



Trinity Wharf Development

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Further Information Response

October 2019
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Trinity Wharf, Trinity Street, Wexford

Further Information Response

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0. INTRODUCTION

Background

Wexford County Council (WCC) submitted a development consent application for the Trinity Wharf Development Project ("the proposed development") to An Bord Pleanála in February 2019. The planning application reference number is PL26.303726.

The period for submissions on the proposed development lasted for six weeks and closed on 1st April 2019. A total of 17 submissions were made. On 24th July 2019, An Bord Pleanála ("the Board") issued by letter a request for further information (RFI), PL26.303726. This letter stated that the Board required WCC to provide further information in relation to the effects on the environment to support the application. The Board requested that the further information should be submitted by 14th October 2019.

A copy of the letter is included in **Appendix A1** to this report.

Project Description

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 site will be a key part of the town's economic development and urban regeneration.

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 site is located in a desirable position, close to Wexford town centre, on the southern end of Wexford Quays and affords exceptional views across Wexford Harbour.

The Trinity Wharf Development will create employment opportunities and provide public amenities that will benefit the community in a sustainable way into the future. The proposed Trinity Wharf Development is located in the Electoral District (ED) of Wexford Urban No. 2 which is located on the south side of Wexford Town. The ED has a Pobal Maps Deprivation score of -11.29 while the average deprivation score for the county is -4.81. This area of Wexford Town is considered disadvantaged. The proposed development will build on the existing connections which this vibrant community already has with the sea, creating 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 in a new urban quarter. The proposed development, within the heart of Wexford Town, offers sustainable solutions that break the circle of social and spatial polarisation.

The 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 of c. 9,950m² gross floor area and height of c. 21.15m (Ground Floor to Roof Plant Level).
- A six-storey multi-storey car park of c.12,750m² gross floor area providing 462 car parking spaces (including 23 spaces designated for people with disabilities) with a height of c.18.15m (Ground Floor to Roof Plant Level). In addition, a further 47 parking spaces are provided at surface level around the site. In total, 509 parking spaces are provided.
- A five-storey residential building of c.6,820m² gross floor area providing 58 apartments (8 no. one bed, and 50 no. two bed) with a height of c.15m (Ground Floor to Roof Plant Level), and ancillary facilities (communal open space, bicycle and bin stores).
- Office Building A, five storey, c.5,450m² gross floor area, height of approx. 20.0 m (Ground Floor to Roof Plant Level).

- Office Building B, five storey, c.6,105m² gross floor area, height of approx. 20.0 m (Ground Floor to Roof Plant Level).
- Office Building C, five storey, c.4,990m² gross floor area, height of approx. 20.0 m (Ground Floor to Roof Plant Level).
- A two-storey cultural/performance centre of c.2,945m² gross floor area and height of c.10.0m (Ground Floor to Roof Plant Level) with event capacity for up to 400 people.
- A two-storey mixed-use restaurant/café/ specialist retail building of c.1,530m² gross floor area and height of c.8.0m (Ground Floor to Roof Plant Level). A single storey management building of c.57m² gross floor area with a height of c.3.2m (Ground Floor to Roof Level) with associated landscaping works and retaining walls to the main vehicular entrance road.
- 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 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 total of 146 bicycle parking spaces throughout the development of which 90 spaces are dedicated to the residential development.
- 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.

Request for Further Information

The following five items were outlined in the RFI and this Further Information Response provides responses to all issues raised, following that same structure:

- 1 Natura Impact Statement
- 2 Traffic and Transportation
- 3 Flood Risk
- 4 Water and Wastewater Infrastructure
- 5 Other matters

1. NATURA IMPACT STATEMENT

a. Qualifying Interest

An Bord Pleanála RFI:

You are requested to address the issues raised by the Department of Culture, Heritage and the Gaeltacht (NPWS) in relation to the potential disturbance of Little Tern, a special conservation interest species (breeding) of the Wexford Harbour and Slobbs Special Protection Area (site code 004076) during construction and operation of the proposed Trinity Wharf development.

Applicant Response:

The submission received from the NPWS notes that *"the rarest of Ireland's tern species...is particularly prone to human disturbance"*. The submission also notes that *"The proposed 64 berth marina and waterside high-density residential development of 58 apartments will lead to an increase in recreational use of the harbour which may cause disturbance to little terns, particularly through landings for recreational purposes on sandbars used as nest sites"*.

In terms of potential impacts during the construction phase, the only disturbance would be caused by excessive noise levels with the Little Tern colonies located > 3km east of Trinity Wharf on the sand banks at the mouth of Wexford Harbour. The sensitivity of birds to disturbance varies by species and whether the source of the disturbance is visual, or noise based (IECS, 2009)¹. Additionally, the current level of habituation will also determine a bird's response to disturbance (IECS, 2013)². The noise levels from impact hammers and vibratory hammers are less than 100 Db(A). Put into practice, this will mean that if an impact hammer generates 100 Db(A) at 1.0m from the source, this sound will be 70 Db(A) at 34m away. The 'acceptable dose' for waterbirds is 70 Db(A) at receptor (IECS, 2013). Therefore, there will be no disturbance of little terns caused by noise levels, and by extension, by construction activities.

With respect to impacts during the operational stage of the proposed development, in the view of Captain Phil Murphy, the Senior Marine Officer and authority at Wexford Harbour, the provision of a marina at Trinity Wharf will not cause a significant increase in marine traffic as the proposed development will simply result in a re-configuration of the existing marine leisure moorings within Wexford Harbour. At present, there are numerous moorings and vessels located ad hoc throughout the area. The proposed development will provide a purpose-built facility for these vessels. Owing to the improved mooring conditions, facilities and shelter, the majority of vessels that will be using the proposed marina are expected to be coming from existing adjacent moorings within the estuary.

It should also be noted that 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. In the view of Captain Phil Murphy, there will never be a significant increase in marine traffic as the area is simply not deep enough. These larger vessels, including trawlers, charter vessels and large sailing vessels, are all accommodated by the nearby Kilmore Quay, which is the largest fishing port in Co. Wexford.

Therefore, we do not consider that there will be an increase in recreational traffic caused by the proposed development that could cause disturbance to the Little Tern.

In the Departments submission it states *"Protective measures may need to be considered during the assessment. For example, a study on little tern nesting success in Portugal (Medeiros et al., 2007) showed that the presence/absence of protective measures (warning*

¹ Cutts, N., Phelps, A. and Burdon, D. (2009) "Construction and Waterfowl: Defining Sensitivity, Response, Impacts and Guidance, Report to Humber INCA." ZBB710-F-2009. Institute of Estuarine and Coastal Studies University of Hull.

² Cutts, N., Phelps, A. and Burdon, D. (2009) "Construction and Waterfowl: Defining Sensitivity, Response, Impacts and Guidance, Report to Humber INCA." ZBB710-F-2009. Institute of Estuarine and Coastal Studies University of Hull.

signs and wardening) was the most important predictor of nesting success, with birds being up to 34 times more likely to succeed with protective measures. Information signage at the marina as outline in the EIAR (Chapter 7 Biodiversity, page 7/50) should advise boat owners of the importance of the area for breeding little terns and how to avoid disturbance. The Little Tern colonies are monitored by the NPWS and signs have been put in place to inform members of the public that ground-nesting birds are present and request that they do not enter this area.

Signage proposed at the new marina will provide information to boat owners about the importance of Wexford Harbour for seals (Section 5.2.2 of the NIS and Section 7.8.2 of the EIAR). This signage will also include information on Little Tern in Wexford Harbour, and a notice warning people not to land on the sand banks. The signage will also be erected at various points of entry to Wexford Harbour including at Wexford Quays and Ferrybank, Goodtide Harbour and the jetty at the bottom of Hantoon Road. An example of the signage is provided in Plate 1.1 below. Medeiros et al. (2006)³ has shown that, at a Little Tern colony in Portugal, protective measures such as signage were the most important predictor of nesting success.

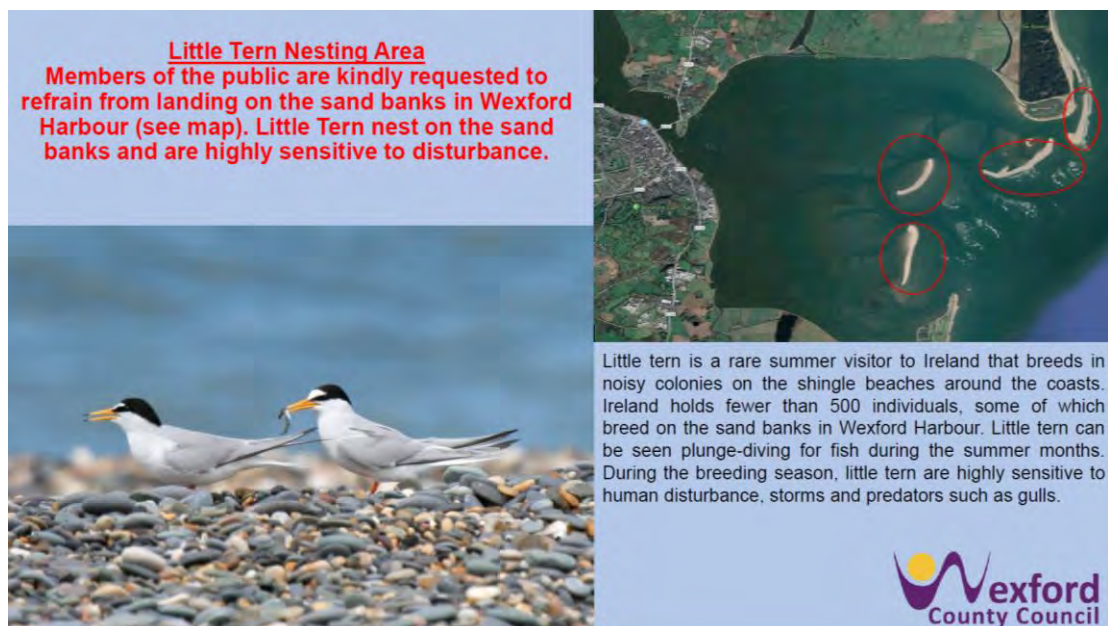


Plate 1.1 Example of signage.

In conclusion, with the adoption of the mitigation measures proposed there is no potential for disturbance of Little Tern during construction and operation of the proposed Trinity Warf development.

³ Medeiros, R., Ramos, J., Paiva, V., Almeida, A., Pedro, P. and Antunes, S. 2007. Signage reduces the impact of human disturbance on little tern nesting success in Portugal. *Biological Conservation* 135 (1) , pp. 99-106. [10.1016/j.biocon.2006.10.001](https://doi.org/10.1016/j.biocon.2006.10.001)

b. Habitat Loss

An Bord Pleanála Request for Further Information:

You are requested to provide clarity on the estimated area of permanent habitat loss of subtidal benthos in relation to the targets set as part of the Conservation Objectives for the habitat Type Estuaries [11301] and Mudflats and Sandflats not covered by seawater at low tide [1140] for the Slaney River Valley Special Area of Conservation.

It would be useful to put this predicted habitat loss in context of the natural processes occurring in the dynamic estuarine environment.

Note 1: the final figure in the Natura Impact Statement is unsubstantiated at 1,547 m² with clearer information presented in the Biodiversity Chapter and in the Benthic study.

Please clarify if this takes account of the overlap between the extent of the Special Area of Conservation and the Special Protection Area as this is not clear in the Natura Impact Statement.

Note 2: It should be noted that monitoring cannot be used as a method to mitigate potential habitat loss and any uncertainty in relation to the calculation of habitat loss should be addressed in the Natura Impact Statement.

Applicant Response:

The figure of 1,547m² consists of 969m² within the Slaney River Valley SAC and 999 m² within the Wexford Harbour and Slob SPA, with, a 421m² overlap. The 969m² 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.

The 999m² within the Wexford Harbour and Slob SPA is classified as “Wetlands and Waterbirds” and represents c.0.002% of the total area of wetland habitat within the SPA.

The habitat surrounding Trinity Wharf conforms to Estuaries [1130], Mudflats not covered by the sea water at low tide [1140] and Wetlands and waterbirds [A999].

- The maximum area of Annex I habitat that will be lost is 2,168m²;
- 621m² of which is outside the Natura 2000 network; and
- 1,547m² of which is inside the Natura 2000 network.

A breakdown of the directly impacted Annex I habitats is presented in Figure 1.1 below. The overall area of the marina and boardwalk has not been included as water will be allowed to circulate freely underneath these structures.

The mudflats and benthic habitats have been found to have low faunal diversity (RPS, 2018) and are not an important area for wintering birds (Natura, 2016).

In terms of the dynamic estuarine environment, habitats such as sand banks and mud-flats are constantly exposed to tidal movements, sediment input from the River Slaney and storm surges from the Irish Sea. The total area of these habitats is constantly changing. As explained, the total area of habitat loss inside the Natura 2000 sites is 1,547m², which is 0.005% of the total area of Estuaries [1130] in the SAC. Therefore, in the context of the dynamic estuarine environment in Wexford Harbour, the area of habitat loss as a result of the project is minimal and in the natural estuarine processes will be replaced elsewhere in the estuary. Furthermore, in the do-nothing scenario, the sea walls would continue to be breached and will result in the perimeter of the Trinity Wharf site, and the rubble and pollutants within it, continuing to collapse, entering the Annex 1 habitats and leading to habitat deterioration and loss.

It should be noted that any monitoring included in the NIS is not proposed as mitigation, and was included in deference to the NPWS scoping submission (see **Appendix A2**). It is imperative to note however, that this monitoring has not been proposed as a mitigation measure, it was not considered in any of the assessments in the EIA or AA or their conclusions and has only been included as an add on as it was requested by NPWS.

In the interests of clarity in relation to the requirements of Appropriate Assessment, WCC propose to remove this commitment to monitoring the effectiveness of protective measures from both the EIAR and NIS as these protective measures are widely used and have proven to be successful in these environments. As the assessments and conclusions contained in the EIAR and NIS were prepared without any consideration of monitoring, the conclusions remain unaffected. However, should ABP deem it necessary for us to include such monitoring as a condition of development approval, Wexford County Council will have no difficulty with this.

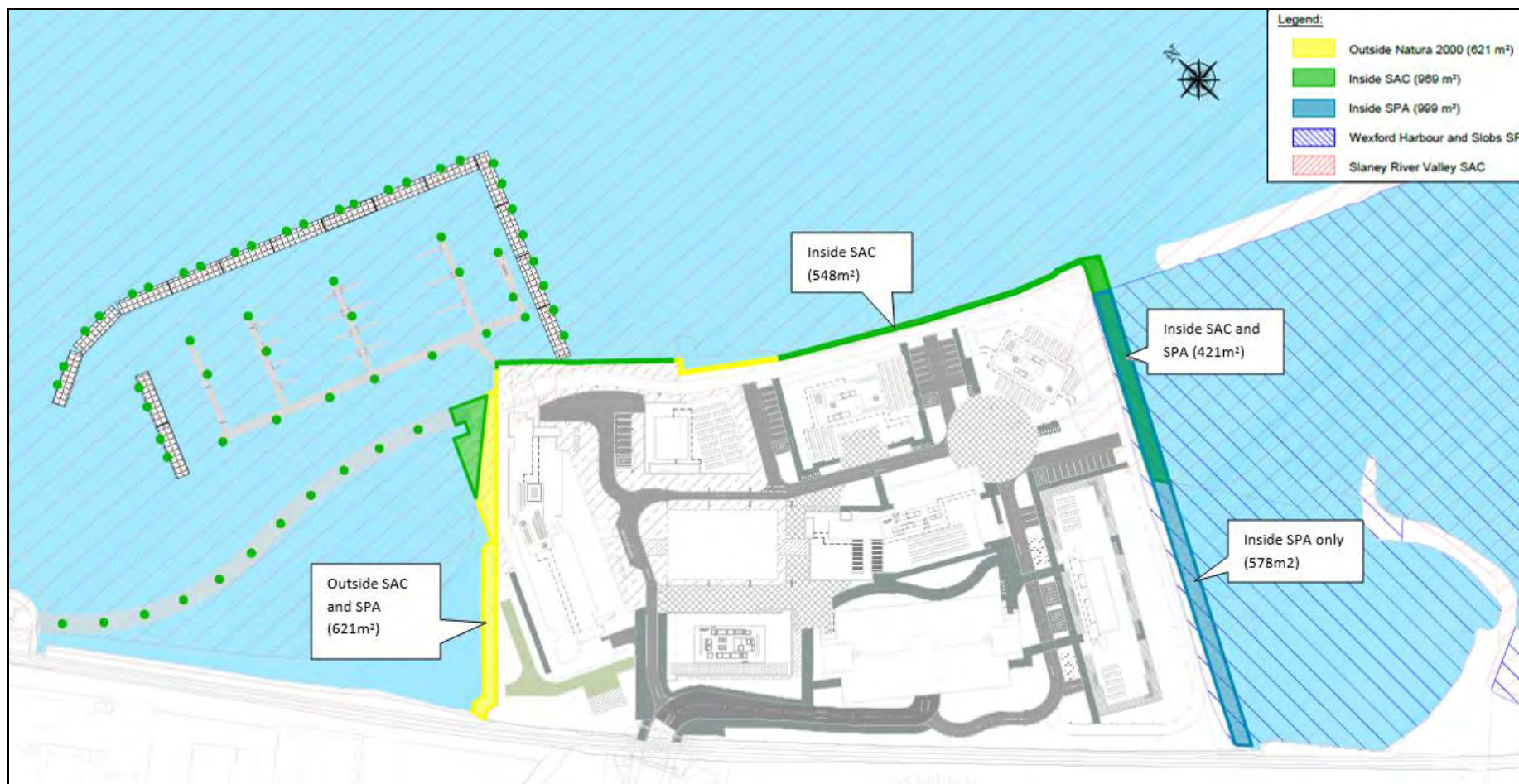


Figure 1.1 **Annex I Habitat Loss Breakdown**

c. In combination effects

An Bord Pleanála Request for Further Information:

The assessment of in-combination effects assesses other plans and projects for potential cumulative adverse effects on the Wexford Harbour and Sloba Special Protection Area and Slaney River Valley Special Area of Conservation, however, it does not take ongoing activities such as aquaculture into account. Aquaculture and recreational activities are identified as pressures and threats to these European Sites. Consideration should be given to the possibility of in-combination effects of these ongoing activities within the Estuary and the proposed development.

This information can be submitted by way of either a revised Natura Impact Statement or an addendum to the current Natura Impact Statement.

Applicant Response:

In this section, the potential for in-combination effect(s) between the Trinity Wharf Development, Aquaculture and water-based recreational activities is considered. The response is also provided as an Addendum to the Natura Impact Statement (**Appendix A3**), as requested by An Bord Pleanála.

There is the potential for in combination effects between the Trinity Wharf Development, Aquaculture and water-based recreational activities to result from an increase in human presence in Wexford Harbour which could lead to impacts such as habitat loss and degradation through visual and noise disturbance and/or pollution.

As presented in the marine traffic response to this RFI, in the view of Captain Phil Murphy, the Senior Marine Officer and authority at Wexford Harbour, the provision of a marina at Trinity Wharf will not cause a significant increase in marine traffic as the proposed development will simply result in a re-configuration of the existing marine leisure moorings within Wexford Harbour. At present, there are numerous moorings and vessels located ad hoc throughout the area. The proposed development will provide a purpose-built facility for these vessels. Owing to the improved mooring conditions, facilities and shelter, the majority of vessels that will be using the proposed marina are expected to be coming from existing adjacent moorings within the estuary.

It should also be noted that 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. In the view of Captain Phil Murphy, there will never be a significant increase in the marine traffic as the area is simply not deep enough. These larger vessels, including trawlers, charter vessels and large sailing vessels, are all accommodated by the nearby Kilmore Quay, which is the largest fishing port in Co. Wexford.

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. These activities require the advance permission of the Harbour Master in accordance with the Wexford County Council Harbour and Piers Bye-laws. To put this into context, the Harbour Master has received one request for jet-ski access since 2014.

The wintering bird studies undertaken in 2015/16 and 2018/19 (**Appendix A4**) illustrate that the area around the Trinity Wharf site contains low numbers of wintering birds. The proposed marina will reduce the area available to aquaculture by 1.2 hectares which is considered to have a positive effect on the subtidal estuarine habitat and the European Sites.

In conclusion, on the basis that:

- The Trinity Wharf development will not result in any significant increase in marine traffic, either from recreational vessels or vessels engaged in aquaculture.
- There are currently low levels of bird use within 200m of Trinity Wharf.

- The proposed marina will provide 1.2 hectares of haven from aquaculture use.
- Mitigation provided in the NIS for Trinity Wharf avoids adverse effects on the integrity of the Natura 2000 Sites within Wexford Harbour.

It can therefore be concluded that there be will no adverse in-combination effects on the integrity of any European Site as a result of the Trinity Wharf Development, Aquaculture and water-based recreational activities.

2. TRAFFIC AND TRANSPORTATION

a. Marine Traffic/Transport

An Bord Pleanála Request for Further Information:

Chapter 5 of the Environmental Impact Assessment Report, entitled Traffic Analysis and the Traffic and Transportation Report address onshore traffic and transportation impacts only and does not address traffic or transport matters arising in the marine environment.

You are requested to revise the documents above/provide an addendum to address marine related traffic/transport.

Applicant Response:

Refer to the Traffic Addendum in **Appendix B1** for the addendum relating to Marine Traffic/Transport.

b. Traffic Surveys

An Bord Pleanála Request for Further Information:

The traffic survey data submitted relates to December 2016 and August 2018 including the bank holiday. You are requested to undertake a traffic survey to include 24 hour Automated Traffic Counts on Parnell Street, Trinity Street and William Street Lower and any other street considered necessary and Junction Turning counts at (1) Trinity Street/King Street and Park Quay Junction, (2) Trinity Street/Sea View Avenue Junction and (3) Trinity Street/Fishers Row/William Street Lower and (4) Trinity Street/Parnell Street Junction and (5) Distillery Road/Joseph Street/Mill Road/King Street on a midweek day during the school term. The traffic impact analysis assessment of the Traffic and Transportation report and Chapter 5 of the Environmental Impact Assessment Report should be amended to reflect any changes which may arise from the new survey information. Furthermore, a map clearly outlining the location of each of the streets and junctions should be included within the reports under 'existing traffic'.

Applicant Response:

The abovementioned sites were resurveyed by Nationwide Data Collections between Thursday 5th September and Thursday 12th September 2019 to account for school term traffic during business core hours. Details of these traffic surveys including a drawing titled 'Existing Traffic' and the junction capacity analysis using this new traffic data can be viewed in the Traffic Addendum contained in **Appendix B1**.

c. Car park Survey

An Bord Pleanála Request for Further Information:

Please provide an updated town centre car parking survey to that undertaken in November 2016 which should include a map including the location of the car parks and an indication of the streets within the vicinity of the site where pay and display parking is in operation. The transport demand generation parking provision should be reviewed on the basis of the results of the surveys undertaken and traffic impact analysis assessments updated to reflect same.

Applicant Response:

The abovementioned sites have been resurveyed by Nationwide Data Collections on Thursday 5th, Monday 16th and Monday 30th September 2019 to account for school term traffic on parking demands during core business hours. A map showing the location of the car parks has been included in Figure 5.1 Rev 2 in **Appendix B1**. A map indicating the streets within the vicinity of the site where pay and display is in operation is shown in **Appendix B1**. The survey confirmed the findings presented in the EIAR that the alternative Town Centre car parks have adequate capacity to meet the surplus parking demand generated by

the site without causing significant disruptions to the parking needs of the Town Centre. The detailed findings and analysis of this car parking survey can be viewed in the Traffic Addendum provided in **Appendix B1**.

d. Junction design

An Bord Pleanála Request for Further Information:

Section 6.3.2 of the Traffic and Transportation report states that the new access junction will form a 4-way signalised junction with Trinity Street and Sea View Avenue. However, the modelling undertaken in the junction capacity analysis refers only to the Trinity Street and Access road junction. You are requested to undertake a review of the junction design and modelling undertaken which takes full account of Sea View Avenue.

It is also requested that you examine and outline the manner by which access to and egress from the vehicular entrance to the commercial premises to the west of the site can be maintained for loading/unloading.

The traffic impact analysis assessment of the Traffic and Transportation report and Chapter 5 of the Environmental Impact Assessment Report should be updated to reflect same.

Applicant Response:

The model has been updated to include Seaview Avenue into the analysis. The results can be viewed in the Traffic Addendum provided in **Appendix B1**.

The general arrangement of the proposed access junction has been refined to improve vehicular access to the McMahon Building Supply Premises. This refinement includes the provision of a loading bay and the repositioning of the stop lines and pedestrian lines at the junction. (See **Appendix B1**).

e. Road Safety Audit

An Bord Pleanála Request for Further Information:

It is stated in the documentation, Section 6.4.1.7 Environmental Impact Assessment Report and Section 11 of the Traffic and Transportation Report, that all issues raised in the RSA have been addressed/accepted so the proposed development will be satisfactory in terms of traffic operations. It is noted that the Road Safety Audit identifies 13 problems. Please provide a report or appendix to the Traffic and Transportation Report which outlines the measures undertaken to address each of the identified problems.

Applicant Response:

A summary of the Road Safety Audit issues and responses along with a description of the measures being implemented by the design team in the design development is included in **Appendix AA5 Road Safety Audit Report** of the Traffic Addendum provided in **Appendix B1**.

f. Cycle/pedestrian access/proposals

An Bord Pleanála Request for Further Information:

Please provide an outline of the existing and proposed cycle lanes and pedestrian pathways on the public roads in the vicinity of the site and proposed connections from same to the cycle lanes proposed in the development. A map should be provided to outline same and a timeframe for the delivery of proposals for cycle lanes/pedestrian pathways not yet in place/subject of proposed improvements.

Applicant Response:

Wexford County Council is working in accordance with the Walking and Cycling Strategy for Wexford Town prepared in 2014 to develop cycling and walking infrastructure in Wexford

Town. This strategy document presents eight new routes within the town boundary that will be developed, without giving a particular timeframe for doing so. Of these, Routes 1 and 2 are proximate to the Trinity Wharf development.

Route 1 is complete and runs from the N25/R730 junction into Rocklands. It provides a dedicated cycle lane at carriageway level, separated by road markings.

Route 2 is proposed to pick up from the end of Route 1 (at Rocklands) and runs to Redmond Square, to the north of Wexford Quays, taking in William Street, Trinity Street and Wexford quays on its route. Wexford County Council has developed a part of this route recently (Route 2D – See Plate 2.2 below), taking advantage of an opportunity to bring the route off-road along the waterfront area. The Trinity Wharf development will provide further advancement of this route (Route 2B – See Plate 2.2 below), while also accomplishing predominantly off-road separation. Routes 2B and 2D are combined cycling and pedestrian ways.

As presented in the Addendum (**Appendix B1**) the design of the proposed access junction and access link at Trinity Street has been refined to accommodate this linkage. The refinement includes pavement marking indicating shared surfaces. The pavement marking symbols on the footpaths will be accompanied by appropriate signage to reinforce its shared use. Please see **Plate A1** in **Appendix B1**.

Wexford County Council plans to complete Route 2C prior to completion of Phase 1 of the Trinity Wharf development. This will comprise formal designation, marking, signage and likely some separation fencing to convert the existing 3m wide footpath into a combined pedestrian/cycleway. Depending on the full scope of works and associated cost, it may prove necessary to submit this section for planning. This route, when complete, will provide full linkage from Trinity Wharf to Wexford Bridge – all off-road. Route 2C will be a combined pedestrian/cycleway.

There is no immediate timeframe to develop Route 2A. The development of this section of cycleway along William Street out to Rocklands will need to take account of the available road space and existing residential parking. Potential options to make this section cycle-friendly include creating a shared surface with reduced speed limits. The development of this section of cycle-way will be subject to the applicable statutory consultation and approval process.

Wexford County Council has also developed cycle lanes on the R741 Road north of Wexford Bridge (designated as Ardcavan cycleway on the attached map). While not included in the original cycling strategy 2014, the zoning of lands in the Ferrybank/Crosstown/Ardcavan area necessitates the development of new sustainable transport links between the area and the town centre.

Proposed greenways

Since the above referenced strategy was prepared, two ambitious greenway projects for Wexford town have been under consideration.

The Wexford to Curracloe greenway (shown yellow and labelled 'WC Greenway' on Plate 2.2 below) has previously been the subject of an unsuccessful development consent application to the Board. Wexford County Council is now considering an alternative route and is in the early stages of preparing for a further consent application to the Board. It is expected to resubmit to the Board for development consent in 2020.

The potential for developing a greenway from Wexford to Rosslare (shown blue and labelled 'WR Greenway' on Plate 2.2 below) is also being examined by the Council. One possible route which will be considered for feasibility is the blue route shown on the attached map, which would connect to the southern end of Trinity Wharf. This proposed route would link to Trinity Wharf and connect Wexford Town with Rosslare Strand and the planned Rosslare Harbour to Waterford greenway. At this stage, it is anticipated that an application for consent will go into the Board in 2021.

Please note that given its urban setting, all roads/streets in the vicinity of Trinity Wharf feature pedestrian walkways. In the interest of clarity, we have not highlighted these on the attached map.



Plate 2.2 WCC Cycleways Map (Walking and Cycling Strategy for Wexford Town, 2014)

3. FLOOD RISK

An Bord Pleanála Request for Further Information:

Notwithstanding the consideration of flood risk in chapter 10 (hydrology) of the Environmental Impact Assessment Report, you are requested to submit a Site Specific Flood Risk Assessment for the proposed development site with specific reference to the Justification Test set out in Chapter 5 of the Planning System and risk management, guidelines for planning authorities 2009. Chapter 10 of the environmental impact assessment report (and other sections of the Environmental Impact Assessment Report as appropriate) should be amended to reference the SSFRA required).

Applicant Response:

A Site-Specific Flood Risk Assessment (SSFRA) for the proposed development in accordance with the Planning System and Flood Risk Management Guidelines for Planning Authorities as published by the Office of Public Works (OPW) and Department of Environment, Heritage and Local Government (DoEHLG) 2009 has been undertaken and is included in **Appendix C1**. Chapter 10 of the Environmental Impact Assessment Report has also been updated to reference the Site-Specific Flood Risk Assessment. The updated Chapter 10 of the Environmental Impact Assessment Report is provided in **Appendix C2**.

4. WATER AND WASTEWATER INFRASTRUCTURE

An Bord Pleanála Request for Further Information:

- a. *In their submission to the Board, Irish Water note that it is proposed to locate elements of the proposed development in close proximity to a number of IW below ground assets in particular a 700mm diameter rising main which runs parallel to the railway line adjacent to the development site. In this regard you are requested to provide details to ensure no conflict with this rising main or other IW assets and in particular provide details of specific measures to protect the 700mm diameter rising main which Irish Water advise cannot be diverted.*

Applicant Response:

It is proposed to locate a number of services in close proximity to an existing 700mm diameter rising main which runs parallel to the railway line adjacent to the development. There is no conflict between the proposed services for this development and the existing rising main. The minimum clear vertical separation distance provided between the rising main and the proposed services is 460mm which is greater than the 300mm requirement outlined in Section 3.6 of the Irish Water Code of Practice for Water Infrastructure, Connections and Developer Services December 2017. Irish Water requirements in terms of horizontal separation distances between the proposed services and the rising main will be adhered to. The horizontal separation distance to the nearest proposed parallel services from the rising main is 12.23m. A minor readjustment to the location of the proposed management building adjacent to the access road is proposed to ensure that a minimum 3.5m separation distance is provided between the building and the existing rising main with a commitment to liaise with Irish Water, as part of detailed design, to provide for the protection of the rising main. This separation distance has been presented to (and agreed) with Irish Water. Refer to drawings TRWH-ROD-GEN-SW_AE-DR-CH-4067 to 4069 in **Appendix D1** outlining the location of the existing rising main relative to the proposed services for the development and the revised management building location. Refer to **Appendix D2** for Irish Water Correspondence outlining separation distance requirements for the proposed management building from the existing rising main.

An Bord Pleanála Request for Further Information:

- b. *Irish Water have outlined that trial holes may need to be dug to confirm the depth of the rising main to inform type of protection measures that might be required.*

Applicant Response:

Contemporaneous as-built records showing the location and level of the existing rising main were obtained from Wexford County Council. These are deemed sufficient for the purposes of this application and the associated environmental assessments.

An Bord Pleanála Request for Further Information:

- c. *Please provide a revised long section for the access road which provides information on the location of proposed storm sewers, foul sewers and watermains and how these would interact with the existing railway line and existing rising main.*

Applicant Response:

Revised long sections at the existing rising main and railway line locations have been prepared which outline the locations of the proposed storm sewers, foul sewers and watermains relative to the rising main and railway line. Refer to drawings TRWH-ROD-GEN-SW_AE-DR-CH-4067 to 4069 in **Appendix D1**.

An Bord Pleanála Request for Further Information:

- d. *Please provide a pre-connection enquiry from Irish Water to facilitate assessment of the capacity of the Irish Water infrastructure to cater for proposed connections and to assess the design of the water and wastewater network on the site to ensure compliance with the Irish Water standards.*

Applicant Response:

A pre-connection enquiry form was submitted to Irish Water on the 20th June 2018. A Letter of Feasibility was subsequently issued to ROD by Irish Water on the 3rd September 2018. Refer to **Appendix D2** for Irish Water correspondences.

5. OTHER MATTERS

An Bord Pleanála Request for Further Information:

- a. *Please submit a copy of the Wexford Quay Economic Development and Spatial Implementation Plan referenced in the Planning Report and Statement of Consistency with Planning Policy.*

Applicant Response:

Please find the Wexford Quay Economic Development and Spatial Implementation Plan provided as **Appendix E1**.

An Bord Pleanála Request for Further Information:

- b. *Please respond to the submissions and observations received by the Board in respect of this application.*

Applicant Response:

Please see the following Sections of this Request for Additional Information Response document (Section 5.1 to 5.16) which provides a response to each item raised in the submissions and observations received by ABP.

5.1 TL Mussels

- a. *The planned development will encroach or affect Site T3 99 - map attached in the application. The applicant comments that the Site T3 99 comprises one of the best areas for mussel cultivation within the Wexford harbour/ Slaney Estuary area.*

Applicant Response:

The licencing of sites for aquaculture in Wexford harbour is a function of the Department of Agriculture, Food and Fisheries. As noted in the Submission, TL Mussels Ltd. has submitted an application for licencing of an area (T03/99) that includes the site of the proposed marina.

Wexford County Council, as a notifiable body in the aquaculture application process, requested that the area required to facilitate the development of the marina be excluded from the grant of any aquaculture licence. See correspondence in **Appendix 5.1.1**.

Wexford County Council was notified on 10/09/2019 by the Department of Agriculture Food and Fisheries, of the Minister's decision to grant an aquaculture licence (with variations) for Site T03/99 to TL Mussels Ltd. The licenced area does not include the area required for the development and operation of the marina and as such no conflict exists between the site T03/99A licensed for aquaculture and the proposed marina. See **Appendix 5.1.2**.

Wexford County Council has also submitted an application for foreshore consent for the elements of the proposed development that are located on the foreshore. This includes the marina.

The development of the marina will be contingent on the decision of the Department of Housing, Planning and Local Government – Foreshore Section in respect to this application.

Wexford County Council would also draw the Board's attention to the submissions from the Department of Agriculture, Food and Fisheries and Bord Iascaigh Mhara (BIM) received in connection with this application which are summarised below:

Department of Agriculture, Food and Fisheries -Aquaculture and Foreshore Management Division (AFMD) (In conjunction with the Department's Marine Engineering Division (MED)) - *"There are significant existing licenced sites and applications for potential future aquaculture sites within Wexford Harbour. It is noted that there is contaminated material on the site of the proposed development. The potential impact on aquaculture is considered not to be significant, provided the development proceeds as outlined in the planning application documentation."*

Concluding remarks: *"AFMD / MED have no objections to the development as proposed in the planning documentation. A further report will follow the proposed foreshore application for the development."*

Bord Iascaigh Mhara - *'We are satisfied that the marina design options chosen will have the least impact on the hydrology of the harbour and that sedimentation of the main channel in and out of the harbour.'*

- b. *The applicant notes that there is worldwide evidence that land-based developments such as the proposed development destroy shell fishing industries and cause long term and unforeseeable damage to the marine environment (listing Gulf of Mexico as an example).*

Applicant Response:

To respond to the specific example of shellfish within the Gulf of Mexico, RPS undertook an extensive search of scientific journals using academic search engines to find an authoritative volume that described shellfish of the Gulf of Mexico (Tunnell, 2017). This volume of works which described the status and trends of shellfish species, the influences on shellfish populations and the shell fishing industry within the Gulf of Mexico was based on a wide-ranging selection of peer reviewed scientific journals.

This volume noted that a range of factors can impact shellfish communities. These factors can include but are not limited to overfishing, habitat loss/degradation, parasites & disease, economic issues, management/regulatory decisions and coastal development & related water quality issues (Lotze, et al., 2006; Halpern et al., 2008; Jackson 2008).

Further assessment of this academic research found that the impact on shellfish communities from coastal/land-based development stemmed primarily from runoff of pollutants and nutrients into the marine environment which in turn created water quality issues. In relation to the proposed development, a number of construction activities such as surface run-off from construction areas etc. do have the potential to negatively impact on water quality. However, these potential impacts have already been considered and mitigated against as detailed in Chapter 8 of the Environmental Impact Assessment Report.

From an operational perspective, there are no activities associated with the proposed development that will be discharging effluent into the Slaney Estuary. Furthermore, hydrodynamic modelling undertaken for the proposed development concluded that:

“Neither the proposed landside development, nor the landside development in combination with a marina will result in any significant differences to either the tidal regime or the prevailing wave climate it can be concluded that neither development would result in any significant changes to the sediment transport regime. As such, it can be concluded that the nearby environmentally sensitive areas will be not be adversely impacted by any changes in the sediment transport as a result of either the landside development in isolation or the landside development in combination with the marina” **Appendix 4.4 Trinity Wharf Marina Additional Modelling Services – Chapter 5.**

It can therefore be concluded that neither the construction nor operational activities of the proposed development will negatively impact the shell fishing industries.

From a more holistic perspective, it is important to acknowledge that, in addition to Wexford harbour, there are many examples throughout Ireland whereby licensed aquaculture (including shell fishing sites) operate in close proximity to land-based developments, busy harbour and Ports, including at:

- Bantry Bay
- Donegal Harbour
- Sligo Harbour
- Carlingford Bay
- Castlemaine Harbour
- Waterford Harbour

The on-going operational success of these licensed aquaculture sites provides strong evidence that aquaculture and land-based development & industry can co-exist if managed and monitored correctly.

- c. *The applicant states that there is no need to locate services on the seabed and that there is plenty of scope of access to Wexford Harbour and Slaney Estuary for any boats which wish to access it.*

Applicant Response:

As stated in Chapter 4 of the Environmental Impact Assessment Report, the only service that will be in contact with the seafloor is the weighted pipe from the designated waste pump-out station through which waste will be injected into the sewer infrastructure of the proposed landside development. This pipe will enter the landside sewer infrastructure through the sheet piled perimeter of the site.

Using a weighted pipe to ensure that the discharge pipe remains on the seabed is industry standard practice. This reduces the hydrodynamic pressure on the pipe, reduces the forces

at connecting joints and reduces the likelihood of the pipe being snagged by equipment or vessels.

During the design of the proposed marina, RPS consulted with the Senior Marine Officer of Wexford Harbour, Captain Phil Murphy, who is the authority on marine traffic within Wexford Harbour and the wider Slaney estuary area. Captain Phil Murphy was in agreement with RPS that the proposed layout minimised navigational restrictions within the existing approach channel to Wexford Harbour. See **Appendix 5.1.3**.

- d. *From a planning perspective their issues with the proposed development are:*
- e. (i) *potential impact of the proposed marina (construction and operation) the river/estuary environment and sensitive mussel beds.*
- (ii) *potential impact of land-based development on the river*

Applicant Response:

The potential construction and operational impact of the proposed development (i.e. the land-based development and the marina) on the marine environment is assessed in detail in Chapter 10 and Chapter 16 of the Environmental Impact Assessment Report. These potential impacts are summarised in Table 1.1.

Table 1.1 Potential impacts of the proposed development on the marine environment

Potential Construction Phase Impact	Potential Operational Phase Impacts
Run-off <ul style="list-style-type: none"> Spillage of concrete, grout and other cement based products. Accidental Spillage of hydrocarbons Faecal contamination Contaminated ground excavated Elevated silt/sediment loading in construction site runoff 	Morphological Changes to Surface Watercourses & Drainage Patterns
Run-off during clearance or grading works	Hardstanding Runoff from areas such as roads or parking bays
Increased sediment during anchoring of marina	Impact to the aquaculture sites due to changes to the tidal and current regime

As specified in Chapter 10 of the Environmental Impact Assessment Report, these potential construction phase impacts will be addressed and mitigated by the actions specified in project-specific Construction Environmental Management Plan (CEMP) and Environmental Operating Plan (EOP). Chapter 10 also describes mitigation measures for the potential operational phase impacts associated with the proposed development.

For the purpose of brevity, we have not re-produced all mitigation measures in this response. Instead the reader should refer to Chapter 10 of the EIAR and the Outline CEMP and EOP which was appended to the main EIAR as Appendices 4.1 and 4.2.

Chapter 10 of the EIAR concluded the construction phase impact of the development will be imperceptible if the measures described in the CEMP and EOP are adapted by the contractors and marina operators. Similarly, Chapter 10 and Chapter 16 concluded that the operational phase impact of the proposed development will be imperceptible. This statement is supported by hydrodynamic modelling undertaken for the proposed development which concluded that:

“Neither the proposed landside development, nor the landside development in combination with a marina will result in any significant differences to either the tidal regime or the

prevailing wave climate it can be concluded that neither development would result in any significant changes to the sediment transport regime. As such, it can be concluded that the nearby environmentally sensitive areas will be not be adversely impacted by any changes in the sediment transport as a result of either the landside development in isolation or the landside development in combination with the marina” **Appendix 4.4 Trinity Wharf Marina Additional Modelling Services – Chapter 5.**

f. (iii) *Need and Demand for a Marina*

Applicant Response:

The Trinity Wharf site offers the opportunity for the development of a marina to service the marine leisure industry in the lower harbour area. Wexford County Council is actively engaged with marinas in Wales to develop cross Irish Sea traffic for suitable vessels. Feedback from visiting vessels over the past number of years has indicated a positive response to developing a marina, as both a stop off destination in its' own right, as well as a bolt hole in adverse weather for vessels transiting the Wexford Coastline.

However, notwithstanding the above, Wexford harbour is naturally managed and limited in terms of access and therefore boat numbers, by the restrictive depth in the navigation channel and at its entrance. Shifting sand banks on the approaches and variations in channel depths restrict vessels with medium to deep draughts accessing the lower harbour. Upstream is also somewhat restricted by Wexford bridge which limits access to the upper harbour for masted craft particularly at high tide.

At present, there is no dedicated berthing facility serving the lower harbour and as a result there are numerous moorings and vessels located ad hoc throughout the area. These vessels currently have to be accessed by small tender, which is not ideal particularly in times of strong winds or tides.

The development of a new marina facility at Trinity Wharf will provide a purpose built public facility for these vessels with improved mooring conditions, facilities and shelter, as well as safe means of access and egress to/from leisure craft in the harbour. The majority of vessels that will be using the proposed marina are expected to be coming from existing adjacent moorings within the estuary. It will complement our existing marinas in both Kilmore Quay and New Ross, and help to enhance the proposed “necklace of marinas” in Ireland.

The marina will act as a focal point for the Trinity Wharf development and acknowledges Wexford town's rich maritime history and the heritage of the site which was originally developed as a boat yard in the early 1800s.

Marinas by their very nature are attractive and draw attention to the coastal environment. The marina at Trinity Wharf will complement the proposed development of the Trinity Wharf lands, in particular the adjacent hotel and nearby apartments. It will help to create a vibrant atmosphere that will add to the attractiveness and appeal of the development which can be enjoyed by boaters, locals and tourists alike.

5.2 Alan and Mary Clancy

- a. (i) *The proposed development will obstruct the established uninhibited and exceptional view from the house and garden of the harbour and sea*
- b. (ii) *Impact of the proposed development (massing and height) on the existing residential amenity of their home and garden*
- c. (iii) *Overlooking of home and garden at close proximity from proposed apartments*

Applicant Response:

Scott Tallon Walker Architects have prepared a contextual section taken perpendicularly through the rear garden of 49 William Street showing the existing and proposed development. (Ref. Section 7: Application Drawing TWW-STW-00-ZZ-DR-A-131-2053 in **Appendix 5.2.1**).

The sections are based on existing levels surveyed by Cardinal Surveys and show the existing outline of 49 William Street with surveyed levels of the existing building's ground floor level (+11.52m OD), eaves level (+16.77m OD), ridge height (+19.32m OD) and boundary wall to the rear of the property (top of wall +11.72m OD).

The proposed section shows the proximity, massing and height of the proposed apartment building, which is the building to be located closest to the rear boundary of No. 49 William Street. The roof parapet level of the apartment building is approx. +19.20m OD. with a setback plant enclosure.

The southern corner of the apartment building is approx. 45m from the rear property boundary and approx. 117m from the rear of the building. This is consistent with the design standard in Section 11.08.06 of the Wexford Town and Environs Development Plan 2009-2015 (extended) that states '*a distance of 22m shall generally be observed between opposing first floor windows.*' In this instance the 117m distance from the rear of the building is considerably more than the 22m general privacy distance. The 45m between the apartment building and the rear property boundary of 49 William Street is more than the 22m general privacy distance.

The difference in ground levels between the Trinity Wharf development site and the properties on William Street means that the parapet level of the apartment building is three storeys (9.5m) above the ground level at the rear property boundary of no. 49 William Street.

The south-west elevation of the apartment building that faces towards 49 William Street is designed with one window on each floor to provide daylight to the kitchen area of each apartment. An external balcony for each apartment is located at the southern corner. The floor level of the fifth-floor balcony (Level 04) is +15.70m OD.

The issues raised in the submission specifically relate to the existing residential amenity of the private rear gardens and living areas of the residential properties along William Street. However, the development has been designed to minimise adverse impact on these properties in terms of distance, massing and scale of the proposed buildings, their elevational treatment and the proposed landscaping within the application site area. While it is recognised that there will be some reduction of the sea view with the proposed development, it is considered that this is compensated by the high-quality design of the proposed buildings and their landscaped setting with semi-mature trees, set well back from the rear boundary of properties on William Street.

Semi-mature tree planting around the building as shown on the proposed Planting Plan (Ref. Application Drawing 1125-L-PP-001) is proposed as part of the natural soft landscaping to this building. This is designed to provide additional supplementary screening to this elevation, helping to reduce visual impact and avoid overlooking and any loss of privacy. The photomontages submitted with the application show the trees as five years old, before full maturity.

In conclusion, Scott Tallon Walker Architects have in their design considered that while the views from the house will change, the existing residential amenity to the residents of 49 William Street should not be affected by the massing and height of the development and that the proximity of the apartments should be acceptable in terms of privacy and overlooking.

- d. *Adverse impact on existing residential amenity due to noise levels, construction traffic, air quality, and the resultant close-proximity building usage*

Applicant Response:

As presented above while the views from the house will change, the existing residential amenity to the residents of 49 William Street should not be affected by the massing and height of the development and that the proximity of the apartments should be acceptable in terms of privacy and overlooking.

In terms of construction traffic, during the construction phase the peak traffic scenario will only result in an increase of 2.6% on existing traffic as presented in Table 4.5 of the EIAR. This will not present a significant impact to the residents of William Street or Trinity Street. Mitigation measures have been proposed to avoid significant effects on noise and air quality during the construction phase and the implementation of the Construction Environmental Management Plan and Dust Minimisation Plan and monitoring by the Site Environmental Manager will ensure that noise and air quality mitigation measures are implemented as specified in the EIAR.

Chapter 13 of the EIAR presents the assessment of air quality and climate impacts and it concludes *"The results of the air dispersion modelling study indicate that the impacts of the proposed development on air quality and climate is predicted to be imperceptible with respect to the operational phase for the long and short term."*

As presented in Chapter 12 of the EIAR following the implementation of noise mitigation measures the overall noise impact from the proposed development on the closest properties will be of low significance falling within the LOAEL – Lowest Observed Adverse Effect Level i.e. that some impact is likely to be detectable but is not considered significant.

As presented above while the views from the house will change, the existing residential amenity to the residents of 49 William Street should not be affected by the massing and height of the development and that the proximity of the apartments should be acceptable in terms of privacy and overlooking.

- e. *Adverse Impact on health and well-being due to loss of sea view, view of proposed development and reduction in sea-air exposure*

Applicant Response:

As a prescribed body the Health Service Executive (HSE) were consulted both at Scoping stage on the content of the EIA and also at the Statutory Consultation stage. They did not make a submission in relation to any Human Health related concerns.

The proposed development has been designed to minimise adverse impact on adjacent properties in terms of distance, massing and scale of the proposed buildings, the elevational treatment and proposed landscaping within the application areas. While it is recognised that with the proposed development there is some reduction of sea views, it is considered that this is compensated by the high-quality design and finishes including the landscape design. Semi-mature tree planting around the building is proposed as part of the natural soft landscaping to this building. This is designed to provide additional supplementary screening to this elevation, helping to reduce visual impact and avoid overlooking and any loss of privacy.

The proposed development will facilitate urban regeneration of the area by transforming a strategically located brownfield site into a new high quality, attractive, commercial, residential and office development along with residential and recreational facilities in Wexford Town. The marina and pedestrian and cycle boardwalk structure across Wexford Harbour will physically integrate with the existing amenities of Wexford's quay front and contribute to a new attractive, connected town centre amenity.

It is hoped that this project will have a transformative effect on the character of the local area and on Wexford Town and will also provide high quality employment and residential and social facilities as well as high quality public realm and amenities.

The development is expected to improve the general amenity, journey characteristics and local economy for residents, visitors as well as marina users that will result in a *moderate, positive, long-term* impact on land uses, social considerations and economic activity in the area;

In conclusion positive social and health outcomes are likely as a result of the urban regeneration of the site through indirect positive land use changes, increased social and economic activity in the area and expansion of walking and cycling facilities with the wider area over time.

- f. *Concern over devaluing of their property due to the 'loss of sea view and spatial setting'. The issue raised relates to 'ownership/right to a view' and impact on value of property.*

Applicant Response:

Trinity Wharf is located on the edge of Wexford's town centre within lands identified as zoned town centre in the Wexford Town and Environs Plan 2009-2015 (extended). The Plan identifies the Trinity Street and Trinity Wharf area to be suitable for development of 5 to 6 stories in height.

The proposed development has taken account of important key urban design principals such as legible building frontages, appropriate heights, smart and respectful design, protection and awareness of environmental assets, promoting a softening of the urban structure through a high quality programme of planting and pedestrian friendly thoroughfare have been incorporated into the overall design. This has resulted in a simple and respectful urban design which acknowledges the human scale and provides for responsible social, economic and environmentally sensitive redevelopment of the Trinity Wharf site.

The proposed development will:

- Act as a catalyst for economic growth and socio-economic development by providing modern office spaces required to attract investors and high profile, high quality employers;
- Drive the regeneration of the wider Trinity Street / William Street areas urban area by providing a vibrant, diverse, multi-use quarter of outstanding place quality on its doorstep;
- Reintegrate the site into the mainstream life of Wexford Town in economic, commercial and social terms, in a manner which is sustainable.

The proposed development will seek to return significant employment opportunities to the Trinity Street / William Street area and will encourage existing residents living outside the traditional town to use and support the town centre on a more frequent basis, encouraging inward investment from a broader business base.

It is Wexford County Councils expectation that the proposed development will lead to the enhancement of property values in the area.

- g. *Concern over the volume of traffic in William Street with proposed development and junction on Trinity Street as proposed. Congestion, impact on local businesses, introduction of*

signals, removal of parking spaces, loss of residents parking, increased parking demand. Queries TIA section 5.4.1. no account taken of other proposed developments in the area.

Applicant Response:

The proposed access junction with traffic loading generated by the proposed development was modelled using industry standard junction modelling software to understand its impact on the street network. This model has been rerun to satisfy the requirements of this RFI using supplementary traffic data and incorporating Seaview Avenue as a 4th arm. The results of the model are presented in the Traffic Addendum (**Appendix B1**). An analysis of the model results indicate that the proposed junction will operate well within capacity with only minor delays to traffic on Trinity Street.

The general arrangement of the proposed junction was refined subsequent to public consultation to minimise the impact the junction will have on on-street parking. The on-street car parking fronting the green area on the western side of Trinity Street will be largely retained as it was identified to be more useful to nearby residents.

The parking impacted on the eastern side of Trinity Street fronts a vacant site and McMahons. The loss of these parking spaces is considered non-significant as there is adequate capacity on the surrounding street network.

Although the junction capacity analysis does not included loading from the proposed development on the former C & D Home and Hardware Store site, the potential traffic generation of 45 apartment dwellings is considered minor in relation to the traffic currently on the network. This site is not part of this application.

5.3 Angelo Bonferraro

- a. (i) *Visual impact of scale, height and bulk of the development on the neighbourhood and town - proposed development is out of character compared to the low-level character of the south side of the town and surrounding area. proposed development will lead to degradation of ambience of town and neighbourhood.*
- b. (ii) *Height and Scale is over development and lacks sympathy with the existing residential neighbourhood: asserts no regard given to the quality of life of people living in the neighbourhood, and that height and intensity of the proposed development will have an overwhelming impact, and is unacceptable on a human health and wellbeing perspective.*
- c. (iii) *Proposed design is out of character with the culture and character of the surrounding area and diminishes the maritime ambience of the south side of the town,*

Applicant Response:

The full text in relation to Point 1 of the third-party submission states:

'The main and initial concern relates to the scale, height and bulk of the development and the massive visual impact it will have on this neighbourhood and on the town in general. It will dwarf the other developments in this area, and completely destroy the visual skyline south from the quays, from the bridge and from Ferrybank. It is out of character from the low-level character of the south side of the town and outlying rural and coastal area as to cause a degradation of the view, atmosphere and ambience of this town, not to mention the neighbourhood.

'We are not against some kind of appropriately scaled low level development on this site, but what is proposed is utterly inappropriate. Such a development would be better placed in a location with similar structures and purpose, e.g. Newtown near the County Council's own offices and the Department of the Environment, or some of the business parks on the outskirts of the town. This site would be more appropriate perhaps for mixed housing development and some leisure facilities to avail of the marine nature of the river front.

'Due to it's scale, height and bulk this development is not in accordance with the proper Planning and Development of the area'.

The proposed development is intended to facilitate the urban regeneration of a derelict brownfield site and improve the ambience of the town. By consolidating land use sustainably in the town centre, the proposed development is intended to enhance the local economy for people working and living in Wexford town with positive, long-term benefits in terms of land-use, social considerations and the economic activity of the area. A high-quality design that responds and respects the urban context is essential to achieving the intended social and economic benefits for Wexford. Scott Tallon Walker Architects has a proven track record for considered, contemporary design that relates with the surrounding context and which is attractive for people to work, live and to use.

Scott Tallon Walker Architects has designed the proposed development to provide a series of new public spaces and walkways extending along the waterfront that connect with the existing quays and Trinity Street. Scott Tallon Walker Architects has carefully considered how the urban form, height, scale, materials and finishes of the proposed development will relate with the surrounding context.

Scott Tallon Walker Architects based the design of the development to comply with the requirements set out in the current *'Wexford Town and Environs Development Plan 2009-2015 (extended)'*.

In the *'Wexford Town and Environs Development Plan 2009-2015 (extended)'* Trinity Wharf is located on the edge of Wexford's town centre with lands zoned town centre. In Zone 13 of the *'Masterplan Zone Maps & District Centre Information'* Trinity Street and the Trinity Wharf area are identified as suitable for development of 5 to 6 storey in height.

The subject site of Trinity Wharf is outside of the older town boundaries and is located on land the majority of which was previously reclaimed in the 19th Century. This brownfield site was used intensively for manufacturing purposes up to the start of this century until the closure of Wexford Electronics. The site's location to the south of the Town's medieval core offers the opportunity for significant commercial and residential development within a short walk from South Main Street.

The subject site requires a strong architectural response to create defining landmark buildings. The topography of the area provides the opportunity for high density commercial and residential development with limited visual impact on the adjoining residential dwellings on William Street.

There are several new tall structures in the Town centre such as the National Opera House and Whites Hotel which break the skyline next to the Twin Churches. However, the tallest buildings on the Quay are 6 storeys (Paul Quay & Talbot Hotel).

Whilst it may be considered that this site could accommodate a taller building, the 5 to 6 storey height is most suitable for the uses proposed and relates to the height and scale of buildings along Paul Quay.

The design of the proposed development was informed by an urban design analysis that considered the relationship of the proposed development with the surrounding context, including in the context of the town centre viewed from Wexford Bridge and Ferrybank and along the Quay-front. 3-D Models and Photomontages of the proposed development were prepared as part of the design process. These identified that the proposed development would be only partially visible at a distance from the surrounding streets because of adjacent low-rise commercial buildings and a vacant site. Relevant information is included in the Architects Design Statement which accompanied the application.

A 'Landscape and Visual Impact Assessment' (LVIA) was carried out and is included as part of the EIAR that accompanied the application (See Chapter 11 of the EIAR). This includes a range of views of the overall context and setting of the development, and its impact on the immediate neighbourhood, the town in general and the surrounding coastal and rural area.

The relationship between the proposed development and the adjoining local residential area was carefully considered by Scott Tallon Walker Architects. It was established that the closest proposed buildings would be approx. 70m from the rear of the closest residential properties on William Street, that the proposed development site is approx. 5m lower than the existing street level at the junction of William Street and Fisher's Row, and that the proposed development site is distinct and separate from the local residential area by a steep embankment and railway line with no existing public access.

There are limited views of the development from Trinity Street, Fisher's Row and William Street. These are largely because of a vacant site formerly occupied by a factory/ warehouse building opposite Fisher's Row. This current application includes a landscaped hedge to screen the existing vacant site and define the continuity of the street. However, Wexford County Council has identified that this vacant site provides an opportunity to reintroduce the building line along Trinity Street and to provide an attractively landscaped recreational/play area for the local community. This will form part of a separate future application.

As part of the response to An Bord Pleanála, Scott Tallon Walker Architects have prepared three contextual sections showing the relative height and proximity of the proposed development in relation to the existing properties on William Street. (Ref. Application Drawing TWW-STW-00-ZZ-DR-A-131-2053 in **Appendix 5.2.1**).

The sections are based on existing levels surveyed by Cardinal Surveys and show the existing outline of the properties along William Street with rear property boundaries and surveyed ground level, eaves and ridge heights of the existing buildings.

The proposed apartment buildings and multi-storey car park are the buildings closest to the existing residences on William Street with the office buildings located further away.

Section 7 shows the proximity, massing and height of the proposed apartment building in relation to No. 49 William Street. Section 8 shows the proximity, massing and height of the proposed car park structure in relation to No. 29 William Street, and Section 9 shows the proximity, massing and height of the proposed car park structure in relation to No. 3 William Street.

These show that the existing building heights along the east side of William Street range from +14.75m OD at No. 3 William Street to +19.32m OD at No. 49 William Street. The proposed parapet heights of the closest buildings are +19.20m OD for the apartment building and +22.15m OD for the car park structure. The apartment building is approx. 117m from 49 William Street (rear of the building) and approx. 45m from the rear boundary of the property. The car parking structure is approx. 70m from No. 3 William Street and approx. 42m from the rear boundary of the property. The car parking structure is approx. 93m from the 29 William Street (rear of building) and approx. 42m from the rear boundary of the property. The distances are based on OS plans due to limited site access with the exception of the rear property boundary of No. 49 William St. which was surveyed.

The proposed development provides a high-quality public realm with a series of interconnected public spaces, waterfront walkways and a pedestrian/cycle routes that connect with both the Town centre quay-front and with the Trinity Street residential area. The proposed development will provide improved access to the water-front and provide an attractive amenity that will enhance the quality of life for people living in the neighbourhood.

In conclusion, the proposed development has an appropriate height, scale and massing of buildings that accords with planning policy for the town as a whole and which also respects the existing character and amenity of the local residential area. The proposed development gives regard to the quality of life of people living in the area in limiting the height and scale of the proposed development and by providing a high-quality public realm that connects Trinity Street with the waterfront. The maritime ambience of the area will be enhanced with a new publicly accessible waterfront and associated marina.

In response to the comment regarding the perceived impact on human health, as a prescribed body the Health Service Executive (HSE) were consulted both at Scoping stage on the content of the EIA and also at the Statutory Consultation stage. They did not make a submission in relation to any Human Health related concerns.

The proposed development has been designed to minimise adverse impact on these properties in terms of distance, massing and scale of the proposed buildings, the elevational treatment and proposed landscaping within the application areas. While it is recognised that with the proposed development there is some reduction of sea views, it is considered that this is compensated by the high-quality design and finishes including the landscape design. Semi-mature tree planting around the building is proposed as part of the natural soft landscaping to this building. This is designed to provide additional supplementary screening to this elevation, helping to reduce visual impact and avoid overlooking and any loss of privacy.

The proposed development will facilitate urban regeneration of the area by transforming a strategically located brownfield site into a new high quality, attractive, commercial, residential and office development along with residential and recreational facilities in Wexford Town. The marina and pedestrian and cycle boardwalk structure across Wexford Harbour will physically integrate with the existing amenities of Wexford's quay front and contribute to a new attractive, connected town centre amenity.

It is hoped that this project will have a transformative effect on the character of the local area and on Wexford Town and will also provide high quality employment and residential and social facilities as well as high quality public realm and amenities.

The development is expected to improve the general amenity, journey characteristics and local economy for residents, visitors as well as marina users that will result in a *moderate, positive, long-term* impact on land uses, social considerations and economic activity in the area;

In conclusion positive social and health outcomes are likely as a result of the urban regeneration of the site through indirect positive land use changes, increased social and economic activity in the area and expansion of walking and cycling facilities with the wider area over time.

- d. *Queries suitability of the site for development because of vulnerability due to **climate change, rising sea levels**, etc. Asserts many other more suitable locations available for these reasons.*

Applicant Response:

A Site-Specific Flood Risk Assessment has been undertaken which incorporates the effects of climate change and rising sea levels (See **Appendix C1**). Appropriate flood defence measures have been incorporated into the design to protect the development against flooding in accordance with the Planning System and Flood Risk Management Guidelines for Planning Authorities as published by the Office of Public Works (OPW) and Department of Environment, Heritage and Local Government (DoHLG) 2009. The proposed flood mitigation measures have incorporated a climate change factor in accordance with the OPW Climate Change Sectoral Adaptation Plan for Flood Risk Management (2019 – 2024).

The proposed development is in line with the current zoning for the site; Town Centre – TC, To Provide for Town Centre under the current Wexford Town & Environs Development Plan 2009 – 2015 (as extended).

- e. ***Lack of car parking capacity:** total under provision of car-parking being provided on the site, with the proposed number of spaces is seriously below the requirement of the local authority's own standards and policies. Asserts that existing parking is over-subscribed for residents and people working or doing business in the town. Asserts that under provision of parking will just push demand onto the already overused public roads on which parking will also be reduced.*

Applicant Response:

The parking demand generated by the development has been estimates based on anticipated use of the office and the percentage of people driving to work in Wexford Town based on SCO census data. This is an industry standard method of estimating parking demand generation.

The core demand for parking generated by the development is estimated to be 639 spaces as outlined in Section 5.4.8.1 of the EIAR. The development will provide 509 spaces within the site as outlined in Section 5.4.8.2. This indicates a deficit of 130 spaces within the site which will seek parking at other long-term car parks.

A supplementary car park survey indicates that the Town Centre car parks have 351 underutilised spaces at peak times of the day, including 156 spaces available for long term parking in Sinnott Place, Paul Quay and Ropeyard/ Kings Street car parks within a 10 minute walk of the site. This indicates that the alternative Town Centre car parks have adequate capacity to meet the surplus parking demand generated by the site without causing significant disruptions to the parking needs of the Town Centre.

The parking demand generation is based on current CSO modal splits for people traveling to work by car in Wexford Town and the surrounds, i.e. baseline modal split. The development will aim to reduce the baseline model split of people driving to work by car by up to 10% with the implementation of Transportation Mobility Management Plan as outlined in Section 5.5.1 of the EIAR. This will reduce the parking demand to 588 spaces and reduce the deficit within the site to 79 spaces.

The on-street parking of the surrounding street network will be protected from long term use by commuter vehicles with the expansion of the Town Centre permit, tariff and enforcement system as outlined in Section 9.5 of the Traffic and Transport Report.

- f. *Road capacity: Development will increase congestion on already overloaded road system.*

Applicant Response:

The proposed access junction with traffic loading generated by the proposed development was modelled using industry standard junction modelling software to understand its impact on the street network.

This model has been rerun to satisfy the requirements of this RFI using supplementary traffic data and incorporating Seaview Avenue as a 4th arm. The results of the model are presented in the Traffic Addendum (**Appendix B1**). An analysis of the model results indicate that the proposed junction will operate well within capacity with only minor delays to traffic on Trinity Street.

- g. *Negative environmental impact on the estuary during and after construction impact on fishing and wildlife. Impact on tidal movements.*

Applicant Response:

The EIAR recognises the potential for impacts on wildlife during the construction and operational phases of the proposed development including noise and vibration both under water and on land, pollution of the River Slaney and Wexford Harbour, and, the spread of invasive species.

Mitigation is proposed to reduce these impacts (Section 7.8 of the EIAR) and following the implementation of the mitigation measures, the impacts on wildlife in the estuary will be slight, and in most cases temporary. During the operation of the proposed development mitigation is also proposed which includes surface water attenuation, the treatment of foul water off site, measures to avoid light spill outside the site and the use of bird friendly glass.

With regard to the proposed development impacting on tidal movements, hydrodynamic modelling undertaken for the proposed development (Appendix 4.4 of the EIAR) concluded that: "neither the proposed landside development, nor the landside development in combination with a marina will result in any significant differences to either the tidal regime or the prevailing wave climate it can be concluded that neither development would result in any significant changes to the sediment transport regime. As such, it can be concluded that the nearby environmentally sensitive areas will be not be adversely impacted by any changes in the sediment transport as a result of either the landside development in isolation or the landside development in combination with the marina".

With the implementation of construction best practice and adherence to the mitigation measures described, there will be no significant adverse impacts on the ecology of the estuary.

- h. *Viability of Development - Asserts there is a lack of demand for office accommodation.*

Applicant Response:

The proposed development will create the modern office capacity required to attract major international companies and create employment opportunities for Wexford town and county. It will create vibrancy within the town that will support existing retailers and town centre businesses.

Appendix 3.1 presents a letter from the Director of Services for Economic Development and Planning in Wexford County Council.

- i. *Queries need/demand for hotel*

Applicant Response:

The proposed development is designed to create a vibrant, diverse, multi-use quarter, connecting to the town centre, that will support employment, residential living and provide for cultural and recreational activities.

The inclusion of the cultural centre, the hotel and the residential block will allow for evening and weekend activities that will make the area attractive, accessible and functional outside of normal business times.

It will also provide complementary services for those working and living on the wharf and in the local area during the working week.

The addition of a hotel on the Trinity Wharf site will provide additional bed spaces at the higher end of the market that will service domestic and international tourism. It will provide the accommodation necessary to support the expansion of the development of tourism in Wexford including the next phase of development of the Irish National Heritage Park and Hook Lighthouse.

It is Wexford County Councils view that the hotel complements the overall offering of the development and will be attractive to hotel operators particularly in the 4* & 5* categories.

- j. *Retail/Restaurant/ cafe component of the development will have adverse impact on vibrancy, ambience and commercial activity in the town and cause displacement of town centre uses.*

Applicant Response:

The proposed development will create the modern office capacity required to attract major international companies and create employment opportunities for Wexford town and county. It will create vibrancy within the town that will support existing retailers and town centre businesses. Much of the commercial activity on the site will be created by those working within and visiting the development. It would be expected that the existing commercial activity in the town continue and in fact be boosted by some business from those on the proposed new Trinity Wharf development.

5.4 Bórd Iascaigh Mhara

- a. *The main mussel production area within Wexford Harbour is currently classified as B and it is vital that this quality designation is maintained or improved to ensure that shellfish from the area are safe to eat and require no additional treatment than that which is currently required prior to consumption.*

Applicant Response:

The potential construction and operational impact of the proposed development (i.e. the land-based development and the marina) on the marine environment is assessed in detail in Chapter 10 of the Environmental Impact Assessment Report. These potential impacts are summarised in the table below.

Table 5.4.1 Potential impacts of the proposed development on the marine environment

Potential Construction Phase Impact	Potential Operational Phase Impacts
Run-off <ul style="list-style-type: none"> Spillage of concrete, grout and other cement based products. Accidental Spillage of hydrocarbons Faecal contamination Contaminated ground excavated Elevated silt/sediment loading in construction site runoff 	Morphological Changes to Surface Watercourses & Drainage Patterns
Run-off during clearance or grading works	Hardstanding Runoff from areas such as roads or parking bays
Increased sediment during anchoring of marina	Impact to the aquaculture sites due to changes to the tidal and current regime

As specified in Chapter 10 of the EIAR, these potential construction phase impacts will be addressed and mitigated by the actions specified in project-specific Construction Environmental Management Plan (CEMP) and Environmental Operating Plan (EOP). Chapter 10 also describes mitigation measures for the potential operational phase impacts associated with the proposed development.

For the purpose of brevity, we have not re-produced all mitigation measures in this response. Instead the reader should refer to Chapter 10 of the EIAR and the Outline CEMP and EOP which was appended to the main EIAR as Appendices 4.1 and 4.2.

Chapter 10 of the EIAR concluded the construction phase impact of the development will be imperceptible if the measures described in the CEMP and EOP are adapted by the contractors and marina operators. Similarly, Chapter 10 concluded that the operational phase impact of the proposed development will be imperceptible. This statement is supported by hydrodynamic modelling undertaken for the proposed development which concluded that:

“Neither the proposed landside development, nor the landside development in combination with a marina will result in any significant differences to either the tidal regime or the prevailing wave climate it can be concluded that neither development would result in any significant changes to the sediment transport regime. As such, it can be concluded that the nearby environmentally sensitive areas will be not be adversely impacted by any changes in the sediment transport as a result of either the landside development in isolation or the landside development in combination with the marina” Appendix 4.4 Trinity Wharf Marina Additional Modelling Services – Chapter 5.

- b. *Surface Water run-off: seeks confirmation that no stormwater is mixed with foul sewage at development site, and that no overflow of any sewage is allowed*

Applicant Response:

No stormwater will be mixed with foul water at the development site. Separate surface water and foul drainage systems are to be provided.

There will be no overflow from the foul drainage system on the site to the harbour.

- c. *Direct Liaising with License Mussel Operators regarding timing of work: Crucial to take preventive measures to curtail spread of particulates to current mussel beds, during any dredging/silt disturbing operations - recommendation - the developers should liaise directly with the licensed mussel operators to determine the best time of the year to undertake dredging/silt disturbing operation in order to minimise any impact to current stocks.*

Applicant Response:

As specified in Chapter 4 of the Environmental Impact Assessment Report, the design of the proposed marina development is such that no dredging works are required to achieve the desired operating depth of -2.5m CD, thus minimising the potential environmental impacts to nearby aquaculture sites. In either instance, the construction work involved with piling or installing helical anchors will mobilise only a very small quantity of sediment material in the estuary for a very short period of time. Without mitigation measures these activities would result in negligible impacts to the River Slaney Estuary given the existing disturbance of sediment during tidal events.

Cognisant of the potential environmental impacts to the nearby aquaculture sites and wider Slaney estuary area, these Construction Phase impacts will be addressed and mitigated by the actions specified in project-specific Construction Environmental Management Plan (CEMP) and Environmental Operating Plan (EOP).

The Construction Environmental Management Plan (CEMP) will be revised to include a requirement for engagement with BIM and Mussel Operators to determine the most appropriate times of year for dredging/silt disturbance operations.

- d. *Requests clarification on the management system of the Marina sewage pump-out facilities and its treatment prior to discharge*

Applicant Response:

The sanitation system for the proposed marina development will be an industry standard system consisting of a holding tank fitted with a head-discharge hose, a pump out hose, and a vent line. The discharge hose in these systems feeds the tank from the head and empties into the top of the tank. The pump-out hose eases use of the pump-out facility, pulling out from the bottom of the tank leading to a through-deck fitting. The vent line, which is a smaller-diameter hose, allows air into the tank for the aerobic breakdown of waste and to replace the wastewater volume when it's pumped out.

The sanitation pump-out systems manufactured by ROLEC is a very typical system which can easily pump sewage up to 500m away. These systems are manufactured to and are compliant with relevant European specification codes.

Untreated waste from the designated waste pump-out station will be ejected through a weighted pipe by high pressure ejector system into the sewer infrastructure of the proposed landside development. The weighted pipe will rest on the seafloor and enter the landside sewer infrastructure through the sheet piled perimeter of the site.

To mitigate the operational impact of the marina development in the event of a pump failure, the pumping station has been designed to provide 24-hour storage. Additional standby pumps will also be provided.

- e. *Request that marine alien species are also considered in the Invasive Species Management Plan and that appropriate actions are taken to minimise risks associated with vessel movements, hull fouling and maintenance of marine infrastructure.*

Applicant Response:

In the view of Captain Phil Murphy, the Senior Marine Officer and authority at Wexford Harbour, the provision of a marina at Trinity Wharf will in not cause a significant increase in marine traffic as the proposed development will simply result in a re-configuration of the existing marine leisure moorings within Wexford Harbour. Furthermore, large craft vessels are restricted from entering the Slaney estuary due to the shallow conditions created by the intertidal sand banks and channels at the entrance to the Slaney.

As such, the proposed development is not expected to increase the existing risk of introducing invasive species through vessel movements or hull fouling. Despite this, Wexford County Council is fully committed to adopting a pro-active approach to managing the environmental risks associated with invasive species. To this end, the Code of Practice for marina operators (Kelly and Maguire, 2009) which was developed by the Invasive Species Ireland project will be implemented into the overall Invasive Species Management Plan for the development. This code provides advice and guidance on the appropriate methodologies to prevent the spread of invasive alien species in the aquatic environment and to islands.

In summary, the following measures will be implemented into the Invasive Species Management Plan:

- ID guides will be provided on the most unwanted species. These ID cards and information leaflets will be downloaded from the Invasive Species Ireland website. These will be printed and made available to staff and customers.
- Promote marina and boat operation practices that minimise the opportunities of spreading invasive species. Key messages would be to **Inspect – remove – dispose – report**.
- Removing build-up of plants and animals from equipment and the hull of boats is effective at preventing the opportunity of colonisation by invasive species. WCC would provide guidelines on how staff and customers minimise the spread of invasive species through appropriate cleaning, handling and record keeping.

Tools to help implement the Code of Practice (CoP) would also be developed for the marina. These tools could include but may not be limited to:

- Displaying signage. The erection of signs pertaining to invasive species will inform customers and users of their responsibility in preventing the spread of species. WCC will refer to Invasive Species Ireland website for suggested signage material;
- Incorporating responsible boating practices into customer contracts e.g. The Recreational Water Users CoP;
- Stocking fact sheets on invasive species and how to prevent spread;
- Promoting environmentally sound boating practices at events; and
- Promoting marinas environmental standards to customers and the public.

In addition to implementing the recommendations put forward in the Marina Operators Code of Practice, WCC will also liaise closely with relevant authorities such as the Environmental Protection Agency (EPA), National Parks and Wildlife Service (NPWS) and Bord Iascaigh Mhara (BIM) when maintenance of the marine infrastructure is being undertaken. This will give all relevant statutory stakeholders the opportunity to inspect and monitor the threat of invasive species during the operational phase of the proposed development.

5.5 Commission of Railway Regulation

- a. (i) *Notification of decision to be given to Irish Rail*
- b. (ii) *Consultation with Irish rail to ensure that risks associated with railway trespass are not increased near the project either during construction or operation phase*
- c. (iii) *the party undertaking the construction should ensure future works which may affect the safe operation of the railway are undertaken with the consultation of Irish Rail*
- d. (iv) *observations/issues raised by Irish rail should be considered*
- e. (v) *consultation with Irish Rail is advised regarding road-rail interfaces on access routes which may have increased flow of abnormal loads during the construction or operation phases*

Applicant Response:

Wexford County Council has no objection to the observations set out in the submission from CRR with respect to the proposed development.

5.6 Development Applications Unit

- a. *Biodiversity - Expresses concern that the impacts on little tern (Sterna albifrons), a species of Special Conservation interest of the Wexford Harbour and Slobbs SPA was not addressed in the NIS - the species is a ground nesting bird and prone to human disturbance which is feared to be elevated due to the construction of the high-density residential development.*
- b. *Advises to consider the possible implementation of protective measures for little tern.*

Applicant Response:

The submission received from the NPWS notes that *"the rarest of Ireland's tern species...is particularly prone to human disturbance"*. The submission also notes that *"The proposed 64 berth marina and waterside high-density residential development of 58 apartments will lead to an increase in recreational use of the harbour which may cause disturbance to little terns, particularly through landings for recreational purposes on sandbars used as nest sites"*.

In terms of impacts during the construction phase, the Little Tern colonies are located > 3km east of Trinity Wharf on the sand banks at the mouth of Wexford Harbour. The sensitivity of birds to disturbance varies by species and whether the source of the disturbance is visual, or noise based (IECS, 2009)⁴. Additionally, the current level of habituation will also determine a bird's response to disturbance (IECS, 2013)⁵. The noise levels from impact hammers and vibratory hammers are less than 100 Db(A). Put into practice, this will mean that if an impact hammer generates 100 Db(A) at 1.0m from the source, this sound will be 70 Db(A) at 34m away. The 'acceptable dose' for waterbirds is 70 Db(A) at receptor (IECS, 2013).

With respect to impacts during the operational stage of the proposed development, in the view of Captain Phil Murphy, the Senior Marine Officer and authority at Wexford Harbour, the provision of a marina at Trinity Wharf will not cause a significant increase marine traffic as the proposed development will simply result in a re-configuration of the existing marine leisure moorings within Wexford Harbour. At present, there are numerous moorings and vessels located ad hoc throughout the area. The proposed development will provide a purpose-built facility for these vessels. Owing to the improved mooring conditions, facilities and shelter, the majority of vessels that will be using the proposed marina are expected to be coming from existing adjacent moorings within the estuary.

It should also be noted that 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 Slobbs, whereby shifting sand banks and channels restrict vessels with medium to deep draughts from passing. In the view of Captain Phil Murphy, there will never be a significant increase in the marine traffic as the area is simply not deep enough. These larger vessels, including trawlers, charter vessels and large sailing vessels, are all accommodated by the nearby Kilmore Quay, which is the largest fishing port in Co. Wexford.

In relation to jet-skiing and similar activities, these require the permission of the Harbour Master to take place, in accordance with the Wexford County Council Harbour and Piers Bye-laws. The Harbour Master has received one request for jet-ski access since 2014.

The colonies are monitored by the NPWS and signs have been put in place to inform members of the public that ground-nesting birds are present and request that they do not enter this area.

Signage proposed at the new marina will provide information to boat owners about the importance of Wexford Harbour for seals (Section 5.2.2 of the NIS and Section 7.8.2 of the EIAR). This signage will also include information on Little Tern in Wexford Harbour, and a notice warning people not to land on the sand banks. The signage will also be erected at the

⁴ Cutts, N., Phelps, A. and Burdon, D. (2009) "Construction and Waterfowl: Defining Sensitivity, Response, Impacts and Guidance, Report to Humber INCA." ZBB710-F-2009. Institute of Estuarine and Coastal Studies University of Hull.

⁵ Cutts, N., Phelps, A. and Burdon, D. (2009) "Construction and Waterfowl: Defining Sensitivity, Response, Impacts and Guidance, Report to Humber INCA." ZBB710-F-2009. Institute of Estuarine and Coastal Studies University of Hull.

points of entry to Wexford Harbour such as Goodtide Harbour and the jetty at the bottom of Hantoon Road. An example of the signage is provided in Plate 5.6.1 below. Medeiros et al. (2006)⁶ has shown that, at a Little Tern colony in Portugal, protective measures such as signage were the most important predictor of nesting success.

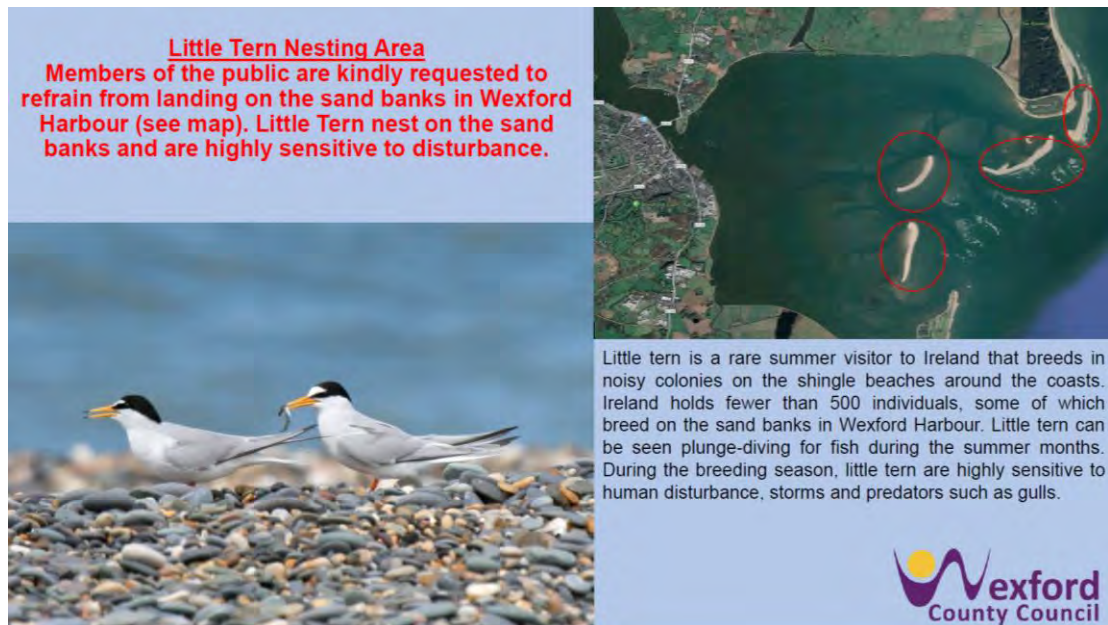


Plate 5.6.1 Example of signage.

- c. *expresses importance of addressing the cumulative impacts of the current proposed development in combination with aquaculture in Wexford Harbour, and other forms of human disturbance.*

Applicant Response:

In this section, the potential for in-combination effect(s) between the Trinity Wharf Development, Aquaculture and water-based recreational activities is considered. The response is also provided as an Addendum to the Natura Impact Statement (**Appendix A3**), as requested by An Bord Pleanála.

There is the potential for in combination effects between the Trinity Wharf Development, Aquaculture and water-based recreational activities to result from an increase in human presence in Wexford Harbour which could lead to impacts such as habitat loss and degradation through visual and noise disturbance and/or pollution.

As presented in the marine traffic response to this RFI, in the view of Captain Phil Murphy, the Senior Marine Officer and authority at Wexford Harbour, the provision of a marina at Trinity Wharf will not cause a significant increase marine traffic as the proposed development will simply result in a re-configuration of the existing marine leisure moorings within Wexford Harbour. At present, there are numerous moorings and vessels located ad hoc throughout the area. The proposed development will provide a purpose-built facility for these vessels. Owing to the improved mooring conditions, facilities and shelter, the majority of vessels that will be using the proposed marina are expected to be coming from existing adjacent moorings within the estuary.

It should also be noted that 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 Slob, whereby shifting sand banks and channels restrict vessels with medium to deep draughts from passing. In the view of Captain Phil Murphy, there will

⁶ Medeiros, R., Ramos, J., Paiva, V., Almeida, A., Pedro, P. and Antunes, S. 2007. Signage reduces the impact of human disturbance on little tern nesting success in Portugal. *Biological Conservation* 135 (1), pp. 99-106. [10.1016/j.biocon.2006.10.001](https://doi.org/10.1016/j.biocon.2006.10.001)

never be a significant increase in the marine traffic as the area is simply not deep enough. These larger vessels, including trawlers, charter vessels and large sailing vessels, are all accommodated by the nearby Kilmore Quay, which is the largest fishing port in Co. Wexford.

In relation to jet-skiing and similar activities, these require the permission of the Harbour Master to take place, in accordance with the Wexford County Council Harbour and Piers Byelaws. The Harbour Master has received one request for jet-ski access since 2014.

