



TRINITY WHARF DEVELOPMENT

.....
Environmental Impact Assessment Report
.....

Volume 1 Non-Technical Summary

February 2019



Trinity Wharf Development
Volume 1
Non-Technical Summary of the
Environmental Impact Assessment Report

Table of Contents

1. INTRODUCTION	1
2. NEED FOR THE PROPOSED DEVELOPMENT.....	3
3. ALTERNATIVES CONSIDERED	4
4. DESCRIPTION OF THE PROPOSED DEVELOPMENT	6
5. TRAFFIC ANALYSIS	10
6. POPULATION AND HUMAN HEALTH.....	12
7. BIODIVERSITY	13
8. SOILS AND GEOLOGY	14
9. HYDROGEOLOGY.....	15
10. HYDROLOGY.....	16
11. LANDSCAPE AND VISUAL.....	17
12. NOISE AND VIBRATION	19
13. AIR QUALITY AND CLIMATE	20
14. ARCHAEOLOGICAL AND CULTURAL HERITAGE	21
15. ARCHITECTURAL HERITAGE.....	22
16. MATERIAL ASSETS AND LAND	23
17. INTERRELATIONSHIPS, MAJOR ACCIDENTS AND CUMULATIVE EFFECTS	24
18. FURTHER INFORMATION & WHAT HAPPENS NEXT	24

1. INTRODUCTION

This Environmental Impact Assessment Report has been prepared in respect of the construction and operation of the Trinity Wharf Development, hereafter referred to as the 'proposed development', by Roughan & O'Donovan Consulting Engineers and a team of specialists on behalf of Wexford County Council to assess the proposed development, as designed by Scott Tallon Walker Architects.

Wexford County Council has embarked on an ambitious programme of economic development projects for County Wexford, of which a cornerstone of this strategy is the proposed Trinity Wharf Development. This project represents a commitment by Wexford County Council to revitalise, regenerate and facilitate the redevelopment of the core urban centre of Wexford Town for the benefit of the town's employees, residents and visitors. The primary objective of the Trinity Wharf Development is to position Wexford as a regionally attractive location for business, particularly financial services, and to increase sustainable employment opportunities within the region.

The Environmental Impact Assessment Report (EIAR) is presented in three volumes; this standalone Non-Technical Summary is Volume 1, Volume 2 contains the main text and Volume 3 contains the associated Figures.

A separate Natura Impact Statement (NIS), which complements the EIAR and vice versa has also been prepared and is provided as a separate document to this EIAR. This EIAR forms part of the application for the proposed development which is submitted to An Bord Pleanála for approval.

1.1 Overview

The proposed development includes a new sustainable urban quarter with a high-quality public realm, mix of modern office space, hotel accommodation, multi-storey car parking, a landmark cultural and events building and 58 residential units. The proposed development also includes the provision of a 64-berth marina and a new boardwalk linking Trinity Wharf with Paul Quay and the Crescent in Wexford Town. The mixed-use, urban quarter development proposed for the Trinity Wharf will be a key part of the town's economic development and urban regeneration.

The existing brownfield site extends over 3.6 hectares 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 site is located in a strategic location, close to Wexford Town centre, on the southern end of Wexford Quays and affords exceptional views across Wexford Harbour (see NTS Figure 1).

The Trinity Wharf Development will create employment opportunities and provide public amenities that will benefit the community and economy into the future. The proposed development is located in the Electoral District (ED) of Wexford Urban No. 2 located on the south side of Wexford Town. Electoral District has a deprivation score of -11.29 and is considered to be disadvantaged from a socio-economic perspective. The average deprivation score for the county is -4.81. The proposed development builds on the existing natural, built and social characteristics to create a contemporary public realm experience by blending the traditional with the new. The strong community spirit and sense of place that exists within the community will be complemented by the proposed development combining people and place making, in a new urban quarter. This development, within the heart of Wexford Town, offers sustainable solutions that break the circle of social and spatial polarisation and build on the principles of compact sustainable development.

1.2 Requirement for an EIA

Environmental Impact Assessment requirements derive from Council Directive 85/337/EEC (as amended by Directives 97/11/EC, 2003/35/EC and 2009/31/EC) and as codified and replaced by Directive 2011/92/EU of the European Parliament and the Council on the assessment of the effects of certain public and private projects on the environment. Directive 2011/92/EU has since been amended by Directive 2014/52/EU of the European Parliament.

The requirements of these directives have been transposed into Irish Law through the Planning and Development Acts (2000 – 2018), the Regulations made under the European Communities Act (1972) including the European Communities (Environmental Impact Assessment) Regulations 1989 – 2006, the European Union (Environmental Impact Assessment and Habitats) Regulations 2011 and the European Communities (Birds and Natural Habitats Regulations) 2011. Directive 2014/52/EU of the European Parliament and has recently been transposed into Irish law through the European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (Statutory Instrument Number 296 of 2018).

Whilst applications for Local Authority Development are typically made under Section 175 of the Planning and Development Act, this planning application will be made under Section 226 of the Planning and Development Act 2018 as the proposed development will be wholly or partially on the foreshore whilst Section 175 relates to development on land.

“226.—(1) Where development is proposed to be carried out wholly or partly on the foreshore—

- (a) by a local authority that is a planning authority, whether in its capacity as a planning authority or otherwise, or*
- (b) by some other person on behalf of, or jointly or in partnership with, a local authority that is a planning authority, pursuant to an agreement entered into by that local authority whether in its capacity as a planning authority or otherwise,*

(hereafter in this section referred to as “proposed development”), the local authority concerned shall apply to the Board for approval of the proposed development.”

The proposed development comprises a total area of approx. 5.47 ha including the existing 3.6 ha brownfield site and the additional area of land required for the marina, boardwalk, access road and junction to be provided on Trinity Street as part of the proposed development. The development will involve the construction of a boardwalk, marina and sea wall within the foreshore and therefore mandatorily requires the preparation and submission of an Environmental Impact Assessment Report to the competent authority.

Wexford County Council is therefore submitting an Environmental Impact Assessment Report and Natura Impact Statement to allow An Bord Pleanála as the Competent Authority to carry out the Environmental Impact Assessment and Appropriate Assessment for the proposed Trinity Wharf Development.

2. NEED FOR THE PROPOSED DEVELOPMENT

Wexford Town has a rich history and a strong urban form and structure which is influenced by its unique natural setting located on the River Slaney Estuary overlooking Wexford Harbour. The site of the proposed development was formerly home to a mix of industrial and commercial premises, factories and fishing harbour as it developed over time. These employers (e.g. dock yard, iron works, car assemblers, electronics plant) were the biggest employers in Wexford Town at the time and contributed to the establishment of residential areas such as Trinity Street and William Street, to house their workers. Over the years these enterprises fell away and the site fell into dereliction. Wexford County Council believes that there is a strong case to go full circle with this currently disused site and recreate jobs for the people now living in the area while also providing modern residential units to accommodate new employers and/ or residents of the area.

Wexford County Council recognise that the unplanned consequences of the economic downturn need to be addressed in order to deliver on national, regional and local planning policy objectives and to ensure that Wexford Town remains an attractive, vibrant town for its existing and future population. The Trinity Wharf Development will re-create employment opportunities within Trinity Wharf and provide public amenities that will benefit the community into the future.

Wexford County Council believe there is a need to create a 21st Century flagship project such as that proposed for Trinity Wharf site, that will form a new high-quality, mixed-use urban quarter and become a catalyst for economic growth and support the wider regeneration and revitalisation of the town. The proposed development will complement the existing town centre and provide an attractive site in the south east region where investors/companies can effortlessly establish themselves in a strategically located, easily accessible and unrivalled rich cultural and environmental setting.

The marina, hotel, cultural/arts building and high-quality public realm will create a new destination and improve the amenity of residents, workers and visitors to the town centre. They will in combination, complement the office development and add vibrancy and diversity of land uses. The marina and hotel will further enrich the high-quality tourism and cultural offering in Wexford and will add to the town's high end offerings such as the renowned International Opera Festival.

The need for the Trinity Wharf Development has been identified in, and is consistent with the following European, national, regional and local planning policy documents:

European Policy Context

- Europe 2020 Strategy; and
- United Nations Sustainable Development Goals.

National Policy Context

- "Project Ireland 2040" National Planning Framework;
- "Project Ireland 2040" National Development Plan, 2018-2027; and
- The Sustainable Development Goals National Implementation Plan, 2018-2020.

Regional Policy Context

- Draft Southern Region Regional Spatial and Economic Strategy;
- Regional Planning Guidelines for the South East Region, 2010-2022;
- South East Economic Development Strategy, 2013-2023; and
- South East Action Plan for Jobs, 2015-2017.

Local Policy Context

- Wexford County Development Plan, 2013 – 2019;
- Wexford Town and Environs Development Plan, 2009-2015 (as extended);
- Wexford Local Economic and Community Plan, 2016-2021; and
- Wexford Quay Economic Development and Spatial Implementation Plan.

Wexford Town has been successful in the past in attracting international companies, however the lack of investment in recent years is believed to be partly because of the absence of suitable property solutions to meet investors' expectations. It is therefore essential to make available a range of suitable options for companies considering Wexford as a location.

The development of Trinity Wharf will improve the unemployment rate within Wexford Town, creating approximately 1,200 full time jobs, while regenerating the wider area, and bringing business and tourism opportunities. The development will enhance the greater Trinity area, creating an attractive urban quarter which is connected to the Town Centre and which will attract investment in the area.

