

Chapter 8 Grouped Options

This chapter explores the consequences of four alternative departures from trend, which involve prioritising the following sets of public and private goods:

- (1) Achieving more sustainable settlement and travel patterns
- (2) Increasing the comparative advantage Cork Harbour confers on the sub-region, in economic and employment terms
- (3) Protecting and using more fully the heritage and natural resources of the Harbour, including recreational ones
- (4) Achieving greater security in relation to climate change

Obviously, we should aim for all four, and to a considerable extent, we are doing so already, as there are public policies and economic activity already in place in respect of each of them.

From the point of view of ensuring that the amenities of the Harbour are well used enough to maintain a balance between development pressures and its natural environment, (3) is the most significant, and is discussed at somewhat greater length. Looking further at each one also highlights:

- (a) types of change which are particularly appropriate to them individually, in the specific conditions which apply in Cork Harbour, and
- (b) where a choice between the changes prompted by different sets of priorities is necessary, as they lead to inconsistent actions in relation to the same areas

(1) More sustainable settlement and travel patterns

This aim reflects a well established policy agenda at both national and local level. At national level, the 1999 Residential Density Guidelines sought higher densities, particularly in town and city centres and on public transport corridors, and these aims were incorporated in the 2009 Guidelines on *Sustainable Residential Development in Urban Areas. Smarter Travel – A Sustainable Transport Future (2009)* aimed to reduce distance travelled by private car, by encouraging people to live closer to their work, through pricing and fiscal measures, and by making the alternatives to car use better and more accessible. At local level, from the 1970s onwards, the LUTS and CASP studies included policies to increase population and improve public transport on the rail corridors to Midleton and Cobh, and the Docklands Strategy has aimed at high density urban development adjoining the city centre.

The economic relevance of the Harbour to these strategies is:

- a location beside water is a marketing advantage, in selling high density development to prospective users,
- concentration of transport corridors along shorelines has resulted in existing or disused rail lines there, which can be restored, upgraded, and provided with extra stations, or converted to cycle and pedestrian links, at much lower cost than a similar facility constructed from scratch.

Relevant Options: Options which would promote these objectives and make use of the market advantages of views over the water and location on a rail line have already been outlined earlier:

- a rail station serving a **twin village at Marino Point-Belvelly** (see Ch. 4 (D) (i)-(iii))
- relocation of the proposed **Dunkettle Park and Ride station so that it could also serve dockland type redevelopment at the E. end of the Tivoli Industrial Estate** (see Ch. 4. (A) (viii) and (B) (iv)).
- **More employment intensive use of Rushbrooke Dockyard** (see Ch.4 (E) (vii))
- **Promotion of owner occupation of apartments in waterfront areas** (see Ch.7(B)).

The City Docklands project is obviously also highly relevant to these objectives, because of much of it is within walking distance of the principal concentration of employment and services in the Cork area, and of most of Cork's public transport services. However, unlike the above, it is an adopted policy rather than an option. The purpose of this chapter is to consider the compatibility of possible policies which are not at present adopted policy, or are subject to some uncertainty as a result of unfavourable An Bord Pleanála decisions. Docklands does not fall into either category, so it is not included consideration of options (eg in Table 8.2 below).

(2) Cork Harbour's comparative advantage

Cork Harbour is one of the largest in the world, and has extensive deepwater frontage. There have been port and industrial development policies in place - particularly from the early 1970s onwards - to exploit these advantages, and these have borne fruit physically in the development of major Harbour side industrial areas and Ringaskiddy Port, and sectorally in the State's primary complexes of pharma and energy industries. More recently, there has been investment in marine educational and research facilities, which may in time support a marine renewable energy cluster.

From the marketing point of view, Harbour-specific marketing attractions might be summarised as follows:

(a) Deepwater berthage: Over the last few decades, growth in Ringaskiddy Port has been offset by shrinkage of port related industries at Marino Point, Haulbowline, and the City Docks, reflecting the loss of shipbuilding and other heavy industries in developed economies. However, as noted in Chapter 4, there may be opportunities for fabrication and/or servicing of marine energy devices which would require facilities similar to those vacated by such industries.

(b) Sectoral Clustering: deepwater berthage provided much of the initial impetus for development on the Harbour, but this has been overlaid by secondary sources of comparative advantage, such specialist skills, services and infrastructure, as well as the availability of suitably placed, industrially zoned land. The sectoral clusters specifically associated with Cork Harbour are the pharma and energy sectors.

