

5.0 HUMAN ENVIRONMENT

5.1 Introduction

This Chapter of the EIS considers the potential and likely significant effects of the proposed alterations to the permitted development on the Human Environment. The purpose of this chapter is to identify and describe any likely significant Human Environment effects because of the proposed alterations in the context of the permitted development. The potential Human Environment impacts are considered under the headings of Economic Activity; Social Considerations; Land Use and Health & Safety.

5.2 Methodology

The methodology for the Human Environment chapter consists of an assessment of the human environment baseline and identification of potential receptors; appraisal of the proposed alterations to identify potential impacts; and a review of submissions from relevant agencies / stakeholders. The potential receptors that may be impacted by the proposed alteration are identified as being:

Residential Receptors

- Residential properties adjacent to the Port
- Residential properties within ½ km of the site
- Residential properties adjacent to the primary transport routes
- Residential properties in the wider context
- Land zoned for residential development

Direct Economic Receptors

- Commercial and Industrial premises near the site
- Commercial activities located within Cork Harbour
- Tourism activities in and around Cork Harbour
- Zoned commercial lands near the site
- Operational and construction related employment

Indirect Economic Receptors

- Suppliers of construction materials
- Commercial and industrial activities served by the N28

Social and Community Facilities

- Schools in the vicinity or located on the N28
- Third level educational & research facilities (National Maritime College of Ireland and UCC's Marine Based Research Centre – the Beaufort Laboratory)
- Recreation and Amenity facilities – within Ringaskiddy village and Cork Harbour, including existing and permitted marinas at Monkstown and Cobh
- Land zoned for recreation or amenity use
- Cork Crematorium
- Churches within Ringaskiddy village and Shanbally

Transient Population

- Commuters using the N28
- Passengers of the Ferryport

Other

- Irish Naval Base
- Permitted Developments within Ringaskiddy, or located on the N28

5.3 Receiving environment

Ringaskiddy has a population of circa 480 people. The village consists of a main street running east/west along the N28 with some smaller streets running off the main street to the south. The Port of Cork occupies lands to the north of the N28.

Ringaskiddy is designated as a Strategic Employment Centre and there is a significant presence of large industrial development within the settlement, in addition to the existing Port of Cork terminal. The draft Local Area Plan¹ covering Ringaskiddy notes that, outside the Greater Dublin area, Ringaskiddy has the largest direct investment employment centre in Ireland. It estimates that approximately 8,800 people are employed in the area and notes that many of the top world leading pharmaceutical companies are in Ringaskiddy.

The National Maritime College of Ireland is in Ringaskiddy. University College Cork also has a Marine based research centre located at the east of Ringaskiddy. The research centre opened in July 2015 and has provision for c.135 research and support staff.

Residential amenities within Ringaskiddy and Shanbally include a primary school, churches, convenience shop, bar, restaurant; crèche and community playground. The area has numerous leisure amenities and recreational facilities, including local GAA and athletic clubs, soccer club and golf course. The permitted development will provide a new amenity area at Paddy's Point to the east of the village. The amenity area will provide a replacement pier and slipway, in mitigation for the loss of access to the existing pier and slipway within the Port of Cork's operational area.

Ringaskiddy is connected by road to Haulbowline Island at the eastern end of the village. Haulbowline Island is home to the Irish Navy, the old Irish Steel site and the Coastal Marine Research Centre. A crematorium is located on a small island – Rocky Island - between Haulbowline and Ringaskiddy. Cork County Council has permission to undertake remediation works to the old Irish Steel site and develop a public park on the eastern tip of the Island.

Figure 5.1 provides an aerial view of Shanbally and Ringaskiddy, identifying the main existing industries and community receptors within the area.

Spike Island is situated in the lower Cork Harbour, to the east of Ringaskiddy. Access to the island is currently only possible by boat, with regular tours leaving from Cobh. Spike Island currently offers visitor tours to the military fortification. Strategic plans are being prepared to develop the Island as a more significant tourism and recreational attraction for the Cork area.

Monkstown village is located across the harbour, north-west of Ringaskiddy and the port lands are visible from much of the village. Monkstown village includes an existing 90 berth marina, which has permission for an extension to provide for 280 berths. Monkstown is linked in spatial planning policy to Passage West and Glenbrook and the area is identified as an important residential settlement within Metropolitan Cork. Monkstown is also identified as a significant centre for water based activities.

