

DUBLIN DOCKLANDS DEVELOPMENT AUTHORITY

**DRAFT DUBLIN DOCKLANDS AREA
MASTER PLAN 2008**

APPROPRIATE ASSESSMENT

**(ASSESSMENT OF THE IMPLICATIONS OF THE DRAFT MASTER
PLAN ON NATURA 2000 SITES)**

JULY 2008



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1 INTRODUCTION

- 1.1 The Dublin Docklands Development Authority (DDDA) is required to conduct a Strategic Environmental Assessment (SEA) of the review of the Draft Dublin Docklands Area Master Plan 2008 under the SEA Directive (Council Directive 2001/42/EC).
- 1.2 As part of the SEA process a scoping letter was sent to the designated Environmental Authorities, including the Minister for the Environment, Heritage and Local Government (DoEHLG). In response the DoEHLG required that an appropriate assessment be carried out of the environmental implications of the Master Plan on Natura 2000 sites in accordance with Article 6(3) of the EU Habitats Directive (Council Directive 92/42/EEC). Natura Environmental Consultants were appointed by the DDDA to undertake this appropriate assessment (AA) of the Draft Dublin Docklands Area Master Plan 2008.
- 1.3 This document forms an addendum to the Environmental Report that accompanies the Master Plan and forms part of the overall SEA of the Master Plan. This document is issued without prejudice to any future surveys and assessments that may be required as part of any planning application or any information that may be made available by the National Parks and Wildlife Service (NPWS) or others.

2 LEGISLATION

- 2.1 Proposed Natural Heritage Areas (pNHA) are sites of national significance that have been proposed but not yet formally designated. When formally designated, an NHA is legally protected from damage under Irish legislation in the form of the Wildlife (Amendment) Act 2000. However, as this Appropriate Assessment report deals only with Natura 2000 sites the pNHAs are not considered further in this study, other than in the description of the study area.
- 2.2 The EU Birds Directive (Council Directive 79/409/EEC on the Conservation of Wild Birds) is the main mechanism for protecting wild bird species that occur within the European Union. It provides for the protection, management and control of bird species and defines rules for their exploitation. According to Article 4 of the Birds Directive “*species mentioned in Annex I shall be the subject of special conservation measures concerning their habitat in order to ensure their survival and reproduction in their area of distribution*”. The key element of the Birds Directive is that it provides for the creation of Special Protection Areas (SPAs) for the protection of Annex I species as well as for regularly occurring migratory species not listed in Annex I. The Birds Directive is implemented in Ireland under the Wildlife Act (1976) and the Wildlife (Amendment) Act (2000).
- 2.3 The main aim of the EU Habitats Directive (Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna) is “*to contribute towards ensuring biodiversity through the conservation of natural habitats of wild fauna and flora in the European territory of the Member States to which the treaty applies*”. Any actions taken must be designed to “*maintain or restore, at a favourable conservation status, natural habitats and species of wild fauna and flora of Community interest*”. The Directive provides for the creation of protected sites known as Special Areas of Conservation (SACs) for a number of habitat types and certain species of flora and fauna. The Directive was transposed into Irish law by the European Communities (Natural Habitats) Regulations, SI 94/1997.

- 2.4 The Natura 2000¹ network is a European network of ecologically important sites (SPAs and SACs) that have been designated for protection under either the Birds Directive or the Habitats Directive. The statutory agency responsible for these designated areas is the National Parks & Wildlife Service of the Department of Environment, Heritage and Local Government.
- 2.5 The following paragraphs are taken from the **EU Habitats Directive** and describe the restrictions placed on any development that may negatively impact on the integrity of a designated area.

Article 6(3)

*“Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to **appropriate assessment** of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.”*

Article 6(4) (extract)

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

- 2.6 Broadly, the first stage in any plan or project is to ensure that all negative impacts on any Natura 2000 site are avoided by early identification of impacts and alterations to the plan to avoid such impacts. If complete avoidance is not possible then **mitigation** measures must be implemented to ensure that there are no adverse impacts on the Natura 2000 sites. If it is found that the plan would result in adverse effects that cannot be mitigated then it should not proceed without an assessment of alternative solutions. Should there be no alternative solutions then the plan can only proceed if it is required for Imperative Reasons of Overriding Public Interest (IROPI).
- 2.7 In any case where there is uncertainty as to whether the plan may have an adverse effect on a Natura 2000 site or if this effect cannot be mitigated then the **Precautionary Principle** must be used. This means that the following steps must be taken:
- Consider alternative solutions that do not have an adverse impact;
 - Declare Imperative Reasons of Overriding Public Interest (IROPI Test);
 - Develop and agree compensation measures.

¹ The EU Habitats Directive, Article 3.1, states “A Coherent European ecological network of Special Areas of Conservation and Special Protection Areas pursuant to Directive 79/409/EEC shall be set up under the title Natura 2000”

- 2.8 If it has been proven that there are no feasible alternatives the competent authority must decide whether there are imperative reasons of overriding public interest that require the plan to proceed. If the plan must proceed then **compensation** measures must be identified and agreed.
- 2.9 Normally IROPI include reasons of a social or economic nature. However if the Natura 2000 site in question is host to a *“priority natural habitat type and/or a priority species the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission to other imperative reasons of overriding public interest”* (Article 6(4), paragraph 2).
- 2.10 The European Court of Justice has recently (December 13 2007) issued a judgement in a legal case against Ireland that found that Ireland has failed in its statutory duty to confer adequate protection on designated areas. Following on from this the Circular Letter *SEA 1/08 & NPWS 1/08 on Appropriate Assessment of Land Use Plans* (from the Department of the Environment, Heritage and Local Government) states that all plans and projects will be subject to critical assessment to ensure that they comply with all relevant legislation.
- 2.11 The **appropriate assessment** is focused on the potential impacts on the “integrity of the site”. This relates to the conservation objectives of the Natura 2000 site. The integrity of the site has been defined as *“the coherence of the site’s ecological structure and function, across its whole area, or the habitats, complex of habitats and/or populations of species for which the site is or will be classified”* (PPG 9, UK Department of the Environment, October 1994). In accordance with the precautionary principle, if there is insufficient information available to make a judgment decision, it should be assumed that there is potential for a significant effect.
- 2.12 The appropriate assessment is closely linked to the **Strategic Environmental Assessment**. The SEA is a mechanism used to evaluate, at the earliest appropriate stage, the environmental effects of plans before they are adopted. It allows interested parties including the public an opportunity to comment on and to be kept informed of decisions and how they were made. The objective of the SEA Directive is *“to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans with a view to promoting sustainable development”*. The European Directive on SEA (Council Directive 2001/42/EC) was transposed into Irish law under two pieces of legislation:
- European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (S.I. No. 435 of 2004);
 - Planning and Development (Strategic Environmental Assessment) Regulations 2004 (S.I. No. 436 of 2004).

3 THE STAGES IN AN APPROPRIATE ASSESSMENT

3.1 There are four stages in an Appropriate Assessment as outlined in the European Commission Guidance document (2001). The following is a brief summary of these steps.

3.1.1 **Screening:** This stage examines the likely effects of a project either alone or in combination with other projects upon a Natura 2000 site and considers whether it can be objectively concluded that these effects will not be significant.

3.1.2 **Appropriate Assessment:** In this stage, the impact of the project on the integrity of the Natura 2000 site is considered with respect to the conservation objectives of the site and to its structure and function.

