



An
Bord
Pleanála

Inspectorate Report - Appropriate Assessment ABP 303726(A)-19

Development

Trinity Warf: a mixed use urban quarter development comprising of a 6 story hotel, multi-story car park, residential apartments, retail, cultural and events building, a 64 berth marina, and pedestrian walkway

Location

Wexford Town and Harbour

Local Authority

Wexford County Council

Type of Application

Application for approval made under Section 177(AE) of the Planning and Development Act, 2000 (local authority development requiring appropriate assessment)

Inspectorate Ecologist

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1.0 Introduction

- 1.1. Wexford County Council is seeking approval from An Bord Pleanála to undertake a mixed use development comprising a new urban quarter to be created on an existing 3.6 ha brownfield site southeast of Wexford Town Centre. The proposed scheme will comprise a 5.47 ha development including a new access road, junction on Trinity Street, a marina and a boardwalk link to Paul Quay to the north. The mixed-use site will also accommodate a mix of office, leisure and residential development and will include a 64-berth marina with aspects of the development partially located within the Wexford Harbour and Slobs Special Protection Area (SPA) and the Slaney River Valley Special Area of Conservation (SAC). Raven Point Nature Reserve SAC and Raven SPA are also within the extents of Wexford Harbour and require consideration. A Natura Impact Statement (NIS) and application under Section 177AE was lodged by the Local Authority on the basis of the proposed development's likely significant effect on these European sites.
- 1.2. Section 177AE of the Planning and Development act 2000 (as amended) requires that where an appropriate assessment is required in respect of development proposed by a local authority, the authority shall prepare an NIS and the development shall not be carried out unless the Board has approved the development with or without modifications. Furthermore, Section 177V of the Planning and Development Act 2000 (as amended) requires that the appropriate assessment shall include a determination by the Board as to whether or not the proposed development would adversely affect the integrity of a European site and the appropriate assessment shall be carried out by the Board before consent is given for the proposed development.
- 1.3. This report details the appropriate assessment, comprising a complete assessment of all aspects of the proposed development that could affect the conservation objectives of European sites and presents precise and definitive conclusions as to the implications for the overall integrity of those sites.

2.0 Proposed Development

- 2.1. The proposed development comprises a new urban quarter with public realm, office space, hotel accommodation, multi-story car parking, cultural and events building

and residential accommodation at a site adjacent to Wexford Harbour. The proposal also includes development within the foreshore comprising the provision of a 64-berth marina and a new boardwalk linking Trinity Wharf with Paul Quay and the Crescent in Wexford Town.

2.2. The existing brownfield site extends over 3.6 ha and is located adjacent to the Dublin to Rosslare railway line. The land is reclaimed and was formerly occupied by a number of industrial uses. The proposed development comprises the following:

- Six storey hotel
- Six storey car park
- Five storey residential building
- Three office buildings
- A two storey cultural performance centre and a two story mixed use building
- New vehicular entrance road on Trinity Street (including railway level crossing)
- A new sheet-piled sea wall around the existing Trinity Wharf site (c.550m overall length) faced along the north-western section with precast concrete panels (c.81m length) and rock armour (for c.62m length) and along the south-eastern section with a rock armour revetment (c.187m length) and exposed sheet-piled walling along the north-eastern side (c.220m length) with ground level across the site raised to typically 3.5m OD Malin.
- Site infrastructure works including ground preparation works, installation of foul and surface water drainage, wastewater pumping station, services, internal roads, public realm and landscape including a public plaza with 1,000m² open performance / events space.
- A pedestrian/cycle boardwalk/bridge (c.187m long) connecting with Paul Quay, with gradual sloped access ramps (max. 1:20 gradient) of c.55m length on Paul Quay and c.24m at the Trinity Wharf development site,
- A 64 berth floating boom marina in Wexford harbour.
- All other ancillary works.

3.0 Natura Impact Statement

3.1. Wexford County Council's application for the proposed development was accompanied by a Natura Impact Statement (NIS, February 2019) which scientifically examined the potential impacts of the proposed development on the European Sites that are designated in the Wexford Harbour area, namely:

- Wexford Harbour and Slobs SPA and
- Raven SPA,
- Slaney River Valley SAC and
- Raven Point Nature Reserve SAC.

The NIS identified and assessed possible adverse effects of the proposed development, alone and in combination with other plans and projects on these European sites in view of the sites conservation objectives. Mitigation measures designed to avoid and/or reduce adverse effects are provided and protocol for implementation and monitoring is also detailed.

3.2. The NIS was accompanied by the following documents (submitted as appendices):

- Drawings of the proposed development
- Trinity wharf marina feasibility study
- Marine benthic assessment
- Winter bird survey report (2015/2016)
- Habitat map
- Invasive species management plan
- Outline environmental management plans
- Marine mammal risk assessment

3.3. Following a request for further information by An Bord Pleanála (24th July 2019), a response document was submitted by Wexford County Council in October 2019 which included an NIS addendum document, addressing specific issues and augmenting the findings of the original NIS submitted with the application. Updated bird survey results from 2018/2019 winter bird surveys and breeding birds (2019)

were submitted as part of the additional information. The NIS, NIS addendum, and accompanying documents, consultations and submissions inform the appropriate assessment undertaken by the Board.

4.0 Consultations and Observations

4.1. Prescribed Bodies

4.2. Department of Culture, Heritage and the Gaeltacht:

The nature conservation related observations and recommendations of the Department related to the following:

- Impacts from the project on the Little tern (*Sterna albifrons*) have not been addressed in the NIS. Cumulative impact of the proposed development in combination with aquaculture in Wexford Harbour and other human disturbance should be assessed. Protective measures such as signage and monitoring of those measures should be put in place.
- Noise impacts at operational stage that may give rise to impacts on the Special Conservation Interest Bird Species. An example of disturbance of roosting Greenland white-fronted geese more than 6kms away is cited, caused by night time fireworks display during the Wexford Opera Festival.

4.3. Bord Iascaigh Mhara (BIM)

Issues raised by BIM related to ensuring the water quality of the Estuary and preservation of the conditions required for aquaculture within Wexford Harbour. While no specific observation was made in relation to European sites, the issues raised are of relevance to the overall ecological functioning of Natura 2000 Network. These included the following:

- Surface water run off pre and post development, sewage pre and post development, risk of discharge of hazardous materials during construction, invasive alien species and alterations to the hydrodynamic regime in the main channel and outer harbour.

- BIM noted that the marina option selected will have the least impact on the hydrology of the harbour and sedimentation of the main channel in and out of the harbour.

4.4. **Observations**

A number of public submissions related to Nature conservation and environmental concerns including the following:

- Concerns regarding interactions with existing mussel cultivation and development within an environmentally sensitive marine environment
- Interference with the natural flow of the River Slaney, sediments and tides due to the installation of the Marina.
- Invasive species such as Japanese Knotweed
- Construction related pollution events
- Fishing and wildlife

5.0 **Appropriate Assessment**

5.1. **The requirements of Article 6(3)** as related to appropriate assessment of a project considered under 177AE of the Planning and Development Act 2000 (as amended) are considered fully in this section. The areas addressed in this section are as follows:

- Compliance with Article 6(3) of the EU Habitats Directive
- Screening the need for Appropriate Assessment
- The Natura Impact Statement and associated documents
- Appropriate Assessment of implications of the proposed development on each European site

5.2. **Compliance with Articles 6(3) of the EU Habitats Directive:** The Habitats Directive deals with the Conservation of Natural Habitats and of Wild Fauna and Flora throughout the European Union. Article 6(3) of this Directive requires that any plan or project not directly connected with or necessary to the management of the

site but likely to have a significant effect thereon, either individually or in combination with other plans or projects shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. The competent authority must be satisfied that the proposal will not adversely affect the integrity of the European site.

