PROVISION OF INFORMATION REGARDING APPROPRIATE ASSESSMENT SCREENING

PROPOSED FLOOD DEFENCE SCHEME,

ENNISCORTHY, CO. WEXFORD

Prepared for Mott MacDonald

on behalf of

Wexford County Council

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Scott Cawley, College House, Rock Road, Blackrock, Co. Dublin, Ireland

Tel+353(1)676-9815 Fax +353(1) 676-9816

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1 Introduction

The information in this report forms part of, and should be read in conjunction with the documentation accompanying the Environmental Impact Assessment (EIA) for the proposed Flood Defence Scheme (hereafter "the proposed scheme") in Enniscorthy, Co. Wexford.

This report, which contains information required for the competent authority to undertake a Stage One Screening for Appropriate Assessment (AA) in respect of the proposed scheme, was prepared by Scott Cawley Ltd. on behalf of the applicant. It provides information on and assesses the potential for the proposed scheme to significantly affect Natura 2000 sites (hereafter "European sites"[1]).

It is necessary that the competent authority has regard to Article 6 of the *Council Directive 92/43/EEC of 21 May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora* (as amended) (hereafter "the Habitats Directive"), the relevant obligations of which are transposed into Irish law.

A Stage Two AA is required if likely significant effects on European sites arising from a proposed scheme, either alone or in combination with other plans or projects, cannot be ruled out at the screening stage.

For the reasons set out in detail in this Stage 1 AA Screening Statement, the competent authority may determine that a Stage 2 Appropriate Assessment of the proposed scheme is required as it cannot be excluded, on the basis of objective information, that the proposed scheme, individually or in combination with other plans or projects, will have a significant effect on two European sites. Therefore, it is concluded that a Stage Two Appropriate Assessment is required in this instance. The information in the tables below provide a summary of the information gathered for this screening exercise and the conclusions.

2 Methodology

2.1 Authors' Qualifications & Expertise

This Natura Impact Statement (NIS) has been prepared jointly by Paul Scott and Maeve Maher-McWilliams of Scott Cawley Ltd.

Paul Scott is Director with Scott Cawley Ltd. He holds a first class honours degree in Environmental Biology from the University of Liverpool and a Masters in Pollution and Environmental Control at the University of Manchester. He is a Chartered Ecologist and Environmentalist and a full Member of the Chartered Institute of Ecology and Environmental Management. He is an experienced environmental scientist, specialising in impact assessment and ecology. He has experience in a wide variety of environmental assessment and management projects and also has acted as a member of environmental assessment Expert Panels. Mr Scott has prepared guidance on Strategic Environmental Assessment, Appropriate Assessment and Environmental Impact Assessment to UK and Irish central government and local authorities. He has prepared ecological guidance notes designed for planners and developers on behalf of the four Dublin local authorities. He has been involved in many Appropriate Assessments of complex projects and land-use plans including the Cherrywood SDZ, Meath and Clare County Development Plans, East Meath Local Area Plan and variations to the Meath, Navan, Kells, Galway, Dublin, Ennis and Kildare Development Plans. He developed a review package for Appropriate Assessment as part of the EPA STRIVE funded project Integrated Biodiversity Impact Assessment. He lectures on EIA and Appropriate Assessment practice at University College Dublin, Trinity College Dublin

[1] Natura 2000 sites are defined under the Habitats Directive (Article 3) as a European ecological network of special areas of conservation composed of sites hosting the natural habitat types listed in Annex I and habitats of the species listed in Annex II. The aim of the network is to aid the long-term survival of Europe's most valuable and threatened species and habitats. In Ireland these sites are designed as *European sites* - defined under the Planning Acts and/or Birds and Habitats Regulations as (a) a candidate site of Community importance, (b) a site of Community importance, (c) a candidate special area of conservation, (d) a special area of conservation, (e) a candidate special protection area, or (f) a special protection area. They are commonly referred to in Ireland as candidate Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).

and NUI Galway. Mr Scott was responsible for overall review and verification of this report and provided additional text where required.

