Dublin Port Company

Masterplan Review 2017
Environmental Report
Consultation Paper

RPS

COMHLACHT CHALAFORT ÁTHA CLIATH
DUBLIN PORT COMPANY

www.dublinport.ie/masterplan

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1.1 Introduction

Dublin Port Company (DPC) is committed to achieving high standards of environmental management. This is reflected in the company's commitment to its ESPO / Ecoports Ports Environmental Review System and ISO 14001 Environmental Management System Standard certifications. These certifications were initially achieved in 2008 and have been maintained through a series of external audits / re-certifications to both of these standards.

DPC's Masterplan 2012 – 2040 was supported by environmental studies presented within a Strategic Environmental Assessment (SEA) environmental report and a Strategic Natura Impact Statement (sNIS). These documents are available on the DPC Masterplan website for download (www.dublinport.ie/masterplan).

The publication of the SEA environmental report and sNIS alongside the Masterplan provided an opportunity for stakeholder and local consultations as well as subsequent responses. This formal consultation process provided the opportunity for expression of opinions on these documents prior to the finalisation and adoption of the Masterplan by DPC.

The necessary recommendations and mitigation measures identified in both the SEA environmental report and sNIS were reviewed and carried forward to the detailed design stage of those development proposals within the Masterplan brought forward for planning consent.

1.2 Strategic Environmental Assessment

The purpose of the SEA process was to ensure that any likely significant environmental impacts of the Masterplan's proposed options and their future development were identified. Developing the SEA in conjunction with the Masterplan, demonstrated how environmental considerations and sustainable development decisions were integrated into the process of preparing the Masterplan.

The Masterplan process was not subject to preparation and / or adoption by an authority at national, regional or local level and was also not required for adoption through a legislative procedure by Parliament or Government. On this basis, the Masterplan was not defined as a plan or programme under the SEA regulations.

The Masterplan is not a statutory plan and accordingly, does not fall within the remit of the SEA regulations. The SEA environmental report was, therefore, a non-statutory voluntary assessment, commissioned by DPC.

Notwithstanding this, the SEA environmental report was prepared in accordance with the provisions of the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 and the European Communities (Environmental Assessment of Certain Plans and Programmes) (Amendment) Regulations 2011 (S.I 200 of 2011).

1.3 Strategic Natura Impact Statement

A sNIS was developed as part of the Appropriate Assessment process as required under the Habitats Directive requirements and with regard to plans or projects being developed near Natura 2000 sites.

The purpose of the sNIS for the Masterplan was to:

- Provide a strategic approach to mitigation which may result from the development of the Masterplan engineering options; and
- Provide a framework within which the Appropriate Assessment process for the individual options presented in the Masterplan can be implemented in the event that they are progressed to the development stage in accordance with Article 6.3 of the European Union (EU) Habitats Directive (92/43/EEC), which requires that "any plan or project" not directly connected with or necessary to the management of a Natura 2000 site, but likely to have a significant effect thereon, shall be subject to an Appropriate Assessment (AA) of its implications for the site in view of the site conservation objectives.

1.4 Masterplan and Sea Objectives – Compatibility Appraisal

A SEA "compatibility appraisal" was conducted at the SEA scoping stage to test the compatibility of the Masterplan objectives with the SEA objectives in order to identify where they supported each other or conflicted. The SEA objectives are outlined in the SEA environmental report.

The goal of this process was not to eliminate conflicts, but to inform development of the Masterplan and to assist in refining the Masterplan's objectives where required. This helped in the development of the options in the Masterplan. These were then developed in a way which helped to address any potential for negative impacts.

Viewed in isolation, the Masterplan objectives which promote development, new facilities and services may be considered to promote activities which could negatively impact on relevant environmental receptors. However, this negative potential was also considered to be largely managed or improved by the SEA objectives, bringing the potential for beneficial impacts.

1.5 Assessment and Selection of Alternatives

The development of the Masterplan involved the consideration of a number of alternative approaches to the provision of future capacity at Dublin Port. It is a requirement of the SEA that the likely significant effects are identified in relation to "reasonable alternatives taking into account the objectives and the geographical scope of the plan" (EU SEA directive, Article 14). Only alternatives which were identified as being reasonable towards achieving the objectives of the Masterplan and capable of delivery by DPC were considered.

The consideration of alternatives included a "no port expansion" scenario, as the basis for comparison with options that provide for potential future growth in port demand. The "Dublin Port Expansion" option was selected as it offered a number of advantages and the potential dis-benefits were likely to be broadly equivalent to the "No Dublin Port expansion" option.

In the assessment, it was recognised that any scenario selected would involve certain "trade-offs" of dis-benefits in exchange for benefits. It was also considered that the potential adverse impacts at Dublin Port were well understood and could be either avoided or reduced to an acceptable level.

Additionally, a number of specific development / engineering alternatives were considered which could potentially meet the objectives of the Masterplan. Following a review and comparison of these proposals, the preferred options were selected for inclusion within the Masterplan.

These various options were assessed as part of the SEA process in order to inform the decision-making process (details of which are contained in section 6 of the SEA environmental report).

1.6 SEA Environmental Report

The assessment of the likely environmental impacts arising from the preferred engineering options was undertaken. The assessment in the SEA Environmental Report related to the environmental aspects outlined below, with full details of the respective assessments contained within Section 8-18 of the SEA Environmental Report:

- Biodiversity – Flora and Fauna
- Flood Risk
- Water – Surface Water
- Water – Groundwater
- Noise and Vibration
- Air Quality and Climate
- Cultural Heritage – Archaeology and Architectural
- Landscape
- Populations
- Transport
- Waste Management

The impact assessment related to both the construction and operational phases of the development proposals and identified appropriate mitigation proposals to minimise likely environmental impacts. The impact assessment for each environmental aspect was summarised in the table produced in Appendix 1 of the SEA Environmental Report giving the characterisation of the aspect, types of impacts associated with that aspect, together with mitigation measures to be implemented and the residual impact of the Masterplan.

In summary, the assessment concluded that short-term negligible effects were predicted for biodiversity, flood risk, surface water, groundwater, noise and vibration, air quality / climate and waste management. Minor adverse effects were predicted in the short term for architectural heritage, landscape, population, human health / deprivation and transport, due primarily to construction activities. No short- term effects were anticipated for archaeological heritage.

Taking into account the implementation of appropriate mitigation in the medium to long term, negligible effects were predicted in relation to flood risk, surface water, groundwater, air quality / climate, landscape, transport and waste management. Moderate adverse effects were predicted for archaeology and relate to the potential for partial or complete removal of unknown archaeological heritage remains due to dredging within the harbour or other construction activities.

With the implementation of mitigation, minor beneficial effects were expected in the medium to long term for biodiversity, due to boundary planting with native species and the potential for habitat enhancements. Minor beneficial effects were also expected for the local community and local residents. The increased trade through the growth of the Port and encouragement of tourism along with the potential for employment, educational and training opportunities was predicted to result in moderate beneficial effects.

1.7 Strategic Natura Impact Statement

The assessment undertaken as part of the sNIS and subsequent mitigation requirements were incorporated into the SEA biodiversity assessment.

The sNIS identified the Natura 2000 sites as potentially subject to significant effects as a result of the Masterplan proposals and additionally identified the principles / measures required to be implemented to facilitate the development of the preferred engineering options.

The Statement also identified the data that would be required at project level to demonstrate that there will be no implication for the integrity of the Natura 2000 sites, or for the qualifying features for which they are designated.

Pathways for potential effects on four Natura 2000 sites were identified which had the potential to result in significant effects in terms of habitat loss, habitat modification, pollution and disturbance.

The approach taken to mitigation within the sNIS was proportionate to the potential likely significant effects of specific development proposals. Mitigation measures were identified to ensure that the integrity of the Natura 2000 sites would be maintained, with details of the specific requirements needed to achieve this. Such mitigation measures were to be delivered at project development stage, in the event that any of the preferred engineering options were progressed.

Mitigation measures included the creation of alternative habitats to replace any proposed loss of Natura 2000 habitat as a result of the pursuance of any of the preferred engineering options in the Masterplan. The alternative habitats were to be selected to ensure the ongoing coherence of the Natura 2000 network. This would be achieved by appropriate assessments to determine suitable locations for habitat creation, including bird surveys. Full details of the strategic assessment are detailed in the sNIS in Appendix C of the SEA Environmental Report.

1.8 Cumulative Effects

Cumulative effects are those effects which occur as a result of multiple actions upon the same receptor – whether a community, a group of people or an aspect of the environment. The Masterplan was likely to be implemented alongside a number of other plans and projects identified for the surrounding area.

On review, the majority of the potential cumulative effects required no further mitigation measures in order to be implemented. However, in the case of plans or projects where the potential for cumulative effects was identified, mitigation was identified in the SEA Environmental Report to reduce the potential for these impacts.

1.9 SEA Mitigation and Monitoring Proposals

Mitigation measures are the initiatives which have been identified in the SEA Environmental Report to prevent or reduce any potential significant impacts on the environment. DPC is committed to implementing the necessary mitigation measures identified in the SEA Environmental Report in the context of and as relevant to, any specific developments that are brought forward from the Masterplan.

Mitigation measures were identified under the same headings that are found in the assessment sections of the SEA Environmental Report (Sections 8-18). The existing environmental conditions and the preferred engineering options were all taken into consideration in the identification of suitable mitigation measures which were to be implemented as part of the Masterplan.

Additionally, a monitoring programme was developed which is based on the SEA Objectives. The purpose of the monitoring programme was to assist in identifying whether the SEA is accurate in its predictions and whether the Masterplan is achieving its environmental objectives. By doing this, it will also assist in identifying at an early stage any unforeseen effects resulting from the Masterplan so that timely and appropriate responses can be implemented.

1.10 Conclusions

The SEA Environmental Report identified that the short-term effects, relating primarily to construction based impacts, ranged from being negligible to minor adverse.

In the medium to long term, moderate adverse effects were predicted for potential unknown archaeological remains resulting from works such as dredging within the Port.

Overall, in the medium to long term, potential effects of the DPC Masterplan were largely negligible with minor beneficial effects expected for some aspects.

Common tern adult and chick on DPC pontoon *(photo: John Fox)*.

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The Alexandra Basin Redevelopment (ABR) Project Planning Phase

2.1 Introduction

The Alexandra Basin Redevelopment (ABR) Project is the first major infrastructure project to be brought forward for planning and other consents from DPC's Masterplan 2012 to 2040. It represents approximately one-third of the total extent of the proposed developments within the Masterplan.

The Masterplan recognised the need to provide capacity in the Port to cater for 60m (million) gross tonnes of cargo by 2040 and was approved by the Board of DPC in February 2012. It was also subsequently endorsed by Government in its National Ports Policy 2013 in the following terms:

"The government endorses the core principles underpinning the company's Masterplan, and the continued commercial development of Dublin Port Company is a key strategic objective of National Ports Policy".

The ABR Project emanates from ideas presented in the Masterplan and its design is based on an in-depth evaluation of needs (supported by detailed modelling and simulation studies) and a determination of the potential environmental impact of the proposed development during the Environmental Impact Assessment (EIA) process. The EIA process included the review and implementation of the mitigation and monitoring proposals put forward in the Masterplan's SEA Environmental Report and sNIS.

The ABR Project complements DPC's continuing initiative to, in some cases, regain operational control over port lands and more generally, to influence port operators to increase their utilisation of port lands. These initiatives have included the publication by DPC of a policy document setting out the company's policies regarding the use of port lands and appropriate targets for their utilisation for different types of cargo.

