Noeleen Roche

Subject: FW: DAS Permit S0021-01 - Ringaskiddy - Request for amendment to Condition 2.2

Attachments: POC_Feb 2015_Revised_Screening_Statement.pdf; POC_Feb 2015 _Revisions_to_EIS.PDF; S0021-01 April 2017-Condition 2 2 removal - Screening Report V4.pdf; Letter to EPA Condition 2 2 V5.pdf

From: Suzanne Wylde
Sent: 24 April 2017 09:02
To: Noeleen Roche; Karen Creed; Breen Higgins
Subject: Fwd: DAS Permit S0021-01 - Ringaskiddy - Request for amendment to Condition 2.2

Subject: DAS Permit S0021-01 - Ringaskiddy - Request for amendment to Condition 2.2

Suzanne

Please find attached request for amendment to Condition 2.2 of the Dumping at Sea Permit Reg S0021-01, together with accompanying information.

I trust this is in order, however if you have any queries please do not hesitate to contact me.

Kind Regards

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Our Ref: IBM0575-03/KG/23
Your Ref: S0021-01

20 April 2017

Suzanne Wylde
Environmental Protection Agency
PO Box 3000
Johnstown Castle Estate
County Wexford
Ireland

Dear Suzanne,

RE: Application for Technical Amendment to Condition 2.2 of Dumping at Sea Permit, Reg. No. S0021-01

We refer to the Dumping at Sea Permit, dated the 22nd July 2015, for works at Ringaskiddy. Condition 2.2 of this permit states, *"Loading and dumping shall be carried out during daytime only."*

We note that our original application, which included an EIS, a screening for an appropriate assessment and a Natura Impact Statement (NIS), as submitted to the EPA in October 2014 assessed environmental impacts of continuous dredging and dumping operations. The 2014 EIS and NIS stipulated that the proposed project which assessed continuous dredging and dumping operations, would be constructed in accordance with best practise NPWS '*Guidance to manage the risk to marine mammals from man-made sound sources in Irish waters*' (DAHG, 2014).

The 2014 EIS and NIS that accompanied the October 2014 Dumping at Sea application were subsequently revised in February 2015 in response to a request by An Bord Pleanála for further information dealing with, *inter alia*, disposal of dredge material at sea, (approved by Dumping at Sea Permit, Reg. No. S0021-01). For completeness, please find enclosed those documents which were revised in February 2015 and submitted to An Bord Pleanála at that time.

We have prepared a screening for appropriate assessment report which considers the proposed technical amendment to remove condition 2.2 of DAS Permit S0021-01 alone, and in combination with other projects. This report concludes that removal of condition 2.2 will not likely give rise to significant effects on the qualifying interests of any European site.

We would therefore respectively request that condition 2.2 is removed from the permit.

We trust this is in order, however if you have any queries please do not hesitate to contact the undersigned.

Yours sincerely
for **RPS Consulting Engineers**

Kelly Guiney

cc **Henry Kingston** **Port of Cork**
Tim Murphy **Port of Cork**
John Geoghegan **Port of Cork**
Mark McConnell **RPS**

Proposal to change permitted loading and dumping at sea activities

Ringaskiddy Port Redevelopment

April 2017

Screening for Appropriate Assessment

Co-financed by the European Union
Connecting Europe Facility

Co-financed by the European Union
Trans-European Transport Network (TEN-T)

TABLE OF CONTENTS

1 INTRODUCTION

This report has been prepared by RPS on behalf of the Port of Cork (POC). The purpose of this report is to document the evaluation and analysis that RPS has undertaken on behalf of POC to establish whether or not a proposal to remove condition 2.2 of DAS Permit S0021-01 allowing loading of dredged material from Ringaskiddy and dumping in the Western Celtic Sea is likely to have a significant effect on any European site.

This exercise considers the proposal to remove condition 2.2 and has been undertaken in view of best scientific knowledge and in view of the conservation objectives of the site(s) concerned.

1.1 GUIDANCE DOCUMENTS

Appropriate Assessment Guidelines for Planning Authorities have been published by the Department of the Environment Heritage and Local Government (DEHLG, 2010a). In addition to the advice available from the Department, the European Commission has published a number of documents which provide a significant body of guidance on the requirements of Appropriate Assessment, most notably including, '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' (EC, 2001), which sets out the principles of how to approach decision making during the process.

These principal national and European guidelines have been followed in the preparation this screening for appropriate assessment report. The following list identifies these and other pertinent guidance documents:

- Communication from the Commission on the Precautionary Principle., Office for Official Publications of the European Communities, Luxembourg (EC, 2000a);
- Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC, Office for Official Publications of the European Communities, Luxembourg (EC, 2000b);
- Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Articles 6(3) and (4) of the Habitats Directive 92/43/EEC. Office for Official Publications of the European Communities, Brussels (EC, 2001);
- Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC – Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the commission; (EC, 2007);
- Estuaries and Coastal Zones within the Context of the Birds and Habitats Directives - Technical Supporting Document on their Dual Roles as Natura 2000 Sites and as Waterways and Locations for Ports. European Commission (EC, 2009);
- Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities. Department of the Environment, Heritage and Local Government, Dublin (DEHLG, 2010a);
- Department of Environment Heritage and Local Government Circular NPW 1/10 and PSSP 2/10 on Appropriate Assessment under Article 6 of the Habitats Directive – Guidance for Planning Authorities (DEHLG, 2010b);
- Guidance document on the implementation of the birds and habitats directive in estuaries and coastal zones with particular attention to port development and dredging. European Commission (EC, 2011a);
- European Commission Staff Working Document 'Integrating biodiversity and nature protection into port development' (EC, 2011b);
- Marine Natura Impact Statements in Irish Special Areas of Conservation: A working document, National Parks and Wildlife Service, Dublin (NPWS, 2012);

- Interpretation Manual of European Union Habitats. Version EUR 28. European Commission (EC, 2013); and

1.2 APPROACH USED IN THIS REPORT

EC (2000a) notes that the implementation of an approach based on the precautionary principle should start with a scientific evaluation, as complete as possible, and where possible, identifying at each stage the degree of scientific uncertainty, and also that decisions taken based on the precautionary principle should be maintained so long as scientific information is incomplete or inconclusive. EC (2001) notes also that predicting the response of a receptor to a disturbance effect can be difficult and, in the absence of firm scientific information, requires a precautionary approach.

In accordance with EC (2001) guidance, this screening exercise has not taken into consideration mitigation measures designed to reduce the environmental impacts on European sites, of the proposal to remove condition 2.2.

The threshold for a likely significant effect is treated in the screening exercise as being above a *de minimis* level. A *de minimis* effect is a level of risk that is too small to be concerned with when considering ecological requirements of an Annex I habitat or a population of Annex II species present on a European site necessary to ensure their favourable conservation condition. If low level effects on habitats or individuals of species are judged to be in this order of magnitude and that judgment has been made in the absence of reasonable scientific doubt, then those effects are not considered to be likely significant effects.

This report takes into consideration the specialist assessments associated with the allied EIS for the Ringaskiddy Port Redevelopment Project (RPRP), and considers that any mitigation measures proposed therein and conditioned to the already permitted development, form an intrinsic part of the permitted development.

The most up-to-date Conservation Objectives (COs) available have been applied to the assessment conducted in this report and are clearly identified by their date of publication (or otherwise) on a site-by-site basis in this report.

2 DREDGING AND DUMPING ACTIVITIES

2.1 PERMITTED DEVELOPMENT

The development permitted by DAS permit S0021-01 is the dumping at sea of 457,500 wet weight tonnes of seabed material dredged from Ringaskiddy Basin.

Loading activities are permitted between 1st September and 30th April annually.

Dumping activities are not permitted in the months of November and February annually.

Loading and dumping of dredged material from Ringaskiddy East shall be completed by 31st December 2018.

Loading and dumping of dredged material from Ringaskiddy West shall be completed by 31st December 2020.

Loading and dumping activities shall be carried out during daytime only. This is condition 2.2 of the permit, and POC seeks removal of this condition.

The permit holder shall appoint a suitably qualified and experienced Marine Mammal Observer (MMO) to record, monitor and protect marine mammals while the permitted activity is ongoing.

The MMO shall liaise with and meet the monitoring and reporting requirements of the NPWS. Full reporting on MMO operations and mitigation undertaken should be made to relevant staff in the Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs within 1 month of completion. The report shall also be submitted to the EPA as part of the Annual Environmental Report.

The development permitted by planning permission PA0035 includes a condition that a MMO conducts their activities in accordance with 'Guidance to manage the risk to marine mammals from man-made sound sources in Irish waters' (NPWS, 2014), and that the MMO recording, monitoring and protection function shall be carried out during dredging and disposal operations.

Taken together, the development and activities as approved by S0021-01 and PA0035 comprise the permitted RPRP.

2.2 PROPOSED DEVELOPMENT

A second Dumping at Sea application has been made, and has yet to be determined. DAS application S0021-02 seeks consent for an additional dumping at sea of 24,000 wet weight tonnes of seabed material dredged from Ringaskiddy Basin.

2.3 PROJECT NOW BEING ASSESSED

POC seeks to have condition 2.2 of DAS Permit S0021-01 removed. Condition 2.2 states that "*Loading and dumping activities shall be carried out during daytime only*".

This is the proposed development, or the project which is to be assessed. It is a request to change a condition of permitted operations. No other works, activities, amendments, changes or operations are proposed.

3 EUROPEAN SITES CONSIDERED

Three European Sites are described in Table 2 and illustrated in Figure 1.

Table 2: European Sites located within 16km Buffer zone of Ringaskiddy Port and Disposal at Sea site

Code	Site	Distance
SPA Code 004030	Cork Harbour SPA	Monkstown Creek component of SPA is located 770m NW of the new mooring dolphins and 800m NW of the additional area to be dredged for optimised berth geometry. The area of proposed marine works is located 110m NNE of existing mooring dolphins upon which the Deepwater berth Common Tern colony breeds each summer.
SPA Code 004022	Ballycotton Bay SPA	The SPA is located 29km by sea from the proposed alterations, and 16km by sea from the marine dump site off Roches Point.
SAC Code 001058	Great Island Channel SAC	The SAC is located 5.5km north of the proposed alterations.

Details in relation to the qualifying features of the Cork Harbour SPA, Ballycotton Bay SPA and Great Island Channel SAC are described in Tables 3 – 5 respectively. The information contained in these tables is based on publicly available data on these European Sites, sourced from NPWS. Site specific Conservation Objectives for Cork Harbour SPA were published in December 2014; for Ballycotton Bay SPA in August 2014 and for Great Island Channel SAC in June 2014.

Natura 2000 Standard Data Forms for these European sites were also reviewed. This information is further supplemented by the findings in Ireland's Article 17 Report to the European Commission's '*The Status of EU Protected Habitats and Species in Ireland*' (NPWS, 2013) as summarised in Table 6; the Cork Harbour SPA Conservation Objectives Supporting Document (v1) published in November 2014; and a Programme of measures by Ireland to ensure full compliance with the CJEU Judgment in Case C 418/04 (DAHG, 2015).

3.1 CORK HARBOUR SPA (SITE CODE 004030)

The site has twenty-four qualifying interests as noted in Table 3.

Table 3: Cork Harbour SPA Qualifying Features

Cork Harbour SPA [IE0004030] SCIs		Season	Qualifying Population[1]
[A004]	Little Grebe Tachybaptus ruficollis	Wintering	68 individuals
[A005]	Great Crested Grebe *Podiceps cristatus*	Wintering	218 individuals
[A017]	Cormorant *Phalacrocorax carbo*	Wintering	620 individuals
[A028]	Grey Heron *Ardea cinerea*	Wintering	47 individuals
[A048]	Shelduck *Tadorna tadorna*	Wintering	1426 individuals
[A050]	Wigeon *Anas penelope*	Wintering	1750 individuals
[A052]	Teal *Anas crecca*	Wintering	807 individuals
[A056]	Pintail *Anas acuta*	Wintering	84 individuals
[A065]	Shoveler *Anas cylpeata*	Wintering	135 individuals
[A069]	Red-breasted Merganser *Mergus serrator*	Wintering	90 individuals
[A130]	Oystercatcher *Haematopus ostralegus*	Wintering	791 individuals
[A140]*	Golden Plover *Pluvialis apricaria*	Wintering	805 individuals
[A141]	Grey Plover *Pluvialis squatarola*	Wintering	66 individuals
[A142]	Lapwing *Vanellus vanellus*	Wintering	3614 individuals
[A149]	Dunlin *Calidris alpine*	Wintering	4936 individuals
[A156]	Black-tailed Godwit *Limosa limosa*	Wintering	412 individuals
[A157]*	Bar-tailed Godwit *Limosa lapponica*	Wintering	45 individuals
[A160]	Curlew *Numenius arquata*	Wintering	1345 individuals
[A162]	Redshank *Tringa totanus*	Wintering	1614 individuals
[A179]	Black-headed Gull *Larus ridibundus*	Wintering	948 individuals

Cork Harbour SPA [IE0004030] SCIs		Season	Qualifying Population[1]
[A182]	Common Gull *Larus canus*	Wintering	2630 individuals
[A183]	Lesser Black-backed Gull *Larus fuscus*	Wintering	261 individuals
[A193]*	Common Tern *Sterna hirundo*	Breeding	69 pairs
[A999]	Wetlands & Waterbirds		2,587 ha (NPWS estimate)
Key to Table [1]As obtained from Standard Natura Data Form.			

Cork Harbour is a large, sheltered bay system, with several river estuaries (Rivers Lee, Douglas, Owenboy and Owennacurra). The SPA site comprises most of the main intertidal areas of Cork Harbour, including all of the North Channel, the Douglas River Estuary, inner Lough Mahon, Monkstown Creek, Lough Beg, the Owenboy River Estuary, Whitegate Bay and the Rostellan and Poulnabibe inlets. Conservation Objectives for Cork Harbour SPA have not been updated to reflect the additional overwintering assemblage of Ringabella Creek, an additional subsite of Cork Harbour SPA added to the Natura 2000 network in late 2015. This narrow estuary is located downstream of Minane Bridge and is located 6km south of Ringaskiddy Port.

Conservation objectives for the 22 no. wintering species are to maintain the favourable conservation conditions of the species in Cork Harbour SPA as measured by two attributes and targets.

> *Population Trend*: The long term population trend is stable or increasing.
> *Distribution*: No significant decrease in the range, timing or intensity of use of areas by the species, other than that occurring from natural patterns of variation.

The conservation objectives for the wetlands is to maintain the favourable conservation conditions of the wetland habitat in Cork Harbour SPA as a resource for the regularly-occurring migratory waterbirds that utilise it, as measured by the following attribute and target.

> *Habitat Area:* The permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 2,587 hectares, other than that occurring from natural patterns of variation.

Conservation objectives for the breeding Common Tern are to maintain the favourable conservation conditions of the species in Cork Harbour SPA as measured by the following six attributes and targets.

> *Breeding population abundance*: apparently occupied nests (AONs): No significant decline.
> *Productivity rate*: fledged young per breeding pair: No significant decline.
> *Distribution*: breeding colonies: No significant decline.
> *Prey biomass available:* No significant decline.
> *Barriers to connectivity:* No significant increase.
> *Disturbance at breeding site:* Human activities should occur at levels that do not adversely affect the breeding common tern population.

3.2 BALLYCOTTON BAY SPA (SITE CODE 004022)

The site has twelve qualifying interests as noted in Table 4.

Table 4: Ballycotton Bay SPA Qualifying Features

Ballycotton Bay SPA [IE0004022] SCIs		Season	Qualifying Population[1]
[A052]	Teal *Anas crecca*	Wintering	903 individuals
[A056]	Ringed Plover *Charadrius hiaticula*	Wintering	167 individuals
[A140]*	Golden Plover *Pluvialis apricaria*	Wintering	2383 individuals
[A141]	Grey Plover *Pluvialis squatarola*	Wintering	124 individuals
[A142]	Lapwing *Vanellus vanellus*	Wintering	2782 individuals
[A156]	Black-tailed Godwit *Limosa limosa*	Wintering	136 individuals
[A157]*	Bar-tailed Godwit *Limosa lapponica*	Wintering	175 individuals
[A160]	Curlew *Numenius arquata*	Wintering	853 individuals
[A162]	Turnstone *Arenaria interpres*	Wintering	179 individuals
[A182]	Common Gull *Larus canus*	Wintering	584 individuals

Ballycotton Bay SPA [IE0004022] SCIs		Season	Qualifying Population[1]
[A183]	Lesser Black-backed Gull *Larus fuscus*	Wintering	1293 individuals
[A999]	Wetlands & Waterbirds		281ha (NPWS estimate)
Key to Table [1]As obtained from Standard Natura Data Form.			

Ballycotton Bay is an east-facing coastal complex. The site comprises two sheltered inlets which receive the flows of several small rivers. The principal habitat within the site is inter-tidal sand and mudflats. The inter-tidal flats provide the main feeding habitat for the wintering birds. Sandy beaches are well represented, and salt marshes fringe the flats in the sheltered inlets and these provide high tides roosts.

Conservation objectives for the 11 no. wintering species are to maintain the favourable conservation conditions of the species in Ballycotton Bay SPA as measured by two attributes and targets.

> *Population Trend*: The long term population trend is stable or increasing.
> *Distribution*: No significant decrease in the range, timing or intensity of use of areas by the species, other than that occurring from natural patterns of variation.

The conservation objective for the wetlands is to maintain the favourable conservation conditions of the wetland habitat in Ballycotton Bay SPA as a resource for the regularly-occurring migratory waterbirds that utilise it, as measured by the following attribute and target.

> *Habitat Area:* The permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 281 hectares, other than that occurring from natural patterns of variation.

3.3 GREAT ISLAND CHANNEL SAC (SITE CODE 001058)

The site has four Features of Interest[1] as noted in Table 5.

Table 5: Features of Interest within the Great Island Channel SAC

Code	Feature
[1130]	Estuaries
[1140]	Mudflats and sandflats not covered by seawater at low tide
[1320]	Spartina swards (Spartinion maritimae)
[1330]	Atlantic salt meadows (Glauco-Puccinellietalia maritimae)

The Great Island Channel stretches from Little Island to Midleton, and is an integral part of Cork Harbour. Great Island Channel forms the eastern stretch of the river basin and, compared to the rest of Cork Harbour, is relatively undisturbed. Within the site is the estuary of the Owennacurra and Dungourney Rivers. These rivers, which flow through Midleton, provide the main source of freshwater to the North Channel.

The conservation objective for Great Island Channel SAC is to maintain or restore the favourable conservation condition of two Annex I habitat types; being 'Mudflats and sandflats not covered by seawater at low tide', and 'Atlantic salt meadows (Glauco-Puccinellietalia maritimae)'. The attributes and targets are defined in the Great Island Channel SAC Conservation Objectives document noted in the footnote below.

[1] *NPWS (2014c) Conservation objectives for Great Island Channel SAC [001058]. Version 1. Department of Arts, Heritage & the Gaeltacht.*

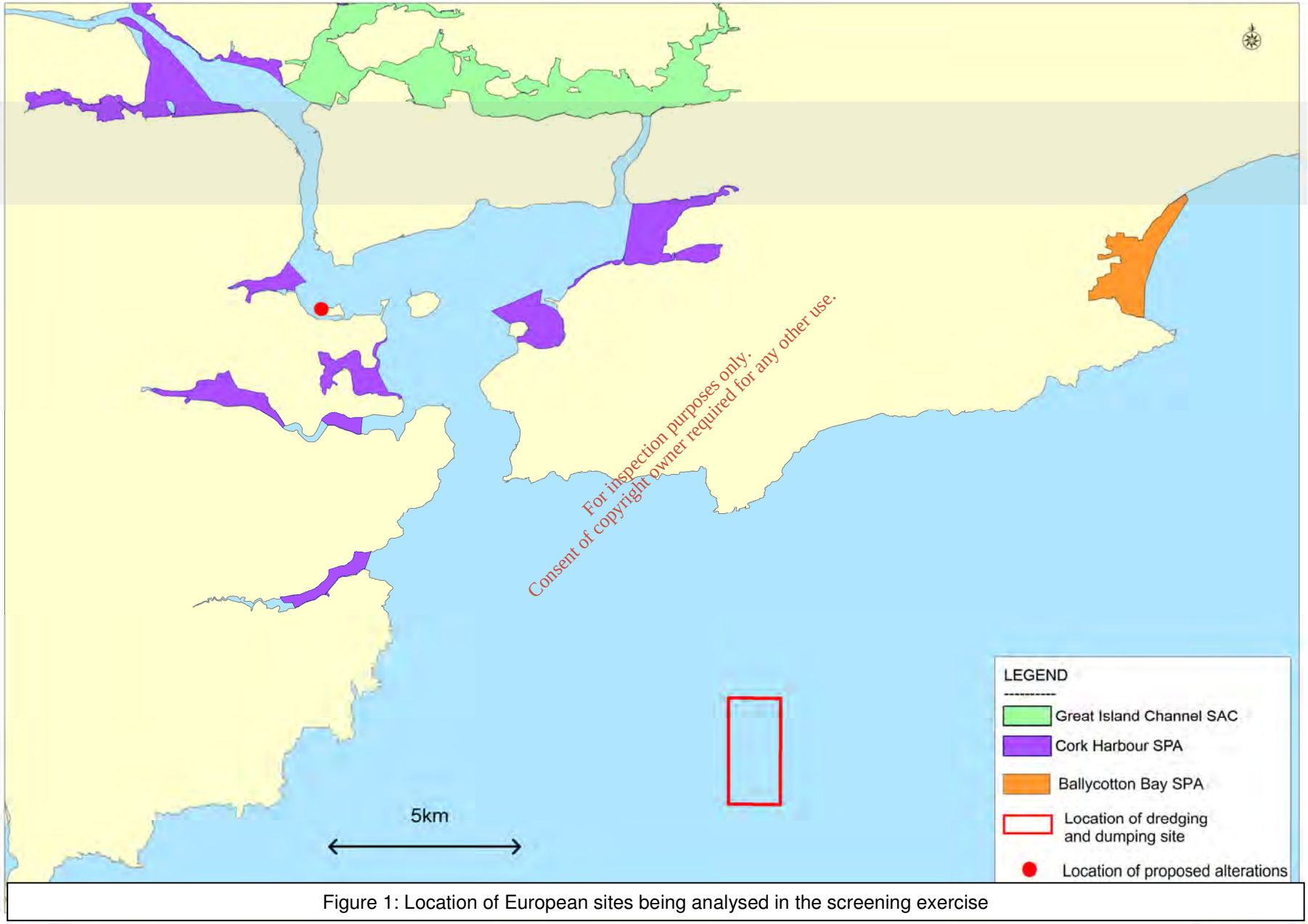

Figure 1: Location of European sites being analysed in the screening exercise

Table 6: Conservation Status, Sensitivity and Threats to SAC and SPA Qualifying Interests screened in this assessment

Qualifying Interest	Site Sensitivity	Conservation Status, Trend in Conservation Status[2]	Threats[3]
Little Grebe Great Crested Grebe Cormorant Grey Heron Shelduck Wigeon Teal Pintail Shoveler Red-breasted Merganser Oystercatcher Ringed Plover Golden Plover Grey Plover Lapwing Dunlin Black-tailed Godwit Bar-tailed Godwit Turnstone Curlew Redshank Black-headed Gull Common Gull Lesser Black-backed Gull Common Tern Wetlands & Waterbirds	Recreational activities are high in some areas of the harbour, including jet skiing which causes disturbance to roosting birds.	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, and • 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.	Extensive areas of estuarine habitat have been reclaimed since about the 1950s for industrial, port-related and road projects, and further reclamation remains a threat. As Cork Harbour is adjacent to a major urban centre and a major industrial centre, water quality is variable, with the estuary of the River Lee and parts of the Inner Harbour being somewhat eutrophic. However, the polluted conditions may not be having significant impacts on the bird populations. Oil pollution from shipping in Cork Harbour is a general threat. The Natura 2000 Standard Data Form for Cork Harbour SPA notes that there are no serious imminent threats to the wintering birds even though the intertidal areas receive polluted water. Oil pollution from shipping in Cork Harbour is a general threat. Aquaculture occurs though it is not known if this has significant impacts on the birds. Recreational activities are high in some areas, including jet skiing which causes disturbance to roosting birds. Extensive areas of estuarine habitat have been reclaimed since about the 1950s for industrial, port-related and road projects, and further reclamation remains a threat. The Natura 2000 Standard Data Form for Ballycotton Bay SPA notes that past drainage and

[2] http://www.npws.ie/en/PublicationsLiterature/ConservationStatusReport/
[3] http://www.npws.ie/publications/euconservationstatus/

Qualifying Interest	Site Sensitivity	Conservation Status, Trend in Conservation Status[2]	Threats[3]
			land-claim have damaged this wetland site and remains a continued threat; and also that Increasing visitor pressure may cause disturbance to the birds as this site is part of a Wildfowl Sanctuary.
Estuaries	Surface and marine water dependent. Moderately sensitive to hydrological change. Moderate sensitivity to pollution. Sensitive to changes in salinity and tidal regime as well as coastal development	Inadequate Improving (+)	Pollution to surface waters (limnic & terrestrial, marine & brackish); nautical sports Fishing and harvesting aquatic resources; estuarine and coastal dredging; other outdoor sports and leisure activities; bottom culture suspension culture; piers / tourist harbours or recreational piers; slipways
Mudflats and sandflats not covered by seawater at low tide	Surface and marine water dependent. Moderately sensitive to hydrological change. Moderate sensitivity to pollution. Sensitive to changes in salinity and tidal regime as well as coastal development.	Inadequate Improving (+)	Pollution to surface waters (limnic & terrestrial, marine & brackish); Fishing and harvesting aquatic resources; Bottom culture; Hand collection; Estuarine and coastal dredging; Nautical sports; Other outdoor sports and leisure activities
Spartina swards (Spartinion maritimae)	Marine water dependent. Medium sensitivity to hydrological changes. As Spartina is considered to be an invasive species in Ireland, it is assessed in a different way to other habitats. Increases in the area and extent of Spartina swards are actually considered to be unfavourable and as future expansion is considered likely, the overall conservation status of this habitat is rated as poor.	Poor	n/a
Atlantic salt meadows (Glauco-Puccinellietalia maritimae)	Marine and groundwater dependent. Medium sensitivity to hydrological change. Sensitive to changes in salinity and tidal regime as well as overgrazing, erosion and accretion	Inadequate Stable (=)	Climate Change; Intensive cattle grazing; intensive sheep grazing; paths, tracks, cycling tracks; disposal of household / recreational facility waste; disposal of industrial waste reclamation of land from sea, estuary or marsh; polderisation; Modification of hydrographic functioning, general; Erosion; invasive non-native species

4 SCREENING EXERCISE

The purpose of this Screening exercise is to establish whether or not a proposal to remove condition 2.2 of DAS Permit S0021-01 allowing loading of dredged material from Ringaskiddy and dumping in the Western Celtic Sea, as described in Section 2.3, is likely to have a significant effect on any European site.

4.1 POTENTIAL IMPACTS

No dredging or dumping is proposed in addition to that already permitted or proposed. It is considered that **there are no mechanisms** by which a significant effect on the Conservation Objectives of the three European sites might potentially occur as a result of the proposed request.

Likely significant effects of the permitted and proposed dredging and dumping activities are categorised and documented in screening for appropriate assessment reports and Natura impact statements prepared and submitted with DAS application bundles S0021-01 and S0021-02.

Potential in combination effects between the current proposed request being considered, and those activities permitted by S0021-01 and proposed in S0021-02 are discussed below.

4.2 IN-COMBINATION IMPACTS

Article 6(3) of the Habitats Directive requires that in-combination effects with other plans or projects are considered. On this basis, other plan and projects were assessed for their potential to have in-combination effects with the dumping and dredging activities permitted by:

- S0021-01 comprising dumping at sea of 457,500 wet weight tonnes of seabed material dredged from Ringaskiddy Basin; and
- S0021-02 comprising an additional dumping at sea of 24,000 wet weight tonnes of seabed material dredged from Ringaskiddy Basin.

The current proposed request does not affect in any way the quantum of material it is proposed to dredge or dump at sea.

It does not propose in any way to amend the method of dredging or dumping, or to intensify the activities permitted and proposed.

It seeks to allow dredging and dumping to continue uninterrupted once the activity has commenced. An individual dredging/dumping cycle is anticipated to last approximately 205 minutes comprising 75 minutes of dredging and 130 minutes of travel and disposal time.

As the current request to remove condition 2.2 does not introduce any physical changes to or intensification of the activities proposed, it is considered that there are no likely significant in-combination effects as a result of the proposed request in combination with the activities permitted by S0021-01 and proposed under S0021-02.

5 CONCLUSION

The Screening exercise was completed in compliance with the relevant European Commission and national guidelines.

A proposal to remove condition 2.2 of DAS Permit S0021-01 allowing loading of dredged material from Ringaskiddy and dumping in the Western Celtic Sea has been considered in the context of the European Sites potentially affected, their Qualifying Interests, Special Conservation Interests and conservation objectives.

From the findings of the Screening exercise, it can be concluded on the basis of objective scientific information that the proposed alterations:

- are not directly connected with or necessary to the management of any Natura 2000 site; and
- will not likely give rise to significant effects on the qualifying interests of any European site.

Ringaskiddy Port Redevelopment

Further Information in accordance with Section 37F [1]

Revised Screening for Appropriate Assessment

February 2015

Co-financed by the European Union
Trans-European Transport Network (TEN-T)
The sole responsibility of this publication lies with the author. The European Union is not responsible for any use that may be made of the information contained therein.

Note:
This screening for appropriate assessment has been prepared in February 2015 to take account of a request by An Bord Pleanála for further information dealing with the following aspects –

- Disposal of dredge material at a licenced marine site, the subject of Dumping at Sea Permit application S0021-01 made to the EPA in October 2014;
- Inclusion of Ballycotton Bay SPA; and
- Further consideration of other relevant plans and projects and their potential for in-combination effects.

Changes in text for the purposes of this screening for appropriate assessment are noted in blue text when compared to the original screening statement contained within Section 2 of the Natura Impact Statement submitted to An Bord Pleanála in May 2014.

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TABLE OF CONTENTS

1.0 INTRODUCTION

This report has been prepared by RPS on behalf of the Port of Cork (POC). The purpose of the report is to document the assessment that POC has undertaken to determine the potential effects that the redevelopment of Ringaskiddy Port and the associated disposal at sea of dredged material may have on the Qualifying Interests of European Sites within the zone of influence of the project.