The energy industries at Whitegate and Aghada use common hard infrastructure (transmission lines, pipelines, jetty) which is location specific, and which imply that that cluster needs to remain physically focused there. Exhaustion of the offshore gas field creates new opportunities to pipe captured carbon back into the undersea cavities formerly filled by natural gas.

Attraction of pharma industries (and further investment in established ones) is less dependent on a Harbour side location or specific hard infrastructure, though the availability of water in volume is sometimes a factor. Physical clustering does however have advantages for such industries. It reduces the level of contact with other land uses with potentially conflicting requirements, and the tendency to use large, well landscaped sites creates a more attractive environment if the landscaping connects up with that in adjoining plants, rather than stopping at the property boundary. Being close to the Harbour is a further environmental advantage, likely to enhance the image of the firm, and to be valued by them. Within such areas, redevelopment of sites which have already been in a related use is less contentious and less at risk of appeals.

Such **'soft' advantages** from a Harbour side location are in an intermediate position between functional advantages based on some form of physical connection or capacity to transfer, and a neutral position where there is no special advantage to locating a use there, relative to inland locations. Such soft advantages should be given some weight, both in this instance, and also in relation to (c) below.

(c) Waterside Amenity and Image: From the late 1970s onwards, there have been many successful efforts by local authorities to use the amenity attractions of a waterside location to attract investment to redundant dockland or waterfront areas, typically for a mix of residential, office and leisure uses. This is broadly the formula underlying the City Docklands Strategy.

There has also been rapid growth in suburban business parks, many of them selling themselves partly on the basis of extensive, high quality landscaping. They are usually not on a river or harbour, but typically incorporating lakes or other water features as part of the landscape design. As for pharma industries, proximity to the Harbour is a potential selling point.

(d) Position on a transport corridor: As already noted, there is a concentration of transport facilities along Harbour shorelines. For marketing purposes, the proximity and accessibility of main road corridors is the most important consideration, but public transport and other alternatives to car access are also potential selling points for employment intensive sites.

(e) Small scale marine related employment: There are a variety of small businesses in sectors like marine engineering and mariculture in easily missed locations around the shores of the Harbour, often using slips into water with limited depth except at high tide. This helps maintain a pool of small marine related businesses and skills, and occasionally represents the incubation stage for businesses which become competitive in much wider markets.

Relevant Options: The options and possibilities discussed in previous chapters, and seen as likely to promote the above advantages are:

- The attractiveness of port facilities to shipping companies is likely to be affected to some extent by their location within Cork Harbour. **A container port at Ringaskiddy**, relatively close to the Harbour mouth would reduce the time spent accessing berths by shipping companies, and may allow access by larger vessels. This in turn may influence their willingness to provide services to Cork, or

their frequency, as seaward side access conditions affect them more directly than landward side ones. Around 2/3rds of lo-lo movements go through Dublin at present, so increased competitive advantage may have a broader regional balance benefit.

- The retention of existing **shipyard type facilities at Rushbrooke Dockyard** has already facilitated the development of some prototype marine energy devices. In its absence, specialised facilities would have probably have to be specially constructed, and this could make Cork an uncompetitive location for this activity. The Dockyard also has obvious potential for service and repair of such devices, if and when they are deployed in substantial numbers.
- Marino Point, Tivoli Industrial Estate and the Mitsui site on Little Island all have some potential for **marine energy related fabrication, and also for port or industrial functions involving bulk goods transported by ship and/or rail**. There is no immediate likelihood of any of these sites becoming unavailable, but it is also unlikely that all 3 can be held for such purposes on a contingency basis in the medium to longer term. If land adjacent to deep water is regarded as a generic source of comparative advantage which should be retained, this would imply a policy of not committing them to incompatible uses unnecessarily, if there is a prospect of a use which would have a functional use for deepwater access and of retaining at least one even in the absence of obvious prospective sources of demand.
- **Retention of the block zoned I-03 in the 2003 and 2005 Plans for stand alone industry**, on the basis that such a use would derive more benefit from its position beside the Harbour and facing Fota than a conventional industrial estate
- **Restoration of the protective industrial zoning of the Plateau E. of Whitegate**, which subject to the necessary assessments could include provision for wind turbines within individual large sites, as perhaps the most suitable area on the Harbour for such an arrangement. The area is also close the various energy networks focused on Whitegate,
- If in the longer term it was considered **unnecessary to retain Tivoli Industrial Estate for port related or industrial uses, it could have considerable comparative advantage as a business park location**. If it was no longer industrial in character, it would have a long water frontage with a pleasant south facing view across the river to Blackrock and the Marina, creating an environment which was perhaps exceptional by business park standards and would help draw businesses to Cork. It would also benefit from its position on the principal transport corridors on the northern side of the Harbour, providing suitable road and public transport access could be created at the Dunkettle end, along the lines suggested in Chapter 4, or otherwise. In so far as this is possible, it would be in a proven location, on the inner side of one of the 2 leading existing business parks in the Cork area (Eastgate). Eastgate – admittedly operating under favourable conditions – succeeded in

maintaining a flow of space built on a speculative basis and available for immediate occupation from the late 1990s onwards.