The wintering bird studies undertaken in 2015/16 and 2018/19 (**Appendix A4**) illustrate that the area around the Trinity Wharf site contains low numbers of wintering birds. The proposed marina will reduce the area available to aquaculture by 1.2 hectares which is considered to have a positive effect on the subtidal estuarine habitat and the European Sites.

In conclusion, on the basis that:

- The Trinity Wharf development will not result in any significant increase in marine traffic, either from recreational vessels or vessels engaged in aquaculture.
- There are currently low levels of bird use within 200m of Trinity Wharf.
- The proposed marina will take 1.2 hectares out of aquaculture use permanently.
- Mitigation provided in the NIS for Trinity Wharf avoids adverse effects on the integrity of the Natura 2000 Sites within Wexford Harbour.

it can therefore be concluded that there will be no adverse in-combination effects on the integrity of any European Site as a result of the Trinity Wharf Development, Aquaculture and water-based recreational activities.

- d. *Advises to include monitoring to evaluate the success or otherwise of a protective measure and any failure is to be identified and measures put in place to rectify it.*

Applicant Response:

We would draw the NPWS attention to the query raised by the Board in its letter of 24th July 2019 to Wexford County Council:

"It should be noted that monitoring cannot be used as a method to mitigate potential habitat loss" (See **Appendix A1**).

It should be noted that any monitoring included in the NIS is not proposed as mitigation, and was included in deference to the NPWS scoping submission (see **Appendix A2**). It is imperative to note however, that this monitoring has not been proposed as a mitigation measure, it was not considered in any of the assessments in the EIA or AA or their conclusions and has only been included as an add on as it was requested by NPWS.

In the interests of clarity in relation to the requirements of Appropriate Assessment, WCC propose to remove this commitment to monitoring the effectiveness of protective measures from both the EIAR and NIS as these protective measures are widely used and have proven to be successful in these environments. As the assessments and conclusions contained in the EIAR and NIS were prepared without any consideration of monitoring, the conclusions remain unaffected. However, should ABP deem it necessary for us to include such monitoring as a condition of development approval, Wexford County Council will have no difficulty with this.

- e. *Noise and Vibration - Identifies that the NIS only assessed noise impacts on Natura 2000 sites at the construction phase only. Advises to also include assessment at operation phase too - concerned that there may be an impact on Special Conservation Interest bird species.*

Applicant Response:

The sensitivity of birds to disturbance varies by species and whether the source of the disturbance is visual, or noise based (IECS, 2009). Additionally, the current level of habituation will also determine a bird's response to disturbance (IECS, 2013). The ambient noise level at Trinity Wharf is 44-54 dB (EIAR Chapter 12 Table 12.1). As can be seen in

Table 12.14 of the EIAR a maximum increase of 3.9dB occurs at the highest of the receptors modelled. This and the impact at all other locations modelled, are below the adverse impact levels identified by BS4142. The 'acceptable dose' for waterbirds is 70 dB (A) at receptor (IECS, 2013). Therefore, there will be no disturbance of little terns caused by noise levels, and by extension, by construction activities.

Civic area and Cultural centre

The proposed cultural centre has been designed to be designed to comply with current standards to provide for residential amenity needs. and will therefore not have any adverse effect on any QI species. In relation to the central civic area no events are proposed as part of this development and it is intended that for the vast majority of the time this space will act as an open public meeting area. Should any significant events be planned in the future, the proposed developer will be required to apply to Wexford County Council for permission in accordance with the Planning and Development Act, who may impose limits and controls on the approval. It is therefore considered that the proposed civic area and cultural centre will not have an adverse impact on special conservation interest bird species.

In relation to the example given of the firework displays during the Wexford Opera Festival, no fireworks display is proposed in this application for the Trinity Wharf development, however should an application be made in the future it is noted it will be subject to approval of Wexford County Council in accordance with the Planning and Development Act and it is also noted that the Trinity Wharf civic area is no closer to the locations of the Greenland White Fronted Geese than the current host site "the Ballast Bank".

Noise impacts associated with the Marina

In the view of Captain Phil Murphy, the Senior Marine Officer and authority at Wexford Harbour, the provision of a marina at Trinity Wharf will not cause a significant increase marine traffic as the proposed development will simply result in a re-configuration of the existing marine leisure moorings within Wexford Harbour. At present, there are numerous moorings and vessels located ad hoc throughout the area. The proposed development will provide a purpose-built facility for these vessels. Owing to the improved mooring conditions, facilities and shelter, the majority of vessels that will be using the proposed marina are expected to be coming from existing adjacent moorings within the estuary.

It should also be noted that 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. In the view of Captain Phil Murphy, there will never be a significant increase in the marine traffic as the area is simply not deep enough. These larger vessels, including trawlers, charter vessels and large sailing vessels, are all accommodated by the nearby Kilmore Quay, which is the largest fishing port in Co. Wexford.

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. These activities require the advance permission of the Harbour Master in accordance with the Wexford County Council Harbour and Piers Bye-laws. To put this into context, the Harbour Master has received one request for jet-ski access since 2014.

It can therefore be concluded that as there will be no significant increase in the number of vessels in the estuary or increase in the size of vessels using the marina there will be no significant increase in noise levels with potential to affect special conservation interest bird species within the estuary.

Noise impacts associated with land based activities

The operation of the proposed development will lead to increased levels of traffic noise in the vicinity of Trinity Wharf as well as on-site traffic accessing the car-park and circulating within the site. Items of mechanical and electrical plant associated with the hotel and office blocks

will be operating in the vicinity and may have an impact. Operations from the cultural and performance centre may also have an impact. Finally, the proposed marina will lead to a reconfiguration of vessels in Wexford Harbour, which will lead to an increase in noise locally but not a significant increase in marine traffic overall.

The noise and vibration chapter dealt specifically with noise and vibration disturbance with regard to the impact on humans rather than the Qualify Interest of the European sites, however the results of the noise impact assessment can be used to illustrate the expected increase in noise in the vicinity of Trinity Wharf.

The most significant increase in operational noise will come from road traffic which will originate from the landside of the development. The noise levels on the sea-side will originate from plant and the arts and cultural centre, which make up a small proportion of the total noise during the operational phase (c. 12% on the landside). The Qualifying Interests that could be impacted during the operation of the proposed development are habituated to the ambient noise levels in the area including road, rail and boat traffic.

As stated above a maximum increase of 3.9dB is predicted at the receptors modelled. This and the impact at all other locations modelled, are below the adverse impact levels identified by BS4142. It should also be noted that the noise levels generated by the proposed development will be less than are currently experienced along William Street and Trinity Street. As these locations are 50m-70m inland from the proposed development, the noise impact on the sea-side will be much less. Furthermore, if the noise levels were to increase by 3.9 dB, this is still below the 'acceptable dose' for waterbirds.

The proposed development will not lead to a perceptible increase in underwater noise and otter habituate readily to urban environments.

Therefore, it can be concluded the operational noise levels will not lead to an adverse effect on any of the European sites.

- f. *Archaeology - advises that the mitigation measures detailed in the EIAR are carried out in full.*

Applicant Response:

WCC commit to carrying out all mitigation measures proposed in the EIAR in full and as may be conditioned by An Bord Pleanála in any approval of the proposed development.

5.7 Eamonn McMahon

- a. *Concern over impact on McMahon Building Supplies in terms of premises access for stocking/supplies and deliveries, and in terms of availability and convenience of customer parking*

Applicant Response:

As is explained in the following sections, supplementary traffic and parking surveys have been undertaken and further junction modelling has been undertaken to confirm the findings of the EIAR Traffic Assessment.

Access to the store's vehicular entrance has been reviewed and the amendments are presented in the Traffic Addendum. A loading bay will be provided for essential loading activities to McMahaons. Please refer to the Traffic Addendum (**Appendix B1**) which has demonstrated that access to the vehicular entrance of the Building Supply premises is largely uninterrupted.

- b. *Issues with Traffic Assessment and the proposed vehicular access junction:*
(i) *Timing of Traffic survey: traffic survey data does not accurately reflect normal traffic movement: dated, carried outside normal school term and reflects seasonal movement patterns.*

Applicant Response:

The traffic was resurveyed in September 2019 to account for school term traffic. The junction capacity analysis has been rerun and is available to view in the Traffic Addendum (**Appendix B1**).

- (ii) *Accuracy of Assessment of LiNSiG Modelling and its application in terms of the junction design: Erroneous Assessment does not reflect proposed junction design or what will actually occur.*

Applicant Response:

The LinSig Model has been remodelled to include Seaview Avenue in the signal cycle. The findings of the initial junction capacity analysis remain unchanged. The junction analysis reports can be found in the Traffic Addendum (**Appendix B1**).

- (iii) *No information provided on traffic signal hardware (poles, paving, control boxes, etc.), therefore safety and operational concerns of junction have not been adequately considered or assessed. impact of signalised junction to existing residential properties not adequately considered (noise of signals, people queuing, etc.).*

Applicant Response:

The details of the traffic signal equipment is considered detailed design and is not typically provided at the planning stage of a development. Measures such as non-noise emitting pedestrian push buttons and hooded traffic signal lights will be implemented where necessary to ensure they are not creating a nuisance to nearby residents. This will be considered in the detail design stage of the development.

- (iv) *Impact of Proposed Junction (design/queuing, etc.) on business operations at service/collection point has not been addressed in junction design or audit.*

Applicant Response:

Please refer to the Traffic addendum (**Appendix B1**) which has demonstrated that access to the vehicular entrance of the Building Supply premises is largely uninterrupted.

(v) *Appropriate use of TRICS Database.*

Applicant Response:

The method used in predicting traffic demand generation is industry best practise and has been prepared in accordance with the TII Traffic and Transport Assessment Guidelines.

(vi) *Assignment and Distribution Methodology*

Applicant Response:

The method used in predicting traffic assignment and distribution is industry best practise and has been prepared in accordance with the TII Traffic and Transport Assessment Guidelines.

(vii) *Implications for Long Vehicular Queues which the applicant believes were not correctly modelled, including the rail level - crossing.*

Applicant Response:

The method used in predicting traffic queues is industry best practise and has been prepared in accordance with the TII Traffic and Transport Assessment Guidelines.

c.

(i) *The submitted Feedback Form is unsigned by both the Auditor and Designer.*

Applicant Response:

Please refer to the Traffic Addendum (**Appendix B1) Appendix A5** which includes a signed copy of the Road Safety Audit and the actions taken by the design team which are appropriate for planning stage of development.

(ii) *The submission agrees with the audit finds and has added additional safety problems from his own observations.*

- *Non-compliance with traffic and parking regulations*

Applicant Response:

The kerb build-out has been extended to the stop line in the refined general arrangement of the proposed junction. The indented parking is adjacent to the carriageway and will be marked as parking and is therefore considered exempted from the cited regulations.

- *Restricted/ non-compliant inter visibility zones*

Applicant Response:

The junction has been designed in accordance with DMURS which promotes tighter corner radii and the set back of stop lines which means that inter visibility is not readily achievable. This is a common occurrence in built up areas.

- *unorthodox/non-compliant lane delineation, stop lines, etc.*

Applicant Response:

The junction has been designed in accordance with DMURS.

- *restricted visibility from Seaview Avenue*

Applicant Response:

Seaview Avenue will be provided with primary and secondary traffic signals in the design development to ensure visibility is achieved.

- *design of turning head inadequate for larger vehicles and with restricted visibility*

Applicant Response:

The proposed hammerhead on Seaview Avenue is designed for standard sized vehicles. Refuse trucks will have to make garbage collections from Trinity Street.

- (iii) *There appears to have been no attempt to address significant safety issues through a revised access design.*

Applicant Response:

A summary of the design refinements following the RSA has been recorded in the RSA summary sheet which is available to be viewed in Appendix A5 of the Traffic Addendum (Appendix B1).

A combination of these safety issues means that the junction cannot be constructed on a safe manner in its current proposed location.

Applicant Response:

All of the issues raised have been addressed above.

- d. *The submission includes swept path analysis showing:*
(i) *vehicular turning movement conflicts due to vehicles clashing with lanes in an unsafe manner*

Applicant Response:

The junction has been designed in accordance with DMURS which promotes pedestrian friendly environments with the tightening of corner radii. The design vehicle used in the junction design was a 12.0m standard rigid bus which is larger than a typical 8m refuse vehicle or 8.6m fire tender. This type of vehicle can navigate the left turn in and out of the access link while remaining lane correct.

- (ii) *inadequate provision for refuse lorry or fire tenders to turn using the proposed turning head on Seaview Avenue.*

Applicant Response:

The proposed hammerhead on Seaview Avenue is designed for standard sized vehicles. Refuse trucks will have to make garbage collections from Trinity Street.

5.8 Fáilte Ireland

- a. *From a tourism perspective, Fáilte Ireland supports the proposed development in line with all proper planning / environmental and tourism standards and registration requirements once they are being met.*

Applicant Response:

Wexford County Council welcomes the support from Fáilte Ireland.

5.9 Iarnród Éireann

- a. *Due to the proximity of the development to the Railway, all persons carrying out any works on or near the railway must be undertaken in compliance with the Railway Safety Act 2005: to ensure that there is no increase in risk to the railway as a consequence of these works, and applies to Design, Construction and Operation phases.*

Applicant Response:

The design, construction and operation of the proposed development will take account on the requirements of the Railway Safety Act 2005;

- b. *Iarnród Éireann is in discussion of relocating the user controlled level crossing to new location - as part of the approval process, the closing of the existing access will be required i.e. there will be no access across the railway to this development at any location except the proposed new level crossing.*

Applicant Response:

Wexford County Council is agreeable to the closing of the existing level crossing as part of an agreement (to be put in place) to allow for the construction of a new level crossing as detailed in development proposal, subject to approval of the Boards of Iarnród Éireann / CIE in conjunction with the necessary rail safety validation and approval from the Commission for Railway Regulations.

- c. *Cyclist crossing at a level crossing - the orientation of the road across the level crossing must be at right angles to the rails. The layout for new rail crossing should include locations of fencing, barriers, signs, road markings, road layout and control cabin.*

Applicant Response:

The details of the automated level crossing and ancillary services will be agreed with Iarnród Éireann /CIE at detailed design stage.

- d. *The design should have no protrusions above the rail level within the railway curtilage (including no raised footpaths/cycleways).*

Applicant Response:

The details of all works within the railway curtilage will be agreed with Iarnród Éireann /CIE at detailed design stage.

- e. *No trees are to be planted along the railway boundary or in such location that may in future fall on the railway or shed leaves on the railway.*

Applicant Response:

The details of the landscaping works along the rail boundary or in such locations that may fall on the railway or shed leaves on the railway will be agreed with Iarnród Éireann /CIE at detailed design stage.

- f. *The boundary treatments between the development and the railway is to be agreed between the Council and Iarnród Éireann and is to be a minimum of 2.4m high.*

Applicant Response:

The details of the boundary treatment between the development and the railway will be agreed with Iarnród Éireann at detailed design stage.

5.10 Irish Water

- a. *Further information is requested and a liaison with Irish Water to ensure no conflict with the rising main (a 700mm diameter rising main running parallel to the railway line) or other Irish Water assets. The requested information should provide details of specific measures to protect the 700mm rising main (advised to not divert).*

Applicant Response:

It is proposed to locate a number of services in close proximity to an existing 700mm diameter rising main which runs parallel to the railway line adjacent to the development. There is no conflict between the proposed services for this development and the existing rising main. The minimum clear vertical separation distance provided between the rising main and the proposed services is 460mm which is greater than the 300mm requirement outlined in Section 3.6 of the Irish Water Code of Practice for Water Infrastructure, Connections and Developer Services December 2017. Irish Water requirements in terms of horizontal separation distances between the proposed services and the rising main will be adhered to. The horizontal separation distance to the nearest proposed parallel services from the rising main is 12.23m. A minor readjustment to the location of the proposed management building adjacent to the access road is proposed to ensure that a minimum 3.5m separation distance is provided between the building and the existing rising main with a commitment to liaise with Irish Water, as part of detailed design, to provide for the protection of the rising main. This separation distance has been presented to (and agreed) with Irish Water. Refer to drawings TRWH-ROD-GEN-SW_AE-DR-CH-4067 to 4069 in **Appendix D2** outlining the location of the existing rising main relative to the proposed services for the development and the revised management building location. Refer to **Appendix 10.2** for Irish Water Correspondence outlining separation distance requirements for the proposed management building from the existing rising main.

- b. *Concerned that for the access road, there is no information provided on location of proposed storm sewers, foul sewers, watermains etc, and how these would interact with the existing railway line and existing rising main.*

Applicant Response:

Revised long sections for the proposed access road at the existing rising main and railway line locations have been prepared which outline the locations of the proposed storm sewers, foul sewers and watermains relative to the rising main and railway line. Refer to drawings TRWH-ROD-GEN-SW_AE-DR-CH-4067 to 4069 in **Appendix D1**.

- c. *Regarding the provision of a water and wastewater network for the site, a pre-connection enquiry should be submitted to Irish Water at newconnections@water.ie*

Applicant Response:

A pre-connection enquiry form was submitted to Irish Water on the 20th June 2018. A Letter of Feasibility was subsequently issued to ROD by Irish Water on the 3rd September 2018. Refer to **Appendix D2** for Irish Water correspondence.

5.11 John Hayes

- a. *Overdevelopment and viability: The submission contends that the proposed development is unsustainable and overdeveloped in the context of current infrastructure. The submission queries the operational viability of the development based around a shared parking strategy for multiple occupant types. It asserts that parking need/demand has been underestimated and that the assessment of parking availability in the area is inaccurate as is based on dated survey carried out at a quiet time of the year.*

Applicant Response:

The figure of 1,200 as quoted in the submission is a figure that was used as a target figure at the commencement of the project, but as the design developed and the limitations in terms of parking spaces was identified a lower number of office jobs was set (approximately 830 employees in total). The parking demand generated by the proposed office employees is 521. Employees will be encouraged through the implementation of a Transportation Mobility Management Plan to use other forms of transport rather than driving, to ease pressure on traffic and parking within the town centre.

A supplementary car park survey was undertaken in September 2019 to account for school term traffic. An analysis of the supplementary car park survey indicates that there is adequate capacity in alternative off-street car parks to absorb the site deficit without causing a significant disruption to the Town Centre as outlined in the Traffic Addendum. The results of the supplementary car park survey are presented in the Traffic Addendum in **Appendix B1**.

- b. *Traffic - suitability and safety of proposed junction:*
(i) *The submission queries WCC's statement that decision to locate the proposed junction being based on providing a view rather than on environmental impact and traffic safety.*

Applicant Response:

There were several deciding factors in proceeding with Alignment Option 3 as the preferred option as discussed in section 3.7.6.2 *Main Access Road* of the EIAR. There were no major environmental or road safety differences between the 3 options.

- (ii) *The submission queries the applicant's own preferred option 1 (widening of existing junction). The submission states that the existing location is the safest route for existing residents and queries why this location was not pursued. (e.g. through using CPO powers to create a wider access).*

Applicant Response:

The statement cited from *Chapter 3 Alternatives Considered* in full is 'an entrance off Trinity Street at the gap site owned by Wexford County Council was the most practical option, providing a gradual slope to a new railway level crossing, with least impact visually and in terms of engineering works'. The referred gap site is the site south of McMahons and not at the location of the existing laneway.

The location of the proposed access street does not increase dangers to children and people crossing Seaview Avenue.

- (iii) *Access to/from Seaview Ave: not compliant with Road traffic regulations for anything larger than a car (bin lorries, deliveries, emergency vehicles, etc.) - unsafe as vehicles will have to reverse out.*

Applicant Response:

Seaview Avenue and the proposed hammerhead has not been designed for vehicles larger than a typical car. Refuse trucks and other delivery vehicles will be required to make their collections/ drop offs from Trinity Street. Oil delivery trucks may have to reverse either up or down the lane but this is an existing situation which the development is improving with the

provision of traffic signals which will provide a gap in traffic for the truck to carry out its manoeuvre. Oil deliveries is a very infrequent occurrence which the truck driver will have a duty of care to carry out safely.

- (iv) *Proximity of junction to Fishers Row junction -approx. 60m - is too close and will impact on traffic flow in a restricted area*

Applicant Response:

The junction capacity analysis was reviewed with updated traffic survey data which accounts for school term traffic. The analysis was carried out in accordance with TII Traffic and Transport Assessment Guidelines. The review found that the junction will operate well within capacity, and that the development traffic will have a marginal impact. (See **Appendix B1** Traffic Addendum).

- (v) *Restricted sight line for vehicles exiting Seaview Avenue*

Applicant Response:

This is an existing situation which the proposed junction will improve by advancing the stop line with the provision of a kerb buildout and traffic signals.

- (vi) *Absence of a pedestrian pathway for residential entry to Seaview Avenue*

Applicant Response:

This is an existing situation which the proposed development is not altering. Seaview Avenue has very low traffic with approximately 3 vehicles per hour in peak hour traffic. A shared surface between pedestrians and vehicles is considered appropriate in these circumstances.

- c. *Traffic - impact on current residents parking: loss of 18 no. on-street parking spaces for residents of the area, submission proposes amendment to scheme to proposed turning head to provide 4 car parking spaces, with herringbone parking on Trinity Street.*

Applicant Response:

The general arrangement of the proposed junction was reviewed subsequent to public consultation to minimise its impacts on parking. Design refinements included removing the Trinity Street roadside parking in front of the vacant site south of McMahons, rather than removing parking across the road in front of the green area which were more valuable to residents.

The design of the proposed development has been careful to not impact on the green area on Trinity Street where possible, to protect this valuable amenity to local residents.

The surrounding streets have capacity to absorb the minor loss of parking and will be monitored on an on-going basis by Wexford County Council.

However, Wexford County Council sees merit in the submission that the existing parallel parking spaces on Trinity Street that front the Fisher's Row green area be reoriented to a herring bone formation and is prepared to include same in the project subject to it securing the necessary consents. As part of this process Wexford County Council will review the location of the existing bus stop in consultation with Wexford Bus.

- d. *Traffic - unsustainable additional users added to an already congested area: current traffic volumes underestimated, and development will add an unsustainable amount of traffic in the already congested area. In addition, traffic analysis incomplete and should include a detailed analysis of a wider area:*
- (i) *traffic data used was from survey carried out over a holiday weekend, which is an abnormal situation with reduced flow due to congestion.*

- (ii) *Traffic survey was conducted outside normal school term - school close by causes congestion at peak times.*
- (iii) *Traffic report omits two main access roads feeding onto Trinity Street - in particular William St Lower which is congested with traffic parking partially on pavements, and Fisher's Row which has a school entrance.*

Applicant Response:

The traffic was resurveyed between Thursday, 5th to Thursday, 12th September 2019. These surveys account for school term traffic during business core hours in Wexford. The junction capacity analysis was rerun using the updated traffic data. The key findings remain unchanged. The junctions will continue to operate within capacity post development. (See **Appendix B1**)

The William Street / Trinity Street / Fisher's Row Junction is included in the junction capacity analysis referred to above. This is the most comprehensive method to analyse the capacity of adjoining streets as street are most restricted at junctions.

Road widths and issues along William Street is an existing issue outside the extents of the proposed development.

- e. ***Construction Phase - impact on residents:** Lack of detail provided with regard to traffic and parking management during construction, site management, noise, dust, etc during the construction period. Queries construction period. Requests a detailed Construction Management Plan to be agreed in consultation with the development of Trinity Wharf. Seeks conditions regarding working hours, cleanliness of the site and surrounding area during construction, direct point of contact, alternative accommodation, parking for existing residents, construction worker mobility plan, independent arbiter.*

Applicant Response:

The Construction Traffic Management Plan will be prepared by the contractor undertaking the works. This Construction Traffic Management Plan will be part of the overall set of Management plans that the Contractor will be required to submit to Wexford County Council for approval. One of the other key plans is the Construction Environmental Management Plan (CEMP) which contains all of the mitigation measures, restrictions, conditions and how the contractor will comply with these. See section 4.5.1 of the EIAR and Appendix 4.1 of the EIAR. The following is an extract from section 4.5.1 of the EIAR:

"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). The Contractors will be required to include details under the following headings:

- *Details of working hours and days;*
- *Details of emergency plan - in the event of fire, chemical spillage, cement spillage, collapse of structures or failure of equipment or road traffic incident within an area of traffic management. The plan must include contact names and telephone numbers for: Local Authority (all sections/departments); Ambulance; Gardaí and Fire Services;*
- *Details of chemical/fuel storage areas (including location and bunding to contain runoff of spillages and leakages);*
- *Details of construction plant storage, temporary offices;*
- *Traffic management plan (to be developed in conjunction with the Local Authority – Roads Section) including details of routing of network traffic; temporary road closures; temporary signal strategy; routing of construction traffic; programme of vehicular arrivals; on-site parking for vehicles and workers; road cleaning; other traffic management requirements;*
- *Truck wheel wash details (including measures to reduce and treat runoff);*

- *Dust management to prevent nuisance (demolition & construction);*
- *Site run-off management;*
- *Noise and vibration management to prevent nuisance (demolition & construction);*
- *Landscape management;*
- *Management of contaminated land including asbestos and assessment of risk for same by suitably qualified, trained and licenced personnel;*
- *Management of demolition of all structures and assessment of risks for same;*
- *Stockpiles;*
- *Project procedures & method statements for:*
 - *Site clearance, site investigations, excavations and working with asbestos containing materials (ACMS);*
 - *Management and removal of ACMS;*
 - *Demolition & removal of buildings, services, pipelines (including risk assessment and disposal);*
 - *Diversion of services;*
 - *Excavation and blasting (through peat, soils & bedrock);*
 - *Piling;*
 - *Construction of pipelines;*
 - *Temporary hoarding & lighting;*
 - *Borrow Pits & location of crushing plant;*
 - *Storage and Treatment of peat and soft soils;*
 - *Disposal of surplus geological material (peat, soils, rock etc.);*
 - *Earthworks material improvement;*
 - *Protection of watercourses from contamination and silting during construction;*
- *Site Compounds.*

The production of the CEMP will also detail areas of concern with regard to Health and Safety and any environmental issues that require attention during the construction phase. Adoption of good management practices on site during the construction and operation phases will also contribute to reducing environmental impacts."

Most of the work activities over the duration of the construction programme will be confined to the development site with very little traffic generated on the road network. Earthworks is anticipated to generate the most traffic with haulage of fill and cut materials but an analysis found that its impacts will be temporary and non-significant on the road network.

- f. **Unsympathetic to the existing area:** Proposed development will have overbearing impact on the historical area of the town and is out of place with the existing streetscape - permanent damage to the visual amenity of Trinity Street, Seaview Avenue, William St district will be permanently damaged. Requests that height of development be refused.*

Applicant Response:

The concerns raised in this submission relate to the impact of the height and scale of the proposed development on the visual amenity and character of the immediate neighbourhood area (the Trinity Street/ Seaview Avenue/ William Street district) and states that the development as proposed is out of place with the existing streetscape.

As stated above in relation to Submission No. 3, Scott Tallon Walker Architects has carefully considered how the urban form, height, scale, materials and finishes of the proposed development will relate with the surrounding context.

Scott Tallon Walker Architects based the design of the development to comply with the requirements set out in the current *'Wexford Town and Environs Development Plan 2009-2015 (extended)'*.

In the *'Wexford Town and Environs Development Plan 2009-2015 (extended)'* Trinity Wharf is located on the edge of Wexford's town centre with lands zoned town centre. In Zone 13 of the 'Masterplan Zone Maps & District Centre Information' Trinity Street and the Trinity Wharf area are identified as suitable for development of 5 to 6 storey in height.

The subject site of Trinity Wharf is outside of the older town boundaries and is located on land the majority of which was previously reclaimed in the 19th Century. This brownfield site was used intensively for manufacturing purposes up to the start of this century until the closure of Wexford Electronics. The site's location to the south of the Town's medieval core offers the opportunity for significant commercial and residential development within a short walk from South Main Street.

The subject site requires a strong architectural response to create defining landmark buildings. The topography of the area provides the opportunity for high density commercial and residential development with limited visual impact on the adjoining residential dwellings on William Street.

There are several new tall structures in the Town centre such as the National Opera House and Whites Hotel which break the skyline next to the Twin Churches. However, the tallest buildings on the Quay are 6 storeys (Paul Quay & Talbot Hotel).

Whilst it may be considered that this site could accommodate a taller building, the 5 to 6 storey height is most suitable for the uses proposed and relates to the height and scale of buildings along Paul Quay.

The design of the proposed development was informed by an urban design analysis that considered the relationship of the proposed development with the surrounding context, including in the context of the town centre viewed from Wexford Bridge and Ferrybank and along the Quay-front. 3-D Models and Photomontages of the proposed development were prepared as part of the design process. These identified that the proposed development would be only partially visible at a distance from the surrounding streets because of adjacent low-rise commercial buildings and a vacant site. Relevant information is included in the Architects Design Statement which accompanied the application.

A 'Landscape and Visual Impact Assessment' (LVIA) was carried out and is included as part of the EIAR that accompanied the application. This includes a range of views of the overall context and setting of the development, and its impact on the immediate neighbourhood, the town in general and the surrounding coastal and rural area.

The relationship between the proposed development and the adjoining local residential area was carefully considered by Scott Tallon Walker Architects. It was established that the closest proposed buildings would be approx. 70m from the rear of the closest residential properties on William Street, that the proposed development site is approx. 5m lower than the existing street level at the junction of William Street and Fisher's Row, and that the proposed development site is distinct and separate from the local residential area by a steep embankment and railway line with no existing public access.

There are limited views of the development from Trinity Street, Fisher's Row and William Street. These are largely because of a vacant site formerly occupied by a factory/ warehouse building opposite Fisher's Row. This current application includes a landscaped hedge to screen the existing vacant site and define the continuity of the street. However, Wexford County Council has identified that this vacant site provides an opportunity to reintroduce the building line along Trinity Street and to provide an attractively landscaped recreational/play area for the local community. This will form part of a separate future application.

As part of the response to An Bord Pleanála, Scott Tallon Walker Architects have prepared three contextual sections showing the relative height and proximity of the proposed development in relation to the existing properties on William Street. (Ref. Application Drawing TWW-STW-00-ZZ-DR-A-131-2053 in **Appendix 5.2.1**).

The sections are based on existing levels surveyed by Cardinal Surveys and show the existing outline of the properties along William Street with rear property boundaries and surveyed ground level, eaves and ridge heights of the existing buildings.

The proposed apartment buildings and multi-storey car park are the buildings closest to the existing residences on William Street with the office buildings located further away.

Section 7 shows the proximity, massing and height of the proposed apartment building in relation to No. 49 William Street. Section 8 shows the proximity, massing and height of the proposed car park structure in relation to No. 29 William Street, and Section 9 shows the proximity, massing and height of the proposed car park structure in relation to No. 3 William Street.

These show that the existing building heights along the east side of William Street range from +14.75m OD at No. 3 William Street to +19.32m OD at No. 49 William Street. The proposed parapet heights of the closest buildings are +19.20m OD for the apartment building and +22.15m OD for the car park structure.

The apartment building is approx. 117m from 49 William Street (rear of the building) and approx. 45m from the rear boundary of the property. The car parking structure is approx. 70m from No. 3 William Street and approx. 42m from the rear boundary of the property. The car parking structure is approx. 93m from the 29 William Street (rear of building) and approx. 42m from the rear boundary of the property. The distances are based on OS plans due to limited site access with the exception of the rear property boundary of No. 49 William St. which was surveyed.

In conclusion, the proposed development has an appropriate height and scale that accords with planning policy for the town as a whole and which also respects the existing amenity and distinctive character of the local residential area. The height and scale of the proposed buildings will have limited visual impact on the existing streetscape pending the separate redevelopment of the existing vacant site on Trinity Street.

- g. Lack of facilities for the Existing Community: Submission states that there is under-provision of local community facilities in the area with no play areas and seeks agreement with WCC on use and design of vacant site on Trinity Street and completion prior to completion of Trinity Wharf development.*

Applicant Response:

Wexford County Council note that the area referred to in the submission (the Old Cash and Carry Site) is primarily outside of the red line for the proposed development and cannot therefore be included as part of this application.

However, Wexford County Council consents, subject to securing development consent under a Part 8 process, to develop an urban playground/amenity area for the use of the local community in parallel with this the development of the Trinity Wharf lands.

- h. Prioritisation of Cycling: The submission requests that WCC provide cycle lanes to the surrounding streets (Trinity Street, Lower and upper William St, Parnell St and Fisher's row) prior to commencement of any work on site.*

Applicant Response:

Wexford County Council is working in accordance with the Walking and Cycling Strategy for Wexford Town prepared in 2014 to develop cycling and walking infrastructure in Wexford Town. This strategy document presents eight new routes within the town boundary that will

be developed, without giving a particular timeframe for doing so. Of these, Routes 1 and 2 are proximate to the Trinity Wharf development.

Route 1 is complete and runs from the N25/R730 junction into Rocklands. It provides a dedicated cycle lane at carriageway level, separated by road markings.

Route 2 is proposed to pick up from the end of Route 1 (at Rocklands) and runs to Redmond Square, to the north of Wexford Quays, taking in William Street, Trinity Street and Wexford quays on its route. Wexford County Council has developed a part of this route recently (Route 2D – See Plate 2.2 below), taking advantage of an opportunity to bring the route off-road along the waterfront area. The Trinity Wharf development will provide further advancement of this route (Route 2B – See Plate 2.2 below), while also accomplishing predominantly off-road separation. Routes 2B and 2D are combined cycling and pedestrian ways.

As presented in the Traffic Addendum (**Appendix B1**) the design of the proposed access junction and access link at Trinity Street has been refined to accommodate this linkage. The refinement includes pavement marking indicating shared surfaces. The pavement marking symbols on the footpaths will be accompanied by appropriate signage to reinforce its shared use. Please see **Plate A1** in **Appendix B1**.

Wexford County Council plans to complete Route 2C prior to completion of Phase 1 of the Trinity Wharf development. This will comprise formal designation, marking, signage and likely some separation fencing to convert the existing 3m wide footpath into a combined pedestrian/cycleway. Depending on the full scope of works and associated cost, it may prove necessary to submit this section for planning. This route, when complete, will provide full linkage from Trinity Wharf to Wexford Bridge – all off-road. Route 2C will be a combined pedestrian/cycleway.

There is no immediate timeframe to develop Route 2A. The development of this section of cycleway along William Street out to Rocklands will need to take account of the available road space and existing residential parking. Potential options to make this section cycle-friendly include creating a shared surface with reduced speed limits. The development of this section of cycle-way will be subject to the applicable statutory consultation and approval process.

Wexford County Council has also developed cycle lanes on the R741 Road north of Wexford Bridge (designated as Ardavan cycleway on the attached map). While not included in the original cycling strategy 2014, the zoning of lands in the Ferrybank/Crosstown/Ardavan area necessitates the development of new sustainable transport links between the area and the town centre.

Proposed greenways

Since the above referenced strategy was prepared, two ambitious greenway projects for Wexford town have been under consideration.

The Wexford to Curracloe greenway (shown yellow and labelled 'WC Greenway' on Plate 2.2 below has previously been the subject of an unsuccessful development consent application to the Board. Wexford County Council is now considering an alternative route and is in the early stages of preparing for a further consent application to the Board. It is expected to resubmit to the Board for development consent in 2020.

The potential for developing a greenway from Wexford to Rosslare (shown blue and labelled 'WR Greenway' on Plate 2.2 below) is also being examined by the Council. One possible route which will be considered for feasibility is the blue route shown on the attached map, which would connect to the southern end of Trinity Wharf. This proposed route would link to Trinity Wharf and connect Wexford Town with Rosslare Strand and the planned Rosslare Harbour to Waterford greenway. At this stage, it is anticipated that an application for consent will go into the Board in 2021.

Please note that given its urban setting, all roads/streets in the vicinity of Trinity Wharf feature pedestrian walkways. In the interest of clarity, we have not highlighted these on the attached map.



Plate 5.11.1 WCC Cycleways Map (Walking and Cycling Strategy for Wexford Town, 2014)

- i. *Submission requests proper and meaningful consultation with the residential community impacted by the development*

Applicant Response:

The public information meeting of 05/09/2018 presented the draft masterplan to allow for public comment and input. The comments, observations and submission arising from this public engagement process was taken into account in preparing the final master plan presented to ABP in this application for development consent. The details of the public consultation process undertaken as part of this application are set out in the Planning Report and Statement of Consistency with Planning Policy - Section 3 included with the application.

This process and the application submitted to An Bord Pleanála constitute the consultation process for the proposed development.

5.12 Karol Jackson

a. *Submission includes copy of submission No. 5.11 above.*

Applicant Response:

See Response to Submission No. 5.11 John Hayes.

In addition, the submission refers to existing permission to operate a business from home at her premises No. 21, Trinity Street. Claims ownership to the centre of Trinity Street including parking space. WCC Planning. Ref. 20150060 grants permission to operate business, includes contribution for parking.

Applicant Response:

The area of Trinity Street within the red line of the proposed development is part of the curtilage of the public road. The grant of planning for retention and permission for change of use included a requirement for a parking contribution in accordance with the Wexford County Council Development Contribution Scheme provided for under the Planning & Development Act 2000 (as amended) with respect of works, consisting of the provision or improvement of the car parking facilities in the functional area of the Planning Authority.

Concern that loss of parking spaces, including that directly outside her premises will exacerbate current parking difficulties.

Applicant Response:

The general arrangement of the proposed junction was reviewed subsequent to community consultation to minimise its impacts on parking. Design refinements included removing the parking in front of the vacant site east of the roadway rather than removing parking in front of the green area which were more valuable to residents.

Proposes alternative using area next to turning on Seaview Avenue and herringbone parking along Trinity Street as replacement resident/permit parking.

Applicant Response:

The proposed development has been careful to not significantly impact on the green area on Trinity Street where possible which provides a valuable amenity to local residents.

The surrounding streets has capacity to absorb the minor loss of parking and will be monitored on an on-going basis by Wexford County Council.

However, Wexford County Council sees merit in the submission that the existing parallel parking spaces on Trinity Street that front the Fisher's Row green area be reoriented to a herring bone formation and is prepared to include same in the project subject to it securing the necessary consents. As part of this process Wexford County Council will review the location of the existing bus stop in consultation with Wexford Bus.

5.13 Katja Hayes

- a. *Proposed Junction with Trinity Street and Seaview Avenue: Concerns with proposed junction raised at public information meeting have not been addressed.*

Applicant Response:

The public information meeting of 05/09/2018 presented the draft masterplan to allow for public comment and input. The comments, observations and submission arising from this public engagement process was taken into account in preparing the final master plan presented to ABP in this application for development consent. The details of the public consultation process undertaken as part of this application are set out in the Planning Report and Statement of Consistency with Planning Policy - Section 3 included with the application documentations.

The issues of traffic congestion arising from additional traffic and concerns in relation to car parking were considered in preparing the final design and this application.

b.

- (i) **Parking for existing residents:**

Loss of 18 parking spaces will leave only 10-13 parking spaces for 26 residential properties and also businesses. 'Pay and display' not effective for residents. Seeks refusal for redesign of trinity Street and removal of existing parking spaces.

Applicant Response:

The proposed parking arrangement are outlined in Section 5.4.8 of the EIAR and the Traffic Addendum in **Appendix B1**. Parking for residents and business on the surrounding street network will be protected from long-term parking of commuter vehicles generated by the development with the expansion of the permit, tariff and enforcement system which will be reviewed and closely monitored by Wexford County Council.

- (ii) **Seaview Avenue:**

Turning head insufficient in size to allow for any vehicle larger than a passenger vehicle (inadequate for oil delivery, refuse, minibuses, etc.)

New exit lane will involve loss of 2 no. existing parking spaces, with no footpath or space between it and 1 Seaview Terrace. New traffic lane shown directly outside front-door and bedroom window to 1, Seaview Avenue. Negative Impact on residential amenity due to proximity, with restricted access, Emissions and light pollution from vehicles waiting at the lights.

Seeks refusal until road and environmental safety for pedestrians and vehicular users can be addressed and alternative residents parking provided.

Applicant Response:

Refuse trucks and other deliver vehicles are proposed to make their collections/ drop offs from Trinity Street. Oil delivery trucks may have to reverse either up or down the lane but this is an existing situation which the development is improving with the provision of traffic signals which will provide a gap in traffic for the truck to carry out its manoeuvre. Oil deliveries is a very infrequent occurrence which the truck driver will have a duty of care to carry out safely.

The loss of two parking spaces on the public laneway is considered non-significant with adequate capacity on the surrounding streets for parking.

The shared use of the static space is an existing situation which the proposed development is not altering. The shared pedestrian/ vehicle use is considered appropriate as the traffic flow is in the region of 3 vehicles per hour during peak times.

The momentary delay of vehicles at in the lane waiting at the traffic light is considered non-significant because of the very low traffic flows in the lane. The traffic signal will be hooded as to avoid causing a nuisance to nearby residents.

The visibility issues exiting Seaview Avenue is an existing situation which the proposed junction will improve with the provision of a kerb build out which will improve visibility and traffic signals.

(iii) Traffic along Trinity Street and William St.

Traffic survey was conducted outside normal school term and during a holiday period including a bank holiday weekend. Residents experience congestion and traffic jams at peak periods. - school close by causes congestion at peak times

North-bound right-hand feeding lane is too short, and conflicts with bus stop location which if relocated would have further impacts that would need to be addressed.

Increased volume in traffic on trinity Street during cultural events and for the operation of the hotel will increase noise and air pollution levels particularly at night times and weekends.

Applicant Response:

The junction capacity analysis has been rerun with supplementary traffic data from surveys taken between Thursday 5th and Thursday 12th September 2019 to account for school term traffic and to incorporate Seaview Avenue. The results of the updated junction capacity analysis found that the junctions will operate within capacity at peak development of the site as outlined in Section 2c of the EAIR Addendum.

It is not proposed to change the current arrangement of the Wexford Bus stop but it's location will be reviewed by Wexford County Council.

The impact of noise and air generated by the proposed development in evening and weekend hours is considered non-significant. Evening and weekend activity in the town is considered integral to urban centre living.

(iv) Access Road from the new Development

Queries why WCC chose this location for the junction over the Preferred option 1, particularly as Independent RSA carried out for WCC states that the access road 'will provide challenges' (Ref Traffic and transportation report p 425) as it will compromise safe access and exit for larger vehicles. Submission therefore queries suitability of access road for emergency vehicles and of the bend at the level crossing for vehicles exiting and asserts that it was based on achieving a view over safety, rather than avoiding the safety issues by developing the existing entrance.

Applicant Response:

There were several deciding factors in proceeding with Alignment Option 3 as the preferred option as discussed in 3.7.6.2 Main Access Road. Each alignment option had challenges, but the proposed location is the most preferred for the reasons set out in Chapter 3 of the EIAR. There were no major environmental or road safety differences between the 3 options.

The proposed junction and proposed link road have been designed in accordance with DMURS which promotes pedestrian friendly environments by tightening up kerb radii and setting back stop lines. The issues raised by the independent auditor have been addressed with design refinements.

c. Visual Impact: height, materials used are out of place with the existing streetscape and out of character of the immediate vicinity and would destroy the character of this area of Wexford - a seaside town built on a maritime heritage.

Applicant Response:

The submission from Katja Hayes expresses concern regarding the visual impact of the proposed development on the streetscape and character of the area. Item 2 of the submission states:

'The proposed planning application contains the development of the 1 x 5-storey high residential block, 3 x 5-storey office blocks, a 6-storey high hotel. Based on the designs and as shown on pictures provided within the planning application, the height of these buildings and materials used are out of place with the existing streetscape and out of character with the immediate vicinity, which contains predominantly 2-storey terraced houses with slate roofs which have been in place since 1800s and show the history of a fishermen's area within Wexford town (the majority of houses have been built to accommodate fishermen and dockyard workers in this district). The new development copies large scale anonymous developments that can be found in any bigger city and would destroy the character of this area of Wexford – a seaside town built on maritime heritage and one of the focal points of Ireland's Ancient East tourist trail.

Consequently, I am asking for the permission for the 5- and 6-storey buildings to be refused'.

Design Team Response:

The concerns raised by Katja Hayes relate to the height and materials of the proposed buildings on the existing character of the immediate vicinity which is described as predominantly 2-storey terraced houses with slate roofs dating from the 1800s.

As stated above in relation to Submissions No. 3 and No. 11, Scott Tallon Walker Architects has carefully considered how the urban form, height, scale, materials and finishes of the proposed development will relate with the surrounding context.

Scott Tallon Walker Architects based the design of the development to comply with the requirements set out in the current *'Wexford Town and Environs Development Plan 2009-2015 (extended)'*.

In the *'Wexford Town and Environs Development Plan 2009-2015 (extended)'* Trinity Wharf is located on the edge of Wexford's town centre with lands zoned town centre. In Zone 13 of the *'Masterplan Zone Maps & District Centre Information'* Trinity Street and the Trinity Wharf area are identified as suitable for development of 5 to 6 storey in height.

The subject site of Trinity Wharf is outside of the older town boundaries and is located on land the majority of which was previously reclaimed in the 19th Century. This brownfield site was used intensively for manufacturing purposes up to the start of this century until the closure of Wexford Electronics. The site's location to the south of the Town's medieval core offers the opportunity for significant commercial and residential development within a short walk from South Main Street.

The subject site requires a strong architectural response to create defining landmark buildings. The topography of the area provides the opportunity for high density commercial and residential development with limited visual impact on the adjoining residential dwellings on William Street.

There are several new tall structures in the Town centre such as the National Opera House and Whites Hotel which break the skyline next to the Twin Churches. However, the tallest buildings on the Quay are 6 storeys (Paul Quay & Talbot Hotel).

Whilst it may be considered that this site could accommodate a taller building, the 5 to 6 storey height is most suitable for the uses proposed and relates to the height and scale of buildings along Paul Quay.

The design of the proposed development was informed by an urban design analysis that considered the relationship of the proposed development with the surrounding context, including in the context of the town centre viewed from Wexford Bridge and Ferrybank and

along the Quay-front. 3-D Models and Photomontages of the proposed development were prepared as part of the design process. These identified that the proposed development would be only partially visible at a distance from the surrounding streets because of adjacent low-rise commercial buildings and a vacant site. Relevant information is included in the Architects Design Statement which accompanied the application.

A 'Landscape and Visual Impact Assessment' (LVIA) was carried out and is included as part of the EIAR that accompanied the application. This includes a range of views of the overall context and setting of the development, and its impact on the immediate neighbourhood, the town in general and the surrounding coastal and rural area.

The relationship between the proposed development and the adjoining local residential area was carefully considered by Scott Tallon Walker Architects. It was established that the closest proposed buildings would be approx. 70m from the rear of the closest residential properties on William Street, that the proposed development site is approx. 5m lower than the existing street level at the junction of William Street and Fisher's Row, and that the proposed development site is distinct and separate from the local residential area by a steep embankment and railway line with no existing public access.

There are limited views of the development from Trinity Street, Fisher's Row and William Street. These are largely because of a vacant site formerly occupied by a factory/ warehouse building opposite Fisher's Row. This current application includes a landscaped hedge to screen the existing vacant site and define the continuity of the street. However, Wexford County Council has identified that this vacant site provides an opportunity to reintroduce the building line along Trinity Street and to provide an attractively landscaped recreational/play area for the local community. This will form part of a separate future application.

As part of the response to An Bord Pleanála, Scott Tallon Walker Architects have prepared three contextual sections showing the relative height and proximity of the proposed development in relation to the existing properties on William Street. (Ref. Application Drawing TWW-STW-00-ZZ-DR-A-131-2053 in **Appendix 5.2.1**).

The sections are based on existing levels surveyed by Cardinal Surveys and show the existing outline of the properties along William Street with rear property boundaries and surveyed ground level, eaves and ridge heights of the existing buildings. The proposed apartment buildings and multi-storey car park are the buildings closest to the existing residences on William Street with the office buildings located further away.

Section 7 shows the proximity, massing and height of the proposed apartment building in relation to No. 49 William Street. Section 8 shows the proximity, massing and height of the proposed car park structure in relation to No. 29 William Street, and Section 9 shows the proximity, massing and height of the proposed car park structure in relation to No. 3 William Street.

These show that the existing building heights along the east side of William Street range from +14.75m OD at No. 3 William Street to +19.32m OD at No. 49 William Street. The proposed parapet heights of the closest buildings are +19.20m OD for the apartment building and +22.15m OD for the car park structure. The apartment building is approx. 117m from 49 William Street (rear of the building) and approx. 45m from the rear boundary of the property. The car parking structure is approx. 70m from No. 3 William Street and approx. 42m from the rear boundary of the property. The car parking structure is approx. 93m from the 29 William Street (rear of building) and approx. 42m from the rear boundary of the property. The distances are based on OS plans due to limited site access with the exception of the rear property boundary of No. 49 William St. which was surveyed.

In conclusion, the proposed development has an appropriate height and scale that accords with planning policy for the town as a whole and which also respects the distinctive character of the local residential area. The height and scale of the proposed buildings have a limited visual impact on the existing streetscape, which can be reduced with the appropriate redevelopment of the existing vacant site on Trinity Street.

- d. *Unsustainability and Parking within the new Development - Submission contends there is under-provision of parking based on WCC's own figures (re. employees overlap between office and hotel users, etc., with conference and cultural events taking place outside normal working hours. Concerned that this will limit interest in office development. Queries availability of parking in the town as dated as contends that the development will increase congestion with people using car parks and on-street parking in the town.*

Applicant Response:

RO'D Traffic/WCC

A supplementary car parking survey has been undertaken by Nationwide Data Collections on Thursday 5th September, Monday 16th September and Tuesday 1st September 2019 to account for school term traffic on parking demands during core business hours. The car parking survey can be viewed in the Appendix A1 of the Traffic Addendum.

An analysis of the car park survey found that the Town Centre has adequate capacity to adsorb the demand generated by the development as outlined in the Traffic Addendum in **Appendix B1**.

- e. *Cycling Access to new Development - Lack of safe cycle lanes through the town centre, along trinity street, William Street and adjacent side street, and the lack of provision of these covering the areas outside Trinity Wharf as part of the proposed development undermines the intention to promote cycling as a means to commute, and mobility strategy for this development. Therefore, permission should be refused pending provision of this infrastructure.*

Applicant Response:

The proposed development includes a pedestrian/ cycle boardwalk from Paul Quay and shared facilities for cyclist on the new access link from Trinity Street. The site's proposed internal street network and plazas will be designed with pedestrians and cyclists prioritised over motor vehicles. Although there are not many dedicated cycle lanes in the nearby Town Centre, traffic flows and traffic speeds are considered low enough for shared use of the roadway for cyclists. All these factors including a Cycle Strategy for Wexford which has been prepared by Wexford County Council will gradually improve cycle facilities on an incremental basis. Please see section 2(f) above for further information on the Cycle Strategy for Wexford.

- f. *Construction Phase: Duration of the construction phase (80 months) seems excessive with little information provided on the impact on the community over a long period. Concerns include traffic and parking management for residents and construction workers, any types of pollution (noise, dust, air), site management, alternative work arrangements offered to people working from home, due to piling, power outages, etc. Requests WCC appoint a single point of contact.*

Applicant Response:

The Construction Traffic Management Plan will be prepared by the contractor undertaking the works.

Most of the work activities over the duration of the construction programme will be confined to the development site with very little traffic generated on the road network. Earthworks is anticipated to generate the most traffic with haulage of fill and cut materials, but an analysis found that its impacts will be temporary and non-significant on the road network.

All assessments in the EIA and AA were undertaken in line with the proposed construction phasing as set out in Sections 4.3.3 and 4.4.3 of the EIAR. Mitigation measures as deemed necessary have been proposed based on this construction sequence and programme.

The Construction Environmental Management Plan (CEMP) will be revised to include a requirement for the appointment of a Liaison officer during the construction phase of the project.

5.14 Representatives of Maureen Hickey (Deceased)

- a. *Ownership of the land: disputes ownership of area shown as under the control of the applicant behind No. 3 William St.*

Applicant Response:

Wexford County Council notes that an unspecified area referred to in the submission from the Reps of Hickey is suggested to be in conflict with the title map of Wexford County Council. Whilst no proof of title has been submitted to Wexford County Council, Wexford County Council states that that the area of alleged boundary conflict (so far as this is understood by Wexford County Council) is in fact outside of the red line for the proposed development.

- b. *Statutory requirements for newspaper Notices and site notices: queries advertisement of newspaper Notice as inadequate and not in accordance with Statutory requirements.*

Applicant Response:

The notification of the development was published in the newspaper on 12/02/2019. Following a request from An Bord Pleanála, an amendment notice was published on 26/02/2019.

It is Wexford County Council's view that the notices published conform with the requirements set out in the Planning & Development Act 2000 (as amended).

- c. *Car Parking: Applies WTEDP parking standards to establish shortfall in provision - notes that Section 5.48 states that 63% of employees will drive to work and queries that events and conferences will rarely be held during office hours. Contends that there is no factual basis that the peak parking demand will be 509 spaces. Concerned that this will lead to serious on-street car parking in the vicinity of the site. Concerns regarding shortfall in car parking.*

Applicant Response:

The parking demand generated by the development has been estimated based on anticipated use of the office and the percentage of people driving to work in Wexford Town based on SCO census data. This is an industry standard method of estimating parking demand generation.

The core demand for parking generated by the development is estimated to be 639 spaces as outlined in Section 5.4.8.1 of the EIAR. The development will provide 509 spaces within the site as outlined in Section 5.4.8.2. This indicates a deficit of 130 spaces within the site which will seek parking at other long-term car parks.

A supplementary car park survey indicates that the Town Centre car parks have 351 underutilised spaces at peak times of the day, including 156 spaces available for long term parking in Sinnott Place, Paul Quay and Ropeyard/ Kings Street car parks within a 10 minute walk of the site. This indicates that the alternative Town Centre car parks have adequate capacity to meet the surplus parking demand generated by the site without causing significant disruptions to the parking needs of the Town Centre.

The parking demand generation is based on current CSO modal splits for people traveling to work by car in Wexford Town and the surrounds, i.e. baseline modal split. The development will aim to reduce the baseline modal split of people driving to work by car by up to 10% with the implementation of Transportation Mobility Management Plan as outlined in Section 5.5.1 of the EIAR. This will reduce the parking demand to 588 spaces and reduce the deficit within the site to 79 spaces.

Event organisers organising an event or conference in the development during core office hours will be required to prepare an Accessibility Management Plan as outlined in Section 5.5.2 of the EIAR.

The on-street parking of the surrounding street network will be protected from long term use by commuter vehicles with the expansion of the Town Centre permit, tariff and enforcement system as outlined in Section 9.5 of the Traffic and Transport Report.

5.15 Stephen Shakeshaft and Others

- a. *The submission considers that the development is not sympathetic to the surrounding primarily residential area, not in keeping with the immediate area or town itself and is an 'off the shelf plan' mirroring numerous others elsewhere. Seeks less density, better design, with more open space and public facilities, with strong local identity*
- b. *Impact of car park on rear of properties - regarding privacy, noise, light pollution.*
- c. *Suggests a car-free development omitting the multi-storey car park, express concern regarding impact of car park on residents regarding privacy, noise and light pollution, with no screening to protect privacy of residents on eastern side of William Street.*

Applicant Response:

This submission includes a section titled 'Scope and style of proposed development' which states:

'We appreciate the ambition of Wexford County Council in their intention to bring new opportunities to Wexford town, however we feel that the current proposals will irrevocably change the area in which we live.

The proposed development will take place within a primarily residential area, with established housing and settled residents. The imposition of such a high-density development is not sympathetic to these existing residential areas. This new development appears to us ill thought out and not in keeping with the immediate area or town itself; it seems an 'off the shelf' plan mirroring numerous others both here and abroad. There seems to be little thought as to how the site will develop in the coming years, the new development is planned to be sitting alone, with no through pedestrian traffic to other established areas, and this creates a danger of the development becoming a 'ghost town' at evenings and weekends. The plan does not include anything which would organically connect it with the existing town quays, and as such any residents or hotel guests would be one-way traffic towards the town centre. The proposal to use such an iconic and well positioned site as a glorified business park appears short sighted and naïve. A less high density better thought out development including more open spaces and better public facilities, with a strong local identity, would stand a far better chance of attracting the desired investors into the area as well as extending the town with a sustainable and unique resource'.

This submission also refers to the planned car park in the section titled 'Parking' which states:

'The planned main car park for the development is proposed to be a multi-storey car park situated approximately 100 feet from the rear of our properties. No consideration appears to have been given to residents regarding privacy or noise and light pollution, presently there is no screening from the rear of the properties onto the site and there is nothing within the plan which will protect the right to privacy of residents on the eastern side of William Street.'

Scope and Style of Proposed Development

The concerns raised in the submission regarding the 'scope and style of development' relate to the integration of the proposed development with the established residential area in terms of its density and character, and the integration of the proposed development with both the immediate wider area and the town in terms of character and connectivity. The submission describes the proposed development as a 'glorified business park' and seeks a lower density development with more open space and better public facilities.

The proposed development is intended to facilitate the urban regeneration of a derelict brownfield site and improve the ambience of the town. By consolidating land use sustainably in the town centre, the proposed development is intended to enhance the local economy for people working and living in Wexford town with positive, long-term benefits in terms of land-use, social considerations and the economic activity of the area. A high-quality design that responds and respects the urban context is essential to achieving the intended social and economic benefits for Wexford. Scott Tallon Walker Architects has a proven track record for

considered, contemporary design that relates with the surrounding context and which is attractive for people to work, live and to use.

Scott Tallon Walker Architects has designed the proposed development to provide a series of new public spaces and walkways extending along the waterfront that connect with the existing quays and Trinity Street. Scott Tallon Walker Architects has carefully considered how the urban form, height, scale, materials and finishes of the proposed development will relate with the surrounding context.

Scott Tallon Walker Architects based the design of the development to comply with the requirements set out in the current *'Wexford Town and Environs Development Plan 2009-2015 (extended)'*.

In the *'Wexford Town and Environs Development Plan 2009-2015 (extended)'* Trinity Wharf is located on the edge of Wexford's town centre with lands zoned town centre. In Zone 13 of the *'Masterplan Zone Maps & District Centre Information'* Trinity Street and the Trinity Wharf area are identified as suitable for development of 5 to 6 storey in height.

The subject site of Trinity Wharf is outside of the older town boundaries and is located on land the majority of which was previously reclaimed in the 19th Century. This brownfield site was used intensively for manufacturing purposes up to the start of this century until the closure of Wexford Electronics. The site's location to the south of the Town's medieval core offers the opportunity for significant commercial and residential development within a short walk from South Main Street.

The subject site requires a strong architectural response to create defining landmark buildings. The topography of the area provides the opportunity for high density commercial and residential development with limited visual impact on the adjoining residential dwellings on William Street.

There are several new tall structures in the Town centre such as the National Opera House and Whites Hotel which break the skyline next to the Twin Churches. However, the tallest buildings on the Quay are 6 storeys (Paul Quay & Talbot Hotel).

Whilst it may be considered that this site could accommodate a taller building, the 5 to 6 storey height is most suitable for the uses proposed and relates to the height and scale of buildings along Paul Quay.

The design of the proposed development was informed by an urban design analysis that considered the relationship of the proposed development with the surrounding context, including in the context of the town centre viewed from Wexford Bridge and Ferrybank and along the Quay-front. 3-D Models and Photomontages of the proposed development were prepared as part of the design process. These identified that the proposed development would be only partially visible at a distance from the surrounding streets because of adjacent low-rise commercial buildings and a vacant site. Relevant information is included in the Architects Design Statement which accompanied the application.

A 'Landscape and Visual Impact Assessment' (LVIA) was carried out and is included as part of the EIAR that accompanies this application. This includes a range of views of the overall context and setting of the development, and its impact on the immediate neighbourhood, the town in general and the surrounding coastal and rural area.

The relationship between the proposed development and the adjoining local residential area was carefully considered by Scott Tallon Walker Architects. It was established that the closest proposed buildings would be approx. 70m from the rear of the closest residential properties on William Street, that the proposed development site is approx. 5m lower than the existing street level at the junction of William Street and Fisher's Row, and that the proposed development site is distinct and separate from the local residential area by a steep embankment and railway line with no existing public access.

There are limited views of the development from Trinity Street, Fisher's Row and William Street. These are largely because of a vacant site formerly occupied by a factory/ warehouse building opposite Fisher's Row. This current application includes a landscaped hedge to screen the existing vacant site and define the continuity of the street. However, Wexford County Council has identified that this vacant site provides an opportunity to reintroduce the building line along Trinity Street and to provide an attractively landscaped recreational/play area for the local community. This will form part of a separate future application.

The proposed development consists of 8 buildings of which just three are office buildings. There are also residential, hotel, restaurant/café and cultural/performance buildings and a public event space – all offering a mix of uses for different times including evenings, weekends, etc. throughout the year. The density and mix of uses will generate activity throughout the day and at weekends.

Public realm, pedestrian connectivity and permeability are a major component of the design. The proposed development includes a pedestrian/cyclist boardwalk connecting directly along the waterfront to Paul Quay. This is intended to form part of the longer 'Greenway' planned along the quays through Wexford and on to Rosslare. However, it is intended that the quays including Trinity Wharf will be largely shared space rather than with designated cycleways. The design approach for the public realm is based around natural wayfinding with a series of interconnected spaces that link the boardwalk/marina area with the main event space and from there provide a series of routes within the site and a connection to Trinity Street.

The proposed landscape design, palette of building materials and finishes are designed to create a unique, distinct, attractive identity that complements the setting and surrounding context. The mix of uses, public realm strategy, landscape and building materials and finishes are described in the Architects Design Statement that accompanied the application.

In conclusion, the density, height and mix of the proposed development is consistent with Planning Policy. In considering the overall site context including that the site itself is distinct and separate from the adjacent residential area, the architectural character of the proposed development is of contemporary high-quality design. The impact on the established residential character of the area will be limited. The proposed development includes a substantial component of publicly accessible space that provides a variety of high-quality amenity places and spaces that create a highly attractive public realm that connect and relate with the surrounding context.

Proximity and Design of Car Park

The concerns raised in the submission regarding the 'proximity and design of the car park' relate to privacy, noise and light pollution to the properties to the rear of the properties on the eastern side of William Street.

As part of the response to An Bord Pleanála, Scott Tallon Walker Architects have prepared three contextual sections showing the relative height and proximity of the proposed development in relation to the existing properties on William Street. (Ref. Application Drawing TWW-STW-00-ZZ-DR-A-131-2053 in **Appendix 5.2.1**).

The sections are based on existing levels surveyed by Cardinal Surveys and show the existing outline of the properties along William Street with rear property boundaries and surveyed ground level, eaves and ridge heights of the existing buildings.

The proposed apartment buildings and multi-storey car park are the buildings closest to the existing residences on William Street with the office buildings located further away.

Section 7 shows the proximity, massing and height of the proposed apartment building in relation to No. 49 William Street. Section 8 shows the proximity, massing and height of the proposed car park structure in relation to No. 29 William Street, and Section 9 shows the proximity, massing and height of the proposed car park structure in relation to No. 3 William Street. Section 9 is therefore closest to Nos. 5 and 9 William Street.

Section 9 shows that the Car Park is approx. 70m from No. 3 William Street and approx. 42m from the rear boundary of the property. The distances are based on OS plans due to limited site access to the rear of the properties. The ground level at No. 3 William Street is approx. +8.29m OD, the eaves height is +12.35m OD and the ridge line is approx. +14.75m OD.

The roof level of the Car Park is approx. +21.15m OD. with a lift/stair core at either end rising to approx. +23.90m to accommodate plant and lift over-run. The roof level is a green sedum roof with maintenance access only. The top floor of the Car Park is approx. +18.00m OD. (Ref. Application Drawing TWW-STW-00-ZZ-DR-A-131-2053 in **Appendix 5.2.1**).

The submission states that no consideration appears to have been given to residents regarding privacy or noise and light pollution. A detailed visual impact assessment is included in Chapter 11 of the EIAR, a detailed noise assessment in Chapter 12 and in relation to air pollution, in Chapter 13 of the EIAR.

The Architectural Design Statement that accompanied the application includes a description of the proposed elevational treatment of the Car Park. This is designed with an attractive bronze finish metal cladding system to diffuse light, noise and views into and from the building. It is intended that the detailed specification of the building will include surface finishes and other measures that will further lower noise levels both within and around the building.

Semi-mature tree planting around the building as shown on the proposed Planting Plan (Ref. Application Drawing 1125-L-PP-001) is proposed as part of the natural soft landscaping to this building. This is designed to provide additional supplementary screening to this elevation, helping to reduce visual impact and avoid overlooking and any loss of privacy. The photomontages submitted with the application show the trees as five years old, before full maturity.

The submission also states that there is no screening from the rear of the properties onto the site.

The application site boundary and proposed development extends to the boundary with Irish Rail and does not extend to the rear of properties on William Street. Consultation has taken place with Irish Rail regarding planting and fencing along the site boundary and their requirements are incorporated into the site boundary treatment.

However, as the embankment directly to the rear of the properties from Nos.1-17 William Street is in the control of Wexford County Council, it would be possible to provide landscape screening to the rear of these properties should it be needed to further protect the privacy of the residents.

- d. *It sits alone with no through pedestrian movement or connectivity with the existing town quays.*

Applicant Response:

The proposed site is suitably located and is considered an organic extension of the town quays. It will be connected to Paul Quay with the proposed pedestrian and cycle boardwalk. The site forms part of a long-term vision to provide a greenway south along the coastline.

The site is proposed as a mixed development with evening and weekend activity encouraged with the residential, hotel and performance centre components of the development.

- e. *Traffic Plan: proposed development will greatly increase the amount of traffic using the William Street/Trinity Street (R730) Corridor. Queries timing and extent of traffic survey.*

Applicant Response:

The junction capacity analysis has been rerun using resurveyed traffic data from September 2019 which account for school term traffic during peak hours. The junction capacity analysis

found that the junctions will operate within capacity at peak development of the site. This is in accordance with TII Traffic and Transport Assessment Guidelines. The finding of the analysis can be viewed in the Traffic Addendum in **Appendix B1**.

The William Street and Fishers Row traffic was captured by Junction Turning Counts during AM and PM peak hour traffic as outline in the Traffic Addendum in **Appendix B1**.

- f. *Parking: Queries shortfall of car parking being provided on site and potential 'overspill' into the surrounding area, particularly as there are currently no alternatives provide, e.g. public transport.*

Applicant Response:

An analysis of the parking survey completed on Thursday 5th September, Monday, 16th September and Tuesday, 1st October 2019 has indicated that the Town Centre car parks have adequate capacity to cater for the demand increase generated by the development.

Parking on the surrounding street network essential to residents and businesses in the area will be protected from long-term parking by commuter vehicle with the expanding of the permit, tariff and enforcement system operated by Wexford County Council on an on-going basis.

- g. *Queries consideration of alternatives, such as improved public transport including rail to minimise car demand.*

Applicant Response:

The development will target a reduction in car usage generated by the development with the implementation of the Transportation Mobility Management Plan as outlined in the EIAR Chapter 5. This will support an uptake in public transport and improve incremental investment.

Applicant Response:

The determinants of health and well-being in our neighbourhoods are complex and varied and can be subjective based on an individual's or community's response to a change in the natural or built environment among other factors. (See Plate 6.2 Chapter 6 of the EIAR).

The development site is zoned 'town centre' in the Wexford Town and Environs Plan 2009-2015 (extended). The Plan identifies the Trinity Street and Trinity Warf area to be suitable for development of 5 to 6 storeys in height.

It is recognised in the EIAR that in terms of the human health assessment, there are uncertainties in relation to assessing impacts on individuals or communities due to the lack of available health data and the difficulty in predicting effects, which could be based on a variety of assumptions.

The proposed development facilitates urban regeneration of a brownfield site and will facilitate the consolidation of existing land uses in the Town. The development is expected to improve the general amenity, journey characteristics and local economy for residents, visitors as well as marina users that will result in a moderate, positive, long-term impact on land uses, social considerations and economic activity in the area.

- h. *Construction Stage: effect on residents of the time, noise and pollution during (80 month) construction phase.*

Applicant Response:

The Construction Traffic Management Plan will be prepared by the contractor undertaking the works.

Most of the work activities over the duration of the construction programme will be confined to the development site with very little traffic generated on the road network. Earthworks is anticipated to generate the most traffic with haulage of fill and cut materials, but an analysis found that its impacts will be temporary and non-significant on the road network.

A detailed Construction Environmental Management Plan (CEMP) has been prepared and is included in Appendix 4.1 of the EIAR, following the submission received this will be revised to include a requirement for the appointment of a Liaison officer during the construction phase of the project.

i. Request Refusal and seeks 'proper' consultation on a new plan.

Applicant Response:

The public information meeting of 05/09/2018 presented the draft masterplan to allow for public comment and input. The comments, observations and submission arising from this public engagement process was taken into account in preparing the final master plan presented to ABP in this application for development consent. The information evening, the publishing of the draft drawings on the Council's website allowed for public input into the preparation of the final masterplan. The details of the public consultation process are set out in the Planning Report and Statement of Consistency with Planning Policy - Section 3 included with the application documentations.

5.16 Transport Infrastructure Ireland (TII)

TII has no specific observations to make in relation to potential impacts to the existing and/or national road network in the area.

Applicant Response:

Comments noted.

Appendix A1

ABP RFI Letter to WCC 24th

July 2019

Our Ref: ABP-303726-19

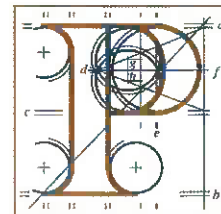
PA Reg Ref:

Your Ref: Wexford County Council

Special Projects

29 JUL 2019

Action



**An
Bord
Pleanála**

Brian Galvin
Wexford County Council
Carricklawn
Wexford
Co. Wexford
Y35 WY93

**WEXFORD COUNTY COUNCIL
RECEIVED BY POST**

25 JUL 2019

PLANNING SECTION

Date: 24 July 2019

Re: A mixed-use development which includes a six-storey hotel, six-storey car park, five-storey residential building, three five-storey office buildings, two-storey cultural/performance centre, two-storey mixed-use restaurant/café/specialist retail building, new sea wall around the existing Trinity Wharf site, 64 berth floating marina and all other site infrastructure works and ancillary works.

Trinity Wharf, Trinity Street, Wexford.

Dear Sir,

I refer to the above mentioned proposed development which is before the Board for approval. Please be advised that the Board, in accordance with section 175(5)(a) of the Planning and Development Act, 2000, as amended, as applicable to section 226 of the Act, hereby requires you to furnish the following further information in relation to the effects on the environment of the proposed development:

1. Natura Impact Statement

(a) Qualifying Interest

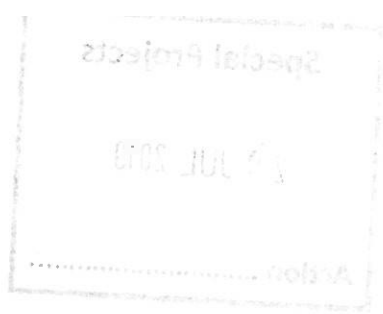
You are requested to address the issues raised by the Department of Culture, Heritage and the Gaeltacht (NPWS) in relation to the potential disturbance of Little Tern, a special conservation interest species (breeding) of the Wexford Harbour and Slobs Special Protection Area (site code 004076) during construction and operation of the proposed Trinity Warf development.

**Teil
Glao Áitiúil
Facs
Láithreán Gréasáin
Ríomhphost**

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Website
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(01) 858 8100
1890 275 175
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www.pleanala.ie
bord@pleanala.ie

64 Sráid Maoilbhríde
Baile Átha Cliath 1
D01 V902

64 Marlborough Street
Dublin 1
D01 V902



(b) Habitat loss

You are requested to provide clarity on the estimated area of permanent habitat loss of subtidal benthos in relation to the targets set as part of the Conservation Objectives for the habitat Type Estuaries [1130] and Mudflats and Sandflats not covered by seawater at low tide [1140] for the Slaney River Valley Special Area of Conservation.

It would be useful to put this predicted habitat loss in context of the natural processes occurring in the dynamic estuarine environment.

Note 1: the final figure in the Natura Impact Statement is unsubstantiated at 1,547 m² with clearer information presented in the Biodiversity Chapter and in the Benthic study. Please clarify if this takes account of the overlap between the extent of the Special Area of Conservation and the Special Protection Area as this is not clear in the Natura Impact Statement.

Note 2: It should be noted that monitoring cannot be used as a method to mitigate potential habitat loss and any uncertainty in relation to the calculation of habitat loss should be addressed in the Natura Impact Statement.

(c) In combination effects

The assessment of in-combination effects assesses other plans and projects for potential cumulative adverse effects on the Wexford Harbour and Slobbs Special Protection Area and Slaney River Valley Special Area of Conservation however, it does not take ongoing activities such as aquaculture into account. Aquaculture and recreational activities are identified as pressures and threats to these European Sites. Consideration should be given to the possibility of in-combination effects of these ongoing activities within the Estuary and the proposed development.

This information can be submitted by way of either a revised Natura Impact Statement or an addendum to the current Natura Impact Statement.

2. Traffic and Transportation

A revised Environmental Impact Assessment Report, Chapter 5 entitled Traffic Analysis (and any other chapters effected as appropriate) and a revised Traffic and Transportation Report should be submitted which includes the following:

(a) Marine Traffic/Transport

Chapter 5 of the Environmental Impact Assessment Report, entitled Traffic Analysis and the Traffic and Transportation Report address onshore traffic and transportation impacts only and does not address traffic or transport matters arising in the marine environment. You are requested to revise the documents above/provide an addendum to address marine related traffic/transport.

(b) Traffic Surveys

The traffic survey data submitted relates to December 2016 and August 2018 including the bank holiday. You are requested to undertake a traffic survey to include 24 hour Automated Traffic Counts on Parnell Street, Trinity Street and William Street Lower and any other street considered necessary and Junction Turning counts at (1) Trinity Street/King Street and Park Quay Junction, (2) Trinity Street/Sea View Avenue Junction and (3) Trinity Street/Fishers Row/William Street Lower and (4) Trinity Street/Parnell Street Junction and (5) Distillery Road/Joseph Street/Mill Road/King Street on a mid-week day during the school term. The traffic impact analysis assessment of the Traffic and Transportation report and Chapter 5 of the Environmental Impact Assessment Report should be amended to reflect any changes which may arise from the new survey information. Furthermore, a map clearly outlining the location of each of the streets and junctions should be included within the reports under 'existing traffic'.

(c) Car park survey

Please provide an updated town centre car parking survey to that undertaken in November 2016 which should include a map including the location of the car parks and an indication of the streets within the vicinity of the site where pay and display parking is in operation. The transport demand generation parking provision should be reviewed on

the basis of the results of the surveys undertaken and traffic impact analysis assessments updated to reflect same.

(d) Junction Design

Section 6.3.2 of the Traffic and Transportation report states that the new access junction will form a 4-way signalised junction with Trinity Street and Sea View Avenue. However, the modelling undertaken in the junction capacity analysis refers only to the Trinity Street and Access road junction. You are requested to undertake a review of the junction design and modelling undertaken which takes full account of Sea View Avenue.

It is also requested that you examine and outline the manner by which access to and egress from the vehicular entrance to the commercial premises to the west of the site can be maintained for loading/unloading.

The traffic impact analysis assessment of the Traffic and Transportation report and Chapter 5 of the Environmental Impact Assessment Report should be updated to reflect same.

(e) Road Safety Audit

It is stated in the documentation, Section 6.4.1.7 Environmental Impact Assessment Report and Section 11 of the Traffic and Transportation Report, that all issues raised in the RSA have been addressed/accepted so the proposed development will be satisfactory in terms of traffic operations. It is noted that the Road Safety Audit identifies 13 problems. Please provide a report or appendix to the Traffic and Transportation Report which outlines the measures undertaken to address each of the identified problems.

(f) Cycle/pedestrian access/proposals

Please provide an outline of the existing and proposed cycle lanes and pedestrian pathways on the public roads in the vicinity of the site and proposed connections from same to the cycle lanes proposed in the development. A map should be provided to outline same and a timeframe for the delivery of proposals for cycle lanes/pedestrian pathways not yet in place/subject of proposed improvements.

3. Flood Risk

Notwithstanding the consideration of flood risk in Chapter 10 (hydrology) of the Environmental Impact Assessment Report, you are requested to submit a Site Specific Flood Risk Assessment for the proposed development site with specific reference to the Justification Test set out in Chapter 5 of the Planning System and Risk Management, Guidelines for Planning Authorities 2009. Chapter 10 of the Environmental Impact Assessment Report (and other sections of the Environmental Impact Assessment Report as appropriate) should be amended to reference the SSFRA required).

4. Water and Wastewater Infrastructure

- (a) In their submission to the Board, Irish Water note that it is proposed to locate elements of the proposed development in close proximity to a number of IW below ground assets in particular a 700mm diameter rising main which runs parallel to the railway line adjacent to the development site. In this regard you are requested to provide details to ensure no conflict with this rising main or other IW assets and in particular provide details of specific measures to protect the 700mm diameter rising main which Irish Water advise cannot be diverted.

Irish Water have outlined that trial holes may need to be dug to confirm the depth of the rising main to inform type of protection measures that might be required.

- (b) Please provide a revised long section for the access road which provides information on the location of proposed storm sewers, foul sewers and watermains and how these would interact with the existing railway line and existing rising main.
- (c) Please provide a pre-connection enquiry from Irish Water to facilitate assessment of the capacity of the Irish Water infrastructure to cater for proposed connections and to assess the design of the water and wastewater network on the site to ensure compliance with the Irish Water standards.

5. Other Matters

- (a) Please submit a copy of the Wexford Quay Economic Development and Spatial Implementation Plan referenced in the Planning Report and Statement of Consistency with Planning Policy.
- (b) Please respond to the submissions and observations received by the Board in respect of this application.

Please also note that following its examination of any information lodged in response to this request for further information, the Board will then decide whether to invoke its powers under section 175(5)(b)(i) of the Planning and Development Act, 2000, as amended, to require you to publish newspaper notice of the furnishing of any further information and to allow for inspection or purchase of same and the making of further written submissions in relation to same to the Board.

Your response to this letter should be received not later than 5.30 p.m. on the **14th October 2019**.

In this regard, please submit 3 hard copies and one electronic copy of the above information.

If you have any queries in relation to the matter please contact the undersigned officer of the Board. Please quote the above mentioned An Bord Pleanála reference number in any correspondence or telephone contact with the Board.

Yours faithfully,


Fergal Kilmurray
Executive Officer
Direct Line: 01-8737266

Ja13

Appendix A2

NPWS Pre-planning

Submission Dated 26/11/2018



Your Ref: 18.133

Our Ref: G Pre00257/2018 *(Please quote in all related correspondence)*

26 November 2018

Barry Corrigan
Roughan & O'Donovan
Arena House
Arena Road
Sandyford
Dublin 18

Via email to barry.corrigan@rod.ie / owen.okeefe@rod.ie

Re: Notification to the Minister for Culture, Heritage and the Gaeltacht under the Planning and Development Act, 2000, as amended.

Proposed Development: Trinity Wharf meeting request with NPWS. ROD has been appointed to complete the EIA and AA in respect of the proposed Masterplan for Trinity Wharf, Wexford

A chara

On behalf of the Department of Culture, Heritage and the Gaeltacht, I refer to correspondence received in connection with the above.

Outlined below are heritage-related observations/recommendations of the Department under the stated heading(s).

Nature Conservation

Article 3 of Directive 2014/52/EU defines the EIA process to include the process of identifying, describing and assessing in an appropriate manner, the direct and indirect significant effects of a project on biodiversity, with particular attention to species and habitats protected under the Habitats and Birds Directives. Assessment must also be made of significant effects of the project on the interaction between the environmental factors listed in Article 3 of the Directive. In this case, assessment should be made of significant effects of the project on the interactions between (c) land, soil, climate, water, air and (b) biodiversity in particular. Assessment of effect shall also include the expected effects deriving from the vulnerability of the project to risks of major accidents and/or disasters relevant to the project.



Assessment of the direct and indirect effects of the project on biodiversity should be made, where applicable, with regard to:

- Natura 2000 sites, i.e. Special Areas of Conservation (SAC) designated under the EC Habitats Directive (Council Directive 92/43/EEC) and Special Protection Areas (SPA) designated under the EC Birds Directive (Directive 2009/147 EC)
- Habitats and species protected under Habitats Directive – Annex I habitats, Annex II species and their habitats, and Annex IV species and their breeding sites and resting places (wherever they occur)
- Bird species protected under the Birds Directive – Annex I species and other regularly occurring migratory species, and their habitats (wherever they occur)
- Other designated sites, or sites proposed for designation, such as Natural Heritage Areas and proposed Natural Heritage Areas, Nature Reserves and Refuges for Fauna or Flora, designated under the Wildlife Acts 1976 to 2012, including Wexford Slob and Harbour proposed Natural Heritage Area (pNHA) (Site Code 712).
- Species protected under the Wildlife Acts including protected flora
- Important bird areas such as those identified by Birdwatch Ireland
- Features of the landscape, which are of major importance for wild flora and fauna, such as those with a “stepping stone” and ecological corridors function, as referenced in Article 10 of the Habitats Directive
- Other habitats of ecological value in a national to local context (such as those identified as locally important biodiversity areas within Local Biodiversity Action Plans and County Development Plans)
- Red data book species
- and biodiversity in general

Reference should be made to the National Biodiversity Action Plan 2017-2021 and County Wexford Biodiversity Action Plan 2013-2018, as well as the All Ireland Pollinator Plan 2015-2020.

It should be noted that the National Biodiversity Action Plan sets out Government policy on nature conservation and includes as Objective 1 to “mainstream biodiversity into decision making”, including for all public authorities to move towards no net loss of biodiversity. It also requires Local Authorities to develop policies and objectives for the protection and restoration of biodiversity. In this regard, the proposed development must comply with such policies and objectives in the Wexford County Development Plan 2013 -2019 and the Wexford Town and Environs Development Plan 2009-2015 (as extended). It must also comply with legislative requirements, national policy and national and regional plans as well as planning requirements.



Baseline data

With regard to the scope of baseline data, details of designated sites can be found at www.npws.ie. For flora and fauna the data of the National Parks and Wildlife Service (NPWS) should be consulted at www.npws.ie. Where further detail is required on any information on the website, a data request form should be submitted. This can be found at www.npws.ie/sites/default/files/general/Data%20request%20form.doc. Further information may be found at <http://dahg.maps.arcgis.com/home/index.html>. Other sources of information relating to habitats and species include that of the National Biodiversity Data Centre (www.biodiversityireland.ie), Inland Fisheries Ireland (www.fisheriesireland.ie), BirdWatch Ireland (www.birdwatchireland.ie) and Bat Conservation Ireland (www.batconservationireland.org). Data may also exist at a County level within the Planning Authority.

Data is also available from recent reports and surveys carried out to inform Appropriate Assessment of Aquaculture in Wexford Harbour
(<https://www.agriculture.gov.ie/seafood/aquacultureforeshoremanagement/aquaculturelicensing/aquacultureforeshorelicenceapplications/wexford/>
<https://www.agriculture.gov.ie/seafood/aquacultureforeshoremanagement/aquaculturelicensing/appropriateassessmentsscreeningcarriedout/wexfordharbourappropriateassessment/>). Data may also exist at a County level within the Planning Authority including survey data in relation to the Wexford to Rosslare and Wexford to Curragloe proposed greenways.

Ecological surveys

With regard to scoping for an EIAR for a proposed development, in order to assess impacts on biodiversity, ecological surveys may be required, including surveying of habitats and species present on the route of any access roads, pipelines or cables etc. Any improvement or reinforcement works required for access and transport anywhere along any proposed haul route(s) should be included in the EIAR and subjected to ecological impact assessment with the inclusion of mitigation measures, as appropriate. Where ex-situ impacts are possible survey work may be required outside of the development site.

Surveys should be carried out by suitably qualified persons at an appropriate time of the year depending on the species / habitats being surveyed for. The EIAR should include the results of the surveys, and detail the survey methodology and timing of such surveys. It is expected by this Department, that in any survey methodology used, best practice will be adhered to and if necessary non-Irish methodology adapted for the Irish situation. Inland Fisheries Ireland should be consulted with regard to fish species.



Scope of EIAR

The EIAR should cover the whole project, including construction, operation and, if applicable, restoration or decommissioning phases. Impacts of plans for remediation, decommissioning, restoration and aftercare on biodiversity must be assessed.

Alternatives examined should also be included in the EIAR.