Rushbrooke Dockyard is located north of the port lands. Whitepoint, Cobh is located to the east of Rushbrooke and is a relatively low density residential area. The port lands form part of the harbour vista from several residential properties at Whitepoint.

Cobh town is located on the opposite side of the harbour to the north, with the main commercial area of the town facing onto the harbour. The town has a steep topography, with many residential areas having a vista of the harbour and the port lands form part of this vista. There are limited views of the port lands from the commercial part of Cobh town.

¹ Draft Ballincollig Carrigaline Municipal District LAP, November 2016 (draft 2016 LAP)



Figure 5.1: Aerial view of Shanbally and Ringaskiddy, identifying the main existing industries and community receptors within the area

The shipping lane (known colloquially as Cobh Road) passes up the middle of the harbour and crosses in front of the town. Cove Sailing Club is located at Whitepoint, and in 2011 was granted planning permission to develop a 74-berth marina.

Cork Harbour is widely used for sailing and leisure boating. Figure 5.2 illustrates the shipping lane, the location of the main sailing and rowing clubs; and sailing racing marks in the Lower Harbour.

Carrigaline is located approximately 5 km to the south west of Ringaskiddy. It is a key residential settlement of approximately 14,757 people². Carrigaline experiences strong commuting to Cork City and Ringaskiddy.

Crosshaven is located to the south east of Ringaskiddy. It is a small settlement with a population of c. 1,700. The strategic planning aim for Crosshaven is to consolidate the settlement and recognise its important economic, leisure, tourism and marine roles within Cork Harbour Area. The main access route from Crosshaven to Cork City is on the N28, via Carrigaline. The Carrigaline LAP has not identified a strong commuting link between Crosshaven and the city.

The permitted development will result in the relocation of some of the Port's current activities from Tivoli and City Quays. The relocation of activities from these sites will provide redevelopment opportunities in the city. In addition to redevelopment of land, the South Docks Local Area Plan has identified the potential for enhanced use of the River Lee for leisure and amenity use when port activities are relocated.

Demographic analysis of the 2006 and 2011 census indicates that the residential population of Ringaskiddy declined by 7% during the inter-censal period (from 514 to 478). Household size in the village is relatively small (at 2.6 in 2011, compared to a county average of 2.8). This may be the consequence of the presence of student housing associated with the NMCI. Population data was not available for the village of Shanbally.

Ringaskiddy and Shanbally are small residential settlements, with a limited housing stock. The 2011 census data states that Ringaskiddy had a total of 241 houses, of which 46 were vacant at the time of the Census (19%); Shanbally had 117 houses, of which 4 were vacant (3%). On Census night, the vacancy rate in Cork County was 15.8% and in the State it was 14.5%.

The vacancy rate in Ringaskiddy suggest that the village does not have a strong housing market in the context of Cork County, which can be explained by the settlement's strategic designation as an area for large scale industrial development. Shanbally would appear to have a stronger housing market, with a vacancy rate significantly lower than the county or state averages.

5.3.1 Residential Receptors

There are no residential properties directly adjoining the Port lands. The residential properties closest to the site of the proposed alterations are those located to the south of the N28 on the main street of the village. There are approximately 173 residential units within 500m of the site.

From Ringaskiddy Port to the Bloomfield Interchange there are approximately 150 dwellings adjacent to the road. From the Bloomfield Interchange to the Dunkettle Roundabout there are approximately another 76 dwellings adjacent to the road.

There is no land specifically zoned for future residential development in either Ringaskiddy or Shanbally, although some small scale residential development may be considered acceptable within areas zoned for town centre / neighbourhood centre.

