NATURA IMPACT STATEMENT

Newtownmountkennedy River Walkway

Wicklow County Council

PROJECT NO. W335

JULY 2022

OCSC
O'CONNOR | SUTTON | CRONIN
Multidisciplinary
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NOTICE

DOCUMENT CONTROL & HISTORY

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NATURA IMPACT STATEMENT

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1 INTRODUCTION

1.1 Project Contractual Bases & Parties Involved

This report has been prepared by O'Connor Sutton Cronin & Associates Ltd. (OCSC) at the request of their Client, Wicklow County Council. The site for assessment comprises portions of land that run adjacent to the Newtownmountkennedy river, Newtownmountkennedy, Co. Wicklow where the project proposes the addition of a walkway along the river with entry/exit points located on the Dublin Road and Main Street. OCSC were commissioned to complete a Natura Impact Statement for the proposed works. This report assesses the effects that the proposed development would have on the Natura 2000 site network and the mitigation required.

The report was completed by Luis Iemma BSc, MSc, Ph.D, Senior Ecologist, assisted by Eadaoin Butler BSc, Consultant Ecologist, reviewed by Glenda Barry, BSC, MSC, Principal Consultant with OCSC, and approved by Eleanor Burke, BSc, MSc, DAS, MIEnvSc, CSci, Technical Principal, and the OCSC Environmental Division Manager.

1.2 Project Description

This Natura Impact Statement (NIS) report has been prepared to assess the impact and propose mitigation to the proposed walkway along the Newtownmountkennedy river in Newtownmountkennedy, Co. Wicklow.

The proposed walkway is situated adjacent to the 2nd order Newtownmountkennedy stream and the 1st order Glendarragh stream. The Glendarragh stream is a tributary of the Newtownmountkennedy stream which flows east into the Kilcoole Estuary. The Kilcoole Estuary is within the boundaries of The Murrough SPA and is located next to the Murrough SAC, located 4.2km and 4.5km east of the site, respectively.

Due to the hydrological indirect connection, there is a potential pathway for impacts to affect downstream aquatic features of interest for which the SAC is designated, such as the Red-Throated Diver, Greylag Goose, Light-bellied Brent Goose and Teal.

1.3 Legislative Context

The Habitats Directive promotes a hierarchy of avoidance, mitigation, and compensatory measures to be addressed in the AA process as follows:

- Firstly, a plan / project should aim to avoid any negative impacts on Natura 2000 sites by identifying possible impacts early and designing the project/plan to avoid such impacts.
- Secondly, mitigation measures should be applied during the appropriate assessment (stage 2) process to the point where no adverse impacts on the site(s) remain.
- Thirdly a plan / project may have to undergo an assessment of alternative solutions. Under this stage of the assessment, compensatory measures are required for any remaining adverse effects, but they are permitted only if (a) there are no alternative solutions and (b) the plan / project is required for imperative reasons of overriding

public interest (the 'IROPI test'). European case law highlights that consideration must be given to alternatives outside the plan / project boundary area in carrying out the IROPI test.

1.4 Methodology and Approach

The NIS has been prepared taking into account legislation including the aforementioned legislation and guidance including the following:

- *Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities*, Department of the Environment, Heritage and Local Government, 2009; 11 February 2010 revision.
- *Commission Notice: Managing Natura 2000 sites – The provisions of Article 6 fo the 'Habitats' directive 92/43/EEC*, European Commission, 2018.
- *Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habiats Directive 92/43/EEC*, Euopean Commission Environment DG, 2002.
- *Managing Natura 2000 sites: the Provisions of Article 6 of the habitats Directive 92/43/EEC,* European Commission, 2000.

Using the above documents, it has been possible to carry out an NIS using the best available guidance and operating within the applicable legislation.

1.5 Relevant Legislation

European Nature Directives (Habitats and Birds)

The Habitats Directive (Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora) forms the basis for the designation of Special Areas of Conservation. Similarly, Special Protection Areas are classified under the Birds Directive (Council Directive 2009/147/EEC on the Conservation of Wild Birds). Collectively, Special Areas of Conservation (SAC) and Special Protection Areas (SPA) are referred to as the Natura 2000 network. In general terms, they are considered to be of exceptional importance for rare, endangered or vulnerable habitats and species within the European Community.

Under Article 6(3) of the Habitats Directive an 'appropriate assessment' must be undertaken for any plan or project that is likely to have a significant effect on the conservation objectives of a Natura 2000 site. An Appropriate Assessment is an evaluation of the potential impacts of a plan or project on the conservation objectives of a Natura 2000 site, and the development, where necessary, of mitigation or avoidance measures to preclude negative effects.

Article 6, paragraph 3 of the EC Habitats Directive 92/43/EEC ("the Habitats Directive") states 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".

European Communities (Birds and Natural Habitats) Regulations 2011

Part 5 of the European Communities (Birds and Natural Habitats) Regulations 2011 sets out the circumstances under which an 'Appropriate Assessment' is required. Section 42(1) requires that 'a screening for Appropriate Assessment of a plan or project for which an application for consent is received, or which a public authority wishes to undertake or adopt, and which is not directly connected with or necessary to the management of the site as a European Site, shall be carried out by the public authority to assess, in view of best scientific knowledge and in view of the conservation objectives of the site, if that plan or project, individually or in combination with other plans or projects, is likely to have a significant effect on the European site.'

Section 42(2) expands on this, stipulating that a public authority must carry out a screening for Appropriate Assessment before consent for a plan or project is given or a decision to undertake or adopt a plan or project is taken. To assist a public authority to discharge its duty in this respect, Section 42(3)(a) gives them the authority to direct a third party to provide a Natura Impact Statement, and Section 42(3)(b) allows them to request any additional information that is considered necessary for the purposes of undertaking a screening. Similarly, Section 177T states that a competent authority may give a notice in writing to the applicant concerned, directing him or her to furnish a Natura Impact Statement, and the applicant shall furnish the statement within the period specified in the notice.

A Natura Impact Statement must include such information or data as the public authority considers necessary to enable it to ascertain if the plan or project will affect the integrity of a Natura 2000 site. Where appropriate, a Natura Impact Statement also needs to include:

I. the alternative solutions that have been considered and the reasons why they have not been adopted;
II. the imperative reasons of overriding public interest that are being relied upon to indicate that the plan or project should proceed notwithstanding that it may adversely affect the integrity of a European site; and
III. the compensatory measures that are being proposed.