- 5.3. The proposed development of Trinity Warf, a mixed-use development in Wexford Harbour is not directly connected to or necessary to the management of any European site and therefore is subject to the provisions of Article 6(3).
- 5.4. **Screening the need for Appropriate Assessment:** The first test of Article 6(3) is to establish if the proposed development could result in likely significant effects to a European site. This is considered stage 1 of the appropriate assessment process i.e. *screening*. The screening stage is intended to be a preliminary examination. If the possibility of significant effects cannot be excluded on the basis of objective information, without extensive investigation or the application of mitigation, a plan or project should be considered to have a likely significant effect and Appropriate Assessment carried out.
- 5.5. The NIS states that the AA Screening Report, prepared by Roughan O'Donovan on behalf of Wexford County Council (WCC), concluded, *in view of best scientific knowledge and the Conservation Objectives of the sites concerned, that, in the absence of appropriate mitigation, the proposed development was likely to have a significant effect on **two European sites** (Slaney River Valley SAC and Wexford Harbour and Slob SPA).* On the basis of that conclusion, WCC, as the Competent Authority at the screening stage, determined that AA was required in order to assess the implications of the proposed development for those sites. However, it is noted that **four sites** have been brought forward for inclusion in the NIS, with two sites, The Raven SPA and Raven Point Nature Reserve only being excluded from the possibility of adverse effects after a more detailed examination of likely significant effects on conservation objectives.
- 5.6. It is noted that the Screening report prepared by Roughan O'Donovan and determination by Wexford County Council was not included in the NIS or supporting documents.

- 5.7. The Feasibility Study (Appendix B of the NIS) includes a preliminary Screening for AA (prepared by RPS). This screening exercise includes European sites within a 15km radius of the proposed development and encompasses 11 European Sites (see Table 1).
- 5.8. Having regard to the information and submissions available, nature, size and location of the proposed development and its likely direct, indirect and cumulative effects, the source pathway receptor principle and sensitivities of the ecological receptors, I can confirm that the only European Sites relevant to include for the purposes of screening for the possibility of significant effects are those within Wexford Harbour, comprising Slaney River Valley SAC and Wexford Harbour and Slobbs SPA, the Raven SPA and Raven Point Nature Reserve SAC, all of which overlap to some degree. Table 2 summarises the likely significant effects in view of the conservation objectives of those sites.
- 5.9. Based on my examination of the NIS and supporting information (including the Feasibly Report), the NPWS website, aerial and satellite imagery, the scale of the proposed development and likely effects, proximity and functional relationship between the proposed works and the European sites, their conservation objectives and taken in conjunction with my assessment of the subject site and the surrounding area, I would conclude that the proposed development (alone) could result in significant effects on four European sites and that Appropriate Assessment is required to determine if adverse effects on site integrity can be ruled out.

Table 1. Summary Table of European Sites considered in Screening for appropriate assessment

Site code	European Site	Distance from proposed development (Km)	Connections (source, pathway receptor)	Considered further in screening Y/N
000781	Slaney River Valley SAC	Within footprint of development	Numerous connections	Y
004076	Wexford Harbour and Slobbs SPA	Within footprint of development	Numerous connections	Y
004019	The Raven SPA	4.5kms but contiguous with Wexford Harbour and Slobbs SPA	Potential pathway	Y
000710	Raven Point Nature Reserve SAC	4.5kms	Potential pathway	Y
002160	Long Bank SAC	10.5kms	No pathway	N
000708	Screen Hills SAC	7.7 kms	No pathway	N
000709	Tacumshin Lake SPA	13.5 linear kms	No pathway	N
0004092	Tacumshin Lake SAC	13.5 linear km	No pathway	N
000704	Lady's island Lake SAC	13.5 linear kms	No pathway	N
004009	Ladys Island Lake SPA	13.5 linear km	No pathway	N
002953	Blackwater Bank SAC	14 Km (by sea)	No pathway	N

Table 2. Screening summary matrix: European Sites for which there is a possibility of significant effects (or where the possibility of significant effects cannot be excluded without further detailed assessment)

<p>Site name</p> <p>Qualifying Interest</p>	<p>Is there a possibility of significant effects in view of the conservation objectives of the site?</p> <p>General impact categories presented</p>		
	<p>Habitat Loss/modification</p>	<p>Water quality and water dependant habitats (pollution)</p>	<p>Disturbance/displacement/barrier effects</p>
<p>Slaney River Valley SAC Estuaries, Mudflats and sandflats not covered by seawater at low tide Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>), Mediterranean salt meadows (<i>Juncetalia maritimi</i>) Water courses of plain to montane levels with the <i>Ranunculon fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation, Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles, *Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>) Freshwater Pearl Mussel Sea Lamprey Brook Lamprey River Lamprey Twaite Shad</p>	<p>Yes</p> <p>Direct impacts on the following habitats: Estuaries Mudflats and sandflats not covered by seawater at low tide</p>	<p>Yes</p> <p>Habitats in close proximity to the development at risk during construction and operation.</p> <p>Potential for impacts to affect the biological communities of habitats: Estuaries Mudflats and sandflats not covered by seawater at low tide</p>	<p>Yes</p> <p>Mobile species which are present within the harbour/ lower River Slaney and species that migrate into the River Slaney for part of their lifecycle</p> <p>Atlantic salmon, Sea Lamprey and River Lamprey Twaite Shad Otter Common (Harbour)Seal</p>

Site name Qualifying Interest	Is there a possibility of significant effects in view of the conservation objectives of the site? General impact categories presented		
Atlantic Salmon Otter Common (Harbour) Seal			
Wexford Harbour and Slobs SPA Special conservation interest (SCI) Bewicks Swan (Annex I) Whooper Swan (Annex I) Greenland White-fronted Goose (Annex I) Light-bellied Brent Goose Shelduck Teal Scaup Red-breasted Merganser Cormorant Oystercatcher Golden Plover (Annex I) Lapwing Sanderling Black-tailed Godwit Bar-tailed Godwit (Annex I) Curlew Black-headed gull Little Tern (Annex I) Additional SCI Wigeon Mallard	Yes Wetland habitat (as above)	Yes Wetland habitats (as above)	Yes Disturbance/displacement of wintering water birds that utilise the wetland habitat around the development (construction/operational phase). Indirect disturbance to birds that may arise from any increase in marine traffic associated with the marina. e.g. Little Tern (Breeding) Indirect disturbance to birds in the wider SPA area from civic events (e.g. fireworks and impacts on roosting Greenland white fronted geese).

Site name Qualifying Interest	Is there a possibility of significant effects in view of the conservation objectives of the site? General impact categories presented		
Pintail Goldeneye Little Grebe Great Crested Grebe Grey Heron Coot Knot Dunlin Redshank Lesser Black-backed Gull Wetland and Waterbirds			
The Raven SPA Special conservation interest (SCI) Greenland White-fronted Goose (Annex I) Common Scoter Red-throated Diver Cormorant Grey Plover Additional SCI Sanderling Wetland and Waterbirds	No Separation distance No change in wetland habitat	No Separation distance	Yes Indirect disturbance from civic events (e.g. noise/ fireworks and effects on roosting Greenland white fronted geese)
Raven Point Nature Reserve SAC Mudflats and sandflats not covered by seawater at low tide	Uncertain Changes to sediment pattern in the wider Wexford Harbour area: Mudflats and sandflats	No Separation distance	N/A

Site name	Is there a possibility of significant effects in view of the conservation objectives of the site?		
Qualifying Interest	General impact categories presented		
Annual vegetation of drift lines Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) Embryonic shifting dunes Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) *Fixed coastal dunes with herbaceous vegetation (grey dunes) Dunes with <i>Salix repens</i> ssp. <i>argentea</i> (<i>Salicion arenariae</i>) Humid dune slacks	not covered by seawater at low tide.		