This document updates the Stage 1 appropriate assessment screening contained at Sections 1 and 2 of the original NIS. New and amended text has been included where necessary and shown in blue. As a result of the conclusions of this Screening Assessment following the request by An Bord Pleanála, the Stage 2 appropriate assessment contained at Sections 3 and 4 of the original NIS has not been altered.

1.1 REGULATORY CONTEXT

The European Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna, better known as "The Habitats Directive", provides the framework for legal protection of habitats and species of European importance. Articles (3) to (9) provide the legislative means to protect habitats and species of Community interest through the establishment and conservation of an EU-wide network of sites known as Natura 2000. This network of sites designated for nature conservation are comprised of Special Areas of Conservation (SACs) as designated under the EU Habitats Directive and Special Protection Areas (SPAs) designated under the Conservation of Wild Birds Directive (79/409/EEC) (better known as "The Birds Directive").

Article 6 sets out provisions which govern the conservation and management of European Sites (Natura 2000 sites). Article 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to affect European Sites. Article 6(3) establishes the requirement for Appropriate Assessment (AA):

> "*Any plan or project not directly connected with or necessary to the management of the [Natura 2000] site but likely to have a significant effect thereon, either individually or in combination with other plans and projects, shall be subjected to appropriate assessment of its implications for the site in view of the site's conservation objectives. In light of the conclusions of the assessment of the implication 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*"

Applications for Strategic Infrastructure made to An Bord Pleanála under section 37E of the Planning and Development Act, 2000, as amended must be accompanied by a Natura Impact Statement where applicable as required under Part XAB of the Planning and Development Act, 2000 as amended. This report is a Natura Impact Statement prepared by Port of Cork Company to accompany the Ringaskiddy Port Redevelopment application for Strategic Infrastructure Development.

1.2 GUIDANCE FOLLOWED IN THE PREPARATION OF THIS STATEMENT

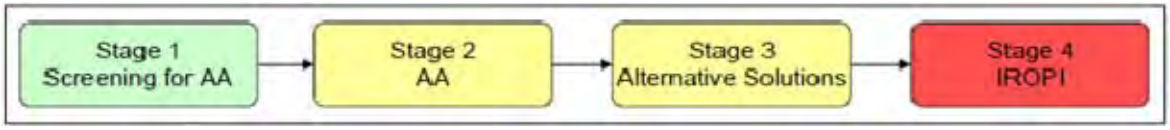
Appropriate Assessment Guidelines for Planning Authorities were published by the Department of the Environment Heritage and Local Government in February 2010 (DEHLG, 2010). In addition to the advice available from the Department, the European Commission has published a number of documents which provide significant guidance on the requirements of Appropriate Assessment, including, *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*, (EC, 2001), which sets out the principles of how to approach decision making during the process and these have been followed as closely as possible.

The assessment is prepared having due regard to the following guidelines:

- European Commission, 2000a. Communication from the Commission on the Precautionary Principle., Office for Official Publications of the European Communities, Luxembourg (EC, 2000a);
- Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC, Office for Official Publications of the European Communities, Luxembourg (EC, 2000b);
- European Commission, 2001. Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Articles 6(3) and (4) of the Habitats Directive 92/43/EEC. Office for Official Publications of the European Communities, Brussels (EC, 2001);
- European Commission. 2006. Nature and biodiversity cases: Ruling of the European Court of Justice. Office for Official Publications of the European Communities, Luxembourg (EC, 2006);
- Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC – Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the commission; (EC, 2007);
- Estuaries and Coastal Zones within the Context of the Birds and Habitats Directives - Technical Supporting Document on their Dual Roles as Natura 2000 Sites and as Waterways and Locations for Ports. European Commission (EC, 2009);
- Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities. Department of the Environment, Heritage and Local Government, Dublin (DEHLG, 2010a);
- Department of Environment Heritage and Local Government Circular NPW 1/10 and PSSP 2/10 on *Appropriate Assessment under Article 6 of the Habitats Directive – Guidance for Planning Authorities* (DEHLG, 2010b);
- Guidance document on the implementation of the birds and habitats directive in estuaries and coastal zones with particular attention to port development and dredging. European Commission (EC, 2011a);
- European Commission Staff Working Document 'Integrating biodiversity and nature protection into port development' (EC, 2011b);
- Marine Natura Impact Statements in Irish Special Areas of Conservation: A working document, National Parks and Wildlife Service, Dublin (NPWS, 2012);
- Interpretation Manual of European Union Habitats. Version EUR 28. European Commission (EC, 2013); and
- Applications for approval for Local Authority Developments made to An Bord Pleanála under 177AE of the Planning and Development Act, 2000, as amended (Appropriate Assessment): Guidelines for Local Authorities. An Bord Pleanála, Dublin (ABP, 2013).

Based on these guidelines, the assessment process is a four-staged approach. An important aspect of the process is that the outcome at each successive stage determines whether a further stage in the process is required.

The four stages are summarised diagrammatically below. Stages 1-2 deal with the main requirements for assessment under Article 6(3). Stage 3 may be part of the Article 6(3) Assessment or may be a necessary precursor to Stage 4. Stage 4 is the main derogation step of Article 6(4).



2.0 SCREENING FOR APPROPRIATE ASSESSMENT

Screening determines whether appropriate assessment is necessary by examining:

1 Whether a plan or project can be excluded from AA requirements because it is directly connected with or necessary to the management of a Natura 2000 site; and

2 Whether the project will have a potentially significant effect on a Natura 2000 site, either alone or in combination with other projects or plans, in view of the site's conservation objectives.

Screening involves the following:

- Description of plan or project;
- Identification of relevant Natura 2000 sites, and compilation of information on their qualifying interests and conservation objectives;
- Assessment of likely effects – direct, indirect and cumulative – undertaken on the basis of available information as a desk study or field survey or primary research as necessary; and
- A Screening Statement with conclusions.

The assessment of likely significant effects is based on the likelihood and significance of any effects from the Ringaskiddy Port Redevelopment and the associated disposal at sea of dredged material on each of the Qualifying Interests of the European Sites being considered. In this context the likelihood depends on whether there is the opportunity and pathway for an effect to occur. If the predicted effects are deemed to be significant, potentially significant, or uncertain, or if the screening process becomes overly complicated, then the process must proceed to Stage 2 (AA).

Clearly a key variable that will determine whether or not a particular European Site is likely to be affected by the proposed works is its physical distance from the project site, and it will generally, but not necessarily, be the case that the greater the distance the smaller the possibility of impacts. The Guidelines for Planning Authorities (DEHLG, 2010) recommend that the AA process should include the following European Sites –

- Any European Sites within or adjacent to the plan or project area; or
- Any European Sites within the likely zone of impact of the plan or project.

A distance of 15km is currently recommended in the case of plans, and derives from UK guidance (Scott Wilson *et. al.*, 2006). 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 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.

2.1 EUROPEN SITES INCLUDED IN THE SCREENING ASSESSMENT

Two European Sites are located within 15km of Ringaskiddy Port as described in Table 1 and illustrated in Figure 1. A third European site is located within 15km of the licenced disposal at sea site, off Roche's Point (revised Figure 1).

Table 1: European Sites located within 15km Buffer zone of Ringaskiddy Port and Disposal at Sea site

Code	Site	Distance
SPA Code 004030	Cork Harbour SPA	Monkstown Creek component of SPA is 60m northwest of Ringaskiddy West. Loughbeg component of SPA is 11.9km north of disposal at sea site.
SPA Code 004022	Ballycotton Bay SPA	The SPA is 15.2km northeast of the disposal at sea site, and 26km around the coastline from Paddy's Point.
SAC Code 001058	Great Island Channel SAC	Lough Mahon component of SAC is 4.8km north of Ringaskiddy West. Ballynacorra River component of SAC is 9km northeast of Paddy's Point. Ballynacorra River component of SAC is 19.5km north of disposal at sea site.

The proposed redevelopment at Ringaskiddy Port is located 60m from Cork Harbour SPA by straight line distance. The proposed licenced disposal at sea site is off Roche's Point (refer to Figure 3) and 8 nautical miles (14.2km) from Ringaskiddy Port, and 8.9km from the nearest European site (Loughbeg component of Cork Harbour SPA). Great Island Channel SAC is 4.8km upstream of Ringaskiddy Port (at Lough Mahon and Marino Point). All distances quoted are by hydrological connectivity except where straight line distance is stated.

Details in relation to the qualifying features of the Cork Harbour SPA, Ballycotton Bay SPA and Great Island Channel SAC are described in Tables 2 – 4 respectively. The information contained in these tables is based on publicly available data on these European Sites, sourced from NPWS. Site specific Conservation Objectives for Cork Harbour SPA were published in December 2014; for Ballycotton Bay SPA in August 2014 and for Great Island Channel SAC in June 2014. Coupled with this the NPWS Natura 2000 Standard Data Forms were also utilised all of which can be found in Appendix 1.

This information is further supplemented by the findings in Ireland's Article 17 Report to the European Commission's '*The Status of EU Protected Habitats and Species in Ireland*' (NPWS, 2013) as summarised in Table 5, and by the Cork Harbour SPA Conservation Objectives Supporting Document (v1) published in November 2014.

2.1.1 Cork Harbour SPA (Site Code 004030)

The site has twenty-four qualifying interests as noted in Table 2.

Table 2: Cork Harbour SPA Qualifying Features

Cork Harbour SPA [IE0004030] SCIs		Season	Qualifying Population[1]
[A004]	Little Grebe Tachybaptus ruficollis	Wintering	68 individuals
[A005]	Great Crested Grebe *Podiceps cristatus*	Wintering	218 individuals
[A017]	Cormorant *Phalacrocorax carbo*	Wintering	620 individuals
[A028]	Grey Heron *Ardea cinerea*	Wintering	47 individuals
[A048]	Shelduck *Tadorna tadorna*	Wintering	1426 individuals
[A050]	Wigeon *Anas penelope*	Wintering	1750 individuals
[A052]	Teal *Anas crecca*	Wintering	807 individuals
[A056]	Pintail *Anas acuta*	Wintering	84 individuals
[A065]	Shoveler *Anas cylpeata*	Wintering	135 individuals
[A069]	Red-breasted Merganser *Mergus serrator*	Wintering	90 individuals
[A130]	Oystercatcher *Haematopus ostralegus*	Wintering	791 individuals

Cork Harbour SPA [IE0004030] SCIs		Season	Qualifying Population[1]
[A140]*	Golden Plover *Pluvialis apricaria*	Wintering	805 individuals
[A141]	Grey Plover *Pluvialis squatarola*	Wintering	66 individuals
[A142]	Lapwing *Vanellus vanellus*	Wintering	3614 individuals
[A149]	Dunlin *Calidris alpine*	Wintering	4936 individuals
[A156]	Black-tailed Godwit *Limosa limosa*	Wintering	412 individuals
[A157]*	Bar-tailed Godwit *Limosa lapponica*	Wintering	45 individuals
[A160]	Curlew *Numenius arquata*	Wintering	1345 individuals
[A162]	Redshank *Tringa totanus*	Wintering	1614 individuals
[A179]	Black-headed Gull *Larus ridibundus*	Wintering	948 individuals
[A182]	Common Gull *Larus canus*	Wintering	2630 individuals
[A183]	Lesser Black-backed Gull *Larus fuscus*	Wintering	261 individuals
[A193]*	Common Tern *Sterna hirundo*	Breeding	69 pairs
[A999]	Wetlands & Waterbirds		2,587 ha (NPWS estimate)
Key to Table [1]As obtained from Standard Natura Data Form.			

Cork Harbour is a large, sheltered bay system, with several river estuaries (Rivers Lee, Douglas, Owenboy and Owennacurra). The SPA site comprises most of the main intertidal areas of Cork Harbour, including all of the North Channel, the Douglas River Estuary, inner Lough Mahon, Monkstown Creek, Lough Beg, the Owenboy River Estuary, Whitegate Bay and the Rostellan and Poulnabibe inlets.

Conservation objectives for the 22 no. wintering species are to maintain the favourable conservation conditions of the species in Cork Harbour SPA as measured by two attributes and targets.

> *Population Trend*: The long term population trend is stable or increasing.
> *Distribution*: No significant decrease in the range, timing or intensity of use of areas by the species, other than that occurring from natural patterns of variation.

The conservation objectives for the wetlands is to maintain the favourable conservation conditions of the wetland habitat in Cork Harbour SPA as a resource for the regularly-occurring migratory waterbirds that utilise it, as measured by the following attribute and target.

> *Habitat Area:* The permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 2,587 hectares, other than that occurring from natural patterns of variation.

Conservation objectives for the breeding Common Tern are to maintain the favourable conservation conditions of the species in Cork Harbour SPA as measured by the following six attributes and targets.

> *Breeding population abundance*: apparently occupied nests (AONs): No significant decline.
> *Productivity rate*: fledged young per breeding pair: No significant decline.
> *Distribution*: breeding colonies: No significant decline.
> *Prey biomass available:* No significant decline.
> *Barriers to connectivity:* No significant increase.
> *Disturbance at breeding site:* Human activities should occur at levels that do not adversely affect the breeding common tern population.

2.1.2 Ballycotton Bay SPA (Site Code 004022)

The site has twelve qualifying interests as noted in Table 3.

Table 3: Cork Harbour SPA Qualifying Features

Cork Harbour SPA [IE0004030] SCIs		Season	Qualifying Population[1]
[A052]	Teal *Anas crecca*	Wintering	903 individuals
[A056]	Ringed Plover *Charadrius hiaticula*	Wintering	167 individuals
[A140]*	Golden Plover *Pluvialis apricaria*	Wintering	2383 individuals
[A141]	Grey Plover *Pluvialis squatarola*	Wintering	124 individuals

Cork Harbour SPA [IE0004030] SCIs		Season	Qualifying Population[1]
[A142]	Lapwing *Vanellus vanellus*	Wintering	2782 individuals
[A156]	Black-tailed Godwit *Limosa limosa*	Wintering	136 individuals
[A157]*	Bar-tailed Godwit *Limosa lapponica*	Wintering	175 individuals
[A160]	Curlew *Numenius arquata*	Wintering	853 individuals
[A162]	Turnstone *Arenaria interpres*	Wintering	179 individuals
[A182]	Common Gull *Larus canus*	Wintering	584 individuals
[A183]	Lesser Black-backed Gull *Larus fuscus*	Wintering	1293 individuals
[A999]	Wetlands & Waterbirds		281ha (NPWS estimate)
Key to Table [1]As obtained from Standard Natura Data Form.			

Ballycotton Bay is an east-facing coastal complex. The site comprises two sheltered inlets which receive the flows of several small rivers. The principal habitat within the site is inter-tidal sand and mudflats. The inter-tidal flats provide the main feeding habitat for the wintering birds. Sandy beaches are well represented, and salt marshes fringe the flats in the sheltered inlets and these provide high tides roosts.

Conservation objectives for the 11 no. wintering species are to maintain the favourable conservation conditions of the species in Ballycotton Bay SPA as measured by two attributes and targets.

> *Population Trend*: The long term population trend is stable or increasing.
> *Distribution*: No significant decrease in the range, timing or intensity of use of areas by the species, other than that occurring from natural patterns of variation.

The conservation objective for the wetlands is to maintain the favourable conservation conditions of the wetland habitat in Ballycotton Bay SPA as a resource for the regularly-occurring migratory waterbirds that utilise it, as measured by the following attribute and target.

> *Habitat Area:* The permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 281 hectares, other than that occurring from natural patterns of variation.

2.1.3 Great Island Channel SAC (Site Code 001058)

The site has four Features of Interest[1] as noted in Table 4.

Table 4: Features of Interest within the Great Island Channel SAC

Code	Feature
[1130]	Estuaries
[1140]	Mudflats and sandflats not covered by seawater at low tide
[1320]	Spartina swards (Spartinion maritimae)
[1330]	Atlantic salt meadows (Glauco-Puccinellietalia maritimae)

The Great Island Channel stretches from Little Island to Midleton, and is an integral part of Cork Harbour. Great Island Channel forms the eastern stretch of the river basin and, compared to the rest of Cork Harbour, is relatively undisturbed. Within the site is the estuary of the Owennacurra and Dungourney Rivers. These rivers, which flow through Midleton, provide the main source of freshwater to the North Channel.

The conservation objective for Great Island Channel SAC is to maintain or restore the favourable conservation condition of two Annex I habitat types; being 'Mudflats and sandflats not covered by seawater at low tide', and 'Atlantic salt meadows (Glauco-Puccinellietalia maritimae)'. The attributes and targets are defined in the Great Island Channel SAC Conservation Objectives at Appendix 1.

[1] *NPWS (2014c) Conservation objectives for Great Island Channel SAC [001058]. Version 1. Department of Arts, Heritage & the Gaeltacht.*

2.2 DESCRIPTION OF THE PROJECT

The proposed redevelopment works comprise the following main construction elements as illustrated in Figure 2, and the associated disposal at sea of dredged material at a licenced site illustrated in Figure 3.

2.2.1 Ringaskiddy East (Container Berths and Multi-purpose Berth (CB/MPB)

- A new 314m Container Berth 1/ Multipurpose Berth that will be capable of accommodating vessels carrying a range of different cargoes including containers, freight and general cargoes
- An additional 200m Container Berth 2
- Surfacing of existing port lands to provide operational areas
- Dredging of the seabed to a level of -13.0 m Chart Datum (CD)
- Demolition of existing link-span
- Installation of link-span comprising a floating pontoon and access bridge
- Installation of container handling cranes and terminal transport equipment
- Maintenance building, administrative buildings and entrance kiosks
- Ancillary car parking, lighting and fencing

2.2.2 Ringaskiddy West (Deepwater Berth Extension)

- A new 182m extension to the existing Deepwater Berth (DWB) which will comprise a filled quay structure extending no further seaward than the edge of the existing DWB
- Dredging works to varying levels to facilitate navigational access to the new facilities
- Lighting

2.2.3 Road Improvements

- Improvements to the external road entrance into the Ringaskiddy Deepwater Terminal and to Ringaskiddy West
- Improvements to the internal link road between Ringaskiddy East and Ringaskiddy West
- Road improvement works within the existing harbour lands at Ringaskiddy East
- Improvements to internal road network at Ringaskiddy East to facilitate future access to the N28
- Lighting and fencing

2.2.4 Paddy's Point Amenity Area

- Construction of a new public pier, slipway and boarding platform;
- New planting and landscaping to provide public amenity area.
- Boat storage, lighting and fencing

2.2.5 Phased Implementation

The various elements of infrastructure proposed may be implemented in a single construction or alternatively they may be implemented in a number of phases as a result of trade demands, port operational requirements and funding.

It is anticipated that a phased implementation is likely to comprise three main elements as listed below.

Phase 1 – Ringaskiddy East comprising;

(a) Improvements to existing port entrance adjacent to existing DWB entrance
(b) Pier, slipway and amenity area at Paddy's Point
(c) Elements of internal road improvements to facilitate access to Ringaskiddy East
(d) Construction of the CB/MPB and associated container storage and handling areas
(e) Additional Internal Roads to facilitate connection to new N28, when constructed, at eastern end of port complex / Ringaskiddy Village

Phase 2 – Ringaskiddy West comprising;

the extension to the existing DWB

Phase 3 – Ringaskiddy East comprising;

additional quay wall and floating linkspan to accommodate RoRo traffic at the CB/MPB.

This facility will not be brought into commission for accompanied RoRo freight traffic until the new N28 is in place and operational.

2.2.6 Construction Activities

The construction of the proposed works may be undertaken in a number of phases. It is estimated that the construction period for Ringaskiddy East will be approximately 2 years.

Construction of the DWB extension at Ringaskiddy West is anticipated to require approximately 11 months. It is not anticipated that this element will be constructed concurrently with Ringaskiddy East.

Temporary Site Compound
An area will be required for the establishment of the Contractor's site compound. The site compound will be used for the Contractor's site office accommodation and facilities and will include an area for temporary storage of construction materials.

Site Access
Existing port operations will continue as normal during the construction period.

Suitable traffic management and other systems will be put in place as required to minimise disruption to existing activities during the construction period. These will include:

- Upgrade of the existing DWB entrance prior to major construction works being undertaken.
- Segregation of entrances
- Suitable restrictions on timing of deliveries to avoid peak traffic periods
- Preparation of a detailed traffic management plan for the construction phase

Site Safety
The works will be subject to the Safety, Health and Welfare at Work Act 2005 and the Safety, Health and Welfare at Work (Construction) Regulations, 2013. All aspects of design construction will be reviewed with regard to health and safety and a risk assessment will be carried out. A project supervisor (design phase) will be appointed to produce a pre-tender Health and Safety Plan for the project. The principal contractor will be responsible for the control and co-ordination of health and safety during the works and will be appointed as the project supervisor (construction stage).

Waste Disposal
Contractors working on site during the works will be responsible for the collection, control and disposal of all wastes generated by the works.

2.2.7 Operational Activities

Maintenance
When construction work has been completed, the quays and revetments will require little by way of maintenance.

Although some siltation may occur in the new dredged areas the water depth is such that this is unlikely to cause any significant problem in the short term. Any maintenance dredging which may be required in the longer term will be carried out as part of the Port of Cork's regular maintenance dredging programme. The material generated would likely be disposed of at sea at a licensed disposal site agreed in accordance with Port of Cork's maintenance dredging licence.

Pollution Control

Surface water from the main quay and working areas will be collected by a system of drainage channels and gullies. The surface water will be discharged to sea via oil and sludge interceptors to ensure that no pollution is released into the harbour or surrounding waters.

Sewage disposal from the proposed buildings will be by connection to the proposed Lower Harbour Drainage Scheme, or if this is not in place by package treatment works and discharge to a soakaway system.

Waste Disposal from Vessels
Port of Cork operates an Environmental Management System (EMS) which includes procedures for the disposal of waste from berthed vessels.

All waste to be disposed of from berthed vessels will be handled and disposed by a licensed waste disposal contractor. Waste awaiting disposal will not be permitted to be stored on the quayside.

Discharges from vessels to the harbour waters will not be permitted.

2.2.8 Disposal at Sea

The total volume to be disposed from dredging at the Ringaskiddy West site is 215,000m^3 comprised of a combination of fine silt and sand. The total volume to be disposed from dredging at Ringaskiddy East site is 90,000m3 comprised of a mainly coarser material than at Ringaskiddy West. Further details of the nature of the material are included in revised Chapter 12 of the EIS.

The dredging will be undertaken by either a trailing hopper suction dredger (THSD) or a combination of THSD and backhoe dredger. The most likely scenario is the use of a THSD at Ringaskiddy West and a backhoe at Ringaskiddy East.

A TSHD is a self contained unit that carries out the dredging, stores the dredged material, sails to the disposal site and dumps the material by releasing through the vessel split bottom. In the case of a back-hoe dredger, the dredger excavates the material and places it in a separate disposal barge which then sails to the disposal site and dumps the material by releasing through the vessel split bottom. In both cases the method of release of material at the dump site is the same.

It is proposed that the dredged material will be disposed of at an l established marine disposal site located to the south east of the entrance to Cork Harbour at location 8^o 09.00' to 8^o 10.18' W 51^o 43.00' to 51^o 44.50' N as shown in Figure 3.

An individual dredging cycle will last approximately 205 minutes comprising 75 minutes of dredging and 130 minutes of travel and disposal time. Based on experience of previous dumping operations, it is expected that the barge will be required to dispose of the material over at least a 9 minute period while sailing around in the disposal area.

Dredging and disposal operations will be very temporary in duration and are expected to be undertaken within 20 days.

LEGEND

Red line shows location of Ringaskiddy Port Redevelopment and the location of associated disposal at sea of dredged material (and 15km buffer around these areas)

European site
Great Island Channel SAC

European site (SPA)
Special Protection Area

Issue Details

Drawn:	JMC	**Project No.**	NI 1004
Chkd:	JMC	**File Ref.**	N/A
Appd:	RH		
Date:	Feb 2015	**Drawing No.**	**Rev.**
Scale:	1:165,000 at A3	Figure 1	02

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Project: *Ringaskiddy Port Redevelopment Natura Impact Statement*

Title: ***European sites within 15km of the proposed Port Redevelopment***

Figure Number: **1**

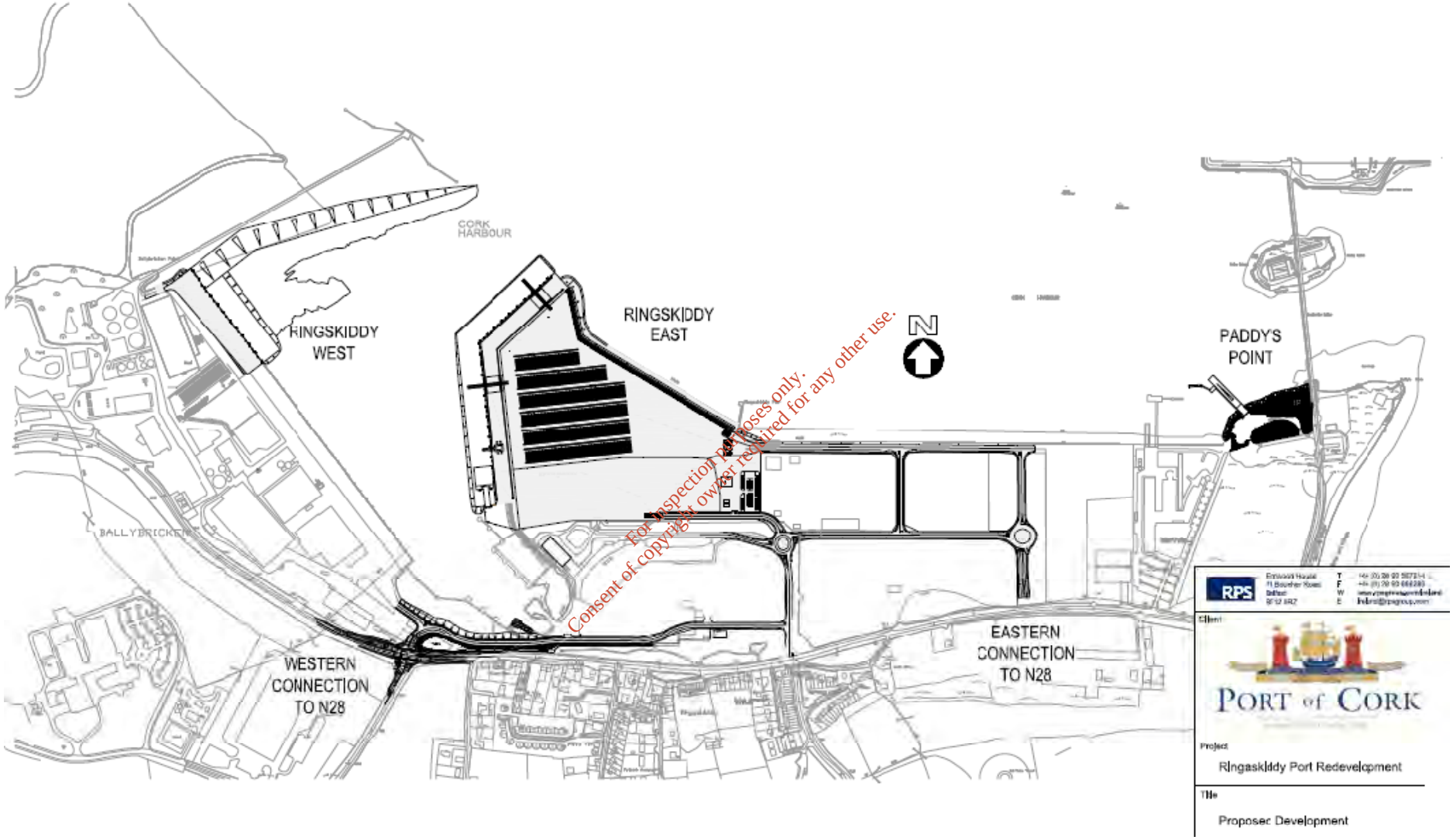

Figure 2: Extent of the proposed Ringaskiddy Port Redevelopment

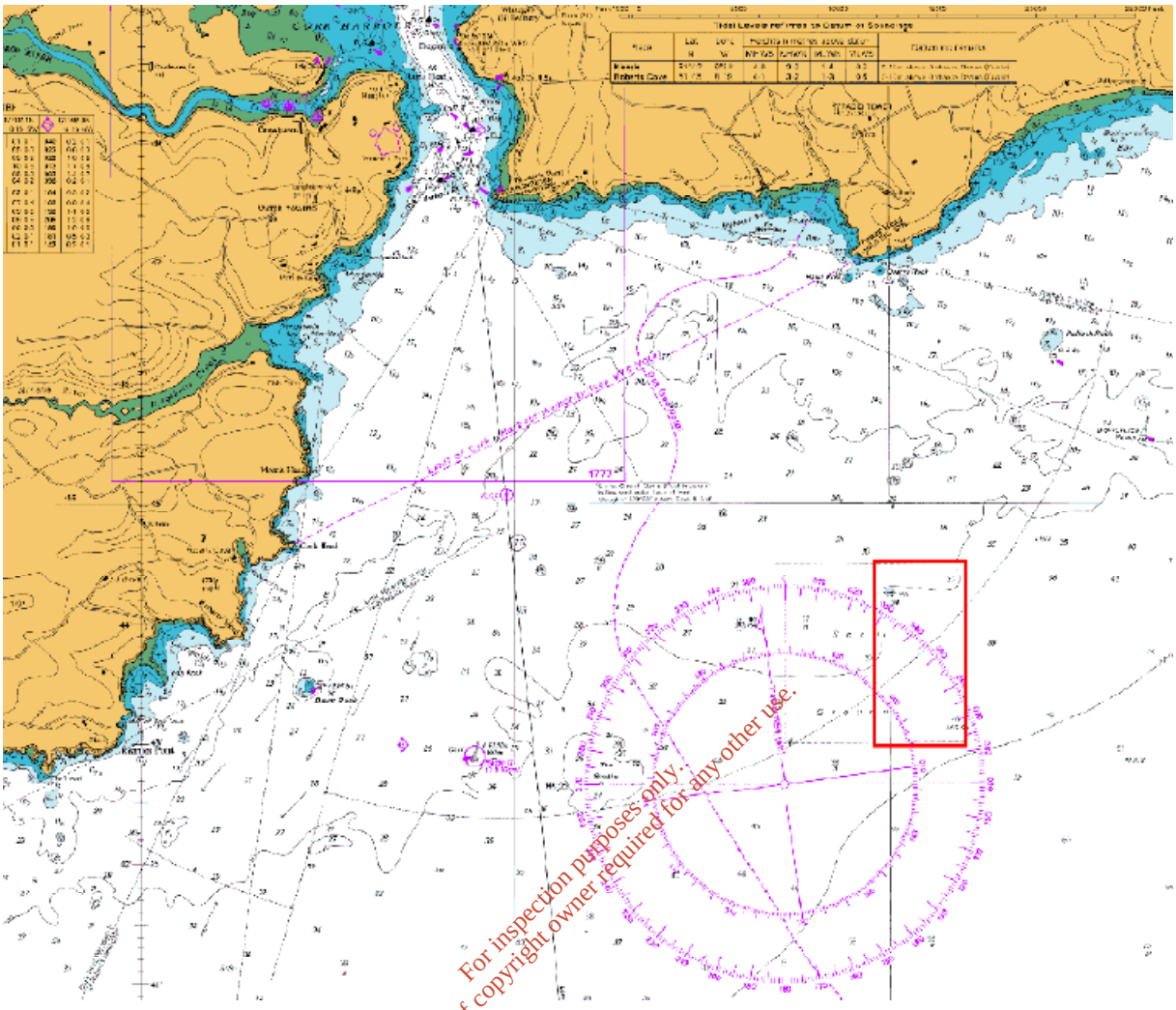

Figure 3: Location of Proposed Marine Disposal Site

Table 5: Conservation Status, Sensitivity and Threats to SAC and SPA Qualifying Interests screened in this assessment

