

Appropriate Assessment Screening for Barnagh Railway house Site.

Prepared on behalf of the Limerick City and County Council, by Rory Dalton, Independent Ecologist.



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Executive Summary

The current report determines, through the Appropriate Assessment process, that work that has been suggested at the Barnagh railway House, Barnagh will not have a significant impact on any SAC's or SPA's in the area.

Introduction

Rory Dalton was appointed by Limerick City and County Council to undertake an Appropriate Assessment Screening for work to be completed at Barnagh Station House.

This Screening Statement outlines the results of a Habitats Directive Stage 1 Screening Assessment for the proposed work at this site. This is a Screening Statement of the proposed project and has been undertaken in order to comply with the requirements of the Habitats Directive Article 6(3). The function of this Screening Statement is to provide information that will facilitate the competent authority in completing a Stage 1 Screening Assessment of the proposed project's potential to result in likely, significant effects to the Conservation Objectives of Natura 2000 Sites.

Appropriate Assessment Process

An Appropriate Assessment is undertaken to establish if any proposed plan or project is likely to have a significant effect or impact on any site that has been designated under: the E.U. Habitats Directive (92/43/EEC) i.e. SAC; or the E.U. Birds Directive (79/409/EEC as amended 2009/147/EC) i.e. SPA. Collectively, SAC's and SPA's are known as Natura 2000 sites. The need to undertake one or more stages of this process has arisen from Articles 6(3) and 6(4) of the aforementioned Habitats Directive; where the former Article is primarily concerned with the protection of sites from likely significant effects and the latter allows derogation from such protection in very specific circumstances involving imperative reasons of over-riding public interest.

Article 6(3) of the Habitats Directive requires that:

“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.”

And Article 6(4) of the Habitats Directive requires that:

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

In Stage 1, a screening process is undertaken to identify whether significant impacts on a Natura 2000 site are likely to arise from the project or plan in question. If significant impacts are likely to occur or if it is unclear whether significant impacts are likely to occur, then the process moves on to Stage 2 where an AA considers potential mitigation measures for adverse impacts. If it is considered that mitigation measures will not be able to satisfactorily reduce potential adverse impact on a Natura 2000 site then an assessment of alternative solutions is considered in Stage 3. This is then followed by Stage 4 in the event that adverse impacts remain and the proposed activity or development is deemed to be of Imperative Reasons of Overriding Public Interest (IROPI), allowing an assessment of compensatory measures to be considered. The outcome of a Stage 2 and higher assessment is presented in a report known as a Natura Impact Statement (NIS). While an AA NIS is provided by the advocate of the plan or project in question, the AA NIS itself is undertaken by the competent authority.

Methodology

Documents associated with the proposed project and relevant ecology databases were consulted as part of this assessment, with a site walkover also undertaken. Furthermore, the following guidelines were used in the completion of this assessment;

- Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites – European Commission Methodical Guidance on the provisions of Article 6(3) and 6(4) of the ‘Habitats’ Directive 92/43/EEC (European Commission 2001)
- Integrated Biodiversity Impact Assessment – Streamlining AA, SEA and EIA Processes: Practitioner’s Manual (EPA 2013)
- Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities (DoEHLG 2009)

The Screening Stage of Appropriate Assessment is used to identify whether the Plan, either alone or in combination with other plans or projects, is likely to have a significant effect on a Natura 2000 site. This report follows European Commission (2001) guidance which recommends that screening should follow a four step process as outlined below:

1. Determine whether the plan is directly connected with or necessary to the management of the site. If it is, then no further assessment is necessary.
2. Describe the plan and other plans and projects that, ‘in combination’, have the potential to have significant effects on a European site.
3. Identify the potential effects on the European site.
4. Assess the significance of any effects on the European site.

Brief Description of the Sites and Proposed works

Site Description and Location

Barnagh

Barnagh, west Co.Limerick, was located on the Great Southern and Western Railway GSWR's Limerick to Tralee line, known more commonly as the 'North Kerry Line'. The section from Limerick through Barnagh to Tralee opened in 1880. Passenger services on the North Kerry Line ceased in 1963, but the line remained in use until 1977 for goods traffic. The track lay in a derelict state with only infrequent weed spraying trains visiting the line in the 1980s. The track was finally lifted in 1988. This section of line is now part of the Great Southern Trail.

