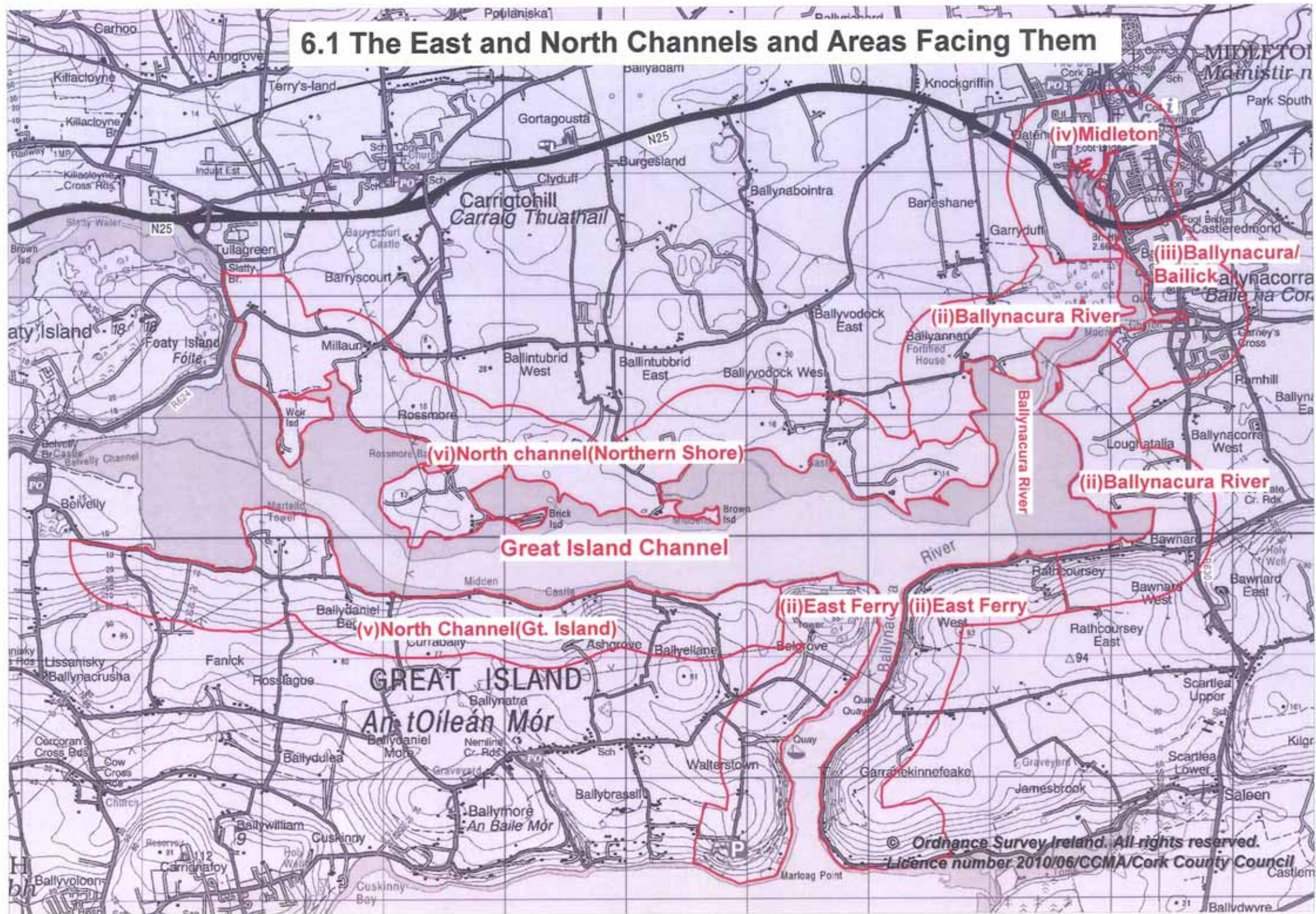


6.1 The East and North Channels and Areas Facing Them



Chapter 6: The North and East Channels and adjoining areas

On Ordnance Survey maps, the channel east of Great Island and the estuary of the Owenacurra and Dungourney Rivers are combined under the description of the Ballynacorra River, and this 'river' crosses the channel which runs east from Fota to Rathcoursey and Bawnard. In the interests of simplicity and brevity, these confluent channels are treated as though they were a single body of water.

The channels to the north and east of Great Island differ from most of the rest of the Harbour, in that the channels do not have a shipping function, though the Port of Cork maintains a quay opposite East Ferry. Otherwise, the functions of this part of the Harbour are primarily recreational, environmental, and aquacultural.

Virtually all land area to the shore is designated scenic landscape in the 2009 and previous County Development Plans, and there are scenic routes along the northern and eastern shores of these channels. The lightly trafficked local road which runs along the northern shore of Great Island is particularly attractive walk

The channel east of Great Island is relatively deep, but the channel up to Midleton and the western part of the North Channel are largely inter-tidal mud banks exposed at low tide. They thus have limited value from a marine leisure point of

view, though there is deeper water near the northern entrance to the East Channel, which is used for moorings and facilitates access to the water.