Qualifying Interest	Site Sensitivity	Conservation Status, Trend in Conservation Status[2]	Threats[3]
Little Grebe Great Crested Grebe Cormorant Grey Heron Shelduck Wigeon Teal Pintail Shoveler Red-breasted Merganser Oystercatcher Ringed Plover Golden Plover Grey Plover Lapwing Dunlin Black-tailed Godwit Bar-tailed Godwit Turnstone Curlew Redshank Black-headed Gull Common Gull Lesser Black-backed Gull Common Tern Wetlands & Waterbirds	Recreational activities are high in some areas of the harbour, including jet skiing which causes disturbance to roosting birds.	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, and • 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.	Extensive areas of estuarine habitat have been reclaimed since about the 1950s for industrial, port-related and road projects, and further reclamation remains a threat. As Cork Harbour is adjacent to a major urban centre and a major industrial centre, water quality is variable, with the estuary of the River Lee and parts of the Inner Harbour being somewhat eutrophic. However, the polluted conditions may not be having significant impacts on the bird populations. Oil pollution from shipping in Cork Harbour is a general threat. The Natura 2000 Standard Data Form for Cork Harbour SPA notes that there are no serious imminent threats to the wintering birds even though the intertidal areas receive polluted water. Oil pollution from shipping in Cork Harbour is a general threat. Aquaculture occurs though it is not known if this has significant impacts on the birds. Recreational activities are high in some areas, including jet skiing which causes disturbance to roosting birds. Extensive areas of estuarine habitat have been reclaimed since about the 1950s for industrial, port-related and road projects, and further reclamation remains a threat. The Natura 2000 Standard Data Form for Ballycotton Bay SPA notes that past drainage and

[2] http://www.npws.ie/en/PublicationsLiterature/ConservationStatusReport/
[3] http://www.npws.ie/publications/euconservationstatus/

Qualifying Interest	Site Sensitivity	Conservation Status, Trend in Conservation Status[2]	Threats[3]
			land-claim have damaged this wetland site and remains a continued threat; and also that Increasing visitor pressure may cause disturbance to the birds as this site is part of a Wildfowl Sanctuary.
Estuaries	Surface and marine water dependent. Moderately sensitive to hydrological change. Moderate sensitivity to pollution. Sensitive to changes in salinity and tidal regime as well as coastal development	Inadequate Improving (+)	Pollution to surface waters (limnic & terrestrial, marine & brackish); nautical sports Fishing and harvesting aquatic resources; estuarine and coastal dredging; other outdoor sports and leisure activities; bottom culture suspension culture; piers / tourist harbours or recreational piers; slipways
Mudflats and sandflats not covered by seawater at low tide	Surface and marine water dependent. Moderately sensitive to hydrological change. Moderate sensitivity to pollution. Sensitive to changes in salinity and tidal regime as well as coastal development.	Inadequate Improving (+)	Pollution to surface waters (limnic & terrestrial, marine & brackish); Fishing and harvesting aquatic resources; Bottom culture; Hand collection; Estuarine and coastal dredging; Nautical sports; Other outdoor sports and leisure activities
Spartina swards (Spartinion maritimae)	Marine water dependent. Medium sensitivity to hydrological changes. As Spartina is considered to be an invasive species in Ireland, it is assessed in a different way to other habitats. Increases in the area and extent of Spartina swards are actually considered to be unfavourable and as future expansion is considered likely, the overall conservation status of this habitat is rated as poor.	Poor	n/a
Atlantic salt meadows (Glauco-Puccinellietalia maritimae)	Marine and groundwater dependent. Medium sensitivity to hydrological change. Sensitive to changes in salinity and tidal regime as well as overgrazing, erosion and accretion	Inadequate Stable (=)	Climate Change; Intensive cattle grazing; intensive sheep grazing; paths, tracks, cycling tracks; disposal of household / recreational facility waste; disposal of industrial waste reclamation of land from sea, estuary or marsh; polderisation; Modification of hydrographic functioning, general; Erosion; invasive non-native species

2.3 SCREENING ASSESSMENT

The purpose of this Screening Assessment is to examine the possibility that the proposed works, either individually or in combination with other plans and projects, may result in significance negative effects of on the Conservations Objectives and the integrity of the European Sites discussed previously.

If there is deemed to be potential for significant effects or if this is considered to be a possibility or is uncertain, then the AA process must either proceed to Stage 2 (Appropriate Assessment).

2.3.1 Consideration of Significance

In terms of significance, NPWS Guidance uses the EC definition "any element of a plan or project that has the potential to affect the conservation objectives of a Natura 2000 site, including its structure and function, should be considered significant (EC, 2006)".

In order to assess the likely impacts, and ascertain whether or not a significant impact on the integrity of the European Sites being screened is likely to occur as a result of the proposed development, it is necessary to consider what constitutes the integrity of a site as referred to in Article 6 (3) of the Habitats Directive. European Commission guidance (EC, 2000b) gives clear guidance on this matter, and states that "*The integrity of the site involves its ecological functions. The decision as to whether it is adversely affected should focus on and be limited to the site's conservation objectives*."

2.3.2 Potential Impacts on Great Island Channel SAC

It is considered that there are three mechanisms by which an adverse effect on the Conservation Objectives of the SPA might potentially occur during construction activity, as follows:

- Smothering of habitats within the SAC by hydrological linkage as a result of deposition of increased suspended sediments arising from dredging or disposal operations associated with the proposed works;
- Deterioration of habitats within the SAC by hydrological linkage as a result of pollution incidences arising from construction or operation of the proposed works; and
- Introduction of invasive plant species to Ringaskiddy Port, which could result in their spread to locations within the SAC.

No direct habitat loss or habitat disturbance is predicted 4.8km up the Cork Harbour main channel (River Lee) from Ringaskiddy Port as a result of the proposed works.

2.3.3 Potential Impacts on Ballycotton Bay SPA

It is considered that there are two mechanisms by which an adverse effect on the Conservation Objectives of the SPA might potentially occur during construction activity, as follows:

- Smothering of habitats within the SPA by hydrological linkage as a result of deposition of increased suspended sediments arising from dredging or disposal operations associated with the proposed works; and
- Deterioration of habitats within the SPA by hydrological linkage as a result of pollution incidences arising from construction or operation of the proposed works.

No direct habitat loss or habitat disturbance in the SPA is predicted 15.2km northeast of the disposal at sea site, nor 26km around the coastline from Ringaskiddy Port as a result of the proposed works.

2.3.4 Potential Impacts on Cork Harbour SPA

It is considered that there are five mechanisms by which an adverse effect on the Conservation Objectives of the SPA might potentially occur during construction activity, as follows:

- Smothering of habitats within the SPA by hydrological linkage as a result of deposition of increased suspended sediments arising from dredging or disposal operations associated with the proposed works;
- Deterioration of habitats within the SPA by hydrological linkage as a result of pollution incidences arising from construction or operation of the proposed works.
- Long term deterioration of habitats within the SPA as a result of the new built elements within Ringaskiddy Port altering the natural coastal processes and extant sediment transport regime in the area;
- Direct noise and visual disturbance; and
- Unintentional installation of additional perches for predators.

2.3.5 Screening Matrix

Tables 6 and 7 provide a summary of the likely effects of the proposed development on the European Sites identified in Table 1. These effects are predicted having applied the precautionary principle set out in Commission Guidance and as required by the Court of Justice of the European Union in Cases C-127/02 (Waddenzee).

Table 6: Screening Matrix of potential effects of the Port redevelopment on European Sites

Site Code	Site Name	Qualifying Interests	Description of potential effect	Predicted Magnitude of Effect
001058	Great Island Channel SAC	• Estuaries • Mudflats and sandflats not covered by seawater at low tide • Spartina swards (Spartinion maritimae) • Atlantic salt meadows (Glauco-Puccinellietalia maritimae)	1) Pollution incident may result in deterioration of habitats within the SAC by hydrological linkage arising from construction or operation of the proposed works. 2) Suspended sediment transported by dredge or disposal plume may result in habitat smothering within the SAC by hydrological linkage arising from construction or operation of the proposed works. 3) Introduction of invasive plant species to Ringaskiddy Port, which could result in their spread to locations within the SAC.	1) Risk of a pollution incident affecting the SAC is very low as the site is 5km up the channel. The predicted magnitude of effect is *de minimis* or non-significant. 2) Risk of elevated suspended sediment reaching the SAC as a result of dredging is low, but this prediction lacks certainty as Cork Harbour is a complex system. A hydrodynamic and sedimentation model is required to establish the degree of risk to the SAC. There is no risk of elevated suspended sediment migrating to the SAC as a result of the disposal at Roche's Point. Refer to Chapter 12 within the revised EIS submitted as Further Information in accordance with Section 37F [1]. 3) Port of Cork has strict controls of discharges and waste from vessels, in accordance with Ballast Water Management (BWM) Convention, with ballast water exchange only occurring mid ocean. The predicted magnitude of effect is *de minimis* or non-significant.
004022	Ballycotton Bay SPA	• 11 species of overwintering birds • Wetlands & Waterbirds	1) Smothering of habitats within the SPA by hydrological linkage as a result of deposition of increased suspended sediments arising from dredging or disposal operations associated with the proposed works.	1) Risk of elevated suspended sediment reaching the SPA is known. A hydrodynamic and sedimentation model was run as part of EIA and presented in the previous Oyster Bank EIS for disposal at sea of a greater quantum (385,000m^3) of dredge material exhibiting similar characteristics to the material in Ringaskiddy Basin. The authors have confirmed that disposal patterns of disposed dredge material are identical for the present project. The results of that study of the proposed sea disposal of the dredge material show that the depth of the deposited material which is likely to deposited outside the dump site area will be less than 50 mm and that no measurable amounts of material will be deposited further away than about 4km from the centre of the licenced site. A statement by the authors is included as Chapter 12 within the revised EIS submitted as Further Information in accordance with Section 37F [1]. The predicted magnitude of effect is *de*

Site Code	Site Name	Qualifying Interests	Description of potential effect	Predicted Magnitude of Effect
			2) Deterioration of habitats within the SPA by hydrological linkage as a result of pollution incidences arising from construction or operation of the proposed works.	*minimis* or non-significant. 2) The seabed in Ringaskiddy Basin may contain contaminants currently trapped in the silt which dredging may release into the water column. Linked with (1) above, seabed sampling is required to identify the magnitude of this risk. The risk of polluting substances migrating from Cork Harbour to the Ballycotton Bay SPA 26km around the coastline from Paddy's Point in sufficient concentration to induce an effect upon overwintering bird species directly or via their prey items is extremely low due to distance and dispersion. The predicted magnitude of effect is *de minimis* or non-significant.
004030	Cork Harbour SPA	• 22 species of overwintering birds • 1 species of breeding bird • Wetlands & Waterbirds	1) Smothering of habitats within the SPA by hydrological linkage as a result of deposition of increased suspended sediments arising from dredging or disposal operations associated with the proposed works. 2) Deterioration of habitats within the SPA by hydrological linkage as a result of pollution incidences arising from construction or operation of the proposed works. 3) Long term deterioration of habitats within the SPA as a result of the new built elements within Ringaskiddy Port altering the natural coastal processes and extant sediment	1) The risk of elevated suspended sediment migrating to the SPA as a result of the dredging required in Ringaskiddy Basin is uncertain. A hydrodynamic model is required to establish degree of risk. There is no risk of elevated suspended sediment migrating to the SPA as a result of the disposal at Roche's Point. Refer to Chapter 12 within the revised EIS submitted as Further Information in accordance with Section 37F [1]. 2) The seabed in Ringaskiddy Basin may contain contaminants currently trapped in the silt which dredging may release into the water column. Linked with (1) above, seabed sampling is required to identify the magnitude of this risk. The risk of polluting substances entering Cork Harbour and migrating to the Cork Harbour SPA behind the Training Wall in sufficient concentration to induce an effect upon bird species directly or via their prey items during construction of the new marine infrastructure is low, as the project requires adherence to stringent pollution prevention measures (e.g. CIRIA Technical Guidance C532 / C648). 3) Risk of long term alteration in the natural coastal processes and extant sediment transport regime is uncertain. A hydrodynamic model is required to establish the degree of risk to the SPA.

Site Code	Site Name	Qualifying Interests	Description of potential effect	Predicted Magnitude of Effect
			transport regime in the area. 4) Direct noise and visual disturbance. 5) Unintentional installation of additional perches for predators.	4) The risk of direct noise and visual disturbance is high, as the project requires a two year construction programme for Ringaskiddy East and almost 1 year to construct Ringaskiddy West. The latter component is located 60m from the SPA at its nearest point. SPA high tide roosts are close to the proposed works. A breeding Common Tern Colony is located 25m of the proposed works, albeit outside of the SPA. An evaluation of avifauna at Ringaskiddy Port is required to add more certainty to the degree of risk. 5) New development to include tall structures (quayside cranes and lighting columns) may introduce more opportunities for predator (raptor or large gull) perching posts. This can lead to an increased perceived risk of predation by nesting terns and wintering waders. An evaluation of avifauna at Ringaskiddy Port is required to add more certainty to the degree of risk.

Table 7: Summary Table of potential direct, indirect and secondary effects of the Port redevelopment on European Sites

Site Name	Direct Impacts	Indirect/ Secondary	Resource Requirements (Drinking Water Abstraction Etc.)	Emissions (Disposal to Land, Water or Air)	Excavation Requirements	Transportation Requirements	Duration of Construction, Operation, Decommissioning
Great Island Channel SAC	No direct loss or impact on qualifying habitats	Potential effects of pollution or contaminat release	No requirement, and no impact on qualifying habitats	Potential effects of suspended sediment depositing in SAC	No requirement, and no impact on qualifying habitats	No requirement, and no impact on qualifying habitats	No impact on qualifying habitats
Ballycotton Bay SPA	None	Potential effect of pollution is *de minimis*	No requirement, and no impact on qualifying species	Potential effects of suspended sediment depositing in SPA is *de minimis*	No requirement, and no impact on qualifying species	No requirement, and no impact on qualifying species	No disturbance effects on qualifying species
Cork Harbour SPA	Noise and Visual disturbance	Potential effects of pollution or contaminat release	No requirement, and no impact on qualifying species	Potential effects of suspended sediment depositing in SPA	No requirement, and no impact on qualifying species	No requirement, and no impact on qualifying species	Potential disturbance effects on qualifying species

2.4 IN COMBINATION WITH OTHER PLANS AND PROJECTS

Article 6(3) of the Habitats Directive requires that in-combination effects with other plans or projects are considered. On this basis, other plan and projects were assessed for their potential to have in-combination effects with the Ringaskiddy Port Redevelopment and the associated disposal at sea of dredged material.

2.4.1 Carrigaline Electoral Area Local Area Plan 2011

The Plan provides the planning policy and zoning objectives for Ringaskiddy, with the aim of reaffirming its strategic industrial and port related roles and seeking to promote its potential for large scale stand alone industry, which are in line with the strategic objectives for the settlement. The majority of land around Ringaskiddy is zoned for industrial use, although the village core is zoned for town centre / neighbourhood uses and there is some provision made for open space and amenity use. The Natura Impact Report associated with the Plan was reviewed, which took into consideration the development also provided for in the Midleton, Blarney and Bandon Electoral Area Local Area Plans 2011 and the Cork City Development Plan 2009-2015. No significant negative effects upon Cork Harbour SPA are predicted as part of the assessment associated with that Plan. There is no pathway of additive effect for significant cumulative or in-combination effects which can be considered to adversely affect the qualifying interests of conservation objectives of the European sites being considered as a result of this Plan and Ringaskiddy Port Redevelopment and the associated disposal at sea of dredged material.

2.4.2 IMERC Masterplan

A Masterplan for the Irish Maritime and Energy Resource Cluster (IMERC) adjacent to the National Maritime College of Ireland (NMCI) aims to deliver research and enterprise campus in Ringaskiddy, Cork. The Beaufort Laboratory is currently under construction by UCC. It is proposed to expand the campus and to develop a marine and energy cluster focussing on research, development, commercialisation and innovation. CIT / UCC intend to prepare a masterplan for the layout and design of this future campus development. The location of this planned development is at the eastern end of Ringaskiddy East. No significant negative effects upon Cork Harbour SPA are predicted as part of the assessment associated with that application. There is no pathway of additive effect for significant cumulative or in-combination effects which can be considered to adversely affect the qualifying interests of conservation objectives of the European sites being considered as a result of this Plan and Ringaskiddy Port Redevelopment and the associated disposal at sea of dredged material.

2.4.3 Spike Island Masterplan

Spike Island is 2km east of Ringaskiddy East and 700m east of Paddy's Point. The Spike Island Masterplan envisages use of Spike Island for public events, concerts etc. In the long-term it is hoped that the island could attract 300,000 visitors per annum. The Masterplan also identifies Haulbowline as a possible future ferry access point. The Masterplan has considered many options and is broad in its approach requiring more detailed design work. It promotes Cork Harbour as a Green Infrastructure asset. This would likely give rise to an increase in coastal recreational activity and boating which would have the potential to increase disturbance to the qualifying features and conservation objectives of Cork Harbour SPA. The development of a number of ferry trails within the harbour together with a substantial network of new recreational berthing facilities at a number of locations around the harbour would increase boating traffic and disturbance in proximity to component parcels of the SPA. The SPA itself comprises the shallow intertidal areas and boat traffic is not likely to enter into the SPA with any recurring frequency. The development of the harbour as a facility for water based sport and leisure activity would also increase disturbance. The Cork Harbour Cycle Trail is proposed adjacent to parts of the SPA. The transport strategy presents a series of options to facilitate access to Spike Island including a floating bridge, half-tide causeway, cable cars, passenger ferry or roll-on roll-off ferry. The proposed redevelopment of Spike Island considers extensive works to the entire Island. Defined effects of Spike Island Masterplan are difficult to predict with accuracy in the absence of fixed and defined proposals. The thrust of any increased pressure on Cork Harbour SPA conservation objectives is likely to be as a result of an increase in recreational use of the harbour by people and vessels. The magnitude of this effect is not predicted to be significant across the SPA. There is no pathway of additive effect for significant cumulative or in-combination effects which can be considered

to adversely affect the qualifying interests of conservation objectives of the European sites being considered as a result of this Plan and Ringaskiddy Port Redevelopment and the associated disposal at sea of dredged material.

2.4.4 Port of Cork Maintenance Dredging

Port of Cork submitted an application to the EPA in February 2014 for a maintenance dredging programme. That application was accompanied by a Natura Impact Statement (NIS) which was reviewed as part of this analysis. The dredging campaign extends from the City Quays and Tivoli Docks in Cork City, out to Roche's Point. Coastal hydrodynamic modelling was undertaken as part of that assessment to help determine the spread of the dredge plume. The NIS concluded that all of the potential impacts identified will be avoided, and that the proposed maintenance dredging would not have a significant negative impact on either European Site being considered here. The permit was issued by the EPA and the 2014 maintenance dredging and related disposal at sea campaign was completed in the autumn of 2014. There is no pathway of additive effect for significant cumulative or in-combination effects which can be considered to adversely affect the qualifying interests of conservation objectives of the European sites being considered as a result of this project and Ringaskiddy Port Redevelopment and the associated disposal at sea of dredged material.

2.4.5 Monkstown Marina

Proposals for a new marina at Monkstown were submitted for planning permission and that application included a NIS. The project is located 750m north of Ringaskiddy West, being separated by Monkstown Creek. The project received planning approval in 2010 subject to 77 no. conditions. It includes for a 285 berth marina at the location of the existing marina that has 82 berths. The project additionally comprises car-parking, retail, office and landscaping, with a requirement to dredge part of the seabed in the shallower parts of the marina and in a band paralleling the shore to enable safe access by craft during all states of the tide. A coastal process modelling assessment submitted with that application showed that there would be no effect on the coastal processes with no change in tidal levels and the effect on the tidal currents restricted to the project area with changes of not greater than 0.04m/s. The coastal processes chapter author for this EIS has confirmed that the marina development will not have a cumulative effect with coastal processes as a result of implementing the proposed Ringaskiddy Port Redevelopment. The marina NIS concluded that the marina at Monkstown will not result in the loss of any feeding areas or roosting sites for wintering waterfowl or waders, and that the marina would be principally used outside of the overwintering season, and consequently no impact on the qualifying interests for Cork Harbour SPA. There is no pathway of additive effect for significant cumulative or in-combination effects which can be considered to adversely affect the qualifying interests of conservation objectives of the European sites being considered as a result of this project and Ringaskiddy Port Redevelopment and the associated disposal at sea of dredged material.

2.4.6 East Tip Remediation Project, Haulbowline Island

The East Tip on Haulbowline Island is 550m northeast of Paddy's Point. The primary objective of this project is to remediate the East Tip thereby ensuring that potential risks to humans and the wider environment are minimised. It is proposed the waste at the site will be contained by constructing an engineered capping system on top of the waste and a perimeter engineered structure around the waste body. The project additionally seeks to widen the access road and construct a slipway and floating pontoon. An EIS and NIS were prepared for that application. That assessment concluded after screening that two potential pathways of effect upon the qualifying interests of Cork Harbour SPA remained, and Stage 2 assessment was undertaken. It concluded that there was no potential for significant negative impacts upon the integrity of Cork Harbour SPA arising either alone or in combination with any other plans or proposals, from the proposed East Tip Remediation Project at Haulbowline Island. There is no pathway of additive effect for significant cumulative or in-combination effects which can be considered to adversely affect the qualifying interests of conservation objectives of the European sites being considered as a result of this project and Ringaskiddy Port Redevelopment and the associated disposal at sea of dredged material.

2.4.7 Hammond Lane Metal Company

Planning permission was granted in 2012 for demolition, new build, upgraded facilities, new processing plant etc at the Hammond Lane Metal Company located adjacent to the N28 opposite the proposed eastern entrance to Port lands at Ringaskiddy. The ecological impact assessment prepared for this project was reviewed. No significant negative impacts upon the integrity of Cork Harbour SPA were predicted. There is no pathway of additive effect for significant cumulative or in-combination effects which can be considered to adversely affect the qualifying interests of conservation objectives of the European sites being considered as a result of this project and Ringaskiddy Port Redevelopment and the associated disposal at sea of dredged material.

2.4.8 Cork Lower Harbour Energy Group

Five large single turbines being developed by the Cork Lower Harbour Energy Group have been given planning permission. Three had been erected by April 2014. The structures are being developed on existing industrial zones land within the facilities of a group of healthcare manufacturing sites in the Ringaskiddy and Currrabinny areas. The EIA and NIS documents prepared for these turbine applications were reviewed which included an assessment on avifauna. That analysis concluded that there would be no displacement of any species which is a qualifying interest of the SPA, and no significant impact on the integrity of Cork Harbour SPA was predicted. There is no pathway of additive effect for significant cumulative or in-combination effects which can be considered to adversely affect the qualifying interests of conservation objectives of the European sites being considered as a result of this project and Ringaskiddy Port Redevelopment and the associated disposal at sea of dredged material.

2.4.9 Marina at Whitepoint, Cobh

The permitted scheme includes for a 74 berth marina at Whitepoint, Cobh and is located 1.1km to the northeast of Ringaskiddy East across the harbour. The NIS for the marina was reviewed and concludes no significant impact on European sites given the small footprint of the proposed project, the use of a point anchoring system and no overall increase in boating activity in the harbour. There is no pathway of additive effect for significant cumulative or in-combination effects which can be considered to adversely affect the qualifying interests of conservation objectives of the European sites being considered as a result of this project and Ringaskiddy Port Redevelopment and the associated disposal at sea of dredged material.

2.4.10 Cobh Cruise Berth Moorings

This project is located 2.2km northeast of Ringasiddy East, and across the Harbour at Cobh. Cruise liners currently berth at the deepwater quay in Cobh. The NIS Screening Assessment of the Cobh Cruise Terminal Upgrade was reviewed. It concluded no significant negative direct or indirect effects on the European sites assessed given the distance between the proposed project and the European sites; the size and scale of the proposed project in the context of existing activity within Cork Harbour and absence of the qualifying features within the area of study. There is no pathway of additive effect for significant cumulative or in-combination effects which can be considered to adversely affect the qualifying interests of conservation objectives of the European sites being considered as a result of this project and Ringaskiddy Port Redevelopment and the associated disposal at sea of dredged material.

2.4.11 Cobh Second Cruise Berth

No design is available for this potential project. If a second berth was constructed at Cobh, it is not expected to result in additional pressures upon the qualifying features and conservation objectives of Cork Harbour SPA. There is no pathway of additive effect for significant cumulative or in-combination effects which can be considered to adversely affect the qualifying interests of conservation objectives of the European sites being considered as a result of this project and Ringaskiddy Port Redevelopment and the associated disposal at sea of dredged material.

2.5 CONCLUSIONS OF SCREENING ASSESSMENT

The Screening Assessment was completed in compliance with the relevant European Commission and national guidelines. The potential impacts during the construction and operation of Ringaskiddy Port Redevelopment and the associated disposal at sea of dredged material have been considered in the context of the European Sites potentially affected, their Qualifying Interests and conservation objectives.

From the findings of the Screening exercise, it is concluded that the proposed project (as described in Section 2.2;

- Is not directly connected with or necessary to the management of any Natura 2000 site;
- Will not give rise to significant adverse effects on the qualifying interests of Ballycotton Bay SPA; and
- Will not give rise to in combination or cumulative effects with the other plans and projects considered.

Having regard to the An Bord Pleanála request for Further Information in accordance with Section 37F [1], a Stage 2 Appropriate Assessment is not required as a result of the revised Screening Assessment. These predictions have been made applying the precautionary principle set out in Commission Guidance and as required by the Court of Justice of the European Union in Cases C-127/02 (Waddenzee) and C-258/11 (Galway City Outer Bypass).

From the findings of the Screening exercise, it is concluded that aspects of the proposed project (as described in Section 2.2 has the *potential* to give rise to significant adverse effects on the qualifying interests of Great Island Channel and Cork Harbour SPA. A Stage 2 Appropriate Assessment of the proposal is required on those aspects of the works which have potential to give rise to significant adverse effects on European sites. Those potential effects are –

For Great Island Channel SAC

- Suspended sediment transported by dredge or disposal plume may result in habitat smothering by hydrological linkage arising from construction or operation of the proposed works.

For Cork Harbour SPA

- Smothering of habitats by hydrological linkage as a result of deposition of increased suspended sediments arising from dredging or disposal operations associated with the proposed works.
- Deterioration of habitats by hydrological linkage as a result of pollution incidences arising from construction or operation of the proposed works.
- Long term deterioration of habitats as a result of the new built elements within Ringaskiddy Port altering the natural coastal processes and extant sediment transport regime in the area.
- Direct noise and visual disturbance.
- Unintentional installation of additional perches for predators.

That assessment is contained in the Stage 2 Appropriate Assessment contained at Sections 3 and 4 of the Natura Impact Statement submitted to An Bord Pleanála in May 2014. There is no change to the Stage 2 Appropriate Assessment of that Natura Impact Statement.

3.0 APPROPRIATE ASSESSMENT

The Stage 2 appropriate assessment text at Sections 3.1, 3.2 and 3.4 of the original NIS remain unchanged. Section 3.3 *Mitigation proposed for the protection of the European site*s should now be read as meaning the schedule of commitments as amended in the Schedule of Environmental Commitments submitted to An Bord Pleanála at oral hearing in September 2014.

4.0 CONCLUSION OF ASSESSMENT

The text in Section 4 remains unchanged.

Table 8: Integrity of the site in Relation to Residual Impacts

Does the project have the potential to:	Yes/No	Details
Cause delays in progress towards achieving the conservation objectives of the site?	No	No significant residual negative impacts
Interrupt progress towards achieving the conservation objectives of the site?	No	No significant residual negative impacts
Disrupt those factors that help to maintain the favourable conditions of the site?	No	No significant residual negative impacts
Interfere with the balance, distribution and density of key species that are the indicators of the favourable condition of the site?	No	No significant residual negative impacts
Cause changes to the vital defining aspects (e.g. nutrient balance) that determine how the site functions as a	No	No significant residual negative impacts
Change the dynamics of the relationships (between, for example, water with flora and fauna) that define the structure and/or function of the site?	No	No significant residual negative impacts
Interfere with predicted or expected natural changes to the site (such as water dynamics or chemical composition)?	No	No significant residual negative impacts
Reduce the area of the key habitats?	No	No significant residual negative impacts
Reduce the population of the key species?	No	No significant residual negative impacts
Change the balance between key species?	No	No significant residual negative impacts
Reduce diversity of the site?	No	No significant residual negative impacts
Result in disturbance that could affect population size or density or the balance between key species?	No	No significant residual negative impacts
Result in habitat fragmentation?	No	No significant residual negative impacts
Result in loss or reduction of key features (e.g. inter-tidal/tidal feeding areas, alteration to tidal regime, etc.)	No	No significant residual negative impacts

APPENDIX 1: NATURA 2000 INFORMATION

Updated to reflect site information for Cork Harbour SPA, Ballycotton Bay SPA and Great Island Channel SAC published after the original NIS was submitted to An Bord Pleanála. . Only the new Conservation Objective documents for the three European sites is included. Previously submitted information remains.

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National Parks and Wildlife Service

Conservation Objectives Series

Cork Harbour SPA 004030

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Introduction

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 on 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.

A site-specific conservation objective aims to define favourable conservation condition for a particular habitat or species at that site.