Section 42(6) requires that 'the public authority shall determine that an Appropriate Assessment of a plan or project is required where the plan or project is not directly connected with or necessary to the management of the site as a European Site and if it cannot be excluded, on the basis of objective scientific information following screening under this Regulation, that the plan or project, individually or in combination with other plans or projects, will have a significant effect on a European site'.

1.6 Natura Impact Statement

The report prepared for the second stage of AA is referred to as a NIS. The approach taken to preparing the NIS is as follows:

- Set out information on the Natura 2000 sites identified at screening stage likely to be significantly affected by the project.

• Describe the elements of the project or plan (alone or in combination with other projects or plans) that are likely to give rise to significant effects on the environment.

• Set out the conservation objectives of the site.

• Describe how the project or plan will affect key species and key habitats. Acknowledge uncertainties and gaps in information.

• Describe how the integrity of the site (determined by structure and function and conservation objectives) is likely to be affected by the project or plan (e.g. loss of habitat, disturbance, disruption, chemical changes, hydrological changes, geological changes, etc.). Acknowledge uncertainties and any gaps in information.

• The appropriate assessment is carried out by the competent authority and is supported by the NIS.

The approach taken in preparing the NIS is based on standard methods and guidance as listed in the references section of this report.

1.7 Limitations

This Natura Impact Statement Report has been prepared for the sole use of Wicklow County Council ("the Client"). No other warranty, expressed or implied, is made as to the professional advice included in this report or any other services provided by OCSC.

This assessment is based on a review of available historical information, environmental records, consultations, relevant guidance information, and reports from third parties. All information received has been taken in good faith as being true and representative.

This report has been prepared in line with best industry standards. The methodology adopted and the sources of information used by OCSC in providing its services are outlined in this Report. The assessment undertaken by OCSC and described was undertaken in May 2022 and is based on the information available during that period. The scope of this Report and the services are accordingly factually limited by these circumstances.

OCSC disclaim any undertaking or obligation to advise any person of any change in any matter affecting the Report which may come or be brought to OCSC's attention after the date of the Report.

The conclusions presented in this report represent OCSC's best professional judgement based on review of the relevant information available at the time of writing. The opinions and conclusions presented are valid only to the extent that the information provided was accurate and complete.

2 Description of the existing environment

2.1 Site Location

The project description is critical for identification of impacts. The project description requires the identification of all features of the proposed project such as its scale and size and changes that will result from the project including excavation to be undertaken and resource requirements, e.g. water abstraction, emissions and waste, noise, light pollution, disturbance, etc. For large projects it may be necessary to identify the parameters for the construction, the operation, and the decommissioning phases. The boundaries of the project are critical, and all activities proposed should be within the application site.

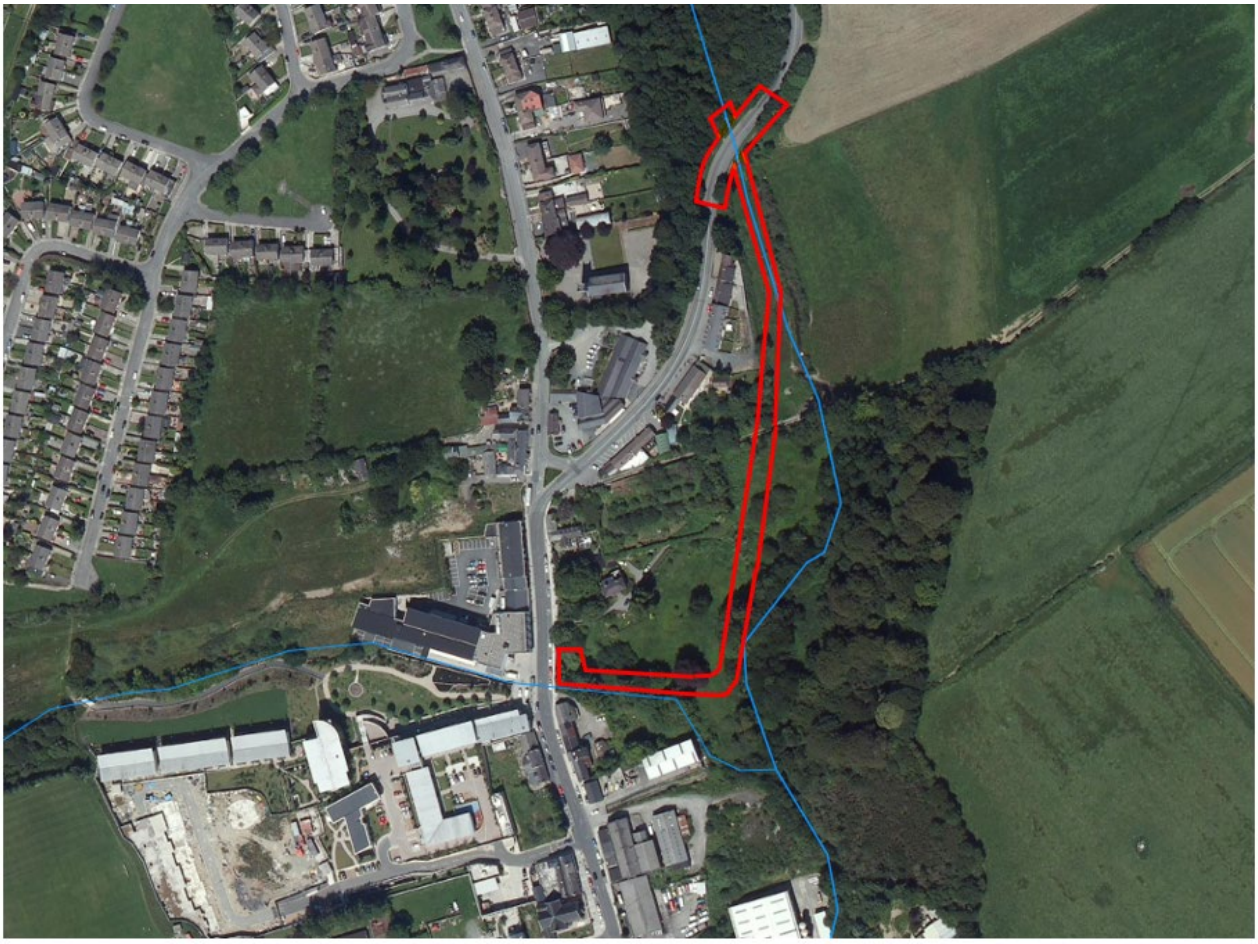

Figure 2.1: Approximate Site location indicated by the red border - Regional Location (Source: EPA Maps, 2021).

