

# DUBLIN PORT COMPANY DRAFT MASTERPLAN 2011-2040

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# Foreword

**Dublin Port Company is a State-owned commercial company charged with operating and developing Dublin Port. The operating model in Dublin is unique in Ireland with all cargo handling activities being provided by private sector companies operating in competitive environments.**

This blend of public ownership and private operation provides a framework within which the competing requirements of economic necessity and environmental sustainability are managed to the benefit of the city and its citizens.

For 30 years or more, the development of Dublin Port has caused unease and conflict between the Port and some of its stakeholders.

The over-riding reason for producing this Masterplan has been to provide all of the Port's stakeholders with a clear view as to how the Port will be developed over the long-term.

In preparing the Masterplan, Dublin Port Company has taken account of the significant unease about the prospect of creeping infill in Dublin Bay. This Masterplan is presented, therefore, as a statement of intent that Dublin Port Company will continue to develop the Port within its current footprint to the maximum extent possible before any major reclamation works are undertaken.

When projects necessitating reclamation are required, they will only be advanced if they can satisfy the exacting planning and environmental protection standards that must be met.

Beyond that, Dublin Port Company believes that the extent of reclamation works indicated in this Masterplan could and should be the final incursion of the Port into the area of Dublin Bay enclosed by the North Bull Wall and the Great South Wall. Any further demand which cannot thereafter be accommodated in Dublin Port will require additional new infrastructure elsewhere on the east coast.

If Dublin Port is developed to the ultimate extent indicated in this Masterplan and if all of this capacity is fully utilised, Dublin Port Company will, without doubt, have the financial wherewithal to undertake the massive challenge of building new port facilities elsewhere, should that become necessary. From where we are today it is difficult to predict whether any new facilities will be required beyond what is envisaged in this Masterplan. It is quite possible they will not.

Beyond the engineering options developed by the Port executive based on consideration of our customers' long-term requirements and following a detailed consideration of alternative options as part of the Strategic Environmental Assessment and Appropriate Assessment, we have sought to temper and modulate how future developments will be implemented by reference to the wider needs of the city and its citizens. The outcome of this approach is manifest in our commitment to respect the soft values of Dublin Port and to better integrate the Port with the City in ways which produce real community gain for all.

Although the Masterplan does not have any statutory status we have prepared it as if it did. In particular, we have subjected the Masterplan to a Strategic Environmental Assessment and to an Appropriate Assessment. Our rationale for doing this is to ensure the maximum visibility and participation for all stakeholders in advance of individual projects being brought forward for planning. Our approach in preparing this Masterplan has, therefore, been to be open with all stakeholders and to create as early as possible an environment within which the concerns of potential negative impacts can be best identified, avoided or mitigated.

The 30 year time period for the Masterplan is long and there are inevitably increasing levels of uncertainty about what developments might be needed beyond the early (five to ten) years of this period. A central part of the Masterplan is, therefore, a commitment and undertaking to keep the Masterplan under review to ensure that it always remains relevant and meets its central objective of providing a clear vision for the development of the Port into the future.

Dublin Port Company acknowledges the significant contribution to the preparation of this Masterplan from a range of statutory stakeholders, in particular Dublin City Council, the Dublin Docklands Development Authority and the National Parks and Wildlife Service. Dublin Port Company is also grateful for the large number of submissions received on the Issues Paper from public bodies, customers, industry and community groups and the wider public. These submissions informed the Masterplan and are reflected in its final form.



**Eamonn O'Reilly**

**Chief Executive**

# 1 Executive Summary

- » Dublin Port is a key facilitator of merchandise trade in and out of Ireland and has a critical impact on the national and regional economies. The Port is also a key component of the national tourism sector and represents a key gateway for visitors to Ireland.
- » The contribution that Dublin Port makes to the national and regional economy and to the people of Ireland as a strategic piece of infrastructure gives the port estate lands their real intrinsic value.
- » Dublin Port is a significant focal point for employment in Dublin with over 4,000 people employed in the Port Estate all directly supported by the trading activity carried on at the Port.
- » The Dublin Port Masterplan presents a vision for future operations at the Port and addresses the key issues around the future development of the Port by reference to developments in merchandise trade and key sectors of the economy. It also examines the existing land utilisation at Dublin Port and suggests some options for future development at the Port which will facilitate the Port handling 60m tonnes by 2040.
- » One of the key outputs from the Masterplan process is for Dublin Port Company to outline some of the options that are available to increase efficiencies at the Port and to provide additional throughput capacity to cater for the projected growth in port tonnage over the next 30 years.
- » The Masterplan is a non-statutory plan which has nonetheless been framed within the context of EU, national, regional and local development plan policies.
- » A full and comprehensive Strategic Environmental Assessment, a Screening Report and an Appropriate Assessment of the Masterplan have also been prepared to accompany and inform the Masterplan.
- » A number of scenarios have been considered as part of the overall strategy for the Masterplan area. Section 4 of the Masterplan sets out the infrastructure development proposals which have been advanced following an assessment of the options available for the provision of port capacity in Dublin Port.
- » The development options presented in Section 4 are not a prescriptive menu of developments that will be carried out in Dublin Port. Rather they are a set of possible options that need to be assessed before being developed by reference to issues of demand, capacity, and that are subject to completion of the relevant planning and consents requirements.
- » The quality of the air and sea access infrastructure is a critical element in serving the internationally traded side of the economy and must be of the highest international standards in order to facilitate merchandise trade in a competitive manner.
- » Dublin Port Company believes that even allowing for shorter term volatility, there is likely to be a positive trajectory of growth over the period to 2040. In advancing the Masterplan for Dublin Port to 2040, it is intended to show how the Port could handle 60 million tonnes by 2040, which is based on a putative growth rate of 2.5% per annum.
- » This potential throughput growth rate of 2.5% is modest, reasonable and achievable in light of the average growth rates that the Port has experienced through a range of economic cycles and significant structural changes since 1950.
- » In the period to 2040, the Greater Dublin Area will retain its primary importance in the national economy – over 40% of the national population live there and with Dublin and the Mid East region accounting for nearly half of the gross value added in the Irish economy.
- » On the basis of current trends Ro-Ro freight will remain the largest component of the Port's traffic to 2040. However, if existing trends continue, the Port could face a considerable challenge to provide sufficient land for unaccompanied Ro-Ro, with a potential 24.4 hectares required to handle putative volumes by 2040.

- » Dublin Port Company is satisfied that through a combination of utilising existing facilities and the possibility of building new facilities, there will be adequate capacity to allow the Port handle future volumes of Lo-Lo container trade over the next 30 years.
- » The Port recognises that new cruise facilities will be required to further develop this business and future growth prospects. The Company believes that the option identified in the City Council's Local Area Plan of North Quay Extension is the optimum location for new facilities. The Port could part fund the development but additional funding would be needed from other sources.
- » Dublin Port Company has identified a site between East Wall Road and the Dublin Port Tunnel which can be used as a dedicated car storage compound.
- » Moving the oil storage facilities from Dublin Port to another location is not a likely prospect over the period of the Masterplan. Dublin Port Company will seek to ensure that the existing oil zone is utilised as efficiently as possible and will work with the oil companies to identify projects which have the capacity to free up land for other Port uses.
- » To accommodate the existing and anticipated level of trade in Bulk Solid and to facilitate other types of freight activity over the period of the Masterplan, some improvements and consolidation of existing areas for handling these materials will be required.
- » Submissions and observations received through the Consultation process on the Issues Paper have been taken into account in the design of the development options and initiatives contained in the Masterplan. The design of the development options has also been informed by the policy objective of Dublin Port Company to secure societal integration of the Port with the City and its people.
- » In the context of a Masterplan which looks to a 30 year horizon it is also important that the Company takes a longer term view of the use and strategic benefit of specific lands and does not relinquish land that may be required for port purposes in the future.
- » Dublin Port is well connected to the national road network and in particular the Dublin Port Tunnel, which was opened in 2006, has provided fast and direct access to the strategically important M50 and M1 routes within minutes of leaving the Port.
- » Dublin Port is at the heart of the national rail network with direct connections to all major centres of population. Dublin Port Company believes that there is significant potential for rail freight to grow over the period of the Masterplan.
- » There are some specific supply chain and transport initiatives that Dublin Port Company will pursue during the period covered by the Masterplan and which will aim to facilitate the achievement of the sustainable transport objectives set out in both EU and National Policies.
- » It is expected that while modern technological innovations and developments in freight logistics will increase efficiencies, there will be a significant net employment gain from the development of new projects envisaged in this Masterplan.
- » Integrating Dublin Port with Dublin City and its people is a core part of the Masterplan for Dublin Port. This policy objective will underpin both how Dublin Port Company operates its current business and any development proposals envisaged under the Masterplan and will be achieved through initiatives and programmes to be undertaken over the course of the period of the Masterplan.
- » In advancing the development options in the draft Masterplan, Dublin Port Company will ensure that the health, safety and security procedures at Dublin Port accord with best international practice and facilitate the operation of a modern, efficient and safe facility for passengers, freight and people working in the Port.

- » Various development options have been assessed as part of the SEA process in order to inform the decision-making process (details of which are contained in Section 6 of the SEA Draft Environmental Report). The development of the Draft Masterplan has involved the consideration of a number of alternative approaches to the provision of future capacity at Dublin Port. Additionally, a number of specific development / engineering alternatives were considered which could potentially meet the objectives of the Draft Masterplan. Following a review and comparison of these proposals, the preferred options were selected for inclusion within the Draft Masterplan.
- » The assessment of the likely environmental impacts arising from the preferred engineering options was undertaken. The SEA Draft Environmental Report identifies that the short-term effects, relating primarily to construction based impacts, range from being negligible to minor adverse. In the medium to long term, moderate adverse effects are predicted for potential unknown archaeological remains resulting from work such as dredging within the harbour. However, overall, in the medium to long term, potential effects of the Dublin Port Company Draft Masterplan are largely negligible with minor beneficial effects expected for some aspects.
- » Dublin Port Company will work closely with Dublin City Council, the NPWS and other stakeholders in the implementation of the proposals outlined in the Masterplan.
- » In particular, Dublin Port Company will establish a formal structure for engagement with both the City Council and the NPWS on the implementation of the Masterplan, with the intention that this forum shall meet at least annually or more frequently if required. Dublin Port Company will also establish formal structures for engagement on the implementation of the Masterplan with the local community.
- » Monitoring the performance of the Port and the achievement of the proposals outlined in the Masterplan will be a key element in ensuring its effective implementation.
- » Within the Masterplan, therefore, there will be periodic fundamental reviews no later than every 10 years to ensure that the course being followed by the Port does not deviate from what is actually required.
- » In carrying out each such review, Dublin Port Company will consult with external stakeholders to ensure that the Plan continues to represent the best solution for future development of the Port, the City and the Bay.

## 2 The Rationale for the Masterplan

### Introduction

**Dublin Port Company has prepared this Masterplan to guide the development of Dublin Port in the period from 2012 to 2040.**

**The Masterplan presents a vision for future operations at the Port and critically examines how the existing land use at Dublin Port can be optimised for merchandise trade purposes. The Masterplan, which has been prepared following extensive engagement with stakeholders, also outlines how Dublin Port Company will work to better integrate the Port with the City and people of Dublin.**

### The Purpose of the Masterplan

The Masterplan has been prepared by Dublin Port Company in order to:

- » Plan for future growth and changes in facilitating seaborne trade in goods and passenger movements to and from Ireland and the Dublin Region in particular.
- » Provide an overall context for future investment decisions.
- » Reflect and provide for current national and regional policies, local guidelines and initiatives.
- » Ensure there is harmony and synergy between the Plans for the Port and those for the Dublin Docklands Area and Dublin City.
- » Give some certainty to customers about how the Port will develop in the future to meet their requirements.

The Masterplan process has sought to address the following:

- » Prepare a strategic Masterplan; building on the Masterplan Issues Paper and in line with international guidance on the preparation of Port Masterplans.
- » Conduct a wide-ranging consultation with stakeholders in the Port, statutory consultees as well as the general public on the Masterplan.
- » Complete a Strategic Environmental Assessment of the Masterplan.

The Masterplan addresses the key issues around the future development of the Port by reference to developments in merchandise trade and key sectors of the economy. It also examines the existing land utilisation at Dublin Port and suggests some options for future development at the Port which will facilitate the Port handling 60m tonnes by 2040.

The Masterplan has been informed by a series of expert reports prepared for the Issues Paper published by Dublin Port Company in March 2011 and takes account of feedback received during the consultation process. The development options outlined in the Masterplan are also informed by the Strategic Environmental Assessment prepared as part of an iterative process by Jacobs Engineering and both documents should be read together.

The rationale for the development options suggested under the Masterplan is also provided by a series of Reports (prepared by the Port's executive) on different aspects of the operations of Dublin Port. These Reports look at how the Port can effectively deliver on an objective of handling 60m tonnes by 2040. These Reports are available as a separate online appendix to the Masterplan on the Dublin Port Company website ([www.dublinport.ie/masterplan](http://www.dublinport.ie/masterplan)).



## Consultation

A major consultation exercise was carried out to inform the Masterplan which involved:

- » Significant consultation with the local community.
- » Detailed consultation with statutory stakeholders.
- » Information briefings for customers, employees and interest groups concerned with the Port.
- » Public meetings in Clontarf, East Wall and Ringsend.
- » A seminar and a conference on the Masterplan.
- » Information leaflets circulated to local houses.
- » A significant public advertising and information campaign.
- » Direct engagement with public representatives.
- » A significant amount of material being made available on the Dublin Port Company website regarding Dublin Port, the Masterplan and related matters.

Over 250 submissions were received in response to the Issues Paper published as part of the master planning process. There was an excellent level of engagement with statutory, community and commercial stakeholders. The report on the consultation process is also available as an online appendix to the Masterplan on the Dublin Port Company website ([www.dublinport.ie](http://www.dublinport.ie))

## Status of the Masterplan

The Masterplan is a non-statutory plan which has nonetheless been framed within the context of EU, national, regional and local development plan policies. The *Ports Policy Review Consultation Document* issued by the Department of Transport in 2010 articulates the advantages of producing Masterplans for Ports and this has encouraged the Company to proceed with its Masterplan. It has also been informed by the *Guidance on Port Master Plans Consultation Document* published by the Minister for Regional Development in Northern Ireland and *Guidance on the Preparation of Port Master Plans* published by the Department of Transport in the UK (23rd December 2010 update).

It is hoped that the Masterplan will form the basis for an input into future Development Plans for Dublin as well as Regional Planning Guidelines for the Greater Dublin Area. It may also be taken into account by An Bord Pleanála in considering any application submitted to it under the Strategic Infrastructure Act.

## Strategic Objectives Underpinning the Masterplan

The Masterplan has been prepared to meet a number of strategic objectives identified by Dublin Port Company as necessary to facilitate the effective operation of the Port in the period to 2040.

The key objectives are set out below:

### Port Functions

1. Ensure the safe operation and development of the Port and its approach waters and provide appropriate infrastructure, facilities, services, accommodation for ships, goods, and passengers to meet future demand.
2. Optimise the use of the lands on the Port Estate through rationalizing the distribution and location of specific areas of activity such as Ro-Ro, Lo-Lo, Ferry Services, Cruise Ships, Liquid / Bulk Goods and storage areas with necessary reconfigurations of service facilities as required.
3. Recover lands that are not being used for critical port activity and re-use for such activity.
4. Develop quaysides adjacent to deep water to their maximum.



# Strategic Environmental Assessment and Appropriate Assessment

Dublin Port Company, as the competent authority responsible for the preparation of the Dublin Port Masterplan has determined that a full and comprehensive Strategic Environmental Assessment of the Plan is required in compliance with EU Directive 2001 / 42 / EC as transposed into Irish legislation through the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (S.I. 435 of 2004).

The SEA process for this Masterplan includes:

1. **Screening:** To determine which plans and programmes are likely to have a significant impact on the environment.
2. **Scoping:** to liaise with statutory consultees to identify key issues of concern that should be addressed in the environmental assessment of the Plan.

3. **Draft Environmental Report:** Where the likely significant environmental effects of implementing the Masterplan are identified and evaluated.
4. **Consultation:** Consulting the public, statutory and public authorities, on the draft environmental report and draft Masterplan, giving adequate time for the receipt of submissions.
5. **Final Environmental Report:** Taking account of the findings of the draft report and the outcome of consultations in deciding whether to adopt or modify the draft Masterplan.
6. **SEA Statement:** To make known on adoption of the plan how the SEA process influenced the outcome and to identify how environmental considerations have been integrated into the final Plan.

In addition, a Screening Report has been undertaken in accordance with the Habitats Assessment Directive Regulations and an Appropriate Assessment has also been prepared to accompany the Masterplan.

# Planning and Environmental Policy Context

## EU Directives and Policy

*The Birds Directive* (2009 / 147 / EC) and *The Habitats Directive* (93 / 43 / EEC) are the cornerstones of EU biodiversity policy. Both directives require Member States to designate specific terrestrial and marine sites, which together constitute the Natura 2000 network. This network consists of Special Protected Areas (SPAs) -protecting bird species - and Special Areas of Conservation (SACs) - protecting habitats and other species of EU conservation concern.

Dublin Bay has a number of designations as follows:

- » South Dublin Bay and River Tolka proposed SPA
- » North Bull Island SPA
- » South Dublin Bay candidate SAC
- » North Dublin Bay candidate SAC

Figure 1 illustrates the areas involved.

*The Strategic Environmental Assessment Directive* (2001 / 42 / EC) (SEA) relates to the evaluation of the effects of certain plans and programmes on the environment. The purpose of the SEA Directive is to ensure that the environmental consequences of certain plans and programmes are identified, assessed and taken into account during their preparation and before their adoption.

*The Environmental Impact Assessment Directive* (85 / 337 / EEC) (EIA) relates to the assessment of the effects of certain public and private projects on the environment.

While the SEA process operates at the level of public plans and programmes, Environmental Impact Assessments (EIA) operate at the level of individual public and private projects. The Masterplan, therefore, cannot assess impacts from individual projects. However, any future projects brought forward under the Masterplan will, of necessity, require the preparation of a specific EIA.

*The Water Framework Directive* (2000 / 60 / EC) (WFD) covers estuaries and coastal water bodies. The WFD establishes a framework for the protection of all surface waters (rivers, lakes, transitional and coastal) and groundwater at EU level and aims to achieve a good ecological status (or a good ecological potential for heavily modified water bodies) and a good chemical status by 2015. *The Marine Strategy Framework Directive* (2008 / 56 / EC) (MSFD) provides a more comprehensive view and deals also with ecosystem services in marine areas. It establishes a framework for the protection and restoration of marine ecosystems. According to this directive, Member States must take the necessary measures to achieve or maintain a good environmental status (GES) in the marine environment by the year 2020.

*The European Commission Recommendation on Integrated Coastal Zone Management* (2002 / 413 / EC) (ICZM) paves the way for better strategic planning of coastal areas which maintains the integrity of this important resource while considering local traditional activities and customs that do not present a threat to sensitive natural areas and to the maintenance status of the wild species of the coastal fauna and flora.

*The EU Ports Policy Communication* (2007) aims to increase the carrying capacity of ports in order to allow a further increase of maritime and fluvial transport. The relationship between cities and their ports remains one of interdependency and should be ruled by long term strategic vision and planning.

*The Maritime Spatial Planning in the EU* (2010) highlights that integrated spatial planning, including maritime spatial planning, offers opportunities for anticipating difficulties and adverse environmental impacts and for avoiding potential conflicts and delays in project development. Such plans should be submitted to strategic environmental assessments, and also to appropriate assessments under the Habitat Directive – to evaluate the potential impacts of plans and projects on Natura 2000 sites.

*Integrating Biodiversity and Nature Protection into Port Development* (2011) and *The Implementation of the Birds and Habitats Directive in Estuaries*

and *Coastal Zones* (2011) outline how to effectively integrate biodiversity with the development of Ports. The key stakeholders are port authorities, dredging companies, private investors, member states' administrations, environmental groups. It advocates a better understanding of the context, improved planning of projects, integration of SEA and EIA into plans and projects, in addition to the better management of dredging.

*EU White Paper - Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system* (2011) at the core of which is the challenge of achieving a reduction of at least 60% of GHGs by 2050 with respect to 1990 from the transport sector. Beyond this central target, the White Paper identifies specific goals to achieve this, including:

- » Reduce EU CO<sub>2</sub> emissions from maritime bunker fuels by 40% (if feasible 50%) by 2050.
- » Shift 30% of road freight over 300 km to other modes such as rail or waterborne transport by 2030, and more than 50% by 2050, facilitated by efficient and green freight corridors.
- » Ensure that all core seaports are sufficiently connected to the rail freight and, where possible, inland waterway system by 2050.

## National Policy

*The National Spatial Strategy 2002-2020* identifies the sea link between Dublin and the west coast of the UK as a main corridor to and from Ireland. Dublin Port is identified as a transit Port in the Dublin and East Region along with a number of smaller ports. The strategy recognises the importance of the future success of the economy of the Greater Dublin Area in the life of the State. It is dependent on good international access through Dublin Port.

*The National Development Plan 2007-2013* proposed a major programme of investment in infrastructure with a particular focus on addressing deficits in the various National Spatial Strategy Gateway areas. A particular objective of the Plan is the preparation of a comprehensive study of the role of Dublin Port, taking into account locational considerations in the context of overall Ports policy on the Island of Ireland – this Study (carried out by Indecon) for the Department of Transport found that Dublin Port is a key piece of national strategic infrastructure and recommended that nothing should be done at a policy level to block the proposed expansion of Dublin Port. Transport 21 was a capital investment framework under the National Development Plan which ran from 2005 to 2010. It will be superseded by the National Development Plan from 2012.

*The Ports Policy Statement, Department of Transport* (2005) seeks to provide a framework for the provision by Port Companies of port services which are efficient, effective and adequate for the needs of our growing economy. *The Ports Policy Review Consultation Document, Department of Transport* (2010) forms part of the initial consultation phase in the review of the Ports Policy Statement. It indicates trends, challenges and opportunities. A number of questions are raised in relation to seaport capacity, energy policy, integrated transport planning. The development of port master planning in other jurisdictions is seen as a transparent method in aiding the engagement of local communities in the long term planning of ports. Environmental impact and, in particular, potential impact upon designated Natura 2000 sites is a particularly sensitive issue. Means by which connectivity for passengers and freight can be improved should be explored further.

A series of formal *Ministerial Guidelines* have been issued under S28 of the Planning and Development Act 2000. The following Guidelines have been taken into account in the preparation of the Master Plan:

- » The Planning System and Flood Risk Management - Guidelines for Planning Authorities (2009).
- » Architectural Heritage Protection – Guidelines for Planning Authorities (2004).

*Smarter Travel - A Sustainable Transport Future* (2009) is a national policy document, which sets out a broad vision for the future and establishes objectives and targets for transport.