The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition 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 area it covers within that range, are stable or increasing, and
- 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, and
- 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.

Notes/Guidelines:

1. The targets given in these conservation objectives are based on best available information at the time of writing. As more information becomes available, targets for attributes may change. These will be updated periodically, as necessary.
2. An appropriate assessment based on these conservation objectives will remain valid even if the targets are subsequently updated, providing they were the most recent objectives available when the assessment was carried out. It is essential that the date and version are included when objectives are cited.
3. Assessments cannot consider an attribute in isolation from the others listed for that habitat or species, or for other habitats and species listed for that site. A plan or project with an apparently small impact on one attribute may have a significant impact on another.
4. Please note that the maps included in this document do not necessarily show the entire extent of the habitats and species for which the site is listed. This should be borne in mind when appropriate assessments are being carried out.
5. When using these objectives, it is essential that the relevant backing/supporting documents are consulted, particularly where instructed in the targets or notes for a particular attribute.

Qualifying Interests

**** indicates a priority habitat under the Habitats Directive***

004030 Cork Harbour SPA

A004	Little Grebe *Tachybaptus ruficollis*
A005	Great Crested Grebe *Podiceps cristatus*
A017	Cormorant *Phalacrocorax carbo*
A028	Grey Heron *Ardea cinerea*
A048	Shelduck *Tadorna tadorna*
A050	Wigeon *Anas penelope*
A052	Teal *Anas crecca*
A054	Pintail *Anas acuta*
A056	Shoveler *Anas clypeata*
A069	Red-breasted Merganser *Mergus serrator*
A130	Oystercatcher *Haematopus ostralegus*
A140	Golden Plover *Pluvialis apricaria*
A141	Grey Plover *Pluvialis squatarola*
A142	Lapwing *Vanellus vanellus*
A149	Dunlin *Calidris alpina alpina*
A156	Black-tailed Godwit *Limosa limosa*
A157	Bar-tailed Godwit *Limosa lapponica*
A160	Curlew *Numenius arquata*
A162	Redshank *Tringa totanus*
A179	Black-headed Gull *Chroicocephalus ridibundus*
A182	Common Gull *Larus canus*
A183	Lesser Black-backed Gull *Larus fuscus*
A193	Common Tern *Sterna hirundo*
A999	Wetlands

Please note that this SPA overlaps with Great Island Channel SAC (001058). See map 2. The conservation objectives for this site should be used in conjunction with those for the overlapping site as appropriate.

Supporting documents, relevant reports & publications

Supporting documents, NPWS reports and publications are available for download from: www.npws.ie/Publications

NPWS Documents

Year :	2014
Title :	Cork Harbour SPA (site code: 4030) Conservation objectives supporting document V1
Author :	NPWS
Series :	Conservation objectives supporting document

Other References

Year :	1985
Title :	Breeding seabirds on the east Cork coastline
Author :	Smiddy, P.
Series :	Cork Bird Report 1984: 46-50
Year :	1995
Title :	Seabird monitoring handbook for Britain and Ireland: a compilation of methods for survey and monitoring of breeding seabirds
Author :	Walsh, P.; Halley, D.J.; Harris, M.P.; del Nevo, A.; Sim, I.M.W.; Tasker, M.L.
Series :	JNCC, Peterborough
Year :	1996
Title :	Handbook of birds of the world volume 3: hoatzin to auks
Author :	del Hoyo, J.; Elliott, A.; Sargatal, J.
Series :	Lynx Edicions, Barcelona
Year :	2000
Title :	Common terns *Sterna hirundo* nesting on Cork Harbour
Author :	Wilson, J.; O'Mahony, B.; Smiddy, P.
Series :	Irish Birds Vol. 6(4)
Year :	2014
Title :	Seabird Monitoring Programme (SMP) Database
Author :	JNCC
Series :	http://jncc.defra.gov.uk/smp/Default.aspx
Year :	2014
Title :	BirdLife International Seabird Ecology and Foraging Range Database
Author :	BirdLife International
Series :	http://seabird.wikispaces.com
Year :	2014
Title :	Chapter 15 in: Ringaskiddy Port Redevelopment. Environmental Impact Statement
Author :	RPS
Series :	Report to Port of Cork

A004 Little Grebe *Tachybaptus ruficollis*

To maintain the favourable conservation condition of Little Grebe in Cork Harbour SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by little grebe, other than that occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objectives supporting document

A005 Great Crested Grebe *Podiceps cristatus*

To maintain the favourable conservation condition of Great Crested Grebe in Cork Harbour SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by great crested grebe, other than that occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objectives supporting document

A017 Cormorant *Phalacrocorax carbo*

To maintain the favourable conservation condition of Cormorant in Cork Harbour SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by cormorant, other than that occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objectives supporting document

A028 Grey Heron *Ardea cinerea*

To maintain the favourable conservation condition of Grey Heron in Cork Harbour SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by grey heron, other than that occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objectives supporting document

A048 Shelduck *Tadorna tadorna*

To maintain the favourable conservation condition of Shelduck in Cork Harbour SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by shelduck, other than that occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objectives supporting document

A050 Wigeon *Anas penelope*

To maintain the favourable conservation condition of Wigeon in Cork Harbour SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by wigeon, other than that occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objectives supporting document

A052 Teal *Anas crecca*

To maintain the favourable conservation condition of Teal in Cork Harbour SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by teal, other than that occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objectives supporting document

A054 Pintail *Anas acuta*

To maintain the favourable conservation condition of Pintail in Cork Harbour SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by pintail, other than that occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objectives supporting document

A056 Shoveler *Anas clypeata*

To maintain the favourable conservation condition of Shoveler in Cork Harbour SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by shoveler, other than that occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objectives supporting document

A069 Red-breasted Merganser *Mergus serrator*

To maintain the favourable conservation condition of Red-breasted Merganser in Cork Harbour SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by red-breasted merganser, other than that occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objectives supporting document

A130 Oystercatcher *Haematopus ostralegus*

To maintain the favourable conservation condition of Oystercatcher in Cork Harbour SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing and intensity of use of areas by oystercatcher, other than that occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part four of the conservation objectives supporting document

A140 Golden Plover *Pluvialis apricaria*

To maintain the favourable conservation condition of Golden Plover in Cork Harbour SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by golden plover, other than that occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objectives supporting document

A141 Grey Plover *Pluvialis squatarola*

To maintain the favourable conservation condition of Grey Plover in Cork Harbour SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by grey plover, other than that occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objectives supporting document

A142 Lapwing *Vanellus vanellus*

To maintain the favourable conservation condition of Lapwing in Cork Harbour SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by lapwing, other than that occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objectives

A149 Dunlin *Calidris alpina alpina*

To maintain the favourable conservation condition of Dunlin in Cork Harbour SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by dunlin, other than that occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objectives supporting document

A156 Black-tailed Godwit *Limosa limosa*

To maintain the favourable conservation condition of Black-tailed Godwit in Cork Harbour SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by black-tailed godwit, other than that occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objectives supporting document

A157 Bar-tailed Godwit *Limosa lapponica*

To maintain the favourable conservation condition of Bar-tailed Godwit in Cork Harbour SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by bar-tailed godwit, other than that occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objectives supporting document

A160 Curlew *Numenius arquata*

To maintain the favourable conservation condition of Curlew in Cork Harbour SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by curlew, other than that occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objectives supporting document

A162 Redshank *Tringa totanus*

To maintain the favourable conservation condition of Redshank in Cork Harbour SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by redshank, other than that occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objectives supporting document

A164 Greenshank *Tringa nebularia*

To maintain the favourable conservation condition of Greenshank in Cork Harbour SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by greenshank, other than that occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part four of the conservation objectives supporting document

A179 Black-headed Gull *Chroicocephalus ridibundus*

To maintain the favourable conservation condition of Black-headed Gull in Cork Harbour SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by black-headed gull other than that occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objectives supporting document

A182 Common Gull *Larus canus*

To maintain the favourable conservation condition of Common Gull in Cork Harbour SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by common gull, other than that occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objectives supporting document

A183 Lesser Black-backed Gull *Larus fuscus*

To maintain the favourable conservation condition of Lesser Black-backed Gull in Cork Harbour SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by lesser black-backed gull, other than that occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objectives supporting document

A193 Common Tern *Sterna hirundo*

To maintain the favourable conservation condition of Common Tern in Cork Harbour SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Breeding population abundance: apparently occupied nests (AONs)	Number	No significant decline	Measure based on standard tern survey methods (see Walsh et al., 1995). Wilson et al. (2000) provides background summary population information for the Cork Harbour area. In 2012 the total population of common terns that nested within the wider Cork Harbour was between 85 and 95 pairs, a proportion of which now breeds outside the SPA (RPS, 2014)
Productivity rate: fledged young per breeding pair	Mean number	No significant decline	Measure based on standard tern survey methods (see Walsh et al., 1995). The Seabird Monitoring Programme (SMP) (JNCC, 2014) provides population data for this species
Distribution: breeding colonies	Number; location; area (hectares)	No significant decline	Common tern breeding colonies can be sited in both coastal and inland areas using a wide variety of habitats including sandy, rocky or well-vegetated islands in estuaries, lakes and rivers. This species can also use artificial substrates (Del Hoyo et al., 1996). First recorded nesting in saltmarsh in 1969-70 (Smiddy, 1985), the colony now largely breeds on artificial structures in at least two locations (see Wilson et al., 2000 and RPS, 2014)
Prey biomass available	Kilogrammes	No significant decline	Key prey items: Small fish, crustaceans, insects and occasionally squid. Key habitats: common tern forage in/over shallow coastal waters, bays, inlets, shoals, tidal-rips, drift lines, beaches, saltmarsh creeks, lakes, ponds or rivers. Foraging range: max. 37km, mean max. 33.81km, mean 8.67km (Birdlife International Seabird Database (Birdlife International, 2014))
Barriers to connectivity	Number; location; shape; area (hectares)	No significant increase	Seabird species can make extensive use of marine waters adjacent to their breeding colonies. Foraging range: max. 37km, mean max. 33.81km, mean 8.67km (BirdLife International Seabird Database (Birdlife International, 2014))
Disturbance at the breeding site	Level of impact	Human activities should occur at levels that do not adversely affect the breeding common tern population	In the Cork Harbour area, this species largely breeds on artificial structures (see Wilson et al., 2000 and RPS, 2014)

Conservation Objectives for : Cork Harbour SPA [004030]

A999 Wetlands

To maintain the favourable conservation condition of the wetland habitat in Cork Harbour SPA as a resource for the regularly-occurring migratory waterbirds that utilise it. This is defined by the following attribute and target:

Attribute	Measure	Target	Notes
Habitat area	Hectares	The permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 2,587 hectares, other than that occurring from natural patterns of variation	The wetland habitat area was estimated as 2,587ha using OSi data and relevant orthophotographs. For further information see part three of the conservation objectives supporting document

Legend

Cork Harbour SPA 004030

CO. KERRY
CO. CORK
Cork
Middleton
Cobh
Cloyne
Bandon
Kinsale
SAC 004030

An Roinn Ealaíon, Oidhreachta agus Gaeltachta
Department of Arts, Heritage and the Gaeltacht

MAP 1:
CORK HARBOUR SPA
CONSERVATION OBJECTIVES
SPA DESIGNATION

Map to be read in conjunction with the NPWS Conservation Objectives Document.

SITE CODE:
SAC 004030; version 2.04. CO. CORK

0 1 2 3 4 km

N

Map Version 1
Date: Dec 2014

SPA 004030

SPA 004030

SAC 001058

SPA 004030

SPA 004030

SPA 004030

SPA 004030

SPA 004030

Legend

- Cork Harbour SPA 004030
- Great Island Channel SAC 001058
- OSi Discovery Series County Boundary

An Roinn Ealaíon, Oidhreachta agus Gaeltachta
Department of Arts, Heritage and the Gaeltacht

MAP 2: CORK HARBOUR SPA CONSERVATION OBJECTIVES ADJOINING / OVERLAPPING DESIGNATIONS

Map to be read in conjunction with the NPWS Conservation Objectives Document.

SITE CODE:
SAC 001058; version 3.
SPA 004030; version 2.04. CO. CORK

0 1 2 3 km

N

Map Version 1
Date: Dec 2014

ISSN 2009-4086

National Parks and Wildlife Service

Conservation Objectives Series

Ballycotton Bay SPA 004022

An Roinn
Ealaíon, Oidhreachta agus Gaeltachta
Department of
Arts, Heritage and the Gaeltacht

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Introduction

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 on 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.

A site-specific conservation objective aims to define favourable conservation condition for a particular habitat or species at that site.

The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition 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 area it covers within that range, are stable or increasing, and
- 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, and
- 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.

Notes/Guidelines:

1. The targets given in these conservation objectives are based on best available information at the time of writing. As more information becomes available, targets for attributes may change. These will be updated periodically, as necessary.
2. An appropriate assessment based on these conservation objectives will remain valid even if the targets are subsequently updated, providing they were the most recent objectives available when the assessment was carried out. It is essential that the date and version are included when objectives are cited.
3. Assessments cannot consider an attribute in isolation from the others listed for that habitat or species, or for other habitats and species listed for that site. A plan or project with an apparently small impact on one attribute may have a significant impact on another.
4. Please note that the maps included in this document do not necessarily show the entire extent of the habitats and species for which the site is listed. This should be borne in mind when appropriate assessments are being carried out.
5. When using these objectives, it is essential that the relevant backing/supporting documents are consulted, particularly where instructed in the targets or notes for a particular attribute.

Qualifying Interests

**** indicates a priority habitat under the Habitats Directive***

004022 Ballycotton Bay SPA

A052	Teal *Anas crecca*
A137	Ringed Plover *Charadrius hiaticula*
A140	Golden Plover *Pluvialis apricaria*
A141	Grey Plover *Pluvialis squatarola*
A142	Lapwing *Vanellus vanellus*
A156	Black-tailed Godwit *Limosa limosa*
A157	Bar-tailed Godwit *Limosa lapponica*
A160	Curlew *Numenius arquata*
A169	Turnstone *Arenaria interpres*
A182	Common Gull *Larus canus*
A183	Lesser Black-backed Gull *Larus fuscus*
A999	Wetlands

Supporting documents, relevant reports & publications

Supporting documents, NPWS reports and publications are available for download from: www.npws.ie/Publications

NPWS Documents

Year :	2014
Title :	Ballycotton Bay SPA (site code: 4022) Conservation objectives supporting document V1
Author :	NPWS
Series :	Conservation objectives supporting document

A052 Teal *Anas crecca*

To maintain the favourable conservation condition of Teal in Ballycotton Bay SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by teal, other than that occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objectives supporting document

Conservation Objectives for : Ballycotton Bay SPA [004022]

A137 Ringed Plover *Charadrius hiaticula*

To maintain the favourable conservation condition of Ringed Plover in Ballycotton Bay SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by ringed plover, other than that occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of conservation objectives supporting document

A140 Golden Plover *Pluvialis apricaria*

To maintain the favourable conservation condition of Golden Plover in Ballycotton Bay SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by golden plover, other than that occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objectives supporting document

A141 Grey Plover *Pluvialis squatarola*

To maintain the favourable conservation condition of Grey Plover in Ballycotton Bay SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by grey plover, other than that occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objectives supporting document

Conservation Objectives for : Ballycotton Bay SPA [004022]

A142 Lapwing *Vanellus vanellus*

To maintain the favourable conservation condition of Lapwing in Ballycotton Bay SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by lapwing, other than that occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objectives supporting document

Conservation Objectives for : Ballycotton Bay SPA [004022]

A156 Black-tailed Godwit *Limosa limosa*

To maintain the favourable conservation condition of Black-tailed Godwit in Ballycotton Bay SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by black-tailed godwit, other than that occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objectives supporting document

Conservation Objectives for : Ballycotton Bay SPA [004022]

A157 Bar-tailed Godwit *Limosa lapponica*

To maintain the favourable conservation condition of Bar-tailed Godwit in Ballycotton Bay SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by bar-tailed godwit, other than that occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objectives supporting document

A160 Curlew *Numenius arquata*

To maintain the favourable conservation condition of Curlew in Ballycotton Bay SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by curlew, other than that occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objectives supporting document

Conservation Objectives for : Ballycotton Bay SPA [004022]

A169 Turnstone *Arenaria interpres*

To maintain the favourable conservation condition of Turnstone in Ballycotton Bay SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by turnstone, other than that occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objectives supporting document

Conservation Objectives for : Ballycotton Bay SPA [004022]

A182 Common Gull *Larus canus*

To maintain the favourable conservation condition of Common Gull in Ballycotton Bay SPA, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by common gull, other than that occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objectives supporting document

A183 Lesser Black-backed Gull *Larus fuscus*

To maintain the favourable conservation condition of Lesser Black-backed Gull in Ballycotton Bay SPA, which is defined by the following list of attributes and targets:

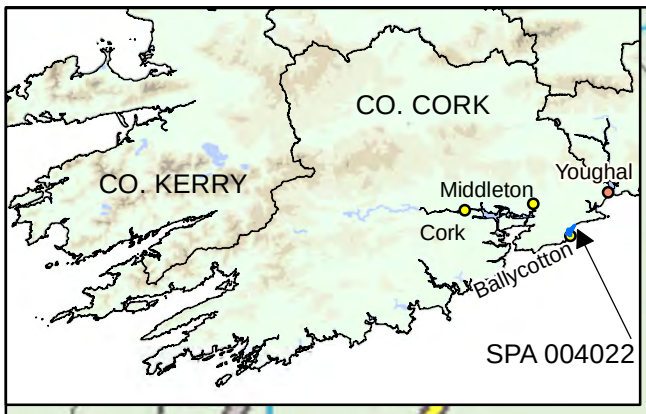
Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by lesser bleck-backed gull, other than that occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objectives supporting document

Conservation Objectives for : Ballycotton Bay SPA [004022]

A999 Wetlands

To maintain the favourable conservation condition of the wetland habitat in Ballycotton Bay SPA as a resource for the regularly occurring migratory birds that utilise it. This is defined by the following attribute and target:

Attribute	Measure	Target	Notes
Habitat area	Hectares	The permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 281 hectares, other than that occurring from natural patterns of variation	The wetland habitat area was estimated as 281ha using OSi data and relevant orthophotographs. For further information see part three of the conservation objectives supporting document



Ballylongane

Shanagarry
An Seangharraí

R632

Ardnahinch

PO

Castle

98

99

00

R629

Ballynamona

10

20

30

40

Ballybraher

I.M.E.S.
Stn.

Sch

Ballycotton
Baile Choitín

PO

Legend

Ballycotton Bay SPA 004022

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MAP 1:
BALLYCOTTON BAY SPA
CONSERVATION OBJECTIVES
SPA DESIGNATION

Map to be read in conjunction with the NPWS Conservation Objectives Document.

SITE CODE:
SPA 004022; version 2. CO. CORK

0 250 500 m

N

Map Version 1
Date: Aug 2014

ISSN 2009-4086

National Parks and Wildlife Service

Conservation Objectives Series

Great Island Channel SAC 001058

An Roinn
Ealaíon, Oidhreachta agus Gaeltachta
Department of
Arts, Heritage and the Gaeltacht

National Parks and Wildlife Service,
Department of Arts, Heritage and the Gaeltacht,

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Series Editor: Rebecca Jeffrey
ISSN 2009-4086

Introduction

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 on 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.

A site-specific conservation objective aims to define favourable conservation condition for a particular habitat or species at that site.

The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition 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 area it covers within that range, are stable or increasing, and
- 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, and
- 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.

Notes/Guidelines:

1. The targets given in these conservation objectives are based on best available information at the time of writing. As more information becomes available, targets for attributes may change. These will be updated periodically, as necessary.
2. An appropriate assessment based on these conservation objectives will remain valid even if the targets are subsequently updated, providing they were the most recent objectives available when the assessment was carried out. It is essential that the date and version are included when objectives are cited.
3. Assessments cannot consider an attribute in isolation from the others listed for that habitat or species, or for other habitats and species listed for that site. A plan or project with an apparently small impact on one attribute may have a significant impact on another.
4. Please note that the maps included in this document do not necessarily show the entire extent of the habitats and species for which the site is listed. This should be borne in mind when appropriate assessments are being carried out.
5. When using these objectives, it is essential that the relevant backing/supporting documents are consulted, particularly where instructed in the targets or notes for a particular attribute.

Qualifying Interests

**** indicates a priority habitat under the Habitats Directive***

001058	Great Island Channel SAC
1140	Mudflats and sandflats not covered by seawater at low tide
1330	Atlantic salt meadows (Glauco-Puccinellietalia maritimae)

Please note that this SAC overlaps with Cork Harbour SPA (004030). See map 2. The conservation objectives for this site should be used in conjunction with those for the overlapping site as appropriate.

Supporting documents, relevant reports & publications

Supporting documents, NPWS reports and publications are available for download from: www.npws.ie/Publications

NPWS Documents

Year :	2006
Title :	A survey of intertidal mudflats and sandflats in Ireland
Author :	Aquafact
Series :	Unpublished report to NPWS
Year :	2009
Title :	Saltmarsh monitoring project 2007-2008
Author :	McCorry, M.; Ryle, T.
Series :	Unpublished report to NPWS
Year :	2014
Title :	Great Island Channel SAC (site code:1058) Conservation objectives supporting document-coastal habitats V1
Author :	NPWS
Series :	Conservation objectives supporting document
Year :	2014
Title :	Great Island Channel SAC (site code:1058) Conservation objectives supporting document-marine habitats V1
Author :	NPWS
Series :	Conservation objectives supporting document

Other References

Year :	1998
Title :	The saltmarshes of Ireland: an inventory and account of their geographical variation
Author :	Curtis, T.G.F.; Sheehy Skeffington, M.J.
Series :	Biology and Environment, Proceedings of the Royal Irish Academy 98B: 87-104
Year :	2012
Title :	Benthic sampling of water bodies of County Cork under the Water Framework Directive
Author :	EcoServe
Series :	Report to the Marine Institute
Year :	2012
Title :	Intertidal benthic survey of Great Island Channel SAC and Cork Harbour SPA
Author :	MERC
Series :	Unpublished report to the Marine Institute and NPWS

Spatial data sources

Year :	Interpolated 2014
Title :	Intertidal surveys 2006, 2011; subtidal survey 2011
GIS Operations :	Polygon feature classes from marine community types base data sub-divided based on interpolation of marine survey data. Expert opinion used as necessary to resolve any issues arising
Used For :	1140, Marine community types (maps 3 and 4)
Year :	2005
Title :	OSi Discovery series vector data
GIS Operations :	High water mark (HWM) and low water mark (LWM) polyline feature classes converted into polygon feature classes and combined; EU Annex I Saltmarsh and Coastal data erased out if present
Used For :	Marine community types base data (map 4)
Year :	Revision 2010
Title :	Saltmarsh Monitoring Project 2007-2008. Version 1
GIS Operations :	QIs selected; clipped to SAC boundary; overlapping regions with Coastal CO data investigated and resolved with expert opinion used
Used For :	1330 (map 5)

Conservation Objectives for : Great Island Channel SAC [001058]

1140 Mudflats and sandflats not covered by seawater at low tide

To maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide in Great Island Channel SAC, which is defined by the following list of attributes and targets:

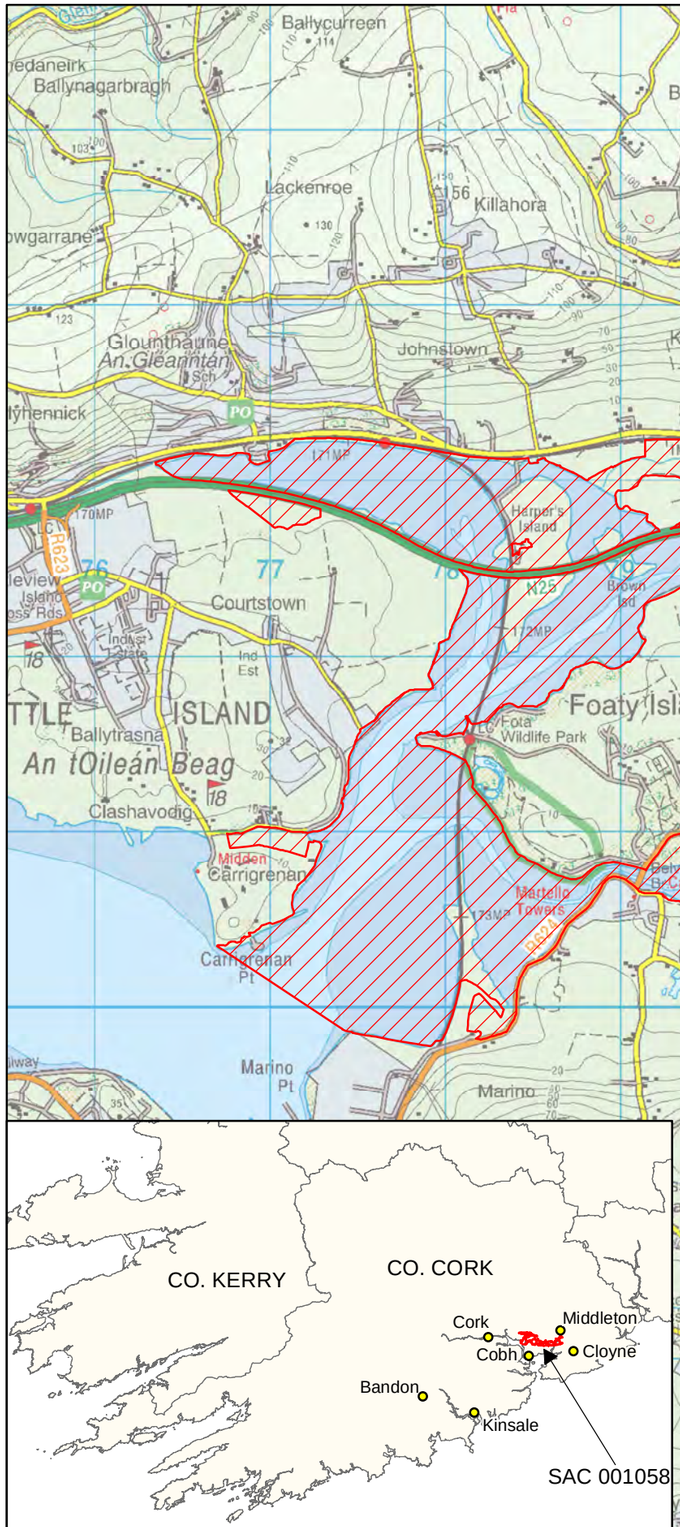
Attribute	Measure	Target	Notes
Habitat area	Hectares	The permanent habitat area is stable or increasing, subject to natural processes. See map 3	Habitat area was estimated using as 723ha using OSi data
Community distribution	Hectares	Conserve the following community type in a natural condition: Mixed sediment to sandy mud with polychaetes and oligochaetes community complex. See map 4	Based on intertidal and subtidal surveys undertaken in 2006 (Aquafact, 2007) and 2011 (EcoServe, 2012; MERC, 2012). See marine supporting document for further information

1330 Atlantic salt meadows (Glauco-Puccinellietalia maritimae)

To restore the favourable conservation condition of Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) in Great Island Channel SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Habitat area	Hectares	Area stable or increasing, subject to natural processes, including erosion and succession. For sub-sites mapped: Bawnard - 0.29ha; Carrigatohil - 1.01ha. See map 5	Based on data from Saltmarsh Monitoring Project (SMP) (McCorry and Ryle, 2009). Two sub-sites that supported Atlantic salt meadow were mapped (1.30ha) and additional areas of potential saltmarsh (17.60ha) were identified from an examination of aerial photographs, giving a total estimated area of 18.90ha. Saltmarsh habitat has also been recorded at two other sub-sites within the SAC (Curtis and Sheehy Skeffington, 1998). NB further unsurveyed areas maybe present within the SAC. See coastal habitats supporting document for further details
Habitat distribution	Occurrence	No decline or change in habitat distribution, subject to natural processes. See map 5 for known distribution	Based on data from McCorry and Ryle (2009). Within the sites surveyed by the SMP, estuary type saltmarsh over a mud substrate is most common and ASM is the dominant saltmarsh habitat. NB further unsurveyed areas maybe present within the SAC. See coastal habitats supporting document for further details
Physical structure: sediment supply	Presence/ absence of physical barriers	Maintain/restore natural circulation of sediments and organic matter, without any physical obstructions	Based on data from McCorry and Ryle (2009). At Bawnard there is a seawall that was constructed in the 18th-19th centuries. At Carrigatohil the northern and eastern shorelines have been significantly modified by road construction. Part of the saltmarsh has also been infilled. See coastal habitats supporting document for further details
Physical structure: creeks and pans	Occurrence	Maintain/restore creek and pan structure, subject to natural processes, including erosion and succession.	Based on data from McCorry and Ryle (2009). The ASM at Carrigatohil is poorly developed, though some of the larger sections contain salt pans. The smaller sections, however, tend to be quite uniform in topography. The saltmarsh topography at Bawnard is poorly developed with few typical saltmarsh features. See coastal habitats supporting document for further details
Physical structure: flooding regime	Hectares flooded; frequency	Maintain natural tidal regime	Based on data from McCorry and Ryle (2009). At Bawnard, the entire bay empties at low tide to expose soft intertidal mudflats. See coastal habitats supporting document for further details
Vegetation structure: zonation	Occurrence	Maintain range of coastal habitats including transitional zones, subject to natural processes including erosion and succession	Based on data from McCorry and Ryle (2009). Zonations to *Salicornia* flats and intertidal mudflats occurs at Carrigatohil. At Bawnard, there is succession from saltmarsh to brackish saltmarsh and wet grassland as well as zonation to intertidal mudflats at the lower saltmarsh boundary. See coastal habitats supporting document for further details
Vegetation structure: vegetation height	Centimetres	Maintain structural variation within sward	Based on data from McCorry and Ryle (2009). At Carrigatohil, the sward height is quite tall due to lack of grazing. At Bawnard only part of the site is grazed. See coastal habitats supporting document for further details
Vegetation structure: vegetation cover	Percentage cover at a representative number of monitoring stops	Maintain more than 90% area outside creeks vegetated	Based on data from McCorry and Ryle (2009). Some poaching was noted in places at Bawnard. See coastal habitats supporting document for further details
Vegetation composition: typical species and sub-communities	Percentage cover at a representative number of monitoring stops	Maintain range of sub-communities with typical species listed in SMP (McCorry and Ryle, 2009)	See coastal habitats supporting document for further details

Vegetation structure: negative indicator species - *Spartina anglica*	Hectares	No significant expansion of common cordgrass (*Spartina anglica*), with an annual spread of less than 1% where it is known to occur	Based on data from McCorry and Ryle (2009). *Spartina* occurs at both sub-sites in this SAC. See coastal habitats supporting document for further details



Legend

Great Island Channel SAC 001058

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MAP 1:
GREAT ISLAND CHANNEL SAC
CONSERVATION OBJECTIVES
SAC DESIGNATION

Map to be read in conjunction with the NPWS Conservation Objectives Document.

