



Dublin Port Masterplan

Internal Report #3

Analysis of Options for Cruise Facilities

27th September 2011

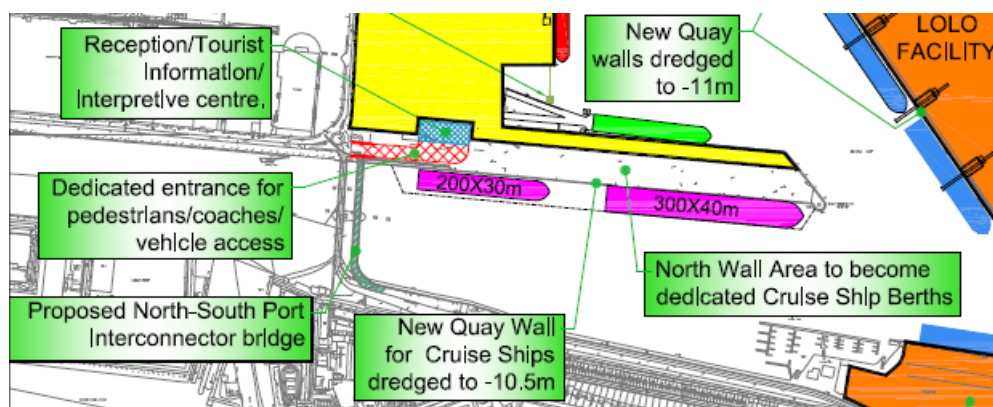
Introduction

Dublin Port's cruise business generates in the region of €0.7m direct revenue for Dublin Port Company. However, it also generates substantial benefit for the local economy from the spend of the 130,000 or so passengers and crew who currently alight from cruise vessels that arrive into Dublin Port each year. The volume of the business has grown substantially to the point where there is now in the order of 85 cruise ships calling to Dublin each year.

Finding an alternative location for the Port's cruise business is central to the development of the Masterplan for a number of reasons:

- The location into which passengers are disembarking is industrial in nature and is unattractive. It presents a poor first impression of Dublin City.
- The cruise industry has grown considerably in recent years. For example, there were 27 cruise calls in 1994. This year there will be 84. The nature of current facilities is likely to limit future growth prospects.
- Transport links for passengers are limited to tour coaches (provided on behalf of the cruise line) or taxis.
- The development of the cruise industry has taken on a wider strategic relevance for the City following the publication by Dublin City Council of its Local Action Plan entitled Cruise Traffic and Urban Regeneration Plan (CTUR) in June 2011
- Cruise ships currently occupy berths which are better suited to the handling of cargo.
- The relocation of the Cruise facilities provides an opportunity for closer integration between the Port and the City – the presence of cruise ships so close to the City is a visible reminder of the interdependence of the City and the Port.

Section 6 of the Masterplan Issues Paper presented an options drawing (321010900/MP1/2) showing how the port might be developed over the next 30 years. This drawing showed dedicated cruise ship berths at North Wall Quay as shown below:



This possibility was described in the Issues Paper in the following terms:

There are benefits of berthing the Cruise Liners closer to the city for both liner passengers and for the city as a whole as the sight of cruise liners so close to the city will provide a dramatic back drop. This work will involve:

- *New Quay walls for Cruise Ships dredged to -10.5m CD.*
- *Reception, tourist information and interpretive centre.*
- *Dedicated entrance for pedestrians, coaches and vehicle access.*
- *Traffic management issues to be developed and agreed with Dublin City Council and the National Roads Authority.*

Other Options

The idea presented in the Issues Paper of locating cruise ships at the North Quay Extension is only one possible option.

A second option was suggested by way of a response to the Issues Paper in the following terms:

A more attractive location is the Lo-Lo facility on the southern side of the Liffey, currently occupied by Marine Terminals Ltd. This would provide the appropriate space to improve landscaping and not leave large numbers of visitors exposed to the more industrial aspect of the Port on the northern plot. Removing the Lo-Lo facility on the southern side would also address some of the environmental noise issues currently affecting residents, and reduce the need for HGVs to cross the East Link.