Impacts on habitats

The EIAR should refer to features and/or measures to address significant effects on biodiversity. Any losses of biodiverse habitat associated with this proposed development (including access roads and cabling) such as woodland, scrub, hedgerows and other habitats should be mitigated for.

Cumulative Effects

Effects of the project must be considered cumulatively. Cumulative effects may arise from:

- The interaction between the various impacts within a single project
- The interaction between all of the different existing and/or approved plans and projects in the same area as the proposed project.

Construction Environment Management Plans (CEMPs)

For large and complex projects such as this, where environmental management may entail multiple aspects, a project specific Construction Environmental Management Plan (CEMP) may be developed. This will form a framework for all environmental management processes, mitigation measures and monitoring and will include other environmental requirements such as invasive species management measures, if applicable. A designated environmental officer and project ecologist should be appointed, as appropriate for the project. Complete project details, including outline CEMPs need to be provided in the EIAR in order to allow an adequate assessment to be undertaken. Applicants need to be able to demonstrate that CEMPs and other such plans are adequate and effective mitigation, supported by scientific information and analysis, and that they are feasible within the physical constraints of the site.

No significant details of the project or its construction may be deferred to the post-consent stage as this may suggest that the impacts are not fully known at consent stage. The positions, locations and sizes of construction infrastructure and mitigation, such as settlement ponds, disposal sites and construction compounds, may significantly affect European sites, other designated sites, habitats, and species in their own right and could have an effect for example on drainage, water quality, habitat loss, and disturbance. If these are undetermined at time of the assessment, all potential effects of the development



on the site are not being considered. If applicants are not in a position to decide the exact location and details of these at time of application, then they need to consider the range of options that may be used in their assessment so that all issues are covered.

In particular, details of how and where dredged or excavated material, contaminated soil and other material such as infill and construction material will be stored, recovered and/or disposed of, both within and outside the works areas, should be given. Consideration should be given to whether there are existing licensed facilities that could accept the type(s) of waste material(s) generated.

Measures to avoid water pollution must also be included.

Monitoring

During construction and operation phase of the project the Developer must monitor the significant adverse effects on the environment identified as well as measures taken to mitigate them (European Commission, 2017). The applicant should not use any proposed post-construction monitoring as mitigation to supplement inadequate information in the assessment.

The EIAR process should identify any pre- and post-construction monitoring which should be carried out. Monitoring results should be made available to the Planning Authority and copied to this Department. A plan of action needs to be agreed at planning stage with the Planning Authority should future results show a significant impacts to species and/or to habitats.

Rare Plants and Plants species protected under the Flora Protection Order

Details of botanical and rare plant surveys undertaken within the area of impact of the scheme should be included in the EIAR.

Alien invasive species

The EIAR should also address the issue of invasive alien plant and animal species. Japanese Knotweed (*Fallopia japonica*) has been found on the proposed development site. Under Regulation 49(2) any person who plants, disperses, allows or causes to disperse, spreads or otherwise causes to grow Japanese knotweed or any of the other invasive plants listed in the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations, 2011 (S.I. No. 477 of 2011) shall be guilty of an offence. Details of methods required to ensure invasive species are not accidentally introduced or spread during construction must be included in the EIAR. Information on alien invasive species in Ireland can be found at

<http://invasives.biodiversityireland.ie/> and at <http://invasivespeciesireland.com/>

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Green Infrastructure

From a biodiversity point of view it is important to take note of the EU Green Infrastructure Strategy. Further information on this can be found at

http://ec.europa.eu/environment/nature/ecosystems/docs/green_infrastructure_broc.pdf.

Care should be taken to ensure that green infrastructure involves greening existing infrastructure rather than adding built infrastructure to existing biodiversity corridors. With regard to waterways, it may be useful to consult the IFI publication entitled “Planning for watercourses in the urban environment” which can be downloaded from their web site at <http://www.fisheriesireland.ie/fisheries-management-1/86-planning-for-watercourses-in-the-urban-environment-1/file>.

Birds

It appears that this project will require significant vegetation removal. Impacts on bird species must be assessed. Where significant impacts are found, suitable mitigation measures must be put in place. Both direct impacts on bird species such as disturbance and indirect impacts must be assessed.

Marine Mammals

Grey Seal (*Halichoerus grypus*) is protected under the Wildlife Act, 1976 as amended and is listed on appendix III of the Bern Convention. A number of intertidal sandbanks in the outer part of Wexford Harbour, and lying off the mainland at Raven Point, represent haul-out sites of regional and national significance for grey seal that are used all year round. The species is vulnerable to human disturbance, particularly at low tide when seals are likely to be hauling out ashore at the intertidal sites and thereby vulnerable. Impacts of disturbance by humans and dogs due to the increase in recreational craft (including boats, kayaks, paddle boards etc.) activity in the harbour as a result of the development of a new marina must be assessed. Appropriate mitigation measure must be out in place to protect haul-out sites from disturbance or interference.

Dolphin, Porpoise and Whale species are protected under the Wildlife Act, 1976 as amended and also listed under Annex IV of the Habitats Directive as species requiring strict protection. Impacts on cetacean species, particularly disturbance, must be assessed.

Pile driving is widely acknowledged to produce substantial levels of anthropogenic sound both in air and in water and tends to take place in a fixed area for a prolonged period of days or weeks, depending on the required scale of development. Therefore this activity, particularly where large infrastructure is concerned, has the potential in most circumstances to introduce persistent anthropogenic sound at levels that may impact upon marine mammal individuals and/or populations.

The multiple pulses of some pile driving works can also be detected at received levels (RL) well exceeding ambient sound (>120 dB re: 1 μ Pa) more than 10km from the operating



source, sufficiently high to potentially cause significant behavioural disturbance to marine mammals at distances of several kilometres.

Monitoring and reporting of marine mammals, particularly during pile driving, may be required due to noise impacts on these species. Monitoring and reporting should be provided by trained and experienced marine mammal observers (MMO's) with all relevant events being logged using standardised data forms (see DAHG, 2014, Appendix 7). Full reporting on MMO operations and mitigation undertaken must be provided to the Regulatory Authority as outlined in DAHG, 2014, Appendix 7. Operational considerations outlined in DAHG, 2014 section 4.2, section 4.3.1 and section 4.3.2 should be taken into account.

Badgers

Badgers are listed on appendix III of the Bern Convention and are also protected under the Wildlife Act 1976, as amended. The development site should be surveyed for badgers. Measures must be put in place to prevent disturbance to badgers including a 30 metre buffer from the sett found.

Bats

Bat species are protected under Annex IV of the Habitats Directive as well as under the Wildlife Acts. This project has potential to significantly affect bats (disturbance and/or removal of breeding and resting places and foraging habitat) and impacts must be assessed. Full details of the surveys undertaken to assess the ecological impacts should be included in the EIAR. Suggested mitigation measures must be included in the EIAR.

Impacts of lighting

The impacts of artificial light sources on biodiversity must be assessed. Bat and otter species in particular can be impacted by artificial lighting. In assessing and mitigating impacts, the procedures outlined in 'Guidance Note 08/18 Bats and Artificial Lighting in the UK (http://www.bats.org.uk/news.php/406/new_guidance_on_bats_and_lighting) should be followed. Light sources must be carefully designed and located to avoid impacts.

Licensing

Where it is not possible to identify a means of avoiding risk to otters, bats and cetaceans completely, consideration should be given as to whether a derogation licence from the Minister under Regulation 54 of the European Communities (Birds and Natural Habitats) Regulations 2011-2015 is required. Applications for a derogation licence should be made in writing, including survey results and proposed mitigation measures, to Wildlife Licensing Unit, National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht. An application for such a derogation licence should be made in advance of seeking planning permission for works. This will ensure that full consideration can be given to the impacts of the proposed project on the species and to avoid the possibility of delay to the proposed project or of a refusal of a derogation licence which would prevent the works being carried out as planned.



Appropriate Assessment under Article 6 of the Habitats Directive

The Department notes that a separate Natura Impact Statement will be prepared which will assess potential impacts on the conservation objectives of Natura 2000 sites. A number of Natura 2000 sites are in close proximity or intersect the proposed development. These include the Slaney River Valley candidate Special Area of Conservation (cSAC) (Site Code 781), the Wexford Harbour and Slobbs Special Protection Area (SPA) (Site Code 4076) The Raven SPA 004019 and the Raven Point Nature Reserve SAC 000710.

Impacts, both direct and indirect, on other Natura 2000 within the project's zone of influence must also be assessed.

Guidance on AA is available in the Departmental guidance document on Appropriate Assessment, which is available on the NPWS web site at

www.npws.ie/sites/default/files/publications/pdf/NPWS_2009_AA_Guidance.pdf

and Marine Natura Impact Statements in Irish Special Areas of Conservation A Working Document April 2012 prepared by the National Parks & Wildlife Service of the Department of Arts, Heritage & the Gaeltacht and in the EU Commission guidance entitled "Assessment of plans and projects significantly affecting Natura 2000 sites. Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC" which can be downloaded from

http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/natura_2000_assess_en.pdf. However CJEU and Irish case law has clarified some issues and should also be consulted.

Description of the project

In describing the project, it will be necessary to identify all those elements of the project or plan, alone or in combination with other projects or plans, that have the potential for having significant effects on Natura 2000 sites. Therefore, full project details must be given, including any planned service points for leisure craft including sewage/waste removal and refuelling points, breakwaters, anti-erosion measures, dredging (both construction and on-going maintenance dredging), infilling or any planned travel connections to the development and the provision of services (electricity and water).

As outlined above, when determining likely significant effects, Article 6(3) of the Habitats Directive requires that in-combination effects with other plans or projects are considered. The following plans and project, inter alia, may give rise to cumulative impacts, particularly disturbance impacts and must be considered in determining likely significant effects:



- Wexford Quay Economic Development and Spatial Implementation Plan
- Boat traffic arising from boat launch area known as 'the Cot Safe' located directly south of the development as well Ferrybank Quay, the Slipway and Town-side Harbour
- Wexford Harbour Maintenance Dredging
- Bottom culture of mussels, intertidal oyster and sub tidal suspended mussel culture including boat traffic. Information on aquaculture applications and licences are available from the Department of Agriculture, Food and the Marine.
- Recreational hunting (wildfowling)

Conservation objectives

In order to carry out the appropriate assessment screening, information about the relevant Natura 2000 sites including their conservation objectives will need to be collected. Details of designated sites and species and conservation objectives can be found on www.npws.ie/. Site-specific, as opposed to generic, conservation objectives are now available for some sites. Each conservation objective for a qualifying interest is defined by a list of attributes and targets and are often supported by further documentation. Where these are not available for a site, an examination of the attributes that are used to define site-specific conservation objectives for the same QIs in other sites can be usefully used to ensure the full ecological implications of a proposal for a site's conservation objective and its integrity are analysed and assessed. It is advised, as per the notes and guidelines in the site-specific conservation objectives, that any reports quoting conservation objectives should give the version number and date, so that it can be ensured and established that the most up-to-date versions are used in the preparation of Natura Impact Statements and in undertaking appropriate assessments.

Slaney River Valley SAC

The Annex I qualifying interest habitat 'Estuaries' and community complex 'Estuarine muds dominated by polychaetes and crustaceans community' lie within the development footprint. It is a conservation objective of the Slaney River Valley SAC to maintain the favourable conservation condition of Estuaries, defined by published attributes and targets (NPWS, 2011a and b). Impacts on the Annex 1 Habitat 'Estuaries' must be assessed and mitigation measures put in place where impacts are significant. Any permanent loss of qualifying interest habitat must be quantified and impacts assessed. It should be noted that, as EU Member States have to report every 6 years on the National resource of habitats and species listed under the Habitats Directive, it is important that any impacts on this habitat both inside and outside of Natura 2000 sites is recorded.



An assessment must be made of alteration to marine sediment movements as a result of this development and the impact of this on qualifying interest habitats.

The proposed development may impact of the following Annex 11 qualifying interest species:

1355 Otter *Lutra lutra*

1365 Harbour Seal *Phoca vitulina*

1103 Twaite Shad *Alosa fallax*

1106 Atlantic Salmon *Salmo salar*

1095 Sea Lamprey *Petromyzon marinus*

It is a conservation objective of the Slaney River Valley SAC to maintain the favourable conservation condition of the above species, defined by published attributes and targets (NPWS, 2011a). Impacts on the above Annex II species must be assessed and mitigation measures put in place where impacts are significant.

Twaite Shad, Atlantic Salmon and Sea Lamprey

The proposed development lies close to the migration route of the above species. Impact must be assessed. Mitigation measures including the timing of construction to avoid impacts must be considered.

Otter

This project has potential have significant effects on otters (disturbance and/or removal of otter holts/couches and foraging habitat) and impacts must be assessed.

Harbour Seal

Several intertidal harbour seal moulting and resting sites regularly recorded within Wexford Harbour. Substantially more harbour seal haul-out location information for the Wexford Harbour area has been gathered by this department since the conservation objectives were published in 2011. This includes several intertidal moulting/resting sites regularly recorded to the west of 'Tern Island' that were not previously known. This more recent unpublished information is of relevance and can be made available by submitting a data request form to NPWS.

Wexford Harbour and Slobs Special Protection Area (SPA) (Site Code 4076) and The Raven SPA 004019.

The NIS must assess the impacts of this proposed development on qualifying interest bird species. In particular, the issue of disturbance due to the increase in marine recreational traffic as a consequence of the proposed marina and the increase in light and noise levels both from the main development, the marina and the pedestrian/cycle link to Pauls Quay need to be assessed. Increase in gulls and corvids associated with the development could lead to predation of ground nesting birds. Unintentional installation of additional perches for gulls and corvids may exacerbate this impact.



Impacts should be evaluated considering individual species ecology, sensitivities or requirements, including feeding and roosting requirements. Cumulative impacts in combination with other activities, including aquaculture and hunting (wildfowling) must be assessed and where required mitigation measures put in place.

Appropriate Assessment carried out under Article 6(3) of the Habitats Directive cannot have lacunae and must contain complete, precise and definitive findings and conclusions capable of removing all reasonable scientific doubt as to the effects of the works proposed on the protected site concerned. Therefore, any conclusions of the proposed development having no impact on the qualifying interests and the integrity of nearby SPA's must be supported by scientific data or survey work. Survey work, where required, should cover a range of tidal conditions and take place over the full calendar year or years. It should consist of both day and night time surveying.

References

Department of Arts, Heritage and the Gaeltacht (2014) Guidance to Manage the Risk to Marine Mammals from man-made Sound Sources in Irish Waters; implemented during site investigation works for the proposed development

European Commission (2017) Environmental Impact Assessment of Projects Guidance on Scoping (Directive 2011/92/EU as amended by 2014/52/EU)

NPWS (2011a) Conservation Objectives: Slaney River Valley SAC 000781. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2011b) Slaney River Valley SAC (site code: 0781) Conservation objectives supporting document – marine habitats and species Version 1



You are requested to send further communications to this Department's Development Applications Unit (DAU) at manager.dau@ahg.gov.ie (team monitored); if this is not possible, correspondence may alternatively be sent to:

The Manager
Development Applications Unit (DAU)
Department of Culture, Heritage and the Gaeltacht
Newtown Road
Wexford
Y35 AP90

Is mise, le meas

A handwritten signature in black ink, appearing to read 'Diarmuid Buttimer'.

Diarmuid Buttimer
Development Applications Unit

Appendix A3

NIS Addendum

TRINITY WHARF, TRINITY STREET, WEXFORD



Appropriate Assessment Natura Impact Statement Addendum

October 2019



Client:
Scott Tallon Walker Architects
19/20 Merrion Square North
Dublin 2
D02 VR80



Trinity Wharf, Trinity Street, Wexford

Further Information Response

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1. INTRODUCTION

In the letter from An Bord Pleanála to the applicant dated the 24th July 2019, the Board requested that consideration be given to in-combination effects between ongoing recreational and aquaculture activities and the proposed development. This addendum to the NIS contains the cumulative impact assessment between the Trinity Wharf development and ongoing aquaculture and recreational activities in Wexford Harbour.

Name of plan or project	Description of the activities	Likely in-combination effects
Ongoing Aquaculture and Recreational Activities.	<p>Wexford Harbour is designated as a protected Shellfish area by the EPA and is currently farmed by a number of licensed Mussel Fisheries. Aquaculture licences are currently held under the Department of Agriculture, Food and the Marine within Wexford Harbour while a number of Mussel Fisheries applications are currently with the Department for consideration. A number of fishing trawlers also moor in Wexford Harbour along the quays and travel out to sea past the Trinity Wharf site, through the main navigational channel of Wexford Harbour.</p> <p>There are 30 currently licensed sites, which are being considered for renewal, for bottom mussel cultivation included in this assessment, covering a total area of 1472 ha (Atkins, 2016).</p> <p>There is a strong presence of maritime recreation within Wexford Harbour. The Wexford Harbour Boat and Tennis Club is located in Carcur, 2km from the Trinity Wharf site, in the inner harbour past Wexford Bridge. Founded in 1873 initially as a rowing club, sailing was brought to the club in the 1920's. The Club has a fleet of dinghies and safety boats, while also having a pontoon and mooring for larger boats, and a crane and slipway for launching vessels. The Club runs Summer and Winter sailing programmes and is an ISA Accredited training centre. Within the harbour there are two existing visitor mooring locations which are managed by the Harbour Office and Wexford's Harbour Master. The northern area runs alongside the southern side of the northern training wall, while the second area is located adjacent to Paul Quay. A slipway is provided within the town with facilities for visitors provided by the Harbour Office at Crescent Quay. There is also a small area to the south of the Trinity Wharf site that is used for mooring small boats by local fishermen/residents. The approximate number and general movement of these vessels is as follows:</p>	<p>It can be concluded that there will no adverse in-combination effects on the integrity of any European Site as a result of the Trinity Wharf Development, Aquaculture and water-based recreational activities on the basis that:</p> <ul style="list-style-type: none"> • The Little Tern Colony is >3km from Trinity Wharf, and the development will not lead to an increase in boat activity in the Wexford Harbour, whether aquaculture or recreationally based. • There are currently low levels of bird use within 200m of Trinity Wharf. • The proposed marina will take 1.2 hectares out of aquaculture use permanently. • Mitigation provided in the NIS for Trinity Wharf avoids adverse effects on the integrity of the Natura 2000 Sites within Wexford Harbour.

Name of plan or project	Description of the activities	Likely in-combination effects
	<p>1. Commercial fishing</p> <ul style="list-style-type: none"> 10 -12 Mussel dredgers which operate alongside for most of the summer months. There is limited movement, fishing or harvesting from September through to April. 8 -10 inshore fishing vessels which undertake daily trips weather permitting. <p>2. Local / resident marine leisure vessels</p> <ul style="list-style-type: none"> There are c.150 local or residential marine vessels mostly on <i>ad hoc</i> moorings. The movement of these vessel are sporadic and very much weather dependent with activity generally increasing during summer months. <p>3. Visiting marine leisure vessels</p> <ul style="list-style-type: none"> The area would typically receive c.20 visiting vessels generally between June and August. <p>In the view of Captain Phil Murphy, the provision of a marina will have no significant negative impact on any of the sectors described above owing to the ample space provided for navigation in the location of the proposed marina. Contrary to proposed development contributing to marine traffic issues within the area, it is the strong view of Captain Phil Murphy that the proposed development will have a positive effect by reducing the number of ad hoc mooring arrangements and will provide safe access to vessels.</p>	

Appendix A4

Winter 2018-2019 Bird

Survey Report

Trinity Wharf Development

Wintering and Breeding Bird Report 2018-19

August 2019



Trinity Wharf Development

Wintering and Breeding Bird Report 2018-19

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1.0 INTRODUCTION

Roughan & O'Donovan (ROD) was commissioned by Wexford County Council (WCC) to carry out a wintering bird survey in the vicinity of Trinity Wharf, Wexford Town, between December 2018 and April 2019. The area surrounding the Trinity Wharf site is part of the Wexford Harbour and Slobbs Special Protection Area (SPA). The survey during the winter of 2018/19 was designed to update the results of the survey carried out in 2015/16 (Natura, 2016) which informed the Environmental Impact Assessment Report (EIAR) and the Natura Impact Statement (NIS) for the Trinity Wharf Development. ROD was also commissioned to carry out a breeding bird survey during the summer of 2019.

2.0 METHODOLOGY

2.1 Study Area

Wintering Birds

The survey area was the tidal area, sea walls and artificial structures within c. 1 km of the Trinity Wharf site. This included small intertidal areas to the north and south of Trinity Wharf, the north and south training walls and the ballast structure at the mouth of the River Slaney.

Breeding Birds

The breeding bird surveys was undertaken within the Trinity Wharf site and the embankment on the landward side of the railway embankment adjacent to the site.

2.2 Survey Methods

Wintering Birds

Counts of wintering birds were carried out monthly within 2 hours of low tide and two hours of high tide between December 2018 and April 2019. Point counts were made from five locations to allow for full coverage of the study area. All waterbirds within c. 1 km of the Trinity Wharf site were recorded using 10 × binoculars and a Viking ED Pro 25-65 × scope. Birds were recorded on maps using standard British Trust for Ornithology (BTO) species codes along with the numbers and activity of each species. Details of the surveys are presented in Table 1 below.

Table 1. Survey dates and tide times. HT = high tide; LT = low tide.

Date	High tide surveys			Low tide surveys		
	HT	Start	End	LT	Start	End
19/12/2018	15:46	13:50	15:10	09:23	09:40	11:05
10/01/2019	09:03	09:10	10:50	15:10	13:10	15:00
26/02/2019	11:02	11:00	12:00	17:16	15:20	16:20
22/03/2019	08:00	09:10	10:05	13:45	13:25	14:50
05/04/2019	08:05	09:00	10:00	14:55	13:30	14:50

Breeding Birds

The breeding bird surveys were carried out twice, once on the 2nd May 2019 (07:00-07:30) and once on the 17th July 2019 (07:20-07:50). The entire Trinity Wharf site was walked slowly, and all visual and sound observations of birds were recorded. Birds were recorded on maps using standard BTO species codes along with the numbers and activity of each species. Any evidence of breeding was noted and each species was labelled as non-breeding, possible breeder, probable breeder or confirmed breeder.

3.0 RESULTS

Wintering Birds

A summary of the results of the wintering bird surveys is given in Table 2. A total of 25 species of waterbirds were recorded during the wintering bird surveys. Of the 25 species recorded, 15 are listed as Qualifying Interests of the Wexford Harbour and Slob SPA.

The Trinity Wharf site itself supports occasional roosting gulls but in general it is not utilised by wintering birds. The mudflat exposed at low tide in Goodtide Harbour south of Trinity Wharf and the mudflat exposed to the north of the harbour hold small number of waders during low tide including Redshank (peak 3) and Black-tailed Godwit (peak 3).

At low tide the south training wall also served as an important roosting site for a variety of bird species including Cormorant (peak 8), Lesser Black-backed Gull (peak 5), Lapwing (peak 5), Oystercatcher (peak 44) and Herring Gull (peak 8).

The ballast structure at the mouth of the river was an important high tide roost with high numbers of Oystercatcher (peak 16), Cormorant (peak 10), Black-headed Gull (peak 15), Herring Gull (peak 12) and Lapwing (peak 38) recorded.

High numbers of Lapwing (peak 339), Bar-tailed Godwit (82) and Herring Gull (peak 31) were recorded at low tide roosting on the north training wall.

Great-crested Grebe (peak 9) and Red-breasted Merganser (peak 36) were recorded feeding in the shallow waters around the training walls.

Table 2. Peak numbers of wintering waterbirds within c. 1 km of Trinity Wharf observed during the surveys. * = Qualifying Interest of the Wexford Harbour and Slobbs SPA; HT = high tide; LT = low tide. Mean peak counts are the means across the 2013/14, 2014/15 and 2015/16 winter seasons (Source: Irish Wetland Bird Survey – I-WeBS).

Species	Peak HT	Peak LT	Mean peak
Oystercatcher*	57	154	745
Herring Gull	61	153	152
Black-headed Gull*	237	117	1452
Lesser Black-backed Gull*	5	9	11
Greater Black-backed Gull	41	16	80
Bar-tailed Godwit*	56	82	1025
Black-tailed Godwit*	157	21	1846
Lapwing*	350	367	4043
Curlew*	4	12	768
Cormorant*	11	9	353
Redshank*	13	43	363
Great Crested Grebe*	9	3	125
Little Grebe*	1	2	25
Red-breasted Merganser*	36	2	100
Little Egret	1	2	22
Grey Heron*	1	3	14
Great Northern Diver	7	0	10
Greenshank	1	1	23
Ringed Plover	4	0	44
Turnstone	4	6	32
Common Gull	1	2	239
Light-bellied Brent Goose*	8	6	2225
Mute Swan	2	1	147
Shelduck*	2	0	553
Common Tern	2	0	2

Breeding Birds

A summary of the results of the breeding bird survey is presented in Table 3 below. In total, 25 species were recorded, and of these, 16 are possible breeders or above.

Table 3. Results of the breeding bird surveys. BoCCI = *Birds of Conservation in Ireland 2014-2019*.

Species	Breeding	Max Breeding Evidence	BoCCI List
Blackbird	Possible	Singling male present	Green
Black-headed Gull	Non-breeding	Flying over	Red
Chaffinch	Probable	Pair in suitable nesting habitat	Green
Collared Dove	Possible	Species in suitable habitat	Green
Common Tern	Non-breeding	Flying over	Amber
Curlew	Non-breeding	Summering non-breeder	Red
Dunnock	Possible	Singling male present	Green
Feral Pigeon	Possible	Species in suitable habitat	Green
Goldfinch	Possible	Species in suitable habitat	Green
Great Tit	Possible	Species in suitable habitat	Green
Greenfinch	Possible	Singling male present	Green
Herring Gull	Non-breeding	Flying over	Red
Hooded Crow	Non-breeding	Flying over	Green
House Martin	Non-breeding	Flying over	Amber
House Sparrow	Possible	Species in suitable habitat	Amber
Lesser Black-backed Gull	Non-breeding	Flying over	Amber
Linnet	Possible	Species in suitable habitat	Amber
Meadow Pipit	Possible	Species in suitable habitat	Red
Robin	Confirmed breeding	Adult carrying food	Amber
Starling	Possible	Species in suitable habitat	Amber
Swallow	Non-breeding	Flying over	Amber
Whitethroat	Possible	Species in suitable habitat	Green
Willow Warbler	Possible	Species in suitable habitat	Green
Wood Pigeon	Non-breeding	Flying over	Green
Wren	Probable	Multiple singing males	Green

4.0 CONCLUSIONS

Twenty-five species of wintering birds were recorded within c. 1 km of Trinity Wharf between December 2018 and April 2019. The most common species were Lapwing, Black-headed Gull and Black-tailed Godwit. Trinity Wharf and the habitat adjacent to it held small numbers of wintering birds. The most important areas for wintering birds within c. 1 km of the site were the north and south training walls, the ballast structure and the breakwater at Ferrybank.

Low numbers of wintering birds were recorded on the Trinity Wharf site and the habitats adjacent to it. There is no significant change in the distribution of wintering birds recorded between 2015/16 and 2018/19, although the number of some species have changed. Black-tailed Godwit and Redshank showed the most notable increases, rising from peaks of 13 to 131 and 12 to 43 respectively. Great-crested Grebe, Red-breasted Merganser, Cormorant and Turnstone all showed peak reductions of at least 50%.

Twenty-five species were recorded during the breeding bird surveys. Of the 16 species that were recorded as possible breeders or above, one species, Meadow Pipit, is Red-listed, while two, Robin and Starling, are Amber-listed.

5.0 REFERENCES

Natura (2016) *Trinity Wharf Wexford Harbour. Winter Bird Surveys 2015/16. Draft Report. March 2016.* Natura Environmental Consultants, Ashford.

Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (the Birds Directive). Official Journal of the European Union, L20/7.

Colhoun K. & Cummins), S. (2013) Birds of Conservation Concern in Ireland 2014-19. Irish Birds 9:523-544.

Appendix B1

Traffic Addendum

TRINITY WHARF, TRINITY STREET, WEXFORD



ABP Further Information Response – Traffic Addendum

October 2019



Client:
Wexford County Council
Carricklawn
Wexford
Co. Wexford
Y35WY93



Trinity Wharf, Trinity Street, Wexford

Further Information Response

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APPENDIX AA6	WEXFORD COUNTY COUNCIL BICYCLE NETWORK STRATEGY	

1. INTRODUCTION

Wexford County Council (WCC) submitted a planning application for the Trinity Wharf Development Project ("the proposed development") to An Bord Pleanála in February 2019. The planning application reference number is PL26.303726.

A number of items raised in the submission from ABP refer to Chapter 5 of the EIAR entitled Traffic Analysis and the Traffic and Transportation Report.

This addendum report addresses the issues raised in the ABP RFI in relation to Traffic and Transportation issues.

2. CHAPTER 5 OF THE EIAR – TRAFFIC ANALYSIS

a. Marine Traffic /Transport

An Bord Pleanála RFI:

Chapter 5 of the Environmental Impact Assessment Report, entitled Traffic Analysis and the Traffic and Transportation Report address onshore traffic and transportation impacts only and does not address traffic and transport matters arising in the marine environment. You are requested to revise the document above/ provide an addendum to address marine related traffic/ transport.

Addendum:

In general, marine traffic movements for Wexford Harbour and Marina can be broken down into the following three sectors:

- 1 Commercial fishing;**
- 2 Local / resident marine leisure vessels; and**
- 3 Visiting marine leisure vessels.**

The approximate number and general movement of these vessels is as follows:

- 1. Commercial fishing**
 - 10 -12 Mussel dredgers which operate alongside for most of the summer months. There is limited movement, fishing or harvesting from September through to April.
 - 8 -10 inshore fishing vessels which undertake daily trips weather permitting.
- 2. Local / resident marine leisure vessels**
 - There are c.150 local or residential marine vessels mostly on *ad hoc* moorings. The movement of these vessel are sporadic and very much weather dependent with activity generally increasing during summer months.
- 3. Visiting marine leisure vessels**

The area typically receives c.20 visiting vessels (in total) generally between June and August.

It should also be noted that 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. In the view of Captain Phil Murphy, there will never be a significant increase in the marine traffic as the area simply isn't deep enough. These larger vessels, including trawlers, charter vessels, and large sailing vessels are all accommodated by the nearby Kilmore Quay which is the largest fishing port in Co. Wexford.

At present, there are numerous moorings and vessels located ad hoc throughout the area that are used predominantly by leisure craft.

Proposed Development

The proposed development will include a purpose-built 64-berth marina facility for leisure craft. Owing to the improved mooring conditions, facilities and shelter, the majority of vessels that will use the proposed marina are expected to have relocated from the existing ad-hoc adjacent moorings within the estuary.

In the view of Captain Phil Murphy, the Senior Marine Officer and authority at Wexford Harbour, the provision of a marina at Trinity Wharf will not cause a significant increase in marine traffic as the proposed development will simply result in a re-configuration of the existing marine leisure moorings within Wexford Harbour.

Assessment of Impact

In the view of Captain Phil Murphy, the provision of a marina will have no significant negative impact on any of the sectors described above owing to the ample space provided for navigation alongside the location of the proposed marina. Contrary to the proposed development contributing to marine traffic issues within the area, it is the strong view of Captain Phil Murphy that the proposed development will have a positive effect by reducing the number of ad hoc mooring arrangements around the harbour and will provide facility for safe access to vessels.

The location of the marina has been selected to avoid the need for dredging and also to avoid any impact on marine traffic in the area.

Plate 2.1 shows the position of the existing channel markers and the training walls. It can clearly be seen that the proposed marina will not have an effect on the buoyed channel.

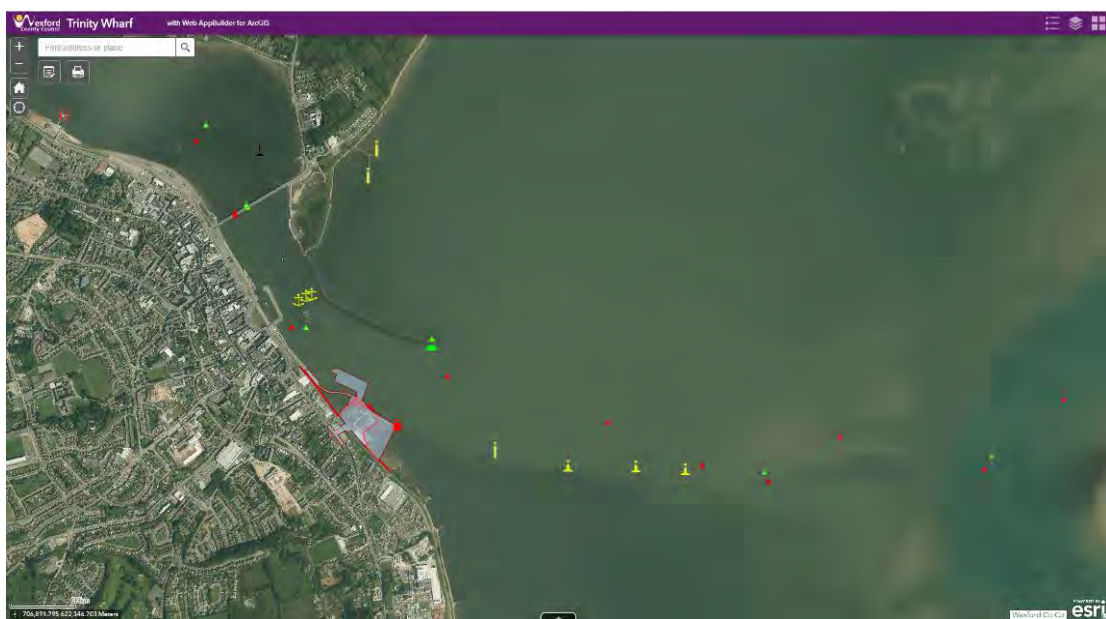


Plate 2.1 Map of existing channel markers and training walls

(<https://wexford.maps.arcgis.com/apps/webappviewer/index.html?id=27f96a831cfb48a785a2a00e68d880e2>)

Conclusion

Based on the foregoing, it is considered that the proposed development will have an slight positive impact on marine traffic and transport in Wexford Harbour.

b. Traffic Surveys

An Bord Pleanála RFI:

The traffic survey data submitted relates to December 2016 and August 2018 including the bank holiday. You are requested to undertake a traffic survey to include 24 Automated Traffic Counts on Parnell Street, Trinity Street and William Street Lower and any other street considered necessary and Junction Turning Counts at (1) Trinity Street/ King Street and Paul Quay Junction, (2) Trinity Street / Seaview Avenue Junction and (3) Trinity Street / Fishers Row/ William Street Lower and (4) Trinity Street/ Parnell Street Junction and (5) Distillery Road/ Joseph Street/ Mill Road/ King Street on a mid-week day during school term. The traffic impact analysis assessment of the Traffic and Transportation report and Chapter 5 of the Environmental Impact Assessment Report should be amended to reflect any changes which may arise from the new survey information. Furthermore, a map clearly outlining the location of each of the streets and junctions should be included with the reports under 'existing traffic'.

Addendum:

The abovementioned traffic survey locations were resurveyed between Thursday, 5th September and Thursday, 12th September, which accounts for school term traffic. The updated Traffic Surveys are provided in **Appendix AA1**.

The capacity of the relevant junctions was re-analysed using the updated traffic survey data. The model of the access junction on Trinity Street was re-run as a 4-way junction to account for Seaview Avenue.

Traffic Surveys around Wexford Town were undertaken by Nationwide Data Collection (NDC) between Thursday, 5th September and Thursday 12th September 2019, which accounted for school term traffic. The traffic survey included 24-hour Automatic Traffic Counts (ATC) on Parnell Street, Trinity Street and William Street Lower, and peak hour Junction Turning Counts (JTC) at Trinity Street / King Street / Paul Quay Junction, Trinity Street / Sea View Avenue Junction, Trinity Street/ Fishers Row/ William Street Lower Junction, Trinity Street/ Parnell Street Junction and Distillery Road/ Joseph Street/ Mill Road/ King Street Junction during periods of peak traffic.

The traffic surveys indicate that the network AM and PM peak traffic is between 08:30 to 09:30 in the morning and 16:15 to 17:15 in the evening. The AM and PM traffic on Trinity Street peaks at 813 vehicles per hour and 793 vehicles per hour.

A map of the existing traffic volumes on the network is provided in Appendix 5.8: Drawings and the traffic survey reports are provided in Appendix 5.2: Traffic Survey Reports.

The following tables present the supplementary traffic survey data as requested: Table 2B1, 2B2, 2B3, 2B4 and 2B5.

Table 2B1: Summary of Linsig Model Report for Proposed Development Access / Trinity St Junction

Trinity Street / Access Link Road/ Seaview Avenue Junction – 90s signal cycle				
Lane Description	AM Peak % DoS*		PM Peak % DoS	
	Baseline	Post Development	Baseline	Post Development
Trinity Street North Arm – Left Turn	-	17.3	-	5.6
Trinity Street North Arm – Through Lane	-	31.5	-	48.6
Access Link – Right & Left Turns	-	16.9	-	49.6
Trinity Street South Arm – Ahead and Right Turns	-	49.5	-	47
Seaview Avenue – Left Right Ahead	-	0.6	-	0.0

* DoS, Degree of Saturation

Table 2B2: Summary of Linsig Model Report for Trinity St / King St / Paul Quay Junction

Trinity Street / King Street / Paul Quay Junction – 90s signal cycle				
Lane Description	AM Peak % DoS		PM Peak % DoS	
	Baseline	Post Development	Baseline	Post Development
Paul Quay Arm – Right and Through Turns	28.4	32.1	33.7	40.0
Trinity Street Arm – Left and Ahead Turns	48.9	54.4	38	49.7

Table 2B3: Summary of Linsig Model Report for Distillery Road / Joseph Street / Mill Road / King Street Junction

Distillery Road / Joseph Street / Mill Road / King Street – 120s signal cycle				
Lane Description	AM Peak % DoS		PM Peak % DoS	
	Baseline	Post Development	Baseline	Post Development
Distillery Road – Right & Left	70.4	75.8	55.5	60.9
Joseph Street – Right & Ahead	69.8	77.3	57.1	62.5
King Street – Ahead & Left	51.0	57.7	56.3	61.5
King Street – Right	68.6	77.5	39.2	47.3

Table 2B4: Summary of Picady (Junctions 8) Model Report for Trinity St / Fishers Row/ William St Lower Junction

Trinity Street / Fishers Row / William Street Lower Junction				
Lane Description	AM Peak Max RFC*		PM Peak Max RFC	
	Baseline	Post Development	Baseline	Post Development
Fisher's Row – Left and Right Turn	0.11	0.12	0.07	0.07
Trinity Street North Arm – Right and Straight Turns	0.07	0.07	0.06	0.07

* RFC, Ratio of Flow to Capacity

Table 2B5: Summary of Picady Model Report Trinity St / Parnell St Junction

Trinity Street / Parnell Street				
Lane Description	AM Peak Max RFC		PM Peak Max RFC	
	Baseline	Post Development	Baseline	Post Development
Parnell Street – Left Turn	0.42	0.47	0.31	0.35
Parnell Street – Right Turn	0.15	0.42	0.12	0.21
Trinity Street	No Right Turn			

The original conclusions of the traffic analysis remain and the junction will operate satisfactorily post development with only marginal non-significant impacts.

c. Car Park Survey

An Bord Pleanála RFI:

Please provide an updated town centre car parking survey to that undertaken in November 2016 which should include a map including the location of the car parks and an indication of the streets within the vicinity of the site where pay and display parking is in operation. The transport demand generation parking provision should be reviewed on the basis of the results of the survey undertaken and traffic impact analysis assessment updated to reflect same.

Addendum

A supplementary car park survey was undertaken on Thursday, 5th and Monday, 16th September and Tuesday, 1st October. The extents of the survey were expanded to incorporate additional car parks and provide a better picture of the Town Centre car parking in holistic manner.

A map of the pay and display parking zones (Drawing No. T/AE/Wex-4/2018 titled Wexford Parking Bylaws – Parking Zones) has been provided in Appendix AA4. The pay and display parking zones are reviewed periodically and will be expanded if and when a need arises.

We hereby present a summary of the supplementary car park surveys.

Table A1: Car Park Demand Survey Results over Thursday, 5th September, Monday 16th September and Tuesday 1st October 2019

Car Park	Capacity	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00
Sinnott Place Long Term Multi Storey (05/09/19)	333	197	212	227	231	205	179	171	148
Paul Quay Long Term Car Park (05/09/19)	131	123	123	120	122	117	117	113	96
Crescent Quay Off Street Car Park North (05/09/19)	61	53	51	49	52	54	49	53	49
High Street/ Keyser's Lane Car Park (05/09/19)	42	42	37	26	38	35	35	33	33
Petit's Supermarket Long Term Car Park (16/09/19)	144	92	116	106	101	103	87	85	77
Bride Street Car Park (01/10/19)	83	33	51	62	62	56	44	43	46
Ropeyard / Kings Street Carpark (01/10/19)	65	23	29	38	20	20	23	22	18
Bride Street Church Carpark (01/10/19)	185	135	137	141	139	111	109	104	90

Car Park	Capacity	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00
Rowe Street Church Car Park (16/09/19)	135	58	77	84	92	94	85	68	61
Clayton/ Whites Hotel Underground Carpark (01/10/19)	231	199	199	202	201	191	185	188	173
Total Occupied Spaces	845	955	1032	1056	1058	986	913	880	791
Total Unoccupied Spaces	-	454	377	353	351	423	496	529	618
Total Occupancy Rate		68%	73%	75%	75%	70%	65%	62%	56%
Total Reserve Capacity		32%	27%	25%	25%	30%	35%	38%	44%

The core demand for parking generated by the development is estimated to be 639 spaces as outlined in Section 5.4.8.1 of the EIAR. The development will provide 509 spaces within the site as outlined in Section 5.4.8.2. This indicates a deficit of 130 spaces within the site which will seek parking at other long-term car parks.

The survey indicates that the Town Centre car parks have 351 underutilised spaces at peak times of the day, including 156 spaces available for long term parking in Sinnott Place, Paul Quay and Ropeyard/ Kings Street carparks within a 10 minute walk of the site. This indicates that the alternative Town Centre carparks have adequate capacity to meet the surplus parking demand generated by the site without causing significant disruptions to the parking needs of the Town Centre.

The parking demand generation is based on current CSO modal splits for people traveling to work by car in Wexford Town and the surrounds, i.e. baseline modal split. The development will aim to reduce the baseline model split of people driving to work by car by up to 10% with the implementation of Transportation Mobility Management Plan as outlined in Section 5.5.1 of the EIAR. This will reduce the parking demand to 588 spaces and reduce the deficit within the site to 79 spaces. This equates to 50% of the underutilised car parking spaces available for long term parking within a 10 minute walk of the site.

d. Junction Design

An Bord Pleanála RFI:

Section 6.3.2 of the Traffic and Transportation Report states that the new access junction will form a 4-way signalised junction with Trinity Street and Seaview Avenue. However, the modelling undertaken in the junction capacity analysis refers only to Trinity Street and Access Road Junction. You are requested to undertake a review of the junction design and modelling undertaken which takes full account of Seaview Avenue.

It is also requested that you examine and outline the manner by which access to and egress from the vehicular entrance to the commercial premises to the west of the site can be maintained for loading/ unloading.

The traffic impact analysis assessment of the Traffic and Transportation Report and Chapter 5 of the Environmental Impact Assessment Report should be updated to reflect same.

EIAR Update:

The junction capacity analysis of the Access Junction on Trinity Street was remodelled as a 4-way junction to account for Seaview Avenue. A summary of the results is presented below. The report can be viewed in full in Appendix AA3.

Table 5.5: Summary of Linsig Model Report for Proposed Development Access / Trinity St Junction

Trinity Street / Access Link Road/ Seaview Avenue Junction – 90s signal cycle				
Lane Description	AM Peak % DoS*		PM Peak % DoS	
	Baseline	Post Development	Baseline	Post Development
Trinity Street North Arm – Left Turn	-	17.3	-	5.6
Trinity Street North Arm – Through Lane	-	31.5	-	48.6
Access Link – Right & Left Turns	-	16.9	-	49.6
Trinity Street South Arm – Ahead and Right Turns	-	49.5	-	47
Seaview Avenue – Left Right Ahead	-	0.6	-	0.0

* DoS, Degree of Saturation

The results indicate that the junction will operate satisfactorily post development.

The general arrangement of the proposed access junction has been refined to improve vehicular access to the McMahon Building Supply Premises. This refinement includes the provision of a loading bay and the repositioning of the stop lines and pedestrian lines at the junction. The amended drawing is included in Appendix A5.

Wexford County Council has agreed to work with residents to investigate if the loss of parking can be minimised by replacing the parallel on street parking along Trinity Street fronting the green area with angled parking. However, these discussions will occur separately as the area involved is outside the scope of the development works.

Add the following text after the last paragraph of Section 5.4.1 of the EIAR.

The McMahons Building Supplies premises has a vehicular entrance to the front of the store which is accessed by the store's delivery vehicle. Currently the vehicles must reverse in/out between kerbside car parking spaces and cross the footpath to enter the store. Visibility of pedestrians on the footpath is obscured to a reversing vehicle accessing the store if vehicles are parked in the spaces either side of the entrance. Likewise, visibility of pedestrians on the footpath is obscured to a reversing vehicle egressing the premises by the building's envelope. Visibility of the traffic on Trinity Street is also obscured to a reversing vehicle if a vehicle is parked in the space beside the entrance. This current arrangement is not ideal with safety implications to both pedestrians and traffic on Trinity Street. The situation is mitigated because the delivery truck driver is familiar with the conditions and the hazards. The access door is shown in the Plate 5.14 below.



Plate 5.14 McMahons Building Supplies vehicular entrance fronting Trinity Street.
Note: Vehicles parked in on-street car parking spaces on both sides of the entrance.

The proposed development will replace the parking spaces approaching the junction with a traffic lane for a left turning vehicles. The proposed arrangement in relation to the distance of the McMahon access from the junction is common in mid-sized towns where priority-controlled junctions are signalised as a result of an increase in traffic. The following examples in Plate 5.15, 5.16, 5.17 and 5.18 are similar in nature and which operate without significant traffic disruption or incidents.



Plate 5.15 Main Street/ Captain Hill Three Way Signalised Junction, Leixlip. Note the proximity of the parallel parking spaces to the traffic signal. Vehicles must often reverse park into tight spaces at this location.

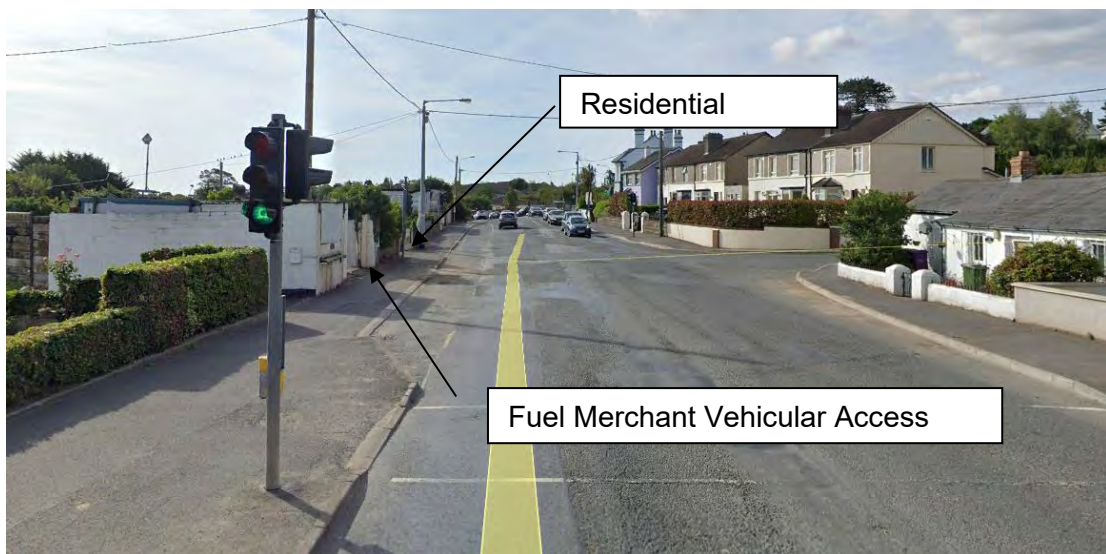


Plate 5.16 Blacklion Three Way Signalised Junction, Greystones. Two priority-controlled accesses within the signalised junction. A fuel merchant vehicle reverses into the access by pulling to one side and waiting for traffic to pass before completing manoeuvre.



Plate 5.17 View of North-West Arm of Malahide Road/ Collins Avenue Junction, Dublin. Residential accesses near signalised junction. Plate shows car reserve parked in second driveway from traffic signal.



Plate 5.17 View of North-East Arm of Malahide Road/ Collins Avenue Junction, Dublin. Residential accesses near signalised junction.

The AutoTrack in Plate 5.18 demonstrates that McMahons access is still accessible by a 7.5t panel van. It is envisaged that the vehicle will pull up parallel to the kerbside, turn on its hazard lights and wait until the driver is satisfied that there is a large enough gap in passing vehicles and pedestrians to complete the reversing manoeuvre safely. Access for a vehicle from the southern approach will be prohibited by the solid white centre line. Vehicles approaching the premises from the south will be expected to circle the block to approach from the north.

A loading bay will be provided on Trinity Street to accommodate essential loading activities to McMahons. The loading bay will be restricted to off-peak traffic hours, i.e. loading not permitted between 08:00 – 09:00 and 16:00 – 18:00. The location of the loading bay is shown in Plate 5.18 below.

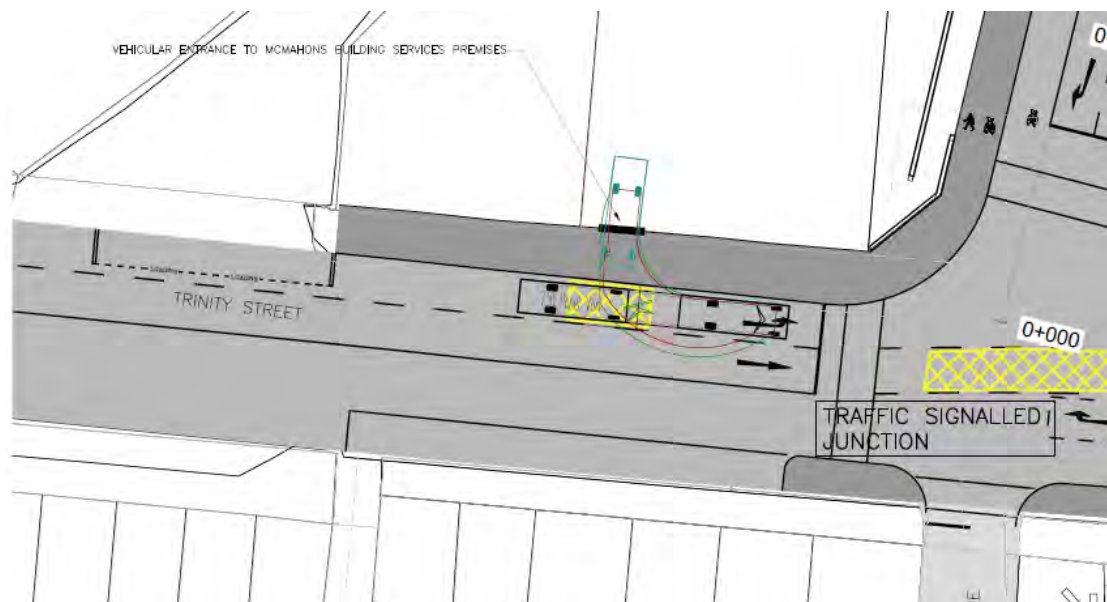


Plate 5.18 AutoTrack of 7.5t Panel Van reversing into McMahons Building Supplies Premises

The proposed general arrangement of the proposed junction is considered to have a slightly beneficial impact on balance. While the proposed traffic signals slightly increase the complexity of the arrangement, the removal of the kerbside parking

fronting McMahons improves inter-visibility between pedestrians and reversing vehicles, which will have a significant beneficial impact.

e. Road Safety Audit

An Bord Pleanála RFI:

It is stated in the documentation, Section 6.4.1.7 Environmental Impact Assessment Report and Section 11 of the Traffic and Transportation Report, that all issues raised in the RSA have been addressed/ accepted so the proposed development will be satisfactory in terms of traffic operations. It is noted that the Road Safety Audit identifies 13 problems. Please provide a report or appendix to the Traffic and Transportation Report which outlines the measures undertaken to address each of the identified problems.

Addendum:

The Feedback Form in Appendix C of the Stage 1 Road Safety Audit has been signed by STW on behalf of the design team, the auditor and WCC. The updated RSA has been included in **Appendix AA5**. A summary of the designers' responses and/ or actions taken by the design team is also included in **Appendix AA5**.

f. Cycle/pedestrian access/ proposals

An Bord Pleanála RFI:

Please provide an outline of the existing and proposed cycle lanes and pedestrian pathways on the public road in the vicinity of the site and proposed connections from same to the cycle lanes proposed. A map should be provided to outline same and a timeframe for the delivery of proposals for cycle lanes/ pedestrian pathways not yet in place/ subject of proposed improvements.

Addendum:

WCC have prepared a Bicycle Network Strategy which includes a map that identifies the council's long- and short-term aspirations for the cycle network in the vicinity of the site and the wider Wexford Town District. The map has been included in Appendix AA6.

The strategy includes a link from Trinity Street to the shoreline via the proposed development. The design of the proposed access junction and access link has been refined to accommodate this linkage. The refinement includes pavement marking indicating shared surfaces. The pavement marking symbols on the footpaths will be accompanied by appropriate signage to reinforce its shared use. Please see **Plate A1** below.



Appendix AA1

Addendum to Appendix 5.2

Traffic Survey Reports



Ireland

9 City Gate,
Lower Bridge Street,
Dublin 8

Tel: 01 633 4725
Fax: 01 633 4562

**ROUGHAN & O'DONOVAN
WEXFORD
TRAFFIC SURVEY**

**SURVEY REPORT
SEPTEMBER 2019**

PROJECT NO.	10370
CHECKED	P. MURRAY
DATE	18/09/2019
CONTACT	A.CHAMBERS
REVISION	

CONTENTS

Introduction

Junction Turning Counts

Automatic Traffic Counts

Car Park Occupancy Counts

Diagram 10370-01

Appendix A – Vehicle Categories

INTRODUCTION

Nationwide Data Collection (NDC) was instructed by Roughan & O'Donovan to undertake the following surveys in Co. Wexford.

A general location plan is given in Diagram 10370-01.

JUNCTION TURNING COUNTS

Junction turning counts were undertaken at the following sites:

Site No.	Location.	Day / Date
4	R730(NW) / R733 / R730(SE)	Thursday 5 th September 2019
5	R730(NW) / Parnell Street / R730(SE)	
6	R730(NW) / Sea View Avenue / R730(SE)	
7	R730(NW) / Fisher's Row / R730(SE)	
8	R733(NE) / R889 / R733(SW) / Mill Road	

All sites were surveyed using telescopically mounted video cameras from which the information was subsequently extracted. Details of the observed movements are given in Diagram 10370-01.

The survey was carried out with survey hours of 07:00 to 10:00 and 14:00 to 19:00. All information was collected in 15 minute intervals and has been tabulated with both peak hour and period totals.

Vehicles were classified into the following categories:

- Cars and Taxis / Light Goods Vehicles (**LV**),
- Heavy Goods Vehicles / Buses (**HV**).

A detailed description of the vehicles included in each category is provided in Appendix A.

AUTOMATIC TRAFFIC COUNTS

Automatic traffic counts were undertaken at the following sites:

Site No.	Location.	Days / Dates
1	R733, west of JTC Site 5	Thursday 5 th September to Wednesday 11 th September 2019
2	R730, north of JTC Site 6	
3	R730, south of JTC Site 7	

METROCOUNT 5600 series automatic traffic counters, attached to pneumatic tubes, were used at all the sites. Data was collected in both directions at all locations, with one counter being used for single carriageway sites (1 lane per direction).

The survey was carried out with survey hours of 00:00 to 00(24):00.

The results have been provided in excel, in hourly totals and includes the following information:

- Total Vehicles
- Class Bin Totals (12 Class)
- Number of Vehicles over Speed Limit
- Percentage of Vehicles over Speed Limit
- Number of Vehicles over Speed Limit 1 (Speed Limit + 5kph)
- Percentage of Vehicles over Speed Limit 1
- Number of Vehicles over Speed Limit 2 – (Speed Limit + 10kph)
- Percentage of Vehicles over Speed Limit 2
- Mean Speed
- 85th Percentile Speed
- Speed Bin Totals (Range 0 to 140kph)

12hr (07:00 to 19:00), 16hr (06:00 to 22:00), 18hr (06:00 to 00:00) and 24hr (00:00 to 00:00) totals are also included along with a virtual day, week and grand total. The peak time period for both the a.m (00:00 to 12:00) and p.m (12:00 to 24:00) are also highlighted.

A detailed description of the vehicles included in each category is provided in Appendix A.

CAR PARK OCCUPANCY COUNTS

Car park occupancy counts were undertaken at the following areas:

Zones	Location	Days / Dates
1	Crescent Quay Off Street Car Park	Thursday 5 th September 2019
2	Crescent Quay On Street Car Park	
3	Crescent Quay Off Street long term	
4	Sinnott Place long term (Europarks)	
5	Paul Quay long term	
6	Paul Quay on-street Car Park	Monday 16 th September 2019
7	High Street/Keyser's Lane Car Park	
8	Petit's Supermarket (Euro car park)	
9	Rowe Street Church	

* Exact locations are shown in Diagram 10370-01

The zones were surveyed using manual staff recording the total number of vehicles parked along each area.

The surveys were carried out between 10:00 to 17:00.

The surveyors undertook 60 minute beats with the first beat at 10:00 and the last beat at 17:00.

SITE REPORT

Weather	Thursday 5 th September and Monday 16 th September: Clear and dry.
Accidents	None.
Roadworks	Footpath extended at Car Park Survey Site 2, reducing number of spaces at this site.
Queues	Not required.
Pedestrians	Not required.

General Site Notes. No additional site notes.


















APPENDIX A

VEHICLE CATEGORIES



	Sites / Location:	ATC Sites 1 to 3 / JTC Sites 4 to 8 / Car Park Sites 1 to 9	Project No:	10370	Diagram No:	10370-01	Drawn By:	AC
	Survey Date:	ATC: Thursday 5th September to Wednesday 11th September JTC: Thursday 5th September 2019 Car Parks 1 to 6: Thursday 5th September / Sites 7 to 9: Monday 16th September 2019	Project Name:	WEXFORD TOWN				
	Survey Times:	ATC: 00:00 to 00(24):00 / Car Parks: 10:00 to 17:00 JTC: 07:00 to 10:00 and 14:00 to 19:00	Diagram Title:	General Location Plan				

VEHICLE CATEGORIES

LIGHT VEHICLES (LV)	 SALOON  ESTATE  PEOPLE CARRIER  CAR TOWING CARAVAN / TRAILER
	 VAN  <3.5 TONNES – single rear tyres  PICK-UP
HEAVY VEHICLES (HV)	 > 3.5 TONNES – twin rear tyres  2-AXLES RIGID
	 2-AXLES RIGID  3 AXLES-RIGID
	 4 OR MORE AXLES RIGID  3-AXLES ARTIC
	 4 OR MORE AXLES ARTIC  OTHER GOODS VEHICLE WITH TRAILER
	 DOUBLE DECK BUS  SINGLE DECK BUS OR COACH

VEHICLE CATEGORIES

Definition of Categories

The various components of traffic have different characteristics in terms of operating costs, growth and occupancy. For the purpose of this survey vehicles types are defined as follows:

Cars and Light Goods Vehicles are grouped together as Light Vehicles (**LV**). All other Goods Vehicles, Buses and Coaches are defined as Heavy Vehicles (**HV**).

Cars (CARS)

Including taxis, estate cars, 'people carriers' and other passenger vehicles (for example, minibuses and camper vans) with a gross vehicle weight of less than 3.5 tonnes, normally ones which can accommodate not more than 15 seats. Three-wheeled cars, motor invalid carriages, Land Rovers, Range Rovers and Jeeps and smaller ambulances are included. Cars towing caravans or trailers are counted as one vehicle unless included as a separate class.

Light Goods Vehicles (LGV)

Includes all goods vehicles up to 3.5 tonnes gross vehicle weight (goods vehicles over 3.5 tonnes have sideguards fitted between axles), including those towing a trailer or caravan. This includes all car delivery vans and those of the next larger carrying capacity such as transit vans. Included here are small pickup vans, three-wheeled goods vehicles, milk floats and pedestrian controlled motor vehicles. Most of this group is delivery vans of one type or another.

Other Goods Vehicles (OGV 1)

Includes all rigid vehicles over 3.5 tonnes gross vehicle weight with two or three axles Includes larger ambulances, tractors (without trailers), road rollers for tarmac pressing, box vans and similar large vans. A two or three axle motor tractive unit without a trailer is also included.












Other Goods Vehicles (OGV 2)

This category includes all rigid vehicles with four or more axles and all articulated vehicles. Also included in this class are OGV1 goods vehicles towing a caravan or trailer.

Buses and Coaches (PSV)

Includes all public service vehicles and works buses with a gross vehicle weight of 3.5 tonnes or more, usually vehicles with more than 16 seats.

ATC VEHICLE CATEGORIES

Axles	Groups	Description	Class		Parameters	Dominant Vehicle	Aggregate
2	1 or 2	Very Short - Bicycle or Motorcycle	MC	1	d(1)<1.7m & axles=2		1 (Light)
2	1 or 2	Short - Sedan, Wagon, 4WD, Utility, Light Van	SV	2	d(1)>=1.7m, d(1)<=3.2m & axles=2		
3, 4 or 5	3	Short Towing - Trailer, Caravan, Boat, etc.	SVT	3	groups=3, d(1)>=2.1m, d(1)<=3.2m, d(2)>=2.1m & axles=3,4,5		
2	2	Two axle truck or Bus	TB2	4	d(1)>3.2m & axles=2		2 (Medium)
3	2	Three axle truck or Bus	TB3	5	axles=3 & groups=2		
>3	2	Four axle truck	T4	6	axles>3 & groups=2		
3	3	Three axle articulated vehicle or Rigid vehicle and trailer	ART3	7	d(1)>3.2m, axles=3 & groups=3		3 (Heavy)
4	>2	Four axle articulated vehicle or Rigid vehicle and trailer	ART4	8	d(2)<2.1m or d(1)<2.1m or d(1)>3.2m axles = 4 & groups>2		
5	>2	Five axle articulated vehicle or Rigid vehicle and trailer	ART5	9	d(2)<2.1m or d(1)<2.1m or d(1)>3.2m axles=5 & groups>2		
>=6	>2	Six (or more) axle articulated vehicle or Rigid vehicle and trailer	ART6	10	axles=6 & groups>2 or axles>6 & groups=3		
>6	4	B-Double or Heavy truck and trailer	BD	11	groups=4 & axles>6		
>6	>=5	Double or triple road train or Heavy truck and two (or more) trailers	DRT	12	groups>=5 & axles>6		

Site No.	Location.	Direction.	Speed Limit - PSL (km/h)	Start Date.	End Date.	Total Vehicles.	5 Day Ave.	7 Day Ave.	No. > Speed Limit.	% > Speed Limit.	No. > Speed Limit1 (+5km/h).	% > Speed Limit1 (+5km/h).	No. > Speed Limit1 (+10km/h).	% > Speed Limit1 (+10km/h).	Mean Speed	85%ile Speed
1	R733, west of JTC Site 5	Eastbound	50	Thursday, 05 September 2019	Wednesday, 11 September 2019	18585	2674	2655	165	0.9	51	0.3	17	0.1	30.6	37.9

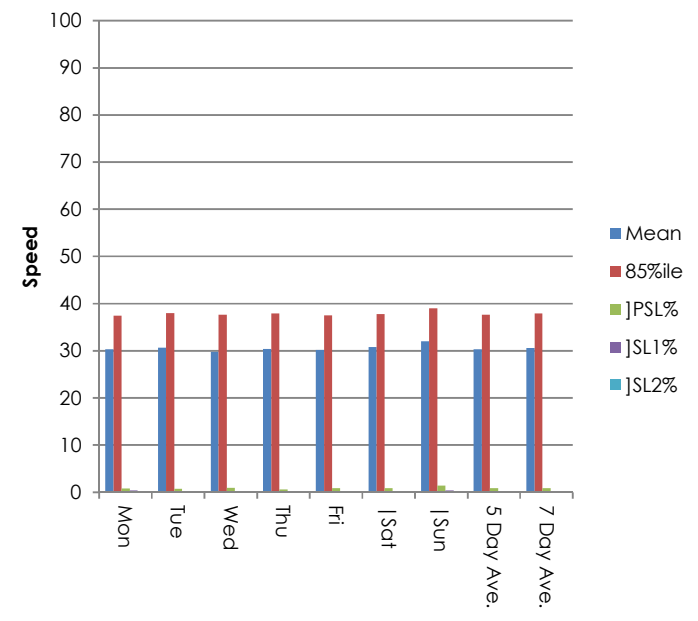
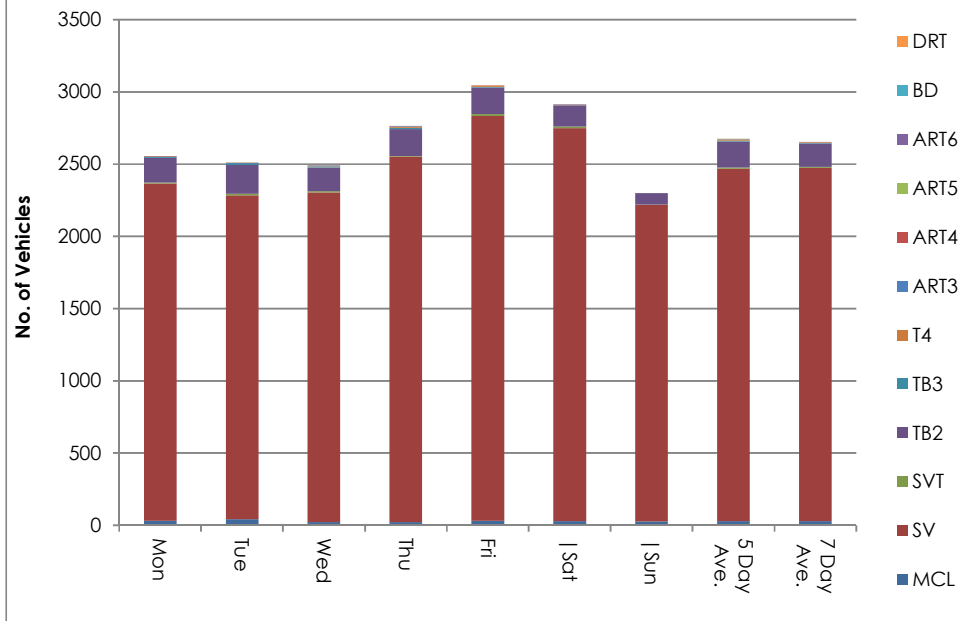
Site 1
 Location R733, west of JTC Site 5
 Direction East

10370 / Wexford Town
 September 2019
 Automatic Traffic Count

Virtual Week (1)

Time	Total	Classification												JPSL 50	JPSL% 50	JSL1 55 +5kph	JSL1% 55 +5kph	JSL2 60 +10kph	JSL2% 60 +10kph	Mean	Vpp 85
		1 MCL	2 SV	3 SVT	4 TB2	5 TB3	6 T4	7 ART3	8 ART4	9 ART5	10 ART6	11 BD	12 DRT								
Mon	2557	32	2333	7	171	7	4	1	2	0	0	0	0	21	0.8	11	0.4	5	0.2	30.3	37.4
Tue	2512	43	2240	11	200	7	2	5	2	2	0	0	0	19	0.8	8	0.3	2	0.1	30.7	38
Wed	2490	23	2281	9	162	5	4	3	1	1	1	0	0	25	1.0	5	0.2	4	0.2	29.8	37.7
Thu	2765	23	2530	5	185	7	9	3	3	0	0	0	0	17	0.6	7	0.3	3	0.1	30.4	37.9
Fri	3047	32	2803	11	183	5	11	0	2	0	0	0	0	27	0.9	5	0.2	0	0.0	30.2	37.5
Sat	2914	28	2721	12	146	1	1	3	1	0	1	0	0	24	0.8	6	0.2	1	0.0	30.8	37.8
Sun	2300	26	2191	4	79	0	0	0	0	0	0	0	0	32	1.4	9	0.4	2	0.1	32	39
5 Day Ave.	2674	31	2437	9	180	6	6	2	2	1	0	0	0	22	0.8	7	0.3	3	0.1	30.3	37.7
7 Day Ave.	2655	30	2443	8	161	5	4	2	2	0	0	0	0	24	0.9	7	0.3	2	0.1	30.6	37.9
--	18585	207	17099	59	1126	32	31	15	11	3	2	0	0	165	0.9	51	0.3	17	0.1	30.6	37.9

Summary Graphs



Site No.	Location.	Direction.	Speed Limit - PSL (km/h)	Start Date.	End Date.	Total Vehicles.	5 Day Ave.	7 Day Ave.	No. > Speed Limit.	% > Speed Limit.	No. > Speed Limit1 (+5km/h).	% > Speed Limit1 (+5km/h).	No. > Speed Limit1 (+10km/h).	% > Speed Limit1 (+10km/h).	Mean Speed	85%ile Speed
2	R730, north of JTC Site 6	Northbound	50	Thursday, 05 September 2019	Wednesday, 11 September 2019	34635	5025	4948	1821	5.3	572	1.7	189	0.5	38.5	45.5
		Southbound	50	Thursday, 05 September 2019	Wednesday, 11 September 2019	32251	4744	4607	11838	36.7	6151	19.1	2788	8.6	47.0	56.6
		Northbound/Southbound	50	Thursday, 05 September 2019	Wednesday, 11 September 2019	66886	9769	9555	13659	20.4	6723	10.1	2977	4.5	42.6	52.3

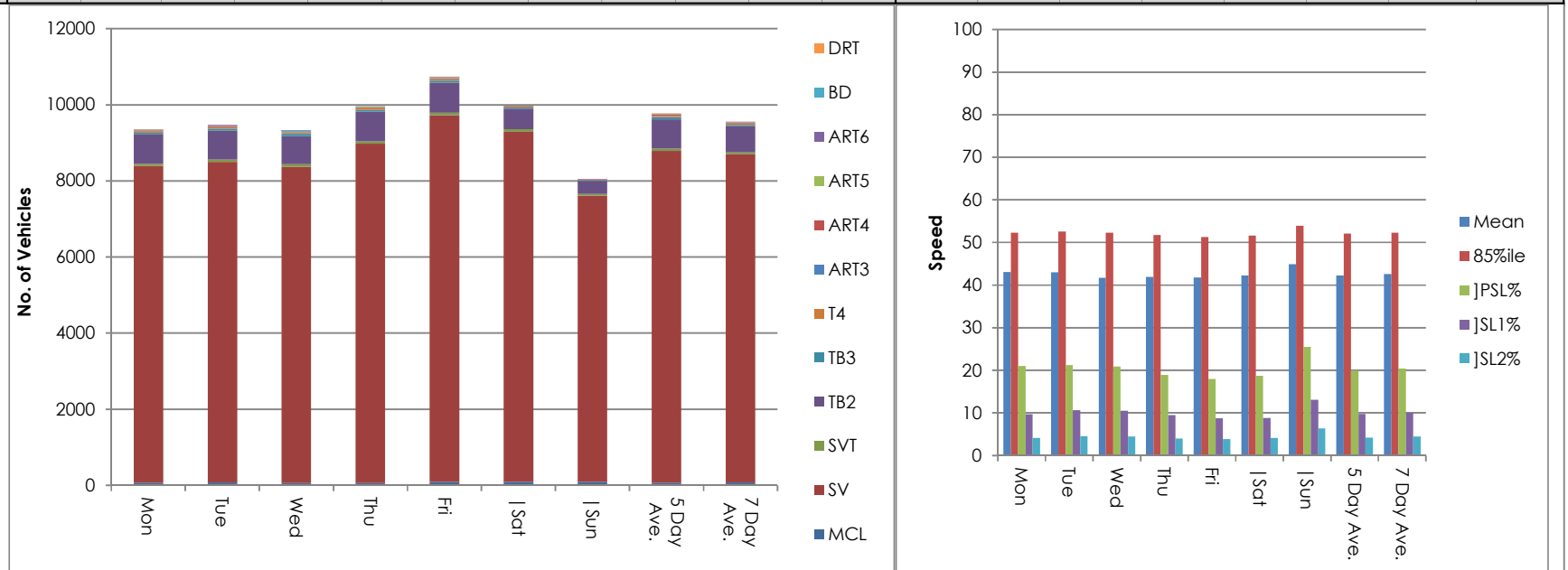
Site 2
 Location R730, north of JTC Site 6
 Direction Northbound/Southbound

10370 / Wexford Town
 September 2019
 Automatic Traffic Count

Virtual Week (1)

Time	Total	Classification												JPSL 50	JPSL% 50	JSL1 55 +5kph	JSL1% 55 +5kph	JSL2 60 +10kph	JSL2% 60 +10kph	Mean	Vpp 85
		1 MCL	2 SV	3 SVT	4 TB2	5 TB3	6 T4	7 ART3	8 ART4	9 ART5	10 ART6	11 BD	12 DRT								
Mon	9354	68	8322	53	777	47	26	4	29	18	8	0	2	1963	21.0	911	9.7	388	4.1	43.1	52.3
Tue	9475	76	8427	54	760	55	32	6	31	12	22	0	0	2012	21.2	1006	10.6	428	4.5	43	52.6
Wed	9318	60	8306	76	732	58	26	5	24	13	17	1	0	1948	20.9	980	10.5	415	4.5	41.7	52.3
Thu	9968	59	8918	63	781	45	42	4	22	19	15	0	0	1892	19.0	941	9.4	402	4.0	41.9	51.8
Fri	10729	88	9634	67	787	59	35	9	25	9	15	0	1	1924	17.9	945	8.8	415	3.9	41.8	51.3
Sat	9989	89	9201	63	548	26	23	5	18	8	8	0	0	1866	18.7	885	8.9	415	4.2	42.2	51.6
Sun	8053	87	7528	38	347	22	6	0	13	3	9	0	0	2054	25.5	1055	13.1	514	6.4	44.9	53.9
5 Day Ave.	9769	70	8721	63	767	53	32	6	26	14	15	0	1	1948	19.9	957	9.8	410	4.2	42.3	52.1
7 Day Ave.	9555	75	8619	59	676	45	27	5	23	12	13	0	0	1951	20.4	960	10.1	425	4.5	42.6	52.3
--	66886	527	60336	414	4732	312	190	33	162	82	94	1	3	13659	20.4	6723	10.1	2977	4.5	42.6	52.3

Summary Graphs



Site No.	Location.	Direction.	Speed Limit - PSL (km/h)	Start Date.	End Date.	Total Vehicles.	5 Day Ave.	7 Day Ave.	No. > Speed Limit.	% > Speed Limit.	No. > Speed Limit1 (+5km/h).	% > Speed Limit1 (+5km/h).	No. > Speed Limit1 (+10km/h).	% > Speed Limit1 (+10km/h).	Mean Speed	85%ile Speed
3	R730, south of JTC Site 7	Northbound	50	Thursday, 05 September 2019	Wednesday, 11 September 2019	33905	4948	4844	245	0.7	67	0.2	27	0.1	33.7	39.9
		Southbound	50	Thursday, 05 September 2019	Wednesday, 11 September 2019	30103	4420	4300	1419	4.7	400	1.3	129	0.4	36.8	44.6
		Northbound/Southbound	50	Thursday, 05 September 2019	Wednesday, 11 September 2019	64008	9368	9144	1664	2.6	467	0.7	156	0.2	35.2	42.3

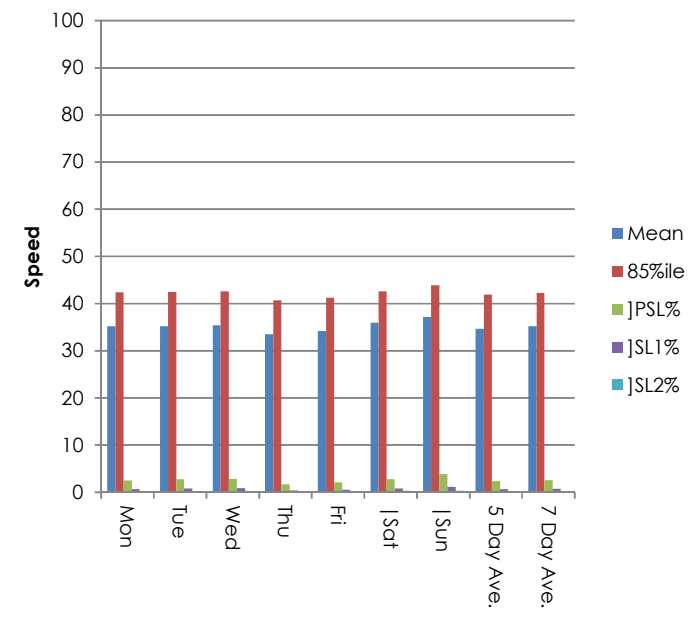
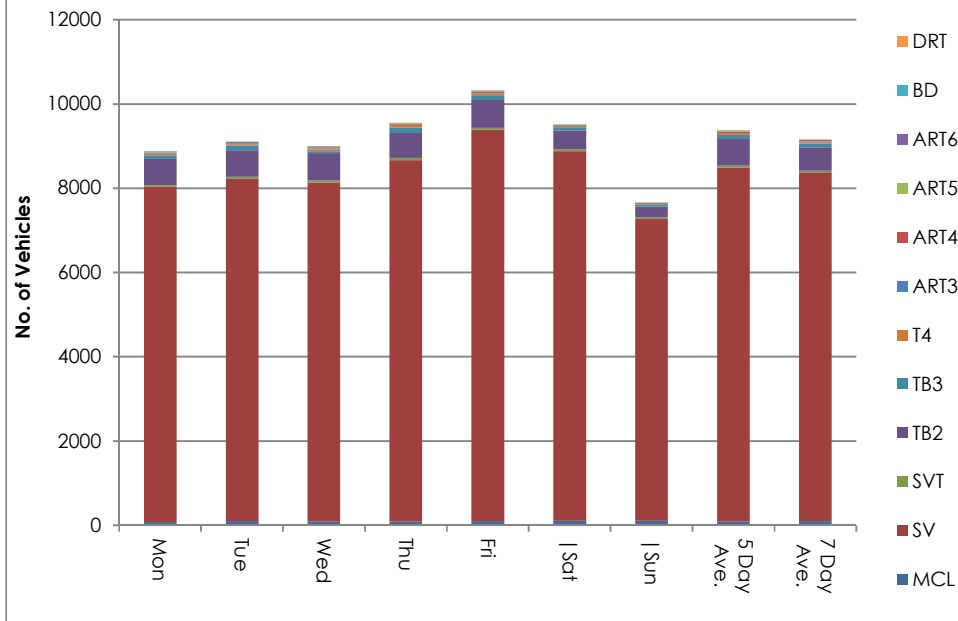
Site 3
 Location R730, south of JTC Site 7
 Direction Northbound/Southbound

10370 / Wexford Town
 September 2019
 Automatic Traffic Count


Virtual Week (1)

Time	Total	Classification												JPSL 50	JPSL% 50	JSL1 55 +5kph	JSL1% 55 +5kph	JSL2 60 +10kph	JSL2% 60 +10kph	Mean	Vpp 85
		1 MCL	2 SV	3 SVT	4 TB2	5 TB3	6 T4	7 ART3	8 ART4	9 ART5	10 ART6	11 BD	12 DRT								
Mon	8875	79	7958	39	621	86	36	8	17	14	14	1	2	226	2.5	57	0.6	20	0.2	35.2	42.4
Tue	9103	100	8137	34	628	109	32	9	17	11	25	1	0	252	2.8	70	0.8	19	0.2	35.2	42.5
Wed	8992	88	8050	49	644	51	39	6	25	11	27	1	1	254	2.8	80	0.9	21	0.2	35.4	42.6
Thu	9549	92	8579	47	597	127	63	4	9	7	20	2	2	156	1.6	38	0.4	15	0.2	33.5	40.7
Fri	10321	99	9288	41	668	107	55	5	25	10	19	3	1	216	2.1	54	0.5	24	0.2	34.2	41.2
Sat	9510	110	8771	45	448	80	28	1	10	6	10	1	0	263	2.8	78	0.8	31	0.3	35.9	42.6
Sun	7658	111	7161	32	262	53	15	1	11	2	10	0	0	297	3.9	90	1.2	26	0.3	37.2	43.9
5 Day Ave.	9368	92	8402	42	632	96	45	6	19	11	21	2	1	221	2.4	60	0.6	20	0.2	34.7	41.9
7 Day Ave.	9144	97	8278	41	553	88	38	5	16	9	18	1	1	238	2.6	67	0.7	22	0.2	35.2	42.3
--	64008	679	57944	287	3868	613	268	34	114	61	125	9	6	1664	2.6	467	0.7	156	0.2	35.2	42.3

Summary Graphs





	Sites / Location:	5 to 8 / Wexford	Project No:	10370	Diagram No:	10370-01	Drawn By:	AC
	Survey Date:	Thursday 5th September 2019	Project Name:	WEXFORD TOWN				
	Survey Times:	07:00 to 10:00 and 14:00 to 19:00	Diagram Title:	General Location Plan				

Site No. 4
Location R730(NW) / R733 / R730(SE)
Date 05 September 2019

Time	A to C - R730(NW) to R730(SE)		Veh. Total	A to B - R730(NW) to R733		Veh. Total
	LV	HV		LV	HV	
07:00	36	3	39	10	0	10
07:15	38	4	42	7	2	9
07:30	62	2	64	21	1	22
07:45	87	2	89	28	2	30
08:00	61	5	66	34	3	37
08:15	60	2	62	36	1	37
08:30	84	5	89	39	2	41
08:45	68	6	74	33	2	35
09:00	68	5	73	33	1	34
09:15	71	4	75	25	1	26
09:30	57	8	65	32	2	34
09:45	67	3	70	35	1	36
Total	759	49	808	333	18	351

Peak Hour	08:15	to	09:15			
08:15	60	2	62	36	1	37
08:30	84	5	89	39	2	41
08:45	68	6	74	33	2	35
09:00	68	5	73	33	1	34
Total	280	18	298	141	6	147

Date 05 September 2019

Time	A to C - R730(NW) to R730(SE)		Veh. Total	A to B - R730(NW) to R733		Veh. Total
	LV	HV		LV	HV	
14:00	61	1	62	40	2	42
14:15	64	4	68	50	2	52
14:30	77	4	81	43	0	43
14:45	50	4	54	41	1	42
15:00	70	1	71	50	2	52
15:15	73	1	74	54	2	56
15:30	79	2	81	43	3	46
15:45	82	3	85	36	4	40
16:00	67	2	69	45	1	46
16:15	67	1	68	36	2	38
16:30	83	1	84	83	1	84
16:45	61	4	65	48	0	48
17:00	79	0	79	31	2	33
17:15	91	2	93	45	0	45
17:30	103	4	107	53	0	53
17:45	96	2	98	53	0	53
18:00	78	3	81	54	2	56
18:15	75	1	76	45	0	45
18:30	53	1	54	38	0	38
18:45	48	2	50	34	0	34
Total	1457	43	1500	922	24	946

Peak Hour	16:30	to	17:30			
16:30	83	1	84	83	1	84
16:45	61	4	65	48	0	48
17:00	79	0	79	31	2	33
17:15	91	2	93	45	0	45
Total	314	7	321	207	3	210

Site No. 4
 Location R730(NW) / R733 / R730(SE)
 Date 05 September 2019

Time	B to A - R733 to R730(NW)		Veh. Total	B to C - R733 to R730(SE)		Veh. Total
	LV	HV		LV	HV	
07:00	0	0	0	0	0	0
07:15	0	0	0	0	0	0
07:30	0	0	0	0	0	0
07:45	0	0	0	0	0	0
08:00	0	0	0	0	0	0
08:15	0	0	0	0	0	0
08:30	0	0	0	0	0	0
08:45	0	0	0	0	0	0
09:00	0	0	0	0	0	0
09:15	0	0	0	0	0	0
09:30	0	0	0	0	0	0
09:45	0	0	0	0	0	0
Total	0	0	0	0	0	0

Peak Hour	08:15	to	09:15
08:15	0	0	0
08:30	0	0	0
08:45	0	0	0
09:00	0	0	0
Total	0	0	0

