

## EVALUATION OF MASTER PLAN ALTERNATIVES

### 6.1 Alternative 1: Continue with Policies and Objectives of Master Plan 2003

### 6.2 Alternative 2: Part Optimisation of Development Potential of the Dublin Docklands Area

6.2.1 Creation of New Planning Scheme Area for the Poolbeg Peninsula

6.2.2 Amendment of North Lotts Planning Scheme

6.2.3 Amendment / Extension of the Custom House Docks Planning Scheme

### 6.3 Alternative 3: Further Optimisation of Development Potential

6.3.1 Optimisation Of Development Potential Of Poolbeg Peninsula

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6.3.3 Extension Of The Custom House Docks Planning Scheme

6.3.4 Extension Of Grand Canal Dock Planning Scheme Area

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### 6.4 Assessment of Plan Alternatives

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The Environmental Report is required to identify, describe and evaluate reasonable alternatives, taking into account the objectives and geographical scope of the Master Plan 2008.

Three plan alternatives were examined in the course of the preparation of the Master Plan 2008 as described below. The three Master Plan alternatives were devised by the Master Plan team in the course of development of the Master Plan, reflecting the need to

- Develop the Area in a sustainable manner, reflecting best use of resources and land while fulfilling the economic potential of the Area
- Make best use of the high level of accessibility of the Docklands Area, particularly with the coming on-stream of Transport 21
- Realise quality of life for a healthy Docklands
- Create high quality public space and public realm throughout the Area
- Create opportunities for family living, diversity in the form of residential and commercial development and the development of a range of community, recreational and cultural facilities

The alternatives were assessed against the environmental protection objectives already identified and described. 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

## 6.1 ALTERNATIVE 1: CONTINUE WITH POLICIES AND OBJECTIVES OF MASTER PLAN 2003

The first plan alternative assessed, Alternative 1, provides for the continuation of the policies and objectives of the Dublin Docklands Master Plan 2003 (Figure 7). The North Lotts Planning Scheme 2002 and the Grand Canal Dock Planning Scheme 2000, both of which were amended in 2006, were prepared in accordance with the Master Plan 2003.

The Master Plan 2003 largely continued with the policies and objectives of its predecessor, the Master Plan 1997, and Alternative 1 proposes to continue this. The Master Plan 2003 also proposed a Section 25 Planning Scheme Area on part of the Poolbeg peninsula towards the latter part of the Master Plan period. A mix of land use was proposed. The former Irish Glass Bottle Company site and the adjoining lands to the south east were zoned for mixed use, including residential. An enterprise zone was proposed between the residential zone and the general industrial zone.