5.10. I confirm that the sites *screened in* for appropriate assessment are the sites included in the NIS prepared by the project proponent and are as follows;

- Slaney River Valley SAC,
- Wexford Harbour and Slobs SPA,
- The Raven SPA and
- Raven Point Nature Reserve SAC

The potential for significant effects on the conservation objectives of European Sites outside of the zone of influence (5km of the proposed development) can be screened out with confidence because of the scale of the proposed works, the separation distances and the lack of substantive ecological linkages between the proposed works and other European sites.

In reaching the conclusion of the screening assessment, no account was taken of measures intended to avoid or reduce the potentially harmful effects of the project on any European Site.

5.11. **The Natura Impact Statement.** As outlined in Section 3, the application was accompanied by an NIS which examines and assesses potential adverse effects of the proposed development on four European Sites.

5.12. The NIS was informed by the following studies, surveys and consultations:

- A desk top study.
- An examination of aerial photography and maps.
- A multi-disciplinary ecological survey including habitat survey, otter survey and survey for invasive species.
- Wintering bird surveys (2015/16),
- A marine benthic survey
- A marine mammal risk assessment
- Consultations with the National Parks and Wildlife Service.

- 5.13. The NIS (February 2019) concluded that, subject to the implementation of the recommended mitigation measures, the Trinity Warf development alone or in combination with other plans and projects would not result in adverse effects on the site integrity of Wexford Harbour and Slobbs SPA, Raven SPA or Raven Point Nature Reserve SAC. The loss of a small proportion of the marine benthos that forms part of the overall habitats *Estuaries and mudflats and sandflats not covered by seawater at low tide* in the Slaney River Valley SAC due to the installation of the Marina and reinforcement of the existing sea walls was assessed as not being ecologically significant to the overall functioning of these habitats and integrity of the site would not be adversely affected.
- 5.14. A request for further information sought further clarity in relation to loss and monitoring of habitats including *Estuaries and mudflats and sandflats not covered by seawater at low tide* in the Slaney River Valley SAC. Wexford County Council was also requested to provide additional information in response to the NPWS submission as it related to (a) disturbance of the Little Tern (breeding), a Special conservation Interest species of the Wexford Harbour and Slobbs SPA and (b) potential disturbance of wintering waterbirds including Greenland white fronted geese from operational aspects of the proposed mixed use development (such as noise generated from the civic plaza e.g. fireworks displays) and consideration of in-combination effects with current activities in Wexford Harbour.
- 5.15. Having reviewed the NIS, further information report, NIS addendum, supporting documentation and submissions, I am satisfied that together these documents provide adequate information in respect of the baseline conditions, and uses the best scientific information available on European sites, and clearly identifies potential adverse impacts. Details of mitigation measures, how and when they will be implemented are detailed in Section 5 of the NIS. Ecological monitoring is also included for a number of mitigation measures which is in line with best practice. Mitigation and monitoring will be managed by the appointed contractor and an outline construction environment management plan (CEMP) has been drafted which incorporates all mitigation measures detailed in the EIAR and NIS.

I am satisfied that the information is sufficient to allow for a complete assessment of the proposed development (see further analysis below) in view of the requirements

of appropriate assessment and precise and definitive findings can be reached with regard to the implications of the project on European Sites.

5.16. Appropriate Assessment of implications of the proposed development on each European site

The following is an objective scientific assessment of the implications of the project on the relevant conservation objectives of the European sites using the best scientific knowledge in the field. All aspects of the project which could result in significant effects are assessed and mitigation measures designed to avoid or reduce any adverse effects are examined and assessed.

I have relied on the following guidance:

- DoEHLG (2009). Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities. Department of the Environment, Heritage and Local Government, National Parks and Wildlife Service. Dublin
- EC (2002) Assessment of plans and projects significantly affecting Natura 2000 sites. Methodological guidance on the provisions of Article 6(3) and 6(4) of the Habitats Directive 92/43/EC
- EC (2011) Guidelines on the implementation of the Birds and Habitats Directives in Estuaries and coastal zones
- EC (2018) Managing Natura 2000 sites. The provisions of Article 6 of the Habitats Directive 92/43/EEC

5.17. Relevant European sites: The following sites are subject to appropriate assessment.

- Slaney River Valley SAC,
- Wexford Harbour and Slobbs SPA,
- The Raven SPA and
- Raven Point Nature Reserve SAC

A description of these sites and their Conservation Objectives and Qualifying Interests, including any relevant attributes and targets for these sites, are set out in the NIS and outlined in tables 3-6. I have also examined the Natura 2000 data forms

as relevant and the Conservation Objectives *supporting documents* for these sites available through the NPWS website (www.npws.ie).

5.18. **Aspects of the proposed development.** The main aspects of the proposed development that could adversely affect the conservation objectives of European sites include;

- Direct impacts on Annex I habitats through habitat loss and/ or modification as a result of the rebuilding of the sea walls/revetments at Trinity wharf and the installation of the 64-berth marina and boardwalk.
- Impacts to water quality and wetland habitat through construction related pollution events and /or operational impacts (surface water/ fowl water management, invasive species).
- Disturbance and or displacement of wintering water birds due to noise and increased human activity during construction and ongoing disturbance throughout the operational phase. Indirect disturbance of breeding Little Tern due to any associated increase in pleasure boating/ marine activities as facilitated by the new marina and ongoing activities within Wexford Harbour.
- Loss/modification of wetland habitat of significance to wintering birds
- Disturbance, displacement, injury and death of mobile aquatic species (marine mammals, fish, otter) due to construction activities, habitat modification/ fragmentation and barrier effects and ongoing disturbance throughout the operational phase.

5.19. **Tables 3-6** summarise the appropriate assessment and site integrity test. The conservation objectives, targets and attributes as relevant to the identified potential significant effects are examined and assessed in relation to the aspects of the project (alone and in combination with other plans and projects). Mitigation measures are examined, and clear, precise and definitive conclusions reached in terms of adverse effects on the integrity of European sites.

5.20. Supplemental to the summary tables, key issues that arose through consultation and through my examination and assessment of the NIS and further information request are expanded upon in the text below as follows:

- The loss of 2,168m² of marine benthos comprising Annex I estuarine habitat (estuarine muds) 1,547m² of which is inside the Natura 2000 network/European sites is addressed in detail under the heading habitat loss.
- Key issues raised by the National Parks and wildlife Service of the Department related to disturbance of Little Tern breeding colonies and potential effects of civic events on wintering birds in the wider Wexford Harbour area are addressed under the heading disturbance of Special Conservation Interest bird species.
- In combination effects between the Trinity Wharf development, aquaculture and water-based recreational activities are also examined and assessed.
- Issues raised by BIM related to surface water run off pre and post development, sewage pre and post development, risk of discharge of hazardous materials during construction, invasive alien species and alterations to the hydrodynamic regime in the main channel and outer harbour have been comprehensively addressed in the EIAR and NIS and in the mitigation measures proposed. The mitigation measures are effective, reflecting current best practice and can be secured over the short, medium and longer term and the methods of implementation will be through a detailed management plan.