19th c. detached three-bay two-storey former train station. Now disused. Faced limestone coursed walls with red brick keystones on all external corners. Cast-iron rainwater goods to west elevation and part cast iron rainwater goods to rear (north) elevation. Square-headed openings to all elevations, red brick reveals, lintels and cut limestone sills. External former railway platform having cut limestone flagstones and remnants of cast-iron canopy column. Of the flanking single storey sheds, only the walls remain.

Site Visit

A site visit to Barnagh railway house was carried out by Independent Ecologist Rory Dalton on the 4/11/2020. The existing environment was studied in relation to the proposed works put forward by the Limerick County Council.

Proposed Works

The proposed works aim to renovate the building to a structurally sound state and sealed against the wind and rain. It is proposed that an architect prepare a measured survey and strategy for repair of the structure. Initial works will involve clearing the site of debris and foliage, reducing the ground and floor levels and installing a new roof structure on the two story section of the building and a canopy to the platform. Additional works would also gather and dispose of rainwater.

A significant allocation will be made to repoint and repair the limestone and brick masonry walls arches, openings and chimneys. The foregoing works would have the objectives of stabilizing the building and improving weather tightness. The external joinery, windows and doors, will be upgraded to secure the building from the elements as well as intruders.

The area of the platform directly to the south of the station will be upgraded/ repaired to permit its use as an informal bench on the greenway. Additional, optional works have been noted that would render the station fully renovated and in a “turn-key” condition ready for occupation/use either as a studio/apartment/retail unit or a combination of same.

Brief Description of Local Natura 2000 Sites and the Potential for Negative Effects

Natura Site	Distance	Conservation Interests	Inclusion in the current Screening
Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA (004161)	Proposed works would be, at closest point, 74 meters from this SPA	(A082) Hen Harrier	Proposed works within 15km of the protected area
Blackwater River (Cork/Waterford) SAC (002170)	Proposed works would be 14.8km from this SAC	Estuaries [1130] Mud flats and sand flats not covered by seawater at low tide [1140] Perennial vegetation of stony banks [1220] 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 Callitriche-Batrachion vegetation [3260] 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] Margaritifera margaritifera (Freshwater Pearl Mussel) [1029] Austropotamobius pallipes (White-clawed Cray fish) [1092] Petromyzon marinus (Sea Lamprey) [1095] Lampetra planeri (Brook Lamprey) [1096] Lampetra fluviatilis (River Lamprey) [1099] Alosa fallax fallax (Twait Shad) [1103] Salmo salar (Salmon) [1106] Lutra lutra (Otter) [1355] Trichomanes speciosum (Killarney Fern) [1421]	Proposed works within 15km of the SAC

<p>Lower River Shannon SAC (002165)</p>	<p>Proposed works would be 6.3km from this SAC</p>	<p>Sandbanks which are slightly covered by sea water all the time [1110] Estuaries [1130] Mud flats and sand flats not covered by seawater at low tide [1140] Coastal lagoons [1150] Large shallow inlets and bays [1160] Reefs [1170] Perennial vegetation of stony banks [1220] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] Salicornia and other annuals colonising mud and sand [1310] Atlantic salt meadows (Glauco-Puccinellietalia maritima) [1330] Mediterranean salt meadows (Juncetalia maritimi) [1410] Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260] Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) [6410] Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0] Margaritifera margaritifera (Freshwater Pearl Mussel) [1029] Petromyzon marinus (Sea Lamprey) [1095] Lampetra planeri (Brook Lamprey) [1096] Lampetra fluviatilis (River Lamprey) [1099] Salmo salar (Salmon) [1106] Tursiops truncatus (Common Bottlenose Dolphin) [1349] Lutra lutra (Otter) [1355]</p>	<p>Proposed works within 15km of the SAC</p>
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Stack's to Mullaghareirk mountains, west Limerick hills and mount Eagle SPA, Site code: 004161: Synopsis.

The Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA is a very large site centred on the borders between the counties of Cork, Kerry and Limerick. The site is skirted by the towns of Newcastle West, Ballydesmond, Castleisland, Tralee and Abbeyfeale. The mountain peaks included in the site are not notably high or indeed pronounced, the highest being at Knockfeha (451 m). Other mountains included are Mount Eagle, Knockanefune, Garraunbaun, Taur, Rock Hill, Knockacummer, Mullaghmuish, Knight's Mt, Ballincollig Hill, Beennageeha Mt, Sugar Hill, Knockanimpuba and Knockathea, amongst others. Many rivers rise within the site, notably the Blackwater, Owentaraglin, Owenkeal, Glenlara, Feale, Clydagh, Allaghaun, Allow, Oolagh, Galey and Smerlagh. The site consists of a variety of upland habitats, though almost half is afforested. The coniferous forests include first and second rotation plantations, with both pre-thicket and post-thicket stands present. Substantial areas of clear-fell are also present at any one time. The principal tree species present are Sitka Spruce (*Picea sitchensis*) and Lodgepole Pine (*Pinus contorta*). A substantial part (28%) of the site is unplanted blanket bog and heath, with both wet and dry heath present. The vegetation of these habitats is characterised by such species as Ling Heather (*Calluna vulgaris*), Bilberry (*Vaccinium myrtillus*), Common Cottongrass (*Eriophorum angustifolium*), Hare's-tail Cottongrass (*Eriophorum vaginatum*), Deergrass (*Scirpus cespitosus*) and Purple Moor-grass (*Molinia caerulea*). The remainder of the site is mostly rough grassland that is used for hill farming. This varies in composition and includes some wet areas with rushes (*Juncus* spp.) and some areas subject to scrub encroachment. The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for Hen Harrier. This SPA is a stronghold for Hen Harrier and supports the largest concentration of the species in the country. A survey in 2005 recorded 45 pairs, which represents over 20% of the all-Ireland total. A similar number of pairs had been recorded in the 1998-2000 period. The mix of forestry and open areas provides optimum habitat conditions for this rare bird, which is listed on Annex I of the E.U. Birds Directive. The early stages of new and second-rotation conifer plantations are the most frequently used nesting sites, though some pairs may still nest in tall heather of unplanted bogs and heath. Hen Harriers will forage up to c. 5 km from the nest site, utilising open bog and moorland, young conifer plantations and hill farmland that is not too rank. Birds will often forage in openings and gaps within forests. In Ireland, small birds and small mammals appear to be the most frequently taken prey.

Short-eared Owl, a very rare species in Ireland, has been known to breed within the site. Nesting certainly occurred in the late 1970s and birds have been recorded intermittently since. The owls are considered to favour this site due to the presence of Bank Voles, a favoured prey item. Merlin also breed within the site but the size of the population is not known. Red Grouse is found on some of the unplanted areas of bog and heath – this is a species that has declined in Ireland and is now Red-listed. The Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA is of ornithological importance because it provides excellent nesting and foraging habitat for breeding Hen Harrier and is one of the top sites in the country for the species. The presence of three species, Hen Harrier, Merlin and Short-eared Owl, which are listed on Annex I of the E.U. Birds Directive is of note.

Lower River Shannon SAC, Site Code: 002165 Synopsis.

This very large site stretches along the Shannon valley from Killaloe in Co. Clare to Loop Head/Kerry Head, a distance of some 120 km. The site thus encompasses the Shannon, Feale, Mulkear and Fergus estuaries, the freshwater lower reaches of the River Shannon (between Killaloe and Limerick), the freshwater stretches of much of the Feale and Mulkear catchments and the marine area between Loop Head and Kerry Head. Rivers within the sub-catchment of the Feale include the Galey, Smerlagh, Oolagh, Allaughau, Owveg, Clydagh, Caher, Breanagh and Glenacarne. Rivers within the sub-catchment of the Mulkear include the Killeenagarraff, Annagh, Newport, the Dead River, the Bilboa, Glashacloonaraveela, Gortnageragh and Cahernahallia.

A number of plant species that are listed in the Irish Red Data Book occur within the site, and several of these are protected under the Flora (Protection) Order, 1999. These include Triangular Club-rush (*Scirpus triquetrus*), a species which is only found in Ireland only in the Shannon Estuary, where it borders creeks in the inner estuary. Opposite-leaved Pondweed (*Groenlandia densa*) is found in the Shannon where it passes through Limerick City, while Meadow Barley (*Hordeum secalinum*) is abundant in saltmarshes at Ringmoylan and Mantlehill. Hairy Violet (*Viola hirta*) occurs in the Askeaton/Foynes area. Golden Dock (*Rumex maritimus*) is noted as occurring in the River Fergus estuary. Finally, Bearded Stonewort (*Chara canescens*), a brackish water specialist, and Convergent Stonewort (*Chara connivens*) are both found in Shannon Airport Lagoon.