Date 05 September 2019

Time	B to A - R733 to R730(NW)		Veh. Total	B to C - R733 to R730(SE)		Veh. Total
	LV	HV		LV	HV	
14:00	0	0	0	0	0	0
14:15	0	0	0	0	0	0
14:30	0	0	0	0	0	0
14:45	0	0	0	0	0	0
15:00	0	0	0	0	0	0
15:15	0	0	0	0	0	0
15:30	0	0	0	0	0	0
15:45	0	0	0	0	0	0
16:00	1	0	1	0	0	0
16:15	0	0	0	0	0	0
16:30	0	0	0	0	0	0
16:45	0	0	0	0	0	0
17:00	0	0	0	0	0	0
17:15	0	0	0	0	0	0
17:30	0	0	0	0	0	0
17:45	0	0	0	0	0	0
18:00	0	0	0	0	0	0
18:15	0	0	0	0	0	0
18:30	0	0	0	0	0	0
18:45	0	0	0	0	0	0
Total	1	0	1	0	0	0

Peak Hour	16:30	to	17:30
16:30	0	0	0
16:45	0	0	0
17:00	0	0	0
17:15	0	0	0
Total	0	0	0

Site No. 4
Location R730(NW) / R733 / R730(SE)
Date 05 September 2019

Time	C to B - R730(SE) to R733		Veh. Total	C to A - R730(SE) to R730(NW)		Veh. Total
	LV	HV		LV	HV	
07:00	3	1	4	23	1	24
07:15	9	0	9	46	6	52
07:30	13	2	15	70	5	75
07:45	14	0	14	63	7	70
08:00	19	1	20	92	5	97
08:15	18	1	19	117	9	126
08:30	38	2	40	140	6	146
08:45	41	1	42	130	4	134
09:00	40	0	40	108	10	118
09:15	24	0	24	108	3	111
09:30	29	3	32	97	7	104
09:45	41	0	41	119	9	128
Total	289	11	300	1113	72	1185

Peak Hour	08:15	to	09:15			
08:15	18	1	19	117	9	126
08:30	38	2	40	140	6	146
08:45	41	1	42	130	4	134
09:00	40	0	40	108	10	118
Total	137	4	141	495	29	524

Date 05 September 2019

Time	C to B - R730(SE) to R733		Veh. Total	C to A - R730(SE) to R730(NW)		Veh. Total
	LV	HV		LV	HV	
14:00	27	1	28	94	5	99
14:15	34	1	35	71	4	75
14:30	30	1	31	84	4	88
14:45	30	0	30	105	4	109
15:00	23	0	23	75	5	80
15:15	29	0	29	89	3	92
15:30	42	0	42	87	3	90
15:45	38	0	38	90	7	97
16:00	23	0	23	105	1	106
16:15	23	0	23	111	6	117
16:30	28	0	28	106	8	114
16:45	29	0	29	116	2	118
17:00	19	0	19	86	3	89
17:15	27	0	27	93	2	95
17:30	28	0	28	117	5	122
17:45	35	0	35	93	3	96
18:00	22	0	22	81	1	82
18:15	29	0	29	96	3	99
18:30	23	0	23	82	0	82
18:45	21	0	21	89	1	90
Total	560	3	563	1870	70	1940

Peak Hour	16:30	to	17:30			
16:30	28	0	28	106	8	114
16:45	29	0	29	116	2	118
17:00	19	0	19	86	3	89
17:15	27	0	27	93	2	95
Total	103	0	103	401	15	416

Site No. 4
Location R730(NW) / R733 / R730(SE)
Date 05 September 2019

Time	To Arm A - R730(NW)		Veh. Total	From Arm A - R730(NW)		Veh. Total
	LV	HV		LV	HV	
07:00	23	1	24	46	3	49
07:15	46	6	52	45	6	51
07:30	70	5	75	83	3	86
07:45	63	7	70	115	4	119
08:00	92	5	97	95	8	103
08:15	117	9	126	96	3	99
08:30	140	6	146	123	7	130
08:45	130	4	134	101	8	109
09:00	108	10	118	101	6	107
09:15	108	3	111	96	5	101
09:30	97	7	104	89	10	99
09:45	119	9	128	102	4	106
Total	1113	72	1185	1092	67	1159

Peak Hour 08:15 to 09:15

Time	LV	HV	Veh. Total	LV	HV	Veh. Total
08:15	117	9	126	96	3	99
08:30	140	6	146	123	7	130
08:45	130	4	134	101	8	109
09:00	108	10	118	101	6	107
Total	495	29	524	421	24	445

Date 05 September 2019

Time	To Arm A - R730(NW)		Veh. Total	From Arm A - R730(NW)		Veh. Total
	LV	HV		LV	HV	
14:00	94	5	99	101	3	104
14:15	71	4	75	114	6	120
14:30	84	4	88	120	4	124
14:45	105	4	109	91	5	96
15:00	75	5	80	120	3	123
15:15	89	3	92	127	3	130
15:30	87	3	90	122	5	127
15:45	90	7	97	118	7	125
16:00	106	1	107	112	3	115
16:15	111	6	117	103	3	106
16:30	106	8	114	166	2	168
16:45	116	2	118	109	4	113
17:00	86	3	89	110	2	112
17:15	93	2	95	136	2	138
17:30	117	5	122	156	4	160
17:45	93	3	96	149	2	151
18:00	81	1	82	132	5	137
18:15	96	3	99	120	1	121
18:30	82	0	82	91	1	92
18:45	89	1	90	82	2	84
Total	1871	70	1941	2379	67	2446

Peak Hour 16:30 to 17:30

Time	LV	HV	Veh. Total	LV	HV	Veh. Total
16:30	106	8	114	166	2	168
16:45	116	2	118	109	4	113
17:00	86	3	89	110	2	112
17:15	93	2	95	136	2	138
Total	401	15	416	521	10	531

Site No. 4
 Location R730(NW) / R733 / R730(SE)
 Date 05 September 2019

Time	To Arm B - R733		Veh. Total	From Arm B - R733		Veh. Total
	LV	HV		LV	HV	
07:00	13	1	14	0	0	0
07:15	16	2	18	0	0	0
07:30	34	3	37	0	0	0
07:45	42	2	44	0	0	0
08:00	53	4	57	0	0	0
08:15	54	2	56	0	0	0
08:30	77	4	81	0	0	0
08:45	74	3	77	0	0	0
09:00	73	1	74	0	0	0
09:15	49	1	50	0	0	0
09:30	61	5	66	0	0	0
09:45	76	1	77	0	0	0
Total	622	29	651	0	0	0

Peak Hour	08:15	to	09:15			
08:15	54	2	56	0	0	0
08:30	77	4	81	0	0	0
08:45	74	3	77	0	0	0
09:00	73	1	74	0	0	0
Total	278	10	288	0	0	0

Date 05 September 2019

Time	To Arm B - R733		Veh. Total	From Arm B - R733		Veh. Total
	LV	HV		LV	HV	
14:00	67	3	70	0	0	0
14:15	84	3	87	0	0	0
14:30	73	1	74	0	0	0
14:45	71	1	72	0	0	0
15:00	73	2	75	0	0	0
15:15	83	2	85	0	0	0
15:30	85	3	88	0	0	0
15:45	74	4	78	0	0	0
16:00	68	1	69	1	0	1
16:15	59	2	61	0	0	0
16:30	111	1	112	0	0	0
16:45	77	0	77	0	0	0
17:00	50	2	52	0	0	0
17:15	72	0	72	0	0	0
17:30	81	0	81	0	0	0
17:45	88	0	88	0	0	0
18:00	76	2	78	0	0	0
18:15	74	0	74	0	0	0
18:30	61	0	61	0	0	0
18:45	55	0	55	0	0	0
Total	1482	27	1509	1	0	1

Peak Hour	16:30	to	17:30			
16:30	111	1	112	0	0	0
16:45	77	0	77	0	0	0
17:00	50	2	52	0	0	0
17:15	72	0	72	0	0	0
Total	310	3	313	0	0	0

Site No. 4
Location R730(NW) / R733 / R730(SE)
Date 05 September 2019

Time	To Arm C - R730(SE)		Veh. Total	From Arm C - R730(SE)		Veh. Total
	LV	HV		LV	HV	
07:00	36	3	39	26	2	28
07:15	38	4	42	55	6	61
07:30	62	2	64	83	7	90
07:45	87	2	89	77	7	84
08:00	61	5	66	111	6	117
08:15	60	2	62	135	10	145
08:30	84	5	89	178	8	186
08:45	68	6	74	171	5	176
09:00	68	5	73	148	10	158
09:15	71	4	75	132	3	135
09:30	57	8	65	126	10	136
09:45	67	3	70	160	9	169
Total	759	49	808	1402	83	1485

Peak Hour	08:15	to	09:15			
08:15	60	2	62	135	10	145
08:30	84	5	89	178	8	186
08:45	68	6	74	171	5	176
09:00	68	5	73	148	10	158
Total	280	18	298	632	33	665

Date 05 September 2019

Time	To Arm C - R730(SE)		Veh. Total	From Arm C - R730(SE)		Veh. Total
	LV	HV		LV	HV	
14:00	61	1	62	121	6	127
14:15	64	4	68	105	5	110
14:30	77	4	81	114	5	119
14:45	50	4	54	135	4	139
15:00	70	1	71	98	5	103
15:15	73	1	74	118	3	121
15:30	79	2	81	129	3	132
15:45	82	3	85	128	7	135
16:00	67	2	69	128	1	129
16:15	67	1	68	134	6	140
16:30	83	1	84	134	8	142
16:45	61	4	65	145	2	147
17:00	79	0	79	105	3	108
17:15	91	2	93	120	2	122
17:30	103	4	107	145	5	150
17:45	96	2	98	128	3	131
18:00	78	3	81	103	1	104
18:15	75	1	76	125	3	128
18:30	53	1	54	105	0	105
18:45	48	2	50	110	1	111
Total	1457	43	1500	2430	73	2503

Peak Hour	16:30	to	17:30			
16:30	83	1	84	134	8	142
16:45	61	4	65	145	2	147
17:00	79	0	79	105	3	108
17:15	91	2	93	120	2	122
Total	314	7	321	504	15	519

Site No. 5
Location R730(NW) / Parnell Street / R730(SE)
Date 05 September 2019

Time	A to C - R730(NW) to R730(SE)		Veh. Total	A to B - R730(NW) to Parnell Street		Veh. Total
	LV	HV		LV	HV	
07:00	32	3	35	0	0	0
07:15	34	3	37	0	0	0
07:30	62	4	66	0	0	0
07:45	80	2	82	0	0	0
08:00	57	5	62	0	0	0
08:15	60	2	62	0	0	0
08:30	96	5	101	0	0	0
08:45	66	6	72	0	0	0
09:00	58	5	63	0	0	0
09:15	66	6	72	0	0	0
09:30	54	7	61	0	0	0
09:45	64	4	68	0	0	0
Total	729	52	781	0	0	0

Peak Hour	08:30	to	09:30			
08:30	96	5	101	0	0	0
08:45	66	6	72	0	0	0
09:00	58	5	63	0	0	0
09:15	66	6	72	0	0	0
Total	286	22	308	0	0	0

Date 05 September 2019

Time	A to C - R730(NW) to R730(SE)		Veh. Total	A to B - R730(NW) to Parnell Street		Veh. Total
	LV	HV		LV	HV	
14:00	61	1	62	0	0	0
14:15	70	4	74	0	0	0
14:30	77	5	82	0	0	0
14:45	52	4	56	0	0	0
15:00	66	1	67	0	0	0
15:15	70	1	71	0	0	0
15:30	75	3	78	0	0	0
15:45	81	4	85	0	0	0
16:00	68	2	70	0	0	0
16:15	67	1	68	0	0	0
16:30	79	1	80	0	0	0
16:45	65	4	69	0	0	0
17:00	115	0	115	0	0	0
17:15	91	2	93	0	0	0
17:30	104	3	107	0	0	0
17:45	101	3	104	0	0	0
18:00	77	2	79	0	0	0
18:15	73	2	75	0	0	0
18:30	54	1	55	0	0	0
18:45	47	2	49	0	0	0
Total	1493	46	1539	0	0	0

Peak Hour	16:15	to	17:15			
16:15	67	1	68	0	0	0
16:30	79	1	80	0	0	0
16:45	65	4	69	0	0	0
17:00	115	0	115	0	0	0
Total	326	6	332	0	0	0

Site No. 5
Location R730(NW) / Parnell Street / R730(SE)
Date 05 September 2019

Time	B to A - Parnell Street to R730(NW)		Veh. Total	B to C - Parnell Street to R730(SE)		Veh. Total
	LV	HV		LV	HV	
07:00	3	0	3	1	0	1
07:15	13	1	14	3	0	3
07:30	22	2	24	3	1	4
07:45	25	3	28	4	0	4
08:00	28	1	29	4	0	4
08:15	32	4	36	7	1	8
08:30	47	4	51	9	0	9
08:45	39	2	41	13	0	13
09:00	54	3	57	11	1	12
09:15	43	1	44	12	0	12
09:30	50	4	54	14	0	14
09:45	30	5	35	15	0	15
Total	386	30	416	96	3	99

Peak Hour	08:30	to	09:30			
08:30	47	4	51	9	0	9
08:45	39	2	41	13	0	13
09:00	54	3	57	11	1	12
09:15	43	1	44	12	0	12
Total	183	10	193	45	1	46

Date 05 September 2019

Time	B to A - Parnell Street to R730(NW)		Veh. Total	B to C - Parnell Street to R730(SE)		Veh. Total
	LV	HV		LV	HV	
14:00	25	2	27	16	0	16
14:15	24	2	26	17	0	17
14:30	20	1	21	13	0	13
14:45	35	1	36	16	0	16
15:00	33	1	34	13	0	13
15:15	38	0	38	17	0	17
15:30	41	2	43	12	0	12
15:45	44	1	45	17	0	17
16:00	30	1	31	21	0	21
16:15	38	1	39	13	0	13
16:30	31	2	33	6	0	6
16:45	38	2	40	5	0	5
17:00	33	1	34	13	0	13
17:15	18	1	19	9	0	9
17:30	33	3	36	18	0	18
17:45	35	0	35	20	0	20
18:00	31	1	32	13	0	13
18:15	31	1	32	16	0	16
18:30	34	0	34	13	0	13
18:45	39	0	39	4	0	4
Total	651	23	674	272	0	272

Peak Hour	16:15	to	17:15			
16:15	38	1	39	13	0	13
16:30	31	2	33	6	0	6
16:45	38	2	40	5	0	5
17:00	33	1	34	13	0	13
Total	140	6	146	37	0	37

Site No. 5
Location R730(NW) / Parnell Street / R730(SE)
Date 05 September 2019

Time	C to B - R730(SE) to Parnell Street		Veh. Total	C to A - R730(SE) to R730(NW)		Veh. Total
	LV	HV		LV	HV	
07:00	0	0	0	23	2	25
07:15	0	0	0	53	6	59
07:30	0	0	0	65	4	69
07:45	0	0	0	60	5	65
08:00	0	0	0	92	4	96
08:15	0	0	0	90	8	98
08:30	0	0	0	126	4	130
08:45	0	0	0	124	4	128
09:00	0	0	0	101	7	108
09:15	0	0	0	111	2	113
09:30	0	0	0	89	8	97
09:45	0	0	0	105	3	108
Total	0	0	0	1039	57	1096

Peak Hour	08:30	to	09:30			
08:30	0	0	0	126	4	130
08:45	0	0	0	124	4	128
09:00	0	0	0	101	7	108
09:15	0	0	0	111	2	113
Total	0	0	0	462	17	479

Date 05 September 2019

Time	C to B - R730(SE) to Parnell Street		Veh. Total	C to A - R730(SE) to R730(NW)		Veh. Total
	LV	HV		LV	HV	
14:00	0	0	0	97	4	101
14:15	0	0	0	80	4	84
14:30	0	0	0	86	1	87
14:45	0	0	0	100	4	104
15:00	0	0	0	68	5	73
15:15	0	0	0	99	2	101
15:30	0	0	0	86	3	89
15:45	0	0	0	73	4	77
16:00	0	0	0	96	0	96
16:15	0	0	0	93	5	98
16:30	0	0	0	118	4	122
16:45	0	0	0	93	0	93
17:00	0	0	0	116	4	120
17:15	0	0	0	101	1	102
17:30	0	0	0	119	3	122
17:45	0	0	0	90	3	93
18:00	0	0	0	78	0	78
18:15	0	0	0	90	1	91
18:30	0	0	0	65	0	65
18:45	0	0	0	73	2	75
Total	0	0	0	1821	50	1871

Peak Hour	16:15	to	17:15			
16:15	0	0	0	93	5	98
16:30	0	0	0	118	4	122
16:45	0	0	0	93	0	93
17:00	0	0	0	116	4	120
Total	0	0	0	420	13	433

Site No. 5
 Location R730(NW) / Parnell Street / R730(SE)
 Date 05 September 2019

Time	To Arm A - R730(NW)		Veh. Total	From Arm A - R730(NW)		Veh. Total
	LV	HV		LV	HV	
07:00	26	2	28	32	3	35
07:15	66	7	73	34	3	37
07:30	87	6	93	62	4	66
07:45	85	8	93	80	2	82
08:00	120	5	125	57	5	62
08:15	122	12	134	60	2	62
08:30	173	8	181	96	5	101
08:45	163	6	169	66	6	72
09:00	155	10	165	58	5	63
09:15	154	3	157	66	6	72
09:30	139	12	151	54	7	61
09:45	135	8	143	64	4	68
Total	1425	87	1512	729	52	781

Peak Hour	08:30	to	09:30			
08:30	173	8	181	96	5	101
08:45	163	6	169	66	6	72
09:00	155	10	165	58	5	63
09:15	154	3	157	66	6	72
Total	645	27	672	286	22	308

Date 05 September 2019

Time	To Arm A - R730(NW)		Veh. Total	From Arm A - R730(NW)		Veh. Total
	LV	HV		LV	HV	
14:00	122	6	128	61	1	62
14:15	104	6	110	70	4	74
14:30	106	2	108	77	5	82
14:45	135	5	140	52	4	56
15:00	101	6	107	66	1	67
15:15	137	2	139	70	1	71
15:30	127	5	132	75	3	78
15:45	117	5	122	81	4	85
16:00	126	1	127	68	2	70
16:15	131	6	137	67	1	68
16:30	149	6	155	79	1	80
16:45	131	2	133	65	4	69
17:00	149	5	154	115	0	115
17:15	119	2	121	91	2	93
17:30	152	6	158	104	3	107
17:45	125	3	128	101	3	104
18:00	109	1	110	77	2	79
18:15	121	2	123	73	2	75
18:30	99	0	99	54	1	55
18:45	112	2	114	47	2	49
Total	2472	73	2545	1493	46	1539

Peak Hour	16:15	to	17:15			
16:15	131	6	137	67	1	68
16:30	149	6	155	79	1	80
16:45	131	2	133	65	4	69
17:00	149	5	154	115	0	115
Total	560	19	579	326	6	332

Site No. 5
Location R730(NW) / Parnell Street / R730(SE)
Date 05 September 2019

Time	To Arm B - Parnell Street		Veh. Total	From Arm B - Parnell Street		Veh. Total
	LV	HV		LV	HV	
07:00	0	0	0	4	0	4
07:15	0	0	0	16	1	17
07:30	0	0	0	25	3	28
07:45	0	0	0	29	3	32
08:00	0	0	0	32	1	33
08:15	0	0	0	39	5	44
08:30	0	0	0	56	4	60
08:45	0	0	0	52	2	54
09:00	0	0	0	65	4	69
09:15	0	0	0	55	1	56
09:30	0	0	0	64	4	68
09:45	0	0	0	45	5	50
Total	0	0	0	482	33	515

Peak Hour	08:30	to	09:30			
08:30	0	0	0	56	4	60
08:45	0	0	0	52	2	54
09:00	0	0	0	65	4	69
09:15	0	0	0	55	1	56
Total	0	0	0	228	11	239

Date 05 September 2019

Time	To Arm B - Parnell Street		Veh. Total	From Arm B - Parnell Street		Veh. Total
	LV	HV		LV	HV	
14:00	0	0	0	41	2	43
14:15	0	0	0	41	2	43
14:30	0	0	0	33	1	34
14:45	0	0	0	51	1	52
15:00	0	0	0	46	1	47
15:15	0	0	0	55	0	55
15:30	0	0	0	53	2	55
15:45	0	0	0	61	1	62
16:00	0	0	0	51	1	52
16:15	0	0	0	51	1	52
16:30	0	0	0	37	2	39
16:45	0	0	0	43	2	45
17:00	0	0	0	46	1	47
17:15	0	0	0	27	1	28
17:30	0	0	0	51	3	54
17:45	0	0	0	55	0	55
18:00	0	0	0	44	1	45
18:15	0	0	0	47	1	48
18:30	0	0	0	47	0	47
18:45	0	0	0	43	0	43
Total	0	0	0	923	23	946

Peak Hour	16:15	to	17:15			
16:15	0	0	0	51	1	52
16:30	0	0	0	37	2	39
16:45	0	0	0	43	2	45
17:00	0	0	0	46	1	47
Total	0	0	0	177	6	183

Site No. 5
Location R730(NW) / Parnell Street / R730(SE)
Date 05 September 2019

Time	To Arm C - R730(SE)		Veh. Total	From Arm C - R730(SE)		Veh. Total
	LV	HV		LV	HV	
07:00	33	3	36	23	2	25
07:15	37	3	40	53	6	59
07:30	65	5	70	65	4	69
07:45	84	2	86	60	5	65
08:00	61	5	66	92	4	96
08:15	67	3	70	90	8	98
08:30	105	5	110	126	4	130
08:45	79	6	85	124	4	128
09:00	69	6	75	101	7	108
09:15	78	6	84	111	2	113
09:30	68	7	75	89	8	97
09:45	79	4	83	105	3	108
Total	825	55	880	1039	57	1096

Peak Hour	08:30	to	09:30			
08:30	105	5	110	126	4	130
08:45	79	6	85	124	4	128
09:00	69	6	75	101	7	108
09:15	78	6	84	111	2	113
Total	331	23	354	462	17	479

Date 05 September 2019

Time	To Arm C - R730(SE)		Veh. Total	From Arm C - R730(SE)		Veh. Total
	LV	HV		LV	HV	
14:00	77	1	78	97	4	101
14:15	87	4	91	80	4	84
14:30	90	5	95	86	1	87
14:45	68	4	72	100	4	104
15:00	79	1	80	68	5	73
15:15	87	1	88	99	2	101
15:30	87	3	90	86	3	89
15:45	98	4	102	73	4	77
16:00	89	2	91	96	0	96
16:15	80	1	81	93	5	98
16:30	85	1	86	118	4	122
16:45	70	4	74	93	0	93
17:00	128	0	128	116	4	120
17:15	100	2	102	101	1	102
17:30	122	3	125	119	3	122
17:45	121	3	124	90	3	93
18:00	90	2	92	78	0	78
18:15	89	2	91	90	1	91
18:30	67	1	68	65	0	65
18:45	51	2	53	73	2	75
Total	1765	46	1811	1821	50	1871

Peak Hour	16:15	to	17:15			
16:15	80	1	81	93	5	98
16:30	85	1	86	118	4	122
16:45	70	4	74	93	0	93
17:00	128	0	128	116	4	120
Total	363	6	369	420	13	433

Site No. 6
Location R730(NW) / Sea View Avenue / R730(SE)
Date 05 September 2019

Time	A to C - R730(NW) to R730(SE)		Veh. Total	A to B - R730(NW) to Sea View Avenue		Veh. Total
	LV	HV		LV	HV	
07:00	28	3	31	0	0	0
07:15	35	2	37	0	0	0
07:30	61	6	67	0	0	0
07:45	82	2	84	0	0	0
08:00	62	4	66	0	0	0
08:15	64	4	68	0	0	0
08:30	96	4	100	0	0	0
08:45	78	6	84	0	0	0
09:00	60	6	66	0	0	0
09:15	69	5	74	0	0	0
09:30	52	7	59	0	0	0
09:45	75	3	78	0	0	0
Total	762	52	814	0	0	0

Peak Hour	08:30	to	09:30			
08:30	96	4	100	0	0	0
08:45	78	6	84	0	0	0
09:00	60	6	66	0	0	0
09:15	69	5	74	0	0	0
Total	303	21	324	0	0	0

Date 05 September 2019

Time	A to C - R730(NW) to R730(SE)		Veh. Total	A to B - R730(NW) to Sea View Avenue		Veh. Total
	LV	HV		LV	HV	
14:00	63	2	65	0	0	0
14:15	82	5	87	0	0	0
14:30	83	4	87	1	0	1
14:45	70	5	75	0	0	0
15:00	80	1	81	0	0	0
15:15	83	1	84	0	0	0
15:30	82	2	84	0	0	0
15:45	98	6	104	0	0	0
16:00	87	2	89	0	0	0
16:15	82	1	83	0	0	0
16:30	81	1	82	0	0	0
16:45	73	4	77	0	0	0
17:00	117	0	117	0	0	0
17:15	101	2	103	0	0	0
17:30	131	3	134	1	0	1
17:45	117	3	120	1	0	1
18:00	93	2	95	0	0	0
18:15	87	2	89	0	0	0
18:30	70	1	71	0	0	0
18:45	53	2	55	0	0	0
Total	1733	49	1782	3	0	3

Peak Hour	16:15	to	17:15			
16:15	82	1	83	0	0	0
16:30	81	1	82	0	0	0
16:45	73	4	77	0	0	0
17:00	117	0	117	0	0	0
Total	353	6	359	0	0	0

Site No. 6
Location R730(NW) / Sea View Avenue / R730(SE)
Date 05 September 2019

Time	B to A - Sea View Avenue to R730(NW)		Veh. Total	B to C - Sea View Avenue to R730(SE)		Veh. Total
	LV	HV		LV	HV	
07:00	0	0	0	0	0	0
07:15	1	0	1	0	0	0
07:30	0	0	0	0	0	0
07:45	0	0	0	0	0	0
08:00	0	0	0	0	0	0
08:15	0	0	0	0	0	0
08:30	0	0	0	0	0	0
08:45	0	0	0	1	0	1
09:00	0	0	0	0	0	0
09:15	0	0	0	0	0	0
09:30	0	0	0	0	0	0
09:45	0	0	0	0	0	0
Total	1	0	1	1	0	1

Peak Hour	08:30	to	09:30			
08:30	0	0	0	0	0	0
08:45	0	0	0	1	0	1
09:00	0	0	0	0	0	0
09:15	0	0	0	0	0	0
Total	0	0	0	1	0	1

Date 05 September 2019

Time	B to A - Sea View Avenue to R730(NW)		Veh. Total	B to C - Sea View Avenue to R730(SE)		Veh. Total
	LV	HV		LV	HV	
14:00	0	0	0	0	0	0
14:15	0	0	0	0	0	0
14:30	0	0	0	1	0	1
14:45	0	0	0	0	0	0
15:00	0	0	0	0	0	0
15:15	0	0	0	0	0	0
15:30	0	0	0	0	0	0
15:45	0	0	0	0	0	0
16:00	0	0	0	0	0	0
16:15	0	0	0	0	0	0
16:30	0	0	0	0	0	0
16:45	0	0	0	0	0	0
17:00	0	0	0	0	0	0
17:15	0	0	0	0	0	0
17:30	0	0	0	1	0	1
17:45	0	0	0	0	0	0
18:00	1	0	1	0	0	0
18:15	0	0	0	1	0	1
18:30	0	0	0	0	0	0
18:45	0	0	0	0	0	0
Total	1	0	1	3	0	3

Peak Hour	16:15	to	17:15			
16:15	0	0	0	0	0	0
16:30	0	0	0	0	0	0
16:45	0	0	0	0	0	0
17:00	0	0	0	0	0	0
Total	0	0	0	0	0	0

Site No. 6
Location R730(NW) / Sea View Avenue / R730(SE)
Date 05 September 2019

Time	C to B - R730(SE) to Sea View Avenue		Veh. Total	C to A - R730(SE) to R730(NW)		Veh. Total
	LV	HV		LV	HV	
07:00	0	0	0	20	2	22
07:15	0	0	0	48	6	54
07:30	0	0	0	59	5	64
07:45	0	0	0	66	5	71
08:00	0	0	0	93	4	97
08:15	0	0	0	96	7	103
08:30	0	0	0	139	4	143
08:45	0	0	0	113	5	118
09:00	0	0	0	114	5	119
09:15	0	0	0	108	1	109
09:30	0	0	0	102	6	108
09:45	0	0	0	105	4	109
Total	0	0	0	1063	54	1117

Peak Hour	08:30	to	09:30			
08:30	0	0	0	139	4	143
08:45	0	0	0	113	5	118
09:00	0	0	0	114	5	119
09:15	0	0	0	108	1	109
Total	0	0	0	474	15	489

Date 05 September 2019

Time	C to B - R730(SE) to Sea View Avenue		Veh. Total	C to A - R730(SE) to R730(NW)		Veh. Total
	LV	HV		LV	HV	
14:00	0	0	0	71	4	75
14:15	0	0	0	76	4	80
14:30	0	0	0	95	1	96
14:45	0	0	0	96	5	101
15:00	0	0	0	70	4	74
15:15	0	0	0	105	2	107
15:30	0	0	0	77	3	80
15:45	0	0	0	67	4	71
16:00	0	0	0	94	0	94
16:15	0	0	0	94	5	99
16:30	0	0	0	119	4	123
16:45	0	0	0	92	0	92
17:00	0	0	0	116	4	120
17:15	0	0	0	94	1	95
17:30	1	0	1	110	3	113
17:45	1	0	1	89	3	92
18:00	0	0	0	71	0	71
18:15	0	0	0	77	1	78
18:30	0	0	0	57	0	57
18:45	0	0	0	71	3	74
Total	2	0	2	1741	51	1792

Peak Hour	16:15	to	17:15			
16:15	0	0	0	94	5	99
16:30	0	0	0	119	4	123
16:45	0	0	0	92	0	92
17:00	0	0	0	116	4	120
Total	0	0	0	421	13	434

Site No. 6
Location R730(NW) / Sea View Avenue / R730(SE)
Date 05 September 2019

Time	To Arm A - R730(NW)		Veh. Total	From Arm A - R730(NW)		Veh. Total
	LV	HV		LV	HV	
07:00	20	2	22	28	3	31
07:15	49	6	55	35	2	37
07:30	59	5	64	61	6	67
07:45	66	5	71	82	2	84
08:00	93	4	97	62	4	66
08:15	96	7	103	64	4	68
08:30	139	4	143	96	4	100
08:45	113	5	118	78	6	84
09:00	114	5	119	60	6	66
09:15	108	1	109	69	5	74
09:30	102	6	108	52	7	59
09:45	105	4	109	75	3	78
Total	1064	54	1118	762	52	814

Peak Hour	08:30	to	09:30			
08:30	139	4	143	96	4	100
08:45	113	5	118	78	6	84
09:00	114	5	119	60	6	66
09:15	108	1	109	69	5	74
Total	474	15	489	303	21	324

Date 05 September 2019

Time	To Arm A - R730(NW)		Veh. Total	From Arm A - R730(NW)		Veh. Total
	LV	HV		LV	HV	
14:00	71	4	75	63	2	65
14:15	76	4	80	82	5	87
14:30	95	1	96	84	4	88
14:45	96	5	101	70	5	75
15:00	70	4	74	80	1	81
15:15	105	2	107	83	1	84
15:30	77	3	80	82	2	84
15:45	67	4	71	98	6	104
16:00	94	0	94	87	2	89
16:15	94	5	99	82	1	83
16:30	119	4	123	81	1	82
16:45	92	0	92	73	4	77
17:00	116	4	120	117	0	117
17:15	94	1	95	101	2	103
17:30	110	3	113	132	3	135
17:45	89	3	92	118	3	121
18:00	72	0	72	93	2	95
18:15	77	1	78	87	2	89
18:30	57	0	57	70	1	71
18:45	71	3	74	53	2	55
Total	1742	51	1793	1736	49	1785

Peak Hour	16:15	to	17:15			
16:15	94	5	99	82	1	83
16:30	119	4	123	81	1	82
16:45	92	0	92	73	4	77
17:00	116	4	120	117	0	117
Total	421	13	434	353	6	359

Site No. 6
Location R730(NW) / Sea View Avenue / R730(SE)
Date 05 September 2019

Time	To Arm B - Sea View Avenue		Veh. Total	From Arm B - Sea View Avenue		Veh. Total
	LV	HV		LV	HV	
07:00	0	0	0	0	0	0
07:15	0	0	0	1	0	1
07:30	0	0	0	0	0	0
07:45	0	0	0	0	0	0
08:00	0	0	0	0	0	0
08:15	0	0	0	0	0	0
08:30	0	0	0	0	0	0
08:45	0	0	0	1	0	1
09:00	0	0	0	0	0	0
09:15	0	0	0	0	0	0
09:30	0	0	0	0	0	0
09:45	0	0	0	0	0	0
Total	0	0	0	2	0	2

Peak Hour 08:30 to 09:30

Time	LV	HV	Veh. Total	LV	HV	Veh. Total
08:30	0	0	0	0	0	0
08:45	0	0	0	1	0	1
09:00	0	0	0	0	0	0
09:15	0	0	0	0	0	0
Total	0	0	0	1	0	1

Date 05 September 2019

Time	To Arm B - Sea View Avenue		Veh. Total	From Arm B - Sea View Avenue		Veh. Total
	LV	HV		LV	HV	
14:00	0	0	0	0	0	0
14:15	0	0	0	0	0	0
14:30	1	0	1	1	0	1
14:45	0	0	0	0	0	0
15:00	0	0	0	0	0	0
15:15	0	0	0	0	0	0
15:30	0	0	0	0	0	0
15:45	0	0	0	0	0	0
16:00	0	0	0	0	0	0
16:15	0	0	0	0	0	0
16:30	0	0	0	0	0	0
16:45	0	0	0	0	0	0
17:00	0	0	0	0	0	0
17:15	0	0	0	0	0	0
17:30	2	0	2	1	0	1
17:45	2	0	2	0	0	0
18:00	0	0	0	1	0	1
18:15	0	0	0	1	0	1
18:30	0	0	0	0	0	0
18:45	0	0	0	0	0	0
Total	5	0	5	4	0	4

Peak Hour 16:15 to 17:15

Time	LV	HV	Veh. Total	LV	HV	Veh. Total
16:15	0	0	0	0	0	0
16:30	0	0	0	0	0	0
16:45	0	0	0	0	0	0
17:00	0	0	0	0	0	0
Total	0	0	0	0	0	0

Site No. 6
Location R730(NW) / Sea View Avenue / R730(SE)
Date 05 September 2019

Time	To Arm C - R730(SE)		Veh. Total	From Arm C - R730(SE)		Veh. Total
	LV	HV		LV	HV	
07:00	28	3	31	20	2	22
07:15	35	2	37	48	6	54
07:30	61	6	67	59	5	64
07:45	82	2	84	66	5	71
08:00	62	4	66	93	4	97
08:15	64	4	68	96	7	103
08:30	96	4	100	139	4	143
08:45	79	6	85	113	5	118
09:00	60	6	66	114	5	119
09:15	69	5	74	108	1	109
09:30	52	7	59	102	6	108
09:45	75	3	78	105	4	109
Total	763	52	815	1063	54	1117

Peak Hour	08:30	to	09:30			
08:30	96	4	100	139	4	143
08:45	79	6	85	113	5	118
09:00	60	6	66	114	5	119
09:15	69	5	74	108	1	109
Total	304	21	325	474	15	489

Date 05 September 2019

Time	To Arm C - R730(SE)		Veh. Total	From Arm C - R730(SE)		Veh. Total
	LV	HV		LV	HV	
14:00	63	2	65	71	4	75
14:15	82	5	87	76	4	80
14:30	84	4	88	95	1	96
14:45	70	5	75	96	5	101
15:00	80	1	81	70	4	74
15:15	83	1	84	105	2	107
15:30	82	2	84	77	3	80
15:45	98	6	104	67	4	71
16:00	87	2	89	94	0	94
16:15	82	1	83	94	5	99
16:30	81	1	82	119	4	123
16:45	73	4	77	92	0	92
17:00	117	0	117	116	4	120
17:15	101	2	103	94	1	95
17:30	132	3	135	111	3	114
17:45	117	3	120	90	3	93
18:00	93	2	95	71	0	71
18:15	88	2	90	77	1	78
18:30	70	1	71	57	0	57
18:45	53	2	55	71	3	74
Total	1736	49	1785	1743	51	1794

Peak Hour	16:15	to	17:15			
16:15	82	1	83	94	5	99
16:30	81	1	82	119	4	123
16:45	73	4	77	92	0	92
17:00	117	0	117	116	4	120
Total	353	6	359	421	13	434

Site No. 7
 Location R730(NW) / Fisher's Row / R730(SE)
 Date 05 September 2019

Time	A to C - R730(NW) to R730(SE)		Veh. Total	A to B - R730(NW) to Fisher's Row		Veh. Total
	LV	HV		LV	HV	
07:00	32	3	35	1	0	1
07:15	34	2	36	1	0	1
07:30	59	6	65	2	0	2
07:45	81	2	83	1	0	1
08:00	57	4	61	4	0	4
08:15	58	4	62	6	0	6
08:30	84	3	87	13	1	14
08:45	68	6	74	12	0	12
09:00	57	5	62	2	1	3
09:15	66	5	71	3	0	3
09:30	47	7	54	5	0	5
09:45	66	3	69	10	0	10
Total	709	50	759	60	2	62

Peak Hour	08:30	to	09:30			
08:30	84	3	87	13	1	14
08:45	68	6	74	12	0	12
09:00	57	5	62	2	1	3
09:15	66	5	71	3	0	3
Total	275	19	294	30	2	32

Date 05 September 2019

Time	A to C - R730(NW) to R730(SE)		Veh. Total	A to B - R730(NW) to Fisher's Row		Veh. Total
	LV	HV		LV	HV	
14:00	69	1	70	7	1	8
14:15	73	5	78	7	0	7
14:30	78	4	82	8	0	8
14:45	65	5	70	5	0	5
15:00	75	1	76	5	0	5
15:15	75	1	76	5	0	5
15:30	79	2	81	6	0	6
15:45	93	4	97	7	0	7
16:00	82	2	84	6	0	6
16:15	78	1	79	4	0	4
16:30	77	1	78	4	0	4
16:45	67	4	71	5	0	5
17:00	104	0	104	14	0	14
17:15	90	2	92	7	0	7
17:30	121	6	127	7	0	7
17:45	111	3	114	6	0	6
18:00	87	2	89	8	0	8
18:15	79	2	81	10	0	10
18:30	66	1	67	4	0	4
18:45	49	2	51	3	0	3
Total	1618	49	1667	128	1	129

Peak Hour	16:15	to	17:15			
16:15	78	1	79	4	0	4
16:30	77	1	78	4	0	4
16:45	67	4	71	5	0	5
17:00	104	0	104	14	0	14
Total	326	6	332	27	0	27

Site No. 7

Location R730(NW) / Fisher's Row / R730(SE)

Date 05 September 2019

Time	B to A - Fisher's Row to R730(NW)		Veh. Total	B to C - Fisher's Row to R730(SE)		Veh. Total
	LV	HV		LV	HV	
07:00	1	0	1	0	0	0
07:15	5	0	5	0	0	0
07:30	5	0	5	0	0	0
07:45	4	0	4	1	0	1
08:00	7	0	7	0	0	0
08:15	7	0	7	1	0	1
08:30	4	0	4	2	0	2
08:45	7	0	7	12	0	12
09:00	14	0	14	2	0	2
09:15	8	0	8	0	0	0
09:30	10	0	10	1	0	1
09:45	11	0	11	1	0	1
Total	83	0	83	20	0	20

Peak Hour	08:30	to	09:30			
08:30	4	0	4	2	0	2
08:45	7	0	7	12	0	12
09:00	14	0	14	2	0	2
09:15	8	0	8	0	0	0
Total	33	0	33	16	0	16

Date 05 September 2019

Time	B to A - Fisher's Row to R730(NW)		Veh. Total	B to C - Fisher's Row to R730(SE)		Veh. Total
	LV	HV		LV	HV	
14:00	9	1	10	4	0	4
14:15	2	0	2	1	0	1
14:30	3	0	3	3	0	3
14:45	23	0	23	4	0	4
15:00	7	1	8	2	0	2
15:15	8	0	8	1	0	1
15:30	8	0	8	0	0	0
15:45	10	0	10	0	0	0
16:00	9	0	9	3	0	3
16:15	9	0	9	1	0	1
16:30	5	0	5	4	0	4
16:45	8	0	8	2	0	2
17:00	6	0	6	0	0	0
17:15	7	0	7	1	0	1
17:30	8	0	8	0	0	0
17:45	9	0	9	1	0	1
18:00	9	0	9	1	0	1
18:15	4	0	4	1	0	1
18:30	3	0	3	1	0	1
18:45	8	0	8	0	0	0
Total	155	2	157	30	0	30

Peak Hour	16:15	to	17:15			
16:15	9	0	9	1	0	1
16:30	5	0	5	4	0	4
16:45	8	0	8	2	0	2
17:00	6	0	6	0	0	0
Total	28	0	28	7	0	7

Site No. 7
 Location R730(NW) / Fisher's Row / R730(SE)
 Date 05 September 2019

Time	C to B - R730(SE) to Fisher's Row		Veh. Total	C to A - R730(SE) to R730(NW)		Veh. Total
	LV	HV		LV	HV	
07:00	0	0	0	21	2	23
07:15	0	0	0	44	6	50
07:30	1	0	1	53	6	59
07:45	0	0	0	62	4	66
08:00	0	0	0	87	4	91
08:15	1	0	1	91	7	98
08:30	3	0	3	135	4	139
08:45	2	0	2	107	5	112
09:00	2	0	2	99	5	104
09:15	0	0	0	100	1	101
09:30	2	0	2	95	6	101
09:45	2	0	2	92	4	96
Total	13	0	13	986	54	1040

Peak Hour	08:30	to	09:30			
08:30	3	0	3	135	4	139
08:45	2	0	2	107	5	112
09:00	2	0	2	99	5	104
09:15	0	0	0	100	1	101
Total	7	0	7	441	15	456

Date 05 September 2019

Time	C to B - R730(SE) to Fisher's Row		Veh. Total	C to A - R730(SE) to R730(NW)		Veh. Total
	LV	HV		LV	HV	
14:00	1	0	1	87	4	91
14:15	0	0	0	75	4	79
14:30	0	0	0	92	1	93
14:45	0	0	0	76	5	81
15:00	1	0	1	60	3	63
15:15	1	0	1	100	2	102
15:30	1	0	1	66	3	69
15:45	1	1	2	57	4	61
16:00	0	0	0	86	0	86
16:15	2	0	2	87	5	92
16:30	0	0	0	114	4	118
16:45	1	0	1	83	0	83
17:00	3	0	3	109	4	113
17:15	2	0	2	85	1	86
17:30	0	0	0	103	3	106
17:45	1	0	1	82	3	85
18:00	2	0	2	61	0	61
18:15	0	0	0	74	1	75
18:30	0	0	0	53	0	53
18:45	0	0	0	65	3	68
Total	16	1	17	1615	50	1665

Peak Hour	16:15	to	17:15			
16:15	2	0	2	87	5	92
16:30	0	0	0	114	4	118
16:45	1	0	1	83	0	83
17:00	3	0	3	109	4	113
Total	6	0	6	393	13	406

Site No. 7
 Location R730(NW) / Fisher's Row / R730(SE)
 Date 05 September 2019

Time	To Arm A - R730(NW)		Veh. Total	From Arm A - R730(NW)		Veh. Total
	LV	HV		LV	HV	
07:00	22	2	24	33	3	36
07:15	49	6	55	35	2	37
07:30	58	6	64	61	6	67
07:45	66	4	70	82	2	84
08:00	94	4	98	61	4	65
08:15	98	7	105	64	4	68
08:30	139	4	143	97	4	101
08:45	114	5	119	80	6	86
09:00	113	5	118	59	6	65
09:15	108	1	109	69	5	74
09:30	105	6	111	52	7	59
09:45	103	4	107	76	3	79
Total	1069	54	1123	769	52	821

Peak Hour	08:30	to	09:30			
08:30	139	4	143	97	4	101
08:45	114	5	119	80	6	86
09:00	113	5	118	59	6	65
09:15	108	1	109	69	5	74
Total	474	15	489	305	21	326

Date 05 September 2019

Time	To Arm A - R730(NW)		Veh. Total	From Arm A - R730(NW)		Veh. Total
	LV	HV		LV	HV	
14:00	96	5	101	76	2	78
14:15	77	4	81	80	5	85
14:30	95	1	96	86	4	90
14:45	99	5	104	70	5	75
15:00	67	4	71	80	1	81
15:15	108	2	110	80	1	81
15:30	74	3	77	85	2	87
15:45	67	4	71	100	4	104
16:00	95	0	95	88	2	90
16:15	96	5	101	82	1	83
16:30	119	4	123	81	1	82
16:45	91	0	91	72	4	76
17:00	115	4	119	118	0	118
17:15	92	1	93	97	2	99
17:30	111	3	114	128	6	134
17:45	91	3	94	117	3	120
18:00	70	0	70	95	2	97
18:15	78	1	79	89	2	91
18:30	56	0	56	70	1	71
18:45	73	3	76	52	2	54
Total	1770	52	1822	1746	50	1796

Peak Hour	16:15	to	17:15			
16:15	96	5	101	82	1	83
16:30	119	4	123	81	1	82
16:45	91	0	91	72	4	76
17:00	115	4	119	118	0	118
Total	421	13	434	353	6	359

Site No. 7

Location R730(NW) / Fisher's Row / R730(SE)

Date 05 September 2019

Time	To Arm B - Fisher's Row		Veh. Total	From Arm B - Fisher's Row		Veh. Total
	LV	HV		LV	HV	
07:00	1	0	1	1	0	1
07:15	1	0	1	5	0	5
07:30	3	0	3	5	0	5
07:45	1	0	1	5	0	5
08:00	4	0	4	7	0	7
08:15	7	0	7	8	0	8
08:30	16	1	17	6	0	6
08:45	14	0	14	19	0	19
09:00	4	1	5	16	0	16
09:15	3	0	3	8	0	8
09:30	7	0	7	11	0	11
09:45	12	0	12	12	0	12
Total	73	2	75	103	0	103

Peak Hour 08:30 to 09:30

Time	LV	HV	Veh. Total	LV	HV	Veh. Total
08:30	16	1	17	6	0	6
08:45	14	0	14	19	0	19
09:00	4	1	5	16	0	16
09:15	3	0	3	8	0	8
Total	37	2	39	49	0	49

Date 05 September 2019

Time	To Arm B - Fisher's Row		Veh. Total	From Arm B - Fisher's Row		Veh. Total
	LV	HV		LV	HV	
14:00	8	1	9	13	1	14
14:15	7	0	7	3	0	3
14:30	8	0	8	6	0	6
14:45	5	0	5	27	0	27
15:00	6	0	6	9	1	10
15:15	6	0	6	9	0	9
15:30	7	0	7	8	0	8
15:45	8	1	9	10	0	10
16:00	6	0	6	12	0	12
16:15	6	0	6	10	0	10
16:30	4	0	4	9	0	9
16:45	6	0	6	10	0	10
17:00	17	0	17	6	0	6
17:15	9	0	9	8	0	8
17:30	7	0	7	8	0	8
17:45	7	0	7	10	0	10
18:00	10	0	10	10	0	10
18:15	10	0	10	5	0	5
18:30	4	0	4	4	0	4
18:45	3	0	3	8	0	8
Total	144	2	146	185	2	187

Peak Hour 16:15 to 17:15

Time	LV	HV	Veh. Total	LV	HV	Veh. Total
16:15	6	0	6	10	0	10
16:30	4	0	4	9	0	9
16:45	6	0	6	10	0	10
17:00	17	0	17	6	0	6
Total	33	0	33	35	0	35

Site No. 7

Location R730(NW) / Fisher's Row / R730(SE)

Date 05 September 2019

Time	To Arm C - R730(SE)		Veh. Total	From Arm C - R730(SE)		Veh. Total
	LV	HV		LV	HV	
07:00	32	3	35	21	2	23
07:15	34	2	36	44	6	50
07:30	59	6	65	54	6	60
07:45	82	2	84	62	4	66
08:00	57	4	61	87	4	91
08:15	59	4	63	92	7	99
08:30	86	3	89	138	4	142
08:45	80	6	86	109	5	114
09:00	59	5	64	101	5	106
09:15	66	5	71	100	1	101
09:30	48	7	55	97	6	103
09:45	67	3	70	94	4	98
Total	729	50	779	999	54	1053

Peak Hour	08:30	to	09:30			
08:30	86	3	89	138	4	142
08:45	80	6	86	109	5	114
09:00	59	5	64	101	5	106
09:15	66	5	71	100	1	101
Total	291	19	310	448	15	463

Date 05 September 2019

Time	To Arm C - R730(SE)		Veh. Total	From Arm C - R730(SE)		Veh. Total
	LV	HV		LV	HV	
14:00	73	1	74	88	4	92
14:15	74	5	79	75	4	79
14:30	81	4	85	92	1	93
14:45	69	5	74	76	5	81
15:00	77	1	78	61	3	64
15:15	76	1	77	101	2	103
15:30	79	2	81	67	3	70
15:45	93	4	97	58	5	63
16:00	85	2	87	86	0	86
16:15	79	1	80	89	5	94
16:30	81	1	82	114	4	118
16:45	69	4	73	84	0	84
17:00	104	0	104	112	4	116
17:15	91	2	93	87	1	88
17:30	121	6	127	103	3	106
17:45	112	3	115	83	3	86
18:00	88	2	90	63	0	63
18:15	80	2	82	74	1	75
18:30	67	1	68	53	0	53
18:45	49	2	51	65	3	68
Total	1648	49	1697	1631	51	1682

Peak Hour	16:15	to	17:15			
16:15	79	1	80	89	5	94
16:30	81	1	82	114	4	118
16:45	69	4	73	84	0	84
17:00	104	0	104	112	4	116
Total	333	6	339	399	13	412

Site No. 8
Location R733(NE) / R889 / R733(SW) / Mill Road
Date 05 September 2019

Time	A to D - R733(NE) to Mill Road		Veh. Total	A to C - R733(NE) to R733(SW)		Veh. Total
	LV	HV		LV	HV	
07:00	6	1	7	12	1	13
07:15	3	0	3	16	0	16
07:30	3	1	4	30	3	33
07:45	11	0	11	37	1	38
08:00	6	0	6	48	2	50
08:15	8	0	8	44	1	45
08:30	12	0	12	56	2	58
08:45	25	0	25	45	2	47
09:00	21	0	21	47	1	48
09:15	17	0	17	46	2	48
09:30	24	0	24	25	2	27
09:45	23	0	23	48	0	48
Total	159	2	161	454	17	471

Peak Hour	08:15	to	09:15			
08:15	8	0	8	44	1	45
08:30	12	0	12	56	2	58
08:45	25	0	25	45	2	47
09:00	21	0	21	47	1	48
Total	66	0	66	192	6	198

Date 05 September 2019

Time	A to D - R733(NE) to Mill Road		Veh. Total	A to C - R733(NE) to R733(SW)		Veh. Total
	LV	HV		LV	HV	
14:00	27	0	27	63	1	64
14:15	23	0	23	69	2	71
14:30	20	0	20	64	1	65
14:45	24	0	24	74	0	74
15:00	23	0	23	65	0	65
15:15	26	1	27	48	3	51
15:30	21	1	22	62	3	65
15:45	26	0	26	51	1	52
16:00	22	0	22	59	1	60
16:15	27	0	27	68	0	68
16:30	24	0	24	66	0	66
16:45	20	0	20	79	0	79
17:00	27	0	27	68	0	68
17:15	24	0	24	75	0	75
17:30	26	0	26	68	0	68
17:45	24	0	24	71	0	71
18:00	32	0	32	65	1	66
18:15	26	0	26	58	0	58
18:30	20	0	20	50	0	50
18:45	15	0	15	51	0	51
Total	477	2	479	1274	13	1287

Peak Hour	16:15	to	17:15			
16:15	27	0	27	68	0	68
16:30	24	0	24	66	0	66
16:45	20	0	20	79	0	79
17:00	27	0	27	68	0	68
Total	98	0	98	281	0	281

Site No. 8
Location R733(NE) / R889 / R733(SW) / Mill Road
Date 05 September 2019

Time	A to B - R733(NE) to R889		Veh. Total	B to A - R889 to R733(NE)		Veh. Total
	LV	HV		LV	HV	
07:00	7	0	7	0	0	0
07:15	5	0	5	0	0	0
07:30	18	0	18	0	0	0
07:45	26	0	26	0	0	0
08:00	34	0	34	0	0	0
08:15	60	1	61	0	0	0
08:30	90	1	91	0	0	0
08:45	80	1	81	0	0	0
09:00	74	0	74	0	0	0
09:15	47	0	47	0	0	0
09:30	49	0	49	0	0	0
09:45	52	1	53	0	0	0
Total	542	4	546	0	0	0

Peak Hour	08:15	to	09:15			
08:15	60	1	61	0	0	0
08:30	90	1	91	0	0	0
08:45	80	1	81	0	0	0
09:00	74	0	74	0	0	0
Total	304	3	307	0	0	0

Date 05 September 2019

Time	A to B - R733(NE) to R889		Veh. Total	B to A - R889 to R733(NE)		Veh. Total
	LV	HV		LV	HV	
14:00	45	0	45	0	0	0
14:15	49	0	49	0	0	0
14:30	64	0	64	0	0	0
14:45	57	1	58	0	0	0
15:00	54	0	54	0	0	0
15:15	51	0	51	0	0	0
15:30	63	0	63	0	0	0
15:45	54	1	55	0	0	0
16:00	46	0	46	0	0	0
16:15	57	0	57	0	0	0
16:30	60	0	60	0	0	0
16:45	53	0	53	0	0	0
17:00	59	0	59	0	0	0
17:15	60	0	60	0	0	0
17:30	70	0	70	0	0	0
17:45	56	0	56	0	0	0
18:00	44	0	44	0	0	0
18:15	37	0	37	0	0	0
18:30	36	0	36	0	0	0
18:45	39	0	39	0	0	0
Total	1054	2	1056	0	0	0

Peak Hour	16:15	to	17:15			
16:15	57	0	57	0	0	0
16:30	60	0	60	0	0	0
16:45	53	0	53	0	0	0
17:00	59	0	59	0	0	0
Total	229	0	229	0	0	0

Site No. 8
Location R733(NE) / R889 / R733(SW) / Mill Road
Date 05 September 2019

Time	B to D - R889 to Mill Road		Veh. Total	B to C - R889 to R733(SW)		Veh. Total
	LV	HV		LV	HV	
07:00	8	0	8	0	0	0
07:15	11	0	11	1	0	1
07:30	24	0	24	2	0	2
07:45	35	0	35	7	0	7
08:00	28	1	29	11	0	11
08:15	62	1	63	24	0	24
08:30	57	0	57	31	1	32
08:45	67	1	68	26	0	26
09:00	37	0	37	12	1	13
09:15	41	0	41	12	0	12
09:30	41	0	41	12	0	12
09:45	40	1	41	11	2	13
Total	451	4	455	149	4	153

Peak Hour	08:15	to	09:15			
08:15	62	1	63	24	0	24
08:30	57	0	57	31	1	32
08:45	67	1	68	26	0	26
09:00	37	0	37	12	1	13
Total	223	2	225	93	2	95

Date 05 September 2019

Time	B to D - R889 to Mill Road		Veh. Total	B to C - R889 to R733(SW)		Veh. Total
	LV	HV		LV	HV	
14:00	34	0	34	16	0	16
14:15	33	0	33	9	0	9
14:30	34	0	34	16	0	16
14:45	53	0	53	30	0	30
15:00	32	1	33	14	0	14
15:15	39	0	39	38	0	38
15:30	64	1	65	32	0	32
15:45	58	0	58	23	0	23
16:00	46	0	46	23	1	24
16:15	39	0	39	13	0	13
16:30	48	0	48	22	0	22
16:45	32	0	32	13	0	13
17:00	45	0	45	25	0	25
17:15	43	0	43	19	0	19
17:30	59	0	59	18	0	18
17:45	47	0	47	15	0	15
18:00	41	0	41	18	0	18
18:15	28	0	28	19	0	19
18:30	28	0	28	15	0	15
18:45	32	0	32	12	0	12
Total	835	2	837	390	1	391

Peak Hour	16:15	to	17:15			
16:15	39	0	39	13	0	13
16:30	48	0	48	22	0	22
16:45	32	0	32	13	0	13
17:00	45	0	45	25	0	25
Total	164	0	164	73	0	73

Site No. 8
Location R733(NE) / R889 / R733(SW) / Mill Road
Date 05 September 2019

Time	C to B - R733(SW) to R889		Veh. Total	C to A - R733(SW) to R733(NE)		Veh. Total
	LV	HV		LV	HV	
07:00	5	0	5	0	0	0
07:15	11	0	11	0	0	0
07:30	8	0	8	0	0	0
07:45	18	0	18	0	0	0
08:00	15	0	15	0	0	0
08:15	61	0	61	0	0	0
08:30	70	0	70	0	0	0
08:45	70	0	70	0	0	0
09:00	43	0	43	0	0	0
09:15	34	0	34	0	0	0
09:30	34	0	34	0	0	0
09:45	35	0	35	0	0	0
Total	404	0	404	0	0	0

Peak Hour	08:15	to	09:15			
08:15	61	0	61	0	0	0
08:30	70	0	70	0	0	0
08:45	70	0	70	0	0	0
09:00	43	0	43	0	0	0
Total	244	0	244	0	0	0

Date 05 September 2019

Time	C to B - R733(SW) to R889		Veh. Total	C to A - R733(SW) to R733(NE)		Veh. Total
	LV	HV		LV	HV	
14:00	26	0	26	0	0	0
14:15	34	0	34	0	0	0
14:30	36	1	37	0	0	0
14:45	22	0	22	0	0	0
15:00	35	0	35	0	0	0
15:15	39	0	39	0	0	0
15:30	52	1	53	0	0	0
15:45	49	1	50	0	0	0
16:00	33	1	34	0	0	0
16:15	37	0	37	0	0	0
16:30	30	0	30	0	0	0
16:45	29	0	29	0	0	0
17:00	34	0	34	0	0	0
17:15	39	0	39	0	0	0
17:30	27	0	27	0	0	0
17:45	27	0	27	0	0	0
18:00	33	0	33	0	0	0
18:15	28	0	28	0	0	0
18:30	29	0	29	0	0	0
18:45	19	0	19	0	0	0
Total	658	4	662	0	0	0

Peak Hour	16:15	to	17:15			
16:15	37	0	37	0	0	0
16:30	30	0	30	0	0	0
16:45	29	0	29	0	0	0
17:00	34	0	34	0	0	0
Total	130	0	130	0	0	0

Site No. 8
Location R733(NE) / R889 / R733(SW) / Mill Road
Date 05 September 2019

Time	C to D - R733(SW) to Mill Road		Veh. Total	D to C - Mill Road to R733(SW)		Veh. Total
	LV	HV		LV	HV	
07:00			0			0
07:15			0			0
07:30			0			0
07:45			0			0
08:00			0			0
08:15			0			0
08:30			0			0
08:45			0			0
09:00			0			0
09:15			0			0
09:30			0			0
09:45			0			0
Total	0	0	0	0	0	0

Peak Hour	08:15	to	09:15			
08:15	0	0	0	0	0	0
08:30	0	0	0	0	0	0
08:45	0	0	0	0	0	0
09:00	0	0	0	0	0	0
Total	0	0	0	0	0	0

Date 05 September 2019

Time	C to D - R733(SW) to Mill Road		Veh. Total	D to C - Mill Road to R733(SW)		Veh. Total
	LV	HV		LV	HV	
14:00			0			0
14:15			0			0
14:30			0			0
14:45			0			0
15:00			0			0
15:15			0			0
15:30			0			0
15:45			0			0
16:00			0			0
16:15			0			0
16:30			0			0
16:45			0			0
17:00			0			0
17:15			0			0
17:30			0			0
17:45			0			0
18:00			0			0
18:15			0			0
18:30			0			0
18:45			0			0
Total	0	0	0	0	0	0

Peak Hour	16:15	to	17:15			
16:15	0	0	0	0	0	0
16:30	0	0	0	0	0	0
16:45	0	0	0	0	0	0
17:00	0	0	0	0	0	0
Total	0	0	0	0	0	0

Site No. 8
Location R733(NE) / R889 / R733(SW) / Mill Road
Date 05 September 2019

Time	D to B - Mill Road to R889		Veh. Total	D to A - Mill Road to R733(NE)		Veh. Total
	LV	HV		LV	HV	
07:00			0			0
07:15			0			0
07:30			0			0
07:45			0			0
08:00			0			0
08:15			0			0
08:30			0			0
08:45			0			0
09:00			0			0
09:15			0			0
09:30			0			0
09:45			0			0
Total	0	0	0	0	0	0

Peak Hour	08:15	to	09:15			
08:15	0	0	0	0	0	0
08:30	0	0	0	0	0	0
08:45	0	0	0	0	0	0
09:00	0	0	0	0	0	0
Total	0	0	0	0	0	0

Date 05 September 2019

Time	D to B - Mill Road to R889		Veh. Total	D to A - Mill Road to R733(NE)		Veh. Total
	LV	HV		LV	HV	
14:00			0			0
14:15			0			0
14:30			0			0
14:45			0			0
15:00			0			0
15:15			0			0
15:30			0			0
15:45			0			0
16:00			0			0
16:15			0			0
16:30			0			0
16:45			0			0
17:00			0			0
17:15			0			0
17:30			0			0
17:45			0			0
18:00			0			0
18:15			0			0
18:30			0			0
18:45			0			0
Total	0	0	0	0	0	0

Peak Hour	16:15	to	17:15			
16:15	0	0	0	0	0	0
16:30	0	0	0	0	0	0
16:45	0	0	0	0	0	0
17:00	0	0	0	0	0	0
Total	0	0	0	0	0	0

Site No. 8
 Location R733(NE) / R889 / R733(SW) / Mill Road
 Date 05 September 2019

Time	To Arm A - R733(NE)		Veh. Total	From Arm A - R733(NE)		Veh. Total
	LV	HV		LV	HV	
07:00	0	0	0	25	2	27
07:15	0	0	0	24	0	24
07:30	0	0	0	51	4	55
07:45	0	0	0	74	1	75
08:00	0	0	0	88	2	90
08:15	0	0	0	112	2	114
08:30	0	0	0	158	3	161
08:45	0	0	0	150	3	153
09:00	0	0	0	142	1	143
09:15	0	0	0	110	2	112
09:30	0	0	0	98	2	100
09:45	0	0	0	123	1	124
Total	0	0	0	1155	23	1178

Peak Hour	08:15	to	09:15			
08:15	0	0	0	112	2	114
08:30	0	0	0	158	3	161
08:45	0	0	0	150	3	153
09:00	0	0	0	142	1	143
Total	0	0	0	562	9	571

Date 05 September 2019

Time	To Arm A - R733(NE)		Veh. Total	From Arm A - R733(NE)		Veh. Total
	LV	HV		LV	HV	
14:00	0	0	0	135	1	136
14:15	0	0	0	141	2	143
14:30	0	0	0	148	1	149
14:45	0	0	0	155	1	156
15:00	0	0	0	142	0	142
15:15	0	0	0	125	4	129
15:30	0	0	0	146	4	150
15:45	0	0	0	131	2	133
16:00	0	0	0	127	1	128
16:15	0	0	0	152	0	152
16:30	0	0	0	150	0	150
16:45	0	0	0	152	0	152
17:00	0	0	0	154	0	154
17:15	0	0	0	159	0	159
17:30	0	0	0	164	0	164
17:45	0	0	0	151	0	151
18:00	0	0	0	141	1	142
18:15	0	0	0	121	0	121
18:30	0	0	0	106	0	106
18:45	0	0	0	105	0	105
Total	0	0	0	2805	17	2822

Peak Hour	16:15	to	17:15			
16:15	0	0	0	152	0	152
16:30	0	0	0	150	0	150
16:45	0	0	0	152	0	152
17:00	0	0	0	154	0	154
Total	0	0	0	608	0	608

Site No. 8
Location R733(NE) / R889 / R733(SW) / Mill Road
Date 05 September 2019

Time	To Arm B - R889		Veh. Total	From Arm B - R889		Veh. Total
	LV	HV		LV	HV	
07:00	12	0	12	8	0	8
07:15	16	0	16	12	0	12
07:30	26	0	26	26	0	26
07:45	44	0	44	42	0	42
08:00	49	0	49	39	1	40
08:15	121	1	122	86	1	87
08:30	160	1	161	88	1	89
08:45	150	1	151	93	1	94
09:00	117	0	117	49	1	50
09:15	81	0	81	53	0	53
09:30	83	0	83	53	0	53
09:45	87	1	88	51	3	54
Total	946	4	950	600	8	608

Peak Hour	08:15	to	09:15			
08:15	121	1	122	86	1	87
08:30	160	1	161	88	1	89
08:45	150	1	151	93	1	94
09:00	117	0	117	49	1	50
Total	548	3	551	316	4	320

Date 05 September 2019

Time	To Arm B - R889		Veh. Total	From Arm B - R889		Veh. Total
	LV	HV		LV	HV	
14:00	71	0	71	50	0	50
14:15	83	0	83	42	0	42
14:30	100	1	101	50	0	50
14:45	79	1	80	83	0	83
15:00	89	0	89	46	1	47
15:15	90	0	90	77	0	77
15:30	115	1	116	96	1	97
15:45	103	2	105	81	0	81
16:00	79	1	80	69	1	70
16:15	94	0	94	52	0	52
16:30	90	0	90	70	0	70
16:45	82	0	82	45	0	45
17:00	93	0	93	70	0	70
17:15	99	0	99	62	0	62
17:30	97	0	97	77	0	77
17:45	83	0	83	62	0	62
18:00	77	0	77	59	0	59
18:15	65	0	65	47	0	47
18:30	65	0	65	43	0	43
18:45	58	0	58	44	0	44
Total	1712	6	1718	1225	3	1228

Peak Hour	16:15	to	17:15			
16:15	94	0	94	52	0	52
16:30	90	0	90	70	0	70
16:45	82	0	82	45	0	45
17:00	93	0	93	70	0	70
Total	359	0	359	237	0	237

Site No. 8
Location R733(NE) / R889 / R733(SW) / Mill Road
Date 05 September 2019

Time	To Arm C - R733(SW)		Veh. Total	From Arm C - R733(SW)		Veh. Total
	LV	HV		LV	HV	
07:00	12	1	13	5	0	5
07:15	17	0	17	11	0	11
07:30	32	3	35	8	0	8
07:45	44	1	45	18	0	18
08:00	59	2	61	15	0	15
08:15	68	1	69	61	0	61
08:30	87	3	90	70	0	70
08:45	71	2	73	70	0	70
09:00	59	2	61	43	0	43
09:15	58	2	60	34	0	34
09:30	37	2	39	34	0	34
09:45	59	2	61	35	0	35
Total	603	21	624	404	0	404

Peak Hour 08:15 to 09:15

Time	LV	HV	Veh. Total	LV	HV	Veh. Total
08:15	68	1	69	61	0	61
08:30	87	3	90	70	0	70
08:45	71	2	73	70	0	70
09:00	59	2	61	43	0	43
Total	285	8	293	244	0	244

Date 05 September 2019

Time	To Arm C - R733(SW)		Veh. Total	From Arm C - R733(SW)		Veh. Total
	LV	HV		LV	HV	
14:00	79	1	80	26	0	26
14:15	78	2	80	34	0	34
14:30	80	1	81	36	1	37
14:45	104	0	104	22	0	22
15:00	79	0	79	35	0	35
15:15	86	3	89	39	0	39
15:30	94	3	97	52	1	53
15:45	74	1	75	49	1	50
16:00	82	2	84	33	1	34
16:15	81	0	81	37	0	37
16:30	88	0	88	30	0	30
16:45	92	0	92	29	0	29
17:00	93	0	93	34	0	34
17:15	94	0	94	39	0	39
17:30	86	0	86	27	0	27
17:45	86	0	86	27	0	27
18:00	83	1	84	33	0	33
18:15	77	0	77	28	0	28
18:30	65	0	65	29	0	29
18:45	63	0	63	19	0	19
Total	1664	14	1678	658	4	662

Peak Hour 16:15 to 17:15

Time	LV	HV	Veh. Total	LV	HV	Veh. Total
16:15	81	0	81	37	0	37
16:30	88	0	88	30	0	30
16:45	92	0	92	29	0	29
17:00	93	0	93	34	0	34
Total	354	0	354	130	0	130

Site No. 8
Location R733(NE) / R889 / R733(SW) / Mill Road
Date 05 September 2019

Time	To Arm D - Mill Road		Veh. Total	From Arm D - Mill Road		Veh. Total
	LV	HV		LV	HV	
07:00	14	1	15	0	0	0
07:15	14	0	14	0	0	0
07:30	27	1	28	0	0	0
07:45	46	0	46	0	0	0
08:00	34	1	35	0	0	0
08:15	70	1	71	0	0	0
08:30	69	0	69	0	0	0
08:45	92	1	93	0	0	0
09:00	58	0	58	0	0	0
09:15	58	0	58	0	0	0
09:30	65	0	65	0	0	0
09:45	63	1	64	0	0	0
Total	610	6	616	0	0	0

Peak Hour	08:15	to	09:15			
08:15	70	1	71	0	0	0
08:30	69	0	69	0	0	0
08:45	92	1	93	0	0	0
09:00	58	0	58	0	0	0
Total	289	2	291	0	0	0

Date 05 September 2019

Time	To Arm D - Mill Road		Veh. Total	From Arm D - Mill Road		Veh. Total
	LV	HV		LV	HV	
14:00	61	0	61	0	0	0
14:15	56	0	56	0	0	0
14:30	54	0	54	0	0	0
14:45	77	0	77	0	0	0
15:00	55	1	56	0	0	0
15:15	65	1	66	0	0	0
15:30	85	2	87	0	0	0
15:45	84	0	84	0	0	0
16:00	68	0	68	0	0	0
16:15	66	0	66	0	0	0
16:30	72	0	72	0	0	0
16:45	52	0	52	0	0	0
17:00	72	0	72	0	0	0
17:15	67	0	67	0	0	0
17:30	85	0	85	0	0	0
17:45	71	0	71	0	0	0
18:00	73	0	73	0	0	0
18:15	54	0	54	0	0	0
18:30	48	0	48	0	0	0
18:45	47	0	47	0	0	0
Total	1312	4	1316	0	0	0

Peak Hour	16:15	to	17:15			
16:15	66	0	66	0	0	0
16:30	72	0	72	0	0	0
16:45	52	0	52	0	0	0
17:00	72	0	72	0	0	0
Total	262	0	262	0	0	0



Zones: CP1 to CP6
Location: Wexford Town
Date: Thursday 05 September 2019

	ZONE CP1	ZONE CP2	ZONE CP3	ZONE CP4	ZONE CP5	ZONE CP6
Total No. Of Spaces	57 / 4 Disabled	6	74	320 / 13 Disabled	127 / 4 Disabled	14

Time	ZONE CP1		ZONE CP2		ZONE CP3		ZONE CP4		ZONE CP5		ZONE CP6	
Class	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV
10:00	50/3	0	3	1	68	0	192/5	0	123	0	11	0
11:00	48/3	0	4	1	71	0	208/4	0	123	0	14	0
12:00	45/4	0	4	1	72	0	223/4	0	120	0	13	0
13:00	49/3	0	4	1	73	0	227/4	0	122	0	11	0
14:00	50/4	0	5	1	67	0	201/4	0	117	0	11	0
15:00	48/1	0	5	1	63	0	174/5	0	116/1	0	12	0
16:00	50/3	0	4	1	57	0	167/4	0	112/1	0	12	0
17:00	47/2	0	5	1	50	0	144/4	0	96	0	12	0



10370 / Wexford Town

September 2019

Parking Occupancy Survey

Zones: CP7 to CP9
 Location: Wexford Town
 Date: Monday 16 September 2019

	ZONE CP7	ZONE CP8	ZONE CP9
Total No. Of Spaces	38 / 2 disabled/ 2 electric	140 / 4 disabled	132 / 2 disabled

Time	ZONE CP7		ZONE CP8		ZONE CP9	
Class	LV	HV	LV	HV	LV	HV
10:00	38/2/2	0	90/2	0	58/0	0
11:00	35/0/2	0	114/2	0	77/0	0
12:00	24/0/2	0	104/2	0	83/1	0
13:00	36/1/1	0	99/2	0	92/0	0
14:00	33/1/1	0	101/2	0	94/0	0
15:00	32/2/1	0	85/2	0	85/0	0
16:00	31/1/1	0	84/1	0	68/0	0
17:00	31/1/1	0	76/1	0	61/0	0



Ireland

9 City Gate,
Lower Bridge Street,
Dublin 8

Tel: 01 633 4725
Fax: 01 633 4562

**ROUGHAN & O'DONOVAN
WEXFORD
TRAFFIC SURVEY**

**SURVEY REPORT
OCTOBER 2019**

PROJECT NO.	10501
CHECKED	P. MURRAY
DATE	04/10/2019
CONTACT	A.CHAMBERS
REVISION	

CONTENTS

Introduction

Car Park Occupancy Counts

Diagram 10501-01

Appendix A – Vehicle Categories

INTRODUCTION

Nationwide Data Collection (NDC) was instructed by Roughan & O'Donovan to undertake the following surveys in Co. Wexford.

A general location plan is given in Diagram 10501-01.

CAR PARK OCCUPANCY COUNTS

Car park occupancy counts were undertaken at the following areas:

Zones	Location	Days / Dates
1	Bride Street Car Park	Tuesday 1 st October 2019
2	Ropeyard/Kings Street Car Park	
3	Bride Street Church Car Park	
4	Clayton/Whites Hotel Underground Car Park	

* Exact locations are shown in Diagram 10501-01

The zones were surveyed using manual staff recording the total number of vehicles parked along each area.

The surveys were carried out between 10:00 to 17:00.

The surveyors undertook 60 minute beats with the first beat at 10:00 and the last beat at 17:00.

SITE REPORT

Weather Clear and dry.

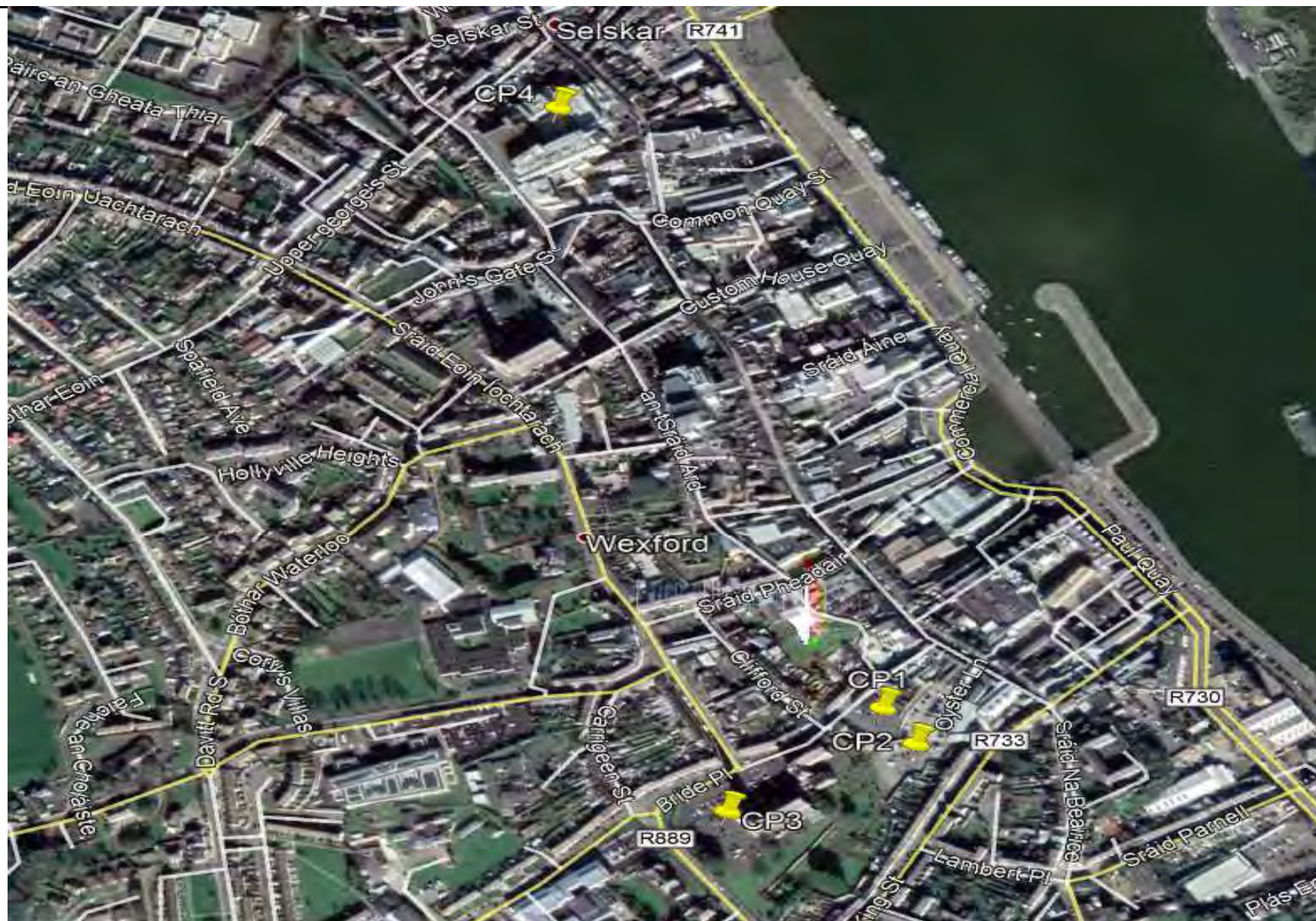
Accidents None.

Roadworks None.

Queues Not required.

Pedestrians Not required.

General Site Notes. No additional site notes.



Sites / Location: Survey Date: Survey Times:	CP1 to CP4 / Wexford	Project No: 10501	Diagram No: 10501-01	Drawn By: AC
	Tuesday 1st October 2019	Project Name: WEXFORD CAR PARK SURVEYS		
	10:00 to 17:00	Diagram Title: General Location Plan		



10501 / Wexford Town

September 2019

Parking Occupancy Survey

Zones: CP1 to CP4
Location: Wexford Town
Date: Tuesday 01 October 2019

	ZONE CP1	ZONE CP2	ZONE CP3	ZONE CP4
Total No. Of Spaces	80 / 3 Disabled	65	180 / 5 Disabled	225 / 4 Disabled / 2 Electric Car

Time	ZONE CP1		ZONE CP2		ZONE CP3		ZONE CP4	
Class	LV	HV	LV	HV	LV	HV	LV	HV
10:00	32/1	0	23	0	132/3	0	196/3/0	0
11:00	50/1	0	29	0	134/3	0	197/2/0	0
12:00	61/1	0	38	0	141/1	0	199/2/1	0
13:00	62/0	0	20	0	139/0	0	199/1/1	0
14:00	56/0	0	20	0	111/0	0	190/1/0	0
15:00	43/1	0	23	0	109/0	0	184/1/0	0
16:00	43/0	0	22	0	103/1	0	185/2/1	0
17:00	46/0	0	18	0	90/0	0	170/2/1	0

Appendix AA2

Addendum to Appendix 5.5

Traffic Calculations

TRAFFIC PREDICTION CALCULATIONS BASED ON TRICS ANALYSIS AND CSO SAPS DATA

Time Range	On Foot	Bicycle	Public Transport	Arrivals			Total Arrivals	On Foot	Bicycle	Public Transport	Departures			Total Departures	On Foot	Bicycle	Public Transport	2-WAY			Total 2 way
				Veh Driver	Veh Passenger	Other					Veh Driver	Veh Passenger	Other					Veh Driver	Veh Passenger	Other	
00:00-01:00																					
01:00-02:00																					
02:00-03:00																					
03:00-04:00																					
04:00-05:00																					
05:00-06:00																					
06:00-07:00																					
07:00-08:00	26	3	3	94	12	12	151	6	1	1	21	3	3	33	32	4	4	115	15	15	184
08:00-09:00	89	10	11	321	42	42	516	15	2	2	55	7	7	88	105	12	13	377	50	49	606
09:00-10:00	67	8	8	244	32	32	391	28	3	3	100	13	13	161	95	11	12	344	45	45	553
10:00-11:00				149			301				108			249				257			550
11:00-12:00				118			260				124			267				242			527
12:00-13:00				108			336				122			382				230			718
13:00-14:00				128			425				126			401				254			825
14:00-15:00				127			312				118			290				245			601
15:00-16:00				89			180				127			298				216			479
16:00-17:00	32	4	4	115	15	15	185	68	8	9	246	32	32	395	100	11	13	361	48	47	580
17:00-18:00	22	2	3	78	10	10	125	82	9	10	297	39	39	476	104	12	13	374	49	49	600
18:00-19:00	9	1	1	32	4	4	51	28	3	4	102	13	13	164	37	4	5	135	18	18	217
19:00-20:00	3	0	0	12	2	2	20	3	0	0	11	1	1	18	7	1	1	24	3	3	38
20:00-21:00	4	0	0	13	2	2	21	3	0	0	11	1	1	18	7	1	1	24	3	3	39
21:00-22:00	2	0	0	6	1	1	10	4	0	0	13	2	2	21	5	1	1	19	3	3	31
22:00-23:00																					
23:00-24:00																					
Daily Trip Rates:				1635			4828				1580			4797				3217			9625

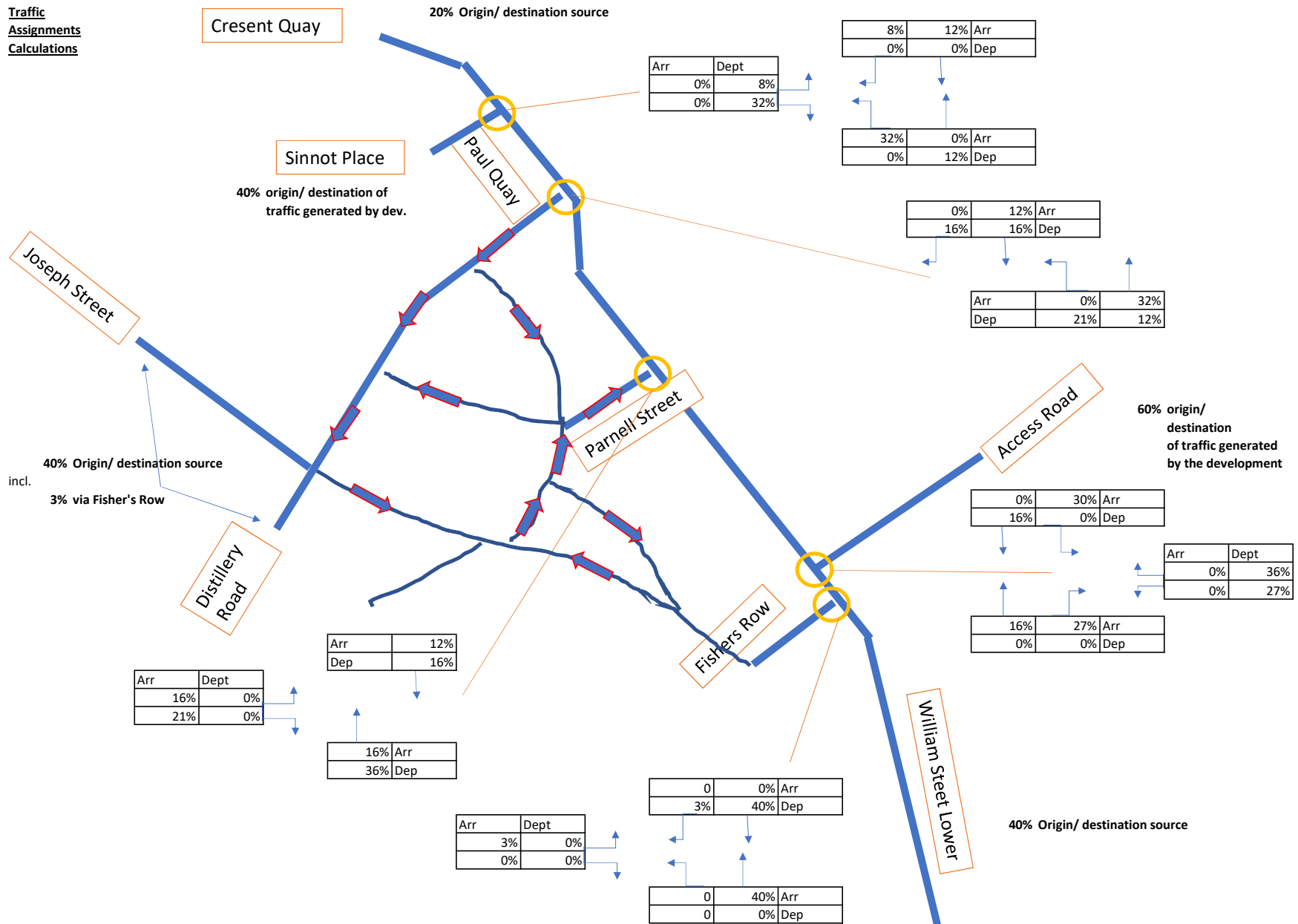
SAPS data from 2016 CSO Census

Means of 1 Work	School or C Total		% (work)
On foot	1,348	1,273	2,621
Bicycle	150	40	190
Bus, minib	159	209	368
Train, DAR	10	13	23
Motorcycle	26	1	27
Car driver	4,480	122	4,602
Car passen	641	2,016	2,657
Van	387	6	393
Other (incl	19	0	19
Work main	219	2	221
Not stated	374	158	532
Total	7,813	3,840	11,653

TRICS Vehicular Data

	Arrivals						Departure						Two Way			
	Apts	Offices	Hotel	Cultural	Total	Apts	Offices	Hotel	Cultural	Total	Apts	Offices	Hotel	Cultural	Total	
10:00	3	130	10	6	149	5	87	13	3	108	8	216	23	9	257	
11:00	4	100	8	6	118	5	101	11	6	124	10	201	19	12	242	
12:00	6	86	11	5	108	4	102	11	5	122	10	188	22	9	230	
13:00	4	107	12	5	128	6	101	13	6	126	10	208	25	11	254	
14:00	5	101	14	6	127	5	96	10	6	118	10	197	25	13	245	
15:00	5	66	13	5	89	3	106	11	7	127	8	172	24	12	216	

**Traffic
Assignments
Calculations**



AADT; Network Existing and Predicted

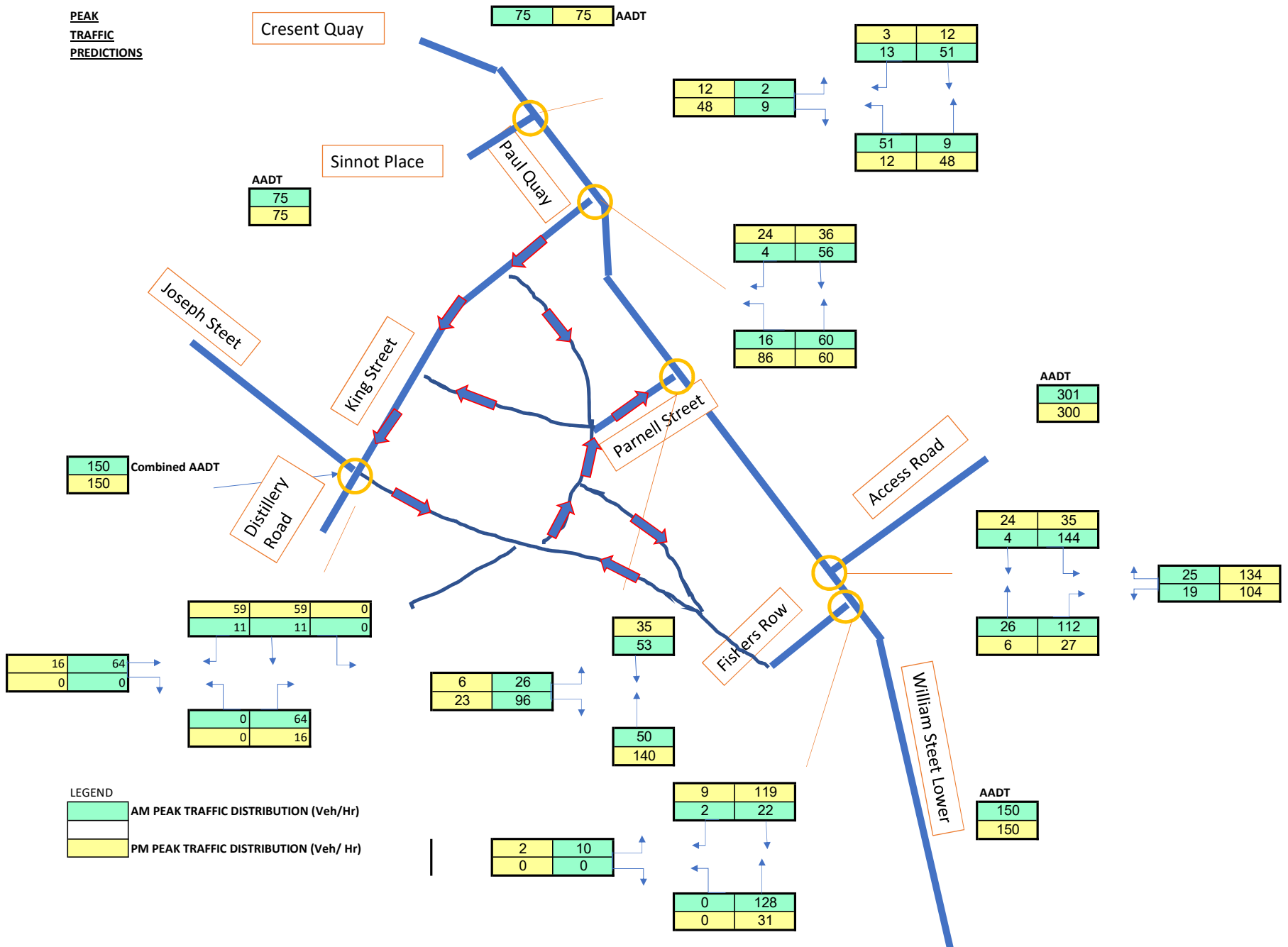


Note: The Trinity Wharf Development is proposed to have approximately 600 car parking spaces of which only cater for 60% of the parking demand for the site based on TRICS accumulation calculations. The remaining 40% is proposed to be accommodated with the under-occupied public all day car parks including Sinnot Place.

