

SEA STATEMENT

Dublin Docklands Area Master Plan 2008

Prepared by: Terry Prendergast BSc, MPhil, MSc, MIPI and Alison Donnelly BA(Mod.), MSC, PhD, MIAIA, for the Dublin Docklands Development Authority.

February 2009

Table of Contents

1	Introduction.....	2
2	SEA and Master Plan Teams.....	2
3	Integration of Environmental Considerations and the Environmental Report into the Master Plan.....	2
4	Submissions on the Environmental Report.....	3
4.1	Summary of Key Issues Raised During Consultation.....	4
4.1.1	Protection of Biodiversity, Flora and Fauna.....	4
4.1.2	Air Pollution.....	5
4.1.3	Capacity of Infrastructure.....	5
4.1.4	The SEA Process.....	5
4.1.5	Climate Change/ Flooding.....	5
4.2	Response to Key Issues Raised During Consultation.....	5
4.2.1	Protection of Biodiversity, Flora and Fauna.....	5
4.2.2	Air Pollution.....	5
4.2.3	Capacity of Infrastructure.....	6
4.2.4	The SEA Process.....	6
4.2.5	Climate Change/Flooding.....	6
5	Reasons for Choosing the Plan as Adopted in the Light of other Reasonable Alternatives.....	6
5.1	Description of Plan Alternative 3.....	6
5.2	Reason for Choosing the Plan Alternative.....	7
6	Master Plan Monitoring Programme.....	9
7	Conclusion.....	11
8	APPENDICES.....	12
8.1	Appendix 1.....	12
8.2	Appendix 2.....	15
8.3	Appendix 3.....	39
8.4	Appendix 4.....	43
8.5	Appendix 5.....	44

1 INTRODUCTION

This document is the Strategic Environmental Assessment (SEA) Statement for the Dublin Docklands Area Master Plan 2008. The Master Plan (MP) was adopted by the Council of the Dublin Docklands Development Authority on 27 November 2008.

An SEA Statement is required under article 9 (1) (b) of Directive 2001/42/EC of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment. The Statement is required to summarise

- how environmental considerations have been integrated into the plan
- how the Environmental Report (ER), the opinions expressed on the ER have been taken into account
- the reasons for choosing the plan, or modifications to the plan in the light of other reasonable alternatives and
- the measures decided upon to monitor the significant environmental effects of the plan.

The Department of the Environment, Heritage and Local Government (DoEHLG) Guidelines for Regional Authorities and Planning Authorities, 2004, note that the SEA Statement must concisely address the above.

The SEA Statement has been prepared in accordance with article 16(2) of the European Communities (Environmental Assessment of Certain Plans and Programmes), Regulations 2004 (S.I. 345 of 2004).

The SEA Statement of the Dublin Docklands Area Master Plan 2008 is structured as recommended in the DoEHLG guidelines as follows:

- Summary of how environmental considerations and the ER have been integrated into the Master Plan.
- Summary of how submissions / observations on the ER have been taken into account.
- Reasons for choosing the plan as adopted in the light of other reasonable alternatives considered.
- Master Plan Monitoring Programme.

2 SEA AND MASTER PLAN TEAMS

The SEA of the Dublin Docklands Master Plan 2008 was carried out by Terry Prendergast BSc, MPhil, MSc, MIPI and Alison Donnelly BA(Mod.), MSC, PhD, MIAIA. The Master Plan team comprised Murray Ó Laoire Architects, Tom Phillips Associates, Deloitte, CB Richard Ellis, MVA Consultancy, Mott MacDonald Pettit, CHL Consulting Group and Connolly Mescall. Both teams worked closely with the Dublin Docklands Development Authority in the SEA and Master Plan processes.

3 INTEGRATION OF ENVIRONMENTAL CONSIDERATIONS AND THE ENVIRONMENTAL REPORT INTO THE MASTER PLAN

The SEA and Master Plan processes took place in parallel. From the outset, environmental considerations informed the Master Plan 2008, as they had for previous the Master Plans adopted in 1997 and 2003. The making of the Master Plan and carrying out of the SEA were an iterative process and this is reflected in the Master Plan. Members of the Master Plan and SEA teams met weekly to ensure interaction between both processes. Key aspects of the integration of the SEA and Master Plan process, which facilitated the integration of environmental considerations into the Master Plan, are as follows:

- The baseline study on the current state of the environment carried out as part of the SEA informed the Master Plan. It formed background data for the plan, from which Master Plan policies could be devised.

- The designated environmental authorities; the Department of the Environment, Heritage and Local Government (DoEHLG), the Department of Communications, Energy and Natural Resources (DoCENR) and the Environmental Protection Agency (EPA) were consulted in relation to the scope and level of detail to be included in the Environmental Report. Responses to the consultation enabled the Environmental Report and Master Plan to focus on particular environmental concerns.

- Master Plan Alternatives were assessed against Environmental Protection Objectives devised as part of the SEA process and the environmental impacts of the preferred plan alternative identified.

- The SEA and environmental considerations informed the development of Master Plan policies. Draft Master Plan policies were assessed by the MP/ SEA teams, with the objective of making the plan as environmentally sustainable as possible. Re-worked policies were subsequently incorporated into the Draft Master Plan (DMP).

- Mitigation measures were devised by the Master Plan and SEA teams and the DDDA, taking into account the baseline data collected, the chosen plan alternative and the environmental impact of the selected alternative. Mitigation measures arose from an environmental assessment of the preferred plan alternative.

- A decision was made that, in order to copper-fasten environmental considerations into the Master Plan, mitigation measures which evolved as part of the SEA process would be included as policies in the Master Plan, thus ensuring that mitigation became an integral element of the Master Plan.

- The SEA process led to the inclusion of 31 mitigation measures/ additional policies to the Draft Master Plan 2008 in respect of the individual environmental receptors as follows:

- Biodiversity, flora and fauna (4)
- Population and Human Health (2)
- Water (3)
- Air (3)
- Climatic Factors (3)
- Material Assets (4)
- Cultural Heritage (8)
- Landscape (4)

- Following consideration of the submissions received during public consultation on the Environmental Report and Draft Master Plan, additional mitigation was incorporated into the Master Plan in the form of 7 additional and 8 strengthened Master Plan policies or mitigation measures (Appendix 1). One of the additional measures/policies related to the promotion of renewable technologies, and others related to the protection of biodiversity/designated nature conservation areas. The strengthened mitigation measures/Master Plan policies included 4 amended infrastructure policies, 3 land use policies and 1 urban design policy. The overall effect is to strengthen the mitigation measures originally proposed, particularly with regard to the provision of infrastructure in tandem with the roll-out of development and to biodiversity protection.

- Amendments/modifications to the Draft Master Plan following consideration of the submissions received during public consultation were screened for environmental impact (see Addendum to the Environmental Report of the Draft Dublin Docklands Master Plan, 2008). The screening exercise led to the introduction of 3 new mitigation measures/Master Plan policies. Two of these refer to the need to provide all necessary infrastructure to support development and one to strengthening of protection of the Liffey Quays (Appendix 1).

4 SUBMISSIONS ON THE ENVIRONMENTAL REPORT

The Draft Master Plan and Environmental Report were put on public display at the Dublin Docklands Development Authority's former offices at Custom House Quay for the period from late June until early September 2008. A summary of submissions on the Environmental Report during public consultation, the main issues raised and how the submissions were taken into account in the SEA and Master Plan process are presented in Table 1. Detailed responses to the individual submissions made on the Environmental Report during public consultation are attached in Appendix 2. All submissions were taken into account in the preparation of the Master Plan.

**Table 1 Summary of Submissions on the Environmental Report
(see also Appendix 1)**

Submission By:	No	Main Issues Raised	SEA and Master Plan Response
Designated Environmental Authorities	2 EPA and DoEHLG	Observations re baseline data, SEA process and clarification and adequacy of mitigation and monitoring of the significant environmental effects of the Master Plan (MP)	Strengthening of mitigation/ MP policies by the inclusion of new /amended policies. (see Appendix 1) Strengthening of MP monitoring programme (See S. 6)
Government Department	1 DoES	Government education policy to optimise access to education in the Docklands	MP text amended
State Bodies	1 ERFB	Protection of fisheries	Observation noted- the MP will not adversely impact on fisheries
Local Authority	1 DCC	Observations re baseline data, impact of MP on biodiversity and on water and wastewater infrastructure in and serving the Docklands Area	Strengthening of policies re biodiversity protection / water and wastewater infrastructure. (see Appendix 1) Strengthening of MP monitoring programme
Developer / Landowner	1	SEA Process	The ER is fully compliant with the SEA Directive
Private Individuals	8	Impact of MP on air quality, biodiversity protection, capacity of infrastructure and open space accessibility	Strengthening of mitigation/ MP policies. Strengthening of monitoring programme
Residents Association	1	Impact of MP on biodiversity and air quality	Strengthening of mitigation/ MP policies. Strengthening of monitoring programme

The Department of Communications, Energy and Natural Resources, a designated environmental authority, had no comment to make on the Environmental Report and Draft Master Plan, but had made comments and suggestions at scoping stage.

4.1 Summary of Key Issues Raised During Consultation

The key issues arising during consultation are outlined below. As noted above, a more detailed summary of submissions and responses is given in Appendix 2.

4.1.1 Protection of Biodiversity, Flora and Fauna

Submissions were made on the impact of the Draft Master Plan on biodiversity, flora and fauna within and adjoining the plan area. It was considered that negative impacts could arise from increased recreation, impacts of development during construction, and the capacity of infrastructure to cater for development. The role of the Draft Master Plan in the promotion of biodiversity was also raised. The Eastern Regional Fisheries Board submission raised the issue of impact on fisheries.

4.1.2 Air Pollution

Several submissions raised the issue of air quality in the Docklands area, in particular PM₁₀ concentrations. The view was expressed that air quality was considered to be compromised in the Area and that PM₁₀ emissions from the proposed Dublin Waste to Energy (WtE) plant on the Poolbeg peninsula could be significant.

4.1.3 Capacity of Infrastructure

The capacity of existing and proposed infrastructure, in particular water and wastewater infrastructure, to cater for the level of development proposed in the Draft Master Plan was raised in a number of submissions.

4.1.4 The SEA Process

Queries were raised in relation to the SEA process, in particular how the Environmental Report has addressed cumulative effects arising from the Draft Master Plan.

4.1.5 Climate Change/ Flooding

The adequacy of the mitigation measures proposed to deal with climate change and flooding was raised in submissions.

4.2 Response to Key Issues Raised During Consultation

The key issues raised have been addressed in the SEA/Master Plan process as follows:

4.2.1 Protection of Biodiversity, Flora and Fauna

Whereas the Environmental Report included strong measures to protect biodiversity, following consideration of submissions, the mitigation measures in the ER were strengthened by the incorporation of additional mitigation measures in the form of 6 new Master Plan policies and 2 amended policies (Appendix 1). These additional measures address management of recreational and amenity use of nature conservation areas, appropriate planting to encourage biodiversity, sensitive timing of works and replacement of significant habitat if considered appropriate. The implementation of the Master Plan will not negatively impact on fisheries.

Additional targets and indicators have been included in the Master Plan monitoring programme to monitor the impacts of the Master Plan on biodiversity, flora and fauna (see S. 6)

4.2.2 Air Pollution

According to the Environmental Protection Agency (EPA) Air Quality Division, the air quality of Zone A (Dublin City and environs, including the Docklands) is good. Since the preparation of the Environmental Report, the EPA has issued an IPC licence for the Dublin WtE plant. Dust monitoring of PM₁₀ and PM_{2.5} emissions from the WtE Plant is to be carried out quarterly by Dublin City Council (DCC). The analysis method/technique is to be agreed with the EPA (EPA Licence Reg. Number W0232-01). The Planning Scheme for Poolbeg will provide an imperative for improving air quality in the area as more people move into it. PM₁₀ exceedances will be investigated and further monitoring and/or source investigation is likely to be carried out as required by the EPA/ DCC. The Authority will liaise and work with both organisations as required with respect to air quality monitoring on the peninsula.

Mitigation measure 10 (MP policy LU14*) has been strengthened in respect of the land use mix of development proposed in the Poolbeg Planning Scheme to reflect the restrictions imposed by public transport infrastructure (see Appendix 1).

No further mitigation is considered necessary at present as part of the SEA/Master Plan process to that proposed, but the situation will be kept under review by the Authority.

4.2.3 Capacity of Infrastructure

In response to submissions, in particular the submission made by Dublin City Council, mitigation measures in relation to Material Assets/infrastructure have been strengthened by the adoption of one new and 3 strengthened mitigation measures/ Master Plan policies (see Appendix 1). The strengthened mitigation promotes, as a prerequisite for development, the provision of adequate infrastructure (potable and fire water supply, foul sewer and storm water drainage systems) to serve development.

It is noted that in the absence of the Master Plan, development of the Docklands Area will take place under the existing planning and development process which is managed by Dublin City Council under the Dublin City Development Plan framework and the Planning and Development Acts, 2000- 2006.

4.2.4 The SEA Process

Observations in relation to the SEA process are clarified in Appendices 2 and 3. In particular, clarification of both the cumulative impacts of the Master Plan and the inter-relationships between environmental receptors considered in the preparation of the Environmental Report are included in Appendix 3.

4.2.5 Climate Change/Flooding

The mitigation measures proposed in the Environmental Report to deal with climate change and flooding are considered adequate. However one measure (mitigation measure 15/ MP Policy IF18*) has been strengthened following consideration of the submissions received during public consultation (see Appendix 1).

Overall the taking into account of the submissions on Environmental Report has had the effect of strengthening both the Master Plan mitigation measures and the Master Plan monitoring programme.

5 REASONS FOR CHOOSING THE PLAN AS ADOPTED IN THE LIGHT OF OTHER REASONABLE ALTERNATIVES

Three plan alternatives were examined in the course of the preparation of the Draft Master Plan 2008 as described in Section 6 of the Environmental Report. The three Master Plan alternatives were developed by the Master Plan team in the course of the preparation of the plan.

The alternatives were assessed against the Environmental Protection Objectives identified and described in the Environmental Report. The three alternatives assessed were:

- ALTERNATIVE 1: Continue with Policies and Objectives of Dublin Docklands Master Plan 2003.
- ALTERNATIVE 2: Part Optimisation of Development Potential of the Dublin Docklands Area.
- ALTERNATIVE 3: Further Optimisation of Development Potential of the Dublin Docklands Area.