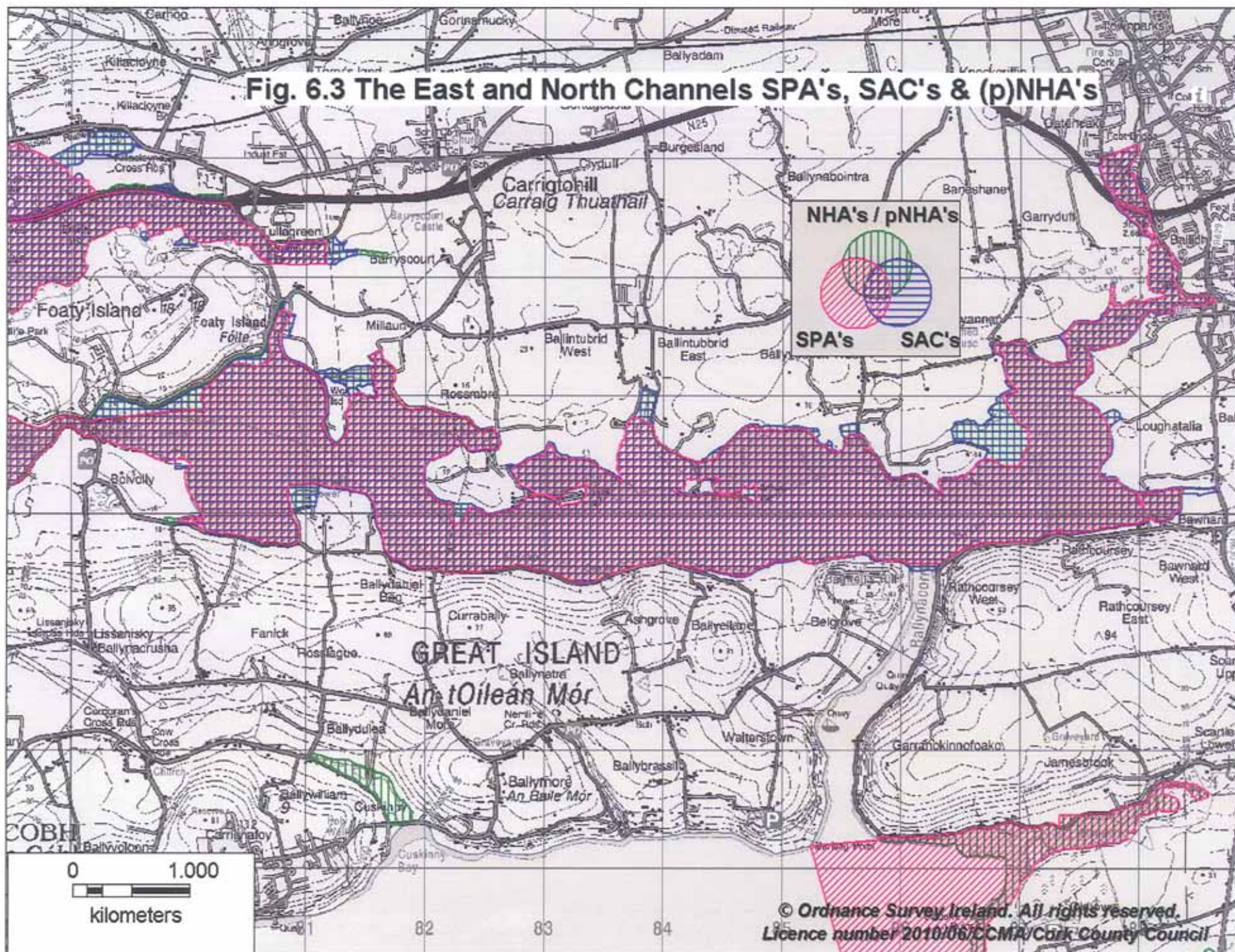
As a result of the extensive inter-tidal areas in the channels between Fota and Midleton, the North Channel has the largest concentration of national and international designations within the harbour area. The entire harbour area of over 1,400 hectares is a designated Ramsar site for wetland protection, and also a Special Protection Area for birds supporting a wintering waterfowl population in excess of 20,000. In addition, Great Island Channel forms part of candidate Great Island SAC site which stretches over to Midleton. The habitats which this area supports including that of sheltered tidal sands and mudflats are both listed on Annex I of the habitats directive. The channel also has pNHA designation (site code 1058), and there are 11 bird species for which the site is selected as of special conservation interest, including redshank and black-tailed godwit – both internationally important species.

Under article 6 of the EU Habitats Directive, an Appropriate Assessment is required for any projects that would have a significant effect on any Natura 2000 site. This is likely to affect – inter alia - development proposals relating to quarries on the northern shore of the North Channel

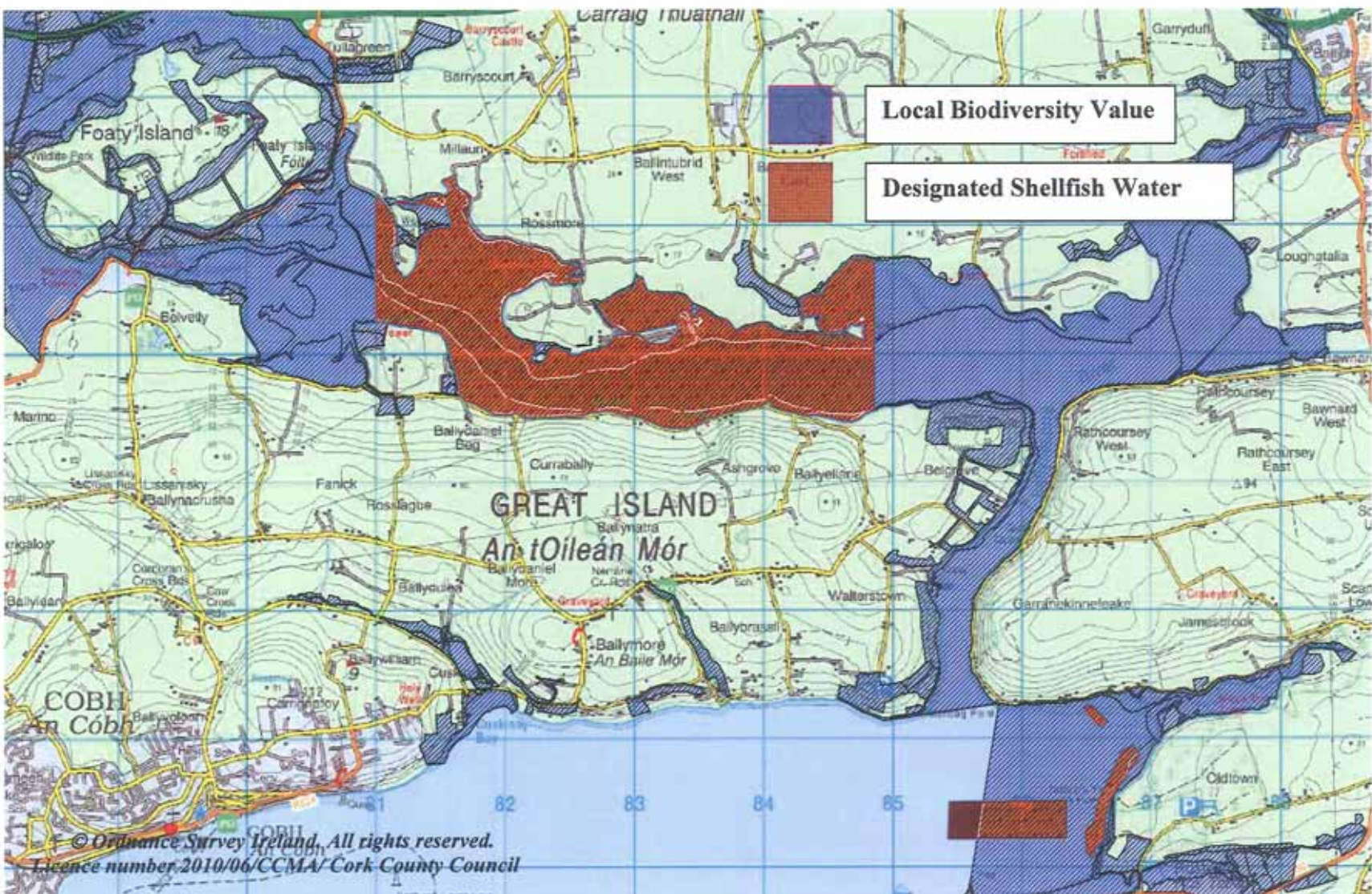
Shellfish

The North Channel is one of the areas within Cork Harbour designated as shellfish waters. Following a European directive,