² Cork County Development Plan 2014 – reference to 2011 Census Data

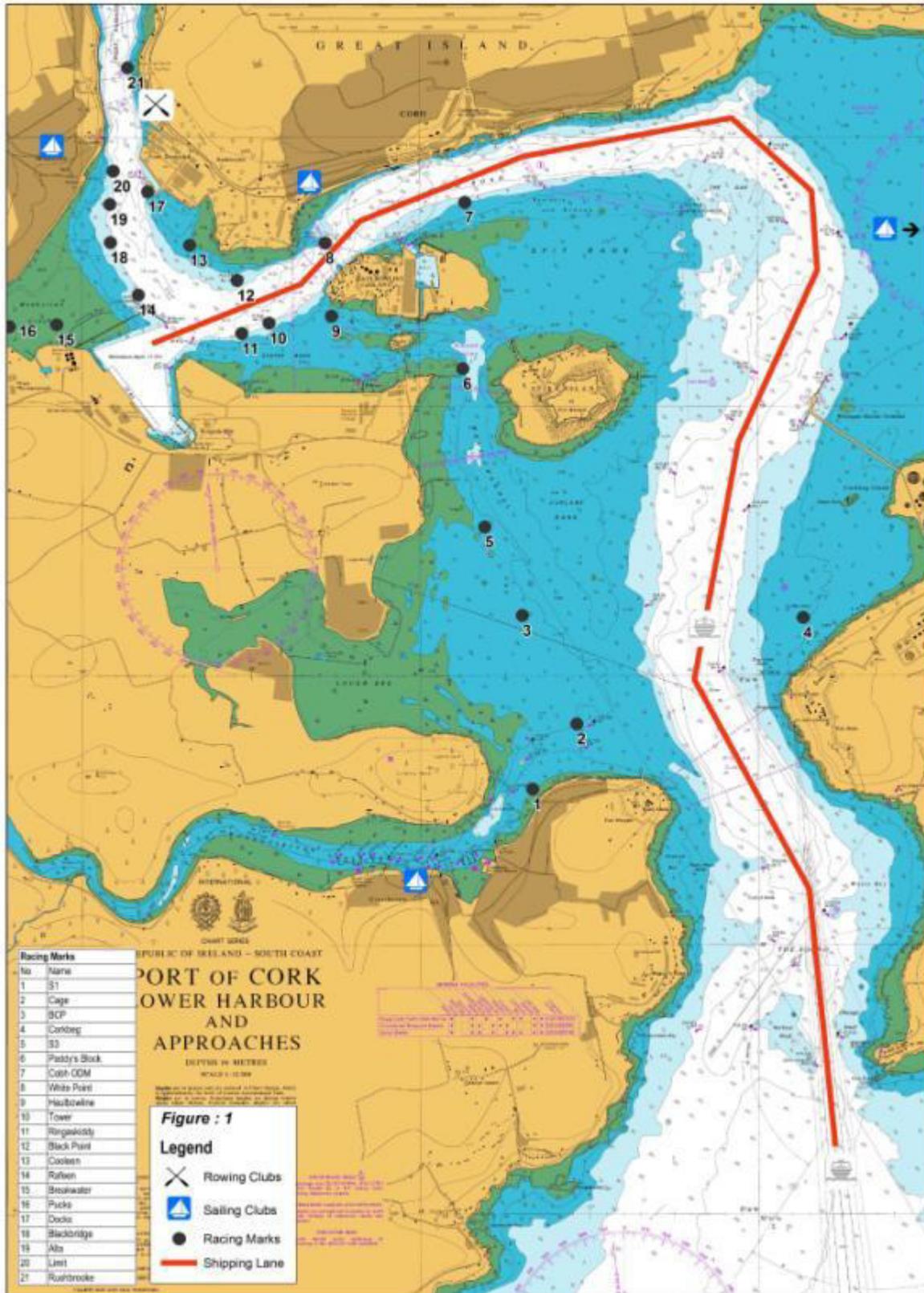


Figure 5.2: Illustrating the shipping lane, the location of the main sailing and rowing clubs; and sailing racing marks in the Lower Harbour

5.3.2 Direct & Indirect Economic Receptors

Ringaskiddy is dominated by industrial development, with the draft 2016 LAP estimating that approximately 8,800 people are employed in Ringaskiddy. There are also significant amounts of land zoned for further employment and industrial development. There have been several major industrial planning applications in recent years and the strategic objective for Ringaskiddy is to support the development of additional industry, include large scale stand-alone industrial developments.

There are a limited number of commercial service companies located within Ringaskiddy. There is one small convenience shop and one restaurant / public house within the village (see plate 5.1).