The proposed works comprise of a boardwalk which will connect the Dublin Road to Main Street. The walkway will include a new gravel footpath 2 metres wide, public lighting and a verge on each side of the path.

3 Relationship to Designated Sites

Natura 2000 sites within 15 kilometres of the proposed structure were considered initially as per the NPWS guidance document. This initial screening revealed that the following sites lie within 15km radius of the development (Figure 3.1 and Table 1):

Table 1. European Sites within 15 kilometres (ZOI) to the proposed site.

Site Code	Site Name	Distance (km)	Sensitive Receptors (Qualifying Interest & Special Conservation Interests) [including the relevant code for the qualifying feature]	Site Synopsis and Existing threats or Sensitivities
000716	Carriggower Bog SAC	3.2 NW	[7140] Transition mires and quaking bogs	Carriggower Bog is situated on Calary plateau at the eastern edge of the Wicklow Mountains. The site is an area of wet bog and poor fen, flanked by the Vartry River on the south-western side. The bog was exploited for peat extraction until 100 years ago and the peat cuttings are now flooded. The remaining bog vegetation is characterised by bog moss (Sphagnum spp.) hummocks. Several species of Sphagnum are found including S. recurvum. On top of the hummocks Heather (Calluna vulgaris) and Cross-leaved Heath (Erica tetralix) are dominant. Between the hummocks, in the wet areas, Bog Asphodel (Narthecium ossifragum), Bogbean (Menyanthes trifoliata), and Common Cottongrass (Eriophorum angustifolium) are common, while Purple Moor-grass (Molinia caerulea) is locally abundant. This site is of conservation importance because it shows a good transition between fen and bog vegetation (with the fen being colonised by characteristic bog species). Transition mire, which is present at the site, is listed in Annex I of the E.U. Habitats Directive. The area holds a rich and varied flora, and it provides a habitat for some rare invertebrates. Carriggower Bog is the last remaining site in Wicklow from which some of these invertebrates are recorded. It also has ornithological interest, being an important site for Jack Snipe.
000719	Glen of the Downs SAC	3.8 N	[91A0] Old sessile oak woods with Ilex and Blechnum in the British Isles	Glen of the Downs is a semi-natural oak wood situated within an impressive glacial overflow channel. It is located on the Dublin-Wexford road, about 7 km south of Bray, Co. Wicklow. The underlying rock is mostly quartzite, and it outcrops in a few places. The soil is a sandy loam, brown earth to brown podzolic, and is very dry over much of the site. Most of the site has been a Nature reserve since 1980. The site includes some areas of mixed woodland, in which Beech (Fagus sylvatica), Sycamore (Acer pseudoplatanus), Scots Pine (Pinus sylvestris), and other non-native species occur. Bryophytes are notably scarce within the valley and may reflect the dryness of the site. However, some rare species

Site Code	Site Name	Distance (km)	Sensitive Receptors (Qualifying Interest & Special Conservation Interests) [including the relevant code for the qualifying feature]	Site Synopsis and Existing threats or Sensitivities
				have been recorded. The site is notable for the presence of the rare bryophytes Cephaloziella turnaeri, Pterigynandrum filiforme, and Plagiothecium curvifolium, the last named in its only Irish site. There are also several rare or scarce Myxomycete fungi, namely Echinostelium colliculosum, Licea marginata, L. perexigua, Perichaena vermicularis, Comatricha ellae (only known Irish site), Diderma chondrioderma, and Didymium crustaceum. Although exploited heavily in the past, this woodland is well developed, rich in species and is of high conservation significance. The site supports oak woodland of a type that is listed on Annex II of the E.U. Habitats Directive. The glacial overflow channel is the largest example of such a feature in the country.
004186	The Murrough SPA	4.2 E	[A001] Red-throated Diver (Gavia stellata) [A043] Greylag Goose (Anser anser) [A046] Light-bellied Brent Goose (Branta bernicla hrota) [A050] Wigeon (Anas penelope) [A052] Teal (Anas crecca) [A179] Black-headed Gull (Chroicocephalus ridibundus) [A184] Herring Gull (Larus argentatus) [A195] Little Tern (Sterna albifrons) [A999] Wetland and Waterbirds	The Murrough SPA comprises a coastal wetland complex that stretches for 13 km from Kilcoole Station, east of Kilcoole village in the north to Wicklow town in the south and extends inland for up to 1 km in places. The site includes an area of marine water to a distance of 200m from the low water mark. A shingle ridge runs along the length of the site and carries the Dublin-Wexford railway line. The Murrough SPA is an important site for wintering waterbirds, being internationally important for Light-bellied Brent Goose and nationally important for Red-throated Diver, Greylag Goose, Wigeon, Teal, Black-headed Gull, and Herring Gull. It is probably the most important site in the country for nesting Little Tern. The regular occurrence of Red-throated Diver, Little Egret, Whooper Swan, Greenland White-fronted Goose, Golden Plover, Little Tern, Sandwich Tern, Short-eared Owl, and Kingfisher is of note as these species are listed on Annex I of the E.U. Birds Directive. Part of the Murrough SPA is a Wildfowl Sanctuary.
002249	The Murrough Wetlands SAC	4.5 E	[1210] Annual Vegetation of Drift Lines [1220] Perennial Vegetation of Stony Banks [1330] Atlantic Salt Meadows [1410] Mediterranean Salt Meadows [7210] Cladium Fens* [7230] Alkaline Fens	The Murrough is a coastal wetland complex which stretches for 15 km from Ballygannon to north of Wicklow town, and in parts, extends inland for up to 1 km. A shingle ridge stretches the length of the site and carries the mainline Dublin-Wexford railway.