3.1.3 **Assessment of Alternative Solutions:** This stage examines alternative ways of implementing the project that, where possible, avoid any adverse impacts on the integrity of the Natura 2000 site.

3.1.4 **Assessment where no alternative solutions exist and where adverse impacts remain:** Where imperative reasons of overriding public interest (IROPI) exist, an assessment to consider whether compensatory measures will or will not effectively offset the damage to the Natura site will be necessary.

3.1.5 This report only covers Stage 1 and Stage 2.

A summary of Stage 1: the Screening Matrix is given in Appendix 3 of this report. This is a stand-alone document.

A summary of Stage 2: Appropriate Assessment is given in Appendix 4 of this report. This is a stand-alone document.

4 METHODOLOGY

4.1 The appropriate assessment of potential impacts on the integrity of Natura 2000 sites is based on a review of existing ecological information, including documented information about the sites themselves and a review of the Draft Dublin Docklands Area Master Plan 2008.

4.2 A desk study was carried out to collate the available information on the local ecological environment.

4.3 A review of the Draft Master Plan and Environmental Report was undertaken, with particular reference to the Master Plan objectives and policies, including those directly or indirectly related to nature conservation, as well as the mitigation measures devised as part of the SEA process. These mitigation measures have been incorporated into the Draft Master Plan as policies.

4.4 This report describes the Master Plan area and the potential ecological impacts on Natura 2000 sites. The findings of this Appropriate Assessment are summarised in Appendix 3 (Screening Matrix) and Appendix 4 (Appropriate Assessment).



5 STUDY AREA DESCRIPTION

- 5.1 The Docklands area has significant amounts of open space, both in private and public ownership. Of particular note are Irishtown Nature Park, Sean Moore Park and Ringsend Park as well as the River Liffey and River Dodder, the Grand Canal and the Royal Canal and other minor watercourses. The area supports a variety of common flora and fauna typically associated with an urban environment, as well as species such as various bats, raptorial birds (such as kestrel and peregrine falcon), Atlantic salmon and sea trout. Dublin Bay hosts large numbers of water birds in the winter months including internationally important numbers of Brent geese and other species.
- 5.2 Directly adjacent to the Master Plan area there are several areas that are subject to nature conservation designations. The various designations are summarised below:

Special Protection Areas (SPA)

South Dublin Bay and River Tolka Estuary SPA (004024)
North Bull Island SPA (004006)

Candidate Special Areas of Conservation (cSAC)

South Dublin Bay (000210)
North Dublin Bay (000206)
(These are both also pNHA)

Proposed Natural Heritage Areas (pNHA)

Dolphins, Dublin Docks (000201)
Booterstown Marsh (001205)
Grand Canal (002104)
Royal Canal (002103)

The River Liffey itself, while not designated at this location, is designated as a pNHA approximately 5km upstream of the Master Plan area. The River Liffey is an important salmonid system with resident populations of brown trout and migratory populations of Atlantic salmon and sea trout.

6 BRIEF DESCRIPTION OF NATURA 2000 SITES

- 6.1 The following provides a brief summary of the Natura 2000 sites that have the potential to be negatively impacted. More details are provided in Appendix 3 to this report (the Screening Matrix).
- 6.2 The Natura 2000 sites within Dublin Bay are all outside the Draft Master Plan area, with one exception. The only part of the Master Plan area that is directly covered by any of the Natura 2000 designations is the finger of land at Poolbeg Peninsula which has recently been included in the South Dublin Bay and Tolka Estuary SPA. This finger of land lies between Ringsend Wastewater Treatment Plant and Irishtown Nature Park. It was specifically included in the revised SPA as it has been set aside (as part of the planning permission for the treatment plant) as a feeding ground for over wintering Brent geese. The revised boundary for this SPA was advertised in the national press on May 28th 2008. There is a three month window during which time submissions and/or objections may be made.
- 6.3 **South Dublin Bay and River Tolka Estuary SPA** comprises a substantial part of Dublin Bay. It includes the intertidal area between the River Liffey and Dun Laoghaire, the estuary of the River Tolka to the north of the River Liffey, Booterstown Marsh and an area of grassland at Poolbeg, north of Irishtown Nature Park. A portion of the shallow marine waters of the bay is also included. The site is of special conservation interest for a number of bird species (Light-Bellied Brent Goose, Oystercatcher, Ringed Plover, Golden Plover, Grey Plover, Knot, Sanderling, Dunlin, Bar-tailed Godwit, Redshank, Black-Headed Gull, Roseate Tern, Common Tern and Arctic Tern) and is important for wintering waterfowl and wintering gulls. An internationally important population of Light-bellied Brent Goose feed on the Eelgrass bed at Merrion and is also known to feed on the grassland at Poolbeg. The SPA is of international importance for Light-bellied Brent Goose and of national importance for nine other waterfowl species. It is also of international importance as an autumn tern roost.
- 6.4 The EU Birds Directive pays particular attention to wetlands, and these form part of the SPA, the site and its associated waterbirds are of special conservation interests for Wetlands and Waterbirds.
- 6.5 **North Bull Island SPA:** North Bull Island is a sand spit that developed after the construction of the North Bull Wall. This island is covered in dune grassland. Other important ecosystems associated with the island are salt marsh and mud flats. The reserves are of international scientific importance for brent geese and also on botanical, ornithological, zoological and geomorphological grounds.
- 6.6 North Bull Island SPA is of international importance for waterfowl on the basis that it regularly supports in excess of 20,000 waterfowl. It also qualifies for international importance as the numbers of two species exceed the international threshold – Brent Goose and Bar-tailed Godwit A further 15 species have populations of national importance – Shelduck, Teal, Pintail, Shoveler, Oystercatcher, Ringed Plover, Golden Plover, Grey Plover, Knot, Sanderling, Dunlin, Black-tailed Godwit, Curlew, Redshank and Turnstone. The North Bull Island SPA is a regular site for passage waders, especially Ruff, Curlew Sandpiper and Spotted Redshank.
- 6.7 **North Dublin Bay cSAC:** Annex I Habitats include fixed dunes, marram/shifting dunes, embryonic shifting dunes, dune slack, annual vegetation of drift lines, salicornia mud and sand flats, Atlantic salt meadows, Mediterranean salt meadows, mud and sand flats. Annex II species include Petalwort. The site overlaps with North Bull Island SPA.

- 6.8 **South Dublin Bay cSAC:** The site has extensive areas of sand and mudflats, a habitat listed on Annex I of the EU Habitats Directive. The largest stand of Eelgrass on the east coast occurs at Merrion Gates. New habitats are developing just south of Merrion Gates including embryonic dunes and a sand spit. This area is becoming increasingly important as a high tide roost site for waterfowl. The site overlaps with South Dublin Bay and River Tolka Estuary SPA.