3. ALTERNATIVES CONSIDERED

A number of alternatives were considered during the development of the Trinity Wharf Development. Both the 'do-nothing' and 'do-minimum' options were assessed however both options were found that they would not meet the objectives of the proposed development and would not release the potential of the brownfield site in the town centre location.

Additionally, consideration was given early in the project conceptual stage as to whether this project should be sited at a green field setting peripheral to the town, however it was decided that such a location would contribute to urban sprawl and could pose a threat to the existing town centre. It was therefore decided that regeneration of a brownfield site such as Trinity Wharf would be a more sustainable development solution and would serve to complement existing town centre commercial and retail infrastructure.

A previous planning permission granted by Wexford Borough Council in 2016 for a mixed-use development on the Trinity Wharf was also considered as an alternative. The application by Deerland Construction Ltd (Ref:W2006025) and as subsequently amended (Ref:W0006042), proposed to construct a development with a variant of uses, including a large retail element, on a footprint of 8.61 ha. While the previous permission was considered as an alternative for the development of the site, it was found that the previous planning permission did not represent the Council's ambitions and objectives for the lands.

3.1 Alternative layouts Considered

Two initial site planning options were explored. These options included:

Option 1: Parking at one level across the entire site and a podium for all the buildings and spaces above.

Option 2: All buildings accessible at ground level with surface parking.

It was decided to progress a cluster of lower well-designed high-quality buildings that form an overall coordinated 'ensemble' in terms of massing, materials and finishes, that read together and relate to the harbour context. This informed the light and neutral colour palette for materials and finishes that relate well to both the sky and water.

The relationship of the site and any development proposals with the surrounding context was a key consideration from the outset. In analysing the site context, a number of views and relationships between the Trinity Wharf site and the surrounding areas were also considered. The site layout was also considered including the location and orientation of each building and element. The measures considered all contribute to creating a connected sequence of spaces including the Trinity Street entrance area, the main public space, the boardwalk, Paul Quay and the Crescent and main central area of Wexford Town.

Mechanical and electrical plant arrangement alternatives included both centralised plant and decentralised plant. While a Landscape Concept has been developed to guide the arrangement of public realm design and landscaping arrangements for public areas of the development, taking into account the features of the site.

3.2 Traffic Provisions

Two options were considered to traverse the rail line as the main site access; an at-grade level crossing and a bridge over the railway with approach ramps. Due to the significant land take required to construct an approach ramp on the development site and the increased environmental impacts, the at-grade level crossing was selected as the preferred solution.

The design of the access road linking the proposed development to Trinity Street which leads directly across the level crossing also considered three alignment options. The preferred option was chosen as the preferred alignment as the land required is owned by the local authority with a reduced impact on the vacant plot compared to other option, while the location of the road will minimise impacts on adjacent properties and provide a corridor into the site, with views of the sea.

Junction Capacity Analysis carried out on the Trinity Street junction found that a Signalised Junction should be selected as the preferred option as it was found that it will operate satisfactorily, managing the traffic in the most efficient way, whilst providing safe crossing points for pedestrians and cyclists.

3.3 Marina Layout Options

For the design of the marina, six conceptual marina layout options were assessed based on the coastal processes within Wexford Harbour. These options included a series of; locations, capacities, breakwater options and construction techniques.

The potential impact of the preferred options on the existing wave climate, tidal regime and sediment transport regime was assessed using a combination of high-level analysis and a series of computational models. Option 2, a marina located to the north of the development, with a capacity of approximately 60 berths and floating

breakwaters, emerged as the preferred option as it is considered to be the most environmentally friendly and technically feasible option.

Two methods were assessed for securing the proposed marina in situ: steel piles and a chained restraint system. The preferred system of foundations for the marina will be finalised during detailed design based on further ground investigations. The Environmental Impact Assessment Report has considered both the piled and chained restraint system options to assess a worst case scenario.

3.4 Boardwalk

A requirement of the development was to create a pedestrian/cycleway access from the existing Paul Quay promenade to the Trinity Wharf Development. The initial option for the pedestrian/cycleway access was to construct 6m wide footpath alongside the railway to the north of the Trinity Wharf site by constructing out into the sea with a rock revetment. The preferred alternative chosen however comprises a structural steel bridge constructed on discrete supports on the sea bed. This option was chosen as the preferred as it would be less intrusive to the benthic¹ environment, reducing the potential impact on the area within the Slaney River Valley Special Area of Conservation (SAC) and would not affect the foreshore as significantly as the construction of a rock armour revetment.

3.5 Seawall

The main alternatives considered for the Seawall were a sheet piled wall and rock armour revetment, both in isolation and as a combined option. The result of the assessment carried out demonstrated that the preferred option was the sheet piled wall. The main factors in coming to this conclusion were the quantity of excavated contaminated material that would be required with constructing the toe of a rock armour revetment.

While the rock armour revetment option was not chosen, rock armour is proposed to be placed on the seabed along a section of the northern edge and along the southern edge of the site for design purposes. However, this rock armour will not require any excavations.

4. DESCRIPTION OF THE PROPOSED DEVELOPMENT

Trinity Wharf currently comprises a brownfield site, approximately 3.6 hectares, located within the existing urban environment of Wexford Town at the southern end of Wexford's quay-front. The site is currently accessed via a small side road from Trinity Street while the Dublin to Rosslare Railway line runs north south along the site's south-western boundary. Wexford Harbour adjoins the site on its north, east and southern boundaries.

The site consists of reclaimed land that extends into Wexford Harbour and is now disused and partly overgrown with most of the former structures demolished, except for a masonry stone boundary.

¹ The benthic zone is the ecological region at the lowest level of a body of water such as an ocean, lake, or stream, including the sediment surface and some sub-surface layers.



Plate 4.1 **Location of the existing Trinity Wharf Site**

The proposed development comprises a mixed-use urban quarter redevelopment of a brownfield, derelict site, as well as development within the foreshore, including;

- A six-storey 120-bedroom hotel;
- A six-storey multi-storey car park with a total of 509 parking spaces;
- A five-storey residential building providing 58 apartments;
- Office Building A, five storey;
- Office Building B, five storey;
- Office Building C, five storey;
- A two-storey cultural/performance centre with event capacity for up to 400 people;
- A two-storey mixed-use restaurant/café/ specialist retail building;
- A single storey management building;
- A new vehicular entrance road with a signalised junction on Trinity Street, widening of Trinity Street, a new railway level crossing and associated works;
- A new sea wall around the perimeter of the site;
- Site infrastructure works including internal roads, public realm and landscape including a public plaza;
- A pedestrian/cycle boardwalk/bridge (c.187m long) connecting with Paul Quay;
- A 64-berth floating boom marina in Wexford Harbour; and,
- All other ancillary works.

The site layout, comprising these elements, is presented in Plate 4.2 and in NTS Figure 2 in Appendix A Figures of this Non-Technical Summary. The total area of land to be developed amounts to approx. 5.47 ha when the marina, boardwalk and road works on trinity street have been taken into account.

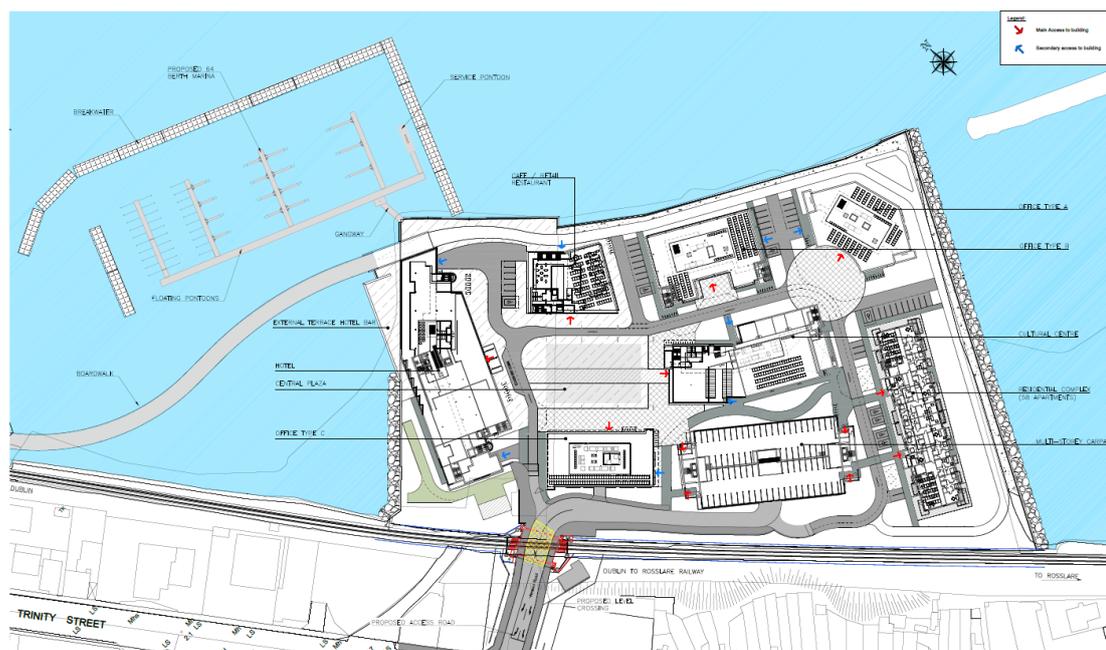


Plate 4.2 Site Layout

The proposed development, centres around the existing reclaimed land of Trinity Wharf with the main element of the works being carried out on the brownfield site. All of the buildings are proposed to be constructed on this site as well as the public realm areas. A new sea wall will also be constructed around the coastal boundaries of the site through sheet piles and the placement of rock armour along sections of the northern and southern edges.