Site Code	Site Name	Distance (km)	Sensitive Receptors (Qualifying Interest & Special Conservation Interests) [including the relevant code for the qualifying feature]	Site Synopsis and Existing threats or Sensitivities
				Recent farming and drainage practices and afforestation have greatly reduced the area and quality of the wetlands habitats - the area between Kilcoole and Newcastle is particularly affected. In 1997 there was some levelling of the sand hills below Killoughter station. Pollution, reclamation, and further drainage would adversely affect this site. A section of the wetlands at Blackditch, which includes alkaline and Cladium fen, has been acquired by BirdWatch Ireland and is being managed for nature conservation. This site is of importance as it is the largest coastal wetland complex on the east coast of Ireland. Although much affected by drainage, it still contains a wide range of coastal and freshwater habitats, including six listed on Annex I of the E.U. Habitats Directive, some of which contain threatened plants. Areas on the site contain a rich invertebrate fauna, including several rarities. It is an important site for both wintering and breeding birds and supports a variety of species listed on Annex I of the E.U. Birds Directive
000714	Bray Head SAC	7.5 NE	[1230] Vegetated Sea Cliffs [4030] Dry Heath	This coastal site is situated in the north-east of Co. Wicklow between the towns of Bray and Greystones. The bedrock geology is Cambrian quartzites and shales (with mudstones and greywackes). Bray Head consists of a plateau of high ground, with five prominent quartzite knolls and has a maximum height of 241 m. The more exposed higher ground has a covering of shallow acidic soils, with protruding bedrock and scree. Elsewhere, deeper soils are formed by drift deposits and are calcareous in character. Bray Head has an important seabird colony. A census in 1999 gave the following populations: Fulmar (55 pairs), Shag (8 pairs), Kittiwake (781+ pairs), Guillemots (286 individuals), Razorbills (191 individuals), and Black Guillemots (123 individuals). A few pairs of gulls also breed. Both the Kittiwake and Black Guillemot populations are of national importance. Peregrine Falcon, an Annex I species of the E.U. Birds Directive, breeds at the site, as do Raven and Kestrel. Characteristic bird species of the heath areas include Stonechat, Whitethroat, Linnet, and Skylark. The heath and grassland habitats at this site are threatened by reclamation for

Site Code	Site Name	Distance (km)	Sensitive Receptors (Qualifying Interest & Special Conservation Interests) [including the relevant code for the qualifying feature]	Site Synopsis and Existing threats or Sensitivities
				agriculture and also by frequent burning. The site is a popular recreational area and is especially used by walkers. Bray Head is of high conservation importance as it has good examples of two habitats (sea cliffs and dry heath) listed on Annex I of the E.U. Habitats Directive. It also supports a number of rare plant species and has ornithological importance.
002122	Wicklow Mountains SAC	7.6 W	[3110] Oligotrophic Waters containing very few minerals [3160] Dystrophic Lakes [4010] Wet Heath [4030] Dry Heath [4060] Alpine and Subalpine Heaths [6130] Calaminarian Grassland [6230] Species-rich Nardus Grassland* [7130] Blanket Bogs (Active)* [8110] Siliceous Scree [8210] Calcareous Rocky Slopes [8220] Siliceous Rocky Slopes [91A0] Old Oak Woodlands [1355] Otter (Lutra lutra)	Wicklow Mountains SAC is a complex of upland areas in Counties Wicklow and Dublin, flanked by the Blessington reservoir to the west and Vartry reservoir in the east, Cruagh Mountain in the north, and Lybagh Mountain in the south. Most of the site is over 300 m, with much ground over 600 m. The highest peak is 925 m at Lugnaquilla. The Wicklow uplands comprise a core of granites flanked by Ordovician schists, mudstones and volcanics. The form of the Wicklow Glens is due to glacial erosion. The topography is typical of a mountain chain, showing the effects of more than one cycle of erosion. The massive granite has weathered characteristically into broad domes. Most of the western part of the site consists of an elevated moorland, covered by peat. The surrounding schists have assumed more diverse outlines, forming prominent peaks and rocky foothills with deep glens. The dominant topographical features are the products of glaciation. High corrie lakes, deep valleys, and moraines are common features of this area. The substrate over much of the area is peat, usually less than 2 m deep. Poor mineral soil covers the slopes, and rock outcrops are frequent. The Wicklow Mountains are drained by several major rivers including the Dargle, Liffey, Dodder, Slaney, and Avonmore. The river water in the mountain areas is often peaty, especially during floods. Wicklow Mountains is important as a complex, extensive upland site. It shows great diversity from a geomorphological and a topographical point of view. The vegetation provides examples of the typical upland habitats with heath, blanket bog, and upland grassland covering large, relatively undisturbed areas. In all, twelve habitats listed on Annex I of the E.U. Habitats Directive are found within the site. Several rare or protected plant and animal species occur, adding further to its value.

Site Code	Site Name	Distance (km)	Sensitive Receptors (Qualifying Interest & Special Conservation Interests) [including the relevant code for the qualifying feature]	Site Synopsis and Existing threats or Sensitivities
004040	Wicklow Mountains SPA	7.6W	[A098]Merlin (Falco columbarius) [A103] Peregrine (Falco peregrinus)	This is an extensive upland site, comprising a substantial part of the Wicklow Mountains. Most of the site is in Co. Wicklow, but a small area lies in Co. Dublin. The underlying geology of the site is mainly of Leinster granites, flanked by Ordovician schists, mudstones and volcanics. The area was subject to glaciation and features fine examples of glacial lakes, deep valleys, and moraines. Most of site is over 300 m, with much ground being over 600 m; the highest peak is Lugnaquillia (925 m). The substrate over much of site is peat, with poor mineral soil occurring on the slopes and lower ground. Exposed rock and scree are features of the site. The predominant habitats present are blanket bog, heaths, and upland grassland. The Wicklow Mountains SPA is of high ornithological importance as it supports nationally important populations of Merlin and Peregrine, both species that are listed on Annex I of the E.U. Birds Directive. Part of Wicklow Mountains SPA is a Statutory Nature Reserve.
000725	Knocksink Wood SAC	11.9 NW	[7220] Petrifying Springs* [91A0] Old Oak Woodlands [91E0] Alluvial Forests*	Knocksink Wood is situated in the valley of the Glencullen River, just north-west of Enniskerry in Co. Wicklow. The fast flowing Glencullen River winds its way over granite boulders along the valley floor. The steep sides of the valley are mostly covered with calcareous drift and support extensive areas of woodland. This site contains a substantial area of potentially ancient woodland. It has one of the most diverse woodland invertebrate faunas in Ireland, including some wet woodland organisms which are threatened at an international level. Vertebrates noted in the vicinity, either by tracks, sett, or sight, include Red Squirrel, Badger, Rabbit, and Deer. The woodland supports large populations of birds, including many common passerines (Robin, Blackbird, Song Thrush, Wren, Chaffinch) and crows, such as Rook, Hooded Crow, Magpie, Jackdaw, and Raven. Buzzard have been recorded in the area, and Dipper are occasionally seen on the river. The importance of this site lies in the diversity of woodland habitats which occur. Three habitats listed in Annex I of the E.U. Habitats Directive, two of which have priority status (petrifying springs and alluvial woodland), occur at this site. The presence of rare or threatened plants and invertebrates adds to the interest. Much of this site has been designated a Statutory Nature.