Maeve Maher-McWilliams holds an honours degree in Biological Sciences from Queens University Belfast and attained a distinction in her Masters in Evolutionary and Behavioural Ecology from University of Exeter. She is an Associate member of Chartered Institute of Ecology and Environmental Management (CIEEM). Maeve has worked in ecological consultancy for over five years and has worked on a range of large to small scale projects across Ireland and the UK. Maeve's primary technical specialism is ornithology, however her skills extend to protected mammal and habitat surveys. Her involvement extends from inception to post planning compliance, survey completion, project and survey management, carrying out of Ecological Impact Assessment, and authoring of EIA Chapters and Appropriate Assessment. Maeve has a pragmatic and forward thinking approach in delivering services, while maintaining the highest protection and consideration for ornithological sensitivities. She regularly undertakes surveys and prepares AA and EcIA reports.

2.2 Guidance

This Screening Statement for Appropriate Assessment was prepared having regard to the following guidance documents here relevant:

- *Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities.* (Department of Environment, Heritage and Local Government, 2010 revision).
- *Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities.* Circular NPW 1/10 & PSSP 2/10.
- *Assessment of Plans and Projects Significantly Affecting Natura 2000 sites: Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC* (European Commission Environment Directorate-General, 2001); hereafter referred to as the EC Article 6 Guidance Document. The guidance within this document provides a non-mandatory methodology for carrying out assessments required under Article 6(3) and (4) of the Habitats Directive.
- *Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitat's Directive 92/43/EEC* (EC Environment Directorate-General, 2000 updated draft April 2015); hereafter referred to as MN2000.

2.3 Stage 1 Screening Methodology

The above referenced guidance documents set out a staged process for carrying out the assessments required under the Habitats Directive, the first stage of which is referred to as "*screening*". A screening for appropriate assessment of an application for consent for proposed development must be carried out by the competent authority to assess, in view of best scientific knowledge, if the proposed development, individually or in combination with another plan or project is likely to have a significant effect on any European site.

A Stage 2 Appropriate Assessment is required if it cannot be excluded, on the basis of objective information, that the proposed development, individually or in combination with other plans or projects, will have a significant effect on a European site. The first (Screening) stage for appropriate assessment operates merely to determine whether a (Stage 2) Appropriate Assessment must be undertaken on the implications of the plan or project for the conservation objectives of relevant European sites.

Screening for AA involves the following:

- Determining whether a project or plan is directly connected with or necessary to the conservation management of any European sites[2];

[2] In this instance the proposed development is not directly connected with or necessary to the conservation management of any European sites.

- Describing the details of the project/plan proposals and other plans or projects that may cumulatively affect any European sites;
- Describing the characteristics of relevant European sites; and
- Appraising likely significant effects of the proposed project on relevant European sites.

Other sources of information relied upon included the following information sources, which included maps, ecological and water quality data:

- Ordnance Survey of Ireland mapping and aerial photography available from www.osi.ie;
- Online data available on European sites as held by the National Parks and Wildlife Service (NPWS) from www.npws.ie;
- Information on land-use zoning from the online mapping of the Department of the Environment, Community and Local Government http://www.myplan.ie/en/index.html;
- Information on water quality in the area available from www.epa.ie;
- Information on the Eastern River Basin District from www.wfdireland.ie;
- Information on soils, geology and hydrogeology in the area available from www.gsi.ie;
- [Information on the location, nature and design of the proposed development supplied by the applicant's design team;
- Information on the status of EU protected habitats and species in Ireland (National Parks & Wildlife Service, 2013a & 2013b);
- Information on the conservation status of birds in Ireland (Colhoun & Cummins, 2014); and
- The Environmental Impact Assessment Report prepared for the proposed scheme (in particular Chapter 6 Biodiversity).