7 POTENTIAL IMPACTS ON THE INTEGRITY OF NATURA 2000 SITES

- 7.1 The Draft Master Plan provides a strategy for the ongoing development of the entire Dublin Docklands area. Its objectives are the sustainable social and economic regeneration of the Dublin Docklands Area, improvements in the physical environment of the Dublin Docklands Area and the continued development in the Docklands of services for the financial sector. The Master Plan area is directly adjacent to the Natura 2000 sites of Dublin Bay. The Draft South Dublin Bay and River Tolka Estuary SPA Boundary covers an area on Poolbeg Peninsula that is included in the Master Plan area.
- 7.2 Master Plan policies such as the maintenance of the variety and diversity of the environmental character of the Area, the enhancement and provision of open space areas and the continued remediation of contaminated soil, have the potential to increase opportunities for biodiversity, flora and fauna throughout the Area. However, any direct interventions (such as alterations to coastal morphology or land reclamation) within the designated areas of Dublin Bay or any potential contamination of water bodies (surface and coastal) in and adjoining the Area could have significant adverse consequences on biodiversity.
- 7.3 Water quality in and adjoining the Master Plan area is satisfactory at present. The existing deficiency in wastewater treatment at regional level creates the potential for the deterioration of water quality, necessitating mitigation. Equally, the deficiency in water supply infrastructure at regional level has the potential for negative impacts and will necessitate mitigation at Master Plan level.
- 7.4 There will be no net loss of land within the Natura 2000 sites. There will be no habitat or species fragmentation, nor will there be any reduction in species density or changes in indicators of conservation value as a result of the Draft Master Plan policies and objectives.
- 7.5 Without strict adherence to the mitigation policies and objectives for both biodiversity and water, there are the following potential impacts on Natura 2000 sites.
- A potential impact on the structure and function of the habitats in and around Dublin Bay that support wetland bird species, including a risk of alteration of the geomorphological/sedimentological regime of Dublin Bay as a whole;
 - A risk of disturbance on the key bird species that use the SPAs and cSACs for feeding, roosting or breeding, particularly during construction. The Natura 2000 sites could also be vulnerable to the effects of development such as disturbance from noise, lighting and increased movement of people;
 - A risk of degradation to the habitat that supports the birds within the Natura 2000 sites.

8 MITIGATION MEASURES

8.1 Comprehensive mitigation measures have been incorporated into the Draft Master Plan and the Environmental Report. The environmental protection objective that has been identified in relation to biodiversity, flora and fauna seeks to:

- Protect and enhance biodiversity, flora and fauna.

8.2 Four mitigation measures in relation to biodiversity, flora and fauna are recommended in the form of additional Urban Design Master Plan policies in the Environmental Report. These measures will ensure that the integrity of all Natura 2000 sites is maintained and that no developments will proceed that would negatively impact in any way on the sites.

1. Any Planning Scheme or any Amended Planning Scheme to be implemented in a manner that protects the integrity of the designated nature areas (SPA, cSAC and pNHA);
2. Prevent contamination of waters (surface, ground and coastal) arising from disturbance of existing contaminated lands;
3. Minimise potential negative impacts on waters (surface, ground and coastal) during construction reflecting best practice;
4. Cooperate with Dublin City Council in the achievements of the objectives of the Dublin City Biodiversity Action Plan 2008-2012.

8.3 Additional measures, in the form of additional Infrastructure Master Plan policies have also been included in the Environmental Report. These measures are designed to ensure that there will be no deterioration in water quality in Dublin Bay as a result of any development that might arise out of the Draft Master Plan.

16. Co-operate and liaise with Dublin City Council as Water Services Authority in ensuring that the potable and fire water supply, together with the foul sewer and storm water drainage systems are upgraded to meet the demands arising from the additional physical development in advance of, or in parallel with, the carrying out of the development, while protecting the environment and also having regard to the Greater Dublin Regional water and drainage infrastructural constraints. Measures to include the full integration of SuDS into new development, as well as the separation of foul and storm water and retrofit of SuDS where practical;
17. Actively support Dublin City Council in the upgrading of the wastewater treatment plant at Ringsend as part of the Greater Dublin Strategic Drainage Strategy;
18. Additional wastewater infrastructure to facilitate intensification of development in the North Lotts Planning Scheme Area to be identified in the Amended North Lotts Planning Scheme and developed in tandem with the carrying out of development in the Area;
19. The roll out and phasing of development under the Poolbeg Planning Scheme and other amendments and extensions to Planning Scheme Areas within the Docklands Area to be subject to the provision of adequate wastewater infrastructure provided at, in consultation with Dublin City Council and other relevant authorities, regional and/or local level to serve that development.



- 8.4 Mitigation measures 1-4 above specifically relate to biodiversity, flora and fauna. They protect nature conservation areas (particularly Natura 2000 sites) from any impacts that might arise from development as part of Planning Schemes, including during the construction phase, particularly as a result of disturbance to contaminated land.
- 8.5 Mitigation measures 16-19 are related to protection of surface and coastal water quality. Mitigation Measure 19 is of particular importance as it deals with the provision of adequate wastewater treatment for development in all Planning Scheme Areas. If adequate treatment is not available at regional level, it will have to be provided locally until regional facilities become available. This will protect the water quality in Dublin Bay and reduce risk to any nature conservation areas in the bay.
- 8.6 Climate change is predicted to result in overall sea level rises. The Draft Master Plan contains policies and objectives that emphasise flood protection. Mitigation measures will substantially reduce the risk of flooding.
- 8.7 Any Planning Scheme within the Master Plan area will be bound by the Master Plan policies, including the measures outlined above, as well as Master Plan policies UD 40, UD 41 and UD 71.

UD 40: Minimise potential negative impacts on waters (surface, ground and coastal) during construction, reflecting best practice;

UD 41: Create a landscape network as part of the Master Plan that not only acts as a flood protection measure but also enhances the potential for biodiversity and movement;

UD 71: Co-operate with Dublin City Council in the achievement of the objectives of the Dublin City Biodiversity Action Plan 2008-2012.

9 MONITORING

- 9.1 The following is extracted from the main Environmental Report on the Draft Master Plan. It is a summary of the monitoring programme devised for the Draft Master Plan.

This section of the Environmental Report outlines the way in which the environmental impacts of the Docklands Master Plan will be monitored. The SEA Directive requires that monitoring of significant environmental effects be carried out. Environmental protection objectives and targets were established early on in the SEA process. However, in order to measure progress towards these parameters environmental protection indicators have also been determined. The indicators are used to describe the baseline situation, monitor the impact of the Master Plan on the environment and predict future environmental impacts. This permits quantitative measurements of trends in environmental condition to be demonstrated. It is expected that monitoring will allow the detection of unforeseen adverse effects, if any, at an early stage and subsequent remedial action to be initiated.

An important function of the monitoring programme is to assess whether or not the Master Plan is reaching its environmental objectives and targets. The proposed monitoring programme for the Dublin Docklands Area Master Plan 2008 consists of environmental objectives, targets and indicators together with the source of the data and frequency of data collection (See Table 9 of the Environmental Report – reproduced below).

Regular monitoring using the environmental indicators will track the on-going condition of the environmental receptors. If a deterioration in a condition occurs, remedial action to address the particular problem will be implemented. Regular monitoring will highlight when and if such action is necessary.

The data required for the proposed monitoring programme is readily available and there is, at present, no need to consider collection of new data. The Authority will be responsible for assembling of all monitoring data from the relevant sources. At present the Authority publishes annual monitoring reports. Annual Master Plan monitoring will continue. Monitoring data will be gathered either on an annual or ongoing (as necessary) basis.

Finally, the monitoring programme should highlight, which environmental indicators, if any, have become redundant and are no longer required. In addition, any gaps in baseline data will also be highlighted where additional indicators may be required.