In identifying the engineering options in the Masterplan, DPC recognised significant levels of public concern about the expansion of the Port through further infill in Dublin Bay. The Masterplan confirmed that the Company would continue to develop the Port within its current footprint to the maximum extent possible before any major reclamation works might be considered.

The ABR Project, therefore, focuses on a combination of re-developing existing (and in some cases life-expired) infrastructure and using existing port lands at higher utilisation levels.

Furthermore, to maximise the operational efficiency of the Port, many of the new berths proposed in the ABR Project have been designed to be multipurpose to cater for the needs of a range of ship and cargo types.

2.2 ABR Project Summary

The ABR Project comprises a number of engineering proposals set out in the Masterplan document, mainly:

- Works at Alexandra Basin West including construction of new quays and jetties, remediation of contamination on the bed of the basin, capital dredging to deepen the basin and to achieve the specified depths of -10m Chart Datum (CD) at the new berths.
- Infilling of the Basin at Berths 52 & 53 and construction of a new river berth with a double tiered Ro-Ro ramp.
- Deepening of the fairway and approach to Dublin Port to increase the ruling depth from -7.8m CD to -10.0m CD.

This is the most significant infrastructural development planned by DPC in the past 100 years and involves a major capital investment on behalf of the Port. It reinforces the Port's commitment to providing a top level port to the City of Dublin and Ireland as a whole. Ireland is an Island and the importance of being able to import and export goods in and out of the country is a basic requirement and vital to our livelihoods and economy as a whole.

PROJECT DESCRIPTION

Figure 1 below shows the site location plan for the overall ABR Project.

The proposed development works comprise the following elements, full details of which are included on the planning application drawings which are available on the ABR Project website for download (www.dublinportabr.ie).

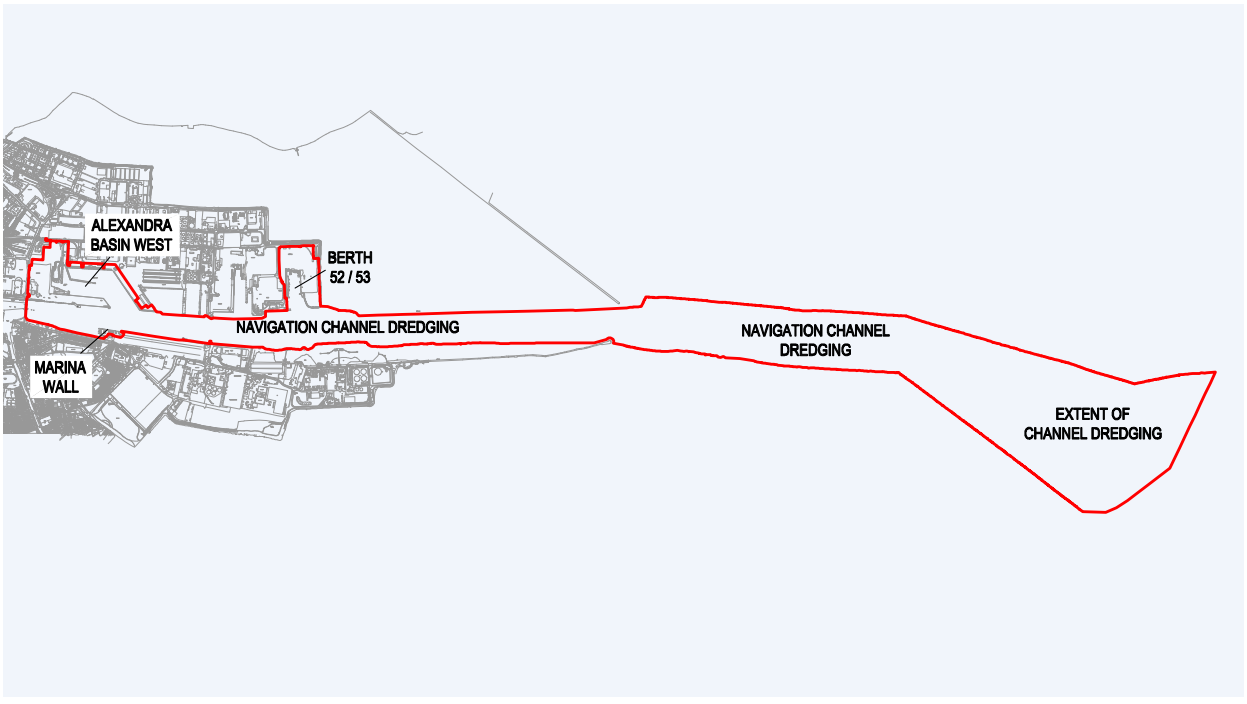


Figure 1. Site Location Plan

NAVIGATION CHANNEL (Extent shown on Figure 1)

- Dredging of Liffey Channel to -10m CD, from East Link Bridge to Dublin Bay Buoy over a six year period; and
- Construction of a surge protection/retaining wall at Poolbeg Marina.

ALEXANDRA BASIN WEST (Extent shown on Figure 2)

- Dismantling of infrastructure and removal of infill material;
- Quay wall refurbishment/construction (designed to accommodate future dredging to a level of -13.0m CD);
- Installation of Ro-Ro ramps;
- Ro-Ro jetty construction;
- Dredging of basin and berths to -10.0m Chart Datum (CD);
- Treatment of contaminated dredged material and re-use as infill on site;
- Excavation and restoration of Graving Dock No.1;
- Infilling of Graving Dock No. 2 with treated dredged material;
- Relocation of ore concentrates loading operations to Alexandra Quay West Extension; and
- Development of cultural heritage interpretative space

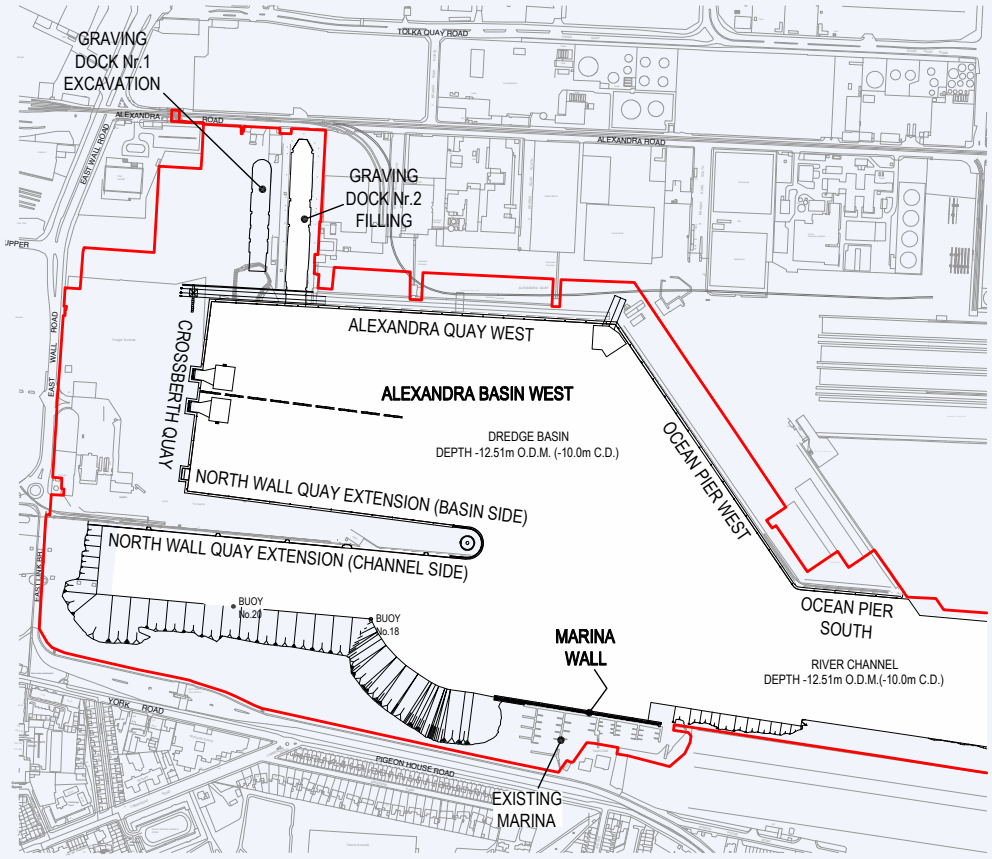


Figure 2. Alexandra Basin West Works

EXISTING BERTH 52/53 (Extent shown on Figure 3)

- Dismantling and removal of existing infrastructure;
- Infilling of existing Berth 52/53 with treated dredged material;
- Raising of existing surface levels by approx. 1.4m;
- Quay wall construction;
- Mooring jetty construction; and
- Installation of Ro-Ro ramp.

COMMUNITY GAIN PROPOSALS

The ABR Project includes a significant community gain proposal comprising the transfer of ownership of a portion of Bull Island from DPC to Dublin City Council and finance to facilitate the provision of information and facilities on the Island.

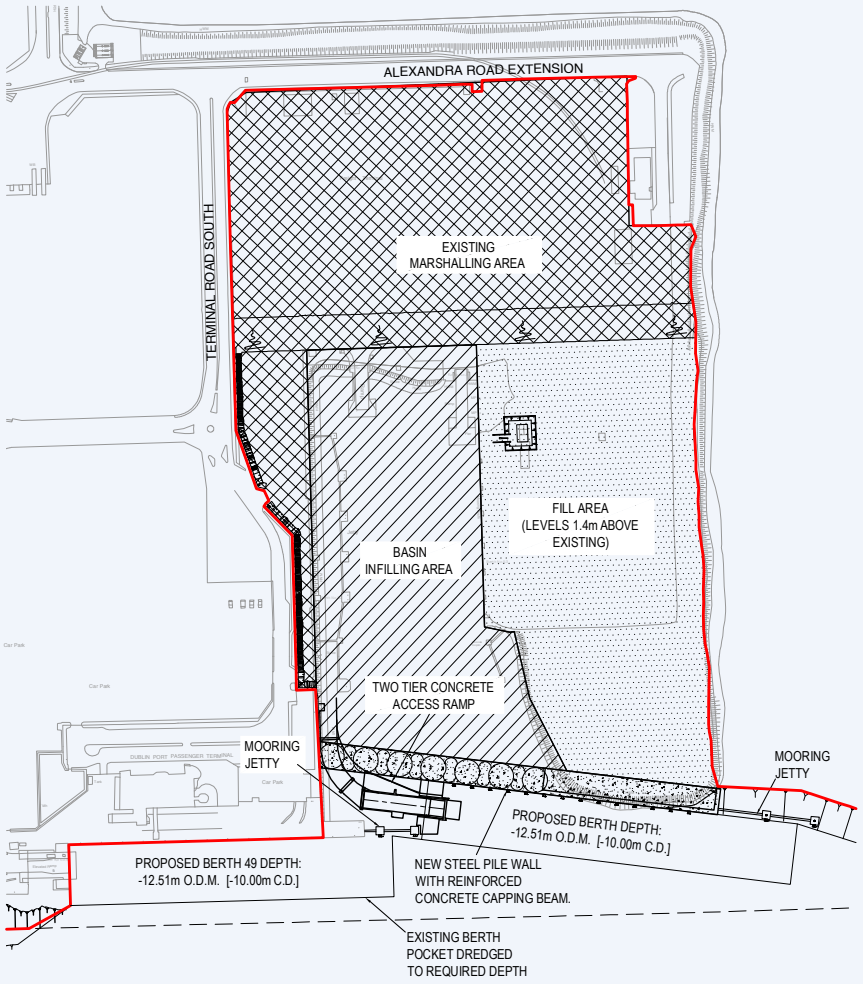


Figure 3 – Berth 52/53 Works

2.3 ABR Project planning process

Following consultations under Section 37B of the Planning and Development Act, 2000 as amended, An Bord Pleanála (ABP) served notice to the applicant (DPC) under section 37B(4)(a) which stated that they had decided that the proposed development would be strategic infrastructure within the meaning of Section 37A of the Act. Any application for the proposed development must therefore be directly to the Board under Section 37E of the Act.