The primary commercial activities located within Cork Harbour are related directly to Port related activities and fishing. The shipping lane is shown on Figure 5.2. There are approximately 50 commercial fishing boats active in the Cork Harbour area.

Cork Harbour also provides an important economic tourism role. Several marine based leisure activities (including fishing, sailing, kayaking, rowing, bird watching and swimming) take place in the harbour and support the tourism industry. The cruise industry is also an important tourist based economic activity. Cobh cruise terminal currently attracts 60 cruise ships a year. It is an objective of the Port of Cork to continue to promote the cruise business and it has an objective to develop a second cruise berth at Cobh.

Spike Island is an important tourism, cultural and recreational destination for Cork and Cork County Council has a vision to further develop the potential of the island.

Ringaskiddy is an arrival / departure point for tourist using the Cork Roscoff passenger car ferry, which operates seasonally once a week. Tourism facilities within Ringaskiddy are limited, with no tourist routes, walking trails, amenities or heritage / cultural sites of major significance within the village.

In relation to direct employment, the Port of Cork currently employs 22 people at the Ringaskiddy site. There are 43 people employed directly at Tivoli and 7 employed by the Port at City Quays. When the redevelopment of Ringaskiddy port is completed, it is anticipated that employees based at Tivoli will be relocated to Ringaskiddy.

It is projected that the construction phase of the development will result in the equivalent of c. 849 full time direct construction jobs for the full development proposals³. Combined direct and indirect full time equivalent jobs (FTEs) are estimate to be 1,473, with an implied economy wide income support of €58.8m because of the construction process⁴.

³ Table 5.9 of Ringaskiddy Port Redevelopment EIS, Volume 1 - Main Statement (RPS, 2014)

⁴ *Ibid*



Plate 5.1: Ferry Boat Inn, Ringaskiddy

5.3.3 Social and Community Facilities

There is one primary school within Ringaskiddy (Plate 5.2) – Ringaskiddy Lower Harbour National school (approximately 90 pupils) and one primary school at Shanbally – Shanbally National School (approximately 214 pupils). There are no secondary schools in Ringaskiddy or Shanbally. There is one crèche in Ringaskiddy village – located at the entrance to the Ferryview housing estate.



Plate 5.2: Ringaskiddy National School

The National Maritime College of Ireland (NMCI) is situated to the east of Ringaskiddy, and has a total of c. 430 full-time students, as well as running several short-term and commercial courses. University College Cork has a marine research centre located adjacent to the NMCI, with c. 135 research and support staff.

Sports clubs in the area include the Shamrocks Hurling and GAA Club in Shanbally and the Hibernian Soccer Club, also based in Shanbally.

Other leisure activities and amenities in the area include fishing; amenity walking (such as Monkstown seafront, Gobby beach, Ringaskiddy to Loughbeg Road to the Martello Tower on the eastern shore); bird watching; sailing; rowing; swimming; and kayaking. There are 6 boat moorings located in Ringaskiddy. Cork Lower Harbour is an active location for leisure sailing and boating, including several racing events, such as the Cobh Regatta (August); Cork Sailing Week (early July) Ocean to City (late May / early June). Open sea swimming has also become more popular within the harbour and there are several events throughout the year, including Cork City to Cobh swim (September) and Escape from Spike Island (August). The Great Island Kayak Race takes place in December / January, but this race circumnavigates Cobh Great Island and does at any point cross the shipping lane.

Recreational lands within the permitted development boundary include Ringaskiddy pier and slipway, used by small craft and an area of cleared scrub to the east of Ringaskiddy Basin, regularly used on an informal basis for walking. The pier and slipway are used to access 6 moorings located at Ringaskiddy. The pier and slipway remain accessible, but will be closed as part of the permitted development; the location of the moorings will remain unchanged. The development of Paddy's Point Amenity Area is included as part of the first phase of the permitted redevelopment works, and will be constructed before access is closed off to Ringaskiddy pier and slipway.

Access to the cleared scrublands to the east of Ringaskiddy Basin is no longer available because advanced works associated with the permitted development has fenced this area off. Development of Paddy's Point Amenity Area under Phase 1A will occur in mitigation for the loss of access to all of these areas.