Table 9 of the Environmental Report: Proposed Monitoring Programme for the Dublin Docklands Area Master Plan 2008.

Environmental Objective	Environmental Target	Environmental Indicator	Data Source	Frequency
Protect and enhance biodiversity, flora and fauna.	No adverse impact on designated nature areas. Develop new and existing open spaces within the Area.	Breaches of EPA licence in Dublin Bay	EPA/NPWS	On-going
		Physical disturbance of designated nature areas.	DDDA	On-going
		Area of new open space provided.	DDDA	Annual
		Greening of existing public spaces.	DDDA	Annual
Protect and enhance human health.	Provision of cycling & walking infrastructure. Develop new and existing open spaces within the Area.	Length of cycling walking infrastructure.	DDDA	Annual
		Total area of open space.	DDDA	Annual
Improve soil quality.	All contaminated development sites decontaminated.	Number and area of contaminated sites decontaminated.	DDDA	Annual
Protect and enhance surface & coastal water quality.	Comply with WFD surface & coastal water targets.	Surface water quality. Coastal water quality.	DCC/EPA	Annual
Protect and enhance ground water quality.	Comply with WFD ground water targets.	Ground water quality.	DDDA/GSI	Annual
Provide water supply infrastructure.	Provide adequate water supply infrastructure.	Capacity of the water supply infrastructure.	DDDA/DCC	Annual
Limit adverse impact on air quality.	Provision of cycling & walking infrastructure. Development of high capacity public transport lines.	Length of cycling walking infrastructure.	DDDA	Annual
		Capacity of high capacity public transport lines.	DDDA/RPA/DTO/DTA	Annual
Minimise Greenhouse gas emissions.	Development of high capacity public transport lines.	Capacity of high capacity public transport lines.	DDDA/RPA/DTO/DTA	Annual
Reduce flood risk.	No incidences of flooding to property.	Number of incidences of flooding to property.	DDDA	On-going
Provide wastewater infrastructure.	Provide adequate wastewater infrastructure.	Capacity of the wastewater infrastructure.	DDDA/DCC	On-going
Provide public transport infrastructure.	Development of high capacity public transport lines. New public transport bridge over River Dodder.	Capacity of public transport lines.	DDDA/RPA/DTO/DTA	Annual
		New public transport bridge over River Dodder.	DDDA	Annual
Protect and enhance the architectural and archaeological heritage.	No adverse impact on archaeological sites and protected structures	Incidences of encroachment on archaeological sites.	DDDA	On-going
		Removal of protected structures.	DDDA	On-going
		Restoration of protected structures.	DDDA	On-going
Protect, enhance and develop streetscape and enhance views.	Develop streetscapes and views.	Preparation and delivery of new and amended Planning Schemes	DDDA	On-going
Protect, enhance and develop new open space areas.	Develop open space.	Area of new open space provided.	DDDA	Annual



10 CONCLUSIONS

- 10.1 Dublin Bay contains several Natura 2000 sites, both SPA and cSAC, some of which overlap with each other. The Dublin Docklands Master Plan Area is directly adjacent to these designated areas, and any plans or projects undertaken within the Master Plan Area have the potential to negatively impact on the integrity and the conservation objectives of the Dublin Bay designated areas.
- 10.2 An Appropriate Assessment was undertaken in response to a request from the Department of the Environment, Heritage and Local Government to the Dublin Docklands Development Authority in a letter dated 26th February 2008. Stages 1 and 2 of the Appropriate Assessment process were completed and are presented in this document.
- 10.3 **Stage 1 Screening** was undertaken to determine the potential for negative impacts on any Natura 2000 sites. The Screening matrix, contained in Appendix 3, concluded that based on the available information there was a potential significant negative impact on the Natura 2000 sites and an Appropriate Assessment was therefore required.
- 10.4 **Stage 2 Appropriate Assessment** was undertaken which included a review of existing relevant information and a review of the Draft Master Plan and Environmental Report. The report concludes that no direct impacts on the Dublin Bay Natura 2000 sites are expected, provided that the mitigation policies and objectives set out in the SEA Environmental Report and Draft Master Plan are strictly adhered to. Consequently, the integrity of the European sites will not be adversely affected by the Draft Master Plan proposals, in the context of the conservation objectives. The Appropriate Assessment matrix is contained in Appendix 4.
- 10.5 **Strict adherence to the policies and objectives set out in the Draft Master Plan (specifically those that relate to natural heritage), combined with the monitoring programme, will ensure that there will be no negative impacts on the integrity, conservation objectives or functioning of any Natura 2000 sites as a result of the Draft Master Plan.**
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11 REFERENCES AND IMPORTANT INFORMATION SOURCES

Assessment of Plans and Projects Significantly Affecting Natura 2000 sites - Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC. European Commission (2001).

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12 APPENDICES

APPENDIX 1

ADDENDUM TO ENVIRONMENTAL REPORT ON THE DRAFT DUBLIN DOCKLANDS MASTER PLAN 2008

The following addendum should be added to S 4.1 of the Environmental Report referring to the proposed South Dublin Bay and River Tolka Estuary SPA. It should form an additional paragraph to the section of the report describing the South Dublin Bay pNHA/cSAC/SPA site (p.43, Environmental Report).

The South Dublin Bay and River Tolka Estuary SPA comprises a substantial part of Dublin Bay. It includes the intertidal area between the River Liffey and Dun Laoghaire, the estuary of the River Tolka to the north of the River Liffey, Booterstown Marsh and an area of grassland at Poolbeg, north of Irishtown Nature Park. A portion of the shallow marine waters of the bay is also included. The site is of special conservation interest for a number of bird species and is important for wintering waterfowl and wintering gulls. An internationally important population of Light-bellied Brent Goose feed on the Eelgrass bed at Merrion and is also known to feed on the grassland at Poolbeg. The SPA is of international importance for Light-bellied Brent Goose and of national importance for nine other waterfowl species. It is also of international importance as an autumn tern roost.

APPENDIX 2 EVALUATION CRITERIA

Criteria for the Evaluation of sites for flora, fauna and fisheries

Rating	Qualifying Criteria
A	<p>Internationally important</p> <p>Sites designated (or qualifying for designation) as SAC* or SPA* under the EU Habitats or Birds Directives.</p> <p>Undesignated sites containing good examples of Annex I <u>priority</u> habitats under the EU Habitats Directive.</p> <p>Major salmon river fisheries.</p> <p>Major salmonid (salmon, trout or char) lake fisheries.</p>
B	<p>Nationally important</p> <p>Sites or waters designated or proposed as an NHA* or statutory Nature Reserves.</p> <p>Undesignated sites containing good examples of Annex I habitats (under EU Habitats Directive).</p> <p>Undesignated sites containing <u>significant numbers</u> of resident or regularly occurring populations of Annex II species under the EU Habitats Directive or Annex I species under the EU Birds Directive or species protected under the Wildlife (Amendment) Act 2000.</p> <p>Major trout river fisheries.</p> <p>Water bodies with major amenity fishery value.</p> <p>Commercially important coarse fisheries.</p>
C	<p>High value, locally important</p> <p>Sites containing semi-natural habitat types with high biodiversity in a local context and a high degree of naturalness, or significant populations of locally rare species.</p> <p>Small water bodies with known salmonid populations or with good potential salmonid habitat.</p> <p>Sites containing <u>any</u> resident or regularly occurring populations of Annex II species under the EU Habitats Directive or Annex I species under the EU Birds Directive.</p> <p>Large water bodies with some coarse fisheries value.</p>
D	<p>Moderate value, locally important</p> <p>Sites containing some semi-natural habitat or locally important for wildlife.</p> <p>Small water bodies with some coarse fisheries value or some potential salmonid habitat.</p> <p>Any water body with unpolluted water (Q-value rating 4-5).</p>
E	<p>Low value, locally important</p> <p>Artificial or highly modified habitats with low species diversity and low wildlife value.</p> <p>Water bodies with no current fisheries value and no significant potential fisheries value.</p>