Tables 3-6: Summary of Appropriate Assessment of implications of the proposed development at Trinity Wharf on the integrity of European Sites alone and in combination with other plans and projects in view of the sites Conservation Objectives.

Table 3 Slaney River Valley SAC [000781] Summary of likely significant effects (from screening) <ul style="list-style-type: none"> • Habitat Loss • Deterioration of water Quality and water dependant habitats • Disturbance to Annex II species Conservation Objectives: https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000781.pdf					
Summary of Appropriate Assessment					
Conservation Objective	Targets and attributes (as relevant)	Potential adverse effects	Mitigation measures (including monitoring)	In-combination effects	Can adverse effects on integrity be excluded?
Maintain favourable condition of Estuaries	Permanent area stable /increasing (1905ha) Maintain in natural condition: mixed sediment community type (200ha), estuarine muds dominated by polychaetes and crustaceans community complex (1269ha) sand dominated by polychaetes community complex (27ha). Significant/ongoing disturbance should not exceed 15% of interpolated area of each community type	Loss of 962m ² benthic habitat within SAC designated as Estuary: <i>Estuarine muds dominated by polychaetes and crustaceans community complex</i> 0.005% of total area (max amount that could be permanently lost) Water quality impacts which may affect the biological communities	Mitigation hierarchy followed with least damaging marina location and layout selected. Benthic habitat monitoring Detailed construction and operational mitigation measures designed and integrated into outline CEMP Pollution and sediment control measures, contaminants, Preventative measures integrated. Water quality monitoring (before,	No	Yes The loss of a very small amount of benthic habitat from the Estuary will not affect the overall structure and functioning of this dynamic habitat and there is no obstruction to the functioning of the open water within the navigation channel.

		<p>(construction and operation), sedimentation, construction compounds (Hydrocarbons, cement), sediment contaminants, nutrient enrichment, boat painting/anti-fowling</p> <p>Hydrodynamic modelling showed no changes to sedimentation or flow patterns due to installation of marina and boardwalk</p> <p>Vibration and lighting</p> <p>Invasive species</p>	<p>during and 24 months after construction)</p> <p>No use of organotin paints (TBT) for boardwalk</p> <p>SuDS for management of surface water</p> <p>Lighting restrictions during construction.</p> <p>Low level downward facing lighting selected to minimise light spill</p> <p>Invasive species management plan prepared. Biosecurity Method statement based on current best practice</p> <p>Signage on invasive species risks at marina</p> <p>Ecological Monitoring to be implemented:</p> <ul style="list-style-type: none"> • Benthic habitats • Water quality • Harbour Seal 		<p>No doubt as to the effectiveness or implementation of mitigation measures proposed to prevent adverse effects.</p> <p>Monitoring measures to be implemented as best practice.</p>
Maintain favourable condition of Mudflats and	Permanent area stable /increasing (1027ha)	No loss of area calculated for conservation objective (NPWS estimate of 1027 ha),	As above	As above	Yes.

<p>sandflats not covered by seawater at low tide</p>	<p>Maintain in natural condition estuarine muds dominated by polychaetes and crustaceans community complex (estimated area 587ha), and sand dominated by polychaetes community complex (441ha)</p>	<p>however, a calculated loss of a max of 962m² as part of overall Estuary above =0.009% of this habitat type based on NPWS estimates</p> <p>Other potential impacts as above</p>			<p>No change to the calculated area of this habitat type for the overall SAC.</p> <p>The loss of a very small amount of benthic habitat that was taken to conform with this habitat types as a worst case scenario will not affect the overall structure and functioning of this dynamic habitat.</p> <p>No doubt as to the effectiveness or implementation of mitigation measures proposed to prevent adverse effects.</p>
<p>Maintain favourable condition of Harbour Seal</p>	<p>Species range not restricted Breeding, moult and resting haul out sites maintained in natural condition Human activity levels not adversely affecting population</p>	<p>Marine Mammal Noise Assessment undertaken. Noise arising from construction activities, particularly pile driving, has the potential to cause significant disturbance impacts in seals in the water within 500m. Risk of disturbance to seals hauled out 2-5km away is very low.</p>	<p>Marine Mammal Observer (MMO) – no pile driving if marine mammal within 500m of source sound</p> <p>Pre-start monitoring Ramp up procedure Monitoring and reporting to be sent to NPWS Monthly survey of haul out sites.</p>	<p>No</p>	<p>Yes</p> <p>No doubt as to the effectiveness or implementation of mitigation measures proposed to prevent adverse effects.</p> <p>Monitoring measures to be implemented as best practice.</p>

		<p>Slight increase in marine traffic to utilise marina may disturb /pose risk to seals</p> <p>Impacts on the ecological function of haul-out sites through water quality impacts or the introduction of invasive species.</p>	<p>Signage at marina regarding importance of Wexford harbour for seals, information on how to avoid disturbance</p> <p>Hydroacoustic monitoring Monitoring of haul-out sites</p>		
<p>Restore favourable condition of Sea lamprey, River lamprey, Twaite Shad, Atlantic Salmon.</p>	<p>Extent of anadromy/barriers to migration; Distribution, quantity and quality of spawning habitat; Number and distribution of redds Availability of juvenile habitat; Abundance of individuals at different life stages</p> <p>Water quality</p>	<p>Marina and floating breakwaters in main channel: no significant obstruction to migration of fish No significant change to tidal/flow regime: will not impede movement of migratory fish</p> <p>No suitable spawning habitat impacted</p> <p>Noise and vibration from pile driving: potential to act as a barrier to movement of adult and juvenile fish species (particularly Twaite shad) and risk auditory injury or mortality within the affected area (25% of navigation channel width) Lighting: light spill in darkness affect activity of</p>	<p>Seasonal and timing restrictions for pile driving for the boardwalk, marine and sea wall including no pile driving between 1st Feb to 31st May</p> <p>30 mins soft start/ramp up (for marina/boardwalk piles)</p> <p>Supervising project ecologist, marine mammal observer to be present during construction</p> <p>Detailed construction and operational mitigation measures designed and integrated into outline CEMP Pollution and sediment control measures, contaminants, Preventative measures integrated. Water</p>	No	<p>Yes</p> <p>No doubt as to the effectiveness or implementation of mitigation measures proposed to prevent adverse effects.</p> <p>Monitoring measures to be implemented as best practice.</p>

		diurnal species and vulnerability to night time predators Risks to water quality (as above)	quality monitoring (before, during and 24 months after construction)		
Restore favourable conservation condition of Otter	Distribution and extent of marine habitat available for foraging otter, disturbance and barriers to connectivity.	Effects on fish species during construction have the potential to reduce the total biomass available to otters as food Inappropriate lighting design may cause an effective barrier to connectivity	Mitigation measures that apply for fish protection will ensure no adverse effects on prey available to otter. Pre-construction survey to ensure no otter within 150m of development Lighting restrictions and light management as detailed in the NIS and apply	No	Yes No doubt as to the effectiveness or implementation of mitigation measures proposed to prevent adverse effects. Monitoring measures to be implemented as best practice.
<p>Overall conclusion: Integrity test Following the implementation of mitigation, the construction and operation of this proposed development will not adversely affect the integrity of the Slaney River Valley SAC in view of the sites conservation objectives. No reasonable scientific doubt remains as to the absence of such effects.</p> <p>Note that monitoring is included as best practice and does not imply any uncertainty regarding adverse effects or the effectiveness of any mitigation measures.</p>					

Table 4

Wexford Harbour and Slobs SPA 004076

Summary of likely significant effects (from screening)

- Disturbance to SCI species (distribution and human activities)
- Habitat loss

Conservation Objectives: https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004076.pdf