The port lands also include a Sculpture Garden, which forms part of the landscaping associated with the ferry terminal building and this is to be relocated as part of the permitted development.

A community playground (plate 5.3) was opened in May 2015 and is located on lands immediately adjacent to the boundary of the Port's operational area (as identified in Figure 5.1).



Plate 5.3: Ringaskiddy Community Playground

Ringaskiddy has one church, Ringaskiddy Catholic Oratory, which is directly opposite the existing entrance to the Port of Cork (see Plate 5.4). The Church of the Immaculate Heart of Mary, Shanbally is located c. 1.45 from the permitted development boundary, adjacent to the N28. The island crematorium is located at Rocky Island – to the east of Ringaskiddy.



Plate 5.4: Ringaskiddy Catholic Oratory Church

There is a small amount of open space zoned within the village of Ringaskiddy, designated as providing a buffer zone between existing residential development and adjoining land designated for industrial use. Similarly, in Shanbally, existing recreational and amenity uses (golf courses & playing

pitches) are zoned open space and additional land is zoned open space to act as a buffer zone or to protect the feeding grounds of bird species.

5.3.4 Transient & Other Receptors

Transient receptors that could be impacted by the permitted development and proposed alterations include commuters on the N28 from Carrigaline into Cork City; and passengers of the Cork to Roscoff service, which caters for a maximum of 2,400 passengers and 650 cars.

Other receptors in the area include the Irish Naval base at Haulbowline Island, accessed via a bridge from the east of Ringaskiddy.

5.4 Impact Assessment

The EIS for the development permitted in May 2015 provided an assessment of the potential impact of the redevelopment of Ringaskiddy port. An Bord Pleanála's decision of May 2015, permits the redevelopment of port facilities, subject to the Schedule of Mitigation measures presented at the Oral Hearing, as further amended by the conditions of the Board's permission. The Schedule of Mitigation measures and conditions commit the permitted development to the following measures:

- Provision of Paddy's Point Amenity Area, including landscaped area a new pier and slipway;
- Relocation of the Sculpture Garden;
- Restriction on construction to ensure safe access and adequate Health & Safety measures are in place;
- Implementation of Pest Management measures;
- Provision of a planning gain contribution, not less than €1m, to enhance the public realm of Ringaskiddy.

The assessment in this EIS is focused on the proposed alterations to the permitted development, in the context of the final Schedule of Mitigation measures and the planning conditions of the extant permission. Impacts which have already been assessed are therefore not reconsidered unless altered in any way by the proposed alterations. The proposed alterations are described in detail in Chapter 3 Project Description. For the purposes of assessment of the impact on the Human Environment the proposed alterations are categorised as being alterations to:

- Landside container handling
- Main Berth and Mooring Dolphins, including dredging and dumping at sea
- Entrance and interchange area
- Maintenance, office and customs building

The impact of each of these is considered in the context of Economic Activity; Social Considerations; Land Use; Health & Safety, Disposal at Sea and Cumulative Effects.

5.4.1 Economic Activity

Landside container handling

The proposed landside container handling alterations will result in an alteration to the method for the logistical handling of containers on the quay side. The alteration will not influence the quantum of containers that may be handled, nor on the number of employees required to operate the landside container handling equipment. There is, therefore, no impact on direct employment associated with the proposed alterations.

The proposed alterations to the landside container handling equipment will result in cost-savings to project, improving the financial viability and economic efficiency of the development. The proposed alterations will, therefore, have a positive impact on the direct economic activity of the Port services.

The construction process will be slightly different, as there will be Rail Mounted Gantry cranes (RMGs) and Straddle Carriers (SCs), instead of Rubber Tyred Gantry cranes (RTGs). This alteration will have an imperceptible impact on the economic impacts associated with the construction process, with investment targeted more towards SCs and RMGs, rather than the RTGs. The alterations will not have any effect on the quantum of trade through the Port. As such, there will be no impact on indirect economic activity.

The proposed landside container handling alterations do not introduce any additional direct or indirect negative impacts in relation to economic activity during either the construction or operational phase of the development.

Main Berth and Mooring Dolphins

The alterations to the main berth (container berth 1) and mooring dolphins are proposed to facilitate efficient use of the berth, following identification of operational restrictions during the detailed design process. In addition, the proposed alteration facilitates the development of the berths at Ringaskiddy East in two phases.