The footprint of the proposed development also requires the development of a section of vacant, brownfield site between Trinity Street and the Dublin to Rosslare Railway line which was used for industry in the past and is currently owned by Wexford County Council. This area will form the new access point into the Trinity Wharf site directly from Trinity Street. There is currently no junction on Trinity Street to service the existing access to Trinity Wharf, therefore alterations to the existing road layout on Trinity Street will be required to accommodate a signalised junction into the Trinity Wharf site via a new access south of McMahons Hardware.

Paul Quay carpark is an existing carpark to the north of the site along the quay front which is owned by Wexford County Council. Modifications will be required to this carpark also to accommodate the tie-in of a boardwalk proposed as part of the proposed development. This 180m boardwalk will provide the main link between the town centre, the existing Wexford Harbour promenade and the pedestrian and cycleway facilities provided on the internal road network of Trinity Wharf.

A proposed 64 berth marina is to be located off the northern corner of the site and is to be connected to the northern corner of the development via a gangway. The marina will be sheltered by a floating breakwater on the seaward side, to the north of the Trinity Wharf site. Including the elements of the description as above, the total site area to be developed as part of the Trinity Wharf Development is in the region of 5.47 ha.

The development is proposed to be carried out in several phases with the first phase of the works being procured and carried out by Wexford County Council and the

following phases being privately developed. The following is the outline of the proposed phasing:

- Phase 1 - Enabling Works;
- Phase 2- Buildings & Marina; and
- Phase 3 – Buildings.

4.1 Services Development

Services to be developed within the site comprise:

- Site Levels and Earthworks;
- Parking Provision;
- Cycle Parking Provisions;
- Surface Water Drainage;
- Wastewater;
- Water Supply;
- Link to the Town Centre;
- Multi-purpose Public Space;
- Building Design;
- Building Services;
- Public Realm and Landscaping;
- Lighting; and
- Boardwalk.

Traffic Provisions

An access road will be provided from Trinity Street with footpaths on both sides. The new access junction will form a 4-way signalised junction with Trinity Street and Seaview Avenue while a turning head facility will be provided on Seaview Avenue to prevent the current practice of vehicles reversing into or out of the lane from or onto Trinity Street.

The proposed link road into the development site will form a new level crossing with the Dublin to Rosslare Railway Line. The boardwalk to be constructed between Paul Quay and Trinity Wharf provides a direct link to the town centre for pedestrians and cyclists and the construction of which will result in the loss of a number of car parking spaces from Paul Quay carpark.

An internal circulation route is provided as part of the development however a large proportion of vehicular traffic accessing the site are expected to drive directly to the multi-story carpark.

Marina

A 64-berth marina is to be located off the northern corner of the Trinity Wharf site and will be sheltered by floating breakwaters. These will either be piled or attached to the seabed using a chained restraint system. Services will also be provided via a service pontoon.

4.2 Construction

The main construction works will comprise the following:

- **Site preparation including;** site clearance, asbestos processing and boundary security;
- **Establishment of site access routes;** construction of access road and level crossing at the railway;
- **Sea wall and revetment works;** the construction of the replacement sea wall consisting of driving steel sheet piles around the entire coastal boundary of the site with the addition of rock armour revetment placement along the south-east edge;
- **Earthworks and paving;** the import and placement of imported material to raise the level of the site, establishment of site utilities and services and the construction of the internal road network;
- **Boardwalk construction;** the construction of the structural steelwork footbridge including the construction of reinforced concrete approach ramps and modifications to Paul Quay Promenade;
- **Marina development;** the construction of the marina and the installation of floating breakwaters;
- **Building structures;** construction of reinforced concrete office buildings, hotel, retail buildings, cultural centre and residential buildings; and
- **Landscaping and finishes;** construction of public realm areas.

It is proposed that the overall construction of the development will be split into phases, while the construction is expected to take place over a period of 80 months.

4.3 Construction Environmental Management Plan

Prior to any demolition, excavation or construction a Construction Environmental Management Plan (CEMP) will be produced by the successful contractors for each element of the proposed development. The CEMP will set out the Contractor's overall management and administration of a construction project. The CEMP will be developed by the Contractors during the pre-construction phase, to ensure commitments included in the statutory approvals are adhered to, and that it integrates the requirements of the Construction Erosion and Sediment Control Plan (CESCP), Environmental Operating Plan (EOP) and the Construction & Demolition Waste Management Plan (C&D WMP).

5. TRAFFIC ANALYSIS

Wexford Town is served by the N11 towards Dublin and the N25 bypass approximately 3.5km west and south of the Town Centre which bypasses the town and connects south to Rosslare Harbour and west to Waterford and Cork. The Trinity Wharf site is located directly off the R730 which connects the town centre to the Rosslare Road Roundabout. The Dublin/Rosslare railway line runs adjacent to the site, while Wexford Town's railway and bus stations are in Redmond Square approximately 1.5km north of the site.

Traffic surveys around Wexford Town were undertaken by Nationwide Data Collection between Thursday, 1st December and Sunday, 3rd December 2016. The survey included 24-hour Automatic Traffic Counts on Parnell Street, Trinity Street and William Street Lower, and a Junction Turning Count at the Trinity Street / King Street / Paul Quay Junction during periods of peak traffic. Updated traffic surveys were carried out in 2018 to capture peak seasonal traffic.

To facilitate the proposed development, an access junction is proposed on Trinity Street to provide a new access to the site, in addition to the new access road into the site. A turning head facility will also be provided on Seaview Avenue to provide access to the proposed 4-way junction on Trinity Street. The provision of the access junction on Trinity Street and the tie in of the boardwalk will result in the loss of a number of car parking spaces. This loss of on-street parking along Trinity Street will have a moderate impact on residents and businesses in the immediate vicinity of the proposed access junction.

The proposed link road into the development site will include a new level crossing over the Dublin - Rosslare railway line to replace the existing one located a short distance to the north. Iarnród Éireann have agreed in principle to the design of the level crossing which will consist of signalised automatic controlled boom barriers.

The impact of the level crossing was considered based on the current operational requirements of the Dublin/Rosslare railway line which caters to 9 daily services travelling in both directions.

Traffic generations as a result of the proposed development have been calculated and junction capacity analysis has been carried out for the surrounding road network. Parking provisions on site will comprise a multi-story carpark and surface car parking spaces. Parking has been developed to provide for the offices, the residential element and the hotel, with a total of 509 car parking spaces provided. The parking within the development will account for 80% of the parking demand within the site, while it is concluded that there are several alternative long-term car parks located close to the proposed site which can accommodate the excess core parking demands of the development in a communal capacity.

A Mobility Management Plan has been prepared for the proposed development to assist future tenants achieve a modal shift away from single occupant vehicles as a means of getting to and from work. The internal road network and proposed junction on Trinity Street is presented in NTS Figure 3 in Appendix A of this Non-Technical Summary.

A Construction Environmental Management Plan and a Construction Traffic Management Plan will be prepared by contractor(s) in consultation with the developer and Wexford County Council to confirm the nature of any and all mitigating road works; the programme for deliveries during the construction period; and, any and all mitigating traffic management measures, prior to commencing any works at the proposed development site. The Construction Traffic Management Plan will detail environmental measures aimed at minimising adverse environmental effects associated with traffic and transport during construction.

The development is predicted to generate 606 and 600 multi-modal two-way trips and 377 and 374 two-way vehicular trips in the AM and PM peak periods. A junction capacity analysis on the proposed Trinity Street Access Junction and the existing nearby junctions found that the existing transport network has adequate capacity to facilitate the development with non-significant residual impacts.

The surplus demand for 130 parking spaces generated by the development will likely have a slight impact on the nearby off-street carparks. It is essential that the parking facilities within the site and on the surrounding road network are managed with an appropriate permit, tariff and enforcement system.

6. POPULATION AND HUMAN HEALTH

The Environmental Impact Assessment has considered and assessed the likely significant effects with regard to population and human health associated with both the construction and operational phases of the proposed Trinity Wharf development. The assessment found that the 80 month construction phase is likely to result in slight to moderate, negative impacts occurring over the medium term on residential receptors and economic operators within close proximity to the construction site and along haulage routes. There will be approximately 50 persons employed during each construction phase and likely additional indirect employment and benefits through local expenditure by construction workers, purchases of local materials and services. The asbestos present on the site has been considered from the outset as part construction methodology (Chapter 4) and assessed as part of the Soils and Geology assessment (Chapter 8). These chapters have informed the human health assessment and found that with the full and proper implementation of asbestos mitigation measures (asbestos surveys, development of a Remedial Strategy and verification report by a suitably qualified, experienced and licenced asbestos contractor, as detailed in Chapter 4 and Chapter 8 of this EIAR) it was found that there are no likely significant impacts to human health as a result of Asbestos Containing Materials (ACMs) present on the site. The assessment includes a number of mitigation measures to address potential impacts to include the development and implementation of a number of construction stage plans that will be required to be agreed with Wexford County Council prior to the construction stage. These plans include: A Construction Environmental Management Plan and associated Traffic Management Plan. A Transportation Mobility Management Plan, an Accessibility Implementation Plan, A Stakeholder Management and Communication Plan, a Dust Management Plan, and implementation of noise and vibration mitigation measures detailed in Chapter 12. The main contractor(s) will be responsible for the coordination, implementation and ongoing monitoring of these plans.