## Regional Policy

*The Regional Planning Guidelines for the Greater Dublin Area 2010-2022* provide an overall strategic context for the Development Plans of each local authority in the GDA. The Guidelines consider Dublin Port and Dublin Airport as the premier access points, not only to the Dublin Region but to the country as a whole.

The Dublin Transportation Office Strategy *A Platform for Change* outlines an integrated transportation strategy for the Greater Dublin Area for the period 2000 – 2016. This is currently being reviewed by the National Transport Authority's *Greater Dublin Area Draft Transportation Strategy, 2011-2030*. It is the policy of the Draft Strategy to retain a corridor for the provision of the Eastern Bypass, linking Sandyford with the Port Tunnel. Preferred routes for freight transport from the Ports will be identified.

## Local Plans and Projects

These include the following:

- » *The Dublin City Development Plan 2011-2017*
- » *The Dublin Docklands Area Master Plan 2008*
- » *The North Lotts Planning Scheme 2002*
- » *The Grand Canal Dock Planning Scheme 2000*

These plans represent the policies and objectives of Dublin City Council and The Dublin Docklands Development Authority for the area. The Planning Schemes set out the physical planning for neighbouring interface areas. The Docklands Masterplan is essentially a plan for the social and economic regeneration of the Docklands area but also includes zoning objectives. It contains a number of objectives supportive of the role played by the Port in the economy of the area and the employment it generates.

The Dublin City Development plan includes objectives that recognise the importance of the Port to the economic life of the city as well as zoning objectives for Port lands.

## The Area and Context

### The Masterplan Area

The area of the Masterplan includes the entire Dublin Port Area of which the Port Estate forms the greater part.

Figure 2 shows the Port area in the context of Dublin Bay and the study area is outlined in Figure 3.

The Masterplan area covers the operational harbour, which is used for shipping, cargo handling, storage as well as ferry and cruise ship activities. There is a small leisure boating area on the southern side of the Port mainly associated with the Poolbeg Yacht Club. Aside from shipping activities the port area accommodates significant utility installations that serve the Dublin region.

## The Natural Environment

The pSPAs and cSACs referred to above contain internationally as well as locally important bird species and population. The issues involved in planning for the Port in proximity to these designated areas are considered in some detail in Section 9 of the Masterplan.

### Cultural Heritage

Dublin Port Estate has a number of elements of historic and engineering interest including the north and south bull walls as well as Poolbeg Harbour. Specific suggestions on developing heritage and cultural initiatives associated with the Port are contained in Section 7 of the Masterplan.

# Development Options

A number of scenarios have been considered as part of the overall strategy for the Masterplan area.

Section 4 of the Masterplan sets out the infrastructure development proposals which have been advanced following an assessment of the options available for the provision of port capacity in Dublin Port.

This has involved assessing what is possible by reference to:

- » Planning constraints
- » Navigation and engineering feasibility
- » Economic feasibility
- » Transportation links
- » Legal constraints
- » Environmental constraints

A detailed consideration of the alternatives to the proposed development options is contained in the Strategic Environmental Assessment of the Masterplan.

The development options presented in Section 4 **are not** a prescriptive menu of developments that will be carried out in Dublin Port. Rather they are a set of possible **options** that need to be assessed before being developed by reference to issues of demand, capacity, and that are subject to completion of the relevant planning and consents requirements.

Where individual applications are advanced during the Masterplan period they will also require to demonstrate that the option chosen is justified following a consideration of the alternatives at that time and by reference to the necessity and impacts of the proposed development.



Figure 2 - Dublin Port in the Context of Dublin Bay



Figure 3 - Masterplan Area



# 3 Forecasts

## A General Economic Overview

**The economic outlook for the Irish economy remains challenging in the short and medium-term as the country adjusts to the changed economic realities following the unprecedented economic shock that the economy endured after 2008.**

The key domestic challenges are to restore order to the public finances; re-create a functioning banking system; and restore the internal and external competitiveness of the Irish economy. The challenge is compounded by the increasingly uncertain international economic and financial backdrop, and particularly the Euro Zone debt crisis.

Ireland is a textbook example of a small open economy, where trade in goods and services is of key importance. Following the sharp contraction in domestic economic activity after 2008, there is now an increased recognition that Ireland's near-term economic recovery and longer-term return to prosperity will be crucially determined by the export sector.

As a small open economy which lacks a domestic market of sufficient scale to support itself, there is a clear recognition that exports will be an essential element of the future Irish economic model. Companies based in Ireland are being actively supported by official agencies to source and secure international markets for their goods and services.

Imports of goods are also of strategic importance to the Irish economy, not just as inputs to domestic consumption, but also as essential inputs to the production process of goods for export.

The quality of the air and sea access infrastructure is a critical element in serving the internationally traded side of the economy. There is a general recognition that the quality and efficiency of ports and airports is a crucial component of Ireland's competitiveness. The quality of air and sea port access must be of the highest international standards in order to facilitate merchandise trade in a competitive manner.

Between 2000 and 2008, Ireland lost considerable international cost competitiveness. This loss of competitiveness was instrumental in the slowdown in both service and merchandise exports, and the pressure on the capacity to attract foreign direct investment. Following the onset of recession in 2008, Ireland's external cost competitiveness improved as most prices and costs responded to the changed economic circumstances.

The improvement in external competitiveness and stronger global demand have contributed to a strong recovery in Ireland's export performance. The value of merchandise exports expanded by 5.9% in 2010 and the value of merchandise imports increased by 1.1%. A merchandise trade surplus of €43.4 billion was recorded in 2010. In the first seven months of 2011 the value of merchandise exports was 4.1% higher than the first seven months of 2010 and the value of merchandise imports increased by 7.4%. A merchandise trade surplus of €25.6 billion was recorded in the first seven months of the year. There are also some indications that despite the fiscal challenges and the difficulties associated with the banking sector, the domestic economy is showing some growth. In the first half of 2011 GDP was 1.3% higher than the first half of 2010 and GNP increased by 1.0%.

As a small open economy Ireland is subject to fluctuations in global demand which has the effect of causing fluctuations in external trade flows. However, trade remains a very important component of Irish economic and social life. Dublin Port Company believes that even allowing for shorter term volatility, there is likely to be a positive trajectory of growth over the period to 2040. The Dublin Port Masterplan Issues Paper indicated that in the period to 2040, Ireland's potential GDP growth rate should be around 3.5% per annum, with exports recording annual growth of 5.0% and imports growing at an average of 3.0% per annum.

Dublin Port Company believes that these economic growth potentials are reasonable in light of:

- » A continual focus by the Irish Government to re-establish Ireland as an export driven economic growth model.
- » The multinational manufacturing sector (which is dominated by the chemical, pharmaceutical and IT industries) will remain key components of growth.
- » The strong contribution that food and drink exports will make to Ireland's future growth model – again in response to clear government guidance.
- » The focused targeting by Government of emerging economies such as India and China.
- » A demographic profile which will ensure that imports of consumer goods should continue to grow.
- » The strategic requirement for imports to drive production processes.
- » The relationship between economic performance and growth in the throughput at Dublin Port between 1950 and 2010 – in particular the interrelationship in economic performance and throughput between 1980 and 2010.

## Anticipating Future Growth

In advancing the Masterplan for Dublin Port to 2040, it is intended to show how the Port could handle 60 million tonnes by 2040, which is based on a putative growth rate of 2.5% per annum.

Dublin Port Company's best estimate of how this overall growth will be spread across the various cargo modes is as follows:

	2010 '000 gross tonnes <sup>1</sup>	2040 '000 gross tonnes	AAGR
<b>Ro-Ro</b>	16,403	41,920	3.2%
<b>Lo-Lo</b>	6,317	10,480	1.7%
<b>Bulk Liquid</b>	4,009	4,000	0.0%
<b>Bulk Solid</b>	2,054	3,500	1.8%
<b>Break Bulk</b>	96	100	0.1%
<b>Total tonnes</b>	<b>28,879</b>	<b>60,000</b>	<b>2.5%</b>

	2010	2040
<b>Ro-Ro ('000 units)</b>	701	1,791
<b>Lo-Lo ('000 units)</b>	377	625
<b>Totals</b>	<b>1,078</b>	<b>2,416</b>

	2010	2040
<b>Lo-Lo ('000 TEU)</b>	641	1,063

<sup>1</sup> All tonnages and volumes are five year averages

Even in the context of the increased global volatility, Dublin Port Company believes that merchandise trade flows in and out of Ireland should continue to expand to 2040, albeit not at the levels of growth that occurred between 1992 and 2002.

This potential throughput growth rate of 2.5% is modest, reasonable and achievable in light of the average growth rates that the Port has experienced through a range of economic cycles and significant structural changes since 1950. Between 1950 and 1980 the average growth rate at Dublin Port was 3.2% per annum. Between 1980 and 2010 the average annual growth rate was 4.7%. In the context of this performance over 60 years, Dublin Port Company believes that reaching 60 million tonnes by 2040 on an estimated annual average growth rate of 2.5% is a reasonable basis upon which to plan the future development of the Port.

## Dublin Port and the Greater Dublin Region

In assessing the potential capacity of Dublin Port through to 2040, one significant aspect is the proximity of the Port to the main markets in Ireland. The origin and destination studies carried out by Dublin Port Company have determined that over 50% of all goods arriving in Dublin Port remain within the M50 area, while 75% of all goods arriving at the Port remain within 80 km of the Port. In the period to 2040, the Greater Dublin Area will retain its primary importance in the national economy – over 40% of the national population live there and with Dublin and the Mid East region accounting for nearly half of the gross value added in the Irish economy. Employment and manufacturing densities are also higher in the greater Dublin area than elsewhere. Dublin Port is at the heart of this market and its location at the edge of a dynamic and vibrant region means that it is well positioned to serve this market in an effective and efficient way to 2040 and beyond. Finally, shippers from all over the country will continue to be attracted to use Dublin Port due to the legacy benefits of major infrastructural investments such as the Dublin Port Tunnel, the completion and widening of the M50 and the major expansions to the radial road network centred on Dublin.

## Planning for the Future – Anticipating Future Trends

Dublin Port's main function is to facilitate the movement of goods and people on an efficient and cost effective basis. To plan to fulfil this objective through to 2040 requires Dublin Port Company to examine the existing port estate and to determine how the Port can achieve an optimal performance taking account of current transport methods and developing trends in merchandise trade.

To achieve this objective Dublin Port Company has prepared a series of internal reports on the movement of goods and people by reference to the specific categories of transport involved. These Reports, which are available in full on the Masterplan website ([www.dublinport.ie/masterplan](http://www.dublinport.ie/masterplan)) provide helpful guidance on how the Port can optimise current performance and plan for the future. The key findings of the reports have provided guidance on the configuration of the Port to 2040 and assist with maximising the effective use of land and quayside resources. The key findings are set out below.

## Ro-Ro Requirements

On the basis of current trends Ro-Ro freight will remain the largest component of the Port's traffic to 2040. Dublin Port Company anticipates that the continuing strength in trading relations between Ireland and Britain and the commencement of new Ro-Ro freight services to Continental Europe and Africa will increase the proportion of trade in the Ro-Ro mode from 57% to 70% of Port traffic by 2040 to an anticipated 41.9m tonnes, equivalent to 1.8m unit loads.

Providing for the growth in capacity in Ro-Ro freight will be a significant challenge for Dublin Port and imposes a requirement to ensure that there are high levels of utilisation of Port land for both accompanied and unaccompanied Ro-Ro freight. On the basis of the current configuration of Ro-Ro freight at Dublin Port, the Company believes that higher levels of land utilisation can be secured for both categories of Ro-Ro freight. This will allow the Port to cater for considerable increases in volumes over the next 30 years through existing land areas. An additional 4.5 hectares will possibly be required for accompanied Ro-Ro and this can be readily provided from within the Port's existing footprint.

However, if existing trends continue, the Port could face a considerable challenge to provide sufficient land for unaccompanied Ro-Ro, with a potential

24.4 hectares required to handle putative volumes by 2040. This land will need to be close to the Ro-Ro berths. On the basis of the current land usage and in light of the loss of some Ro-Ro capacity if the proposed cruise berths are built on North Quay Extension, some element of new land (reclamation) will be required over the period of the Masterplan to meet demand.

## Lo-Lo Requirements

Analysis by Dublin Port Company suggests that the putative volume of Lo-Lo trade by 2040 will be 1.1m TEU (equivalent to 0.6m unit loads). There is significant spare terminal capacity for Lo-Lo container handling at present with significant potential to increase container throughput by planned projects and increased utilisation of existing container terminals. Through a combination of these factors, container handling capacity in Dublin Port could increase towards 1.9m TEU per annum - all through existing land. This would provide a level of capacity that is greatly in excess of foreseeable demand.

Additional berths and facilities for Lo-Lo trade may be required, however, if existing operators face restrictions on their capacity to increase throughput. Additionally, if the size of container ships increases over the period of the Masterplan there may be a requirement to build deeper berths to accommodate these vessels. There is potential to build new deep berths immediately in front of the ESB Poolbeg Power Station.

Accordingly Dublin Port Company is satisfied that through a combination of utilising existing facilities and the possibility of building new facilities, there will be adequate capacity to allow the Port handle future volumes of Lo-Lo container trade over the next 30 years.

## Cruise Terminals

The Cruise business at Dublin Port has grown significantly in recent years and in 2011, over 85 cruise ships arrived at the Port, with 130,000 passengers alighting to see Dublin City and its environs. It is estimated that these passengers contribute up to €50m to the local economy. The cruise business currently generates €700,000 direct revenue for Dublin Port Company.

The Port recognises that new cruise facilities will be required to further develop this business and develop future growth prospects. At present cruise ships occupy berths that are better suited to cargo vessels and provide an unattractive location for passengers disembarking from the liners.

Dublin Port Company also recognises that the development of the cruise industry is of wider strategic importance to the City of Dublin, as reflected in the Local Area Plan published by Dublin City Council in June 2011.

As a key part of the Company's vision of integrating the Port with the City, the relocation of the Cruise liners closer to the city centre provides a real opportunity to create a strong visible link. The sight of cruise liners so close to the city will provide a dramatic backdrop. It will also facilitate passengers on cruise liners to access the city directly and ensure an increased usage of the city's public transport infrastructure.

Having assessed three alternative locations for the development of new cruise facilities, the Company believes that the option identified in the City Council's Local Area Plan of North Quay Extension is the optimum location. A new facility at this location could accommodate two large cruise ships at any one time and provide a strong visible and accessible link with the city.

Constructing new cruise facilities will be expensive as it will involve:

- » New quay walls and berthage dredged to a depth of 10.5m CD to accommodate large cruise liners.
- » A reception, tourist information and interpretive centre.
- » A dedicated entrance for pedestrians, coaches and vehicles.
- » Traffic management measures.
- » Relocation of existing Ro-Ro facilities at North Quay extension.
- » Relocation of existing ESB underwater high voltage cables.

Initial indications suggest that the cost of developing these new facilities will be in the region of €30m. This includes the construction of a new wall, the associated ground / pavement works, fendering, bollards, relocation of ESB cables and dredging. Given the relatively low revenues generated by cruise ships, such an investment by Dublin Port Company alone could not be justified. The Port could, however, part fund the development but additional funding would be needed from other sources.

## Trade Cars

The economic downturn has negatively impacted on the level of car imports through Dublin Port. In 2007, at the peak of the boom, 144,866 cars were imported through Dublin Port and this accounted for 58.4% of total imports of trade vehicles through Irish ports. By the end of 2010, Dublin Port's throughput had declined to 47,333 and it seems that the volume for 2011 will be of this magnitude.

There have been significant changes in the nature of shipping services catering for trade cars. In the past cars were imported into Ireland on large deep-sea car carriers. However, the decline in the car market, together with the commencement of Ro-Ro freight services from Continental Europe has led to the majority of trade cars being imported into Ireland as an additional cargo to Ro-Ro freight in smaller consignments and on a more regular basis.

In 2007 only 6% of trade cars were shipped on multi purpose Ro-Ro ferries. By 2010, nearly 61% are shipped on multipurpose Ro-Ro ferries.

Trade cars require significant transit storage capacity and present significant challenges given that the business is concentrated around the end of each year and the first quarter of the following year. Dublin Port needs to be able to cater for the average annual volume of car imports measured over the last decade – 108,000 cars, with capacity for peak years, up to 157,000 cars. Measured on a monthly basis, the Port would need capacity to store up to 18,000 cars in a peak month. Cars also need to be stored in safe, clean areas with high security. The mobility of cars means that they can be stored away from the quay walls which can then be freed up for other types of cargo, including unitised freight.

To achieve this, Dublin Port Company has identified a site between East Wall Road and the Dublin Port Tunnel which can be used as a dedicated car storage compound. This site has capacity for 2,300 trade cars and can be linked to the Port by a bridge across Bond Road (subject to necessary planning consents). This will free up lands close to the quay for other trade purposes and alleviate immediate demands for increased reclamation over the short term.

## Oil zone

There will continue to be a large dependence on petroleum products over the period to 2020 and beyond to the end of the Masterplan period. In 2010 Dublin Port's liquid bulk volume was 4.0m tonnes, equivalent to 53% of the country's total oil requirements. Dublin Port's oil facilities are of critical strategic importance – including supplying the only source of fuel supply for Dublin Airport.

Dublin Port Company does not expect any significant change in the volume of liquid bulk through the Port to 2040.

There are four oil berths which handle 500 oil tankers each year. The oil storage and distribution facilities account for 10% of the Port Estate. There are also bitumen and LPG storage facilities.

Moving the oil storage facilities from Dublin Port to another location is not a likely prospect over the period of the Masterplan. The challenges in finding a suitable site, securing the necessary consents and constructing the facility would be immense. In addition, the capital cost of such a development is estimated to be well in excess of €250m.

Over the period of the Masterplan, Dublin Port Company will seek to ensure that the existing oil zone is utilised as efficiently as possible and will work with the oil companies to identify projects which have the capacity to free up land for other Port uses.

## Bulk Solid

Bulk Solid includes products from the agricultural, energy, mining and construction sectors. The material in bulk includes grain, animal feeds, fertilizer, peat moss, cement, petroleum coke, furnace slag and scrap metals. Dublin Port also handles exports of lead and zinc ores from Tara Mines. The Port additionally handles project cargoes – typically large scale structural components for buildings or elements of transport or industrial infrastructure.

In the medium term, it is likely that the volumes of construction materials through Dublin Port will be at more modest levels than during the boom. There has been an annual average decline of 21% in each of the years between 2007 and 2010 and a further significant decline has occurred in 2011.

Agricultural cargo in Dublin Port comprising cereals and animal feed peaked in 2000 at 845,000 tonnes but has since declined by 25% up to the end of 2010. Future demand for agricultural cargo will depend on demand for cereals and animal feeds – these are expected to grow following a projected increase in livestock when milk quotas are abolished in coming years.

The agri-food sector has demonstrated great resilience against the global recession with the value of exports increasing by more than €800m in 2010 to reach €7.9bn. In the first half of 2011,

the value of food and live animal exports experienced annual growth of 17%. Continued strong growth in Ireland's agri-food exports is expected as the sector continues to grow – however the bulk of this increase is likely to be seen within the Port's unitised modes, reflecting the higher value added nature of agri-food exports.

To accommodate the existing and anticipated level of trade in Bulk Solid and to facilitate other types of freight activity over the period of the Masterplan, some improvements and consolidation of existing areas for handling these materials will be required. There will also be additional facilities constructed, which will have the operational capacity to handle Bulk Solid and general materials handling.

# 4 Infrastructure Proposals

## The Masterplan Approach

**One of the key outputs from the Masterplan process is for Dublin Port Company to outline some of the options that are available to increase efficiencies at the Port and to provide additional throughput capacity to cater for the projected growth in port tonnage over the next 30 years.**

This approach has been informed by the expert studies carried out in preparing the Issues Paper published in March 2011. These studies examined future projections in the freight logistics, transport modes and developments likely to occur in certain trade and passenger categories. The Issues Paper also outlined some key criteria around environmental considerations, planning and land use elements and the engineering and technical contexts impacting on Dublin Port.

Submissions and observations received through the Consultation process on the Issues Paper have also been taken into account in the design of the development options that may be undertaken to deliver the needs and capacity that have been identified. In particular, the design of the development options has been informed by the policy objective of Dublin Port Company to secure societal integration of the Port with the City and its people.

The precise configuration advanced in the Masterplan is primarily informed by two key assessments of the Masterplan and its prospective development proposals. These are a Strategic Environmental Assessment and an Appropriate Assessment.

A series of drawings have been prepared to outline the development options that are identified in the Masterplan. The primary drawing (Figure 4 - see page 28) sets out the overall Masterplan options with site numbers which are referenced below in the narrative of the development options.

It is important to stress that the options presented in Figure 4 and described below are not a prescriptive menu of developments that will be carried out in Dublin Port. Rather, it is a list of possible options that need to be evaluated at the appropriate time (by reference to such issues as demand and capacity) and subjected to the completion of relevant assessments, planning and consent requirements.

A description of the development options outlined in Figure 4.