Version date: 16.12.20136 of 7 002165_Rev13.Doc Overall, the Shannon and Fergus Estuaries support the largest numbers of wintering waterfowl in Ireland. The highest count in 1995-96 was 51,423 while in 1994-95 it was 62,701. Species listed on Annex I of the E.U. Birds Directive which contributed to these totals include: Great Northern Diver (3; 1994/95), Whooper Swan (201; 1995/96), Pale-bellied Brent Goose (246; 1995/96), Golden Plover (11,067; 1994/95) and Bar-tailed Godwit (476; 1995/96). In the past, three separate flocks of Greenland White-fronted Goose were regularly found, but none were seen in 1993/94. Other wintering waders and wildfowl present include Greylag Goose (216; 1995/96), Shelduck (1,060; 1995/96), Wigeon (5,976; 1995/96), Teal (2,319; 1995-96), Mallard (528; 1995/96), Pintail (45; 1995/96), Shoveler (84; 1995/96), Tufted Duck (272; 1995/96), Scaup (121; 1995/96), Ringed Plover (240; 1995/96), Grey Plover (750; 1995/96), Lapwing (24,581; 1995/96), Knot (800; 1995/96), Dunlin (20,100; 1995/96), Snipe (719; 1995/96), Black-tailed Godwit (1,062; 1995/96), Curlew (1,504; 1995/96), Redshank (3,228; 1995/96), Greenshank (36; 1995/96) and Turnstone (107; 1995/96). A number of wintering gulls are also present, including Black-headed Gull (2,216; 1995/96), Common Gull (366; 1995/96) and Lesser Black-backed Gull (100; 1994/95). This is the most important coastal site in Ireland for a number of the waders including Lapwing, Dunlin, Snipe and Redshank. It also provides an important staging ground for species such as Black-tailed Godwit and Greenshank. A number of species listed on Annex I of the E.U. Birds Directive breed within the site. These include Peregrine Falcon (2-3 pairs), Sandwich Tern (34 pairs on Rat Island, 1995), Common Tern (15 pairs: 2 on Sturamus Island and 13 on Rat Island, 1995), Chough (14-41 pairs, 1992) and Kingfisher. Other breeding birds of note include Kittiwake (690 pairs at Loop Head, 1987) and Guillemot (4,010 individuals at Loop Head, 1987). There is a resident population of Bottle-nosed Dolphin in the Shannon Estuary. This is the only known resident population of this E.U. Habitats Directive Annex II species in Ireland. The population is estimated (in 2006) to be 140 ± 12 individuals. Otter, a species also listed on Annex II of this Directive, is commonly found on the site. Five species of fish listed on Annex II of the E.U. Habitats Directive are found within the site. These are Sea Lamprey (*Petromyzon marinus*), Brook Lamprey (*Lampetra planeri*), River Lamprey (*Lampetra fluviatilis*), Twaite Shad (*Allosa fallax fallax*) and Salmon (*Salmo salar*). The three lampreys and Salmon have all been observed spawning in the lower Shannon or its tributaries. The Fergus is important in its lower reaches for spring salmon, while the Mulkear catchment excels as a grilse fishery, though spring fish are caught on the actual Mulkear River. The Feale is important for both types. Twaite Shad is not thought to spawn within the site. There are few other river systems in Ireland which contain all three species of lamprey.

Version date: 16.12.20137 of 7 002165_Rev13.Doc Two additional fish species of note, listed in the Irish Red Data Book, also occur, namely Smelt (*Osmerus eperlanus*) and Pollan (*Coregonus autumnalis pollan*). Only the former has been observed spawning in the Shannon. Freshwater Pearl Mussel (*Margaritifera margaritifera*), a species listed on Annex II of the E.U. Habitats Directive, occurs abundantly in parts of the Cloon River. There is a wide range of land uses within the site. The most common use of the terrestrial parts is grazing by cattle, and some areas have been damaged through over-grazing and poaching. Much of the land adjacent to the rivers and estuaries has been improved or reclaimed and is protected by embankments (especially along the Fergus estuary). Further, reclamation continues to pose a threat, as do flood relief works (e.g. dredging of rivers). Gravel extraction poses a major threat on the Feale. In the past, cord-grass (*Spartina* sp.) was planted to assist in land reclamation. This has spread widely, and may oust less vigorous colonisers of mud and may also reduce the area of mud flat available to feeding birds. Domestic and industrial wastes are discharged into the Shannon, but water quality is generally satisfactory, except in the upper estuary where it reflects the sewage load from Limerick City. Analyses for trace metals suggest a relatively clean estuary with no influences of industrial discharges apparent. Further industrial development along the Shannon and water polluting operations are potential threats. Fishing is a

