

14 MARINE ECOLOGY

14.1 Introduction

This section of the report considers the potential and likely significant effects of the proposed alterations to the marine aquatic baseline features in context of the parameters of assessment conducted previously. The purpose of this report is to identify and describe any additional likely significant marine ecological effects as a result of the proposed alterations which were not identified in the previous assessment.

14.2 Changes to the receiving environment

The marine ecological features and receptors within Ringaskiddy Deepwater Port where alterations are proposed remain the same as those identified and described in the previous assessment. The proposed alterations include:

- Alterations to the geometry at the southern end of the main berth resulting in a longer berth without any net increase in quay wall construction or area of quay behind the main berthing line;
- Removal of two existing mooring dolphins associated with the Ferry terminal and a landside storm bollard (Refer Figure 15.1);
- Construction of three proposed mooring dolphins will be similar in scale and massing to the existing dolphins; and
- Marine works to be undertaken in the period between September and April inclusive.

Increasing the berth length will result in an increase in the area of the dredging pocket, which will in turn see an increase in depth to -13m in the area concerned. This will result in the removal of 15,000m³ of additional sandy muddy sediment from the dredge pocket which will be disposed of at the licensed dumpsite off Roches Point.

Constructing three mooring dolphins will introduce additional piled structures to the area of proposed redevelopment in proximity to the main berth. These additional piling works shall be undertaken within the period proposed for piling activities associated with the construction of the main berth.

14.3 Impact assessment

14.3.1 Main berth and mooring dolphins

The proposed alterations will result in a small footprint on the seabed of piled structures but will not require any significant reclamation of additional intertidal or subtidal marine habitats. The only change will be an increase in depth of an existing sub-tidal area. Once the pocket has been dredged, a benthic community largely the same as the one currently present and which was described in the previous assessment is very likely to recolonise the area affected. This impact can be described as minor negative to neutral.

The 15,000m³ of additional dredge spoil material arising from these alterations constitutes less than 5% of the proposed disposal volume described in the previous assessment. The potential impacts of disposal was assessed previously and is summarised in chapter 12 of this report. The modelled volume is within the assimilation capacity of the dumpsite and the increase to 320,000m³ is well within the range for which impacts were modelled. Predicted impacts of spoil disposal on benthic and fisheries as identified and described in the previous assessment are not changed by the alterations now proposed.

Constructing three mooring dolphins will introduce additional piled structures to the area of proposed redevelopment in proximity to the main berth. These additional piling works shall be undertaken within the period already proposed for piling activities associated with the construction of the main berth. The additional marine piling is within the envelope of magnitudes of predicted impacts already considered in the previous assessment undertaken in respect of marine ecology.

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14.3.2 Cumulative Effects

When potential construction and operational stage effects are considered for the proposed alterations for potential cumulative marine ecological effects they will not result in any changes to the cumulative effects identified and described in the previous assessment. The construction stage and operational stage activities proposed as part of the alterations are sufficiently separated from any permitted or planned projects and minor in the scale of the Ringaskiddy Port Redevelopment project to avoid potential cumulative effects.

14.4 Conclusion

Having considered the proposed alterations, this report then considered the potential and likely significant effects of the proposed alterations to the marine ecological baseline features in context of the parameters of assessment conducted previously.

This report has identified no additional direct, indirect or cumulative effects not previously identified in the previous assessment. The environmental commitments contained in the Schedule of Commitments relating to marine ecology resources remain applicable and can be successfully achieved.

15 TERRESTRIAL ECOLOGY AND ORNITHOLOGY

15.1 Introduction

This section of the report considers the potential and likely significant effects of the proposed alterations to the ecological and ornithological baseline features in context of the parameters of assessment conducted previously. An allied screening for appropriate assessment exercise has been conducted and that report is enclosed as Appendix 1.

The purpose of this section is to identify and describe any additional likely significant ecological and ornithological effects as a result of the proposed alterations which have not been identified and described in the previous assessment

The purpose of the screening for appropriate assessment at Appendix 1 is to document evaluation and analysis seeking to consider whether or not the proposed alterations are likely to have a significant effect on any European site, individually and in combination with other relevant plans or projects, in view of best scientific knowledge and in view of the conservation objectives of the site(s) concerned.