Fig. 6.3 The East and North Channels SPA's, SAC's & (p)NHA's



6.4 Eastern and Northern Channels Areas of Local Biodiversity Value



the Quality of Shellfish Waters Regulations (SI 268 of 2006) set out the water quality requirements for these areas, with a requirement for pollution reduction programmes for every designated shellfish area. Shellfish pollution reduction programmes (PRPs) are in place for four areas within the harbour, of which the Great Island/North Channel is the largest, covering 3.4 sq km, and extending from Weir Island to further extent of Brown Island. (The PRPs are specifically focused on the bacterial pollution within designated shellfish areas, while the River Basin District management plans seek to address water quality in all water types). A large river catchment area - defined as 20km from the shellfish area - contributes water to this area, and also to the other three designated areas in the Harbour, which are north, south and west of Rostellan. Consequently, there is a large area north of Midleton which affects all designated shellfish areas in the Harbour. The dominant shellfish activity in the Harbour is the cultivation of oysters.

The main issue is the microbial contamination of the shellfish growing waters. Urban waste water treatment plants and on site treatment units are seen as the main pressure on water quality within the designated areas, though agricultural discharges also affect the quality of shellfish waters. The main measures in place to control these point and diffuse pollution sources are the Urban Waste Water Treatment and the Nitrates regulations applying to agriculture. Systematic checking of compliance with the nitrates regulations by inspectors from the Department of agriculture on behalf of the local authority is seen as a priority from 2010.

As Table 6.1 indicates, the areas facing the North and East channels are predominantly rural, and some of them have a quite remote feel. The only substantial settlement is Midleton/Ballynacurra. This is one of the 3 large towns on the Harbour, with Carrigaline and Cobh. Its population is in excess of 10,000, and during the boom 1996-2006 period it was growing as rapidly as Carrigaline, and much more rapidly than Cobh. Both the 2001 CASP Study and the 2008 CASP Update envisage Midleton becoming the largest and fastest growing town on the Harbour, with a population of over 20,000 in 2020, though realisation of this will be contingent on a relatively quick economic recovery.

Table 6.1 Estimated Employment and Population Densities in areas facing the Lower River Lee

Area	Population per km ²	Jobs per km ²
East Channel (E&W)	30	>20
Ballynacurra River	90	>20
Ballynacurra	2500	150
Midleton	1450	850
North Channel (north shore)	20	20
North shore of Great Island	20	>20

**Fig 6.5 East Ferry
(East & West)**



(i) The East Channel

The East Channel runs between two steep hillsides, which look across at each other. On both sides, the area is very rural in character, with pockets of woodland overlooking the river. There is limited road access to the shore on the Great Island side, but on the eastern side the scenic route forms a loop which stays close to the shore all the way around the peninsula, though access to it is often limited, because the steepness of the slope leads to the road being well above the shore, with wooded areas in some of these intervening slopes, particularly in Rathcoursey. Limited road widths and verges, and quite frequent passage of vehicles, may make the scenic route more suitable for cyclists or drivers than walkers on the N. and W. sides of the peninsula. Walkers could however be given some protection, through appropriate signage and traffic calming measures, and where possible footpaths or verge areas. The scenic route could connect to the Rostellan peninsula near Saleen, in the manner described in Ch.5(A)(viii).

As in some other parts of the Harbour, access by water has deteriorated in the last century, as the original connection across the channel provided by the East Ferry has been lost. This ferry ran on cables, due to the strong current.

The East Ferry area has worthwhile marine leisure facilities, including a marina and boatyard on the western side of the channel, and the Cobh Sailing Club (the sailing club is one of 7 registered within the harbour area). The Marloag Inn is a venue used for social and club events, including summer camps. There is a pier alongside the small boatyard. Beyond the

marina, a roadway provides access to the rocky shoreline, with access to the pier at low tide. East Ferry is also one of the hot spots for moorings as well, with a total of 107 mooring points between both sides of the channel¹. Other marine leisure activities include wind surfing, which is not club based but is nevertheless popular at East Ferry and elsewhere on the eastern side of the harbour.

The peninsula on the eastern side of the channel has a small group of houses on the northern side around projecting areas of hard standing at Rathcoursey, and a deep water pier operated by the Port of Cork on the western side facing Great Island. A public house and restaurant adjoins the pier, but parking is limited there. There is a boat based angling club, localised informal access directly from the public road for pedestrians, and some private slips SW of the main pier. The facilities are limited in comparison to those across the channel, but seem to work most of the time, though there can be a difficulty with inadequate parking at peak times.

The peninsula on the eastern side of the channel has steep slopes falling from a plateau directly to the water of sandstone ridges in the Harbour area. This makes development difficult, either above or below the coast road, and vehicle access up or down from it tends to be at an angle to the slope or involve zig-zags. This accounts for the limited development and sense

¹ Assessment of coastal recreational activity and capacity for increased boating in Cork harbour. CMRC, UCC.

Fig 6.6 Ballynacurra River



of remoteness on the east side of the channel, which would otherwise be surprising so close to major urban areas. The sense of remoteness would probably be lost if the difficult construction works likely to be needed for substantial extra parking or creation of a marina were undertaken. Even with such works, there is little prospect of worthwhile critical mass in leisure or tourism activities, so it may be better to retain the existing unspoilt character of the area.

(ii) The Ballinacurra River

This area includes the lands on either side of the estuary south of Midleton and Ballinacurra. At present, these areas are predominately rural in character, particularly on the western side. On the eastern side, there is a line of houses at the base of the hill on the road to Rathcoursey, facing north over the water.