Note: The proposed Trinity Wharf development is anticipated to have <30HGVs / day

	Baseline		Post- Development		Average Speed, kph	Δ%	
	AADT	HGV	AADT	HGV		AADT	HGV
Trinity Street	10154	157	11826	169	38	16%	8%
William Street Lower	10208	510	11494	558	38	13%	9%
Fisher's Row	1380	14	1476	14	30	7%	0%
Parnell Street	2918	12	3605	12	32	24%	0%
King Street	4129	41	4793	53	24	16%	29%
Paul Quay	12437	249	12694	249	30	2%	0%
Access Road	0	0	3217	0	30	na	na
Circulatory Rd	0	0	322	0	20	na	na

**PEAK
TRAFFIC
PREDICTIONS**



Peak Development Junction Turning Movement Calculations based on Traffic Assignments
Access Junction with Trinity Street

September 2019 JTC Survey

The survey company renamed differntely the arms part of the junction

O\D	A	B	C	Total
A - 1	-	0	324	324
B - 2	0	-	1	1
C - 3	489	0	-	489
Total	489	0	325	814

O\D	A	B	C	Total
A - 1	-	0	359	359
B - 2	0	-	0	0
C - 3	434	0	-	434
Total	434	0	359	793

A - Trinity Street North A-1
 B - Access Road
 C - Trinity Street South C-3
 D - Seaview Avenue B-2

Linsig Turning Counts Props

AM Peak 08:30 - 09:30

O\D	A	B	C	D	Total
A	-	0	324	0	324
B	0	-	0	0	0
C	489	0	-	0	489
D	0	0	1	-	1
Total	489	0	324	0	813

PM Peak 16:15 - 17:15

O\D	A	B	C	D	Total
A	-	0	359	0	359
B	0	-	0	0	0
C	434	0	-	0	434
	0	0	0	-	0
Total	434	0	359	0	793

Traffic Generated by Trinity Wharf

AM Peak 08:30 - 09:30

O\D	A	B	C	D	Total
A	-	144	4	0	149
B	25	-	19	0	44
C	26	112	0	0	138
D	0	0	0	0	0
Total	50	257	24	0	331

PM Peak 16:15 - 17:15

O\D	A	B	C	D	Total
A	-	35	24	0	59
B	134	-	104	0	238
C	6	27	-	0	34
	0	0	0	0	0
Total	140	62	128	0	330

Peak Development of Site

AM Peak 08:30 - 09:30

O\D	A	B	C	D	Total
A	-	144	328	0	473
B	25	-	19	0	44
C	515	112	-	0	627
D	0	0	1	0	1
Total	539	257	348	0	1144

PM Peak 16:15 - 17:15

O\D	A	B	C	D	Total
A	-	35	383	0	418
B	134	-	104	0	238
C	440	27	-	0	468
	0	0	0	0	0
Total	574	62	487	0	1123

Post Development Junction Turning Movement Calculations based on Traffic Assignments

Trinity Street / Fishers Road/ William Street South - JTC Aug 2018

A - Trinity Street North
B - Fisher Row
C - William Street South

September 2019 JTC

AM Peak	<i>08:30 - 09:30</i>
----------------	----------------------

O\D	A	B	C	Total
A	0	32	294	326
B	33	0	16	49
C	456	7	0	463
Total	489	39	310	838

Traffic Generated by Trinity Wharf

AM Peak	<i>08:30 - 09:30</i>
----------------	----------------------

O\D	A	B	C	Total
A	0	2	22	24
B	10	0	0	10
C	128	0	0	128
Total	138	2	22	162

Peak Development Year

AM Peak	<i>08:30 - 09:30</i>
----------------	----------------------

O\D	A	B	C	Total
A	0	34	316	350
B	43	0	16	59
C	584	7	0	591
Total	627	41	332	1000

PM Peak	<i>16:15 - 17:15</i>
----------------	----------------------

O\D	A	B	C	Total
A	-	27	332	359
B	28	-	7	35
C	406	6	-	412
Total	434	33	339	806

PM Peak	<i>16:15 - 17:15</i>
----------------	----------------------

O\D	A	B	C	Total
A	0	9	119	128
B	2	0	0	2
C	31	0	0	31
Total	34	9	119	161

PM Peak	<i>16:15 - 17:15</i>
----------------	----------------------

O\D	A	B	C	Total
A	0	36	451	487
B	30	0	7	37
C	437	6	0	443
Total	468	42	458	967

Picady Turning Counts Props

AM Baseline			
From\To	Arm A	Arm B	Arm C
Arm A - William Street South	0	7	456
Arm B - Fisher Row	16	0	33
Arm C - Trinity Street North	294	32	0

PM Baseline			
From\To	Arm A	Arm B	Arm C
Arm A	0	6	406
Arm B	7	0	28
Arm C	332	27	0

AM Peak Development Year			
From\To	Arm A	Arm B	Arm C
Arm A - William Street South	0	7	584
Arm B - Fisher Row	16	0	43
Arm C - Trinity Street North	316	34	0

PM Peak Development Year			
From\To	Arm A	Arm B	Arm C
Arm A	0	6	437
Arm B	7	0	30
Arm C	451	36	0

Peak Development Junction Turning Movement Calculations based on Traffic Assignments
Trinity Street / Parnell Street

A - Trinity Street North
 B - Parnell Street
 C - Trinity Street South

September 2019 JTC

AM Peak	<i>08:30 - 09:30</i>
----------------	----------------------

O\D	A	B	C	Total
A	0	0	308	308
B	193	0	46	239
C	479	0	0	479
Total	672	0	354	1026

Traffic Generated by Trinity Wharf

AM Peak	<i>08:30 - 09:30</i>
----------------	----------------------

O\D	A	B	C	Total
A	0	0	53	53
B	26	0	96	122
C	50	0	0	50
Total	76	0	149	225

Peak Development

AM Peak	<i>08:30 - 09:30</i>
----------------	----------------------

O\D	A	B	C	Total
A	0	0	361	361
B	219	0	142	361
C	529	0	0	529
Total	748	0	503	1251

Picady Turning Counts Props

AM Baseline			
From\To	Arm A	Arm B	Arm C
Arm A - Trinity Street South	0	0	479
Arm B - Parnell Street	46	0	193
Arm C - Trinity Street South	308	0	0

AM Peak Development Year			
From\To	Arm A	Arm B	Arm C
Arm A - Trinity Street South	0	0	529
Arm B - Parnell Street	142	0	219
Arm C - Trinity Street South	361	0	0

PM Peak	<i>16:15 - 17:15</i>
----------------	----------------------

O\D	A	B	C	Total
A	0	0	332	332
B	146	0	37	183
C	433	0	0	433
Total	579	0	369	948

PM Peak	<i>16:15 - 17:15</i>
----------------	----------------------

O\D	A	B	C	Total
A	0	0	35	35
B	6	0	23	30
C	140	0	0	140
Total	146	0	59	205

PM Peak	<i>16:15 - 17:15</i>
----------------	----------------------

O\D	A	B	C	Total
A	0	0	367	367
B	152	0	60	213
C	573	0	0	573
Total	725	0	428	1153

PM Baseline			
From\To	Arm A	Arm B	Arm C
Arm A	0	0	433
Arm B	37	0	146
Arm C	332	0	0

PM Peak Development Year			
From\To	Arm A	Arm B	Arm C
Arm A	0	0	573
Arm B	60	0	152
Arm C	367	0	0

Post Development Junction Turning Movement Calculations based on Traffic Assignments
Trinity Street/ Pual Quay/ King Street Junction

A - Paul Quay Junction

B - King Street

C - Trinity Street

September 2019 JTC

AM Peak 08:15 - 09:15

O\D	A	B	C	Total
A	-	147	298	445
B	-	-	-	0
C	524	141	-	665
Total	524	288	298	1110

PM Peak 16:30- 17:30

O\D	A	B	C	Total
A	-	210	321	531
B	-	-	-	0
C	416	103	-	519
Total	416	313	321	1050

Traffic Generated by Trinity Wharf

AM Peak 08:15 - 09:15

O\D	A	B	C	Total
A	-	4	56	60
B	0	-	0	0
C	60	16	-	76
Total	60	20	56	136

PM Peak 16:30- 17:30

O\D	A	B	C	Total
A	-	24	36	60
B	0	-	0	0
C	60	86	-	146
Total	60	110	36	206

Peak Development Year

AM Peak 08:15 - 09:15

O\D	A	B	C	Total
A	-	151	354	505
B	0	-	0	0
C	584	157	-	741
Total	584	308	354	1246

PM Peak 16:30- 17:30

O\D	A	B	C	Total
A	-	234	357	591
B	0	-	0	0
C	476	189	-	665
Total	476	423	357	1256

Post Development Junction Turning Movement Calculations based on Traffic Assignments
Distillery Road

September 2019 JTC Survey

The survey company renamed differently the arms part of the junction

O\D	A	B	C	D	Total
A - 1	-	307	198	66	571
B - 2	-	-	95	225	320
C - 3	-	244	-	0	244
D - 4	-	-	-	-	0
Total	0	551	293	291	1135

O\D	A	B	C	D	Total
A - 1	-	229	281	98	608
B - 2	-	-	73	164	237
C - 3	-	130	-	0	130
D - 4	-	-	-	-	0
Total	0	359	354	262	975

A - Joseph Street
B - King Street
C - Mill Road
D - Distillery Road

Linsig Turning Counts Props

AM Peak 08:15 - 09:15

O\D	A	B	C	D	Total
A	0	0	225	95	320
B	307	0	66	198	571
C	0	0	0	0	0
D	244	0	0	0	244
Total	551	0	291	293	1135

PM Peak 16:15 - 17:15

O\D	A	B	C	D	Total
A	0	0	164	73	237
B	229	0	98	281	608
C	0	0	0	0	0
D	130	0	0	0	130
Total	359	0	262	354	975

Traffic Generated by Trinity Wharf

AM Peak 08:15 - 09:15

O\D	A	B	C	D	Total
A	0	0	64	0	64
B	11	0	0	11	22
C	0	0	0	0	0
D	0	0	64	0	64
Total	11	0	128	11	150

PM Peak 16:15 - 17:15

O\D	A	B	C	D	Total
A	0	0	16	0	16
B	59	0	0	59	118
C	0	0	0	0	0
D	0	0	16	0	16
Total	59	0	32	59	150

Peak Development Year

AM Peak 08:15 - 09:15

O\D	A	B	C	D	Total
A	-	0	289	95	384
B	318	0	66	209	593
C	0	0	0	0	0
D	244	0	64	0	308
Total	562	0	419	304	1285

PM Peak 16:15 - 17:15

O\D	A	B	C	D	Total
A	0	0	180	73	253
B	288	0	98	340	726
C	0	0	0	0	0
D	130	0	16	0	146
Total	288	0	278	413	1125

Office Parking Demand

<u>Land Use</u>	<u>Scale (sq.m.)</u>
Office Building A	5452
Office Building B	6105
Office Building C	4990
	<u>16547</u>

Estimated office occupancy of 1 person / 20sqm = 827 employees

x 63% commuting in single occupancy vehicle= 521 spaces

Total Demand	Spaces without MMP	Spaces with MMP		
16547 sqm. GFA Offices	521	469		
120 bedrooms at 33% day occupancy	40	40		
58 apartments	58	58		
	<u>619</u>	<u>567</u>		
Estimated Core Demand	619	567		
Provision	<u>509</u>	<u>509</u>		
Deficit	<u>110</u>	<u>58</u>	18%	10%

Hotel Parking Demand Monday to Friday based on Car Parking Survey and Accumulation of TRICS**ARR. & Dep.**

	Arr.	Dep.	Diff.	Acc.
<u>Assumed Occupancy before 07:00</u>				
07:00-08:00	9	9	0	73
08:00-09:00	11	24	-13	60
09:00-10:00	12	19	-7	53
10:00-11:00	10	13	-3	49
11:00-12:00	8	11	-4	46
12:00-13:00	11	11	0	45
13:00-14:00	12	13	-1	45
14:00-15:00	14	10	4	49
15:00-16:00	13	11	2	50
16:00-17:00	15	12	3	53
17:00-18:00	19	12	7	60 * see note below
18:00-19:00	17	11	6	66
19:00-20:00	16	15	1	67
20:00-21:00	11	8	3	70
21:00-22:00	8	9	-1	69

* 50% occupancy - Typical rate based on average occupancy of other hotels located in Wexford Town captured in car parking survey in November 2016 at 5pm.

Appendix AA3

Addendum to Appendix 5.6

Junction Analysis Reports

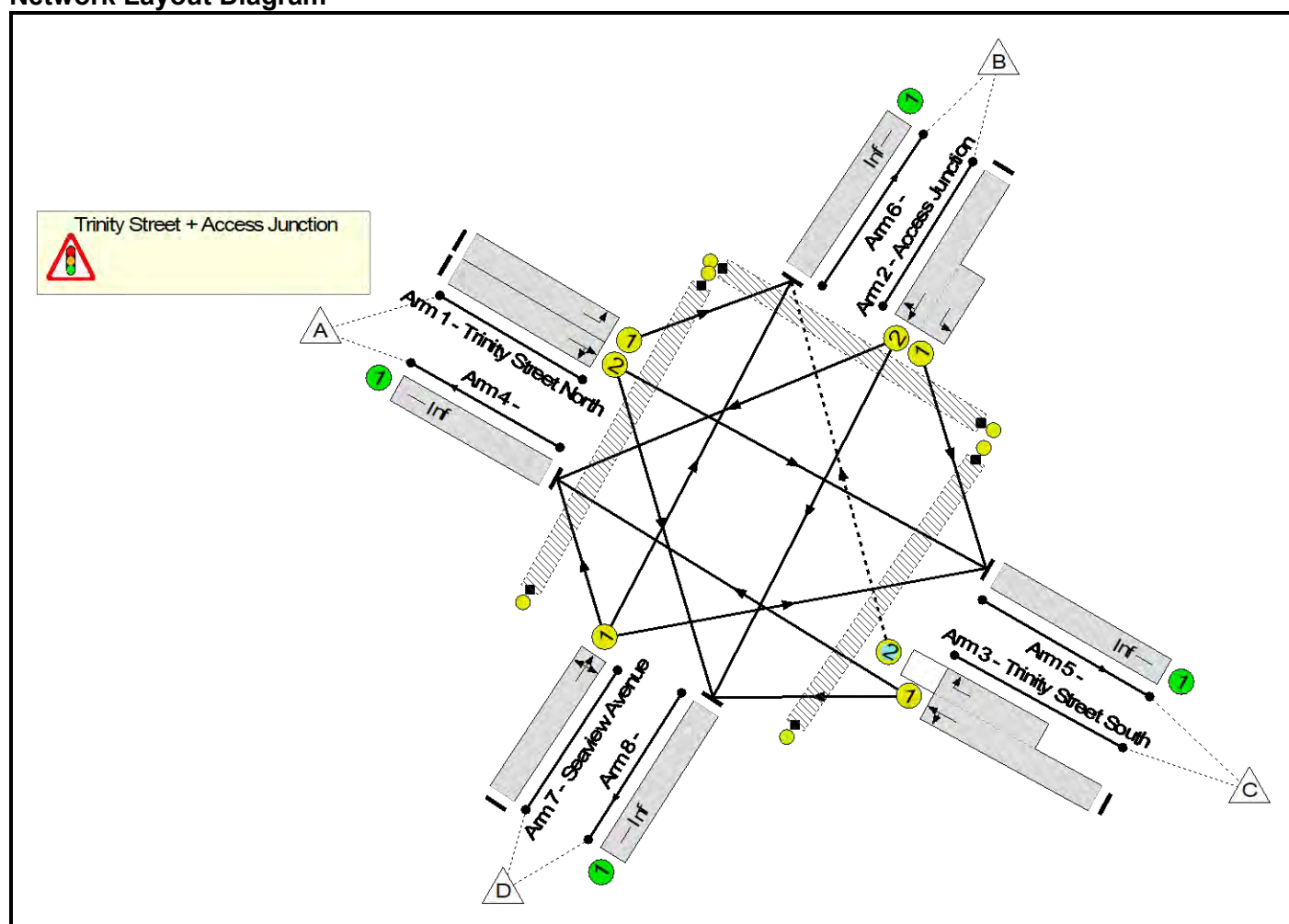
Basic Results Summary
Basic Results Summary

User and Project Details

Project:	18133 Trinity Wharf Masterplan
Title:	Trinity Street Access Junction
Location:	Wexford
File name:	Access Junction Trinity Street - Peak Development.lsg3x
Author:	JA
Company:	ROD
Address:	Dublin 18
Notes:	The loading bay in front of the hardware store is restricted to off-peak hours. However, the model accounts for the use of the loading bay in it modelling.

Scenario 1: 'AM Peak' (FG2: 'PM Peak', Plan 1: 'Network Control Plan 1')

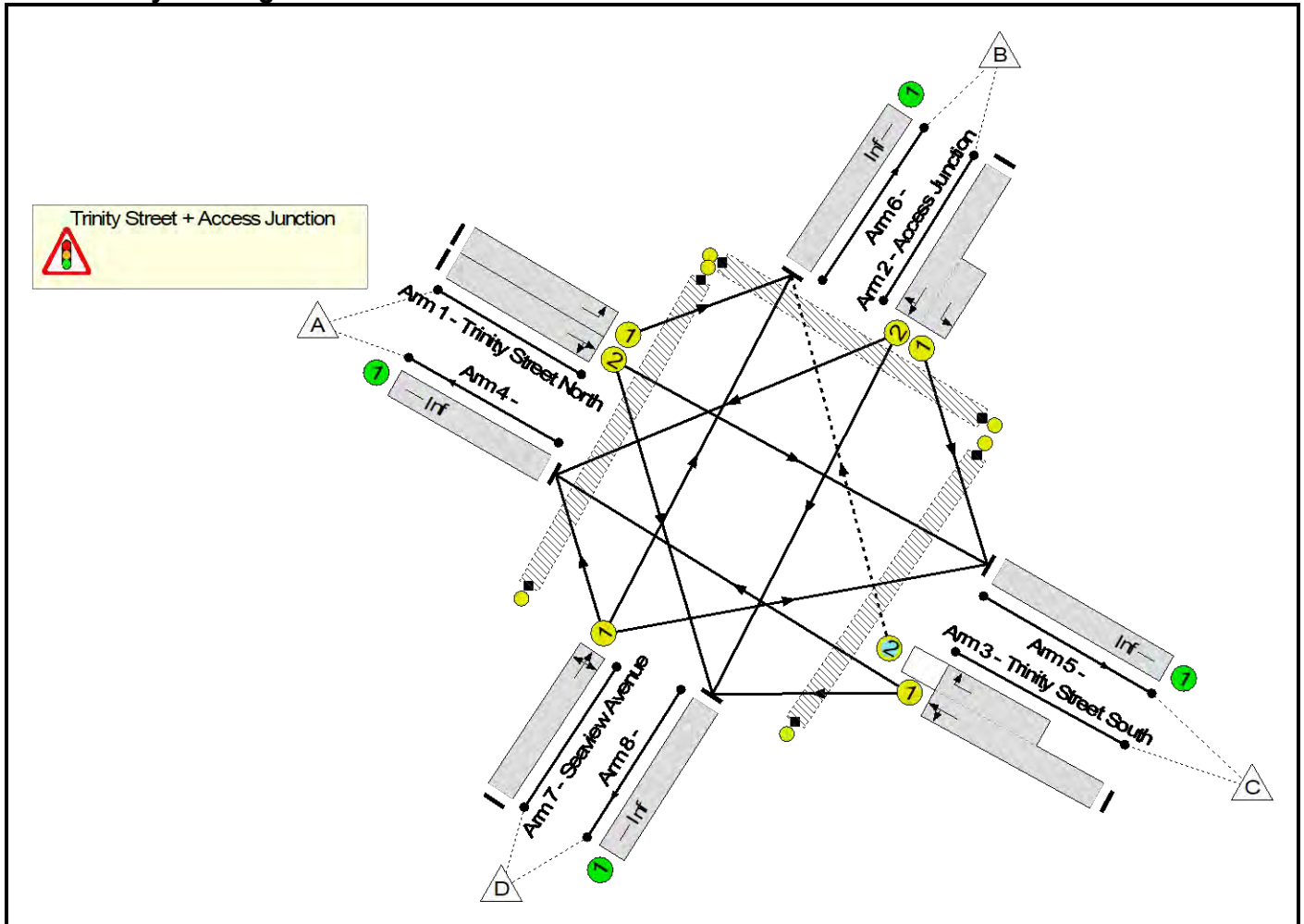
Network Layout Diagram



Network Results

C1	PRC for Signalled Lanes (%):	81.7	Total Delay for Signalled Lanes (pcuHr):	4.23	Cycle Time (s): 90
	PRC Over All Lanes (%):	81.7	Total Delay Over All Lanes(pcuHr):	4.23	

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Trinity Street Access Junction	-	-	-		-	-	-	-	-	-	49.6%	24	2	1	7.3	-	-
Trinity Street + Access Junction	-	-	-		-	-	-	-	-	-	49.6%	24	2	1	7.3	-	-
1/1	Trinity Street North Left	U	A		1	36	-	35	1532	630	5.6%	-	-	-	0.2	19.0	0.6
1/2	Trinity Street North Ahead Right	U	A		1	36	-	383	1915	787	48.6%	-	-	-	2.5	24.0	7.5
2/2+2/1	Access Junction Right Left Ahead	U	D	E	1	19:28	9	238	1665:1532	270+210	49.6 : 49.6%	-	-	-	2.2	33.8	3.3
3/1+3/2	Trinity Street South Ahead Right Left	U+O	B	C	1	45	4	467	1915:1665	936+57	47.0 : 47.0%	24	2	1	2.3	17.7	7.4
7/1	Seaview Avenue Left Right Ahead	U	J		1	19	-	0	1915	426	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P1	Access Junction Crossing	-	F		1	6	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Trinity Street Crossing	-	G		1	6	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	-	I		1	6	-	0	-	0	0.0%	-	-	-	-	-	-
C1		PRC for Signalled Lanes (%):		81.6		81.6		Total Delay for Signalled Lanes (pcuHr):		7.26		7.26		Cycle Time (s):		90	
		PRC Over All Lanes (%):		81.6				Total Delay Over All Lanes(pcuHr):									

Basic Results Summary

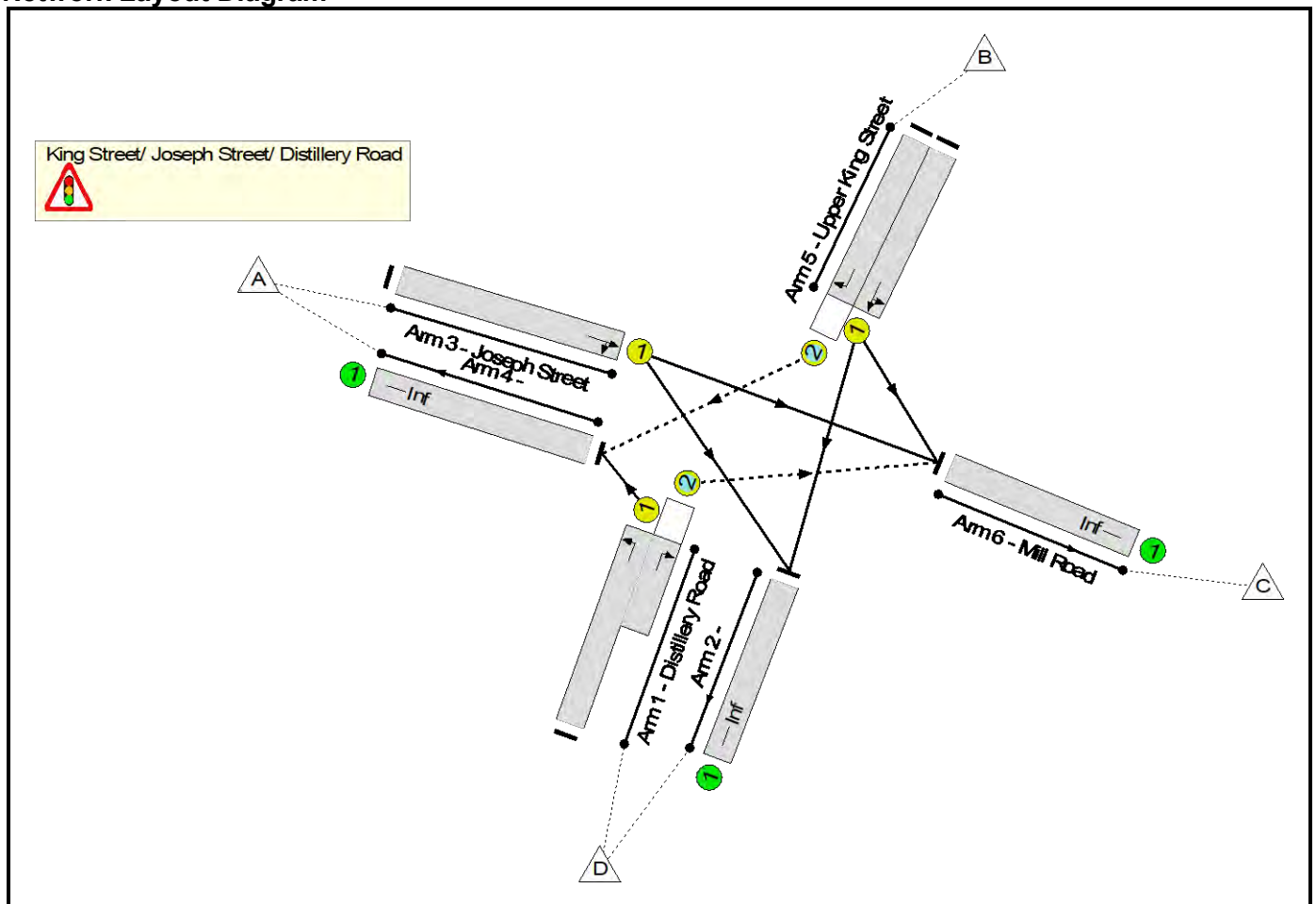
Basic Results Summary

User and Project Details

Project:	Trinity Wharf
Title:	BASELINE - Distillery Rd, King St, Mill Rd, Joseph St Junction
Location:	
File name:	Distillery Rd_ King St_ Joseph St_ Mill Rd - Baseline.lsg3x
Author:	JA
Company:	ROD
Address:	
Notes:	

Scenario 1: 'AM Peak' (FG1: 'AM Peak', Plan 1: 'Network Control Plan 1')

Network Layout Diagram

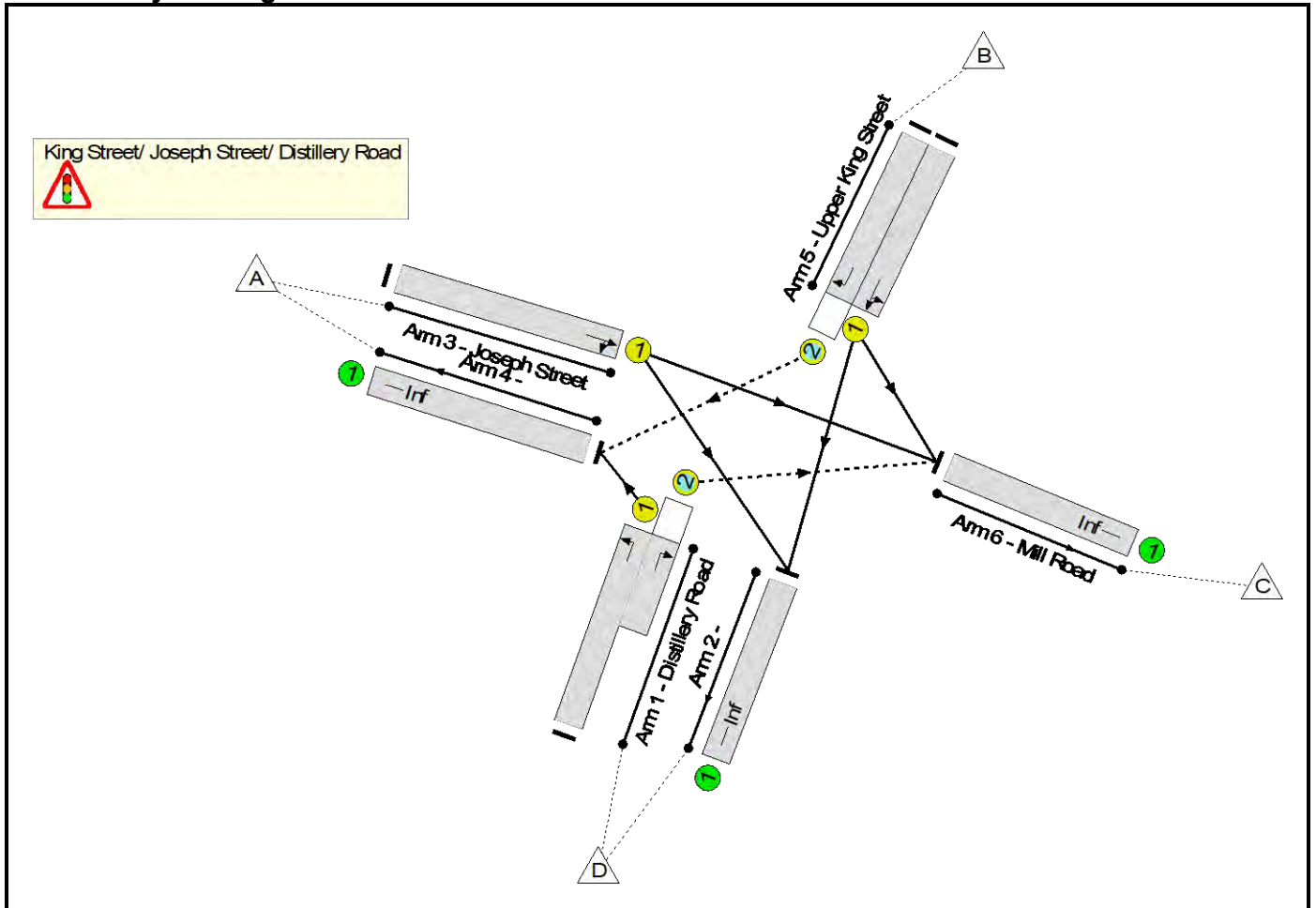


Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	
Network: BASELINE - Distillery Rd, King St, Mill Rd, Joseph St Junction	-	-	-		-	-	-	-	-	-	70.4%	0	302	5	16.1	-	-	
King Street/ Joseph Street/ Distillery Road	-	-	-		-	-	-	-	-	-	70.4%	0	302	5	16.1	-	-	
1/1+1/2	Distillery Road Left Right	U+O	C		1	24	-	244	1687:1940	347+0	70.4 : 0.0%	0	0	0	4.1	61.2	8.7	
3/1	Joseph Street Right Ahead	U	A		1	32	-	320	1667	458	69.8%	-	-	-	4.6	51.8	10.6	
5/1	Upper King Street Ahead Left	U	B		1	35	-	264	1724	517	51.0%	-	-	-	3.1	41.8	7.8	
5/2	Upper King Street Right	O	B		1	35	-	307	1492	448	68.6%	0	302	5	4.2	49.6	10.0	
C1		PRC for Signalled Lanes (%):					27.9	Total Delay for Signalled Lanes (pcuHr):					16.05	Cycle Time (s): 120				
		PRC Over All Lanes (%):					27.9	Total Delay Over All Lanes(pcuHr):					16.05					

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	
Network: BASELINE - Distillery Rd, King St, Mill Rd, Joseph St Junction	-	-	-		-	-	-	-	-	-	57.1%	0	225	4	11.2	-	-	
King Street/ Joseph Street/ Distillery Road	-	-	-		-	-	-	-	-	-	57.1%	0	225	4	11.2	-	-	
1/1+1/2	Distillery Road Left Right	U+O	C		1	16	-	130	1687:1940	234+0	55.5 : 0.0%	0	0	0	2.3	65.0	4.6	
3/1	Joseph Street Right Ahead	U	A		1	29	-	237	1659	415	57.1%	-	-	-	3.3	49.4	7.5	
5/1	Upper King Street Ahead Left	U	B		1	46	-	379	1718	673	56.3%	-	-	-	3.6	34.6	10.4	
5/2	Upper King Street Right	O	B		1	46	-	229	1492	584	39.2%	0	225	4	2.0	31.3	5.8	
C1		PRC for Signalled Lanes (%):					57.5	Total Delay for Signalled Lanes (pcuHr):					11.23	Cycle Time (s): 120				
		PRC Over All Lanes (%):					57.5	Total Delay Over All Lanes(pcuHr):					11.23					

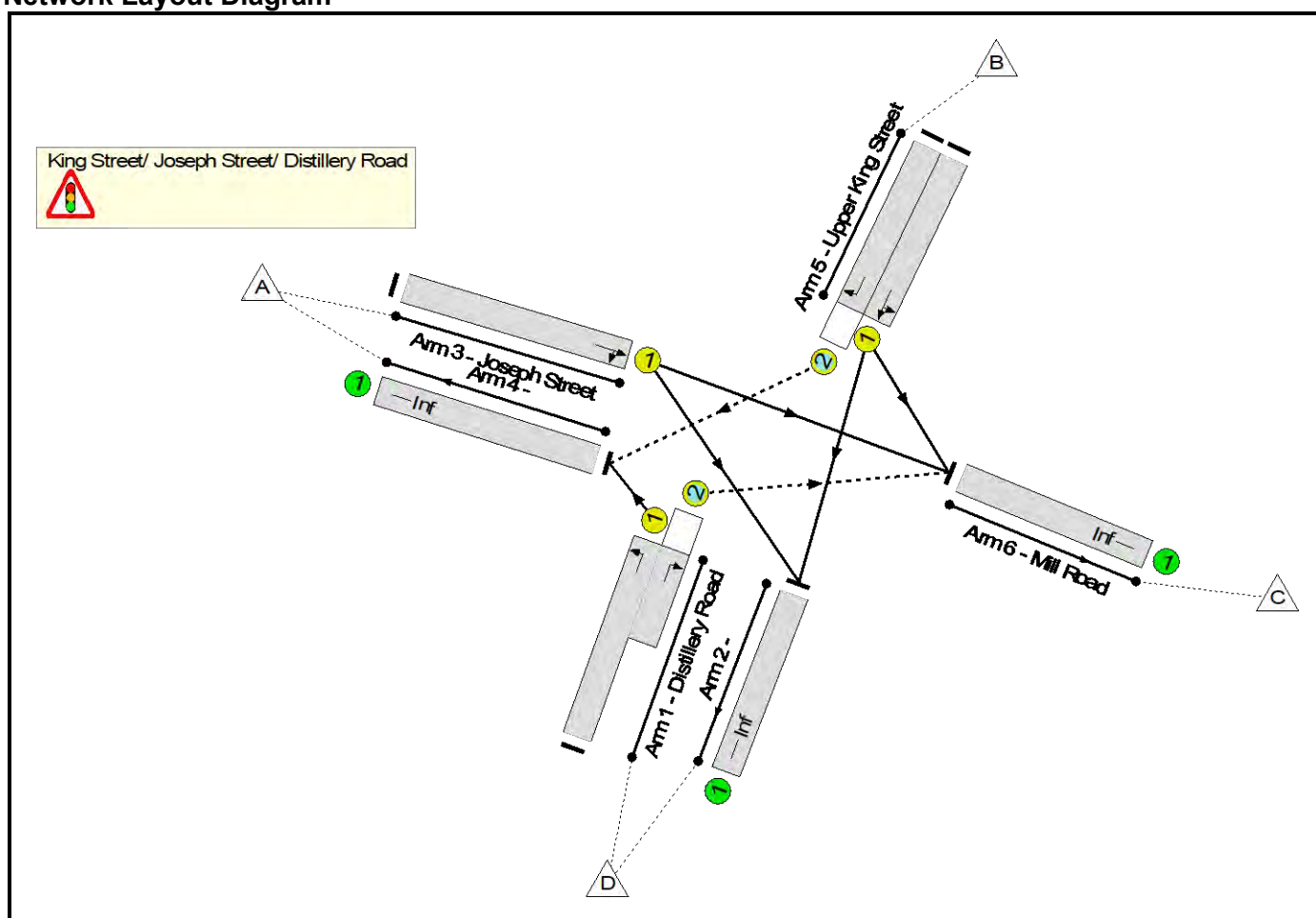
Basic Results Summary
Basic Results Summary

User and Project Details

Project:	Trinity Wharf
Title:	
Location:	
File name:	Peak Development Distillery Rd_ King St_ Joseph St_ Mill Rd - Peak Development.lsg3x
Author:	JA
Company:	ROD
Address:	
Notes:	

Scenario 1: 'AM Peak' (FG1: 'AM Peak', Plan 1: 'Network Control Plan 1')

Network Layout Diagram

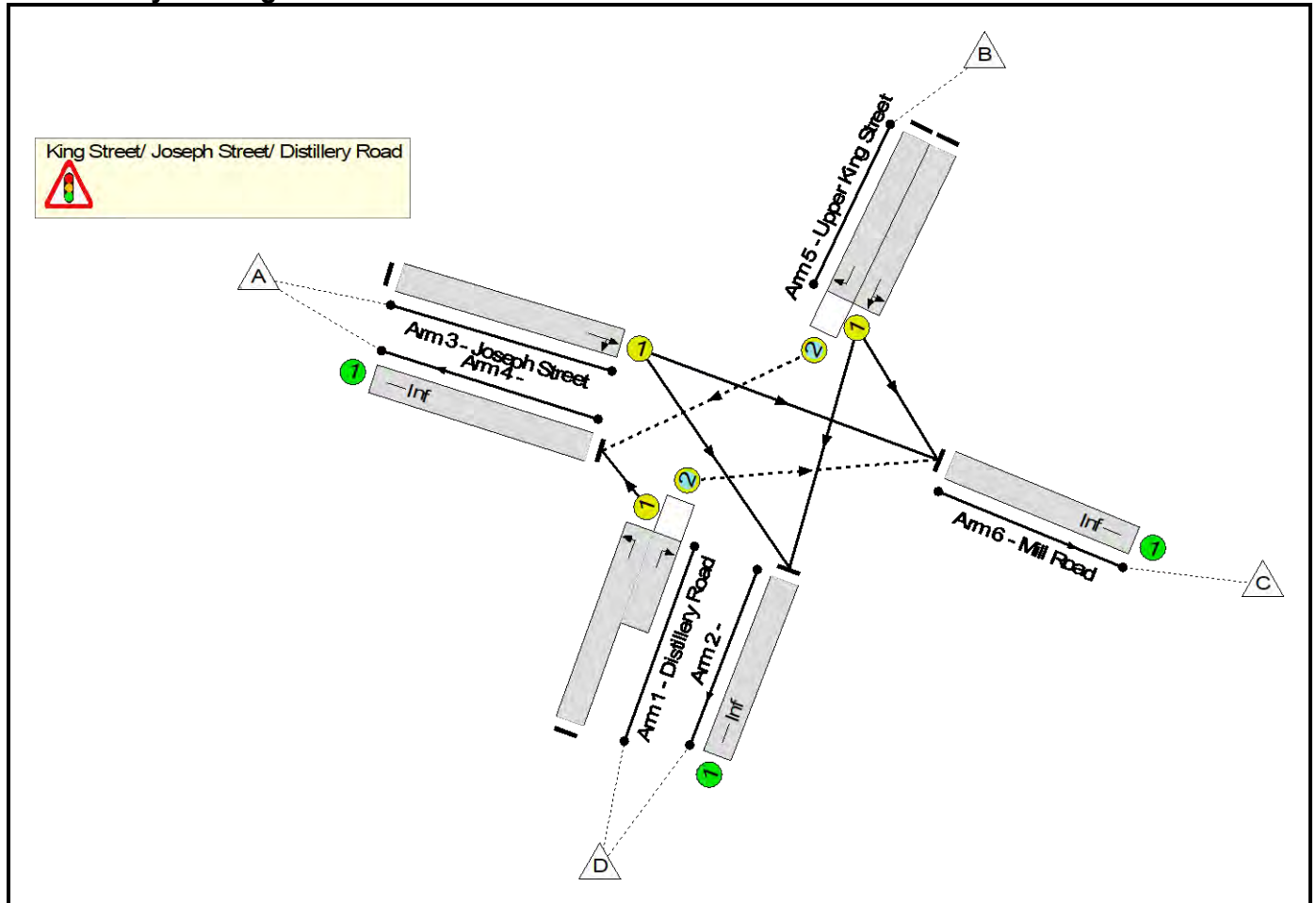


Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	77.5%	0	376	6	19.7	-	-
King Street/ Joseph Street/ Distillery Road	-	-	-		-	-	-	-	-	-	77.5%	0	376	6	19.7	-	-
1/1+1/2	Distillery Road Left Right	U+O	C		1	25	-	308	1687:1940	322+84	75.8 : 75.8%	0	63	1	5.2	60.5	9.7
3/1	Joseph Street Right Ahead	U	A		1	34	-	384	1704	497	77.3%	-	-	-	5.8	54.3	13.3
5/1	Upper King Street Ahead Left	U	B		1	32	-	275	1732	476	57.7%	-	-	-	3.5	46.4	8.5
5/2	Upper King Street Right	O	B		1	32	-	318	1492	410	77.5%	0	313	5	5.2	58.9	11.4
C1				PRC for Signalled Lanes (%):		16.1	16.1		Total Delay for Signalled Lanes (pcuHr):		19.72	19.72		Cycle Time (s): 120			
				PRC Over All Lanes (%):		16.1			Total Delay Over All Lanes(pcuHr):								

Network Layout Diagram



Network Results

[illegible]

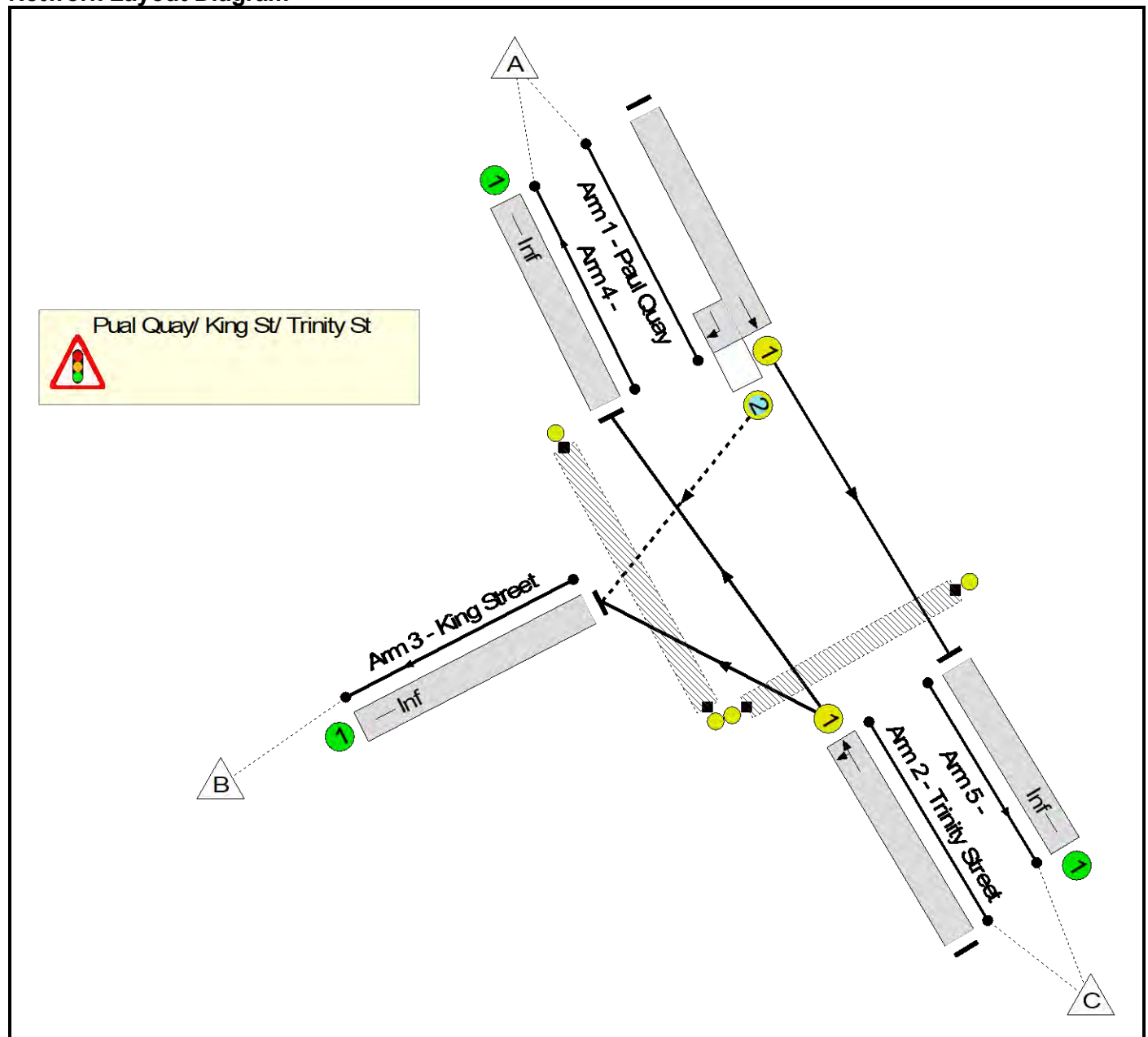
Basic Results Summary
Basic Results Summary

User and Project Details

Project:	18133 Trinity Wharf Masterplan
Title:	Trinity St/ King St, Pual Quay BASELINE
Location:	Wexford
File name:	Paul Quay King St Trinity St Junction - Baseline.lsg3x
Author:	JA
Company:	ROD
Address:	Dublin 18
Notes:	

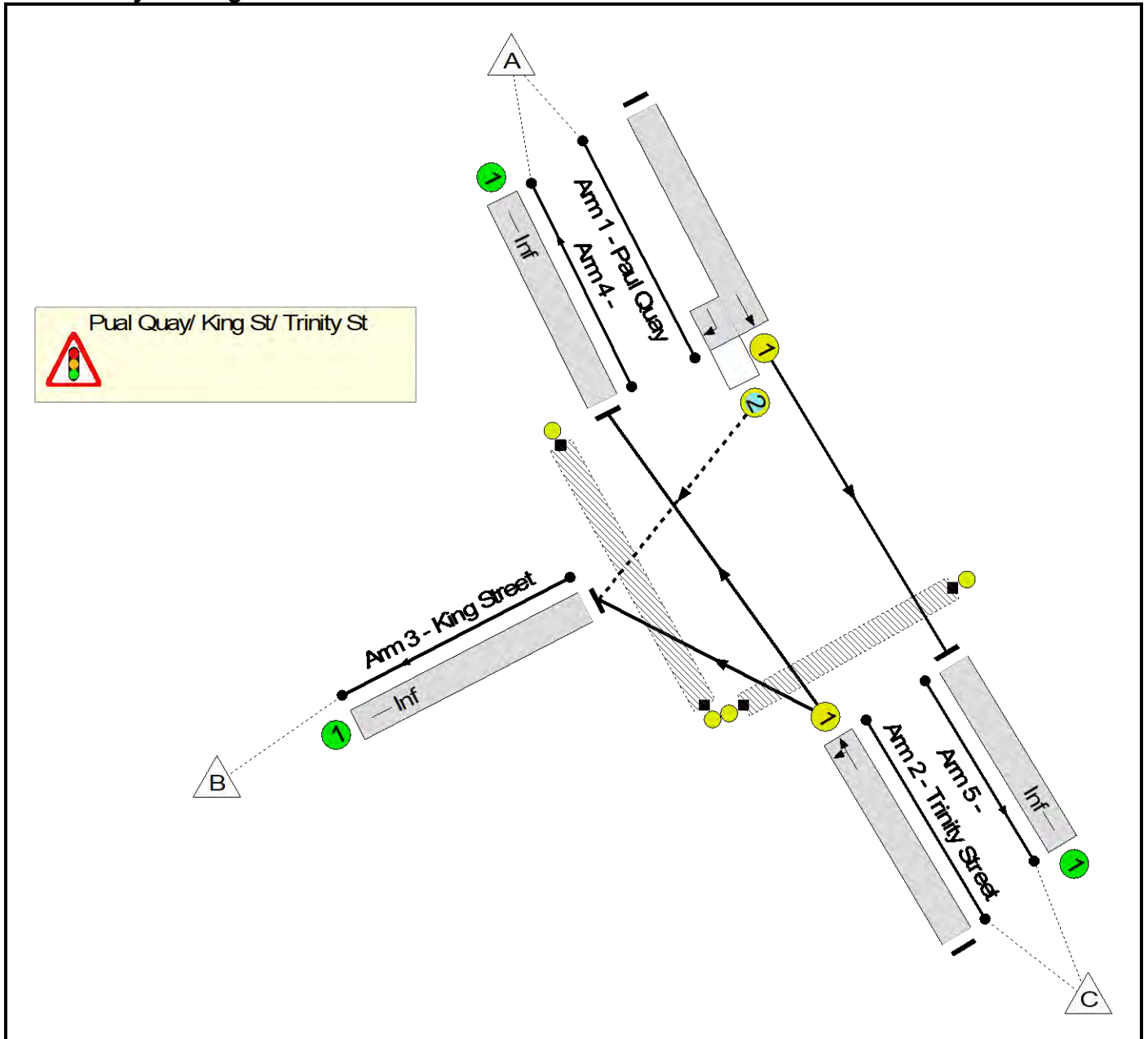
Scenario 1: 'AM' (FG1: 'Am Peak', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Network Results

Network Layout Diagram



Network Results

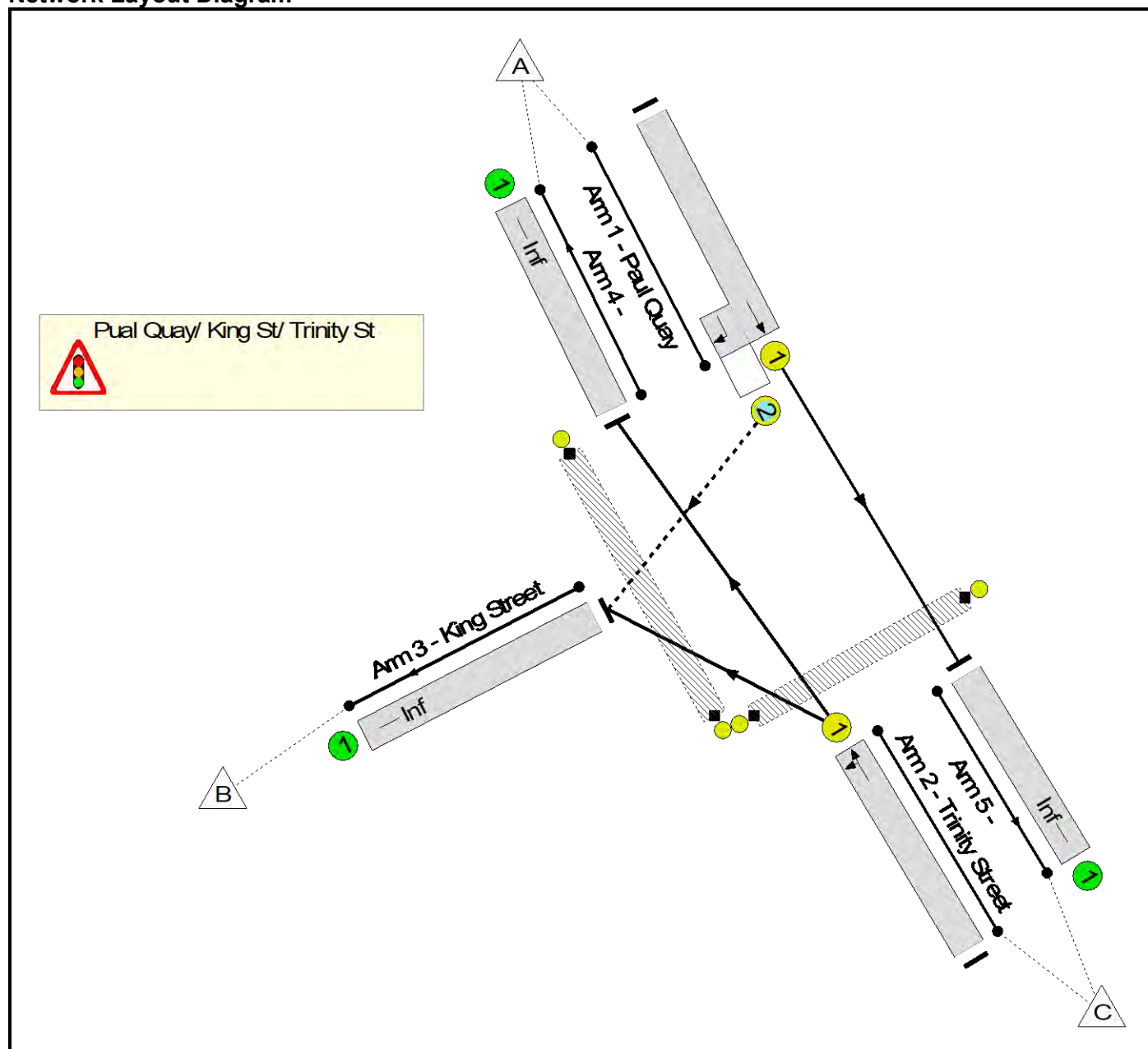
Basic Results Summary
Basic Results Summary

User and Project Details

Project:	18133 Trinity Wharf Masterplan
Title:	Trinity St/ King St, Pual Quay
Location:	Wexford
File name:	Paul Quay King St Trinity St Junction - Peak Development.lsg3x
Author:	JA
Company:	ROD
Address:	Dublin 18
Notes:	

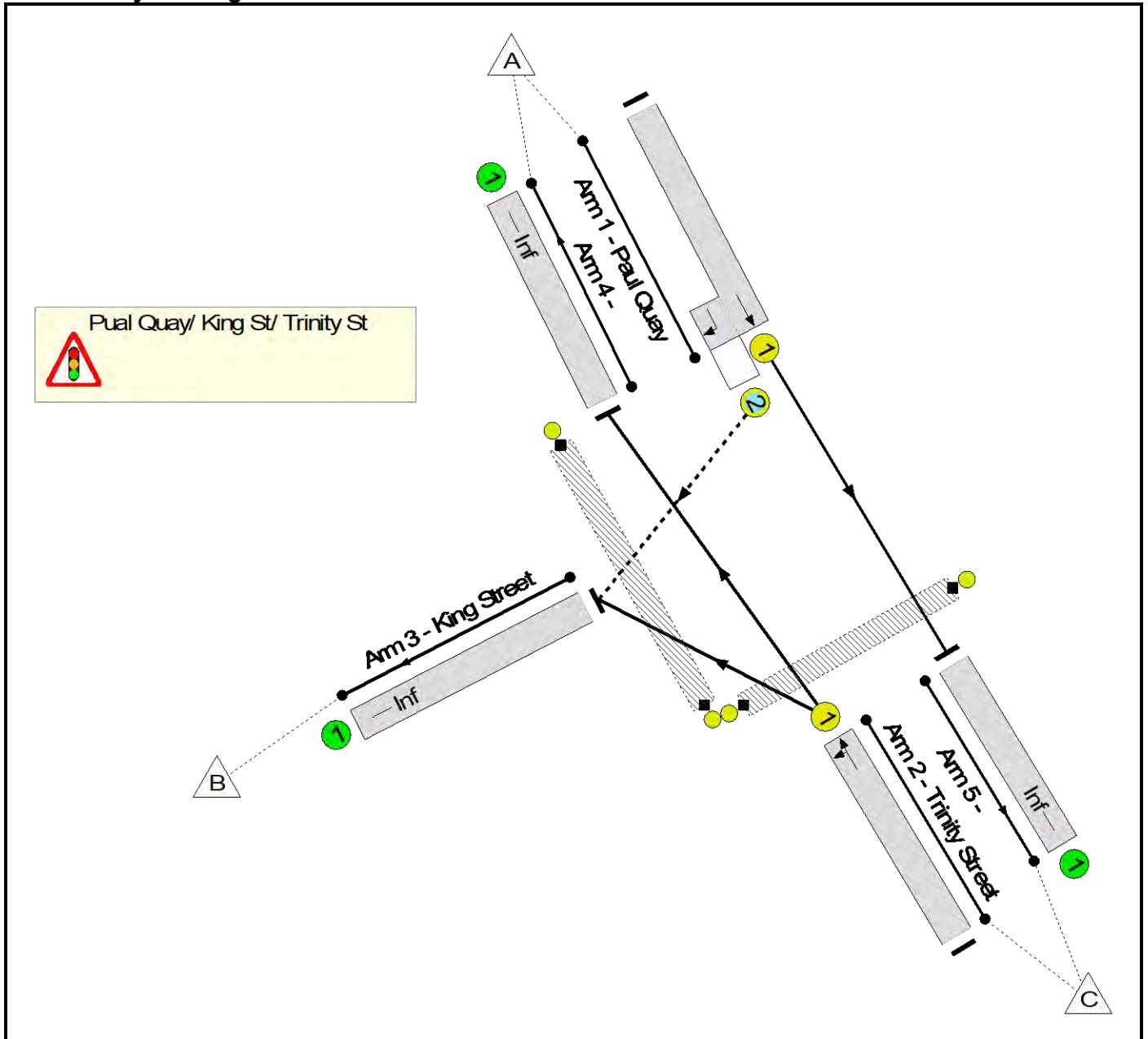
Scenario 1: 'AM' (FG1: 'Am Peak', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Network Results

Network Layout Diagram



Network Results

Junctions 8							
PICADY 8 - Priority Intersection Module							
Version: 8.0.3.332 [14595,13/11/2013] © Copyright TRL Limited, 2019							
For sales and distribution information, program advice and maintenance, contact TRL: Tel: +44 (0)1344 770758 E-mail: software@trl.co.uk Web: http://www.trlsoftware.co.uk							
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution							

Filename: Trinity St Fishers Row Sir William St Junction.arc8

Path: J:\2018\18133\18133-02_WIP\04 TECH DOCS\01 Traffic\RFI ABP\CALCS\Junctions 8\Trinity Street Fishers Row Sir William Street Lower Junction

Report generation date: 16/09/2019 11:22:18

- » Tinity Street / Fishers Row / William Street Lower Junction - Peak development, AM
- » Tinity Street / Fishers Row / William Street Lower Junction - Peak development, PM
- » Tinity Street / Fishers Row / William Street Lower Junction - Baseline, AM
- » Tinity Street / Fishers Row / William Street Lower Junction - Baseline, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
Tinity Street / Fishers Row / William Street Lower Junction - Baseline								
Stream B-AC	0.13	8.40	0.11	A	0.08	7.42	0.07	A
Stream C-AB	0.08	7.60	0.07	A	0.06	7.34	0.06	A
Stream C-A	-	-	-	-	-	-	-	-
Stream A-B	-	-	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-	-	-
Tinity Street / Fishers Row / William Street Lower Junction - Peak development								
Stream B-AC	0.14	8.65	0.12	A	0.08	7.40	0.07	A
Stream C-AB	0.08	7.87	0.07	A	0.08	7.31	0.07	A
Stream C-A	-	-	-	-	-	-	-	-
Stream A-B	-	-	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-	-	-

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - Peak development, AM" model duration: 08:30 - 09:30

"D3 - Peak development, PM" model duration: 16:15 - 17:15

"D4 - Baseline, AM" model duration: 08:30 - 10:00

"D5 - Baseline, PM" model duration: 16:15 - 17:45

Run using Junctions 8.0.3.332 at 16/09/2019 11:22:12

File summary

File Description

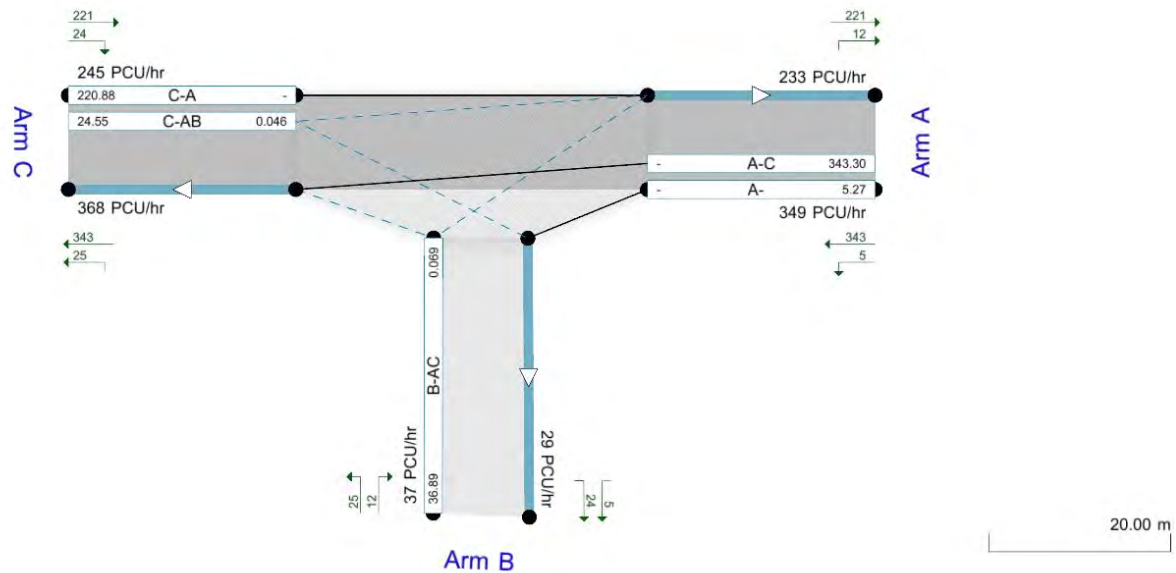
Title	Trinity Street Fishers Row William Street Lower Junction
Location	Wexford
Site Number	
Date	27/09/2018
Version	
Status	(new file)
Identifier	
Client	Wexford CoCo
Jobnumber	18133
Enumerator	
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin



Text overlays show modelled flow through the junction (entry and exit flows, PCU/hr).
Streams (upstreams) show Total Demand (PCU/hr); Streams (downstreams) show RFC ()

Time Segment: (08:30-08:45)

Showing Analysis Set "A1 - Tinity Street / Fishers Row / William Street Lower Junction"; Demand Set "D1 - Peak development, AM"

The junction diagram reflects the last run of ARCADY.

Tinity Street / Fishers Row / William Street Lower Junction - Peak development, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Tinity Street / Fishers Row / William Street Lower Junction			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Peak development, AM	Peak development	AM		FLAT	08:30	09:30	60	15		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
Trinity Street / Parnell Street	T-Junction	Two-way	A,B,C	8.35	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm Type
A	Trinity Street South		Major
B	Parnell Street		Minor
C	Trinity Street North		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	8.00		0.00		2.20	50.00	✓	1.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	3.50										50	50

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	544.462	0.091	0.229	0.144	0.327
1	B-C	688.222	0.096	0.243	-	-
1	C-B	602.919	0.213	0.213	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.12	8.65	0.14	A
C-AB	0.07	7.87	0.08	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Tinity Street / Fishers Row / William Street Lower Junction - Peak development, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Tinity Street / Fishers Row / William Street Lower Junction			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Peak development, PM	Peak development	PM		FLAT	16:15	17:15	60	15		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
Trinity Street / Parnell Street	T-Junction	Two-way	A,B,C	7.35	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm Type
A	Trinity Street South		Major
B	Parnell Street		Minor
C	Trinity Street North		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	8.00		0.00		2.20	50.00	✓	1.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	3.50										50	50

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	544.462	0.091	0.229	0.144	0.327
1	B-C	688.222	0.096	0.243	-	-
1	C-B	602.919	0.213	0.213	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.07	7.40	0.08	A
C-AB	0.07	7.31	0.08	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Tinity Street / Fishers Row / William Street Lower Junction - Baseline, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Tinity Street / Fishers Row / William Street Lower Junction			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Baseline, AM	Baseline	AM		ONE HOUR	08:30	10:00	90	15		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
Tinity Street / Parnell Street	T-Junction	Two-way	A,B,C	8.08	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm Type
A	Trinity Street South		Major
B	Parnell Street		Minor
C	Trinity Street North		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	8.00		0.00		2.20	50.00	✓	1.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	3.50										50	50

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	544.462	0.091	0.229	0.144	0.327
1	B-C	688.222	0.096	0.243	-	-
1	C-B	602.919	0.213	0.213	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.11	8.40	0.13	A
C-AB	0.07	7.60	0.08	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Trinity Street / Fishers Row / William Street Lower Junction - Baseline, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Trinity Street / Fishers Row / William Street Lower Junction			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Baseline, PM	Baseline	PM		ONE HOUR	16:15	17:45	90	15		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
Trinity Street / Parnell Street	T-Junction	Two-way	A,B,C	7.38	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm Type
A	Trinity Street South		Major
B	Parnell Street		Minor
C	Trinity Street North		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	8.00		0.00		2.20	50.00	✓	1.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	3.50										50	50

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	544.462	0.091	0.229	0.144	0.327
1	B-C	688.222	0.096	0.243	-	-
1	C-B	602.919	0.213	0.213	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.07	7.42	0.08	A
C-AB	0.06	7.34	0.06	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Junctions 8			
PICADY 8 - Priority Intersection Module			
Version: 8.0.3.332 [14595,13/11/2013] © Copyright TRL Limited, 2019			
For sales and distribution information, program advice and maintenance, contact TRL: Tel: +44 (0)1344 770758 E-mail: software@trl.co.uk Web: http://www.trlsoftware.co.uk			
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution			

Filename: Trinity Street Parnell Street Junction.arc8

Path: J:\2018\18133\18133-02_WIP\04 TECH DOCS\01 Traffic\RFI ABP\CALCS\Junctions 8\Trinity Street Parnell Street Junction_Junctions 8 Report

Report generation date: 16/09/2019 11:24:52

- » **Trinity Street / Parnell Street Junction - Peak Development, AM**
- » **Trinity Street / Parnell Street Junction - Peak Development, PM**
- » **Trinity Street / Parnell Street Junction - Baseline, AM**
- » **Trinity Street / Parnell Street Junction - Baseline, PM**

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
Trinity Street / Parnell Street Junction - Baseline								
Stream B-C	0.72	12.30	0.42	B	0.44	9.98	0.31	A
Stream B-A	0.17	12.21	0.15	B	0.13	11.51	0.12	B
Stream C-A	-	-	-	-	-	-	-	-
Stream C-B	0.00	0.00	0.00	A	0.00	0.00	0.00	A
Stream A-B	-	-	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-	-	-
Trinity Street / Parnell Street Junction - Peak Development								
Stream B-C	0.87	14.42	0.47	B	0.54	11.82	0.35	B
Stream B-A	0.70	18.00	0.42	C	0.27	14.65	0.21	B
Stream C-A	-	-	-	-	-	-	-	-
Stream C-B	0.00	0.00	0.00	A	0.00	0.00	0.00	A
Stream A-B	-	-	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-	-	-

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - Peak Development, AM" model duration: 08:30 - 09:30

"D3 - Peak Development, PM" model duration: 16:15 - 17:45

"D4 - Baseline, AM" model duration: 08:30 - 10:00

"D5 - Baseline, PM" model duration: 16:15 - 17:45

Run using Junctions 8.0.3.332 at 16/09/2019 11:24:46

File summary

File Description

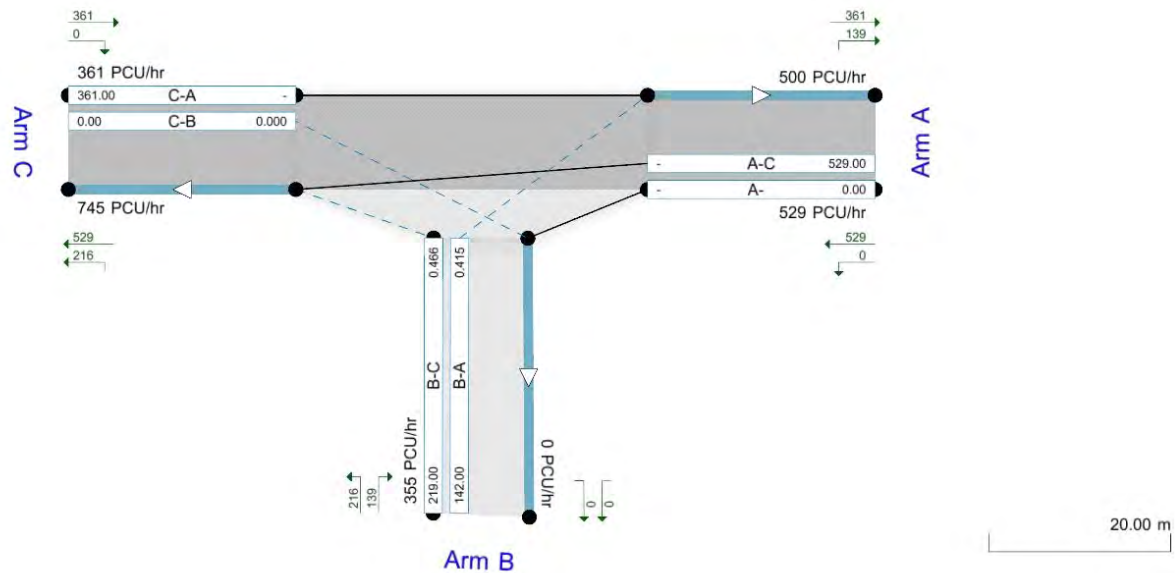
Title	Trinity Street Parnell Street Junction
Location	Wexford
Site Number	
Date	27/09/2018
Version	
Status	(new file)
Identifier	
Client	Wexford CoCo
Jobnumber	18133
Enumerator	
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin



Text overlays show modelled flow through the junction (entry and exit flows, PCU/hr).
Streams (upstreams) show Total Demand (PCU/hr); Streams (downstreams) show RFC (J).
Time Segment: (08:30-08:45)
Showing Analysis Set "A1 - Tinity Street / Parnell Street Junction"; Demand Set "D1 - Peak Development, AM"

The junction diagram reflects the last run of ARCADY.