15.2 Changes to the receiving environment

Floral, habitat and mammal baseline as identified and described in the previous assessment was principally derived from surveys undertaken between 2012 and 2014 as part of the suite of surveys contained in the 2014 EIS. More recent surveys and site visits have also been undertaken –

- Overwintering waterbird counts at low and high tide between December 2014 and March 2015;
- Monitoring of the Common Tern colony at the deepwater berth mooring dolphins in the breeding seasons of 2015 and 2016;
- Otter survey of the shoreline in December 2015; and
- Ecological walkover survey of the location of the proposed maintenance, office and customs building in April 2016.

15.2.1 Landside container handling

The project ecologists have been at the Port a number of times since the previous assessment was concluded (as discussed above) and can verify that habitats of lands within Ringaskiddy Port where alterations to landside container handling are proposed remain the same as described in the previous assessment. That is to say they comprise dry calcareous or neutral grassland with gorse scrub (Heritage Council codes GS1 and WS1 respectively). No protected mammal structures occur here.

There is no change to this aspect of the receiving environment.

15.2.2 Main berth and mooring dolphins

15.2.2.1 Overwintering waterbird survey

Overwintering waterbird counts in 2015/16 replicated the methodology of previous surveys conducted in 2011/12 and 2013/14 to facilitate a direct comparison of results with those obtained previously. Survey revealed similar trends and peak counts at high and low tidal states in the Ringaskiddy Port area.

There is no change to this aspect of the receiving environment.

15.2.2.2 Common Tern colony

Common Tern colony monitoring replicated the methodology of the previous four surveys conducted between 2011 and 2014 to facilitate a direct comparison of results with those obtained previously. Survey revealed a maximum of 76 apparently occupied nests (AONs) in mid-June, and 134 deserted

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nests on 4th July 2015 including 33 with cold eggs. At this time, there were 8 AONs on the island in the nearby Pfizer owned Rafeen Creek Golf Course lake.

The number of nesting pairs in the Common Tern sub-colony at Ringaskiddy DWB was estimated to be around 75 pairs. This is higher than totals in recent years (47-52 pairs in 2014, 48 in 2013 and 45-50 in 2012). Nesting was also recorded at Pfizer Pond, Raffeen Creek, taking the total number of nesting pairs in the Ringaskiddy area to c.80+ pairs in 2015.

Although the number of nesting pairs increased in 2015, the sub-colony at DWB failed to fledge any young, most likely as a result of predation by Grey Herons. This event also occurred the previous year in 2014.

Evidence of an avian predator on abandoned eggs in early July was supported by reports from a local birdwatcher who observed two Grey Herons within the colony in late-June. Failure at the Pfizer Pond followed high spring tides on two occasions which coincided with both the first clutches and any repeat nesting attempts.

The colony remains active in the operational port and is under threat of predation, although as of early July 2016 no significant predation by herons had occurred. There is no material change to this aspect of the receiving environment.

15.2.2.3 Otter survey

Otter survey was conducted along the southern shoreline of Monkstown Creek, at the Training Wall and ADM Liquid Jetty, in the Deepwater Port and along the shoreline around Ringaskiddy East, towards the National Maritime College of Ireland and extending to Paddy's Point.

Survey revealed no new otter couches or holts, but spraint and tracks were observed confirming that otter still uses Ringaskiddy.

There is no change to this aspect of the receiving environment.

15.2.3 Entrance and interchange area

The habitats of lands within Ringaskiddy Port where alterations to the entrance and interchange area are proposed remain the same as described in the previous assessment. That is to say they comprise artificial surfaces and scattered trees/parkland on amenity grassland (Heritage Council codes BL3, WD5 and GA2 respectively). No protected mammal structures occur here.

There is no change to this aspect of the receiving environment.

15.2.4 Maintenance, office and customs building

The habitats of lands within Ringaskiddy Port where the maintenance, office and customs building is proposed remain the same as described in the previous assessment. That is to say they comprise artificial surfaces and scattered trees/parkland on amenity grassland (Heritage Council codes BL3, WD5 and GA2 respectively). No protected mammal structures occur here.

There is no change to this aspect of the receiving environment.

15.3 Impact assessment

15.3.1 Landside container handling

Construction phase

For the purposes of an assessment on flora and fauna, no material change exists between constructing the permitted landside container handling area and the proposed alterations. An area of dry calcareous grassland with gorse scrub shall be transformed into hardstanding under both scenarios.