The operational stage will involve the urban regeneration of a brownfield site in an existing town centre, building on the principles of compact sustainable and integrated land use planning. This project has the potential to have significant, positive, long-term impacts to the population and human health of the local community, economy and tourism offer. Mitigation measures proposed at operational stage include the development of an Accessibility Implementation Plan relating to the future cultural and performance space, a Transportation Mobility Management Plan to identify the measures that will be implemented to promote sustainable modes of transport and reduce the use of the private car in accordance with Smarter Travel Policy. The mitigation measures detailed in Chapter 10 Hydrology of this EIAR detail measures to address the potential risk of flooding.

During the construction phase of the proposed development, residual impacts include slight disruption to traffic, noise and air quality. During the operational phase, urban regeneration projects of this nature and scale have the potential to act as a stimulus and create wider investment opportunities resulting in significant, positive, long-term residual effects for the local and regional community and economy. The investment in walking and cycling infrastructure in the area has the potential to improve social and health outcomes and associated environmental benefits over time.

7. BIODIVERSITY

The Trinity Wharf development is located in Wexford Harbour which comprises the lower River Slaney Estuary and which is an environmentally designated and sensitive area. The assessment examined the receiving natural environment and identified the Key Ecological Receptors likely to be impacted upon by the proposed development, namely; mudflats and benthic habitats, the River Slaney/Wexford Harbour waterbody, migratory fish species, otter, marine mammals, bats, invasive species and birds. Each Key Ecological Receptor was evaluated in terms of its conservation value on a geographical scale. The assessment analysed the potential impacts of the proposed development on these Key Ecological Receptors and characterised these impacts in terms of their magnitude, extent, duration, frequency and reversibility, thereby evaluating their significance on a geographical scale.

The assessment determined that, in the absence of mitigation, the construction and operation of the proposed development had the potential to have significant negative effects on the Key Ecological Receptors. In light of this finding, appropriate mitigation measures were proposed, aimed at eliminating or minimising these effects. In the case of all Key Ecological Receptors other than mudflats and benthic habitats and the River Slaney/Wexford Harbour waterbody, it was found that any residual effects following the application of the proposed mitigation measures would not be significant at any geographical level.

The area of habitat loss does not represent a significant portion of the total estimated area of these habitats within the River Slaney/Wexford Harbour waterbody and will not affect the integrity of the Slaney River Valley Special Area of Conservation (SAC) or the Wexford Harbour and Slobbs Special Protection Area (SPA). However, their status as Annex I habitats and designation as Qualifying Interests of these sites means that monitoring will be undertaken to ensure that this habitat loss is minimised and accurately quantified in order to inform Ireland's reporting under the European Union Habitats Directive and Birds Directive.

The loss of mudflats and benthic habitats is significant over a small area; however, this impact is mitigated by the fact that these habitats are of low quality and the new hard surfaces will increase the diversity in the local area. In addition, the release of contaminants from the existing site will be prevented by the proposed outer sea wall. Therefore, the favourable conservation status of these Annex I habitats will not be compromised. The design of the development through the assessment of alternatives has also included mitigation through avoidance as far as possible.

Provided that the proposed development is constructed and operated in accordance with best practice guidelines and the mitigation measures described in the EIAR, there will be no other significant residual effects on biodiversity and ecology in the Zone of Influence at the international, national, county or local level. Furthermore, the assessment found no significant impacts arising from the cumulation of the impacts from proposed development with the impacts from other past, present or reasonably foreseeable future developments.

In addition to mitigation of the likely ecological effects on the proposed development, the biodiversity assessment also proposed a number of ecological enhancement measures aimed at having a positive impact on ecology, wherever possible.

8. SOILS AND GEOLOGY

The Trinity Wharf is currently a brownfield site comprising reclaimed land that extends into Wexford Harbour. Owing to the reclaimed nature of the site the superficial soils are dominated by relatively deep layers of 'Made Ground'. The site is flat, with generally low and sparse vegetation. The sea bed depth at the location of the marina ranges from -2.5m OD (Ordnance Datum) to -7m OD while the depth at the location of the proposed boardwalk ranges from 0m OD to -2m OD. The site does not contain any Geological Heritage features or quarries.

The made ground stratum exhibits low to moderate levels of contamination, primarily from Polycyclic Aromatic Hydrocarbons (PAHs) and sulphates remaining from the historical industrial use of the site. In general, low to moderate levels of contamination were noted within the site. Mild to moderate levels of contamination with OCPs and PAHs were also found in samples from the sea bed undertaken as part of the Trinity Wharf Marina Feasibility Study by RPS Group (November 2018). The contamination remains from the historical industrial usage of the site.

A Preliminary Asbestos Walkover Survey was undertaken within the site in October 2018. The walkover survey undertaken by RSK identified fragments of asbestos cement, floor tiles and / or floor tile debris containing asbestos, in numerous locations across the surface of the site.

Mitigation measures have been incorporated in the design of the proposed development to avoid potential impacts. In order to limit the risk to human health and the surrounding aquatic environment by exposure to contaminated material through excavation, it is proposed to retain the majority of the made ground in place. The current ground level across the entire site will be raised for the proposed development (1.5m raise on average), using imported good quality granular material.

All buildings will rely on driven piles for foundations which will minimise the need for excavation, as no in-situ ground needs to be displaced or handled during the execution of this type of piles. The steel driven piles were selected as the foundation option in order to avoid the handling of the contaminated pile arisings and reduce the environmental impacts related to the arisings disposal.

The soils and geological assessment found that all material excavated in the made ground stratum at the site shall be assumed to be contaminated. Appropriate testing of this material by a suitably qualified and licenced waste contractor shall take place for all aspects of ground contamination. Any contaminated material that is required to be excavated will be disposed of to a suitably licensed and permitted contractor to a licenced landfill site, which will be determined in accordance with the actual level of contamination and Waste Acceptance Criteria.

Mitigation measures have been included to ensure that prior to the start of any construction work further asbestos surveys, intrusive asbestos surveys and site investigation and a Remediation Strategy will be developed. Measures for site clearance and excavation works have been outlined to ensure that the works are carried out by suitably qualified contractors and that any excavation will be disposed of correctly, in accordance with all relevant waste management legislation.

A Remediation Verification Report will be produced to demonstrate that all mitigation measures proposed by the contractor and all associated remedial works implemented will be independently validated prior to proceeding with the

redevelopment of the site. Once the mitigation measures have been incorporated, there are no likely significant permanent soil or geological impacts associated with the Trinity Wharf development.

9. HYDROGEOLOGY

The site consists of made ground, underlain by sands, silts and gravel. The bedrock aquifer underlying the site is classified by the Geological Survey of Ireland (GSI) as a Poor Aquifer Bedrock which is generally unproductive except for local zones. Groundwater vulnerability mapping from for the site indicates that groundwater is at low vulnerability to pollution at the ground surface however the actual groundwater vulnerability across the site is thought to range between moderate and high depending on the exact thickness of silt/clay deposits present.

Ground investigations undertaken at the site have returned elevated levels of sulphate and Polycyclic Aromatic Hydrocarbons while non-intrusive investigations carried out to date have found fragments of asbestos across the surface of the site.

Potential impacts to groundwater during construction include contaminated soils and aquifer contamination the excavation of made ground through. All piles within the site will be driven to prevent contamination being brought to the surface and the proposed sheet-piled wall around the edge of the site will provide a barrier to contain contaminated material within the site.

A surface water drainage system comprising SuDS features such as blue roofs and permeable paving will be provided as part of the proposed development, providing water treatment and attenuation to runoff. The entire site will require the importation of fill material in order to raise the level of the site to the required finished floor and road elevations. A compacted clay with low permeability will be placed above this fill material, where it will form the base of the surface water drainage system and will effectively prevent infiltration of rainwater to the underlying subsoil and therefore prevent mobilisation of contaminants into the underlying layers.

A project-specific Construction Environmental Management Plan and Environmental Operating Plan will be prepared and maintained by each Contractor during the construction phase. Mitigation measures for preventing pathways of contamination to underlying groundwater and surface water have been included and will be implemented by contractors during construction.

Prior to any works taking place on-site, a further ground investigation programme shall be undertaken to fully quantify the nature and extent of contaminated material present at the site. All material excavated at the site shall be assumed to be contaminated during construction. Mitigation measures during the construction phase will include implementing best practice during excavation works to avoid sediment or contaminants entering Wexford Harbour. All contaminated excavations also will be disposed of off-site to a licenced waste facility.

All potential impacts have been identified as slight in the operational phase and as such no long-term mitigation measures are proposed. The incorporation of the mitigation measures will result in the magnitude of any impacts either during construction or operation, to be considered as Negligible. As a result, the significance of all residual impacts is Imperceptible.

10. HYDROLOGY

The development site is located in Wexford Harbour and is bound to the north, south and east by the Lower Slaney Estuary. The River Slaney rises on Lugnaquilla Mountain, approximately 70km north of the subject site, and generally flows south towards the Irish Sea.

The Lower Slaney Estuary had an Environmental Protection Agency Transitional Surface Water Quality Status of "Potentially Eutrophic" from 2010 – 2012 and a Water Framework Directive Status of "Poor" from 2010 – 2015.

The existing topography of the site dictates that runoff discharges directly to the Lower Slaney Estuary while the Preliminary Flood Risk Assessment map at the proposed development location indicates that the site is located within the 1 in 200 year flood zone and extreme coastal flood extents.