A planning application was submitted to ABP on 6th March 2014 supported by the following documents, available to download at (www.dublinportabr.ie):

- Planning Report which presented the case for the project as being in the interests of the proper planning and sustainable development of the area;
- Planning Drawings;
- Project level Environmental Impact Statement (EIS) and Natura Impact Statement (NIS); and
- Built Heritage Conservation Strategy.

Consultations with statutory bodies and other stakeholders formed a key role in formulating the scope of the EIS and NIS building on the extensive consultation carried out to develop DPC's Masterplan 2012-2040.

In summary, the consultations comprised interaction with key stakeholders including Dublin City Council, National Parks & Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Department of Environment, Community and Local Government, National Roads Authority, National Transport Authority, Department of Transport, Failte Ireland, Environmental Protection Agency and the Marine Institute.

An extensive programme of public consultation was also undertaken involving:

- Publication of a community newsletter circulated to over 40,000 homes in the areas adjacent to Dublin Port;
- Briefing local public representatives;
- Meetings with local community groups;
- Provision of a dedicated website; and
- An extensive media campaign to publicise the ABR Project which secured wide coverage in national and local print, electronic and online media outlets

The key environmental issues identified are briefly summarised below:

- Potential impact of noise during piling operations on neighbouring communities and potential disturbance to wildlife, including birds, marine mammals and migratory fish;
- Potential impact of the removal and treatment of contaminated sediments within Alexandra Basin West on the marine environment;
- Potential impact of the capital dredging scheme on the coastal processes within Dublin Bay, its benthic ecology and food resource for birds and marine mammals; and
- The potential loss of infrastructure of architectural heritage importance and the potential to uncover previously unrecorded archaeological material during dredging and construction activities.

All of the environmental issues identified during the scoping phase are addressed in the EIS in what is termed a "Grouped Format Structure" which examines each topic as a separate section referring to the existing environment, the proposed development, impacts and mitigation measures.

The environmental issues which have potential to have likely significant impacts on Natura 2000 sites, notably the Rockabill to Dalkey Island candidate Special Area of Conservation (cSAC) and the South Dublin Bay and River Tolka Estuary Special Protection Area (SPA) are addressed in the Natura Impact Statement (NIS).

A summary of the mitigation measures recommended in respect of the proposed development is presented in the ABR Project Construction Environmental Management Plan (CEMP).

The appraisals set out in the EIS and NIS was supplemented by DPC's responses to two Requests for Further Information issued by ABP. Moreover, An Bord Pleanála convened an Oral Hearing on the application for planning permission in respect of the ABR Project, which took place in October 2014 and which provided the public and other interested parties a further opportunity to make submissions and observations on the proposal. This included proposals on issues in relation to the potential environmental impacts of the proposed infrastructure development, capital dredging and dredge spoil disposal.

AN BORD PLEANÁLA'S PLANNING DECISION

ABP granted permission for the ABR Project on 8th July 2015.
The following extracts from ABP's Decision to grant Planning Permission demonstrate the extent to which the environmental issues were addressed.

Environmental Impact Assessment undertaken by ABP

The Board considered that the environmental impact statement, supported by the documentation and various further submissions by the applicant, identifies and describes adequately the direct and indirect effects of the proposed development on the environment. The Board completed an environmental impact assessment in relation to the proposed development and concluded that, by itself and in combination with other development in the vicinity, the proposed development would not be likely to have significant effects on the environment.

Habitats Directive Assessment undertaken by ABP

The Board completed the assessments required under the Habitats Directive, taking into account the Natura Impact Statement, the initial Inspector's report (dated 18th December, 2014) and the supporting specialist report entitled "Review of Coastal Processes Related Issues", and also the Inspector's addendum report (dated 5th June, 2015), the latter having been completed following a request for further information which addressed, inter alia, the removal of the North Wall – Poolbeg 220kv cable and cumulative impacts of the proposed development.

Stage One Screening Assessment

The Board agreed with the screening assessment carried out in the Inspector's assessment of the impacts of the proposed development on the Rockabill to Dalkey Island candidate Special Area of Conservation (site code 003000), the Lambay Island candidate Special Area of Conservation (site code 000206), the South Dublin Bay candidate Special Area of Conservation (site code 000210), the North Bull Island Special Protection Area (site code 004006) and the South Dublin Bay and River Tolka Estuary Special Protection Area (site code 004024). The Board concluded that the proposed development, in itself or in combination with other plans or projects, would not adversely affect the integrity of the European sites in view of the sites' conservation objectives. reports, which concluded that there are six European sites for which the likelihood of significant effects could not be ruled out at the screening stage:

- Rockabill to Dalkey Island candidate Special Area of Conservation (site code: 003000)
- Lambay Island candidate Special Area of Conservation (site code: 000204)
- North Dublin Bay candidate Special Area of Conservation (site code: 000206)
- South Dublin Bay candidate Special Area of Conservation (site code: 000210)
- North Bull Island Special Protection Area (site code: 004006)
- South Dublin Bay and Tolka Estuary Special Protection Area (site code: 004024)

continued...

The Board also concurred with the applicant's appropriate assessment screening exercise in relation to the potential effects arising from the works required to decommission and replace the 220kV cable and was satisfied that there was no requirement to proceed to Stage 2 appropriate assessment on this aspect of the proposed development.

Stage Two Appropriate Assessment

The Board considered the Natura Impact Statement, further information responses received from the applicant on the 18th August, 2014 and the 2nd April, 2015, and all other relevant submissions including those made at the Oral Hearing and carried out a Stage Two Appropriate Assessment of the implications of the proposed development for the six European Sites in view of those sites' conservation objectives. The Board considered that the information before it was adequate to allow the carrying out of a Stage Two Appropriate Assessment.

Having regard to the nature, scale and design of the proposed development, the Natura Impact Statement submitted with the application, the submissions on file and the Inspector's assessment, the Board completed an appropriate assessment of the impacts of the proposed development on the Rockabill to Dalkey Island candidate Special Area of Conservation (site code 003000), the Lambay Island candidate Special Area of Conservation (site code 000206), the South Dublin Bay candidate Special Area of Conservation (site code 000210), the North Bull Island Special Protection Area (site code 004006) and the South Dublin Bay and River Tolka Estuary Special Protection Area (site code 004024). The Board concluded that the proposed development, in itself or in combination with other plans or projects, would not adversely affect the integrity of the European sites in view of the sites' conservation objectives.

2.4 ABR Project Foreshore Licensing Process

Dublin Port Company (DPC) submitted a Foreshore Licence Application for the ABR Project to the Department of Environment, Community and Local Government (DECLG) on 1st July 2015 in order to obtain permissions for undertaking works on the Foreshore (below the mean High Water Mark) including the construction of new quays and jetties and undertaking capital dredging operations. This application was supported by the same ABR Project EIS and NIS as the planning application to ABP.

As part of the foreshore licence application process, there was a consultation period of 8 weeks (40 working days) during which members of the public could view the application documentation and make submissions on the application. The consultation period was advertised in the national press and local press on 16th September 2015. The consultation period was also advertised in "The Marine Times" and "The Skipper" publications. The consultation period ended on 11th November 2015.

The application documentation was placed on display in the following four locations over the 8 week period:

- Clontarf Garda Station, 43 Clontarf Road, Clontarf, Dublin 3
- Irishtown Garda Station, 57A Irishtown Road, Dublin 4
- Dublin Central Library, Ilac Shopping Centre, Ilac Centre, Henry St., Dublin 1
- Dublin City Council, Civic Offices, Wood Quay, Dublin 8

In addition, the foreshore application material was available to view and download on the following dedicated website (www.dublinportabrforeshoreconsent.ie) and on the Department's website at (www.environ.ie/en/Foreshore/ApplicationsSubjecttoEIA).

CDs containing the application documentation package were made available free of charge on request from members of the public.

Also at the request of DECLG, the application documentation was made available by DPC to the following prescribed bodies:

- Dublin City Council
- Fingal County Council
- South Dublin County Council
- Dun Laoghaire Rathdown County Council
- Failte Ireland
- An Taisce
- The Department of Transport

All prescribed body and public submissions were directed to the Foreshore Unit of DECLG. After the consultation period ended, DECLG collated the submissions received and produced a consolidated version. The consolidated submissions were issued to DPC on 24th November 2015 and DPC submitted their response by the 21st December 2015.

On 15th January 2016 DECLG requested a further response with respect to further observations received from:

- DECLG Water Service Advisor; and
- Inland Fisheries Ireland.

DPC responded to these further observations by 29th January 2016.

DECLG'S FORESHORE LICENSING DECISION

The Minister for DECLG granted a Lease/Licence/Consent under Sections 2(1), 3(1) and 10(1) of the Foreshore Act, 1933 to DPC on 12th May 2016.

The following extracts demonstrate the extent to which the environmental issues were addressed:

> The Minister confirms that he has had regard to the following matters in determining the application for a Foreshore Lease/Licence/Consent:
> - The application for a Foreshore Lease/Licence/Consent together with accompanying documents;
> - The submission received during the public consultation procedure carried out in respect of the application which commenced on 16 September 2015 and concluded on 11th November 2015;
> - The submissions received from prescribed bodies in respect of the application;
> - The submissions received during the public consultation and the applicant's responses; the consent conditions to be attached to the Foreshore Lease/Licence/Consent if granted;
> - The nature of the proposal and its purpose;
> - The appropriate assessment of the proposed development by the Marine Institute on behalf of the Marine License Vetting Committee (MLVC) under domestic and EU law, including the Birds Directive and the Habitats Directive and its conclusions and recommendations in this regard;
> - The environmental impact assessment of the proposed development by the MLVC under domestic and EU law, including the EIA Directive, and its conclusions and recommendations in this regard;
> - The MLVC assessment and recommendations including specific conditions; and
> - The advice of the Marine Planning and Foreshore Section of the Department of the Environment, Community and Local Government.
>
> *continued...*

> Having had regard to the foregoing, and in particular having regard to the consent conditions attached to the Foreshore Lease/Licence/Consent, and having agreed with the recommendation of the MLVC, the Minister is satisfied (i) that the proposed development on the foreshore would not have significant adverse impacts on human health and safety, nor on the marine environment; (ii) that the proposed development on the foreshore would not adversely affect the integrity of any European site; and (iii) that it is in the public interest to grant the Foreshore Lease/Licence/Consent having regard to the nature of the proposal.

2.5 ABR Project Dumping at Sea permitting process

Following the granting of Planning Permission from ABP on 8th July 2015, DPC submitted a Dumping at Sea Permit application for the ABR Project to the EPA on 13th July 2015. This application was supported by the same ABR Project EIS and NIS which included detailed environmental appraisals of the proposed capital dredging scheme which is an integral part of the overall Project.

As part of the Dumping at Sea Permit application process, there was a consultation period of one month in which members of the public could view the application documentation and make submissions on the proposal. The Dumping at Sea Permit application documentation was available to view and download on the EPA website (www.epa.ie).