More significantly, the northern fifth of the 2.4 km² peninsula west of the Whitegate Road and immediately south of Ballinacorra is zoned and was partly developed for housing in the last few years. The remaining 4/5ths remains in agricultural use and is designated scenic landscape, but could come under pressure for development in future because it is relatively level and has views of the estuary. It is an exception to the prevailing pattern in the Harbour area, whereby most urban areas have reached natural or man made limits which prevent significant further lengthening of their frontage onto the water.

However, the planning case for expansion of Midleton is essentially a case for its northward or north-westward growth.

While the CASP strategy highlights Midleton as a major centre for population growth, this is related to its position on the Blarney – Midleton suburban rail corridor. Residential development on the peninsula would be far removed from the reopened train station to the north of the town, or from any future station at Waterrock. It would be car dependent, without easy access to a high quality public transport alternative, and so more likely to create congestion on the crucial N25 route than development on the northern side of Midleton.

Ballyannan Wood is the principal feature on the western side of the estuary, and is located on a bend, so that it faces south down the estuary as well as east towards the quays at Bailick. It is 25 hectares of mature mixed woodland, owned and managed by Coillte as amenity woodland with some commercial timber. A new pedestrian bridge and system of paths now provides access to it from Ballick road. The development of this amenity area is the result of cooperation of between public bodies, and was supported by contributions collected from residential developments.



Fig 6.7 Ballynacurra and Ballick



(iii) Ballinacurra and Bailick

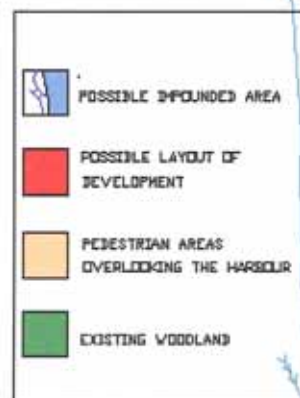
Over time, Ballinacurra village has to some extent lost contact with the Harbour. Up until the middle of the last century, the Ballinacurra channel was dredged up to Bailick, which served as Middleton's port area. The tidal basin which at present reaches the R630 Whitegate Road originally extended further E., to Ballinacurra Main Street. Improvement of the Whitegate Road, which by passes the Main Street, has created a barrier between it and Bailick. The quays and surviving traditional stone warehouse buildings are reminders of this previous function. Without dredging, the channel has silted up to the point where it poses difficulties for small leisure craft, and is inaccessible to anything larger. Absence of marine activity and dominance of mud banks at low tide, reduce the amenity value and interest of the former port area, though the views across to Ballyannan Wood are attractive.

Revival of interest in dockland areas as places for urban renewal has had mixed effects in Bailick over the last 15 years. The most impressive result is the restoration of the Charleston Maltings complex for apartments. Other new quayside apartment developments have been built at intervals along a section of quay and shore almost one kilometre long. However, the understandable tendency to try to maximise the number of apartments directly facing the water has in some cases resulted in long blocks presenting rear elevations and parking areas to the Bailick Road, treating it as a service road, and making little use of opportunities to connect it visually with the water

Currently, the area has a number of features which can be viewed either as problems or opportunities. Specifically:

- (a) The development process in the area is incomplete. There are unimplemented permissions for around 100 new apartments on 2 vacant quayside sites on Commissioner's Quay immediately north of the (modern) Charlestown Wharf development, and on the Dairygold premises between the R630 and Ballinacurra Main Street at the head of the inlet. The current state of the apartment market could mean these projects remain unimplemented for a considerable time, but might also lead to their re-evaluation, possibly leading to re-design in ways which made a stronger positive contribution to the area.
- (b) The Draft LeeCFrams Study indicated that the quayside area at Bailick, and the N. end of Ballinacurra Main St., are at risk of flooding, and propose flood walls and embankments to reduce this. These could further disconnect the area from the Harbour. The Study conceded that there would be adverse visual effects, affecting a designated scenic route and scenic landscape, but felt these might be reduced through ameliorative measures, such as special design of floodwalls, or use of demountable defences.
- (c) The inlet running east to the R630 is shallow, and not particularly attractive at low tide, as any litter or discoloration of the mud is more likely and more evident there. On the other hand, at high tide, it approximates more closely to the dock basins characteristic of some of the more successful dockland regeneration projects internationally, than other waterfront areas on Cork Harbour.

FIGURE 6.8 WAYS OF RECONNECTING
BALLINACURRA VILLAGE, BAILICK
AND THE HARBOUR



Re-connection Options for Bailick and Ballinacurra

An alternative to flood walls around the inlet would be to impound it behind a wall/embankment (as in Figure 6.7), and use flows through pipes set in it to moderate tidal variations, as in Ross Carbery and Kinsale. The cost per linear metre would be greater, but the defences protecting the inlet would only be 1/10th as long as those shown in the Draft LeeCFrams Study (shown in Figure 6.8). The impounded area might also help store fluvial flood water between tides, from the stream which flows into the head of the inlet via a culvert under Dairygold and Ballinacurra Main St.²

A higher normal level of water in the inlet (in line with methods (iv)-(vi) of Theme 6 (see Ch. 5 (A) (i)) could improve its appearance and help attract waterside development. In particular, it might justify a re-configured redevelopment of the Dairygold property, so as to incorporate a first floor level courtyard which would be open to the NW, and look over the R630 on the inlet. The footpath along that side of the main street could be raised through stairs and ramps to allow a view through the development. A first floor level courtyard would also facilitate inclusion of some 'own front door' duplex units in the development

Figure 6.7 also show a possible joint redesign of the 2 vacant sites on Commissioner's Quay, N. of Charleston Wharf, on lines which would include some conventional houses, and help connect the Bailick Road visually with the Harbour. Such a redesign might be possible if the sites came into one ownership, and changes in property values made this type of development more economic - or more readily realisable - than the existing apartment permissions.

² The catchment area of this stream is estimated at 2.71km², and its mean maximum flow in a 100 year flood at 1.4m³/second (White, Young, Green, Additional Flood Assessment, submitted with application S/06/11673, p.4).

Any proposals for impoundment of the inlet would need to pass a number of tests, in which a common thread would be comparison with the more obvious on-shore option outlined in the Draft LeeCFrams Study. These tests would be

- (1) Appropriate Assessment (having regard to the status of the adjoining waters as an SPA and SAC)
- (2) Financial feasibility (including operating costs)
- (3) Predicted performance under flood conditions
- (4) Visual impact
- (5) Water quality (having regard to reduced tidal flushing)

While the height of any barrier would presumably have to be much the same wherever it was located, the short length of embankment needed to close off the inlet (c.40m) would make visual amelioration measures such as demountable or lifting barriers easier to finance. A (normally) low embankment would interfere less with views down the estuary, and act more as a rim to the area of water retained.