This use of Tivoli assumes that there will be continuing business park development in Cork, in parallel with the City Docklands, and to some extent in competition with it, but also promoting it because of its proximity. Employment growth in the Harbour area as a whole could benefit from having a wider range of business premises available, with more of it available at lower cost, and able to respond fairly rapidly to changing market conditions.

(3) Protection and fuller use of Natural Resources, Heritage

The main forms of public policy protecting the natural resources in the Harbour area are designation of areas as SPAs, SACs and NHAs, protection of scenic amenity through Scenic Route and Scenic Landscape designations in successive County Development Plans, and protection under the Quality of Shellfish Waters Regulations.

Fuller use of marine leisure potential has been urged at national level through the publications of the Marine Institute. At local level, the County Council has produced *Marine Leisure Infrastructure Studies* for West Cork (2008) and South Cork (2010). The latter deals with Cork Harbour in the aggregate, as one of a number of sections of coastline between Youghal and Timoleague, but is supported by the more detailed *Assessment of Coastal Recreational Activity and Capacity for Increased Boating in Cork Harbour*, produced by the CMRC under the auspices of COREPOINT. Further work is also underway on marina provision in the Harbour in association with IMCORE.

Table 8.1 lists the main sources of demand for amenities, tourism and recreational facilities of Cork Harbour across the top of the table, and the various options for creating or expanding such facilities referred to in previous chapters, on the vertical axis. The 'lead markets' identified in the cells of the table are the markets which are likely to be most effective in promoting provision of the facility in question. Significant secondary markets are also identified, making the point that in many cases there may be overlapping groups of users, providing in depth support for the facility.

Table 8.1 Users of New or Expanded Recreational and Tourism Facilities

New/expanded activity or facility	Referred to in Ch./section (as well as this one):	Recreational, Transport Users		Tourists (by main method of transport used)				Niche activity tourists (golf, angling, etc)
		Local	Day Trip	Car	Public transport etc	Cruise liner	Visiting yachts	
Bird Watching Centre	4(D)(vii) 6(v)	Lead market (educational)	Secondary market	Secondary market				Secondary market (bird watchers)
Marinas	5, 5(i)	Lead Market					Secondary market	Secondary market
Coastal Fortifications	5, 5(A)(v)-(vii), 5 (C)(i)		Secondary market	Secondary market	Secondary market	Lead Market		
Harbour Transport	4(B)(iii), 4(E)(vi), 5(A)(i)	Lead market	Secondary market		Secondary market	Secondary market		
Gt. Island – E. Cork car ferry	5(A)(i), (x)	Secondary market		Lead market				
W. Harbour cycle/walking route	4(B)(iii), 5(A)(iii), 5(B)(ii)	Lead market			Secondary market			
N. Harbour walking route	6(v)	Lead market			Secondary market			Secondary market
E. Harbour cycle route	5(A)(viii) -ix)	Lead market						

The sources of demand shown in Table 8.1 have the potential to grow, with cruise liners providing the most obvious and visible growth in recent years. A common need for all these groups is that the Harbour continues to provide a pleasant and attractive context within which these various activities can take place, and that this is not lost, for instance through overdevelopment.

Focal Options:

Most of the options outlined in Table 8.1 are either 'focal' ones, which would help build up critical mass in the main tourism/recreational centres on the Harbour, or 'connective' ones, improving access to these centres, and/or to the main tourism entry point on the Harbour (Ringaskiddy Ferryport), and the most populated urban areas.

As indicated at the beginning of chapter 5, the main focal options are seen as ways of increasing critical mass and the diversity of attractions in centres which already have some well developed facilities, such as Cobh, and to a lesser extent Crosshaven. They involve promoting marina provision in Cobh (and possibly also Rushbrooke Dockyard), and using coastal fortification heritage as an additional attraction for both.