SITE CODE:
SAC 001058; version 3. CO. CORK

0 0.5 1 1.5 2 km

N

Map Version 1
Date: June 2014

SAC 001058

SPA 004030

Legend

- Great Island Channel SAC 001058
- Cork Harbour SPA 004030
- OSi Discovery Series County Boundary

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MAP 2:
GREAT ISLAND CHANNEL SAC CONSERVATION OBJECTIVES ADJOINING / OVERLAPPING DESIGNATIONS

Map to be read in conjunction with the NPWS Conservation Objectives Document.

SITE CODE:
SAC 001058; version 3.
SPA 004030; version 2.04. CO. CORK

0 1 2 3 km

N

Map Version 1
Date: June 2014

Legend

- Great Island Channel SAC 001058
- 1140 Mudflats and sandflats not covered by sea water at low tide
- OSi Discovery Series County Boundary

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Department of Arts, Heritage and the Gaeltacht

MAP 3:
GREAT ISLAND CHANNEL SAC
CONSERVATION OBJECTIVES
TIDAL MUDFLATS AND SANDFLATS

Map to be read in conjunction with the NPWS Conservation Objectives Document.

SITE CODE:
SAC 001058; version 3. CO. CORK

0 0.5 1 1.5 2 km

N

Map Version 1
Date: June 2014

Legend

Great Island Channel SAC 001058

OSi Discovery Series County Boundary

Marine Community Types

Mixed sediment to sandy mud with polychaetes and oligochaetes community complex

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MAP 4:
GREAT ISLAND CHANNEL SAC
CONSERVATION OBJECTIVES
MARINE COMMUNITY TYPES

Map to be read in conjunction with the NPWS Conservation Objectives Document.

SITE CODE:
SAC 001058; version 3. CO. CORK

0 0.5 1 1.5 2 km

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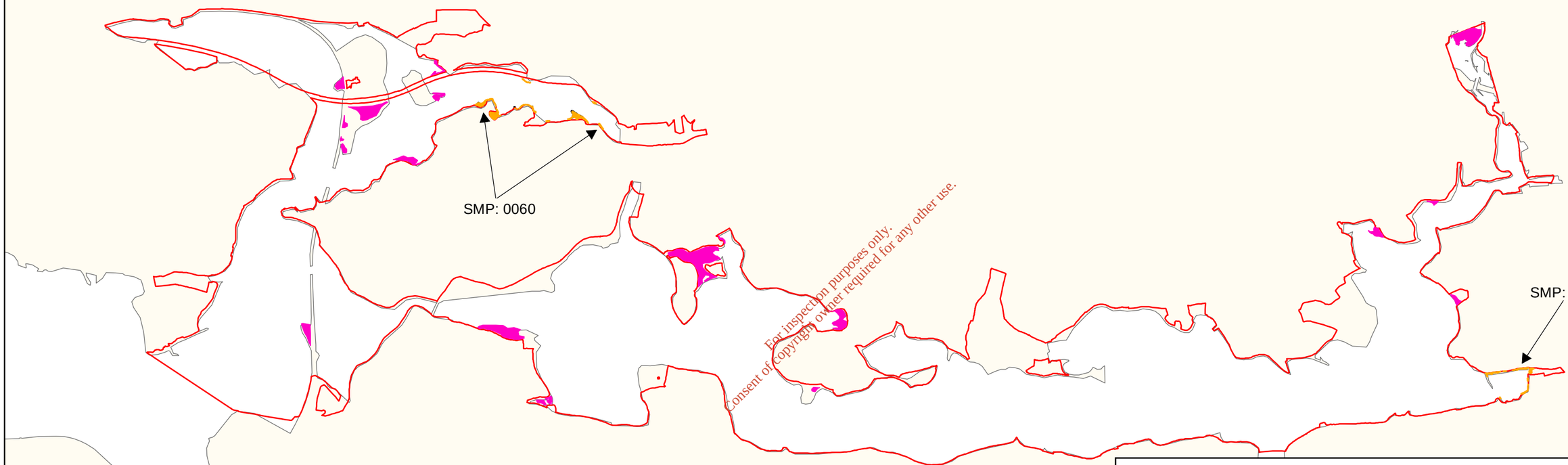
Map Version 1
Date: June 2014



Legend

- Great Island Channel SAC 001058
- OSi Discovery Series County Boundary
- SMP: 0057 Saltmarsh Monitoring Project Site Codes

Saltmarsh Habitats

Qualifying Interests

- 1330 Atlantic salt meadows (Glauco-Puccinellietalia maritimae)
- Potential 1330 Atlantic salt meadows (Glauco-Puccinellietalia maritimae)

Non-Qualifying Interests

- 1310 *Salicornia* and other annuals colonising mud and sand

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Department of Arts, Heritage and the Gaeltacht

MAP 5:
GREAT ISLAND CHANNEL SAC
CONSERVATION OBJECTIVES
SALTMARSH HABITATS

Map to be read in conjunction with the NPWS Conservation Objectives Document.

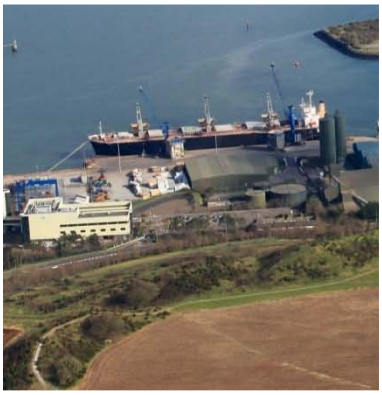
SITE CODE:
SAC 001058; version 3. CO. CORK

0 0.5 1 1.5 2 km

N

Map Version 1
Date: June 2014

RINGASKIDDY PORT REDEVELOPMENT



Further Information in accordance with Section 37F [1]

Revisions to ENVIRONMENTAL IMPACT STATEMENT February 2015

Co-financed by the European Union
Trans-European Transport Network (TEN-T)

The sole responsibility of this publication lies with the author. The European Union is not responsible for any use that may be made of the information contained therein.

1.0 INTRODUCTION, SCOPING & CONSULTATION

Section 1.1 is updated as follows

1.1 Project Summary

This document has been prepared following a request from An Bord Pleanála to submit further information in accordance with section 37F(1) of the Planning and Development Act 2000 for the Ringaskiddy Port Redevelopment.

Each Chapter of the submitted EIS has been reviewed and where appropriate only the additional text has been provided.

References in blue font identify by reference to Sections whether and in what manner any changes occur to the text of the original EIS submitted in May 2014.

A revised screening for appropriate assessment has also been forwarded to the Board as requested.

The remaining text for Sections 1.1 to 1.6 remains unchanged.

2.0 NEED FOR THE SCHEME AND ALTERNATIVES

The text for Sections 2.1 to 2.2 remains unchanged.

3.0 PROJECT DESCRIPTION

The text Sections 3.1 to 3.5.7 remain unchanged. Sections 3.2.1.5 & 3.2.2.4 are included for completeness and are the exact text that appeared in the original EIS submitted at the application stage.

3.2.1.5 Dredging

Dredging works will be carried out to -13.0m CD adjacent to the new quay structures to provide sufficient water depths for vessels at all stages of the tide.

Bed conditions comprise uncompacted silts overlying gravel, clay and limestone depending on location. Dredging will be required in all materials including bedrock.

The soft overlying silt material is unsuitable for use in the works and therefore this will be removed, either by backhoe or trailing suction hopper dredger, and disposed of at a sea disposal site. The quantity involved is in the order of 90,000m³. The disposal of the dredged material will require application for a Dumping at Sea Permit from the Environmental Protection Agency, which is subject to a separate consenting process.

Bedrock and other hard strata will most likely be removed by a combination of drilling and blasting, and / or the use of use of mechanical plant working from a floating or jack-up barge. Typical floating plant is illustrated in Plate 3.2. Dredged rock and other suitable material will be re-used in the reclamation works. The total volume of rock to be removed is anticipated to be in the order of 47,000m³. Further detailed site investigations will be carried out prior to dredging to confirm the precise volume of rock to be removed.

3.2.2.4 Dredging

Dredging works will be carried out to -13.4m CD at the new berth slot in order to maintain a consistent water depth with the existing DWB. The approach to the berths will be dredged to -11.75m CD.

Bed conditions are similar to that in Ringaskiddy East however rock levels are deeper which will mean that no rock dredging will be required as part of the proposed dredging works. Dredging to the required depths will therefore either be by backhoe or trailing suction hopper dredger, and disposed of at a sea disposal site. Again, the disposal of the dredged material will require application for a Dumping at Sea Permit from the Environmental Protection Agency. Excavation of approximately 215,000m^3 of material is estimated.

3.5.8 Disposal at Sea from Dredging Operations

This is a new heading providing further information on dredging activities and disposal at sea. Refer to original EIS section 3.2.1.5 & 3.2.2.4 as set out above.

The total volume to be disposed from dredging at the Ringaskiddy West site is 215,000m^3 comprised of a combination of fine silt and sand. The total volume to be disposed from dredging at Ringaskiddy East site is 90,000m3 comprised of a mainly coarser material than at Ringaskiddy West. Further details of the nature of the material are included in revised Chapter 12 of the EIS.

The dredging will be undertaken by either a trailing hopper suction dredger (THSD) or a combination of THSD and backhoe dredger. The most likely scenario is the use of a THSD at Ringaskiddy West and a backhoe at Ringaskiddy East.

A TSHD is a self contained unit that carries out the dredging, stores the dredged material, sails to the disposal site and dumps the material by releasing through the vessel split bottom. In the case of a back-hoe dredger, the dredger excavates the material and places it in a separate disposal barge which then sails to the disposal site and dumps the material by releasing through the vessel split bottom. In both cases the method of release of material at the dump site is the same.

It is proposed that the dredged material will be disposed of at an l established marine disposal site located to the south east of the entrance to Cork Harbour at location 8° 09.00' to 8° 10.18' W 51° 43.00' to 51° 44.50' N as shown Figure 3.8.

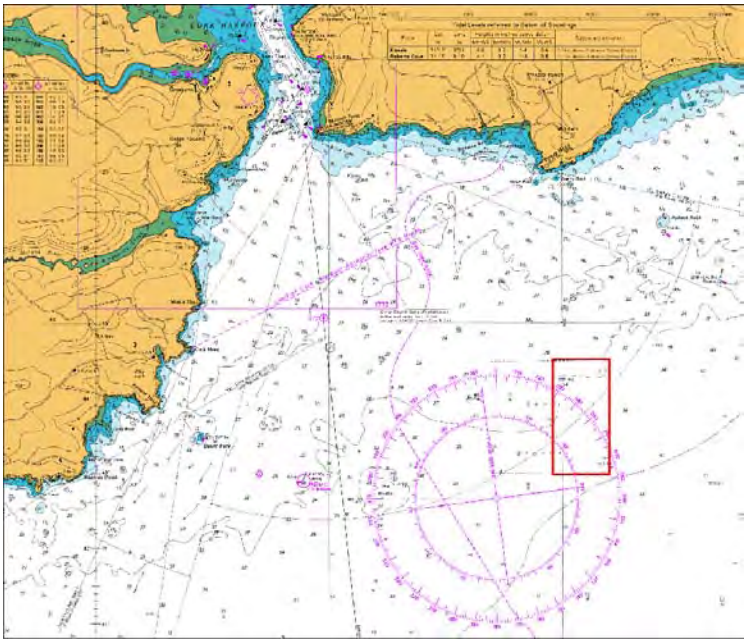


Figure 3.8 Location of disposal site

An individual dredging cycle will last approximately 205 minutes comprising 75 minutes of dredging and 130 minutes of travel and disposal time. Based on experience of previous dumping operations, it is expected that the barge will be required to dispose of the material over at least a 9 minute period while sailing around in the disposal area.

Dredging and disposal operations will be very temporary in duration and are expected to be undertaken within 20 days.

The text in section 3.6 - 3.7 remains unchanged.

4.0 PLANNING POLICY

The text for Sections 4.1 to 4.3 remains unchanged.

4.4 Harnessing Our Ocean Wealth: July 2012

Paragraphs 1 – 4 of Section 4.4 remain unchanged. The following are additional paragraphs for insertion at the end of Section 4.4:

The IMP makes no specific reference to dumping at sea, or the impacts of dredging. The policy notes that the Government is determined to ensure that our ocean wealth will be a key component of the country's economic recovery and sustainable growth and states that the IMP also aims to ensure a balance is struck between protecting our marine ecosystems and maximising the use of its resources as a source of economic growth.

Goal 2 of the IMP aims to ensure a healthy eco-system, by protecting and conserving the marine bio-diversity and ecosystems; managing living and non-living resources and implementing and complying with environmental legislation. In Ireland, compliance with environmental legislation in respect of dumping at sea is overseen by the Environmental Protection Agency (EPA).

A new Section 4.4[A] is inserted as follows:

4.4A Disposal at Sea

National and local spatial planning policy documents do not apply beyond the immediate foreshore. The foreshore extends from the high water mark out to 12 nautical miles and this area is recognised by Government as providing:

> "…a unique and important ecologically sensitive resource which supports various economic activities, public infrastructure and recreation uses." [Foreshore & Dumping at Sea (Amendment) Bill 2009]

Policy protection for the foreshore is provided by the London Convention 1972 (and subsequent Protocol of 1996), and the Convention of the Prevention of Marine Environment of the North-East Atlantic 1992 (the OSPAR Convention 1992). The London Convention 1972 has an objective to promote the effective control of all sources of marine pollution and to take all practicable steps to prevent pollution of the sea by dumping of wastes and other matter. The OSPAR Convention 1992 has an objective to protect the marine environment of the North-East Atlantic from pollution and regulate dumping at sea. In Ireland, OSPAR and London Convention requirements are implemented via the Dumping at Sea (DAS) Acts 1996 to 2012.

The OSPAR Guidelines of the Management of Dredged Material (Agreement 2014-06) provide a scientific and technical framework for dredging and associated dumping at sea. The guidelines note that:

> "Dredging is essential to maintain navigation to, within and from ports and harbours and for the development of port facilities, as well as for remediation, flood management and to maintain the carrying capacity of marine and coastal systems. Much of the material removed during these necessary activities requires deposit at sea." (p.3, Agreement 2014-06)

The aim of the Guidelines is to ensure that EU Contracting Parties take all possible steps to prevent and eliminate pollution and to protect the maritime area against adverse impacts associated with dredging. Since February 2010 the responsibility for permitting and enforcement for Dumping at Sea transferred from the Department of Agriculture Fisheries & Food to the Environmental Protection Agency (EPA). The EPA is responsible for issuing DAS permits for the disposal of dredged material.

Text for Sections 4.5 to 4.13 remains unchanged.

4.14 Summary

Paragraph 1 of Section 4.14 is revised with additional text inserted after the first sentence, as follows:

The London Convention 1972 and OSPAR Convention 1992 provide the framework for protection of the foreshore. Compliance with European legislation and guidelines related to dredging and dumping at sea is licensed by the Environmental Protection Agency.

The remainder of Section 4.14 remains unchanged.

5.0 HUMAN BEINGS

Text under Sections 5.1 to 5.3 remains unchanged.

5.4 Impact Assessment and Proposed Mitigation Measures

Text under Section 5.4 remains unchanged until sub-section 5.4.2.2.

5.4.2.2 Social Considerations - Construction Impacts

The first and second paragraphs of sub- section 5.4.2.2 remain unchanged.

The third paragraph of sub-section 5.4.2.2 is deleted and replaced with the following text.

The construction process will involve dredging and associated disposal at sea of dredged materials, as described in the project description. Dredging activity will result in circa 7 dredging cycles a day; it is expected to be completed within 20 days and will not take place during the months from May to August (inclusive). The potential impacts on social considerations relate to tourism; and recreation & amenity use of the harbour and Western Celtic Sea. These are discussed in 5.4.2.2(A).

Insert new sub-section 5.4.2.2 (A) – Disposal at Sea

5.4.2.2 (A) – Disposal at Sea – Construction Impacts

Dredging activity will take place outside the season for the main established leisure events that happen in the lower harbour – namely Cobh Regatta (August); Cork Sailing Week (early July); Ocean to City (late May / early July); or Escape from Spike Island (August). The Great Island Kayak Race takes place in December / January, but this race circumnavigates Cobh Great Island and does not at any point cross the shipping lane, so will be unaffected by the dredging works. The dredging activity and associated disposal at sea will therefore have no impact on established leisure events associated with the lower harbour.

The dredging ship (THSD) will use the existing shipping lane to exit Cork Harbour and will form part of the general commercial shipping traffic. The THSD will not impede the use of established sailing and recreational boating areas outside the shipping lane in the lower harbour. The THSD will make up to 7 trips to and from the site over the day. Typically there are 25 commercial vessels entering Cork Harbour per week (circa 1,200 – 1,300 pa). The additional shipping associated with the dredging and subsequent trips to the disposal site will, over a very short term, increase the level of commercial shipping traffic to and from Cork Harbour. Such short term increases in vessel activity are not unusual and from experience of similar and larger scale dredging activities including: Port of Cork Maintenance Dredging Autumn 2014; Lee Tunnel; and Cork Main Drainage Scheme; the Port of Cork has confirmed that there has never been an issue between dredging vessels and leisure craft due to the existing systems in place through Port Operations Centre that operates 24/7 and tracks all vessel movements (commercial and leisure) in the harbour. Further Port of Cork maintain communications with the organisers of sailing events (e.g. RCYC) as part of their operations management. Therefore the overall impact of dredging will be temporary and negligible.

The sea disposal site is off-course from existing ferry and cruise liner routes in and out of Cork Harbour and will not impede or impact on any tourism related shipping associated with the Harbour. While recreational sailing craft may occasionally traverse the disposal site the use of the existing site for disposing dredged material associated with the Ringaskiddy Port redevelopment will not impact on tourism shipping, or leisure sailing activities within the Western Celtic Sea.

5.4.3 Land Use

Text under sub-section 5.4.3 remains unchanged until sub-subsection 5.4.3.2 'Land Use – Construction Impacts'.

A new paragraph is inserted as follows:

Construction – Disposal at Sea

Disposal at Sea of dredged material will occur at an existing site, licenced by the EPA. There is, therefore, no impact on land use (which in this instance refers to use of the sea-bed and waters).

5.5 Cumulative Impacts

The first two paragraphs of sub-section 5.5 remain unchanged. The following new paragraph is inserted after the second paragraph.

In relation to construction dredging and associated disposal at sea, permitted projects with a potential cumulative impact have been identified as Monkstown Marina; Cobh Marina; Haulbowline Remediation; and Cobh Cruise Berth improvements. Proposed plans with a potential cumulative impact have been identified as a possible second cruise berth at Cobh; and development of a link from Haulbowline Island to Spike Island. When considered in combination the permitted projects and proposed plans do not have a cumulative impact on the Human Beings discipline. Monkstown Marina is the only project currently identified as having any potential significant dredging activity associated with its construction programme.

The remaining paragraphs under this sub-section remain unchanged. The following new paragraph is inserted at the end of Section 5.5.

Should construction dredging activity for Monkstown Marina and the proposed Ringaskiddy Port redevelopment coincide there would be a concentrated increase in commercial shipping within the Lower Harbour. This concentrated increase in commercial shipping would have a short term impact on recreational activity in the Lower Harbour, but it is considered that any cumulative negative impact would be negligible. Any cumulative impact would be very short term, with construction dredging and disposal at sea activities for the proposed Ringaskiddy Port redevelopment anticipated to be complete within 20 days. None of the other permitted or proposed plans within Harbour waters are considered to have a potential cumulative impact in relation to the Human Beings discipline.

5.6 Summary of Impacts and Mitigation Measures

Text under Section 5.6 is unchanged.

6.0 CULTURAL HERITAGE

Text for Sections 6.1 to 6.6.2 remains unchanged.

6.6 Impact Assessment

The following additional subsection has been inserted at the end of Section 6.6.

6.6.3 Impacts during Dumping at Sea

The licensed marine disposal area is well established, since 1978, and lies southeast of the entrance to Cork Harbour, as indicated on Figure 3.8 in Chapter 3.0 Project Description. The location is in an area of deep water, extending from depths of 28m in its northern sector, to below 45m in the south.

There is one possible wrecksite recorded historically as being located within the disposal area, in its northwest corner (Figure 6.15). The Admiralty Chart indicates the site as an 'obstruction' (Figure 6.16). The Historic Shipwreck Inventory maintained by the National Monuments Section at the Department of Arts, Heritage and the Gaeltacht qualifies this record as being a target identified by the UK Hydrographic Survey (UKHO reference 011500530). The UKHO record indicates that the anomaly measures 35m long by 20m wide, and rises 1.6m from the seabed. The record concludes that it is an obstruction that is a probable natural feature.

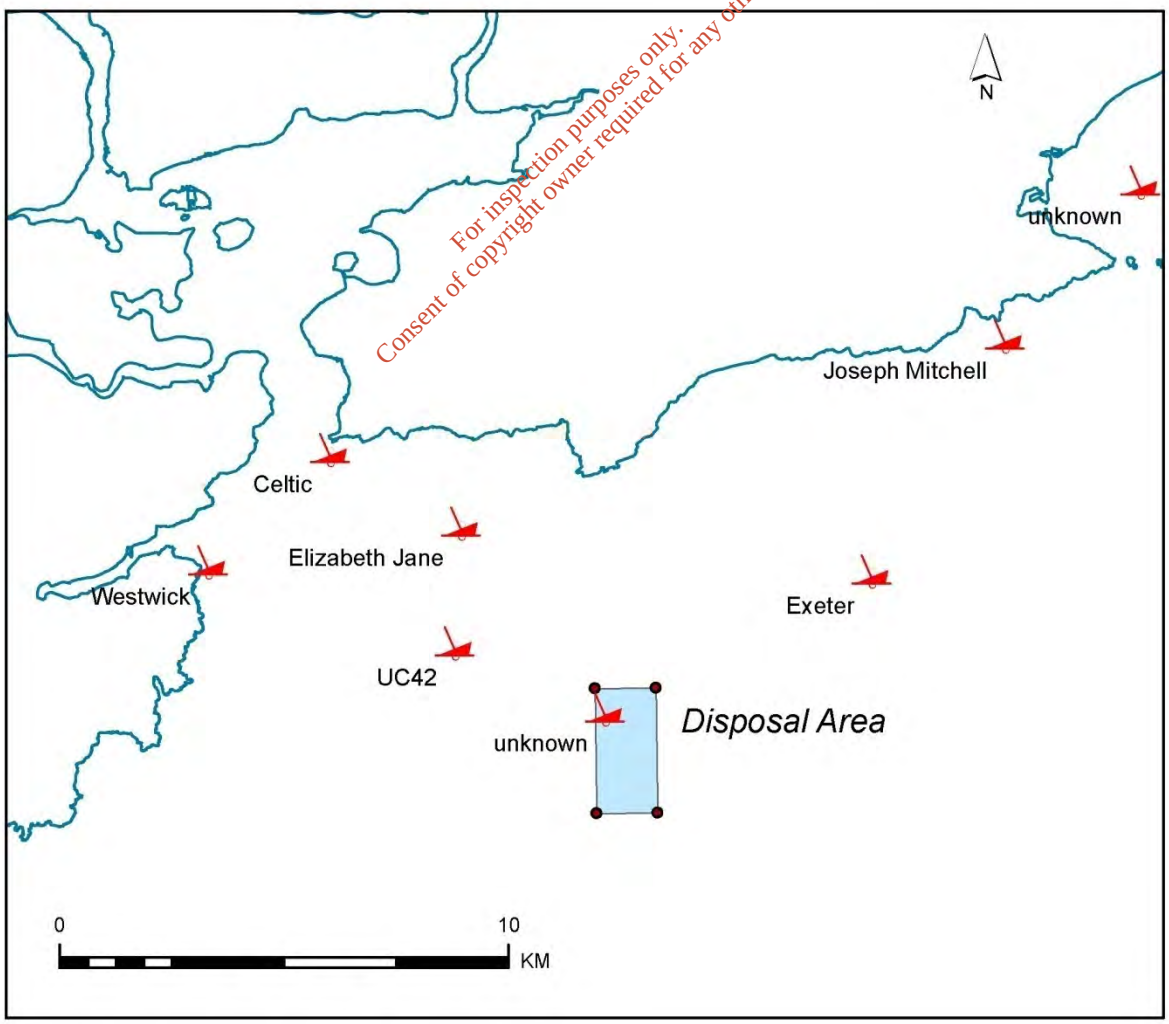


Figure 16.5 Shipwreck Locations in vicinity of disposal area.

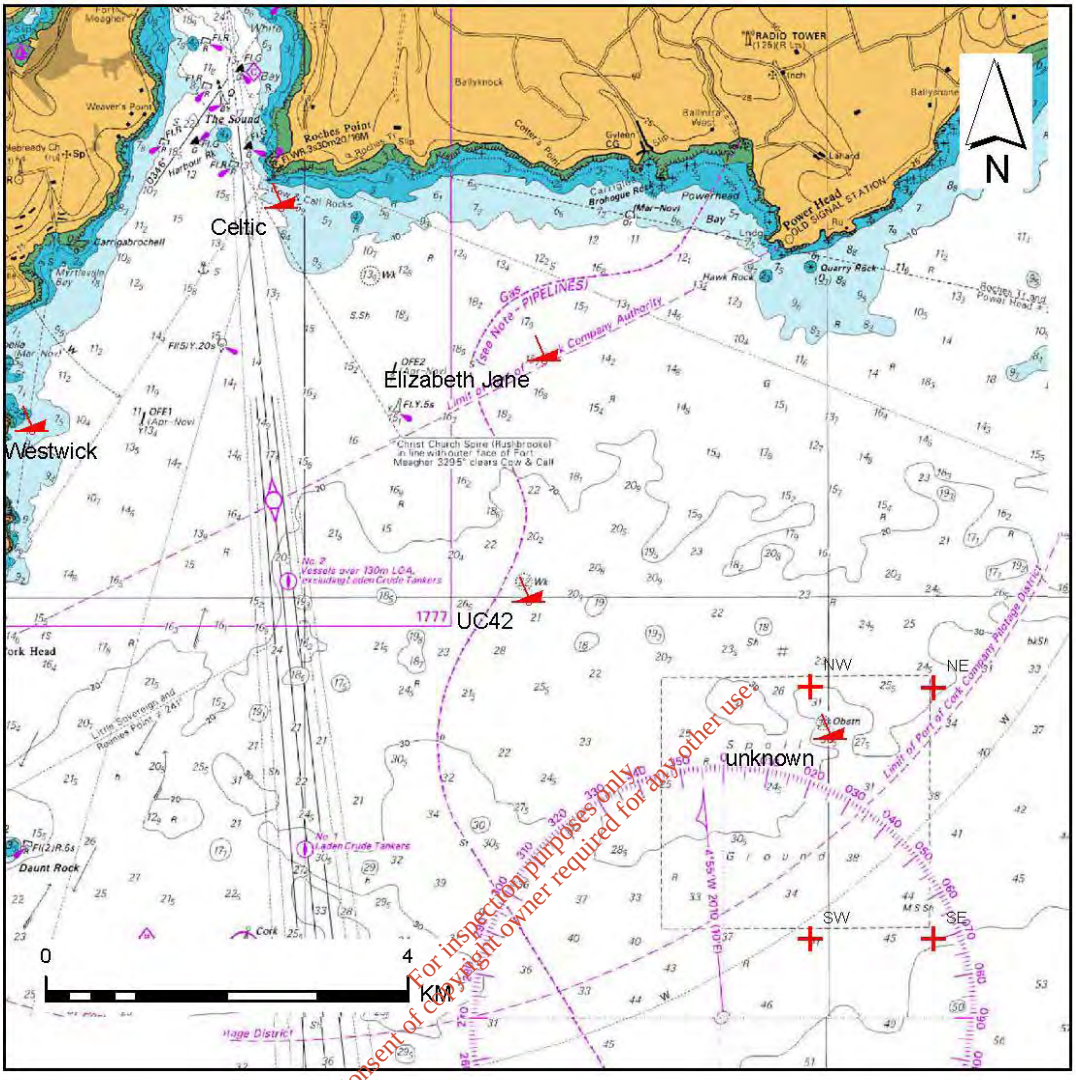


Figure 16.6 Admiralty Chart indicating shipwrecks.

There are no other known or possible shipwreck sites or features of archaeological significance within the disposal area. The next nearest feature is the wreck of German submarine UC42, which lies 3.1km northwest of the disposal area. It is a genuine wreck of the First World War, measuring 45m long and was lost in 1917. The submarine lies in 27m of water.

The Port of Cork has carried out marine geophysical survey of the disposal area. In 1999, an archaeologically-informed survey was conducted, comprising side-scan sonar and magnetometry surveys (Irish Hydrodata,'Cork dredge spoil disposal site, archaeo-geophysical survey', 1999). No indication of shipwreck were observed in this survey.

In 2013, a multibeam echosounding survey was carried out to identify expanses of areas within the disposal site that consist of exposed bedrock and surface sediments (Irish Hydrodata,'Cork dredge spoil disposal site, impact hypothesis update 2013'). The information was then compared with that from earlier surveys.

In addition, the state-sponsored INFOMAR survey of the seabed by the Geological Survey of Ireland has included the marine disposal area within its survey of the Cork coastline in 2008. That work included multi-beam echosounding and sub-bottom profiling surveys.

The results of this succession of comprehensive and detailed survey work indicates that there is no clear evidence of shipwreck within disposal area. The surveys also indicate that the seabed at the

disposal area consists predominantly of large expanses of exposed bedrock, some of which are associated with cobble spreads, and some of which are in high relief. The UKHO 'obstruction' may in fact be a high-relief exposure of bedrock. There are also expanses of sediment, which both intermixes with the bedrock in places, and which forms its own discrete spreads and channels. The sediment reaches 2m depth in places but is generally in the order of 1m deep.

Comparison of the data sets over time was most robust when examining those from 2008 and 2013, as both data sets were acquired using comparable equipment. Some 272,075m^3 of dredged material was disposed of here between those years. The survey data indicated that there was little or no change in the expanse of sediment on the seabed surface within the dump site.