The following planning and policy documents were relevant to the subject lands, in particular with regard to the assessment of other plans and projects with potential for cumulative effects:

- *Wexford County Development Plan 2013 – 2019;*
- *Enniscorthy Town and Environs Development Plan 2008 – 2014 (as extended);*
- *Wexford County Council's Biodiversity Action Plan 2013 – 2018;* and
- *National Biodiversity Action Plan 2017 – 2021* (Department of Culture, Heritage and the Gaeltacht, 2011).

Table 1 Overview of the Proposed Scheme and its Receiving Environment	
Brief Site Description	The proposed scheme is located along the River Slaney in Enniscorthy town. The River Slaney flows from the Wicklow Mountains to Wexford Harbour, traversing several towns along its route. The proposed scheme works are centred around Enniscorthy town and start upstream at approximate National Grid Reference (NGR) S 97877 40784 and end downstream at approximate NGR S 97270 38415 (c. 3km long). The area supports a variety of habitats including woodland (scrub, hedgerows and treelines), grasslands and wetlands, as well as built structures and amenity habitats centred around Enniscorthy town. Land-uses include agricultural, recreational (including water-based activities), angling, forest, commercial, and residential use. The surrounding area includes similar habitat types of improved agricultural fields, hedgerows, scrub, marsh and wet grassland.
Features of the Surrounding Environment	Elements of the proposed scheme are located within two European sites, the Slaney River Valley SAC and the Wexford Harbour and Slobs SPA, from the desk study and field based surveys (Enniscorthy Flood Defence Scheme EIAR Chapter 6 Biodiversity), species and habitats for which these sites have been designated occur within the extent of the proposed scheme. The River Slaney is approx. 117km long and flows from its source in a southerly direction through Co. Wicklow, Co. Carlow and Co. Wexford before entering the Irish Sea at Wexford Harbour, draining a catchment of 1631km^2. Downstream of Enniscorthy the River Slaney enters a 19km long estuary before discharging into Wexford Harbour at Wexford town. This transitional water is divided in to the Upper Slaney Estuary and the Lower Slaney Estuary. Wexford Harbour is an extensive, shallow estuary which dries out considerably at low tide exposing large expanses of mudflats and sandflats. Ecological monitoring of the River Slaney has been carried out since the 1970's. According to EPA Envision mapping, the most recent sampling carried out in 2013 recorded macroinvertebrate fauna that indicated a *'High Ecological Status'* in the upper reaches of the river, with a sharp decline to '*Poor Ecological Status'* in a monitoring station downstream of Baltinglass and further declines in seven monitoring stations downstream to Kilcarry Bridge. However, all monitoring stations downstream of Bunclody were found to be in *'Good Ecological Status'*, one of which improved from a moderate status in 2010. The Upper Slaney Estuary (freshwater tidal) is currently assigned '*Good Ecological Status'* while the Lower Slaney Estuary (transitional) is assigned *'Poor Ecological Status'*. The groundwater body of the River Slaney includes mostly *'poorly productive bedrock'* with *'productive fissured bedrock'* at Enniscorthy where the proposed scheme is located. North of the *'productive fissured bedrock'* groundwater has been scored as *'possibly at risk of not achieving good status'* and south of the *'productive fissured bedrock'* is *'expected to achieve good status'*. Corresponding with the area of *'productive fissured bedrock'* the groundwater score is *'at risk of not achieving good status'*.

Description of Proposed Scheme	Full details of the proposed scheme are provided in the EIA Chapter 4 Description of the Proposed Works. In brief the proposed scheme includes the following;
	
	• For increase flood conveyance works include;
	  ○ River Excavation and Dredging
	  ○ River Widening