Tinity Street / Parnell Street Junction - Peak Development, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Tinity Street / Parnell Street Junction			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Peak Development, AM	Peak Development	AM		FLAT	08:30	09:30	60	15		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
Trinity Street / Parnell Street	T-Junction	Two-way	A,B,C	15.83	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm Type
A	Trinity Street South		Major
B	Parnell Street		Minor
C	Trinity Street North		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	6.50		0.00		2.20	50.00		

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	Two lanes		3.00	3.00								50	50

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	518.507	0.092	0.234	0.147	0.334
1	B-C	655.413	0.098	0.248	-	-
1	C-B	602.919	0.229	0.229	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.47	14.42	0.87	B
B-A	0.42	18.00	0.70	C
C-A	-	-	-	-
C-B	0.00	0.00	0.00	A
A-B	-	-	-	-
A-C	-	-	-	-

Tinity Street / Parnell Street Junction - Peak Development, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Tinity Street / Parnell Street Junction			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Peak Development, PM	Peak Development	PM		ONE HOUR	16:15	17:45	90	15		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
Trinity Street / Parnell Street	T-Junction	Two-way	A,B,C	12.62	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm Type
A	Trinity Street South		Major
B	Parnell Street		Minor
C	Trinity Street North		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	6.50		0.00		2.20	50.00		

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	Two lanes		3.00	3.00								50	50

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	518.507	0.092	0.234	0.147	0.334
1	B-C	655.413	0.098	0.248	-	-
1	C-B	602.919	0.229	0.229	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.35	11.82	0.54	B
B-A	0.21	14.65	0.27	B
C-A	-	-	-	-
C-B	0.00	0.00	0.00	A
A-B	-	-	-	-
A-C	-	-	-	-

Tinity Street / Parnell Street Junction - Baseline, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Tinity Street / Parnell Street Junction			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Baseline, AM	Baseline	AM		ONE HOUR	08:30	10:00	90	15		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
Tinity Street / Parnell Street	T-Junction	Two-way	A,B,C	12.29	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm Type
A	Trinity Street South		Major
B	Parnell Street		Minor
C	Trinity Street North		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	6.50		0.00		2.20	50.00		

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	Two lanes		3.00	3.00								50	50

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	518.507	0.092	0.234	0.147	0.334
1	B-C	655.413	0.098	0.248	-	-
1	C-B	602.919	0.229	0.229	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.42	12.30	0.72	B
B-A	0.15	12.21	0.17	B
C-A	-	-	-	-
C-B	0.00	0.00	0.00	A
A-B	-	-	-	-
A-C	-	-	-	-

Tinity Street / Parnell Street Junction - Baseline, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Tinity Street / Parnell Street Junction			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Baseline, PM	Baseline	PM		ONE HOUR	16:15	17:45	90	15		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
Tinity Street / Parnell Street	T-Junction	Two-way	A,B,C	10.29	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm Type
A	Trinity Street South		Major
B	Parnell Street		Minor
C	Trinity Street North		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	6.50		0.00		2.20	50.00		

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	Two lanes		3.00	3.00								50	50

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	518.507	0.092	0.234	0.147	0.334
1	B-C	655.413	0.098	0.248	-	-
1	C-B	602.919	0.229	0.229	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Results

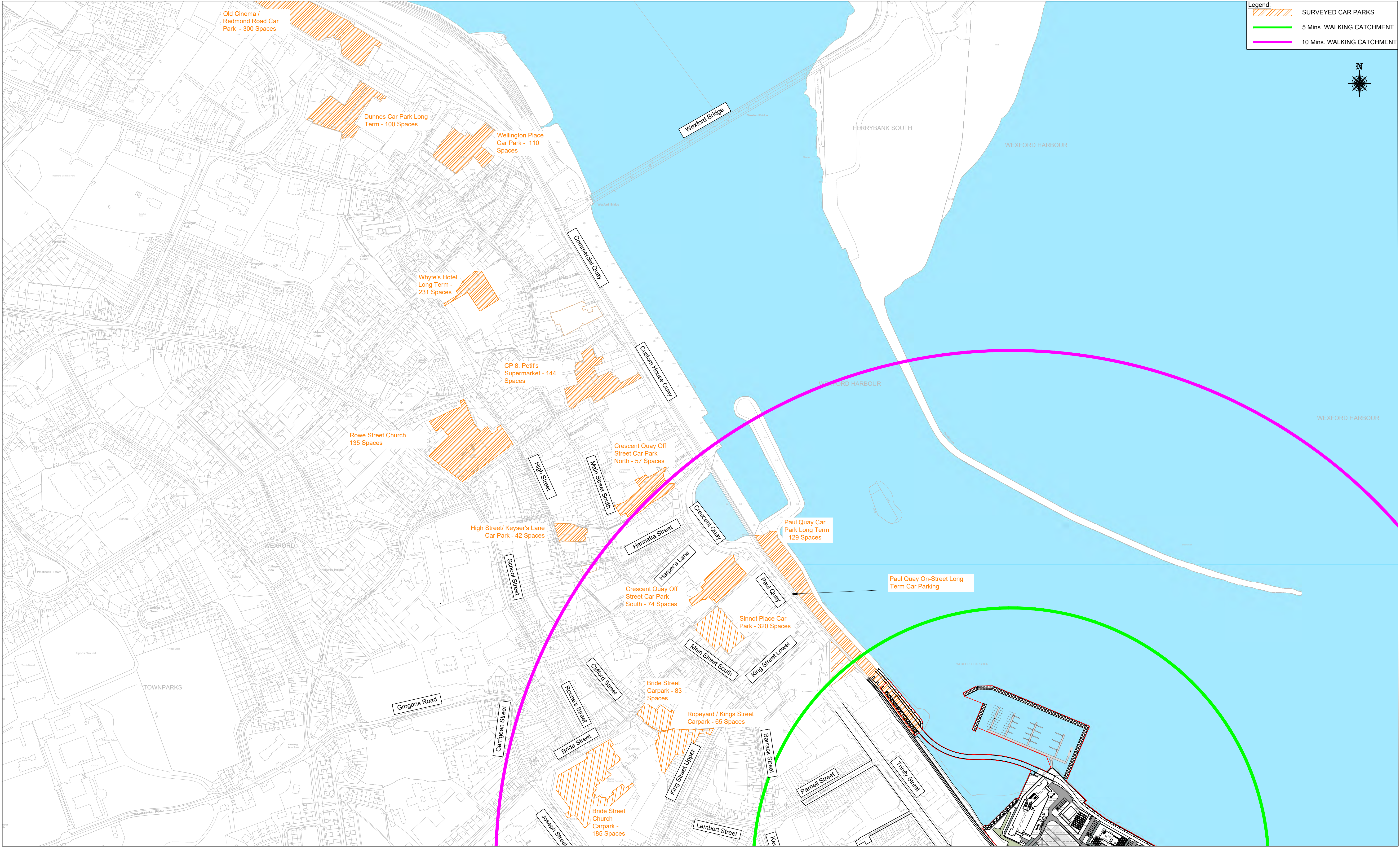
Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.31	9.98	0.44	A
B-A	0.12	11.51	0.13	B
C-A	-	-	-	-
C-B	0.00	0.00	0.00	A
A-B	-	-	-	-
A-C	-	-	-	-

Appendix AA4

Addendum to Appendix 5.7

Drawings



OFF-SITE PARKING

A1 SCALE 1:2500
A3 SCALE 1:5000



TRINITY WHARF DEVELOPMENT

ENVIRONMENTAL IMPACT
ASSESSMENT REPORT



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

Project Stage	E.I.A.R.				
Project Title	TRINITY WHARF DEVELOPMENT				
Drawing Title	FIGURE 5.1 CATCHMENT AREA FOR OFF-SITE PARKING				
Drawing Number	Project	Originator	Volume	Location	Type Role Number
TRWH	-	ROD	-	HGN - SW_AE	- DR - CH - 4005.1
Scale (A1)	AS SHOWN	Date:	November 2018	Job No:	18.133
				Rev:	2

DO NOT SCALE USE FIGURED DIMENSIONS ONLY




OFF-SITE PARKING
A1 SCALE 1:2500
A3 SCALE 1:5000



TRINITY WHARF DEVELOPMENT

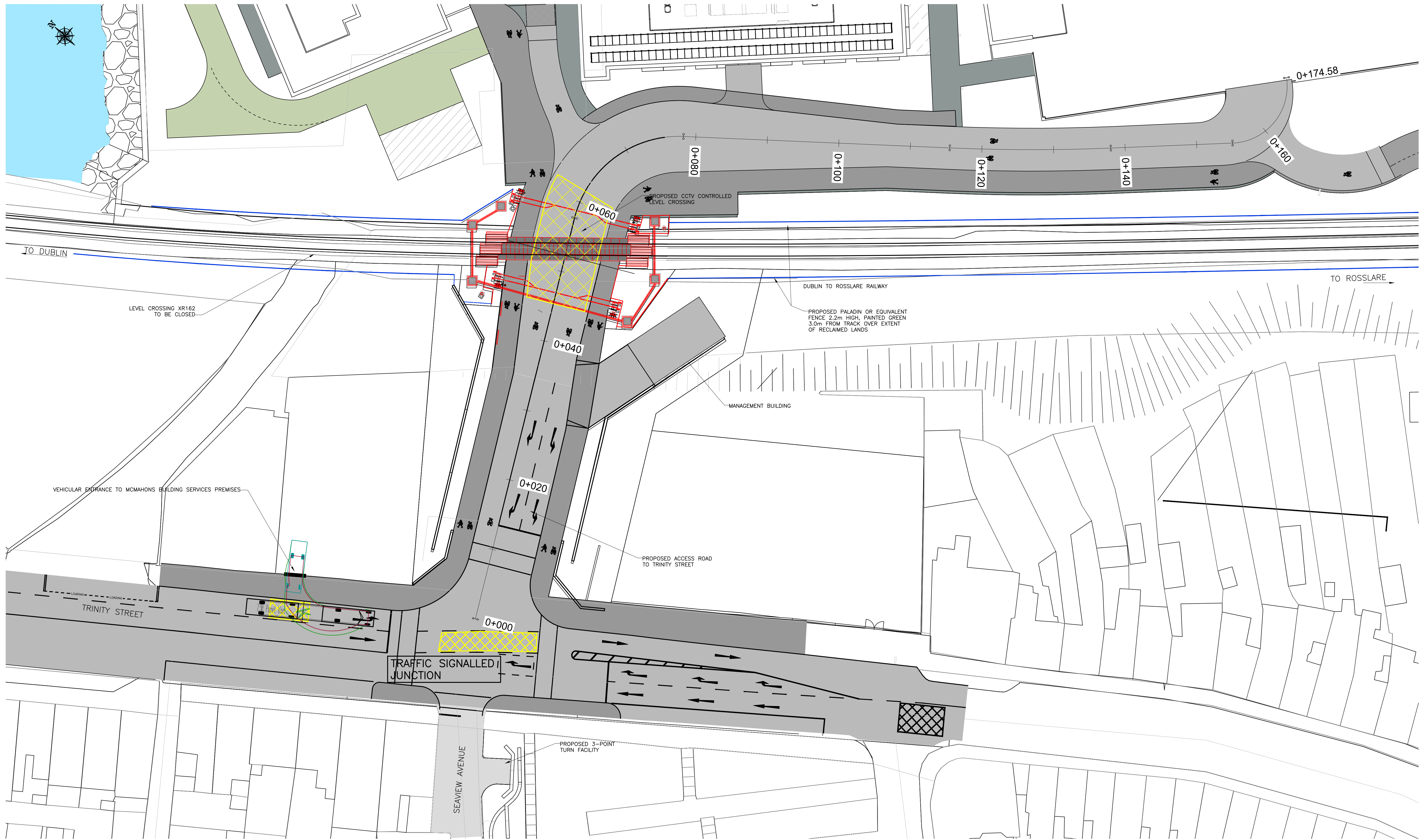
ENVIRONMENTAL IMPACT ASSESSMENT REPORT



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

Project Stage	E.I.A.R.				
Project Title	TRINITY WHARF DEVELOPMENT				
Drawing Title	FIGURE 5.2 EXISTING TRAFFIC				
Drawing Number	Project	Originator	Volume	Location	Type Role Number
TRWH	-	ROD	-	HGN	- SW_AE - DR - CH - 4005.2
Scale (A1)	AS SHOWN	Date:	November 2018	Job No:	18.133
				Rev:	-



CROSSING LAYOUT

A1 SCALE 1:250
A3 SCALE 1:500



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



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

Project Stage	E.I.A.R.				
Project Title	TRINITY WHARF DEVELOPMENT				
Drawing Title	FIGURE 4.9 ACCESS ROAD AND LEVEL CROSSING - SHEET 1				
Drawing Number	Project	Originator	Volume	Location	Type Role Number
	TRWH	ROD	SBR	SW_AE	DR - CH - 4004.9
Scale (A1)	AS SHOWN	Date:	December 2018	Job No:	18.133
				Rev:	2

DO NOT SCALE USE FIGURED DIMENSIONS ONLY



BLUE ZONE
SHORT TERM PARKING
0.5 Hour to 4 Hour
Pay & Display Parking

1798 STREET, ABBEY STREET,
BELVEDERE CAR PARK, BELVEDERE
ROAD, BELVEDERE GREEN, DAVITT
ROAD NORTH, GEORGES STREET
LOWER, GEORGES STREET UPPER, HILL
STREET, JOHN'S GATE STREET, MANNIX
PLACE, MOUNT GEORGE, REDMOND
ROAD, SELSKAR STREET, SKEFFINGTON
STREET, SPAWELL ROAD
TEMPERANCE ROW, UPPER JOHN
STREET, WELL LANE, WELLINGTON
PLACE CAR PARK, WESTGATE PARK,
WYGRAM PLACE



GREEN ZONE
LONG TERM PARKING
€2 Per Day
Pay & Display Parking
SPAWELL ROAD
REDMOND ROAD



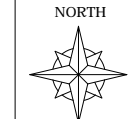
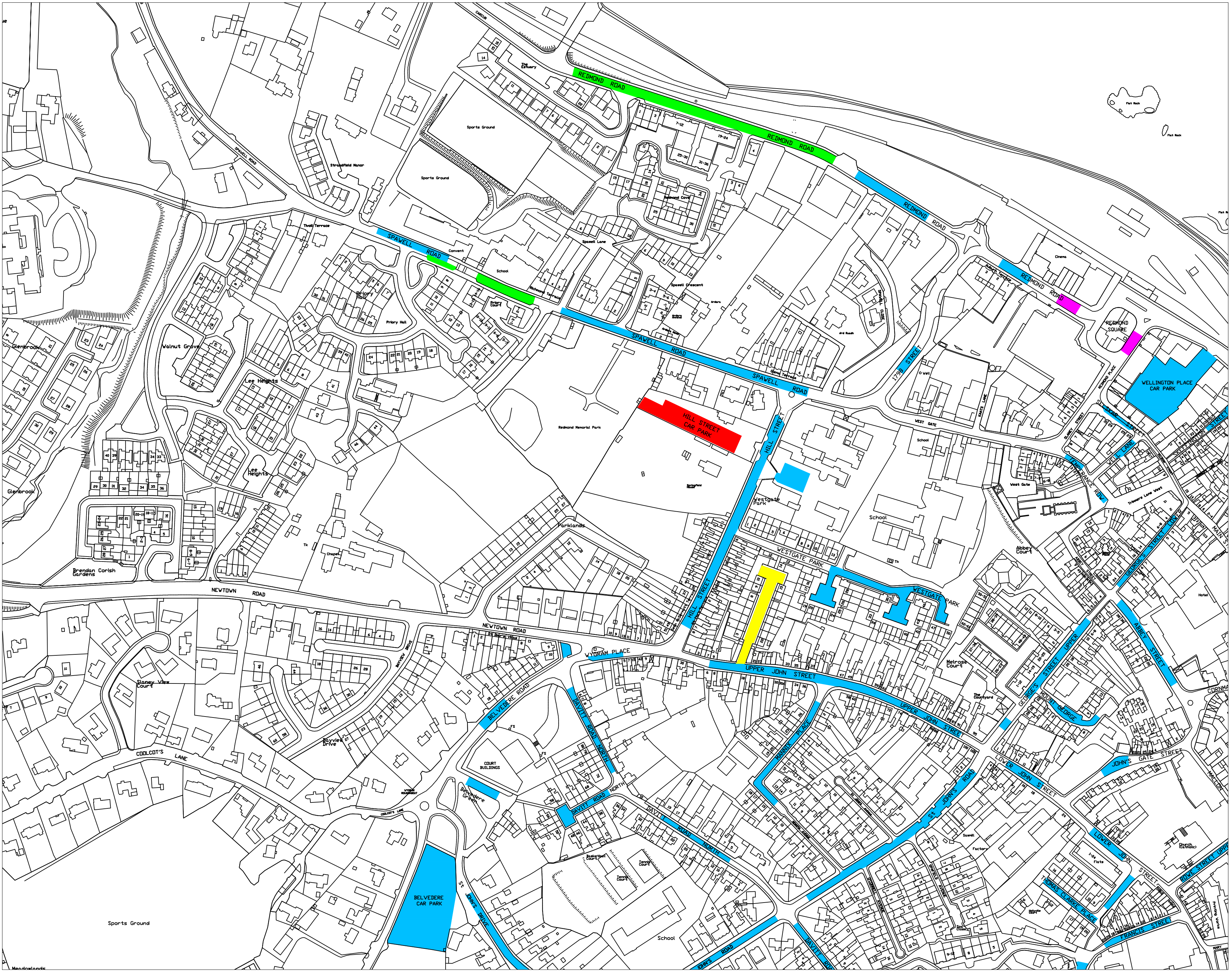
BARRIER PARKING
€2 Per Visit
HILL STREET CAR PARK



BUSES PARKING ONLY
REDMOND ROAD
REDMOND SQUARE



RESIDENT PARKING ONLY
CROKE AVENUE



NO.	DESCRIPTION	DATE	CRD	DRAWN BY	SG
	CHECKED BY	MM			
	ISSUE DATE	17 JAN 2018			
	SCALE	NTS			
	DRAFT	DESIGN			
	DWG ADDRESS	TENDER			
	REV	SITE			
	T/AE/Wex-1/2018	A			



BLUE ZONE
SHORT TERM PARKING
0.5 Hour to 4 Hour
Pay & Display Parking

1798 STREET, ABBEY STREET, ALLEN STREET CAR PARK, ANNE STREET, BELVEDERE ROAD, COMMERCIAL QUAY, COMMON QUAY STREET, CRESCENT QUAY, CRESCENT QUAY CAR PARK, CUSTOM HOUSE QUAY, DAVITT ROAD NORTH, DAVITT ROAD SOUTH, FRANCIS STREET, GEORGES STREET LOWER, GEORGES STREET UPPER, HIGH STREET CAR PARK, HILL STREET, JOHN'S GATE STREET, LOWER JOHN STREET, MANNIX PLACE, MOUNT GEORGE, REDMOND ROAD, ROWE STREET LOWER, ROWE STREET UPPER, ST JOHN'S ROAD, ST PATRICK'S SQUARE, SELSKAR STREET, SKEFFINGTON STREET, SPAWELL ROAD TEMPERANCE ROW, THOMAS CLARKE PLACE, UPPER JOHN STREET, WATERLOO ROAD, WELL LANE, WELLINGTON PLACE, WELLINGTON PLACE CAR PARK, WESTGATE PARK, WYGRAM PLACE



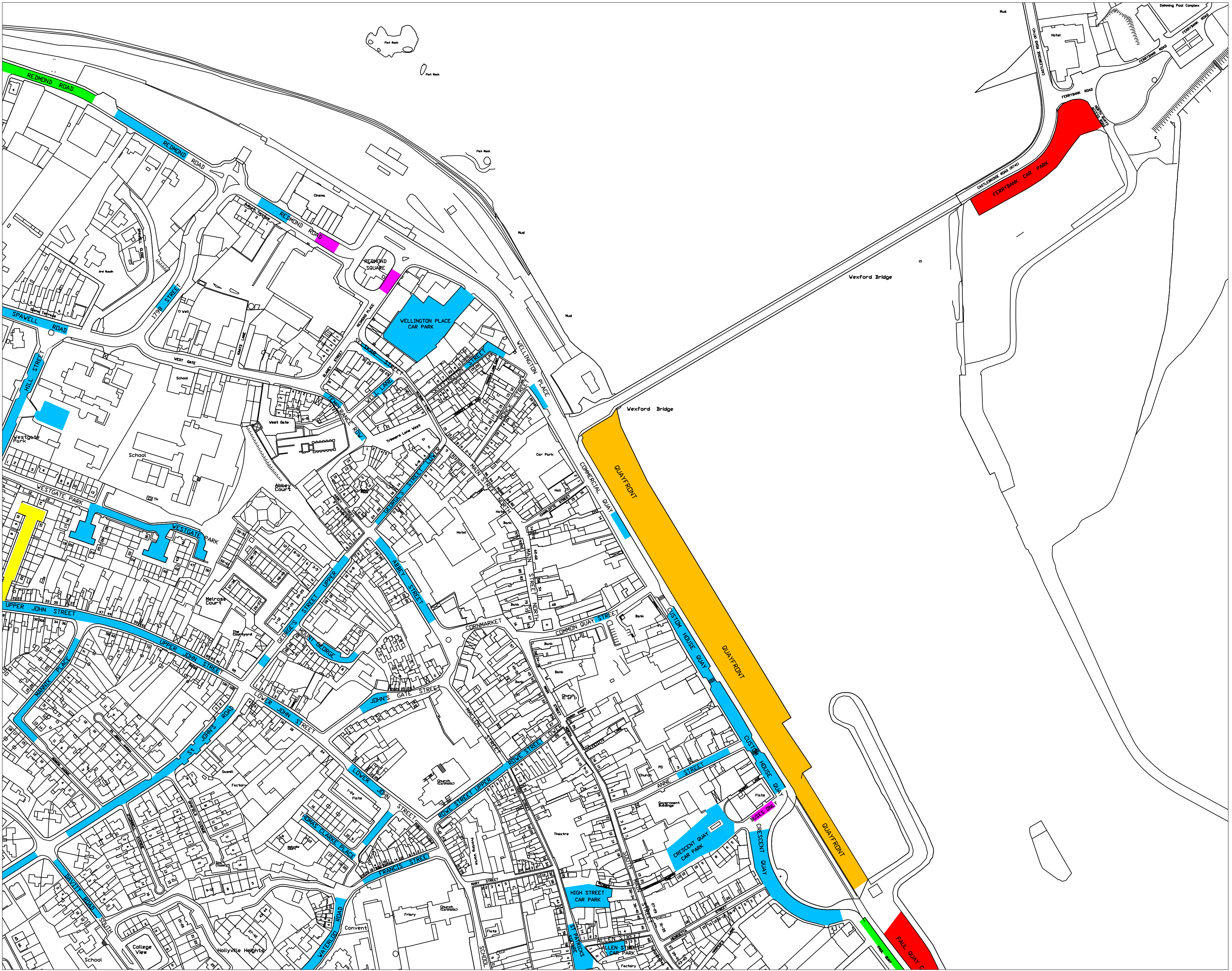
BARRIER PARKING
€2 Per Visit
FERRYBANK CAR PARK



PERMIT PARKING ONLY
QUAYFRONT AREA



BUSES PARKING ONLY
CRESCENT QUAY
REDMOND ROAD
REDMOND SQUARE



NO.	DESCRIPTION	DATE	CKD	DRAWN BY	SG
				CHECKED BY	MM
				ISSUE DATE	17 JAN 2018
				SCALE	NTS
				DRAFT	DESIGN
				DWG ADDRESS	T/AE/Wex-2/2018
				TENDER	
				SITE	
				REV	A

PROJECT TITLE	Wexford Parking Bylaws
DRAWING TITLE	PARKING ZONES FOR ADOPTION
DRG NO	2

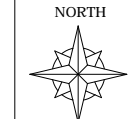
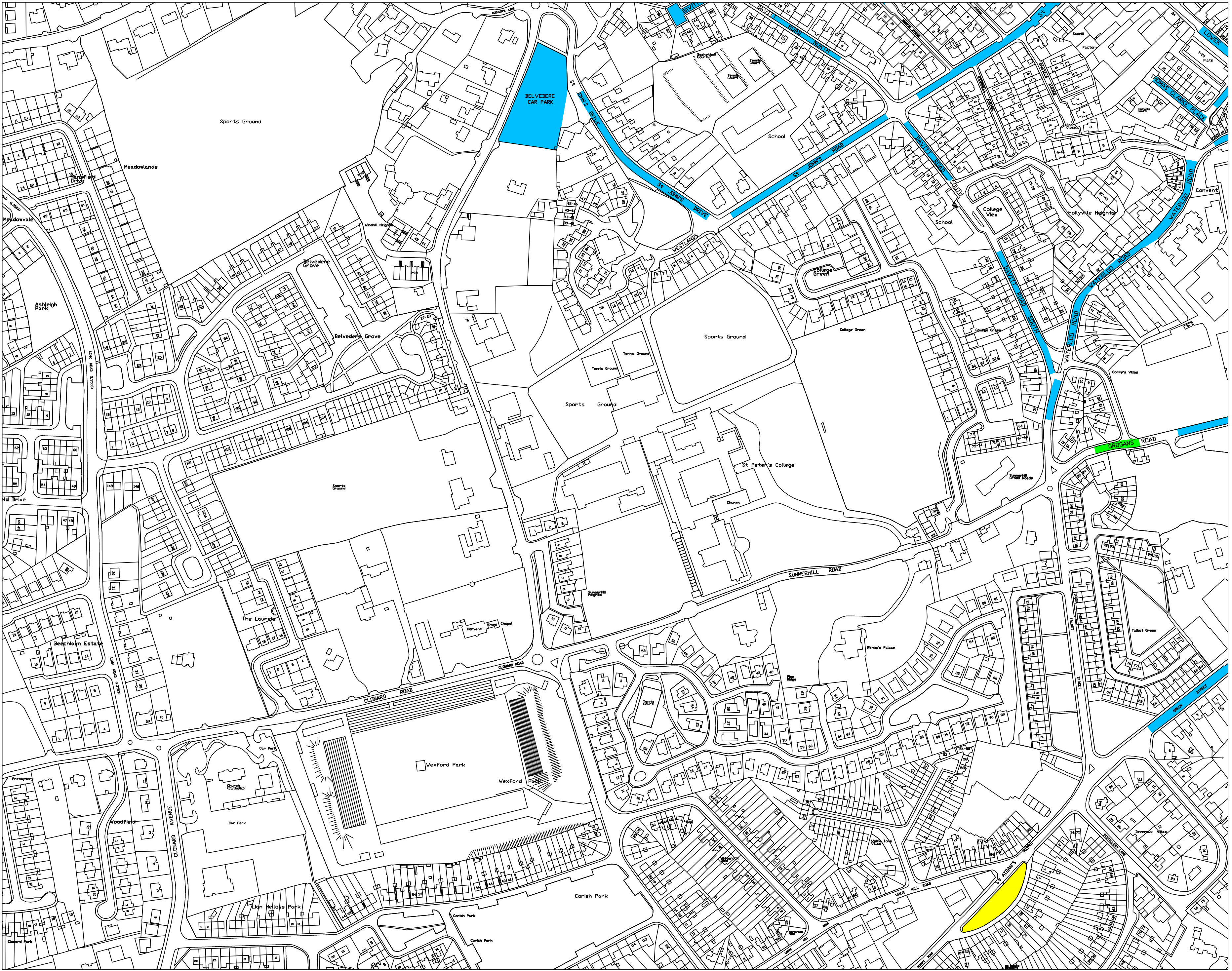


BLUE ZONE
SHORT TERM PARKING
0.5 Hour to 4 Hour
Pay & Display Parking


ABBAY STREET, BELVEDERE ROAD,
DAVITT ROAD NORTH, DAVITT ROAD
SOUTH, FRANCIS STREET, GEORGES
STREET UPPER, GROGAN'S ROAD, HILL
STREET, JOHN'S GATE STREET, LOWER
JOHN STREET, MANNIX PLACE, MOUNT
GEORGE, ROWE STREET UPPER, ST
JOHN'S DRIVE, ST JOHN'S ROAD,
THOMAS CLARKE PLACE, UPPER JOHN
STREET, WATERLOO ROAD, WESTGATE
PARK, WYGRAM PLACE



GREEN ZONE
LONG TERM PARKING
€2 Per Day
Pay & Display Parking
GROGAN'S ROAD



NO.	DESCRIPTION	DATE	CRD	DRAWN BY	SG
				MM	
				17 JAN 2018	
				SCALE NTS	SHEET SIZE A2
				DRAFT DESIGN	TENDER
				DWG ADDRESS	REV
				T/AE/Wex-3/2018	A


BLUE ZONE
SHORT TERM PARKING
0.5 Hour to 4 Hour
Pay & Display Parking


ALLEN STREET CAR PARK, ANNE STREET, BRIDE STREET, BRIDE STREET CAR PARK, CARRIGEEN STREET, CLIFFORD STREET, CRESCENT QUAY, CRESCENT QUAY CAR PARK, CUSTOM HOUSE QUAY, DISTILLERY ROAD, FRANCIS STREET, GREEN STREET, GROGAN'S ROAD, HIGH STREET CAR PARK, KEVIN BARRY STREET, KING STREET LOWER, KING STREET UPPER, LAMBERT PLACE, LOWER JOHN STREET, MICHAEL STREET, MILL ROAD, PARNELL STREET, PETER STREET, ROCHE'S ROAD, ROWE STREET UPPER, ST PATRICK'S SQUARE, ST PETER'S SQUARE, SCHOOL STREET, SOUTH MAIN STREET, THE FAYTHE, THOMAS CLARKE PLACE, THOMAS STREET, TRINITY STREET, WATERLOO ROAD


GREEN ZONE
LONG TERM PARKING
€2 Per Day
Pay & Display Parking

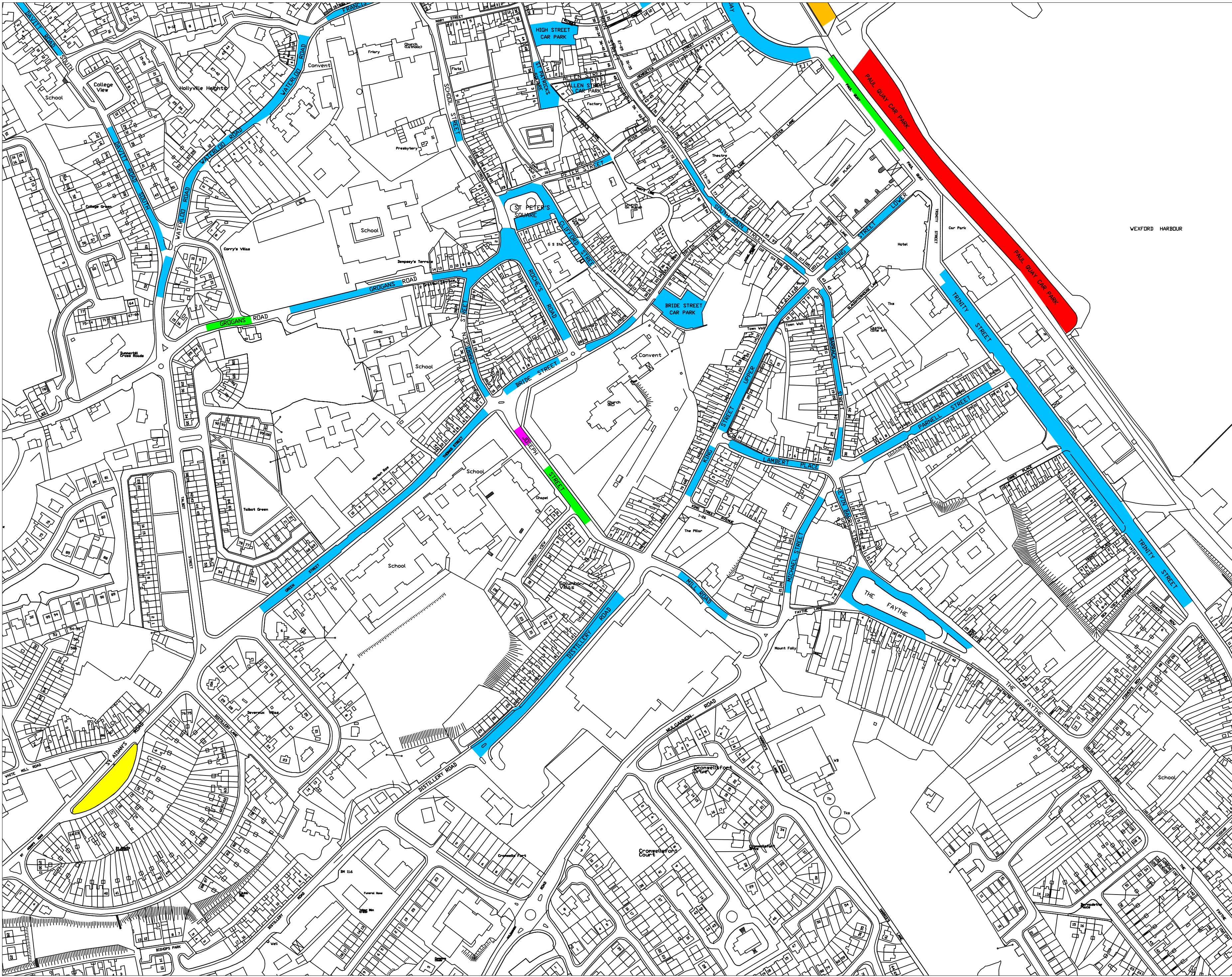
GROGAN'S ROAD
JOSEPH STREET
PAUL QUAY


BARRIER PARKING
€2 Per Visit
PAUL QUAY CAR PARK


PERMIT PARKING ONLY
QUAYFRONT AREA


BUSES PARKING ONLY
CRESCENT QUAY
JOSEPH STREET


RESIDENTS PARKING ONLY
ST AIDAN'S CRESCENT



NO.	DESCRIPTION	DATE	CRD	DRAWN BY	SG
				MM	
				ISSUE DATE	17 JAN 2018
				SCALE	N/TS
				DRAFT	DESIGN
				DWG ADDRESS	T/AE/Wex-4/2018
				REV	A

PROJECT TITLE	DRC NO
Wexford Parking Bylaws	
DRAWING TITLE	
PARKING ZONES FOR ADOPTION	

Appendix AA5

Road Safety Audit Report & Design Team Responses

Roughan & O Donovan

Proposed Trinity Wharf
Development, Co. Wexford

Stage 1 Road Safety Audit

Roughan & O Donovan

Proposed Trinity Wharf Development, Co. Wexford

Stage 1 Road Safety Audit

Document Ref: **P18-093-RP-001**

Rev	Prepared By	Reviewed By	Approved By	Issue Date	Reason for Revision
2.0	DOB	TAG	TAG	10 th September 2019	Final Report
1.0	DOB	TAG	TAG	6 th Dec. 2018	Draft Report

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1 Introduction

1.1 General

This report results from a Stage 1 Road Safety Audit on the proposed Trinity Wharf Development in Co. Wexford carried out at the request of Mr. John Ahern of Roughan & O Donovan.

The members of the Road Safety Audit Team are independent of the design team, and include:

Mr. Aly Gleeson

(MBA, MEng, BSc, CEng, RSACert, MIEI, MSoRSA)
Road Safety Audit Team Leader

Mr. David O'Brien

(BA, BAI, PgDip(PM), CEng, MIEI)
Road Safety Audit Team Member

The Road Safety Audit took place during September 2019 and comprised an examination of the documents provided by the designers (see Appendix B). In addition to examining the documents supplied the Road Safety Audit Team visited the site of the proposed measures on the 4th December 2018 (at approximately 10:45am). Weather conditions during the site visit were dry. The road surface was dry. Traffic volumes and speeds were considered low.

Where problems are relevant to specific locations these are shown on drawing extracts within the main body of the report and their locations are shown in Appendix D. Where problems are general to the proposals sample drawing extracts are within the main body of the report where considered necessary.

This has been carried out in accordance with the requirements of GE-STY-01024 (December 2017) - Road Safety Audit, contained on the Transport Infrastructure Ireland (TII) Publications website.

The scheme has been examined and this report compiled in respect of the consideration of those matters that have an adverse effect on road safety and considers the perspective of all road users. It has not been examined or verified for compliance with any other standards or criteria. The problems identified in this report are considered to require action in order to improve the safety of the scheme and minimise collision occurrence.

If any of the recommendations within this road safety audit report are not accepted, a written response is required, stating reasons for non-acceptance. Comments made within the report under the heading of Observations are intended to be for information only. Written responses to Observations are not required.

2 Project Description

It is proposed to develop a high-density urban development located on a brown field site within Wexford Town, Co. Wexford. The proposed development consists of a hotel, three office buildings, a multi-storey car park, a residential complex, a cultural and performance centre and a marina.

Vehicular access to the development will be provided from Trinity Street within Wexford Town forming a new four-arm signalised junction with Seaview Avenue. Trinity Street provides access into Wexford Town centre and has a posted speed limit of 50kph.

The vehicular access to the development will cross a rail line which will be controlled by a level crossing. Pedestrian and cycle access will be provided via a new 6m wide bridge from Paul Quay, located in the north west corner of the site (see Figure 2-1). Pedestrian and cycle facilities within the development include a dedicated shared cycle/footway along the northern and eastern extents of the proposed development.

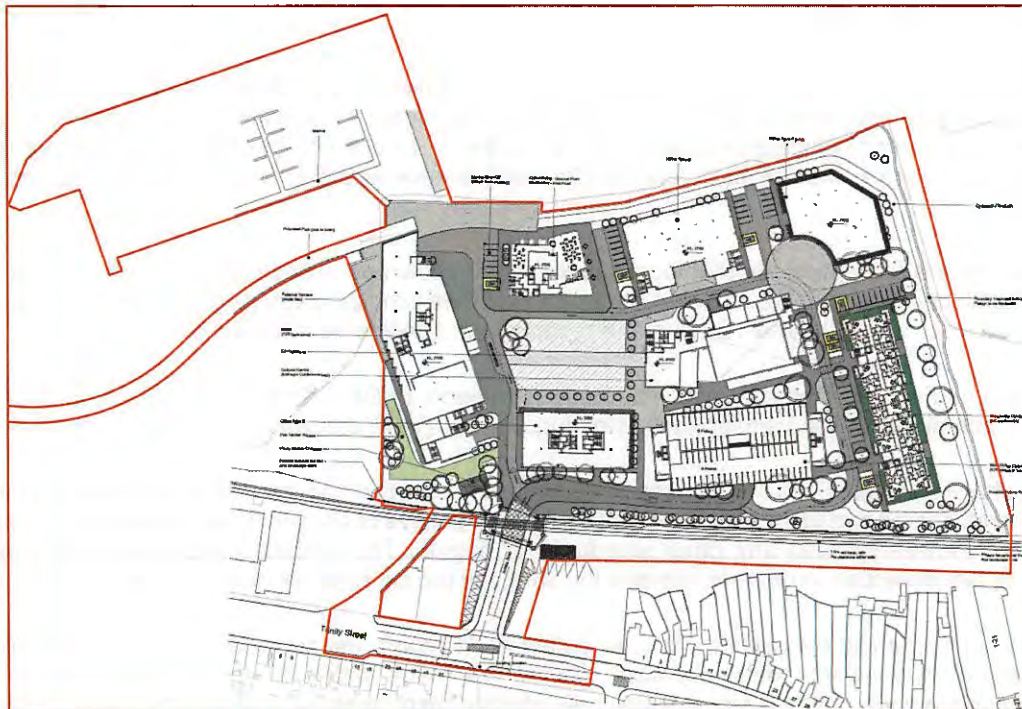


FIGURE 2-1 PROPOSED SITE LAYOUT

3 Main Report

3.1 Problem

Location: Seaview Avenue

Summary: It is unclear if sufficient turning space will be provided within Seaview Avenue

The proposed signalised junction at the development access will include traffic signals for vehicles exiting Seaview Avenue, which is a narrow cul de sac. It is unclear how vehicles currently exit Seaview Avenue, as there is no turning head within the cul de sac. It is assumed that the majority of drivers currently reverse onto Trinity Street when exiting Seaview Avenue, though this needs to be validated.



It is therefore unclear how drivers will exit Seaview Avenue under the current proposal, as they may not have clear visibility to the green signal if the current practice (assumed) of reversing is maintained. If this is the case, exiting drivers may reverse onto the junction when it is unsafe to do so, leading to side-on collisions.

Recommendation

The designer should investigate the existing arrangement within Seaview Avenue, and determine how the current exiting procedure may impact, or be impacted by, the proposed traffic signals.

Measures should be provided to ensure Seaview Avenue traffic does not reverse into Trinity Street under the proposed layout.

3.2 Problem

Location: General Problem

Summary: Insufficient swept paths



Vehicle swept path analysis appears to highlight a number of vehicle movements over-running the proposed footway and parking spaces. If insufficient space is provided, this may lead to vehicles mounting the inside kerb when undertaking turning manoeuvres, resulting in pedestrian/vehicle collisions.

Additionally, swept paths indicate HGV's entering/exiting the development must use the adjacent lane to complete movements to/from Trinity Street. This may result in a side swipe collision with a vehicle in the adjacent lane. This problem is exacerbated when the left and right turn movements happen together, as left turning HGVs may weave into the right turn lane, leading to side swipe collisions.

Additionally, it is unclear how HGV's will exit from the Cul De Sac's located to the north of the development where the carriageway width appears to be narrow. HGVs attempting to reverse out from these locations onto the one-way systems may find the manoeuvre difficult and with insufficient visibility resulting in material damage collisions.

Recommendation

Ensure sufficient turning space is provided for vehicles throughout the proposed development and ensure turning movements for vehicles entering/exiting the development do not require vehicles to use the adjacent lane.

3.3 Problem

Location: General Problem

Summary: Information regarding bicycle parking bays not provided to the Audit Team.

Information regarding bicycle parking bays has not been provided to the Audit Team. The Audit Team are aware that this is a Stage 1 Road Safety Audit and this information is likely to be considered as the design progresses. However, if sufficient consideration is not given to the location of bicycle parking bays, this could result bicycle parking being located where the effective footpath width is reduced below 1.2m. Additionally, insufficient bicycle parking facilities may result in informal parking, also reducing the effective footpath width. This may lead to pedestrians walking into the running carriageway where there is an increased risk of vehicle/pedestrian collision.

Recommendation

Ensure sufficient bicycle parking bays are provided, and are located where there is demand close to amenities and residential developments.

3.4 Problem

Drawing No.: General Problem

Summary: Visibility at internal junctions and pedestrian crossings may be reduced or impacted by the location of proposed trees.

A number of trees are proposed within the development. Where these trees are located near internal junctions or at pedestrian crossings, visibility may be reduced or impacted resulting in drivers being unaware of vehicles reversing out of parking bays or pedestrians attempting to cross the road. This may result in a side-on or vehicle/pedestrian collision.



Recommendation

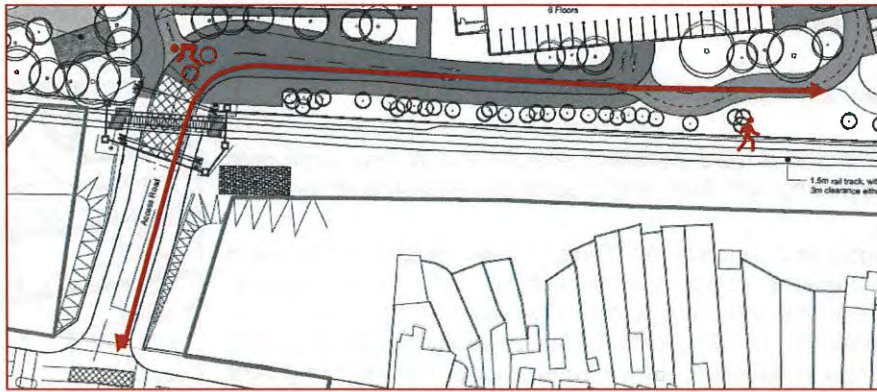
Ensure existing and proposed trees do not reduce or impact visibility requirements at junctions and pedestrian crossings within the proposed development. Additionally, ensure footways and internal roads are free from low hanging tree canopies.

3.5 Problem

Drawing No: Figure 2: Proposed Site Layout + Section

Summary: Discontinuous cycle/pedestrian facilities

Pedestrian and cycle facilities are proposed throughout the development including a cyclepath/footpath from the south-eastern to northern extents. However, pedestrian/cycle facilities are not continuous along the southern extents of the development. Without the provision of a continued pedestrian/cycle facility on the southern side, VRUs may enter the running carriageway where there is an increased risk of a personal injury collision.



Recommendation

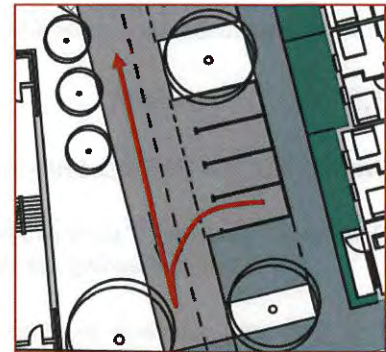
Provide continuous cycle and pedestrian facilities along the southern extents of the scheme.

3.6 Problem

Drawing No.: Figure 2: Proposed Site Layout + Section

Summary: Perpendicular parking bays may result in drivers unintentionally driving against one-way traffic

The internal road layout of the proposed development includes a one-way system. The proposed perpendicular parking located on the eastern side of the development may result in drivers reversing out of the road and turning against the one-way system, leading to a head-on collision.



Recommendation

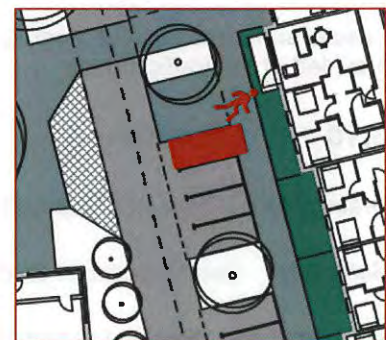
Provide echelon parking that can passively direct drivers to enter and exit the parking bays with the flow of traffic on the one-way system.

3.7 Problem

Drawing No.: Figure 2: Proposed Site Layout + Section

Summary: Parking bays may lead to vehicles overhanging the adjacent kerbline, and reducing the effective width of the footway.

Perpendicular parking bays within the development may lead to vehicles overhanging the adjacent footway, and reducing the effective width available for pedestrians. As a result, pedestrians may choose to enter the carriageway, where there is an increased risk of a vehicle/pedestrian collision. Additionally, drivers parking may unintentionally over-run the kerbline and strike a pedestrian on the footway, leading to vehicle/pedestrian collisions.



Recommendation

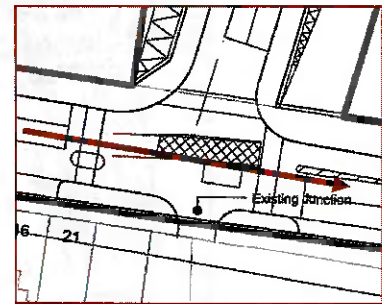
Provide measures that prevent vehicles from overhanging the adjacent footway.

3.8 Problem

Drawing No.: Figure 2: Proposed Site Layout + Section

Summary: Southbound drivers travelling straight-ahead may sight onto the opposing right turn lane, leading to head-on collisions.

The proposed signalised junction on Trinity Street includes a skewed straight-ahead movement across the junction for southbound drivers. Drivers may sight onto the right turn lane for development traffic, as it is in line with their approach to the junction. As a result, drivers may not anticipate the change in direction of travel and overrun the opposing right turn lane, resulting in head-on collisions.



The RSA Team acknowledge the guidance road markings proposed, but are concerned that these lines may not be clearly visible during the hours of darkness or during inclement weather.

Recommendation

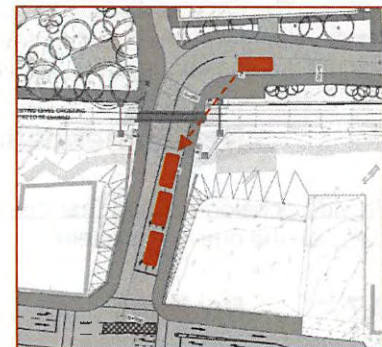
Provide measures that safely direct drivers through the junction and into the appropriate straight-ahead.

3.9 Problem

Drawing No: TRWH-ROD-SBR-SW_AE-DR-CB-4004.10

Summary: Unclear if sufficient forward visibility is achieved to queueing vehicles exiting the development

The proposed scheme includes a level crossing located on a bend approximately 50m from the development access where a signalised junction is proposed. It is unclear from the drawings provided if sufficient forward visibility is provided to queueing traffic at the traffic signals. If sufficient forward visibility is not provided to queueing traffic, drivers exiting the development may enter, and be unable to exit, the proposed yellow box. This may lead to conflict with the operation of the level crossing, leading to side-on collisions between a train and the stationary vehicle.



Recommendation

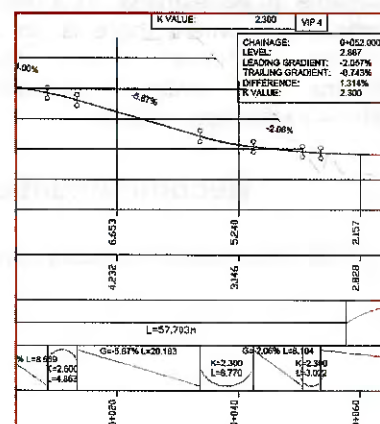
Ensure sufficient forward visibility to queueing vehicles is provided, and that adequate stacking distance is provided at the traffic signals.

3.10 Problem

Drawing No: TRWH-ROD-SBR-SW_AE-DR-CB-4004.12

Summary: Vertical gradient on development access may limit visibility.

The drawings provided show a vertical gradient of 5.87% on the development's approach to the traffic signals. Visibility into the junction for exiting development traffic may be impeded by the vertical alignment, leading to drivers entering the junction when it is unsafe to do so, resulting in possible side-on collisions with road users on Trinity Street.



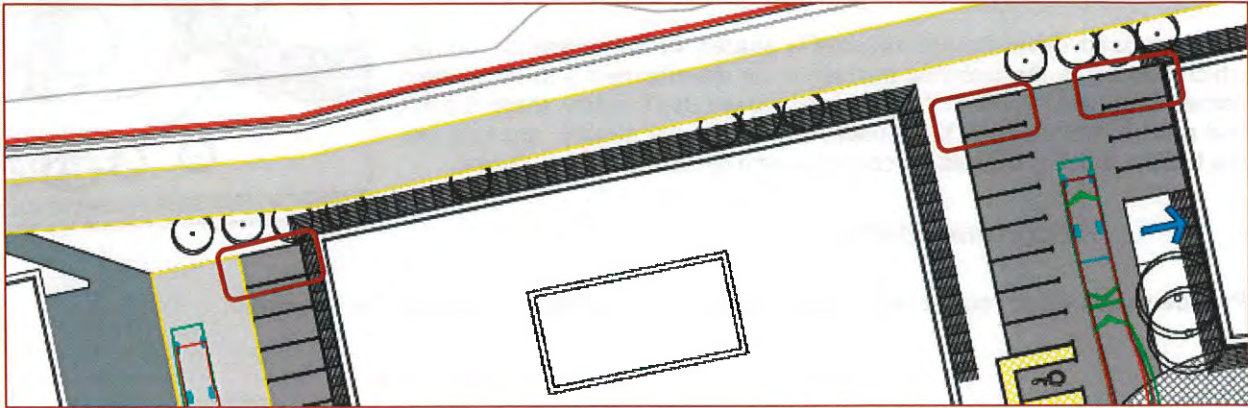
Recommendation

Ensure drivers exiting the development have clear visibility into the junction.

3.11 Problem

Drawing No.: Figure 2: Proposed Site Layout + Section

Summary: *Insufficient space for drivers wishing to park in the end parking bays.*



It is unclear from the drawings provided if sufficient turning space is provided for vehicles accessing/egressing the end parking spaces in the two car parks at the northern extents of the development. This may result in vehicles mounting the kerb leading to pedestrian/vehicle or material damage collisions.

Recommendation

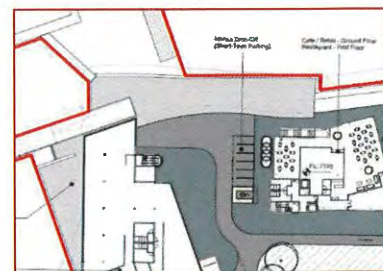
Ensure vehicles can enter/exit all car parking spaces.

3.12 Problem

Drawing No.: Figure 2: Proposed Site Layout + Section

Summary: *Pedestrians and cyclists may conflict with reversing vehicles at the marina.*

A pedestrian bridge is proposed on the northern extents of the scheme, which is accessed via a ramp near the marina. It is unclear from the drawings provided if measures are proposed to protect pedestrians and cyclists exiting the bridge from vehicles manoeuvring at the marina. This problem may be exacerbated by the types of vehicles reversing at the marina, which may be towing boats or other vehicles. Failure to protect pedestrians and cyclists in this area may lead to personal injury collisions.



Recommendation

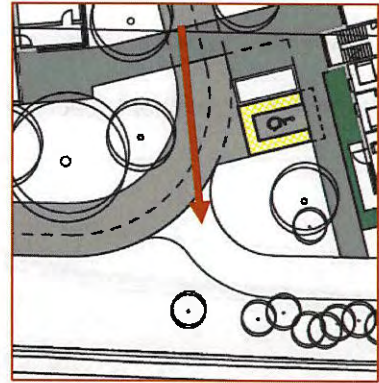
Ensure measures are provided to protect cyclists and pedestrians from moving vehicles within the marina area. Additionally, measures should be provided to ensure cyclists reduce their speed before entering the marina area.

3.13 Problem

Drawing No: Figure 2: Proposed Site Layout + Section

Summary: Drivers may enter the shared cycle/pedestrian footway at the development's southern extents

The proposed development includes a shared cycle/pedestrian footway which intersects the one-way system in the development's south-eastern corner. Due to the width of the proposed shared use footway, there is a risk that drivers may mistake the footway for a vehicular access, and turn into the facility, leading to head-on collisions with cyclists and pedestrians.



Recommendation

Provide measures to restrict vehicle access at the shared use cycle/pedestrian footway.

4 Road Safety Audit Team Statement

We certify that we have examined the drawings referred to in this report. The examination has been carried out with the sole purpose of identifying any features of the design that could be removed or modified in order to improve the safety of the scheme.

The problems identified have been noted in this report together with associated safety improvement suggestions, which we would recommend should be studied for implementation.

No one on the Road Safety Audit Team has been involved with the design of the scheme.

ROAD SAFETY AUDIT TEAM LEADER

Aly Gleeson

Signed:



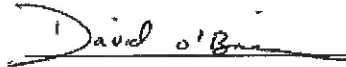
Dated:

10/09/2019

ROAD SAFETY AUDIT TEAM MEMBER

David O'Brien

Signed:



Dated:

10/09/2019

Appendix A – Road Safety Audit Brief Checklist

Have the following been included in the audit brief?: (if 'No', reasons should be given below)

	Yes	No
1. The Design Brief	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Departures from Standard	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Scheme Drawings	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. Scheme Details such as signs schedules, traffic signal staging	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Collision data for existing roads affected by scheme	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6. Traffic surveys	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7. Previous Road Safety Audit Reports and Designer's Responses/Feedback Form	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8. Previous Exception Reports	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9. Start date for construction and expected opening date	<input type="checkbox"/>	<input checked="" type="checkbox"/>
10. Any elements to be excluded from audit	<input type="checkbox"/>	<input checked="" type="checkbox"/>

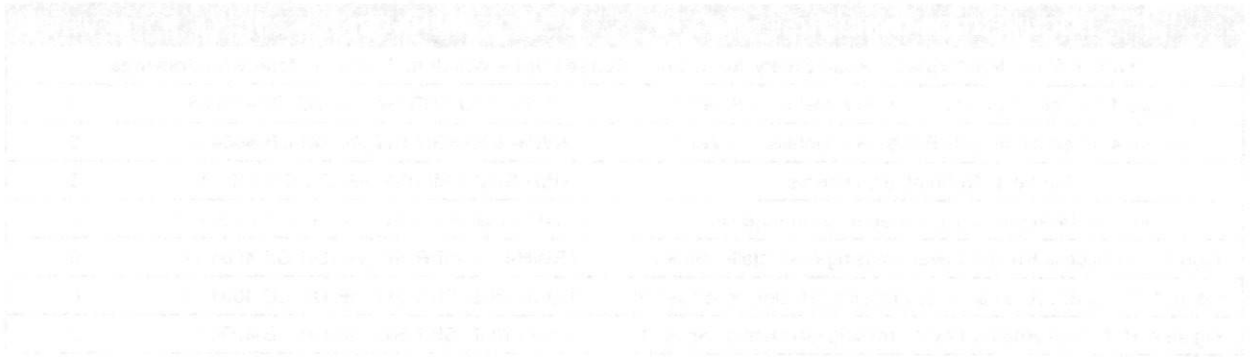
Any other information?

(if 'Yes', describe below)

☐ ☒

Appendix B – Documents Submitted to the Road Safety Audit Team

DOCUMENT/DRAWING TITLE	DOCUMENT/DRAWING NO.	REVISION
Trinity Wharf Masterplan – Road Safety Audit Brief, Co.Wexford – Which includes the following drawings		
Figure 4.9 Pedestrian Link Bridge G.A Details – Sheet 1	TRWH-ROD-SBR-SW_AE-DR-CB-4004.8	0
Figure 4.9 Pedestrian Link Bridge G.A Details – Sheet 2	RWH-ROD-SBR-SW_AE-DR-CB-4004.9	0
Figure 4. 13 Autotrack analysis	RWH-ROD-HML-SW_AE-DR-CH-4004.13	0
Figure 4.14 Access Junction General Arrangement	TRWH-ROD-HML-SW_JN01-DR-CH-4004.14	0
Figure 4.14 Access Road & Level Crossing GA Details -Sheet 3	TRWH-ROD-SBR-SW_AE-DR-CB-4004.12	0
Figure 4.11 Access Road & Level Crossing GA Details -Sheet 2'	TRWH-ROD-SBR-SW_AE-DR-CB-4004.11	0
Figure 4.10 Access Road & Level Crossing GA Details -Sheet 1'	TRWH-ROD-SBR-SW_AE-DR-CB-4004.10	0



Appendix C – Feedback Form

Road Safety Audit Feedback Form

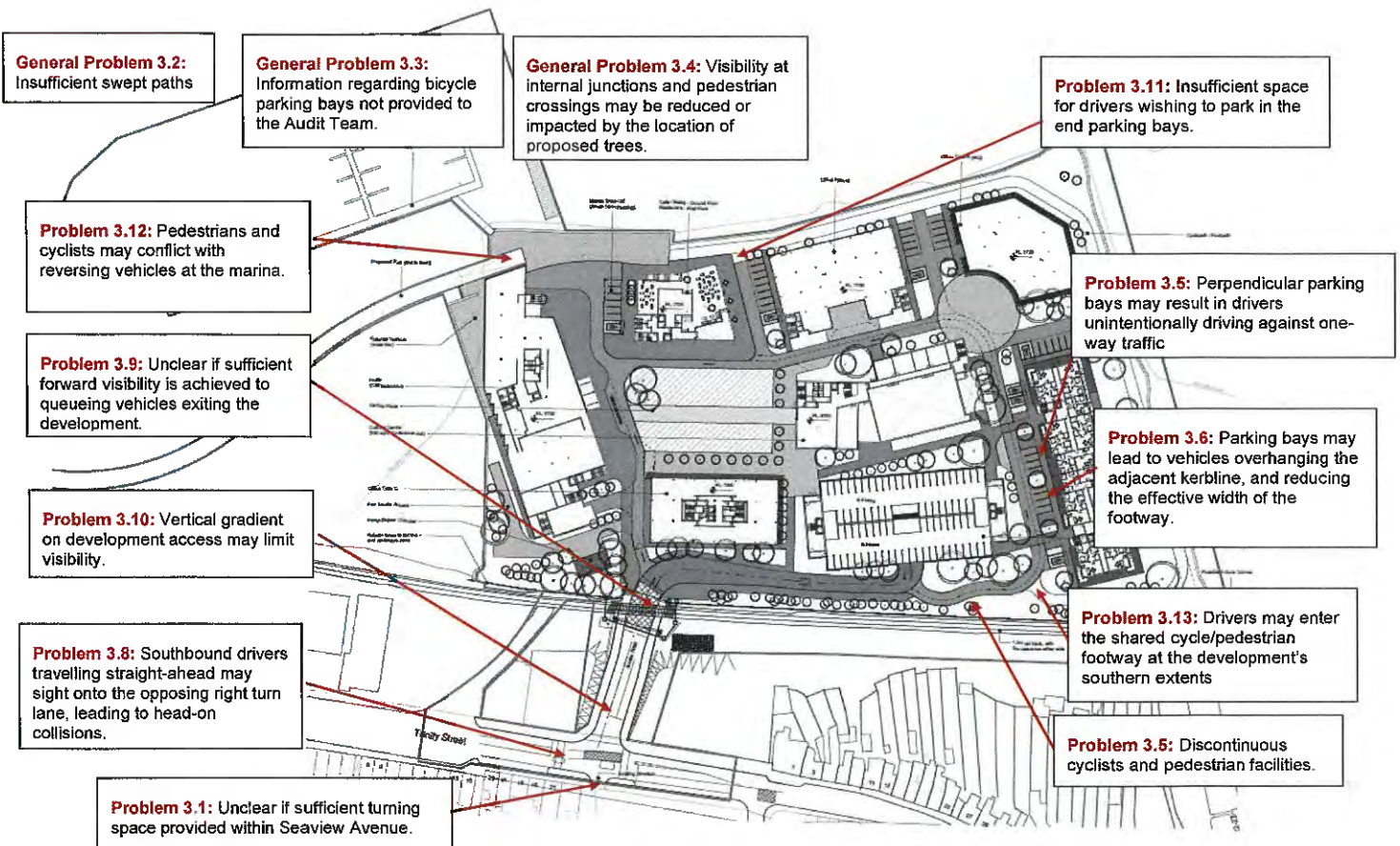
Scheme: Proposed Trinity Wharf Development in Co. WexfordRoute No.: R730Audit Stage: Stage 1 Road Safety Audit Date Audit Completed: 06/12/18

To Be Completed By Designer				To Be Completed By Audit Team Leader
Paragraph No. in Safety Audit Report	Problem Accepted (Yes/No)	Recommended Measure(s) Accepted (Yes/No)	Describe Alternative Measure(s). Give reasons for not accepting recommended measure	Alternative Measures or Reasons Accepted by Auditors (Yes/No)
3.1	Yes	Yes		
3.2	Yes	Yes		
3.3	Yes	Yes		
3.4	Yes	Yes		
3.5	Yes	Yes		
3.6	Yes	Yes		
3.7	Yes	Yes		
3.8	Yes	Yes		
3.9	Yes	Yes		
3.10	Yes	Yes		
3.11	Yes	Yes		
3.12	Yes	Yes		
3.13	Yes	Yes		

Signed: *  Designer Date 13/09/2019Signed:  Audit Team Leader Date 10/09/2019Signed:  Employer Date 17/9/2019

*On behalf of Scott Tallon Walker Architects

Appendix D – Problem Locations



PROPOSED TRINITY WHARF DEVELOPMENT, CO WEXFORD
STAGE 1 ROAD SAFETY AUDIT REPORT SUMMARY

Road Safety Audit Feedback Form					To be Completed by Audit Team Leader	
Paragraph No. In RSA Report	Location / Drawing No.	Problem Summary	Recommendation	Design Response		
				Problem Accepted [Yes / No]	Recommended Measure(s) Accepted [Yes / No]	Describe Alternative Measure(s). Give reasons for not accepting recommended measure. Or General Comments on Actions Taken
3.1	Seaview Avenue	It is unclear if sufficient turning space will be provided within Seaview Avenue	The designer should investigate the existing arrangement within Seaview Avenue, and determine how the current exiting procedure may impact, or be impacted by, the proposed traffic signals. Measures should be provided to ensure Seaview Avenue traffic does not reverse into Trinity Street under the proposed layout.	Y	Y	Design have been developed to include a hammerhead facility on Seaview Avenue which will allow vehicles up to a standard size vans to undertake 3 point turns
3.2	General Problem	Insufficient swept paths	Ensure sufficient turning space is provided for vehicles throughout the proposed development and ensure turning movements for vehicles entering/exiting the development do not require vehicles to use the adjacent lane.	Y	Y	Design has been reviewed at the access junction. The design vehicle used on the AutoTrack drawings is a 10m rigid coach which overhangs occasionally to manoeuvre at turns. This is acceptable as outlined in DMURS because of the very infrequent nature of this size vehicle on site.
3.3	General Problem	Information regarding bicycle parking bays not provided to the Audit Team.	Ensure sufficient bicycle parking bays are provided, and are located where there is demand close to amenities and residential developments.	Y	Y	The audit team's recommendation is accepted. These changes are included in the latest site layout drawing which indicates the location of on-site bicycle parking. The provision of bicycle parking has been guided by the National Cycle Manual.
3.4	General Problem	Visibility at internal junctions and pedestrian crossings may be reduced or impacted by the location of proposed trees.	Ensure existing and proposed trees do not reduce or impact visibility requirements at junctions and pedestrian crossings within the proposed development. Additionally, ensure footways and internal roads are free from low hanging tree canopies.	Y	Y	The designers will ensure proposed trees do not reduce or impact visibility requirements at junctions and pedestrian crossings as part of the design development.
3.5	Figure 2: Proposed Site Layout + Section	Discontinuous cycle/pedestrian facilities	Provide continuous cycle and pedestrian facilities along the southern extents of the scheme.	Y	Y	A 3.0m footpath has been provided on the western side of the access road between the multi-storey carpark and the level crossing for pedestrians and novice cyclists. This footpath links to the shared surface where pedestrians and cyclist will have priority over one-way vehicular traffic. The shared surface will be distinguished from the access road with a different surface type and entry treatments. The anticipated traffic flows on the access road are predicted to be in the region of 3,000 AADT which is suitable for on-road cycling as outlined in the National Cycle Manual. Speed conditions are anticipated to be 40 km/hr max which is suitable for comfortable on-road cycling.

3.6	Figure 2: Proposed Site Layout + Section	Perpendicular parking bays may result in drivers unintentionally driving against one-way traffic.	Provide echelon parking that can passively direct drivers to enter and exit the parking bays with the flow of traffic on the one-way system.	Y	Y	Echelon parking will be considered in further development of the design.
3.7	Figure 2: Proposed Site Layout + Section	Parking bays may lead to vehicles overhanging the adjacent kerbline, and reducing the effective width of the footway.	Provide measures that prevent vehicles from overhanging the adjacent footway.	Y	Y	Wheel stops will be considered in further development of the design. The designers will assess whether the introduction of wheel stops will constitute a trip hazard.
3.8	Figure 2: Proposed Site Layout + Section	Southbound drivers travelling straight-ahead may sight onto the opposing right turn lane, leading to head-on collisions.	Provide measures that safely direct drivers through the junction and into the appropriate straight-ahead.	Y	Y	The detail design of the junction will include a full street lighting design which will ensure the alignment of the through movement is clear and easily understood.
3.9	TRWH-ROD-SBR-SW_AE-DR-CB-4004.10	Unclear if sufficient forward visibility is achieved to queuing vehicles exiting the development	Ensure sufficient forward visibility to queuing vehicles is provided, and that adequate stacking distance is provided at the traffic signals.	Y	Y	The 3m footpath in front of the boom gate will be kept clear of level crossing furniture and equipment to ensure visibility across the yellow box.
3.10	TRWH-ROD-SBR-SW_AE-DR-CB-4004.12	Vertical gradient on development access may limit visibility.	Ensure drivers exiting the development have clear visibility into the junction.	Y	Y	The forward sight distance approaching the junction from the proposed access road has been checked and was found to comply with DMURS based on 30kph speed limit and a driver's eye level height of between 1.05m and 2.0m and an object height between 0.26m and 2.0m.
3.11	Figure 2: Proposed Site Layout + Section	Insufficient space for drivers wishing to park in the end parking bays.	Ensure vehicles can enter/exit all car parking spaces.	Y	Y	The parking areas have been rearranged to ease parking of vehicles into the end spaces.
3.12	Figure 2: Proposed Site Layout + Section	Pedestrians and cyclists may conflict with reversing vehicles at the marina.	Ensure measures are provided to protect cyclists and pedestrians from moving vehicles within the marina area. Additionally, measures should be provided to ensure cyclists reduce their speed before entering the marina area.	Y	Y	The proposed develop will not include a boat launch eliminating the risk's associated vehicles towing boats. Vehicles will be prohibited from the marina area with exception to maintenance vehicles.
3.13	Figure 2: Proposed Site Layout + Section	Drivers may enter the shared cycle/pedestrian footway at the development's southern extents	Provide measures to restrict vehicle access at the shared use cycle/pedestrian footway.	Y	Y	The corridor shown must provide fire tender and maintenance vehicle access to the pedestrian/cyclist promenade. However, the audit team's recommendation is accepted in that the track must restrict access to general vehicle traffic. The details will be included with further development of the design.


17/9/2019

Appendix C1

Site Specific Flood Risk

Assessment



Trinity Wharf Development, Wexford

Site Specific Flood Risk Assessment



September 2019



Trinity Wharf Development, Wexford

Site Specific Flood Risk Assessment

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1. INTRODUCTION

Roughan & O'Donovan Consulting Engineers have been engaged by Wexford County Council to undertake a Site Specific Flood Risk Assessment for a brownfield site at Trinity Wharf, Wexford Town. This report has been prepared to assess the flood risk to the subject site and adjacent lands as a result of the proposed development.

1.1 Description of Study Area

The Trinity Wharf site will facilitate a mix of office, leisure and residential development, with a primary objective of increased sustainable employment. It will also include the development of high quality public realm spaces within the development and pedestrian friendly links along the waterfront linking to Crescent Quay and to Wexford town centre.

The brownfield site is adjacent to the Dublin-Rosslare railway and extends over 3.5 Ha. The land was reclaimed from the sea in the 1980s and was formerly occupied by a number of industrial premises. The proposed site layout is shown in fig.1.1 below. Wexford County Council (WCC) is proposing to enhance the site's potential by developing a marina attached to the site. The proposal for the Trinity Wharf development comprises:

- A 6 floor hotel with 120 bedrooms;
- A two storey performing arts centre/conference hall;
- A multi-storey carpark with 482 spaces;
- An amphitheatre and central plaza;
- A residential complex;
- Three 5 storey office blocks and one 6 storey office block;
- A railway level crossing;
- Access roads; and
- A marina with 61 berths.



Figure 1.1 Trinity Wharf Proposed Site Layout

2. FLOOD RISK

2.1 Introduction

This report has been prepared in accordance with 'The Planning System and Flood Risk Management Guidelines for Planning Authorities' herein referred to as 'The Guidelines' as published by the Office of Public Works (OPW) and Department of Environment, Heritage and Local Government (DoHLG) in 2009.

2.2 Identification of Flood Risk

Flood risk is a combination of the likelihood of a flood event occurring and the potential consequences arising from that flood event and is then normally expressed in terms of the following relationship:

Flood risk = Likelihood of flooding x Consequences of flooding.

To fully assess flood risk an understanding of where the water comes from (i.e. the source), how and where it flows (i.e. the pathways) and the people and assets affected by it (i.e. the receptors) is required. Figure 2.1 below shows a source-pathway-receptor model reproduced from 'The Guidelines' (DEHLG-OPW, 2009).

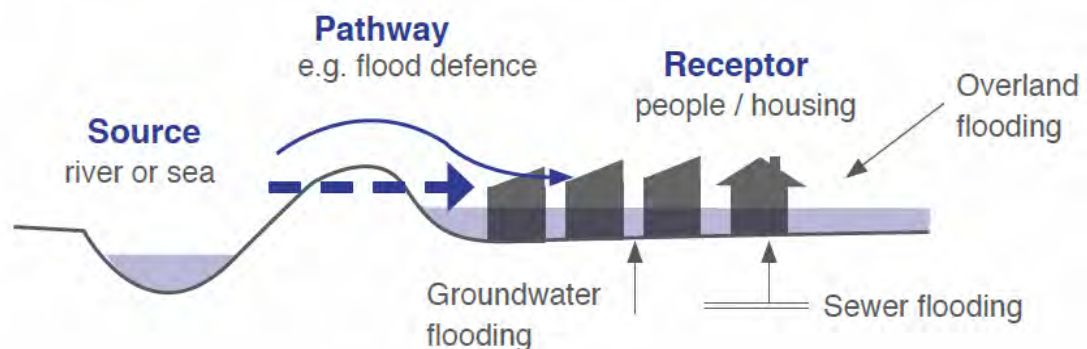


Figure 2.1 Sources, Pathways and Receptors of Flooding

The principal sources of flooding generally are rainfall or higher than normal sea levels. The principal pathways are rivers, drains, sewers, overland flow and river and coastal floodplains. The receptors can include people, their property and the environment. All three elements as well as the vulnerability and exposure of receptors must be examined to determine the potential consequences.

The Guidelines set out a staged approach to the assessment of flood risk with each stage carried out only as needed. The stages are listed below:

- **Stage I Flood Risk Identification** – to identify whether there may be any flooding or surface water management issues.
- **Stage II Initial Flood Risk Assessment** – to confirm sources of flooding that may affect an area or proposed development, to appraise the adequacy of existing information and to scope the extent of the risk of flooding which may involve preparing indicative flood zone maps.
- **Stage III Detailed Flood Risk Assessment** – to assess flood risk issues in sufficient detail and to provide a quantitative appraisal of potential flood risk to a proposed or existing development or land to be zoned, of its potential impact on flood risk elsewhere and of the effectiveness of any proposed mitigation measures.

2.3 Likelihood of Flooding

The Guidelines define the likelihood of flooding as the percentage probability of a flood of a given magnitude or severity occurring or being exceeded in any given year. It is generally expressed as a return period or annual exceedance probability (AEP). A 1% AEP flood indicates a flood event that will be equalled or exceeded on average once every hundred years and has a return period of 1 in 100 years. Annual Exceedance probability is the inverse of return period as shown Table 2.1 below.

Table 2.1 Correlation Between Return Period and AEP

Return Period (years)	Annual Exceedance Probability (%)
1	100
10	10
50	2
100	1
200	0.5
1000	0.1

2.4 Definition of Flood Zones

Flood zones are geographical areas within which the likelihood of flooding is in a particular range. These are split into three categories in The Guidelines:

Flood Zone A

Flood Zone A where the probability of flooding from rivers and the sea is highest (greater than 1% or 1 in 100 for river flooding or 0.5% or 1 in 200 for coastal/tidal flooding);

Flood Zone B

Flood Zone B where the probability of flooding from rivers and the sea is moderate (between 0.1% or 1 in 1000 and 1% or 1 in 100 for river flooding and between 0.1% or 1 in 1000 or 0.5% or 1 in 200 for coastal/tidal flooding);

Flood Zone C

Flood Zone C where the probability of flooding from rivers and the sea is low (less than 0.1% or 1 in 1000 for both river and coastal/tidal flooding. Flood Zone C covers all plan areas which are not in zones A or B.

It is important to note that when determining flood zones the presence of flood protection structures should be ignored. This is because areas protected by flood defences still carry a residual risk from overtopping or breach of defences and the fact that there is no guarantee that the defences will be maintained in perpetuity.

2.5 Sequential Approach & Justification Test

The Guidelines outline the sequential approach that is to be applied to all levels of the planning process. This approach should also be used in the design and layout of a development and the broad philosophy is shown in Figure 2.2 below. In general, development in areas with a high risk of flooding should be avoided as per the sequential approach. However, this is not always possible as many town and city centres are within flood zones and are targeted for development.

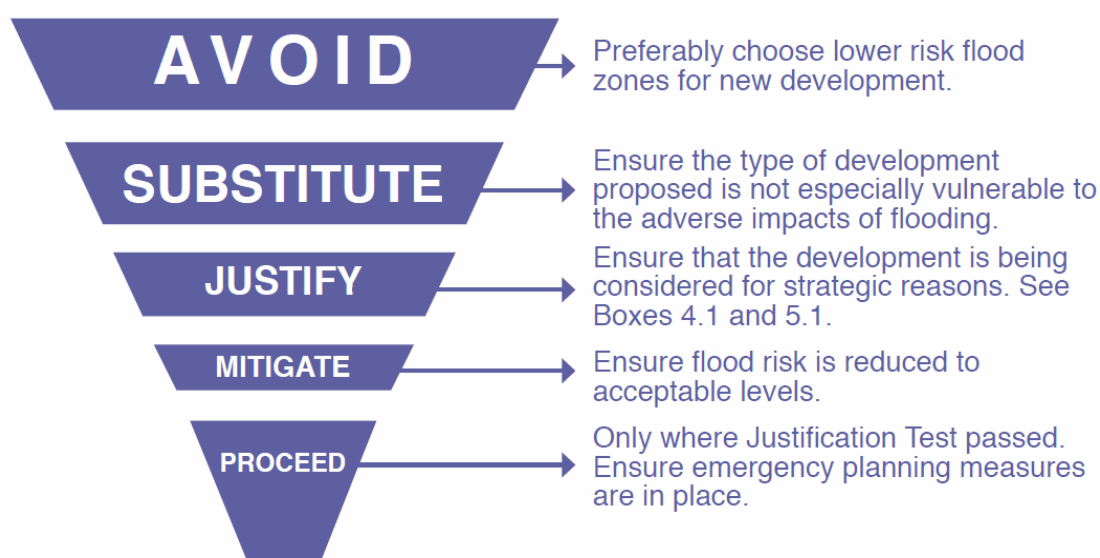


Figure 2.2 Sequential Approach (Source: The Planning System and Flood Risk Management)

The Justification Test has been designed to rigorously assess the appropriateness, or otherwise, of developments that are being considered in areas of moderate or high flood risk. The test comprises the following two processes.

- The first is the Plan-making Justification Test and is used at the plan preparation and adoption stage where it is intended to zone or otherwise designate land which is at moderate or high risk of flooding.
- The second is the Development Management Justification Test and is used at the planning application stage where it is intended to develop land at moderate or high risk of flooding for uses or development vulnerable to flooding that would generally be inappropriate for that land.

Table 2.2 Matrix of Vulnerability Versus Flood Zone to Illustrate Appropriate Development that is Required to Meet the Justification Test (Source: The Planning System and Flood Risk Management)

	Flood Zone A	Flood Zone B	Flood Zone C
Highly vulnerable development (including essential infrastructure)	Justification Test	Justification Test	Appropriate
Less vulnerable development	Justification Test	Appropriate	Appropriate
Water-compatible development	Appropriate	Appropriate	Appropriate

3. STAGE 1: FLOOD RISK IDENTIFICATION

3.1 General

This Stage 1 Flood Risk Identification includes a review of the existing information and the identification of any flooding or surface water management issues in the study area that may warrant further investigation.

3.2 Information Sources Consulted

The following information sources were consulted as part of the Stage 1 Flood Risk Identification:

Table 3.1 Information Sources Consulted

Source	Data Gathered
OPW Preliminary Flood Risk Assessment (PFRA) maps	Fluvial, Pluvial, Coastal and Groundwater flooding examined; myplan.ie
Catchment Flood Risk Assessment and Management Study (CFRAM)	OPW South-Eastern CFRAM Study
OPW National Flood Hazard Mapping	www.floodmaps.ie
Irish Coastal Protection Strategy Study	OPW Coastal flood Maps
Wexford County Council Trinity Wharf Marina Project - Feasibility Study	Hydraulic and Hydrodynamic modelling Wexford Harbour
Geological Survey of Ireland (GSI) Maps	GSI Teagasc subsoils map consulted to identify if alluvial/marine sediments are shown to be present at development site that may indicate the presence of a watercourse, floodplain, tidal zone.
Historical Maps	OSI 6" & 25" mapping assessed

3.3 Primary Sources of Baseline Data

(i) Preliminary Flood Risk Assessment

The PFRA is a national screening exercise, based on available and readily-derivable information, to identify areas where there may be a significant risk associated with flooding (referred to as Areas for Further Assessment, or AFA's). As part of the PFRA study, maps of the country were produced showing the indicative fluvial, coastal, pluvial and groundwater flood extents.

The PFRA flood extent mapping at the subject site indicates that the site is located within the coastal 0.5%AEP flood extents. The PFRA mapping does not indicate any fluvial, pluvial or groundwater flooding within or in the vicinity of the site.

The PFRA Maps for the area are reproduced in Appendix B.

(ii) Catchment Flood Risk Assessment and Management Study

The Plan area is covered within the South Eastern CFRAM study areas. The CFRAM programme led by the OPW, provides a detailed assessment of flooding in areas identified as AFA's during the PFRA study. Catchment wide Flood Risk Management Plans were also developed as part of the programme.

The published Final CFRAM mapping indicates that the periphery of the subject site has the potential to flood in 1% Fluvial AEP with 0.5% Tidal AEP flood events. The CFRAM mapping does not indicate any pluvial or groundwater flooding within or in the vicinity of the site.

The published CFRAM flood maps are reproduced in Appendix B.

(iii) Irish Coastal Protection Strategy Study

The Irish Coastal Protection Strategy Study (ICPSS) Phase 3, undertaken by the OPW, covers coastal flooding throughout Ireland. The aims of the ICPSS were to establish extreme coastal flood extents, produce coastal flood extent and flood depth maps and assess and quantify the hazard and potential risk associated with coastal erosion.

The ICPSS flood maps indicate that sections of the subject site is within the 0.5% AEP coastal flood extent.

The published ICPSS flood maps are reproduced in Appendix B.

(iv) OPW National Flood Hazard Mapping

The OPW National Flood Hazard Mapping Web Site (www.floodmaps.ie) was examined to identify any recorded flood events within the vicinity of the subject site. Flood Events have been recorded occurring on the coastline in 1996 and 2004 directly north west of the subject site.

The OPW Flood Hazard Mapping is reproduced in Appendix B.

(v) Wexford County Council Trinity Wharf Marina Project - Feasibility Study

This study was undertaken in order to investigate the feasibility of developing a marina facility in an area of land at Trinity Wharf that was acquired by Wexford County Council. The study included an assessment of extreme tide and wave heights.

The assessment indicates 1 in 200 year tide level that would cause flooding at Trinity Wharf.

(vi) Secondary Sources of Baseline data

The following sources were also examined to identify areas that may be liable to flooding:

Table 3.2 Secondary Sources of Baseline Data

Source	Data Gathered
GSI Maps	GSI Teagasc subsoils map shows the subject site is underlain by made ground and marine sediments. No evidence of Karst features have been identified within the vicinity of the site. Refer to Appendix B for GSI maps.
Historical Maps	Historic Maps indicate that a large portion of the subject site was build on land reclaimed form the sea. Refer to Appendix B for Historical Maps.

3.4 Conclusion of Stage 1 SFRA

In accordance with Stage 1 of the approach outlined in the Guidelines, the possible sources of flooding associated with this development have been identified. These are summarised in Table 3.3 (taken from Appendix A of the Guidelines).

Table 3.3 Possible Sources of Flooding Associated with the subject Site

Source	Pathway	Receptor	Likelihood	Consequence	Risk
Tidal	Overland flow, out of bank	Trinity Wharf Site	High	High (large portion of site indicated to be affected)	High due to proximity to Tidal estuary and elevation of site
Fluvial	Overland flow, out of bank	Trinity Wharf Site	High	High (large portion of site indicated to be affected)	High due to proximity to watercourses and elevation of site
Surface Water	Overland flow	Trinity Wharf Site	Possible	Medium (no reported surface water flooding on site)	Low if appropriate drainage system is incorporated in development and maintained appropriately
Ground Water	Rising levels	Trinity Wharf Site	Low Possibility	High (due to tidal-groundwater interaction)	Low due to low permeability of soil cover
The following potential flood sources were also scoped but no perceptible flood risk was identified: dam breach, canal bank breach, snow melt, watermain burst.					

The information provided in this section identifies that there is potentially elevated levels of Fluvial/tidal flood risk arising along the eastern, northern and western boundary of the Trinity Wharf Site; therefore, a Stage 2 SFRA is required to be undertaken.

4. STAGE 2 – INITIAL FLOOD RISK ASSESSMENT

4.1 General

A Stage 2 SFRA (initial flood risk assessment) was undertaken to:

- Confirm the sources of flooding that may affect the subject site;
- Appraise the adequacy of existing information as identified by the Stage 1 FRA.

4.2 Sources of Flooding

Flooding from Fluvial & Sea Level Rises / Coastal Flooding

The proposed Trinity Wharf development borders Wexford Harbour for approximately 0.5km on its western, northern and eastern boundary. Wexford Harbour is tidally dominated, as such; the most prevalent flood risk to the site is from extreme coastal inundation events or coastal events in combination with extreme fluvial events. The periphery of the site are indicated to be within flood zones A and B in the OPW's South Eastern CFRAM Study, the OPW Preliminary flooding assessment and the Irish Coastal Protection Strategy study. The Trinity Wharf development is considered to require a stage 3 detailed flood risk assessment with respect to flooding derived from Fluvial and Tidal Flooding.

Surface Water Flooding

Surface water flooding occurs when the local drainage system cannot convey stormwater flows from extreme rainfall events. The rainwater does not drain away through the normal drainage pathways or infiltrate into the ground but instead ponds on or flows over the ground instead. Surface water flooding is unpredictable as it depends on a number of factors including ground levels, rainfall and the local drainage network. The drainage network for any development on the site will incorporate Sustainable Drainage Systems (SuDS) for the purpose for managing surface water in terms of both flow and quality. The subject site is not considered to require a detailed flood risk assessment with respect to surface water flooding.

Groundwater Flooding

Ground water flooding is a result of upwelling in occurrences where the water table or confined aquifers rises above the ground surface. This tends to occur after long periods of sustained rainfall and/or very high tides. High volumes of rainfall and subsequent infiltration to ground will result in a rising of the water table. Groundwater flooding tends to occur in low-lying areas, where with additional groundwater flowing towards these areas, the water table can rise to the surface causing groundwater flooding. The sources consulted such as the CFRAM mapping and GSI records show no indication that the Trinity Wharf Site is subject to Groundwater derived flooding. The subject site is not considered to require a detailed flood risk assessment with respect to groundwater flooding.

Pluvial Flood Risk

Pluvial flooding results from heavy rainfall that exceeds ground infiltration capacity or more commonly in Ireland where the ground is already saturated from previous rainfall events. This causes ponding and flooding at localized depressions. Pluvial flooding is commonly a result of changes to the natural flow regime such as the implementation of hard surfacing and improper drainage design. The sources consulted such as the CFRAM mapping and PFRA mapping show no indication that the subject site is subject to pluvial derived flooding. Pluvial flooding will be considered in the design of drainage systems as part of planned developments. The subject site is not considered to require a detailed flood risk assessment with respect to pluvial flooding.

4.3 Conclusion of Stage 2 SFRA

The information provided in this section identifies that there is potentially elevated levels of coastal flood risk arising along the boundary of the subject site therefore, a Stage 3 SSFRA is required.

5. STAGE 3 DETAILED FLOOD RISK ASSESSMENT

5.1 Planning and Guidance

OPW Guidance

As per the OPWs Flood Risk Management Guidelines for Local Authorities (2009) residential dwelling are regarded as “highly vulnerable” developments and must be defended to the 1 in 1000 year fluvial or tidal flood events. Commercial uses and local transport infrastructure are regarded as “less vulnerable” and are subject to a lower mandatory level of protection of 1 in 200 year tidal events. The Guidelines specify the use of a precautionary approach when dealing with data uncertainties.

The Flood Risk Management Guidelines (OPW, 2009) also stipulates that the effect of climate change should be considering when assessing flood risk. The OPW details the potential impact and design parameters associated with climate change scenarios as part of the Climate Change Sectoral Adaptation Plan - Flood Risk Management 2019-2024. This programme includes the assessment of risk for two potential future scenarios; the Mid-Range Future Scenario (MRFS) and the High-End Future Scenario (HEFS). These scenarios include a sea level rise of 0.5m and 1.0m and an increase in peak flood flows of 20% and 30% for the MRFS and HEFS respectively. The MRFS is considered suitable for the subject site.

Wexford Town and Environs Development Plan 2009-2015 (duration extended to 2019)

No flood risk assessment was undertaken as part of the Wexford Town and Environs Development Plan, however, policy statements SW6-SW11 relate to flood risk in the planning document. The plan stipulates that floor levels of all buildings must be 300mm above the 1 in 100 year fluvial or 1 in 200 year tidal flood level.

5.2 Extreme Tide and Wave Height Assessment

Flood risk assessments at strategic and site specific scale have been undertaken as part of the following studies:

- Irish Coastal Protection Strategy Study(ICPSS);
- The South Eastern CFRAMs;
- Wexford County Council Trinity Wharf Marina Project - Feasibility Study and;
- Wexford County Development Plan SFRA.

Extreme sea level return periods detailed in these studies are listed in table 5.1 below.

Table 5.1 Calculated Sea levels (all figures include climate a change factor as per the OPW MRFS)

Study	1 in 200 year WL (mOD)	1 in 200 year WL (mOD) + 300mm	1 in 1000 year WL (mOD)
Irish Costal protection Strategy Study	2.24	2.54	2.47
South Eastern CFRAMs	2.14	2.44	2.32
Wexford County Council Trinity Wharf Marina Project - Feasibility Study	2.34	2.64	2.56

The highest values among the various flood studies (Table 5.1) were calculated as part of the Wexford County Council Trinity Wharf Marina Project - Feasibility Study. As per the precautionary approach, these are considered the most suitable indicator of flood

risk for the subject site. Utilising these figures, the following minimum levels will be required within the site:

- To satisfy the Wexford Town and Environs Development Plan (2009-2015) all buildings as part of the proposed development must have a minimum floor level of 2.64mOD. The lowest proposed ground floor level within the site is 3.30mOD.
- As per the OPWs Flood Risk Management Guidelines for Local Authorities (2009) "Less vulnerable developments" such as local transport infrastructure must have a minimum level of 2.34mOD. The lowest proposed road level within the site is 2.80mOD.

The ICPSS states that there are no significant interactions of tidal currents and surges. Anecdotal evidence suggests that during frequent easterly wind conditions, the tidal levels in the Harbour do not drop during ebb flow (ICPSS Phase 2 South East Coast).

A feasibility study was completed by Wexford County Council for the Trinity Wharf Site in January 2018, this builds upon the works undertaken as part of the ICPSS and South Eastern CFRAMs where extreme sea levels and wave action were examined.

The two wave height acceptance thresholds used in the study were based on guidelines published by the Yacht Harbour Association and the Australian Standard (AS3962) Guidelines for design of Marinas. The assessment concluded that for the marina to be viable and safe, a suitably designed defence structure would be required. The study calculated a 1 in 50 year significant wave height of 0.9m. The simulated wave height was significantly reduced by the implementation of defences such as breakwaters.

This report recommends that sloping revetments to 2.4mOD with an additional 1m parapet would be required to provide adequate protection to pedestrians and the wider development with a final parapet height of 3.4mOD. This figure is inclusive of the OPW MRFS climate change parameters.

6. JUSTIFICATION TEST

The flood risk assessment carried out for the Trinity Wharf development determined that the subject site is within lands at risk of flooding. In this context, the proposed development satisfies the Justification Test as outlined below:

6.1 The subject lands have been zoned or otherwise designated for the use or form of development in an operative development plan, which has been adopted or varied taking account of these Guidelines.

The subject site is zoned as Town Centre (TC) as per the Wexford Town & Environs Development Plan 2009-2015 (as extended to 2019). The Trinity Wharf site will facilitate a mix of office, leisure and residential development, with a primary objective of increased sustainable employment. It will also include the development of high-quality public realm spaces within the development and pedestrian friendly links along the waterfront linking to Crescent Quay and to the existing Wexford town centre. Therefore, the proposed development is suitable for the subject site.

6.2 The proposal has been subject to an appropriate flood risk assessment that demonstrates:

6.2.1. *The development proposed will not increase flood risk elsewhere and, if practicable, will reduce overall flood risk;*

Development of the site with relevant mitigation measures will greatly reduce flood risk from tidal inundation while having negligible impact on neighbouring developments. The flood volume displaced by the raising of levels as part of the proposed development is seen to have a negligible effect in the context of the tidal extents of the River Slaney Estuary, Wexford Harbour and the Irish Sea.

6.2.2. *The development proposal includes measures to minimise flood risk to people, property, the economy and the environment as far as reasonably possible;*

The proposed development shall be defended to the 1 in 1000 year coastal flood level as per the OPW Guidelines. ROD proposes that the development shall be defended to a minimum level of 2.64mOD. This figure was derived from the Wexford County Council Trinity Wharf Marina Project - Feasibility Study 1 in 200 year level flood level plus an additional 0.5m climate change factor + 0.3m freeboard to satisfy the Wexford Town and Environs Development Plan (2009-2015). The level of 2.64mOD is 80mm higher than the 1 in 1000 year coastal flood level. The lowest proposed ground floor level within the site is 3.30mOD. The lowest proposed road level within the site is 2.80mOD.