The selected Master Plan Alternative is Alternative 3.

5.1 Description of Plan Alternative 3

Alternative 3 allows for new, amended and extended Planning Schemes as follows:

- creation of a Section 25 Planning Scheme Area at the Poolbeg Peninsula. The density of development on the peninsula would be at an overall gross plot ratio of 2.
- amendment to North Lotts and Custom House Docks Planning Schemes. Note that the boundaries for amendments to both these Planning Scheme Areas will be the boundaries of the current Planning Schemes as illustrated in Figure 1 below.
- a possible extension of the North Lotts, Custom House Docks, Grand Canal Dock and Poolbeg Planning Scheme Areas.

Alternative 3 is described in full in S.6 of the Environmental Report and S.8 of the Master Plan 2008. The plan alternative is ambitious and allows for the development of a new Planning Scheme area at Poolbeg, amendments to two existing Planning Scheme areas and possible extensions to four Planning Scheme Areas. All areas will be developed in the form of compact residential and commercial mixed use development with associated infrastructure and amenities.

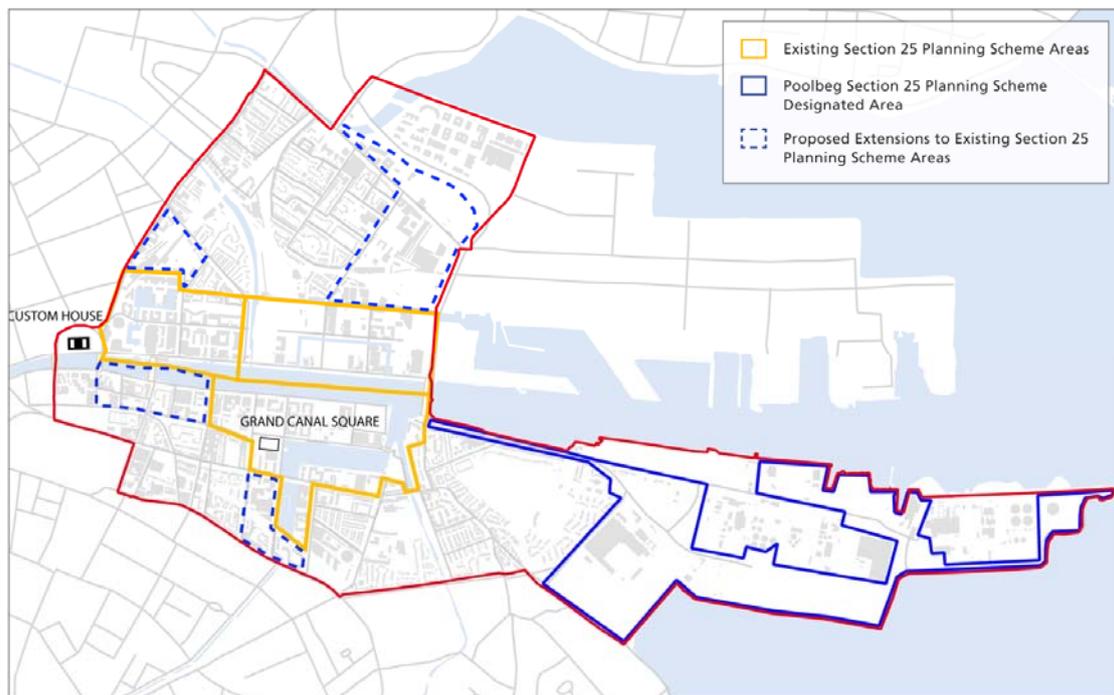


Figure 1 Adopted Master Plan Alternative

5.2 Reason for Choosing the Plan Alternative

It is considered that the selected plan alternative (Alternative 3) leverages the development potential of the Docklands Area. The Master Plan provides an overall planning framework for the Area for a 10 year time period, with particular emphasis on the next five years to 2013. The creation and extension of Planning Scheme Areas provides a structured planning framework to develop the areas selected.

Given the strategic location of the Docklands Area in close proximity to Dublin City Centre, the increased accessibility of the Area with the coming on-stream of Transport 21, the need to maximise development in proximity to public transport corridors and create sustainable densities capable of supporting investment in infrastructure, the Authority has decided that Alternative 3 provides the most appropriate framework to develop the Area.

A failure to optimise the development potential of this strategically located area in close proximity to the city centre and where substantial investment in infrastructure is on-going would be unsustainable, leading to overall negative impacts on air quality and greenhouse gas emissions in the Dublin region.

The position of the Authority is that a significantly lower level of development would not be considered sustainable because of the need to provide for compact residential and commercial mixed use development in locations close to Dublin City centre. Otherwise dispersed development would be encouraged. The Authority is of the opinion that lower levels of development would result in further dispersed development at the edges of the city.

In the absence of the Master Plan, development of the Docklands Area will take place under the existing planning and development process which is managed by Dublin City Council under the Dublin City Development Plan framework and the Planning and Development Acts, 2000- 2006.

6 MASTER PLAN MONITORING PROGRAMME

The SEA Directive requires that monitoring of significant environmental effects of the Master Plan be carried out. An important function of the monitoring programme is to assess whether or not the Master Plan is reaching its environmental objectives and targets. Monitoring will also allow the detection of unforeseen adverse effects, if any, at an early stage and subsequent remedial action to be initiated.

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 (Table 2). The monitoring programme has been updated following consideration of submissions received during public consultation with additional targets and indicators added.

Table 2 Master Plan Monitoring Programme

Environmental Objective	Environmental Target	Environmental Indicator	Data Source	Frequency
Protect and enhance biodiversity, flora and fauna.	No adverse impact on designated nature areas.	Breaches of EPA licence in Dublin Bay. Physical disturbance of designated nature areas.	EPA/ NPWS DDDA	On-going On-going
	Develop new and existing open spaces within the Area.	Area of new open space provided.	DDDA	Annual
		Greening of existing public spaces.	DDDA	Annual
	Planting native species of trees and shrubs.	Number of native species of trees and shrubs planted.	DDDA	Annual
	Planting of appropriate food plants for butterflies, moths and songbirds.	Number of species of food plants.	DDDA	Annual
	Erection of bird nesting boxes as identified at Planning Scheme level.	Number & location of species specific bird boxes.	DDDA	Annual
	Erection of bat boxes as identified at Planning Scheme level.	Number & location of bat boxes.	DDDA	Annual
Protect and enhance human health.	Provision of cycling & walking infrastructure.	Length of cycling walking infrastructure.	DDDA	Annual
	Develop new and existing open spaces within the Area.	Total area of open space.	DDDA	Annual

	To minimise noise and vibration, where possible and maintain the environmental acoustic quality where it is good.	Type and number of noise/vibration complaint received.	DDDA	On-going
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 Water Framework Directive (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.	EPA	Annual (once available)
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.	Length of cycling walking infrastructure.	DDDA	Annual
	Development of high capacity public transport lines.	Capacity of high capacity public transport lines.	DDDA/RPA/DTO/DTA	On-going
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/DCC	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.	Capacity of public transport lines.	DDDA/RPA/DTO/DTA	On-going
	New public transport bridge over River Dodder.	New public transport bridge over River Dodder.	DDDA	On-going
Protect and enhance the architectural and archaeological heritage.	No adverse impact on archaeological sites and protected structures	Incidences of encroachment on archaeological sites.	DCC/DDDA	On-going
		Removal of protected structures.	DCC/DDDA	On-going
		Restoration of protected structures.	DCC/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
--	---------------------	----------------------------------	------	--------

7 CONCLUSION

The SEA carried out of the Dublin Docklands Area Master Plan 2008 has ensured that any potential significant environmental impacts have been identified and assessed. Consultation on the Draft Master Plan and the Environmental Report has strengthened environmental considerations in the plan. Environmental impacts of the Master Plan will be monitored through the proposed monitoring programme, which will be subject to on-going review.

8 APPENDICES

8.1 Appendix 1

Additional / Strengthened Master Plan Mitigation Measures

New Mitigation Measures: New Master Plan Policies Derived Following Public Consultation on the Environmental Report and Draft Master Plan

New Policy No	New Policy
IF 10	The Authority will encourage the use of renewable energy technologies wherever possible.
UD 71*	Planning Schemes to allow for replacement of loss of significant habitat and nesting places of protected species if considered appropriate.
UD 72*	Encourage appropriate native planting throughout the Docklands to allow for connectivity for wildlife and to keep important natural heritage character of site.
UD 73*	Landscape planting throughout the area to be environmentally sensitive and include food plants for the important populations of butterflies, moths and songbirds in the area.
UD 74*	Ensure sensitive timing of works to prevent disturbance to nesting birds e.g. terns on ESB mooring platforms or guillemots around Pigeon House Dock.
UD 75*	Any works near Shellybanks to be sensitive of the embryonic dunes forming at this site and reflect soft engineering practices as outlined in 'Environmentally Friendly Coastal Protection Code of Practice, 1996' (Dept. of Marine, DOENI, Forbairt, Life).
UD 76*	Increased amenity, recreational and other use of designated nature conservation areas in and adjoining the Docklands shall be planned and managed in order to avoid possible significant negative impacts on biodiversity.

An asterisk indicates that the Master Plan policy arose from or was informed by the SEA Process

Strengthened Mitigation Measures: Amended Master Plan Policies Derived Following Public Consultation on the Environmental Report and Draft Master Plan

Draft Master Plan Policy in italicised text Amended Master Plan Policy in plain text

New Policy No	New Policy	Comment
IF 2*	<p><i>Co-operate and liaise with Dublin City Council as the water services authority in ensuring that the potable and firewater 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 Sustainable urban Drainage Systems (SuDS) into new development, as well as the separation of foul and storm water and retrofit of SuDS where practical.</i></p> <p>Actively promote, in conjunction with Dublin City Council, as a prerequisite for development, the provision of adequate potable and fire water supply, foul sewer and storm water drainage systems, 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 Sustainable urban Drainage Systems (SuDS) into new development, as well as the separation of foul and storm water and retrofit of SuDS where practical.</p>	Strengthening of mitigation measure/MP policy to promote provision of potable, firewater and wastewater infrastructure as a prerequisite for development in the Docklands Area.
IF 6*	<i>Additional wastewater infrastructure to facilitate intensification of development in the North Lotts Planning Scheme Area to be identified in the Amended North Lotts</i>	Strengthening of mitigation measure/ MP policy to promote

	<p><i>Planning Scheme and developed in tandem with the carrying out of development in the Docklands.</i></p> <p>As a prerequisite for development actively promote, in conjunction with Dublin City Council, the provision of adequate potable and fire water supply, foul sewer and storm water drainage systems to facilitate development. 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 Docklands.</p>	<p>additional potable, firewater and wastewater infrastructure as a prerequisite of development in the Docklands Area.</p>
IF 7*	<p><i>The rollout 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, in consultation with Dublin City Council and other relevant authorities at regional and/or local level to serve that development.</i></p> <p>The rollout and phasing of development under the Poolbeg Planning Scheme, the Amended North Lotts Planning Scheme, and other amendments and extensions to Planning Scheme Areas within the Docklands Area to be subject to the provision of adequate wastewater and adequate potable water supply infrastructure provided, in consultation with Dublin City Council and other relevant authorities at regional and/or local level to serve that development.</p>	<p>Strengthening of mitigation measure/ MP policy to include reference to potable water in addition to wastewater.</p>
LU 14*	<p><i>A land use mix in the order of 60-70% residential/30-40% commercial floorspace to be adopted in the Poolbeg Planning Scheme.</i></p> <p>A floorspace ratio in the order of 60-70:40-30 residential to commercial will be required in the proposed Section 25 Planning Scheme for Poolbeg in accordance with the capacity of public transportation proposed for the area.</p>	<p>Strengthening of mitigation measure/ MP policy. Reflects restrictions imposed by public transport infrastructure on the Poolbeg peninsula.</p>
LU 56*	<p><i>Seek to preserve, provide and improve recreational amenity, green areas and open space provision within the Area</i></p> <p>Seek to preserve, provide and improve recreational amenity, green areas and both active and passive open space within the Area, which is accessible to and useable by all Docklanders and which promotes nature conservation and biodiversity enhancement within the Area.</p>	<p>Strengthening of mitigation measure/ MP policy. Promotes nature conservation and biodiversity enhancement of amenity areas</p>
LU 57*	<p><i>Seek to protect and improve canal, coastal and river amenities.</i></p> <p>Seek to protect and improve canal, coastal, and river amenities, including both water-based activities and leisure amenities in areas immediately adjacent, and promote nature conservation and biodiversity enhancement within the Area.</p>	<p>Strengthening of mitigation measure/ MP policy. Promotes nature conservation and biodiversity enhancement of amenity areas</p>
IF 18*	<p><i>Ensure that, in their design and operation, canals, waterways, locks and other infrastructure, do not compromise flood protection for the City.</i></p> <p>Ensure that, in their design, operation, and maintenance,</p>	<p>Strengthens policy by inclusion of 'maintenance' of canals, waterways, locks and other infrastructure</p>

	canals, waterways, locks and other infrastructure, do not compromise flood protection for the City.	
UD 11*	<p><i>Carry out a views study to inform consideration of the impact of development on city views.</i></p> <p>Carry out a views study to inform consideration of the impact of development on city views, including those from the Liffey and Dublin Bay.</p>	Inclusion of reference to the Liffey and Dublin Bay for the purpose of clarification of the mitigation measure

**New Mitigation Measures: New and Amended Master Plan Policies
Derived Following Screening of Amendments/ Modifications to the Draft
Master Plan**

New/ Amended Policy No.	New/Amended Policy	Comment
Amended Policy LU7	Provide appropriate zoning of sufficient lands and for the implementation, extension and amendment of Section 25 Planning Schemes, as appropriate, to cater for a target population of between 32,000 and 42,000 by 2013, subject to the timely provision of all necessary infrastructure (including water, waste water, electricity, public transport and social infrastructure), a suitable economic climate and the parallel and efficient roll out of development.	MP policy qualified by to the need to provide all necessary infrastructure to support development in Planning Scheme areas
New LU policy(LU4)	The Authority will consider higher plot ratios, and in certain circumstances lower plot ratios, for development in Section 25 Planning Schemes, consistent with the provision of all necessary infrastructure (including water, wastewater, electricity, public transport and social infrastructure), in accordance with the provisions set out in section 4.2.4 and section 4.4.3 of this Master Plan.	Qualifies MP text by including reference to the need to provide all necessary infrastructure to support development
New UD policy(UD 54)	The Liffey Quays shall be retained and any proposed development shall be in accordance with the requirements of the 'Architectural Conservation Guidelines for Planning Authorities', and shall ensure minimum physical impact on the quay walls which are identified on the Sites and Monuments Record (SMR) and / or included in the Record of Protected Structures (RPS).	Strengthens protection of Liffey Quays.