Table 1 Overview of the Proposed Scheme and its Receiving Environment	
	○ Sediment deposition zone/ Debris Trap ○ Flow deflectors ○ Compound Channel • For flood defences works include; ○ Flood Protection walls including glass inserts ○ Raising Roads/Ground levels ○ Pumping Storm Waters from behind the Flood Defences ○ Removal and Alteration of Specific Obstructions ○ Underpinning of Enniscorthy Bridge • Construction of a new road bridge across the River Slaney and approach roads; and • Construction of new pedestrian bridge within the town. Surface water runoff generated from the new elements of the proposed scheme will drain into the existing local drainage network and will ultimately discharge into the River Slaney. Surface water run-off generated from the new road bridge and approach roads will be treated by petrol interceptors before any discharge to the River Slaney.
Defining the zone of influence of the proposed Scheme	The zone of influence is a distance within which the proposed works could potentially affect the conservation condition of Qualifying Interest (QI) habitats or species. There is no set recommended distance for which European sites are considered as being relevant (*i.e.* within the zone of influence of proposed works) for this report. Available guidance (NPWS, 2010) recommends that 'the distance should be evaluated on a case-by-case basis with reference to the nature, size and location of the project, and the sensitivities of the ecological receptors, and the potential for in combination effects'. As a general rule of thumb, it is often considered appropriate to examine all European sites within 15km as a starting point. In some instances, where there are far reaching hydrological/hydrogeological connections, a whole river catchment or a groundwater aquifer may need to be included in determining the zone of influence. All European sites within 15km of the proposed works are listed in Table 2 below and shown on Figure 1. In this case the distance of 15km does not cover the extent of the potential zone of influence of the proposed works and the entire downstream environment of the River Slaney has been included in the zone of influence.
Potential pressures on European sites as a result of the proposed development	**Existing habitat loss pressures** The proposed scheme is located within two European sites. Annex 1 habitats that support QI and Special Conservation Interest (SCI) species will be directly or indirectly altered or lost to the proposed scheme. Full details of associated mitigation and compensation is included in the EIA and NIS report. Cumulative effects relating to habitat loss will need to be considered.

Table 1 Overview of the Proposed Scheme and its Receiving Environment	
	Existing pressures on water quality within European sites in proximity to the site The River Slaney catchment is at risk from numerous threats and pressures such as diffuse agricultural pollution, acute pollution from waste water treatment facilities, water abstractions and morphological impacts from drainage works. Some of the habitats for which European sites listed in Table 2 are designated are failing to meet favourable conservation status. For some of these, diffuse surface water pollution from agricultural and forestry activities, fertilisation, cultivation and forestation of lands, aquaculture and encroachment of urbanisation have been listed as '*high importance*' threats, pressures and activities with impacts on the site, some of affect the water quality within European sites (NPWS, 2013a).
Other existing or proposed plans or projects nearby which may lead to cumulative effects on European sites.	**Cumulative Water Quality Pressures** *Cumulative surface water pressures* The baseline environment of receiving surface waters for the proposed scheme (River Slaney) has been described under the heading 'Features of the Surrounding Environment' this report. The River Slaney waters are currently of *'good'* WFD status, although have been scored as '*at risk of not achieving good status'*. Wastewater outflows, runoff from intensive agricultural enterprises, a meat factory at Clohamon, a landfill site adjacent to the river, and further industrial development upstream in Enniscorthy and in other towns could all have potential adverse impacts on the water quality unless they are carefully managed. In addition, the spread of exotic species is reducing the quality of the woodlands (NPWS 2015). The proposed scheme may produce additional surface water run-off compared to current levels as a result of an increased area of hard artificial surfaces from the new road bridge, approach roads and new pedestrian bridge, however, it is not expected to result in significantly increased surface water run-off entering the River Slaney. *Cumulative foul water pressures* The proposed development will not result in the discharge of any foul waters.

European sites within 1km, 5km and 15km of the proposed scheme site are shown in Figure 1 overleaf.