A number of more ambitious variants on the approach described in the box to the left are possible, including more extended impoundment continuing N. from the mouth of the inlet, to the S. end of Charleston Wharf, or of the vacant sites N. of it. Both variants would involve an embankment/flood wall in the centre of the deep channel (there is a tendency for the channel to split in two at low tide which would facilitate this), creating a canal along the quay frontage. Possible incidental benefits might include the opportunity to create secure pontoons in the deep channel, with access to the flood wall/embankment controlled from a new development on the

vacant sites, and marketed as a selling point to potential residents. However, it would probably be more difficult for such variants to pass tests (1) and (2) above.

The Draft LeeCFrams Study envisaged a detailed scheme being developed for Midleton in 2010-11, proceeding to procurement in 2012-13 and implementation in 2014-15.

Ballinacurra remains an attractive village, and has its own distinct character and identity, evident for instance in the southern part of the Main Street. There is some vacancy at the northern end. Any development on the Dairygold site will need to fit in with the character of the Main St. and the small residential street immediately S. of the site (Quay Road). Figure 6.7 illustrates one possible way of achieving this transition, using a duplex block which would present a 2 storey frontage with conventional roof to Quay Road (like the present store), with 2nd building behind it which would present a 3 storey front to the Main Street, and 2 storeys to the suggested 1st floor courtyard referred to above.

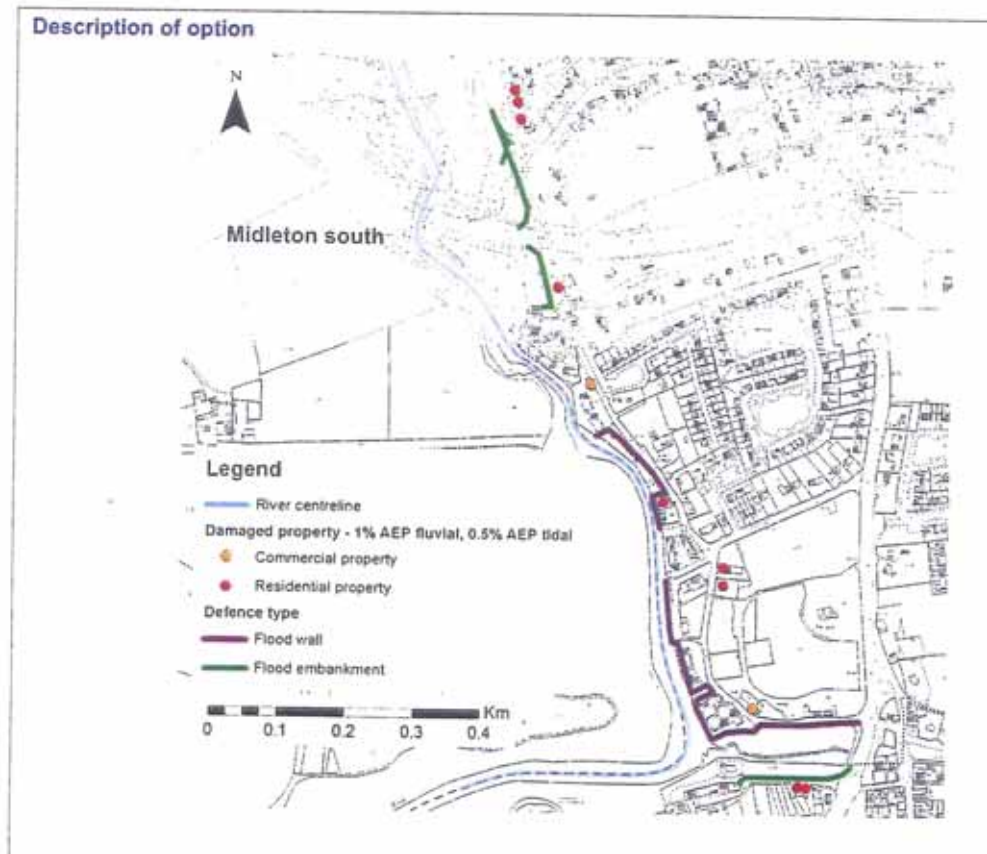
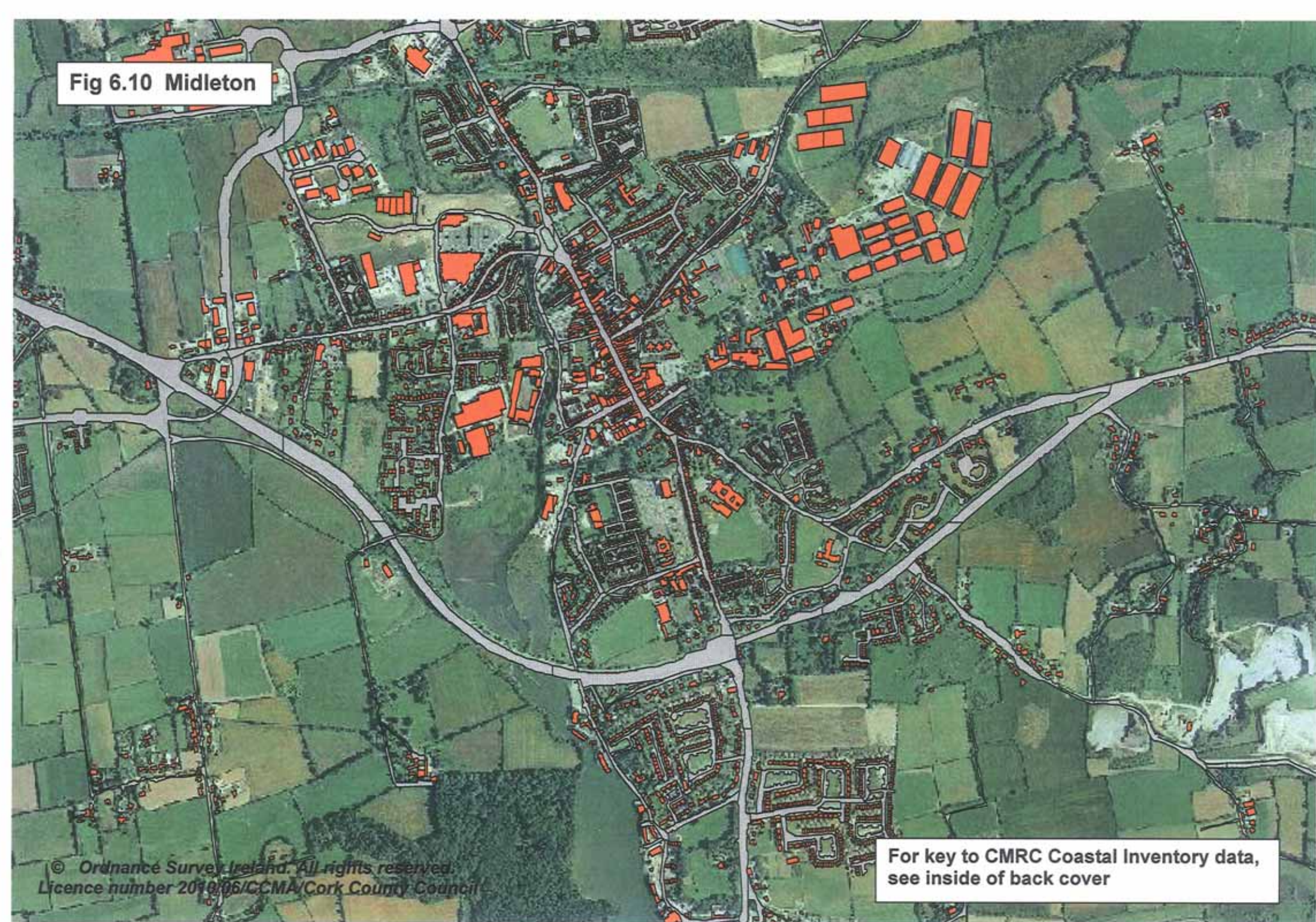