8.2 Appendix 2

Response to Submissions on the Draft Dublin Docklands Master Plan 2008 Environmental Report

Orla Hennessy, Development Application Unit, Department of Environment, Heritage and Local Government	
Summary of Key Points Raised	Response
Notes that since the ER was prepared, the Sandymount Strand and Tolka Estuary SPA has been re-advertised. This SPA includes the mooring dolphins.	It is acknowledged that changes have occurred to the Natura sites since the ER was prepared in that the Sandymount Strand and Tolka Estuary SPA has been re-advertised and extended. Specific Objectives Map B of the MP has been amended accordingly.
States there is evidence of otters in both the River Liffey and Dodder River and the Grand Canal Dock area. In addition Peregrine Falcons are also present in the area	Observations on the baseline data on biodiversity in the Docklands Area are noted.
States the flood protection measures listed such as tidal barrages would have implications for the Natura 2000 sites	Any flood management measures which would impact on Natura 2000 sites would require assessment for their environmental impact. As noted in the ER, these proposals are being investigated by Dublin City Council.
States the addendum in Appendix 1 of the Appropriate Assessment may need to be amended to include mention of the nesting terns on the ESB dolphin which is now part of the South Dublin Bay and Tolka River SPA (site code 004024)	Noted. The Appropriate Assessment can be amended accordingly.
Brigid McManus, Secretary General, Department of Education and Science	
Summary of Key Points Raised	Response
States the Department 'welcomes the plans for the sustainable social and economic regeneration of the Dublin Docklands Area'	Noted.
<p>Responds to a section of the Environmental Report that recognises early school leaving rates in the Docklands area are still too high despite a drop from 65% to 30% between 1997-2005.</p> <p>The numerous initiatives and measures in existence to combat this trend in the Docklands Area are outlined in addition to initiatives to address adult education as part of government education policy to prioritise investment in favour of those most at risk and to optimise access, participation and outcomes at every level of the system for disadvantaged groups.</p>	MP text amended to refer to the initiatives and measures referred to in the submission.

Tadhg O'Mahony, Senior Scientific Officer, SEA Section, Office of Environmental Assessment, Environmental Protection Agency (EPA), Inniscara, County Cork	
Summary of Key Points Raised	Response
1. Consultation	
Confirm the nature and extent of consultation with the adjoining Local Authorities during the Plan-making and environmental assessment process.	Regular consultation with Dublin City Council during MP/ER process which is on-going. Consultation with DCC on drafting of Infrastructure Policies, incorporating MP mitigation measures, which relate to material assets and to flooding/climatic factors. Informal scoping letter sent to a number of organisations including DCC. DCC represented on DDDA Council, which adopts the MP, by the Dublin City Manager and by 5 elected representatives. Joint working group established between DDDA and DCC to review issues of water supply and wastewater treatment. Preparation of Planning Schemes also undertaken in consultation with DCC.
Provide information on the zone of influence of the Plan outside the Plan area e.g. impacts on air quality, water quality, habitat and protected areas.	The Master Plan has the potential to have a negative impact outside the physical boundary of the Plan area. In particular, the zone of influence of the Plan has the potential to extend into Dublin Bay which has several national and European nature conservation designations. Potential negative impacts may arise due to negative influences on air quality, water quality and thence biodiversity. Due to the importance of Dublin Bay as a nature conservation area, monitoring of any impact on these designations is subject to regular review to ensure monitoring indicators are effective.
Confirm consultation has taken place with the National Parks and Wildlife Service (NPWS) with regard to Appropriate Assessment.	This was deemed unnecessary by Natura Consultants who carried out the AA. The AA was carried out in accordance with the European Commission publication on Assessment of Plans and Projects significantly affecting Natura 2000 sites.
2. Non –Technical Summary	
The Non-Technical Summary is required to include a summary of all the information included in the SEA Directive and include a summary of the overall findings.	See Appendix 4.
3. Plan Description	
There would be merits in including information on key European legislation e.g. Water Framework Directive, Floods Directive, Habitats Directive etc. that could have an impact on development and related activities associated with the Dublin Docklands Development Master Plan ("the Plan") area.	It is not a requirement to refer to European legislation in the ER. However, relevant European legislation and associated national/regional policy is as follows: Water Framework Directive (WFD) 2000. Council Directive 2000/60/EC was adopted in 2000 and encompasses many previous EU Directives aimed at reducing pollution ¹⁰ . It requires governments to manage all waters including rivers, lakes, groundwater, estuaries and coastal waters. The aim is to provide a new, strengthened system for the protection and improvement of water resources ensuring that all waters achieve at least 'good status' by 2015. Management Plans are being prepared for the whole of Ireland which is divided up into eight River Basin Districts (RBDs) and must be in place by 2009. The RBDs serve as administrative areas for coordinated water management so the responsible authorities which include cross-border

counties, must coordinate their water management actions for their region. The Docklands lies within the Eastern River Basin District.

Habitats Directive 1992. Its purpose is to promote and ensure biodiversity through the conservation of natural habitats and wild flora and fauna. It consists of two parts dealing with habitat protection and species protection. Each Member State must designate Special Areas of Conservation (SACs) as part of a European Network called Natura 2000. This enables the natural habitat and species habitat to be maintained and restored if necessary to a favourable conservation status. Animals and plant species that are in need of strict protection are listed. The Directive was transposed into Irish Law through the E.U. Natural Habitats Regulations, 1997.

Birds Directive 1979. This is one of the main directives introduced by the EU on nature conservation. The designated sites are habitats of importance for wild birds. The Directive requires E.U. Member States to designate habitats, called Special Protection Areas (SPAs) for particularly vulnerable species (such as Whooper Swan and Corncrake), regularly occurring migratory species (such as ducks and geese) and wetlands which attract larger numbers of migratory birds each year. It also ensures the implementation of special habitat conservation measures.

Convention on Biological Diversity 1992 (CBD). The purpose of this Convention is to conserve biological species, genetic resources, habitats and ecosystems, to ensure the sustainable use of biological materials, and to guarantee a sustainable sharing of benefits derived from genetic resources.

Floods Directive 2007 The European Directive on the Assessment and Management of Flood Risks (2007/60/EC of 23 October 2007) (the Floods Directive) is designed to help Member States prevent and limit floods and their damaging effects on human health, the environment, infrastructure and property.

Air Quality Directive 2008. Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe entered into force on 11 June 2008. This Directive aims to define and establish objectives for ambient air quality designed to avoid, prevent or reduce harmful effects on human health and the environment as a whole; maintaining air quality where it is good and improving it in other cases.

The Environmental Protection Agency has published a **National Hazardous Waste Management Plan** for the period 2008 to 2012. The Plan sets out the priorities to be pursued over the next five years and beyond to improve the management of hazardous waste in the Republic of Ireland. The objectives of the Plan are:

1. To reduce the generation of hazardous waste by industry and society generally.

	<p>2. To minimise unreported hazardous waste with a view to reducing the environmental impact of this unregulated waste stream.</p> <p>3. To strive for increased self-sufficiency in the management of hazardous waste and to reduce hazardous waste export.</p> <p>4. To minimise the environmental, social and economic impacts of hazardous waste generation and management.</p> <p>The Plan is made under section 26 of the Waste Management Acts, 1996 to 2008.</p> <p>Eastern River Basin District Management Plan see section on Water Framework Directive (WFD).</p> <p>River Dodder Catchment Flood Risk Assessment and Management Plan. The purpose of the study is to assess the spatial extent and degree of flood hazard and risk within the Dodder Catchment, to examine the future pressures that could impact on this risk and to develop a long term strategy for managing the risk that is economically, socially and environmentally sustainable. This report is due in the near future.</p>
<p>The inclusion of a number of relevant figures/maps throughout the document with an Ordnance Survey base would be beneficial to show the Plan area in the context of known named environmental features-rivers, water bodies, designated areas etc. Also, there would be merits in having a wider spatial area covered in Figure 1. to give an overall context of the location of the Docklands in the Greater Dublin area</p>	<p>The Maps and Figures are consistent with those in the Master Plans 2003 and 2008. Statutory MP Maps A and B are available at a scale of 1:7500. The other figures in the MP and ER are schematic representations and act as a guide for the reader. The maps and figures reflect the strategic nature of the MP and associated ER and the role of the Authority as a development authority.</p>
<p>There would be merits in the following:</p> <ul style="list-style-type: none"> • giving further consideration to addressing links to wider public transport issues, impacts on nature conservation sites beyond the Plan boundary; and, • Inclusion of a description of links to, and impacts of, nearby areas/ activities. In particular reference should be made to shipping and other activities at Dublin Port e.g. freight transport related emissions, Seveso sites etc., likely future activities at Poolbeg and other likely developments in Dublin and wider area. 	<p>Acknowledged that the Docklands, due to its location, is interlinked with the adjoining Dublin City and Dublin Port. As such it links into and impacts on transport initiatives that serve the wider Dublin Area referred to in the ER. Due to its proximity to Dublin Bay, development in Docklands has the potential to impact on nature conservation areas adjoining and within Docklands as noted in the ER.</p> <p>The Docklands Area is located in direct proximity to Dublin City Centre and to Dublin Port. As such it has direct links into areas where a range of commercial, industrial, residential and recreational activities take place. The activities at Dublin Port and Dublin City Centre generate traffic impacts. Dublin Port also contains a number of Seveso sites. The Docklands includes the south port area at Poolbeg, where it is proposed to adopt a Planning Scheme for part of the peninsula.</p>
<p>4. Existing environment</p>	
<p><i>Use of Maps</i> Throughout the Environmental Report consideration could be given to the inclusion of the names of key features identified in the relevant associated Tables. The use of an Ordnance Survey map base would be useful in this regard. The figures/maps included in the Environmental Report provide little contextual information.</p>	<p>See above.</p>

<p><i>Environmental Objectives, Indicators and Targets</i></p> <p>Relevant Environmental Protection Objectives set at European Community or Member State level should where appropriate be clearly stated (e.g. relevant air quality standards and relevant water quality-surface water, groundwater, coastal water etc.) as appropriate.</p>	<p>The Air Quality Directive 2008, has established air quality standards for the protection of human health and vegetation, for SO₂, NO₂ and NO_x, lead, PM₁₀, PM_{2.5}, CO, ozone and benzene and require targets to be reached by 2010. Air quality status should be maintained where it is already good, or improved. This is covered in the ER by the environmental protection objective to 'limit adverse impact on air quality'.</p> <p>The objectives of the Water Framework Directive (WFD) are to protect all high status waters, prevent further deterioration of all waters and to restore degraded surface and ground waters to good status by 2015. This is reflected in the monitoring programme.</p>
<p><i>Evolution of the environment without implementation of the Plan</i></p> <p>Consideration should be given, where not already provided, (e.g. landscape and climate), to the inclusion of relevant text on the evolution of the different environmental aspects of the environment without implementation of the Plan.</p>	<p>Confirmation that this is included in S. 4.6.3 and S. 4.8.4 of the ER.</p>
<p><i>Water Framework Directive</i></p> <p>While reference is made to the Water Framework Directive, there should also be a description with respect to the relevance and the potential for the outputs, River Basin Management Plan associated Programme of Measures to influence water related resources within the Plan area.</p>	<p>The Eastern River Basin District Management Plan is under preparation but is not yet published. The WFD requires each River Basin District to produce a management plan. The Docklands lies within the Eastern River Basin District and therefore the water resources in the area will be influenced by the Management Plan and associated Programme of Measures when it is published. The potential date of publication is June 2009 (http://www.erbd.ie). It is proposed to establish an integrated water quality monitoring and management system in relation to all inland surface waters, estuaries, coastal waters and groundwaters, and to provide the bulk of the baseline information required for the development of a comprehensive River Basin Management Project. All significant impacts on water quality and quantity will be identified, quality objectives will be set and identify and necessary monitoring and management measures to achieve those objectives will be put in place. This Management Plan will influence how water resources in the Docklands are managed in future.</p> <p>Since the ER was published the Liffey Estuary (as far as the Customs House) has been designated as a heavily modified water body. This designation recognises that the water body cannot be returned to Good Ecological Status (natural state) and therefore must only reach Good Ecological Potential. The environmental objective for AWB and HMWB is good ecological potential (GEP) instead of "good ecological status". This has to be achieved by 2015. The Grand and Royal canals also run into the Docklands - these are designated as Artificial Waterbodies - Waterways Ireland is determining their status (but they are both in very clean condition) and selecting measures for any improvements needed.</p>
<p>There may be merits in including indicators for monitoring "water usage", "waste water generated", "energy usage", etc. Consideration should be given to the potential for inclusion of relevant indicators relating to the provision/and relative usage of "renewable</p>	<p>These issues will be addressed in the forthcoming Sustainability Toolkit for Planning Schemes within the Docklands (see Section 8.4 of the MP). The Authority is seeking to reach the highest levels in sustainable waste management.</p>