Table 2 Analysis of European sites within 15km.			
Site name and code	**Distance from Proposed Scheme (approximate)**	**Reasons for designation[3] (*= Priority Habitat)** **(Sourced from NPWS online Conservation Objectives Generic Version 3.0 for SACs and 4.0 for SPAs, unless otherwise stated).**	**Relevant source-pathway-receptor links between proposed scheme and European site?** No sites are "Relevant" to the proposed scheme. (European sites are "Relevant" where a relevant source-pathway-receptor link[4] exists).
Special Areas of Conservation			
Slaney River Valley cSAC [000781]	Proposed scheme within designation	**Conservation objectives: Slaney River Valley SAC [000781] Version 1.0 (21/10/2011)** **Annex I Habitats:** • Estuaries [1130] • Mudflats and sandflats not covered by seawater at low tide [1140] • Atlantic salt meadows (*Glauco-puccinellietalia maritimae*) [1330] • Mediterranean salt meadows (*Juncetalia maritimi*) [1410] • Water courses of plain to montane levels with *Ranunculion fluitantis* and *Callitricho-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] • *Petromyzon marinus* (Sea lamprey) [1095]	Yes, there is linkage between the proposed development and the European site, the proposed development is located within the European site and significant effects on Qualifying Interests (QIs) cannot be ruled out in view of the relevant conservation objectives. Although there is potential linkage with all QI habitats and species through hydrological means, it is considered that the following QI habitats are not at risk of significant impacts from the proposed scheme; estuaries [1130], mudflats and sandflats not covered by seawater at low tide [1140], Atlantic salt meadows [1330], and Mediterranean salt meadows [1410]. These habitats are located over 15km downstream of the proposed scheme (NPWS 2011b). Hjulstrom analysis and sediment analysis deposition of the sediment is predicted to be localised and expected to settle at a maximum

[3] "Qualifying Interests" for SACs and "Special Conservation Interests" for SPAs based on relevant Statutory Instruments for each SPA, and NPWS Conservation Objectives for SACs downloaded from www.npws.ie in September 2016.

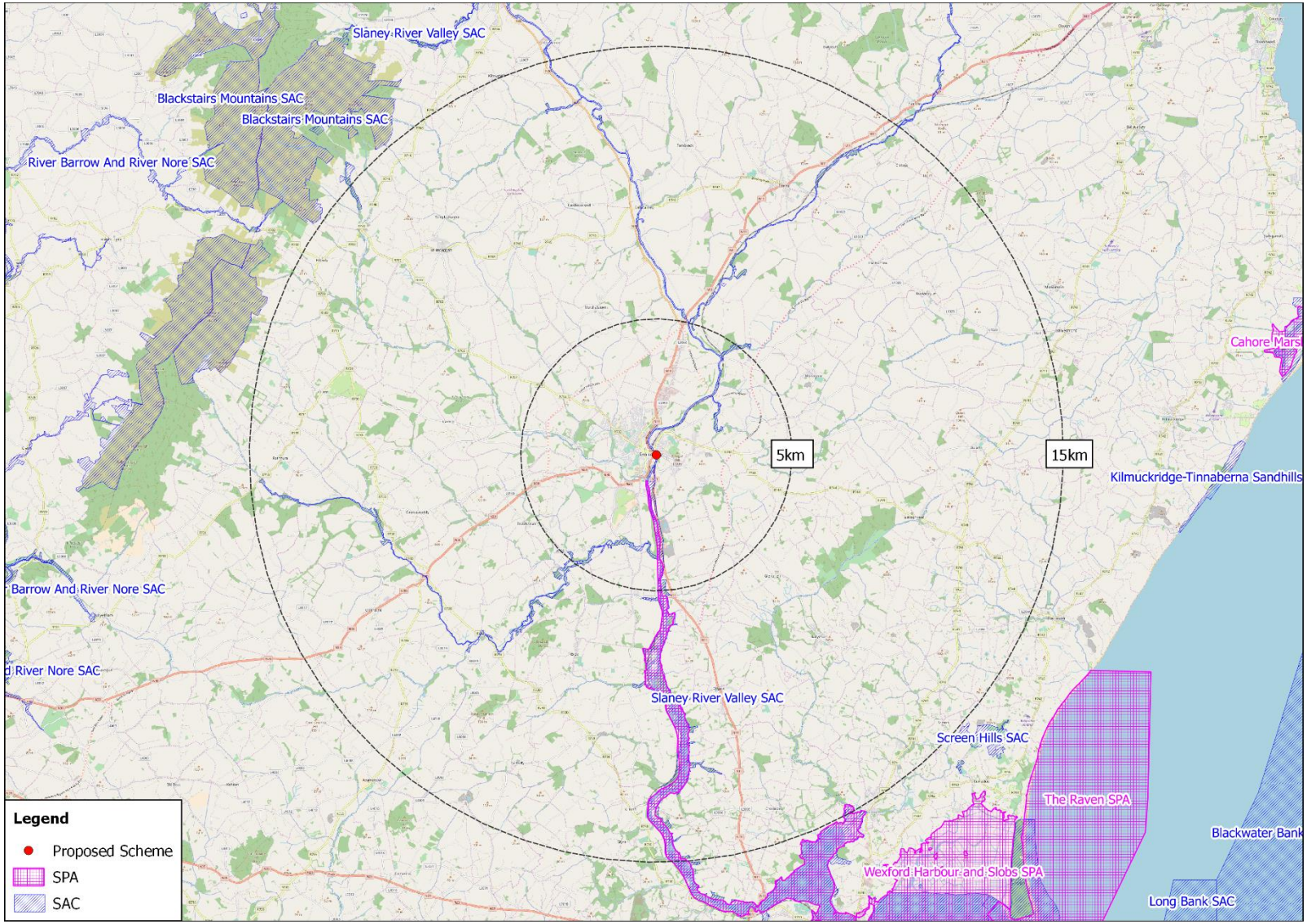
[4] For significant effects to arise, there must be a risk enabled by having a 'source' (*e.g.* construction works at a proposed development site), a 'receptor' (*e.g.* a SAC), and a pathway between the source and the receptor (*e.g.* a watercourse connecting a proposed development site to a SAC). The identification of a pathway does not automatically mean significant effects will arise. The likelihood for significant effects will depend upon the characteristics of the source (*e.g.* duration of construction works), the characteristics of the pathway (*e.g.* water quality status of watercourse receiving run-off from construction) and the characteristics of the receptor (*e.g.* the ecology including conservation status of the SAC reason for designation). When expert judgment determines, that significant effects are likely to arise, both the pathway, and the European site are considered "Relevant", and an Appropriate Assessment is triggered.