All prescribed body and public submissions were made directly to the EPA and were published on the EPA website. After the consultation period ended, the EPA forwarded a total of 759 submissions to DPC.

On 15th December 2015, the EPA issued a request for further information to which DPC issued a response on 12th February 2016.

DPC's response to the request for further information was subject to a second period of public consultation. The public consultation was advertised by the EPA on 22nd February 2016. The EPA also directly notified all those who had made a previous submission. A period of one month was allocated for this second round of public consultation.

A total of 21 submissions were received by the EPA in connection with this second phase of public consultation. The 21 submissions were placed on EPA website and also forwarded to DPC. DPC subsequently sent a response to the issues raised by the submissions on 30th May 2016.

EPA'S DUMPING AT SEA PERMITTING DECISION

The EPA granted a Dumping at Sea Permit to DPC on 13th September 2016.

The following extracts from the EPA's Decision to grant a Dumping at Sea Permit demonstrate the extent to which the environmental issues were addressed:

> The Environmental Protection Agency is satisfied, on the basis of the information available, that subject to compliance with the conditions of this permit, the loading and dumping activities will comply with and will not contravene any of the requirements of Section 5 of the Dumping at Sea Act 1996 as amended.
>
> The Agency also considers that the activities will not adversely affect the integrity of any European Site and has decided to impose conditions for the purposes of ensuring that they do not do so. It has determined that the activities, if managed, operated and controlled in accordance with the permit, will not have any adverse effect on the integrity of any of those sites.
>
> The Agency has accordingly decided to grant a permit to Dublin Port Company to carry on the activities listed in Part I Schedule of Activities Permitted, subject to the conditions set out in Part III Conditions.
>
> **Habitats Directive Assessment undertaken by the EPA**
> A screening for Appropriate Assessment was undertaken to assess, in view of best scientific knowledge and the conservation objectives of the site, if the proposed activities, individually or in combination with other plans or projects is/are likely to have a significant effect on any European Site. In this context, particular attention was paid to the European Site(s) at Rockabill to Dalkey Island SAC, North Bull Island SPA, North Dublin Bay SAC, South Dublin Bay and River Tolka Estuary SPA and South Dublin Bay SAC.
>
> The proposed activities are not directly connected with or necessary to the management of any European Site and the Agency considered, for the reasons set out below, that it cannot be excluded, on the basis of objective information, that the proposed activities, individually or in combination with other plans or projects, will have a significant effect on any European Site and accordingly determined that an Appropriate Assessment of the proposed activities was required and for this reason determined to require the applicant to submit a revised Natura Impact Statement. This determination is based on the location of the proposed dumping activity within Rockabill to Dalkey Island SAC and in close proximity to a number of other European Sites (North Bull Island SPA, North Dublin Bay SAC, South Dublin Bay and River Tolka Estuary SPA, South Dublin Bay SAC), the scale and characteristics of the proposed loading and dumping activities and their potential to give rise to significant effects on the qualifying interests of the European Sites.
>
> The Agency has completed the Appropriate Assessment of potential impacts on these sites and has made certain that, (based on scientific knowledge of the field and in accordance with the European Communities (Birds and Natural Habitats) Regulations 2011 as amended, pursuant to Article 6(3) of the Habitats Directive), the proposed activities individually or in combination with other plans or projects, will not adversely affect the integrity of any European Site, in particular Rockabill to Dalkey Island SAC, North Bull Island SPA, North Dublin Bay SAC, South Dublin Bay and River Tolka Estuary SPA and South Dublin Bay SAC, having regard to their conservation objectives and will not affect the preservation of these sites at favourable conservation status if carried out in accordance with this permit and the conditions attached hereto for the following reasons:
>
> *continued...*

- A Marine Mammal Observer will be employed to monitor, record and protect marine mammals including Harbour Porpoise, in accordance with NPWS guidelines for the duration of the loading and dumping activities (Condition 4.5);
- The loading and dumping activities will be confined to the winter months (1st October to 31st March)(Condition 3.2), thereby avoiding any impacts on the foraging activity of birds during the breeding season and the calving and breeding season for Harbour Porpoise;
- Sediment transport modelling indicates that there will be no significant impact on the protected reef habitat; and
- Conditions included in this permit to reduce impacts on water quality (Conditions 3.3, 3.4 and 3.5) will result in an avoidance of any potential indirect impacts on the qualifying interests of the European Sites

The Agency is satisfied that no reasonable scientific doubt remains as to the absence of adverse effects on the integrity of those European Sites Rockabill to Dalkey Island SAC, North Bull Island SPA, North Dublin SAC, South Dublin Bay and River Tolka Estuary SPA and South Dublin Bay SAC.

CLASS 2 SEDIMENTS

The EPA excluded from the Dumping at Sea Permit, the loading and dumping of Class 2 sediments present in the upper reach of the navigation channel (between East Link Bridge and the West Oil Jetty). DPC is currently evaluating engineering options for the safe disposal of this material.

2.6 ABR Project Industrial Emissions licensing process

Following the grant of Planning Permission from ABP on 8th July 2015, DPC also submitted an Industrial Emissions (IE) License Application for the ABR Project to the EPA on 17th July 2015. This application was supported by the same ABR Project EIS and NIS which included detailed environmental appraisals of the proposed treatment of contaminated sediments from Alexandra Basin West and their re-use as fill material to existing Berths 52 / 53, being an integral part of the overall Project.

Three requests for further information were issued by the EPA to DPC during the IE Licensing Process to which DPC provided technical responses. This cumulated in the issuing of a Proposed Determination on the IED licence application by the EPA on 27th October 2016. The Proposed Determination was subject to a period of 28 day public consultation to which no objections were made.

EPA'S INDUSTRIAL EMISSIONS LICENSING DECISION

The EPA granted an Industrial Emissions (IE) Licence to DPC on 29th November 2016.

The following extracts from the EPA's Decision to grant an IE License demonstrate the extent to which the environmental issues were addressed:

The Environmental Protection Agency is satisfied, on the basis of the information available, that subject to compliance with the conditions of this license, any emissions from the activity will comply with and will not contravene any of the requirements of Section 83(5) of the Environmental Protection Agency Act 1992 as amended.

The Agency also considers that the activity will not adversely affect the integrity of any European Site and has decided to impose conditions for the purposes of ensuring that they do not do so. It has determined that the activity if managed, operated and controlled in accordance with the licence, will not have any adverse effect on the integrity of any of those sites.

The Agency has accordingly decided to grant a license to Dublin Port Company, Port Centre, Alexandra Road, Dublin Port, Dublin 1 to carry on the activities listed in Part I, Schedule of Activities Licensed, subject to the conditions set out in Part III, Conditions.

No objection having been received to the proposed determination, the license is granted in accordance with the terms of the proposed determination.

Habitats Directive Assessment undertaken by the EPA

The Agency notes that a Natura Impact Statement was submitted by the applicant on 17th July 2015. The Agency has completed the Appropriate Assessment of potential impacts on these sites and has made certain, based on best scientific knowledge in the field and in accordance with the European Communities (Birds and Natural Habitats) Regulations 2011 as amended, pursuant to Article 6(3) of the Habitats Directive, that the proposed activities, individually or in combination with other plans or projects, will not adversely affect the integrity of any European Site, in particular South Dublin Bay and River Tolka Estuary SPA (Site code: 004024), South Dublin Bay SAC (Site code: 000210), North Dublin Bay SAC (Site code: 000206), North Bull Island SPA (Site code: 004006) and Rockabill to Dalkey Island SAC (Site code: 003000), having regard to their conservation objectives and will not affect the preservation of these sites at favourable conservation status if carried out in accordance with this license and the conditions hereto for the following reasons:

- The license specifies emission limit values in Schedule B.2: Emissions to Water, of this licence for relevant parameters in the waste water discharge, which are set to ensure compliance with the requirements of the European Communities Environmental Objectives (Surface Water) Regulations 2009;
- The results of coastal process modelling presented in the NIS conclude that there will be no impact on the intertidal habitats that support the species designated as qualifying interests.
- The results of the modelling presented in the NIS of waste water and storm water discharges from the treatment area conclude that there will be no measureable impact on the environment;
- The drainage system on site will maintain a separation between the clean storm water and runoff which has the potential to be contaminated, which will be treated onsite before discharge;
- Schedule C: Control & Monitoring of this license of the licence provides for control and monitoring of storm water emissions and emissions to surface water from the installation;

continued...

- Conditions in the license require that all drainage from bunded and waste storage areas be treated as contamination, (Condition 3.7.3), while visual inspections and proper maintenance are also provided for (Condition 6.11);
- A Marine Mammal Observer will be engaged during licensed activities and activities associated with licensed activities at the installation that may cause disturbance impacts on the Harbour Porpoise, which is highly mobile within its habitat (Condition 6.16.3); and
- Noise-producing activities will only take place during daylight hours where visibility provides for effective monitoring (Condition 6.16.4).

The Agency is satisfied that no reasonable scientific doubt remains as to the absence of adverse effects on the integrity of those European Sites South Dublin Bay and River Tolka Estuary SPA (Site code: 004024), South Dublin Bay SAC (Site code: 000210), North Dublin Bay SAC (Site code: 000206), North Bull Island SPA (Site code: 004006) and Rockabill to Dalkey Island SAC (Site code: 003000).

2.7 Conclusions

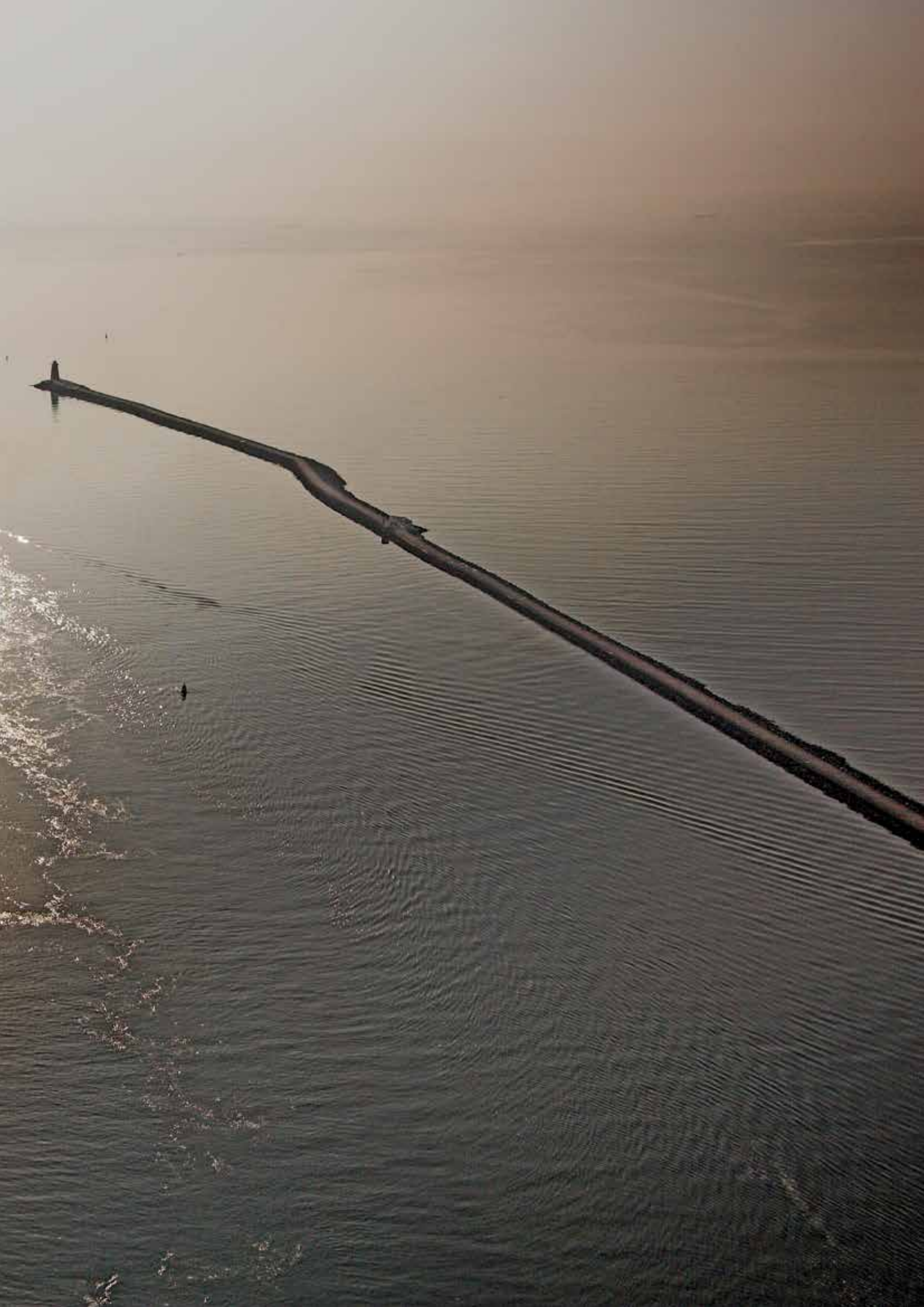
The ABR Project is the first major infrastructure project to be brought forward for planning and other consents from DPC's Masterplan 2012 to 2040. It represents approximately one-third of the total extent of the proposed developments within the Masterplan.