The impact on this area from the proposed dredging associating with the Ringaskiddy harbour redevelopment project will see further disposal of dredged spoils within the dump site. The dredged quantities will be 215,000m^3, from Ringaskiddy West, and 90,000m^3 from Ringaskiddy East. These quantities are equivalent to those that have been dumped at the site between 2008 and 2013. The former quantities are considered to have resulted in little or no change in the expanse of sediment on the seabed surface. It is concluded in the assessment that the same will be case in the present instance. Consequently the impact assessment from the perspective of cultural heritage is that the impact will be slight to negligible. There is no archaeological reason why the proposed work should not proceed.

There is no requirement for further archaeological work prior to dredging commencing. The physical dredging at Ringaskiddy will be archaeologically monitored as part of the Environmental Commitments submitted at the Oral Hearing (see Chapter 17).

Text for Section 6.7 remains unchanged.

Section 6.8 has been revised as follows;

6.8 Cumulative Effects

Cumulative impacts consider the following projects and proposed projects from a cultural heritage perspective:

- Cobh marina
- Monkstown Marina
- Haulbowline Remediation Project
- Cobh Cruise Berth Upgrade/Mooring Dolphins
- Spike Island Masterplan
- Cobh Second Cruise Berth

The cultural heritage narrative of the lower harbour area is informed by the standing remains of coastal defensive works and related structures. Among the specific projects identified, including Ringaskiddy, the most substantial cultural heritage assets are on the islands of Haulbowline and Spike, where the historic forts and their later developments remain centrally important to the present-day landscapes.

The Haulbowline Remediation Project on Haulbowline Island will be meeting conditions required to preserve the archaeological heritage during construction works, and this can be expected as part of the Spike Island Masterplan as well.

The archaeological potential at all of these project locations also lies in the buried sediments on land and at sea. The potential remains unqualified. To address this issue, and where construction impacts will be significant, the implementation stages of the projects will have comprehensive archaeological monitoring programmes as part of their construction management plans.

Archaeological monitoring that is licensed by the Department of Arts, Heritage and Gaeltacht (DAHG), is the single most useful mitigation when working in locations that do not have visible or known archaeological features in the immediate area, as it safeguards any cultural heritage material that may be discovered as a result of new construction works, and it ensures that such material is recorded and

archived in the most effective manner. Such measures are in fulfilment of requirements set by the National Monuments Section of the DAHG, which are made on the basis of conserving the archaeological heritage of a site and securing the preservation and protection of any remains that may exist within the site.

The cumulative impact of this mitigation strategy across the projects will be to generate a new baseline of information that will inform the wider cultural heritage narrative of Cork Harbour. This impact can be considered a positive long term result.

Text for Section 6.9 remains unaltered.

7.0 LANDSCAPE AND VISUAL

Text for Sections 7.1 to 7.5.6 remains unchanged.

Text for Section 7.5.7 has the following paragraph added.

7.5.7 Construction Phase Impacts

The proposed activities associated with dredging as part of the construction of the Ringaskiddy Port Redevelopment has been included in Chapter 7 of the submitted EIS. The activities required for the transfer of dredged material to the licensed disposal site will be completed by the dredging vessel. The transfer will require the dredged vessel to move back and forth from Ringaskiddy to the licensed site until completion of dredging works. The dredging works will be temporary in duration. There are numerous vessels coming and going from Cork Harbour and the addition of the dredging vessel will not cause any significant landscape or visual impacts.

No significant landscape and visual effects are predicted for the transfer and disposal of dredged material from the proposed Ringaskiddy Port Redevelopment.

The text of Section 7.5.8 is replaced as follows:

7.5.8 Cumulative Impacts

A review of the planning history for the area to establish projects that might have a potential cumulative impact with the proposed Ringaskiddy Port Redevelopment and the proposed dumping at sea. Amongst the permitted projects included in the cumulative assessment are the Monkstown Marina; the five large single wind turbines being developed by Cork Lower Harbour Energy Group; Cobh Marina; Cobh Cruise Berth; and Haulbowline Remediation Project.

Permitted Projects

Monkstown Marina

The permitted scheme includes for a 285 berth marina at the location of the existing marina that has 82 berths and is located on the opposite side of Monkstown Creek from the proposed redevelopment. This area has numerous leisure craft currently berthed and launched from slipways at Monkstown. The proposed redevelopment will be observed from Monkstown in the context of leisure craft in the foreground and there will be little noticeable change to the aspect of views from the Monkstown area with the addition of the new marina. Dredged material will be disposed of at sea but similar vessels and activities take place in the harbour and in-combination visual impacts are not predicted.

Due to the separation distance and the existing use of the wider harbour area for leisure craft there will be no significant cumulative landscape and visual effects.

Cork Lower Harbour Energy Group Single Wind Turbines

The construction of the turbines had commenced at the time of the assessment for the proposed redevelopment and these turbines formed part of the baseline for the landscape and visual impact assessment within the submitted EIS. The turbines have increased the perception of the landscape character in the Ringaskiddy area as an industrialised landscape. The turbines are observed as separate and distinct features from the proposed redevelopment and are more dominant in the wider landscape.

When viewed in combination with the proposed redevelopment it is the turbines that are the tallest and dominant features with no significant cumulative landscape and visual impacts caused by the proposed redevelopment.

Cobh Marina

The permitted scheme includes for a 74 berth marina at Cobh and is located on the opposite side of Cork Harbour from the proposed redevelopment. The permitted scheme is small in scale and at a location which is currently used for leisure craft. No dredging is proposed for this project and there is no potential for in-combination visual impacts for disposal at sea. There is limited potential for in-combination views due to the separation distance between the two sites and within views from Cobh where such in-combination views are possible, it will be the berthed leisure craft in the foreground that are more noticeable that the more distant proposed redevelopment.

No significant cumulative landscape and visual impacts will be caused by the proposed redevelopment.

Cobh Cruise Berth

The permitted scheme is remote from the Ringaskiddy area and not visual linked due to the small scale of the permitted works. No dredging is proposed for this project and there is no potential for in-combination visual impacts for disposal at sea. Cruise liners currently berth at the deepwater quay in Cobh and this will continue to be the case with the permitted scheme.

There will be no significant cumulative landscape and visual impacts caused by the proposed redevelopment due to the separation distance and small scale of the permitted works.

Haulbowline Remediation Project

The permitted remediation project at Haulbowline Island will result in the creation of a new park and recreation facilities that will result in a beneficial landscape and visual impact. No dredging is proposed for this project and there is no potential for in-combination visual impacts for disposal at sea. The project is remote from the proposed Ringaskiddy redevelopment and there is very limited potential for in-combination effects.

Overall no significant cumulative landscape and visual impacts will be caused by the proposed redevelopment.

Planned Projects

With regards to planned projects the following have been assessed; Spike Island Masterplan; Cobh Second Cruise Berth.

Spike Island Masterplan

The Masterplan has considered many options and is broad in its approach requiring more detailed design work. However the most likely area for potential cumulative landscape and visual effect relates to the proposal for a new link between Haulbowline and Spike Islands. This could be created by a causeway or a new bridge. With either option the new crossing point would be remote from the proposed Ringaskiddy redevelopment and with significant land mass and urban development located between the two sites.

Therefore no significant cumulative landscape and visual impacts caused by the proposed redevelopment.

Cobh Second Cruise Berth

Ifa second berth is constructed at Cobh there would be no significant change in the existing landscape and visual context of the Cork Harbour area as cruise liners currently berth at the deepwater quay in Cobh and there will be no significant cumulative landscape and visual impacts caused by the proposed redevelopment due to the separation distance and small scale of the permitted works.

In conclusion no significant landscape and visual cumulative effects are predicted for the combination of any permitted or proposed projects within the vicinity of the proposed Ringaskiddy Port Redevelopment.

Text for Sections 7.6 to 7.7 remains unchanged.

8.0 TRAFFIC & TRANSPORTATION

Text for Sections 8.1 to 8.7 remains unchanged.

Text for sub-section 8.7.4 is revised as follows;

8.7.4 Cumulative Impacts

For the construction phase assessment in 2017, cumulative traffic volumes includes for other permitted construction projects including Monkstown Marina, Cobh Marina, Haulbowline Remediation Project and the proposed N28 Upgrade.

For the operational phase assessment of the proposed redevelopment, cumulative traffic volumes have been included in the predicted traffic levels for future years 2018 and 2033. The same NRA traffic growth figures that were used for the Dunkettle Interchange Assessment have also been used for this traffic assessment. These future traffic levels allow for permitted and proposed projects such as the Monkstown Marina; Cobh Marina; Haulbowline Remediation Project; and Cobh Cruise Berths.

The cumulative traffic volumes do not result in any changes to the predicted impacts in the submitted EIS. The proposed dredging and disposal to a licensed dump site, as part of the Ringaskiddy Port Redevelopment, has no impact on traffic. Further the proposed redevelopment and other permitted and proposed projects are already considered and assessed in the Traffic and Transportation chapter of the EIS.

9.0 NOISE AND VIBRATION

Text remains unchanged for Chapter 9 with the exception of new or amended text in Sections 9.4.2 and 9.5.5.

9.4.2 Predicted Impact of Construction Noise from Proposed Redevelopment

Text below to be inserted after the last paragraph in Section 9.4.2.

Dredging activities associated with the proposed Ringaskiddy Port Redevelopment have been assessed and included in the detailed noise assessment described in Sections 9.4.1 and 9.4.2. There will be a requirement for dredged material from the construction site to be transported to and disposed of at a licensed marine disposal site located to the south east of the entrance to Cork Harbour.

It is estimated that an individual dredging cycle will take approximately 3-4 hours, which incorporates the dredging, transport to and from the disposal site and the disposal activity. On account of the busy nature of the shipping channel between the entrance of Cork Harbour and Ringaskiddy Port, one dredging cycle movement every 3-4 hours along this channel will not generate any significant change to the noise environment in the vicinity of the channel.

On account of the distance between the disposal site and the nearest noise sensitive properties on the coastline facing the disposal site, noise levels from the disposal activities will be below existing background noise levels (i.e. L_{A90}) at these properties and will not generate any significant noise impact at any property.

9.5.5 Cumulative Noise Impacts

Text in Section 9.5.5 of the EIS to be replaced with the text below.

There are a range of projects in the study area that are in different stages of planning/construction and have the potential to influence the noise environment in the vicinity of the proposed redevelopment. These have all been considered in the context of the proposed redevelopment and the potential for cumulative noise impacts at the nearest noise sensitive receptors.

Current or future projects that have the potential to alter the noise environment in the study area include the East Tip Remediation Project at Haulbowline Island, the construction of 5 wind turbines by the Cork Lower Harbour Energy Group, the Spike Island Masterplan, Monkstown Marina, Cobh Marina and Cobh Cruise Berth.

The proposed Monkstown Marina has the potential to generate significant localised noise impacts during the construction phase on account of its proximity to properties along the R610. Section 9.4 demonstrated that there will be no significant construction noise impact at Monkstown as a result of the proposed Ringaskiddy Port Redevelopment and therefore, any cumulative noise impact from both projects should they be constructed at the same time, will be as a result of the construction works at the proposed Monkstown Marina site only.

The baseline survey for the proposed Ringaskiddy Port Redevelopment was completed prior to the construction of the Cork Lower Harbour Energy Group single wind turbines that are now present in the study area. Therefore, a quieter noise environment was recorded against which the proposed Ringaskiddy Port Redevelopment was assessed (i.e. worst-case scenario). The noise sensitive receptors most impacted by the wind turbines are not the same receptors that will be impacted by noise associated with the proposed Ringaskiddy Port Redevelopment. There will be no significant cumulative noise impact from the wind turbines and the proposed Ringaskiddy Port Redevelopment at any of the nearest noise sensitive properties.

The Cobh Marina project is on a smaller scale than that proposed at Monkstown. On account of the nature of the proposed structure, there will be no significant construction phase noise impact from this

project and hence no significant cumulative noise impact from this project in tandem with the proposed Ringaskiddy Port Redevelopment.

On account of the distance between the proposed works at the Cobh Cruise Berth (and the potential Second Cruise Berth) and the proposed development at Ringaskiddy Port, there is no potential for significant cumulative noise impacts at properties adjacent to these projects.

The Haulbowline Remediation Project at Haulbowline Island will generate significant localised noise impacts during the construction phase. If the construction phase for this project were to proceed at the same time as the proposed Ringaskiddy Port Redevelopment project, there is limited potential for significant cumulative noise impacts as there are no properties that are sufficiently close to both projects as to experience such a cumulative impact.

The Spike Island Masterplan is currently being progressed. On account of the distance between Spike Island and Ringaskiddy Port, the number and relative location of receptors between the two sites and the topography between the sites, there is no likelihood of significant cumulative construction phase noise impacts from both sites.

In summary, all of the potential and planned projects in the lower Cork Harbour area have been considered as part of the assessment to determine the potential for cumulative noise impacts associated with the proposed Ringaskiddy Port Redevelopment in tandem with other projects.

It is concluded that there no potential for any significant cumulative noise impacts from the proposed redevelopment in combination with other projects.

10.0 AIR QUALITY & CLIMATE

A new sub-heading (*10.4.1.6*) has been added addressing specifically the impact of dumping at sea.

The second paragraph of text in section 10.8 of the original EIS has been replaced to clarify cumulative impacts.

All other text within Chapter 10 of the original EIS remains unchanged.

10.4.1.6 Dumping at Sea Impact Assessment

This is a new subheading.

The activities required for the transfer of dredged material to the licensed disposal site will be completed by the dredging vessel. The transfer will require the dredged vessel to move back and forth from Ringaskiddy to the licensed site until completion of dredging works. Dredging and disposal operations will be very temporary in duration and are expected to be undertaken within 20 days.

There are numerous vessels coming and going from Cork Harbour and the addition of the dredging vessel will not cause any significant air quality (including odour) & climate impacts.

In conclusion, no significant air quality (including odour) & climate impacts effects are predicted from the transfer and disposal of dredged material for the proposed Ringaskiddy Port Redevelopment whether 'in combination' or otherwise as part of the proposed development.

10.8 Cumulative Impacts

The following text is the replacement text for the second paragraph of text in section 10.8 of the original EIS:

Cumulative impacts may arise from the combined effects of a number of different projects, in combination with the project being assessed, on a single receptor/resource. This can include multiple impacts of the same or similar type from a number of projects upon the same receptor/resource.

A review took place of the planning history for the area to establish projects that might have a potential cumulative impact with the proposed Ringaskiddy Port Redevelopment. Amongst the permitted projects included in the cumulative assessment were the Monkstown Marina; the five large single wind turbines being developed by Cork Lower Harbour Energy Group; Cobh Marina; Cobh Cruise Berth; and Haulbowline Remediation Project. With regards to planned projects the following have been assessed; Spike Island Masterplan; a potential Cobh Second Cruise Berth.

The air quality and climate assessment has taken into consideration cumulative impacts that takes account of all proposed developments or those that are planned. The contribution of airborne contaminants from site vehicles and plant during the construction phase to local air quality is predicted to be negligible, and effects transient. The cumulative impacts from the permitted projects (Monkstown Marina; the five large single wind turbines being developed by Cork Lower Harbour Energy Group; Cobh Marina; Cobh Cruise Berth; and Haulbowline Remediation Project) and the planned projects (Spike Island Masterplan and Cobh Second Cruise Berth) on air quality and climate are predicted to be negligible.

A range of projects have been taken into consideration as part of the cumulative assessment.

In conclusion no significant air quality and climate cumulative effects were predicted for the combination of any permitted or proposed projects within the vicinity of the proposed Ringaskiddy Port Redevelopment.

11.0 SOILS AND GEOLOGY

Text for Sections 11.1 to 11.4 remains unchanged.

The following text has been added to subsection 11.4.3.

11.4.3 Cumulative Impacts

A range of permitted projects; Monkstown Marina; Cobh Marina; Cobh Cruise Berth and Haulbowline Remediation Project; and proposed projects; IMERC Masterplan; Spike Island Masterplan; Cruise Second Cruise Berth; has been taken into consideration as part of the cumulative assessment. When these projects have been considered as part of this assessment, no significant cumulative effects are predicted due to the separation distance between the proposed Ringaskiddy Port Redevelopment and the permitted and proposed projects that limits potential pathways and also due to the construction and operational phase mitigation measures for the proposed Ringaskiddy Port Redevelopment, as submitted to the Oral Hearing.

Text for Section 11.5 and 11.6 remains unchanged.

12.0 COASTAL PROCESSES

Text for Sections 12.1 to 12.3 remains unchanged.

12.3 Sediment Modelling and Water Quality

The following Section 12.3.2 is inserted after Section 12.3.1 of the original EIS.

12.3.2 Dumping at Sea

The impact of the proposed 2007 Oyster Bank Strategic Infrastructure Development (Ref: 04.PA0003) on the hydrodynamic regime of the dredge material disposal area was assessed using computational modelling techniques based on the MIKE 21 suite of coastal process modelling software developed by the Danish Hydraulics Institute.

That model was run on the basis of a greater quantum (385,000m^3) of dredge material than is currently proposed (300,000m^3), but where the material in Oyster Bank exhibits similar characteristics to the material in Ringaskiddy Basin. The authors of the 2007 EIS Coastal Processes chapter are the same authors of the 2014 Ringaskiddy Port Redevelopment EIS Coastal Processes chapter. We can confirm that the model used then is wholly applicable to the current proposal to dispose at sea of material dredged in Ringaskiddy Basin. We can confirm that disposal patterns of disposed dredge material are identical for the present project.

The model accurately simulated the tidal flows and water level variations in the area. The tidal model was run for a period from late February to early April 2005 so that the hydrodynamic data would include a large equinoctial spring tide. The results of those simulations are shown below in terms of the deposition footprint on the seabed and the maximum concentration envelope. The maximum concentration envelope shows the peak value that occurs at any time during the simulation at the particular point in the model area and is generated in the model as the plume from the dredged material disposal washes over the area in response to the varying tidal flow conditions. The concentrations shown in the figures will therefore not be experienced simultaneously.

Figure 12.48 shows the net deposition footprint on the seabed for the disposal of the 385,000 m^3 of material from the dredging. The deposition thickness on the seabed in millimetres may be estimated by dividing the kg/m^2 value by 1.5. It will be noted that the thickness of the deposited sediment outside the dump site area is generally less than about 50 mm and that no measurable amount of material is deposited further than about 4 kilometres from the centre of the site.

Figure 12.49 show the maximum instantaneous suspended sediment concentration envelope averaged over the whole of the water column that occurs at any time during the dumping operations. Figure 12.50 shows maximum instantaneous suspended sediment concentration envelope in the top 10m of the water column that occurs at any time during the dumping operations. It can be seen from the maximum suspended sediment concentration figures that the plume from the dumping of the dredge material, even at very low concentration values, does not extend a great distance from the disposal site.

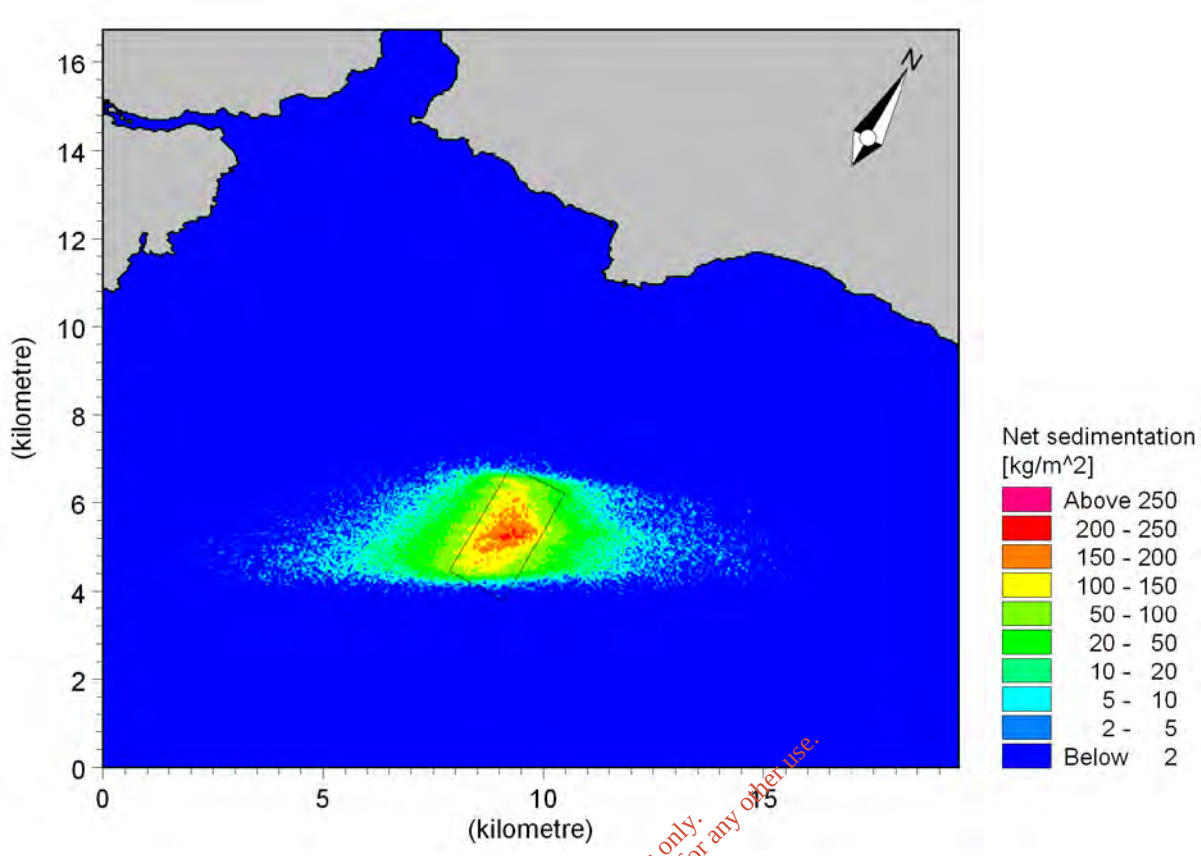


Figure 12.48 Deposition Footprint for dumping of 385,000 m^3 of sediment from Oyster Bank and related area

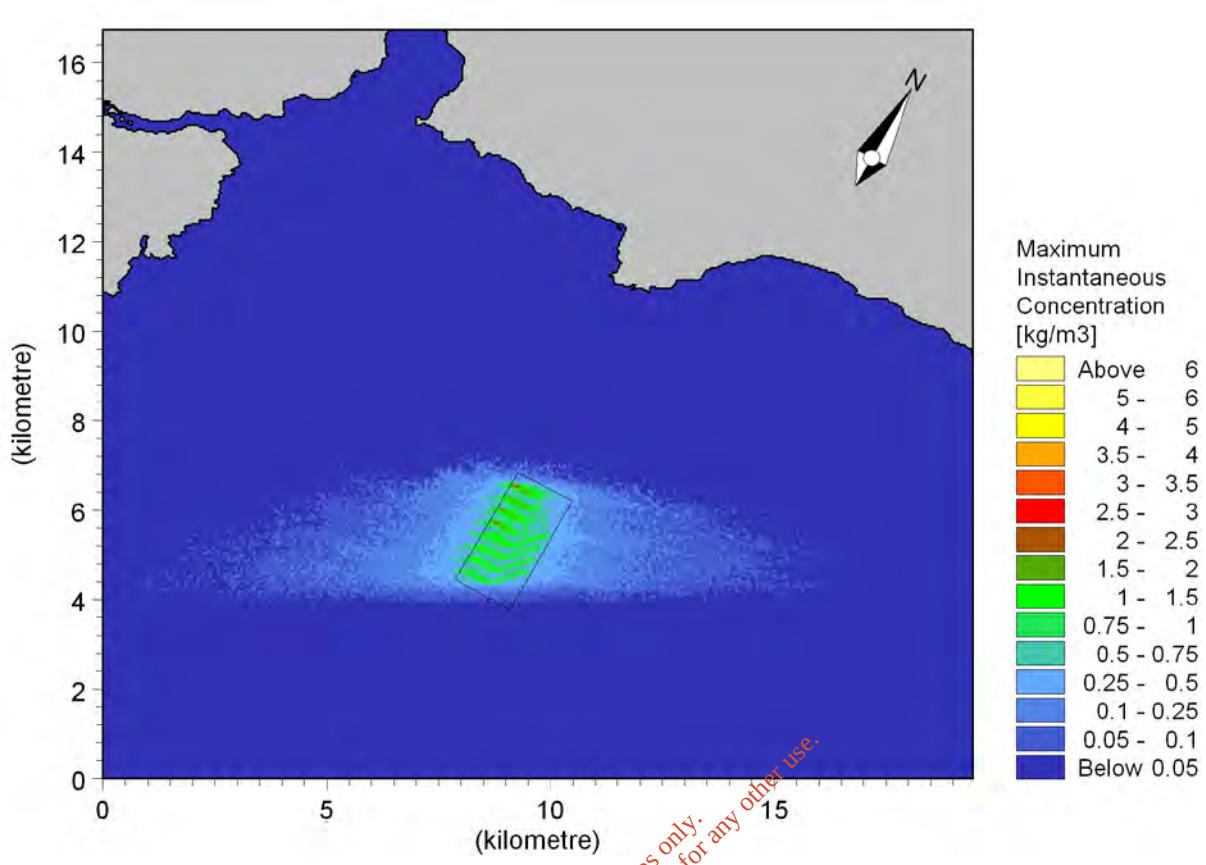


Figure 12.49 Maximum Concentration Contours (instantaneous) of suspended sediment averaged over the of water column dumping of 385,000 m^3 of sediment from Oyster Bank and related area

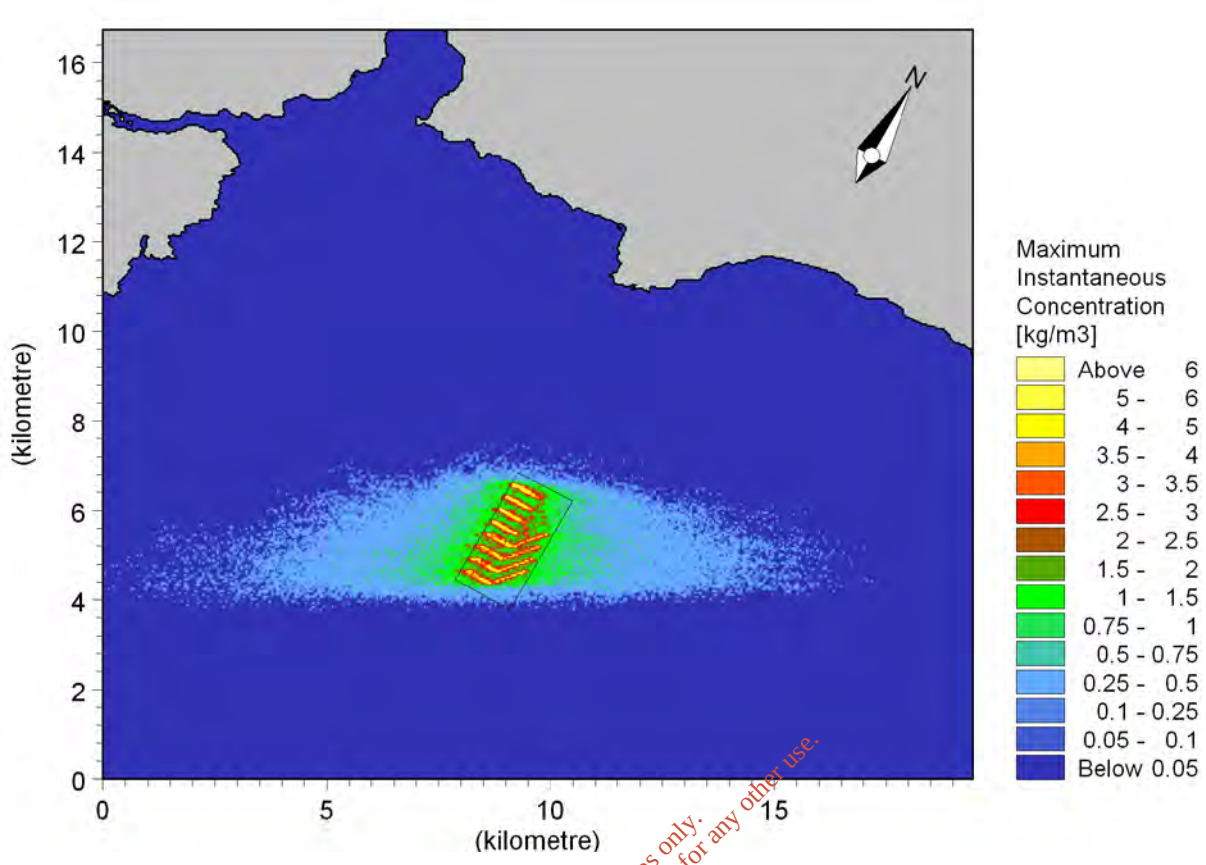


Figure 12.50 Maximum Concentration (instantaneous) of suspended sediment in top 10 metres of water column dumping of 385,000 m^3 of sediment from Oyster Bank and related area

12.4 Cumulative Effects

Add new text at the end of this section.

The Cove Sailing Club was granted planning permission for a 74 berth marina located at Whitepoint, Cobh.

As part of the planning process a hydrodynamic study was undertaken by Cronin Millar Consulting Engineers in January 2010 on behalf of the Cove Sailing Club. The following conclusions are reproduced from this study:

a) It is envisaged that the proposed marina development will not impact on the flow regime in Cork Harbour or at the site of the proposed marina.

b) The proposed marina site is very sheltered from offshore wave conditions (swell). It is anticipated that offshore swell will have negligible (if any) affect on the development.

c) The marina will be subject to locally generated wind waves. Highest waves are generated by winds blowing from the East. A design incident wave height of 1.1m with a corresponding wave period of 3.63sec was calculated for the site. It was estimated that wave transformations (diffraction, refraction and shoaling) will be negligible.

d) A floating concrete breakwater is proposed as wave protection to the marina. The wave characteristics for the marina have been calculated for a 1 in 50 year wind event. The design significant wave (1.1m height) is attenuated by the breakwater resulting in a transmitted wave height of 0.385m. This wave height satisfies the recommended upper limit of 0.300 to 0.400m wave height in a marina.

e) Dredging will not be required for this marina development, therefore there will not be any impact on the natural sediments regimes.

In reference to point a) if the development will not have an impact of the flow regime then there cannot be the potential for in combination effects with the proposed Ringaskiddy redevelopment. Likewise, as outlined in point e) if there is no dredging works relating to the marina project there cannot be any in combination effects on suspended sediment levels.

No further relevant plans or projects were identified, additional to those outlined above and in the EIS document which include coastal process alteration or dredging.