energy" and "waste management" e.g. waste generation, level of recycling etc.	
<i>Landscape</i> Under Landscape, consideration should be given to the inclusion of specific Indicators and Targets for the protection and enhancement of water related landscape-features –e.g. "Liffescape", "canalscape", "seascape", and "coastscape".	Not considered appropriate at this plan level. Water related landscape protected by MP policies (UD 46 – 49 incl.). Note also River Regeneration Strategy 2001 developed by the DDDA.
Also under landscape, recognition should be given to the distinct streetscape /landscape types within the "Docklandscape" including both the traditional residential areas, traditional industrial buildings and the more recent development.	Recognition of the distinct architectural heritage of the Area is acknowledged in S.4.8.1 of the ER. The Authority will continue to work with DCC in the identification of areas suitable for Architectural Conservation Area (ACA) status in the Area.
There may also be merits in considering the long distance and short distance views into the Docklands from the Liffey and Dublin Bay.	Dealt with by Policy UD 11*. For the purpose of clarification, the policy has been amended to refer to views from Dublin Bay and the South City as follows: Carry out a views study to inform consideration of the impact of development on city views, <i>including those from the Liffey and Dublin Bay</i>
Consideration should be given to treating landscape and visual aspects in a separate section and also the requirement for further description and assessment of the landscape elements of the Plan and surrounding area (zone of influence) should be considered.	Structure of this section of the ER reflects the urban character of the Area. A main influence on the surrounding area relates to views which are acknowledged in the ER. The fact that the area contains open space areas of city-wide significance is also acknowledged in the ER. The methodology employed in the ER is considered the most appropriate given the nature and context of the Area.
<i>Population and human health</i> Under Population and Human Health consideration should be given as appropriate to the potential for inclusion of relevant "indicators" or "targets" relating to "education" and /or "employment". The inclusion of a target relating to the provision of "homes"/ affordable homes could also be considered, as appropriate.	The Annual Monitoring Reports published by the DDDA monitor progress in educational attainment, employment and affordable homes.
<i>Biodiversity, Flora and Fauna</i> Clarify what the "Green Shading " in Figure 3 denotes. Also clarify whether the proposed SPA extends within the Docklands Area. A similar Figure with more contextual background information and wider spatial coverage would be useful to include in the Draft Plan and the Appropriate Assessment. It would be useful to identify the individual designated areas on Figure 3.	Green shading indicates SPA. See Figure legend. The area designated for nature conservation at European level, i.e. the Natura 2000 sites, extend into the Docklands Area between Irishtown Nature Reserve and the Wastewater Treatment Plant as illustrated in Figure 3 of the ER. Since the ER was written an extension of the boundary of the SPAs (4024 & 4006) has been made. The most significant impact of this has been the inclusion of the, South Dublin Bay cSAC (210), one of the Mooring Dolphins (pNHA 201) and part of the terrestrial area of Poolbeg into SPA 4024.
Confirm whether there is a "Management Plan (s)" in place for the European sites (SACs/ SPAs).	There are no Management Plans in place at present. These are the responsibility of the NPWS.
<i>Population and human health</i> There may be merits in making a distinction between the impacts of the Plan on the different communities within the Plan area, i.e. the longer-term residents of the area and those who have moved in following redevelopment in the area.	Annual monitoring reports published by the DDDA monitor progress in educational attainment, employment and affordable homes throughout the Docklands Area.
<i>Air</i> Confirm the availability of Baseline Air Quality data for the Docklands area and the broader Dublin Port area. This information would be useful in establishing baseline situation against which future activities in the Port and surrounding area could be assessed.	The baseline data available for the Docklands Area is presented in section 4.5 of the ER. The Air Quality Monitoring Unit of the EPA, has advised that in Zone A (i.e. Dublin City and environs), air quality is generally good and that

	<p>there may be some 'local nuisance' from time to time and that DCC deal with this under the Air Pollution Act 1987. There is no air quality monitoring being conducted by the EPA within the Docklands Area at present.</p>
<p><i>Noise</i> Consideration should be given to the potential for including a specific "Environmental Objective" and associated relevant "Indicator" and "Target" with respect to "noise" and possibly also "vibration", as appropriate. Reference should be made to the Noise Directive and associated national regulations as well as the specific "measures"/ "actions" set out in the "Noise Action Plan " for Dublin City when it becomes available.</p>	<p>Noise is of particular importance due to its temporary and potentially long-term nature. During the construction phase of any Plan both noise and vibration can cause nuisance.</p> <p>An additional target and indicator in the MP monitoring programme in respect of noise and vibration has been added to the objective 'Protect and enhance human health' as follows '</p> <p>New target: To minimise noise and vibration, where possible and maintain the environmental acoustic quality where it is good. (Taken from END Directive) New indicator: Type and number of noise/vibration complaint received.</p> <p>EU Directive 2002/49/EC relating to The Assessment and Management of Environmental Noise, (known as the 'END' Directive)</p> <p>Irish Government (2006) S.I. No. 140 of 2006 Environmental Noise Regulations</p> <p>Noise Action Plan for Dublin City underway but not yet available. The Noise Action Plan will be for a 5-year period from 31st October 2008.</p>
<p><i>Climatic Factors</i> The section should include a description of climate change and the potential for increased frequency of extreme weather events impacting on the Plan area.</p>	<p>Climate change issues are addressed in two ways in the ER. Firstly, the influence of climate change on the Plan area such as impacts of increased frequency of extreme weather events for example flooding. Secondly, the influence the plan has on climate change, for instance the impact of increased greenhouse gas emissions from transport and energy use.</p> <p>In order for the Plan area to adapt to future climate change policies have been included to address the issue (IF 15-18*). These include measures requiring flood risk assessment for all S. 25 applications and require developers to set minimum floor level above predicted high tide levels, thus combating flooding of property due to extreme weather events.</p> <p>In order to mitigate against activities resulting in greenhouse gas emissions, a MP policy have been developed to improve energy efficiency (IF11). In addition, the use of public transport has been optimised.</p>
<p>In addition, the potential for the creation of a microclimate urban "heat island" effect within the Docklands area.</p>	<p>It is considered that the urban heat island effect would not be a significant impact in the Docklands Area due to its location adjacent to the Irish sea and to the strong influence of onshore breezes which would act to cool the Area.</p>

<p>How has the possible implication of climate change on potential for flooding within the Plan area been assessed and addressed in the Draft Plan?</p>	<p>A number of policies have been incorporated to ensure flood risk, from climate change is kept to a minimum (IF 15-18*). These policies have been the subject of consultation with DCC.</p> <p>Climate change impacts outside the Plan area have the potential to cause flooding within the Plan area. For example, increased rainfall in the Dodder catchment has the potential to increase the flood risk downstream (in the Docklands Area). In addition, an increase in the surface area of hard surfaces, outside the Plan area, has the potential to increase runoff within the Plan area. In addition, sea level rise due to climate warming has the potential to affect the Docklands.</p> <p>Mitigation measures have been proposed to address the issue of climate change. It was considered that maintenance of locks in working order would be of particular importance in helping reduce flood risk due to climate change.</p> <p>The following mitigation measure has been strengthened as follows: IF18*. Ensure that, in their design, operation and <i>maintenance</i>, canals, waterways, locks and other infrastructure do not compromise flood protection for the city.</p>
<p>5. Alternatives</p>	
<p>Clarify the extent to which lower level alternatives were considered in the assessment e.g. best option(s) for provision of transport links, renewable energy requirements, level of affordable housing to be provided.</p>	<p>Plan alternatives are focused at the strategic level. Lower level alternatives will be addressed at Planning Scheme level. Each Planning Scheme is subject to EIA, and alternatives at this level are more appropriately addressed in the accompanying EIS.</p> <p>Focus at all times on providing a high level of public transport accessibility with an emphasis on walking and cycling. Public transport options for the Poolbeg Peninsula involve both BRT and LUAS which will be investigated further at Planning Scheme level. Decision taken at MP level to opt for both LUAS and BRT on the peninsula.</p> <p>Renewable energy requirements to be investigated via sustainability toolkits.</p> <p>Social and affordable housing similar to national level of 20%. This has been a consistent MP policy since 1997 and incorporated in the 1997 and 2003 MPs. The Docklands Area has sought the provision of 20% social and affordable housing in housing developments since 1997 i.e. before it became national policy in the Planning and Development Act, 2000.</p>
<p>Reconcile the text in Section 6.4 "Assessment of Plan Alternatives" and the Table setting out the Assessment of the "Master Plan Alternatives". There would appear to some discrepancies between the text evaluating the alternatives and the table representing the assessment for "air" and "water".</p>	<p>The text of the ER refers to short term negative impacts on air during the construction phase. These were included in the text rather than in the matrix, the latter providing key information supported by additional information in the text. The text and matrix should be read in conjunction with each other. The EPO in relation to water supply infrastructure is worded – 'to provide water supply infrastructure' which is clearly a positive objective. The text however qualifies this by referring to deficiencies in water supply infrastructure which are inadequate and necessitate mitigation.</p>

<p>Consideration should be given under "Biodiversity, flora and fauna" in the Alternatives Assessment to the potential for promotion of increased recreational use of nature conservation areas for amenity/recreation to negatively impact on "biodiversity". In the event that this is a potential outcome, consider, how any potential negative impacts might be avoided/mitigated.</p>	<p>It is acknowledged that the promotion of increased recreational use of nature conservation areas for amenity/recreation has potential to negatively impact on biodiversity, flora and fauna. It is considered that not only recreational use but other uses could also impact negatively on biodiversity.</p> <p>Additional mitigation/ MP policy (UD 76*) included as follows. <i>Increased amenity, recreational and other use of designated nature conservation areas in and adjoining the Docklands shall be planned and managed in order to avoid possible significant negative impacts on biodiversity</i></p>
<p>Explain why Population and Human Health were not included as Environmental Receptors in the Assessment Matrix for the Assessment of Alternatives.</p>	<p>It was considered that, due to the complexity of the impacts, Population and Human Health would be best addressed in the text of the ER.</p>
<p>Clarify the status of the proposed Amendments/Extensions to the North Lotts, Customs House, Grand Canal and Poolbeg Planning Schemes. Confirm how the preferred alternative(s) for each of these "Schemes" was informed by the environmental assessment.</p>	<p>The preferred alternatives for the North Lotts are under evolution at present and will be considered at Planning Scheme and associated EIS level. The Draft Planning Scheme for an Area of Poolbeg Peninsula is currently on public display. No amendments are currently proposed for the Customs House and Grand Canal Dock Planning Schemes but may arise during the course of the MP as described in the ER. The development of the Poolbeg Peninsula at different densities (gross plot ratios of c. 1 and c.2) informed the plan alternatives. In addition, a zoning change to the North Wall Quay would enable consideration of creative and innovative development proposals for the campshire and river, provided they are consistent with the amenity and conservation of the area, and enhance the use of these amenities by members of the public.</p> <p>Assessment of Land Use zoning changes included in the MP is attached in Appendix 5. This confirms that the changes have been assessed and have either been mitigated against in the ER or have no significant environmental implications.</p>
<p>6. Likely significant effects of the Plan</p>	
<p><i>Full range of likely significant effects</i> The Environmental Assessment should include an assessment of the full range of "likely significant effects" as set out in the SEA Directive and associated national Regulations, namely – <i>"secondary, cumulative, synergistic, short, medium and long-term, permanent and temporary, positive and negative"</i>. The assessment appears only to assess the positive and negative effects of the Plan.</p>	<p>The ER assessed the full range of likely significant effects. Clarification in Appendix 3.</p>
<p>The full range of effects should be assessed and reported on in the Environmental Report. In this context the potential for cumulative effects in combination with other relevant Plans within the Dublin/Greater Dublin area should be assessed.</p>	<p>The ER assessed full range of likely significant effects. Clarification in Appendix 3.</p>

<p><i>Cumulative effects</i> Development within the Plan area, Dublin Port and the city at large could result in cumulative effects with respect to "air quality". In addition, the proposed large scale construction arising from the implementation of the Plan would result in short-term temporary impacts associated with noise, dust and traffic disruption. The assessment should address the potential for impacts of the Plan beyond the Plan boundary as well as potential for impacts from outside the Plan boundary within the Plan area. These likely effects should be considered and assessed.</p>	<p>Cumulative impacts will arise in relation a number of environmental receptors (see Appendix 3) In relation to air quality, there is a lack of public transport infrastructure currently serving the Poolbeg peninsula. Other parts of the Area including North Lotts and Grand Canal Docks Areas are, or are planned to be, well connected by public transport under Transport 21. Mitigation measures were devised with these cumulative impacts in mind. The mitigation measures serve to control the land-use mix on the Poolbeg peninsula, phase development in tandem with public transport and ensure any retail development is well served by public transport.</p> <p>Short term impacts arising from construction will be addressed at Planning Scheme and Section 25 level.</p> <p>The full range of impacts of the MP is addressed in the ER including impacts outside the plan area. See Appendix 3 for clarification.</p>
<p><i>Methodology</i> Clarify the methodology applied for undertaking the assessment of the preferred alternative. Describe whether the assessment for the various environmental topics were "qualitative" or "quantitative" and whether modelling was applied as appropriate.</p>	<p>Qualitative assessment was applied. No modelling was undertaken</p>
<p>7. Mitigation</p>	
<p>Consideration could be given to the inclusion of the following "mitigation measures" and/or policies for their promotion as appropriate:</p>	<p>Many of the suggested mitigation measures will be addressed at Planning Scheme level.</p>
<ul style="list-style-type: none"> • Car-free developments; 	<p>Planning Scheme level and as part of the Sustainability Toolkit.</p>
<ul style="list-style-type: none"> • the concept of "green roofs" (to reduce the urban "heat island" effect); 	<p>Planning Scheme level as part of the Sustainability Toolkit.</p>
<ul style="list-style-type: none"> • rainwater collection and recycling requirement for all developments; 	<p>Addressed in MP policy IF 20. Also to be addressed at Planning Scheme level and as part of the Sustainability Toolkit.</p>
<ul style="list-style-type: none"> • strong promotion of renewable energy production through requiring developments to provide a certain percent of their electricity needs from renewables; 	<p>New MP policy devised to address this issue as follows: <i>The Authority will encourage and promote the use of renewable energy technologies wherever possible (IF 10).</i></p>
<ul style="list-style-type: none"> • the feasibility of "harnessing of wind energy" within the Plan area; 	<p>As above.</p>
<ul style="list-style-type: none"> • the provision of allotments for resident of the Plan area; 	<p>Proposed in Section 6.3.2 of the MP.</p>
<ul style="list-style-type: none"> • the need for relevant mitigation measures to offset any potential negative impacts of increased recreational activities along water courses and the shoreline/coastal areas on biodiversity; and 	<p>New Mitigation measure/ MP policy recommended (UD 76*)</p>
<ul style="list-style-type: none"> • provision for "homeless shelter". 	<p>This is a DCC matter</p>