Table 2 Analysis of European sites within 15km.			
		• *Lamptera planeri* (Brook lamprey) [1096] • *Lamptera fluviatilis* (River lamprey) [1099] • *Alosa fallax fallax* (Twaite shad) [1103] • *Salmo salar* (Salmon) [1106] • *Lutra lutra* (Otter) [1355] • *Phoca vitulina* (Harbour seal) [1365]	0.5km-2km from the works area, fine (silt-sand) sediments are consistently transported by the river. Anny pollutants generated during the construction of operation of the scheme would have a substantial distance to travel before reaching these QI habitats, where any pollutants are expected to have been captured in pollution control measures in the area of works or will have significantly diluted or filtered out before reaching these QI habitats. Similarly, the QI species harbour seal (*Phoca vitulina*) [1365] was recorded very occasionally, on three occasions during baseline surveys, on an *ad hoc* basis within the survey area of the proposed scheme. Known breeding sites, moulting and resting haul-out sites are located *c.*20km downstream of the proposed scheme in Wexford Harbour (NPWS 2011b). There is no risk of significant impacts from the proposed scheme on this QI species. QI species and habitats recorded during baseline surveys and occurring within the zone of influence of the proposed scheme and therefore at risk from likely significant effects include; floating river vegetation [3260], old oak woodland [91A0], alluvial woodland [91E0], freshwater pearl mussel [1029], Sea lamprey [1095], Brook lamprey [1096], River lamprey [1099], Twaite shad [1103], Atlantic salmon [1106] and otter [1355].
Screen Hills cSAC [000708]	Located *c.* 13.2km southeast	**Conservation objectives Generic Version 5.0 (15/08/2016)** **Annex I Habitats:** • Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*) [3110]	No, there are no linkages between the proposed development and the European site, as none of the QI habitats for which the European site have been designated occur within the subject lands. The