main tourist attraction on the Shannon and there are a large number of angler associations, some with a number of beats. Fishing stands and styles have been erected in places. The River Feale is a designated Salmonid Water under the E.U. Freshwater Fish Directive. Other uses of the site include commercial angling, oyster farming, boating (including dolphin-watching trips) and shooting. Some of these may pose threats to the birds and dolphins through disturbance. Specific threats to the dolphins include underwater acoustic disturbance, entanglement in fishing gear and collisions with fast moving craft. This site is of great ecological interest as it contains a high number of habitats and species listed on Annexes I and II of the E.U. Habitats Directive, including the priority habitats lagoon and alluvial woodland, the only known resident population of Bottle-nosed Dolphin in Ireland and all three Irish lamprey species. A good number of Red Data Book species are also present, perhaps most notably the thriving populations of Triangular Club-rush. A number of species listed on Annex I of the E.U. Birds Directive are also present, either wintering or breeding. Indeed, the Shannon and Fergus Estuaries form the largest estuarine complex in Ireland and support more wintering wildfowl and waders than any other site in the country. Most of the estuarine part of the site has been designated a Special Protection Area (SPA), under the E.U. Birds Directive, primarily to protect the large numbers of migratory birds present in winter.

Blackwater river (Cork/Waterford) SAC, Site code: 002170 Synopsis.

The River Blackwater is one of the largest rivers in Ireland, draining a major part of Co. Cork and five ranges of mountains. In times of heavy rainfall the levels can fluctuate widely by more than 12 feet on the gauge at Careysville. The peaty nature of the terrain in the upper reaches and of some of the tributaries gives the water a pronounced dark colour. The site consists of the freshwater stretches

of the River Blackwater as far upstream as Ballydesmond, the tidal stretches as far as Youghal Harbour and many tributaries, The larger of which include the Licky, Bride, Flesk, Chimney field, Finisk, Araglin, Awbeg (Buttevant), Clyda, Glen, Allow, Dalua, Brogeen, Rathcool, Finnow, Owentaraglin and Awnaskirtaun. The portions of the Blackwater and its tributaries that fall within this SAC flow through the counties of Kerry, Cork, Limerick, Tipperary and Waterford. Nearby towns include Rathmore, Millstreet, Kanturk, Banteer, Mallow, Buttevant, Doneraile, Castletownroche, Fermoy, Ballyduff, Rathcormac, Tallow, Lismore, Cappoquin and Youghal.

The site is important for the presence of several E.U. Habitats Directive Annex II animal species, including Sea Lamprey (*Petromyzon marinus*), Brook Lamprey (*Lampetra planeri*), River Lamprey (*L. fluviatilis*), Twaite Shad (*Alosa fallax fallax*), Freshwater Pearl Mussel (*Margaritifera margaritifera*), Otter (*Lutra lutra*) and Salmon (*Salmo salar*). The Awbeg supports a population of White-clawed Cray fish (*Austropotamobius pallipes*). This threatened species has been recorded from a number of locations and its remains are also frequently found in Otter spraints, particularly in the lower reaches of the river. The freshwater stretches of the Blackwater and Bride Rivers are designated salmonid rivers. The Blackwater is noted for its enormous run of salmon over the years. The river is characterized by significant pools, streams, glides, and generally, a good push of water coming through except in very low water. Spring salmon fishing can be carried out as far upstream as Fermoy and is highly regarded especially at Careysville. The Bride, main Blackwater upstream of Fermoy, and some of the tributaries are more associated with grilse fishing.

The site supports many of the mammal species occurring in Ireland. Those which are listed in the Irish Red Data Book include Pine Marten, Badger and Irish Hare. The bat species Natterer's Bat, Daubenton's Bat, Whiskered Bat, Brown Long-eared Bat and Pipistrelle, can be seen feeding along the river, roosting under the old bridges and in old buildings.

Common Frog, a Red Data Book species that is also legally protected (Wildlife Act, 1976), occurs throughout the site. The rare bush cricket *Metrioptera rosellii* (Order Orthoptera) has been recorded in the reed/willow vegetation of the river embankment on the Lower Blackwater River. The Swan Mussel (*Anodonta cygnea*), a scarce species nationally, occurs at a few sites along the freshwater stretches of the Blackwater.