As the Irish Glass Bottlers site is beside the Lo-Lo facility, placing the cruise terminal on the southern side would also provide the option of disposing or developing some of the flanking land for residential, commercial or tourist facilities, in tandem with the long term proposals of the DDDA to develop key areas of the Poolbeg peninsula.

There would also be space to accommodate a nautical museum on this site to celebrate the ancient history of port activities in Dublin if the Lo-Lo facility was moved.

Finally, there is a third option originally suggested in the DDDA's Draft Poolbeg Planning Scheme. This option was shown as follows,



and was described in the following terms:

Pigeon House Park will become the heart of an urban area with three strong programmatic clusters:

- 1. The refurbished Pigeon House Dock Power Station with cultural and/or media uses.*
- 2. The mixed use cluster with retail, residential and office uses at the fort, supported by restaurants and leisure activities nearby.*
- 3. The Dublin Cruise Terminal area mixed with residential and commercial uses.*

In all, therefore, there are three options which should be considered in the context of finalising the chosen location for cruise facilities in our Masterplan, 2011 to 2040.

These options are as follows:

- Option 1: North Quay Extension
- Option 2: South Bank Quay
- Option 3: Poolbeg Peninsula

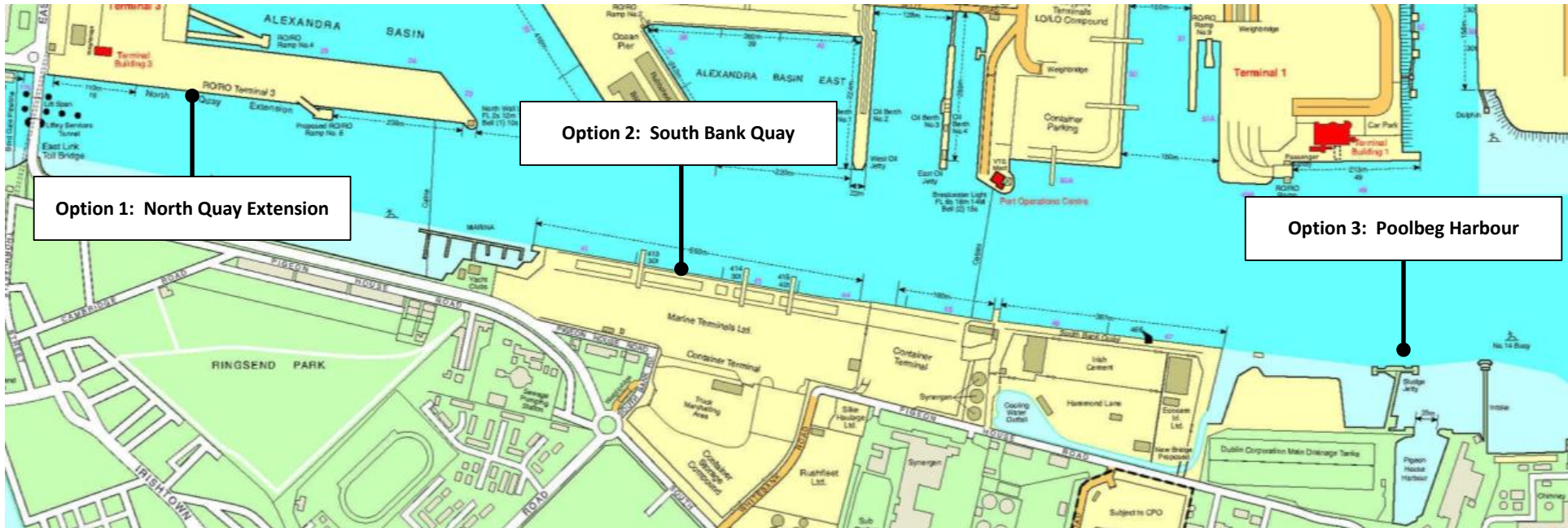
The location of each of these three options is shown overleaf.