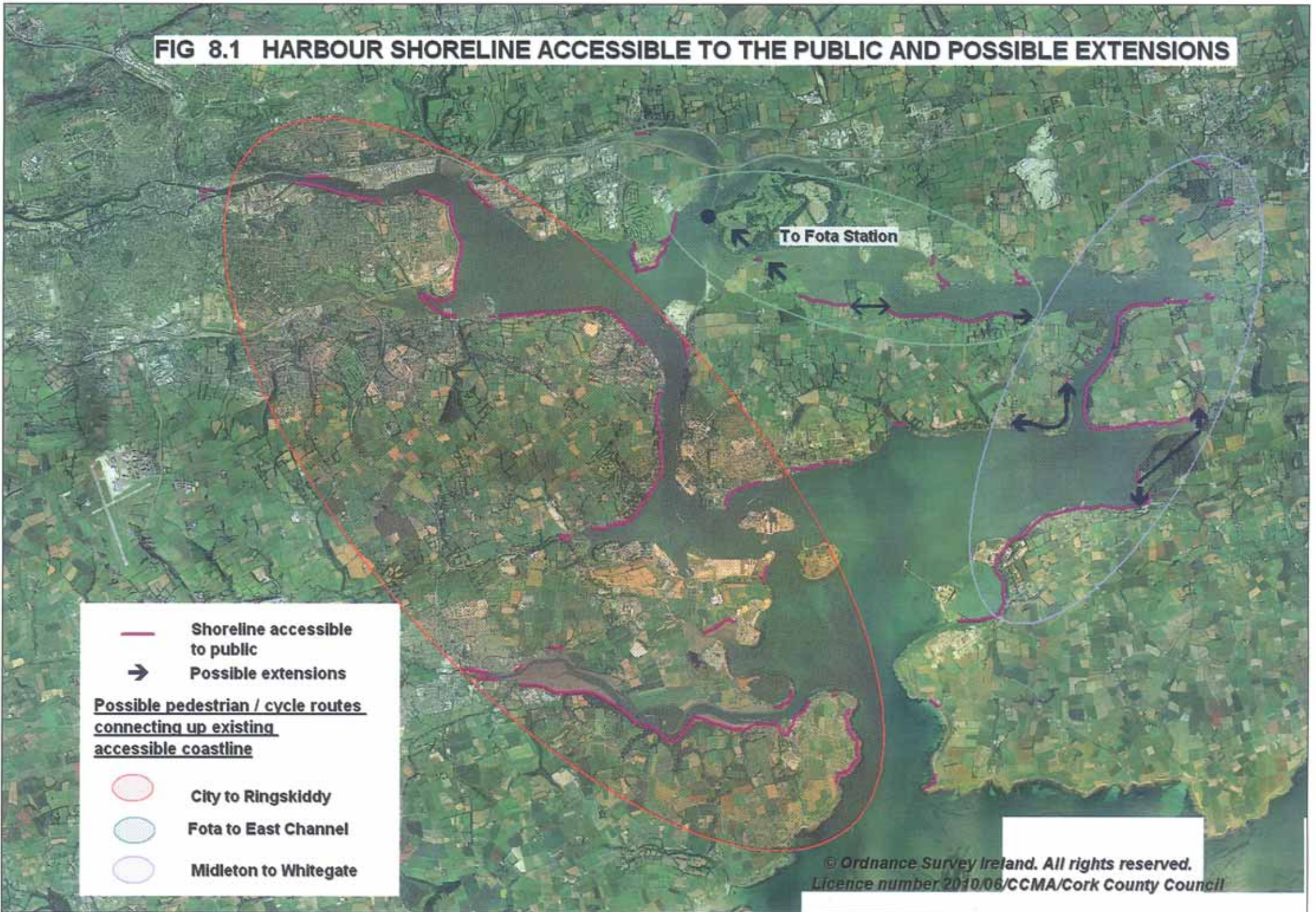
While concentration of facilities in a few main centres might be seen as being conflict with the aim of maintaining the natural setting of the Harbour, in practice this is necessary to develop a broader tourism base which will help support protection of that setting. Much of the broader commercial tourist infrastructure, such as general purpose facilities like restaurants and specialist

shops, can be channelled into old town centre areas in need of new uses, as the example of Kinsale illustrates.

While **marinas** may suffer from under-provision and excess concentration in Cork Harbour, it is not easy to address this through a physically specific plan for marine leisure, in the absence of hydrological data, which is crucial for marinas in particular. For this reason such a plan will depend on future research. However, the following points in relation to marina provision can be made:

- (i) Marina provision is very concentrated on the Owenabue estuary at present. A wider range of locations needs to be encouraged, and this may require discouragement of further provision in the Owenabue
- (ii) Provision of a marina in Cobh should be a priority. On the landward side, the site east of White Point appears the most practical, being relatively central, and having adjacent parking already in place. More generally, marinas within walking distance of general on shore facilities like shops, pubs and restaurants are likely to be of more economic benefit than ones which are not.
- (iii) Some marina proposals on the Harbour have been on a large scale. These may be more difficult to finance and realise in practice, and may also deter more modest projects, by creating a concern that the market might be temporarily oversupplied. A more

FIG 8.1 HARBOUR SHORELINE ACCESSIBLE TO THE PUBLIC AND POSSIBLE EXTENSIONS



incremental approach, whereby a moderately sized marina is proposed initially, with the possibility of future expansion designed into it, may be preferable.