Several bird species listed on Annex I of the E.U. Birds Directive are found on the site. Some use it as a staging area, others are vagrants, while others use it more regularly. Internationally important numbers of Whooper Swan (average peak 174, 1994/95-95/96) and nationally important numbers

Bewick's Swan (average peak 5, 1996/97-2000/01) use the Blackwater Callows. Golden Plover occur in regionally important numbers on the Blackwater estuary (average peak 885, 1984/85-86/87) and on the River Bride (absolute maximum 2,141, 1994/95). Staging Terns visit the site annually, with >300 Sandwich Tern and >200 Arctic/Common Tern (average peak 1974-1994). The site also supports populations of the following: Red Throated Diver, Great Northern Diver, Barnacle Goose, Ruff, Wood Sandpiper and Greenland White-fronted Goose. Three breeding territories for Peregrine Falcon are known along the Blackwater Valley. This, the Awbeg and the Bride River are also thought to support at least 30 pairs of Kingfisher. Little Egret breed at the site (12 pairs in 1997, 19 pairs in 1998).

The site holds important numbers of wintering waterfowl. Both the Blackwater Callows and the Blackwater Estuary Special Protection Areas (SPAs) hold internationally important numbers of Black-tailed Godwit (average peak 847, 1994/95-95/96 on the callows, average peak 845, 1974/75-93/94 in the estuary). The Blackwater Callows also hold Wigeon (average peak 2,752), Teal (average peak 1,316), Mallard (average peak 427), Shoveler (average peak 28), Lapwing (average peak 880), Curlew (average peak 416) and Black-headed Gull (average peak 396) (counts from 1994/95-95/96). Numbers of birds using the Blackwater Estuary, given as the mean of the highest monthly maxima over 20 years (1974-94), are Shelduck (137 +10 breeding pairs), Wigeon (780), Teal (280), Mallard (320 + 10 breeding pairs), Goldeneye (11-97), Oystercatcher (340), Ringed Plover (50 + 4 breeding pairs), Grey Plover (36), Lapwing (1,680), Knot (150), Dunlin (2,293), Snipe (272), Black-tailed Godwit (845), Bar-tailed Godwit (130), Curlew (920), Redshank (340), Turnstone (130), Black-headed Gull (4,000) and Lesser Black-backed Gull (172). The greatest numbers (75%) of the wintering waterfowl of the estuary are located in the Kinsalebeg area on the east of the estuary in Co. Waterford. The remainder are concentrated along the Tourig estuary on the Co. Cork side.

The site supports several Red Data Book plant species, i.e. Starved Wood-sedge (*Carex depauperata*), Killarney Fern (*Trichomanes speciosum*), Pennyroyal (*Mentha pulegium*), Bird's-nest Orchid (*Neottia nidus-avis*), Golden Dock (*Rumex maritimus*) and Bird Cherry (*Prunus padus*). The first three of these are also protected under the Flora (Protection) Order, 2015, while the Killarney Fern is also listed on Annex II of the E.U. Habitats Directive. The following plants, relatively rare nationally, are also found within the site: Toothwort (*Lathraea squamaria*) - associated with woodlands on the Awbeg and Blackwater; Summer Snowflake (*Leucojum aestivum*) and Flowering Rush (*Butomus umbellatus*) on the Blackwater; Common Calamint (*Calamintha ascendens*), Red Campion, Sand Leek (*Allium scorodoprasum*) and Wood Club-rush (*Scirpus sylvaticus*) on the Awbeg.

The River Blackwater is of considerable conservation significance for the occurrence of good examples of habitats and populations of plant and animal species that are listed on Annexes I and II of the E.U. Habitats Directive respectively. Furthermore, it is of high conservation value for the populations of bird species that use it. Two Special Protection Areas, designated under the E.U. Birds Directive, are also located within the site - Blackwater Callows and Blackwater Estuary.