The identification of the best solution for providing cruise facilities in Dublin Port needs to be made within the framework of analyzing requirements for a number of the Port's trades as follows:

- Ro-Ro freight, tourism and passenger services
- Lo-Lo container trades
- Bulk solid trades (such as animal feed, grains, cereals, peat moss, pet coke, clinker and ores)
- Bulk liquid trades (primarily petroleum products such as petrol, diesel and aviation fuel)
- Trade cars
- Cruise tourism

In many cases, the requirements of more than one of the above trades can be met at a given location requiring us to prioritise and select the needs of one trade over another.

Cruise Berth Options



Cruise ship requirements

Before looking at each of the three options in turn, we have analysed below the operational requirements for the cruise ships calling to Dublin Port. This analysis is based on data for 2010 and 2011 (the latter based on bookings and berthing plans as of 3rd February 2011).

How many berths do we need for cruise ships?

We have 84 cruise ships booked for 2011. 47 of these are scheduled to call on days when they will be the only cruise ship in port.

# in day	# days	
	2010	2011
1	62	47
2	11	14
3	1	3
Totals	87	84

On 17 other days there will be more than one cruise ship to be accommodated. However, on only three of these 17 days will there be three ships.

Based on this analysis, it seems that we should plan to be able to accommodate not less than two cruise ships on any given day.

What size cruise ships do we need to be able to handle?

The median draught of our cruise ships is 7.5m and the maximum draught is 8.8m.

Draught		# ships
<i>from</i>	<i>to</i>	
0.0m	6.0m	26
6.0m	6.5m	8
6.5m	7.0m	1
7.0m	7.5m	5
7.5m	8.0m	22
8.0m	8.5m	13
8.5m	9.0m	9
		84

Of the 84 ships expected in 2011, 69 will have lengths of less than 176m and 15 will have lengths in excess of 270m.

LOA		# ships
from	to	
0m	100m	4
100m	150m	16
150m	200m	27
200m	250m	16
250m	300m	21
		84

This would suggest we need a primary cruise ship berth 300m long with not less than 10.0m alongside.

On the 17 days during 2011 when we expect to have more than one cruise ship in the port, the next biggest ship (in terms of draught requirement on each of these days) is as follows:

#	Date	# ships	Day	Vessel Name	Draft	LOA
1	17/08/2011	2	Wed	Clipper Odyssey	4.3	103
2	31/08/2011	2	Wed	Vistamar	4.6	117
3	29/07/2011	2	Fri	Le Diamant	5.0	124
4	28/06/2011	2	Tue	Silver Cloud	5.4	156
5	04/09/2011	3	Sun	Silver Cloud	5.4	156
6	16/07/2011	2	Sat	Adonia	6.0	181
7	15/09/2011	2	Thur	Delphin	6.2	156
8	12/09/2011	2	Mon	Funchal	6.8	153
9	12/08/2011	2	Fri	Aidablu	7.2	253
10	05/09/2011	2	Mon	Boudicca	7.5	207
11	13/06/2011	2	Mon	Black Watch	7.6	205
12	13/07/2011	2	Wed	Marina	7.6	238
13	25/07/2011	2	Mon	Marina	7.6	238
14	28/08/2011	3	Sun	Eurodam	8.0	285
15	23/07/2011	3	Sat	Dawn Princess	8.1	261
16	16/09/2011	2	Fri	Mein Schiff	8.5	264
17	07/08/2011	2	Sun	Saga Ruby	8.6	191

If we are to develop facilities which can facilitate a significant increase in the level of cruise business, we should ensure that we can handle a second large cruise ship simultaneously. This would suggest we need we need a second berth 300m long with not less than 10.0m alongside.