Operational phase

The proposed landside container handling alterations will occur in an area already assessed for its effects on terrestrial ecology and ornithology. The proposed alterations are over 200m from the Common Tern nesting dolphins, and 600m from Cork Harbour SPA. This area was previously proposed for general cargo / RoRo and container operations. Changing the landside container operations from RTGs to Straddle Carriers and using more land within Ringaskiddy East to stack containers results in no appreciable difference or permanent effects being predicted.

15.3.2 Main berth and mooring dolphins

Whilst the allied Alterations Report describes in more detail what the proposed alterations comprise, the key aspects in relation to the main berth and mooring dolphins are set out here.

- Alterations to the geometry at the southern end of the main berth resulting in a 6m longer berth without any net increase in quay wall construction or area of quay behind the main berthing line;
- 15,000m³ of additional dredge material to be disposed at sea as a result of the extension of the dredge pocket to the south of the quay wall;
- Removal of two existing mooring dolphins associated with the Ferry terminal and a landside storm bollard (Refer Figure 15.1);
- Construction of three proposed mooring dolphins will be similar in scale and massing to the existing dolphins; and
- Marine works to be undertaken in the period between September and April inclusive.

Construction phase

The storm bollard is the nearest of these structures to be removed, 120m (and partially shielded) from the deepwater berth dolphins upon which the Common Tern colony nest. A clear view occurs from the middle dolphin to be removed, at 135m. The furthest seaward dolphin is 150m from the nearest nesting dolphin.

The replacement dolphins and walkway infrastructure will be, at their closest point, 110m from the nearest nesting dolphin, and with an unobscured view. The new dolphins will be located at 110m, 130m and 155m from the nearest nesting dolphin. That being so, two of the new structures shall be located further away from the nearest nesting dolphin than their equivalent existing structures.

The approved design quay wall of Ringaskiddy East is 150m from the nearest nesting dolphin. The proposed alteration design quay wall is 130m from the nearest nesting dolphin.

The area where replacement dolphins are to be located is part of the main feeding area for terns within the dredged deepwater port basin, but equally feeding also occurs widely beyond the basin in the wider harbour.

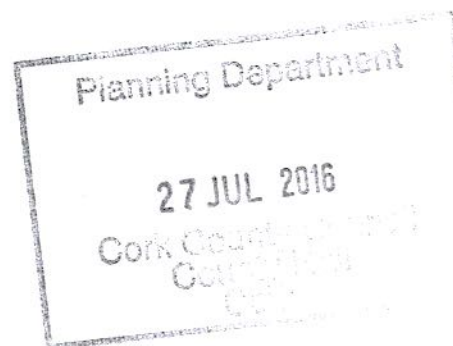




Figure15.1: Illustrating the three dolphins to be removed

Within the context of the parameters of assessment conducted previously, construction of the main berth is considered to be sufficiently screened from the nesting dolphins by existing infrastructure including the ferry terminal building, passenger gangway and mooring infrastructure, which results in obscured views to and from Ringaskiddy East. The proposed alterations require marine disassembly and construction in full view of the tern colony.

The conservation objective for Common Tern in Cork Harbour SPA is to "maintain the favourable conservation condition of Common Tern in Cork Harbour SPA, which is defined by the following list of attributes and targets". Those six attributes and targets are described in the allied screening for appropriate assessment report accompanying this Environmental Report, at Appendix 1. Of these, the target for two (breeding population abundance and productivity rate) is "no significant decline". For disturbance at the breeding site, the target is that "human activities should occur at levels that do not adversely affect the breeding common tern population".

Having been subject to significant predation for the past two years, Common Tern is under a degree of pressure in Cork Harbour. The species is however very resilient, and it is of note that the colony is located in and adjacent to an operational Port. The colony currently co-exists alongside the Port's operations including daily human and shipping presence on the quayside, periodic maintenance dredging, and the amenity and commercial use of the shoreline, basin and channel.