The proposed alterations do not in themselves have any effect on construction, operational, or indirect Economic Activity when compared with the permitted development. The scheduling of the construction phasing will be different than originally envisaged, as the first phase is to be divided into Phase 1a and 1b. However, the totality of the construction works required remains broadly similar to the permitted development. There may be minor increases in construction related employment associated with the additional dredging and dolphin construction, which will have an imperceptible to minor positive impact on direct economic activity during the construction phase.

During the operational phase, the proposed alterations will provide substantial cost-savings in the early phase of the redevelopment. The alterations to the main berth will mean that the construction of the second berth can be deferred to a later phase in the timeline of the permitted development. This will reduce the level of initial investment required before the container trade can be relocated from Tivoli. This will have a positive short term economic impact for the Port of Cork, improving the economic viability of the infrastructure investment.

In a 'do-nothing' scenario, where the development proceeds as currently permitted, there may be a negative impact on direct and indirect economic activity, because of the logistical restrictions associated with the permitted design, and the higher initial investment costs associated with the construction of 2 berths in the first phase of the redevelopment.

The proposed alterations to the main berth and mooring dolphins do not introduce any negative direct or indirect impacts in relation to economic activity during either the construction or operational phase of the development.

Entrance and interchange area

The alterations to the entrance and interchange area have been proposed to facilitate efficient operation of the Straddle Carrier system and will not change the volume of trade that may be handled by the Port. The alterations will not change economic activity associated with either the construction or operational phase of the permitted development. The alterations to the entrance and interchange will not result in any indirect effects on economic activity, as there will be no change to the volume of trade handled by the Port.

The proposed alteration to the entrance and interchange area do not introduce any negative direct or indirect impacts in relation to economic activity during either the construction or operational phase of the development.

Maintenance, office and customs building

The proposed alterations to the maintenance, office and customs building are to provide a space fit for purpose to maintain the Straddle Carriers, and consolidate the other uses of Customs, Border Control and Agriculture Inspection Facilities.

During the construction phase, there will be a minor positive impact on economic activity associated with the development of the additional maintenance shed.

During the operational phase, the nature of the maintenance works associated with container handling operations will be different from the permitted development, as they will be focused on the 15 straddle carriers, and 2 Rail Mounted Gantry (RMG) cranes, rather than the permitted RTGs, and associated container handling equipment. The proposed alteration does not change the overall scale of maintenance that will be associated with container handling operations and it is not envisaged that there will be any change in the number of people to be employed related to maintenance works.

Similarly, the consolidation of the Customs, Border Control and Agriculture Inspection Facilities do not change the nature or scale of work involved. The proposed alteration will provide more suitable and comfortable facilities, but there is no change envisaged to any employment associated with these activities

The proposed alterations to the maintenance, office and customs building do not introduce any negative direct or indirect impacts in relation to economic activity during either the construction or operational phase of the development.

5.4.2 Social Considerations

Social considerations relate to whether the development will change patterns and types of activity. In this context, it is necessary to consider potential impacts on recreation and amenity; and on non-commercial activities that may be affected by the proposed alterations. Potential social and community receptors have been identified as being: residential population; schools; third level education and research facilities; childcare facilities; churches and cemeteries; and recreation and leisure amenities.

Impacts associated with the permitted development were identified as the relocation of the Sculpture Garden; loss of access to the existing pier and slipway; loss of access to the informal walk at Ringaskiddy East; a slight increase in the distance from the existing 6 moorings to the new pier and slipway; and loss of access to a sailing race marker within the Port's operational area.

No other impacts on social considerations were identified and it was concluded that the then proposed (now permitted) development would not result in the loss of any sailing grounds within the Lower Harbour.

Mitigation measures proposed for the permitted development were the development of Paddy's Point Amenity area and the relocation of the sculpture garden. In addition, the planning permission requires a community gain contribution toward enhancing the public realm for Ringaskiddy village. Realisation of those mitigation measures enshrined in the extant approval for the Ringaskiddy Port Redevelopment development will not be impacted by the proposed alterations.

The following assessment considers whether the proposed alterations will have any additional impact on social considerations.