Overall, therefore, our core requirement is to provide berths 10.5m deep and not less than 600m in length to enable us to handle two large cruise ships with lengths approaching 300m each.

Where do we currently handle cruise ships?

The berths currently planned for 2011 cruise ships are summarised below:

Berth #	Location	Standard	Sounded	# ships
8	John Rogersons Quay	6.5	5.2	13
9	John Rogersons Quay	6.5	5.8	1
31	Alex Quay West	9.8	8.3	1
32	Ocean Pier West	9.5	9.1	1
33	Ocean Pier West	9.5	9.4	52
34	Ocean Pier West	9.5	9.0	1
35	Ocean Pier North	9.5	9.3	1
37	Ocean Pier East	10.3	9.6	11
39	Alex Quay East	10.3	9.9	2
46	South Bank Quay	11.0	8.5	1
				84

With the exception of berths 8, 9 and 35, all other berths currently used are required first and foremost for cargo handling.

For the future, if we build facilities to accommodate up to two large cruise ships, we will still have berths 8, 9 and 35 available for small cruise ships.

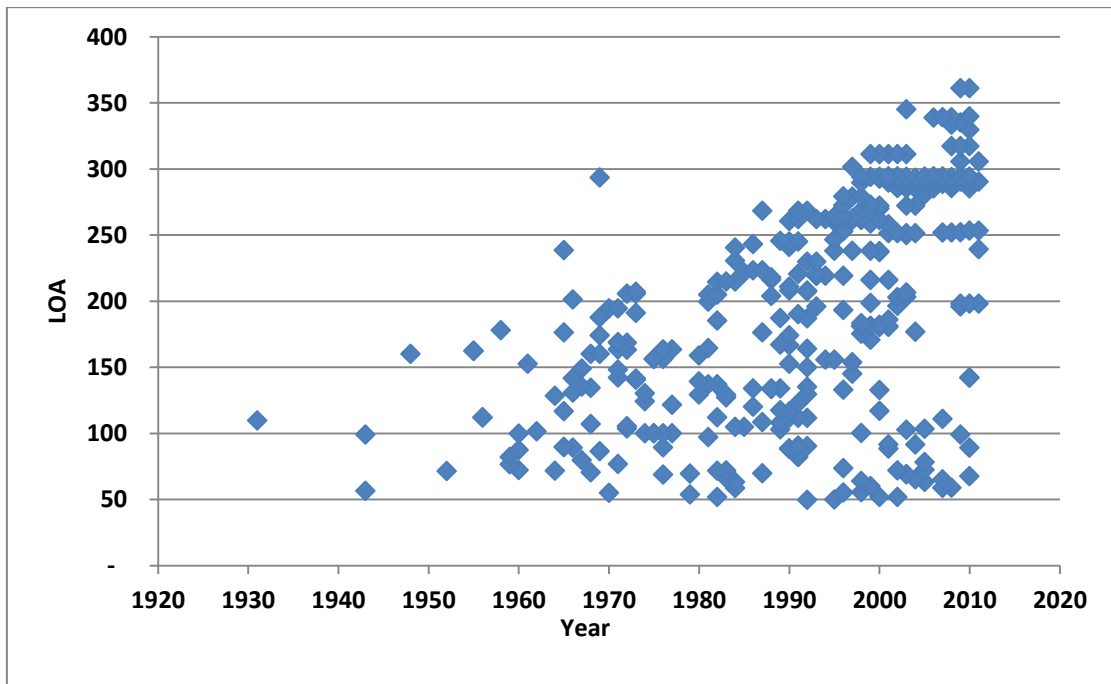
What is the maximum size cruise ship that could be handled in Dublin?

The largest cruise ships handled in Dublin Port currently are in the region of 300m.

An analysis of 366 cruise ships in operation worldwide shows that 94% of all cruise ships are less than 300m in length and could, therefore, be accommodated in Dublin Port based on current operational norms.