Works in relation to the approved access road are screened from the colony. The proposed alterations require marine disassembly and construction in full view of the tern colony, as described above. It is possible that if these marine works were to be undertaken within the Common Tern breeding season, a loss of attractiveness of the nest site would occur. This will not however occur, as all permitted dredging and disposal of dredged material at sea is restricted to the period between September and April inclusive. Additional dredging under the proposed alterations will also occur in this period, increasing the total quantum of dredging to 320,000m³. The removal of existing and construction of new marine

structures will also occur in the period between September and April inclusive. The breeding tern colony will not be present. No appreciable or permanent effects are predicted.

Operational phase

Once construction is completed, potential effects relate only to operational port activity. The proposed main berth and mooring dolphins are located 600m south of the ADM Liquids Jetty, the intertidal mussel bank and 800m south of the Training Wall and Cork Harbour SPA. These locations are where the overwintering population of waterbirds are chiefly recorded roosting and feeding.

Potential operational effects upon the Common Tern colony have been fully considered in the previous assessment, and conditions attached to the permission granted to ensure no likely significant operational effects.

No new or additional appreciable or permanent effects are predicted as a result of the new mooring dolphins and the altered quay wall design.

15.3.3 Entrance and interchange area

Construction phase

For the purposes of an assessment on flora and fauna, no material change exists between constructing the permitted entrance and interchange area and the proposed alterations. An area of artificial surfaces and scattered trees/parkland on amenity grassland shall be transformed into hardstanding in both scenarios.

Operational phase

The proposed alterations to the entrance and interchange area are 470m from the Common Tern nesting dolphins, and 1.2km from Cork Harbour SPA. Potential operational effects under the headings of disturbance, increased predation risk and indirect habitat loss have been considered in the previous assessment. Changes to the permitted layout results in no appreciable differences or permanent effects being predicted.

15.3.4 Maintenance, office and customs building

Construction phase

For the purposes of an assessment on flora and fauna, no material change exists between constructing the permitted entrance and interchange area and the proposed alterations. An area of artificial surfaces and scattered trees/parkland on amenity grassland shall be transformed into hardstanding in both scenarios.

Operational phase

The proposed alterations to the entrance and interchange area are 450m from the Common Tern nesting dolphins, and 1.3km from Cork Harbour SPA. Potential operational effects under the headings of disturbance, increased predation risk and indirect habitat loss have been considered in the previous assessment. Changes to the permitted layout results in no appreciable differences or permanent effects being predicted.

15.3.5 Cumulative Effects

When potential cumulative construction and operational stage effects are considered for the proposed alterations they will not result in any changes to the cumulative effects predicted in the previous assessment.

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The construction stage and operational stage activities proposed as part of the proposed alterations are sufficiently separated from any permitted or planned projects and minor in the scale of the Ringaskiddy Port Redevelopment project to avoid potential cumulative effects.

15.5 Conclusion

Having considered the proposed alterations, this report then considered the potential and likely significant effects of the proposed alterations to the ecological baseline features in context of the parameters of assessment conducted previously.

The screening for appropriate assessment document at Appendix 1 documents the evaluation and analysis seeking to establish whether or not the proposed alterations are likely to have a significant effect on any European site, individually and in combination with other relevant plans or projects. It has been prepared in view of best scientific knowledge and in view of the conservation objectives of the site(s) concerned.

This report and the allied screening for appropriate assessment report at Appendix 1 have identified no additional direct, indirect or cumulative effects not identified in previous assessment. The environmental commitments contained in the Schedule of Commitments relating to terrestrial ecology and ornithology remain applicable and can be successfully achieved.

16 CONCLUSION

An assessment of the potential direct, indirect and cumulative effects of the proposed alterations to approved development at Ringaskiddy Deepwater Port on the environment has been completed. It has considered the potential and likely significant effects of the proposed alterations under the headings of:

- Planning Policy
- Human Environment
- Cultural Heritage
- Landscape and Visual
- Transport
- Noise and Vibration
- Air Quality and Climate
- Soils and Geology
- Coastal Processes
- Water Environment
- Marine Ecology
- Terrestrial Ecology and Ornithology

A screening for appropriate assessment has also been completed. Overall, the environmental assessment has concluded that the proposed alterations do not introduce any direct, indirect or cumulative significant effects upon the environment, when compared to the previous assessment and the project for which planning permission has already been granted, including the conditions, restrictions and Schedule of Environmental Commitments therein.



APPENDIX 1: SCREENING FOR APPROPRIATE ASSESSMENT REPORT