Site Reference (Figure 4)	Description of options for development or reconfiguration of existing port operations
1	<p><b>Transit storage site for trade cars</b></p> <p>This 4.3 hectare site has been identified as a dedicated site for the transit storage of trade cars. It comprises port lands which were disconnected from the main port estate when the Dublin Port Tunnel was built. A new access by way of a bridge over Bond Road is proposed. It is envisaged that this development will proceed in the early stages of the Masterplan period in order to free up lands elsewhere in the Port for longer term development for the transit storage of unitised cargo. Market requirements will determine whether this is accompanied Ro-Ro, unaccompanied Ro-Ro or Lo-Lo.</p>
2	<p><b>Reconfiguration of Ro-Ro facilities</b></p> <p>The development of new cruise facilities will require a major reconfiguration of existing Ro-Ro operations on North Quay Extension. Likewise, if currently vacant lands to the north of Alexandra Road are to be used for growing Ro-Ro trade, additional berthage will be needed.</p> <p>Taking these factors together, it is envisaged that there will be a major reconfiguration of lands and berths in and around Alexandra Basin West. The elements of this reconfiguration are:</p> <ul style="list-style-type: none"> <li>» Building of a new Ro-Ro berth to replace capacity that will be lost to cruise ships on North Quay Extension.</li> <li>» Removal of the existing bulk jetty used for ore loading and its replacement by alternative facilities on a new 120m berth.</li> <li>» Incorporation of currently vacant land to the north of Alexandra Road to create an additional capacity for the transit storage of Ro-Ro.</li> <li>» Removal of the existing Port Centre building.</li> </ul>
3	<p><b>Additional transit storage for unitised cargo</b></p> <p>Removal of existing warehouses and sheds and incorporation of vacant land to the north of Alexandra Road (the so-called "Texaco Yard") into the existing Ocean Pier and Alexandra Quay East terminal facilities to create additional transit storage for unitised cargo. Market requirements will determine whether this is accompanied Ro-Ro, unaccompanied Ro-Ro or Lo-Lo.</p>



Site Reference (Figure 4)	Description of options for development or reconfiguration of existing port operations
4	<p><b>Multi-user check in area for Ro-Ro</b></p> <p>Building of a new multi-user check-in area for Ro-Ro traffic (freight and cars). This would be done as a first step with the objective of creating a new one-way route into the Ro-Ro area along the northern perimeter of the Port with a one-way exit heading west along Tolka Quay Road.</p> <p>By having a single check-in area for all Ro-Ro operators, substantial lands could be freed up in the existing terminal areas by the removal of existing internal roadways.</p>
5	<p><b>New quay wall and deepwater berth</b></p> <p>Building of a new quay wall to the east of Berth 47 to create a 300m deepwater riverside berth with a further 100m north-south berth outside the entrance to Pigeon House Harbour.</p> <p>These new berths would facilitate the relocation of some bulk traffic to the south side of the Port thereby facilitating, for example, the further development of Ocean Pier for Lo-Lo.</p>
6	<p><b>Capital refurbishment of quay walls on Ocean Pier</b></p> <p>Capital refurbishment of the quay walls along Ocean Pier and the creation of deeper berths. As part of this development, additional container stack capacity would be provided on Ocean Pier to provide long-term capacity to cater for Lo-Lo (and Ro-Ro) container growth.</p>
7	<p><b>New cruise ship berthing and facilities</b></p> <p>Deepening of the berthage on North Quay Extension to provide capacity for cruise ships.</p> <p>Beyond this, it is envisaged that there could be a landmark development in this area which could simultaneously provide cruise terminal facilities and provide an appropriate final step in the redevelopment of Dublin's north quays.</p>

Site Reference (Figure 4)	Description of options for development or reconfiguration of existing port operations
8	<p><b>New Ro-Ro Facility</b></p> <p>Subject to growth in demand in future years and subject to the Port developing towards maximum utilisation of existing land in the interim, it is envisaged that there will be a major development to the east of the Port.</p> <p>In light of the anticipated growth in demand and although Dublin Port Company is committed to maximising the utilisation of all of the Port's existing lands, additional reclamation and development will be required if the Port is to ultimately cater for a demand level approaching 60m tonnes.</p>
9	<p><b>Non core port lands</b></p> <p>These lands on the south side of the Poolbeg Peninsula are not considered to be core to Port activities in the future and it is envisaged that their redevelopment for suitable alternative uses will be planned for in the early stages of the Masterplan period.</p>
10	<p><b>New oil transit / Lo-Lo transit storage lands</b></p> <p>This approximately 3.0 hectare site is currently unused. The site will be preserved for suitable Port uses in the future as demand increases. Suitable uses could include additional Lo-Lo transit storage capacity or development of new oil transit storage facilities, possibly in the context of consolidating existing capacity into a smaller area of the Port.</p>
11	<p><b>New deepwater berthage</b></p> <p>There are inevitably uncertainties as to how the demand for Port infrastructure will develop over the 30 year period of the Masterplan. The possible reclamation of about nine hectares in front of the Poolbeg generating stations could provide 700m of deepwater berthage.</p> <p>The use to which this facility might be put would depend on developments elsewhere in the Port and on market demand. At this stage, there are three possible uses which could drive the development of this site:</p> <ul style="list-style-type: none"> <li>» The building of a new deepwater container terminal within the Port either to cater for currently unforeseen future demand or to relocate existing Lo-Lo activities should that become necessary or desirable.</li> <li>» Development of a new Ro-Ro freight terminal.</li> <li>» Creation of a multi-use facility for project cargoes and break bulk.</li> </ul>

Site Reference (Figure 4)	Description of options for development or reconfiguration of existing port operations
12	<p><b>Reconfiguration</b></p> <p>The redevelopment of Ro-Ro facilities in the vicinity of Alexandra Basin West and to the north of Alexandra Road will likely have the effect of isolating a small area of Port land facing onto East Wall Road. This site could be used for a number of uses including:</p> <ul style="list-style-type: none"> <li>» Port Centric warehousing / logistics.</li> <li>» Transit storage of trade cars.</li> <li>» Possible redevelopment for non-port uses.</li> </ul>
13	<p><b>Vessel Turning Basin</b></p> <p>In order to cater for increasing ship lengths, a new 400m turning basin will be created immediately at the eastern entrance to the Port's working quays.</p> <p>Such a facility would allow, for example, the largest cruise ships to access the Port.</p>
14	<p><b>Port Centric Developments</b></p> <p>These lands are currently used for a variety of activities including empty container storage yards and tank cleaning. Some plots are vacant. There are also some unused Dublin Port Company warehouses and offices. Finally, there is a 110,000 square foot modern high specification logistics facility.</p> <p>Subject to control over certain sites and facilities reverting to Dublin Port Company, it is envisaged that this overall area would be devoted to Port Centric developments including warehousing, cross-docking facilities, import / export consolidation centres.</p>

## Additional Drawings

The development options contained in Figure 4 (page 28) are further explained in a series of additional drawings focusing on specific aspects of the options suggested. These additional drawings provide further detail on the drawings in Figure 4 and show the following:

- » Figure 5 – Highlights the unitized freight handling facilities.
- » Figure 6 – Outlines the bulk solid and liquid trade facilities.
- » Figure 7 – Shows the general trade and cruise facilities.
- » Figure 8 – Highlights the travel and transport links in the Port envisaged in the Masterplan.
- » Figure 9 – Indicates the soft boundaries, viewing points and new footpaths as well as new amenity areas.
- » Figure 10 – Shows the Approach Channel to Dublin Port.

## The Infrastructure Proposals and Zoning Objectives

The Dublin City Development Plan contains zoning objectives for the Port area and the Dublin Docklands Area Masterplan also contains zoning objectives for the Southern Port area. Although the greater part of the zoning is fully compatible with the options set out in the Port Masterplan, there are sites to the South, which are unsuitably zoned in the two statutory plans. These are located in the Southern Port area to each side of Whitebank Road and on the Liffey frontage west of Pigeon House Dock. They are zoned 'Zone 14' the objective of which is *'To seek the social, economic and physical rejuvenation of an area with mixed use, of which residential and Zone 6 would be predominant uses'*.

The lands are in port use and are not in need of rejuvenation and will continue to be used for port purposes during the lifetime of the Masterplan. Their status has become that of a non-conforming use under the City Development Plan, which has the potential to impact negatively on their future development for port purposes.

Residential development is not a suitable use in the middle of an area that is largely surrounded by utilities and a 24-hour working port and the Port will seek to cooperate with Dublin City Council and the DDDA to secure the rezoning of these areas to their previous industrial and employment zoning.

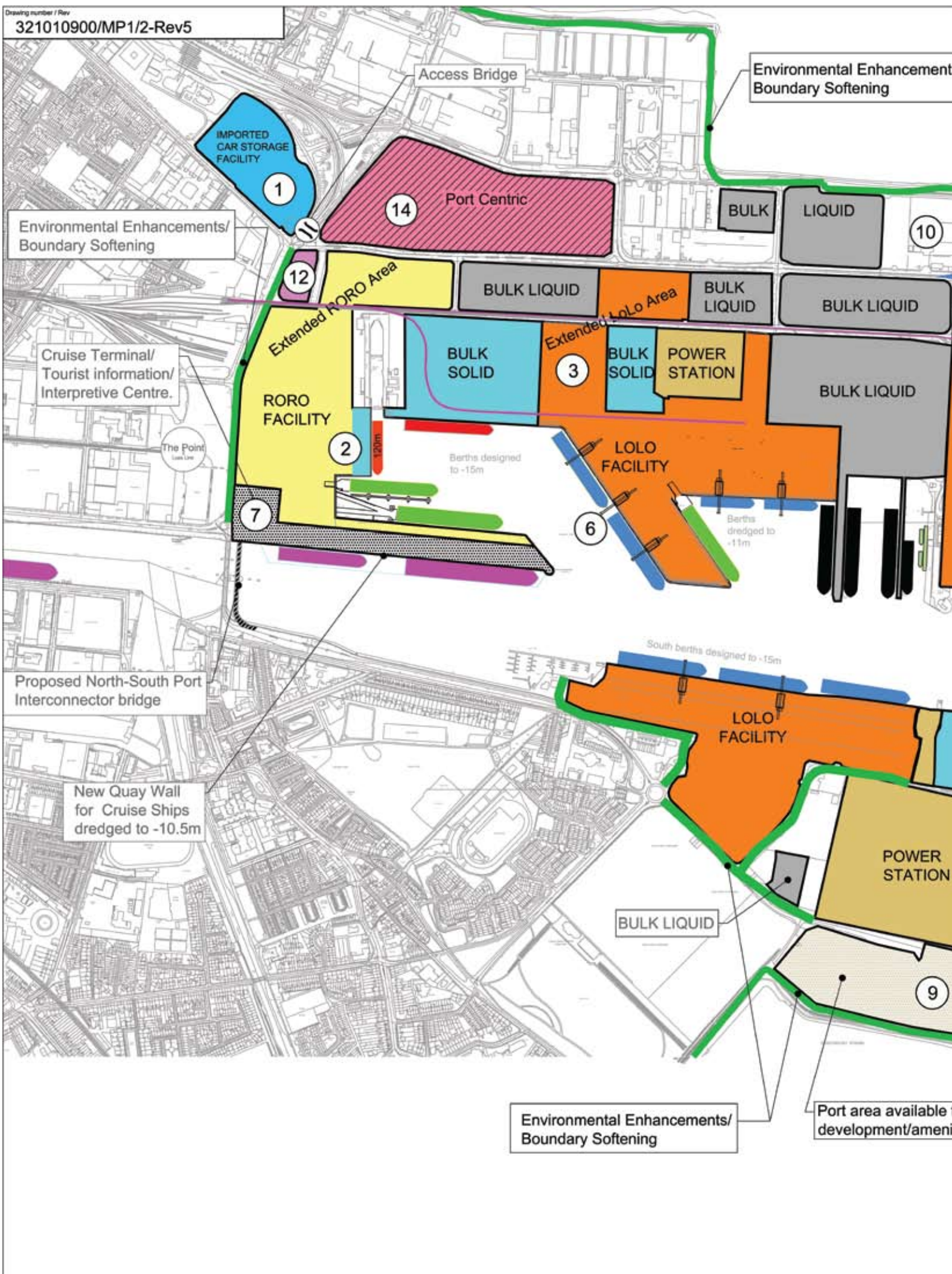
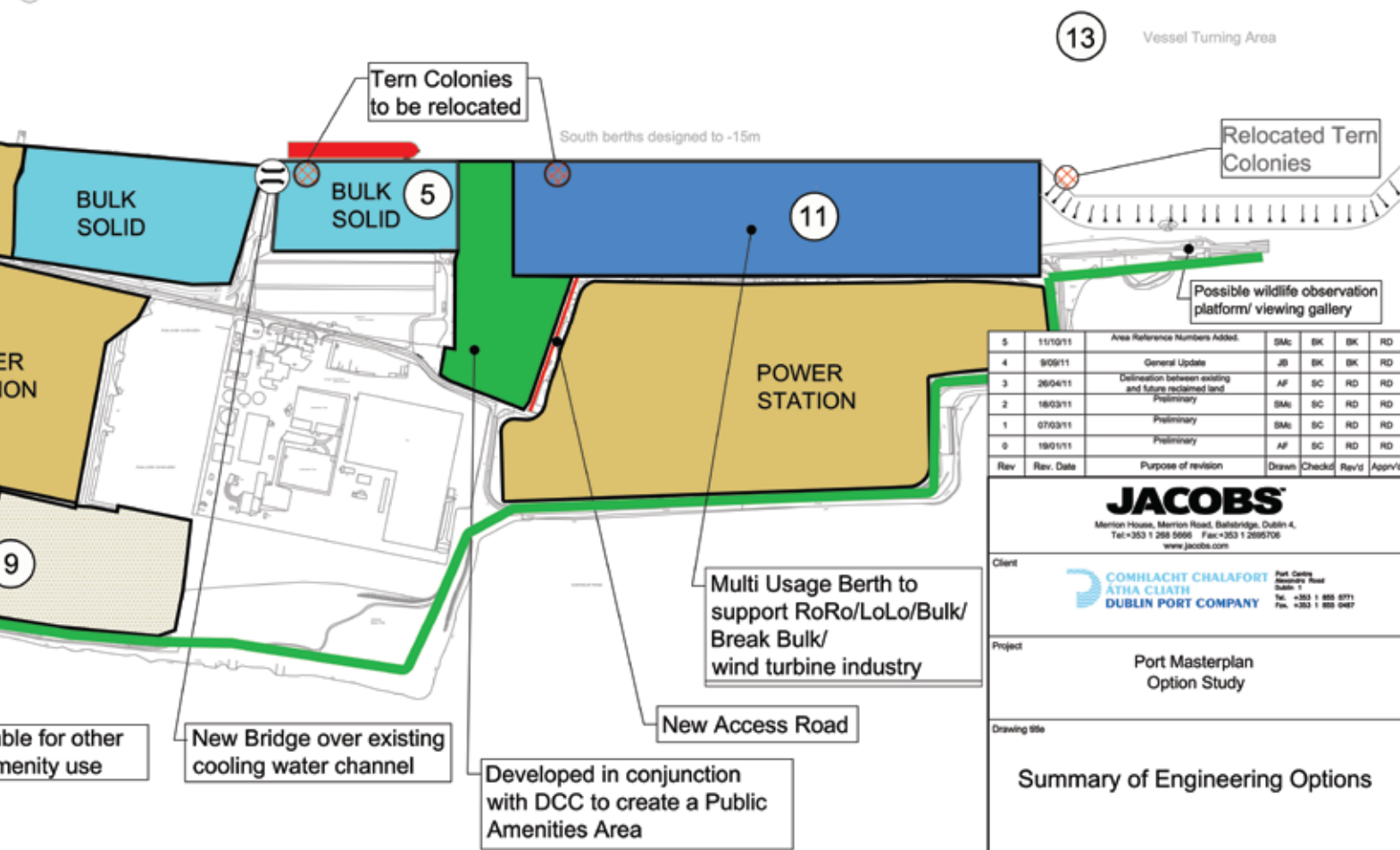
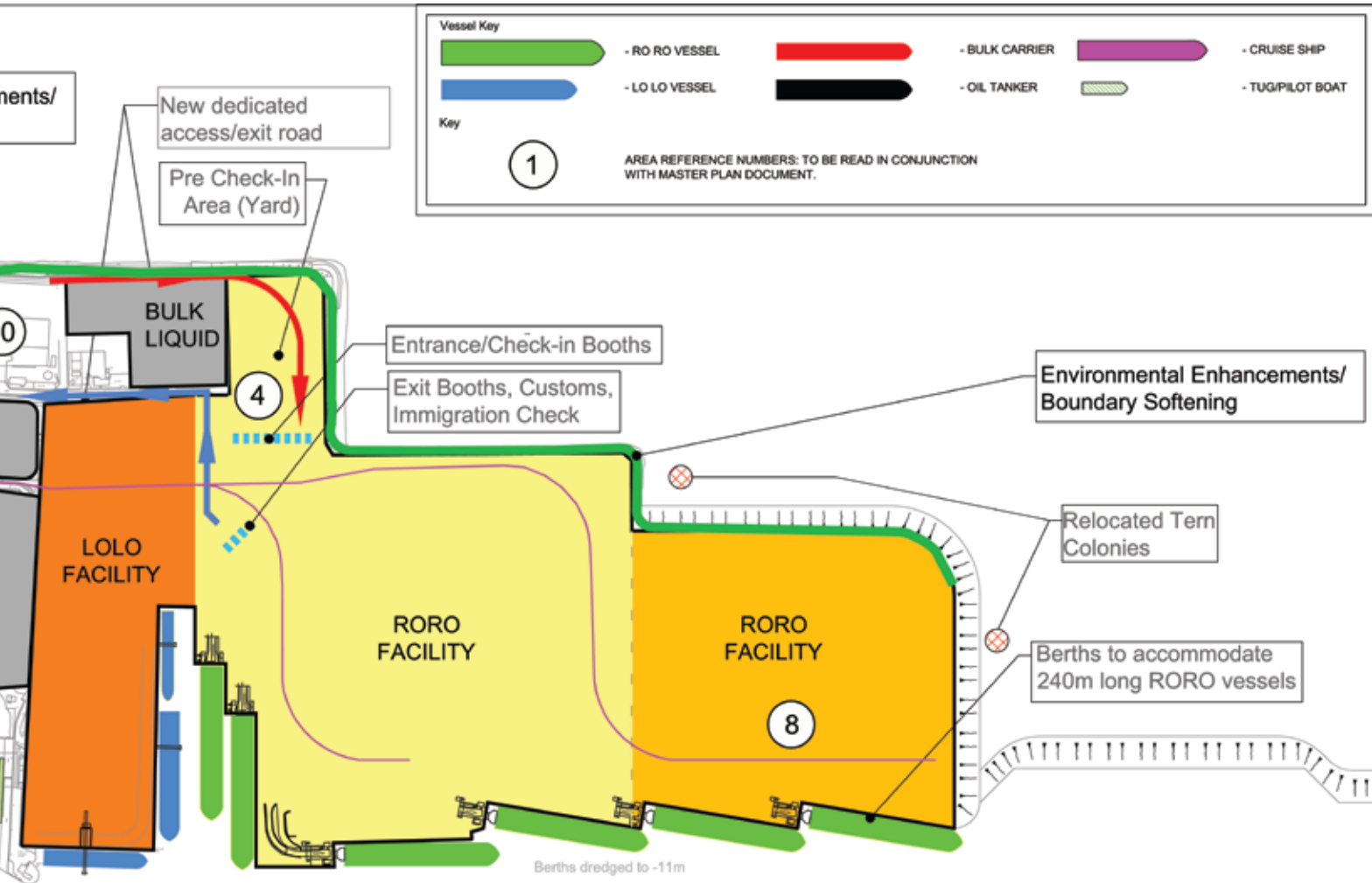


Figure 4 - Sets out the overall Masterplan options with site numbers which are referenced on pages 23 - 26



Rev	Rev. Date	Purpose of revision	Drawn	Checked	Rev'd	Apprv'd
5	11/10/11	Area Reference Numbers Added	SMc	BK	BK	RD
4	9/09/11	General Update	JB	BK	BK	RD
3	26/04/11	Delineation between existing and future reclaimed land	AF	SC	RD	RD
2	18/03/11	Preliminary	SMc	SC	RD	RD
1	07/03/11	Preliminary	SMc	SC	RD	RD
0	19/01/11	Preliminary	AF	SC	RD	RD

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Project: **Port Masterplan Option Study**