Length	# ships	%
100m	66	18%
150m	63	17%
200m	63	17%
250m	48	13%
300m	105	29%
350m	19	5%
400m	2	1%
	366	100%

However, there is a trend now for larger cruise ships to be built as is evident in the chart below which plots length of ships against year of construction.



Whereas it is likely that there will not be significant demand for Dublin Port to handle cruise ships with lengths in the region of 330m or so, it would be desirable if the Port and City could market Dublin as a destination capable of handling the larger ships which, for example, regularly call to ports such as Southampton and Cork.

Dublin City Council Local Action Plan

DCC developed its Local Action Plan with Dublin Port Company and others within the context of a European project, CTUR (Cruise Tourism Urban Regeneration). This project was funded under URBACT II, a European Programme, the aim of which is to foster the exchange of experience among European cities and to capitalise on and disseminate knowledge on all issues relating to sustainable urban development.

The output of the CTUR project was the compilation of integrated strategies (Local Action Plans) for cruise tourism opportunities connected to the sustainable development and regeneration of deprived or under-utilised areas on the waterfront, and to allow for the preservation of waterfront heritage buildings in 11 European cities:

- Dublin (Ireland)
- Helsinki (Finland)
- Rostock (Germany)
- Trieste (Italy)
- Varna (Bulgaria)
- Rhodes (Greece)
- Naples (Italy - Lead partner)
- Alicante (Spain)
- Valencia (Spain)
- Leixões (Portugal)
- Matosinhos (Portugal)

The overall goal of the Dublin Local Action Plan is to:

...develop a strategy for the development of cruise traffic and the urban regeneration of the port area. This would create an urban quarter that facilitates sustainable and consolidated growth in Dublin City and articulates a new relationship between the city and the port through the development of the cruise tourism sector.

A central idea in the LAP is that:

the environment into which cruise passengers arrive is vital to shaping both their initial and lasting impressions of the city. As such, a port which demonstrates a commitment to quality and accessibility starts with a huge advantage in this competitive market. When visitors arrive and leave Dublin in style and comfort, this creates a positive first and lasting impression of the city, in addition to their enjoyment of a strong tourist product on offer in Dublin.

Against this background, the LAP identified three objectives and six action points as follows:

Objective 1: To transform, regenerate and adapt the physical and environmental components of the port.

- **Action 1.1:** To provide a cruise terminal and improve connectivity between the port and the city.
- **Action 1.2:** Promote a sense of public place within the port area.

Objective 2: To maximise cruise traffic and port heritage as a means to achieving social and economic regeneration

- **Action 2.1:** To promote the provision of a visitor centre in the docklands area
- **Action 2.2:** To promote social infrastructure and address the effects of community services in the city

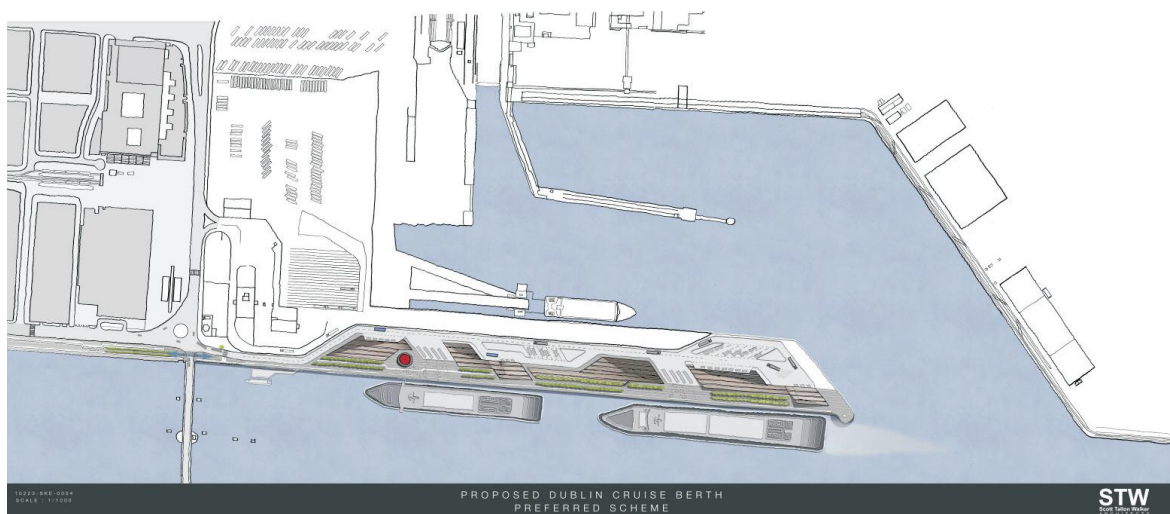
Objective 3: To plan and manage the cruise development within a global port city project