DPC undertook a holistic view of the proposed development and prepared detailed environmental appraisals covering the total extent of the works, including the capital dredging scheme, to develop a project level EIS and NIS to support the Planning Application and other required consents including a Foreshore Lease/Licence/Ministerial Consent, Dumping at Sea Permit and Industrial Emissions License.

The environmental appraisals presented within the EIS and NIS, supplemented by responses to requests for further information during the consenting processes, were used to inform environmental impact assessments / Habitats Directive assessments undertaken by An Bord Pleanála, the EPA and the Minister for DECLG. All of these agencies / government departments endorsed the environmental appraisals undertaken by DPC by granting permission for the works to proceed, subject to the adherence of mitigation measures and monitoring requirements.

The detailed environmental appraisals undertaken for the ABR Project were in general agreement with the findings of the SEA Environmental Report and sNIS which supported DPC's Masterplan which concluded that, in the medium to long term, potential effects of the DPC Masterplan were largely considered negligible with minor beneficial effects expected for some aspects.


P&O



03

The Alexandra Basin Redevelopment (ABR) Project Construction Phase

3.1 Construction Environmental Mangement Plan

DPC seeks to achieve the highest possible standards of environmental management during the construction of the ABR Project which commenced in November 2016.

A Construction Environmental Management Plan (CEMP) has been developed to support the achievement of this goal and comprises two main parts

PART 1 SUMMARY OF MITIGATION MEASURES

The objective of this part of the CEMP is to capture all mitigation measures put forward within the EIS and NIS together with conditions specified by ABP and to provide additional detail in order to develop a practical programme of measures for the Contractor(s) and/or independent Environmental Monitoring team. Conditions specified by other consents have also been added, namely, the Foreshore Lease/ Licence/Consent, the Dumping at Sea Permit and the Industrial Emissions License.

This element of the CEMP forms part of the specification of the Contract Documents for each stage of the construction phase to enable suitably qualified Contractors to price the works required to implement the mitigation measures.

PART 2 MANAGEMENT OF ENVIRONMENTAL IMPACT

The objective of this part of the CEMP is to develop a suite of Construction Phase Environmental Management Plans which are prepared in association with the preferred Contractor(s), (see summary Table 1). The Environmental Management Plans are agreed with the Planning Authority; Dublin City Council, in advance of each stage of the construction phase.

LIAISON GROUP AND ENVIRONMENTAL FACILITY MANAGER

The CEMP will remain a 'live' document for the duration of the construction phase and is reviewed on a regular basis to ensure mitigation measures are sufficient, through interrogation of monitoring results and that appropriate action is taken to ensure compliance with the consent conditions.

This process is overseen by a Liaison Group which has established by DPC and includes representatives from the Planning Authority Dublin City Council, DPC and the Contractor. The group meets at least quarterly with an agenda and minutes taken of the meetings.

DPC has also appointed a suitably qualified person; Dr Tony McNally, to the role of Environmental Facility Manager (Environmental Clerk of Works) to monitor the construction works. The Environmental Facility Manager submits reports detailing the results of monitoring programmes to members of the liaison group in advance of each meeting. The Environmental Facility Manager also works closely with the Contractors site supervisors to monitor activities and ensure that all relevant environmental legislation is complied with and that the requirements of the CEMP are implemented. The Environmental Facility Manager has the authority to review method statements, oversee works and instruct action as appropriate, including where necessary, the authority to require the temporary cessation of works.

Regular audits of the CEMP will be undertaken during the construction phase of the works by the Environmental Facility Manager.

SITE SAFETY

Safety is of prime importance during the construction works. 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 risk assessments carried out as appropriate.

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).

All individuals working on the Project will be required to undertake induction procedures. Such will be designed to make individuals aware of all the issues associated with the Project and will include, but not be limited to:

- The terms of the CEMP;
- Working Hours;
- Access arrangements;
- Health, Safety and environmental policy and procedures;
- Code of Conduct within the site and surrounding environs;
- Statutory obligations of individuals on site;
- Traffic Management;
- Site parking;
- Public Access;
- Lighting requirements;
- Complaints and disciplinary procedures;
- Protection of the water environment;
- Protection of wildlife and habitats;
- Dust and air quality;
- Noise and vibration; and
- Emergency procedures.

Visitors will not be allowed onto the site unless they have received formal induction or are accompanied by an authorised person who has completed the induction. All visitors will be required to sign a visitors' book.

Table 1. Summary of Environmental Management Plans

TYPE OF ENVIRONMENTAL MANAGEMENT PLAN	Compliance with Planning Condition Number	Lead Organisation	Ongoing Mitigation Required	Ongoing Mitigation Specific Requirements
CONSTRUCTION TRAFFIC MANAGEMENT PLAN	Condition 1, 3, 4	Contractor	Yes	Compliance with DCC's HGV Management Strategy
SITE WASTE MANAGEMENT PLAN	Condition 1, 4	Contractor	Yes	Collection, control and disposal of all wastes to be recorded
NOISE MANAGEMENT PLAN	Condition 1, 4, 6	DPC	Yes	Compliance with NRA Guidelines and BS5229:2009
DUST AND ODOUR MANAGEMENT PLAN	Condition 1, 4	DPC	Yes	Compliance with EPA and BRE Guidelines
CONTAMINATION / MATERIALS HANDLING MANAGEMENT PLAN	Condition 1,4, 5	Contractor	Yes	Compliance with IED Licence Conditions
MARINE MAMMALS MANAGEMENT PLAN	Condition 1, 4, 8	DPC	Yes	Compliance with NPWS Guidelines
BIRDS, SEALS, LAMPREY, BATS, BENTHOS & FISHERIES MANAGEMENT PLAN	Condition 1, 4, 7, 9, 10, 11, 12	DPC	Yes	Adherence to piling and dredging mitigation measures
MARINE ARCHAEOLOGY MANAGEMENT PLAN	Condition 1, 4, 14	DPC	Yes	Compliance with DAHG Guidelines
INDUSTRIAL HERITAGE CONSERVATION PLAN	Condition 1, 4, 13	DPC	Yes	Compliance with conservation strategy developed for the ABR Project
WATER QUALITY MANAGEMENT PLAN	Condition 1, 4	DPC	Yes	Compliance with EPA Guidelines etc.
DREDGING MANAGEMENT PLAN	Condition, 1, 4, 5	Contractor	Yes	Compliance with Dumping at Sea Permit and Foreshore Licence

Ongoing Monitoring/ Auditing Required	Timing of Ongoing Monitoring	Reporting Requirements	Reporting Procedures	Ongoing Liaison Required	Other Specific Requirements
Yes	During Construction	Quarterly Reports	Report submitted to Planning Authority	Yes	Complaints Procedure
Yes	During Construction	Quarterly Reports	Report submitted to Planning Authority	Yes	Complaints Procedure
Yes	Preconstruction and during construction	Monthly Reports, input to Annual Environmental Report	Report submitted to Planning Authority	Yes	Specific limits to be met at nearest noise sensitive receptors, Complaints Procedure
Yes	Preconstruction and during construction	Monthly Reports, input to Annual Environmental Report	Report submitted to Planning Authority	Yes	Complaints Procedure
Yes	Preconstruction, during construction and for 2 years after works completion	Monthly Reports, input to Annual Environmental Report	Report submitted to Planning Authority and EPA	Yes	Complaints Procedure
Use of MMOs, installation of real-time PAM system, installation of SAM system	Preconstruction, during construction and for 2 years after works completion	Monthly Reports, input to Annual Environmental Report	Report submitted to Planning Authority and NPWS	Yes	Close liaison required with NPWS
Specialist surveys required	Preconstruction, during construction and for 2 years after works completion	Monthly Reports, input to Annual Environmental Report	Report submitted to Planning Authority and NPWS	Yes	Existing Black Guillemot nest boxes to be removed and replaced at specific time of year.
Monitoring to be undertaken by marine archaeologist	During Construction	Monthly Reports, input to Annual Environmental Report	Report submitted to Planning Authority and DAHG	Yes	Appropriate Licences required from DAHG
Monitoring to be undertaken by heritage engineer or architect and marine archaeologist	Preconstruction and during construction	Monthly Reports, input to Annual Environmental Report	Report submitted to Planning Authority and DAHG	Yes	Appropriate Licences required from DAHG
Installation of real-time water quality monitoring system	Preconstruction and during construction	Monthly Reports, input to Annual Environmental Report	Report submitted to Planning Authority	Yes	Complaints Procedure
Yes	During Construction	Monthly Reports, input to Annual Environmental Report	Report submitted to Planning Authority and EPA	Yes	Complaints Procedure

3.2 Construction Environmental Monitoring

This section gives an overview of the extent and nature of environmental monitoring being undertaken in connection with the ABR project. Monitoring verifies compliance with various elements of the CEMP, and that mitigating measures that have been put in place to prevent environmental impact are proving to be effective. Monitoring covers a wide variety of environmental parameters including water quality, noise and dust levels, marine mammals, birds, seabed animal communities, bats and migratory fish.

Measurements are made at key strategic locations throughout the zone of influence of the ABR Project. Some measurements are made in 'real time' with live results being transmitted from sensors back to monitoring stations in the ABR Environmental Office (which is located on site at Dublin Port and permanently staffed by experienced qualified environmental personal). Other measurements are made seasonally during project operations and at times that are critical for the animals, birds and fish that we are protecting.

Where monitoring indicates that conditions are not complying with regulatory or agreed limits then the cause of the non-compliance is investigated and reported. Should the ABR Project be responsible then any necessary actions required to ensure protection of the environment are taken, including the temporary cessation of works if necessary.

The principal monitoring programmes are described next.