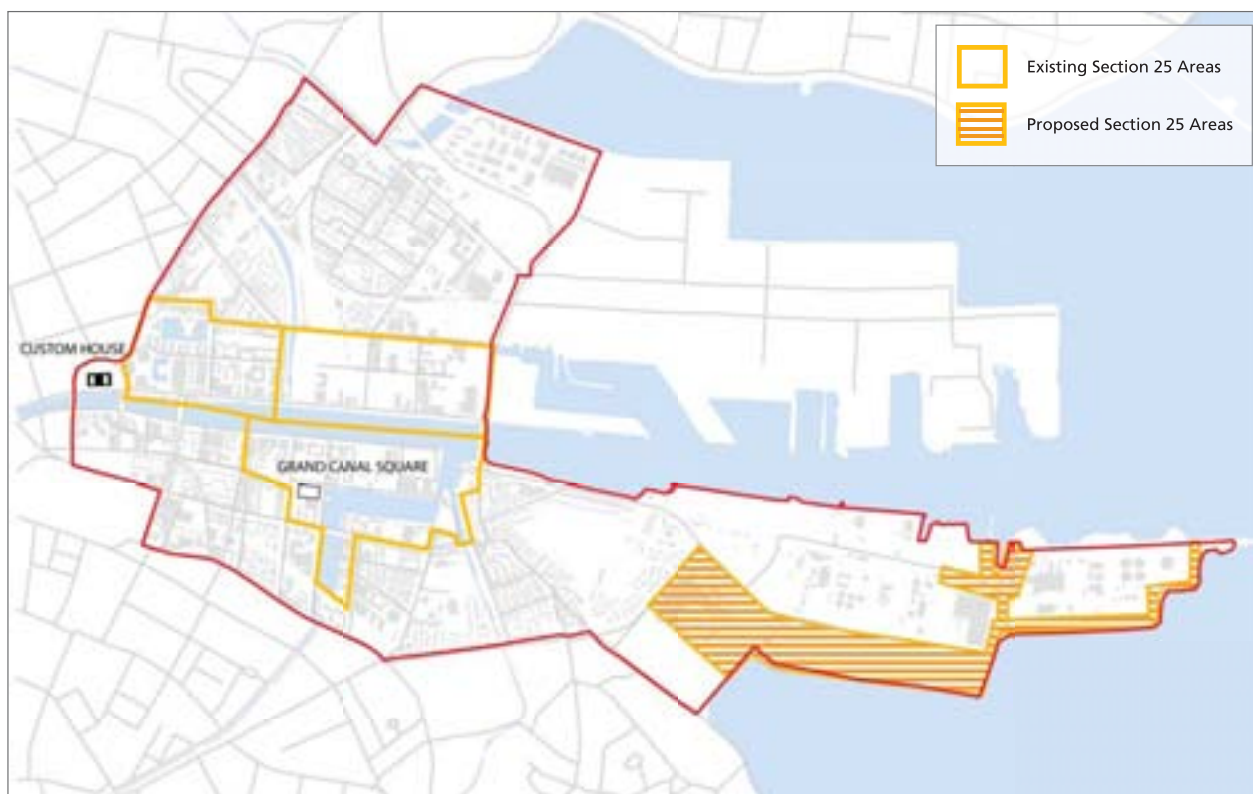


FIGURE 7 MASTER PLAN ALTERNATIVE 1

## 6.2 ALTERNATIVE 2: PART OPTIMISATION OF DEVELOPMENT POTENTIAL OF THE DUBLIN DOCKLANDS AREA

The second alternative assessed, Alternative 2, allows for the creation of a new Section 25 Planning Scheme Area at Poolbeg and the amendment of existing Planning Schemes (Figure 8).

In this alternative, new, amended and extended Planning Schemes are proposed as follows:

- Creation of a Section 25 Planning Scheme Area for the Poolbeg peninsula
- Amendment of the North Lotts and Custom House Docks Planning Schemes

### 6.2.1 CREATION OF NEW PLANNING SCHEME AREA FOR THE POOLBEG PENINSULA

The Poolbeg peninsula contains under-utilised land, is poorly laid out, has significant lands within state ownership and requires a co-ordinating plan to realise its physical and economic development. Mixed-use urban development is proposed on the peninsula, supported by public transportation, the provision of open space and the conservation and improvement of amenities. The proposed Section 25 Planning Scheme covers a larger area than originally envisaged in the Master Plan 2003. A designated area for a Section 25 Planning Scheme for Poolbeg has been approved by the Minister for the Environment, Heritage and Local Government.

In Alternative 2, an overall average gross Plot Ratio of 1 is proposed for the development areas of the peninsula.

### 6.2.2 AMENDMENT OF NORTH LOTTS PLANNING SCHEME

Alternative 2 includes a proposed amendment of the North Lotts Planning Scheme. This will occur at an early stage, following the adoption of the Master Plan 2008. The purpose of the proposed amendment is to improve the urban structure and allow for high quality, high density, mixed use development facilitated by the provision of the rail interconnector, to provide key civic attractions and enhanced amenities for the city. An amended Planning Scheme offers the opportunity to enhance open space provision and improve connections with the surrounding neighborhoods and community facilities.

The general aims of the amended Planning Scheme would be to create high quality public spaces and amenities, diversity in the offer of both residential and commercial development, provision for community gain and the development of a range of community and cultural facilities, while at the same time increasing development potential and promoting intensification of development.

### 6.2.3 AMENDMENT OF THE CUSTOM HOUSE DOCKS PLANNING SCHEME

Alternative 2 proposes the amendment of the Custom House Docks Planning Scheme. The Planning Scheme will facilitate the development of the proposed new Abbey Theatre. The Amending Planning Scheme will include a full review of the existing Planning Scheme to include consideration of the appropriate restructuring and intensification of key sites.