Connective Options:

These include two possible ways of helping to connect Cobh and Great Island to other parts of the Harbour by **water transport**. A vehicle ferry connection to E. Cork would put Cobh on a touring route from Rosslare to W. Cork, while a passenger ferry along the lines proposed by Harbour CAT Ferries could have connect Cobh, the City and possibly also Crosshaven and Spike Island, to each other and to the Ferryport at Ringaskiddy.

Water transport could be complemented by **shoreline pedestrian and cycle routes**. Figure 8.1 indicates the parts of the Harbour shoreline which are accessible at present, showing in different colours sections which might be joined up to form part of three longer, more or less continuous routes. These routes are seen as having somewhat different functions:

- (a) a pedestrian cum cycle route along the western shore of the Harbour, from the **City Centre to Crosshaven and Ringaskiddy**, would fulfil one of the aims of the 2007 Irish Cycle Tourism Strategy, and would increase opportunities for recreational, journey to work and other movements from the main centres of population west of the Harbour: the City, Rochestown, and Carrigaline,

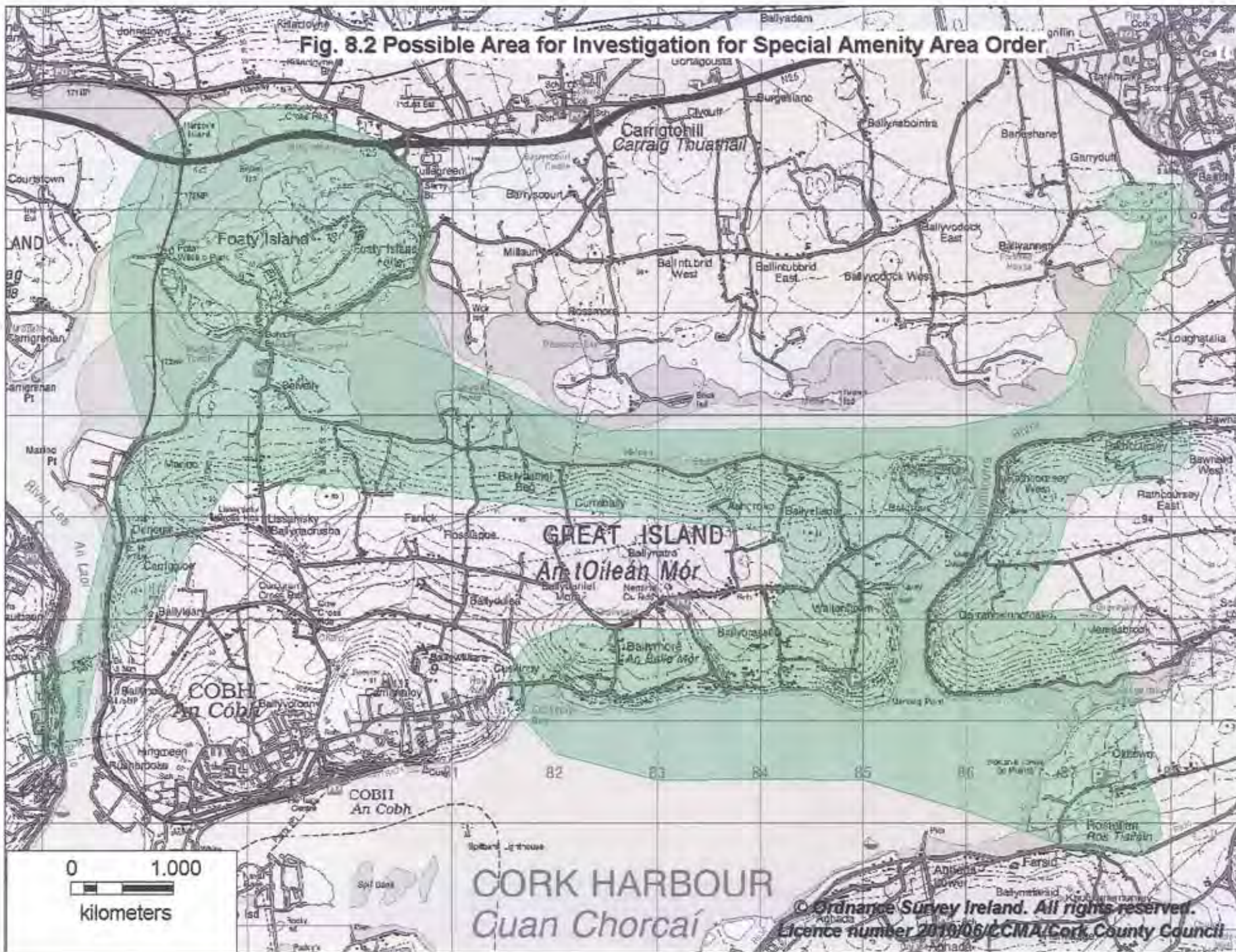
- (b) a cycle route with a subsidiary role for walkers running along the eastern side of the Harbour, from **Middleton to Whitegate**, via East Ferry, Saleen, and Rostellan. This would be primarily a recreational route connect the largest centre of population on the eastern side of the Harbour (Middleton) to the coastline, with a possible subsidiary journey to work role.