Drawing title: **Summary of Engineering Options**

Drawing status: **ISSUED TO DPC**

Scale: NTS DO NOT SCALE

Jacobs No. 321010900

Drawing number: **321010900/MP1/2** Rev: **5**

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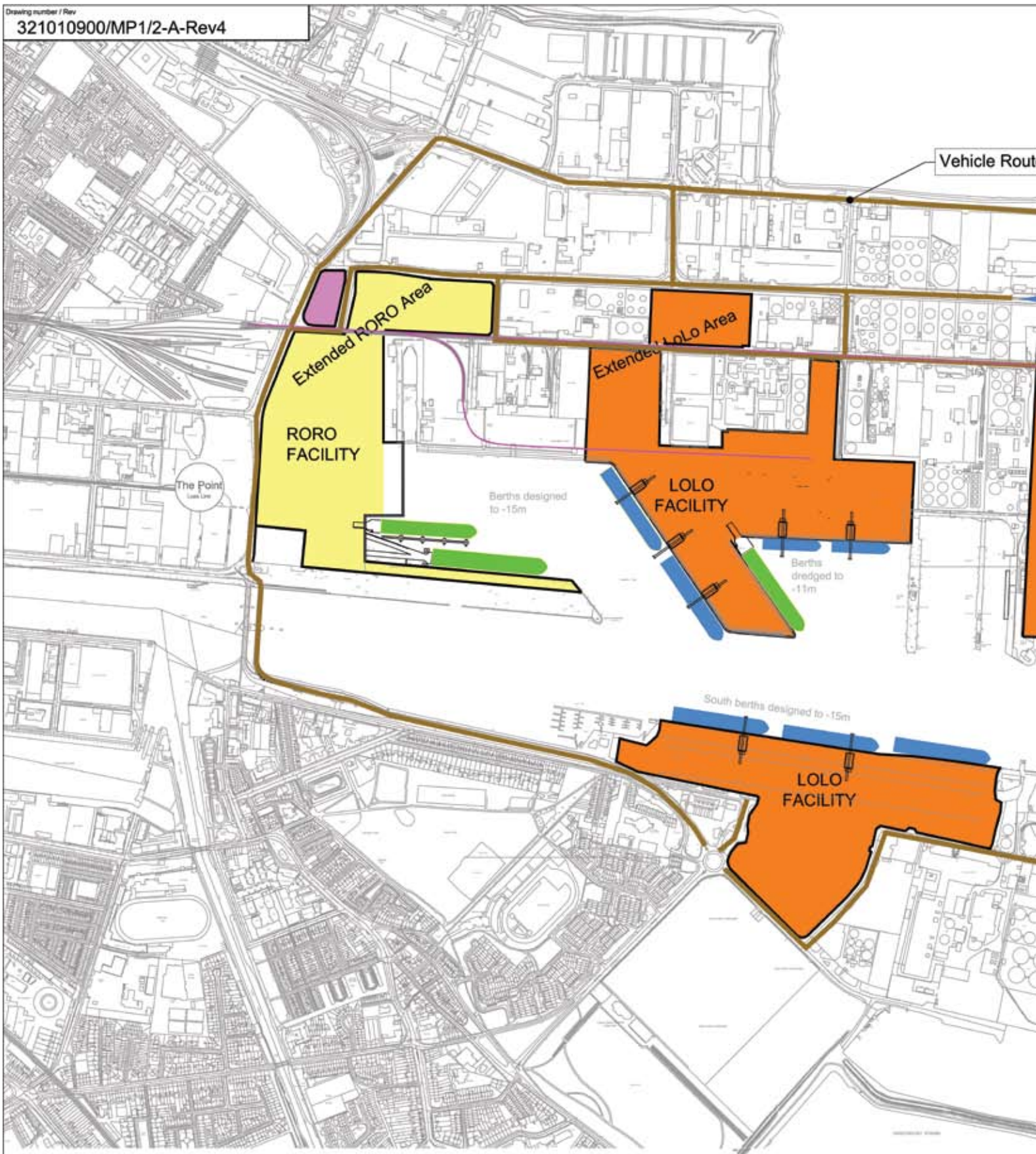
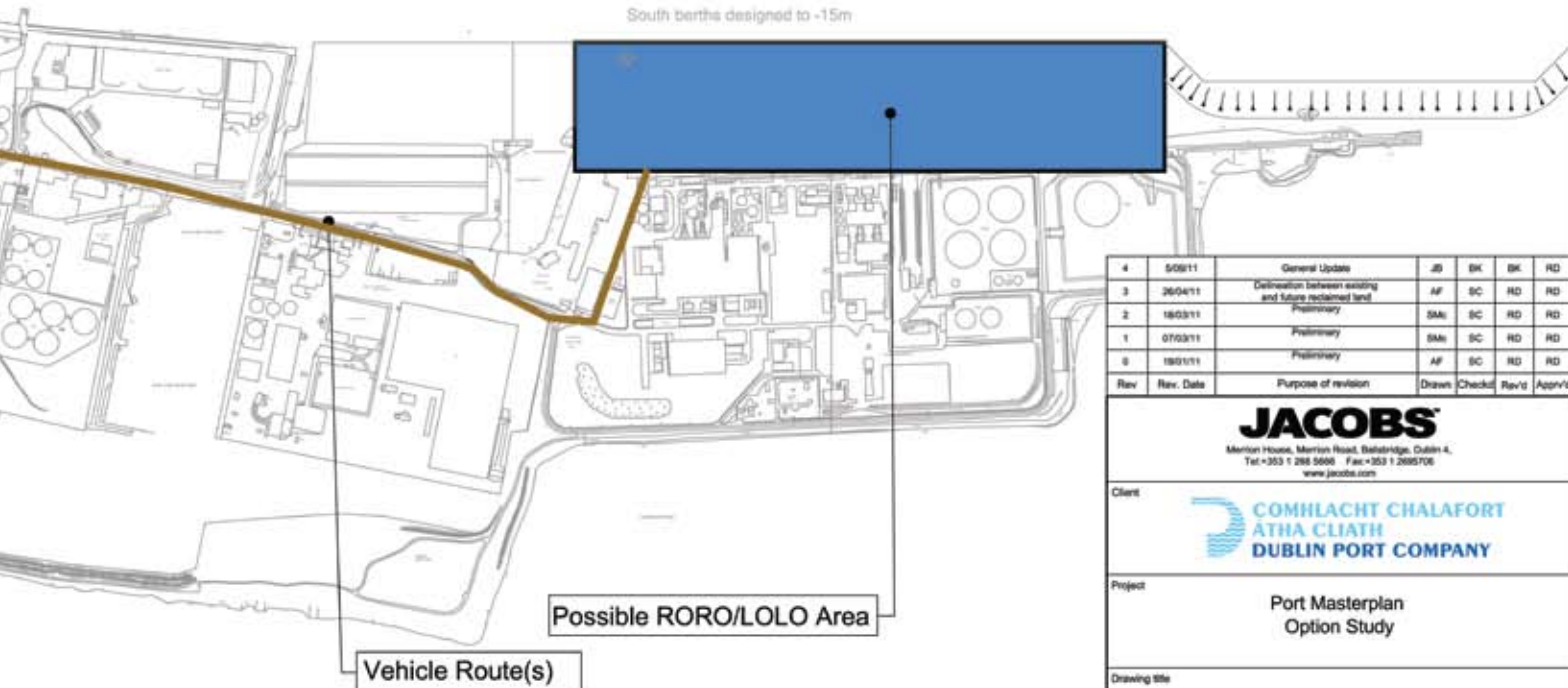
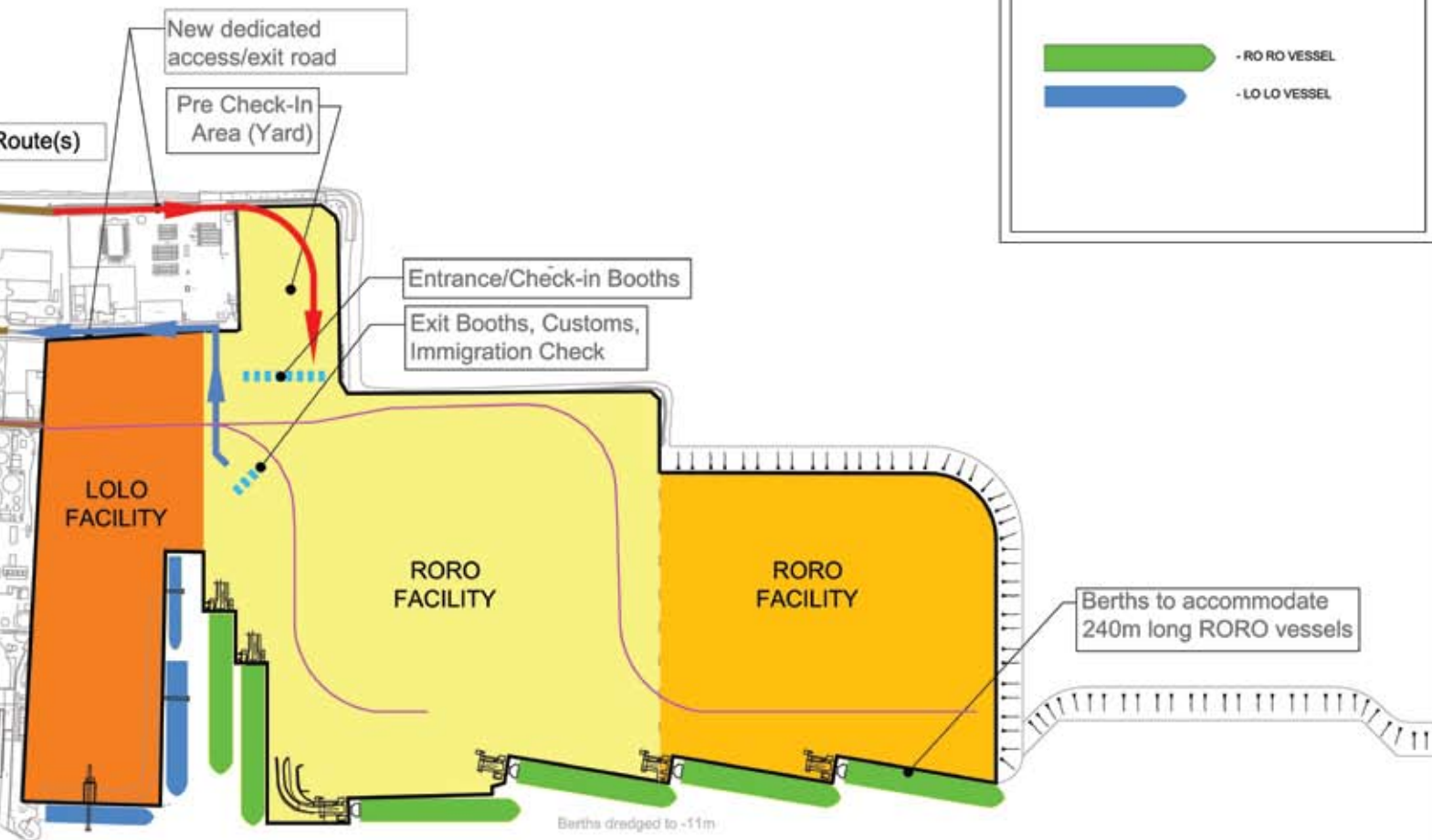


Figure 5 – Highlights the unitized freight handling facilities



Rev	Rev. Date	Purpose of revision	Drawn	Checked	Rev'd	Appr'd
4	5/08/11	General Update	JB	BK	BK	RD
3	26/04/11	Delineation between existing and future reclaimed land	AF	SC	RD	RD
2	18/03/11	Preliminary	SM	SC	RD	RD
1	07/03/11	Preliminary	SM	SC	RD	RD
0	18/01/11	Preliminary	AF	SC	RD	RD

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Project: **Port Masterplan Option Study**

Drawing title: **Summary of Engineering Options Utilised Freight Handling Facilities**

Drawing status: **ISSUED TO DPC**

Scale: **NTS DO NOT SCALE**

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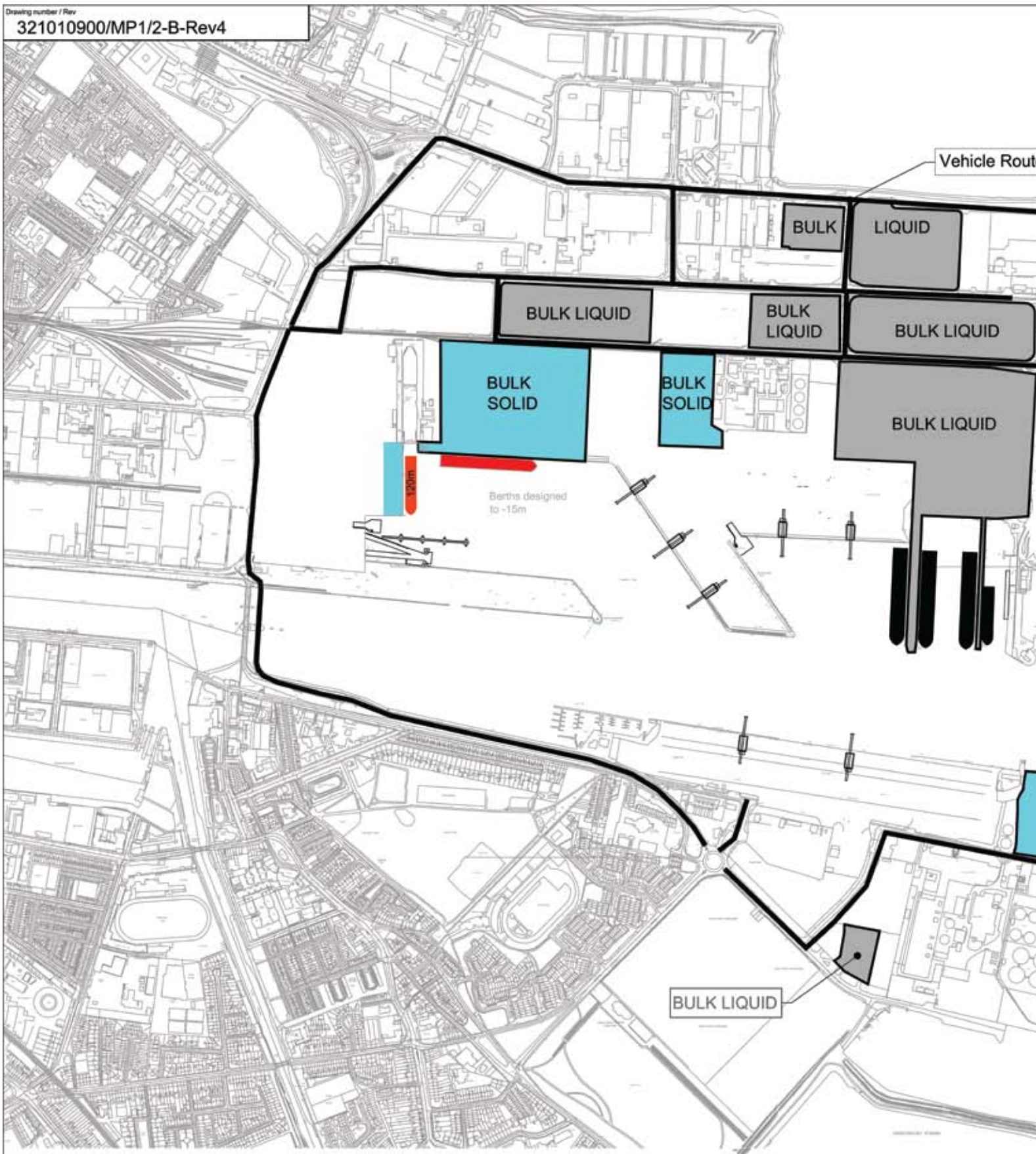
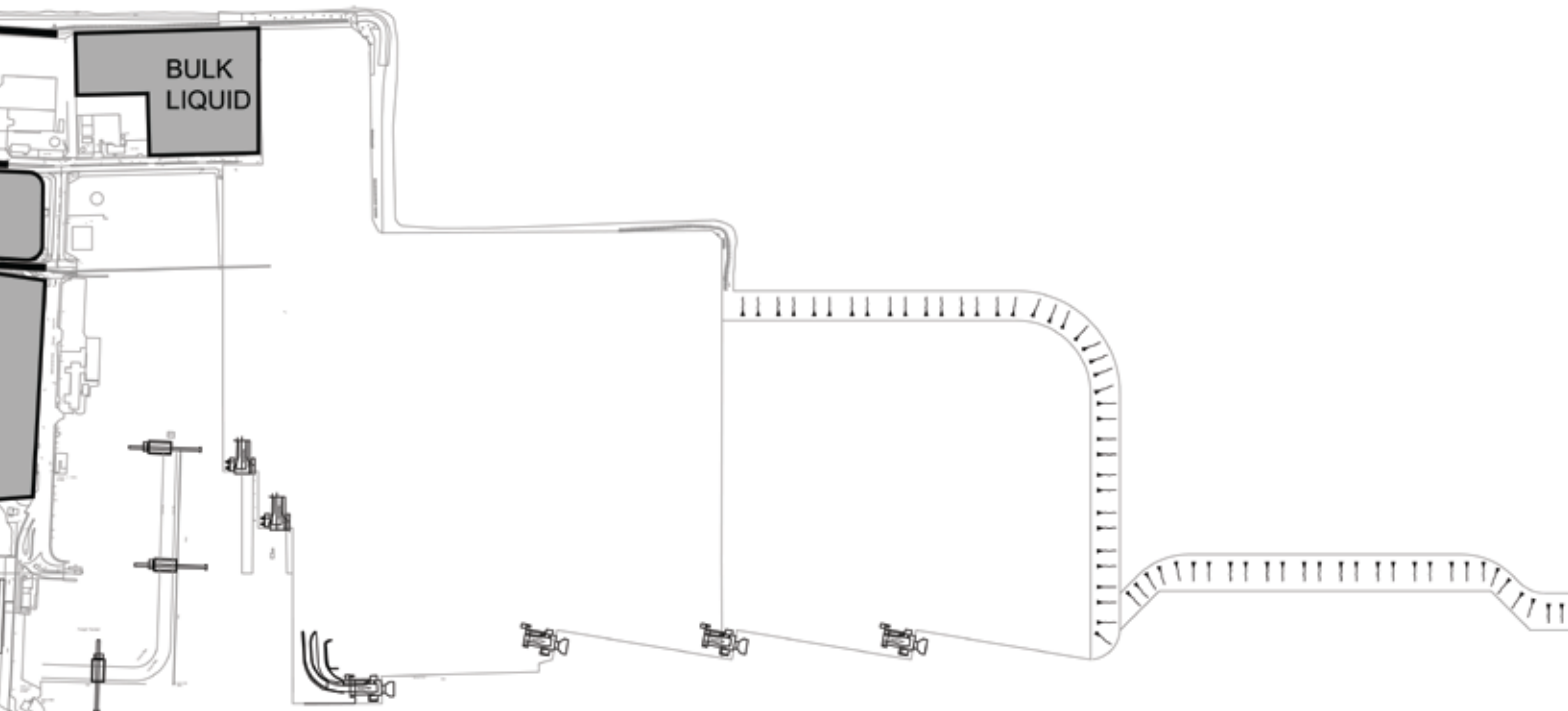


Figure 6 – Outlines the bulk solid and liquid trade facilities



- BULK CARRIER  
- OIL TANKER

Route(s)



Vessel Turning Area

South berths designed to -15m



Multi Usage Berth to support Bulk/ Break Bulk/ wind turbine industry

Vehicle Route(s)

New Access Road

4	09/09/11	General Update	JB	BK	BK	RD
3	26/04/11	Delineation between existing and future reclaimed land	AF	SC	RD	RD
2	18/03/11	Preliminary	SM	SC	RD	RD
1	07/03/11	Preliminary	SM	SC	RD	RD
0	19/01/11	Preliminary	AF	SC	RD	RD
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**COMHLACHT CHALAFORT  
ATHA CLIATH  
DUBLIN PORT COMPANY**

Project  
Port Masterplan  
Option Study

Drawing title  
**Summary of Engineering Options  
Bulk Solid/Liquid Trade**

Drawing status  
**ISSUED TO DPC**

Scale  
NTS DO NOT SCALE

Jacobs No.  
321010900

Drawing number  
**321010900/MP1/2 - B**

Rev  
**4**

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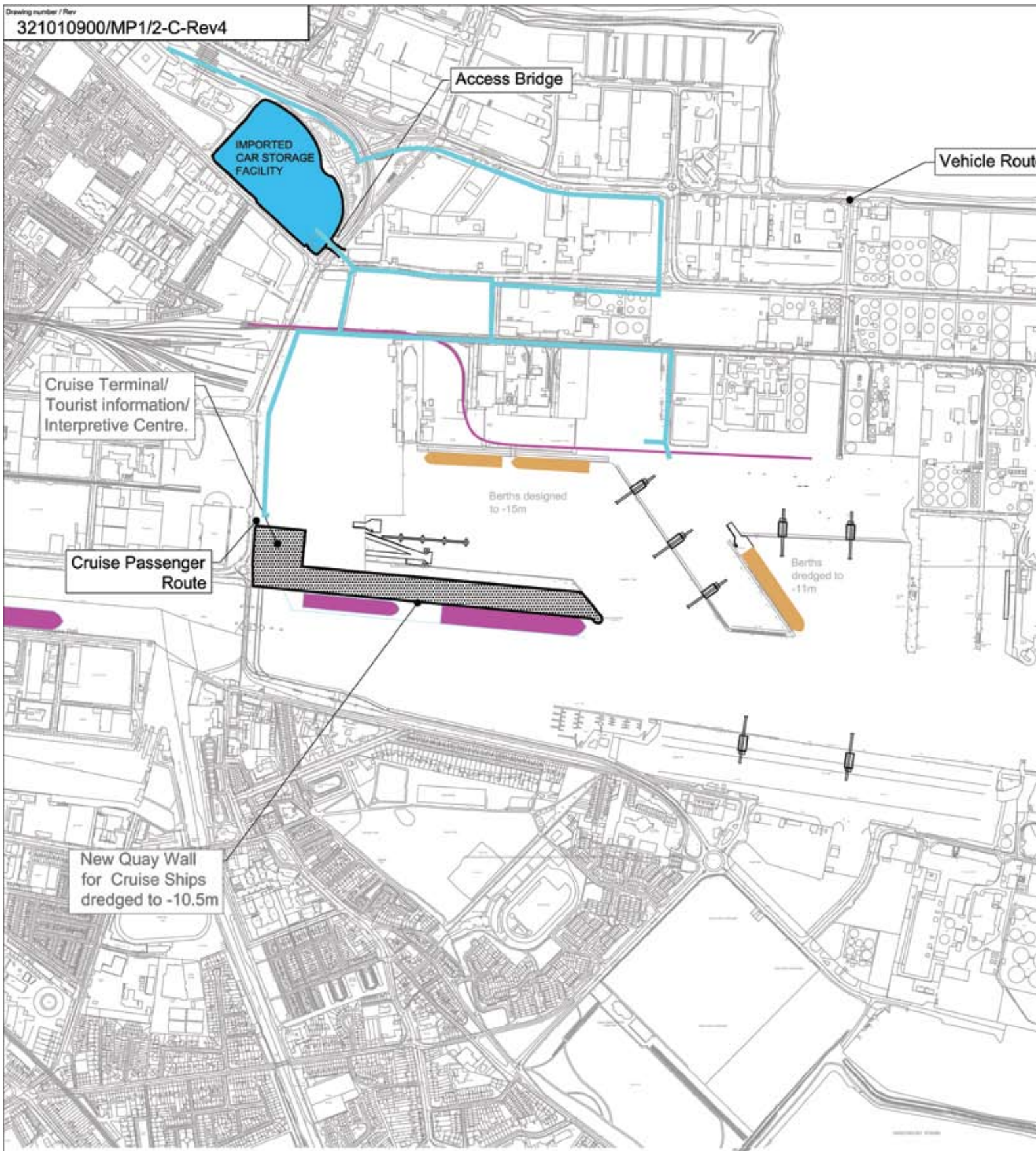


Figure 7 – Shows the general trade and cruise facilities

**Existing & Potential Travel/Transport Routes Key**

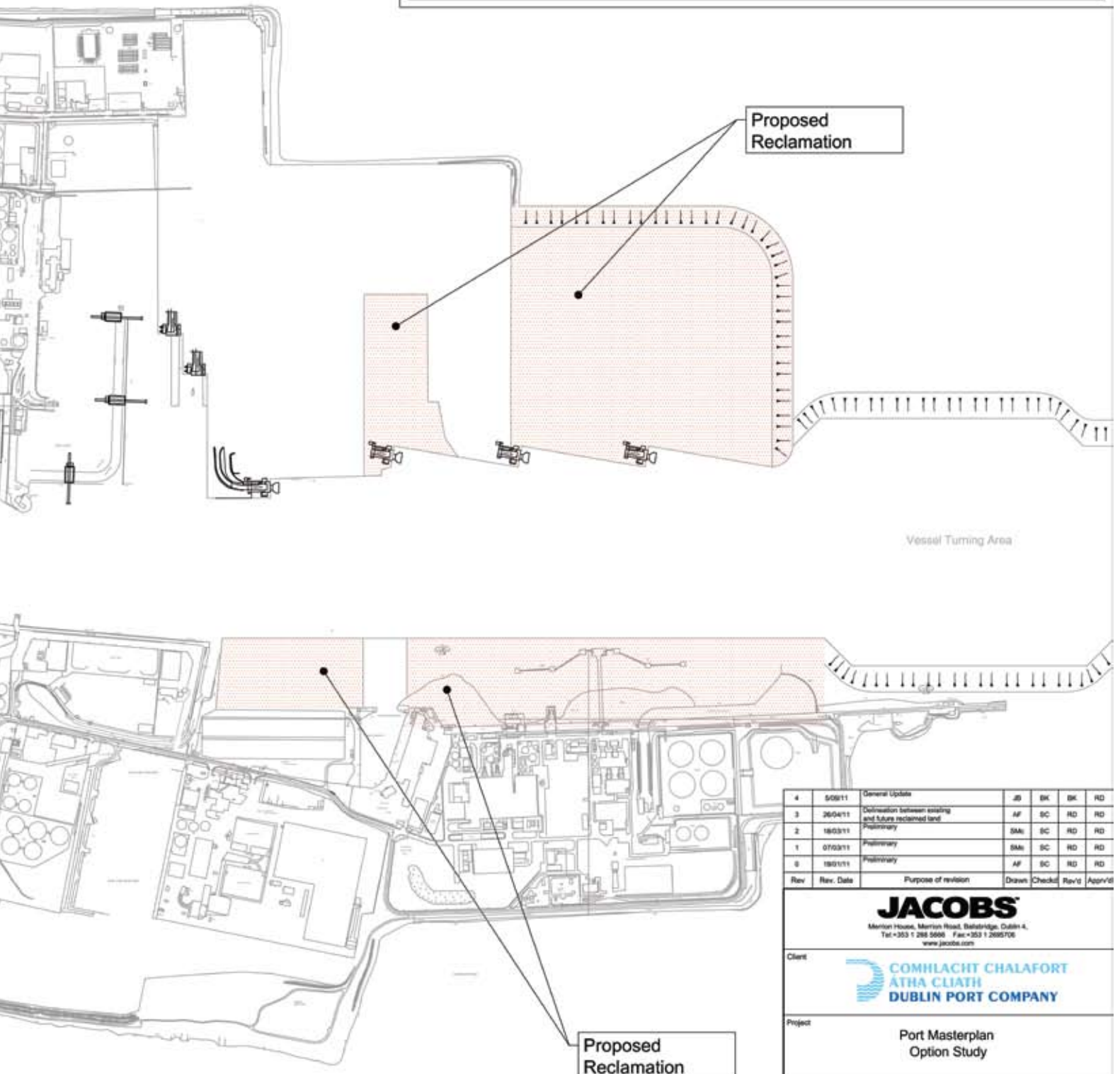
**Trade Cargo & Cruise Liners**

-  Proposed Trade Cargo (Vehicle Imports - From RO/RO) & Cruise Liner Routes
-  - Rail Link Spur
-  Proposed Reclamation