- **Action 3.1:** To establish an organisation / agency to promote and develop the cruise traffic industry in Dublin. This new body would meet in a formal, obligatory forum.
- **Action 3.2:** To develop clear marketing strategies and quality standards for the cruise traffic industry in Dublin.

The identification of how cruise facilities might be provided in Dublin Port is central both to our Masterplan and to the realization of the vision of DCC's LAP.

Option 1 – North Quay Extension

The option of developing cruise facilities at North Quay Extension is at the heart of DCC's Local Action Plan which indicates a development as shown below:



From DPC's viewpoint, this option would require the relocation of existing Ro-Ro freight (and passenger) activities from Ramp No. 6 to another location and DPC would lose part of the existing Terminal No. 3. Within the context of a Masterplan which provides substantial additional Ro-Ro capacity elsewhere in the Port (including retention of Ro-Ro operations on North Quay Extension using Ramp No. 3), the loss of some of the Port's existing Ro-Ro capacity in favour of the development of the new cruise facilities could be accommodated without compromising the Port's overall capacity for Ro-Ro freight.

The existing berth is in excess of 600m in useful length but is broken into two sections at present by No.6 Ro-Ro. The designed depth alongside is about 6.5m and the quay wall was constructed using large concrete and granite blocks. Crossing the river, in a north/south direction, are four submerged and buried HT (220 kV) ESB cables which are brought up onto the North Wall Extension close to the eastern end. They then extend westwards parallel to the quay before turning northwards close to the western end of berth 18.

The type of construction used in the quay wall and the presence of these cables will greatly influence the costs of deepening the berths to accommodate large cruise ships.

In addition to the above civil works considerations, there is also a possible operational issue due to the narrowness of the river in the vicinity of North Wall Extension. The berthing of ships might have to be sequenced in order that the most westerly vessel would have to berth first and leave last as passing of a large vessel to the east might be constrained because of the reducing depth of water to the south.

In order to deepen the berth to the required depth, a new sheet-pile wall would need to be built outside the existing structure. A complicating factor is the presence of the HT ESB cables as these would have to be moved northwards to accommodate the anchor wall and tie rods.

Preliminary estimates for the construction of a new wall over about 600m put the cost in the region of about €30m. This would cover the construction of the new wall, the associated ground/pavement works, fendering, bollards and the dredging to 10.5m. This also includes for the moving of the ESB cables, estimated to cost €2m.

Option 2 – South Bank Quay

The possible site for cruise facilities on South Bank Quay comprises Berths 41 to 45. The characteristics of these berths are as follows:

Berth	Standard depth	Length
41	7.4m	550m long
42	11.0m	
43	11.0m	
44	8.0m	
45	8.7m	160m long

These berths currently form part of the 14.1 hectare container terminal area operated by MTL. Any decision to utilize these berths for cruise ships would, therefore, require the ending of container handling operations at this site.