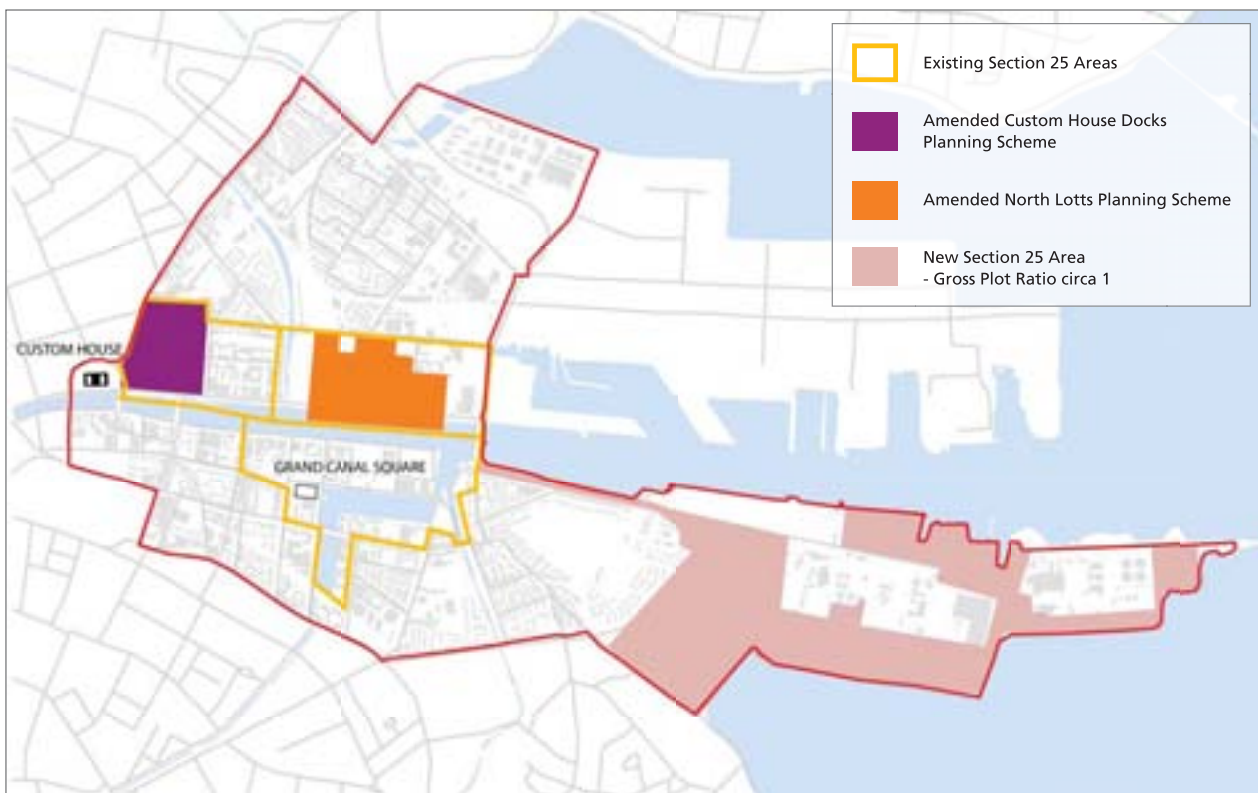


FIGURE 8 MASTER PLAN ALTERNATIVE 2

## 6.3 ALTERNATIVE 3: FURTHER OPTIMISATION OF DEVELOPMENT POTENTIAL

Alternative 3 mirrors Alternative 2 in that it allows for new amended and extended Planning Schemes as follows:

- Creation of a Section 25 Planning Scheme Area for the Poolbeg peninsula
- Amendment to North Lotts and Custom House Docks Planning Schemes

Alternative 3 however proposes to further optimise the development potential of the Docklands Area by allowing for

- An increase in the density of development on the Poolbeg peninsula
- A possible extension of the North Lotts, Custom House Docks, Grand Canal Dock and Poolbeg Planning Scheme Areas. (Figure 9)

### 6.3.1 OPTIMISATION OF DEVELOPMENT POTENTIAL OF POOLBEG PENINSULA

Mixed-use urban development is again proposed on the Poolbeg peninsula, supported by public transportation, the provision of open space and the conservation and improvement of amenities. In Alternative 3, an overall average gross Plot Ratio in the order of 2 is proposed on the peninsula.