**Vessel Key**

-  - CRUISE SHIP
-  - GENERAL TRADE VESSEL (CAR IMPORTS ETC)

Route(s)



Rev	Rev. Date	Purpose of revision	Drawn	Checked	Rev'd	Appr'd
4	5/08/11	General Update	JB	BK	BK	RD
3	26/04/11	Delineation between existing and future reclaimed land	AF	SC	RD	RD
2	18/03/11	Preliminary	SM	SC	RD	RD
1	07/03/11	Preliminary	SM	SC	RD	RD
0	18/01/11	Preliminary	AF	SC	RD	RD

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Client  


Project  
 Port Masterplan  
 Option Study

Drawing title  
**Summary of Engineering Options  
 General Trade/ Cruise Facilities**

Drawing status  
**ISSUED TO DPC**

Scale  
 NTS DO NOT SCALE

Jacobs No.  
 321010900

Drawing number  
**321010900/MP1/2-C**

Rev  
**4**

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Proposed North-South Port Interconnector bridge

Access Bridge

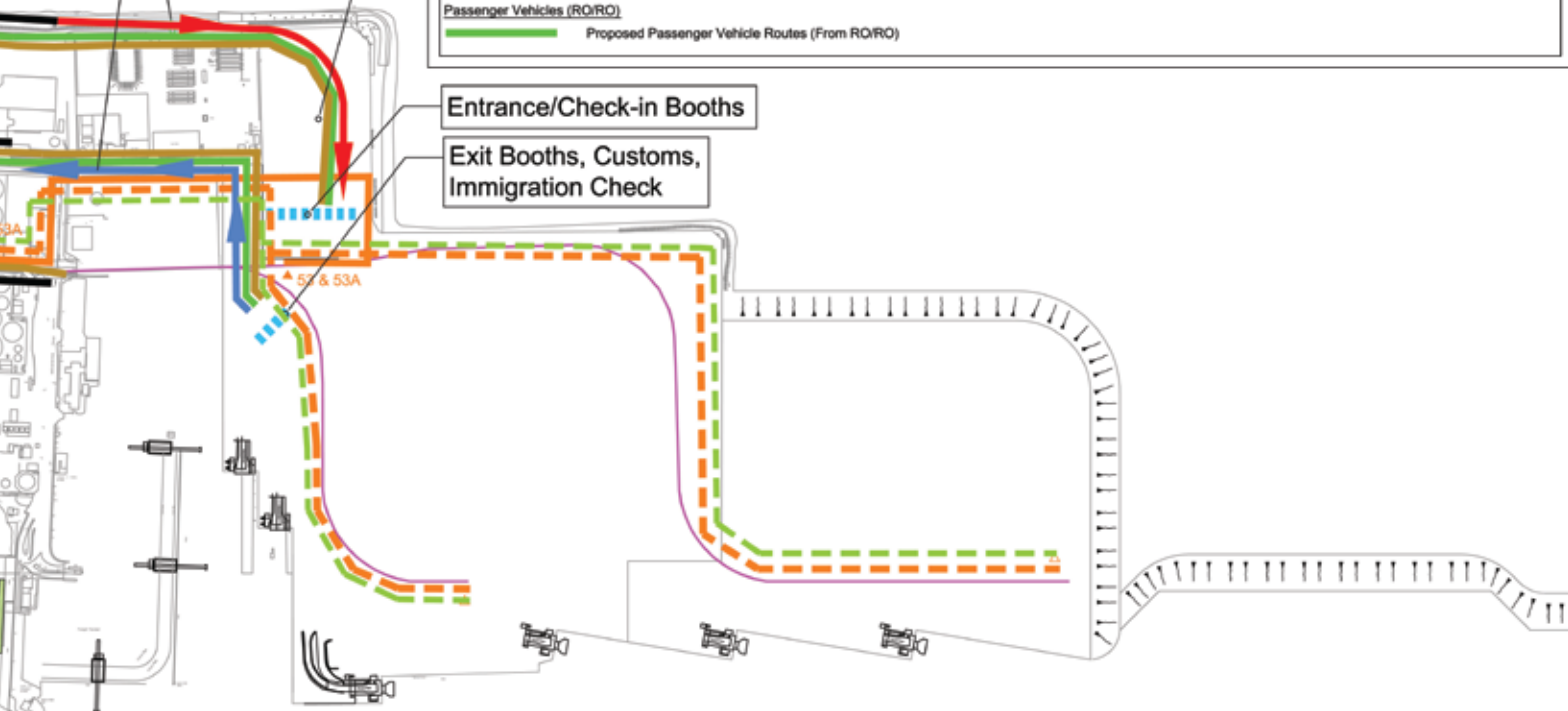
New Access Road

The Point

Frequent bus service to operate between existing Luas Red Line Station "The Point" and Passenger Ferry Terminals within Dublin Port

Figure 8 – Highlights the travel and transport links in the Port envisaged in the Masterplan

Existing & Potential Travel/Transport Routes Key	
<b>Public Transport - Bus &amp; Luas</b>	
	Existing Luas Red Line (Point to City Centre)
	Existing Bus Routes (Dublin Bus)
	Potential Dedicated Bus Routes (Dublin Bus)
	Existing Bus Stops (Numbers Refer to Bus Route Number)
	Potential Bus Stops
<b>Cyclists &amp; Pedestrians</b>	
	Routes to Workplaces
<b>Passenger Vehicles (RO/RO)</b>	
	Proposed Passenger Vehicle Routes (From RO/RO)
<b>Trade Cargo &amp; Cruise Liners</b>	
	Proposed Trade Cargo (Vehicle Imports - From RO/RO) & Cruise Liner Routes
<b>Utilised Freight Handling</b>	
	Proposed Utilised Freight Handling Routes - HGV (From LO/LO, RO/RO & Multi-Usage)
<b>Bulk Solid &amp; Liquid Trade</b>	
	Proposed Bulk & Liquid (Fuel) Routes - HGV
	- NEW ACCESS ROAD
	- NEW EXIT ROAD
	- RAIL LINK/SPUR



Rev	Rev. Date	Purpose of revision	Drawn	Check'd	Rev'd	Apprv'd
4	5/09/11	General Update	JB	BK	BK	RD
3	26/04/11	Delineation between existing and future reclaimed land	AF	SC	RD	RD
2	18/03/11	Preliminary	SM	SC	RD	RD
1	07/03/11	Preliminary	SM	SC	RD	RD
0	19/01/11	Preliminary	AF	SC	RD	RD

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Client **COMHLACHT CHALAFORT  
 ÁTHA CLIATH  
 DUBLIN PORT COMPANY**

Project **Port Masterplan  
 Option Study**

Drawing title  
**Summary of Engineering Options  
 Travel/Transport Links**

Drawing status  
**ISSUED TO DPC**

Scale **NTS** **DO NOT SCALE**

Jacobs No. **321010900**

Drawing number **321010900/MP1/2-D** Rev **4**

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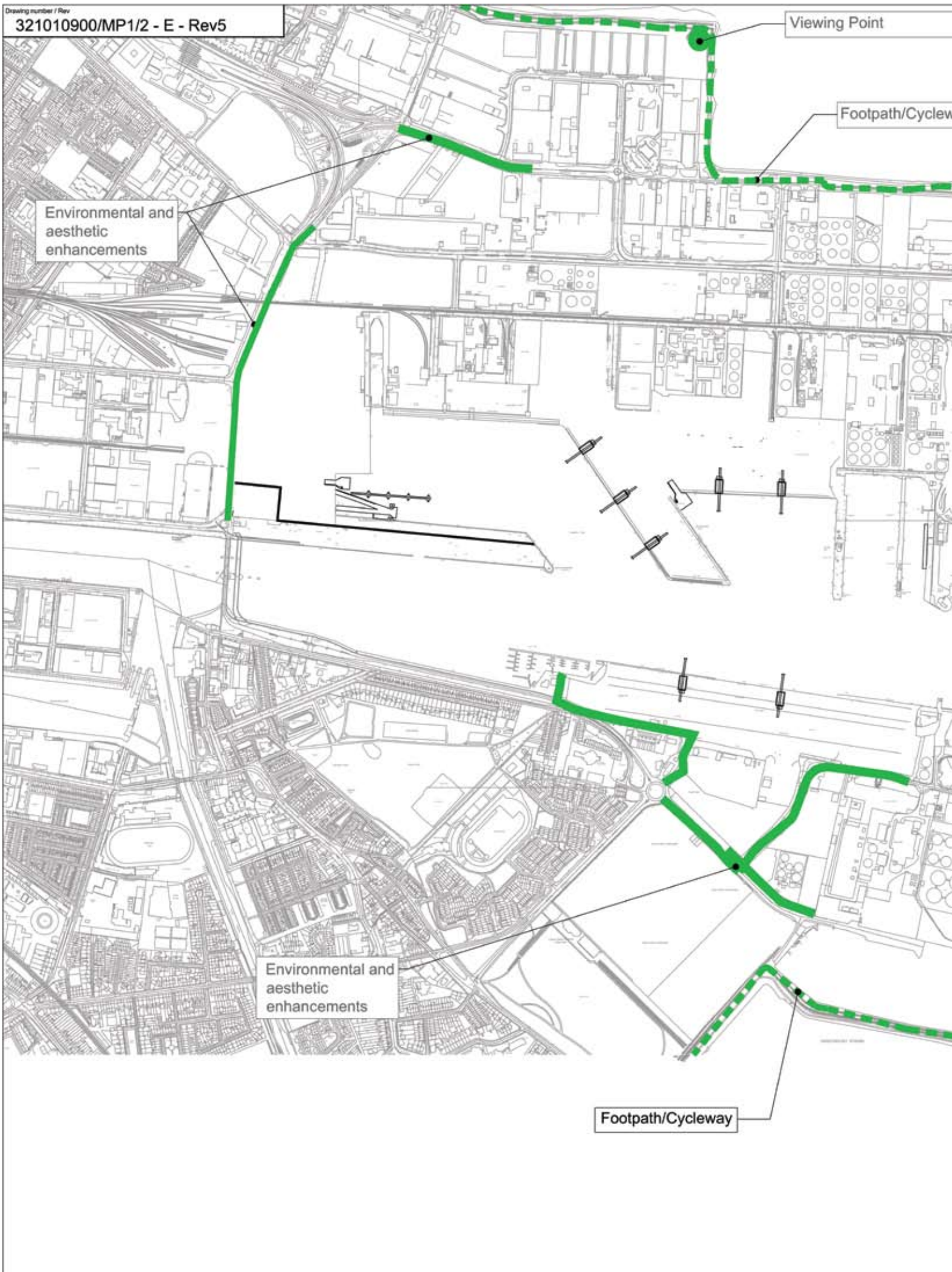


Figure 9 – Indicates the soft boundaries, viewing points and new footpaths as well as new amenity areas

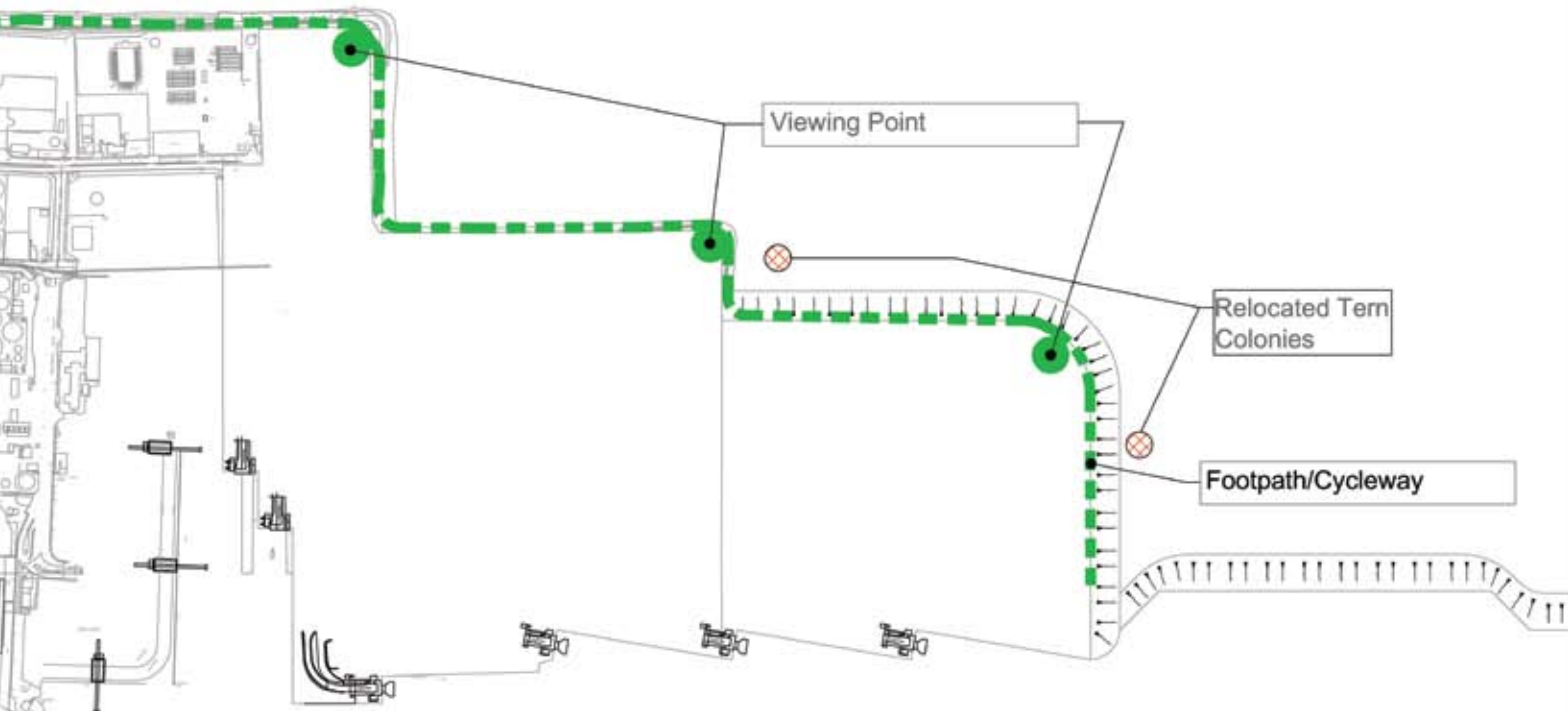
Land Use Key

 - SOFT AREA

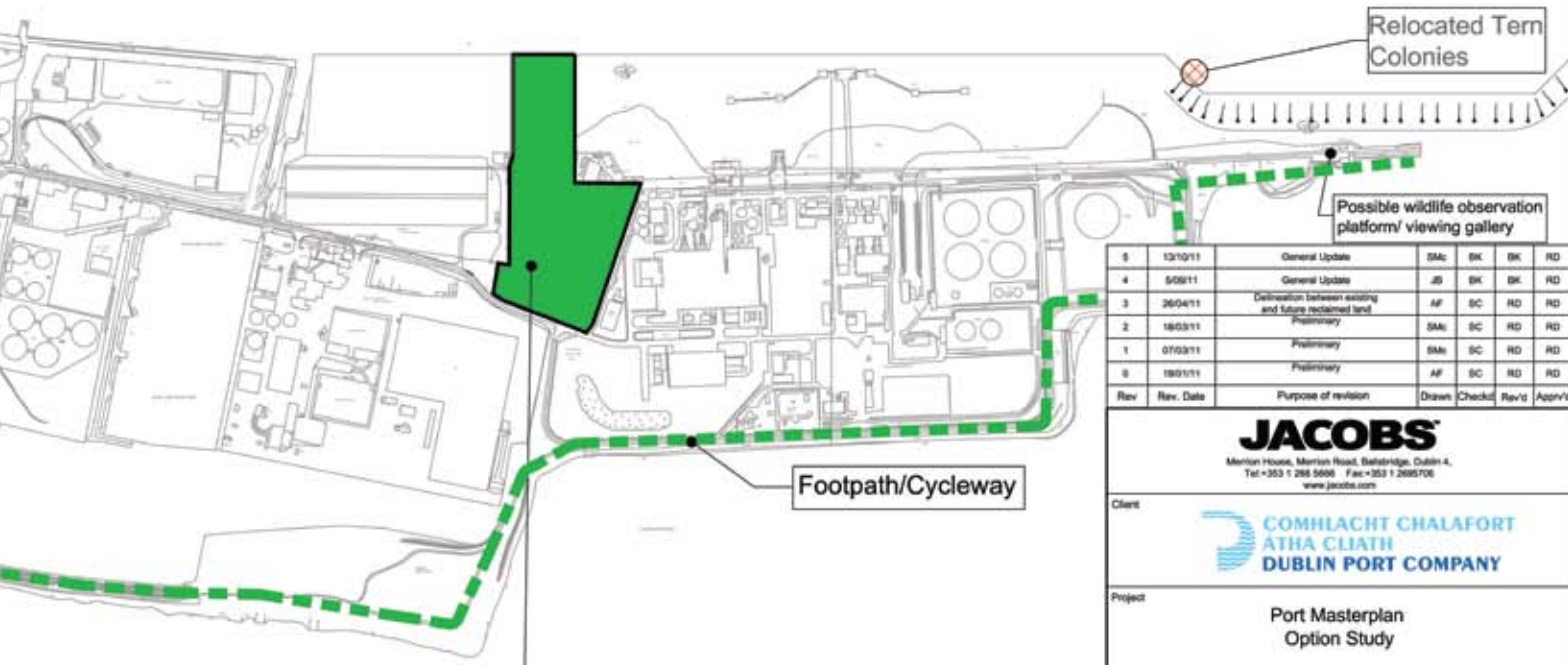
 - Footpath/Cycleway

 - BOUNDARY ENHANCEMENTS

cleway



Vessel Turning Area



Developed in conjunction with DCC to create a Public Amenities Area

5	13/10/11	General Update	SM:	BK	BK	RD
4	5/09/11	General Update	JB	BK	BK	RD
3	26/04/11	Delineation between existing and future reclaimed land	AF	SC	RD	RD
2	18/03/11	Preliminary	SM:	SC	RD	RD
1	07/03/11	Preliminary	SM:	SC	RD	RD
0	18/01/11	Preliminary	AF	SC	RD	RD
Rev	Rev. Date	Purpose of revision	Drawn	Checked	Rev'd	Apprv'd

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Client  


Project  
 Port Masterplan  
 Option Study

Drawing title  
**Summary of Engineering Options  
 Soft Boundaries**

Drawing status  
**ISSUED TO DPC**

Scale  
 NTS DO NOT SCALE

Jacobs No.  
 321010900

Drawing number  
**321010900/MP1/2 - E**

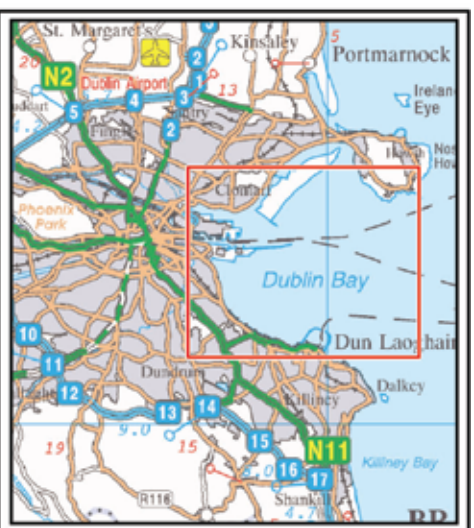
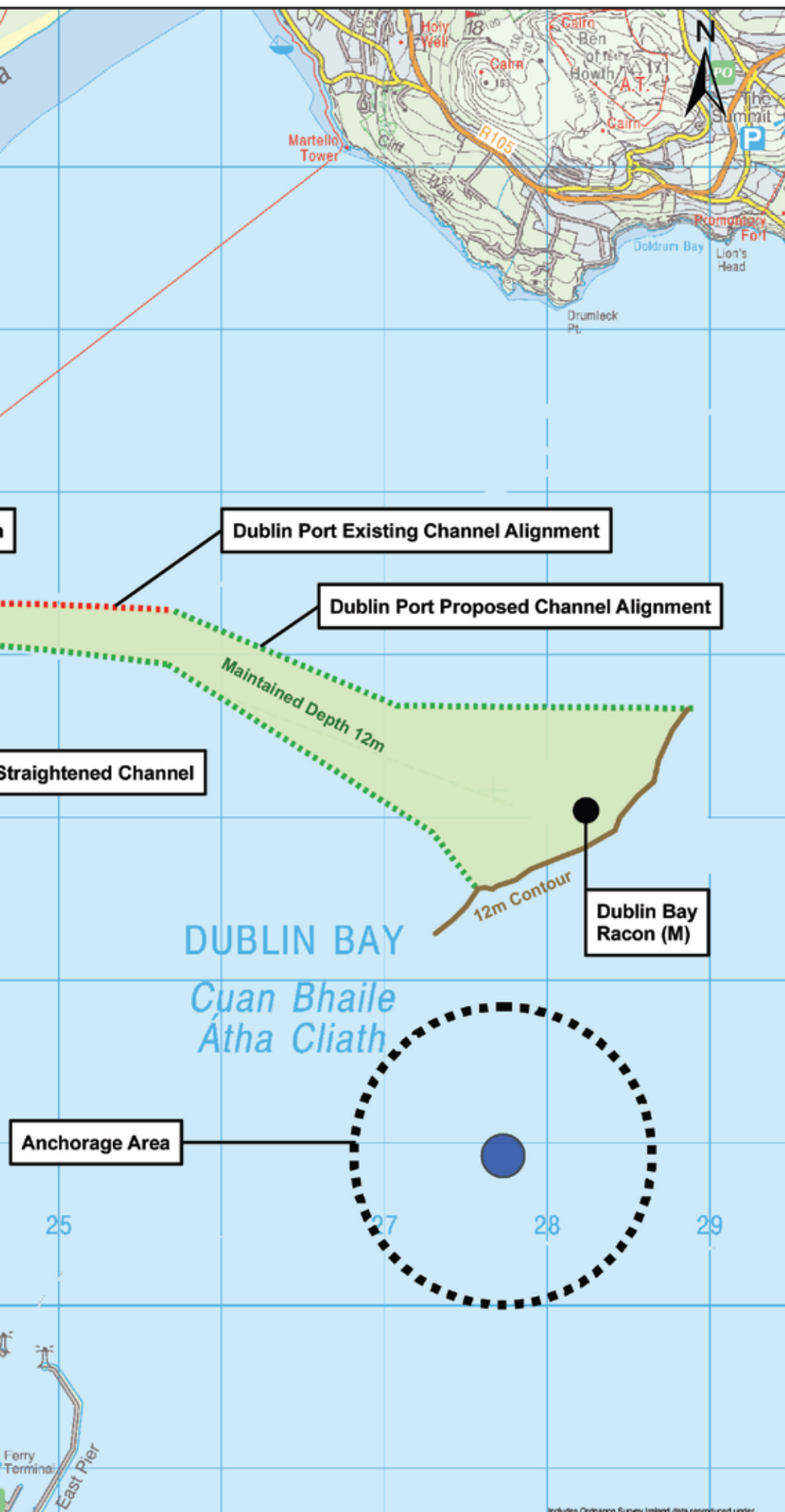
Rev  
**5**

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Figure 10 – Shows the Approach Channel to Dublin Port



- The maintained depth of the channel is currently 7.8m.
- Future maintained depth of the channel may be increased to accommodate larger vessels requiring access to the Port.
- It is envisaged that any future increase in the maintained depth of the channel would be undertaken in stages as required, e.g. 10m/12m as and when the demand for deeper draught vessels is anticipated and economically justified.