*SAC = Special Area of Conservation

SPA= Special Protection Area

NHA= Natural Heritage Area

APPENDIX 3: SCREENING MATRIX

Stage 1: SCREENING MATRIX FOR THE DRAFT DUBLIN DOCKLANDS AREA MASTER PLAN 2008 WITH REGARD TO POTENTIAL IMPACTS ON NATURA 2000 SITES (which include both Special Protection Areas* (SPA) and candidate Special Conservation Areas** (cSAC).

(Following Article 6 (3) of the European Union Habitats Directive (92/43/EEC)

***Assessment of the effects of the Draft Dublin Docklands Master Plan 2008 on the integrity of South Dublin Bay and River Tolka Estuary SPA (Site code 004024), North Bull Island SPA (Site code 004006), South Dublin Bay cSAC (Site code 000210) and North Dublin Bay cSAC (Site code 000206).

1. Description of the project or plan	
Location	The Master Plan area is located within Dublin's Docklands, both north and south of the River Liffey, in the eastern part of the city centre, adjacent to Dublin Bay. The Dublin Port lands on the north side of the Liffey are outside the Master Plan area.
Distance from designated sites	The Master Plan area is directly adjacent to South Dublin Bay and River Tolka Estuary SPA and South Dublin Bay cSAC. It is within 3km of North Bull Island SPA and North Dublin Bay cSAC.
Brief Description of the project or plan	<ul style="list-style-type: none"> The Draft Master Plan provides a framework to guide development of the Docklands Area over a five year period and beyond, embracing social regeneration, economic development, land use, transportation, infrastructure, urban design and art, tourism and culture. The Draft Master Plan contains detailed policies and objectives which are designed to ensure that sustainability is at the core of future development within the docklands
Is the plan directly connected with or necessary to the Natura 2000 site management for nature conservation?	No

* A Special Protection Area (SPA) is a designated under the EU Birds Directive (79/209/EEC) for the protection of named bird species.

** A candidate Special Area of Conservation is designated under the EU Habitats Directive (92/43/EEC) for the protection of certain habitats and species as listed in the Directive.

*** Prepared in accordance with documents: European Commission (2000) Managing Natura 2000 sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC. 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 and European Commission (2007) Guidance document on Article 6(4) of the 'Habitats Directive' 92/49/EEC; clarification of the concepts of: Alternative solutions, Imperative reasons of overriding public interest, Compensatory Measures, Overall Coherence, Opinion of the Commission.

2. Brief Description of the Natura 2000 sites	
Names and designations	South Dublin Bay and River Tolka Estuary SPA North Bull Island SPA North Dublin Bay cSAC South Dublin Bay cSAC
Site descriptions and qualifying interests (extracted from the NPWS Site Synopses)	<p>South Dublin Bay and River Tolka Estuary SPA</p> <p>This site comprises a substantial part of Dublin Bay. It includes the intertidal area between the River Liffey and Dun Laoghaire, and the estuary of the River Tolka to the north of the River Liffey, as well as Booterstown Marsh. A portion of the shallow marine waters of the bay is also included.</p> <p>In the south bay, the intertidal flats extend for almost 3 km at their widest. The sediments are predominantly well-aerated sands. Several permanent channels exist, the largest being Cockle Lake. A small sandy beach occurs at Merrion Gates, while some bedrock shore occurs near Dun Laoghaire. The landward boundary is now</p>

almost entirely artificially embanked. There is a bed of Dwarf Eelgrass below Merrion Gates which is the largest stand on the east coast. Green algae are distributed throughout the area at a low density. The macro-invertebrate fauna is well-developed, and is characterised by annelids such as Lugworm and Sand Mason, and bivalves, especially Cockle and Baltic Tellin. The small gastropod Spire Shell occurs on the muddy sands off Merrion Gates, along with the crustacean *Corophium volutator*. Sediments in the Tolka Estuary vary from soft thixotropic muds with a high organic content in the inner estuary to exposed, well-aerated sands off the Bull Wall. The site includes Booterstown Marsh, an enclosed area of saltmarsh and muds that is cut off from the sea by the Dublin/Wexford railway line, being linked only by a channel to the east, the Nutley Stream. An area of grassland at Poolbeg, north of Irishtown Nature Park, is also included in the site.

The site is a Special Protection Area (SPA) under the EU Birds Directive, of special conservation interest for the following species: Light-Bellied Brent Goose, Oystercatcher, Ringed Plover, Golden Plover, Grey Plover, Knot, Sanderling, Dunlin, Bar-tailed Godwit, Redshank, Black-Headed Gull, Roseate Tern, Common Tern and Arctic Tern. The EU Birds Directive pays particular attention to wetlands, and these form part of the SPA, the site and its associated waterbirds are of special conservation interests for Wetlands and Waterbirds.

Both Common Tern and Arctic Tern breed in Dublin docks, on a man-made mooring structure known as the ESB dolphin – this is included within the site.

The main threat to this site is further reclamation for industrial and/or infra-structural purposes. The intertidal areas receive water that is somewhat polluted though there are no apparent impacts on the associated flora and fauna. Owing to its location in Dublin Bay, pollution such as oil spillages from Dublin Port and shipping is a threat. Commercial bait digging may be a problem - this causes disturbance to wintering birds. Disturbance to birds is also caused by walkers and dogs.

North Bull Island SPA

This site covers all of the inner part of north Dublin Bay, with the seaward boundary extending from the Bull Wall lighthouse across to Drumleck Point at Howth Head. The North Bull Island sand spit is a relatively recent depositional feature, formed as a result of improvements to Dublin Port during the 18th and 19th centuries. It is almost 5 km long and 1 km wide and runs parallel to the coast between Clontarf and Sutton. Part of the interior of the island has been converted to golf courses.

A well-developed and dynamic dune system stretches along the seaward side of the island. Various types of dunes occur, from fixed dune grassland to pioneer communities on foredunes. Marram Grass is dominant on the outer dune ridges. A feature of the dune system is a large dune slack with a rich flora, usually referred to as the 'Alder Marsh' because of the presence of Alder trees. The water table is very near the surface and is only slightly brackish. The orchid flora is notably diverse in this area. Saltmarsh extends along the length of the landward side of the island and provides the main roost site for wintering birds in Dublin Bay. On the island shelters two intertidal lagoons which are divided by a solid causeway. These lagoons provide the main feeding grounds for the wintering waterfowl. The sediments of the lagoons are mainly sands with a small and varying mixture of silt and clay. The site includes a substantial area of the shallow marine bay waters.