<p><i>Flooding</i> Re-examine the proposed mitigation measures in relation to flooding, in the context of ensuring the measures proposed are adequate to protect residents and workers within the Plan area and to protect emergency transport services and infrastructure.</p>	<p>MP policies and mitigation measures on climatic factors have been the subject of iterative consultation with DCC, and are considered to be robust. There will be on-going co-operation with DCC on the matter. A strengthening of Mitigation measure 15 (MP policy IF18*) is recommended as follows: Ensure that, in their design, operation <i>and maintenance</i>, canals, waterways, locks and other infrastructure do not compromise flood protection for the city.</p>
<p>Describe how has the possible implication of climate change on potential for flooding been assessed and addressed in the Draft Plan.</p>	<p>Addressed in Section 5.2.6 of the MP and by policies IF15, IF16, IF17*, IF18*, IF 23* and UD40* .</p>
<p>It is noted that the specific Policies which relate to a proposed mitigation measure arising from the environmental assessment have been identified in the Draft Plan. There would be merits in highlighting in the Environmental Report also which specific Plan Policy implements specific mitigation measure.</p>	<p>A table of new, amended and replaced policies due to mitigation is attached (Appendix 1).</p>
<p>The proposed "mitigation measures" should be re-examined and assessed in the context of their ability to fully avoid the relevant significant environmental effects. Where full mitigation is not likely to be achieved identify what other measures are underway through different instruments or what other measures are required which would ensure the identified effects of the Plan are fully mitigated.</p>	<p>Additional mitigation measures devised following the public consultation process. Additional or amended mitigation measures recommended re biodiversity, infrastructure, views and climatic factors.</p>
<p>8. Monitoring</p>	
<p>Clarify how the proposed Monitoring Programme will address significant gaps identified in environmental data during the environmental assessment process. For example there would appear to have been gaps in data for "greenhouse gas emissions" and appropriate scale data water, soil, air, flooding and biodiversity.</p>	<p>The Authority will cooperate with DCC and NPWS in relation to habitat mapping of the Area and any data generated will be made available for monitoring.</p> <p>The Authority will cooperate with DCC and the EPA in relation to air quality monitoring, in particular PM₁₀ monitoring. In addition, when data becomes available through the EPA for appropriate scale greenhouse gas emission data this will be incorporated into the monitoring programme.</p> <p>Additional data has become available on water quality and further data will become available for flooding on publication of the Flood Risk Management Plan for the Dodder River. Since the ER was published, the Liffey Estuary (as far as the Customs House) has been designated as a heavily modified water body. More water quality data will become available through implementation of the WFD. The Authority will cooperate with DCC and EPA in relation to water (surface, coastal and groundwater) monitoring.</p> <p>As more sites become developed in the Docklands Area more soil data will become available through the Section 25 process.</p>
<p>Describe how the Plan and associated monitoring programme will ensure adequate data is gathered to address significant data gaps during the life of the Plan.</p>	<p>Addressed above.</p>

<p>Describe how the Environmental Indicators proposed will provide “an early warning of significant unforeseen adverse effects”.</p>	<p>Environmental indicators are designed to detect deteriorating environmental condition and once a negative trend is identified over a period of time appropriate action will be taken as noted in the ER.</p>
<p>Describe how the environmental assessment and the Plan have been informed by the ongoing monitoring undertaken during the implementation of the current Docklands Area Master Plan.</p>	<p>Previous monitoring reports identified a deficiency in public open space in the North Docklands Area and the need to increase permeability and movement throughout the entire Docklands Area. The MP was informed by previous monitoring in respect of social regeneration including education attainment, employment/unemployment and the provision of social and affordable housing.</p>
<p>Consideration should be given to the following in the Monitoring Programme:</p> <ul style="list-style-type: none"> • The use of environmental indicators as set out in the EPA’s ‘Environment in Focus 2006’ and ‘Water Quality in Ireland 2006’ reports. 	<p>The indicators used in Environment in Focus and Water Quality in Ireland are based on national data and therefore not directly applicable to the Docklands Area. However, they provide a useful guide.</p>
<ul style="list-style-type: none"> • The setting of appropriate thresholds, which would determine when intervention measures might be required. 	<p>Thresholds established in the relevant Directives such as WFD and AQS will determine if intervention is necessary.</p>
<ul style="list-style-type: none"> • Monitoring of both positive and negative effects, where they occur. 	<p>This is incorporated into the monitoring programme.</p>
<ul style="list-style-type: none"> • Inclusion of the on-going review of environmental targets and indicators in the monitoring programme. Responsibility for this role should be clearly defined. 	<p>It is the policy of the Authority to carry out an on-going review of environmental targets and indicators. The 2003 MP has been the subject of regular monitoring, where targets and indicators have been reviewed. The responsibility for this role rests with the DDDA. This is addressed in Section 9.2 of the ER.</p>
<p>The Monitoring Programme should be flexible to take account of the various stages of the Plan and should be able to deal with specific environmental issues as they arise. The programme must be able to deal with the possibility of cumulative effects.</p>	<p>The environmental indicators have been designed to be sufficiently flexible to demonstrate environmental impact including cumulative, at different stages of implementation of the Plan.</p>
<p>Clarify the nature of the response to any significant negative environmental effects that may occur during the implementation of the Plan. Who will have responsibility for this? What will trigger appropriate action?</p>	<p>Biodiversity – DDDA will alert the NPWS of any significant physical disturbance of Natura 2000 sites.</p> <p>Soil – DDA responsible for ensuring contaminated sites are decontaminated.</p> <p>Water – monitoring data compiled by DCC, ERBD (Eastern River Basis District) Authority and EPA.</p> <p>Air– monitoring data compiled by DCC and EPA.</p> <p>Greenhouse gas – plan unlikely to significantly contribute to climate change due to high level of public transport proposed and employment of Sustainability Toolkit at planning scheme level.</p> <p>Flooding – any flooding to property will trigger action by the DDDA in consultation with DCC and the Office of Public Works (OPW).</p> <p>Material Assets – any deterioration in water</p>

	<p>quality in Dublin Bay and other water bodies will be detected by ERBD Authority and DCC. Breaches in standards for Bathing Water, Drinking Water and WFD will trigger appropriate action in consultation with DCC/EPA.</p> <p>Cultural Heritage – DDDA will alert the DoEHLG of any serious encroachment on archaeological sites should this occur.</p>
<p>The Monitoring Programme should include information on how the monitoring proposed will allow unforeseen adverse effects to be identified and responded to as appropriate. Who has responsibility for this? What will trigger appropriate remedial action?</p>	<p>The monitoring programme is believed to be robust enough to alert the Authority to any unforeseen adverse effects. The Authority will have responsibility for this in consultation with DCC. Appropriate action will be specific to the nature of the impact.</p>
<p>There would also be merits in including a commitment to oversee the implementation of mitigation measures and monitoring programme. There may be merits in establishing a Steering Committee tasked with these responsibilities.</p>	<p>The DDDA has carried out monitoring of the 2003 MP and will continue this practice. The implementation of the mitigation measures have been incorporated into the MP as policies and as such have a strengthened statutory basis. They are an integral part of the MP and have equal standing with other MP policies. The annual monitoring reports will be published.</p>
<p>9. Appropriate Assessment</p>	
<p>Clarify the scope of the Appropriate Assessment. Clarify how the Appropriate Assessment has taken into account the potential for <i>“in combination” impacts of other plans and projects</i>”. For instance clarify how the assessment has addressed the potential for likely significant effects on European sites upstream and downstream of the site, as appropriate, arising from for instance critical infrastructure required to service development within the Plan area e.g. water supply, waste water treatment etc.</p> <p>Clarify how the Appropriate Assessment, <i>“undertaken in accordance with Article 6 of the Habitats Directive”</i>, was integrated in the environmental assessment and Plan –making processes.</p> <p>Identify what “mitigation” and “monitoring” measures over and above those already recommended in the environmental assessment were generated by the “Appropriate Assessment”.</p> <p>The Appropriate Assessment should include a map showing the Plan area in the context of the European sites within the zone of influence of the Plan and “other relevant plans and projects”.</p> <p>Reference should be made to the conservation objectives of the relevant European sites within the zone of influence of the Plan area. Also confirm whether a Management Plan exists for the European sites identified.</p> <p>The National Parks and Wildlife Service of the Department of Environment, Heritage and, Local Government is the statutory body with respect to Appropriate Assessment.</p>	<p>The scope of the AA addresses the impact of the Master Plan in combination with other plans and projects. This is furthermore reflected in the mitigation and monitoring proposed. The AA is compliant with Article 6.3 of the Habitats Directive.</p> <p>The AA, ER and MP were prepared in conjunction with each other, with each process informing the other</p> <p>The AA, ER and MP were prepared in conjunction with each other. Biodiversity mitigation was prepared by the AA and SEA consultants in consultation.</p> <p>Noted</p> <p>No management plans exist.</p>

Brian Beckett, Fisheries Environmental Officer, Eastern Regional Fisheries Board, 15a Main Street, Blackrock, County Dublin	
Summary of Key Points Raised	Response
The Master Plan area incorporates some of the foremost salmonoid fisheries in the region in addition to the Royal and Grand Canals. The Liffey and Dodder support a significant population of Atlantic salmon.	This is acknowledged.
The Board has serious reservations regarding any proposals for direct interventions e.g. coastal morphology or land reclamation	No changes in coastal morphology or land reclamation are proposed.
The issue of fisheries habitat loss should be considered. States areas proposed for development are located immediately adjacent to tidal sections of river systems and estuarine and transitional habitats – the development scheme and strategy proposed have significant potential to impact on aquatic ecology in the area	There will be no fisheries habitat loss due to the Masterplan as no reclamation of tidal waters is proposed. The Master Plan includes strong policies to protect biodiversity, flora and fauna in and adjoining the Docklands Area. Additional mitigation measures in respect to biodiversity are included following public consultation.
Data from nearby Poolbeg water intake has recorded up to 28 species of fish over a sampling season – recommendations and mitigation measures should be formulated accordingly.	This is acknowledged.
Mitigation measures outlined in the Appropriate Assessment should be applied to all areas where aquatic or riparian impact is possible.	Mitigation measures outlined in the Appropriate Assessment to be applied to all areas.
Contaminant levels arising from past land-use practise should be closely monitored.	Stringent measures are applied in respect of all Section 25 applications in relation to safe disposal and treatment of contaminated soil. See MP policy IF 14.
Recommended that the publication "Requirements for Protection of Fisheries Habitat during Construction and Development Works at River Sites" be consulted when works are undertaken.	Noted
Any works directly affecting watercourses or riparian habitats in the area must first be submitted to the Board for assessment and approval.	Noted

<p>Fisheries ecology is an important element for consideration for any development in the area</p> <p>Dodder systems support a regionally significant population of Atlantic salmon, a species listed under Annex II and V of the EU Habitats estuaries, and transitional zones serve as the natural linkage for species such as salmon and sea trout migrating between freshwater and ocean environments</p>	<p>Noted</p>
<p>Suggest estuaries provide: a nursery habitat for fish species; shelter and food for fish and shellfish; food sources for shore birds, waterfowl, larger fish and marine mammals – it is essential to consider the potential impact of any proposal in the DDDA on fisheries in order to ensure representation of environmentally sustainable and sympathetic fisheries targets</p>	<p>There will be no fisheries habitat loss due to the Master Plan as no reclamation of tidal waters is proposed.</p>
<p>Michael Stubbs, Assistant City Manager, Dublin City Council</p>	
<p>Summary of Key Points Raised</p>	<p>Response</p>
<p>Additional baseline data provided by DCC on biodiversity, flora and fauna in the Docklands Area.</p> <p>Any activity that occurs in adjacent areas to protected habitats or species requires an Appropriate Assessment in accordance with Article 6(3) of the EU Habitats Directive.</p>	<p>Included in ER at the appropriate level of detail.</p> <p>This is acknowledged.</p>
<p>Comments on the Environmental Report</p>	
<p>The Map showing Specific Objectives is incorrect. It does not represent the ESB Mooring Platform nearest the Power Station Towers as now being proposed as a SPA. The same applies to Figure 3, page 41 showing Designated Sites.</p>	<p>This is noted. Map B has been amended in the MP.</p>
<p><i>Baseline Data for Biodiversity, Flora and Fauna</i> Poor baseline data presented. No specific ecological assessment provided, only referencing of DCC Biodiversity Action Plan. Statements such as 'it is not considered likely that otters exist within the Docklands area' are not acceptable in terms of assessing the presence and therefore impact on an EU Habitats Directive Annex IV species.</p>	<p>The biodiversity baseline data used in the ER was a summary of available data. Collection of primary data is not required in SEA (see DoEHLG Guidelines, 2004) nor was an ecological assessment carried out. It is acknowledged that evidence of otters exists within the Docklands area.</p>
<p><i>Existing Environmental Problems</i> This list could certainly be longer. Other sources of concern to flora and fauna are:</p> <ul style="list-style-type: none"> • Disturbance to nesting birds • Disturbance to orchid grassland • Loss of feeding areas for butterflies, moths and birds. 	<p>The suggested concerns are acknowledged and addressed in MP policies UD73* and UD 76* and in the MP monitoring programme.</p>