Figure 6.8 Draft Lee CFrams Study Option for Flood Protection at Bailick/Ballinacurra, February 2010, Appendix E



Fig 6.10 Midleton



(iv) Midleton

Midleton is the natural centre for East Cork, being mid way along the valley which runs from Youghal to Cork. It grew up around the lowest crossing point of the Owenacurra and Dungourney Rivers, before they enter the Harbour. Traditionally it had roles as a centre for resource based industries processing raw materials from its agricultural hinterland (textiles as well as food) and as a port, and its ongoing role as a market town has developed in the last decade through expansion of its retail role.

From 1967 onwards, it acquired a further role as one of Cork's designated satellite towns, and both the LUTS and CASP plans sought to make it one of the fastest growing ones, primarily for transport planning reasons. The town was seen as being well placed as a residential area serving employment growth in Little Island and other industrial areas east of Cork City, and now has the commuter rail service recommended by both LUTS and CASP.

As with in settlements served by rail around Cork, Midleton station is at a distance from the town centre (c.¾ km in Midleton), and the 1978 LUTS study even suggested running a rail spur in to the junction at the N. end of the Main Street. The alternative approach - followed by CASP - is to use the greenfield land often available close to stations as a result of their off-centre position for relatively dense development. This has considerable advantages, but the disadvantage is that the part of the settlement on the far side of the town centre is usually more than normal walking distance from the station,

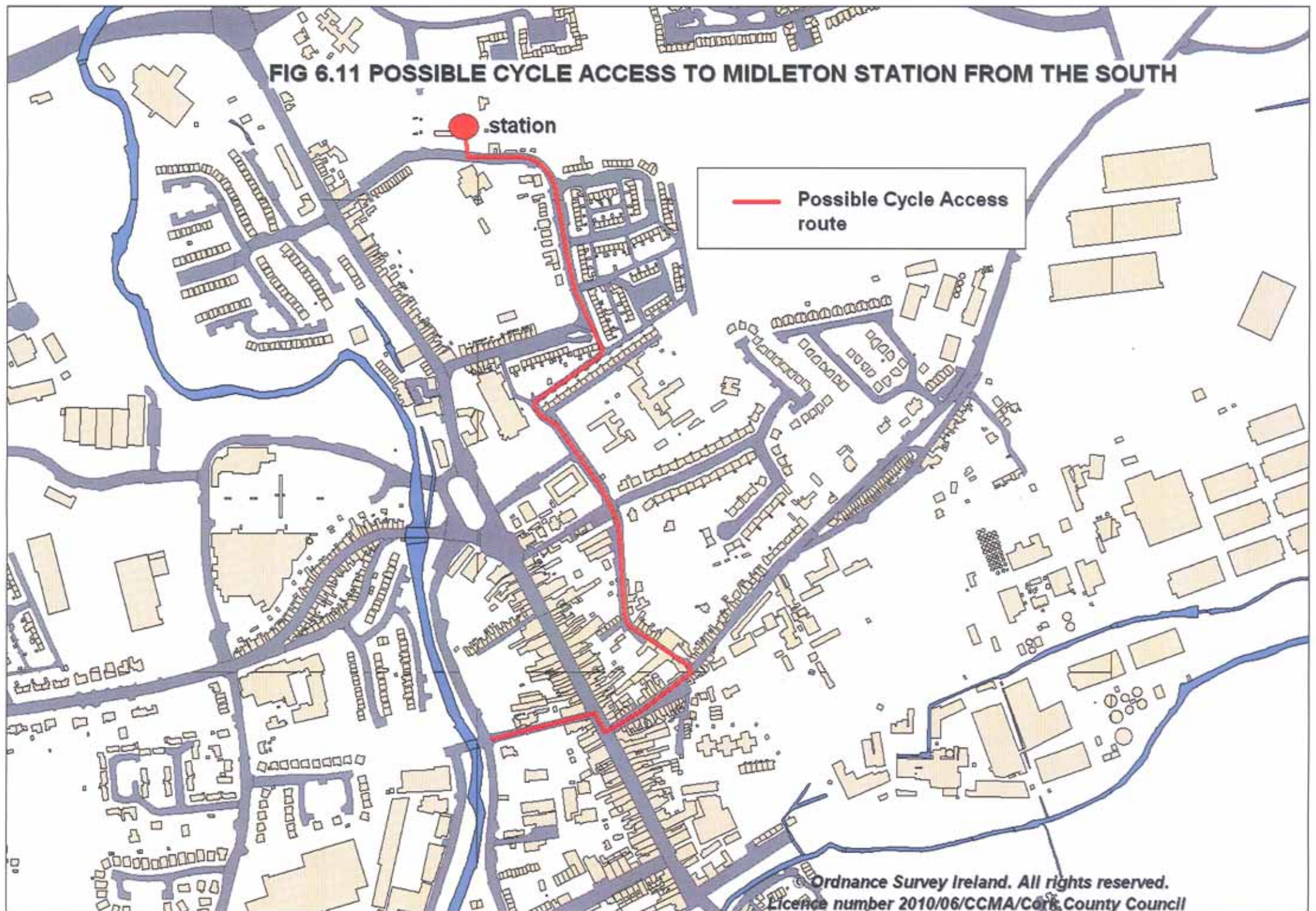
and town centre traffic may be something of an obstacle to access by bicycle or car³.