### 6.3.2 EXTENSION OF NORTH LOTTS PLANNING SCHEME AREA

The lands east of East Road and north of the North Lotts Planning Scheme Area, bounded by East Road, East Wall Road and Sheriff Street Upper, as well as the lands to the north of East Wall Road and south of the Port Tunnel access route and toll plaza contain areas of underutilised and derelict land, which are poorly laid out, as well as some significant tracts in state ownership comprising railway yards, together with lands owned by Dublin City Council south of the port access tunnel route. The area is fragmented in terms of urban structure, with significant barriers to movement through the area and to neighbouring areas. The Authority is to examine the possibility of extending the existing area of the North Lotts Planning Scheme to these lands having regard to the selection criteria for Section 25 Planning Schemes outlined in the Master Plan and in consultation with Dublin City Council.

### 6.3.3 EXTENSION OF THE CUSTOM HOUSE DOCKS PLANNING SCHEME

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The lands to the north of the Custom House Docks Planning Scheme comprising Connolly Station and its environs, including the An Post Sorting Office and the lands bounded by Amiens Street, Seville Place, Oriel Street Upper and Sheriff Street Lower, consist of buildings and lands, parts of which are underutilised and poorly laid-out. Connolly Station and its associated yards, buildings and lands are in state ownership. Having regard to the selection criteria for Section 25 Planning Schemes, the Authority will examine the possibility of extending the existing area of the Custom House Docks Planning Scheme to include these lands, in consultation with landowners, occupiers, and Dublin City Council.

### 6.3.4 EXTENSION OF GRAND CANAL DOCK PLANNING SCHEME AREA

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The Authority is to examine the possibility of extending the existing Grand Canal Dock Planning Scheme 2000 (amended in 2006), in consultation with Dublin City Council, having regard to the selection criteria for Section 25 Planning Scheme to include the following areas :

- The lands to the south and west of Grand Canal Dock/Basin bounded by Pearse Street, Macken Street and Grand Canal Street Upper and Lower
- The lands west of the Grand Canal Dock Planning Scheme Area bounded by the River Liffey, Townsend Street and Moss Street

### 6.3.5 EXTENSION OF POOLBEG PLANNING SCHEME AREA

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The Poolbeg peninsula comprises a number of major facilities including power stations, oil and fuel storage facilities, the south port terminal and container storage areas, and the lands for the proposed waste-to-energy facility. In the medium to long-term, it is possible that some of these facilities may be rationalised, consolidated or co-located, or may even be relocated. In this regard, over the next five years the Authority will work with the Port Authority in coordination, co-location and planning future development. In the event that any of the facilities on these lands are rationalised, consolidated, co-located or, even relocated, it would be appropriate to consider them for possible incorporation into an extension of the Poolbeg Planning Scheme Area, having regard to the selection criteria for Section 25 Planning Schemes, and in consultation with their owners and operators, and with Dublin City Council.