Summary of Appropriate Assessment					
Conservation Objective	Targets and attributes (as relevant)	Potential adverse effects	Mitigation measures	In-combination effects	Can adverse effects on integrity be excluded?
To maintain the favourable conservation condition of the following wintering waterbirds: Bewicks Swan Whooper Swan Greenland White-fronted Goose Light-bellied Brent Goose Shelduck Teal Scaup Red-breasted Merganser Cormorant Oystercatcher Golden Plover Lapwing Sanderling Black-tailed Godwit Bar-tailed Godwit	Long term population trend is stable or increasing Distribution: No significant decrease in the numbers or range of areas used by waterbird species other than that occurring from natural variation	No potential for adverse effects on population trend No potential for adverse effects of any significance on distribution of wintering waterbirds during construction: Low numbers of birds utilising this area of Wexford harbour Unsuitable habitat (feeding and roosting) in immediate vicinity of development Indirect effects on estuarine muds and prey availability in wider harbour Potential for indirect disturbance effects of outdoor civic events if held	All mitigation measures to prevent water quality impacts and impacts to intertidal muds apply Note: Any outdoor civic events such as concerts or firework displays will require their own license which will have to take account of requirements of EC Habitat Regulations (2011) in relation to Screening for AA etc.	No likely significant in-combination effects. Note: Assessment of activities and existing uses of Wexford Harbour in further information Reduction in area under aquaculture due to the installation of the marina is positive effect overall on the subtidal estuarine habitat	Yes Low number of SCI birds utilise the area identified as zone of influence for project. This was based on best available scientific information on disturbance distances and likely effects: no significant change in numbers of birds or distribution in SPA likely No doubt as to the effectiveness or implementation of mitigation measures proposed to prevent indirect effects.

<p>Curlew Black-headed gull Additional SCI Wigeon Mallard Pintail Goldeneye Little Grebe Great Crested Grebe Grey Heron Coot Knot Dunlin Redshank Lesser Black-backed Gull</p>		<p>during wintering season e.g. fireworks</p>			
<p>To maintain the favourable conservation condition of Hen Harrier (wintering)</p>	<p>Human activities should occur at levels that do not adversely affect the Hen Harrier winter roost population</p>	<p>Hen harrier winter roost sites will not be directly impacted due to distance from calculated zone of influence.</p> <p>Potential for indirect effects of outdoor civic events if held during wintering season e.g. fireworks</p>	<p>As above</p>	<p>No likely significant in-combination effects.</p>	<p>As above</p>
<p>To maintain the favourable conservation condition of Little Tern (Breeding)</p>	<p>Human activities should occur at levels that do not adversely affect the breeding little tern population</p>	<p>No direct impacts on breeding birds during construction or operation or due to distance of development site from the sandbanks utilised by the Little Tern</p>	<p>Signage will be installed at various location in and around the marina highlighting the importance of sandbanks to breeding Little tern and the</p>	<p>No likely significant in-combination effects.</p>	<p>Yes- excluded</p> <p>Low levels of increased boating and marine activities due to shallow and constrained nature of Wexford Harbour</p>

		Potential for indirect effects on the breeding colony caused by any increased leisure boating and activities excluded due to restrictive nature of harbour and no significant increase in marine traffic likely to occur.	significance of the species. No disembarking on the sandbanks		Information boards/signage will be installed at Marina.
Wetlands	The permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 4,241 ha, other than that due to natural patterns of variation	Loss of less than 0.002% of overall wetland habitat within the SPA boundaries. (mix of rocky shore and estuarine muds). Taking into account the dynamic nature of the estuary and the marginal nature of this habitat it is not considered significant in the context of natural patterns of variation within the wider Wexford harbour. The habitat affected is confined to the eastern sea wall at Trinity Wharf and has been shown not to be of any significance for foraging or roosting SCI species.		No likely significant in-combination effects.	Yes The loss of a very small amount of benthic habitat from the Estuary/SPA will not affect the overall structure and functioning of the SPA due to: Low value of habitat to wintering birds at this location Low numbers of wintering birds in the area
<p>Overall conclusion: Integrity test</p> <p>Following the implementation of mitigation, the construction and operation of this proposed development will not adversely affect the integrity of Wexford Harbour and Slobs SPA in view of the sites conservation objectives. No reasonable scientific doubt remains as to the absence of such effects.</p>					

Table 5

The Raven SPA [004019]

Summary of likely significant effects (from screening)

- Disturbance to SCI species (distribution and human activities)
- Habitat loss

Conservation Objectives: https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004019.pdf

Conservation Objective	Targets and attributes (as relevant)	Summary of Appropriate Assessment			Can adverse effects on integrity be excluded?
		Potential adverse effects	Mitigation measures	In-combination effects	
To maintain the favourable conservation condition of the following wintering water birds: Red throated Diver, Cormorant, Common Scoter, Grey Plover, Sanderling, Greenland White-fronted goose	Long term population trend is stable or increasing Distribution: No significant decrease in the numbers or range of areas used by waterbird species other than that occurring from natural variation	As for Wexford Harbour and Slobs SPA: No significant direct impacts on the population or distribution of these species. Indirect impacts may arise due to human disturbance from outdoor civic events if held during the winter such as fireworks (noise and visual disturbance in the wider area)	No specific mitigation required. Any outdoor civic events such as concerts or firework displays will require their own license which will have to take account of requirements of EC Habitat Regulations (2011) in relation to Screening for AA etc.	None predicted	Yes: No direct effects No doubt as to the effectiveness or implementation of mitigation measures proposed to prevent indirect effects.
Wetlands	The permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 42027 ha other than that due to natural patterns	No effect on wetland habitat area No potential for adverse effects on habitat quality or abundance	No specific mitigation required. Measures prescribed for water quality and wetland habitats will	None	Yes: No direct effects No doubt as to the effectiveness or

	of variation		also apply to this site owing to the contiguous and dynamic nature of the estuary and mud and sandflats		implementation of mitigation measures proposed to prevent indirect effects
<p>Overall conclusion: Integrity test Following the implementation of mitigation, the construction and operation of this proposed development will not adversely affect the integrity of The Raven SPA in view of the sites conservation objectives. No reasonable scientific doubt remains as to the absence of such effects.</p>					

Table 6 Raven Point Nature Reserve SAC [000710]					
Summary of likely significant effects (from screening) <ul style="list-style-type: none"> • Habitat modification • Deterioration of water Quality and water dependant habitats 					
Conservation Objectives: https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000710.pdf					
Summary of Appropriate Assessment					
Conservation Objective	Targets and attributes (as relevant)	Potential adverse effects	Mitigation measures	In-combination effects	Can adverse effects on integrity be excluded?
To maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide	The permanent habitat area is stable or increasing, subject to natural processes (73ha) Community types should be maintained in a natural condition: Sand dominated by polychaetes community complex; Estuarine muds dominated by polychaetes and crustaceans community complex.	No direct impacts (>4.6kms distant from the site) Detailed hydraulic modelling shows no likelihood that sedimentation patterns could be significantly affected.	No specific measures required. Mitigation measures proposed and defined in the outline CEMP will ensure that any impacts arising from the various stages of the proposed development will not affect the wider Wexford Harbour area.	None	Yes No direct effects No doubt as to the effectiveness or implementation of mitigation measures proposed to prevent indirect effects.
Overall conclusion: Integrity test Following the implementation of mitigation, the construction and operation of this proposed development will not adversely affect the integrity Raven Point Nature Reserve in view of the sites conservation objectives. No reasonable scientific doubt remains as to the absence of such effects.					