Site Code	Site Name	Distance (km)	Sensitive Receptors (Qualifying Interest & Special Conservation Interests) [including the relevant code for the qualifying feature]	Site Synopsis and Existing threats or Sensitivities
000713	Ballyman Glen SAC	12.3 NW	[7220] Petrifying Springs* [7230] Alkaline Fens	Ballyman Glen is situated approximately 3 km north of Enniskerry and straddles the County boundary between Dublin and Wicklow. It is orientated in an east-west direction with a stream running through the centre. The glen is bounded mostly by steeply sloping pasture with Gorse (Ulex europaeus) and areas of wood and scrub. An area of land that slopes towards the fen has been used as a landfill site for domestic refuse. The site is also used for a clay pigeon shoot and shattered clay pigeons are scattered throughout the area. The fen vegetation at this site is well developed, with an unusually large number of sedge species present. The presence of alkaline fen and of petrifying spring/seepage areas is also particularly notable, as these habitats are listed, the latter with priority status, on Annex I of the E.U. Habitats Directive. Fens are rare in Wicklow and Dublin, and this is one of only two sites in Wicklow for the Narrow-leaved Marsh orchid.
002274	Wicklow Reef SAC	14 SE	[1170] Reefs	Wicklow Reef is situated just to the north of Wicklow Head on the east coast of Ireland in Co. Wicklow. The substrate is a mixture of cobbles, bedrock, and sand and is subject to strong tidal streams. Wicklow Reef is an example of a subtidal reef constructed by the honeycomb worm Sabellaria alveolata. In Irish waters this worm normally constructs reefs on intertidal rocks, in areas subject to some sand scour. Such reefs are widespread but uncommon. Sabellaria alveolata subtidal reefs are known to occur in the Mediterranean but this example is an extremely unusual feature and may be the first record for Britain and Ireland. Wicklow Reef is of high conservation value as it is the only documented example in Ireland of a biogenic reef. Further, it supports a number of uncommon species.
004127	Wicklow Head SPA	14.1 SE	[A188] Kittiwake (Rissa tridactyla)	Wicklow Head is a rocky headland with extensive exposures of mica-schist. It is situated approximately 3 kilometres south of Wicklow town. A lighthouse is located near the base of the cliffs. The cliffs are highest immediately south of the lighthouse where they rise to about 60 m, and it is here that most of the seabirds breed. The site comprises the cliffs and cliff-top vegetation, as

Site Code	Site Name	Distance (km)	Sensitive Receptors (Qualifying Interest & Special Conservation Interests) [including the relevant code for the qualifying feature]	Site Synopsis and Existing threats or Sensitivities
				well as some heath vegetation. The marine area to a distance of 500 m from the base of the cliffs is included in the site. At the time this site was identified for Special Protection Area (SPA) designation, it was utilised by a nationally important population of Kittiwake and this species is regarded as a special conservation interest for this SPA. A survey in 2002 recorded a nationally important population of breeding Kittiwake (956 pairs) and other breeding seabirds including Fulmar (62 pairs), Shag (11 pairs), Herring Gull (20 pairs), Guillemot (281 pairs), and Razorbill (125 pairs). A survey of Black Guillemot in April 1998 recorded 70 individual birds within the SPA. The site also supports a pair of breeding Peregrine. Ravens nest annually on the cliffs, and the heath supports such species as Stonechat, Whitethroat, and Linnet. The occurrence of Peregrine, a species that is listed on Annex I of the EU Birds Directive, is of note.