12.5 Summary and Conclusions

Replace third paragraph with the following text:

The study of the dispersion of the marine disposal of dredge material at a site to the south east of Cork Harbour has been undertaken to investigate the fate of the material dredged from the proposed development at Oyster Bank and related areas. In the study 385,000 m^3 of material was deposited over the shortest possible time, i.e. 1 load every 205 minutes for 15 days, to give the highest possible suspended sediment concentrations in the water column.

The results of the studies have been shown in terms of the footprint of the deposited material on the sea bed together with the maximum concentration envelopes for the whole of the water column and for the top 10 metres of the water column. The results of the study of the proposed sea disposal of the dredge material from the three sites show that the depth of the deposited material which is likely to deposited outside the dump site area will be less than 50 mm and that no measurable amounts of material will be deposited further away than about 4 kilometres from the centre of the site.

Proposed and permitted marine projects adjacent to the Ringaskiddy redevelopment have been considered in respect of cumulative impacts. There is a proposed marina at Monkstown and a proposed marina at Whitepoint, Cobh, both of which have been shown to have no significant impact on the coastal processes and there is a remedial operation planned for the eastern end of Haulbowline Island. The impact from both projects is not anticipated to cause a cumulative effect in conjunction with the proposed redevelopment.

13.0 WATER ENVIRONMENT

13.2.1.1 Study Area

The following two paragraphs are added to Section 13.2.1.1 as the fifth and sixth paragraphs.

The location of the proposed dump site lies partly within the Western Celtic Sea coastal water body (IE_SW_010_0000) in the South Western River Basin District (SWRBD). This large coastal water body is fed by numerous coastal and transitional water bodies along the south coast of Ireland, The water body is a large over 500 km^2 in area, and extends along the southern coastline from Brow Head County Cork to Ram Head, County Waterford.

In terms of the impact assessment the Western Celtic Sea water body is considered to be a feature of extremely high importance based on the evaluation of significance set out in the original EIS. The significance of the water body is extremely high as sections of the water body are protected by EU legislation, i.e. Natura 2000 sites (European Sites) designated under the Birds Directive (2009/147/EC).

13.2.2.1 WFD Classification

The following paragraph is added to Section 13.2.2.1 of the EIS as the seventh paragraph.

The Western Celtic Sea coastal water body (IE_SW_010_0000) has not been assigned a classification for ecological or chemical status under the Water Framework Directive as the coastal and estuarine monitoring programmes have yet to be fully implemented. The completion of the classification for coastal waters will be completed as soon as the Environmental protection Agency deems sufficient monitoring data is available (South Western River Basin Management Plan (2009-2015), 2010). Based on a precautionary approach and recognising the location of Natura 2000 sites and shellfish designated waters in the water bodies discharging to the Western Celtic Sea coastal water body it has been assumed that the status for this water body is high.

13.2.2.2 WFD Objectives

The following paragraph is added to Section 13.2.2.2 of the EIS as the third paragraph.

As the classification of the Western Celtic Sea water body has not yet been completed a WFD objective has not been established. However on the assumption that the status is high it is a requirement to prevent the deterioration of the status

13.2.4.1 Construction Phase Impacts

The following paragraphs are added to Section 13.2.4.1 of the EIS as a new subsection after the subsection on Suspended Sediment.

Dumping at Sea of dredge material

The Marine Institute provided details of 12 sampling locations where they requested an extensive suite of parameters for analysis of the sediment including heaving metals. As outlined in the original EIS and clarified in the Oral Hearing the results of this analysis demonstrated that the sediments were uncontaminated and therefore they can be considered as suitable for disposal at sea.

Considering the limited dispersion of the dredged sediment from the proposed dump site as outlined in the coastal processes chapter of this addendum and the uncontaminated nature of the sediment, the dumping at sea will not have a significant impact on the chemical status of the Western Celtic Sea water body or on those physic-chemical elements supporting ecological status.

In terms of the biological elements that contribute to ecological status the marine ecology chapter has concluded that there will only be a minor negative impact that will be temporary in nature. Given that the majority of the dump site is located outside the Western Celtic Sea coastal water body and the

minor nature of the impact which will be confined to the footprint of the dumpsite and the immediate adjoining areas this will not result in an overall deterioration in the ecological status of the water body.

When assessing the ecological status of a water body the protected area status should also be considered Given the uncontaminated nature of the dredged sediment and the limited dispersion within the Western Celtic Sea water body there is no potential for impact on the protected areas in adjacent water bodies such as the Ballycotton Bay SPA, Cork Harbour SPA or Great Island Channel SAC.

Taking this into consideration the impact on the water quality, ecological and chemical status of the Western Celtic Sea water body and adjoining water bodies is considered to be negligible and there will be no risk of deterioration in status therefore the WFD objective for this water body will not be compromised.

Oil and Chemicals

The following paragraph is added to the subsection on "*Oil and Chemicals*" under Section 13.2.4.1 of the EIS as the third paragraph.

Pollution from oils, diesels or chemicals from the barge used to transport the dredge material to the dump site during the dumping at sea operations is also a potential impact. Any fuel spillages would potentially have adverse impacts on water quality in the area depending on the volumes released. However with the mitigation measures in place , as proposed in Chapter 17 of the Environmental Commitments and updated at the Oral Hearing, the risk of accidental spillage of oil and diesel will be mitigated and the potential impact is considered to be negligible.

13.2.5 WFD Assessment

The following paragraph is added to the subsection on the *"Achievement of WFD Objectives"* under Section 13.2.5 of the EIS as the second paragraph.

The assessment of the dumping at sea activities will not alter the conclusion of the WFD assessment.

The uncontaminated nature of the sediments and the short term impact on the biological elements of ecological status will not cause a deterioration in the ecological or chemical status of the relevant water bodies.

13.2.8 Cumulative Impacts affecting Water Quality

The following paragraphs replace those under Section 13.2.8 of the EIS".

An assessment of the cumulative impact of the following projects has been undertaken in the context of the Ringaskiddy Port Redevelopment and the proposed dumping at sea.

- *Cork Lower Harbour Energy Group*
- *Hammond Lane Metal Company*
- *Haulbowline Remediation Project, Haulbowline Island*
- *Monkstown Marina*
- *Port of Cork Maintenance Dredging*
- *Cobh Marina*
- *Cobh Cruise Berth Upgrade/Mooring Dolphins*
- *Spike Island Masterplan*

Cork Lower Harbour Energy Group

There are three applications approved for five wind turbines to be developed by the Cork Lower Harbour Energy Group. The structures will be developed on existing industrial zones land within the facilities of a group of healthcare manufacturing sites in the Ringaskiddy and Currrabinny areas. Where available the EIS for the developments have been reviewed to establish the water quality impacts. These developments do not require dredging or dumping at sea. Given the nature of the

development and the proposed programme of mitigation to be put in place it has been concluded that there will be no significant cumulative impact from these developments

Hammond Lane Metal Company
Planning permission was granted in 2012 for demolition, new build, upgraded facilities, new processing plant etc at the Hammond Lane Metal Company located adjacent to the N28 opposite the proposed eastern entrance to Port lands at Ringaskiddy. The EIS prepared for this project was reviewed and there is no potential for cumulative impact and there is no dredging or dumping at sea proposals.

Haulbowline Remediation Project, Haulbowline Island
The primary objective of this project is to remediate the East Tip thereby ensuring that potential risks to humans and the wider environment are minimised. It is proposed the waste at the site will be contained by constructing an engineered capping system on top of the waste and a perimeter engineered structure (PES) around the waste body. . The project additionally seeks to widen the access road and construct a slipway and floating pontoon. The Environmental Impact Statement prepared in support of the application concludes that there will be negligible impacts on the hydrogeology with the mitigation proposed during the construction phase. During the operational stages the water quality impacts are positive with the PES reducing groundwater discharge from the site to the marine waters in Cork Harbour. The PES will require some excavation works but no dredging will be proposed nor is there any need for dumping at sea. There is no potential for cumulative impacts with the proposed Ringaskiddy Port Redevelopment.

Monkstown Marina
The marina comprises car-parking, retail, office and landscaping, with a requirement to dredge part of the seabed (70,000 m^3) in the shallower parts of the marina and in a band paralleling the shore to enable safe access by craft during all states of the tide. The EIS prepared for the development outlines the suite of mitigation measures proposed to address water quality impact and concludes there will be no significant impact. The volume of dredge material from the Monkstown Marina and the proposed Ringaskiddy Port Redevelopment is slightly less than that modelled for the Oyster Bank Strategic Infrastructure Development (Ref: 04.PA0003) as outlined in the coastal processes chapter.

Taking the limited dispersion as outlined in this modelling exercise and the uncontaminated nature of the deposits from Ringaskiddy the potential for cumulative effects on water quality and the coastal water bodies in the vicinity is not significant.

Port of Cork Maintenance Dredging
The coastal process modelling has concluded that the redevelopment of the Port will not change the existing maintenance dredging requirements in Cork Harbour. The habitats directive screening statement prepared for the latest maintenance dredging application (Port of Cork, 2014) has also concluded that the current maintenance dredging regime and disposal will not have a significant impact on water quality.

Therefore based on the assessment of the capital dredging works proposed for the Port redevelopment and the maintenance dredging assessment, no cumulative impacts are predicted.

Cobh Marina
There is no dredging works relating to the marina project and there cannot be any cumulative effects on suspended sediment levels either within the Cork Harbour or the dump site in the Western Celtic Sea coastal water body. The documentation for the development outlines that an Environmental Management Plan will be put in place for the development which will ensure that the potential for any pollution of the marine environment will be avoided. In addition the marina will operate as a “blue flag marina” where a berth holder’s hand book will be provided which informs of all guidelines in relation to health safety and the environment. No cumulative impacts are predicted in combination with the proposed Ringaskiddy Port Redevelopment.

Cobh Cruise Berth Upgrade/Mooring Dolphins
For the permitted works at Cobh Cruise Berth there is no dredging proposed with this activity and the works will be undertaken in accordance with the CIRIA Guideline C584 Coastal and Marine Environmental Site Guide. Materials arising from the piling operations will not be allowed to enter the

aquatic environment and will be removed from site to a licensed facility. Environmental best practice in relation to fuel and chemical handling, accidental spillages and the adherence to the Coastal and Marine Environmental Site Guide as outlined in the further information submitted as part of the planning documentation will ensure that there will be no impact on water quality and therefore there will be no cumulative impacts with the Ringaskiddy Port Redevelopment.

Spike Island Masterplan
The Masterplan outlines a number of objectives in relation to sustainable water management. These include:

- Sustainable urban drainage systems
- Rainwater harvesting and use of grey water
- Reduced water usage by using efficient fittings and appliances
- Design integrated wastewater treatment systems encouraging recycling of nutrients and water as well as minimal discharge to natural water bodies (water table, ocean and surface water).

This sustainable use of water will ensure minimal impact on the water environment in Cork Harbour and therefore there is no potential for cumulative impacts with the proposed Ringaskiddy Port Redevelopment.

Overall, the impacts on water quality from Ringaskiddy Port Redevelopment and the dumping at sea activities in combination with the above permitted and proposed projects does not change the conclusion of the cumulative effects in the original EIS.

14.0 MARINE ECOLOGY

[The text under Sections 14.1.1 to 14.1.3 remains unchanged.]

14.1.4 Impact Assessment

[All text in Section 14.1.4 remains unchanged. Add new text after last paragraph.]

Impact of dumping at sea
The current licensed dumpsite site is approximately 4km^2 in area and is situated 4.5 km south of Power Head and 7.5 km south east of Roche's Point at the entrance to Cork Harbour. It has been in use since 1996, however, it formed the eastern half of a dump site that had been in use since 1978 of dredge spoil disposal. The current reduced-size dump has received considerable amounts of dredge spoil since 1996, initially every 2 years and in recent times every 3 years. Most recently in late 2014 the volume of spoil for which a license was granted was 352,000m^3. On the 4 previous occasions, the volume of spoil dumped was as follows –

- 2011 = 272,025m^3
- 2008 = 253,848m^3
- 2005 = 133,979m^3
- 2003 = 441,931m^3

Source: Port of Cork Maintenance Dredging Habitats Directive Assessment, Screening Statement (RPS, 2014)

These figures indicate that the disposal at sea volumes proposed from the Ringaskiddy Port Redevelopment will not mark a departure from the regular disposal activity at this site over the past decade.

A number of previous surveys at the site have shown that much of the site area comprises exposed bedrock rock, interspersed with areas of sediment making up the remainder of the site. Cobbles and boulders are also very common. It's exposure to the Atlantic with huge fetches from the south east, south and south west means that it susceptible to storm surges and this combined with tidal currents combine to make it a dynamic site from which sediment rapidly disperses into the surrounding area. Such sites are generally the fastest to recover from disturbance to their benthic communities following dredge spoil disposal.

In 2004 the dumpsite site was surveyed using a drop-down video camera and benthic grab samples (RPS, 2007). This confirmed that the bottom comprised a mosaic of habitat types dominated by exposed bedrock and coarse substrate (cobble and boulders) with large patches of sandy mud and muddy gravel. Furthermore, habitats adjoining the site to the east, west and north were of a similar mix.

The year prior to the 2004 survey, 441,931m^3 of dredge spoil had been disposed at the site and the imagery in the 2004 survey suggested that layers of silt and remained on and between the bedrock in places. Nevertheless, identifiable fauna e.g. Devonshire cup corals (*Caryophyllia smithii*), urchins (*Echinus esculentus*), starfish and brittle stars along with encrusting species including bryozoans, hydroids and sponges were frequently encountered on rock outcrops, cobbles and boulders within and adjoining the site. In sedimentary areas of sandy mud and gravel, crabs were frequently noted. These areas also had visible infaunal burrows. A range of fish species including wrasse and gadoids were noted in the camera survey also. The grab survey in and adjoining the site revealed a fauna dominated by polychaete worms and bivalve molluscs with an average of 24 different families represented across the sampling sites. A typical indicator of disturbed organic-rich sediments, the polychaete worm *Capitella capitata*, was present in elevated numbers at just one site toward the centre of the disposal area and this was thought possibly to relate to the disposal activities of the previous year.

It is important to note that the disposal site, in common with all sites which regularly receive dredge spoil undergoes regular 2-3 year cycles of disposal followed by an intervening period of 2-3 years in which recovery can take place. Immediately after the disposal, areas of rock and sediment which receive deep cover of disposed sediment will suffer a drop in the biomass and diversity of their benthic communities followed by a recovery period which will last until the next scheduled disposal event, during which the deposited layers of sediment will disperse aided by tidal currents and storm evens and be

incorporated into the surrounding areas of fine sediments. During this period the site will be recolonised by fauna which survive the disposal in patches not completely covered or only thinly covered, and by seasonal settlement of new recruits from the overlying plankton supplied by the same species in the surrounding non-impacted benthic habitats. The 2004 dump site survey (RPS, 2007) which was carried out a year after a typical disposal event, would suggest that even in this short time interval, the site shows many signs of being a fully functional benthic ecosystem, albeit still in a state of recovery. It is expected that the dumpsite will react in a very similar way to the disposal of the 300,000m^3 associated with Ringaskiddy Port Redevelopment. In this respect it is important to note that this sediment carries a very low contaminant burden, a factor which should reduce its impact and improve the rate of recovery.

Overall, the impact on the local benthic ecology of the site is assessed as being minor, negative and temporary and confined mainly to the footprint of the dumpsite and the immediate adjoining areas.

14.2 FISHERIES

[The text under headings 14.2.1 to 14.3.3 remains unchanged.]

14.2.4 Impact Assessment

All text in Section 14.2.4.1 remains unchanged. Add new text at end of Section 14.2.4.2.

Impact of dumping at sea

Modelling of a very similar disposal volume (385,000 m^3) at the dumpsite undertaken in 2007 by RPS (refer to Chapter 12) included a simulation of suspended solids in the water column resulting from the disposal exercise. This indicated that within the upper water column and close to the dredger, very high suspended solids levels (2,000-5,000 mg/l) were estimated to occur which then rapidly dissipate away from the dredger disposal track falling to hundreds of mg/l toward the edges of the box and beyond (Refer to Figures 12.49 and 12.50 of Coastal Processes chapter). These simulations however present the worst case because they give the maximum instantaneous concentrations across the whole dumping period but in reality each dumping event will be associated with a unique plume which while it will give rise to suspended solids within these ranges they will only persist over a few hours and within a much more restricted area, with the highest concentrations persisting for the least time. That notwithstanding, fish and especially shoaling pelagic species such as herring or sprat would likely avoid such plumes in the area in and around the dump site if they were present in the area during the proposed dumping period, which may run to 20 days. Demersal and benthic species such a pollock and wrasse would also likely avoid these plumes and during the 3-weeks disposal period. Overall fish biomass in the immediate area of the dumpsite may be reduced. However, within hours or days of the cessation of disposal the suspended solids levels will rapidly decline to background levels and cease to cause avoidance reactions in fish. In this regard therefore the impact of the disposal on pelagic and demersal species is expected to be minor and consist of temporary avoidance of the area at the time.

The current state of commercial fishing activity at the disposal site is unknown. However the rocky nature of the substrate means that trawling could not be safely undertaken at the site. Potting or bottom netting could be undertaken there but it is extremely unlikely that fishermen would let static gear at this site during periods of disposal as their gear would be in danger of being smothered by spoil. Outside of the very short disposal periods fishermen would be unlikely to use the site (given the distance offshore) unless it proved a more productive area than more easily accessible inshore sites for target species such as crab, lobster and demersal fish.

In conclusion, given the long history of the sites' use as a disposal area, fishermen will have adapted their fishing practice at the site to these periodic 2-3 year cycles of disturbance, either avoiding the site entirely or concentrating in periods outside of the dumping and early recovery phases.

Remainder of Section 14.2.4 is unchanged.

14.2.5 Mitigation

All text remains the same.

Insert new section before 14.2.6 Residual Impacts

14.2.6 Cumulative Impacts

Other approved development in the area has been considered for potential to result in cumulative impacts with the proposed Ringaskiddy Port Redevelopment.

Monkstown Marina development is for a 285 berth marina at Monkstown overlapping the footprint of the existing 82 berth marina. The proposed new marina includes both foreshore reclamation and dredging. The area to be reclaimed comprises intertidal and subtidal components which will be used for car parking and marina buildings. The actual areal extent of the reclamation isn't given in the document but was estimated based on drawings in the EIS at approximately 1.25ha. As part of the marina project a total 70,000m^3 of dredge material will be removed from the site to facilitate mooring vessels of various drafts. The coarser portion of this material will be used in the reclamation with the balance of finer material being disposed of at the same licensed dumpsite as would be used for Ringaskiddy Port Redevelopment. The marina EIS concludes that the loss of habitat associated with the development will be minor because of the widespread occurrence of similar habitats in Cork Harbour. It also indicates that the impact will be partly offset by the building of a rock armour perimeter around the seaward side of the reclamation area, which would be quickly colonised by a broad range of marine species.

A proposed marina development in Monkstown in Cork Harbour (Planning No. 089317) which has been granted permission will require the disposal of up to 70,000 m^3 of dredge spoil. This volume of spoil, even when added to the 300,000m^3 arising from the proposed Ringaskiddy redevelopment remains within the range of disposal volumes that have been placed on the dumpsite over the decades. Furthermore it is it is also accommodated within the volume modelled by RPS previously i.e. 385,000m^3.

Remediation of the East Tip on Haulbowline Island has been granted permission by An Bord Pleanála and more recently has been granted a waste license by the EPA. The aspect of that project that might have cumulative impacts was adjudged to be the construction of a PES or Perimeter Engineered Structure which is a narrow berm or trench around the outer edge of the tip designed to radically reduce exchange of water between the tip and the waters of the harbour and vice versa. The PES will be faced with rock armour on its external side to prevent it being eroded by wave action. This structure will be built along the eastern foreshore and will impinge slightly on the intertidal area along the eastern side perimeter of the Haulbowline Island. The exact area of the encroachment isn't given in the EIS but can be roughly estimated at 1 to 2 hectares based on a perimeter length of about 800m and a base width of 15-25m. In this particular case the fact that the width of shore affected is narrow and the that the rock armour facing will be rapidly re-colonised by marine life and provide a more stable and potentially less contaminated environment locally, means that the impact of that development will be minor, possibly neutral/positive on benthic habitats.

In summary, the cumulative impacts of the Monkstown Marina, the East Tip remediation and the current proposed redevelopment at Ringaskiddy and Paddy's Point are considered overall to be minor negative, in the context of the benthic marine habitats of Cork Harbour. The same conclusion can be drawn regarding wild fisheries. In terms of commercial fisheries, the Monkstown Marina EIS states that no commercial fishing is undertaken in the footprint of that development, while the East Tip documents indicate that all residual impacts on recreational and commercial fishing are likely to be negligible and temporary, therefore no cumulative impacts are anticipated between these two projects and that proposed for Ringaskiddy.

Two other developments, a 74-berth marina at White Point in Cobh (permission granted in 2011) and proposed additional moorings for Cruise Liners at Cobh (under construction) are not considered likely to have any cumulative or in-combination adverse impacts with the proposed Ringaskiddy development. In the case of the new marina, there would be no habitat reclamation involved and no dredging, with the proposed floating pontoon held in place using a chain and anchor system. Furthermore many of the berth holders will be existing swing mooring users at the site. In this regard there will be no significant intensification of berth numbers in Cork Harbour. In the case of the Cobh liner terminal mooring

upgrade, there will be no habitat reclamation required for the new mooring dolphins and no dredging, so that no change to the local habitats or their ecology is anticipated.

Subsequent Section on Residual Impacts (14.2.6) to be renumbered as 14.2.7, but text remains the same.

14.3 MARINE MAMMALS

All text in Sections 14.3.1 to 14.3.4 remains the same.

14.3.5 Impact Assessment

All text in Sections 14.3.5.1 and 14.3.5.2 remains the same. Insert new text at end of Section 14.3.5.2.

Dumping at Sea

A marine mammal risk assessment[1] was prepared in March 2014 (IWDG, 2014) and submitted to the Environmental Protection Agency by Port of Cork as part of a Dumping at Sea application for maintenance dredging. That risk assessment provided the following:

- A baseline description of the presence of seals and cetaceans using the waters of Cork Harbour and surrounding the licensed disposal site.
- An assessment of the background noise levels currently operating within Cork Harbour and at the Dump Site on a regular basis through shipping.
- Scientifically supported consideration of the potential impacts from the operation of the dredger both while dredging, while travelling to the dump site and while undertaking dumping operations in terms of perceived noise levels and the potential disturbance impact upon seals and cetaceans.

That marine mammal risk assessment considered the proposal to dump 1,136,000 m^3 of dredge material from Cork Harbour over the next 7 years up to 2020; and specifically including 352,000 m^3 of material in 2014. Ringaskiddy Port Redevelopment requires disposal of 300,000 m^3 of dredge material. The IWDG report is summarised here as it is wholly applicable to the present request from An Bord Pleanála to consider the environmental effects of dumping at sea.

NPWS (2014) provides guidelines on mitigating the impact of sound sources on marine mammals, including from dredging activity. Dredging is defined as "*the excavation of sand, gravel, loose rock and other material from the seabed*". The concern for dredge activities is due to the potential of the operation to produce noise sources up to 190 dB re 1 µPa and at frequencies which can overlap with some marine mammal hearing and therefore has the potential to impact and disturb these species (NPWS, 2014).

Sound produced from dredging has the potential to impact on aquatic life and it is assumed that most of these impacts would concern disruption of communication due to masking or alteration of behaviour patterns. However, cumulative and long-term exposure leading to TTS has to be considered for marine mammals, but PTS or other auditory injuries are unlikely. Previous studies on sound production by TSHDs in silt/mud substrates have found that maximum source levels from different activities associated with TSHD dredging (including the dredging process, transit to dump site, placement, pumping and rainbowing) were very similar with dredging itself not producing louder sounds than those produced by the dredger during transit (De Jong *et al*., 2010). Therefore marine mammals occurring at the site over the durations of the works will be exposed to sound equivalent to an additional ship in the area. Given that the dump site is adjacent to one of the busiest shipping lanes in coastal Irish waters, marine mammals frequenting the site will be well accustomed to shipping noise.

[1] Available at http://www.epa.ie/licences/lic_eDMS/090151b2804e2f34.pdf

In summary, the presence of an additional vessel and associated noise, is extremely unlikely to have significant impact. During dredging, and dumping at the spoil grounds, the dredge vessel moves slowly between 0-3 knots, making the risk of collision extremely unlikely.

Renumber Sections 14.3.5.3 and 14.3.5.4

14.3.6 Cumulative Impacts

Replace with the following text

No cumulative impacts are expected to occur between the proposed Ringaskiddy Port Redevelopment and associated disposal of dredge material and the development of a marina at Monkstown, a marina at White Point, new cruise berth moorings at Cobh or the capping of a spoil heap at the East Tip Remediation Project on Haulbowline Island. The Natura Impact Statements prepared for the Monkstown Marina, Haulbowline Remediation project, White Point Marina and Cobh Cruise Berth developments do not predict significant effects upon marine mammals. In that regard, the non-significant effects of this project will not act in combination or cumulatively with the effects of those projects. No dredging or dumping at sea is proposed for the White Point Marina and Cobh Cruise Berth projects. The scale and distance of these marina and berthing developments and the nature of the Haulbowline development are not considered to result in cumulative effects.

The remainder of the chapter is unchanged.

15.0 TERRESTRIAL ECOLOGY & ORNITHOLOGY

Text for Sections 15.1 and 15.2 remains unchanged.

15.3 Baseline

Revise Section 15.3.1.1 with the following text.

15.3.1.1 European sites

The proposed development does not directly impinge upon any Natura 2000 sites but lies within 100m of Cork Harbour SPA [Site Code: IE0004030] and within 5km of The Great Island Channel SAC [Site Code: IE0001058]. The next nearest Natura 2000 site is Ballycotton Bay SPA [Site Code: IE0004022], located over 15km from the proposed disposal at sea site and 26km from Paddy's Point.

Cork Harbour SPA [Site Code: IE0004030]
Cork Harbour SPA is located approx 60m to the west of the proposed redevelopment footprint at its nearest point, being the base of the breakwater where it meets the ADM Jetty. The main breakwater arm is 125m northwest of the proposed DWB quay wall extension.

Cork Harbour qualifies for designation under the Birds Directive by regularly supporting over 20,000 waterbirds including internationally important populations of wintering Black-tailed Godwit *Limosa limosa* and Redshank *Tringa totanus* along with nationally important wintering populations of Little Grebe *Tachybaptus ruficollis*, Great Crested Grebe *Podiceps cristatus*, Cormorant *Phalacrocorax carbo*, Grey Heron *Ardea cinerea*, Shelduck *Tadorna tadorna*, Wigeon *Anas penelops*, Teal *Anas crecca*, Pintail *Anas acuta*, Shoveler *Anas clypeata*, Red-breasted Merganser *Mergus serrator*, Oystercatcher *Haematopus*, Golden Plover *Pluvialis apricaria*, Grey Plover *Pluvialis squatarola*, Lapwing *Vanellus vanellus*, Dunlin *Calidris alpina*, Bar-tailed Godwit *Limosa laponica*, Curlew *Numenius arquata*, Black-headed Gull *Larus ridibundus*, Common Gull *Larus canus* and Lesser Black-backed Gull *Larus fuscus*. The site also qualifies for designation by regularly supporting a nationally important breeding population of Common Tern *Sterna hirundo*.

Ballycotton Bay SPA [Site Code: IE004022]
Ballycotton Bay SPA is located 15.2km northeast of the disposal at sea site, and 26km around the coastline from Paddy's Point. The site is an east-facing coastal complex. The site comprises two sheltered inlets which receive the flows of several small rivers. The principal habitat within the site is inter-tidal sand and mudflats. The inter-tidal flats provide the main feeding habitat for the wintering birds. Sandy beaches are well represented, and salt marshes fringe the flats in the sheltered inlets and these provide high tides roosts.

The Birds Directive pay particular attention to wetlands and, as these form part of this SPA, the site and its associated waterbirds are in their own right a Special Conservation Interest (SCI) - Wetlands & Waterbirds [A999]. Table 15.5 provides a summary of Cork Harbour SPA and Ballycotton Bay SPA SCIs.

Table 15.5: Cork Harbour and Ballycotton Bay SPA SCIs

Cork Harbour SPA	Ballycotton Bay SPA	SPA Special Conservation Interests	Season	Qualifying Population[1]	
				Cork Harbour SPA	Ballycotton Bay SPA
X		Little Grebe Tachybaptus ruficollis	Wintering	68	
X		Great Crested Grebe *Podiceps cristatus*	Wintering	218	
X		Cormorant *Phalacrocorax carbo*	Wintering	620	
X		Grey Heron *Ardea cinerea*	Wintering	47	
X		Shelduck *Tadorna tadorna*	Wintering	1,426	
X		Wigeon *Anas penelope*	Wintering	1,750	

Cork Harbour SPA	Ballycotton Bay SPA	SPA Special Conservation Interests	Season	Qualifying Population[1]	
				Cork Harbour SPA	Ballycotton Bay SPA
X	X	Teal *Anas crecca*	Wintering	807	903
X		Pintail *Anas acuta*	Wintering	84	
X		Shoveler *Anas cylpeata*	Wintering	135	
	X	Turnstone *Arenaria interpres*	Wintering		179
X		Red-breasted Merganser *Mergus serrator*	Wintering	90	
X		Oystercatcher *Haematopus ostralegus*	Wintering	791	
X	X	Golden Plover * *Pluvialis apricaria*	Wintering	805	2,383
	X	Ringed Plover *Charadrius hiaticula*	Wintering		167
X	X	Grey Plover *Pluvialis squatarola*	Wintering	66	124
X	X	Lapwing *Vanellus vanellus*	Wintering	3,614	2,782
X		Dunlin *Calidris alpine*	Wintering	4,936	
X	X	Black-tailed Godwit *Limosa limosa*	Wintering	412	136
X	X	Bar-tailed Godwit * *Limosa lapponica*	Wintering	45	175
X	X	Curlew *Numenius arquata*	Wintering	1,345	853
X		Redshank *Tringa totanus*	Wintering	1,614	
X		Black-headed Gull *Larus ridibundus*	Wintering	948	
X	X	Common Gull *Larus canus*	Wintering	2,630	584
X	X	Lesser Black-backed Gull *Larus fuscus*	Wintering	261	1,293
X		Common Tern * *Sterna hirundo*	Breeding	69 pairs	
X	X	Wetlands & Waterbirds	n/a	2,587 ha	281 ha

Key to Table
[1]No. Of individuals as obtained from Standard Natura Data Form.
*Species listed on Annex I of The Birds Directive.