NOISE AND DUST MONITORING

Two permanent noise monitoring stations have been established in agreement with Dublin City Council, one at the Poolbeg Marina (Site 1) and the other on Port lands close to the Dublin Port Centre (Site 2) as shown in Figure 4. These stations represent noise levels at the nearest sensitive receptors i.e. Pigeon House Road and the Gibson Hotel respectively. Noise threshold limit values have been set for these locations.

Figure 4.
Noise and Dust
Monitoring Locations

Dust deposition is also measured at these same sites. The amount of dust deposited over a monthly period is measured and compared to a standard guideline deposition rate. This is a standard that is widely applied in Ireland to determine dust nuisance.

Noise and dust data are summarised and reported every month. The results are made available to Dublin City Council for discussion at each Liaison Group meeting.

MARINE MAMMALS

Since the ABR project operates near to, and sometimes even within a conservation area where harbour porpoise is one of the features of interest, DPC committed to meeting the requirements of National Parks and Wildlife Service (NPWS) for protecting marine mammals from disturbance during ABR Project operations. This meant recruiting a number of independent, trained observers through the Irish Whale and Dolphin Group (IWDG) to monitor all operations that could potentially disturb or impact on marine mammals, including seals and porpoises.

These independent IWDG observers maintain a log of all the watches they complete, any seals or porpoises observed, and any actions taken. They have the authority to prevent works commencing when marine mammals are close enough to be at risk. They ensure that seals and porpoises are outside pre-determined exclusion zones before allowing operations to commence. So far about 800 hours of watches have been carried out by five different observers. The grey seal is the most commonly observed mammal (76 sightings) and occurs mostly in the port area, but porpoises are also regularly spotted (56 sightings) especially in the Bay. Figure 5 shows the locations where harbour porpoise and seal have been spotted by Marine Mammal Observers during routine maintenance dredging operations in the period of June to July 2016.

The independent IWDG expert observers believe that it is highly unlikely that the ABR Project operations will have any significant impact on marine mammals in the area, and that the objectives of the NPWS guidelines to protect marine mammals will be achieved.

In addition to watches by IWDG observers, a series of hydrophones have been deployed at key locations in the Bay to detect and report the presence of marine mammals. Four Static Acoustic Monitors (SAMs) and two Passive Acoustic Monitors (PAMs) will detect calls of marine mammals in the area. The SAMs log information for download at regular intervals. The PAMs when fully operational will transmit data back to a monitoring station in the ABR Project Environmental Office. This will allow the distribution and numbers of mammals within the Bay to be estimated even at times when conditions will not permit visual observation.

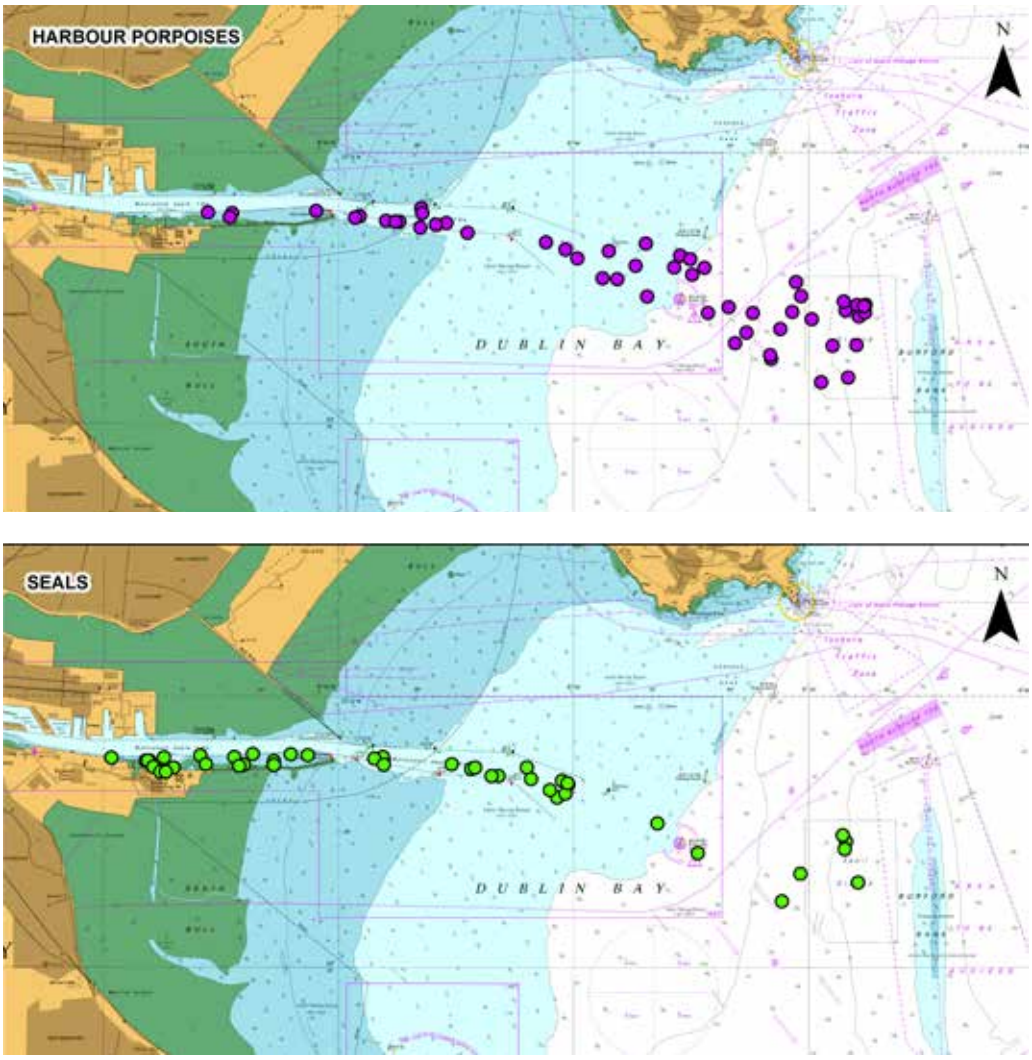


Figure 5. Location of sightings of Marine Mammals during routine maintenance dredging (June – July 2016). Each flag represents one sighting.

UNDERWATER NOISE

Underwater noise levels from dredging operations are of potential concern because of the damage or interference that might result for marine mammals. These are well known to be sensitive to sounds, especially the harbour porpoise, and loud noise can cause permanent damage to them. Studies completed by DPC had already indicated that risk of harm can be avoided once the NPWS guidelines described previously are put in place. To provide further evidence, DPC monitored the actual underwater noise emitted during dredging operations to confirm that there would be no risk.

Dredging usually generates low-frequency (i.e. low-pitched), continuous noise that varies depending on a number of factors including, how the ship operates, the dredging area, or the type of material being dredged. Of course Dublin Port is a busy shipping area and there are often relatively high levels of background underwater noise during normal port operations.

Underwater measurements of dredging noise were recorded with a microphone (a hydrophone) and compared to levels that have been shown to disturb or injure whales or seals. The measurements confirm predictions that the ABR Project dredging will not significantly impact any marine mammals, even when they enter the normal exclusion zones operated by the IWDG observers.

It is also worth noting that although noise can potentially injure fish, the dredging noise levels measured would not harm fish, even at short ranges.

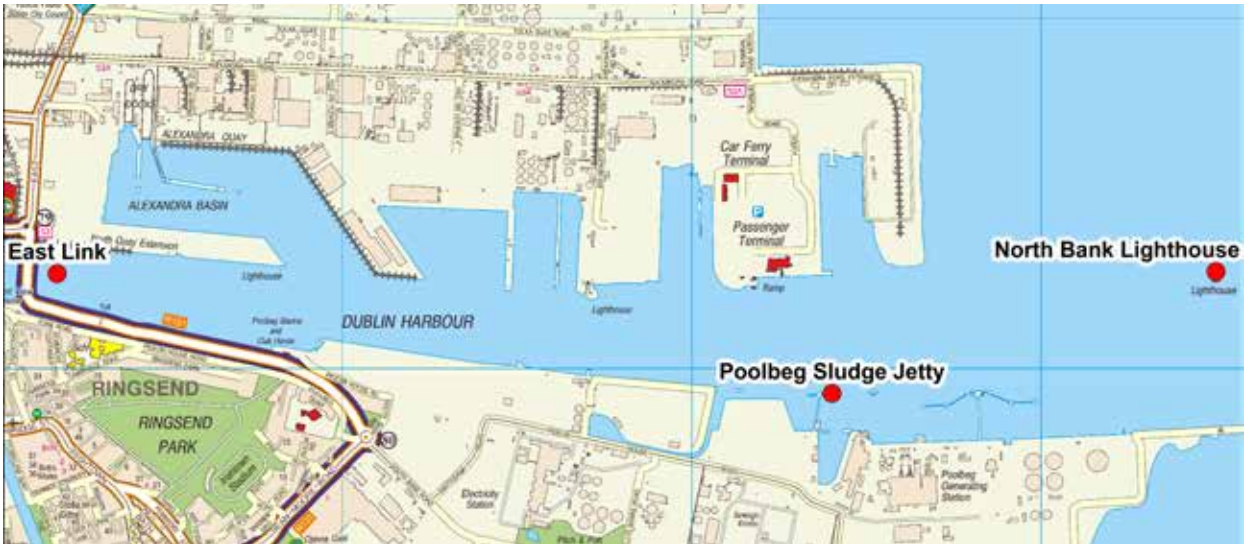


Figure 6. Location of Permanent WaterQuality Monitoring Stations

WATER QUALITY

One of the main concerns expressed about water quality was that dredging and dumping of dredge material might lead to large amounts of sediment being widely dispersed in the water. This could lead to murky water where visibility might be greatly reduced. To provide detailed information on the amount of sediment suspended in the waters of the Liffey and Dublin Bay DPC has set up monitoring stations in the port and outer Bay. The stations in the port area are shown on the map below (Figure 6). Sensors at these stations measure turbidity, oxygen levels, temperature and salinity of the water every 15 minutes and relay the data back onshore. This gives real-time information about what is happening during ABR operations.

The information from the monitoring stations is supplemented by data collected by boat surveys. Water samples are taken at fixed locations and along set paths that are strategically located to measure any impacts on water quality in the area.

Water quality data is summarised and reported every month. So far it has been found to be satisfactory and water clarity has been good and similar to background values previously recorded. The ABR project is not impacting on water quality.

3.3 Bird Monitoring

A number of dedicated bird monitoring programmes are being undertaken by experienced ornithologists and with the necessary licences in compliance with the planning conditions for the ABR project. Three species in particular that nest within the port area are being monitored during the nesting season to ensure that the ABR project will not have adverse effects on them. The species are the Black Guillemot, a seabird that nests in crevices within the quays and other structures, and the Common Tern and Arctic Tern, seabird species that nest on permanent structures and floating pontoons within Dublin Port. The nesting population of all three species are monitored on an annual basis.

The census of adult Black Guillemots is conducted annually from a boat by two surveyors who visit and survey all quaysides within the port on two separate dates during the nesting period. Any apparently occupied nest sites are also mapped. Temporary nestboxes, that have been erected for Black Guillemots at the Oil Jetty, are also checked each year for occupancy.