<p><i>Environmental Targets for Biodiversity</i> The Environmental Indicators for biodiversity monitoring are not adequate or appropriate for biodiversity, rather the environment, as a whole. The Indicator 'Develop new and existing open spaces within the area' is not a biodiversity specific monitoring indicator.</p>	<p>Open/green space can be used as an indirect indicator for biodiversity in the absence of primary biodiversity data. Whereas amenity grassland, such as playing fields, does not support a wide range of biodiversity, places like Pearse Square, with a diverse range of planted species provide a range of different niches for wildlife to exist within the urban environment. New biodiversity targets and indicators have been added to the monitoring programme.</p>
<p><i>Assessment of Plan Alternatives: Biodiversity, Flora and Fauna</i> The sentence stating that the 'implementation of the Master Plan 2003 has led to the creation of new areas of public open space and public realm giving rise to a range of habitats where biodiversity, flora and fauna can flourish' is tenuous.</p>	<p>Public open space can be used as an indirect indicator for biodiversity in the absence of primary biodiversity data. Whereas amenity grassland, such as playing fields, does not support a wide range of biodiversity, places like Pearse Square, with a diverse range of planted species provide a range of different niches for wildlife to exist within the urban environment.</p>
<p><i>Mitigation for biodiversity</i> The list presented is not sufficient. It should include:</p> <ul style="list-style-type: none"> • Seasonal timing of works to prevent disturbance to nesting birds e.g. terns on ESB mooring platforms or guillemots around Pigeon House Dock. • Landscape planting throughout the area to be sensitive and include food plants for the important populations of butterflies, moths, songbirds and raptors in the area. • Upgrading of ESB mooring platforms as mentioned previously. • Any works near Shellybanks to be sensitive of the embryonic dunes forming at this site and reflect soft engineering practices as outlined in 'Environmentally Friendly Coastal Protection Code of Practice, 1996 (Dept. of Marine, DOENI, Forbairt, Life). 	<p>Additional mitigation measures have been incorporated into the MP as part of the SEA process as follows. The Authority has no remit in relation to the mooring platforms.</p> <p>Policy UD71* Planning Schemes to allow for replacement of loss of significant habitat and nesting places of protected species considered appropriate.</p> <p>Policy UD72* Encourage appropriate native planting throughout the Docklands to allow for connectivity for wildlife and to keep important natural heritage character of site.</p> <p>Policy UD73* Landscape planting throughout the area to be environmentally sensitive and include food plants for the important populations of butterflies, moths, and songbirds in the area.</p> <p>Policy UD74* Ensure sensitive timing of works to prevent disturbance to nesting birds e.g. terns on ESB mooring platforms or guillemots around Pigeon House Dock.</p> <p>Policy UD75* Any works near Shellybanks to be sensitive of the embryonic dunes forming at this site and reflect soft engineering practices as outlined in 'Environmentally Friendly Coastal Protection Code of Practice, 1996 (Dept. of Marine, DOENI, Forbairt, Life).</p> <p>Policy UD76* Increased amenity, recreational, and other use of designated nature conservation areas in and adjoining the Docklands shall be planned and managed in order to avoid possible significant negative impacts on biodiversity.</p>
<p><i>Monitoring Programme</i> The Environmental Targets and Indicators of the provision of green open space are not appropriate Biodiversity indicators.</p>	<p>Open/green space can be used as an indirect indicator for biodiversity in the absence of primary biodiversity data. Whereas amenity grassland, such as playing fields, does not support a wide range of biodiversity, places like Pearse Square, with a diverse range of planted species provide a range of different niches for wildlife to exist within the urban environment.</p> <p>New biodiversity targets and indicators have been added to the monitoring programme.</p>

Comments on the Appropriate Assessment	
Designated areas are do not include the proposed SPA boundary mentioned the Common Tern Colony on the ESB Mooring Platform in Dublin Bay.	Noted.
<i>Mitigation for Biodiversity</i> The mitigation list could include: Replacement of lost habitat and nesting places of protected species known to use the site.	Additional mitigation measures for biodiversity incorporated into the ER and MP.
<i>Monitoring</i> Other specific biodiversity monitoring indicators suggested:	Monitoring programme updated.
Water	
Recommendations made in relation to Section 3 of the ER re local, regional and national plans listed as being relevant to the MP.	These reports are noted. The WFD and the GDSDS are referred to in the ER. The Eastern River Basin District management plan is forthcoming. The Authority is bound by or follows by-laws, codes of practice and regulations- it is not considered appropriate to refer to all regulations, by-laws etc. which pertain to development in the Area in the ER.
ER should refer to the current Government proposal to extend the Special Protection Areas in Dublin Bay and the Tolka Estuary	This is referred to in the text of the ER (see Section 4.1).
Additional information provided re water quality monitoring in the Docklands Area.	This information is noted and very useful and will be employed in the monitoring of the MP.
Furthermore any section on receiving waters should refer to the legal parameters controlling the water quality standards to be achieved by such waters including the Water Framework Directive.	The objectives of the WFD are incorporated in the monitoring programme.
<i>Non-Implementation of the Master Plan</i> Unless significant infrastructural and development control measures are put in place with the implementation of the Master Plan, it is likely that the implementation of the development proposals would have a negative impact on the receiving waters.	In the absence of the implementation of the MP, development is carried out through the normal planning and development process which is managed by DCC. Policies IF2*, IF6* and IF7* have been strengthened and address infrastructure provision in consultation with DCC.

<p><i>Water Supply Distribution System</i></p> <p>The scale and density of development proposed will require the provision of major additional potable water supply infrastructure, both within and outside the area covered by the plan, in order to meet the increased demand that will be generated.</p>	<p>Noted. Policies IF 6* and IF 7* amended to reflect need for additional potable water supply infrastructure.</p>
<p><i>Flooding</i></p> <p>Clarification of some sources of information sought.</p>	<p>MP policies and ER mitigation on flooding the subject of consultation with DCC. Levels of protection will be the subject of on-going consultation with DCC.</p>
<p>Other Sections</p>	
<p><i>S 7.1.4 Water</i></p> <p>There appears to be no recognition in the ER of the likely impact of further development on the performance of the existing infrastructure, including the likelihood that spills from Combined Storm Overflows (CSOs) will increase in frequency and loading resulting in a significant negative environmental impact on receiving waters.</p>	<p>Existing infrastructural deficiencies are acknowledged. Additional text has been incorporated into the MP to reflect this (S 5.2.2). Mitigation measure and MP policy IF2*, 6* and 7* have been strengthened accordingly.</p>
<p><i>S 8 Mitigation</i></p> <p>It is not clear that the proposals set out in this section are, in fact, mitigation of the identified problems rather than proposed solutions to those problems.</p>	<p>Master Plan mitigation has been incorporated into the Plan as MP Policies and will be implemented in conjunction with DCC. In the absence of the implementation of the MP, development is carried out through the normal planning and development process, which is managed by DCC, under the Planning and Development Acts, 2000-2006. Policies IF2*, IF6* and IF7* have been strengthened and address infrastructure provision in consultation with DCC.</p>
<p><i>S 8.3 Water</i></p> <p>This also concentrates on the Regional deficiencies and fails to recognise the deficiencies in infrastructure directly serving the Docklands.</p> <p>In relation to wastewater the only mitigation offered is the implementation of SUDS policies and no reference is made to the issue of Combined Storm Overflows or the capacity of the network.</p> <p>Section 8.6 Material Assets refers only to the provision of wastewater and public transport infrastructure. It should include potable water supply also.</p>	<p>Existing infrastructural deficiencies are acknowledged. Addition text has been incorporated into the MP to reflect this (S 5.2.2). Mitigation measure and MP policy IF 2*, 6* and 7* have been strengthened accordingly.</p> <p>Policies IF 2*, 6*, 7* address wastewater.</p> <p>Policies IF 2*, 6*, 7* amended accordingly.</p>
<p>John Spain Associates for Treasury Holdings Real Estate Opportunities Ltd and Spencer Dock Development Company Ltd, 10 Lower Mount Street, Dublin 2</p>	
<p>Summary of Key Points Raised</p>	<p>Response</p>
<p>Considers that there are serious shortcomings in the ER and that the overall approach to assessment has failed to identify significant environmental effects.</p>	<p>Significant environmental effects have been fully addressed in the ER. The full range of the secondary, cumulative, synergistic, short, medium and long term, permanent and temporary, positive and negative impacts that were assessed in the ER are clarified in Appendix 3.</p>
<p>Is of the view that no attempt has been made to assess the interrelationships between SEA topics / factors and that no attempt has been made to</p>	<p>Interrelationships and cumulative effects have been fully addressed in the ER. The interrelationships and cumulative impacts</p>

assess or report on cumulative effects.	addressed in the ER are clarified in Appendix 3.
Raises the question about whether the alternatives considered are reasonable. States that no attempt has been made to consider radically different options, or combinations of alternative mixes of development.	Reasonable plan alternatives were considered. The MP alternatives considered reflect the on-going development of the Docklands Area since 1997 and represent reasonable plan alternatives in the context of both the 1997 and 2003 Master Plans. To suggest otherwise does not take into consideration the development of the Area over the past decade and the context within which the MP is adopted.
Is of the view that there is no detail relating to the options or individual spatial elements of the plan e.g. for the Amended North Lotts Planning Scheme and that the nature and purpose of the intrusion into the river and the creation of the Liffey Island is not assessed.	Assessment appropriate to the level of the plan. The forthcoming Planning Schemes are subject to environmental impact assessment and will be accompanied by EISs.
Suggests that there should be reference the ER to the relationship of the ER to any subsequent assessments, either SEA or project level EIA.	The ER refers to existing and forthcoming Planning Scheme areas. Clearly stated in Section 8.1.2 of the MP. The SEA carried out on the Dublin City Development Plan (Appendix 23) does not purport to be a strict interpretation of the requirements of the Directive.
The evolution of the environment without the plan for each SEA topic is considered inadequate.	Evolution of the environment without the plan for each SEA topic is adequate.
Is of the view that the ER is not of sufficient quality to meet the requirements of the SEA Regulations 2004.	ER fully meets the requirements of the SEA Regulations 2004.
Brian Gormley, 2 Strand Mews, St. Johns Road, Sandymount, Dublin 4	
Summary of Key Points Raised	Response
States that Section 4.1 Biodiversity, Flora and Fauna in the Environmental Report is 'mainly cribbed' from previously published public sector reports and adds nothing to our knowledge of biodiversity on the Area, does not describe the state of the environment in the Docklands area	The ER reflects current data availability.
No proposals for conservation or management in the future	MP and ER contain policies/ mitigation measures to protect biodiversity, for and fauna. Management plans for Natura 2000 sites are under preparation by the NPWS.
States that before adding the open spaces of the Poolbeg area to the DDDA's remit the area in fact contained no significant open space	Areas of open space of varying size and character have always existed within the Docklands Area.
Considers statement in the ER in relation to otters is inaccurate and exist within the Docklands area as claimed and questions the significance of kestrels being observed hunting on the peninsula.	Evidence of otter activity has been found in the River Tolka, River Dodder and Grand Canal Dock.

Queries whether the Plan makes provision for the identified roosting bat colonies or nesting Swift, House Martin, Barn Owl etc on new or existing buildings	To be addressed at Planning Scheme level (see MP monitoring programme)
Request further evidence of the claimed 'green spaces created under the 1997 and 2003 master plans in which biodiversity can potentially flourish' Suggests there is not necessarily a link between green spaces and biodiversity – 'but it should be demonstrated exactly how and where this has been achieved'	It is considered that green space may be used as an indirect indicator for biodiversity where primary biodiversity data is not available.
Would like the Master Plan to address: Promotion of biodiversity in the Docklands and in its new developments in Poolbeg	The Observer is referred to MP policies on biodiversity and text 6.4.5 that outlines the Master Plan's approach to biodiversity.
Carrying out of a biodiversity survey	The DDDA will cooperate with DCC and the NPWS in the carrying out of any biodiversity surveys.
Management plans for the designated areas in and bordering its remit	The preparation of management plans for the nature conservation areas is the responsibility of the NPWS and is ongoing.
Whether the Tern dolphins in the River Liffey fall under the DDDA remit	Mooring (Tern) dolphins not under DDDA remit.
Plans for Irishtown Nature Park and the public walkway from Beach road to Poolbeg;	Any plans for Irishtown Nature Park will be addressed at Planning Scheme level in consultation with DCC.
Compensatory field for Brent Geese at Poolbeg	The finger of land which lies between Ringsend Wastewater Treatment Plant and Irishtown Nature Park has been specifically included in the revised South Dublin Bay and River Tolka Estuary SPA as a feeding ground for over-wintering Brent geese. Its management is the responsibility of Dublin City Council.
Provisions there are for nesting birds on buildings and accommodating wildlife in general.	Nesting birds on buildings will be considered at Planning Scheme level. See UD Policy 71*.
Catherine Cavendish, 6 Prospect Terrace, Marine Drive, Sandymount, Dublin 4	
Summary of Key Points Raised	Response
Submission accompanied by a CD of images of plants in the Poolbeg / Nature Park Area; migratory wild birds that depend 'year after year on the large arm of the Cockle Lake' (the channel that runs below the southeast and southern edge of the Nature Park); the protective dune at Beach Road / Marine Drive; and sand blown onto the Pigeon House Road 'due to injury to the White Bank on Sandymount Strand'	Images noted

States there is a registered complaint with the EU Commission regarding the drain at the corner of the strand beneath Bissets – registered complaint No. P98/6122 . It is illegal to discharge anything noxious to a bathing place	This matter is outside of the statutory obligations of the DDDA. DCC are responsible for the drain at the corner of the strand beneath Bissets.
Suggests the lands to the north of the ‘bank’ that come under the DDDA Master Plan (former pipe assembly site), <i>‘are hugely contaminated as is the Zoe site’</i>	Master Plan Policy IF14 addresses contaminated lands
The Cockle Lake is protected under the Habitats Directive. The channel beneath the walkway that comes from the diverted arm of the cockle lake is hugely important for migratory birds etc. Migratory birds are protected under the Wild Birds Directive.	Noted. ER and MP recognise important nature conservation areas within and adjoining the Area.
States the invertebrates that provide food for fish through plankton production, adult worms and molluscs (food for birds) are all at risk of changes in water salinity in the Docklands estuaries.	The MP and ER include policies to protect biodiversity, flora and fauna and water quality. The Observer is referred to UD MP policies 69* - 76*incl. and MP text S. 6.4.5 that outlines the Master Plan’s approach to biodiversity. The activities of the Master Plan will not change the salinity of the estuary.
Frances Corr 83 Bath Avenue, Ringsend, Dublin 4	
Summary of Key Points Raised	Response
States (in a letter to the Environmental Protection Agency) that a new EU Air Quality Directive has come into force since June 11, 2008	Noted
Attaches a report from Dr Broderick to the Inspector of An Bord Pleanála hearing on the Dublin WtoE plant that notes the P ₁₀ limit was exceeded during monitoring of air quality in the Poolbeg area in the period 2003-2007. Even with improvements to air quality and the absence of the proposed waste to energy incinerator, the 24 hour P ₁₀ limit will be exceeded more than 35 days per year Requests that the attached report is taken into consideration with regard to the proposed Poolbeg development	Dust monitoring i.e. PM ₁₀ and PM _{2.5} emissions from the WtE Plant to be monitored quarterly by DCC. Analysis method/technique to be agreed by EPA (EPA Licence Reg. number W0232-01). The Planning Scheme for Poolbeg will provide an imperative for improving air quality in the area as more people move into the area. PM ₁₀ exceedances will be investigated and further monitoring and/or source investigation is likely to be carried out as required by the EPA/ DCC. The Authority will liaise and work with both organisations as required with respect to air quality monitoring on the peninsula.
Joe McCarthy and Valerie Jennings, 52 Claremont Road, Sandymount, Dublin	
Summary of Key Points Raised	Response
The submission is supported by an audio recording and a copy of slides of a presentation to the Special Interest Group for Environment and Sustainability. The recording was made on 29 th August 2008 in the DDDA premises and audio recorded by the DDDA. It was made available as part of the submission. It presents a detailed critique of air quality in the DDDA area.	Audio recording and slides noted