Great Island Channel SAC (Site Code: IE0001058)
The Great Island Channel SAC is located c.4.8km to the North of the proposed development footprint at its nearest point. The main habitats of conservation interest are the sheltered tidal sand and mudflats and Atlantic salt meadows. Both habitats are listed on Annex I of the EU Habitats Directive. Table 15.6 provides a summary of the Great Island Channel SAC SCIs.

Table 15.6: Great Island Channel SAC SCIs

Great Island Channel (0001058) SCIs		% Cover[1]
[1140]*	Mudflats and sandflats not covered by seawater at low tide	62
[1330]*	Atlantic salt meadows	2

Key to Table
[1]As obtained from Standard Natura Data Form.
*Habitat listed on Annex I of The Habitats Directive.

15.4 Impact Assessment

15.4.1 Potential Impacts on Statutory Designated Sites for Nature Conservation

Add the following paragraph at the beginning of sub-section *15.4.1.1 Construction*

The revised screening for appropriate assessment considers the proposed Ringaskiddy Port redevelopment and the associated disposal at sea of dredged material for likely significant effects upon European sites. It concluded at screening stage that no significant effects are likely on Ballycotton Bay SPA.

Add the following paragraph at the beginning of sub-section 15.4.1.2 Operation

The revised Screening assessment for the Natura Impact Statement concluded at screening stage that no significant effects are likely on Ballycotton Bay SPA.

15.4.3 Ornithological Impact Assessment

The following sub-section is added at the end of sub-section *15.4.3.1 Construction*

Disposal at Sea
A review of the research report prepared for Irish Petroleum Infrastructure Programme on Seabirds of Ireland's Atlantic Margin (Cetaceans and Seabirds of Ireland's Atlantic Margin. Volume I – Seabird distribution, density & abundance) (Mackey *et al*, 2004) concluded that there are no significant aggregations of seabirds using waters at the licensed disposal site. Given that the disposal site is adjacent to one of the busiest shipping lanes in coastal Irish waters, seabirds frequenting the site will be well accustomed to shipping noise. Therefore, the temporary presence of an additional vessel and associated noise is extremely unlikely to have significant impact. No significant effects are predicted upon seabirds at this marine site.

15.5 CUMULATIVE IMPACTS

The following text replaces all text in section 15.5.

Potential cumulative effects with other projects and the proposed Ringaskiddy Port Redevelopment and the associated disposal at sea of dredged material has been considered in this assessment.

Port of Cork Maintenance Dredging
Port of Cork submitted an application to the EPA for a maintenance dredging programme in February 2014. That application was accompanied by a Natura Impact Statement (NIS) which was reviewed as part of this analysis. The dredging campaign extends from the City Quays and Tivoli Docks in Cork City, out to Roche's Point. Coastal hydrodynamic modelling was undertaken as part of that assessment to help determine the spread of the dredge plume. The NIS concluded that all of the potential impacts identified will be avoided, and that the proposed maintenance dredging would not have a significant negative impact on either European Site being considered. The permit was issued by the EPA and the maintenance dredging and related disposal at sea campaign was completed in the autumn of 2014 which was outside of the important breeding tern or core overwintering seasons. Future dredging campaigns will also occur in that same seasonal window. No significant disturbance impacts upon birds, bird habitats or otters was predicted. In the absence of any significant impacts as a result of that project, there is no pathway of additive effect for cumulative or in-combination effects between the maintenance dredging project and the Ringaskiddy Port Redevelopment and its associated disposal at sea of dredged material.

Monkstown Marina
Proposals for a new marina at Monkstown were submitted for planning permission and that application included a NIS. The project is located 750m north of Ringaskiddy West, being separated by Monkstown Creek. The project received planning approval in 2010 subject to 77 no. conditions. It includes for a 285 berth marina at the location of the existing marina that has 82 berths. The project additionally comprises car-parking, retail, office and landscaping, with a requirement to dredge part of the seabed in the shallower parts of the marina and in a band paralleling the shore to enable safe access by craft during all states of the tide. A coastal process modelling assessment submitted with that application showed that there would be no effect on the coastal processes with no change in tidal levels and the effect on the tidal currents restricted to the project area with changes of not greater than 0.04m/s. The coastal processes chapter author for this EIS has confirmed that the marina development will not have a cumulative effect with coastal processes as a result of implementing the proposed Ringaskiddy Port Redevelopment. The marina NIS concluded that the marina at Monkstown will not result in the loss of any feeding areas or roosting sites for wintering waterfowl or waders, and that the marina would be principally used outside of the overwintering season. It concludes that the Monkstown Creek bird population is unlikely to be affected by activity in the marina as those activities

would be confined, predictable and that habituation would be expected to occur quite rapidly. The EIS and NIS for that project predict no impact on the qualifying interests for Cork Harbour SPA. A planning condition associated with this approved development notes that construction related or maintenance dredging shall not be carried out between September to April, but that the requirement may be varied to comply with the Port of Cork maintenance dredging programme for the main channel. The effect of this condition is that either dredging will not occur over the sensitive winter season or that it will be associated with a POC dredging campaign and thus the effects of dredging will not be felt by the overwintering species assemblage. In the absence of any significant impacts as a result of that project, there is no pathway of additive effect for cumulative or in-combination effects between the Monkstown Marina project and the Ringaskiddy Port Redevelopment and its associated disposal at sea of dredged material.

Haulbowline Remediation Project, Haulbowline Island

The Haulbowline Remediation Project on Haulbowline Island is 550m northeast of Paddy's Point. The primary objective of this project is to remediate the East Tip thereby ensuring that potential risks to humans and the wider environment are minimised. It is proposed the waste at the site will be contained by constructing an engineered capping system on top of the waste and a perimeter engineered structure around the waste body. The project additionally seeks to widen the access road and construct a slipway and floating pontoon. An EIS and NIS were prepared for that application. That assessment concluded after screening that two potential pathways of effect upon the qualifying interests of Cork Harbour SPA remained, and Stage 2 assessment was undertaken. It concluded that there was no potential for significant negative impacts upon the integrity of Cork Harbour SPA arising either alone or in combination with any other plans or proposals from the proposed East Tip Remediation Project at Haulbowline Island. No displacement of local bird or otter populations was predicted to occur as a result of the Haulbowline Remediation Project. This project is too far from the Ringaskiddy Port Redevelopment for simultaneous or consecutive construction effects to give rise to cumulative or in-combination effects between the remediation project and the Ringaskiddy Port Redevelopment and its associated disposal at sea of dredged material.

Hammond Lane Metal Company

Planning permission was granted in 2012 for demolition, new build, upgraded facilities, new processing plant etc at the Hammond Lane Metal Company located adjacent to the N28 opposite the proposed eastern entrance to Port lands at Ringaskiddy. The ecological impact assessment prepared for this project was reviewed. One badger sett is located within the Hammond Lane lands and will be lost to that development. No badger setts and no significant badger foraging were recorded within Ringaskiddy Port. No significant negative impacts upon the integrity of Cork Harbour SPA were predicted. . In the absence of any significant impacts as a result of that project, there is no pathway of additive effect for cumulative or in-combination effects between the new processing plant project and the Ringaskiddy Port Redevelopment and its associated disposal at sea of dredged material.

Cork Lower Harbour Energy Group

Five large single turbines being developed by the Cork Lower Harbour Energy Group have been given planning permission. Three had been erected by April 2014. The structures are being developed on existing industrial zones land within the facilities of a group of healthcare manufacturing sites in the Ringaskiddy and Currrabinny areas. The EIA and NIS documents prepared for these turbine applications were reviewed which included an assessment on avifauna. That analysis concluded that there would be no displacement of any species which is a qualifying interest of the SPA, and no significant impact on the integrity of Cork Harbour SPA was predicted. The turbines have been constructed, and there have not been any collision risks identified through the ornithological analysis for that application. Simultaneous or consecutive construction effects cannot occur. The turbines are located at a distance from the Port. There is no likelihood of cumulative or in-combination effects with the Ringaskiddy Port Redevelopment and its associated disposal at sea of dredged material.

Spike Island Masterplan

Spike Island is 2km east of Ringaskiddy East and 700m east of Paddy's Point. The Spike Island Masterplan envisages use of Spike Island for public events, concerts etc. In the long-term it is hoped that the island could attract 300,000 visitors per annum. The Masterplan also identifies Haulbowline as

a possible future ferry access point. The Masterplan has considered many options and is broad in its approach requiring more detailed design work. It promotes Cork Harbour as a Green Infrastructure asset. This would likely give rise to an increase in coastal recreational activity and boating which would have the potential to increase disturbance to the qualifying features and conservation objectives of Cork Harbour SPA. The development of a number of ferry trails within the harbour together with a substantial network of new recreational berthing facilities at a number of locations around the harbour would increase boating traffic and disturbance in proximity to component parcels of the SPA. The SPA itself comprises the shallow intertidal areas and boat traffic is not likely to enter into the SPA with any recurring frequency. The development of the harbour as a facility for water based sport and leisure activity would also increase disturbance. The Cork Harbour Cycle Trail is proposed adjacent to parts of the SPA. The transport strategy presents a series of options to facilitate access to Spike Island including a floating bridge, half-tide causeway, cable cars, passenger ferry or roll-on roll-off ferry. The proposed redevelopment of Spike Island considers extensive works to the entire Island. Defined effects of Spike Island Masterplan are difficult to predict with accuracy in the absence of fixed and defined proposals. The thrust of any increased pressure on Cork Harbour SPA conservation objectives is likely to be as a result of an increase in recreational use of the harbour by people and vessels. The magnitude of this effect is not predicted to be significant across the SPA. This project is too far from the Ringaskiddy Port Redevelopment for simultaneous or consecutive construction effects to give rise to cumulative or in-combination effects between implementation of the Spike Island Masterplan and the Ringaskiddy Port Redevelopment and its associated disposal at sea of dredged material.

Cobh Marina

The permitted scheme includes for a 74 berth marina at Whitepoint, Cobh and is located 1.1km to the northeast of Ringaskiddy East across the harbour. The NIS for the marina was reviewed and concludes no significant impact on European sites given the small footprint of the proposed project, the use of a point anchoring system and no overall increase in boating activity in the harbour. In the absence of any significant impacts as a result of that project, there is no pathway of additive effect for cumulative or in-combination effects between the Cobh Marina project and the Ringaskiddy Port Redevelopment and its associated disposal at sea of dredged material.

Cobh Cruise Berth Moorings

This project is located 2.2km northeast of Ringaskiddy East, and across the Harbour at Cobh. Cruise liners currently berth at the deepwater quay in Cobh. The NIS Screening Assessment of the Cobh Cruise Terminal Upgrade was reviewed. It concluded no significant negative direct or indirect effects on the European sites assessed given the distance between the proposed project and the European sites; the size and scale of the proposed project in the context of existing activity within Cork Harbour and absence of the qualifying features within the area of study. This project is under construction, and simultaneous or consecutive construction effects cannot occur. Due to distance, the small scale nature of the works and the absence of dredging, no significant cumulative effects are predicted in combination with the proposed Ringaskiddy Port Redevelopment and the associated disposal at sea activity

Cobh Second Cruise Berth

No design is available for this potential project. If a second berth was constructed at Cobh, it is not expected to result in additional pressures upon the qualifying features and conservation objectives of Cork Harbour SPA. No significant cumulative or in-combination effects between this proposal and the Ringaskiddy Port Redevelopment and the associated disposal at sea of dredged material are expected to adversely affect the flora, habitats and fauna of Ringaskiddy.

Sections 15.6 and 15.7 remain unchanged.

16.0 ENVIRONMENTAL INTERACTIONS

The text for Sections 16.1 to 16.2 remains unchanged.

The following repeats the text of the Schedule of Environmental Commitments submitted to the Oral Hearing.

17.0 SCHEDULE OF ENVIRONMENTAL COMMITMENTS

17.1 Introduction

17.2 Human Beings

☐ Environmental Improvements shall be implemented at Paddy's Point Amenity Area to include new landscaping and enhanced facilities for casual amenity.

☐ Paddy's Point Amenity Area shall provide a pier and slipway in place of the existing Ringaskiddy Pier. The new slipway and pier will provide access to the six established moorings in Ringaskiddy (which will remain in their current location) with improved parking facilities and provision for boat storage.

☐ Relocation of the Sculpture Garden to another site in Ringaskiddy in consultation with the original artist.

☐ Construction access shall be restricted to existing port access road.

☐ Construction site shall be established within and restricted to existing, undeveloped lands within Port of Cork ownership.

☐ Prior to construction, a preliminary Health and Safety Plan will be completed by the Project Supervisor Design Process (PSDP). During the construction process all areas will be delineated and will be under the control of the Project Supervisor Construction Stage (PSCS). A safety plan will be maintained throughout the duration of the project.

- The Port of Cork will provide an apportioned development contribution towards the provision of a footpath from the entrance to the Irish Maritime College to connect with the proposed footpath to be provided by the Department of Agriculture Food & the Marine (immediately north of Gobby's Beach car-park) as shown on attached map.

☐ In line with existing procedures, all site access, both vehicular and pedestrian shall be logged during construction.

- The Port of Cork will continue to implement 'Integrated Pest Management' procedures and fully comply with any recommendations from the HSE in relation to pest control.

17.3 Cultural Heritage

☐ The area of impact on the Prospect Villa boundary wall will be recorded archaeologically in advance of its destruction, which will be monitored archaeologically.

☐ Archaeological monitoring by a suitably qualified and experienced maritime archaeologist licensed by the Department of Arts, Heritage and Gaeltacht (DAHG) shall be conducted during all seabed, inter-tidal/foreshore and terrestrial disturbances associated with the development. An archaeologist experienced in maritime archaeology will be retained for the duration of the relevant works.

☐ All necessary permits shall be in place before site works commence.

☐ In the event of archaeologically significant features or material being uncovered during the construction phase, machine work will cease in the immediate area to allow the archaeologist/s to inspect any such material; full archaeological recording of significant material will be in accordance with archaeological license requirements.

☐ If it is not possible for the construction works to avoid the material, full excavation will be in accordance with archaeological license requirements. A suitable archaeological team will be on standby to deal with any such rescue excavation.

☐ Machinery traffic during construction will be restricted to avoid any identified archaeological site/s and their environs.

☐ Spoil will not be dumped on any of the selected sites or their environs.

17.4 Landscape & Visual

☐ The proposals for the pier and slipway and amenity area at Paddy's Point shall be implemented as outlined within drawing nr. 1004.1.02.

☐ Planting shall be provided in the form of tree-lines and woodland screen planting adjacent to the southern site boundary and internal roads to provide screening, as per drawing nr. 1004.1.03. Further planting will be provided on the northern boundary, as per drawing nr. 1004.1.04.

- Plant species will be suitable for a coastal location and include; Poplar tree species including Aspen; Pioneer tree species including Alder and Birch: Pioneer shrub species including Broom and Willow species; Pine tree species; and Gorse.

☐ Cranes will be mid-grey in colour, based on existing landscape and predominant sky colour.

☐ Directional downlight style cut-off luminaries shall be implemented to prevent up lighting and reduce glare and sky glow.

☐ Down lighting style cut-off luminaries shall be used on any crane superstructures to prevent up lighting and reduce glare and sky glow.

☐ Lighting control systems shall be used to reduce amount of light spill, sky glow, and visual appearance during periods of low activity during the construction phase.

☐ The use of flashing, moving, strobe, or blinking lights will be kept to a minimum.

17.5 Traffic & Transportation

- The Port of Cork Company will not operate Phase 3 of the redevelopment until the completion of the Dunkettle Interchange and N28 upgrades.

- The Port of Cork Company will implement a Ringaskiddy Mobility Management Plan (RMMP) which will be used to manage HGV traffic entering the road network to and from the Port. This will be a mandatory system with which all hauliers serving the port must comply.

- The RMMP systems and measures will include: -

  - o A Vehicle Booking System (VBS) to manage the discharge of HGV traffic onto the strategic road network, to minimise the impact of Port traffic on peak traffic periods and to reduce truck queuing in and out of the Port.

  - o Each haulier shall be required to register an arrival/ departure through the RMMP website. Hauliers collecting/ dropping off cargo shall be required to book an arrival/ departure time. Only hauliers with pre-booked slots will be allowed access into the Port.

  - o A gate system will be introduced to regulate HGV traffic flows into and out of the Port which will restrict HGV traffic flows to do-minimum levels during peak periods.

  - o Gated entry and exit lanes will be sited a significant distance back from the public road, allowing sufficient room for HGV queuing within the Port of Cork boundary.

  - o IT solutions will be used to transfer information and to communicate with hauliers.

  - o An information service for customers will be introduced to provide information regarding port operations and road/ traffic conditions to hauliers.

- A monitoring and evaluation programme shall be agreed with Cork County Council and shall include:

  - o Annual monitoring, in order to be able to adjust the measures set out in the RMMP according to changing circumstances

  - o The results of this monitoring will be evaluated and the RMMP will be updated if required.

- During the construction phase, mitigation measures shall be implemented by the contractor responsible for the construction and overseen by the Port of Cork. The contractor shall also be required to develop a mobility management plan to ensure that construction workers travel to

the site outside of peak periods. The effectiveness of these measures can be monitored by Cork County Council and the construction traffic restrictions increased or decreased as deemed necessary.

- Construction and operational traffic will be the subject of a planning condition. Please refer to proposed schedule of draft conditions numbers 5, 6 and 7.

17.6 Noise & Vibration

☐ During the construction phase, the Contractor shall adhere to all of the recommendations for reducing noise included in British Standard *BS5228:2009 – Noise and vibration control on construction and open sites: Part 1 – Noise.*

☐ Three 4m noise barriers as illustrated in Figure 9.15 (EIS, Volume II) will be built prior to the commencement of operations associated with the proposed redevelopment; these barriers shall be maintained during the operational phase.

☐ During operational phase, a noise threshold limit of 100dB Lw (95dB Lw with tone) will be set for alarm systems associated with the plant/equipment on-site by the introduction of 'Smart' Broadband alarm systems.

17.7 Air Quality & Climate

☐ During the construction phase, a site dust monitoring programme will be put in place with secure monitoring locations to ensure compliance with dust deposition limits.

☐ An odour management plan will be adopted during the construction phase of the proposed development to mitigate potential odour issues and implement remedial action through agreement with Cork County Council. The management plan will include but not be limited to odour monitoring proposals, odour control mechanisms and odour complaint procedures.

☐ Within the management plan, monitoring proposals for odour emissions will be submitted for agreement to the planning authority prior to the commencement of dredging activities in the construction phase of the proposed development.

☐ A Construction Environmental Management Plan (CEMP) will be developed and implemented. The CEMP will provide a framework for the management and implementation of construction activities incorporating the mitigation measures identified in the relevant chapters of this EIS, including dust and odour. The CEMP will be reviewed regularly, and revised as necessary, to ensure that the measures implemented are effective.

☐ During the operational phase, emissions to air from berthed shipping will be controlled by strict international limits. Good cargo unloading practices will minimise the impact of exhaust fumes from HGVs.

☐ Bulk grain cargo unloading will be carried out in a manner that minimises cargo spillage. To this effect all loading/unloading will be subject to operation specific control and containment protocols as adhered to by Port of Cork. The current method of handling cargoes will be continued and extended to service the proposed berth extension and dust monitoring at site peripheries will be continued.

- Protocol will include; Operational best practice and preventative measures will be adopted at the proposed Deep Water Berth extension. All Cargo Handling Equipment (Cranes, Hoppers and Dust Suppression Units) will be tested in advance of operations. Prior to operations Dust Suppression Units (Dust Boss and Road Sweeper) are pre-positioned according to the prevailing wind in order to limit and prevent Dust Migration. This is monitored continually throughout the unloading operation. Hopper Operators will load trailers in accordance with procedure and in particular avoid creating cones of product above the trailer "waterline" which can result in dust spill. Hopper operators will also ensure that the plant is in full working order with regards to dust extraction before commencing work.

- Staff will monitor transport units on terminal with regards the heights of product in trailers and also the integrity of the tail gates of trailers. Any issues will be raised and remedial action sought. Lorries drawing feed from the stores off terminal will be required to use the truck wash in order to remove excess product which may have gathered on equipment. In addition trailers will be covered prior to release from the terminal to the main road.

- The Building Research Establishment (BRE) Guidance on the Control of Dust from Construction and Demolition Activities will be followed and that a site dust monitoring programme will be put in place during the construction phase to manage dust deposition.

- Refer also to proposed schedule of draft conditions numbers 9, 10 and 11.

17.8 Soils, Geology & Contamination

- ☐ At construction stage, a Groundwater Management Plan based on CIRIA C515 Groundwater Control – Design and Practice will be implemented by the contractor.
- ☐ Any contaminated groundwater encountered during earthworks or piling shall be disposed off site to a licensed waste disposal facility or treated by passing it through a three stage interceptor and discharged to sewer under license from the Local Authority.
- ☐ Material imported onto the site will be assessed to ensure that contamination is not introduced to the site.
- ☐ Topsoil which is imported onto the site will be chemically analysed and screened against generic screening values for a commercial end use to ensure that it does not pose a risk to human health.
- ☐ Fill material imported onto the site will undergo Waste Acceptance Criteria (as per BS 12457/3) testing to ensure that the material is classified as inert and does not pose a risk to the underlying groundwater.
- ☐ The existing Port of Cork Oil Spill Contingency Plan shall continue to be implemented on site.

- Fill material will not comprise marine aggregates extracted from Cork Harbour.

- The existing Port of Cork Company Environmental Management Plan will be updated to include a Waste Management Plan for the operational phase of the redevelopment.

17.9 Coastal Processes

- Dredging will be undertaken by either a trailing hopper suction dredger or a backhoe dredger.

17.10 Water Environment Water Quality

- ☐ Water quality monitoring will be carried out by the main contractor with continuous in-situ monitoring carried out in advance of the works to establish a water quality baseline and during the dredging activities to ensure effective response to any incidents that may impact on water quality at sensitive sites.
- ☐ A protocol for regular communication with statutory agencies such as National Parks and Wildlife Service (NPWS) and Cork County Council and other third parties shall be established to ensure all pollution incidents or potential incidents are reported in an efficient and timely manner;
- ☐ Management and auditing procedures, including tool box talks to all personnel, shall be put in place to ensure that any works which have the potential to impact on the aquatic environment are being carried out in accordance with required permits, licences, certificates and planning permissions.
- ☐ Existing and proposed surface water drainage and discharge points shall be mapped on a site plan which shall also include the location of existing and proposed measures such as monitoring points, sediment traps, settlement lagoon and oil interceptors.
- ☐ An appropriate dredging regime will be implemented with due regard to best practice.
- ☐ Dredge material will be transported in closed systems to prevent overspill.
- ☐ Contractors shall implement best practice and relevant guidance to ensure silt laden or contaminated surface run-off from the entire construction site; i.e. the Container Berth / Multi-purpose Berth, Deepwater Berth extension, road upgrades, site compound and Paddy's Point pier and slipway, does not discharge directly to the Harbour.
- Port of Cork Oil Spill Contingency Plan will be adhered to by all staff including those employed to carry out construction works on behalf of the Port. Its primary purpose is to set in motion the necessary actions to stop or minimise an accidental discharge of oil and/or Hazardous Noxious Substances (HNS) and to mitigate its effects.

- ☐ Imported fill material required to complete the infilling behind the quay walls will be clean graded stone sourced from local quarries.
- ☐ Concrete use and production shall adhere to control measures outlined in PPG 6 Working at demolition & construction sites (Environment Agency, 2012).
- ☐ For the sections of concrete that are under water, pre-cast units shall be used for construction. Where the use of pre-cast units is not possible, where *in situ* stitching is required or where concrete is to be placed under water or in tidal conditions, specific fast-setting mix is required to limit segregation and washout of fine material / cement.
- ☐ In relation to fuel and chemical storage the control measures outlined in PPG 26 "*Safe storage – drums and intermediate bulk containers"* (Environment Agency, 2011a) shall be implemented. The safe operation of refuelling activities shall be in accordance with PPG 7 *"Safe Storage – The safe operation of refuelling facilities"* (Environment Agency, 2011b).
- ☐ With regard to potential oil spills during dredging operations, an emergency spill kit and oil spill containment equipment will be held on board by the dredging operator;
- ☐ A contingency plan for the works shall be prepared in accordance with *PPG 21 Pollution Incident Response Planning* (Environment Agency, 2009).
- ☐ Operations shall be undertaken in compliance with the existing Port of Cork Oil Spill Contingency Plan.
- ☐ The following shall be adhered to with respect to vessels at berth or travelling through the Port of Cork:
  - Bilge water shall be treated in accordance with Marpol standards;
  - Ballast water management shall comply with the appropriate National and International Maritime Organisation guidelines;
  - Vessels shall be equipped with oil-water separation systems in accordance with Marpol requirements;
  - Spills on deck shall be contained and controlled using absorbing materials;
  - Vessels without sewage treatment systems shall have suitable holding tanks and will bring waste onshore for treatment by licensed contractors;
  - Chemicals shall be stored in suitably bunded areas and with material safety data sheets.

Sewage and Storm Water Infrastructure

- ☐ The proposed redevelopment will connect to the new Cork Lower Harbour Main Drainage Scheme and therefore will receive appropriate treatment prior to discharge to coastal waters. Should the proposed sewer upgrade works not proceed as intended or occur beyond the timescales indicated, then the Port of Cork will install an on site waste water treatment works in order to appropriately treat sewage from the proposed redevelopment prior to discharge to the marine environment.
- ☐ All surface drainage waters, including road drainage, will be presumed to be contaminated and will be routed through highway quality oil interceptors and sediment traps prior to discharge into the sea.

17.11 Marine Ecology

During the construction phase:

- ☐ Vehicles will not be allowed to traverse the mussel bank during construction.
- ☐ Refuelling of plant will be undertaken away from the intertidal area to minimise the effects of possible fuel spillage.
- ☐ Standing machinery will be placed on drip trays to avoid spillages.
- ☐ No overflow from the dredger shall be permitted during dredging.
- ☐ A qualified Marine Mammal Observer shall be appointed to implement mitigation measures derived from '*Guidance to manage the risk to marine mammals from man-made sound sources in Irish waters'* (NPWS, 2014).

During the operational phase:

- ☐ Surface water will be collected in drainage channels and gullies, and passed through oil interceptors prior to discharge.
- ☐ Port of Cork will contribute to an environmental education programme for local primary schools concentrating on the marine environment. To that end they will engage with Inland

Fisheries Ireland, and with the relevant educational institutions on the initiative with a view to agreeing a programme to commence within 18 months of project commencement should it be approved.

17.12 Terrestrial Ecology & Ornithology

☐ A suitably qualified Ecological Clerk of Works will be appointed prior to the commencement of any works to ensure the mitigation is implemented in the manner for which it is intended and to act as a liaison between Port of Cork and NPWS.

- The mitigation measures set out in Section 3.3 of the Natura Impact Statement will be implemented in full.

☐ Landscaping will prioritise the use of native species in keeping with habitats immediately adjacent to the proposed development footprint.

☐ A pre-construction re-survey of the shoreline will be undertaken by a suitably qualified Ecologist to identify otter activity prior to construction.

☐ Construction works at the shoreline adjacent to the ADM Jetty shall be restricted to daytime hours in order to allow otters and other waterbirds to forage at dusk, through the night and at dawn.

☐ Construction of the DWB extension shall be screened from the ADM Training Wall and ADM Jetty for a distance of 40m along the ADM Jetty. A temporary visual screen will be draped under the ADM Jetty between the piled structures for the duration of works at shoreline level.

☐ Light spill will be reduced during construction and operation through the use of directional lighting at locations set out in Planning Drawings IBM0474-GA-400 to 405.

- Predator (gull and heron) perching deterrents will be placed on new lighting columns.

☐ Vegetation clearance and topsoil stripping will be undertaken outside of the breeding bird season i.e. it will not take place between 1st March - 31st August.

- Prior to construction works commencing at the Container Berth and Multipurpose Berths, in the event that these works are likely to commence during the period 1st March - 31st August, a deterrent to breeding plover will be put in place to avoid destruction of active nests or young, or disturbance of active breeding birds.

☐ Mature trees within the application site will be retained where possible. If any are to be removed they will be felled during the months of September to November inclusive subject to re-survey and inspection for bats by a suitably qualified Ecological Clerk of Works.

☐ Any ivy-covered trees which require felling will be left to lie for 24 hours after cutting to allow any bats beneath the cover to escape.

☐ Dredging will not be undertaken between May and August inclusive.

☐ The construction of the internal Port road between the existing security hut and the existing Ro-Ro ramp will not take place between April and August inclusive unless a visual barrier to screen works is in place before construction works commence.

- Placement of infill and erection of a visual barrier to screen Port road construction between the existing security hut and the existing Ro-Ro ramp will be undertaken between September and March.

☐ A 4m visual barrier to screen works will be constructed as part of the permanent works along the northern perimeter of the internal road at the location shown in Planning Application Drawing 0474-PL-0802. This screen will include predator perching post deterrents.

- Sound levels from pile-driving will be ramped up initially by starting at less than full power and increasing to full-power gradually.

- Use of the three mooring dolphins upon which Common Tern breeds by vessels directly or indirectly associated with the port development will not commence until a nesting platform has been constructed to the southern side of each of the three mooring dolphins and northernmost terminal dolphin of the ADM Jetty as specified in the Recommendations Report '*Recommendations on Common Tem nesting habitat improvement measures in Cork Harbour'*. Each of the new nesting platforms will provide at a minimum, equal nesting habitat extent as occurs on the existing dolphins, fitted with a wooden or metal perimeter edge (c.30cm height) to create a secure bund. A series of internal wooden baffles and built-in chick

shelters will be constructed and the floor will be covered with a layer of suitable coarse aggregate and mussel shells as nesting substrate.

- Upon commencement of both port construction and the breeding season of common terns, monitoring of the use of the mooring dolphins by breeding terns will be carried out by one or more competent and experienced ornithologists, in order to confirm the predictions of no adverse effects of construction disturbance. The monitoring will also include estimates of hatching and fledging success. The monitoring will be continued for the duration of construction, and during the first year of operation. If, on the basis of the ornithological monitoring of the mooring dolphins and additional nesting site(s), unforeseen abandonment by some or all breeding terns of the port nesting sites occurs, then the long-term phase of the Recommendations Report '*Recommendations on Common Tem nesting habitat improvement measures in Cork Harbour'* will be implemented and an alternative nesting site constructed as soon as possible.

- A Construction Environment Management Plan (CEMP) will be prepared incorporating the mitigation measures set out in the EIS.