- 5.21. **Habitat loss: Slaney River Valley SAC and Wexford Harbour and Slobs SPA**
- 5.22. The Trinity Wharf site is bounded by the **Slaney River Valley SAC** along much of its perimeter. Works proposed for the sea walls and revetments are therefore partly within the SAC. The proposed 64 berth marina and pedestrian/cycle boardwalk is within the SAC.
- 5.23. The assessment of the potential adverse effects of the project is confined to the Annex I habitats *Estuaries* and *mudflats and sandflats not covered by seawater at low tide*. All other habitats for which the site is designated are outside of the range of possible impact from the project and there is no doubt as to the absence of effects on those qualifying habitats (See summary table 2). The Slaney River Valley SAC incorporates a large estuarine area within Wexford Harbour. Estuaries and intertidal sand and mud flats are particularly well represented in this site, with salinity ranging from full freshwater to full seawater. These habitats are considered to be in favourable conservation status in Wexford Harbour.
- 5.24. The proposed development will lead to the permanent loss of an extremely small percentage (0.005%) total estuary and intertidal mudflat habitat within Wexford Harbour. This permanent habitat loss includes a narrow strip along the existing sea wall and estuary benthos around the seaward perimeter of the site. I note that the final design of the sea wall and revetment has been selected to avoid the need for excavation of the existing site, which contains contaminants originating from its former industrial use. The existing sea wall is in poor condition through much of its extent around Trinity Wharf. The new sea wall will prevent any further infiltration of contaminants into the River Slaney. The other areas that will be affected include a small area at the north-western corner for the boardwalk landing and the areas to be occupied by the steel piles for the boardwalk and marina. I note that the exact method of restraint for the marina will be decided at detailed design and, for the purposes of this assessment it has taken into account the largest surface area possible.
- 5.25. The **maximum** area of Annex I habitat (Estuary) that will be lost is 2,168 m², 621 m² of which is outside the Natura 2000 network and 1,547 m² of which is inside the Natura 2000 network.

- 5.26. Of the 1,547 m² within the Natura 2000 network, 969 m² has been calculated to be within the Slaney River Valley SAC and 999 m² is within the Wexford Harbour and Slobbs SPA (note that there is an overlap of 421 m² between these two areas). In the NIS, the 969 m² within the Slaney River Valley SAC is classified as both “Estuaries” and “Mudflats and sandflats not covered by seawater at low tide” and represents c. 0.005% and c. 0.009%, respectively, of the estimated total area of these habitats within the SAC. I note that the NPWS habitat mapping and conservation objective for *mudflats and sandflats not covered by low tide* does not include the area affected. The project proponent is therefore taking a wider view in relation to the habitat classification.
- 5.27. The community complex of the above habitats was determined by scientific assessment and conforms well to the *Estuarine mud complex*, although there are also elements of the mixed sediment community complex present. This is in line with the NPWS findings on the distribution of this community complex within Wexford Harbour (NPWS 2011) and are described as having low faunal diversity.
- 5.28. The Conservation objective is to maintain the favourable conservation condition of both Estuaries and mudflats and sandflats not covered by low tide, based on the permanent area being stable or increasing and community types being maintained in natural condition. Any permanent loss of Annex I habitat would be considered a significant effect. However, the dynamic nature of Estuaries means that such a small proportion of habitat loss at this location (0.005-0.009 %) will not affect the overall functioning of the site. Targets and attributes set for such dynamic habitat types acknowledge ongoing disturbance and state that this should not exceed **15%** of interpolated area of each community type. While this refers to ongoing activities (as opposed to new proposals) it illustrates the dynamic nature and resilience of these habitats to ongoing activities.
- 5.29. I also note the evaluation of the Aquatic Services Unit UCC (November 2018), on the benthic survey which concluded that the very small levels of permanent habitat loss will not result in an adverse impact on the integrity or functioning of the Slaney River Valley SAC, nor will it cause any habitat fragmentation. *Within that area of the SAC the only habitat designated as a Conservation Objective is Estuaries (1130) and the habitat alterations arising from the development (i.e. mainly changing from soft to hard benthos) will not change this habitat designation.*

- 5.30. During the operation phase of the development, the provision of pump-out facilities coupled with the continued good water movements at the site, will insure no significant adverse impacts from this phase of the project. The displacement of any macroinvertebrate in-fauna around the site during construction will be a temporary moderate impact at the local scale. I also note that long-term changes associated with soft and hard benthos will be largely offset by the provision of additional hard benthic surfaces on piles, restraints and rock-armour which flora and fauna will colonise.
- 5.31. Within the footprint of the marina structure outside of the piles/ restraints, the benthic habitats will be unavailable for mussel farming and will remain in a natural state. The construction of the marina will prevent potential mussel farming in approximately 25,000m² of sea-bed which is not currently licensed. This will improve the quality of the benthic habitat in this area in the long term. This will be a positive impact.
- 5.32. Based on an analysis of the evidence presented, I consider that there will be no adverse effect on the site integrity of the Slaney River Valley SAC as the loss of this very small amount of benthic habitat from the Estuary will not affect the overall structure and functioning of this dynamic habitat and there is no obstruction to the functioning of the open water within the navigation channel.
- 5.33. The Trinity Wharf site is bounded by the **Wexford Harbour and Slobs SPA** along Eastern sea wall. Works proposed for the sea wall at this location are within the SPA and there will be a predicted loss/modification of habitat of ca.2m into the SPA along this perimeter. I note that the extent of the SPA designation does not cover the Trinity Wharf site (terrestrial) and the navigation channel is also excluded from the SPA.
- 5.34. The loss of 999m² of rocky shore dominated habitat and intertidal mud along the seawall at this location has been assessed in the NIS as not significant to the functioning of the SPA (0.002% of overall wetland habitat) in terms of wetland habitat available for SCI bird species.
- 5.35. Having examined the information and data provided I am satisfied that this very minor loss of habitat along the periphery of SPA boundary at the Trinity Wharf site will not affect the overall site integrity of the SPA for the following reasons: the very small amount of habitat affected and the low quality habitat for SPA birds at this

location demonstrated through scientific sampling and assessment (rocky shore and the low faunal diversity of muds). The low quality of the habitat for feeding and roosting at this location is reflected in the low numbers of birds that utilise this area of Wexford Harbour.

5.36. Benthic habitat monitoring

5.37. The 1547m² of estuarine /intertidal mudflat habitats that is predicted to be of permanently lost is a worst-case figure/ maximum that could be affected based on calculations of sea wall dimensions, provisions for the boardwalk and the proposed marina. There is a proposal by Wexford County Council to monitor and record any changes in the intertidal habitats, in terms of habitat lost to the development, particularly mud habitats, in the vicinity of the Project. This proposal is not designed to overcome any uncertainty with respect to the degree of habitat loss, rather it will provide quantitative information to inform the Natura 2000 data collected by NPWS on the site (and part of NPWS's reporting under Article 17 of the Habitats Directive and Article 12 of the Birds Directive). This issue was clarified in the further information and for the avoidance of doubt, benthic habitat monitoring should be carried out as detailed in the NIS and data submitted to the NPWS.

5.38. Disturbance of Special Conservation Interest Bird Species

Wexford Harbour and Slobs SPA and The Raven SPA

5.39. The Trinity Wharf site is bounded by the Wexford Harbour and Slobs SPA along Eastern sea wall. Works proposed for the sea wall at this location are within the SPA and there will be a predicted loss/modification of habitat of 2m into the SPA along this perimeter. The extent of the SPA designation does not cover the Trinity wharf site (terrestrial) and the navigation channel is also excluded from the SPA. Given the contiguous nature of the two SPA designations and the movements of birds between the two sites, the sites are examined together in this section with regard to possible disturbance issues.