Table 2 Analysis of European sites within 15km.			
		• European dry heaths [4030]	subject lands are not connected to the European site via hydrological features or semi-natural habitats.
Blackstairs Mountain cSAC [000770]	Located *c.* 13.5km northwest	**Conservation objectives Generic Version 5.0 (15/08/2016)** **Annex I Habitats:** • Northern Atlantic wet heaths with *Erica tetralix* [4010] • European dry heaths [4030]	No, there are no linkages between the proposed development and the European site, as none of the QI habitats for which the European site have been designated occur within the subject lands. The subject lands are not connected to the European site via hydrological features or semi-natural habitats.
Special Protection Areas			
Wexford Harbour and Slobs SPA [004076]	Proposed Scheme within designation	**Conservation objectives: Wexford Harbour and Slobs SPA [004076]. Version 1.0 (21/03/2012)** • Little Grebe (*Tachybaptus ruficollis*) [A004] • Great Crested Grebe (*Podiceps cristatus*) [A005] • Cormorant (*Phalacrocorax carbo*) [A017] • Grey Heron (*Ardea cinerea*) [A028] • Bewick's Swan (*Cygnus columbianus bewickii*) [A037] • Whooper Swan (*Cygnus cygnus*) [A038] • Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] • Shelduck (*Tadorna tadorna*) [A048] • Wigeon (*Anas penelope*) [A050] • Teal (*Anas crecca*) [A052] • Mallard (*Anas platyrhynchos*) [A053] • Pintail (*Anas acuta*) [A054] • Scaup (*Aythya marila*) [A062]	Yes, there is linkage between the proposed development and the European site, an extent of the proposed scheme is within the SPA. A resident breeding population of grey heron were recorded in nationally-important numbers within the survey area and zone of influence of the proposed scheme during bird surveys carried out in 2016 and 2017. The following SCI species were also recorded during baseline bird surveys carried out for the proposed scheme; Little Grebe, Great Crested Grebe, Cormorant, Grey Heron, Whooper Swan, Wigeon, Teal, Mallard, Lapwing, Redshank, Black-headed Gull and Lesser Black-backed Gull. As a result significant effects from the proposed scheme on the European site SCIs cannot be ruled out.

Table 2 Analysis of European sites within 15km.			
		• Goldeneye (*Bucephala clangula*) [A067] • Red-breasted Merganser (*Mergus serrator*) [A069] • Hen Harrier (*Circus cyaneus*) [A082] • Coot (*Fulica atra*) [A125] • Oystercatcher (*Haematopus ostralegus*) [A130] • Golden Plover (*Pluvialis apricaria*) [A140] • Grey Plover (*Pluvialis squatarola*) [A141] • Lapwing (*Vanellus vanellus*) [A142] • Knot (*Calidris canutus*) [A143] • Sanderling (*Calidris alba*) [A144] • Dunlin (*Calidris alpina*) [A149] • Black-tailed Godwit (*Limosa limosa*) [A156] • Bar-tailed Godwit (*Limosa lapponica*) [A157] • Curlew (*Numenius arquata*) [A160] • Redshank (*Tringa totanus*) [A162] • Black-headed Gull (*Chroicocephalus ridibundus*) [A179] • Lesser Black-backed Gull (*Larus fuscus*) [A183] • Little Tern (*Sterna albifrons*) [A195] • Greenland White-fronted Goose (*Anser albifrons flavirostris*) [A395] • Wetland and Waterbirds [A999]	

Figure 1. All European sites within 15km of the site



3 Conclusions of the Screening Assessment

Following an examination, analysis and evaluation of the relevant information, including in particular, the nature of the proposed works and their potential relationship with European sites, as well as considering other plans and projects, and applying the precautionary principle, it is the professional opinion of the authors of this report that it can be concluded, on the basis of objective information, that the proposed scheme, individually or in combination with other plans or projects, will have a significant effect on a European site.

As likely significant effects on European sites have been identified during this AA Screening process, a separate Natura Impact Statement has been prepared.

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