Landside container handling

The proposed alterations will result in no material changes to the construction methods associated with the works to provide for RMG cranes. No construction impacts on social considerations have been identified.

During the operational phase, the proposed alterations to the landside container handling will result in the use of mobile Straddle Carriers &RMGs (instead of RTGs) and the provision of a maintenance shed for the purposes of maintaining the Straddle Carriers. The nature of the container handling will not impact on the overall quantum of trade throughput at the Port, or the level of traffic entering or exiting the Port. All the container handling activities will take place within the boundary of the Port of Cork's operational area and will not have any direct impact on social considerations, such as recreation and leisure amenity, education facilities, or churches.

The Ringaskiddy Community Playground has been developed since the original permission was granted (see Plate 5.3 and Figure 5.1). The playground is adjacent to the Port of Cork's site boundary and within 250m of the proposed Maintenance Shed. There are no public safety implications associated with the operation of the container handling or maintenance shed – as the Port of Cork is a secure site; and there is no connection from the playground into the operational area. Noise attenuation barriers are now in place at the boundary of the Ports lands, providing a noise barrier and a visual screening between the playground and the Port operational area. The playground, by its nature, is an active and animated environment and does not rely on low baseline noise for its use. The proposed alterations to the landside container handling system will have no impact on the community playground.

The proposed alterations to the landside container handling do not introduce any negative direct or indirect impacts in relation to social considerations during either the construction or operational phase of the development.

Main Berth and Mooring Dolphins

The proposed alterations at the main berth (container berth 1) do not impact on landside features and therefore there is no effect on any landside social considerations, such as recreation and leisure amenity, education facilities, or churches, during the construction or operational phases.

In terms of seaward impacts, the alterations do not result in any change to the quantum of ships to be handled by the Port, or to any shipping movements within the harbour. Therefore, the proposals will not impact on the use of the harbour for leisure, tourism or other commercial activities during the operational phase. Potential construction impacts related to an increased duration of dredging and disposal at sea operations are considered in section 5.4.5.

The proposed alterations to the main berth and mooring dolphins do not introduce any negative direct or indirect impacts in relation to social considerations during either the construction or operational phase of the development.

Entrance and interchange area

While the proposed alterations amend the layout of the entrance and interchange area, the nature and scale of the associated construction works are unchanged. The construction phase of the proposed alterations to the entrance and interchange area will, therefore, have no impact on social considerations.

The alterations to the entrance and interchange area have been proposed to facilitate efficient operation of the Straddle Carrier system and will not change the volume of trade that may be handled by the Port. The alterations will not change the level of traffic entering or exiting the site, or compliance with Mobility Management restrictions, enshrined in the conditions of the permitted development.

The proposed alterations to the entrance and interchange area do not introduce any negative direct or indirect impacts in relation to social considerations during either the construction or operational phase of the development.

Maintenance, office and customs buildings

As noted above, the proposed alterations to landside container handling will require the provision of a Maintenance Shed, fit for purpose to maintain Straddle Carriers and no construction or operational negative impacts have been identified. Also, as noted, the consolidation of the Customs, Border Control and Agriculture Inspection Facilities do not change the nature or scale of work involved during the operational phase. Therefore, the proposed alterations will not have any impact on social considerations during the operational phase.

There will be an imperceptible difference between the construction of the permitted maintenance building and the proposed alteration to the 'Custom's Building. Accordingly, no negative construction impacts on social considerations have been identified.

The proposed alterations to the maintenance office and customs buildings are within the Port operational area and will not introduce any negative direct or indirect impacts in relation to social considerations.

5.4.3 Land Use

The proposed alterations all fall within the landholding of the Port of Cork within lands and water used for 'port operations'. There are, therefore, no potential impacts on 'Land Use' during either the construction or operational phases, because of the proposed alterations, as the lands and water involved are all existing port operational areas.

The proposed alterations will not introduce any negative direct or indirect impacts in relation to land use during either the construction or operational phase of the development.

5.4.4 Health & Safety

The proposed alterations will not result in any change to the health & safety procedures or requirements associated with either the construction or operational phase of the development. The proposed alterations will not involve any inherent increase in construction health and safety risk over the existing permitted design. Construction Health & safety will be addressed within the Construction Management Plan which will take account of the final permitted design and the proposed alterations.