Rev.	Rev. Date	Purpose of revision	AMD	JC	BK	RD
0	SEP 11	For inclusion in MP suite of Engineering Drawings				

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 ÁTHA CLIATH  
 DUBLIN PORT COMPANY**

Project  
**DUBLIN PORT MASTERPLAN**

Drawing Title  
**ENGINEERING OPTIONS  
 APPROACH CHANNEL**

Drawing Status  
**Issued to DPC**

Scale  
**1:37,500 @ A3** DO NOT SCALE

Jacobs No.  
**321010900/MP/1/2 - F**

Drawing Number  
**321010900/MP/1/2 - F**

Rev  
**0**

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# 5 Safeguarding, Property and Blight

## The Value of Port Lands

### **Dublin Port Company recognises that the Port Estate is an inherently valuable asset.**

While the value of the land is now considerably reduced from levels postulated in 2007 during the height of the boom, the real value of the land lies in the activity that is carried out in the Port rather than in a simple assessment of the open market value of real estate. The contribution that Dublin Port makes to the national and regional economy and to the people of Ireland as a strategic piece of infrastructure gives the port estate lands their real intrinsic value.

Dublin Port is a facilitator of international merchandise trade and forms a critical part of the economic infrastructure of the Greater Dublin Region, which is a huge generator of economic activity nationally. This imposes an obligation on Dublin Port Company to ensure that the port estate is managed in a way that maximises its value to the State and key stakeholders. It is imperative to ensure that land is used efficiently and effectively and is not used for sub-optimal or non-port related purposes.

Dublin Port must provide a competitive, efficient and dynamic environment for the conduct of trade. This is achieved through the development and operation of port activities in ways which make optimal use of the existing port estate and which facilitate and encourage intense competition within the Port among operators in different sectors. Dublin Port Company can take steps to ensure that the existing lands are used effectively and efficiently by the port operators. In the context of future operations, it will be imperative that the Port can demonstrate that all options to optimise the throughput of trade from the existing port estate have been explored fully before any reclamation is contemplated.

In the context of a Masterplan which looks to a 30 year horizon it is also important that the Company takes a longer term view of the use and strategic benefit of specific lands and does not relinquish land that may be required for port purposes in the future. It is equally important that the consequences of decisions taken in relation to the future use of land do not create a blight on surrounding land and properties impeding development and renewal.

## The Nature of Port Development

In examining the provision of capacity in Dublin Port to 2040 it is important to factor in a number of key considerations.

Firstly, in order to be efficient, cargo handling space must be close to the quay wall. Otherwise delays and inefficiencies can arise in the movement of cargo between the quays and transit areas. This impacts on ships' turnaround times and is a key consideration for port and ship efficiencies.

Secondly, in examining the need for future capacity to 2040 a key requirement will be to secure new deepwater berths to facilitate larger ships which may emerge over this period in some modes. There are limited options for the development of such facilities in Dublin Port without some element of reclamation.

Thirdly, providing new port capacity takes time. A significant port infrastructure development project can take up to ten years from project inception through to commissioning. This makes it imperative that the process of providing additional capacity adequately identifies the required needs in good time.

Finally, the planning and consents process for securing approval for new ports projects, particularly given the dynamic natural environment that exists in Dublin Port, introduces a level of uncertainty as to the outcome of particular projects. This risk can be mitigated to an extent in the application process but the uncertainty as to outcomes remains.

Collectively, these factors create an imperative for Dublin Port Company to ensure that the existing land in Dublin Port is used effectively, efficiently and is optimised. In particular, it requires a strong commitment to ensure that the scarce resource of land adjacent to the quay wall is utilised effectively.

## Intensification of Use of Lands

Dublin Port Company has adopted a number of different approaches to securing the effective use of port lands. While the Company is the freehold owner of most of the lands in the estate, it does not have full control over the use of these lands. In particular, large parts of the estate are held by tenants and port operators under a range of long leases and licence agreements. Consequently, the Port has focused on regaining land from tenants and franchise holders and endeavours to ensure that the remaining land held under lease or licence is used effectively and efficiently.

In seeking to acquire land, the Company has concentrated its efforts on freeing up considerable ground area that was occupied by old redundant warehouses and structures and then improving the condition of the ground area itself to improve its load bearing capability. This has required considerable investment by Dublin Port Company and in the past ten years some €250 million has been spent on improving the facilities within the Port.

Dublin Port Company's objective is to designate all lands south of Tolka Quay Road for direct cargo operations as this is regarded as the limit within which direct unitised operations can be carried out efficiently. Utilising lands further north would require additional handling of cargo with a resultant reduction in ship turnaround efficiency. Dublin Port Company will remain committed to a programme of regaining control of port lands over the period of the Masterplan and may use its CPO powers to assist in this process, if necessary. The process of regaining control of lands is both costly and slow and, of itself, cannot be relied upon to yield up the amount and type of land required to deliver future capacity.

Where land remains with tenants or licensees, Dublin Port Company will seek to ensure that this land is used effectively and is not employed for suboptimal purposes. This will be achieved through negotiation of changes in the franchise arrangements with

operators to give Dublin Port Company the ability to influence the utilisation of existing lands and to eliminate discrepancies in competing operators' cost bases.

Throughout the Masterplan period, Dublin Port Company will use pricing incentives to encourage customers to achieve optimum land utilisation for core port trading purposes.

## Safeguarding Property and Preventing Blight

In light of the need to make provision for future capacity, Dublin Port Company has identified port lands that are likely to be developed for specific uses over the Masterplan period. While some of the development will take place in the short term, Dublin Port Company needs to ensure that land that will be needed for development projects in the longer term is safeguarded for such purposes.

The guiding principles in safeguarding Port lands for future uses will be to ensure that:

- » Land will be safeguarded for port operational use where there is a likelihood that it will be used for such purposes within the period of the Masterplan.

» Land will be safeguarded where any alternative interim use (pending its ultimate development for port purposes) would be difficult to reverse at a later stage.

» Conversely, Dublin Port Company will not seek to safeguard land where there is no realistic prospect of land being brought back into significant port use within the period of the Masterplan or where an alternative use in the interim can be terminated to facilitate port use.

In the Masterplan, there are four particular sites which have been identified where judgement is required as to the future safeguarding or use of these lands. These lands are identified in the drawing at Figure 4 on page 28.

1	<p>These lands were isolated from the main area of the Port by the building of the Port Tunnel and many of the original port-related activities were relocated from this area to other locations within the Port.</p> <p>Given the location of these lands and the foreseeable increase in demand for port lands in the future, Dublin Port Company considers that the best use for this site is to redevelop it for the transit storage of trade cars.</p>
9	<p>The development of a Masterplan for the Poolbeg peninsula is strategically important for the City. In considering these lands, Dublin Port Company believes that their most appropriate future use does not lie in cargo handling, notwithstanding that the lands could be productively used for Port activities. That being the case, Dublin Port Company will in the early stages of the Masterplan, seek to find a suitable alternative use for these lands within the context of developing plans for the Poolbeg peninsula as a whole.</p>
10	<p>These lands are located within a Seveso site and are adjacent to existing oil storage and Lo-Lo container facilities. The lands have little alternative use. As such, Dublin Port Company will preserve them for future development for cargo handling purposes. The most likely options will be for oil storage or as an extension to existing Lo-Lo facilities.</p>
12	<p>The redevelopment of Ro-Ro facilities in the vicinity of Alexandra Basin West and to the north of Alexandra Road will likely have the effect of isolating a small area of Port land facing onto East Wall Road. This site could be used for a number of uses. Dublin Port Company would plan in the early stages (first five years) of the Masterplan to evaluate these uses and to decide whether the site should be safeguarded for future port use or should, instead, be developed for alternative non-port uses.</p>

In making a strategic decision to safeguard land for Port uses, Dublin Port Company will have due regard to the need to ensure that the protection of land for future development does not create a blight on surrounding property.

While the decision to develop land has consequences for adjoining property owners, equally the decision not to develop land can impact on surrounding properties and communities.

Consequently, Dublin Port Company will engage with adjoining landowners and key stakeholders when considering the safeguarding of potentially significant lands in Dublin Port.

# 6 Inland Connectivity

## A Connected Port

**The core objective of the Dublin Port Masterplan is to explore how the Port can handle 60m tonnes by 2040. In assessing how this can be achieved it is important to focus on the transport and travel issues concerning the operation of the Port – in particular how Dublin Port connects with inland transport networks outside the Port Estate.**

It is also important to examine travel within the Port Estate to ensure that more sustainable modes of transport are facilitated and encouraged over the Masterplan period.

Research carried out for Dublin Port Company in the preparation of the Masterplan has confirmed that the majority of freight movements at Dublin Port originate or are destined for customers within the Greater Dublin Region, encompassing Dublin City and County, and Counties Meath, Louth, Kildare and Wicklow. The research also indicates that a significant amount of trade (up to 25%) originates or is destined for locations outside the Greater Dublin Region.

## Inland Connectivity

### Road

Dublin Port is well connected to the national road network and in particular the Dublin Port Tunnel, which was opened in 2006, has provided fast and direct access to the strategically important M50 and M1 routes within minutes of leaving the Port. With over 13,000 HGV movements per day into and out of the Port, the Dublin Port Tunnel has also assisted in removing congestion within the Port Estate and in the environs of the Port.

Dublin Port Company has invested significantly in improving the road network within the Port to facilitate the efficient movement of goods to and from the various terminals and facilities in the Port. These improvements have been delivered to ensure that the investment in the Dublin Port Tunnel and the expansion of the capacity of the M50 are adequately utilised by freight traffic to and from the Port. In addition to reducing congestion within the Port and reducing the impact of HGV traffic on the City Centre, the strategic investment in both the Dublin Port Tunnel and the upgrading of the M50 have both assisted in reducing the times involved in moving goods to and from the Port.

### Rail

Dublin Port is at the heart of the national rail network with direct connections to all major centres of population. Dublin Port Company has maintained and developed the main rail infrastructure within the Port and is committed to the provision of rail connections and sidings within the Port. The level of freight that is transported by rail remains comparatively low but Dublin Port Company believes that there is significant potential for rail freight to grow over the period of the Masterplan.

## Transport Policy & the Masterplan

In developing the Masterplan, Dublin Port Company has taken account of a number of policy developments which will guide and influence how transport infrastructure is provided within the Port and for onward connectivity.

The **EU White Paper** (Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system) which was adopted in March 2011 sets a clear policy context and challenges for Dublin Port. The White Paper seeks a reduction of 60% in Greenhouse Gases from the transport sector by 2050 (based on 1990 levels).

To pursue this objective the White Paper sets some specific goals including:

- » Reducing CO<sub>2</sub> emissions from maritime bunker fuels by 2050.
- » Moving 30% of road freight over 300km to other modes including rail and waterborne travel.
- » Ensuring all core seaports are connected to the rail freight and inland waterway system by 2050.

The Irish Government's **Smarter Travel** policy sets out a vision for sustainability in transport centred around 5 key goals:

- » Reducing travel demand
- » Maximising the efficiency of the transport network
- » Reducing reliance on fossil fuels
- » Reducing transport emissions
- » Improving accessibility to transport.

The **Greater Dublin Area Draft Transport Strategy 2011 – 2030** deals specifically with land transport and outlines an explicit hierarchy of transport users with 84 direct measures to assist in achieving the objectives set out under the strategy, including 21 measures specifically dealing with roads, freight and demand management.

These strategies have guided Dublin Port Company in the preparation of the Masterplan and will inform the transport elements to any specific developments and initiatives that are brought forward during the Masterplan period. In particular, the hierarchy in

the Greater Dublin draft Transport Strategy places an onus on Dublin Port Company to ensure that the needs of other transport users are adequately catered for in the Masterplan. The clear enunciation of specific measures in the Strategy provides a logical framework for the Port to plan its development in a way that caters for the needs of other transport users and the City, while meeting the core requirement for freight transport.

In particular in light of the provisions of the policy objectives at EU and national level there is an onus on Dublin Port when bringing forward developments or initiatives during the Masterplan period to seek to:

- » Implement initiatives which support pedestrians and cyclists within and in the vicinity of the Port both for recreational and for access purposes.
- » Support better public transport links within the Port.
- » Where achievable, to facilitate initiatives throughout the supply chain which these policies seek to implement.

Dublin Port Company is confident that these objectives can be achieved in the context of operating an efficient and competitive port through a targeted Travel Plan to address movements within the Port and by specific measures designed to facilitate a better modal split in favour of rail transport for goods movement and the development of port centric logistics.

## Dublin Port Travel Plan

Dublin Port Company has prepared a Travel Plan for Dublin Port to help promote more sustainable modes of transport in and around Dublin Port – the Travel Plan is available on the Dublin Port Company website ([www.dublinport.ie/masterplan](http://www.dublinport.ie/masterplan)).

The Travel Plan takes account of an Area and Access Audit which was carried out in Dublin Port in September 2011 and reflects the substantial work undertaken by Consultants, including an Origin and Destination Study, carried out by Atkins on behalf of the Dublin Port Company. This audit examined access to Dublin Port by private motorised transport, rail, public transport, cyclists and pedestrians. The Travel Plan also sets out clear policy objectives which are based on the policy guidance provided by the European and National Strategies outlined above. The Travel Plan also outlines specific proposals to secure the policy objectives together with an implementation and review process.

Measures proposed in the Travel Plan also take their lead from the initiatives outlined in the Masterplan aimed at securing greater access and connectivity between Dublin Port and Dublin City.

For example the Travel Plan envisages measures such as:

- » The provision of a dedicated public transport route.
- » Suitable pedestrian and cyclist access to the Port.
- » The provision of dedicated pedestrian and cycle routes within the Port.
- » Measures to encourage car sharing for people working within the Port.
- » Car parking management measures.

## Supply Chain Initiatives

There are some specific supply chain initiatives that Dublin Port Company will pursue during the period covered by the Masterplan and which will aim to facilitate the achievement of the sustainable transport objectives set out in both EU and National Policies.

## Rail

Specifically, Dublin Port Company will continue to promote the increased use of rail freight through the movement of containers and bulk solids by rail. Dublin Port has supported and will continue to support the development of container rail freight services in Dublin Port. A sign of this commitment is the development of a new 1.6km rail spur at Dublin Port which was opened in July 2011. Dublin Port Company is also examining potential for private sector operators to offer container freight services to a range of destinations.

The Company believes that if market demand develops to the full set of potential services, the volume of containers moved by rail could reach 1.3m tonnes. There is also potential for increased movement of bulk solids and petroleum products by rail subject to market demand with the potential for about two million tonnes per annum to be moved by rail – equivalent to about 7% of the Port's gross tonnage in 2010.

## Portcentric Logistics

The development of portcentric logistics in Dublin Port could help to achieve the national policy objectives directed towards increased sustainable transport provision. Portcentric logistics involves the location of hinterland distribution facilities on port estates or in the immediate environs of ports as an alternative to locating a distribution centre in the middle of a country's road network.

Based on experience to date, Dublin Port Company believes that the proportion of port volume that can be handled through portcentric facilities is small, particularly for unitised loads, but will explore future provision of such facilities during the Masterplan period.

Portcentric logistics are vital for the bulk solids and oil tank farms and will remain a key element during the period of the Masterplan.



# 7 Social Community and Economic Impacts

## National Economic Impact of Dublin Port

**Dublin Port is a key facilitator of merchandise trade in and out of Ireland and has a critical impact on the national and regional economies. The Port is also a key component of the national tourism sector and represents a key gateway for visitors to Ireland.**

Over forty per cent (43.6%) of imports through Irish Sea ports came through Dublin Port in 2010, while 46.2% of exports from Ireland originated from Dublin Port. In particular the Port handles more than two thirds of containerised trade to and from Ireland.

The strategic importance of Dublin Port has been recognised at a national level in a number of policy statements and studies:

» A Report prepared for the Department of Transport in July 2009 (The Dublin Port National Development Plan Study) concluded that Dublin Port “is clearly a vital strategic port in terms of the provision of capacity for the Irish economy”.

» Forfás, the State’s policy advisory board for enterprise and jobs, has also commented on the importance of Dublin Port to the Irish economy and recognised the potential role of the Port in providing deeper water to facilitate larger vessels which are likely to operate to and from Ireland in future.

At a Government level, the impact of Dublin Port is also recognised. At a conference specifically convened to address the Masterplan and the future of Dublin Port, Dr. Leo Varadker TD, Minister for Transport, Tourism and Sport said that Dublin Port “as the country’s major port, is a strategic asset”.

In terms of Planning Policy the critical role and national and regional impact of Dublin Port is recognised in key strategies and policy documents including:

- » The National Spatial Strategy
- » The National Development Plan
- » Transport 21
- » The Regional Planning Guidelines for the Greater Dublin Area 2004 – 2016
- » The Dublin City Development Plan 2011 – 2017
- » Dublin Docklands Area Masterplan 2008

## Dublin Port and the Local Environs

Dublin Port is also a significant focal point for employment in Dublin with over 4,000 people employed in the Port Estate all directly supported by the trading activity carried on at the Port.

The Port is located at the eastern edge of Dublin City and is surrounded to the north, west and south by the urban districts of Clontarf, the North Docks and Pembroke. There are eight district electoral districts (DED’s) adjacent to Dublin Port, which display the following socio economic characteristics:

» Higher than average population increase - The population of the Greater Dublin Area increased by 7.0% between 2006 and 2011. Overall the eight DED’s adjacent to Dublin Port experienced an increase in population of 12.3% - higher than the regional average – while three of the DED’s adjacent to Dublin Port actually experienced a decrease in population over the same period.<sup>1</sup>

<sup>1</sup> Population statistics are based on Census 2011 Preliminary Results. The other socio-economic statistics are based on Census 2006.

- » Higher age profile – in 2006, the percentage of the population in the DED's adjacent to Dublin Port that were over 65 years of age was 13.8%, which was higher than the national and regional averages. This means that the population of the Dublin Port Area is ageing faster than the national average.
- » Higher employment levels – In 2006, the percentage of the population in employment in the Port Environs (60.2%) was higher than the regional and national averages. The percentage of people in employment in the Greater Dublin Area is 59.1%, while the Figure nationally is 57.2%. Conversely, the percentage of the population that is unemployed in the Port Environs is 3.9% lower than either the Greater Dublin Area Figure (4.8%) or nationally (4.4%). This reflects the relatively older age profile of the population in the area, but also the high levels of employment within the Port Estate. However, there are also pockets of high unemployment within the Port Environs.

The employment generated at Dublin Port makes an important contribution to the regional economy. The development of additional facilities at Dublin Port over the period of the Masterplan will bring new opportunities for employment creation in both the construction and operation of the facilities. Aside from the benefit associated with the generation of new employment, the benefits for the

State in terms of income tax and PRSI receipts would also be significant.

An economic assessment of a previous proposal to develop new port facilities at the Dublin Gateway site indicated that that project could generate up to 485 jobs during construction producing a gross economic injection of €93.3m into the national economy through wages, income tax receipts and PRSI. The assessment also indicated that the subsequent operation of the facility would generate 90 permanent jobs, which would generate an economic contribution of €7m each year to the national economy.

While any new development proposals at Dublin Port would require a specific economic assessment, the indicative figures for the Dublin Gateway Project, provide an initial indication of the scale of the employment gain in the event of larger scale development proposals and enhancements at Dublin Port. It is expected that while modern technological innovations and developments in freight logistics will increase efficiencies, there will be a significant net employment gain from the development of new projects envisaged in this Masterplan.

## Integrating Dublin Port with Dublin City

It is a key objective of the Masterplan and a policy imperative for Dublin Port Company that the development and operation of the Port must benefit the City and people of Dublin.

The primary function of the Port is to serve the merchandise trade of the Dublin region and the national economy. The Port is a busy centre for trading activity and at different times of the day can be teeming with trucks, people and ferries. Maintaining a busy and secure port need not preclude the implementation of initiatives which are aimed at securing greater integration of the Port with the City. International experience has shown that a busy, connected and integrated port should be achievable with vision, clarity and a commitment on the part of port operators and the city authorities.

Integrating Dublin Port with Dublin City and its people is a core part of the Masterplan for Dublin Port. A port which serves the City but which remains detached and isolated from the society that it serves will be regarded as little more than an intrusive and unappealing blight on the City. This integration must be both meaningful and enduring with a real recognition of the interdependence that exists between the Port, the City and its people.

Over the period of the Masterplan, Dublin Port Company will pursue a deliberate policy objective to secure societal integration of the Port with the City and its people. The statement of these policy objectives and their achievement through a focused programme and high level Board commitment represents a cultural shift on the part of the Port to ensure that the commercial function of Dublin Port is matched with a recognition of the soft values that attach to the Port and the responsibilities that they confer in the relationship between the Port, the City and its people. In particular, it is a policy objective of Dublin Port Company to ensure that the Port will not operate in isolation from Dublin City and the people that it services.