The following table assesses the potential for impacts to each individual conservation interest of each Natura 2000 site within 15km of the study area and thereby determines the need for mitigation and further analysis through Stage 2 NIS

Natura Site	Conservation Interests	Assessment of Potential Impacts	Mitigation required
<p>Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA (004161)</p>	<p>(A082) Hen Harrier</p>	<p>No significant negative impacts are envisaged for this habitat. Potential nesting or foraging habitat does not exist within or adjacent to the footprint of the works.</p>	<p>No</p>
<p>Blackwater River (Cork/Waterford) SAC (002170)</p>	<p>Estuaries [1130] Mud flats and sand flats not covered by seawater at low tide [1140] Perennial vegetation of stony banks [1220] Salicornia and other annuals colonising mud and sand [1310] Atlantic salt meadows (<i>Glaucopuccinellietalia maritima</i>) [1330] Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410] Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation [3260] Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles [91A0] Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>) [91E0] <i>Margaritifera margaritifera</i> (Freshwater Pearl Mussel) [1029] <i>Austropotamobius pallipes</i> (White-clawed Cray fish) [1092] <i>Petromyzon marinus</i> (Sea Lamprey) [1095] <i>Lampetra planeri</i> (Brook Lamprey) [1096] <i>Lampetra fluviatilis</i> (River Lamprey) [1099]</p> <p><i>Alosa fallax fallax</i> (Twaite Shad) [1103] <i>Salmo salar</i> (Salmon) [1106] <i>Lutra lutra</i> (Otter) [1355] <i>Trichomanes speciosum</i> (Killarney Fern) [1421]</p>	<p>No significant negative impacts are envisaged for these habitats. These habitats do not exist within the footprint of the works, nor is the site hydrologically connected to these habitats.</p>	<p>No</p>

<p>Lower River Shannon SAC (002165)</p>	<p>Sandbanks which are slightly covered by sea water all the time [1110] Estuaries [1130] Mud flats and sand flats not covered by seawater at low tide [1140] Coastal lagoons [1150] Large shallow inlets and bays [1160] Reefs [1170] Perennial vegetation of stony banks [1220] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] Salicornia and other annuals colonising mud and sand [1310] Atlantic salt meadows (<i>Glaucopuccinellietalia maritima</i>) [1330] Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410] Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation [3260] Molinia meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>) [6410] Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae) [91E0] <i>Margaritifera margaritifera</i> (Freshwater Pearl Mussel) [1029] <i>Petromyzon marinus</i> (Sea Lamprey) [1095] <i>Lampetra planeri</i> (Brook Lamprey) [1096] <i>Lampetra fluviatilis</i> (River Lamprey) [1099] <i>Salmo salar</i> (Salmon) [1106] <i>Tursiops truncatus</i> (Common Bottlenose Dolphin) [1349] <i>Lutra lutra</i> (Otter) [1355]</p>	<p>No significant negative impacts are envisaged for these habitats. These habitats do not exist within the footprint of the works, nor is the site hydrologically connected to this habitat</p>	<p>No</p>
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Conclusion

In conclusion it has been determined that the works as outlined above in the “Proposed Works” section of this document will not have a significant negative impact on a Natura 2000 site.

Photographs and Maps



Plate 1: Distance from proposed site to Blackwater River (Cork/Waterford) SAC (002170)