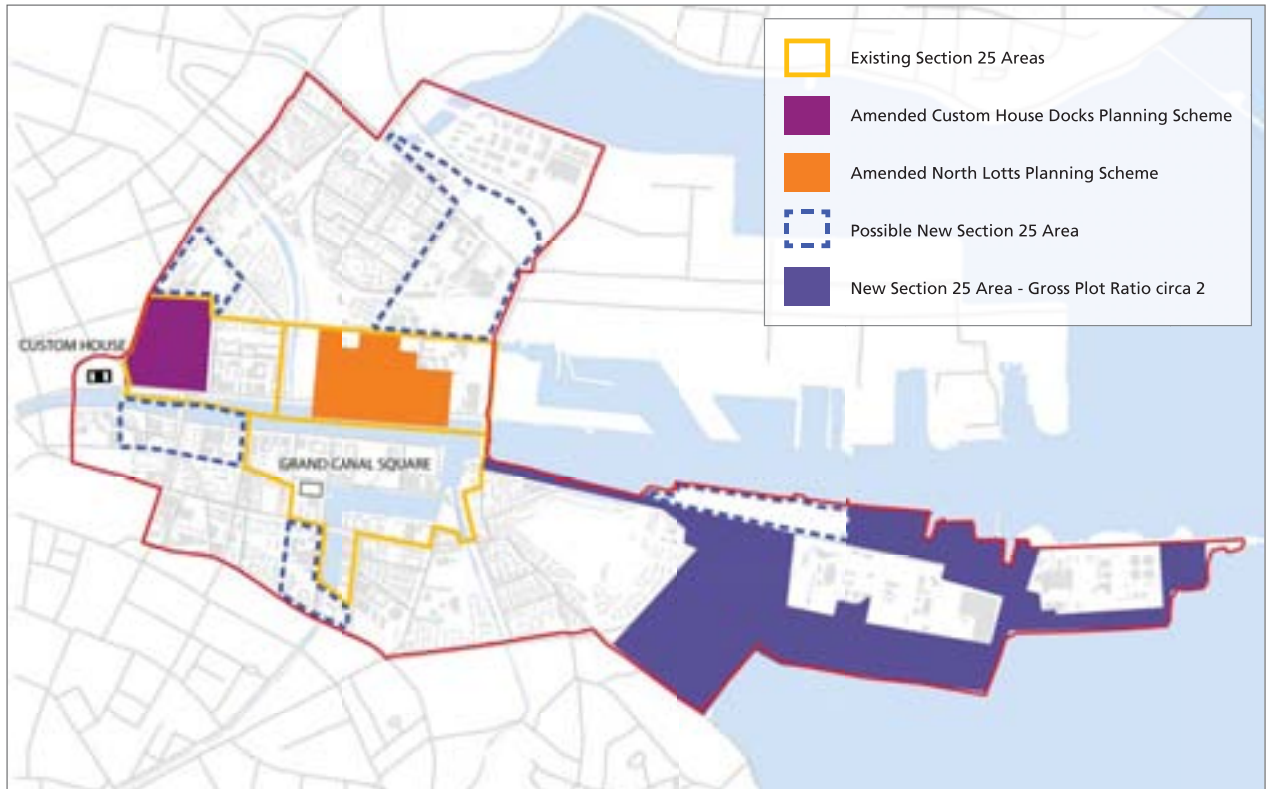


FIGURE 9 MASTER PLAN ALTERNATIVE 3

### Assessment of the Master Plan Alternatives

The three plan alternatives are assessed against the environmental protection objectives (see Section 5) below

| Environmental Receptor        | Environmental Protection Objective                                | Alternative 1<br>Continuation of Master Plan 2003 | Alternative 2<br>Part optimisation of development potential | Alternative 3<br>Further optimisation of development potential | Comment                                                                                                                                                                                                                                                                                                                                                                                          |
|-------------------------------|-------------------------------------------------------------------|---------------------------------------------------|-------------------------------------------------------------|----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Biodiversity, flora and fauna | Protect and enhance biodiversity, flora and fauna                 | +/0                                               | +/x                                                         | +/xx                                                           | Positive impact due to increased potential for aquatic and terrestrial habitats. Development of Irishtown Nature Reserve to enhance potential for biodiversity. Potential negative impacts for Alternatives 2 and 3 reflecting current deficiencies in waste water infrastructure in the Greater Dublin Area. Mitigation at Master Plan level necessary to avoid negative environmental impacts. |
| Soil                          | Improve soil quality                                              | +                                                 | +                                                           | +                                                              | Improved soil quality due to remediation of development sites.                                                                                                                                                                                                                                                                                                                                   |
| Water                         | Protect and enhance surface & coastal water quality               | x                                                 | xx                                                          | xxx                                                            | Potential negative impacts reflecting current deficiencies in wastewater infrastructure in Greater Dublin Area. Mitigation at Master Plan level necessary.                                                                                                                                                                                                                                       |
|                               | Protect and enhance groundwater                                   | +                                                 | +                                                           | +                                                              | Improved ground water quality due to improved soil quality.                                                                                                                                                                                                                                                                                                                                      |
|                               | Provide water supply infrastructure                               | +                                                 | +                                                           | +                                                              | Water supply infrastructure inadequate in Greater Dublin Area. Mitigation at regional level not feasible within time frame of Master Plan. Mitigation at Master Plan level necessary.                                                                                                                                                                                                            |
| Air                           | Limit adverse impact on air quality                               | +                                                 | ++                                                          | ++                                                             | Strong public transport focus. Need to provide public transport in tandem with delivery of development. Short term negative impacts during construction phase.                                                                                                                                                                                                                                   |
| Climatic factors              | Minimise greenhouse gas emissions                                 | x                                                 | x                                                           | x                                                              | Minimal negative impacts due to increased level of development.                                                                                                                                                                                                                                                                                                                                  |
|                               | Reduce flood risk                                                 | +                                                 | +                                                           | +                                                              | Increase floor levels and introducing flood protection measures.                                                                                                                                                                                                                                                                                                                                 |
| Material assets               | Provide waste water infrastructure                                | +                                                 | +                                                           | +                                                              | Waste water infrastructure inadequate in Greater Dublin Area. Mitigation at regional level not feasible within time frame of Master Plan. Mitigation at Master Plan level necessary in the form of provision of waster water treatment at local level.                                                                                                                                           |
|                               | Provide public transport infrastructure                           | +                                                 | ++                                                          | ++                                                             | Provision of Bus Rapid Transit within time frame of Master Plan.                                                                                                                                                                                                                                                                                                                                 |
| Cultural heritage             | Protect and enhance the architectural and archaeological heritage | +                                                 | +                                                           | +                                                              | General positive impact but with instances of negative impact on individual elements of the architectural and archaeological heritage.                                                                                                                                                                                                                                                           |