This will involve ensuring that the people of Dublin benefit not just from the Port operating as an efficient facilitator of trade, but also that the City and the people of Dublin gain in many wider senses from the successful operation and growth of the port.

This policy objective will underpin both how Dublin Port Company operates its current business and any development proposals envisaged under the Masterplan. To support the achievement of this objective, a programme will be devised and implemented, in consultation with the local authority, statutory stakeholders and local communities, to identify and implement initiatives to support societal integration between the Port and the City and the achievement of soft values associated with the Port.

To give practical vent to these policy objectives, Dublin Port Company is proposing some initiatives and programmes which will be undertaken over the course of the Masterplan to achieve integration between the Port and the City. Some of the initiatives will occur in the short term and represent tangible evidence of the commitment of Dublin Port Company to societal integration. Other initiatives will take place aligned to specific projects or proposals as they come to fruition. Collectively they demonstrate a strategic vision with tangible outcomes which will effectively bring the Port closer to the City and its people.

## Dublin - A Port City

Dublin is an historic port city. The development of the city over the last 300 years has been closely aligned to the growth and expansion of mercantile trade, with vessels handling cargo right into the heart of the city until relatively recently.

The development in the containerised trade together with the growth of Ro-Ro freight saw a movement in port operations away from the core of the city out towards the current location of Dublin Port at the eastern fringes of the urban area and at the mouth of Dublin Bay. These developments together with the built transport infrastructure, city centre traffic planning and the requirements

introduced for the security of ports and ships have all contributed to the operation of Dublin Port as a zone that is separate and distinct from Dublin City.

The Port, which has played such an important role in the location, growth and development of the City, has become physically detached from the City over time. Yet given the role that the Port plays in the lives of Dubliners, it remains central to the City and its people.

While Dublin Port is now located away from the centre of Dublin City, the Port has been and remains a central part of the structure, culture and heritage of Dublin and its people. The evolution and development of the City of Dublin is inextricably linked with the operations and growth of Dublin Port. Dublin City developed around the River Liffey, which today remains the central channel to Dublin Port.

Dublin Port is intrinsically linked with the fortunes of the people in the city. It has been a point of arrival and departure for generations of people visiting Ireland not just Dubliners. People have left from Dublin Port both in its current location and when the passenger ferries departed from the city quays, to find new lives in other countries and traditions. Equally they have returned to visit family and renew connections in Ireland. The Port has also been the first point of arrival for many new entrants into Ireland who have expanded the ethnic mix and complexion of Dublin.

While there has been a growth in air passenger traffic in the last 30 years, the levels of passenger throughput in Dublin Port remain high. In 2010, there were over 1.8m passengers on ferries and a further 130,000 visitors on cruise ships.

The Port is also central to commerce, life and the living standards of people living in the Dublin region. Food that is consumed on the tables of Dublin households, or clothes worn or equipment used by Dubliners, including cars, fridges, and even toothbrushes, all arrive through Dublin Port.

It is an entrance point for people, goods and materials for the City. It also serves as the export point for many goods manufactured in Dublin and beyond.

## Dublin Port - A Positive Contribution to the Natural History of Dublin

The growth of Dublin Port has helped to shape the city and it has created not just a centre for people, trade and commerce, but also amenities which are used on a daily basis by people living and visiting the Port.

The construction of the North Bull Wall and the Great South Wall led to the creation of two amenities that help to define the city and provide an important resource for its people. Bull Island, which was created directly as a consequence of marine works needed to ensure the safe operation of Dublin Port, is now an amenity that is enjoyed by thousands of Dubliners. It has become an internationally recognised habitat for wildlife, a place of recreation for Dubliners and contains one of Dublin's finest beaches. In addition, the Great South Wall, which was built to preserve the channel into Dublin Port, has also made a significant contribution to the city and is a much valued amenity and vantage point for looking at the City and the operations of its vibrant port.

It is a central part of the approach by Dublin Port Company to the maintenance, operation and development of Dublin Port over the period of the Masterplan to maintain and enhance these two natural amenities which have been created directly as a consequence of the development of the Port.

Dublin Port remains a centre for nature, heritage and conservation. The Port is adjacent to areas of high conservation value and amenity and has facilitated the creation of habitats which are important, not just in an Irish sense but across Europe. In addition some of the structures developed in the Port have provided refuge and breeding grounds for protected species. A vibrant and successful port in Dublin has co-existed beneficially with a dynamic, developing and scarce natural habitat. It is the intention of Dublin Port Company to maintain Dublin Port as a centre for commerce within a centre for nature.

## Dublin Port and an Innovative Ireland

With a background rooted in history and focused on mercantile trade it is important to remember that Dublin Port is a conduit for innovation and new ideas – the Port is a gateway for innovation and creativity.

Many of the products and raw materials that form part of Ireland's knowledge economy enter the country through the Port. The Port is also a receptor for new and imaginative articles which impact on the citizens of Dublin on a daily basis:

- » The Beckett Bridge was brought in through Dublin Port.
- » Major structural components of the National Convention Centre arrived in Dublin through Dublin Port.
- » The Aviva Stadium was built using materials imported through Dublin Port.
- » New DART carriages, Luas carriages, locomotives, buses and wind farms regularly arrive in Ireland through Dublin Port.

This gateway to innovation and "new things" is an aspect to the Port's operations which receives little focus, but is of keen importance in terms of creating a city which retains that innovative streak and inventive spirit which underpinned much of the economic, cultural and individual successes through the years.

## Integrating Dublin Port with the City

Integration of the Port with the city involves examining ways in which Dublin Port in its current location can encourage a greater throughput of people while maintaining its core function.

The improvement in transport links with the construction of the Luas line to the Point Depot has made the port area more accessible, but on the north side of the city there remains an area of land that is undeveloped and unappealing in its current form. In the immediate future, it is unlikely that this scenario will change and accordingly new and innovative ways of bridging the gap between the City and the Port need to be embraced.

On the south side of the Port, the port activities are mainly confined to the Poolbeg peninsula. Dublin Port Company has ownership of part of the peninsula with other large areas under the ownership of Dublin City Council and the ESB. Dublin Port Company will investigate how best it can work in partnership with these bodies in integrating the peninsula with the city.

The city quays between the Port and the Matt Talbot Bridge continue to be used by the Port to provide berthing facilities for visiting vessels. Currently the vessels using these quays are limited in

size and there is no commercial freight handling on these quays. However, the vacant quay sides present an opportunity for increased usage for suitable vessels and as such have an important role in creating a greater linkage between the City and the Port.

## Effective Community Engagement

Dublin Port Company has an extensive programme of engagement with local communities with initiatives including:

- » A Community Scholarship Programme to facilitate local people to complete their education.
- » A Programme aimed at supporting families affected by drug abuse in local communities.
- » Support for local sporting and community groups.
- » Support for local educational initiatives – including the provision of new technology for three local schools.
- » Support for the Rinn Voyager Project to encourage sail training and personal development for the marginalised and disadvantaged.
- » The Port Open Day – a full day when the Port is open to visitors with a host of events and initiatives aimed at the people of Dublin.

This programme provides an excellent foundation for a wider programme aimed at integrating the Port and the City as it focuses on building enduring and sustainable relationships between the Port and the local communities who directly interface with the Port each day.

## A Focused Approach to Engagement and Integration

In the context of implementing the Masterplan, Dublin Port Company is proposing a series of initiatives to secure integration of the Port with the City and the people and in the process deliver a significant gain to the communities that Dublin Port interacts with.

The programme has twelve elements as follows:

### Access

Dublin Port Company recognises that the function and operations of Dublin Port, particularly in the context of the security requirements imposed by international standards, means that there can never be unrestricted public access across all areas of the Port Estate. However, within these constraints Dublin Port also recognises that there is significant potential to facilitate the public to gain wider access

to the Port, as an additional amenity and to better understand the operations of the Port and view Dublin City from a new perspective.

To increase this public access there are a number of different initiatives that Dublin Port Company is considering:

- » Cycleways and Walkways – It is possible, even in the context of operating a busy international trading port, to facilitate access for pedestrians and cyclists in the Port through the improvement of cycleways and footpaths.
- » Tourism visits – Dublin Port Company will examine ways to facilitate access to tours and groups that wish to see the port both from both the land side and the sea side.
- » Open days - Dublin Port remains committed to retaining the Open Day and potentially to extend this format to other events, in particular the casting of the spear by the Admiral of the Port, the Lord Mayor of Dublin.
- » Public Transport – It would be the objective of Dublin Port Company to ensure that the north port estate secures public transport provision to the passenger ferry terminals. This public transport provision could be through either the provision of a dedicated bus route or the extension of the existing bus route to link with the LUAS terminal at the Point Depot. It would also be the objective to increase public transport links through the Poolbeg Peninsula right down to the Great South Wall.

- » Car Access – The Company will examine proposals to provide for car parking at an appropriate area in the Port for people who wish to come and see the Port at weekends.
- » Educational Tours – Dublin Port Company will examine the possibility of increasing the number of organised educational tours of the port for schools.
- » Development of a visitor centre – The Company will examine proposals for the development of a visitor centre for the port that could include displays of archive materials, old equipment used in the port, video displays of port operations and interactive features such as container crane operations or the safe maneuvering of a vessel into the port.

### Visual Integration

At present, the Port estate, when viewed from both the north and the south sides and along its eastern perimeter, can appear quite severe and unwelcoming. Dublin Port Company is committed in the short term to commencing boundary softening works to break down the physical barrier which exists between the Port and the immediate area outside the Port Estate, particularly along East Wall Road. In addition, the fencing surrounding port installations on the south side will be reviewed to see how a functional but more appealing boundary can be erected. Such developments are likely to be the subject of a planning application.

## Landscaping

It is also the intention of Dublin Port Company to undertake landscaping on the northern fringe of the Port to ensure that the visual impact of the Port (in particular the oil tank farms) is less intrusive from the vantage point of Clontarf, Raheny and Sutton.

## Information

The extent of the vehicle, passenger and vessel movements through Dublin Port is impressive. However, there is little public awareness of ship movements in and out of the Port. Dublin Port Company is committed in the short term to increasing information on vessel movements at Dublin Port through the provision of webcams, and the erection of a board on both the north and south side of Dublin Port detailing arrivals and departures each day.

## Vantage Points

In addition to providing information on vessel movements, it is also important that people have access to see the Port and its facilities. Dublin Port Company is committed in the short term to enhancing and improving the vantage points at the Great South Wall and on the North Bull Island for viewing port facilities and activities.

## New Technology

New technology provides opportunities for Dublin Port Company to outline events and movements that are happening at the Port. In particular, Dublin Port Company will, in the short term, examine the development of smartphone applications that can provide details on vessels that are visiting Dublin Port with an indication of their origin and destination and provide tidal information. In addition, social media provides opportunity for information to be provided publically about port operations, through tweeting of new arrivals, departures and tours.

## Website

In the short term it is also possible through new technology for Dublin Port Company to include some additional features on the website including:

- » A virtual tour of the port.
- » An interactive map of the port.
- » A directory of companies operating in the Port.
- » Inclusion of videos of port operations e.g. a Lo-Lo ship being discharged; a pilot boarding a ship at sea.
- » Port Webcams covering port activity, traffic in the port and nature views.
- » Display the route a selected cargo travels from source port to Dublin (for example a car manufactured in Japan).
- » A feature on ships, for example, a vessel of the week on the Homepage.

- » A display of the physical development of the Port and its hinterland that includes rolling images with a timeline.

## Visibility of the City and the Port

Because the Port has moved eastwards from the city centre it is not visible to citizens of the city as they go about their daily business. However, there are a number of steps that can be taken to create greater linkages between the City and the Port, including:

- » Moving cruise ship operations closer to the City – As part of the Master Plan Dublin Port Company is advancing a proposal to create a cruise terminal at a new location adjacent to the Point Depot. This new location will allow cruise vessels to come right up to East Link Bridge and will provide access for visiting passengers and crew to the city via the LUAS at the Point Depot. It will also provide a greater visible presence of the Port at the heart of the city and introduce a new dynamic perspective on the port's operation for the people of the city.
- » City Quays – Dublin Port Company is also exploring how the city quays, (North Wall Quay and Sir John Rogerson's Quay) can be used for increased berthage, again to facilitate the linkage between the city centre and the port area. The use of the quay side for berthing of vessels during dockland festivals and during the Tall Ships Race in 2012 will be timely reminders of the links between the Port and the City.

## Cultural and Artistic

As part of a process to integrate the Port with the City and its people, a programme of cultural and artistic initiatives will be undertaken with the following key elements:

- » Art and installations – In the first instance, the Port will be viewed as a location for the display of art and installations on the Port Estate, on the Port boundary and surrounding area. Dublin Port Company also commits to becoming involved in the development of a Port Cultural Centre to harness and direct cultural initiatives related to the Port or adjoining communities. An exciting proposal has been advanced by promoters seeking the development of a cultural centre at Poolbeg Harbour and at the Great South Wall. This proposal is attractive and innovative and will be the subject of further review and support by Dublin Port Company. The possibility of working with popular festivals with an arts dimension such as the St Patricks Day Festival and the Bealtaine festival will be explored. Dublin Port Company is also exploring the provision of working spaces and artist residencies in the port area.
- » New cultural opportunities – Dublin Port Company will explore ways in which the unique cultural mix associated with the origins of crew members of vessels visiting the port can be explored and illustrated. The linkage between visiting crews, their national identity and local communities in Dublin has the potential to explore new cultural opportunities between the City, its people and visitors.
- » The Port as a venue – There are also opportunities for areas of the port to be used as a venue for cultural activities, including open air cinema or concert performances on an ad hoc basis.
- » Heritage – Dublin Port Company and its predecessors (such as Dublin Port & Docks Board) through its archives has a wealth of material that can be made more publicly accessible, possibly through the Port Cultural Centre. Again, modern technology has made digitisation of this material possible to bring important documents to a wider public.
- » Heritage Map – Dublin Port Company is also examining the possibility of developing a Heritage Map of Dublin's quays and port and the possibility of extending existing heritage tours to cover the Port.
- » Immovable Port Heritage – The links between the Port and the City can be enhanced through the preservation or reinstallation of some immovable port heritage on the city quays. The diving bell and a working crane provide useful opportunities to place a permanent link with the port on the current city quay area.
- » Spear casting ceremony – Each year the Admiral of the Port, the Lord Mayor of Dublin, casts the spear into the River Liffey as a key part of their ceremonial duties. Up to now this ceremony has been celebrated without any widespread public involvement, but given its significance and its function in reaffirming the links between the City and the Port, Dublin Port Company is exploring expanding this ceremony into a public event. The event could coincide with an open day and provide an opportunity for the wider Dublin community to participate in this historical and important event.
- » Twinning – Dublin Port Company intends pursuing a programme of twinning with other ports of historical importance and significance to help build the cultural, economic and social links between Dublin city and other key urban centres throughout the world. The programme will be developed and pursued in conjunction with Dublin City Council.



## Environment / Ecological

Dublin Port is intertwined with a dynamic natural environment. Located adjacent to a Special Protection Area and a Special Area of Conservation which are both of international importance, Dublin Port Company will work with habitat and nature interests to ensure that the full resource that these habitats and areas provide for wildlife and for the wider public in Dublin are managed, controlled and supported. Dublin Port Company will seek to establish cooperation agreements with nature interests, including NGO's which will involve the provision of access, some element of funding and support to these groups. Other key initiatives include:

- » Audit – Dublin Port Company will commence an audit of the Flora and Fauna of Dublin Port to assist with the development and implementation of conservation, preservation and sustainability objectives.
- » Vantage Points - Dublin Port Company will also look at examining increased vantage points for viewing wildlife and birdlife from areas abutting Dublin Port.
- » Protection Programmes - Pursuant to the co-operation agreements outlined above, the Company will pursue dedicated protection programmes for specific species to ensure that these species are encouraged, facilitated and managed according to best international practice.

Dublin Port Company will, if necessary, examine options for possible mitigation measures likely to be available if future port capacity requirements involve potential negative impacts on existing habitats.

## Community Engagement

All of these initiatives and the general interaction between the Port and wider communities will be the subject of extensive stakeholder engagement programmes. Formal structures will be developed to facilitate effective engagement with local stakeholders and their elected representatives. This will involve three additional aspects:

- » Surplus Lands - The Port will consider, on a sympathetic basis, granting access or use to local communities of surplus port lands strictly for community purposes. Such access will be made in the context of resources available at the time and in light of the current and future requirements of the Port.
- » Education - The Port's existing programme of support for community education will be maintained. In particular, programmes to meet the potential skill set required for people who wish to seek employment in the Port Estate will be addressed in conjunction with local education interests.

- » Community Support – Dublin Port Company is also committed to establishing a community support fund for local groups. This fund will build on the existing funds that the Port dispenses to local community groups.

## Leisure Activities

Dublin Port is a vibrant centre for leisure activity. The port is currently home to a number of sporting and leisure clubs such as rowing clubs (St. Patrick's and Stella Maris), Poolbeg Yacht Club and the Half Moon swimming club. The Port will develop initiatives on the promotion of leisure activities such as sailing, swimming and fishing, possibly working with the established clubs on ways to involve more people in marine based activity.

## Implementation of Soft Value Programme and Prioritising Resources

The implementation of a programme designed to address the soft values of the port and secure greater integration between the Port and the City and its people over the period of the Masterplan will require considerable resources.

The most important element on the part of Dublin Port Company is an acceptance of the wider impact of the Port on the City and the community and recognition of the imperative of integrating the Port with the City. This is reflected in the objectives outlined above.

These principles will underpin the operation, management and development of the Port over the period of the Masterplan and an implementation plan will be developed specifically to give effect to the initiatives outlined in this report. Given the nature and scope of the measures identified, their implementation will be on a phased basis with some initiatives capable of immediate implementation – other initiatives will require a longer term programme.

# 8 Safety and Security

## Introduction

**Dublin Port is a large and dynamic industrial estate with 24 hour operations. It is the centre for the importation and dispatch of products, including fuels, which require careful handling and storage to ensure that they remain stable and safe for use by consumers and businesses. The Port is also a centre for the movement of people and goods to and from Ireland, with large numbers of passengers and significant amounts of freight passing through the port annually.**

In both these contexts there are significant potential security, health and safety risks that need to be managed in the operation of the Port. In advancing the development options in the draft Masterplan, Dublin Port Company will ensure that the health, safety and security procedures at Dublin Port accord with best international practice and facilitate the operation of a modern, efficient and safe facility for passengers, freight and people working in the Port.

## Safety

Dublin Port is a large industrial estate with a wide range of activities taking place involving both land based and water-borne operations. As such the operations at the Port carry manageable risks to the safety of people and to damage to the land or marine environments.

Land based activities include the loading, discharging and handling of a variety of cargoes, the movement of road traffic of different types (freight, pedestrians and cyclists), the movement of passengers, the storage of oil and gas and railfreight. Water based activities include the movement of shipping within the Port area and out in the Bay, manoeuvring adjacent to berths, the provision of piloting / towage services to vessels and the management of leisure craft in the Port area and in the shipping channels in the bay.

The activities at Dublin Port pose different types of potential risk ranging from collisions involving shipping to accidents involving pedestrians. To address and manage these risks, procedures have been developed by Dublin Port Company and the various operators within the Port to ensure that the Port operates in accordance with the best international practice and in accordance with recognised safety standards. Procedures have also been developed, and are frequently tested, to respond to any emergency, within the port area, either on land or on water.

As there are Seveso sites located within the Port Estate, Dublin Port Company attaches a high priority to addressing the potential risks that oil, gas and bitumen storage presents to the safety of communities adjoining the Port. In assessing the risks involved, Dublin Port Company fully prepares for the potential risks arising from routine operations but, also, the consequences of any accident within the Port. Such risk assessments and response protocols are kept under continual review with the relevant operators and external authorities and modified in line with improvements in international standards.

Safety exercises and routines are frequently carried out involving the emergency services including the Gardai, Fire Brigade, Civil Defence and the Health Service Executive in order to ensure adequate preparedness and co-ordination of responses in the event of any emergency.

In the context of the development options outlined in the Masterplan, it is the practice of Dublin Port Company to assess and evaluate the various safety and environmental risks associated with any projects when they are being planned, constructed or ultimately operated.

An initial safety assessment of the development proposals envisaged in the Masterplan, suggests that they will deliver an improvement in the safety and efficiency of current port operations. This will be achieved through improved design and layout of existing areas with an enhanced operational and environmental management system.

## Security

Security at all major seaports has been tightened considerably over the last decade. Following the 9 / 11 attacks in New York concerns were raised that ports could be used as a possible conduit for the international transportation of terrorist material and personnel. The International Community responded to this threat by introducing new legislation which enforces more stringent security procedures in major seaports to ensure that ports cannot be used to facilitate such illegal transportation or terrorist activity.

This new protocol, the International Ship and Port Facility Security Code (ISPS Code) focuses on the Ship / Port interface. As a consequence, ports are required to introduce measures to ensure that "undesirable" personnel or goods are not allowed to access this interface. This has led to increased regulation of security protocols at Dublin Port (specifically the introduction of Port Facility Security Plans), which in turn has an impact on the layout and configuration of operations at the Port.

More recently the EU has extended the security requirements for ports, under EU Directive 2005 / 65, to extend the targeted security area beyond the ship / port interface (under the ISPS Code) to encompass the entire port area.

Dublin Port Company has introduced stringent security measures to comply with these requirements.

## Safety and Security and the Masterplan

The obligations and guidance provided by the EU and international authorities have been factored into the development options outlined in the Masterplan. Dublin Port Company is confident that the development options in the Masterplan can be delivered while satisfying all relevant safety and security requirements. This will ensure that Dublin Port can deliver enhanced capacity in a safe and secure environment for customers, employees and visitors to the Port.

# 9 Summary of Environmental Studies

## Introduction

### **This section provides an overview of the Strategic Environmental Assessment (SEA) Draft Environmental Report and the Draft Strategic Natura Impact Statement (sNIS) related to Dublin Port Company's Draft Masterplan.**

The SEA Draft Environmental Report and the Draft Strategic Natura Impact Statement Report should be read in conjunction with the Draft Masterplan 2012-2040. All documents are available on the Dublin Port Company Masterplan website for download and review ([www.dublinport.ie/masterplan](http://www.dublinport.ie/masterplan)).

The publication of the SEA Draft Environmental Report alongside the Draft Masterplan and Strategic Natura Impact Statement, provides an opportunity for stakeholder and local consultation and response. A formal consultation process will provide the opportunity for expression of opinions on these documents prior to the finalisation and adoption of the Masterplan by Dublin Port Company.

## Strategic Environmental Assessment (SEA)

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

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

As outlined in Section 2 (The Rationale for the Masterplan), the Masterplan is not a statutory plan and, accordingly, does not fall within the remit of the SEA Regulations. The SEA Draft Environmental Report is, therefore, a non-statutory voluntary assessment, which has been commissioned by Dublin Port Company.