The roundabout junction at the N end of the Main Street was remodelled in conjunction with construction of the Market Green shopping centre, to facilitate pedestrian movement between the two. While quite successful in this respect, it is not particularly cyclist friendly. The layout of the Main St. is also better adapted for pedestrians and vehicles entering or leaving parking spaces, than for cyclists. Promotion of an alternative route which runs parallel and to the E. of the Main Street and Mill Road northwards, from Connolly Street northwards (shown on Figure 6.10), might be considered, as being less subject to competition between different road users. This route could in turn connect to Riverside Way via Church Lane and a staggered crossing of the Main Street.

For vehicular traffic, the proposed future station at Water Rock might in principle be a more accessible park and ride location for those living in Ballinacurra, as the N25 comes within ½ km of the station site. This would require any future interchange layout on the N25 west of Midleton to be designed to facilitate easy access to the station, which may not be easy to achieve. However, encouraging some N25 traffic to transfer to rail at that point would ease pressures on its capacity further west.

³ A further, more immediate difficulty in Midleton is that station car park charges have not been adjusted to reflect what the (local) market will currently bear, and so discourage use by those living beyond walking distance.

FIG 6.11 POSSIBLE CYCLE ACCESS TO MIDLETON STATION FROM THE SOUTH



There is an extensive wetland area south of the junction between the Dungourney and Owenacurra Rivers, and north of the by-pass. The area has some existing recreational function, as there are paths and a footbridge connection to the town centre. Although surrounded by development, and subject to a certain amount of dumping, its size gives it a natural feel surprising in a place so close to the centre of a large town.

Development on its northern edge will however advance c.100m southwards if and when a 2008 planning permission for 257 dwellings is implemented. Further development is more or less precluded, as the remainder of the area is designated SAC/SPA/NHA, as well as being subject to flooding. The Midleton & Carrigwohill Transportation Study envisages amenity routes on its (new) northern and eastern edges, linking to routes S. to Ballannan Wood, and N and E along the Owenacurra and Dungourney Rivers.

The Transportation Study also envisages pedestrian/cycle/amenity routes running from Riverside Way via Bailick Road onto the Whitegate Road, almost as far as the junction with the Rathcoursey Road. If these were provided, it would not be difficult to link Midleton to an E. Harbour cycle route, with component sections as outlined at Ch.5(A)(viii) and 6(i).

(v) North Channel (Great Island side)

The southern shore of the North Channel slopes steeply and is relatively undeveloped. It has a scenic route (S52) which runs along a lightly trafficked minor road on the shoreline. The most attractive section is E of the Rosslague peninsula, c.3 km long and ideal for walking. A further 1.5km section west of this one crosses the peninsula and then runs along the shore again

Extending the Ashgrove-Rosslague Walking Route to Fota?

This scenic walking route is not easily reached, other than by car. The W. end is within 1.5 km of Fota, and 2.5 km of Fota Station. It is possible to walk from Belvelly Bridge through the Fota Estate to the station, and planning permission was recently granted for rerouting this pedestrian route. If a suitable pedestrian link could be achieved between Belvelly Bridge and the western end of the coast road, this would create an extended walking route with a great deal of interest at the W. end, including the Martello Tower and Castle at Belvelly. The route would also be an addition to the cluster of attractions at Fota, and available to those staying in the hotel and lodges on the island.

There would be a need to define a route and secure the agreement of the relevant landowners. Agreement would also be needed with the organisations managing Fota Island to promotion of the route, and perhaps also to some variations to the times when the gate beside Belvelly Bridge is open.



**Fig 6.12 North Channel
Great Island**

The muddy inter tidal flats at Rosslague and Belvelly have been colonised by Cordgrass (*Spartina app*) and other species. This reduces the attractions of adjoining shoreline area slightly.

While the channel is too shallow for significant recreational use, the shoreline supports Harbour related businesses, such as Fota Oyster farm (on a side road east of Rosslague). This location specific industry is an approved facility and operates fish hatcheries and a fish farm. It is part of a number of commercial fish farming operations along the north channel

.Rosslague Martello Tower

The NW headland of the Rosslague contains a wood and Martello Tower owned by Cork County Council. The Martello Tower, like those at Belvelly and N. of Marino Point, was built during the Napoleonic wars to protect naval facilities on Great Island from a possible attack from the mainland by a force that had landed elsewhere⁴.

Council ownership of the Tower raises the question of whether there might be a case for opening it to the public. If compared with the Ringaskiddy Martello Tower (discussed in the same context in Chapter 5(A)(v)), the location of the Rosslague tower is more atmospheric, but its strategic function is less obvious and it is only tenuously related to Spike and Camden Forts. The woodland at Rosslague limits views of the water, and this part of the channel is also uncovered mudbank at low

tide. While there is an access route to the Martello Tower which would be adequate for a private property, it is overgrown at present, and even if cleared would be an inadequate route for public access purposes. It would probably be necessary to acquire land for a car park and access road or path along the W. shore of the peninsula, if regular public access to the Tower was required.

The access issue would also arise if the tower were used as an educational or interpretative centre focused on the wildfowl and biodiversity of Cork Harbour, as a possible alternative to Harper's Island (see Ch. 4(D)(vii)). It is within the North Channel SAC and pNHA, and overlooks the channel itself (which is also an SPA). This possibility has been considered, and the site would have some advantages over the Harper's Island one for this purpose, having more atmosphere, as it is less hemmed in by roads and rail lines, though perhaps less well placed in relation to bird activity. It would also offer the possibility of sharing supervision costs, on a site containing interpretative material in relation to both biodiversity and coastal fortifications.

As it was doubtful whether the Rosslague tower could be operated as a viable visitor attraction, the Council has explored the possibility of selling it. An alternative which might have greater benefits for the Cork area would be to lease to a specialist organisation such as the Landmark Trust, which rents out historically interesting buildings for holiday purposes. This would bring new visitors into the area each week. It could perhaps be combined with a limited amount of public access, if arrival and departure times were such as to leave a gap (eg 12-4 on Saturdays) during which public access was allowed.