5.40. **Wexford Harbour** is of international importance for several species of waterbirds but also because it regularly supports in excess of 20,000 waterbirds during winter. Wexford Harbour and Slobs is one of the top three sites in the country for numbers and diversity of wintering birds. The combination of estuarine habitats, including shallow waters for grebes, diving duck and seaduck, and the farmland of the polders

(the slob), which include freshwater drainage channels, provides optimum feeding and roost areas for a wide range of species.

5.41. **The Raven SPA** extends from north of Rosslare Point to Blackwater Harbour on the coast of Co. Wexford. The seaward boundary of the site extends a maximum distance of approximately 4.5 km from the shoreline to encompass important areas of shallow water utilised by some of the species of special conservation interest. The Raven is an important bird site, being part of the Wexford Slob and Harbour complex and is of critical significance is that it forms the principal night roost for the internationally important Wexford Harbour population of Greenland White-fronted Goose.

5.42. **Potential direct disturbance effects to wintering waterbirds:**

5.43. The potential for the proposed development to cause direct effects of disturbance and displacement on the Special Conservation Interest (SCI) bird species considered in Table 3.2 of the NIS. The potential for adverse effects on all SCI species was excluded for Wexford Harbour and Slob and Raven SPA. This was based on low numbers of SCI birds within a projected disturbance zone of 200m, the lack of suitable habitat in the immediate area of Trinity Wharf (within 200m) for SCI species, habituation of those birds present to visual and noise disturbance in and around the area of Trinity wharf and the navigation channel. The assessment concluded that the proposed development does not have the potential to impact on significant numbers of any of these species and thus could not adversely affect the conservation objectives.

5.44. Factors than can adversely affect the achievement of conservation objectives include, disturbance that could result in the displacement of one or more listed waterbird species, habitat modification and activities that could modify discrete areas within the SPA causing displacement from feeding or roosting areas.

5.45. Two wintering bird surveys have been undertaken (2015/2016 and 2018/2019) which show that the Trinity Wharf site (terrestrial) itself does not support any waterbirds due to the unsuitability of the habitat present and that the northern and eastern edges do not provide foraging or roosting habitat for any significant aggregations of waterbirds except for occasional roosting gulls. A total of 25 species of waterbirds were present within 1km of Trinity Wharf in winter over the course of both survey

periods, 15 of which are SCI for the SPA. Very few individuals occurred within the immediate vicinity (200m) of the Wharf because there is limited suitable habitat. The mudflat at Goodtide Harbour on the southern side of Trinity Wharf supports low numbers of waterbirds (in the context of the numbers occurring in Wexford Harbour from Irish Wetlands Bird Survey data). A study conducted by Mayes (2004/2015) was also relied upon for data on bird usage of Goodtide Harbour, the south training wall and the Wexford Creamery outfall (used as a high tide roost). The most important areas for wintering birds within c. 1 km of the site (but at a distance >250m) were the north and south training walls (roosting/feeding), the ballast structure and the breakwater at Ferrybank (roosting). Data available on the Conservation Objectives supporting documents and Natura 2000 forms support these findings.

- 5.46. The NIS and further information submitted relies on defining waterfowl sensitivity and response impacts based on the Institute of Estuarine and Coastal Studies (University of Hull) guidance report (2009) and their more recent *waterbird disturbance mitigation toolkit* (2013). Given the predicted noise and visual disturbance likely to be generated during the construction phase (e.g. piling within the estuary and along the periphery of Trinity Wharf, general construction noise etc.) and to a lesser degree during the operational phase, a potential zone of influence/disturbance zone of c.200m was defined in which there could be direct and significant disturbance effects. Given the very low number of wintering waterbirds likely to be present within this 200m zone at any time, the modelled dissipation of construction noise, likely habituation of any birds that happen to utilise this area, I accept the evidence presented that there would be no significant displacement of wintering birds within this area of Wexford harbour as a result of the proposed development.
- 5.47. I note that site hoarding along the periphery of Trinity Wharf site during the construction phase will also further reduce visual disturbance to any waterbirds in the vicinity of the development site.
- 5.48. The issue raised by the NPWS in relation to other potential anthropogenic disturbance effects in the wider Wexford Harbour is based a scientific paper presented in the Bird Watch Ireland scientific journal *Irish Birds* (Anthony Fox, Alyn Walsh & Mitch Weegmam. 'Effects of the Wexford Opera fireworks display on roosting Greenland white-fronted geese *Irish Birds*, 41. 2019) which recorded a

significant disturbance event whereby geese roosting at the Wexford wildfowl reserve at night were disturbed by a fireworks display organised for the Wexford Opera Festival which occurs in early November 2017. GPS tagged geese were recorded leaving the night roost and flying out over the Irish Sea in response to the fireworks display which was set up over 6km from the roost site. On this occasion it seems likely that the entire roost of Greenland white-fronted geese were displaced into the air (returning to the roost some 45 minutes later). The paper acknowledges that other similar but less prolonged events did not yield the same level of disturbance and that *duration, and footprint of displays are important*. The proposed development application does not include for any such proposals or comparable anthropogenic disturbance effects.

5.49. Based on my examination of the NIS, wintering bird surveys and NPWS data, no significant decrease in the numbers or range of areas used by wintering waterbird species will occur as result of the proposed development at Trinity Wharf and there will be no adverse effect on the Special Conservation Interests wintering waterbirds of Wexford Harbour and Slobs SPA and the Raven SPA in view of this conservation objective.

5.50. **Indirect Effects: Potential disturbance of breeding Little Tern**

5.51. The possibility of indirect effects were raised in the NPWS submission in relation to breeding Little Tern due to increased boating activity in Wexford Harbour. The NIS screened out the potential for all SCI bird species without specific reference to breeding Little Tern. The Little Tern nests in colonies on sandbanks on the entrance to Wexford Harbour (e.g. Fort Bank). The number of nesting terns have increased over recent years with Wexford harbour now one of the biggest colonies in Ireland, however fledgling success can be limited by bad weather and high tides, predators and disturbance can add significantly to the threats encountered by eggs and chicks. At the start of the summer breeding season, the NPWS notify users of Wexford Harbour and the general public through various media channels of the presence of these Annex I Tern species (examples provided for the Board in folder). Signs are erected on the sandbanks, appealing to the public not to disturb the nesting birds.

5.52. Any potential significant increase in marine traffic could affect this species if there were landings on or disembarking onto the sandbanks or increased marine activities

causing disturbance. In the further information submitted, clarification was provided in terms of the lack of potential for impacts on Little Tern due to noise disturbance caused by the construction or operational aspects of the physical development (due to distance).