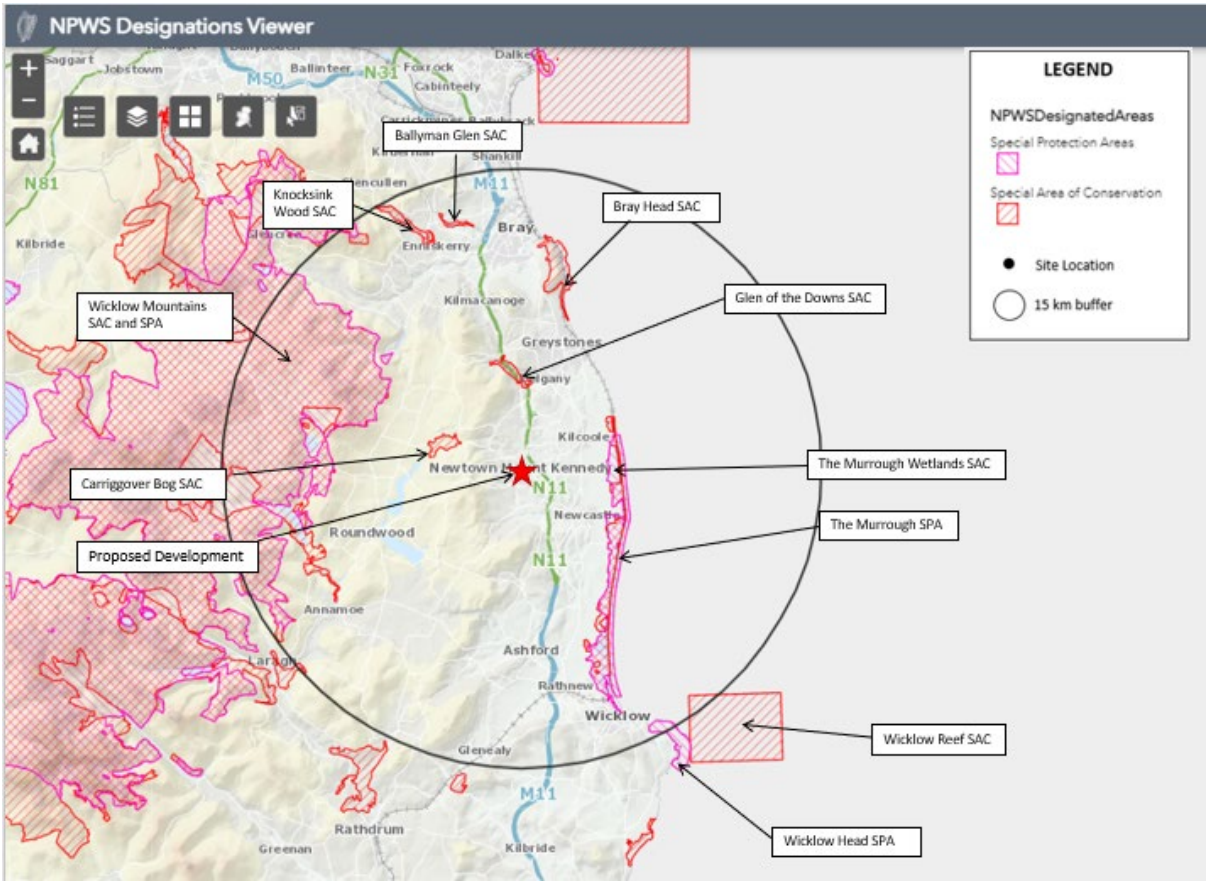

Figure 3.1. Designated Sites within 15km radius. Site location shown by a red star (Source: NPWS, 2022).

3.1 Zone of Influence

According to the DEHLG 2009 guidelines, "Although a distance of 15km is currently recommended in the case of plans…[however] for projects, the distance could be much less than 15km, and in some cases less than 100m, but this must be evaluated on a case-by-case basis". An OPR report (2021) states that a few projects have a zone of influence as large as 15km, but some more complex projects may require a greater zone of investigation.

Thus, the zone of influence must be defined for each project. A "zone of influence" is the difference between an activity's spatial footprint and the extent of the activity's effects on surrounding habitat and wildlife populations. Light, noise, and hydrological connections are the major influencers in this regard. The factors in defining the zone of influence above were as follows:

- The location of designated Natura 2000 sites.
- The footprint of the development
- The distance to which pollution generated could impact on downstream habitats.
- The extent of noise and light impacts on ecological receptors.

Given the type of project, the sites being given further consideration are the Murrough SAC and SPA shown in Figure 3.1 due to the fact that it is downstream from the proposed development and is connected via hydrological link, the Newtownmountkennedy stream (Figure 3.2). The other sites are too distant to be impacted on or are within a separate water catchment.

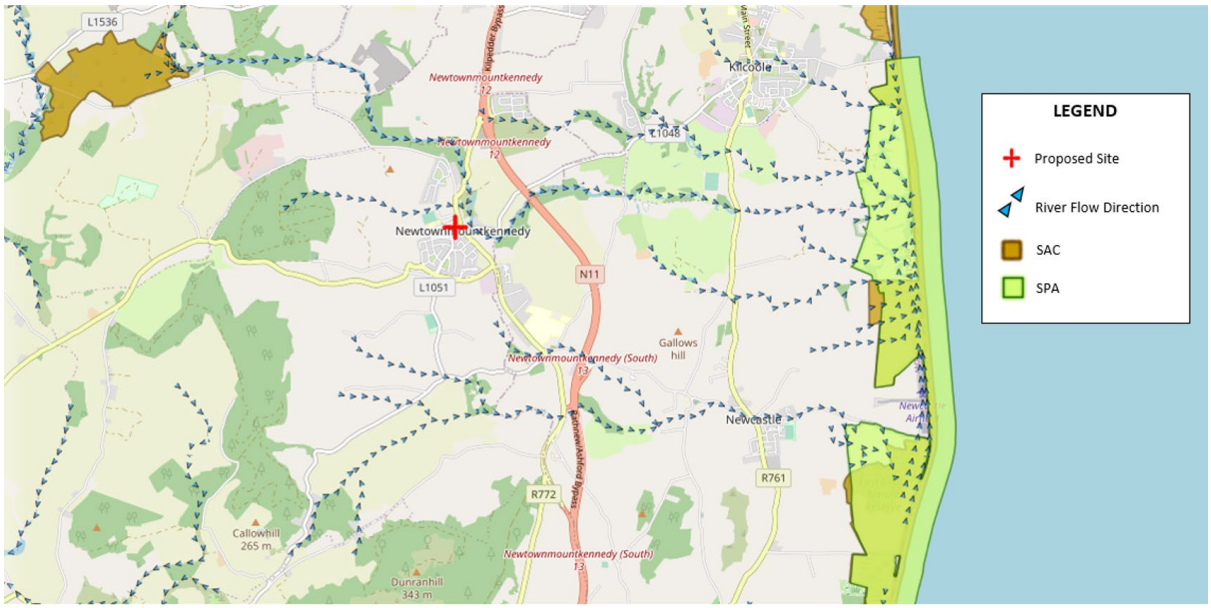

Figure 3.2. River Flow direction showing the site in the top right (red cross) and the waterway leading to The Murrough SAC and SPA downstream (Source: EPA maps, 2022).

3.2 Description of the Natura 2000 Sites

The Habitats Directive states, "Any plan or project not directly connected 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 implication for the site in view of the sites conservation objectives…the competent national authorities shall agree to the plan or project only having ascertained that it will not adversely affect the integrity of the site…" The conservation objectives form the basis of the Appropriate Assessment as it is against these objectives that the assessment is made. The overall aim of the Habitats Directive is to maintain or restore the favourable conservation status of habitats and species of community interest. These habitats and species are listed in the Habitats and Birds Directives, and Special Areas of Conservation and Special Protection Areas are designated to afford protection to the most vulnerable of them. These two designations are collectively known as the Natura 2000 network. European and national legislation places a collective obligation in Ireland and its citizens to maintain habitats and species in the Natura 2000 network at favourable conservation condition. The Government and its agencies are responsible for the implementation and enforcement of regulations that will ensure the ecological integrity of these sites.