Figure 7. Black Guillemots *(photo: John Fox)*

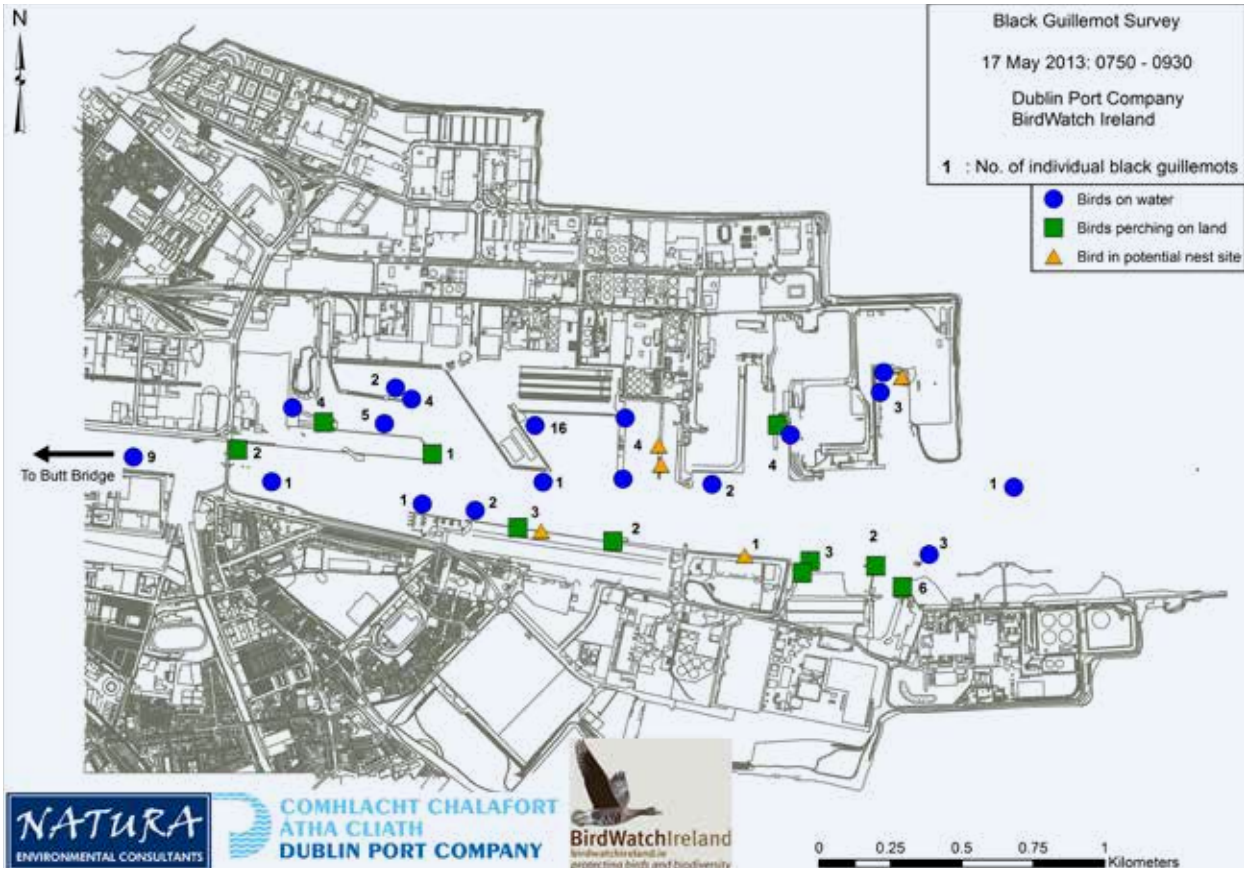


Figure 8. Location of individual Black Guillemots in Dublin Port during the breeding season of 2013.

Results of the census over the last four years (before the start of the ABR project) show that there is significant natural fluctuation in the population, probably due to weather conditions in the previous winter. The total estimated population (individuals) in Dublin Port in the period 2013-2016 ranged from 56 to 82 (mean 70) individuals. The same nest sites are used each year although not necessarily by the same individuals. The construction of the new berths in Alexandra Basin will include the provision of a number of permanent nest sites for Black Guillemots to replace those affected by the construction programme.

For Common Terns and Arctic Terns the monitoring includes a census of apparently occupied nests on the port structures. Two surveyors walk through the colonies and record the number of egg clutches of each species present or where access to a site is restricted for safety or other reasons, the number of terns in the air over the colony during flushing is estimated. This work is integrated with the wider Dublin Bay Birds Project (DBBP) carried out by BirdWatch Ireland with support from Dublin Port Company and the Dublin Bay Biosphere Partnership. The DBBP includes ringing and monitoring of breeding productivity in the tern colonies as well as resighting work and monitoring of the post breeding flocks of terns roosting in South Dublin Bay. This work is carried out by experienced ornithologists under licence from the National Parks and Wildlife Service.

In addition to the census of nesting seabirds, a Winter Wetland Bird Monitoring Programme is carried out in the South Dublin Bay and River Tolka Estuary Special Protection Area (SPA). This includes all intertidal areas between Dun Laoghaire West Pier and the Bull Wall as indicated by the areas bounded in red on the map in Figure 10. Six low tide surveys are carried out during daylight and favourable weather at approximately monthly intervals from October to March (starting in 2016) by a team of experienced observers. The location of all bird flocks is mapped at low tide to establish the preferred foraging areas. Any disturbance events are recorded.

An annual report on the results of each Bird Monitoring Programme will be prepared and submitted to the Planning Authority not later than 31st July each year. This work is integrated with the wider Dublin Bay Birds Project carried out by BirdWatch Ireland with support from Dublin Port Company and the Dublin Bay Biosphere Partnership. The DBBP includes all of Dublin Bay and involves extensive monitoring of waterbirds during the entire year at high and low tide as well as tracking studies to establish the movements of birds around the bay and beyond.

Figure 9. Nesting colony of Common Terns in Dublin Port *(photo: Richard Nairn).*

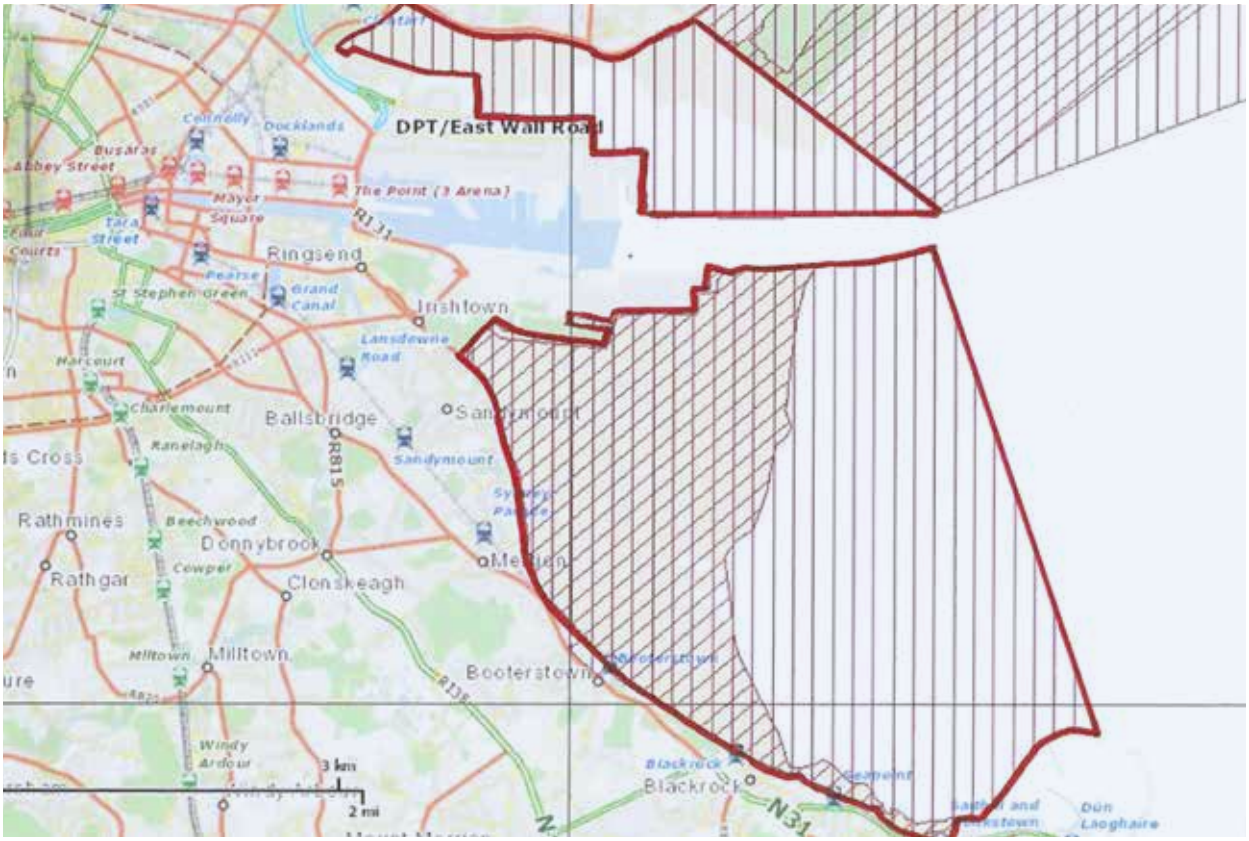


Figure 10. Study area for monitoring of waterbirds in winter (bold red line marks the boundary of South Dublin Bay and River Tolka Estuary SPA).

FURTHER MONITORING PROGRAMMES

Further monitoring is occurring as required by specific ABR Project activities or phasing of works. This includes monitoring for presence of bats in advance of demolition works, surveys of the seabed animal communities before and after the dredging programme, surveys of seal haul out sites, monitoring for invasive alien species on sites, and monitoring of River Lamprey within the River Liffey. The monitoring programme is part of an Environmental Management System, a systematic framework to identify, manage and mitigate any immediate or long term environmental impacts arising from the ABR Project.

04
Dublin Port Road Network Improvement Project

Major road network improvements identified in DPC's Masterplan 2012 to 2040 have also been brought forward for planning.

These works comprise:

- Construction of new roads and enhancement to existing roads within the Dublin Port estate north of the River Liffey;
- Construction of enhanced landscaping and amenity route along the northern boundary;
- Construction of new pedestrian and cycle overbridge at Promenade Road;
- Construction of access ramps to pedestrian and cycle overbridge at Promenade Road;
- Construction of new pedestrian and cycle underpass at Promenade Road;
- Construction of eleven new signage gantries;
- Works to existing boundaries and construction of new boundaries;
- Construction of minor works to the junctions of East Wall Road with Tolka Quay Road and East Wall Road with Alexandra Road, and
- Associated ancillary works.

The provision of the shared cycle and pedestrian facility, referred to as the 'Greenway' is approximately 4km in length and runs along the top of the seawall (revetment) along the northern foreshore of Dublin Port from East Point Business Park to Terminal 5 on the eastern edge of Dublin Port. The Greenway is bounded by the Tolka Estuary to the north, Dublin Bay to the east and Dublin Port to the south.

The planning application to Dublin City Council for the above works was supported by, among others, an Ecological Assessment Report which contains a number of mitigation measures to safeguard the environment, particularly during the construction phase of the works. The need for a full Appropriate Assessment was screened out and the justification for this is presented in the Report.

Dublin City Council granted planning permission for the Dublin Port Road Network Improvement Project in August 2016. Works are expected to commence in 2017. DPC will ensure all mitigation measures put forward in the Ecological Assessment Report and all conditions of planning are fully implemented in a similar fashion to that described for the ABR Project.