- 5.53. Disturbance effects to Little Terns that may be caused by an increase in marine traffic associated with the 64-berth marina was addressed in the further information. The potential for adverse effects on this species was excluded mainly due to the fact that the provision of the marina will not result in a significant increase in marine traffic. This is emphasised throughout the EIAR chapters and reinforced in the further information supplied.
- 5.54. The provision of the Marina will consolidate berth activity in the area providing a year-round safe location for vessels to berth. The current situation is that boat mooring is *ad hoc* within the harbour. It is expected that the majority of the new 64 berth marina will be occupied by vessels already within the harbour.
- 5.55. Any increase in visiting leisure craft is expected to be modest and any impacts insignificant in comparison to the current levels of recreational and commercial boat traffic as well as the fishing and aquaculture activities which take place in Wexford Harbour. While the current levels of activity are not quantified, reference and weight is given to the informed contribution of the Wexford Harbour Master *there will never be a significant increase in the marine traffic as the area is simply not deep enough*. The volume of marine traffic within the estuary, Wexford Harbour and at the proposed development site is naturally managed and limited by the restrictive depth of the entrance to the harbour, whereby shifting sand banks and channels restrict vessels with medium to deep draughts from passing.
- 5.56. In relation to jet-skiing and similar activities, the addition of a marina will not facilitate access to the harbour for such activities. Access for such vessels would typically require a slipway, which will not be provided as part of the proposed development.
- 5.57. While the provision of the Marina will undoubtedly lead to an increase in the number of leisure boats that can be safely accommodated in Wexford harbour, the evidence presented in the EIAR and further information clearly demonstrates that no significant change to the current marine activity in Wexford Harbour is expected due to the natural constraints of the entrance to Wexford Harbour. Therefore, there

should be no significant increase in human activities at the sandbanks that could affect Little Tern during the breeding season. In order to further reduce the risk of disturbance to the little Tern breeding colony, measures will be put in place at the Marina to inform marina users of the Little Tern colony and to avoid human disturbance at this area. Information boards will be erected as per the further information supplied.

- 5.58. Scientific evidence was referenced by the NPWS submission in relation to the effectiveness of signage in reducing the impacts of human disturbance on nesting Little Terns, a measure already implemented by the NPWS at the sand banks. In a study conducted in Portugal, work by Mederios *et al* (Biological conservation, 2007, Note: abstract provided in folder for the Board) showed that the presence/absence of protective measures including signage and wardens was the most important predictor of nesting success. The early implementation of such measures during the breeding season was also important.
- 5.59. Therefore, taking into account the constrained nature of Wexford Harbour and low levels of increased marine activity predicted, combined with the proposed signage promoting avoidance of the sand banks, the target supporting the favourable conservation of Little Tern objective that *Human activities should occur at levels that do not adversely affect the breeding little tern population* will not be undermined and adverse effects will not occur.
- 5.60. I have recommended a condition that monitoring of the use of the new Marina by leisure boats not registered to Wexford Harbour is implemented so that details on boating activity can be fed back to the NPWS as part of the overall monitoring of activities in Wexford Harbour as part of any updates to the Natura 2000 form and reporting for Article 12 of the EU Birds Directive.
- 5.61. **In combination effects**
- 5.62. A comprehensive analysis of other plans and projects that could act in-combination with the proposed development was provided in the NIS. This analysis was complete and robust in terms of plans and projects and no potentially significant impacts arose taking into account any residual impacts from the proposed development.

5.63. An addendum to the NIS was submitted as part of the request for further information to address specifically potential in combination effects of the proposed development with existing activities and aquaculture within Wexford Harbour. Further information was required to rule out any potential adverse effects such as increased disturbance or displacement of bird species from any such effects.

5.64. The potential for adverse effects due to in-combination effects with ongoing activities in Wexford Harbour was excluded based on the following:

- Trinity Wharf development will not result in any significant increase in marine traffic, either from recreational vessels or vessels engaged in aquaculture which could combine to result in a significant effect on the conservation objectives of the European sites.
- The low levels of bird use within the zone of influence of the Marina and terrestrial elements of the project.
- The proposed marina will take 1.2 hectares out of aquaculture use permanently, thereby providing a positive effect on the marine benthos.
- Mitigation provided in the NIS for Trinity Wharf avoids adverse effects on the integrity of the European Sites within Wexford Harbour.

6.0 **Appropriate Assessment Conclusions**

Having carried out screening for appropriate assessment of the project, it was concluded that it would be likely to have a significant effect on the River Slaney Valley SAC, Wexford Harbour and Slobs SPA, the Raven SPA and Raven Point Nature Reserve SAC. Consequently, an appropriate assessment was required of the implications of the project on the qualifying features of those sites in light of their conservation objectives.

Following an appropriate assessment, it has been ascertained that the proposed development, individually or in combination with other plans or projects would not adversely affect the integrity of River Slaney Valley SAC, Wexford Harbour and Slobs SPA, the Raven SPA and Raven Point Nature Reserve SAC or any other European site,

in view of the site's Conservation Objectives. No reasonable scientific doubt remains as to the absence of such effects.

This conclusion is based on:

- A full and detailed assessment of all aspects of the proposed project including proposed mitigation and ecological monitoring measures.
- Careful consideration of implications for loss of small area of benthic habitat within the estuary- assessed as not being significant to the overall functioning of the Slaney River Valley SAC or Wexford Harbour and Slobs SPA and will not impact on the overall integrity of these sites.
- No adverse effects to wintering or breeding Special Conservation Interest bird species of Wexford Harbour and Slobs SPA or the Raven SPA following the application of mitigation measures.
- Taking full account of all proposed mitigation measures which will ensure no adverse effects to fish species including Atlantic Salmon, Twaité shad, Sea and River lamprey, Harbour Seal and Otter, their habitats or prey upon which they are dependant.

Conditions

1. The development shall be carried out and completed in accordance with the plans and particulars lodged with the application, except as may otherwise be required in order to comply with the following conditions. Where any mitigation measures [set out in the Natura Impact Statement] or any conditions of approval require further details to be prepared by or on behalf of the local authority, these details shall be placed on the file and retained as part of the public record.

Reason: In the interest of clarity and the proper planning and sustainable development of the area and to ensure the protection of the environment.

2. Prior to the commencement of development, details of measures to protect fisheries and water quality of the Estuary shall be outlined and placed on

file. Piling works shall adhere to the timing restrictions set out in the NIS and schedule of mitigation. A programme of water quality monitoring shall be prepared in consultation with the contractor, the local authority and relevant statutory agencies and the programme shall be implemented thereafter.

Reason: In the interest of the protecting of receiving water quality, fisheries and aquatic habitats.

3. A suitably qualified ecologist shall be retained by the local authority to oversee the site set up and construction of the proposed development and implementation of mitigation and all monitoring measures relating to ecology set out in the NIS and outline CEMP. The ecologist shall be present during site construction works. Ecological monitoring reports detailing all monitoring of the site works shall be prepared by the appointed ecologist to be kept on file as part of the public record.

Reason: In the interest of nature conservation and the protection of terrestrial and marine biodiversity.

4. Prior to the commencement of development, a monitoring plan for the quantitative assessment of benthic habitat and loss will commence [as set out in the Natura Impact Statement]. Data collected should be in the correct format for utilisation by NPWS for updating the Natura 2000 form for the Slaney River Valley SAC in relation to Estuaries and mudflats and sandflats not covered by low tide as relevant, and for Article 17 reporting.

Reason: In the interest of nature conservation and to inform national monitoring of Annex I habitats

5. A dedicated biodiversity information area will be installed in a prominent position at the Marina and the Trinity Wharf civic area. This will clearly display information related to a) the prevention of spread of invasive species, b) information about and protection of harbour seal and haul out sites, c) information and protection of the Little tern colony.

The information boards will be maintained and updated as necessary.

Reason: In the interest of nature conservation and the protection of terrestrial and marine biodiversity

6. Monitoring of the use of the Marina by leisure boats not registered to Wexford Harbour will be implemented so that details on boating activity can be fed back to the NPWS as part of the overall monitoring of activities in Wexford Harbour as part updates to the Natura 2000 form and reporting for Article 12 of the EU Birds Directive

Reason: In the interest of nature conservation and the protection of terrestrial and marine biodiversity



Dr Maeve Flynn MCIEEM
Inspectorate Ecologist

06th March 2020