Sloping revetments to a minimum 2.4mOD with 1m parapet wall along sea facing perimeter of the site will be incorporated to protect the development against storm surge and wave action. This figure is inclusive of the OPW MRFS climate change parameters.

6.2.3. *The development proposed includes measures to ensure that residual risks to the area and/or development can be managed to an acceptable level as regards the adequacy of existing flood protection measures or the design, implementation and funding of any future flood risk management measures and provisions for emergency services access;*

The proposed development has been designed with regard to flood resilient construction measures and materials. The proposed flood defences and drainage systems will be subject to a maintenance plan, the maintenance of the proposed developments flood defences and drainage systems will be undertaken by the relevant competent authority.

6.2.4. *The development proposed addresses the above in a manner that is also compatible with the achievement of wider planning objectives in relation to development of good urban design and vibrant and active streetscapes.*

The proposed development is in keeping with modern urban design regarding architecture and landscaping. The proposed development is incorporating best management practices using SuDS to attenuate and treat surface water runoff. The Trinity Wharf development shall provide a beneficial addition to the urban form of Wexford town, which will assist in achieving strategic planning objectives in the immediate vicinity of the development and in the wider region.

6.3 Justification Test Conclusions

The proposed development at Trinity Wharf has been determined to have satisfied all requirements of the justification test.

7. FLOOD RISK ASSESSMENT CONCLUSIONS

The Trinity Wharf development site has been assessed for existing and future sources of flood risk. The primary source of flood risk identified for the sites is from coastal flooding from the adjacent Wexford Bay.

A review of the previous detailed hydraulic and hydrological assessments has determined a minimum ground floor level of 2.64mOD should be adopted within the development. The lowest proposed ground floor level within the site is 3.30mOD. The lowest proposed road level within the site is 2.80mOD. This will protect the site up to the 1 in 1000 year coastal flood event and satisfies the requirements of the relevant planning guidance documents and statutory plans. In addition, a sloping revetment to 2.4mOD with a 1m parapet wall (to 3.4mOD) along the sea facing perimeter of the site should be suitable to protect the development against storm surge and wave action.

A justification test was completed for the proposed development which has been determined to have satisfied all requirements.

APPENDIX A

GLOSSARY OF TERMS

GLOSSARY OF TERMS

Catchment: The area that is drained by a river or artificial drainage system.

Catchment Flood Risk Assessment and Management Studies (CFRAMS): A catchment-based study involving an assessment of the risk of flooding in a catchment and the development of a strategy for managing that risk in order to reduce adverse effects on people, property and the environment. CFRAMS precede the preparation of Flood Risk Management Plans (see entry for FRMP).

Climate change: Long-term variations in global temperature and weather patterns, which occur both naturally and as a result of human activity, primarily through greenhouse gas emissions.

Core of an urban settlement: The core area of a city, town or village which acts as a centre for a broad range of employment, retail, community, residential and transport functions.

Detailed flood risk assessment: A methodology to assess flood risk issues in sufficient detail and to provide a quantitative appraisal of flood hazard and potential risk to an existing or proposed development, of its potential impact on flood elsewhere and of the effectiveness of any proposed measures.

Estuarial (or tidal) flooding: Flooding from an estuary, where water level may be influenced by both river flows and tidal conditions, with the latter usually being dominant.

Flooding (or inundation): Flooding is the overflowing of water onto land that is normally dry. It may be caused by overtopping or breach of banks or defences, inadequate or slow drainage of rainfall, underlying groundwater levels or blocked drains and sewers. It presents a risk only when people, human assets and ecosystems are present in the areas that flood.

Flood Relief Schemes (FRS): A scheme designed to reduce the risk of flooding at a specific location.

Flood Defence: A man-made structure (e.g. embankment, bund, sluice gate, reservoir or barrier) designed to prevent flooding of areas adjacent to the defence.

Flood Risk Assessment (FRA): FRA can be undertaken at any scale from the national down to the individual site and comprises 3 stages: Flood risk identification, initial flood risk assessment and detailed flood risk assessment.

Flood Risk Identification: A desk-based study to identify whether there may be any flooding or surface water management issues related to a plan area or proposed development site that may warrant further investigation.

Flood Hazard: The features of flooding which have harmful impacts on people, property or the environment (such as the depth of water, speed of flow, rate of onset, duration, water quality, etc.).

Floodplain: A flood plain is any low-lying area of land next to a river or stream, which is susceptible to partial or complete inundation by water during a flood event.

Flood Risk: An expression of the combination of the flood probability, or likelihood and the magnitude of the potential consequences of the flood event.

Flood Storage: The temporary storage of excess run-off, or river flow in ponds, basins, reservoirs or on the flood plain.

Flood Zones: A geographic area for which the probability of flooding from rivers, estuaries or the sea is within a particular range.

Fluvial flooding: Flooding from a river or other watercourse.

Groundwater flooding: Flooding caused by groundwater escaping from the ground when the water table rises to or above ground level.

Initial flood risk assessment: A qualitative or semi-quantitative study to confirm sources of flooding that may affect a plan area or proposed development site, to appraise the adequacy of existing information, to provide a qualitative appraisal of the risk of flooding to development, including the scope of possible mitigation measures, and the potential impact of development on flooding elsewhere, and to determine the need for further detailed assessment.

Freeboard: Factor of safety applied for water surfaces. Defines the distance between normal water level and the top of a structure, such as a dam, that impounds or restrains water.

Justification Test: An assessment of whether a development proposal within an area at risk of flooding meets specific criteria for proper planning and sustainable development and demonstrates that it will not be subject to unacceptable risk nor increase flood risk elsewhere. The justification test should be applied only where development is within flood risk areas that would be defined as inappropriate under the screening test of the sequential risk-based approach adopted by this guidance.

Likelihood (probability) of flooding: A general concept relating to the chance of an event occurring. Likelihood is generally expressed as a probability or a frequency of a flood of a given magnitude or severity occurring or being exceeded in any given year. It is based on the average frequency estimated, measured or extrapolated from records over a large number of years and is usually expressed as the chance of a particular flood level being exceeded in any one year. For example, a 1-in-100 or 1% flood is that which would, on average, be expected to occur once in 100 years, though it could happen at any time.

Ordnance Datum (or OD) Malin: is a vertical datum used by an ordnance survey as the basis for deriving altitudes on maps. A spot height may be expressed as AOD for "above ordnance datum". Usually mean sea level (MSL) is used for the datum. In the Republic of Ireland, OD for the Ordnance Survey of Ireland is Malin Ordnance Datum: the MSL at Portmoor Pier, Malin Head, County Donegal, between 1960 and 1969. Prior to 1970, Poolbeg Ordnance Datum was used: the low water of spring tide at Poolbeg lighthouse, Dublin, on 8 April 1837. Poolbeg OD was about 2.7 metres lower than Malin OD.

Management Train/Treatment Train: the sequence of drainage components that collect, convey, store and treat runoff as it drains through the site.

Mitigation: The term is used to describe an action that helps to lessen the impacts of a process or development on the receiving environment. It is used most often in association with measures that would seek to reduce negative impacts of a process or development.

Pathways: These provide the connection between a particular source (e.g. high river or tide level) and the receptor that may be harmed (e.g. property). In flood risk management, pathways are often 'blocked' by barriers, such as flood defence structures, or otherwise modified to reduce the incidence of flooding.

Pluvial flooding: Usually associated with convective summer thunderstorms or high intensity rainfall cells within longer duration events, pluvial flooding is a result of rainfall-generated overland flows which arise before run-off enters any watercourse or sewer. The intensity of rainfall can be such that the run-off totally overwhelms surface water and underground drainage systems.

Regional Planning Guidelines (RPG): These provide the regional context and priorities for applying national planning strategy to each NUTS III region and encourage greater co-ordination of planning policies at the city/county level. RPGs are an important part of the flood policy hierarchy as they can assist in co-ordinating flood risk management policies at the regional level.

Resilience: Sometimes known as “wet-proofing”, resilience relates to how a building is constructed in such a way that, although flood water may enter the building, its impact is minimised, structural integrity is maintained, and repair, drying and cleaning and subsequent reoccupation are facilitated.

Receptors: Things that may be harmed by flooding (e.g. people, houses, buildings or the environment).

Residual risk: The risk which remains after all risk avoidance, substitution and mitigation measures have been implemented, on the basis that such measures can only reduce risk, not eliminate it.

Sequential Approach: The sequential approach is a risk-based method to guide development away from areas that have been identified through a flood risk assessment as being at risk from flooding. Sequential approaches are already established and working effectively in the plan-making and development management processes.

Sustainable Drainage System (SuDS): Drainage systems that are considered to be environmentally beneficial, causing minimal or no long-term detrimental impact.

Site-specific Flood Risk Assessment: An examination of the risks from all sources of flooding of the risks to and potentially arising from development on a specific site, including an examination of the effectiveness and impacts of any control or mitigation measures to be incorporated in that development.

Source: Refers to a source of hazard (e.g. the sea, heavy rainfall).

Strategic Flood Risk Assessment: The assessment of flood risk on a wide geographical area against which to assess development proposed in an area (Region, County, Town).

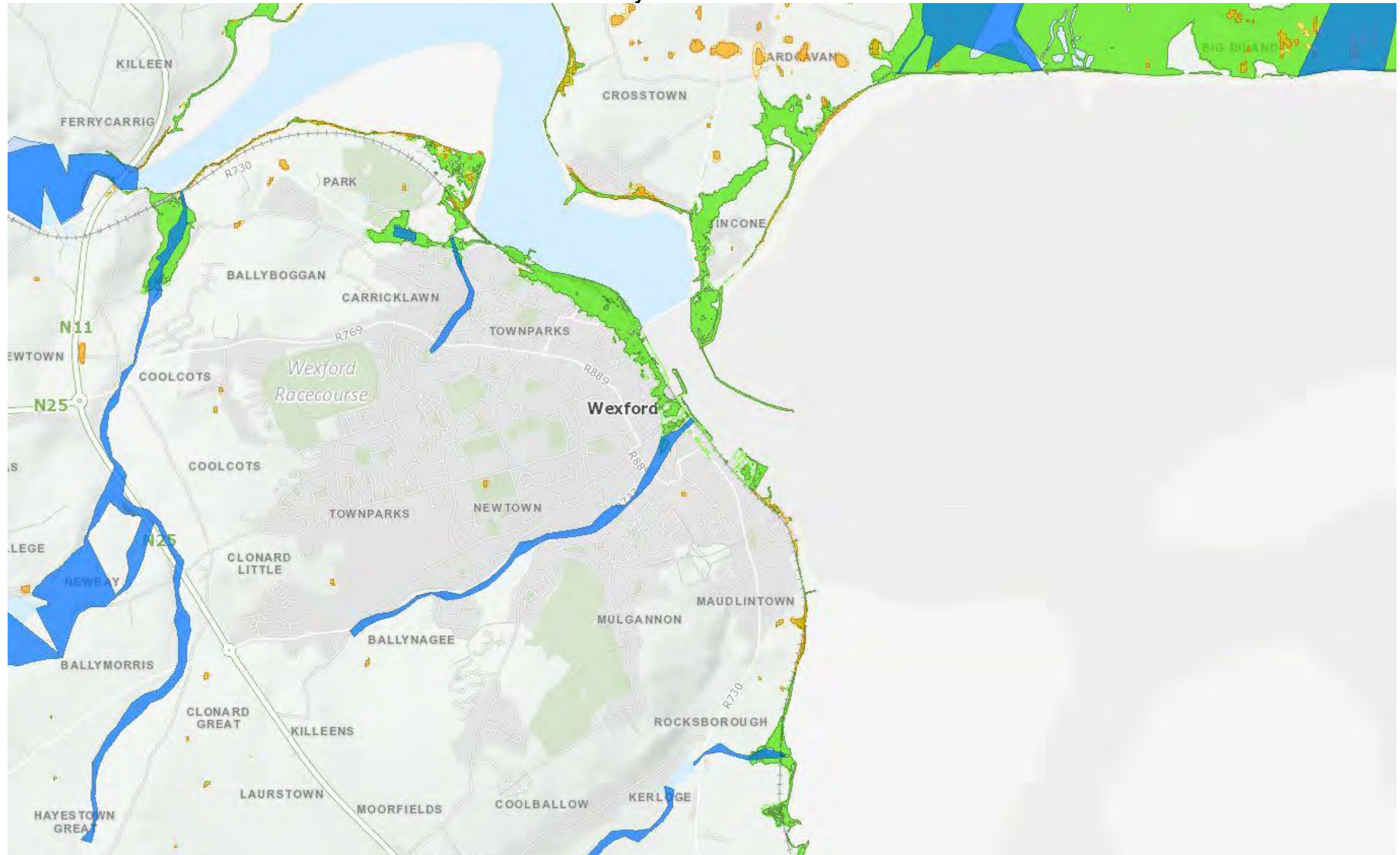
Vulnerability: The resilience of a particular group of people or types of property or habitats, ecosystems or species to flood risk, and their ability to respond to a hazardous condition and the damage or degree of impact they are likely to suffer in the event of a flood. For example, elderly people may be more likely to suffer injury, and be less able to evacuate, in the event of a rapid flood than younger people.

Source: *The definitions above are sourced from the DoEHLG Guidelines for Planning Authorities on ‘The Planning System and Flood Risk Management, 2009’ and Ciria 753 “the SuDS Manual”.*

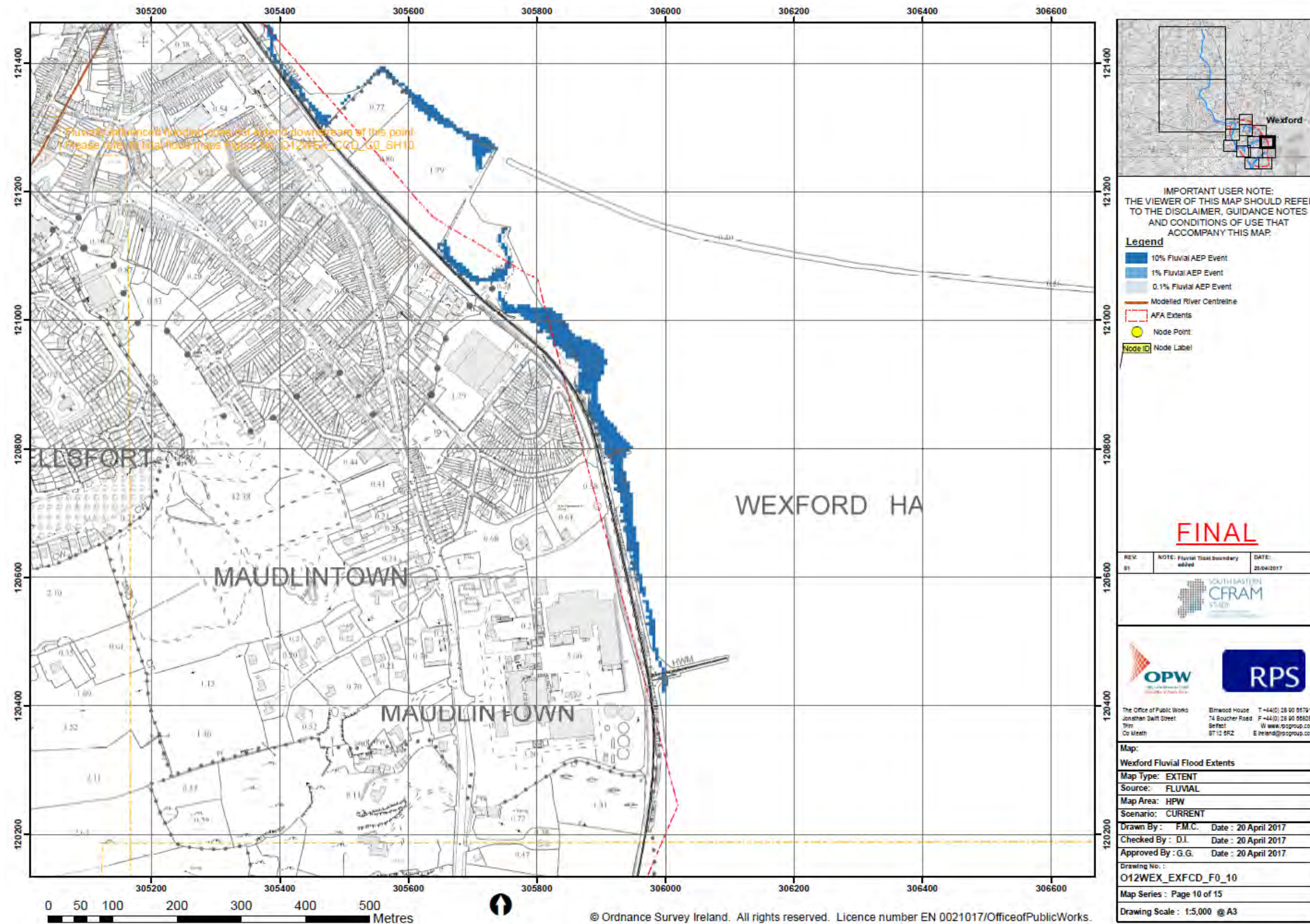
APPENDIX B

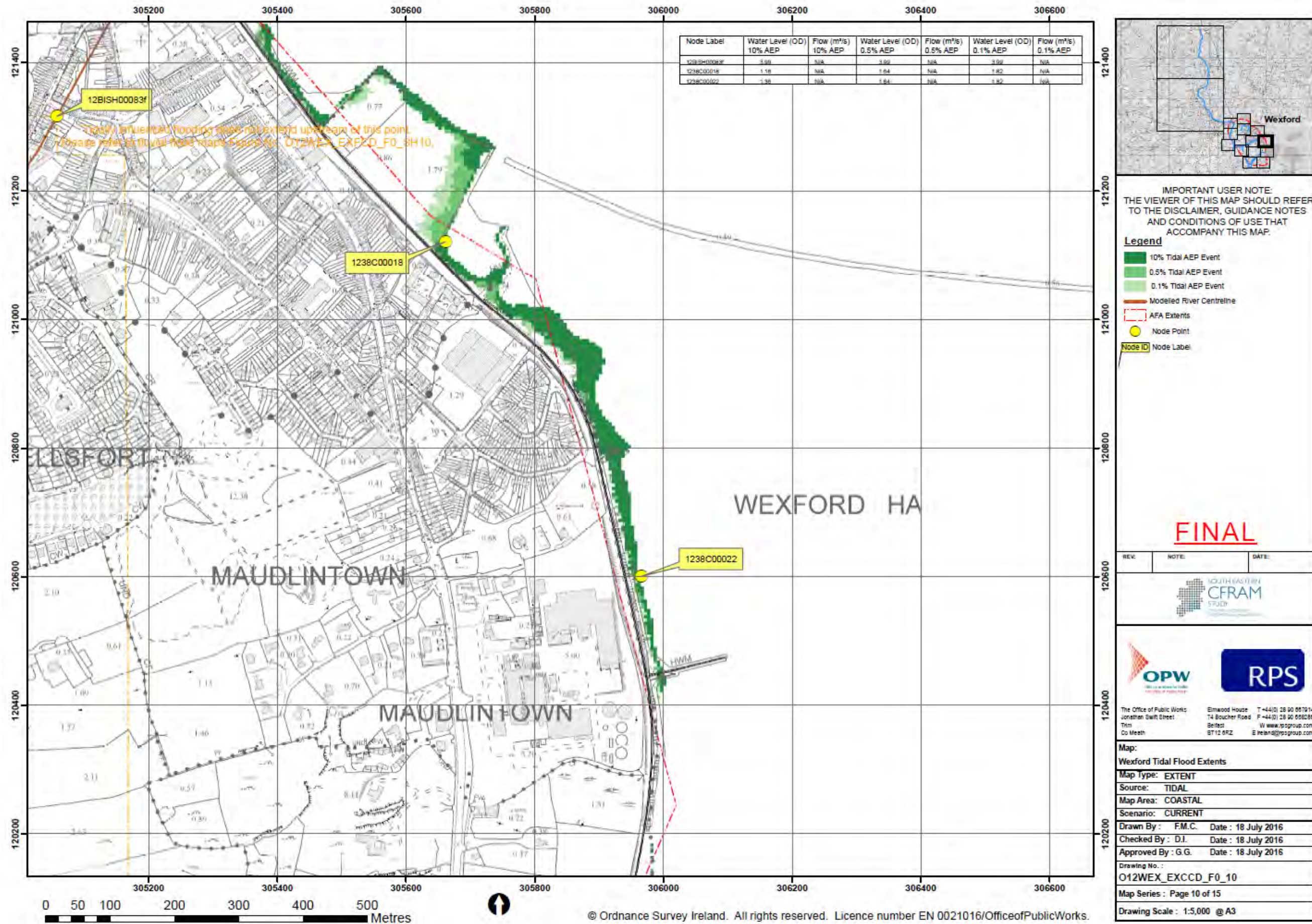
INDICATIVE FLOOD SOURCES

Preliminary Flood Risk Assessment

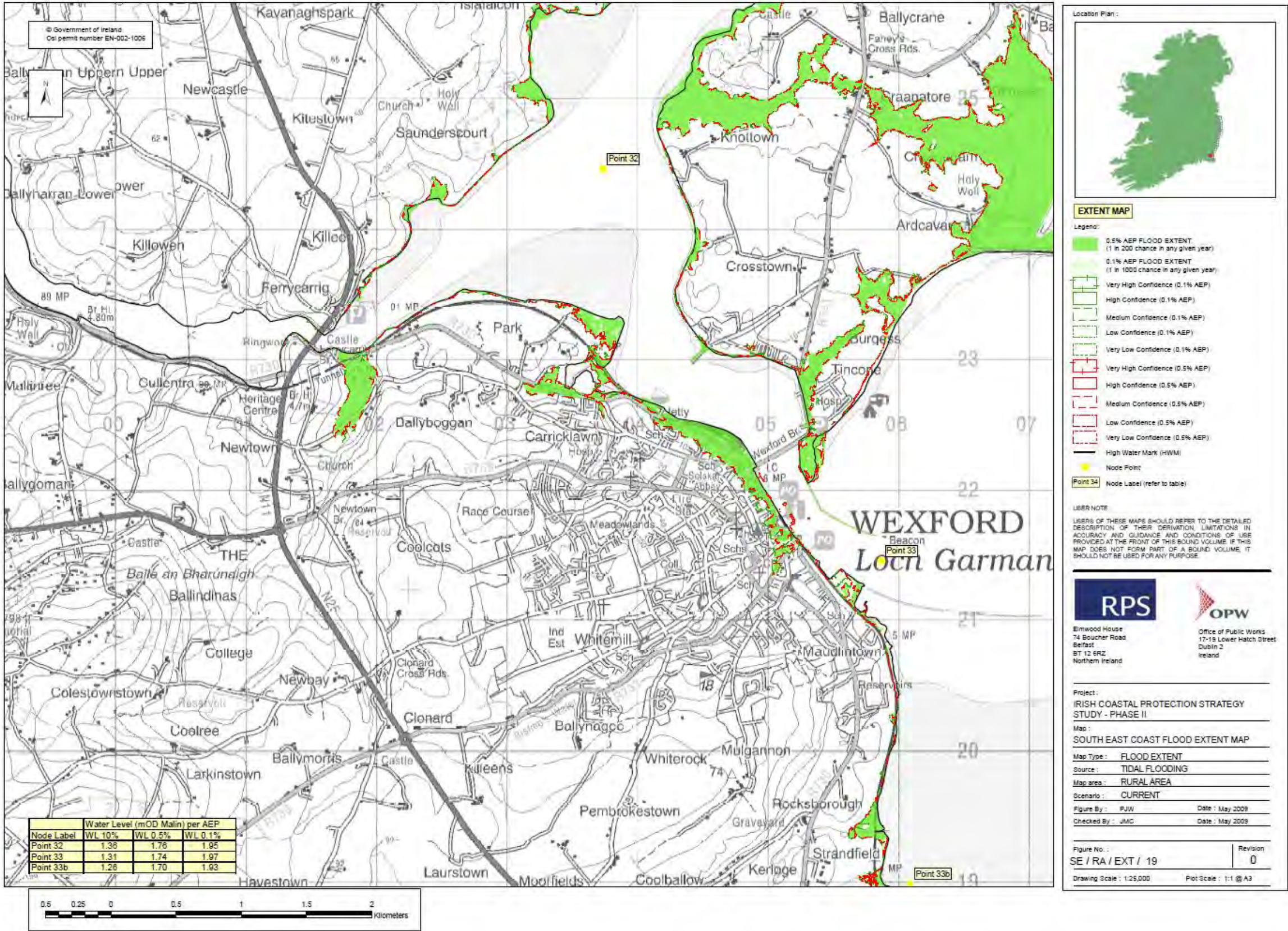


Catchment Flood Risk Assessment and Management Study





Irish Coastal Protection Strategy Study



OPW Flood Hazard Mapping

Summary Local Area Report

This Flood Report summarises all flood events within 2.5 kilometres of the map centre.

The map centre is in:

County:

NGR: T 054 217

This Flood Report has been downloaded from the Web site www.floodmaps.ie. The users should take account of the restrictions and limitations relating to the content and use of this Web site that are explained in the Disclaimer box when entering the site. It is a condition of use of the Web site that you accept the User Declaration and the Disclaimer.

Map Legend

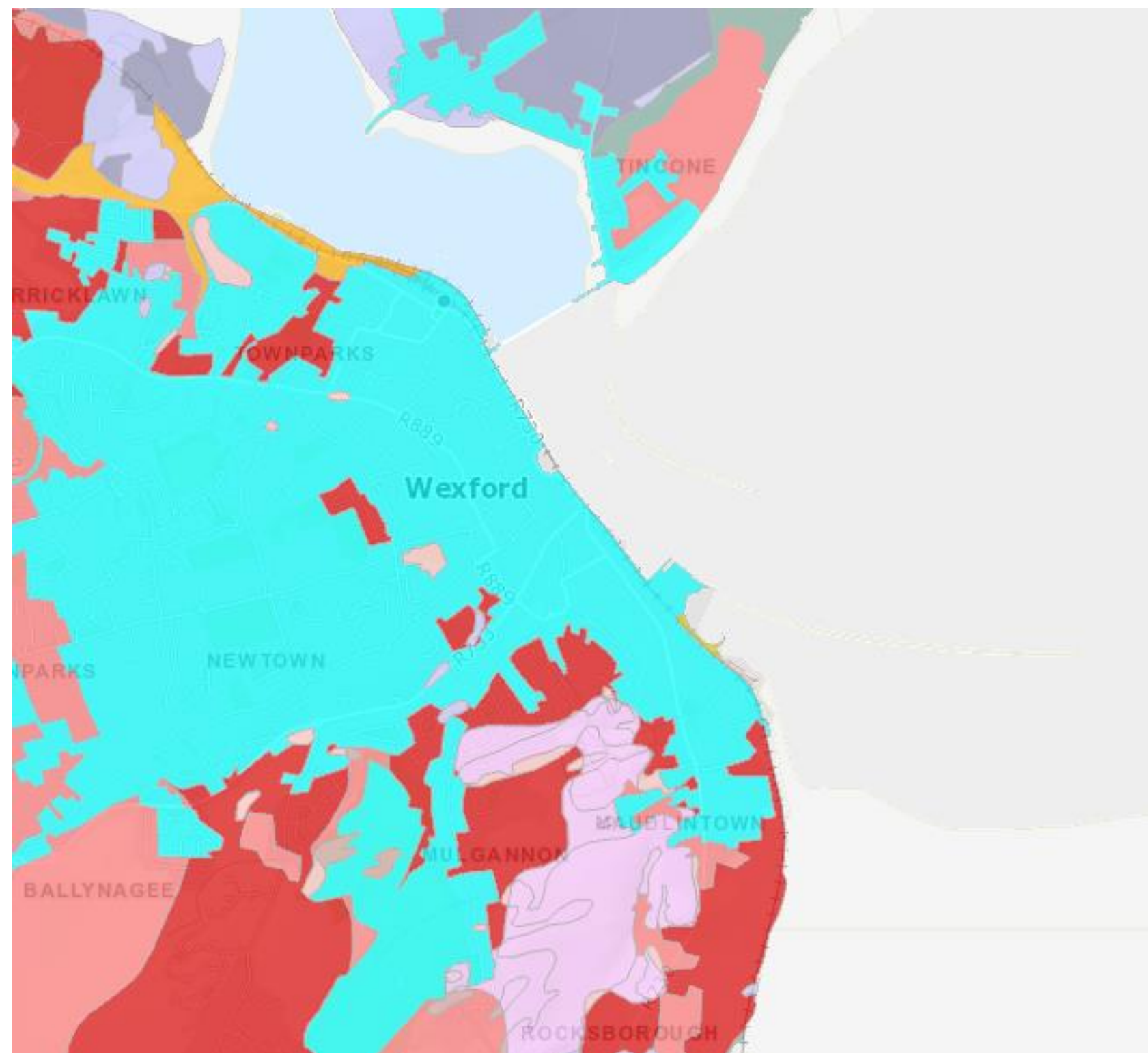
- Flood Points
- Multiple / Recurring Flood Points
- Areas Flooded
- Hydrometric Stations
- Rivers
- Lakes
- River Catchment Areas
- Land Commission *
- Drainage Districts *
- Benefiting Lands *

* Important: These maps do not indicate flood hazard or flood extent. Their purpose and scope is explained in the Glossary.

3 Results

<p>1. Wexford Town Oct 2004 County: Wexford</p> <p>Additional Information: Photos (34) Reports (6) More Mapped Information</p>	<p>Start Date: 27/Oct/2004 Flood Quality Code: 1</p>
<p>2. Wexford Town Jan 1996 County: Wexford</p> <p>Additional Information: Reports (5) More Mapped Information</p>	<p>Start Date: 10/Jan/1996 Flood Quality Code: 1</p>
<p>3. Wexford Parkside Oct 2004 County: Wexford</p> <p>Additional Information: Reports (2) More Mapped Information</p>	<p>Start Date: 27/Oct/2004 Flood Quality Code: 3</p>

Geological Survey of Ireland: Teagasc Subsoil Mapping



Historical Maps: 6"



Appendix C2

EIAR Chapter 10 Hydrology

- Amended

Chapter 10

Hydrology

10.1 Introduction

The proposed development for the Trinity Wharf site will facilitate a mix of office, leisure and residential development, with a primary objective of increased sustainable employment. It will also include the development of high quality public realm spaces within the development and pedestrian friendly links along the waterfront linking to Crescent Quay and to Wexford town centre.

The development as described in Chapter 4 will include a boardwalk link to Paul Quay north of the Trinity Wharf site and a 64-berth marina within the Lower Slaney Estuary, located off the northern corner of the site. This chapter has assessed the potential impacts on the hydrology of the local environment as a result of the construction and operation phases of the proposed development.

10.2 Methodology

This chapter has been prepared having due regard to relevant legislation guidance documents which are listed below:

- EPA Guidelines on the Information to be contained in Environmental Impact Statements (2002);
- EPA Advice Notes on Current Practice (in the preparation of Environmental Impact Statements) (2003);
- Draft EPA (Environmental Protection Agency) Guidelines on the Information to be contained in Environmental Impact Assessment Reports, August 2017 (referred to where appropriate);
- Draft EPA Advice Notes for Preparing Environmental Impact Statements, September 2015;
- NRA 2009 Guidelines on Procedures for Assessment and Treatment of Geology, Hydrology and Hydrogeology for National Road Schemes.
- NRA 2008 Guidelines for the crossing of watercourses during the construction of National Road Schemes.

10.3 Description of Receiving Environment

10.3.1 Site Description & Topography

Trinity Wharf is a brownfield site, approximately 3.6 ha in area, located at the southern end of Wexford's quay-front. The total development will comprise 5.47 ha with the additional lands being required for the access from the Trinity Street, the marina, boardwalk and Paul Quay. The existing site consists of reclaimed land that extends into Wexford Harbour and was gradually reclaimed, with the northern part reclaimed around 1832 initially as a dockyard area and then extended south-eastwards through the late 1800s and early 1900s. The northern part of the site changed from being a dockyard to a market and then a bacon processing plant (Clover Meats) which closed in the late 1980s leaving the site vacant. The southern part of the site developed as an ironworks which operated from 1911 – 1964, following which it was used as a car assembly plant until the early 1980s, and then for manufacturing electronic components (Wexford Electronix) until 2001. The site is now disused and partly overgrown with most structures demolished, except for a masonry stone boundary wall dividing the two compounds.

There are a number of spoil embankments and concrete surfaces on the site, however the topography of the site generally falls from the centre towards the west and eastern boundaries.

10.3.2 Regional & Local Hydrology

The development site 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 River Slaney becomes tidal, approximately 5km south of Enniscorthy town. There are a number of minor tributaries that join the River Slaney, upstream of the development site.

The River Slaney is located within Hydrometric Area No.12 (Slaney & Wexford Harbour). This catchment has a total draining area of approximately 1,980km². The proposed development is within the Forth Commons WFD sub-catchment.

10.3.2.1 EPA Monitoring River Programme

The EPA carries out water quality assessments of rivers, transitional and coastal water bodies as part of a nationwide monitoring programme. Data is collected from physico-chemical and biological surveys, sampling both river water and the benthic substrate (sediment).

Water sampling is carried out throughout the year and the main parameters analysed include: conductivity, pH, colour, alkalinity, hardness, dissolved oxygen, biochemical oxygen demand (BOD), ammonia, chloride, ortho-phosphate, oxidised nitrogen and temperature.

As is the case for rivers and lakes the impact of nutrient enrichment and the process of eutrophication is also a major concern in the tidal waters environment. The direct negative effects of excessive nutrient enrichment include increases in the frequency and duration of phytoplankton blooms and excessive growth of attached opportunistic macroalgae. The subsequent breakdown of this organic matter can lead to oxygen deficiency which in turn can result in the displacement or mortality of marine organisms. As such the effects of over enrichment can severely disrupt the normal functioning of tidal water ecosystems.

The status of individual estuarine and coastal water bodies is assessed using the EPA's Trophic Status Assessment Scheme (TSAS). This assessment is required for the Urban Waste Water Treatment Directive and Nitrates Directive. The scheme compares the compliance of individual parameters against a set of criteria indicative of trophic state (Table 10.1). These criteria fall into three different categories which broadly capture the cause-effect relationship of the eutrophication process, namely nutrient enrichment, accelerated plant growth, and disturbance to the level of dissolved oxygen normally present.

Table 10.1 Biological River Water Quality Classification System

Trophic Status	Pollution Status	Condition
Unpolluted	Unpolluted	Unpolluted water bodies are those which do not breach any of the criteria in any category
Intermediate	Unpolluted	Intermediate status water bodies are those which breach one or two of the criteria

Trophic Status	Pollution Status	Condition
Potentially Eutrophic	Slightly polluted	Potentially Eutrophic water bodies are those in which criteria in two of the categories are breached and the third falls within 15 per cent of the relevant threshold value
Eutrophic	Polluted	Eutrophic water bodies are those in which criteria in each of the categories are breached, i.e. where elevated nutrient concentrations, accelerated growth of plants and undesirable water quality disturbance occur simultaneously

The Lower Slaney Estuary had an EPA Transitional Surface Water Quality Status of “Potentially Eutrophic” from 2010 – 2012 and a Water Framework Directive (WFD) Status of “Poor” from 2010 - 2015.

10.3.3 Site Drainage

The development site is a brownfield site. Drainage records indicate that there is an existing combined sewer located along Trinity Street, immediately southwest of the site. These existing drainage records do not show a surface water outfall from the site to the existing drainage network on Trinity Street. The existing topography dictates that runoff discharges directly to the Lower Slaney Estuary.

10.3.4 Groundwater Dependant Terrestrial Ecosystems (GWDTE) /Special Areas of Conservation (SAC)

Sites designated under the Natura 2000 and within 2km are listed in Table 10.2 below:

Table 10.2 Sites designated under Natura 2000

Natura 2000 Sites	Distance from Site
Slaney River Valley SAC (000781)	Within Project Area
Wexford Harbour and Slobbs SPA (004076)	Immediately Adjacent to site
Nationally Designated Sites	Distance from Site
Wexford Slobbs and Harbour Proposed NHA (000712)	Within Project Area

There are no GWDTE present within the site.

10.3.5 Water Supplies

There are no recorded public groundwater supplies or group water schemes within the GSI database. There are a small number of recorded boreholes within 1km of the development site which are for industrial use. There are also a number of abstraction points on the River Slaney, upstream of the development site that are used for drinking water purposes.

10.3.6 Flood Risk Identification

The flood risk of the proposed development has been assessed as part of this study. Previous flood studies have been undertaken as part of the national Preliminary Flood Risk Assessment (PFRA), the Catchment Flood Risk Assessment and Management (CFRAM) Programme, the Irish Coastal Protection Strategy Study (ICPSS) and the Wexford Town and Environs Development Plan 2009 – 2015 (as extended). A Site-Specific Flood Risk Assessment (SSFRA) was also undertaken to inform the design of the proposed development. This SSFRA examined the PFRA maps, CFRAM mapping the ICPSS mapping, the Wexford Town and Environs Development Plan 2009 – 2015

(as extended) and the Trinity Wharf Marina Feasibility Study. The SSFRA is provided in **Appendix C1** of the Further Information Response Document.

10.3.6.1 OPW Preliminary Flood Risk Assessment (PFRA)

As required by the EU Floods Directive, the OPW carried out a PFRA to identify areas where the risk of flooding may be significant. The PFRA is a broad scale assessment based on historic flooding, predictive analysis and consultation with local communities and experts. As part of the PFRA, maps of the country were produced showing the indicative fluvial, pluvial and tidal flood extents. Areas for Further Assessment (AFA's) were identified.

The PFRA map at the proposed development location indicates that the site is located within the 1 in 200 year and extreme coastal flood extents. There is no indication of groundwater flooding within the vicinity of the site, however there is indications of pluvial flooding, immediately south east of the development site. The PFRA mapping shows the 1 in 100 year and extreme pluvial flood extents immediately to the south east of the site.

10.3.6.2 OPW Catchment Flood Risk Assessment and Management (CFRAM)

Following on from the PFRA study, the OPW commissioned The South Eastern CFRAM Study Flood Risk Review which highlighted Wexford as an AFA for fluvial and Coastal flooding. This was based on a review of historic flooding and the extents of flood risk determined during the PFRA study. The Wexford town AFA incorporates the River Slaney and its associated tributaries.

The published final CFRAM (20/04/2017) fluvial mapping indicates that the development site is within the 1 in 10 year, 1 in 100 year and 1 in 1000 year fluvial flood extents. The site also lies within the 1 in 10 year, 1 in 200 year and 1 in 1000 year tidal flood extents, as indicated on the final CFRAM (18/07/2018) tidal mapping.

10.3.6.3 OPW Irish Coastal Protection Strategy Study (ICPSS)

The Irish Coastal Protection Strategy Study (ICPSS) is a national study that was commissioned in 2003 with the objective of providing information to support decision making about how best to manage risks associated with coastal flooding and coastal erosion.

The published tidal flood extent mapping indicates that the development site is within the 1 in 200 year and 1 in 1000 year tidal flood extents.

10.3.6.4 Wexford Town and Environs Development Plan 2009-2015 (as extended)

No flood risk assessment was undertaken as part of the Wexford Town and Environs Development Plan however, policy statements SW6-SW11 relate to flood risk in the planning document. The plan stipulates that floor levels of all buildings must be 300mm above the 1 in 100 year fluvial or 1 in 200 year tidal flood level.

10.4 Description of Potential Impacts

This section will discuss the impacts associated with the proposed development before mitigation measures are applied.

10.4.1 Construction

The potential impacts as a result of construction works are discussed below.

10.4.1.1 Construction Works

Construction activities pose a significant risk to watercourses, particularly contaminated surface water runoff from construction activities entering the watercourses.

Construction activities within and alongside surface waters, can contribute to the deterioration of water quality and can physically alter the stream/river bed and bank morphology with the potential to alter erosion and deposition rates locally and downstream. Activities within or close to the watercourse channels can lead to increased turbidity through re-suspension of bed sediments and release of new sediments from earthworks. The potential impact is moderate to significant.

The main contaminants arising from construction runoff include:

- Elevated silt/sediment loading in construction site runoff. Elevated silt loading can lead to long-term damage to aquatic ecosystems by smothering spawning grounds and gravel beds and clogging the gills of fish. Increased silt load in receiving watercourses stunts aquatic plant growth, limits dissolved oxygen capacity and overall reduces the ecological quality with the most critical period associated with low flow conditions. Chemical contaminants in the watercourse can bind to silt which can lead to increased bioavailability of these contaminants. Should significant sediment loading occur in the River Slaney Estuary the associated impact rating is assessed as moderate to significant.
- Spillage of concrete, grout and other cement based products. These cement based products are highly alkaline (releasing fine highly alkaline silt) and extremely corrosive and can result in significant impact to watercourses altering the pH, smothering the stream bed and physically damaging fish through burning and clogging of gills due to the fine silt. Construction spillages, if uncontrolled, represent a moderate impact to the River Slaney Estuary.
- Accidental Spillage of hydrocarbons from construction plant and at storage depots / construction compounds. Construction spillages, if uncontrolled, represent a Moderate Impact to the River Slaney Estuary.
- Faecal contamination arising from inadequate treatment of on-site toilets and washing facilities – this represents a slight impact the River Slaney Estuary.
- Contaminated ground excavated as part of the rock armour revetment works entering the Slaney Estuary. Should contaminated material enter the River Slaney the associated impact rating is assessed as slight to moderate.

The construction works required for the proposed marina will most likely involve pre-cast concrete anchor blocks being gently lowered to the seabed where they will then embed within the existing silt/sediment/mud providing an anchoring point for the marina. The placement of the anchor blocks in this manner could potentially release a very short-term and limited quantity of sediment to the estuary. This would result in negligible impacts to the River Slaney Estuary given the existing disturbance of sediment during tidal events. In the unlikely event that the seabed be unsuitable for such works it would be necessary to locally excavate the seabed to provide a level area onto which block anchors would be placed and then partially buried. Alternatively, should bedrock be encountered at a shallow depth, chain mooring could be fixed to a metal plate which would be rock bolted down onto the surface of the bedrock. This option would also require the local excavation of seabed material to expose bedrock for fixing works by divers. Any local excavation works of the seabed could cause a short-term and temporary sediment load being released to the estuary. Local

excavations for the installation of block anchors, in the absence of mitigation, represents a slight impact to the River Slaney Estuary.

During site clearance and grading works there is potential for generation of contaminated surface water runoff arising from rainwater coming in contact with temporarily exposed contaminated material. This contaminated runoff could, in the absence of controls, then enter the River Slaney estuary and negatively affect water quality. In addition, deep excavations which encounter contaminated material may require dewatering of potentially contaminated surface water or groundwater. This pumped water could, in the absence of control measures, discharge overland to the River Slaney. Should contaminated surface water or groundwater enter the River Slaney the associated impact rating is assessed as slight to moderate.

10.4.1.2 Flooding

The proposed construction works will include for the construction of a new sea wall consisting of steel sheet piles to be installed around the perimeter of the site, with a reinforced concrete capping beam to be constructed on top of the sheet piles which will support a handrail. The proposed boardwalk will also consist of driven pile foundations.

The volumes of water displaced by the proposed sheet pile wall and board walk foundations during the construction phase is extremely small relative to the volumes of the receiving waterbody and will result in an imperceptible impact.

A SSFRA has been undertaken to inform the design of the proposed development. This SSFRA is provided in [Appendix C1](#) of the Further Information Response Document.

10.4.1.3 Sediment Transport

Hydrodynamic modelling was undertaken for the proposed marina in 2018 by RPS Consulting Engineers as part of the Trinity Wharf Marina Feasibility Study (RPS). This study concluded that the marina development would not significantly alter the sediment supply or flow of sediment in Wexford Harbour. Therefore, the associated impact is deemed to be slight.

10.4.2 Operational

The potential impacts as a result of the operational phase of the development are outlined below.

10.4.2.1 Morphological Changes to Surface Watercourses & Drainage Patterns

The existing surface water drainage pathways on the site will be altered as a result of the development and as a result, the impact is deemed to be slight.

10.4.2.2 Hardstanding Runoff

As a result of the proposed development, runoff from hardstanding areas such as roads, parking bays, roofs and footpaths will be generated. Unmitigated, this would increase the rate of runoff from the site and as a result, the associated effect is deemed to be slight.

10.4.2.3 Drainage and Foul Sewers

There is no indication of any existing foul or surface water drainage connections to the site. New separate foul and surface water drainage systems will be developed to serve the site.

Due to topographical constraints, foul effluent will require pumping to the existing foul/combined sewer network located on Trinity Street, south west of the site, where the effluent will ultimately be conveyed to the Wexford Wastewater Treatment Works for treatment.

10.4.2.4 Implications for Designated Sites

The potential impact associated with discharging untreated surface water into the Slaney River Valley SAC, Wexford Harbour and Slobbs SPA and Wexford Slobbs and Harbour Proposed NHA is considered moderate to significant, due to the environmental sensitivities of the area.

10.4.3 Flood Risk

The development site is located within Flood Zone A. The OPW “The Planning System and Flood Risk Management – Guidelines for Planning Authorities” (The Guidelines), 2009 states that for Flood Zone A, the probability of flooding from rivers and the sea is highest (greater than 1% or a 1 in 100 return period for river flooding or 0.5% or a 1 in 200 year return period for coastal flooding). As a result of the proposed development, there will also be an increase in impermeable areas on the site, as mentioned in Section 10.4.2.2 above.

A SSFRA has been included as part of the Further Information Responses to An Bord Pleanála’s Request for Further Information (RFI).

Flood risk assessments at strategic and site specific scale have also been undertaken as part of the following studies:

- Irish Coastal Protection Strategy (ICPSS);
- The South Eastern CFRAMs and;
- Trinity Wharf Marina Feasibility Study (RPS).

Extreme sea level return periods detailed in the SSFRA and these studies are listed in table 10.3 below.

Table 10.3 Calculated sea Water Levels (WL) (all figures include a climate change factor as per the OPW MRFS)

Study	1 in 200 year WL (mOD)	1 in 200 year WL (mOD) + 300mm	1 in 1000 year WL (mOD)
Irish Coastal protection Strategy Study	2.24	2.54	2.47
South Eastern CFRAMs	2.14	2.44	2.32
Trinity Wharf Marina Feasibility Study	2.34	2.64	2.56

The highest flood levels among the various flood studies (Table 10.3) were calculated as part of the Trinity Wharf Marina Feasibility Study (RPS). As per the precautionary approach, these are considered the most suitable indicators of flood risk prior to a detailed flood risk assessment of the Proposed Development being undertaken. The impact associated with flooding during the operational stage in the absence of appropriate mitigation is deemed to be moderate to significant.

10.4.4 Tide and Wave Height

The ICPSS states that there are no significant interactions of tidal currents and surges. Anecdotal evidence suggests that during frequent easterly wind conditions, the tidal levels in the Harbour do not drop during ebb flow (ICPSS Phase 2 South East Coast).

A Marina Feasibility Study was completed RPS Group for the Trinity Wharf Site in January 2018 (see Appendix 4.3), this builds upon the works undertaken as part of the ICPSS and South Eastern CFRAMs where extreme sea levels and wave action were examined.

The two wave height acceptance thresholds used in the study were based on guidelines published by the Yacht Harbour Association and the Australian Standard (AS3962) Guidelines for design of Marinas. The assessment concluded that for the marina to be viable and safe, a suitably designed defence structure would be required. The study calculated a 1 in 50 year significant wave height of 0.9m. The simulated wave height was significantly reduced by the implementation of defences such as breakwaters.

10.4.5 Cumulative Impacts of the Proposed Development

The cumulative impact as a result of the construction works and operational phase in the absence of mitigation is considered slight to moderate, mainly as a result of the proposed construction works. The construction related activities associated with the development are temporary and short term in nature. The mitigation and monitoring measures detailed below will aid in minimising the impacts associated with this development.

10.5 Mitigation and Monitoring Measures

10.5.1 Construction Mitigation

10.5.1.1 Construction Works

A project-specific Construction Environmental Management Plan (CEMP) and Environmental Operating Plan (EOP) will be prepared by the contractors appointed for the development following the Outline CEMP attached as Appendices 4.1 and 4.2 to this EIAR. The CEMP will list any difficulties encountered and it will be maintained by each Contractor for the duration of the construction phase. The CEMP and EOP will cover all potentially polluting activities and include an emergency response procedure. All personnel working on the site will be trained in the implementation of the procedures. As a minimum, the CEMP and EOP for the proposed development will be formulated in consideration of the standard best practice. The following will be implemented as part of this plan:

- A draft Incident Response Plan detailing the procedures to be undertaken in the event of spillage of chemical, fuel or other hazardous wastes, non-compliance incident with any permit of license or other such risks that could lead to a pollution incident, including flood risks;
- All necessary permits and licenses for in stream construction work for provision of the sea walls, boardwalk and marina works will be obtained prior to commencement of construction; and
- Inform and consult with Inland Fisheries Ireland (IFI) and Waterways Ireland (WI).

The draft CEMP and EOP will be developed by the selected construction contractors to suit the detailed construction methodology and allocate responsibilities to individuals in the construction team.

During construction, cognisance will have to be taken of the following guidance documents for construction work on, over or near water.

- Requirements for the Protection of Fisheries Habitat during Construction and Development Works at River Sites (Eastern Regional Fisheries Board);
- Central Fisheries Board Channels and Challenges – The enhancement of Salmonid Rivers;
- CIRIA C532 Control of Water Pollution from Construction Sites Guidance for Consultants and Contractors;
- CIRIA C648 Control of Water Pollution from Constructional Sites; and
- Guidelines for the Crossing of Watercourses during the Construction of National Road Schemes (NRA/TII, 2006).

Based on the above guidance documents concerning control of constructional impacts on the water environment, the following outlines the principal mitigation measures that will be prescribed for the construction phase in order to protect all catchment, watercourse and ecologically protected areas from direct and indirect impacts:

- Exposure of contaminated material shall be minimised by placing the low permeability clay capping layer immediately following initial site grading and clearance works. Grading works shall progress in a manner which always allows runoff to be directed towards a temporary treatment facility without surface ponding. This will minimise contact time between the contaminated material and surface water and thus limit the opportunity for contamination to occur. Runoff which has been in contact with exposed contaminated material will be captured and directed to a temporary lined facility, where the flow will be attenuated and sediment allowed to settle, before passing through a hydrocarbon interceptor and being discharged to Wexford Harbour.
- Should temporary dewatering be required during deep excavations within the contaminated material, strict control measures will be put in place for disposal of same. Water pumped from excavations within the contaminated material shall either be passed through the temporary surface water treatment/attenuation facilities before discharge to Wexford Harbour or discharged to a foul sewer. Should very heavily contaminated groundwater be encountered during deep excavations and pumping be required of same, temporary dewatering shall be either collected and discharged to a foul sewer via tanker or treated on-site by way of a temporary water treatment works. Groundwater samples shall be taken from boreholes across the site in advance of construction works taking place to determine which method of disposal is required. Specialist advice will be sought as to the most appropriate form of treatment required as determined by the pre-construction groundwater sampling results. The works shall be planned in an appropriate manner so as to minimise the need for construction dewatering. Where excavation into contaminated material does take place, control measures to limit or prevent surface water runoff from entering the excavation shall be incorporated. These measures may include shoring, sheet piling, benching/battering or embankment of the excavation perimeters.
- All construction compound areas will be required to be set back a minimum of 50m from the seaward boundary of the site. Protection of waterbodies from silt load will be carried out through use of grassed buffer areas, timber fencing with silt fences or earthen berms to provide adequate treatment of runoff to watercourses;
- In order to attenuate flows and minimise sediment input into Wexford Harbour through run-off, all surface water run-off from the construction site shall be directed to a temporary facility, where the flow will be attenuated and sediment allowed to settle, before passing through a hydrocarbon interceptor and being discharged to Wexford Harbour. An impermeable membrane overlaid with

suitable fill will be provided to storage areas to prevent contamination or pollution of the groundwater;

- Settlement ponds, silt traps and bunds will be used where appropriate and construction within watercourses will be minimised. Where pumping of water is to be carried out, filters will be used at intake points and discharge will be through a sediment trap. General Constructional Compounds will not be permitted within 50m of Slaney River Valley SAC and Wexford Harbour and Slobbs SPA. It may, however, be necessary to locate temporary storage areas adjacent to the Slaney Estuary when the marina and flood protection works are being undertaken. Measures will be implemented to ensure that silt laden or contaminated surface water runoff from the compound does not discharge directly to the estuary. This will primarily be in the form of silt fences which will be installed along the compound boundary to stop 'dirty' surface water runoff from entering the estuary without treatment;
- Protection measures will be put in place to ensure that all hydrocarbons used during the construction phase are appropriately handled, stored and disposed of in accordance with the NRA/TII document "Guidelines for the crossing of watercourses during the construction of National Road Schemes". All chemical and fuelling locations will be contained within bunded areas and set back a minimum of 50m from watercourses;
- All construction machinery operating in-stream should be mechanically sound to avoid leaks of oils, hydraulic fluid, etc. Machinery shall be steam cleaned and checked prior to commencement of in-stream works to avoid spread of invasive species;
- Oil booms and oil soakage pads should be maintained on-site to enable a rapid and effective response to any accidental spillage or discharge;
- No refuelling of construction plant shall be undertaken while the vehicles are in or adjacent to watercourses, as this could lead to contamination of the watercourse through spillage of fuel. In addition, all construction vehicles entering the watercourse should be in good condition and be provided with drip trays to prevent pollution through dripping of oil or fuel from the vehicle;
- Foul drainage from all site offices and construction facilities will be contained and disposed of in an appropriate manner to prevent pollution;
- The construction discharge will be treated such that it will not reduce the environmental quality standard of the receiving watercourses;
- Any surface water abstracted from a watercourse for use during construction will be through a pump fitted with a filter to prevent intake of fish;
- The use and management of concrete in or close to watercourses will be carefully controlled to avoid spillage. Washout from concrete mixing plant will be carried out only in a designated contained impermeable area;
- All shuttering shall be securely installed and inspected for leaks prior to cement being poured and all pouring operations shall be supervised monitored for spills and leaks at all times;
- All pouring of concrete, sealing of joints, application of water-proofing paint or protective systems, curing agents etc. for outfalls shall be completed in dry weather;
- Any concrete used in or over the estuary shall be pre-cast, where possible;
- Where concrete or other wet materials are to be used over water, appropriate bunded platforms shall be in place to capture any spilled concrete, sealants or other materials;

- A geotextile screen and boom with oil barrier will be required around such marine works to prevent runoff, silt, oil or other deposits generated by construction activities such as boring in overburden or rock from polluting the river;
- Any materials collected on these platforms shall be transferred to the landside construction areas and disposed of in accordance with the Construction and Demolition Waste Management Plan; and
- The placing of anchor blocs (if required) shall be undertaken so as to minimise disturbance of sediment from the sea-bed. Should local excavation of the seabed be required it shall be carried out behind a geotextile screen and boom with oil barrier to prevent pollution of the river/estuary.

10.5.2 General Operational Mitigation

10.5.2.1 Morphological Changes to Surface Watercourses & Drainage Patterns

SuDS components will convey runoff to the Lower Slaney Estuary while attenuation will be provided for the 1 in 100 year 6-hour event. The conveyance of runoff to the Lower Slaney Estuary will generally follow the existing site topography. The implementation of these proposed mitigation measures reduces the impact to imperceptible.

10.5.2.2 Hardstanding Runoff

As a result of the increase in hardstanding areas, runoff from the site will increase. 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 through multiple outfalls located along the extent of the proposed sea wall. Whilst the base of the permeable paving and grassed swales will allow very limited percolation to the underlying subsoils, the percolating portion is expected to be minimal due to the incorporation of a low permeability clay layer across the entire site.

The surface water drainage system will be designed to store the 1 in 100 year 6 hour rainfall event plus a climate change factor (between tidal cycles). The OPW FSU Portal calculates this rainfall depth to be 80.76mm. Attenuation of surface water runoff will occur within a layer of coarse graded clean aggregate material installed below the permeable paving which will have a voids ratio of typically 30%. These proposed mitigation measures reduced the associated impact from hardstanding runoff from moderate/significant to slight. The provision of permeable paving within the development will negate the need to provide numerous individual petrol interceptors throughout the development. Treatment to runoff generated will be provided within the pavement layers through the processes of filtration, biodegradation, adsorption of pollutants and the settlement and retention of solids within the pavement layers.

10.5.2.3 Foul Drainage Infrastructure

In the event of a pump failure at the proposed foul pumping station, mitigation measures have been proposed. The pumping station has been designed to provide 24-hour effluent storage in case of failure. Standby pumps will also be provided.

10.5.2.4 Implications for Designated Sites

It is proposed that surface water from the proposed development discharges to the Slaney Estuary, which is an environmentally sensitive area. Mitigation measures that will be implemented include the design of a surface water drainage system to serve the proposed development. 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 through multiple outfalls located along the extent of the proposed sea wall (with some limited percolation into the

subsoil). The incorporation of a SuDS based approach will ensure that discharge will be controlled, and treatment of runoff will take place within the SuDS components. The implementation of these mitigation measures will reduce the associated impact from moderate/significant to imperceptible.

10.5.3 Flood Risk Mitigation

The flood risk associated with the proposed development is deemed to be moderate to significant. As discussed in Section 10.4.3 and detailed within the SSFRA, the following minimum levels will be required within the site:

- To satisfy the Wexford Town and Environs Development Plan 2009-2015 (as extended) all buildings as part of the proposed development must have a minimum floor level of 2.64mOD; and
- As per the OPWs Flood Risk Management Guidelines for Local Authorities (2009) "Less vulnerable developments" such as local transport infrastructure must have a minimum level of 2.34mOD.

The lowest proposed finished floor level for the development is 3.3mOD, while the lowest road level will be at 2.80mOD (generally 3.5mOD).

In addition to the flood risk measures above, a new steel sheet pile sea wall is to be provided along the northwest, southeast and northeast edges of the site as part of the development, while sections of the northwest and southwest edges will comprise an area of rock armour revetment outside of the sheet piles. A sheet pile driving rig will mobilise and begin driving sheet piles in front of the existing sea wall to approximately -10.5mOD into the stiff gravelly clay. The existing wall will remain in place until the sheet pile wall is correctly installed and only then will be demolished. Construction of the rock armour revetment will involve suitable boulders being placed directly onto the silt/sediment of the seabed.

The marina will also be sheltered by a breakwater on the seaward side. This will involve driving pile sockets for the breakwater units and the pontoon walkways into the seabed. Vertical steel piles will then be grouted into the pile sockets to give good line and plumbness.

Alternatively, helical anchors can be drilled into the seabed via a barge at the location for the lower terminal of anchor chains that will connect and secure the breakwater units and pontoon walkways and finger berths. Depending on substrate conditions, restraint chains could also be anchored by appropriately sized anchor blocks buried into the seabed.

The actual method of securing the marina elements (i.e. piled restraints or chained restraints) will be subject to ground investigations during detailed design phase. The proposed marina breakwater, sea wall and rock armour revetment along the perimeter of the site will protect the development against storm surge and wave action.

The proposed mitigation measures outlined above indicate that the risk associated with flooding can be reduced from moderate/significant to slight.

10.6 Residual Impacts

10.6.1 Construction Phase

Construction shall be undertaken in accordance with the measures outlined in Section 10.5.1 and the CEMP and EOP adapted by the contractors. If these measures are

adapted, the risk of any residual impact as a result of construction should be imperceptible.

10.6.2 Operational Phase

The use of SuDS features 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.

10.7 Difficulties Encountered

No difficulties were encountered in undertaking this hydrological assessment.

10.8 References

Water Features, Rivers and Streams, EPA (gis.epa.ie/Envision/);

Geological maps, Geological Survey of Ireland (GSI) (www.gsi.ie/);

Groundwater quality status maps (watermaps.wfdireland.ie/);

Environmental Protection Agency Drinking Water Reports;
OPW Flood Mapping (www.floodinfo.ie/map/floodmaps/);

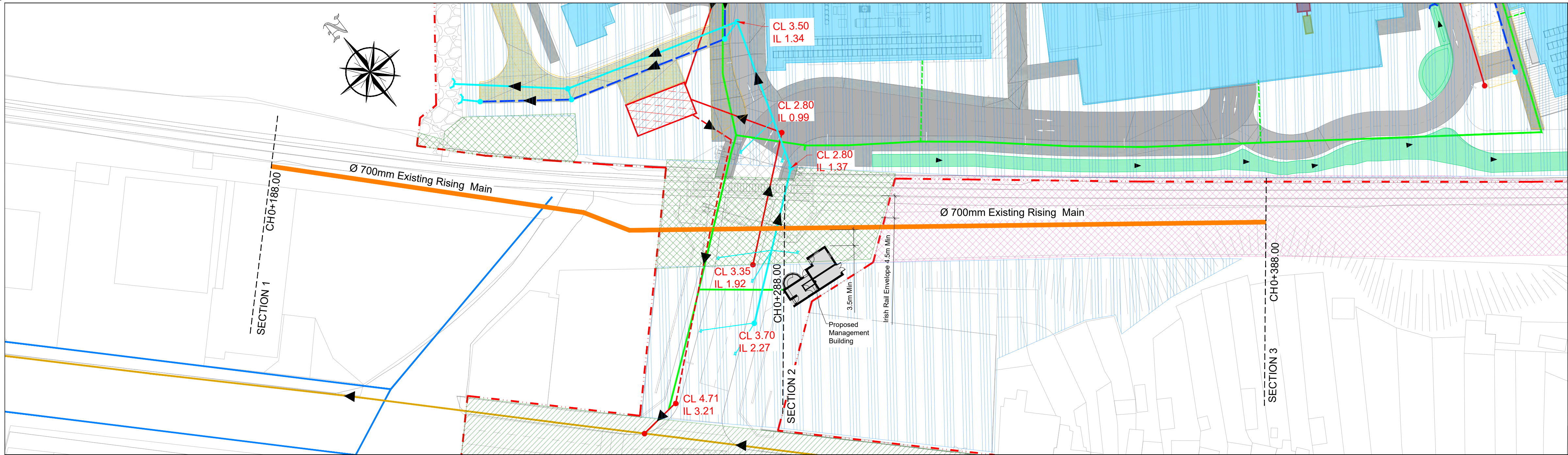
Myplan.ie (<http://www.myplan.ie/webapp/>);

OPW Irish Coastal Protection Strategy Study Mapping
(<https://www.opw.ie/en/floodriskmanagement/floodanderosionmapping/icpss/>);

Trinity Wharf Marina Feasibility Study (RPS, 2018)

Appendix D1

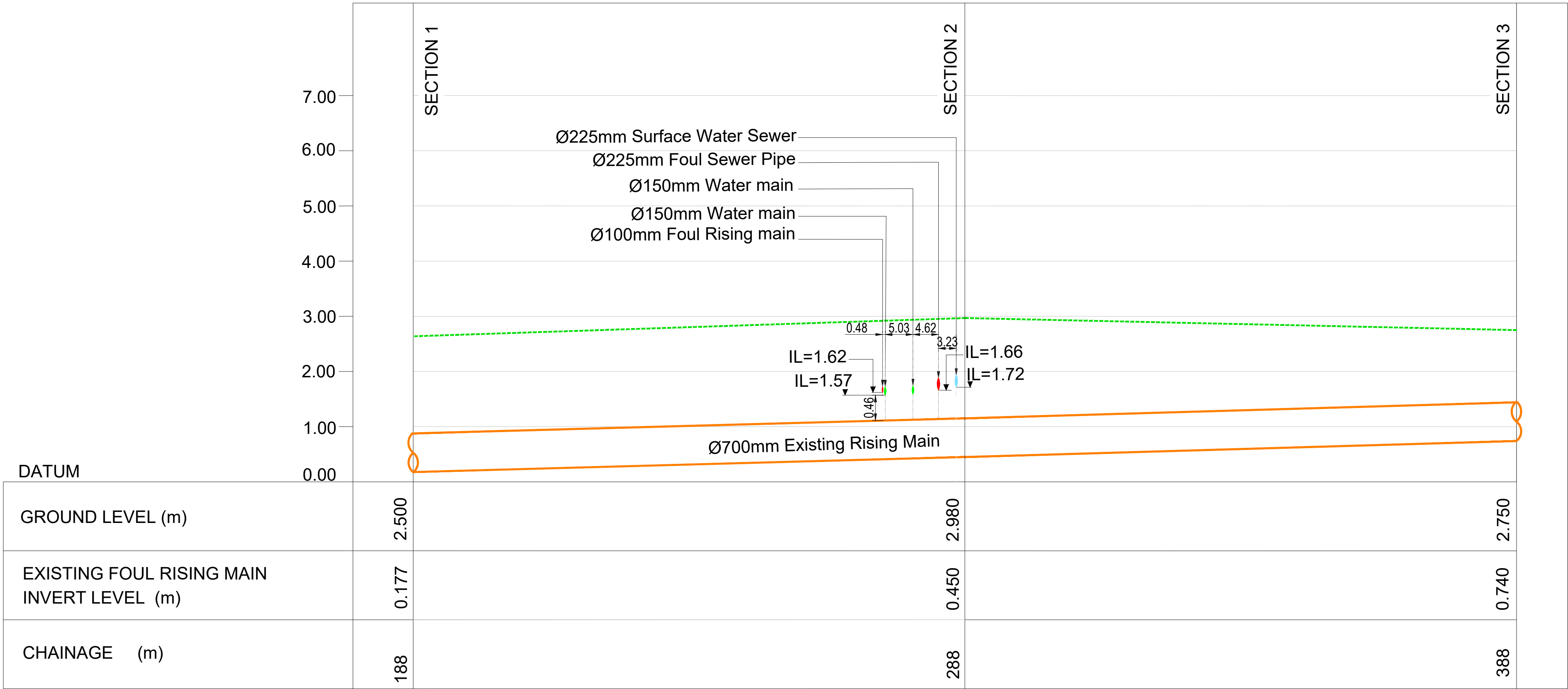
Drawings TRWH-ROD-GEN- SW_AE-DR-CH-4067 to 4069



- LEGEND:
- Proposed Ø150mm Water main to Irish Water Requirements.
 - Proposed Ø225mm Water main service connection to Irish Water Requirements.
 - Existing Water main
 - Existing Ø700mm Rising Main
 - Proposed Ø225mm Surface Water Sewer
 - Proposed Ø225mm Foul Sewer pipe
 - Proposed Ø100mm Foul Rising main
 - Application Site Boundary
 - Area of Consent from Wexford County Council (Roads) outlined & dashed in green
 - Adjacent lands in control of Irish Rail outlined & hatched in pink
 - Area of consent from Irish Rail outlined & hatched in green
 - Area within the control of Wexford County Council outlined & dashed in blue

ACCESS ROAD SERVICES LAYOUT PLAN

A1 SCALE 1:500
A3 SCALE 1:1000



SCALE (A3) : HORZ. 1 : 100
VERT. 1 : 100

LONGITUDINAL SECTION 1-3



TRINITY WHARF DEVELOPMENT

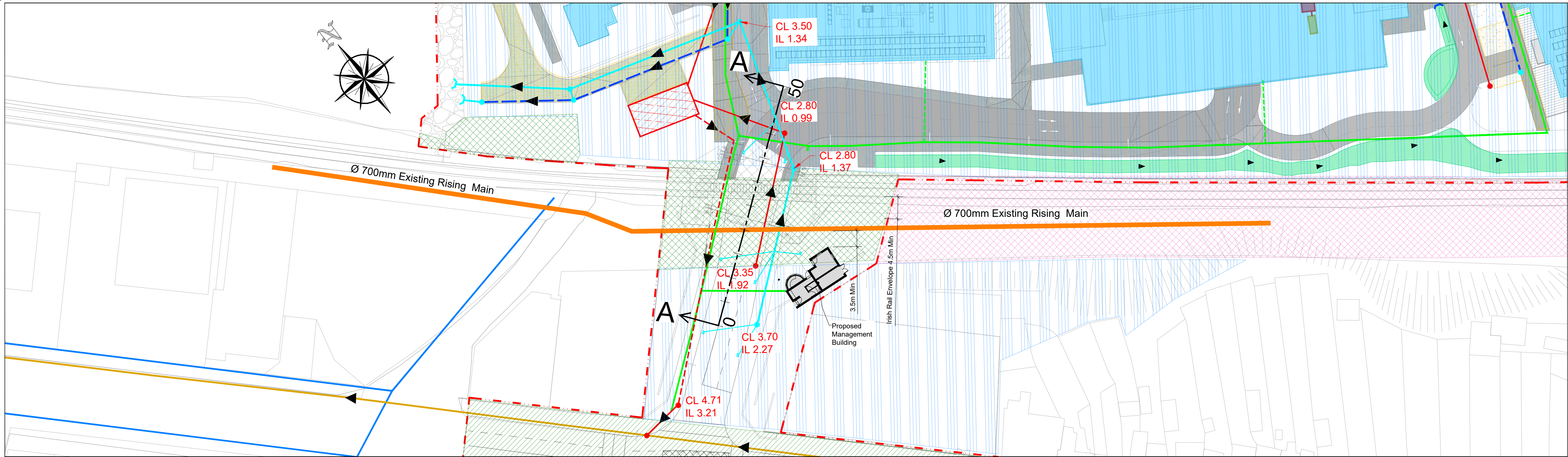
PLANNING



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www.rod.ie

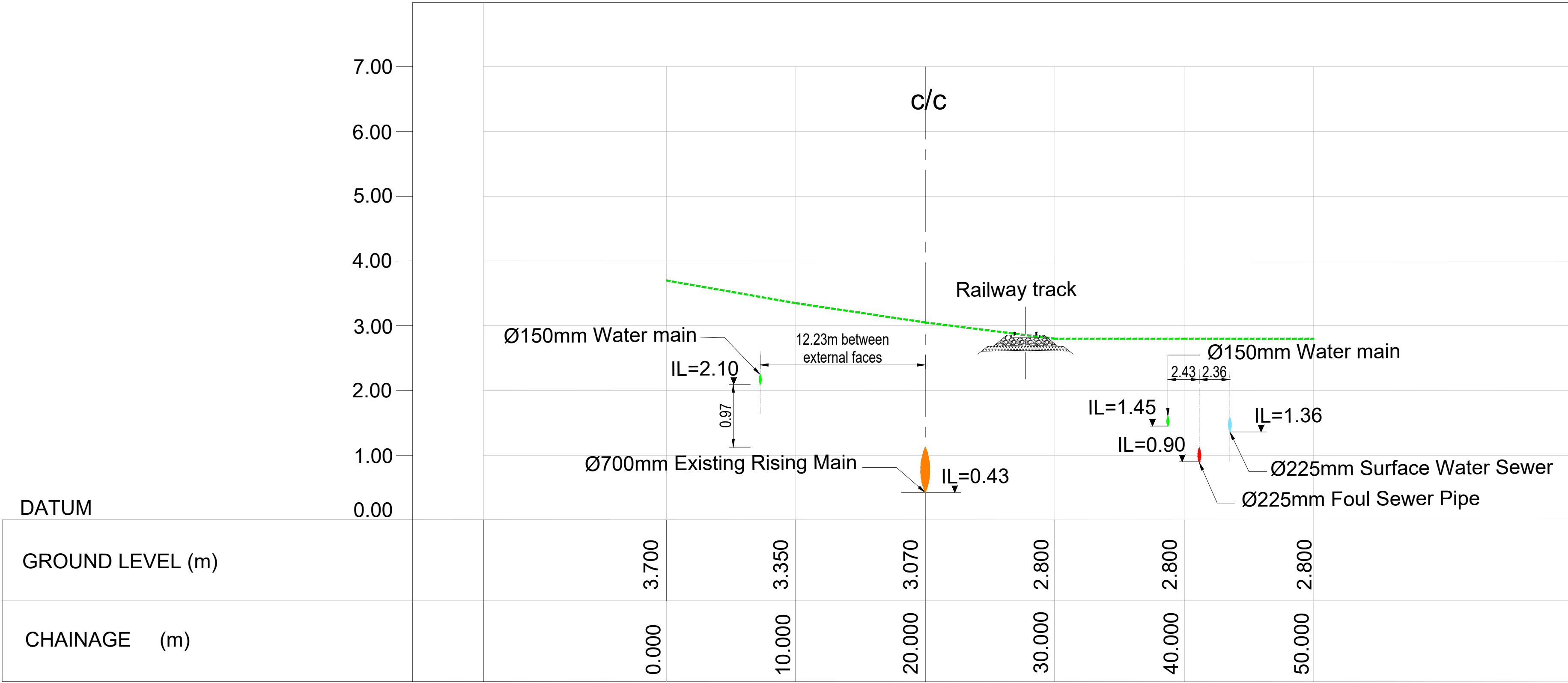
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MA	WV	JPR	JPR	S4 - Stage Approval

Project Stage	PLANNING					
Project Title	TRINITY WHARF DEVELOPMENT					
Drawing Title	ACCESS ROAD SERVICES PLAN AND SECTION SHEET 1 OF 3					
Drawing Number	TRWH	-	ROD	-	GEN	-
Scale (A1)	AS SHOWN	Date:	September 2019	Job No:	18.133	Rev: -



- LEGEND:
- Proposed Ø150mm Water main to Irish Water Requirements.
 - Proposed Ø225mm Water main service connection to Irish Water Requirements.
 - Existing Water main
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 - Area of consent from Irish Rail outlined & hatched in green
 - Area within the control of Wexford County Council outlined & dashed in blue
- Note:
All pipes are shown in the cross section in the interest of clarity.

ACCESS ROAD SERVICES LAYOUT PLAN
A1 SCALE 1:500
A3 SCALE 1:1000



SCALE (A3) : HORZ. 1 : 500
VERT. 1 : 100

SECTION A-A



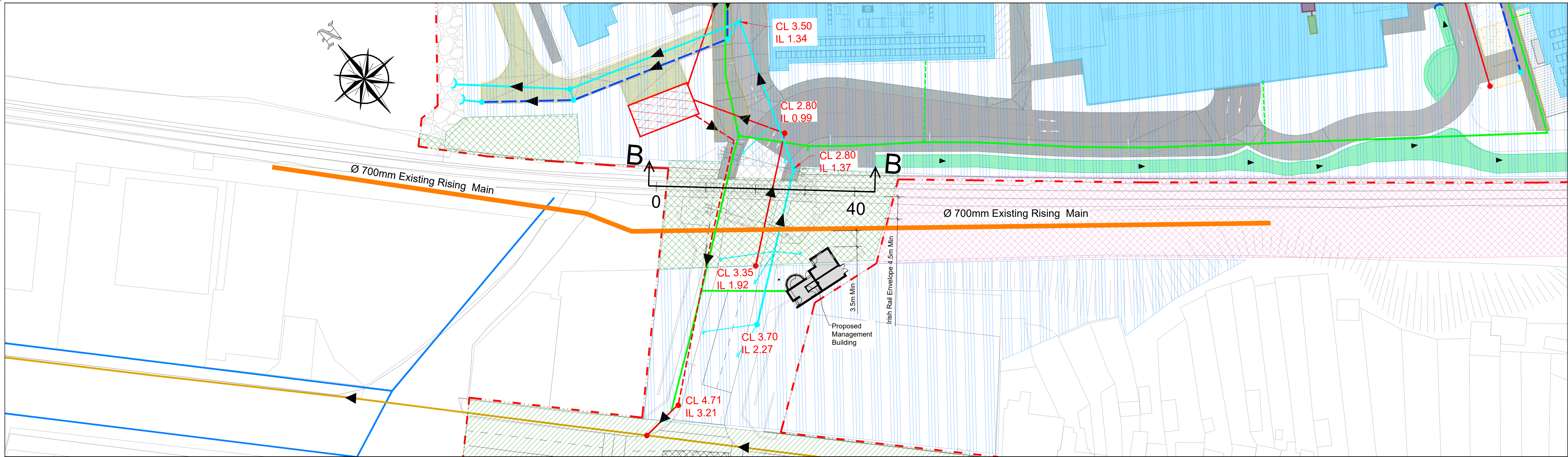
TRINITY WHARF DEVELOPMENT

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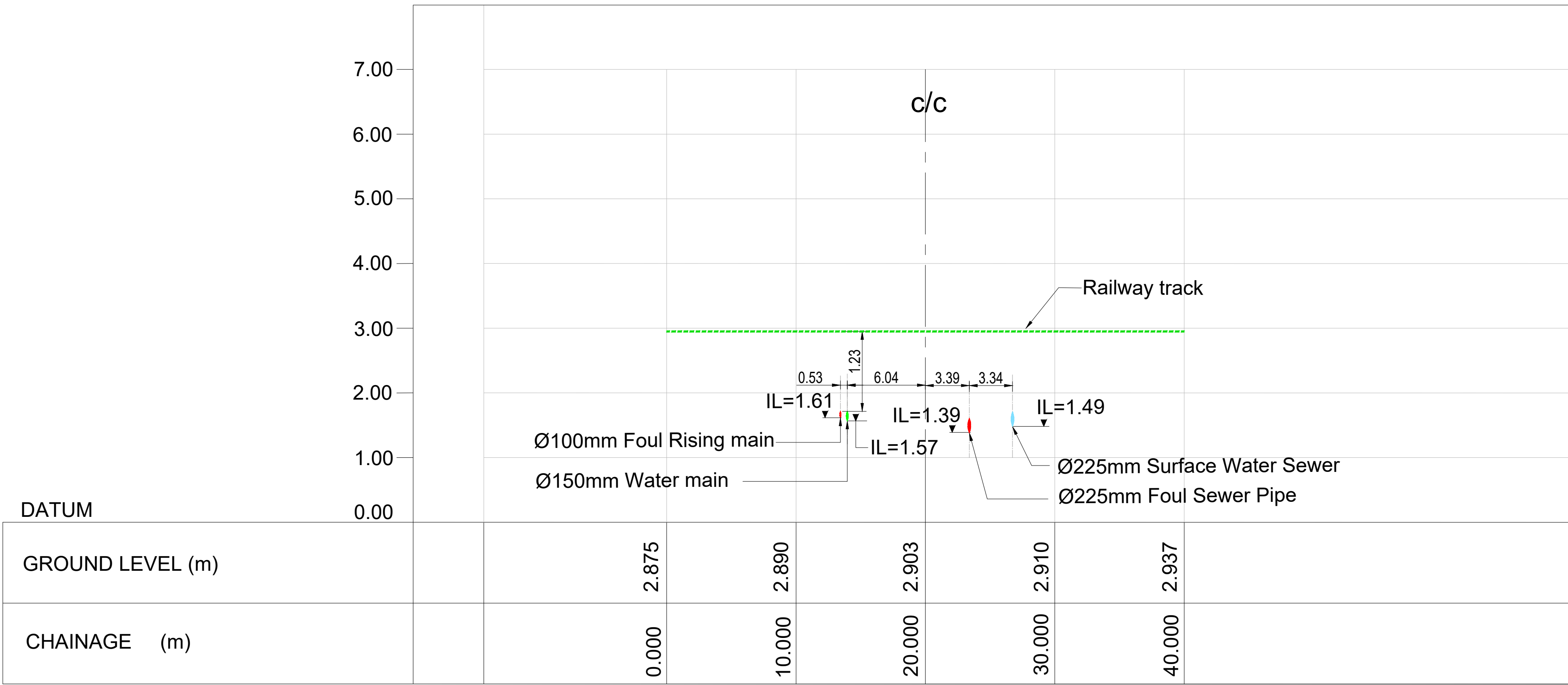
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Project Title	TRINITY WHARF DEVELOPMENT						
Drawing Title	ACCESS ROAD SERVICES PLAN AND SECTION SHEET 2 OF 3						
Drawing Number	TRWH	-	ROD	-	GEN	-	SW_AE - DR - CH - 4068
Scale (A1)	AS SHOWN	Date:	September 2019	Job No:	18.133	Rev:	-



- LEGEND:
- Proposed Ø150mm Water main to Irish Water Requirements.
 - Proposed Ø225mm Water main service connection to Irish Water Requirements.
 - Existing Water main
 - Existing Ø700mm Rising Main
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ACCESS ROAD SERVICES LAYOUT PLAN

A1 SCALE 1:500
A3 SCALE 1:1000



SCALE (A3) : HORZ. 1 : 500
VERT. 1 : 100

SECTION B-B



TRINITY WHARF DEVELOPMENT

PLANNING



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Consulting Engineers
Civil - Structural - Transportation - Environmental

Drawn	Designed	Checked	Approved	Suitability Code - Description
MA	WV	JPR	JPR	S4 - Stage Approval

Project Stage: PLANNING

Project Title: TRINITY WHARF DEVELOPMENT

ACCESS ROAD SERVICES
PLAN AND SECTION
SHEET 3 OF 3

Drawing Number	Project	Originator	Volume	Location	Type	Role	Number
TRWH	-	ROD	-	GEN	-	SW_AE	-

Scale (A1)	AS SHOWN	Date:	September 2019	Job No:	18.133	Rev:	-
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DO NOT SCALE USE FIGURED DIMENSIONS ONLY

Appendix D2

Irish Water Correspondence

Pre-connection enquiry form

Large industrial and commercial developments, mixed use developments, housing developments, business developments.



This form is to be filled out by applicants enquiring about the feasibility of a water and/or wastewater connection to Irish Water infrastructure. If completing this form by hand, please use BLOCK CAPITALS and black ink.

Please refer to the **Guide to completing the pre-connection enquiry form** on page 12 of this document when completing the form.

Section A | Applicant details

1 WPRN number (where available):

2 Applicant details:

Registered company name (if applicable):

Trading name (if applicable):

Company registration number (if applicable):

If you are not a registered company/business, please provide the applicant's name:

Contact name:

Postal address:

Eircode:

Telephone:

Mobile:

Email:

3 Agent details (if applicable):

Contact name:

Company name (if applicable):

Postal address:

Eircode:

Telephone:

Email:

- 4 Please indicate whether it is the applicant or agent who should receive future correspondence in relation to the enquiry:

Applicant ☐

Agent ☒

Section B | Site details

5 Site address: T r i n i t y S t r e e t , W e x f o r d
T o w n , I r e l a n d

6 Irish Grid co-ordinates of site: E(X) 3 0 5 5 7 6 N(Y) 1 2 1 2 5 6
Eg. co-ordinates of GPO, O'Connell St., Dublin: E(X) 315,878 N(Y) 234,619

7 Local Authority:
Local Authority that granted planning permission (if applicable):

8 Has full planning permission been granted? Yes ☐ No ☒
If 'Yes', please provide the current or previous planning reference number:

9 Previous use of this site (if applicable): B r o w n f i e l d s i t e

10 Date that previous development was last occupied (if applicable): / / 2 0 0 2

11 Are there poor ground conditions on site? Yes ☐ No ☒
If 'Yes', please include site investigation report and a detailed site-specific report on the approach being taken to deal with ground conditions specifically with regard to pipe support and trenching.

12 Are there potential contaminated land issues? Yes ☒ No ☐
If 'Yes', please include a detailed site-specific report on the approach being taken to deal with contaminated land and the measures being taken to mitigate the impact on infrastructure.

13 Is the development compliant with the local area development plan? Yes ☒ No ☐

Section C | Water connection and demand details

- 14 Is there an existing connection to public water mains at the site? Yes ☒ No ☐
- 15 Is this enquiry for an additional connection to the one already installed? Yes ☒ No ☐
- 16 Is this enquiry to increase the size of an existing water connection? Yes ☐ No ☒
- 17 Is this enquiry for a new water connection? Yes ☒ No ☐

18 Approximate date water connection is required: 1 / 1 / 2 0 2 0

19 Please indicate pre-development water demand (if applicable):

Pre-development peak hour water demand	0.53	l/s
Pre-development average hour water demand	0.42	l/s

Pre-development refers to brownfield sites only. Please include calculations on the attached sheet provided.

20 Please indicate the domestic water demand (housing developments only):

Post-development peak hour water demand	0.53	l/s
Post-development average hour water demand	0.42	l/s

Please include calculations on the attached sheet provided.

21 Please indicate the business water demand (shops, offices, schools, hotels, restaurants, etc.):

Post-development peak hour water demand	2.73	l/s
Post-development average hour water demand	2.18	l/s

Please include calculations on the attached sheet provided. Where there will be a daily/weekly/seasonal variation in the water demand profile, please provide all such details.

22 Please indicate the industrial water demand (industry-specific water requirements):

Post-development peak hour water demand	0	l/s
Post-development average hour water demand	0	l/s

Please include calculations on the attached sheet provided. Where there will be a daily/weekly/seasonal variation in the water demand profile, please provide all such details.

23 What is the existing ground level at the property boundary at connection point (if known) above Malin Head Ordnance Datum?

2 . 6 8 6 m

24 What is the highest finished floor level of the proposed development above Malin Head Ordnance Datum?

2 . 6 4 0 m

- 25 Is on-site water storage being provided? Yes ☐ No ☒

Please include calculations on the attached sheet provided.