05
Working To Support Nature Conservation

Figure 11. A Dublin Bay-ringed Oystercatcher DJ photographed in Orkney, northern Scotland in summer *(photo: Colin Morse).*

INTRODUCTION

The Masterplan 2012-2040 stated that DPC would work with habitat and nature interests to ensure that the full resource that these habitats and areas provide for wildlife and for the wider public in Dublin are managed controlled and supported. DPC will seek to establish co-operation agreements with nature interests including NGOs which will involve the provision of access, some element of funding and support to these groups.

DUBLIN BAY BIRDS PROJECT

The first such agreement was reached in 2013 with BirdWatch Ireland (a national NGO) to fund a 3-year project entitled Dublin Bay Birds Project (DBBP). This project involved a professional team of ornithologists carrying out a range of survey and monitoring schemes covering the entire area of Dublin Bay from Dun Laoghaire to Sutton. This has continued since 2013 and has now been extended into 2017.

The initial phase of the project has resulted in a number of key findings:

The total counts of waterbirds within Dublin Bay confirms the significant importance of the area for several species, especially Light-bellied Brent Goose, Knot, Black-tailed Godwit and Bar-tailed Godwit. Total numbers were highest during low-tide counts when compared with high-tide counts, probably because birds are more easily visible when feeding than when roosting.

This project has demonstrated the importance of Dublin for a suite of 'summering' waterbirds, a result that had not been reported before this work. Nationally important numbers of Light-bellied Brent Goose, Shelduck, Oystercatcher, Sanderling, Black-tailed Godwit, Bar-tailed Godwit, Greenshank and Redshank were present in the bay during the summer months, demonstrating the importance of the bay both as a staging area during the migration period, and as a summering site for non-breeding birds.

A series of successful catches have resulted in the ringing of over 2,200 birds from 13 species, and there have been some really interesting reports of birds seen at locations outside Ireland, including Iceland, the Faroe Islands, Norway, Scotland, Wales, Germany and The Netherlands. The re-sighting database now holds 2,300 records, more than half of which have been submitted by interested amateurs. The ringing of post-breeding terns on Sandymount Strand has proved particularly enlightening and a good foundation has been made in determining the migratory origins of these important flocks.

The project has continued to add considerable value to existing knowledge on the distribution and movements of birds within Dublin Bay during the winter period and, importantly, during the summer months. Meanwhile the catching and colour-ringing work has put the project on the map, with 78 re-sightings of colour-ringed birds being reported from outside Ireland.

Figure 12. Common terns nesting on a floating pontoon at the north side of Dublin Port *(photo: Richard Nairn).*

DUBLIN BAY BIOSPHERE

Biospheres are places where nature and culture connect. They are internationally recognised for their biodiversity yet also actively managed to promote a balanced relationship between people and nature. A Biosphere is a special designation awarded by UNESCO but managed in partnership by communities, NGOs and local and national governments.

DPC actively participates in the management of the North Bull Island Biosphere which was expanded in 2015 to cover Dublin Bay, reflecting its environmental, economic, cultural and tourism importance. DPC provides support for

- Conservation: protecting biodiversity and cultural diversity;
- Development: fostering a sustainable economy and society for people living and working in the area; and
- Learning: facilitating education, training and research to support conservation and sustainable development.

OTHER KEY INITIATIVES

Other key initiatives outlined in the Masterplan 2012–2040 were:

- *Audit – DPC will commence an audit of the Flora and Fauna of Dublin Port to assist with the development and implementation of conservation, preservation and sustainability objectives.*
  In the period 2009-2013, Dublin Port Company commissioned Natura Environmental Consultants to carry out monitoring of waterbirds wintering in the Tolka Estuary (the only intertidal area between the North and South Walls of the Liffey Estuary).
  This led on in 2013 to the wider Dublin Bay Birds Project carried out by BirdWatch Ireland with support from Dublin Port Company (see above). This has generated valuable data for the audit of flora and fauna in the Port as well as supporting nature conservation in Dublin Bay which holds one of the ten largest concentrations of waterbirds in Ireland.
- *Vantage Points – DPC will also look at examining increased vantage points for viewing wildlife and birdlife from areas adjoining Dublin Port.*
  The first phase of this programme was linked with the proposal for a Greenway (pedestrian and cycleway) around the northern perimeter of the Port. This innovative scheme will open up significant views of the northern part of Dublin Bay to the general public using this amenity. Information panels and other interpretation will be provided for users on the landscape, habitats and wildlife of the area. The Dublin Port Greenway received planning permission from Dublin City Council in August 2016 as part of the Dublin Port Road Network Improvement Plan.

Figure 13. Brent Geese in Alexandra Basin *(photo: Richard Nairn).*

- *Protection Programmes - DPC will pursue dedicated protection programmes for specific species to ensure that these species are encouraged, facilitated and managed according to best international practice.*

One of the internationally important wildlife features of Dublin Port is a large breeding colony of terns, small migratory seabirds, on various port structures. Recorded here since at least the 1940s the colony includes two species, Common Tern and Arctic Tern, both of which are listed in Annex I of the EU Birds Directive. In conjunction with a number of stakeholders, Dublin Port Company prepared a Tern Colony Management Plan in 2015 and several initiatives have resulted from this Plan. To give the terns greater choice of nesting site, two large floating pontoons were modified for use by the birds and deployed in 2013 and 2015, one on the north and the other on the south side of the Port. Both pontoons have been used successfully by terns each year since. This initiative proved especially valuable in 2016 when a timber structure, owned by the ESB at Poolbeg and which had long held the largest number of tern nests, collapsed and had to be removed for health and safety reasons. One of the DPC pontoons was moved alongside the collapsed structure in early 2016 and provided temporary space for the colony to nest successfully. As a result the colony size has remained at approximately 500 pairs in 2016.

Another seabird species nesting in the Port is the Black Guillemot with a colony ranging in size from 56 to 82 (mean 70) individuals the period 2013 – 2016. Some of these birds will be temporarily affected by the current Alexandra Basin Redevelopment Project so Dublin Port Company has introduced a number

of temporary nest boxes in another part of the Port during the construction phase. The new quay walls will incorporate dedicated permanent nest sites to replace the old cavities that these attractive seabirds previously used.

In the winter months, a sizeable number of Pale-bellied Brent Geese visit Alexandra Basin in the Port on a regular basis to feed on spilt agricultural products such as maize and soya meal. These birds have been monitored and protected here by Dublin Port Company as part of a network of terrestrial sites around the city. The geese move regularly around these sites on a daily basis, moving to the North Bull Island to roost at night. A number of the Brent Geese have been colour-ringed by the Irish Brent Goose Research Group and these birds carry individual alpha-numerical codes that can be easily read from a stationary vehicle on the quay. A total of 11 individual ringed geese were identified in Alexandra Basin in the period January to April 2013 and a further 10 ringed birds were identified in the period November 2013 to January 2014. The full re-sighting history of these marked individuals indicates that they use a wide variety of both intertidal and inland sites from Kilcoole Marshes in Co Wicklow to Baldoyle Bay in north Dublin.

Several of the individual geese have already been recorded repeatedly in Alexandra Basin with at least 14 marked birds recorded more than once at the site and five marked birds resighted in both winters 2012/13 and 2013/14. One individual has been recorded in this flock on seven separate dates. This confirms that there is a high degree of site faithfulness and that some of the geese are becoming habituated to this food source. The geese undertake a very long annual migration each year to their summer breeding areas in the Canadian Arctic.

Figure 14. Brent Geese in Alexandra Basin *(photo: Richard Nairn)*.

06 Implementing the Next Phase of the Masterplan

DPC'S STRATEGIC APPROACH TO SAFEGUARDING THE ENVIRONMENT

DPC's Masterplan 2012 – 2040 was informed by a 14 month long consultation process. This process was aimed at soliciting views from a wide circle of stakeholders whose perspectives on the operations and future of the port were regarded as important.

A further consultation process on the implementation of the first phase of the Masterplan (ABR Project and the Community Gain proposal) secured further responses from statutory authorities, environmental NGOs, general public and other interested parties.

Significant levels of public concern were raised about the expansion of the Port through further infill of the Tolka Estuary.

In response, DPC confirmed that the Company would continue to develop the Port within its current footprint to the maximum extent possible before any major reclamation works might be considered. The ABR Project, therefore, focused on a combination of re-developing existing (and in some cases life-expired) infrastructure and using existing port lands at higher utilisation levels.

The implementation of the next phase of the Masterplan continues to focus on achieving proper planning and sustainable development through the continued re-development of existing 'brown field' sites with the Dublin Port estate for direct Port related facilities and the transfer of non-critical operations to new facilities located to the south of Dublin Airport (Dublin Inland Port). This initiative, combined with further Port expansion on the Poolbeg Peninsula and the development of Port infrastructure within the North Port area, will, if achieved, negate the need for reclamation within the Tolka Estuary within the lifespan of the Masterplan 2012 – 2040.

DPC also confirms that further deepening of Dublin Port navigation channel and fairway to lower than -10.0m CD will not be required within the lifespan of the Masterplan 2012 – 2040. The proposed turning circle within the inner Liffey channel, identified by the Masterplan, which impinges on the South Dublin Bay and Tolka Estuary Special Protection Area will also not be required. The next implementation phase will instead focus on proving suitable depths within the Port's basins and berthing pockets for the safe embarkation and berthing of cargo and passenger vessels using the Port.

These decisions taken by DPC will significantly reduce the potential environmental impact of the next implementation phase of the DPC Masterplan 2012 – 2040.

ENVIRONMENTAL ISSUES TO BE ADDRESSED

Notwithstanding the strategic approach being adopted by DPC to safeguarding the environment, as described above, there are a number of key environmental issues identified in the Masterplan which DPC intend to address prior to the implementation of the next phase of the Masterplan.

These include:

- The management of the potential impact associated with the required relocation of the tern colony located on the existing ESB Dolphin which is designated a Special Protection Area. The conservation objectives require inter alia that human activities should occur at levels that do not adversely affect the breeding tern population at its breeding site and which do not adversely affect the numbers of tern among the post-breeding aggregation of terns at their roosting sites;
- The potential impact on the South Dublin Bay and Tolka Estuary Special Protection Area due to the construction of a new berth adjacent to this designated site;
- The potential to improve fisheries management to offset any impact on fisheries as a result of additional quay construction and limited reclamation of the foreshore within the inner Liffey channel;
- The potential to enhance biodiversity in line with the Dublin City Biodiversity Action Plan 2015-2020;
- The future proofing of Dublin Port to climate change and negating potential impacts on flood risk taking account of planned works by OPW at Clontarf;
- The potential to improve drainage and discharges to water through the development of a strategic drainage management plan
- The management of increased Port traffic as a result of expected growth in trade through the Port: and
- The control of noise, air quality and dust levels within the Dublin Port estate.

The Masterplan recognises that mitigation measures would include the creation of alternative habitats to replace any proposed loss of Natura 2000 habitat as a result of pursuance of any of the preferred engineering options in the Masterplan. DPC has been advancing the creation of alternative habitat for the tern colony located on the existing ESB Dolphin. In planning and legal terms, this may require the application of Article 6(4) of the Habitats Directive as a project of overriding public interest.

YOUR VIEWS ARE IMPORTANT

DPC welcomes feedback on the key environmental issues identified above in implementing the next phase of the Masterplan. There may also be further environmental issues which you consider need to be addressed going forward.

Make your views known, the consultation process runs until 5pm on 7th March 2017.

Common Terns in flight
(photo: John Fox)

Cover Image:
Common Terns in flight over DPC pontoon
(photo: John Fox)

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