| Environmental Receptor                                                                                                                                                                                                                                                                                       | Environmental Protection Objective                         | Alternative 1<br>Continuation of Master Plan 2003 | Alternative 2<br>Part optimisation of development potential | Alternative 3<br>Further optimisation of development potential | Comment                                                  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|---------------------------------------------------|-------------------------------------------------------------|----------------------------------------------------------------|----------------------------------------------------------|
| Landscape                                                                                                                                                                                                                                                                                                    | Protect, enhance and develop streetscape and enhance views | +                                                 | +                                                           | +                                                              | Positive impact due to creation of new streetscape.      |
|                                                                                                                                                                                                                                                                                                              | Protect, enhance and develop new open space areas          | +                                                 | ++                                                          | ++                                                             | Positive impact due to creation of new open space areas. |
| Impacts on environmental receptors during the time period of the Master Plan:<br>+ Positive: positive impact on environmental receptor<br>x Negative: negative impact on environmental receptor<br>? Uncertain: uncertain impact on environmental receptor<br>0 Neutral: no impact on environmental receptor |                                                            |                                                   |                                                             |                                                                |                                                          |

Note: Where increased impacts are anticipated related to the quantum of development proposed, the matrix records the level of impact (whether positive, negative or otherwise) with single, double or treble symbols e.g. +, ++.

## 6.4 ASSESSMENT OF PLAN ALTERNATIVES

The three plan alternatives have been assessed against each environmental receptor in turn below.

### 6.4.1 BIODIVERSITY, FLORA AND FAUNA

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The impact of the Master Plan 2003 on biodiversity, flora and fauna has been positive, as evidenced by the Environmental Report and subsequent Monitoring Programme and associated Monitoring Reports. 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. Alternative 1, which would continue the roll out of the Master Plan 2003, would have a positive impact on biodiversity, flora and fauna in the Area.

Both Alternatives 2 and 3 would also have a positive impact on biodiversity, flora and fauna in the Docklands Area through the creation potential for habitat creation including the Irishtown Nature Reserve. The impact of development proposed in the North Lotts Area is anticipated to have an overall positive impact on biodiversity, flora and fauna through the creation of new open space areas.

The Docklands Area is located adjacent to the South Dublin Bay Area, which is of international importance for nature conservation. Potential negative impacts could arise for both Alternatives 2 and 3 reflecting current deficiencies in wastewater treatment at regional level. The impact of the plan alternatives is related to the quantum of development proposed. Mitigation will be necessary at Master Plan level for either alternative.

### 6.4.2 SOIL

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Each of the plan alternatives examined would have a beneficial effect on soil throughout the Docklands Area as development sites are decontaminated prior to redevelopment.

### 6.4.3 WATER

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Each of the plan alternatives has the potential to protect and enhance groundwater quality in the Docklands Area through the decontamination of soil which impacts on groundwater quality.

The proposed upgrading of water quality in Grand Canal Dock will have a positive impact in the Area.

However, potential negative impacts on water quality and water supply arise for all plan alternatives due to the current deficiencies in waste water infrastructure and water supply in the Greater Dublin

Area and the time period within which these deficiencies are anticipated to be remedied at regional level. Mitigation measures at local level would be required for all plan alternatives.

Potential negative impacts could arise for all alternatives reflecting current deficiencies in wastewater treatment at regional level. The impact of plan alternatives is related to the quantum of development proposed, necessitating mitigation at Master Plan level.

Alternatives 2 and 3 would also both have short-term negative impacts on water quality in the River Liffey due to the amendment proposed to the North Lotts Planning Scheme where it is proposed to extend into the river.