- (c) a walking route, most of which would also be usable by cyclists, based on the existing lightly used road on the northern side of Great Island, and extending west to connect up to Fota via Belvelly, and east towards the East channel. This could be accessible by public transport via Fota railway station, and in the longer term might also be connected up to Carrigtwohill via Barryscourt, as the town develops from its current relatively modest size towards the population of 12,000 envisaged in the current County Development Plan.

These options would give residents and visitors more opportunities for exercise and movement along the shores of the Harbour, and for travel on it or across it. The attractions of being able to this will depend partly on the level of protection of the areas they move through or sail past.

Having regard to development projections for the Harbour in Chapters 2 and 7, a more general protection against incremental development pressures may be needed for core areas of the Harbour. One possibility would be to designate steeply sloping, undeveloped areas along the central sandstone ridge which runs across the Harbour area, from Glenbrook

Fig. 8.2 Possible Area for Investigation for Special Amenity Area Order



through Great Island to East Ferry, as an Area of Special Amenity. This would be a means of protecting some of the most unspoilt areas adjoining the Harbour, through which routes (a) – (c) above pass.



Option of Special Amenity Area Order for Cork Harbour

Under s.202 of the 2000 Planning Act, a planning authority can designate an area of special amenity, because of *'its outstanding natural beauty or special recreational value.. having regard to any benefits for nature conservation'*, and may state in the order its aims for preserving or enhancing *'the character or special features of the area, including ...prevention or limitation of development'*. Such orders have been made in the Dublin area (Howth, the Liffey Valley, Dollymount). They require detailed justification of the specific sub-areas suggested, an opportunity for objections by the public, and confirmation by An Bord Pleanála. Once made, they remain in force, unless amended or revoked, and so can provide a longer term policy framework than a statutory plan.

It would require a substantial study in its own right to establish whether there was an adequate case for such designation, and if so, the specific area(s) to which it should apply. Figure 8.2 outlines a set of areas from which such an investigation might start, consisting of the outward facing slopes of Great Island, plus adjoining waters, and key areas on the opposite side of the channel from Great Island, such as Fota, Carrigmahon Wood, the peninsula facing E. Ferry, and Rostellan.

Part of the basis for any designation would be the significance of Cork Harbour as a recreational area close to a major urban area. Public access to such areas would thus be an issue. The area outlined in Figure 8.2 would include much of Harbour side routes (b) and (c), and a short but crucial section of (a), between Glenbrook/Carrigaloe and Rushbrook/Monkstown.

(4) Greater security in relation to climate change

The effects of climate change on the Harbour, and the potential for adaptation to them are currently being explored under the IMCORE programme. At this point, it may be worth highlighting two longer term issues specific to Cork Harbour's function as a harbour.

(a) Sea level rise and possible future tidal barriers: While sea level rise is liable to affect any coastal area, the possible longer term use of tidal barriers arises mainly in harbours and estuaries in which areas of water are already largely enclosed by land. The Draft LeeCFrams Study (p.98) included Mid and High Range Future Scenarios which projected sea level rises of 0.55m and 1.05m respectively, by 2100. It also considered tidal barriers on the channels on the E. and W. of Great Island (at Monkstown and Marloag Point) would *'be likely to become cost beneficial'* with a rise of 0.315m, which *'is expected between 2050 and 2075'*. The cost of such barriers was estimated at €340m. However, the Study felt *'this eventuality is so far in the future and the timing is so uncertain that it should not unduly influence decision making at this time'*.