⁴ Paul Kerrigan, *Castles and Fortifications in Ireland, 1485-1945*, Collins Press, Cork, p.196




Fig 6.13 North Channel

For key to CMRC Coastal Inventory data,
see inside of back cover

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Alternatively, lettings and visits might be managed in conjunction with the hotel and holiday homes on Fota Island. The benefit for Fota might be the added interest of promotional material which included a small amount of exotic accommodation or an additional visitor attraction almost on site.

Another possibility would be to seek to exchange the Rosslague tower with Belvelly Martello Tower, which is currently on the market. The Belvelly tower is the only one of the 5 Martello towers on Cork Harbour which is sufficiently well positioned to have a reasonable chance of succeeding as a tourist attraction. It directly faces all vehicles coming over Belvelly bridge, and is also close enough to Fota House and Wildlife Park to operate as part of the same complex of attractions. A potential selling point for Rosslague is the substantial area of land (c.5ha) attached to it.

(vi) The Northern Shore of the North Channel

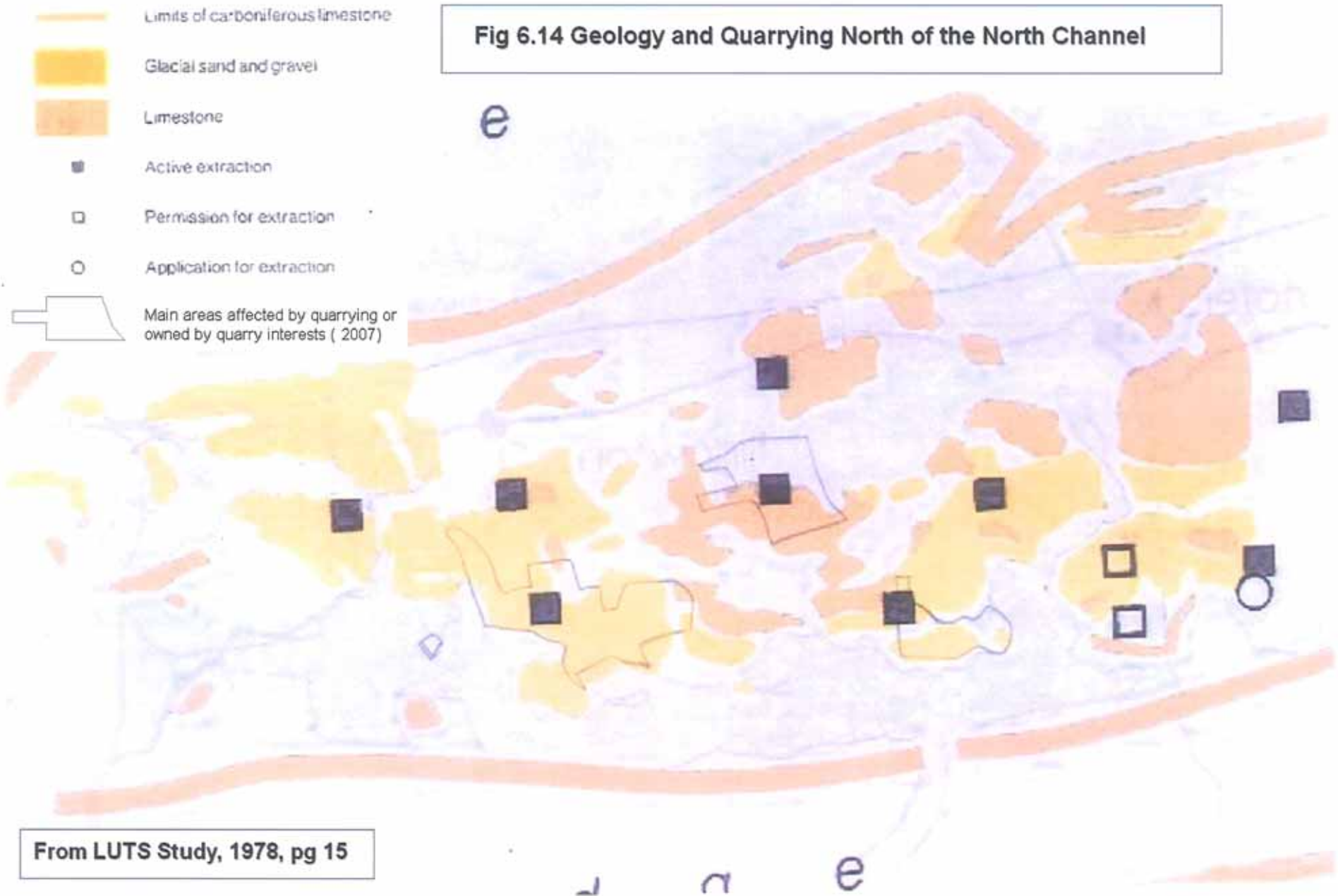
The northern shore of the North channel is part of the limestone based valley which runs W. through Lough Mahon to the City and Ballincollig, and E. to Midleton and Youghal. Its relatively level nature has resulted in only limited views of the Harbour from areas not immediately on the shoreline, and due to the absence of steep slopes falling to the shore, there has been no need to build a road along it. Instead, the main roads are in land, with side roads coming down to the shore at intervals, and typically ending in a slip, pier or beach, sometimes associated with small industrial buildings in a marine related use.

The presence of limestone and gravel in this area has led to extensive quarrying. There has been a fair amount of conflict over the environmental effect of quarrying on local residents over a number of decades, generating numerous planning appeals and enforcement cases.

Despite the effects of quarrying, the area within 0.5 km of the shore has been designated Scenic Landscape in successive County Development Plans, for the full length of this section of coast. This reflects its visual significance from the scenic route (S52) on the southern side of the channel. Quarrying has had relatively limited effects from viewpoints near water level (including the scenic route) but is very visible from high ground (eg the near the ridge on Great Island).

The eastern part of the area, between Midleton to Ballintubrid E., is slightly hillier than the land to the W., and has more

Fig 6.14 Geology and Quarrying North of the North Channel



From LUTS Study, 1978, pg 15

mature deciduous tree belts. As Figures 6.12 and 6.13 show, it has been less affected by quarrying, partly because deposits are more limited, and has retained more of its agricultural character. The effect of the woodland in the area suggests predominantly deciduous planting near the outer rims of previously quarried areas could have a useful role to play in their restoration.