The maintenance of habitats and species within Natura 2000 sites at favourable conservation conditions will contribute to the overall maintenance of favourable conservation status of those

habitats and species at a national level. Favourable conservation status of a habitat is achieved when:

- its natural range and the area it covers within that range are stable or increasing;
- the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future; and
- the conservation status of its typical species is favourable. The favourable conservation status of a species is achieved when:
  - population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats;
  - the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future; and
  - there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

Tables 2 and 3 lists the species and habitats that the SPA and the SAC are designed to protect. It is in relation to the conservation objective to maintain or restore these habitats or species that this assessment is made.

3.3 The Murrough SPA

The Murrough is listed as a Special Protected Area (SPA) and designated based on the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive (Table 2).

Table 2. The Murrough SPA Qualifying Interest – Species & Habitats

Code	Qualifying Interest	Objectives
A001	Red-throated Diver (Gavia stellata)	To maintain or restore the favourable conservation condition
A043	Greylag Goose (Anser anser)	To maintain or restore the favourable conservation condition
A046	Light-bellied Brent Goose (Branta bernicla hrota)	To maintain or restore the favourable conservation condition
A050	Wigeon (Anas penelope)	To maintain or restore the favourable conservation condition
A052	Teal (Anas crecca)	To maintain or restore the favourable conservation condition
A179	Black-headed Gull (Chroicocephalus ridibundus)	To maintain or restore the favourable conservation condition
A184	Herring Gull (Larus argentatus)	To maintain or restore the favourable conservation condition
A195	Little Tern (Sterna albifrons)	To maintain or restore the favourable conservation condition
A999	Wetland and Waterbirds	To maintain or restore the favourable conservation condition

The conservation objectives above form the basis of this assessment. In relation to conservation condition, the bar of "restore" is more difficult to achieve than "maintain". This will be considered should significant impacts be identified in relation to the habitats or species for which the site is selected.

This table should be read with information from the Article 17 reporting in respect of the Habitats Directive which indicates the status and trends of the designated species.

The Special Conservation Interests listed for The Murrough SPA details are as follows:

1. The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Red-throated Diver, Greylag Goose, Light-bellied Brent Goose, Wigeon, Teal, Black-headed Gull, Herring Gull and Little Tern. The E.U. Birds Directive pays particular attention to wetlands, and as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds.

2. It is probably the most important site in the country for nesting Little Tern. The regular occurrence of Red-throated Diver, Little Egret, Whooper Swan, Greenland White-fronted Goose, Golden Plover, Little Tern, Sandwich Tern, Short-eared Owl and Kingfisher is of note as these species are listed on Annex I of the E.U. Birds Directive.

3.4 The Murrough Wetlands SAC

The Murrough Wetlands SAC is listed as a Special Area of Conservation (SAC) and designated based on the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive (Table 3).

Table 3. The Murrough Wetlands SAC Qualifying Interest – Species & Habitats

Code	Qualifying Interest	Objectives
[1210]	Annual Vegetation of Drift Lines	To restore the favourable conservation condition
[1220]	Perennial Vegetation of Stony Banks	To restore the favourable conservation condition
[1330]	Atlantic Salt Meadows	To restore the favourable conservation condition
[1410]	Mediterranean Salt Meadows	To restore the favourable conservation condition
[7210]	Cladium Fens*	To restore the favourable conservation condition
[7230]	Alkaline Fens	To restore the favourable conservation condition

The conservation objectives above form the basis of this assessment. In relation to conservation condition, the bar of "restore" is more difficult to achieve than "maintain". This will be considered should significant impacts be identified in relation to the habitats or species for which the site is selected.

This table should be read with information from the Article 17 reporting in respect of the Habitats Directive which indicates the status and trends of the designated species.

The Special Conservation Interests listed for The Murrough Wetlands SAC details are as follows:

This site is of importance as it is the largest coastal wetland complex on the east coast of Ireland. Although much affected by drainage, it still contains a wide range of coastal and freshwater habitats, including six listed on Annex I of the E.U. Habitats Directive, some of which contain threatened plants. Areas on the site contain a rich invertebrate fauna, including

several rarities. It is an important site for both wintering and breeding birds and supports a variety of species listed on Annex I of the E.U. Birds Directive.

4. Direct and Indirect Impacts

Having outlined the proposed project and the details of the Natura 2000 sites, an assessment for possible impacts can be carried out following the document, "Assessment of plans and projects significantly affecting Natura 2000 sites- Methodology guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC, European Commission, 2002". The impact of the project on the conservation objectives of the selected Natura 2000 site must be examined in terms of both direct and indirect impact.

Direct impacts: Loss of habitats or loss of nesting/den sites.
For example, if the main habitat on site was heath and the footprint building resulted in loss of heath habitat that would fall into this category.

Indirect impacts: examples of indirect impacts are water pollution, light pollution, or noise pollution.

Annex I, II and III Species and Special Conservation Interest Habitats - Indirect Impacts

Red-throated Diver (*Gavia stellata*) [A001]

Greylag Goose (*Anser anser*) [A043]

Light-bellied Brent Goose (*Branta bernicla* hrota) [A046]

Wigeon (*Anas penelope*) [A050]

Teal (*Anas crecca*) [A052]

Black-headed Gull (*Chroicocephalus ridibundus)* [A179]

Herring Gull (*Larus argentatus*) [A184]

Little Tern (*Sterna albifrons*) [A195]

Special Conservation Interest Habitats - Indirect Impacts

Annual vegetation of drift lines [1210]

Perennial vegetation of stony banks [1220]

Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330]

Mediterranean salt meadows (*Juncetalia maritimi*) [1410]

Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae* [7210]

Alkaline fens [7230]

The footprint of the development does not overlap any of the Annex I, II and III habitats or Special Conservation Interest Habitats listed in tables 2 and 3. Therefore, no direct impacts are predicted.

Indirect Impacts - Construction Phase - Typical risks associated with this project:

The mobilisation of sediments, fuel spillage or leakage, and the use of concrete products during site works pose a risk of water pollution. This is particularly relevant to the rehabilitation of the proposed walkway where parking, machinery usage, fuel and concrete storage and use, and the removal of vegetation and debris from the site may contribute to these risks.