Construction activities pose a significant risk to watercourses, particularly from contaminated surface water runoff from construction activities entering the watercourses. The main contaminants arising from construction runoff include elevated silt/sediment loading in construction site runoff, spillage of concrete, grout and other cement based products, accidental spillage of hydrocarbons from construction plant and at storage depots / construction compounds, faecal contamination arising from inadequate treatment of on-site toilets and washing facilities and contaminated ground excavated as part of the rock armour revetment works entering the Slaney Estuary.

Hydrodynamic modelling for the proposed marina concluded that the marina development would not significantly alter the sediment supply or flow of sediment in Wexford Harbour. The existing surface water drainage pathways on the site will be altered as a result of the development with a new surface water drainage system being put in place. The proposed surface water drainage system will comprise predominantly SuDS features which will attenuate and cleanse the surface water runoff from the site prior to discharge to sea and will account for a 1 in 100 year rainfall event. A foul drainage system will also be provided within the site. A foul pumping station will connect the system to the public sewer and will include mitigation measures in case of pump failure.

The impact associated with flooding during the operational stage in the absence of appropriate mitigation is deemed to be moderate to significant. The level of the site will therefore be raised with a lowest proposed finished floor level for the development to be 3.3mOD, while the lowest road level will be 2.80 OD. This will meet the minimum levels required within the site, reducing the impact to slight.

A project-specific Construction Environmental Management Plan and Environmental Operating Plan will be prepared for the development to cover all potentially polluting activities and include an emergency response procedure.

If the mitigation measures are adopted, the risk of any residual impact as a result of construction should be imperceptible. During operation, the use of Sustainable Drainage Systems and the attenuation of storm water will mitigate any potential impacts relating to changes in runoff rates and volumes whilst also maintaining or indeed potentially improving the quality of water in the estuary. The proposed design

will also mitigate any potential impacts arising from flooding. There will therefore be an imperceptible impact from development in the operational phase.

11. LANDSCAPE AND VISUAL

The Trinity Wharf site is a derelict site which was formerly occupied by a number of warehouse buildings, demolished in the early 2000s and which obscured views to the site. The project site is considered of Low to Moderate landscape value. There are no formal landscape or visual amenity designations on the site. However, the wider surrounds of the town contain some elements of Moderate to High landscape value, in areas such as the waterfront, and the core of the medieval town.

There are considerable views of scenic quality from the site. The most striking element of the site is its waterfront location, surrounded as it is by water on three sides. The proximity to water, and the views across the water over Wexford Harbour, are key characteristics of the site.

Views from the streets surrounding Trinity Wharf are varied, but some contain or frame views or glimpses of the harbour, while others are pleasant views of nineteenth and twentieth streetscapes. Some views along Trinity Street are of the warehouses and steel fences which block sea views and detract from the streetscape. Views to the harbour are considered important and are also available from the waterfront promenade to the north of the site along Paul Quay, as well as from some locations south of the site. Views from the waterfront at Paul Quay to the south and east are more open and expansive, but views to the north, to Wexford Bridge and Ferrybank, are also remarkable.

The landscape effects are assessed under the headings of site and immediate environs, and the wider context, as per the baseline. Under each heading, the landscape sensitivity, magnitude of change and the significance of the effect is assessed.

It is considered that the landscape sensitivity of the site and immediate environs at a local level is medium. The site is in an urban context, a derelict site, with few valued features, and, along with its immediate surroundings, considered of moderate sensitivity. The proposed development will be prominent, especially at the local level, and will undoubtedly result in change to the landscape character of this local area.

The construction phase will involve landscape effects, which include the movement of construction vehicles and machinery in and out of the site, as well as works on the site itself. This will involve a considerable change in the nature of the area which includes the busier Trinity Street but a number of quieter streets including Batt Street, Fisher's Row and other smaller streets including Sea View Terrace. Construction phase landscape effects on the site and immediate vicinity are expected to be short term, and negative in quality.

It is considered that the site's fabric and character will change dramatically, as a result of the proposed development however, the key characteristics of the site itself, which include the setting, views and proximity to the water, will remain on the site. The overall landscape effect on the environs of the site is considered to be Moderate

to Significant. The duration of the effect is considered Long Term. The quality of this effect includes both beneficial and adverse effects

The landscape effects on the wider Wexford townscape, including the waterfront areas, and the Ferrybank area, were also considered and are predicted to be Slight to Moderate however the quality of this effect is considered neutral. Landscape effects on the wider town effects are likely to be neutral to beneficial, as the proposed development extends the town to the south, providing a boardwalk linking the development with Paul Quay will enhance connectivity, activity and footfall along the waterfront and the Crescent area also.

Landscape effects at the wider scale on the character Wexford Harbour and the coastal landscape, including the areas of Raven Point and Rosslare Point are likely to be imperceptible to not significant and neutral in quality.

During construction there will be a change to the landscape and there will be negative visual impacts for residents and visitors to the areas adjacent to the site associated with construction activity. Visual receptors in the vicinity of the site including residents, would be of High Sensitivity. The magnitude of the change during construction is considered to be Medium to High. Construction of the proposed development in three phases will involve visual effects/which are is considered to be Moderate, negative visual effects. These are expected to be Short term effects.

A total of 21 viewpoints within the study area were assessed and visual effects were found to range from beneficial, neutral to adverse. In terms of visual effects, the views of the harbour are considered characteristic of this area, and are noted in the Development Plan. The proposed development will re-introduce built form on the site, in the form of large scale buildings on this prominent site. Visual effects range from Not Significant, in cases where the development is barely visible, or visible but not in any way dominant, to Significant, where the development is clearly visible and will cause a considerable change in the visual character and amenity of the area.

While some Significant visual effects are likely in particular in the immediate vicinity of the site and the waterfront to the north, visual effects are not considered significant in relation to the wider town including the historic medieval core and the wider Wexford harbour area, including the areas of Raven point and Rosslare Harbour.

Beneficial visual effects include views where the view is considered to be improved, such as sections along Trinity Street, and where the high quality of the built form improves the view. Neutral effects are likely from the views from across harbour or the wider townscape where the development sits in well with the existing townscape and backdrop. Adverse visual effects are likely to be experienced where views to the sea or harbour are obscured by the proposed development. While the majority of the adverse effects relate to the restriction of long views by a large scale built form, in most cases, views are available in other directions to the harbour, as from the waterfront locations north of the site, and also the end of Batt Street and Gulbar Road/Harbour view. There are very few views where the proposed development will obstruct the only view to the harbour.

Mitigation measures during the construction stage include appropriate site management procedures such as the control of site lighting, storage of materials, placement of compounds, delivery of materials and car parking. Site hoarding will be appropriately scaled, finished and maintained for the period of construction of each

section of the works as appropriate. Mitigation measures were also largely included in the design of the project, analysing the buildings and the proposed streetscape in the vicinity. The proposed design includes provision of public spaces and walkways including a waterside route and viewpoints, to enhance the views from the site and thus enhance a key characteristic of the site.

The landscape plan proposes to enhance the site's character with tree and shrub planting to emphasise the natural character and setting of the site and create a buffer of suitable and robust vegetation along the railway line to integrate development into the wider landscape.

12. NOISE AND VIBRATION

The ambient noise level was assessed as part of the noise and vibration chapter at locations representative of the closest residential dwellings to the site, while an additional location was monitored to assess the noise levels experienced by a passing train. The locations, being the closest to the site, represent the worst case scenario.

The construction stage of development will result in a variety of items of plant being operated. Typical items of plant used will include breakers, excavators, piling rigs, dump trucks, compressors and generators in addition to general concreting plant, road surfacing and levelling equipment.

A computer-based prediction model has been prepared in order to quantify the noise level associated with the construction phase of the proposed development. The model was based on a list of major plant items which will be required for the construction of the proposed development. Noise levels were predicted for receiver locations closest to the site, but also predicted levels for different heights to represent different floors in a building, and also different locations to represent the front and back of some properties.

The predicted noise levels are less than the Transport Infrastructure Ireland (TII) maximum recommended limit and the lowest Category A limit of British Standard 5228. Assessment is made for the day-period only as construction will take place during day time working hours, except in the event of an emergency.

Although there is little likelihood of a significant adverse impact from the construction works. An Outline Construction Environmental Management Plan has been prepared which includes mitigation measures which will manage the risk of noise impacting the community.

The noise assessment has concluded that construction activities can operate within the adopted noise limits for daytime periods at the nearest properties to the works. The application of the proposed noise limits and restricted hours of operation, along with implementation of appropriate noise control measures, will ensure that noise impact is kept to within acceptable standards.

A vibration monitoring programme will be required to be adopted at a select number of the nearest residential properties during the most critical phase(s) of construction e.g. pile driving.

During operation, almost all locations will see an increase in noise level as a result of the development. Site-related traffic is the most significant contributor from the development during operation. It is the conclusion of the noise impact assessment that this development falls within the Lowest Observed Adverse Effect Level i.e. that some impact is likely to be detectable but is not considered significant. This is the level above which adverse effects on health and quality of life can be detected.

13. AIR QUALITY AND CLIMATE

The air quality and climate assessment has found that the greatest potential impact on air quality during the construction phase of the proposed development is from construction dust emissions and the potential for nuisance dust and particulate matter (PM₁₀/PM_{2.5}) emissions. There are a number of sensitive receptors, predominantly residential and commercial properties in close proximity to the site, along the western site boundary. In order to minimise dust emissions during construction, a series of mitigation measures have been prepared in the form of a Dust Minimisation Plan. Provided the dust minimisation measures outlined in the plan are adhered to, the air quality impacts during the construction phase will not be significant.