<p>Considers that air quality in the DDDA area is severely compromised. Statements in the ER on air quality in the Area are incorrect. The DDDA should reassess its plans for the Area.</p>	<p>According to the EPA Air Quality Division the air quality of Zone A (Dublin City and environs, including the Docklands) is of good quality.</p>
<p>A copy of actual PM₁₀ readings measured during the measurement campaigns carried out on behalf of DCC in the preparation of the EIS for the Dublin Incinerator at Poolbeg has been obtained. The survey is comprehensive and clearly shows the limit value is exceeded</p>	<p>Dust monitoring i.e. PM₁₀ and PM_{2.5} emissions from the WtE Plant to be monitored quarterly by DCC. Analysis method/technique to be agreed by EPA (EPA Licence Reg. number W0232-01). The Planning Scheme for Poolbeg will provide an imperative for improving air quality in the area as more people move into the area. PM₁₀ exceedances will be investigated and further monitoring and/or source investigation is likely to be carried out as required by the EPA/ DCC. The Authority will liaise and work with both organisations as required with respect to air quality monitoring on the peninsula.</p>
<p>Considers that the PM₁₀ values from the proposed WtE plant facility may have a significant adverse impact on air quality</p> <p>The effect of PM₁₀ emissions from the proposed WtE facility should be considered significant</p>	<p>As above</p> <p>As above</p>
<p>A full baseline study on air quality in the Area is required.</p>	<p>The Authority will cooperate with DCC and the EPA in this regard.</p>
<p>Peter Fegan, Killinure House Lower, Tullow, County Carlow</p>	
<p>Summary of Key Points Raised</p>	<p>Response</p>
<p>Supports the overall objectives of the Master Plan</p>	<p>Noted</p>
<p>Says the plan does not address short comings of Ringsend WwTW which put the whole plan in jeopardy. Criticises the proposal to use mitigating measures i.e. a derogation from the Urban Wastewater Treatment Directive. Says odour problems at WwTW will jeopardise whole development.</p>	<p>The problems at Ringsend WwTW are recognised in S. 4.7.4.2 of the ER and S. 5.2.2 of the MP. Acknowledgement that local WwTWs may be required. Odour issues are currently being dealt with by the City Council, and this work is due to be completed by the end of 2008. No proposal to seek derogation from the Urban Waste Water Directive as a mitigation measure.</p>
<p>Says that Dublin Sludge Management Plan has not been updated since 1996, meaning that it is not valid and therefore there is no valid Waste Management Plan for the city. Therefore the City Development Plan and the DDDA Master Plan have no legitimacy.</p>	<p>This matter is outside of the statutory obligations of the DDDA – DCC are responsible for the status of the Dublin City Council Sludge Management Plan.</p>

<p>Says that the contract that DCC have entered into with PPP operators at WwTW and proposed Waste to Energy Facility are a property ransom strip and question the viability of the Master Plan. Any proposed compensation payment to the plant operator should take into account the failure to comply with EU and additional regulations and laws. The same will be true if the Waste to Energy Plant is moved to Rathcoole.</p>	<p>This matter is outside of the statutory obligations of the DDDA – DCC are responsible for wastewater services in the Docklands area.</p>
<p>Michael Lynch, Ballytarsna, Abbeyleix, County Laois</p>	
<p>Summary of Key Points Raised</p>	<p>Response</p>
<p>Considers that there is not adequate wastewater treatment in the GDA now and that there will not be in the foreseeable future.</p>	<p>The Ringsend Wastewater Treatment Plant is currently operating at capacity. Dublin City Council has commenced the process of upgrading treatment capacity to its ultimate capacity and the Authority supports this process. It is acknowledged that that local WwTWs may be required (MP policy IF7*).</p>
<p>Expresses concern that the mitigation referred to in the ER turns local pumping stations into minor wastewater treatment plants. This will mean pouring vast quantities of sewerage into various water bodies</p>	<p>The shortcomings in wastewater infrastructure serving the Greater Dublin Area are fully acknowledged in the ER. There is no proposal to turn pumping stations into Wastewater Treatment Plants.</p>
<p>Objects to the plan until wastewater treatment for the GDA has been resolved</p>	<p>Master Plan policies IF2*, IF6* and IF7* address the issue and have been strengthened following public consultation.</p>
<p>Suggests a new type of PPP where developers would develop a facility and hand it over to public ownership without charge and in return be allowed to develop under the plan</p>	<p>The opinion of the Observer has been noted.</p>
<p>Claire O'Regan, Labour Party Candidate, Local Elections 2009, 66 Seaview Avenue, East Wall, Dublin 3</p>	
<p>Summary of Key Points Raised</p>	<p>Response</p>
<p>Wide ranging submission on the MP. Expresses concern over the Environmental Report's assertion that Fairview Park is in proximity to the East Wall community – it is too far removed physically, too dangerous to access due to busy roads, and cannot provide passive surveillance opportunities for parents.</p>	<p>It is acknowledged that physical barriers exist between Fairview Park and East Wall. The Authority will continue to work with DCC to improve physical connections within and to the Area.</p>
<p>Claire Wheeler, member of Dublin South –East Green Party Group, former resident and former DCC councillor, 27 Oaklands Park, Ballsbridge, D4</p>	
<p>Summary of Key Points Raised</p>	<p>Response</p>
<p>This submission is wide ranging and deals with many Master Plan issues. In relation to the ER and the Master Plan the following points have been raised:</p>	

The framework is premature pending an enforceable conservation plan for Brent geese and other protected species.	Management Plan for the SPA is the responsibility of the NPWS and is underway.
South Dublin Bay is a designated SPA on account of its migrant population of Pale-bellied Brent Geese and other rare birds. These birds should be protected. The geese are constantly chased and disturbed by dogs.	Due to the inclusion of South Dublin Bay in the South Dublin Bay and River Tolka Estuary SPA, the protection of the Brent geese is ensured and intrusion of development into this area is prevented.
Table 7.1.1 of the ER on the impact on flora and fauna is meaningless or misleading. Many more people using the area used by Brent geese would probably cause their extinction. There should be signs to inform dog owners, park rangers, fencing and more grazing areas identified.	Management Plan for the SPA is the responsibility of the NPWS and is underway.
Sandymount & Merrion Residents Association, c/o Lorna Kelly, 15 Castle Park, Sandymount, Dublin 4.	
Summary of Key Points Raised	Response
Attached to this submission is a report by Natura, Environmental Consultants on the potential impacts on birds of a proposed development at Southbank Road, Dublin 4, (March 2001).	Report noted
Applied to the Poolbeg Peninsula, the Association was surprised to note that all the impacts are estimated to be neutral or positive. This is clearly not the case when the screening matrix Appendix 3, S.8, Appropriate Assessment, is referred to which clearly states that significant effects are likely.	Without mitigation the impact of the Master Plan on biodiversity, flora and fauna could potentially be negative.
It is considered that the mitigation policies quoted are at best purely aspirational and not preventative and are without substance.	The Master Plan includes policies to protect biodiversity, flora and fauna and water quality. These are detailed as mitigation measures in the ER and have been included as policies in the Master Plan. The mitigation measures are considered to be robust.
Monitoring of events after they have occurred does not rectify the harm already done.	Monitoring of the environmental impacts of the Master Plan will occur on a regular basis and results published annually. (See S.6)
The assumption that there will be no transgression of the Birds and Habitats Directives just so long as no part of a development actually crosses a precise boundary line of the existing SPA/ SAC is erroneous.	It is accepted that development can have an impact beyond the boundaries of the plan and the mitigation measures seek to mitigate against negative impacts.
Raising land in one area to prevent possible sea incursion of proposed development has knock on effects on adjoining adjacent lands which increase the risk of flooding. The submission questions the large scale development of sites which require extraordinary preventative measures to cope with possible future flooding.	Master Plan Policies in relation to flooding have been the subject of consultation with Dublin City Council. The Authority will continue to work with DCC and the OPW to minimise flood risk in the Area.
Includes quotes from EPA website as further clarification of photochemical effects of sunlight on NOx emissions on and viewed from the Poolbeg peninsula. The quotes refer to Nitrogen dioxide and Ozone.	The Air Quality Monitoring Unit, EPA has confirmed and advised that in Zone A (i.e. Dublin City and environs), air quality is generally good and that there may be some 'local nuisance' from time to time and that DCC deal with this.

8.3 Appendix 3

Interrelationships between Environmental Receptors and Full Range of Environmental Impacts Assessed in the Environmental Report

Annex 1 (f) of the SEA Directive requires the following to be addressed in the Environmental Report: 'likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationships between the above factors'. Clarification of the interrelationships identified in the Environmental Report is illustrated in Matrix 1.

It is necessary to assess the environmental impacts of the Draft Master Plan before any mitigation measures have been introduced. The full range of environmental impacts assessed in the Environmental Report is outlined in Matrix 2. In the matrix the environmental receptors and the Master Plan sections have been incorporated into an assessment matrix providing clarification of the environmental impacts assessed. The results of this assessment suggest that in general, impacts of the Master Plan without mitigation would result in short, medium and long-term positive impacts on population, soil, climatic factors, material assets, cultural heritage and landscape. On the other hand, negative impacts would also arise in the short, medium and in some instances long-term on biodiversity, population, water, air, climatic factors and material assets. Cumulative impacts may arise in the medium term relating to the quantum of development proposed given infrastructural constraints. Finally, some secondary impacts may arise due to the indirect impact of transport emissions on biodiversity.

The following matrices summarises the nature of the interrelationships between the environmental receptors and the environmental impacts of the Draft Master Plan on the environmental receptors.

Matrix 1 Illustration of the Main Interrelationships between the Environmental Receptors Identified in the Environmental Report

Environmental Receptor	Environmental Receptor									Comment
	Biodiversity, flora and fauna	Population and human health	Soil	Water (surface, coastal and ground)	Air	Climatic factors	Material assets	Cultural heritage	Landscape	
Biodiversity, flora and fauna (BFF)	0	1	1	1	1	1	1	1	1	BFF has inter-relationships with all of the other environmental receptors due to its sensitivity to change.
Population and human health (PHH)	1	0	1	1	1	1	1	1	1	PHH has inter-relationships with all of the other environmental receptors due to their interconnectivity.
Soil (S)	1	1	0	1	0	1	1	1	1	S has inter-relationships with all of the other environmental receptors due to the importance of soil as a resource and its vulnerability to erosion (extreme events).
Water (W)	1	1	1	0	0	1	1	1	1	W has inter-relationships with most of the other environmental receptors due to its key role in the integrity of environmental condition.
Air (A)	1	1	0	0	0	1	1	1	1	A has inter-relationships with most of the other environmental receptors due to its key role in the integrity of environmental condition.
Climatic factors (CF)	1	1	1	1	1	0	1	1	1	CF have inter-relationships with all of the other environmental receptors due to their influence upon climate and associated impacts.
Material Assets (MA)	1	1	1	1	1	1	0	1	1	MA has inter-relationships with all of the other environmental receptors due to its critical role in ensuring sustainability of environmental condition and enabling development.
Cultural heritage (CH)	1	1	1	1	1	1	1	0	1	CH has inter-relationships with all of the other environmental receptors due to its sensitivity to change.
Landscape (L)	1	1	1	1	1	1	1	1	0	L has inter-relationships with all of the other environmental receptors due to its key role in enabling sustainable development.

1 = interrelationship between environmental receptors

0 = no significant interrelationship between environmental receptors

Most of the environmental receptors show an inter-relationship with each other. This is to be expected given the connectivity and interdependence of all environmental receptors. Each has its own role to play in ensuring the integrity of environmental condition and enabling sustainable development in the Docklands Area. In terms of the Master Plan, the interrelationships between these factors, in particular biodiversity, flora and fauna, water, material assets, population and human health and climatic factors are key to assessing environmental effects and monitoring of the environmental impact of the Master Plan. Interrelationships between the environmental receptors are addressed throughout the Environmental Report and are reflected in Chapter 8 of the Environmental Report through mitigation of the significant environmental impacts of the Draft Master Plan.

Matrix 2 Impacts of the Draft Master Plan Policies on Environmental Receptors before mitigation as identified in the Environmental Report.

Environmental Receptors	Master Plan Section								Comment
	Social Regeneration	Economic Development	Land Use	Transport	Infrastructure	Urban Design Framework	Art Culture Tourism and Leisure	Implementation	
Biodiversity, flora & fauna	0	0	0 ? C M SY	-S ST	- M	C +	?- ?	- M	In general, impacts of the MP without mitigation would result in short and medium-term negative impacts. Cumulative/Uncertain synergistic impacts would result from quantum of development proposed given infrastructural constraints, secondary short-term impacts during construction and uncertain impacts arising from increased recreational use. Cumulative positive impact due to provision of open space network.
Population & human health	+ ST M LT	+ ST M LT	0 - C M	+ LT -	- M -	+ ST M LT	+ ST M LT	- M	On balance, impacts of the MP without mitigation would result in positive impacts. Negative-Cumulative-Medium term impacts arise relating to the quantum of development proposed given infrastructural constraints.
Soil	+	+	+	+	+	+	+	+	Overall, impacts of the MP without mitigation would result in positive impacts on soil due to remediation of contaminated soils.
Water	0	- ST M C + LT	- ST M C + LT	?- ?	- ST M	0	?- ?	- ST M	In general, the impacts of the MP without mitigation are negative in the short and medium-term. Potential uncertain negative impact dependent on level of water-based transport and recreational use. Negative cumulative impacts arise due to existing infrastructural constraints.
Air	0	- C ST M	- C ST M	- ST M	- ST	0	0	- C ST M	In general, impacts of the MP would result in short term negative impacts mainly due to construction. Short/medium-term cumulative impacts due to lack of public transport infrastructure on the Poolbeg peninsula.
Climatic factors	0	-C	-C	-C	+	+	0	-C	In general, impacts of the MP without mitigation could result in cumulative negative impacts. Positive impacts also arise from flood protection measures and appropriate landscaping.
Material assets	0	- C ST M	- C ST M	+	+	0	0	- C ST M	In general, impacts of the MP without mitigation would result in cumulative short and medium-term negative impacts due to infrastructure constraints. Positive impacts arise from additional transport and other infrastructure.
Cultural heritage	+	+	?- ?	0	+	?- ?	+	+	In general, impacts of the MP without mitigation would result in positive impacts on cultural heritage. Potential uncertain negative impacts could arise in relation to protected structures and archaeological heritage.
Landscape	+	+	?- ?	+	+	?- ?	+	+	In general, impacts of the MP without mitigation would result in positive impacts on landscape. Potential uncertain negative impacts could arise in relation to impact on city views.