The North Bull Island SPA is of international importance for waterfowl on the basis that it regularly supports in excess of 20,000 waterfowl. It also qualifies for international importance as the numbers of two species exceed the international threshold – Brent Goose and Bar-tailed Godwit. A further 15 species have populations of national importance – Shelduck, Teal, Pintail, Shoveler, Oystercatcher, Ringed Plover, Golden Plover, Grey Plover, Knot, Sanderling, Dunlin, Black-tailed Godwit, Curlew, Redshank and Turnstone. The North Bull Island SPA is a regular site for passage waders, especially Ruff, Curlew Sandpiper and Spotted Redshank.

The site has five Red Data Book vascular plant species, four rare bryophyte species,

and is nationally important for three insect species. A rare liverwort, *Petalophyllum ralfsii*, was first recorded from the North Bull Island in 1874 and its presence here has recently been re-confirmed. This species is of high conservation value as it is listed on Annex II of the E.U. Habitats Directive. A well-known population of Irish Hare is resident on the island.

The main landuses of this site are amenity activities and nature conservation. The North Bull Island is the main recreational beach in Co. Dublin and is used throughout the year. Two separate Statutory Nature Reserves cover much of the island east of the Bull Wall and the surrounding intertidal flats. North Bull Island is also a Wildfowl Sanctuary, a Ramsar Convention site, a Biogenetic Reserve, a Biosphere Reserve and a Special Area Amenity Order site. Much of the SPA is also a candidate Special Area for Conservation. The site is used regularly for educational purposes and there is a manned interpretative centre on the island.

The North Bull Island SPA is an excellent example of an estuarine complex and is one the top sites in Ireland for wintering waterfowl. It is of international importance on account of both the total number of waterfowl and the individual populations of Brent Goose and Bar-tailed Godwit that use it. Also of significance is the regular presence of several species listed on Annex I of the E.U. Birds Directive, notably Golden Plover and Bar-tailed Godwit but also Ruff and Short-eared Owl.

North Dublin Bay cSAC

This site covers the inner part of North Dublin Bay, the seaward boundary extending from the North Bull Wall Lighthouse to the Martello Tower at Howth Head.

The North Bull Island is the focal point of this site. The island is a sandy spit which formed after the building of the South Wall and Bull Wall in the 18th and 19th centuries. It now extends for about 5 km in length and is up to 1 km wide in places. A well-developed and dynamic dune system stretches along the seaward side of the island. Various types of dunes occur, from fixed dune grassland to pioneer communities on foredunes.

About 1 km from the tip of the island, a large dune slack with a rich flora occurs, usually referred to as the 'Alder Marsh' because of the presence of Alder trees. The water table is very near the surface and is only slightly brackish.

Saltmarsh extends along the length of the landward side of the island. The edge of the marsh is marked by an eroding edge which varies from 20 cm to 60 cm high. The island shelters two intertidal lagoons which are divided by a solid causeway. The sediments of the lagoons are mainly sands with a small and varying mixture of silt and clay.

Three Rare plant species legally protected under the Flora Protection Order 1987 have been recorded on the North Bull Island. These are Lesser Centaury, Hemp Nettle and Meadow Saxifrage. Two further species listed as threatened in the Red Data Book, Wild Sage and Spring Vetch, have also been recorded. A rare liverwort, *Petalophyllum ralfsii*, was first recorded from the North Bull Island in 1874 and has recently been confirmed as being still present there. This species is of high conservation value as it is listed on Annex II of the E.U. Habitats Directive. The North Bull is the only known extant site for the species in Ireland away from the western seaboard.

The main landuses of this site are amenity activities and nature conservation. The North Bull Island is the main recreational beach in Co Dublin and is used throughout the year. Much of the land surface of the island is taken up by two golf courses. Two separate Statutory Nature Reserves cover much of the island east of the Bull Wall and the surrounding intertidal flats. The site is used regularly for educational purposes. North Bull Island has been designated a Special Protection Area under the E.U. Birds Directive and it is also a statutory Wildfowl Sanctuary, a Ramsar Convention site, a Biogenetic Reserve, a Biosphere Reserve and a Special Area Amenity Order site.



	<p>This site is an excellent example of a coastal site with all the main habitats represented. The holds good examples of ten habitats that are listed on Annex I of the E.U. Habitats Directive; one of these is listed with priority status. Several of the wintering bird species have populations of international importance, while some of the invertebrates are of national importance. The site contains a numbers of rare and scarce plants including some which are legally protected. Its proximity to the capital city makes North Dublin Bay an excellent site for educational studies and research.</p> <p>South Dublin Bay cSAC</p> <p>This site lies south of the River Liffey and extends from the South Wall to the west pier at Dun Laoghaire. It is an intertidal site with extensive areas of sand and mudflats, a habitat listed on Annex I of the E.U. Habitats Directive. The sediments are predominantly sands but grade to sandy muds near the shore at Merrion gates. The main channel which drains the area is Cockle Lake.</p> <p>There is a bed of Eelgrass below Merrion Gates which is the largest stand on the east coast. Green algae are distributed throughout the area at a low density. Fucoid algae occur on the rocky shore in the Maretimo to Dún Laoghaire area.</p> <p>Several small, sandy beaches with incipient dune formation occur in the northern and western sectors of the site, notably at Poolbeg, Irishtown and Merrion/Boosterstown. Driftline vegetation occurs in association with the embryonic and incipient fore dunes. Typically drift lines occur in a band approximately 5 m wide, though at Boosterstown this zone is wider in places. The habitat occurs just above the High Water Mark and below the area of embryonic dune. A small area of pioneer salt marsh now occurs in the lee of an embryonic sand dune just north of Boosterstown Station.</p> <p>Lugworm and Cockles and other annelids and bivalves are frequent throughout the site. The small gastropod <i>Hydrobia ulvae</i> occurs on the muddy sands off Merrion Gates.</p> <p>South Dublin Bay is an important site for waterfowl. (See preceding paragraphs on Dublin Bay's SPAs).</p> <p>At low tide the inner parts of the south bay are used for amenity purposes. Bait digging is a regular activity on the sandy flats. At high tide some areas have windsurfing and jet-skiing.</p> <p>This site is a fine example of a coastal system with extensive sand and mudflats, a habitat listed on Annex I of the E.U. Habitats Directive. South Dublin Bay is also an internationally important bird site.</p>
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Assessment Criteria	
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<p>3. Describe the individual elements of the project (either alone or in combination with other plans or projects) likely to give rise to impacts on the Natura 2000 sites.</p>	<p>The Draft Master Plan provides a strategy for the ongoing development of the entire Dublin Docklands area. Its objectives are the sustainable social and economic regeneration of the Dublin Docklands Area, improvements in the physical environment of the Dublin Docklands Area and the continued development in the Docklands of services for the financial sector.</p> <p>Master Plan policies such as the maintenance of the variety and diversity of the environmental character of the Area, the enhancement and provision of open space areas and the continued remediation of contaminated soil, have the potential to increase opportunities for biodiversity, flora and fauna throughout the Area. However, any direct interventions (such as alterations to coastal morphology or land reclamation) within the designated areas of Dublin Bay or any potential contamination of water bodies (surface and coastal) in and adjoining the Area could have significant adverse consequences on biodiversity.</p>
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	<p>Water quality in and adjoining the Area is satisfactory at present. The existing deficiency in wastewater treatment at regional level creates the potential for the deterioration of water quality, necessitating mitigation. Equally, the deficiency in water supply infrastructure at regional level has the potential for negative impacts and will necessitate mitigation at Master Plan level.</p>
<p>4. Describe any likely direct, indirect or secondary impacts of the project (either alone or in combination with other plans or projects) on the Natura 2000 site by virtue of:</p> <ul style="list-style-type: none"> ▪ Size and scale; ▪ Land-take; ▪ Distance from Natura 2000 site or key features of the site; ▪ Resource requirements; ▪ Emissions; ▪ Excavation requirements; ▪ Transportation requirements; ▪ Duration of construction, operation etc.; ▪ Others. 	<p>The Draft Master Plan provides for the regeneration and improvement of the entire docklands area.</p> <p>Without strict adherence to the mitigation policies and objectives for both biodiversity and water, there are potential impacts on Natura 2000 sites. These include habitat and species loss and fragmentation due to land reclamation, contamination of water and alterations to the geomorphology and sedimentology of Dublin Bay.</p> <p>There will be no net loss of land within the Natura 2000 sites.</p> <p>The Master Plan area is directly adjacent to the Natura 2000 sites of Dublin Bay. The Draft South Dublin Bay and River Tolka Estuary SPA Boundary covers an area on Poolbeg Peninsula that is included in the Master Plan area.</p>
<p>5. Describe any likely changes to the site arising as a result of:</p> <ul style="list-style-type: none"> ▪ Reduction of habitat area; ▪ Disturbance of key species; ▪ Habitat or species fragmentation; ▪ Reduction in species density; ▪ Changes in key indicators of conservation value; ▪ Climate change. 	<p>There will be no loss of habitat area within any Natura 2000 site.</p> <p>There is the potential for disturbance to key bird species that may use Dublin Bay, particularly at Poolbeg Peninsula and Sandymount Strand, during the construction phase of any development. Contamination of water (surface, ground or coastal) would cause negative impacts on the Natura 2000 sites.</p> <p>There will be no habitat or species fragmentation, nor will there be any reduction in species density or changes in indicators of conservation value as a result of the Draft Master Plan policies and objectives.</p> <p>Climate change is predicted to result in overall sea level rises. The Draft Master Plan contains policies and objectives that emphasise flood protection. Mitigation measures will substantially reduce the risk of flooding.</p>
<p>6. Describe any likely impacts on the Natura 2000 site as a whole in terms of:</p> <ul style="list-style-type: none"> ▪ Interference with the key relationships that define the structure of the site; ▪ Interference with key relationships that define the function of the site. 	<p>Without strict adherence to the mitigation policies and objectives for both biodiversity and water, there are the following potential impacts on Natura 2000 sites:</p> <ul style="list-style-type: none"> • A potential impact on the structure and function of the habitats in and around Dublin Bay that support wetland bird species, including a risk of alteration of the geomorphological/sedimentological regime of Dublin Bay as a whole; • A risk of disturbance on birds that use the SPAs and cSACs for feeding, roosting or breeding; • A risk of degradation to the habitat that supports the birds within the Natura 2000 sites.