There is the potential for a number of greenhouse gas emissions to the atmosphere during the construction of the development. Construction vehicles, generators etc., may give rise to Carbon Dioxide (CO₂) and Nitrogen oxide (N₂O) emissions. However, the impact on the climate is considered to be imperceptible in the long and short term.

A preliminary survey of the site found asbestos containing materials and asbestos containing soils to be present on site. During any investigative and remedial works there is the potential for asbestos fibres to be released into the air and to impact air quality and subsequently human health. Standard mitigation measures for working with asbestos will be implemented for the duration of remedial works to avoid any significant impacts to air quality or human health. As a result, impacts are predicted to be temporary and insignificant with regards to human health.

There is the potential for a number of emissions to the atmosphere during the operational phase of the development. In particular, the traffic-related air emissions may generate quantities of air pollutants such as (Nitrogen Dioxide) NO₂, Carbon Monoxide (CO), benzene and Particulate Matter (PM₁₀). The impact has been assessed by modelling emissions from the traffic generated as a result of the development selecting sensitive receptors, as they have the potential to be adversely impacted by the development. Using this assessment, the impact of the development in terms of PM₁₀, PM_{2.5}, CO, NO₂ and benzene is considered negligible, long-term, negative and imperceptible.

The main contractor will be responsible for the coordination, implementation and ongoing monitoring of the dust management plan. Monitoring of construction dust deposition at nearby sensitive receptors (residential dwellings) during the construction phase of the proposed development is recommended to ensure mitigation measures are working satisfactorily. No additional mitigation measures are required at the operational phase of the proposed development as it is predicted to have an imperceptible impact on ambient air quality and climate.

When the dust minimisation measures are implemented, fugitive emissions of dust from the site will be insignificant and pose no nuisance at nearby receptors. Impacts to climate during the construction phase are considered imperceptible and therefore residual impacts are not predicted.

14. ARCHAEOLOGICAL AND CULTURAL HERITAGE

The placename Wexford is derived from the Old Norse '*Ueigsfiord*' '*the inlet of the waterlogged island*' or '*Waesfiord*' a '*broad shallow bay*'. Reclamation of land from the harbour was an ongoing process from at least the late thirteenth century, with nineteenth century land reclamation projects further changing the face of the harbour. The northern portion of the Trinity Wharf site was reclaimed by John Edward Redmond from the harbour in the early 1830s and it was developed as the Wexford Dockyard which opened in 1832.

On the Trinity Wharf site today, a wall of squared rubble red sandstone runs in a north east to south west direction through the site and survives to a height of circa 2m. This marks the boundary between the north-western portion of the site which was reclaimed in the early nineteenth century and the south-eastern portion of the site which was reclaimed in the later nineteenth and twentieth centuries. Elements of the infrastructure of the nineteenth century dockyard survives in the north-western portion of the site, including an early nineteenth century wall of red sandstone which has a slight batter at the base. The remains of a timber and cast-iron wharf also run along the north-eastern edge of the site, while there is a large masonry beacon marking the eastern corner of the site.

Because the site is on reclaimed land, it is considered that all buildings will require piled foundations. There is the potential for archaeological impacts on both pre-reclamation archaeological features and elements of the former dockyard associated with any sub-surface excavation works or piling required.

The existing sea wall along the north-east edge of the site, which comprises a reinforced concrete structure, will be replaced as part of the proposed development. It is proposed to construct a steel sheet piled structure around the perimeter of the site and no excavation of these structures below ground will be required. There is however the potential for archaeological impacts associated with any piling required.

The proposed marina is located in an area of underwater archaeological potential to the south of the medieval quays, associated with the nineteenth century dockyard and the sites of three recorded shipwrecks. The proposed boardwalk is also located in an area of underwater archaeological potential to the south of the medieval quays, associated with the nineteenth century dockyard and the sites of three recorded shipwrecks. There is the potential for underwater archaeological impacts associated with the development of the boardwalk and the marina. The proposed landing point at Paul's Quay is also identified as one of the town's historic quays while piling will also be required in an area of archaeological potential.

An access road leading from the site to Trinity Street runs immediately to the south of the site of a holy well (RMP WX037-038). While the vicinity of the well has previously been developed and there are no longer any archaeological features evident at ground level, it is possible that features associated with the well survive below ground.

An Underwater Archaeology Impact Assessment (UAIA) of the area to be impacted by the proposed marina and boardwalk will be carried out prior to any construction works. Such work is licensed by the National Monuments Service and will be carried out as part of the required UAIA, which will inspect the known underwater archaeological elements adjacent to the development area.

In the event that the underwater assessment identifies features that will be impacted by the construction phase, further archaeological mitigation will be required and may include investigation and excavation. Archaeological Monitoring of Ground and Seabed Disturbance activities during the construction phase and associated elements, with the proviso to fully resolve any archaeological features identified. Such work is licensed by the National Monuments Service.

A number of mitigation measures have also been incorporated to account for archaeological monitoring on site during construction. Should the requirement for archaeological excavation and/or preservation *in situ* occur; this will be undertaken as per best practice and in consultation with the National Monuments Service of the Department of Culture, Heritage and the Gaeltacht.

15. ARCHITECTURAL HERITAGE

Nineteenth century land reclamation projects greatly changed the face of Wexford Harbour, of which one of the key instigators was John Edward Redmond. Redmond reclaimed the site of the proposed development from the harbour in the early 1830s. The newly reclaimed land was developed as the Wexford Dockyard and opened in 1832 (O'Leary 2014). The dockyard thrived throughout the nineteenth century and became the town's most significant employer.

Further land was reclaimed to the east of the dockyard in the later nineteenth century to facilitate the construction of the factory buildings for the Wexford Engineering Company. A large factory was constructed along with a shipping wharf for the discharging of coke and scrap iron and a railway siding for loading and unloading of company wagons for Star Ironworks, which was subsequently sold to Smith Holdings. The opening of land through reclamation and the presence of the dockyards, the railway station and the later iron works provided impetus for the intensification of residential development in the southern part of Wexford.

The architectural heritage assessment examines buildings and other structures within and in the vicinity of the proposed development, assesses their architectural significance and the likely effects of construction on their architectural character. The site of the proposed development has been cleared and the remains of only one standing building survives *in situ*. The site includes a number of structures including a former boundary wall and a wharf wall of early nineteenth century date.

While the proposed development will have slight impact on the setting of 3 built heritage features, two sites of built heritage within the site will be directly impacted as they will be required to be removed to allow the construction of the proposed development. Avoidance of architectural heritage is the preferred mitigation measure, although either direct or indirect impacts on architectural heritage can occur within a development.

Mitigation by architectural record involves the production of a written account generally supplemented by measured drawing and a photographic survey. The level

of recording will depend on the significance of the structure in question. Any architectural features within the site including the former boundary wall running northeast-southwest through the site and the stone wall along the western boundary of the site should be subject to architectural recording prior to their removal.

Subject to the implementation of appropriate mitigation measures, no significant residual impacts on architectural heritage are predicted.

16. MATERIAL ASSETS AND LAND

The Material Assets and Land chapter has assessed the impact of the proposed development on material assets including built services, residential and commercial property, development land and maritime businesses within the study area.

The proposed development will require works on Paul's Quay and along Trinity Street, realignment of traffic lanes on Trinity Street to provide a junction into the site, a level crossing of the Dublin to Rosslare railway line and will also require connection to existing utilities along Trinity Street. A connection to the existing water supply within Wexford Town is also required. The impacts of upgrade works and connection works along Trinity Street to facilitate connection to the water and waste water supplies will be temporary and are likely to be slight.

The proposed development will have positive impacts on land use due to the redevelopment of a brownfield site increasing attractiveness of the local area and the increased accessibility through a proposed link road and circulatory route which will provide access for hotel drop offs and disabled parking. It is likely that the proposed development will attract businesses to invest in the wider area in the future, to complement the urban hub and provide services and facilities to benefit the new residents within Trinity Wharf and existing population within the vicinity of the site.

There will be no significant adverse impact on land ownership within the study area. The Trinity Wharf site is owned by Wexford County Council, and while the railway is owned by Coras Iompar Éireann (CIE) the project team have been in consultation with CIE throughout the development of the project to agree consent on a preferred railway crossing.

The proposed development will require construction within the foreshore and therefore a Foreshore Lease or leases will be sought from the Department of Housing, Planning and Local Government.

The area of the seabed to be directly impacted by the proposed development will not directly impact on any existing areas designated under Aquaculture licences granted by the Department of Agriculture, Food and the Marine. Analysis has been undertaken in the relevant chapters of the EIAR and mitigation measures have been put in place to ensure that any construction or operation works will not have an impact on the water quality of Wexford Harbour. The proposed development is not expected to have any impacts on local maritime and boat users. The footprint of the marina does not encroach on the navigational channel within Wexford Harbour.

The proposed development would have a positive impact in making this area of the town significantly more attractive, with the potential to facilitate tourism, leisure, recreational activities and related commercial opportunities, allowing for the economic growth. It is proposed to capture the maritime history of the site in the

development of the site by creating signage around the Trinity Wharf site, promote the historical background of the site including its former use as a dockyard.