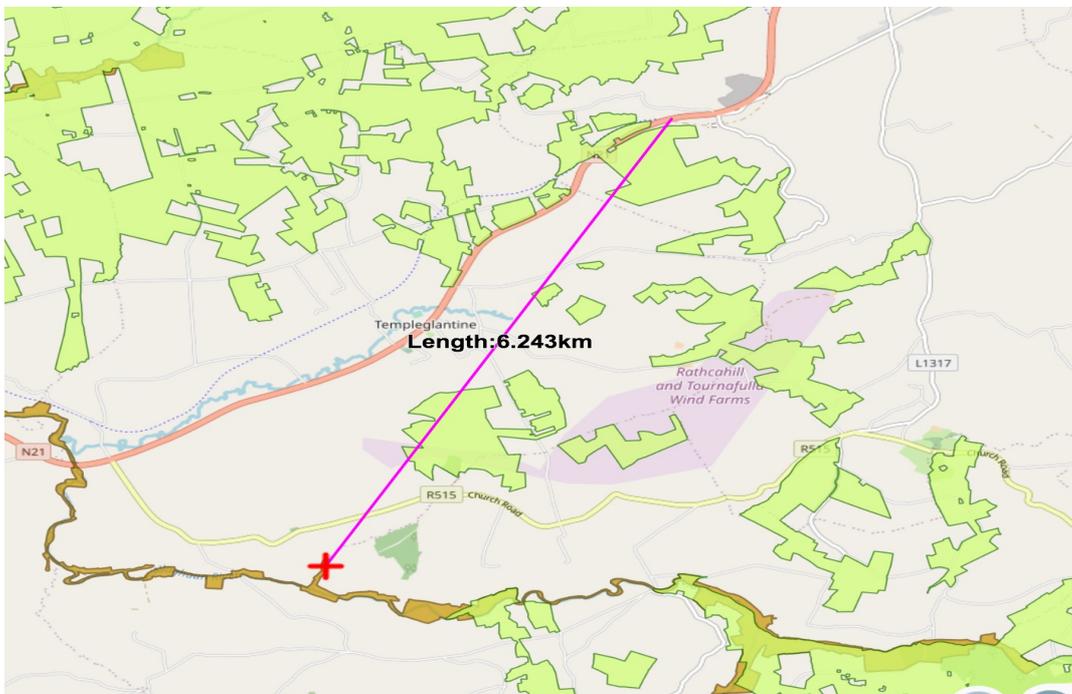


Plate 2: Distance from proposed site to Lower River Shannon SAC (002165)



Plate 3: Distance from proposed site to Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA (004161)

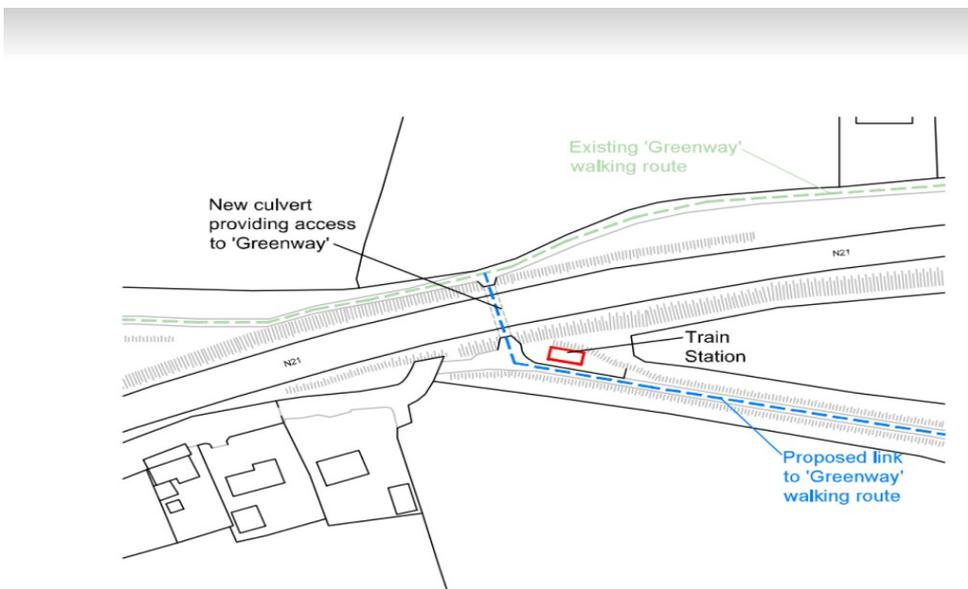


Plate 4: Barnagh Railway Station Site Plan.

Bibliography

Department of Environment, Heritage & Local Government (DoEHLG). 2009. Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities. DoEHLG, Dublin.

European Commission. 2001. Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites – European Commission Methodical Guidance on the provisions of Article 6(3) and 6(4) of the ‘Habitats’ Directive 92/43/EEC. European Commission DG Environment, Oxford UK.

Environmental Protection Agency (EPA). 2013. Integrated Biodiversity Impact Assessment – Streamlining AA, SEA and EIA Processes: Practitioner’s Manual. EPA STRIVE Programme 2007–2013; Report Series No. 106. EPA, Wexford.

NPWS Conservation Objectives: Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA (004161) National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2014) Site Synopsis: Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA (004161) National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS Conservation Objectives: Lower River Shannon SAC Site (002165) National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2013) Site Synopsis: Lower River Shannon SAC Site (002165) National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS Conservation Objectives: Blackwater River (Cork/Waterford) SAC (002170) National Parks and Wildlife Services, Department of Arts, Heritage and the Gaeltacht.

NPWS (2016) Site Synopsis: Blackwater River (Cork/Waterford) SAC (002170) National Parks and Wildlife Services, Department of Arts, Heritage and the Gaeltacht.

NRA (2009) Guidelines for Assessment of Ecological Impacts of National Road Schemes. National Roads Authority.