<p>7. Provide indicators of significance as a result of the identification of effects set out above in terms of:</p> <ul style="list-style-type: none"> ▪ Loss; ▪ Fragmentation; ▪ Disruption; ▪ Disturbance; ▪ Change to key elements of the site. 	<p>Without strict adherence to the mitigation policies and objectives for both biodiversity and water, there is the potential for a net habitat loss, fragmentation, disruption or disturbance to any land within any of the Natura 2000 sites.</p> <p>The Natura 2000 sites could be vulnerable to the effects of development such as disturbance from noise, lighting and increased movement of people as well as potential pollution of surface, ground and coastal waters, both during construction and operation of any development.</p>
<p>8. Describe from the above those elements of the project or plan, or combination of elements, where the above impacts are likely to be significant or where the scale of magnitude of impacts is not known.</p>	<p>Although the policies and objectives of the Draft Master Plan are detailed and specific in terms of protection of biodiversity, nevertheless, due to the nature of the Draft Master Plan it was deemed necessary to proceed with the preparation of an appropriate assessment of the Master Plan. Significant effects are potentially likely to arise as a result of the elements of the plan as described above.</p>



APPENDIX 4 APPROPRIATE ASSESSMENT

STAGE 2 APPROPRIATE ASSESSMENT OF THE DRAFT DUBLIN DOCKLANDS AREA MASTER PLAN 2008 WITH REGARD TO POTENTIAL IMPACTS ON NATURA 2000 SITES

(Following Article 6(3) of the European Union Habitats Directive (92/43/EEC))

<i>*Assessment of the effects of the Draft Dublin Docklands Area Master Plan on the integrity of Natura 2000 sites.</i>	
<i>Describe the elements of the project that are likely to give rise to significant effects on the site</i>	<p>The Draft Master Plan provides a strategy for the ongoing development of the entire Dublin Docklands area. Its objectives are the sustainable social and economic regeneration of the Dublin Docklands Area, improvements in the physical environment of the Dublin Docklands Area and the continued development in the Docklands of services for the financial sector.</p> <p>Master Plan policies such as the maintenance of the variety and diversity of the environmental character of the Area, the enhancement and provision of open space areas and the continued remediation of contaminated soil, have the potential to increase opportunities for biodiversity, flora and fauna throughout the Area. However, any direct interventions (such as alterations to coastal morphology or land reclamation) within the designated areas of Dublin Bay or any potential contamination of water bodies (surface and coastal) in and adjoining the Area could have significant adverse consequences on biodiversity.</p> <p>Water quality in and adjoining the Area is satisfactory at present. The existing deficiency in wastewater treatment at regional level creates the potential for the deterioration of water quality, necessitating mitigation. Equally, the deficiency in water supply infrastructure at regional level has the potential for negative impacts and will necessitate mitigation at Master Plan level.</p>

*Prepared in accordance with documents: European Commission (2000) Managing Natura 2000 sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC. 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 and European Commission (2007) Guidance document on Article 6(4) of the 'Habitats Directive' 92/49/EEC; clarification of the concepts of: Alternative solutions, Imperative reasons of overriding public interest, Compensatory Measures, Overall Coherence, Opinion of the Commission.