It will presumably become more evident in the next decade or two whether significant sea level rise is likely, and if so, at what rate it may occur. The prospect of sea level rises could have effects well in advance of their actual occurrence, via market behaviour in relation to longer lived or user owned structures, or through prospective insurance costs or availability, or through possible professional or other liability for losses.

At present, it appears that if tidal barriers were required at some point, it would be substantially cheaper to provide them in the channels E¹ and W. of Great Island, than at the Harbour mouth. There could thus be a period in which the Upper Harbour was better protected from sea level rise than the Lower Harbour. The prospect of such protection could in turn make sites upstream of possible barrier locations appear more attractive than alternatives downstream for some purposes. Sites downstream of a barrier could presumably be remodelled to cope with sea level rise, for instance by raising ground and quay wall levels, but this would involve substantial costs.

The area in the Lower Harbour with most prospect of being affected by investment choices to which sea level rise might be relevant is Ringaskiddy. Other sites which might be affected could include Haulbowline, Rushbrooke Dockyard, and Whitegate.

(b) Facilities for transfer from ships to rail transport.

This issue has so far arisen (in the context of the An Bord Pleanála decision on the container port proposal for Ringaskiddy) only as something which it might be desirable to provide for. In the longer term it is possible that rising energy costs or more ambitious energy conservation targets might make it a market or regulatory requirement.

¹ A further alternative would be to substitute barriers in shallower water, S. of Ballinacurra and E. of Fota, for a barrier on the E. channel at Marloag.

As suggested in Chapter 5 (A) (v), it is probably not necessary or even desirable that all Irish ports have ship to rail transfer facilities for all main types of cargo, and Cork may have more potential for transfer of dry bulk goods, rather than containers. However, if this is accepted, it still requires retention of one of the Harbour side sites served by rail for uses compatible with this function.

Relevant Options:

In relation to (a), Marino Point is probably the closest substitute for the Lower Harbour locations, on the upstream side of a putative tidal barrier. Specifically, it shares with them the central characteristic of a Harbour, namely a substantial, accessible area of land adjacent to deep water. Tivoli and the Mitsui site share this characteristic, but they are less close substitutes for locations on the Lower Harbour, as the available draft at those sites is c.6.5m, as compared with 11.5m at Marino Point. Greater depth would also increase the range of ships able to use a ship to rail transfer facility. To the extent it is considered appropriate to give weight to these points, given the uncertainties involved and length of time likely to elapse before they become real issues, this would support **retention of Marino Point in a port or port related industrial use.**

The option of restoring the protective industrial zoning of the Plateau E. of Whitegate, with provision for wind turbines within individual large sites (already referred to under Priority (2)), could help protect the industrial role of the Harbour against increased energy costs resulting from climate change, or from efforts to mitigate it



Table 8.2 Interaction between Priorities and Major Sites

<i>Major Sites:</i>	(1) More Sustainable settlement and travel patterns	(2) Cork Harbour's Comparative Advantage	(3) Protection and Fuller Use of Natural Resources, Heritage	(4) Greater Security in Relation to Climate Change	<i>Inconsistency between priorities?</i>
Marino Point - Belvelly	Rail station to serve twin villages	At least one major brownfield site adjoining the shipping channel should be retained, inter alia to allow for possible marine energy related fabrication.	Retain Belvelly in rural agricultural use	Retain Marino Point for Port functions or port-related industrial use	Yes: (1) points in opposite direction to (2)-(4)
Former Mitsui site, Little Island					
Tivoli Industrial Estate – Dunkettle	Dockland type redevelopment served by park and ride station at Dunkettle	(if not required for above) Business park served by park and ride station at Dunkettle			Some tension
Ringaskiddy Port		Container Port at Ringaskiddy			
Rushbrooke Dockyard	More intensive employment uses	Retention of shipyard facilities	Possible site for marina		Some tension
E. end of Little Island		Retain site zoned I-03 for stand alone industry. Possibly also O-03 with link to Fota Station	Retain O-03 zone for OS/recreational use which would enhance setting of Fota		Some tension
Plateau area E. of Whitegate		Restoration of protective industrial zoning, site specific wind turbines possible		Restoration of industrial zoning, <i>if</i> site specific wind turbines possible	
Spike, Camden Fort			Develop as visitor attractions		

Consistency and Tension between Grouped Options

Coastal Zone Management is concerned with potentially conflicting claims and priorities affecting the same areas on the landward and seaward side of the high water mark. The potential for conflict is naturally increased in the periphery of a large urban area. However, multiple priorities do not necessarily lead to tension or conflict, and may in fact coincide, or be mutually compatible with each other.