There are no specific mitigation measures in relation to material assets and land. The design of the development has accommodated the necessary improvements in infrastructure to service the site, without having impacts on infrastructure along Trinity Street. The provision of the proposed utilities and services will facilitate the required needs of the development without impacting on any existing utilities within the site. There will be no negative residual impacts on material assets as a result of the proposed development. The proposed development will provide an additional amenity to the area with positive impacts for the local community with regards to increased tourism and improved economic activity.

17. INTERRELATIONSHIPS, MAJOR ACCIDENTS AND CUMULATIVE EFFECTS

Interrelationships

The interrelationships between the individual environmental disciplines have been considered and assessed. It is concluded that once relevant mitigation measures are implemented, likely significant interrelation effects will exist as a result of the construction or operation of the Trinity Wharf Development.

Major Accidents and Natural Disasters

The design of the proposed development has taken account of the potential for flooding, road and rail accidents, spillages, building failure or fire on site and animal and plant disease in the design of the development and the construction methodology. In relation to accidents resulting in a spillage of polluting material, the risk of these occurring will not be significant. The likelihood of the proposed development causing major accidents and /or disasters is therefore found to be slight and is not significant.

Cumulative Impacts

Although it is acknowledged in Chapter 11 that the proposed development will result in adverse landscape and visual effects of certain localised views along the coastline it is not considered that there is potential for significant negative cumulative impacts arising in combination with any of the other assessed plans or projects. Positive cumulative impacts are predicted with strategic plans for the area as the proposed development supports various objectives of these plans.

Based on the above, it can be objectively concluded, in view of best scientific knowledge, on the basis of objective information and provided effective mitigation is in place, that the proposed development, either individually or in combination with other plans and projects, will not have a significant adverse effect on the receiving environment.

18. FURTHER INFORMATION & WHAT HAPPENS NEXT

The Environmental Impact Assessment Report will be available for inspection at the following locations as detailed in the published newspaper notices:

- An Bord Pleanála's offices during public opening hours, from 15th February 2019 until 1st April 2019 inclusive (except on Public and certain Holidays);

- Planning Department, Wexford County Council, County Hall, Carricklawn, Wexford, Y35 WY93 between the hours of 09:00 to 13:00 and 14:00 to 16:00; Monday to Friday from 15th February 2019 until 1st April 2019 inclusive (except on Bank and Public Holidays);
- Wexford Town Library, Mallin Street, Wexford, Y35 AY20 from 15th February 2019 until 1st April 2019 inclusive, between the hours of 10:30 to 17:30 Monday, Wednesday, Friday & Saturday (except Mondays and Saturdays on Bank Holiday weekends) and 10:30 to 21:00 on Tuesdays & Thursdays.

The application documentation, including the EIAR and NIS, will also be available for purchase at a reasonable fee not exceeding the reasonable cost of making a copy.

A copy of the Environmental Impact Assessment Report, Natura Impact Statement and Plans and Particulars may also be accessed free of charge on the Council's website at <https://www.wexfordcoco.ie/business/economic-development-projects/trinity-wharf-development>

Submissions may be made in writing to:

An Bord Pleanála,
Strategic Infrastructure Division,
64 Marlborough Street,
Dublin 1, D01 V902.

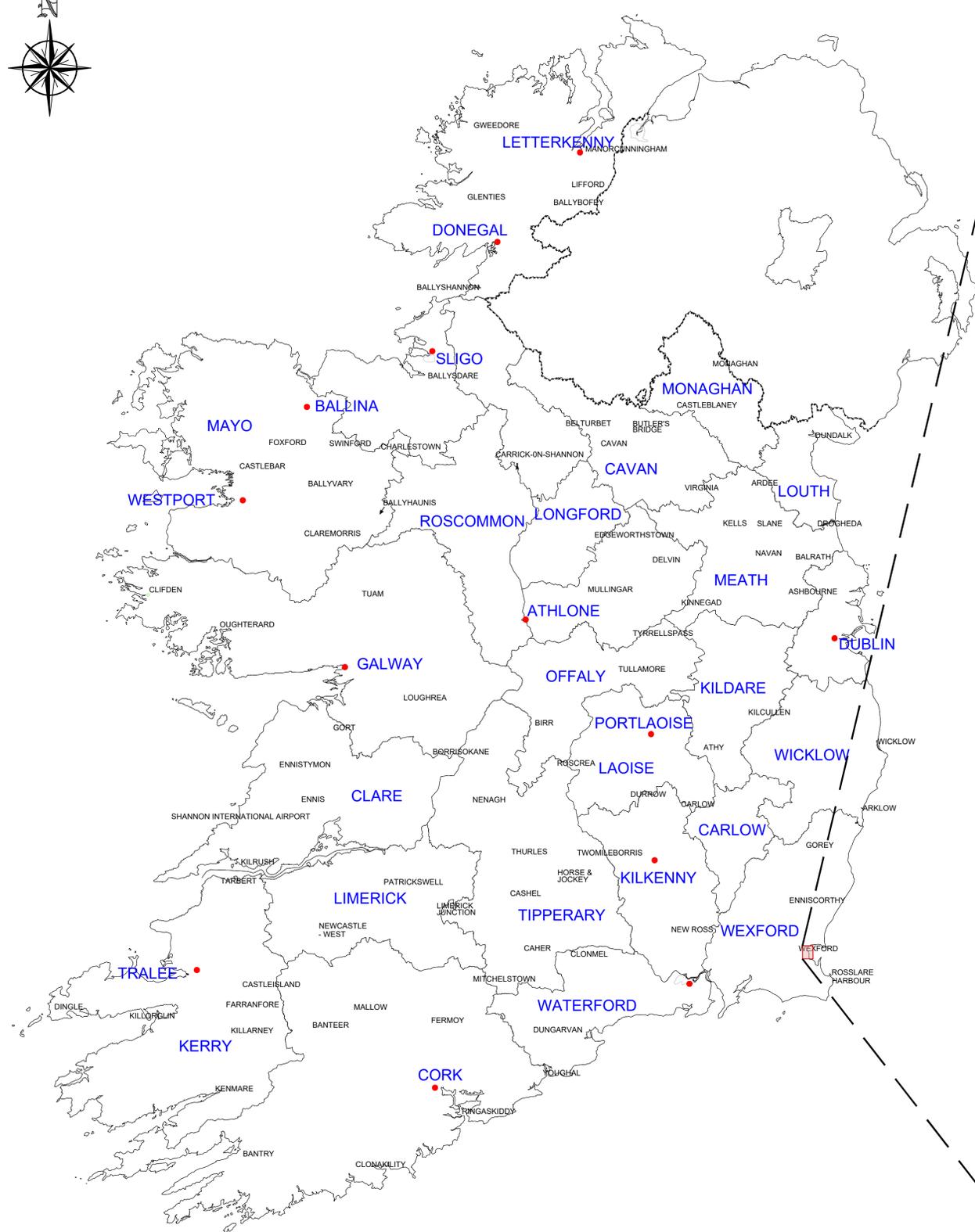
Submissions may be made prior to the 1st of April 2019, as specified in the published newspaper notices, in relation to:

- the likely effects on the environment as a result of the Trinity Wharf Development;
- the implications of the Trinity Wharf Development for proper planning and sustainable development in the area which it is proposed to situate the proposed development; and
- the likely significant effects of the Trinity Wharf Development on a European Site.

An Oral Hearing may be held, should the statutory requirements for one be met. Written submissions, together with any representations made at any oral hearing, will be considered by An Bord Pleanála in making its decision on whether or not to approve the Trinity Wharf Development with or without modifications. An Bord Pleanála's decision will be published in one or more newspapers circulating in the area, including where appropriate, particulars of any modifications to the Trinity Wharf Development.