The rehabilitation works provide a mechanism by which pollution could enter the nearby protected area. Mitigation is proposed.

Table 4. Summary of Impacts on Habitats identified as within the Zone of Influence of the development. Blue highlights where impacts are predicted, and mitigation will follow.

Qualifying Interest	Direct Impacts	Indirect Impacts
Red-throated Diver (Gavia stellata) [A001] Greylag Goose (Anser anser) [A043] Light-bellied Brent Goose (Branta bernicla hrota) [A046] Wigeon (Anas penelope) [A050] Teal (Anas crecca) [A052] Black-headed Gull (Chroicocephalus ridibundus) [A179] Herring Gull (Larus argentatus) [A184] Little Tern (Sterna albifrons) [A195]	No direct impacts as the proposed development is outside the Natura 2000 network.	Indirect impacts such as pollution from hydrocarbons, cementitious products and sedimentation during construction phases.
Annual vegetation of drift lines [1210] Perennial vegetation of stony banks [1220] Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330] Mediterranean salt meadows (Juncetalia maritimi) [1410] Calcareous fens with Cladium mariscus and species of the Caricion davallianae [7210] Alkaline fens [7230]	No direct impacts as the proposed development is outside the Natura 2000 network.	Indirect impacts such as sedimentation, hydrocarbon pollution, invasive species, and decreased water quality during construction phases.

5. Mitigation

The main mitigation for this site would be:

1. CEMP – Construction Environmental Management Plan.
2. Physical Mitigation installed to protect water quality in the greater area.
3. On-site management to protect water courses.
4. Avoid interfering with the hydrology of site.

Construction Environmental Management Plan

An outline construction environmental management plan (CEMP) for the project should be prepared to further examine potential construction related impacts and develop appropriate mitigation measures to ensure no construction related impacts on the conservation objectives of the Murrough SAC and SPA.

Specifically, the outline CEMP and subsequent contractor CEMP should:

- Detail the establishment of a site compound for the storage of plant, machinery, and materials during the construction phase of the project. The CEMP must consider the location of the off-site compound with due regard for the receiving environment at the off-site location.
- Ensure all plant and machinery are refuelled at the off-site compound at the start of each working day.
- Ensure all plant and machinery are being regularly checked for leaks.
- Ensure no hydrocarbons will be stored at the project site.
- Ensure a spill kit is available at the project site for accidental leaks.
- Detail measures to ensure that construction or demolition debris removed from the embankments and the downstream riverbed do not enter the stream during works on the walkway.
- Detail measures to mitigate silt mobilisation and subsequent potential for runoff.
- Detail the roles and responsibilities of construction and associated staff regarding the protection of the receiving environment.

5.1 Construction/Rehabilitation Phase

The removal and disposal of wastewater from temporary welfare facilities in the construction compounds and throughout the site must be carried out by a fully permitted waste collector holding valid Waste Collection Permits as issued under the Waste Management (Collection Permit) Regulations, 2007.

To prevent small spillages or loose debris falling into watercourses, scaffolding and a bearing shelf with polythene sheeting canopy should be erected under scaffolds where they overly water and where required.

A 'leave no trace' policy should be adopted with education and awareness programmes to be implemented ensuring that littering does not develop into a significant issue.

5.2 Silt Management

The first step to prevent silt from entering protected habitats is to minimise the generation of silt laden runoff through planning of construction activities by working during clement weather and minimising the storage of sediment producing material. Where silt laden runoff is generated, it should be prevented from entering sensitive habitats. Specifically, the following actions should be taken:

- The minimum area necessary for an active work area will be identified, and there must be no access to works vehicles outside the fenced off areas. All works are to be located within the confines of these fences. No works should take place outside the fences to prevent damage to areas outside the necessary development footprint.
- Excavation, if required in places, should be undertaken during clement weather to minimise runoff.
- Where possible, minimise areas stripped of vegetation using a phased approach during construction.
- Avoid stockpiles of excavated material to control silt runoff.
- Backfilling shall, wherever practicable, be undertaken immediately after the specified operations preceding it have been completed.
- Silt fencing should be erected along the boundaries of the watercourse during the construction works. This will mitigate any sediment run-off resulting from excavations, debris removal from the embankments and the downstream riverbed and construction entering the adjacent body of water. A double layer of geotextile membrane is recommended for use.

5.3 Fuel and Oil Control

On-site refuelling must be carried out using a mobile, double-skinned fuel bowser.

Only designated, trained, and competent operatives should be authorised to refuel plant on site. Mobile measures such as drip trays and fuel absorbent mats must be used during all refuelling operations. Mobile fuel storage such as fuel bowsers, if used, should not be placed in proximity to the waterway.

5.4 Site drainage

Drainage activities in the catchment might lead to flash floods which can potentially damage Annex II species present on the SAC; therefore, the following mitigation is proposed:

- No direct discharges to water are to be made.
- Natural vegetation on verges of the proposed development must be preserved when possible, acting as a filter to any sediment laden runoff.
- Stockpiles of excavated materials should be small and must be surrounded with silt fencing to prevent any pathway to any sensitive receptors downstream.
- Silt fencing installed adjacent to the walkway under rehabilitation must remain in place until the works in that area have been completed.
- Whilst no significant silt laden run off is anticipated in this project, the site should be regularly monitored by construction staff for signs of run-off such as silt in surrounding vegetation. Measures will be put in place to prevent this and may include the provision

of an additional layer of silt fence. A silt fence may be constructed by attaching a double layer sheet of geotextile membrane to a stock fence and burying the bottom of the membrane into the ground, thus allowing water to pass through but not the heavier fraction of the sediment.

6. Statement of Impacts and Conclusion of NIS

The proposed site is outside the Natura 2000 network. Having considered all the habitats and species for which the nearby Natura 2000 sites are designated, it was concluded that the main risk was to water quality in the Newtownmountkennedy and Glendarragh Streams as well as to the Murrough SAC and SPA.

Mitigation was proposed to reduce this risk to water pollution to a non-significant level. This includes careful project management in respect of water protection and proper management of fuels and building materials.

The mitigation will be the responsibility of the grantee of planning and may be implemented through a contractor. The conclusion is that, with mitigation in place, no significant negative impacts on the conservation status of the Natura 2000 network and its associated habitats and species are anticipated as a result of this development.