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

## Strategic Natura Impact Statement (sNIS)

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

The purpose of the sNIS for the Masterplan is to:

- » Provide a strategic approach to mitigation which may result from the development of the Masterplan engineering options.
- » Provide a framework within which the Appropriate Assessment process for the individual options presented in the Masterplan can be implemented in the event that they are progressed to the development stage.

# Dublin Port Company Masterplan and SEA Objectives – Compatibility Appraisal

An SEA 'compatibility appraisal' was conducted at the SEA scoping stage to test the compatibility of the Masterplan Objectives with the SEA Objectives in order to identify where they supported each other or conflicted. The SEA Objectives are outlined in the SEA Draft Environmental Report.

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

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

the Dublin Port Company Masterplan Objectives MA1-MA3 and EH1-EH6, bringing the potential for beneficial impacts.

## Assessment and Selection of Alternatives

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

The consideration of alternatives has included a 'no port expansion' scenario, as the basis for comparison with options that provide for potential future growth in port demand. The 'Dublin Port Expansion' option has been selected, as it offers a number of advantages, and the potential disbenefits are likely to be broadly equivalent to the 'No Dublin Port Expansion' option.

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

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

These various options have been assessed as part of the SEA process in order to inform the decision-making process (details of which are contained in Section 6 of the SEA Draft Environmental Report).

# SEA Draft Environmental Report Assessment

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

8. Biodiversity – Flora and Fauna
9. Flood Risk
10. Water – Surface Water
11. Water – Groundwater
12. Noise and Vibration
13. Air Quality and Climate
14. Cultural Heritage – Archaeology and Architectural
15. Landscape
16. Populations
17. Transport
18. Waste Management

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

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

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

With the implementation of mitigation, minor beneficial effects are expected in the medium to long term for biodiversity, due to boundary planting with native species and the potential for habitat enhancements. Minor beneficial effects are also expected for population, human health and deprivation as a result of improving accessibility of community facilities and facilities to local residents. The increased trade through the growth of the port and encouragement of tourism along with the potential for employment, educational and training opportunities is predicted to result in moderate beneficial effects.

## Strategic Natura Impact Statement (sNIS)

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

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

The Statement also identifies the data that would be required at project level to demonstrate that there will be no

implication for the integrity of the Natura 2000 sites', or for the qualifying features for which they are designated.

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

The approach to mitigation in the sNIS has been to propose an approach that is proportionate to the potential likely significant effects of specific development proposals. Mitigation measures would be identified to ensure how the integrity of the Natura 2000 sites can be maintained, with details on the specific requirements needed to achieve this. Such mitigation measures would most likely be delivered at project development stage, in the event that any of the preferred engineering options are progressed.

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

## Cumulative Effects

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

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

## SEA Mitigation and Monitoring Proposals

Mitigation measures are the initiatives which have been identified in the SEA Draft Environmental Report to prevent or reduce any potential significant impacts on the environment.

Mitigation measures have been identified under the same headings that are found in the assessment sections of the SEA Draft Environmental Report (Sections 8-18). The existing

environmental conditions and the preferred engineering options were all taken into consideration in the identification of suitable mitigation measures which will be implemented as part of the Draft Masterplan.

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

## Conclusion

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

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

However, overall, in the medium to long term, potential effects of the Dublin Port Company Draft Masterplan are largely negligible with minor beneficial effects expected for some aspects.



# 10 Implementation of the Masterplan

## A 30 Year Horizon

The essence of the Masterplan is that it sets out how Dublin Port **might** develop in the future on the basis of an assumed growth path over a long period (30 years). It is not intended to be, and nor can it ever, be a precise statement of what will happen.

However, it does outline core principles and policies that will inform how the Port will operate and grow over a long period. These represent commitments and undertakings as to how Dublin Port Company will seek to develop the Port in harmony with both the natural and built environments, closely linking the Port with the City and people of Dublin.

When Dublin Port Company comes to bring individual projects forward for development, it will do so within the framework of these commitments and undertakings and will be further guided by need and finance.

## Anticipating Capacity Demand

In the first instance, Dublin Port Company will only bring projects forward when there is some reasonable level of certainty about future demand. In particular, the Company will keep market developments under review with customers (both existing and prospective) and will seek to tie private sector operators into complementary investments (in cargo handling equipment for example) or suitable franchise agreements (where private operators have to commit to minimum sum payments to the Port). In this way, Dublin Port Company will seek to avoid speculative investments and will only proceed where the project risk being assumed by the Company is matched by a related private sector operator's risk.

## Financing Development

Dublin Port Company is a robust and financially strong company as shown by the summary below of its financial performance over the past five years.

The engineering options in the Masterplan are advanced with an eye to the Company's ability to finance them. Dublin Port Company envisages the Port developing through a series of "bite-sized" project investments which keep the company within the bounds of reasonable and acceptable levels of financial risk associated with taking on project debt.

(€'000)	2006	2007	2008	2009	2010
Turnover	66,423	70,450	70,597	62,852	66,969
EBITDA	33,305	27,842	33,254	32,313	34,310
Operating Profit	25,592	21,664	26,969	25,647	27,031
Capital Employed	219,775	252,338	262,982	295,611	307,250
ROCE	11.6%	8.6%	10.3%	8.7%	8.8%

## Implementing the Masterplan

Dublin Port Company will work closely with Dublin City Council in the implementation of the proposals outlined in the Masterplan. There is a shared objective to ensure that the Port operates effectively and efficiently to serve the Dublin Region. It is also important that Dublin Port Company and the City Council work effectively together to ensure that any projects that are required are brought forward in time to ensure that capacity can be provided when required. It is also important that Dublin Port Company works with the City Council on the implementation of the programmes and initiatives designed to secure greater integration between the Port and the City.

Moreover, Dublin Port Company will need to and is committed to continue its engagement with the NPWS and other stakeholders charged with environmental protection and the preservation of the natural heritage of Dublin Bay.

In particular, Dublin Port Company will establish a formal structure for engagement with both the City Council and the NPWS on the implementation of the Masterplan, with the intention that this forum shall meet at least annually or more frequently if required. Dublin Port Company will also establish formal structures for engagement on the implementation of the Masterplan with the local community.

Individual projects will require planning and other consents. In some instances this will involve a planning application being made directly to Dublin City Council as the Planning Authority for the area. In the case of projects that are designated as Strategic Infrastructure, the application will be made directly to An Bord Pleanála as required by law. In either case Dublin Port Company will engage directly and extensively with all stakeholders, in particular the local communities adjoining the Port in the context of seeking formal consents and approvals for projects.

# 11 Monitoring and Review of the Masterplan

## Introduction

**The Masterplan provides an overarching long-term planning framework for the future development of the Port. From the Masterplan, Dublin Port Company will create and implement shorter term (rolling five year) strategic plans from which individual projects will be brought forward, planned and developed.**

All development projects will in turn require assessment and consent from the relevant planning authorities (Dublin City Council or An Bord Pleanála) but many of the initiatives outlined in the Masterplan can be developed directly by the Company in consultation with stakeholders without the need for formal permitting consent.

The Masterplan covers a long period of 30 years. Looking back 30 years ago, it is evident that the current state of development of the Port could not have been accurately predicted all those years ago. Likewise, it is more likely than not that the future development of the Port in the period to 2040 will differ from the long-term vision of this Masterplan.

## Monitoring

Monitoring the performance of the Port and the achievement of the proposals outlined in the Masterplan will be a key element in ensuring its effective implementation. Effective monitoring will form a critical tool in adjusting and fine-tuning the Plan to achieve its strategic objectives. The preparation of base line operational data and the effective monitoring of performance against this information will also be critical to the reviews of the plan which will be carried out over its term.

## Data Collection

To monitor the implementation of the Masterplan, data will be collected on a frequent basis across a number of specific areas:

### Data to be collected annually

- » Throughput of cargo under the various category headings
- » Ferry passenger numbers
- » Cruise ship visits
- » Investment in new infrastructure and landside shipping facilities including new technology
- » Bird counts in Dublin Bay
- » Employment figures

### Data to be collected on a five year Basis

- » Quantum of land recovered from non-critical port uses
- » Development of additional Deep Water Berthage
- » Development of Soft Value projects
- » Origin and Destination Survey
- » Modal split between HGV and Train borne goods
- » Development of Pedestrian and Cycle routes
- » Improvements to interface with city
- » Community investment

## Benchmarks

Benchmarks are set out broadly in the Masterplan. It would not be productive to set rigid benchmarks over a 30-year period when economic and social changes cannot be forecast accurately. However, a reasonable set of benchmarks can be set for the assessment of the effective implementation of the Masterplan over the next five years.

These will include

- » Accommodating an expected throughput of 32.7m tonnes per annum on average.
- » Catering for growth in Ro-Ro volumes from 701,000 units in 2010 to 821,000 by 2015.

- » Handling an increase in Lo-Lo from 641,000 TEU to 697,000 TEU (assuming putative average annual growth of 1.7% per annum. However, in the event that the domestic economy improves very significantly over the next five years, it is equally possible that Lo-Lo volumes could increase by as much as 200,000 TEU.
- » Catering for increase in the annual number of cruise ship visits from 85 to 110.
- » Increasing deep water berthage to not less than 11.0m CD along 600 metres of quays.
- » Generating an additional 15 hectares of land for unitised freight within the Port's existing footprint.
- » Improved landscaping at the interface with the City.
- » Improvements in Modal Split between HGV and train movements.
- » Maintaining existing employment numbers in the Port Estate at 4,000.
- » Developing and implementing five specific projects aimed at achieving integration of the Port with the City.

## Strategic Environmental Assessment

Dublin Port Company will monitor the Masterplan in accordance with the monitoring section of the Environmental Report. It will publish five year monitoring reports and take appropriate corrective actions if adverse impacts are identified. The first such review will be published in 2016 to cover the period from 2011 to 2015.

All major projects are likely to be the subject of Environmental Impact Statements that will identify impacts and propose appropriate mitigation measures where warranted.

## Review

Within the Masterplan, therefore, there will be periodic fundamental reviews no later than every 10 years to ensure that the course being followed by the Port does not deviate from what is actually required. Dublin Port Company will take account of changing circumstances (particularly the level of demand for port infrastructure) in determining the actual timing of these reviews. The greater the level of change from the demand levels postulated in this plan, the earlier the review will occur.

Dublin Port Company will also liaise with Dublin City Council as it periodically updates its development plan to ensure that the Port Masterplan remains relevant within the wider context of the development of the City.

In carrying out each such review, Dublin Port Company will consult with external stakeholders to ensure that the Plan continues to represent the best solution for future development of the Port, the City and the Bay.

# Appendix 1 SEA Impact Assessment Summary

Aspect	Characterisation	Types of Impact
<b>Biodiversity- Flora and Fauna</b>		
Sandymount Strand / Tolka Estuary SPA (Site Ref. 0004024) and Dolphins Dublin Docks pNHA (Site Ref. 000201)	Very High	Potential construction impacts include: <ul style="list-style-type: none"> <li>» loss of habitats and / or foraging areas</li> </ul>
North Bull Island SPA (00406)	Very High	<ul style="list-style-type: none"> <li>» potential increased risk of pollution of an estuary and / or the bay through leakage or accidental spillage of fuels or chemicals used;</li> <li>» runoff of loose sediment into a water body, which can impact on habitats and species; and</li> <li>» construction-based noise and vibration may lead to species mortality e.g. through abandonment of nests or difficulty foraging.</li> </ul>
North Dublin Bay cSAC / pNHA (000206)		
South Dublin Bay cSAC / pNHA (000210)		
Grand Canal pNHA (002104)		
Royal Canal pNHA (002103)		
Aquatic Ecology and Fisheries	Medium	Potential operation impacts include, <ul style="list-style-type: none"> <li>» loss of parts of designated sites, including habitat and feeding resource for qualifying species, mainly as a result of the proposed Dublin Gateway;</li> </ul>
Non Designated Flora and Fauna	Medium	<ul style="list-style-type: none"> <li>» Increased activity at the port could lead to noise and / or vibration disturbance of species; and</li> <li>» Capital and maintenance dredging could result in disturbance of sediment / benthic flora and fauna.</li> </ul>
<b>Flood Risk</b>		
Dublin Port Estate	Medium	<p>Construction works may temporarily alter the ground levels during excavation or reclamation periods within the Port Estate, potentially making some areas more susceptible to flooding.</p> <p>Risk that climate change may increase the risk of flooding in the Port Estate, which may apply to construction given the long timescales of this Masterplan.</p>
Clontarf and Sandymount Coastal Shoreline	Medium	Hydrodynamic changes change shoreline erosion patterns and rates.

Mitigation	Short Term Residual	Medium / Long Term Residual
Proposed mitigation to relocate the Dolphins on which the breeding Tern colonies are located is incorporated into the Masterplan.	Negligible	Negligible
Employment of good construction management practises.	Negligible	Negligible
sNIS for the Masterplan which outlines the principles and measures to be addressed at a later stage and in the event of future projects progressing to the development stage.		
Development of project specific sNIS in the event of future individual project development.		
Consideration will be given to the development of an Integrated Environmental Management Plan with relevant stakeholders.	Negligible	Negligible
Where feasible, seek net enhancements on individual projects – native tree and shrub planting, nest boxes etc.	Negligible	Minor Beneficial
Individual projects will be subject to a Flood Risk Assessment (FRA's) at the planning application stage.	Negligible	Negligible
The principles from sustainable urban drainage principles will be implemented as relevant in the future projects.		
During the development of future projects, appropriate consideration will be given to flood protection schemes and Flood Risk Management Plans being developed in the area.	Negligible	Negligible
Hydrodynamic modelling undertaken for the previous Dublin Gateway application showed that the impact that this development and associated dredging had a very small effect on water levels in the Liffey.		

Aspect	Characteri- sation	Types of Impact
<b>Water-Surface Water</b>		
Liffey Lower Estuary (Estuarine Water Body)	Very High	Construction activities have the potential to impact on the surface water environment through:
Tolka Estuary (Estuarine Water Body)	Very High	<ul style="list-style-type: none"> <li>» Disturbance of Sediment (increased suspended solids or mobilization of contaminants);</li> <li>» Accidental release of Hydrocarbons / chemicals / silt into the water body</li> </ul> <p>Growth in operational activities may increase the likelihood of accidental pollution incidents impacting the surface water bodies through;</p> <ul style="list-style-type: none"> <li>» Spills from loading / unloading vessels such as oil products, molasses, bitumen, oil, chemicals</li> <li>» Release of contaminants from site activities to the Dublin Port Company surface water drainage system</li> </ul>
Dublin Bay (Coastal Water)	Very High	
<b>Water- Groundwater</b>		
Dublin Urban Groundwater Body	Medium	<ul style="list-style-type: none"> <li>» Leakage from bulk storage of oils / fuels / chemicals and tank farm operations.</li> <li>» Deterioration of WFD 'Good' status.</li> <li>» Contamination of groundwater body through pollutant leakage or accidental spillage.</li> </ul>
<b>Noise and Vibration</b>		
Residents in the immediate vicinity such as Coastguard Cottages, Pigeon House Road, and Clontarf Road and also sensitive receptors in the near vicinity.	High	Construction activities may increase noise levels in the vicinity of the construction area, and somewhat beyond depending upon the local noise environment and atmospheric conditions.
Residents in the near vicinity of the Port, and other sensitive receptors - Pigeon House Road, Schools in East Wall. Clontarf and Sandymount, Users of Ringsend Park, Irishtown Nature Park, Sean Moore Park	Medium	Operational Nighttime noise is more likely to be a relevant issue than daytime noise. There remains the potential that accommodating larger ships could allow for an increasing duration of RoRo / LoLo activity at night, thus creating a causal effect between deepening berths and noise impact.
Residential Receptors of Ringsend, Sandymount, Clontarf and East Wall - General	Medium	

Mitigation	Short Term Residual	Medium / Long Term Residual
Dublin Port Company will continue to operate within the requirements of the Eastern River Basin District Plan programme of measures and these measures will inform the future development stages of the Masterplan.	Negligible	Negligible
Employment of good construction management practises.	Negligible	Negligible
Water quality monitoring during construction periods.		
Consideration will be given to the development of an Integrated Environmental Management Plan		
Employment of good construction management practises.	Negligible	Negligible
Identification of areas / sites historically contaminated with free phase product .		
Consideration will be given to the development of an Integrated Environmental Management Plan.		
Dublin Port Company will continue to liaise with residents with regard to noise issues.	Negligible	Minor Adverse
Consideration will be given to the development of an Integrated Environmental Management Plan.	Negligible	Negligible
Appropriate assessments of noise emissions and potential for cumulative impacts will be undertaken for individual planning applications.		
Appropriate construction mitigation will be implemented.	Negligible	Negligible



Aspect	Characteri- sation	Types of Impact
<b>Air Quality and Climate</b>		
Residential / Sensitive Receptors in the immediate vicinity (Coastguard Cottages, Pigeon House Road and Clontarf Road)	Medium	Additional air emissions of NO <sub>2</sub> , SO <sub>2</sub> and Particulate Matter could result from increased construction vehicle movements and during operation;
Residential / Sensitive Receptors of Ringsend, Sandymount, Clontarf and East Wall - General	Low	<ul style="list-style-type: none"> <li>» Increased throughput of LoLo may give rise to additional air emissions from container handling and transport plant;</li> <li>» Increased throughput of RoRo may give rise to additional air emissions from vehicles movements.</li> <li>» Increased throughput of Bulk handling activities may give rise to nuisance dust emissions.</li> </ul>
<b>Cultural Heritage - Archaeological</b>		
Undesignated archaeological assets the preservation of which is of National Importance by reason of their historical, architectural, traditional, artistic or archaeological interest.	High	<p>Partial or complete removal of unknown archaeological remains due to dredging within the harbour or other construction activities.</p> <p>Removal of archaeological remains is a permanent impact.</p>
Assets included in the Shipwreck Inventory of Ireland		
Recorded Monuments including Zones of Archaeological Importance	Medium	
Rare, well-preserved, undesignated archaeological assets with identifiable group value, a high degree of vulnerability and high amenity value.		
Averagely well-preserved, undesignated archaeological assets with limited group value, limited vulnerability and low amenity value.	Low	

Mitigation	Short Term Residual	Medium / Long Term Residual
Employment of good construction management practises.	Negligible	Negligible
Appropriate air quality impact assessments will be undertaken for relevant individual planning applications.	Negligible	Negligible
Avoidance of impacts where possible in the detailed design phase of individual projects.	Negligible	Moderate Adverse
Appropriate landscape planting to assist in reducing visual impacts.		
Where impacts cannot be avoided, appropriate mitigation including preservation in situ or by records for archaeological heritage assets will be undertaken.	Negligible	Minor Adverse
	Negligible	Negligible

Aspect	Characteri- sation	Types of Impact
<b>Cultural Heritage - Architectural</b>		
Assets assessed by the Dublin City Council's Inventory of Industrial Heritage to be of National value: Pigeon House Power Station.	High	Short term impacts on the setting of architectural heritage assets resulting from noise and visual intrusion associated with construction activities.
Protected Structures or assets which, while not designated, meet the criteria for designation as Protected Structures.	Medium	Construction may result in the partial or total removal of undesignated architectural heritage assets of Medium or Low importance.
Assets assessed by the Dublin Inventory of Industrial Heritage to be of Regional merit.		Any such physical impacts on architectural heritage assets will be permanent.
Architectural Heritage assets which, whilst not designated, meet some of the criteria for designation as Protected Structures.	Low	
Conservation Areas designated under local development plans.		
<b>Landscape</b>		
Industrial character of the Port.	Low	Landscape character and the visual aspect of the port would be adversely affected by construction compounds, machinery and general construction traffic. Although this is likely to be temporary in nature.
Views from both the north and south site of the port, including Bull Island.	High	Reclamation of land and new buildings could increase the visual envelope of the port and in turn, expand its overall influence on the landscape.

Mitigation	Short Term Residual	Medium / Long Term Residual
Where impacts cannot be avoided on architectural heritage assets, a photographic record of assets in their existing condition may be required.	Minor Adverse	Minor Adverse
In the medium to long term, adverse impacts on the setting of architectural heritage assets may result from the presence and operation of new port facilities. Whilst the setting of architectural heritage assets within the port is currently industrial in character, the Masterplan has the potential to impact on the setting of architectural heritage assets due to new port buildings, or the proximity or prominence of new developments.	Minor Adverse	Minor Adverse
	Minor Adverse	Negligible
Implementation of environmental enhancements / boundary softening proposals as part of the Masterplan.	Minor Adverse	Negligible
Employment of good construction management practises to minimise visual impacts.	Minor Adverse	Moderate Beneficial
Appropriate landscaping + arboriculture schemes will be implemented for future		

Aspect	Characteri- sation	Types of Impact
<b>Population, Human Health &amp; Deprivation</b>		
Levels of deprivation.	Low	Increased traffic in and around the port which could lead to congestion and a rise in air and noise emissions.
Local population.	Low	
Unemployment levels in Dublin.	High	<p>Deterioration in the visual amenity of local residents.</p> <p>Additional traffic and industrial processes may also result in a rise in air and noise emissions.</p> <p>Potential short term benefits due to the potential for local employment opportunities in the construction of port developments.</p> <p>Benefit - new leisure activities such as swimming, sailing and fishing as well as the provision of two new amenity areas within the port estate.</p> <p>Benefit of increased trade for local businesses and industry which may encourage start up and enhancement of businesses having further regional effects through strengthening the Dublin City economy.</p> <p>Increase in tourism through cruise ships.</p>
<b>Transport</b>		
Traffic levels on the surrounding road network within Dublin.	Medium	Rise in traffic on the local road network leading to congestion and delays for local people and public transport during construction.
Levels of usage of more sustainable transport modes.	Very High	Congestion issues with regards to transportation.
<b>Waste Management</b>		
Waste and recycling levels within the port estate.	Medium	Increase in port facilities and activity may lead to increasing volumes of waste being sent to landfill.

Mitigation	Short Term Residual	Medium / Long Term Residual
Employment of good construction management practises to minimise impacts on local populations / communities.	Minor Adverse	Minor Positive
	Minor Adverse	
	Minor Beneficial	Moderate Beneficial
Future developments will give appropriate consideration to potential for traffic growth and implement mitigation as required and agreed with DCC.	Minor Adverse	Negligible
Creation of more sustainable transport options for movement of freight to and from the port.	Minor Adverse	Moderate Beneficial
Improved pedestrian and cycle access and facilities.		
Consideration will be given to the appointment of a Travel Plan Co-ordinator and Steering Group.		
Review current waste management strategy to identify how future waste management needs will be accommodated including consideration given for the potential to encounter contaminated soil arisings and their management.	Negligible	Negligible
Development of construction waste management plans for future projects.		



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