There is a limited number of large strategic land areas adjoining the high water mark in Cork Harbour, which are likely to be developed or redeveloped in the medium term. Table 8.2 lists the major sites referred to in this chapter, which are relevant to more than one of the 4 sets of grouped priorities discussed, to see how far there is tension or incompatibility between the roles allocated to them under different priorities.

The main area in which the various priorities lead to incompatible conclusions is Marino Point. It cannot both be a predominantly port/industrial site, and a predominantly residential dockland renewal type one. Tensions elsewhere are more limited. Different priorities suggest a somewhat different mix of uses at Tivoli, Rushbrooke and the E. end of Little Island, but not generically incompatible ones.

Land Supply for Existing and Potential Clusters

There are also types of use for which there would probably be oversupply, if all the land areas which could be available for them were in fact made available. Cork's very successful specialisation in the pharma chem sector has taken place mostly on large sites, clustered in groups at Ringaskiddy and Little Island in most but not all cases. The possible sources of supply for this type of industry noted in this Study are:

- (a) sites already developed for this type of use, and now available for re-use
- (b) remaining large blocks of greenfield land in Ringaskiddy and Little Island
- (c) the Amgen site at Carrigtwohill
- (d) possible sites in the plateau area at Whitegate, also currently unserviced

In the aggregate this may be more than is needed, even in the longer term. However, (d) and (e) are merely possibilities in need of further investigation, and experience has shown that over time, land in category (b) gets used up, some of it for the type of use intended, and some of it for other uses which for various reasons are needed or accepted. In the past, additional sites have been identified when it was felt they were needed (eg (c)), but finite Harbour land supply means this will become progressively more difficult in future. Decisions on individual sites need to be informed by a wider long term view on aggregate availability, with subtractions from land in the "probably" available category being balanced by additions to it.

Somewhat similar considerations apply to other existing or potential economic clusters in the Harbour area, such as the established group of energy related industries at Whitegate/Aghada, or a potential cluster in marine energy which may develop from the specialised resources being created around the National Maritime College. If all sites which might possibly be of use to such clusters were held from them, this would probably result in over supply.

While it is not possible to predict what actual needs will be, some prudential principles are suggested:

- where there is established, Harbour related competitive advantage supporting a cluster of related industries, or a reasonable prospect of this, it is sensible to err on the side of generosity and a longer term view in terms of land supply
- there is a constant flow of new information on the prospects for such clusters, which will provide a basis for future adjustments to policy.
- it is preferable to avoid making unnecessarily early decisions on key sites – ie ones which are not likely to have a practical effect for some time, but involve a commitment which may become questionable in the light of further information. Particularly in the shorter term, trends are not necessarily linear, and sometimes subject to unexpected reversal
- for sites suitable for specialised types of use, it is usually possible to arrange them in a hierarchical list, according to likely suitability and availability. This will not tell us where the cut off point should come, beyond which holding land for that use will

constitute land hoarding and not be likely to serve a useful purpose, but it will suggest what priorities should apply, if the overall supply of land for that use appears excessive.

On the last point, the stand alone industrial sites listed (a) – (e) on the previous page may be regarded as being in such a sequence, though there might be scope for argument as to whether (c) should precede (b), or (e) precede (d). For marine energy uses, the sequence might be:

- (i) Rushbrooke Dockyard
- (ii) Marino Point
- (iii) Haulbowline
- (iv) Tivoli
- (v) Mitsui site (Little Island)

The principle could also be applied to categories of use where clustering of industrial sectors is less relevant, but where there is still a list of possible locations, which in the aggregate may be more than is required. The Port of Cork the recent Review of its Strategic Plan saw the hierarchy of port sites (or at least its upper end) as being

- (i) Ringaskiddy
- (ii) Marino Point
- (iii) Dogsnose Bank

and this is consistent with the view of this Study. A hierarchy of locations for dockland type redevelopment might also be constructed. Such sequences are useful in cases where there is uncertainty on the real volume of demand, and a likelihood that

the most accurate view possible at any particular time will not remain fixed, but will vary as market conditions change.

Uses which do not need to be on the Harbour

The other point worth noting is a negative one: that the major land uses which have driven expansion of developed land around the Harbour, such as conventional suburban housing and industrial estates, do not have any obvious role in relation to any of the priorities. In general, there is no clear reason why further expansion of these uses needs to take place on Harbour side sites, and cannot take place further inland. This point is developed in the next chapter.