The operational phase of the redevelopment is guided by national health & safety legislation. The proposed alterations will not involve any inherent increase in health and safety risks over the permitted development.

None of the proposed alterations introduce any additional direct or indirect negative impacts in relation to health & safety during either the construction or operational phase of the redevelopment.

5.4.5 Disposal at Sea

The construction process for the proposed alterations will involve dredging and associated disposal at sea of dredged materials, as described in the project description. The potential impacts on social considerations relate to tourism; and recreation & amenity use of the harbour and Western Celtic Sea.

The proposed alterations will result in a minor increase in the area to be dredged, but do not result in a significant extension to the proposed dredging programme. Dredging will not take place during the months from May to August (inclusive). Dredging activity will therefore take place outside the season for the main established leisure events that occur in the Lower Harbour – namely Cobh Regatta (August); Cork Sailing Week (early July); Ocean to City (late May / early June); or escape from Spike Island (August).

It is anticipated that the additional area to be dredged will result in an additional five days of vessel movements between the dredging and disposal sites. This level of increased shipping will be

imperceptible in the context of existing commercial shipping activity in the Lower Harbour and will not result in any impact on tourism, or recreation and leisure amenity use of the harbour and Western Celtic Sea.

5.4.6 Cumulative Effects

The significant proposed developments which may have a cumulative effect in combination with the proposed alterations include the following:

- **Road Infrastructure:** M28 Upgrade and Dunkettle Interchange Improvements;
- **Tourism / State Infrastructure Developments:** proposed Cobh Cruise Berth; Spike Island Masterplan; Martello Tower Site Reprofiling
- **Industrial / Commercial Developments:** range of application for expansion of existing and new commercial and industrial activities in Ringaskiddy (such as Indaver; GE Healthcare; DePuy Turbines)
- **Leisure / Amenity Developments:** Marina at Whitepoint, Cobh, Marina at Monkstown;
- **Residential:** Shannonpark Masterplan site

The potential Human Environment cumulative effects identified for the permitted development related to:

- A positive impact on the public realm, due to the combined plans for Haulbowline Island and Paddy's Point.
- A positive impact on public amenity due to the then proposed development of the community playground and the removal of traffic from the main street of the village.
- A positive impact on the economic vitality of Cork and its region because of employment expansion associated with Port activities and proposed industrial / commercial developments.
- Potential for concentrated increase in commercial shipping within the Lower Harbour, should construction dredging activity for Monkstown Marina and the proposed Ringaskiddy Port redevelopment coincide. Any cumulative effect was identified as being very short term, as Port related construction dredging was anticipated to be complete within 20 days.

No cumulative effects have been identified in any of the Human Environment categories of Economic Activity; Social Considerations; Land Use or Health & Safety because of the proposed alterations. Impacts related to disposal at sea of additional dredged material will be imperceptible.

Having reviewed the significant proposed developments listed above in context of the proposed alterations, no further potential cumulative effects have been identified, nor have any changes to the cumulative effects for the permitted development been identified during either the construction or operational phase of the redevelopment.

5.5 Mitigation Measures

No negative impacts have been identified because of the proposed alterations to the permitted development. Accordingly, no further mitigation measures are required in the context of the Human Environment. The mitigation measures that formed part of the An Bord Pleanála approval of the permitted development of the Ringaskiddy Port Redevelopment therefore do not require any changes and remain entirely appropriate.

5.6 Residual Impacts

No significant residual impacts on the Human Environment have been predicted for the proposed alterations. The extant permission provides for the redevelopment of port facilities, subject to the Schedule of Mitigation and planning conditions. The mitigation measures enshrined in the extant permission for the Ringaskiddy Port Redevelopment remain unchanged by the proposed alterations.

5.7 Conclusion

The assessment of the Human Environment has considered the potential and likely significant effects of the proposed alterations to the human environment baseline of the site and its surrounding environment.

The conclusion of this assessment of the proposed alterations is that these modifications will not result in any significant change to the assessment of effects and conclusions as previously presented in the 2014 EIS for the permitted development. The mitigation measures enshrined in the Schedule of Commitments and conditions of the extant permission remain applicable.