Berths 42 and 43 would provide a quay of sufficient length to accommodate a 300m vessel. However, berths 41, 44 and 45 would need to be deepened. This would require constructing between 400m and 450m of new sheet-pile walls. In addition to this, works would be required to remove the remains of the Ro-Ro ramp at berth 44. Remedial works on large areas of pavement would also be required.

Overall, the estimated cost of all of these works would be in the region of €30m. There is no allowance in this estimate for the provision of any form of terminal facility.

On top of the cost of these civil works, DPC would incur substantial compensation / relocation costs in respect of ceasing / moving the existing container operations to another location.

Option 3 – Poolbeg Peninsula

The suggested cruise berth in the vicinity of the Poolbeg Peninsula is the east of DPC’s Berth 47 and, if built as envisaged in the original proposed DDDA scheme, would be in the region of 300m in length. Based on the analysis of requirements above, such a berth would be able to accommodate only one cruise ship at a time and, unless the scheme was expanded (to include, for example, the cargo berths 46 and 47), would not be sufficient in itself to meet the cruise industry’s requirements in Dublin.

The DDDA’s suggestion for the development at Berth 47a was made within the wider context of the inclusion of this area in the Authority’s Zone 14¹. We are elsewhere arguing in the Masterplan that

¹ To seek the social, economic and physical development or rejuvenation of an area with mixed use of which residential and Zone 6 (creation and protection of enterprise and facilitate opportunities for employment creation) would be the predominant uses.

the existing zonings of lands adjacent to Berths 46, 47 and 47a are inappropriate and need to be amended to facilitate the future development of the port.

Specifically, we have identified Berth 47a to provide capacity for bulk solid materials such as cement related commodities and peat moss.

For its part, DCC discussed the Poolbeg Peninsula location for cruise facilities and dismissed it in the following terms:

Poolbeg Peninsula, located on the south side of the River Liffey and approximately opposite Alexandra Basin, has been suggested as a possible location for a cruise terminal in the Draft Poolbeg Planning Scheme (Section 25 Planning Scheme). Poolbeg forms part of the Dublin Port hinterland, in the eastern docklands area and is home to many of Dublin's major power, sewage, storage and port facilities, in addition to a number of amenities. It has active deep water berthing and dockage facilities on the northern edge. However, while there are some important open space and natural amenities on the Poolbeg Peninsula, land uses on the peninsula are currently dominated by utility uses and heavy industry, a number of which are Seveso II sites. It is considered that in the absence of a statutory plan for this area being implemented, the provision of a terminal for cruise liners at this location is unlikely to materialize in the short to medium term.

Conclusions

- Three potential locations for the provision of cruise facilities have been identified and analysed.
- Based on this analysis, DPC concurs with the option identified in DCC's LAP that the optimum location is on North Quay Extension. A new facility at this location could simultaneously accommodate two large (300m) cruise ships. In addition, other smaller cruise ships could continue to be accommodated on Berths 8 and 9 on Sir John Rogerson's Quay.
- Beyond this, there will always remain the possibility of accommodating small cruise ships in the vicinity of working areas such as on Berth 35 on Ocean Pier.
- The provision of new cruise ship facilities in Dublin Port will be expensive. The estimated minimum cost to provide berthage is in the region of €30m. Beyond this, there is possible additional cost of terminal facilities are to be provided.
- Given the comparatively small financial income from cruise ships paid directly to DPC and the need to demonstrate a reasonable return on capital employed, the development of the proposed new facilities at North Quay Extension can only be part-funded by DPC. Additional external funding would be required.
- The inclusion of the North Quay Extension option in the Masterplan would partly meet the Objective 1 of DCC's LAP to transform, regenerate and adapt the physical and environmental components of the port.

- The North Quay Extension could potentially facilitate the provision of high quality and lucrative (for the city) cruise turnaround operations. This potential is emphasised by the direct connection between North Quay Extension and Dublin Airport through the Dublin Port Tunnel and the availability of adjacent hotel accommodation and transport links, including the Luas which takes passengers directly into the City Centre.