0 = Neutral impact
 + = Positive impact
 - = Negative impact
 ? = Uncertain impact
 ? - = Uncertain negative impact

C = Cumulative impact
 SY = Synergistic impact
 S = Secondary impact
 ST = Short-term/Temporary
 M = Medium-term
 LT = Long-term/Permanent

A **neutral impact** is one that does not effect an environmental receptor for example a policy to encourage social regeneration will more than likely not result in an impact on soil quality in an area.

A **positive impact** is one that would improve the environmental condition for example a policy to conserve biodiversity.

A **negative impact** is one that would dis-improve the environmental condition for example an increase in development in an area without providing additional infrastructure.

An **uncertain impact** is one that is difficult to predict for example it is uncertain what the implications of increased recreational use of a park might be on biodiversity. These can either be positive or negative.

A **cumulative impact** is one that results from a collection of smaller individual impacts that would not have a significant impact on their own for example one development on its own may not significantly impact on air quality but if combined with other plans in an area could contribute significantly to a deterioration in air quality (additive impact). Cumulative impacts may be positive or negative.

A **synergistic impact** is a cumulative impact that produces a greater impact than the sum of individual impacts for example a wildlife corridor may become so fragmented that it cannot sustain a given habitat which would result in loss of particular species.

A **secondary impact** is one that has indirect effects on the environment for example a development which lowers the water table could effect biodiversity in a nearby wetland.

A **short-term/temporary impact** is one that is not permanent for example the creation of dust or traffic interruption during the construction phase of a development.

A **medium-term impact** is one that is not permanent but is of longer duration than a short-term impact.

A **long-term/permanent impact** is one that is generally irreversible for example the complete destruction/removal of a habitat.

8.4 Appendix 4

Non Technical Summary

Non-technical summary to include the following;

Non-implementation of the Master Plan

Were the Master Plan Review 2008 not implemented, the redevelopment of the Docklands Area would take place at a slower pace than that envisaged in the Master Plan 2008.

- Any proposed development adjacent to the South Dublin Bay Area would be required to reflect its significance in terms of nature conservation.
- The rate of growth of the residential population would not take place at the rate anticipated in the Master Plan. The delivery of infrastructure and services would be at a slower pace.
- Existing contaminated sites would remain contaminated pending redevelopment.
- The potential exists for a negative impact on water bodies in the Area arising from a lack of capacity for wastewater treatment at regional level.
- The situation regarding air quality would remain unchanged.
- The situation regarding greenhouse gas emissions would continue to deteriorate.
- The redevelopment of the Docklands Area would take place at a slower pace than that envisaged in the plan and delivery of infrastructure would be at a reduced level.
- Redevelopment and renewal would be likely to occur in a piecemeal fashion, rather than in the comprehensive manner envisaged.
- Opportunities for introducing new uses for Protected Structures would be more limited. The character of the existing Conservation Areas would remain largely unaltered in the shorter term. Sites/artefacts of archaeological interest would be largely unaffected.
- The improvement of public access to the water bodies, the redevelopment of the campshires, the redevelopment of areas adjoining the water bodies and river regeneration would stall, as would the provision of additional amenity/open spaces/ public realm in the Area.
- Views of the Area would undergo change at a slower pace than would arise on implementation of the Master Plan.

Environmental Protection Objectives

The following Environmental Protection Objectives were developed to assess and monitor the significant environmental impacts of the Master Plan.

Environmental Receptor	Environmental Objective
Biodiversity, flora and fauna	Protect and enhance biodiversity, flora and fauna.
Population and human health	Protect and enhance human health.
Soil	Improve soil quality.
Water	Protect and enhance surface & coastal water quality.
	Protect and enhance ground water quality.
	Provide water supply infrastructure.
Air	Limit adverse impact on air quality.
Climatic factors	Minimise greenhouse gas emissions.
	Reduce flood risk.
Material assets	Provide wastewater infrastructure.
	Provide public transport infrastructure.
Cultural heritage	Protect and enhance the architectural and archaeological heritage.
Landscape	Protect, enhance and develop streetscape and enhance views.
	Protect, enhance and develop new open space areas.

8.5 Appendix 5

Assessment of Land Use Zoning Changes in the Dublin Docklands Area Master Plan 2008

The following table assesses the principle Land Use zoning changes included in the Dublin Docklands Area Master Plan 2008. Land use re-zonings were the subject of consultation with Dublin City Council and the majority of these reflect zoning changes in the Dublin City Development Plan 2005-2011. Following consideration of submissions received during public consultation, further re-zonings were identified.

Location	Zoning in Master Plan 2003 (no. indicates notation on attached figures)	Area (ha) in Master Plan 2003	Zoning in Master Plan 2008	Comment
Poolbeg Peninsula	Z6 (5)	13.2 Ha	Z 14	Zoning changes assessed as part of the ER. Zoning changes on part of the Planning Scheme Area for the Poolbeg Peninsula. Environmental impacts mitigated in particular by MP policies IF2*, IF5*, IF6* and IF7*, IF 15-17* incl., UD 2, UD11*- 13* incl., LU14* and LU48*.
	Z9 (7)	0.13 Ha		
	Z9 (8)	0.15 Ha		
	Z7 (9)	7.99 Ha		
	Z7 (10)	11.85 Ha		
	Z8 (11)	1.89 Ha		
	Z9 (12)	0.17 Ha		
	No zoning (13)	0.08 Ha		
North Lotts	Z9 (3 and 4A)	1.58 Ha 91.22 (CCD) plus 0.53 (campshire)	Z14	Zoning changes assessed as part of the ER. Zoning changes on part of Amended North Lotts Planning Scheme Area. Environmental impacts mitigated in particular by MP policies IF2*, IF5* and IF6*, IF 15-17* incl. UD11*and UD12*. Zoning change Z11 to Z14 mitigated by MP policies UD53 & 54, UD64*-68 incl.
	Z11 (4B)	0.75 Ha		
East Wall	Z1 (1)	0.64 Ha	Z10	No significant environmental implications.
Other miscellaneous zoning changes e.g. at Georges Dock, of the triangular Area north of Waste Water Treatment Plant on the Poolbeg peninsula.	Various	Various	Various	No significant environmental implications arising appropriate for assessment at SEA level.
	Georges Dock Z11 (2)	0.25 Ha	Z9	
	Triangular Area north of Waste Water Plant Z9 (14)	0.53 Ha	Z14 (following DCC submission)	
	Z6 (6)	0.94 Ha (following DCC submission)	Z9 (following DCC submission)	

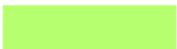
Dublin Docklands Area Master Plan 2008, (Map A) Zoning Objectives		
	Zone 1:	To protect, provide and improve residential amenities
	Zone 6:	To provide for the creation and protection of enterprise and facilitate opportunities for employment creation
	Zone 7:	To provide for the protection and creation of industrial uses and facilitate opportunities for employment creation
	Zone 8:	To protect the existing architectural and civic design character, and to allow for limited expansion consistent with the conservation objective. To allow primarily residential and compatible office and institutional uses
	Zone 9:	To preserve, provide and improve recreational amenity, and open space
	Zone 10:	To consolidate and facilitate the development of inner suburban sites for mixed use development of which office, retail and residential would be predominant uses
	Zone 11:	To protect and improve canal, coastal and river amenities
	Zone 14:	To seek the social, economic and physical development or rejuvenation of an area with mixed use, of which residential and Zone 6 would be the predominant uses



Figure 2 Land-use zoning, Master Plan 2003 (North Docklands)

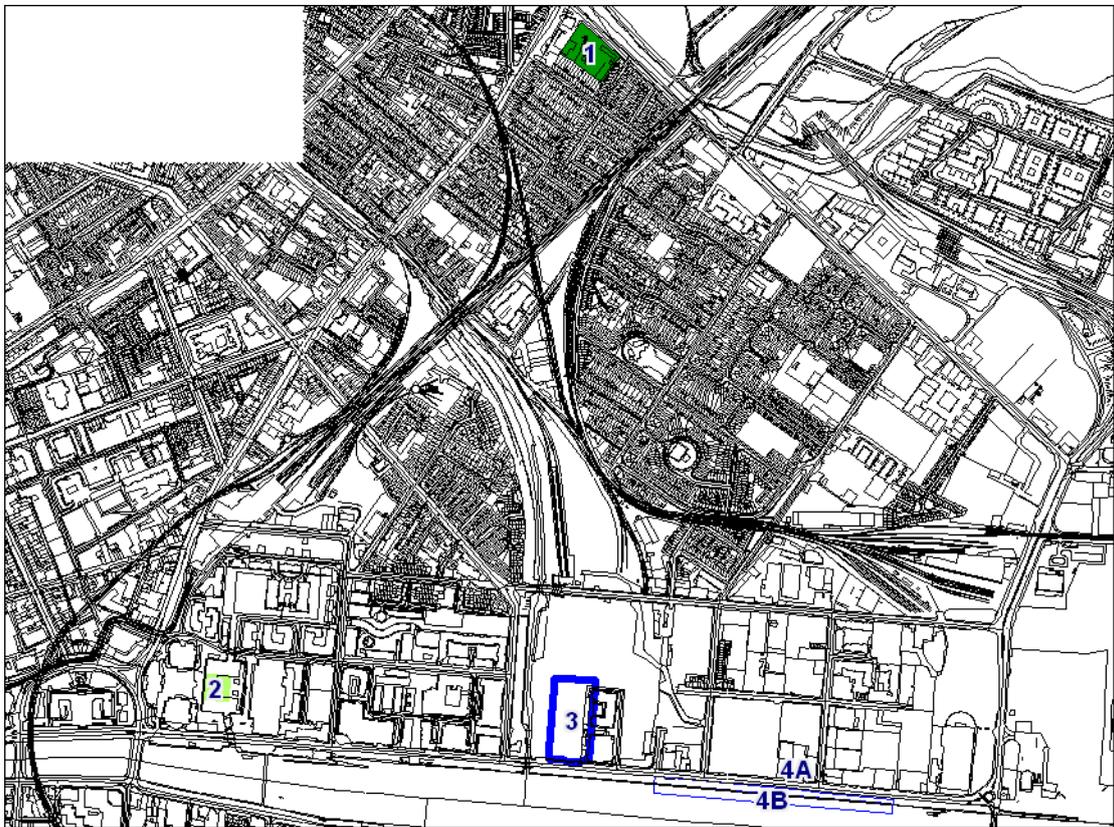


Figure 3 Land-use zoning, Master Plan 2008 (North Docklands)



Figure 4 Land-use zoning, Master Plan 2003 (Poolbeg)

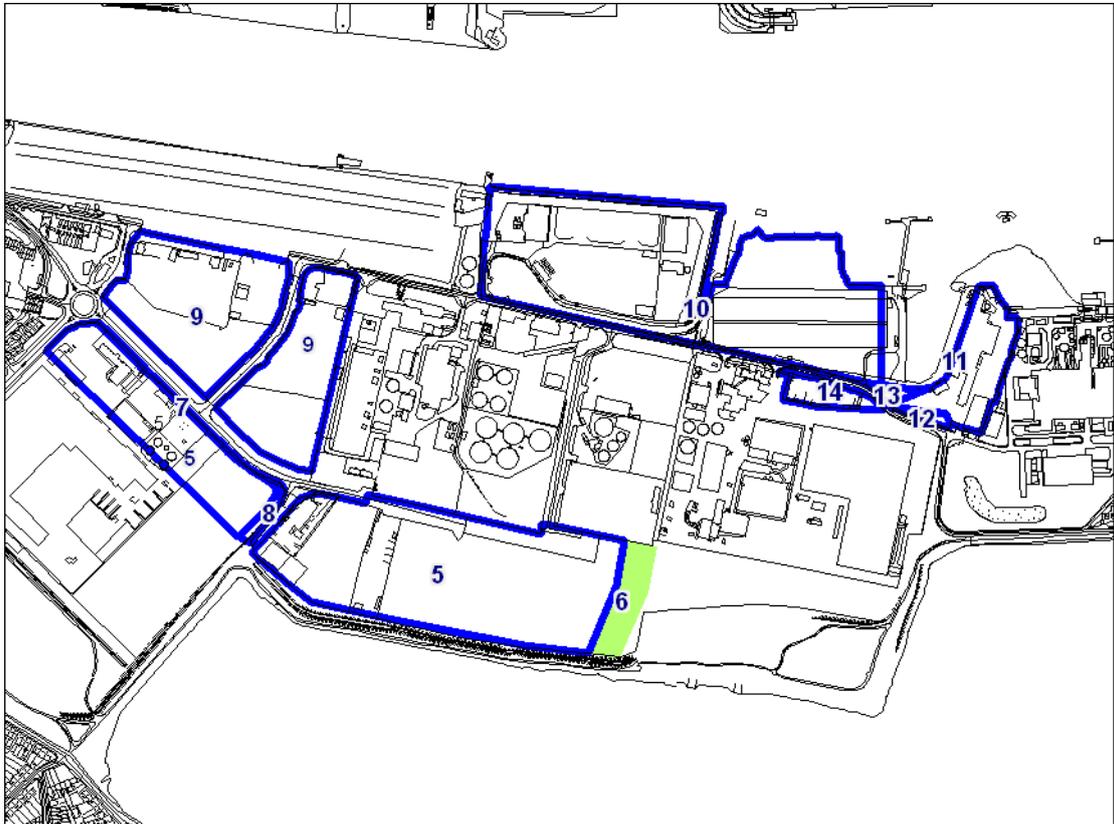


Figure 5 Land-use zoning, Master Plan 2008 (Poolbeg)