## 6.4.4 AIR

Introducing new population and development into the Docklands Area will impact on air arising primarily from the impact on air quality from transport. New centres of employment and residences will generate associated traffic movement. The level of the impact on air is dependent upon the level of development proposed and the modal split between public and private transport. Each of the plan alternatives would have a strong focus on public transport. Due to the quantum of development proposed in Alternative 3, efficient public transport provision throughout the Area, in particular to Poolbeg, is essential.

All three alternatives will have short term negative impacts on air during the construction phase.

## 6.4.5 CLIMATIC FACTORS

Introducing new population and development into the Docklands Area will have an impact on greenhouse gas emissions arising from transportation and energy consumption. With mitigation, these should not be significant. Modern office developments in particular have an impact in terms of energy consumption but are increasingly developing sustainable features into their design.

All plan alternatives offer enhanced opportunities introducing flood protection measures in new development areas.

## 6.4.6 MATERIAL ASSETS

Each of the plan alternatives necessitates the provision of infrastructure in tandem with development.

The impact of each plan alternative will be positive in regard to public transport with the continued roll out of Transport 21 in the Docklands Area. A Bus Rapid Transit system can also be provided within the time frame of the Master Plan.

Deficiencies exist in respect of waste water infrastructure in the Greater Dublin Area given the time period within which this is anticipated to be remedied at regional level, mitigation measures at local level would be required for all plan alternatives. The level of mitigation is related to the quantum of development proposed.

#### 6.4.7 CULTURAL HERITAGE

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The impact of the Master Plan 2003 on cultural heritage has been positive, as evidenced by the Environmental Report and subsequent Monitoring Programme and associated Monitoring Reports. Alternative 1 would continue to have a positive impact on this receptor.

Alternatives 2 and 3 will also have an overall positive impact on cultural heritage. Both alternatives however have the potential to negatively impact on the Protected Structure and Recorded Monument at the North Wall Quay.

#### 6.4.8 LANDSCAPE

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The impact of the three plan alternatives on landscape would be positive. Each of the alternatives promotes the protection and enhancement of streetscape and new open space areas.

#### 6.4.9 POPULATION AND HUMAN HEALTH

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The continuing development of the Docklands Area has led to an improvement in the overall quality of the environment. This is supported by the Monitoring Programmes associated with the Master Plan 2003. It is considered that all three Plan Alternatives will continue to enhance the environment in relation to soil, biodiversity, flora and fauna, cultural heritage and landscape.

The positive impacts of the continued roll out of public transport (including cycling and walking facilities) will further enhance the impact on human health.

However all three alternatives have the potential to have a negative impact on human health arising from shortfalls in wastewater and water supply infrastructure in the Greater Dublin Area. This is a problem that exists at regional level and pertains to all development proposed throughout the region and not just development in the Docklands Area. The level of impact relates to the quantum of development proposed in the plan alternatives. Mitigation at Master Plan level arises for all plan alternatives.

All three alternatives will have short term negative impacts on air during the construction phase.

## 6.5 PREFERRED PLAN ALTERNATIVE

From this assessment, Alternative 1 has an overall positive outcome in terms of protection and enhancement of the environment. However, Alternative 1 does not maximise the development potential of the strategically located Docklands Area, in close proximity to Dublin City Centre, where considerable investment in public transport infrastructure is on-going. Since the adoption of the Master Plan 2003, a framework for the delivery of significant public transport has come on-stream in the form of Transport 21. As part of Transport 21, the Docklands Area will become highly accessible and will become one of best served locations in Dublin City in terms of public transport. On a city wide and regional level, a failure to maximise the development potential of the Docklands Area would be unsustainable leading to overall negative impacts on air quality and greenhouse gas emissions.

Alternatives 2 and 3 leverage the development potential of the Docklands Area. All of the plan alternatives pose challenges in terms of the existing deficit in water supply and waste water infrastructure in the Greater Dublin Area. Pending the provision of such infrastructure at regional level, the potential exists for negative environmental impacts arising from any development in the region, necessitating mitigation measures.

The Master Plan provides a planning framework for the Area for a 10 year time period. 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.

It is recognised that the provision of public transport, water conservation measures and local wastewater infrastructure consistent with the coming on-stream of development, will be necessary for this plan alternative. Until such time as water supply and wastewater infrastructure at regional level becomes available, mitigation at local Docklands level will be essential.

## 6.6 DIFFICULTIES ENCOUNTERED

There were no technical or data difficulties encountered in compiling the required information to assess the Master Plan Alternatives.