<p><i>Set out the conservation objectives of the sites</i></p>	<p>To maintain the favourable conservation status of the species listed on Annex I of the EU Birds Directive, Annex II of the EU Habitats Directive, and habitats listed on Annex I of the EU Habitats Directive, as well as other important species and habitats.</p> <p>South Dublin Bay and River Tolka Estuary SPA The South Dublin Bay and River Tolka Estuary SPA comprises a substantial part of Dublin Bay. It includes the intertidal area between the River Liffey and Dun Laoghaire, the estuary of the River Tolka to the north of the River Liffey, Booterstown Marsh and an area of grassland at Poolbeg, north of Irishtown Nature Park. A portion of the shallow marine waters of the bay is also included. The site is of special conservation interest for a number of bird species (Light-Bellied Brent Goose, Oystercatcher, Ringed Plover, Golden Plover, Grey Plover, Knot, Sanderling, Dunlin, Bar-tailed Godwit, Redshank, Black-Headed Gull, Roseate Tern, Common Tern and Arctic Tern) and is important for wintering waterfowl and wintering gulls. An internationally important population of Light-bellied Brent Goose feed on the Eelgrass bed at Merrion and is also known to feed on the grassland at Poolbeg. The SPA is of international importance for Light-bellied Brent Goose and of national importance for nine other waterfowl species. It is also of international importance as an autumn tern roost.</p> <p>The EU Birds Directive pays particular attention to wetlands, and these form part of the SPA, the site and its associated waterbirds are of special conservation interests for Wetlands and Waterbirds.</p> <p>North Bull Island SPA: North Bull Island is a sand spit that developed after the construction of the North Bull Wall. This island is covered in dune grassland. Other important ecosystems associated with the island are salt marsh and mud flats. The reserves are of international scientific importance for brent geese and also on botanical, ornithological, zoological and geomorphological grounds.</p> <p>North Bull Island SPA is of international importance for waterfowl on the basis that it regularly supports in excess of 20,000 waterfowl. It also qualifies for international importance as the numbers of two species exceed the international threshold – Brent Goose and Bar-tailed Godwit A further 15 species have populations of national importance – Shelduck, Teal, Pintail, Shoveler, Oystercatcher, Ringed Plover, Golden Plover, Grey Plover, Knot, Sanderling, Dunlin, Black-tailed Godwit, Curlew, Redshank and Turnstone. The North Bull Island SPA is a regular site for passage waders, especially Ruff, Curlew Sandpiper and Spotted Redshank.</p> <p>North Dublin Bay cSAC: Annex I Habitats include fixed dunes, marram/shifting dunes, embryonic shifting dunes, dune slack, annual vegetation of drift lines, salicornia mud and sand flats, Atlantic salt meadows, Mediterranean salt meadows, mud and sand flats. Annex II species include Petalwort. The site overlaps with North Bull Island SPA.</p> <p>South Dublin Bay cSAC: The site has extensive areas of sand and mudflats, a habitat listed on Annex I of the EU Habitats Directive. The largest stand of Eelgrass on the east coast occurs at Merrion Gates. New habitats are developing just south of Merrion Gates including embryonic dunes and a sand spit. This area is becoming increasingly important as a high tide roost site for waterfowl. The site overlaps with South Dublin Bay and River Tolka Estuary SPA.</p>
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<p><i>Describe how the project will affect key species and key habitats</i></p>	<p>Without strict adherence to the mitigation policies and objectives for both biodiversity and water, there are the following potential impacts on Natura 2000 sites:</p> <ul style="list-style-type: none"> • A potential impact on the structure and function of the habitats in and around Dublin Bay that support wetland bird species, including a risk of alteration of the geomorphological/sedimentological regime of Dublin Bay as a whole; • A risk of disturbance on birds that use the SPAs and cSACs for feeding, roosting or breeding; • A risk of degradation to the habitat that supports the birds within the Natura 2000 sites.
<p><i>Describe how the integrity of the site (determined by structure and function and conservation objectives) is likely to be affected by the project or plan (e.g. loss of habitat, disturbance, disruption, chemical changes, hydrological changes etc).</i></p>	<p>The habitats and species for which the Natura 2000 sites are designated will not be significantly negatively impacted provided that the mitigation policies and objectives set out in the SEA Environmental Report and Draft Master Plan are strictly adhered to. Consequently, the integrity of the European sites will not be adversely affected by the Draft Master Plan proposals, in the context of the conservation objectives.</p>
<p><i>Describe mitigation measures that are to be introduced to avoid, reduce or remedy the adverse effects on the integrity of the site</i></p>	<p>Comprehensive mitigation measures have been incorporated into the Draft Master Plan and the Environmental Report. The environmental protection objective that has been identified in relation to biodiversity, flora and fauna seeks to:</p> <ul style="list-style-type: none"> • Protect and enhance biodiversity, flora and fauna. <p>Four mitigation measures in relation to biodiversity, flora and fauna are recommended in the form of additional Urban Design Master Plan policies in the Environmental Report. These measures will ensure that the integrity of all Natura 2000 sites is maintained and that no developments will proceed that would negatively impact in any way on the sites.</p> <ol style="list-style-type: none"> 1. Any Planning Scheme or any Amended Planning Scheme to be implemented in a manner that protects the integrity of the designated nature areas (SPA, cSAC and pNHA); 2. Prevent contamination of waters (surface, ground and coastal) arising from disturbance of existing contaminated lands; 3. Minimise potential negative impacts on waters (surface, ground and coastal) during construction reflecting best practice; 4. Cooperate with Dublin City Council in the achievements of the objectives of the Dublin City Biodiversity Action Plan 2008-2012. <p>Additional measures, in the form of additional Infrastructure Master Plan policies have also been included in the Environmental Report. These measures are designed to ensure that there will be no deterioration in water quality in Dublin Bay as a result of any development that might arise out of the Draft Master Plan.</p> <ol style="list-style-type: none"> 16. Co-operate and liaise with Dublin City Council as Water Services Authority in ensuring that the potable and fire water supply, together with the foul sewer and storm water drainage systems are upgraded to meet the demands



	<p>arising from the additional physical development in advance of, or in parallel with, the carrying out of the development, while protecting the environment and also having regard to the Greater Dublin Regional water and drainage infrastructural constraints. Measures to include the full integration of SuDS into new development, as well as the separation of foul and storm water and retrofit of SuDS where practical;</p> <ol style="list-style-type: none"> 17. Actively support Dublin City Council in the upgrading of the wastewater treatment plant at Ringsend as part of the Greater Dublin Strategic Drainage Strategy; 18. Additional wastewater infrastructure to facilitate intensification of development in the North Lotts Planning Scheme Area to be identified in the Amended North Lotts Planning Scheme and developed in tandem with the carrying out of development in the Area; 19. The roll out and phasing of development under the Poolbeg Planning Scheme and other amendments and extensions to Planning Scheme Areas within the Docklands Area to be subject to the provision of adequate wastewater infrastructure provided at, in consultation with Dublin City Council and other relevant authorities, regional and/or local level to serve that development. <p>Mitigation measures 1-4 above specifically relate to biodiversity, flora and fauna. They protect nature conservation areas (particularly Natura 2000 sites) from any impacts that might arise from development as part of Planning Schemes, including during the construction phase, particularly as a result of disturbance to contaminated land.</p> <p>Mitigation measures 16-19 are related to protection of surface and coastal water quality. Mitigation Measure 19 is of particular importance as it deals with the provision of adequate wastewater treatment for development in all Planning Scheme Areas. If adequate treatment is not available at regional level, it will have to be provided locally until regional facilities become available. This will protect the water quality in Dublin Bay and reduce risk to any nature conservation areas in the bay.</p> <p>Any Planning Scheme within the Master Plan area will be bound by the Master Plan policies, including the measures outlined above, as well as Master Plan policies UD 40, UD 41 and UD 71.</p> <p style="padding-left: 40px;">UD 40: Minimise potential negative impacts on waters (surface, ground and coastal) during construction, reflecting best practice;</p> <p style="padding-left: 40px;">UD 41: Create a landscape network as part of the Master Plan that not only acts as a flood protection measure but also enhances the potential for biodiversity and movement;</p> <p style="padding-left: 40px;">UD 71: Co-operate with Dublin City Council in the achievement of the objectives of the Dublin City Biodiversity Action Plan 2008-2012.</p>
<p>Results of consultation</p>	
	<p>A range of statutory and non-statutory bodies were consulted on an on-going basis during the preparation of the Draft Master Plan and SEA Environmental Report, however no consultations have yet been undertaken specifically in relation to Appropriate Assessment.</p>