APPENDIX A

FIGURES



MAP OF IRELAND
A1 SCALE: 1:1000000
A3 SCALE: 1:2000000



MAP OF IRELAND
A1 SCALE: 1:100000
A3 SCALE: 1:200000



TRINITY WHARF DEVELOPMENT

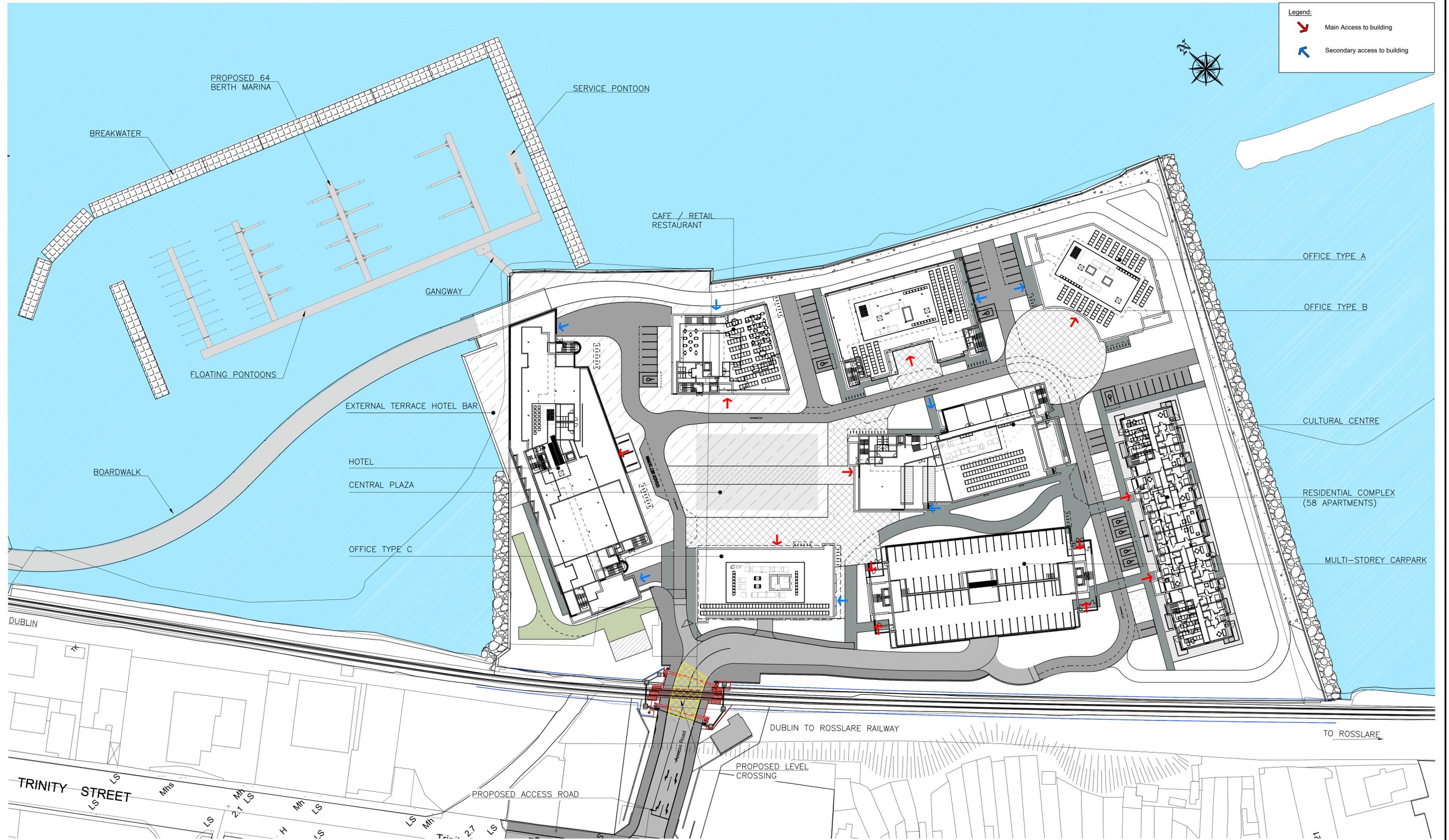
ENVIRONMENTAL IMPACT ASSESSMENT REPORT



Arena House, Arena Road, Sandyford, Dublin 18, Ireland
t +353 (0) 1 294 0800
f +353 (0) 1 294 0820
www.rod.ie

Drawn	Designed	Checked	Approved	Suitability Code - Description
IM	SH	BC	MK	S4 - Stage Approval

Project Stage	E.I.A.R.				
Project Title	TRINITY WHARF DEVELOPMENT				
Drawing Title	NTS FIGURE 1 LOCATION PLAN				
Drawing Number	Project	Originator	Volume	Location	Type Role Number
TRWH	-	ROD	-	GEN	- SW_AE - DR - CH - 4001.1
Scale (A1)	AS SHOWN	Date:	December 2018	Job No:	18.133
				Rev:	-



Legend:

- ➔ Main Access to building
- ➔ Secondary access to building

PROPOSED SITE LAYOUT
 A1 SCALE 1:600
 A3 SCALE 1:1200



NOTE:
 E.I.A.R drawings based on Design drawings prepared by Scott Tallon Walker Architects with inputs from the project team as listed at the start of this Volume.

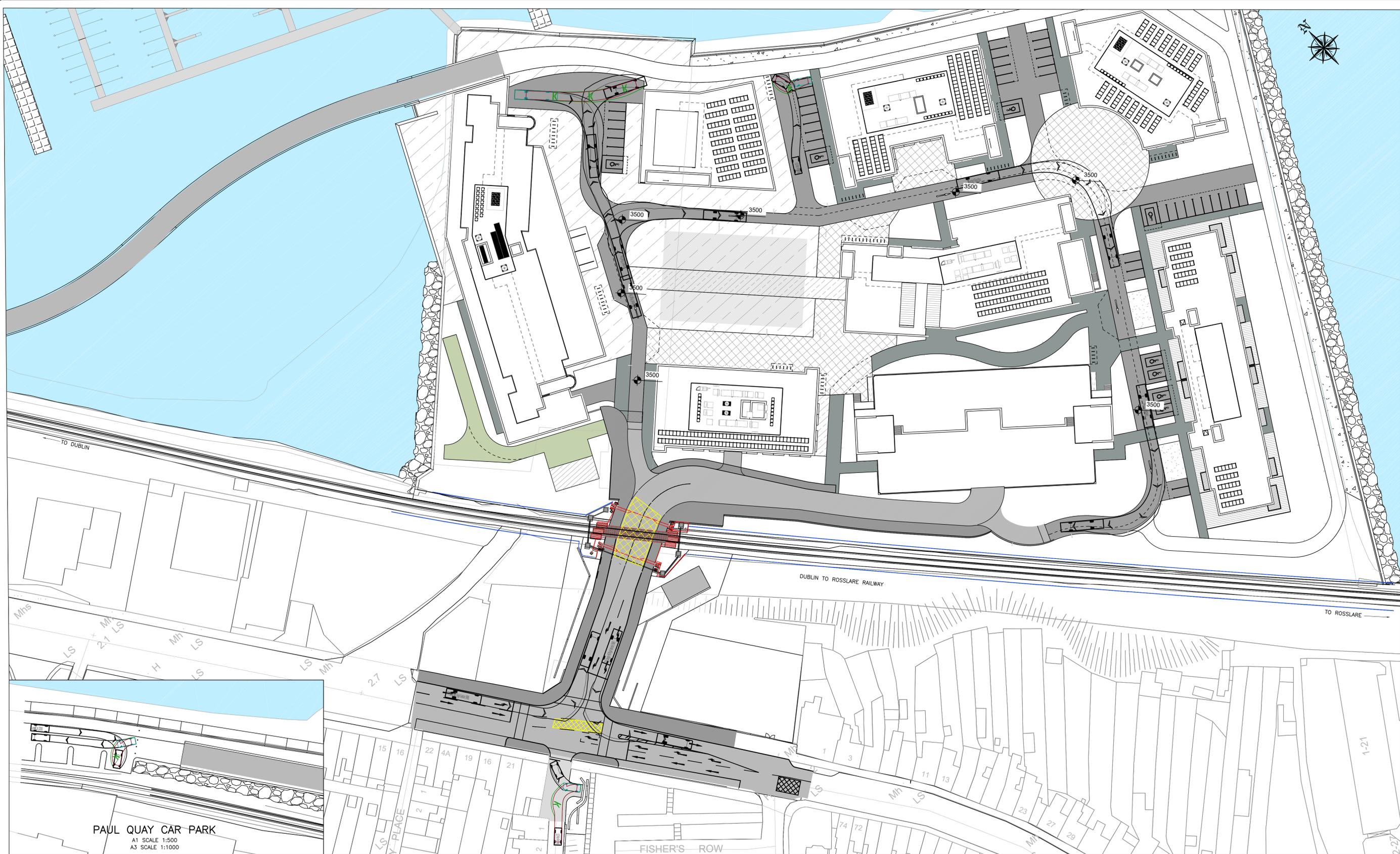
TRINITY WHARF DEVELOPMENT
ENVIRONMENTAL IMPACT ASSESSMENT REPORT



Arena House, Arena Road, Sandyford, Dublin 18, Ireland
 t +353 (0) 1 294 0800
 f +353 (0) 1 294 0820
 www.rod.ie

Drawn	Designed	Checked	Approved	Suitability Code - Description
IM	STW	STW	MK	S4 - Stage Approval

Project Stage	E.I.A.R.				
Project Title	TRINITY WHARF DEVELOPMENT				
Drawing Title	NIS FIGURE 2 PROPOSED SITE LAYOUT FIRST FLOOR LEVEL				
Drawing Number	Project	Originator	Volume	Location	Type Role Number
TRWH	- STW	- GEN	- SW_AE	- DR - AX	- 4004.6
Scale (A1)	AS SHOWN	Date:	December 2018	Job No:	18.133
				Rev:	-



PAUL QUAY CAR PARK
 A1 SCALE 1:500
 A3 SCALE 1:1000

INTERNAL ROADS
 A1 SCALE 1:500
 A3 SCALE 1:1000



NOTE:
 EIAR drawings based on Design drawings prepared by
 Scott Tallon Walker Architects with inputs from the
 project team as listed at the start of this Volume.

TRINITY WHARF DEVELOPMENT

ENVIRONMENTAL IMPACT
 ASSESSMENT REPORT



Arena House, Arena
 Road, Sandyford,
 Dublin 18, Ireland
 t +353 (0) 1 294 0800
 f +353 (0) 1 294 0820
 www.rod.ie

Drawn	Designed	Checked	Approved	Suitability Code - Description
JA	JA	MK	MK	S4 - Stage Approval

Project Stage	E.I.A.R.				
Project Title	TRINITY WHARF DEVELOPMENT				
Drawing Title	NTS FIGURE 3 INTERNAL ROADS AUTOTRACK				
Drawing Number	Project	Originator	Volume	Location	Type Role Number
TRWH	TRWH	ROD	HML	SW_AE	DR - CH - 4004.11
Scale (A1)	AS SHOWN	Date:	December 2018	Job No:	18.133
				Rev:	-



ROUGHAN & O'DONOVAN CONSULTING ENGINEERS

Arena House
Arena Road
Sandyford
Dublin 18
D18 V8P6
Ireland

Phone +353 1 294 0800

Email info@rod.ie