- 26 Are there fire flow requirements? Yes ☐ No ☒

Additional fire flow requirements over and above those identified in Q20, Q21 and Q22 above		I/s
---------------------------------------------------------------------------------------------	--	-----

Please include calculations on the attached sheet provided, and include confirmation of requirements from the Fire Authority.

- 27 Do you propose to supplement your potable water supply from other sources? Yes ☐ No ☒

If 'Yes', please indicate how you propose to supplement your potable water supply from other sources (see **Guide to completing the application form** on page 12 of this document for further details):

[illegible]

Section D | Wastewater connection and discharge details

- 28 Is there an existing connection to a public sewer at the site? Yes ☐ No ☒

- 29 Is this enquiry for an additional connection to one already installed? Yes ☐ No ☒

- 30 Is this enquiry to increase the size of an existing connection? Yes ☐ No ☒

- 31 Is this enquiry for a new wastewater connection? Yes ☒ No ☐

- 32 Approximate date that wastewater connection is required: 1 / 1 / 2020

- 33 Please indicate pre-development wastewater discharge (if applicable):**

Pre-development peak discharge	0.53	l/s
Pre-development average discharge	0.42	l/s

Pre-development refers to brownfield sites only. Please include calculations on the attached sheet provided.

- 34 Please indicate the domestic wastewater hydraulic load (housing developments only):**

Post-development peak discharge	0.53	l/s
Post-development average discharge	0.42	l/s

Please include calculations on the attached sheet provided.

- 35 Please indicate the commercial wastewater hydraulic load (shops, offices, schools, hotels, restaurants, etc.):**

Post-development peak discharge	2.73	l/s
Post-development average discharge	2.18	l/s

Please include calculations on the attached sheet provided.

Section E | Development details

42 Please outline the domestic and/or industry/business use proposed:

Property type	Total number of units for this application
Domestic	60
Office	3
Residential care home	
Hotel	1
Factory	
School	
Institution	
Retail unit	1
Industrial unit	
Other (please specify)	Performing Arts Centre = 1, multistory car park = 1

43 Approximate start date of proposed development:

1 / 1 / 2020

44 Is the development multi-phased?

Yes ☐ No ☒

If 'Yes', application must include a master-plan identifying the development phases and the current phase number.

If 'Yes', please provide details of variations in water demand volumes and wastewater discharge loads due to phasing requirements.

Section F | Supporting documentation

Please provide the following additional information:

- > Site location map: A site location map to a scale of 1:1000, which clearly identifies the land or structure to which the enquiry relates. The map shall include the following details:
 - a) The scale shall be clearly indicated on the map.
 - b) The boundaries shall be delineated in red.
 - c) The site co-ordinates shall be marked on the site location map.
- > Details of planning and development exemptions (if applicable).
- > Calculations (calculation sheets provided below).
- > Site layout map to a scale of 1:500 showing layout of proposed development, water network and wastewater network layouts, additional water/wastewater infrastructure if proposed, connection points to Irish Water infrastructure (if known).
- > Any other information that might help Irish Water assess this pre-connection enquiry.

Section G | Declaration

I/We hereby make this application to Irish Water for a water and/or wastewater connection as detailed on this form.

I/We understand that any alterations made to this application must be declared to Irish Water.

The details that I/we have given with this application are accurate.

I/We have enclosed all the necessary supporting documentation.

Signature:

Ciaran M'Gee

Date:

2 0 / 0 6 / 2 0 1 8

Your full name (in BLOCK CAPITALS):

C I A R A N M C G E E

Irish Water will carry out a formal assessment based on the information provided on this form.

Any future connection offer made by Irish Water will be based on the information that has been provided here.

Please submit the completed form to **newconnections@water.ie** or alternatively, post to:

Irish Water
PO Box 860
South City Delivery Office
Cork City

For office use only:

Input customer number:

--	--	--	--	--	--	--	--	--	--

Calculations

Water demand

Pre-Development Water Demand:

Car Assembly Plant:

Water Demand = 60 litres/day/person (EPA Recommended Wastewater Loading Rates)

Employees (Peak) = 600

Average water demand = $60 \times 600 / (24 \times 60 \times 60) = 0.421/\text{s}$

Peak Demand = Average Demand $\times 1.25 = 0.531/\text{s}$

Post Development Water Demand:

Apartments (Residential):

60 apartments (2 bed, 4 persons per dwelling as per EPA COP clarification Aug 2013)

PE = $60 \times 4 = 240$ residents

Assuming 150l/person/day (IW COP Section 3.7.2)

Daily Demand = $240 \times 150 = 36000\text{l/day}$

Average demand = $36000 / (24 \times 60 \times 60) = 0.421/\text{s}$

Peak Demand = Average demand $\times 1.25 = 0.531/\text{s}$

Offices, Hotel, Restaurant / Cafe / Retail, Performing Arts Centre:

Hotel:

No of rooms = 120, 240 guests, 240 visitors for events, 60 staff
Daily Demand (hotel) = $(240 \times 250) + (240 \times 25) + (60 \times 60) = 69600\text{l/day}$ (EPA Recommended Wastewater Loading Rates)

Offices:

1740 people in total

Daily Demand (Offices) = $1740 \times 60 = 104400\text{l/day}$ (EPA Recommended Wastewater Loading Rates)

Performing arts centre:

400 visitors + 20 staff

Daily Demand (Arts Centre) = $420 \times 25 = 10500\text{l/day}$

Restaurant/Cafe/Retail:

200 visitors + 30 staff

Daily Demand (Restaurant/cafe/Retail) = $230 \times 15 = 3450\text{l/day}$

Total Daily Demand (Business) = $69600 + 104400 + 10500 + 3450 = 187950\text{l/day}$

Average demand = $187950 / (24 \times 60 \times 60) = 2.181/\text{sec}$

Peak demand = average demand $\times 1.25 = 2.731/\text{sec}$

On-site storage

24 hour storage to be provided at foul pumping station.

Minimum storage of 223950l/day to be provided.

Fire flow requirements

N/A - Refer to Local Authority /Fire officer requests

Foul wastewater discharge

Refer to "Water demand" calculation

N/A

Guide to completing the pre-connection enquiry form

This form should be completed by applicants enquiring about the feasibility of a water and/or wastewater connection to Irish Water infrastructure.

The Irish Water Codes of Practice are available at www.water.ie for reference.

Section A | Applicant Details

- Question 1:** 'Water Point Reference Number (WPRN)' is a unique number assigned to every single water services connection in the country. The WPRN is prominently displayed on correspondence received from Irish Water, and can be found on water bills, previous connection offers, or previous enquiries in relation to the site. Existing customers and brownfield sites should have a WPRN. New customers are not required to answer this question.
- Question 2:** This question requires the applicant or company enquiring about the feasibility of a connection to identify themselves, their postal address, and to provide their contact details.
- Question 3:** If the applicant has employed a consulting engineer or an agent to manage the enquiry on their behalf, the agent's address and contact details should be recorded here.
- Question 4:** Please indicate whether it is the applicant or the agent who should receive future correspondence in relation to the enquiry.

Section B | Site details

- Question 5:** This is the address of the site requiring the water/wastewater service connection and for which this enquiry is being made.
- Question 6:** Please provide the Irish Grid co-ordinates of the proposed site. Irish grid positions on maps are expressed in two dimensions as Eastings (E or X) and Northings (N or Y) relative to an origin. You will find these coordinates on your Ordnance Survey map which is required to be submitted with an application.
- Question 7:** Please identify the Local Authority that is or will be dealing with your planning application, for example Cork City Council.
- Question 8:** Please indicate if planning permission has been granted for this application, and if so, please provide the planning permission reference number.
- Question 9:** Please specify the previous use of the site that is proposed to be developed, for example if greenfield, please state 'Agricultural'.
- Question 10:** Please specify the date that the development site was last occupied. Your answer will help us to determine the previous water usage/wastewater load of the development. If the site was previously greenfield, then this question does not need to be completed.
- Question 11:** Please provide details in relation to the ground conditions on the site if they are known to be poor, for example soil with a low bearing capacity, high water table, presence of peat, silt, etc. If a site investigation report is available, please include it with your enquiry.
- Question 12:** Please provide details in relation to contaminated land on your site (if any); this will determine what pipe material will be appropriate in the vicinity of the contaminated ground.
- Question 13:** Please indicate if the development is compliant with the local area development plan. You should contact your Local Authority in this regard and confirm same by ticking the appropriate box.

Section C | Water connection and demand details

- Question 14:** Please indicate if a water connection already exists for this site.
- Question 15:** Please indicate if this enquiry concerns an additional connection to one already installed on the site.
- Question 16:** Please indicate if you are proposing to upgrade the water connection to facilitate an increase in water demand. Irish Water will determine what impact this will have on our infrastructure.
- Question 17:** Please indicate if this enquiry concerns a new water connection for this site.
- Question 18:** Please indicate the approximate date that the proposed connection to the water infrastructure will be required.

- Question 19:** If the site was previously in use, please provide details of the pre-development peak hour and average hour water demand.
- Question 20:** Please provide calculations for domestic water demand and include your calculations on the calculation sheet provided. Demand rates (peak and average) are site specific. Average demand is the total daily volume divided by a 24-hour time period and expressed in litres per second (l/s). For design purposes, please refer to the Irish Water Codes of Practice for Water Infrastructure.
- Question 21:** If this connection enquiry concerns a business premises, please provide calculations for the water demand and include your calculations on the calculation sheet provided. Business premises include shops, offices, hotels, schools, etc. Demand rates (peak and average) are site specific. Average demand is the total daily volume divided by a 24-hour time period and expressed in litres per second (l/s). For design purposes, please refer to the Irish Water Codes of Practice for Water Infrastructure.
- Question 22:** If this connection enquiry is for an industrial premises, please calculate the water demand and include your calculations on the calculation sheet provided. Demand rates (peak and average) are site specific. Average demand is the total daily volume divided by a 24-hour time period and expressed in litres per second (l/s). The peak demand for sizing of the pipe network will be as per the specific business production requirements. For design purposes, please refer to the Irish Water Codes of Practice for Water Infrastructure.
- Question 23:** Please specify the ground level at the location where connection to the public water mains will be made. This is required in order to determine if there is sufficient pressure in the existing water infrastructure to serve your proposed development. Levels should be quoted in metres relative to Malin Head Ordnance Datum.
- Question 24:** Please specify the highest finished floor level on site. This is required in order to determine if there is sufficient pressure in the existing water infrastructure to serve your proposed development. Levels should be quoted in metres relative to Malin Head Ordnance Datum.
- Question 25:** If storage is required, water storage capacity of 24-hour water demand must usually be provided at the proposed site. In some cases, 24-hour storage capacity may not be required, for example 24-hour storage for a domestic house would be provided in an attic storage tank. Please calculate the 24-hour water storage requirements and include your calculations on the attached sheet provided. Please also confirm that on-site storage is being provided by ticking the appropriate box.
- Question 26:** The water supply system shall be designed and constructed to reliably convey the water flows that are required of the development including fire flow requirements by the Fire Authority. The Fire Authority will provide the requirement for fire flow rates that the water supply system will have to carry. Please note that while flows in excess of your required demand may be achieved in the Irish Water network and could be utilised in the event of a fire, Irish Water cannot guarantee a flow rate to meet your fire flow requirement. To guarantee a flow to meet the Fire Authority requirements, you should provide adequate fire storage capacity within your development. Please include your calculations on the attached sheet provided, and further provide confirmation of the Fire Authority requirements.
- Question 27:** Please identify proposed additional water supply sources, that is, do you intend to connect to the public water mains or the public mains and supplement from other sources? If supplementing public water supply with a supply from another source, please provide details as to how the potable water supply is to be protected from cross contamination at the premises.

Section D | Wastewater connection and discharge details

- Question 28:** Please indicate if a wastewater connection to a public sewer already exists for this site.
- Question 29:** Please indicate if this enquiry relates to an additional wastewater connection to one already installed.
- Question 30:** Please indicate if you are proposing to upgrade the wastewater connection to facilitate an increased discharge. Irish Water will determine what impact this will have on our infrastructure.
- Question 31:** Please indicate if this enquiry relates to a new wastewater connection for this site.
- Question 32:** Please specify the approximate date that the proposed connection to the wastewater infrastructure will be required.
- Question 33:** If the site was previously in use, please provide details of the pre-development peak and average wastewater discharge.

- Question 34:** Please provide calculations for domestic wastewater discharge and include your calculations on the attached sheet provided. Discharge rates (peak and average) are site specific. Average discharge is the total daily volume divided by a 24-hour time period and expressed in litres per second (l/s). For design purposes, please refer to the Irish Water Codes of Practice for Wastewater Infrastructure.
- Question 35:** If this enquiry relates to a business premises, please provide calculations for the wastewater discharge and include your calculations on the attached sheet provided. Business premises include shops, offices, hotels, schools, etc. Discharge rates (peak and average) are site specific. Average discharge is the total daily volume divided by a 24-hour time period and expressed in litres per second (l/s). For design purposes, please refer to the Irish Water Codes of Practice for Wastewater Infrastructure.
- Question 36:** If this enquiry relates to an industrial premises, please provide calculations for the wastewater discharge and include your calculations on the calculation sheet provided. Discharge rates (peak and average) are site specific. Average discharge is the total daily volume divided by a 24-hour time period and expressed in litres per second (l/s). The peak discharge for sizing of the pipe network will be as per the specific business production requirements. For design purposes, please refer to the Irish Water Codes of Practice for Wastewater Infrastructure.
- Question 37:** Please specify the maximum and average concentrations and the maximum daily load of each of the wastewater characteristics listed in the wastewater organic load table (if not domestic effluent), and also specify if any other significant concentrations are expected in the effluent. Please complete the table and provide additional supporting documentation if relevant. Note that the concentration shall be in mg/l and the load shall be in kg/day. Note that for business premises (shops, offices, schools, hotels, etc.) for which only domestic effluent will be discharged (excluding discharge from canteens/restaurants which would require a Trade Effluent Discharge licence), there is no need to complete this question.
- Question 38:** In exceptional circumstances, such as brownfield sites, where the only practical outlet for storm/surface water is to a combined sewer, Irish Water will consider permitting a restricted attenuated flow to the combined sewer. Storm/surface water will only be accepted from brownfield sites that already have a storm/surface water connection to a combined sewer and the applicant must demonstrate how the storm/surface water flow from the proposed site is minimised using sustainable urban drainage system (SUDS). This type of connection will only be considered on a case by case basis. Please advise if the proposed development intends discharging surface water to the combined wastewater collection system.
- Question 39:** Please specify if the development needs to pump its wastewater discharge to gain access to Irish Water infrastructure.
- Question 40:** Please specify the ground level at the location where connection to the public sewer will be made. This is required to determine if the development can be connected to the public sewer via gravity discharge. Levels should be quoted in metres relative to Malin Head Ordnance Datum.
- Question 41:** Please specify the lowest floor level of the proposed development. This is required in order to determine if the development can be connected to the public sewer via gravity discharge. Levels should be quoted in metres relative to Malin Head Ordnance Datum.

Section E | Development details

- Question 42:** Please specify the number of different property/premises types by filling in the table provided.
- Question 43:** Please indicate the approximate commencement date of works on the development.
- Question 44:** Please indicate if a phased building approach is to be adopted when developing the site. If so, please provide details of the phase master-plan and the proposed variation in water demand/wastewater discharge as a result of the phasing of the development.

Section F | Supporting documentation

Please provide additional information as listed.

Section G | Declaration

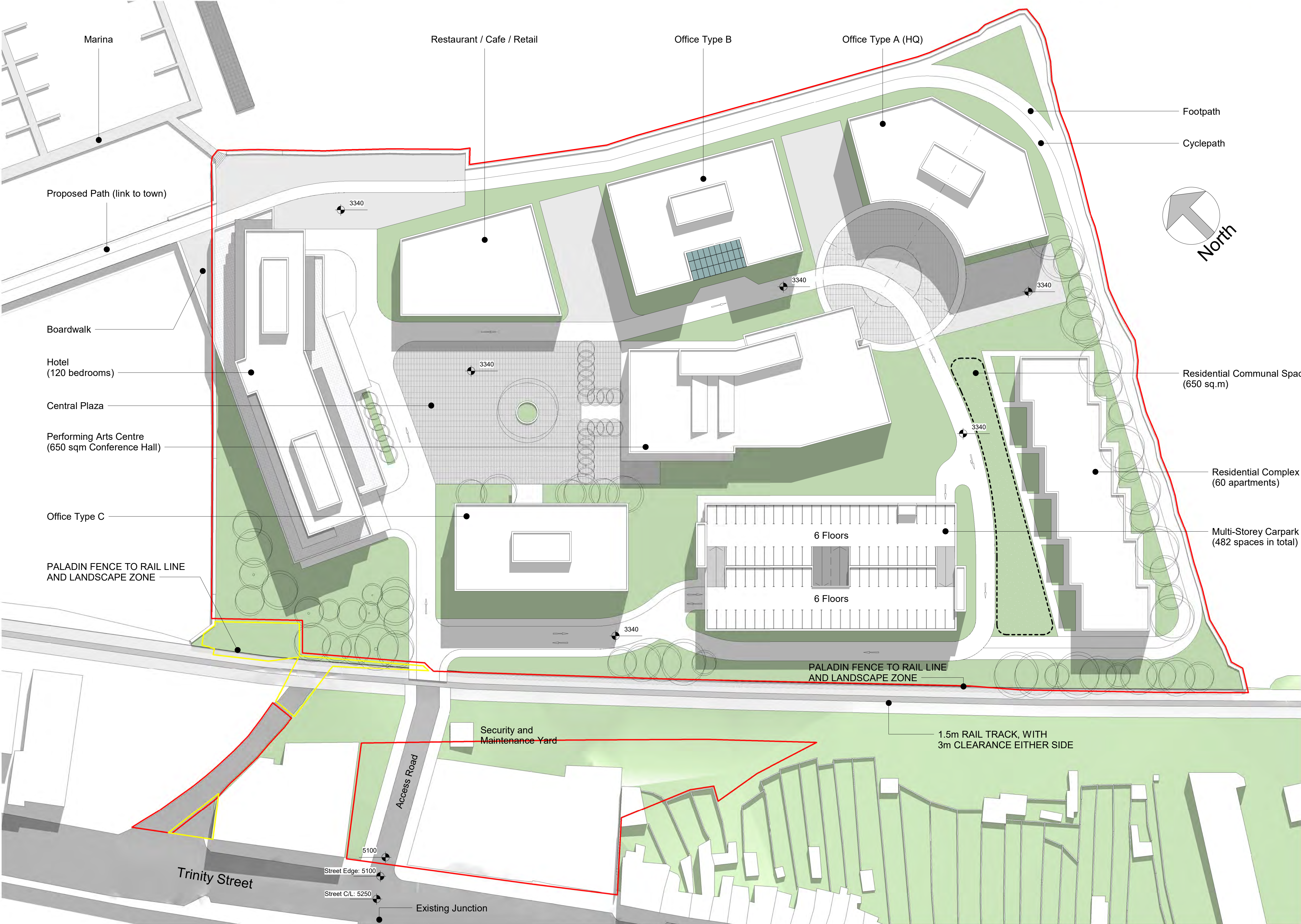
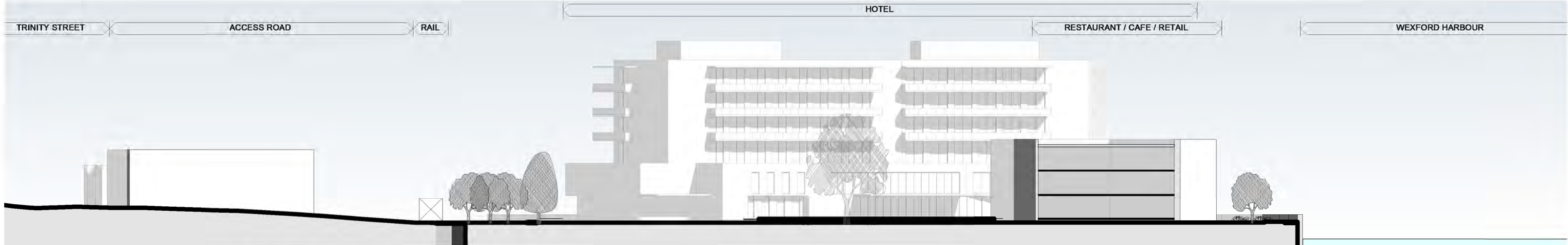
Please review the declaration, sign, and return the completed application form to Irish Water by email or by post using the contact details provided in Section G.

Question 12: Ground Investigations are currently being undertaken at the site to determine the extent of contamination - Ground Investigation Report to follow.

Question 38: Storm water runoff to be attenuated on site for the 1 in 100 year 6 hour event and discharged to the sea.

Question 39: Wastewater from the development is to be pumped to existing public combined network on Trinity Street.

A large, empty rectangular box with a thin black border, occupying the majority of the page. It is intended for handwritten notes.



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Levels and contours are relative to an Ordnance Survey Datum
Figured dimensions in millimetres.

NOTES:

Arts Centre - Area Schedule	
Level	Area

G00 - GROUND FLOOR PLAN	1672 m ²
G01 - FIRST FLOOR PLAN	1112 m ²
Total Floors: 2	2784 m ²

Hotel - Area Schedule	
Level	Area

G00 - GROUND FLOOR PLAN	1883 m ²
G01 - FIRST FLOOR PLAN	2388 m ²
G02 - SECOND FLOOR PLAN	1226 m ²
G03 - THIRD FLOOR PLAN	1226 m ²
G04 - FOURTH FLOOR PLAN	1226 m ²
G05 - FIFTH FLOOR PLAN	1226 m ²
Total Floors: 6	9175 m ²

Office Type A - Area Schedule	
Level	Area

G00 - GROUND FLOOR PLAN	1275 m ²
G01 - FIRST FLOOR PLAN	1275 m ²
G02 - SECOND FLOOR PLAN	1275 m ²
G03 - THIRD FLOOR PLAN	1275 m ²
G04 - FOURTH FLOOR PLAN	1275 m ²
Total Floors: 5	6374 m ²

Office Type B - Area Schedule	
Level	Area

G00 - GROUND FLOOR PLAN	1212 m ²
G01 - FIRST FLOOR PLAN	1212 m ²
G02 - SECOND FLOOR PLAN	1212 m ²
G03 - THIRD FLOOR PLAN	1212 m ²
G04 - FOURTH FLOOR PLAN	1212 m ²
Total Floors: 5	6058 m ²

Office Type C - Area Schedule	
Level	Area

G00 - GROUND FLOOR PLAN	991 m ²
G01 - FIRST FLOOR PLAN	991 m ²
G02 - SECOND FLOOR PLAN	991 m ²
G03 - THIRD FLOOR PLAN	991 m ²
G04 - FOURTH FLOOR PLAN	991 m ²
Total Floors: 5	4957 m ²

Restaurant - Area Schedule	
Level	Area

G00 - GROUND FLOOR PLAN	920 m ²
G01 - FIRST FLOOR PLAN	920 m ²
G02 - SECOND FLOOR PLAN	920 m ²
Total Floors: 3	2761 m ²

All areas shown above include cores
but exclude plant zones

REVISION SCHEDULE		
NO.	DATE	DESCRIPTION
1	2018.05.09	Client Workshop
2	2018.05.28	For Client Review
3	2018.05.31	Client Workshop
4	2018.06.13	Design Team Review
5	2018.06.19	Irish Rail Review

CLIENT

Wexford County Council
County Hall, Carricklawn, Wexford,
Y35 WY93
Tel: 053 919 6000
Web: www.wexfordcoco.ie



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Fax: +353 (0)1 661 3300 Web: www.stwalkers.com

DRAWING

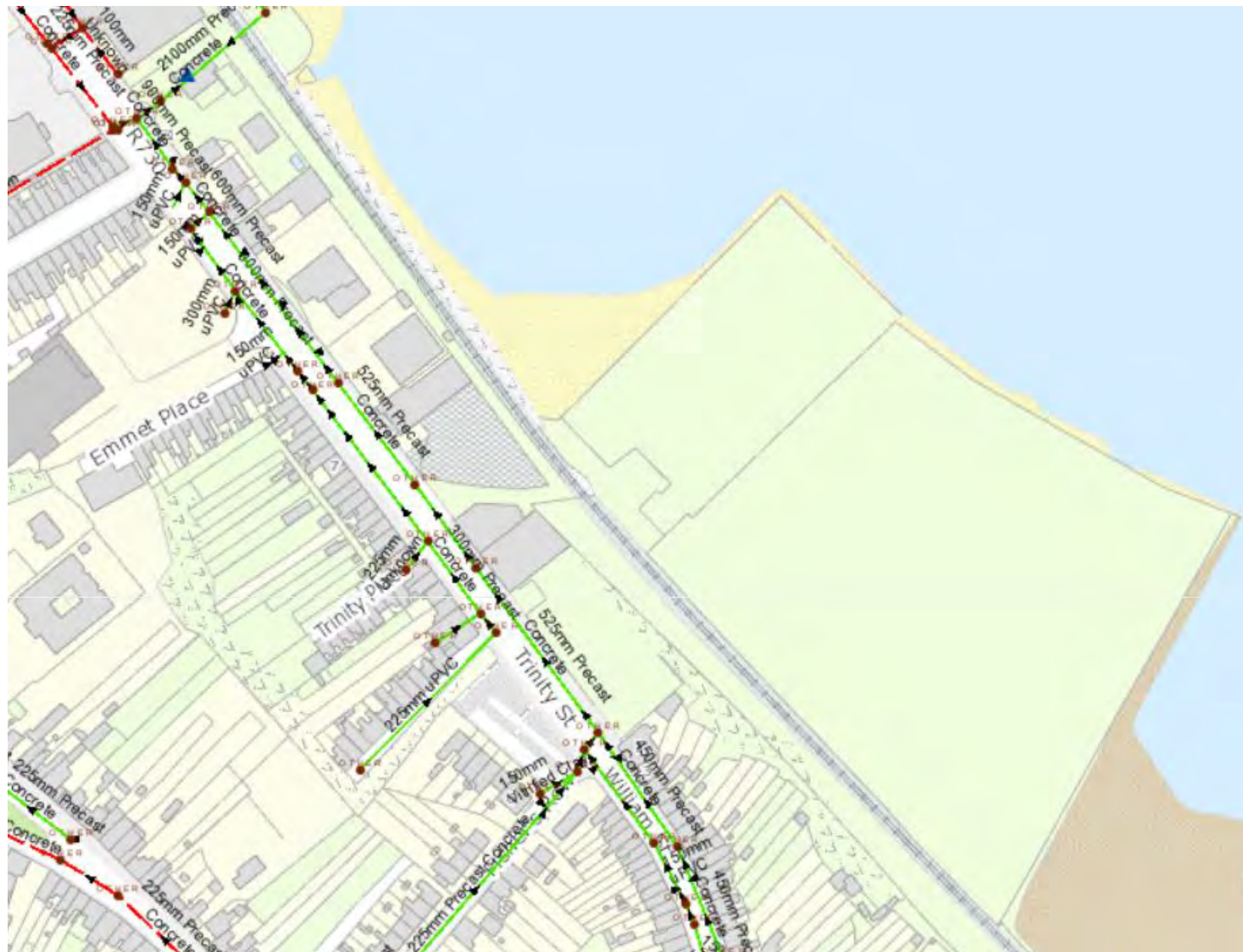
**SITE LAYOUT AND SECTION -
OPTION 1**

SCALE @A1	ISSUED:
1 : 500	2018.06.19
DRAWN BY:	CHECKED BY:
STW	DC

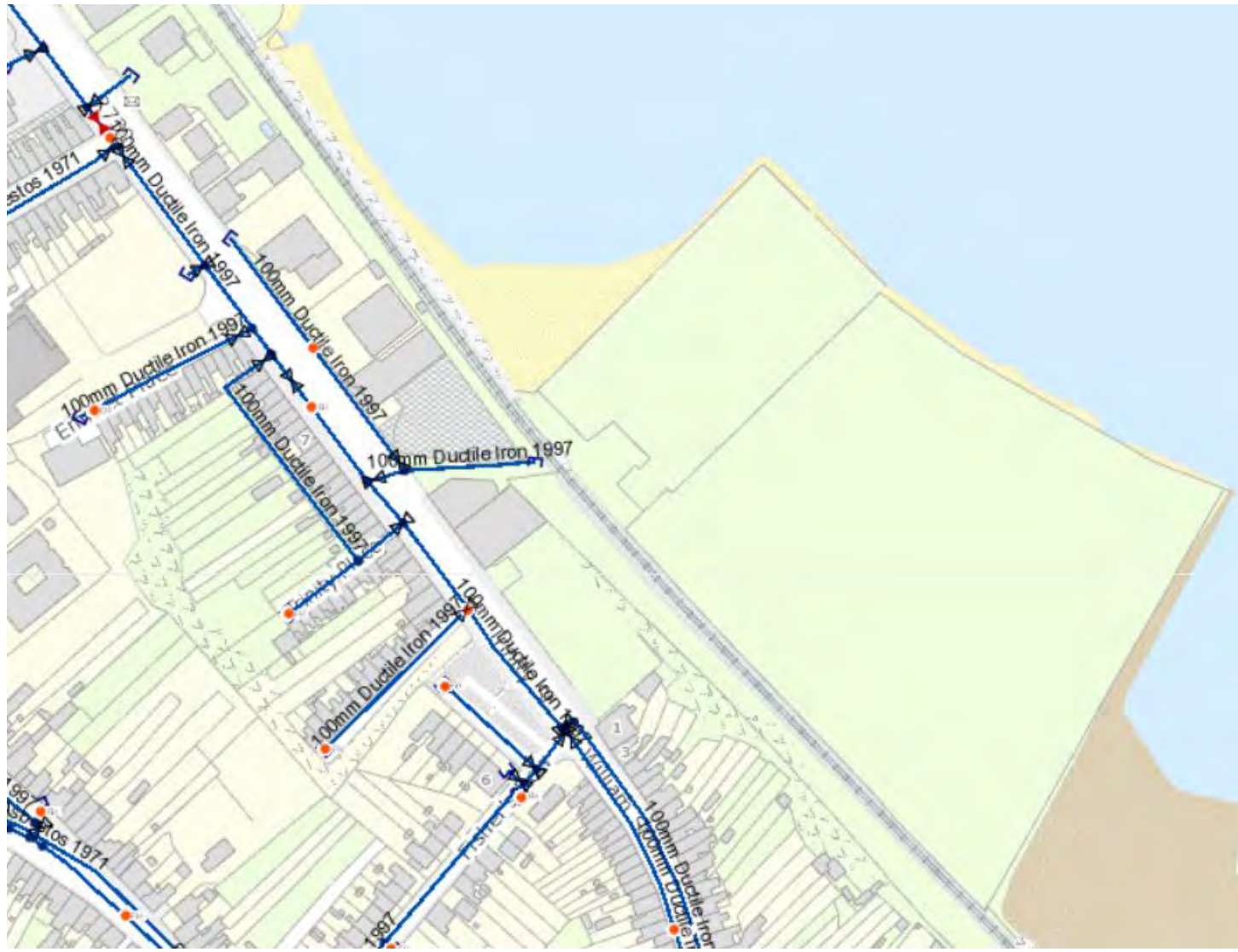
PROJECT NO.	PROJECT STAGE:	PROJECT ARCHITECT:
15058		David Cahill

DRAWING NO.	REVISION
TWW-STW-00-ZZ-M3-A-131-1001_OPT1	5

Drainage Records



Watermain Records



Ciaran McGee
Arena House
Arena Road
Dandyford
Dublin



Uisce Éireann
Bosca OP 6000
Baile Átha Cliath 1
Éire

Irish Water
PO Box 6000
Dublin 1
Ireland

T: +353 1 89 25000
F: +353 1 89 25001
www.water.ie

03 September 2018

Dear Sir/Madam,

Re: Customer Reference No 325108944 pre-connection enquiry - Subject to contract | Contract denied
Connection for Mixed Use Development at Trinity Street, Wexford Town, Co. Wexford

Irish Water has reviewed your pre-connection enquiry in relation to water and wastewater connections at Trinity Street Wexford Town Wexford. Based upon the details that you have provided with your pre-connection enquiry and on the capacity currently available in the network(s), as assessed by Irish Water, we wish to advise you that, subject to a valid connection agreement being put in place, your proposed connection to the Irish Water network(s) can be facilitated.

In the case of wastewater connections this assessment does not confirm that a gravity connection is achievable. Therefore a suitably sized pumping station may be required to be installed on your site. All infrastructure should be designed and installed in accordance with the Irish Water Code of Practice.

Please note there are capacity constraints in the water network that require upgrade works to cater for the proposed development. There is an existing 100mm diameter watermain serving the development site on Trinity Street which requires upsizing to cater for the development. Irish Water currently does not have any plans to upsize its network in this area. The exact length of upgrade is not yet known and further studies are required to be carried out to confirm the length of upgrade. Should you wish to consider upsizing the water network, please contact Irish Water.

All infrastructure should be designed and installed in accordance with the Irish Water Codes of Practice and Standard Details. A design proposal for the water and/or wastewater infrastructure should be submitted to Irish Water for assessment. Prior to submitting your planning application, you are required to submit these detailed design proposals to Irish Water for review.

You are advised that this correspondence does not constitute an offer in whole or in part to provide a connection to any Irish Water infrastructure and is provided subject to a connection agreement being signed at a later date.

A connection agreement can be applied for by completing the connection application form available at **www.water.ie/connections**. Irish Water's current charges for water and wastewater connections are set out in the Water Charges Plan as approved by the Commission for Regulation of Utilities.

If you have any further questions, please contact John Hennessy from the design team on 022-52256 or email jhennessy@water.ie. For further information, visit **www.water.ie/connections**

Yours sincerely,

Maria O'Dwyer

Connections and Developer Services

Stiúrthóirí / Directors: Mike Quinn (Chairman), Jerry Grant, Cathal Marley, Brendan Murphy, Michael G. O'Sullivan

Oifig Chláraithe / Registered Office: Teach Colvill, 24-26 Sráid Thalbóid, Baile Átha Cliath 1, D01 NP86 / Colvill House, 24-26 Talbot Street, Dublin 1, D01 NP86

Is cuideachta ghníomhaíochta ainmnithe atá faoi theorainn scaireanna é Uisce Éireann / Irish Water is a designated activity company, limited by shares.

Uimhir Chláraithe in Éirinn / Registered in Ireland No.: 530363

Ciaran McGee

Subject: FW: Trinity Wharf - IW Sewer rising Main
Attachments: 2019-10-04_TW_IW.pdf; Location of Management Building and 700mm Sewer Rising Main.pdf; Relocated Management Building - Clearance to 700mm Rising Main Sketch.pdf; TRWH-ROD-GEN-SW_AE-DR-CH-4068.pdf; TRWH-ROD-GEN-SW_AE-DR-CH-4069.pdf; TRWH-ROD-GEN-SW_AE-DR-CH-4067.pdf

From: PJ Murphy [<mailto:pjmurphy@water.ie>]
Sent: Thursday 10 October 2019 14:41
To: Brian Galvin
Cc: Tadhg Coffey; John O'Shaughnessy
Subject: FW: Trinity Wharf - IW Sewer rising Main

Hi Brian,

As discussed the proposed structure needs to comply with Table 8.1 of IW Gravity Sewer Standard. Table 8.1 requires sewers with a DN of between 450mm and 749mm and with a depth to invert of less than 3m to be minimum distance of 3.5m from buildings / structures.

Irish Water are happy to liaise with the Developer with regard to any designs etc. adjacent to the DN700 rising main and / or water services designs within the site. Please feel free to contact me if you require additional information.

Regards,

PJ Murphy
Southern Region - Connections and Developer Services – Design Engineer

Uisce Éireann
Teach na hAbhann Móire, Páirc Ghnó Mhala, Mala, Contae Chorcaí, Éire
Irish Water
Blackwater House, Mallow Business Park, Mallow, County Cork, Ireland

P: +353 22 52267
E: pjmurphy@water.ie
www.water.ie

From: Brian Galvin [<mailto:Brian.Galvin@wexfordcoco.ie>]
Sent: 08 October 2019 14:59
To: Tadhg Coffey; PJ Murphy
Subject: Trinity Wharf - IW Sewer rising Main

Tadhg,

I refer to our recent call and attached details of sewer rising main located in the vicinity of the Trinity Wharf site and WCC's proposals to provide for the protection of this main as part of the proposed development of these lands.

A long section of the rising main and the access road is also attached for information. Please note that the sections show the original location of the Management /Services building prior to relocation.

Should you require any further information, please contact me.

Brian Galvin
Head of Special Projects



Email: brian.galvin@wexfordcoco.ie
Phone: 053 9196245
Mobile: 087 9678144

Address: **Wexford County Council, County Hall, Carricklawn, Wexford, Y35 WY93**

T? an t-eolas sa r?omhphost seo agus in aon chomhad a ghabhann leis r?nda agus ceaptha le haghaidh ?s?ide an t? n? an aon?in ar seoladh chuige iad agus na h?s?ide sin amh?in. Is tuairim? n? dearctha? an ?dair amh?in aon tuairim? n? dearctha? ann, agus n? g? gurb ionann iad agus tuairim? n? dearctha? Comhairle Contae Loch Garman. M? bhfuair t? an r?omhphost seo tr? earr?id, ar mhiste leat ? sin a chur in i?l don seolt?ir n? le customerservice@wexfordcoco.ie. Scanann Comhairle Contae Loch Garman r?omhphoist agus ceangalt?in le haghaidh v?reas, ach n? r?tha?onn s? go bhfuil ceachtar d?obh saor ? v?reas agus n? glacann dliteanas ar bith as aon dam?iste de dhroim v?reas.

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Thank you for your attention.

Tá an fhaisnéis á seachadadh dírithe ar an duine nó ar an eintiteas chuig a bhfuil sí seolta amháin agus féadfar ábhar faoi rún, faoi phribhléid nó ábhar atá íogair ó thaobh tráchtála de a bheith mar chuid de. Tá aon athsheachadadh nó scaipeadh den fhaisnéis, aon athbhreithniú ar nó aon úsáid eile a bhaint as, nó aon ghníomh a dhéantar ag brath ar an bhfaisnéis seo ag daoine nó ag eintitis nach dóibh siúd an fhaisnéis seo, toirimisce the agus féadfar é a bheith neamhdhleathach. Níl Uisce Éireann faoi dhliteanas maidir le seachadadh iomlán agus ceart na faisnéise sa chumarsáid seo nó maidir le haon mhoill a bhaineann léi. Ní ghlacann Uisce Éireann le haon dliteanas faoi ghnímh nó faoi iarmhairtí bunaithe ar úsáid thoirmisce the na faisnéise seo. Níl Uisce Éireann faoi dhliteanas maidir le seachadadh ceart agus iomlán na faisnéise sa chumarsáid seo nó maidir le haon mhoill a bhaineann léi. Má fuair tú an teachtaireacht seo in earráid, más é do thoil é, déan teagmháil leis an seoltóir agus scríos an t-ábhar ó gach aon ríomhaire. Féadfar ríomhphost a bheith soghabhálach i leith truaillithe, idircheaptha agus i leith leasaithe neamhúdaraith. Ní ghlacann Uisce Éireann le haon fhreagracht as athruithe nó as idircheapadh a rinneadh ar an ríomhphost seo i ndiaidh é a sheoladh nó as aon dochar do chórais na bhfaighteoirí déanta ag an teachtaireacht seo nó ag a ceangaltáin. Más é do thoil é, tabhair faoi deara chomh maith go bhféadfar monatóireacht a dhéanamh ar theachtairachtaí chuig nó ó Uisce Éireann chun comhlíonadh le polasaithe agus le caighdeáin Uisce Éireann a chinntiú agus chun ár ngnó a chosaint. Fochuideachta gníomhaíochta de chuid Ervia is ea Uisce Éireann atá faoi theorainn scaireanna, de bhun fhorálacha an tAcht um Sheirbhísí Uisce 2013, a bhfuil a bpríomh ionad gnó ag 24-26 Teach Colvill, Sráid na Talbóide, BÁC 1.

Go raibh maith agat as d'aird a thabhairt.

Tá an t-eolas sa ríomhphost seo agus in aon chomhad a ghabhann leis rúnda agus ceaptha le haghaidh úsáide an té nó an aonáin ar seoladh chuige iad agus na húsáide sin amháin. Is tuairimí nó dearcthaí an údair amháin aon tuairimí nó dearcthaí ann, agus ní gá gurb ionann iad agus tuairimí nó dearcthaí Comhairle Contae Loch Garman. Má bhfuair tú an ríomhphost seo trí earráid, ar mhiste leat é sin a chur in iúl don seoltóir nó le customerservice@wexfordcoco.ie. Scanann Comhairle Contae Loch Garman ríomhphoist agus ceangaltáin le haghaidh víreas, ach ní ráthaíonn sé go bhfuil ceachtar díobh saor ó víreas agus ní glacann dliteanas ar bith as aon damáiste de dhroim víreas.

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Appendix E1

Wexford Quay Economic Development & Spatial Implementation Plan



WEXFORD QUAY ECONOMIC DEVELOPMENT & SPATIAL IMPLEMENTATION PLAN - STAGE 2B REPORT

Scott Tallon Walker Architects

PROJECT TEAM



Client
Wexford County Council



Architects & Urban Planners
Scott Tallon Walker Architects

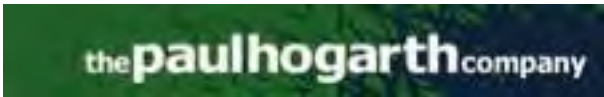


Transport Planning
Roughan O'Donovan



Economic Analysis & Business Development
CHL Consulting Group

Conservation Architecture & Heritage
Rob Goodbody



Paul Hogarth Landscape Architecture
Paul Hogarth

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EXECUTIVE SUMMARY

INTRODUCTION

Wexford is a unique town full of history that combines the old and new, with a unique blend of commercial, retail, cultural and leisure activities, all of which is reflected in the town’s urban structure and varied architecture.

The lack of investment and economic activity during the economic downturn has manifested itself physically in a multitude of ways including the unplanned formation of several large derelict and under-utilised sites which are strategically located within the town centre. With renewed economic activity becoming more evident, Wexford County Council consider that it is an appropriate time to consider the opportunity to provide a strategic vision for the revitalisation and regeneration of the Wexford Quays area.

Wexford County Council recognises that there is an urgent need to do more to promote economic development and physical growth in Wexford, and to introduce measures to revitalise the town’s economy with innovative proposals that greatly enhance the town’s physical attractiveness and well-being as a place for people to work, shop, visit and live.

Wexford County Council therefore commissioned this ‘Economic Development and Spatial Implementation Plan for the revitalization of the Wexford Quay Area’ to address these issues and to provide a strategy.

The plan is prepared by a team, led by Scott Tallon Walker Architects, which has worked in close cooperation with a Steering Group from Wexford County Council. The team consists of:

- Scott Tallon Walker Architects (Spatial & Urban Design, Planning and Architecture)
- The Paul Hogarth Company Ltd (Landscape and Public Realm)
- CHL Consulting Group (Economic Analysis and Business Development, Culture)
- Roughan O’Donovan (Transportation, IT infrastructure)
- Rob Goodbody (Conservation Architecture and Heritage)

The team carried out extensive initial consultation with stakeholders during the analysis stage and presented their overall vision to the public in March 2017.

Economic Profile and Outline Action Plan

The Plan reviews the present economic condition of Wexford Town, with particular reference to the Project Area. It assesses the strengths and weaknesses of the local economy and the constraints to economic growth and employment, and identifies the comparative advantages that offer a platform for future economic development. The analysis draws on a combination of published statistics, documents, and research reports, as well as the findings of consultations in Wexford and numerous site visits.

A significant constraint to economic growth and employment is the size of the available market, a fundamental consideration in a market economy. The immediate local population of Wexford Town is too small to support economic growth on its own.

Therefore, Wexford must depend on bringing more people into the town for shopping, services, leisure and recreation, and selling goods and services produced in the town to remote markets.

However, there is a sizeable residential market within an hour's drive and, second, there is a large tourism market in County Wexford. These markets present real opportunities for Wexford but success will depend on competing effectively with other destinations that fall within, or attract business from within, the catchment area, including Waterford and Kilkenny.

A second constraint is the below-average level of educational attainment in Wexford. An educated population is a vital resource for businesses that many towns in Ireland would like to attract, particularly foreign direct investment. Educational attainment levels in Wexford are below the national average, and this is a barrier to economic growth.

A third potential constraint is the extent to which the existing physical environment, including infrastructure and available sites and buildings, places limits on development opportunities. The Quays are a major traffic artery and also carry a main railway line, and these cannot be easily changed. The sites and buildings available for new economic use also have their limitations and may not be readily converted to meet the needs of contemporary users (retailers, etc.).

Economic Strategy

The focus of the Economic Strategy is for Wexford to establish a clear position of competitive advantage. Competitive advantage in this sense relates to the capacity of the town to stand out and capture the attention of investors, tourists and consumers to an extent that is greater and more compelling than neighbouring urban centres. In the case of Wexford the greater opportunity to achieve this is by setting out to be different and very deliberately trade on that difference.

A key difference is Wexford's unique heritage which has been shaped by its maritime prominence and relationship to Europe. Today, the form and function of Wexford is required to meet a different set of contemporary needs as a destination for business, a regional centre for retail and a desirable place to live and work.

However, its origins give Wexford a distinctiveness from other towns on the East coast and these should not be overlooked in imagining Wexford as a more significant destination for culture and leisure: aspects of a vibrant town which contribute greatly to strengthening the economic drivers of business, retail and creating a desirable place to live and work.

To a significant extent, Wexford's distinctiveness is reflected in the town's streetscape, public realm, its existing retail offer and service economy. It has the potential to deepen and strengthen these attributes as a platform from which a distinct competitive advantage can be built. Place-branding could support this focus on differentiation as part of developing the Town's competitive advantage.

The Economic Strategy provides a targeted set of strategic economic activities for revitalising the project area and to stimulate significant sustainable economic activity, employment creation or other desirable consequential development. These are:

- Investment in public realm improvements with event spaces, activities and attractions
- Development of 'Heritage Tourism' projects to improve the visitor experience
- Redefinition of the Crescent as the town's centrepiece space – unique to Wexford
- Development of Trinity Wharf as a new signature business district to support the transition of the town towards a higher-value knowledge and leisure economy.
- Support the development of a strong technology sector
- Support the creation of a skilled local labour force through further education training programmes and other measures, particularly for young people in long-term unemployment.

The Economic Strategy recommends a series of key actions for each of the above.

Spatial Analysis and Strategy

The Spatial Implementation Plan provides the physical and spatial context for implementation of the key actions identified in the Economic Action Plan. This has required a detailed spatial analysis of the existing urban context including the built heritage and conservation, the urban character and form, a survey of the existing condition of the public realm, an analysis of the existing town centre uses, and an analysis of traffic and movement and traffic. Further key actions and recommendations have been identified in each of these areas.

The spatial strategy brings together all the key actions into an overall vision with a series of area based development objectives. These include:

- the development of Trinity Wharf on a planned basis as a flexible serviced urban business quarter, connected with the rest of the town centre by a direct connection with the Crescent by an extended Paul Quay,
- the transformation of the Crescent as a focal point for the town centre at the mid-point of the historic quays between Wexford Bridge and Trinity Wharf.
- Public Realm Improvements along the waterfront, quays and the streets, lanes and squares connecting with Main Street to create a varied and pedestrian-friendly public realm,
- measures to encourage the upgrade and improvement of the quality and care of the existing built fabric throughout the town centre,
- development of a ‘north-south ‘heritage route’ with improved visitor offer and experience
- a coordinated lighting strategy

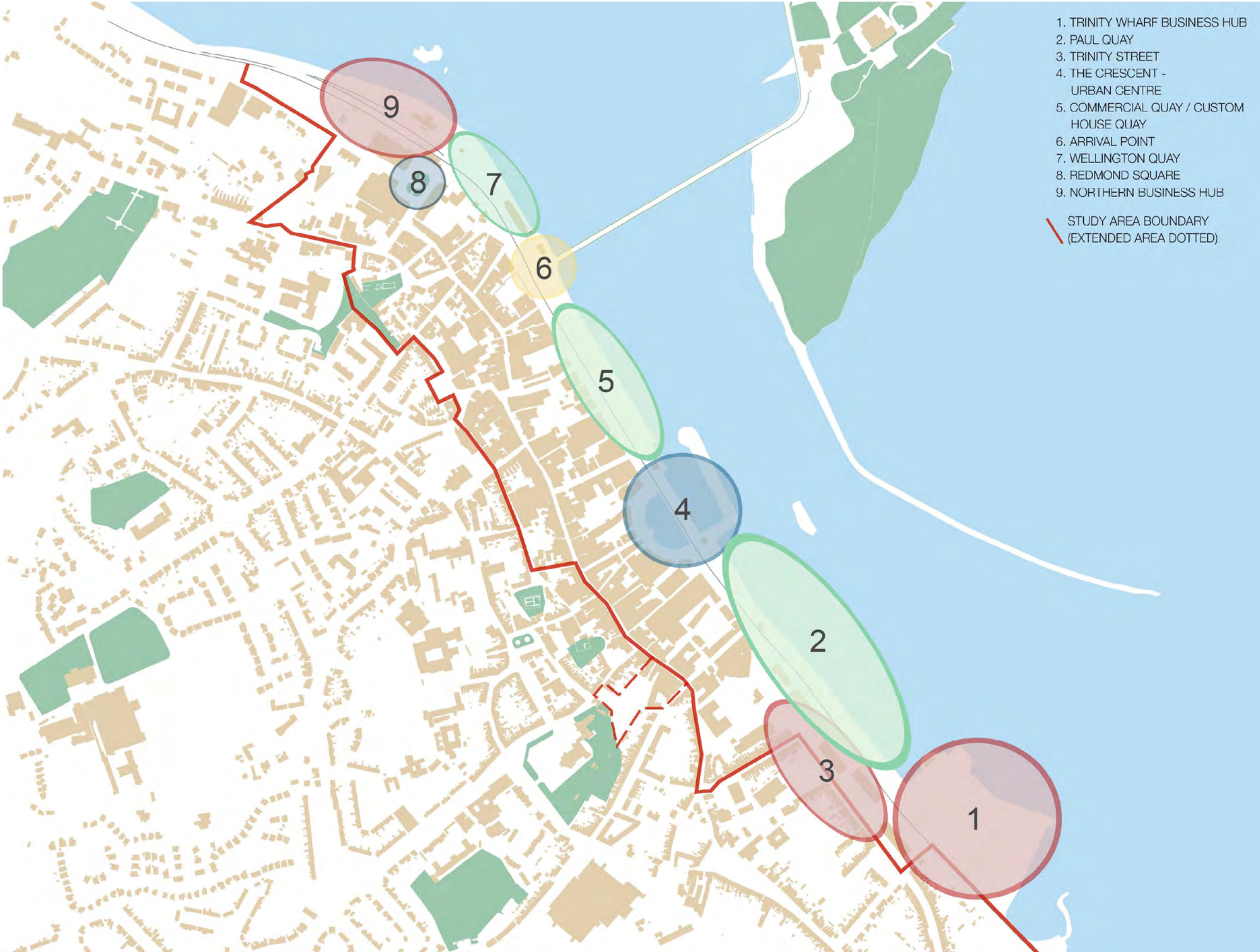
Implementation Plan

The plan includes a detailed section on Implementation. This identifies key actions led by Wexford County Council in the following areas:

- progressing partnerships with State and Local Agencies including commissioning a feasibility study for the development of a third level educational institute
- investigate options with a view to preparing applications for funding for visitor attractions / tourism related development
- developing and implementing policies relating to heritage, conservation and urban design
- setting up of a ‘town team’ and preparation of a public realm management plan and putting in place communication / coordination channels
- implementing a programme of works related to the Crescent including traffic management, public realm improvements, building refurbishment and site development
- commissioning a site-specific masterplan for Trinity Wharf including appropriate permissions to enable development
- implementing a coordinated programme of traffic management measures, public realm improvements and site development on an area by area basis.
- A programme of long-term monitoring, management and maintenance.

The plan includes a detailed description of various actions on an area – by area basis with an indicative programme for the next four years. Delivery is subject to resources, approvals and will require many small steps of gradual transformation towards the ‘long-term’ vision. The implementation process will involve working and involving people in Wexford, to develop a series of events and activities for the area, to care for and celebrate the town’s unique and valuable heritage, and to be part of creating a positive economic future for Wexford.

1.0 INTRODUCTION



KEY DEVELOPMENT AREAS ALONG QUAYFRONT

1.0 INTRODUCTION

Wexford is a unique town full of history that combines the old and new, with a unique blend of commercial, retail, cultural and leisure activities, all of which is reflected in the town’s urban structure and varied architecture.

However, the lack of investment and economic activity during the economic downturn has manifested itself physically in a multitude of ways including the unplanned formation of a number of large derelict and under-utilised sites which are strategically located within the town centre. With renewed economic activity becoming more evident, it is an appropriate time to consider the opportunity to provide a strategic vision for the revitalisation and regeneration of the Wexford Quays area.

There is an urgent need to do more to promote economic development and physical growth in Wexford, and to introduce measures to revitalise the town’s economy with innovative proposals that greatly enhance the town’s physical attractiveness and well-being as a place for people to work, shop, visit and live.

The route to a more sustainable economy lies in the development of realistic economic policy goals and their expression in spatial terms. Effective spatial planning reduces costs, promotes efficiency and reduces conflict of interest. It recognises the need for more integrated thinking and informs the policies designed to promote economic growth and development.

An effective economic and spatial strategy can provide a clear long-term vision for the physical, economic and social transformation of the Wexford Quay area. The long term vision involves the identification of areas of different growth potential, of improving access and permeability with the core retail area.

The spatial strategy guides the location and pattern of development whilst ensuring the compact urban form is maintained.

The economic and spatial strategy provides a framework for the economic and physical renewal of the area and a flexible vision for its long term potential.

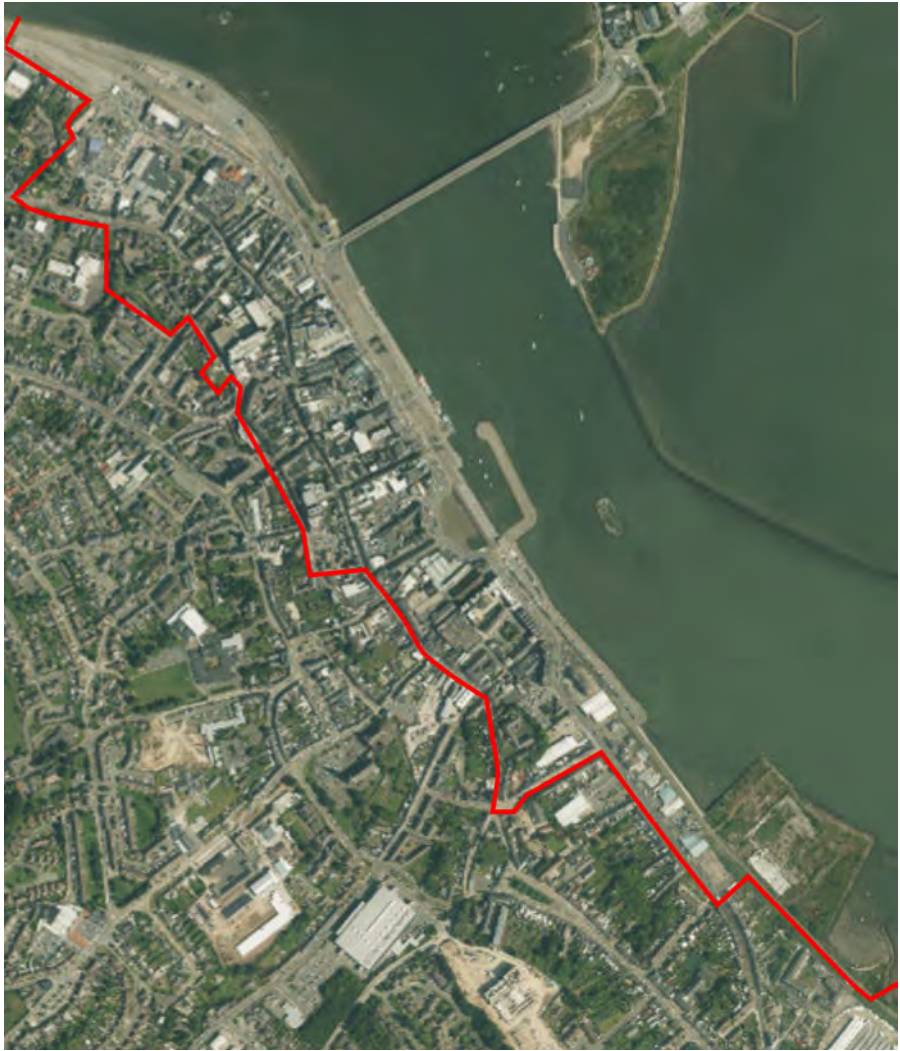
1.1 Context

This plan has been commissioned by Wexford County Council. It is co-funded with the EU European Regional Development Fund, Ireland’s Structural and Investment Funds Programme (2014-2020) and the Southern Regional Assembly.

Wexford County Council identified the Quayfront study area as extending from Redmond Road car park north of the town centre, to Trinity Wharf south of the town centre, including most of the town centre within the existing town walls as well as Barrack Street, Parnell Street and Trinity Street, with the exception of the area on the west side of Main Street to the south of Henrietta Street (Figure 1).

During the study it was agreed to extend the study area to include the car park and backland areas west side of Main Street south of Henrietta Street.

While the plan is largely confined to the area defined in the plan below, a holistic approach has been taken with regard to the relationship of the quayfront area with the rest of the town centre and wider context including the Slaney river. As a result several parts of the spatial analysis consider the study area within it’s broader context.



1.2 Purpose of the Plan

A successful plan involves the generation of ideas and the preparation of realistic design concepts based on thorough research, analysis and consultation. While non-statutory in nature, the plan is an effective tool that provides direction for both physical and non-physical interventions that will shape the urban form and visual appearance of Wexford in response to growing economic, technological, demographic and social changes.

The plan includes a high-level analysis and assessment of Wexford’s economy using ‘Pestel’ and ‘SWOT’ techniques which are then used to set out key economic actions for the sustainable development of Wexford with private and public investment. These include recommendations for specific proposals to drive the revitalisation of the quays, while taking account of spatial and other relevant considerations to provide an appropriate balance between economic opportunities and the proper planning and development of the area, with some locations requiring certain development designations which may not entirely match the economic opportunity identified, in order to accord with proper urban planning principles.

The Spatial Implementation Plan provides flexibility by identifying key principles as opposed to finite blueprint solutions. It includes a strategic vision and concept for how Wexford may develop, with regard to key characteristics such as skyline, urban form and historic elements that are particularly unique. It is the intention that proposals for the built and public realm consolidate the distinctive and positive characteristics of the area as a whole and of its parts.

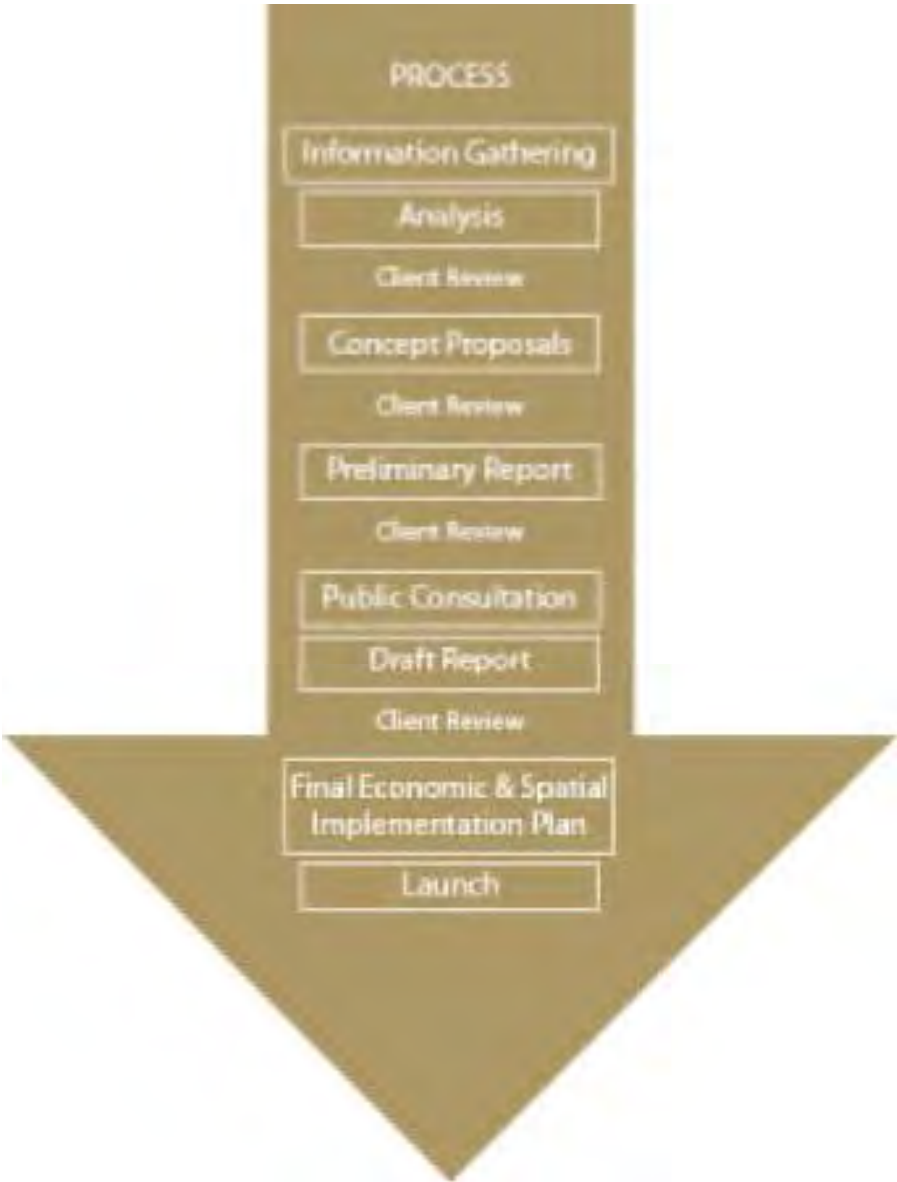
By studying and thinking about Wexford holistically, it is intended that individual projects can be coordinated to maximise their contribution to making Wexford a better place to live, work, play, invest and visit. This plan will not replace statutory planning policy for the area, but will help key organisations from the public, private and community sectors to plan and target investment wisely.

The Spatial Implementation Plan provides a strategic vision for the comprehensive and sustainable development of the Wexford Quays area over the next 5 to 15 years. It is formulated to match investment opportunities, including development of the public realm and strategic sites which acknowledges the significant architectural, cultural and historic heritage of Wexford Town.

1.3 The Planning Team

This ‘Economic Development and Spatial Implementation Plan for the revitalisation of the Wexford Quay Area’ was overseen by a Steering Group comprising officers from Wexford County Council and by a Project Management team from Wexford County Council. Technical input was also provided by Wexford County Council.

The plan was prepared by the multidisciplinary consultant team led by Scott Tallon Walker Architects with CHL Consulting Group providing specialised economic analysis and assessment, studies from The Paul Hogarth Company Ltd providing specialist landscape and public realm advice, Roughan & O’Donovan providing traffic and movement analysis and recommendations and Rob Goodbody - Historic Building Consultant providing specialist conservation and heritage advice.



1.4 Methodology

The steps taken throughout the course of the planning process are outlined in the graphic below.

During the initial 'information gathering' stage, numerous site visits and on-site visual surveys were conducted. Desktop research involving the review of existing plans, policies, reports and available data was also undertaken. Traffic and Movement Analysis studies included signalling and junction studies, parking availability and pedestrian safety. The existing cultural built heritage was also appraised through several site visits and a review of existing policies.

Stakeholder consultation also formed a key component of the information gathering stage. Discussions and consultations took place with various stakeholders in the town including Council officials and elected representatives, Stakeholders including Chamber of Commerce, local landowners, businesses and the cultural arts.

The analysis stage involved the examination of the built fabric, public realm, land use, character and quality in the context of the historic growth of Wexford. Guided by the Steering Group and Project Management team, it provided the team with a good understanding of all aspects and issues of the overall study area, and identified key bodies for implementing change.

The consultant team then held several collaborative working sessions exchanging information and findings, and exploring possibilities. It quickly became apparent that Wexford's unique historical and cultural heritage still has a significant role in both the town's urban structure and in the economic potential of the town. Consequently the team needed to explore the role that heritage can contribute to the economy and also consider the potential consequences of new development proposals on this, in particular how to cater for a greater variety of retail without damaging the existing special historic character of Main Street. This led to an overall concept approach.

Guided by the Steering group, a public consultation day to present the overall ideas to the general public was held at the Talbot Hotel on Paul Quay. This enabled members of the public to discuss their comments and concerns directly with the consultant team and provided valuable insight from people with first hand knowledge and experience of the town. These were then reviewed and incorporated into the Stage 1 Preliminary Plan which was presented to the Steering Group.

1.5 Report Structure / Format

The report first provides an analysis of Wexford's existing economic position and then sets out an Economic Strategy to help secure the economic potential of the town centre.

The Economic Profile & Analysis (Section 2) provides an overview of Wexford's existing economic position, and identifies the main strengths and weaknesses, the potential opportunities and challenges. This was informed by extensive desk-top study of existing available data and research by CHL Ltd as well as stakeholder consultation.

The Economic Strategy (Section 3) proposes seven key actions to help secure the economic potential of Wexford's town centre. These include both pure socio-economic and spatial actions, including:

- improving the quality of the existing urban fabric and public realm, as part of the much larger objective of consolidating and improving the economic offer of the town,
- revitalise the area around The Crescent as part of a strategy to link the Town centre with Trinity Wharf and improve the economic attractiveness of Trinity Wharf and,
- prepare a Masterplan for the development of Trinity Wharf.

The Spatial Analysis (Section 4) considers the condition of the existing Urban Built Heritage, Landscape Character, the existing uses, the overall urban character, as well as traffic and movement. This identifies several recommendations.

The Spatial Strategy (Section 5) includes a vision for the overall study area with more detailed illustrative plans to explain the proposed approach to specific areas identified to deliver the key spatial actions set out in Section 3.

The final part of the report (Section 6) provides an Implementation Plan to deliver the key actions over the short-, medium and long-term.

An appendix provides Traffic and Movement analysis and surveys addressing vehicular circulation, car parking provision and usage which have informed the Spatial Strategy.

2.0 ECONOMIC PROFILE & ANALYSIS

2.0 ECONOMIC PROFILE AND ANALYSIS

This Section reviews the present economic condition of Wexford Town, with particular reference to the Project Area. It assesses the strengths and weaknesses of the local economy and the constraints to economic growth and employment, and identifies the comparative advantages that offer a platform for future economic development. The analysis in this Section draws on a combination of published statistics, documents, and research reports, as well as the findings of consultations in Wexford and numerous site visits.

2.1 Demography

The growth in population over the past 20 years at national, county and town levels is summarised in Table 2.1. Overall, the population of the State increased by almost a third during this period, while that of County Wexford grew by a remarkable 43% to reach a total of 150,000 residents. This represents an average annual growth rate of 1.8%. Inward migration was a significant factor in this expansion.

Wexford Town’s population increased by 27% between 1996 and 2016 which, although much lower than the County, represents a strong average annual rate of growth of 1.2%. At just over 20,000 in 2016, the Town’s population represented just 13.5% of the County total.

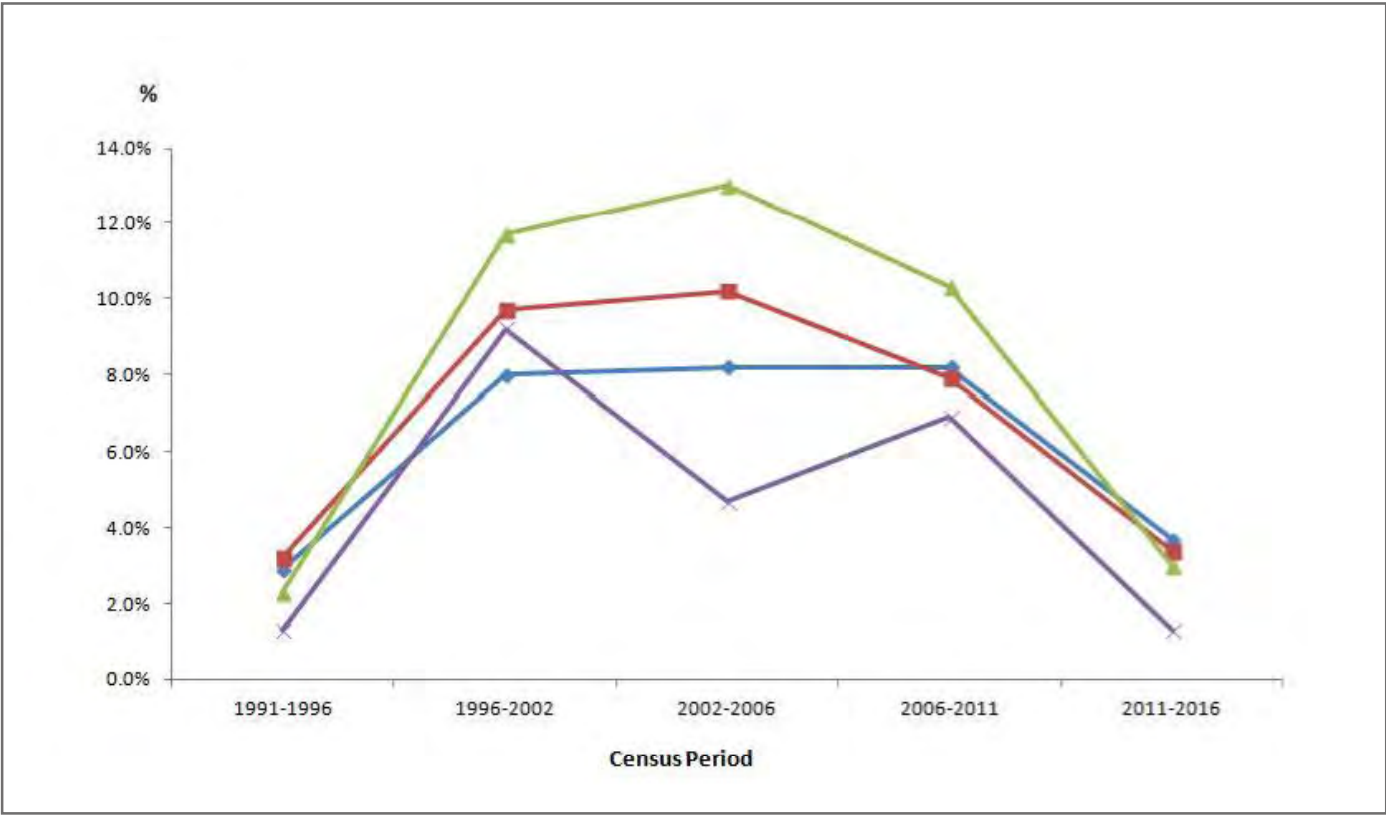
Table 2.1: National, County & Town Population Trends 1996 - 2016 ('000s)

	1996	2002	2006	2011	2016	% change '96 - '16
State	3,626.1	3,917.2	4,239.8	4,588.3	4,758.0	+31.2%
County Wexford	104.4	116.6	131.7	145.3	149.6	+43.3%
Wexford Borough	15.9	17.2	18.2	19.91	20.17	+26.9%

Source: CSO

The high average growth rates over the past 20 years were driven by exceptional population growth during the Celtic Tiger years. As illustrated in Figure 1, County Wexford recorded much higher population growth than either the State or the average for the five counties in the South-East. Much of the economic planning during this period, such as the National Spatial Strategy, assumed continued high growth, and projected that Wexford Town would have a population of around 40,000 by 2020. However, the Great Recession brought the era of high growth to an abrupt halt and, as shown in Figure 1, the rate of population increase in both County Wexford and Wexford Town fell back to a low level between 2011 and 2016.

Figure 1: Population Growth Trends

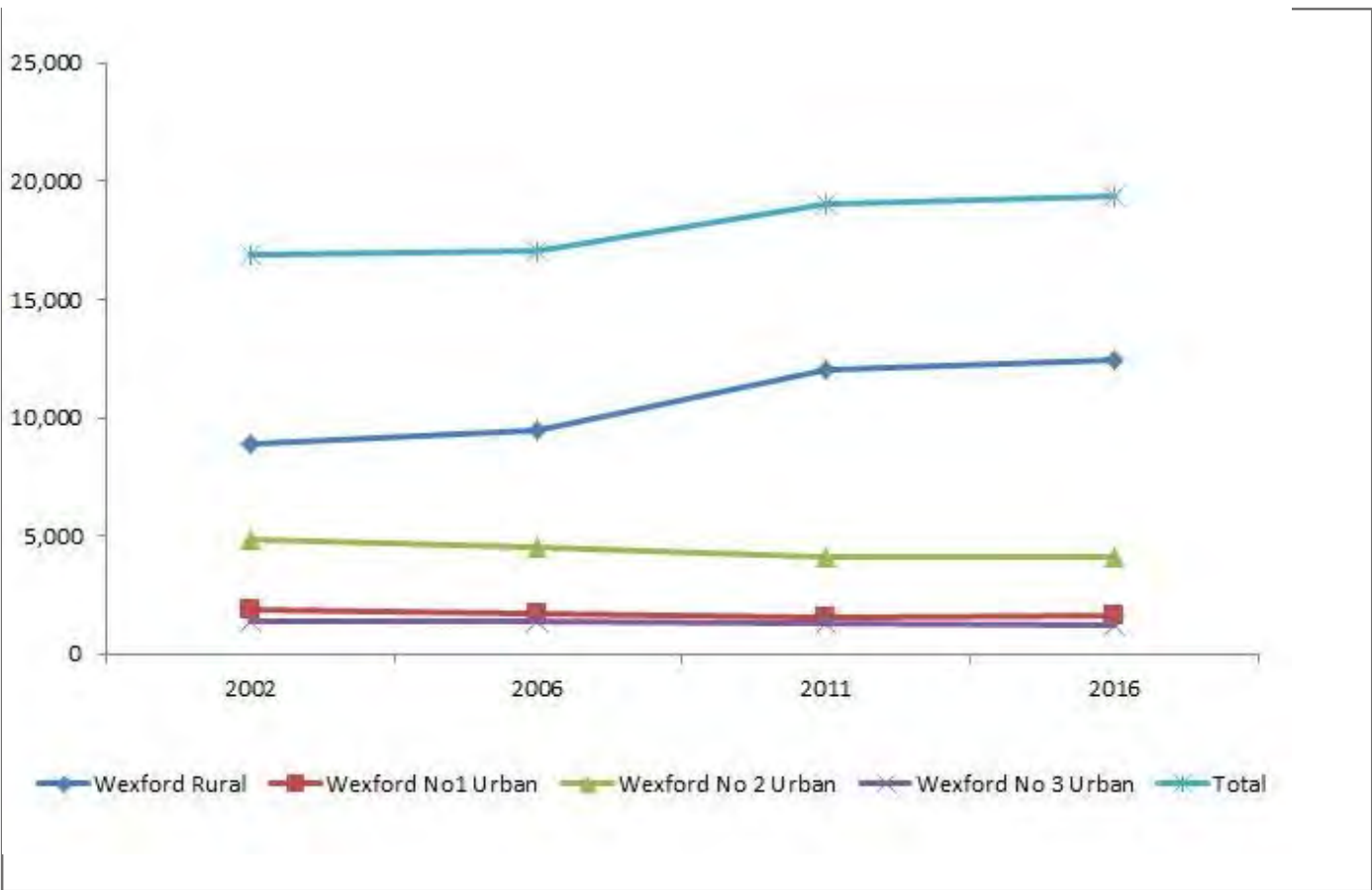


Most of Wexford Town is within the area covered by 4 Electoral Districts – Wexford Urban 1, 2 and 3, and Wexford Rural. Their location is shown in Map 1 overleaf. Wexford Borough also includes parts of four further Electoral Districts – Ardcavan to the north across the bridge, and Carrick, Rathaspick and Drinagh which adjoin Wexford Rural. The combined urban population of parts of these 4 Electoral Districts, which is included in Wexford Borough’s population count, amounted to 805 people in 2016.

Map 1: National, County & Town Population Trends 1996 - 2016



Figure 2: Population Growth 1996 - 2016



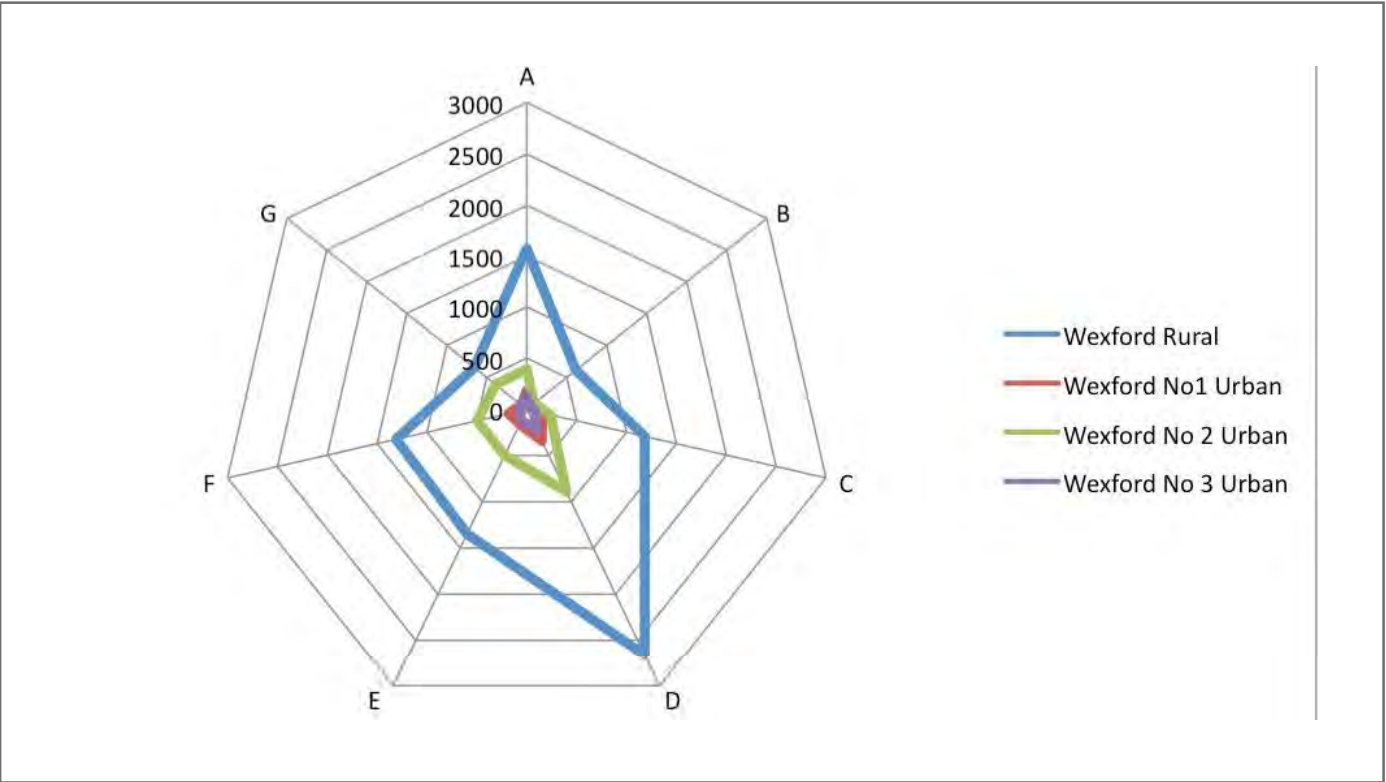
The demographic analysis in this Section is based on the 4 main Electoral Districts illustrated in Map 1 which constitute most of Wexford's Borough and accommodate 96% of its population. The Project Area is contained within the three Wexford Urban Electoral Districts. As shown in Figure 2, virtually all of the population growth in the Town over the past 20 years has been in Wexford Rural where there has been considerable housing development. The opportunities for population growth in the three urban Electoral Districts have been much more limited and, indeed, the 2016 Census results indicate that the resident population in all three was slightly lower than in 2002.

2.2 Socio-Economic Factors

2.2.1 Socio-Economic Group

The distribution of socio-economic groups in Wexford is skewed towards category D: non-manual workers* - see Figure 3 below. Higher professionals choose to live in Wexford Rural Electoral District rather than the urban districts. Where the head of household is classed as A or B, there is a tendency to live outside the town. These census data are also reflected in the distribution of affluence shown on Map 2.

Figure 3: Distribution of Affluence

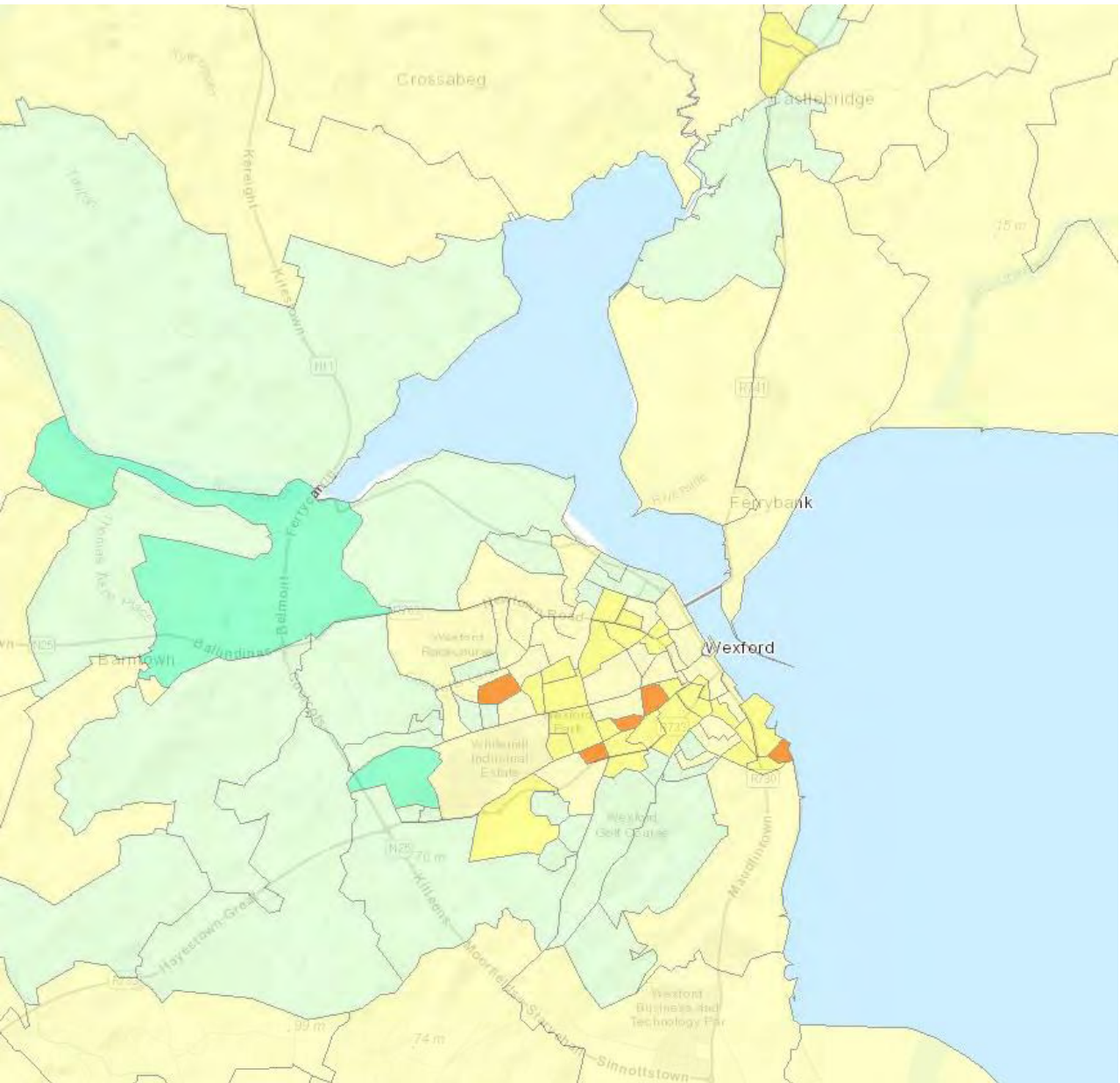


Groups
A: Employers/managers
B: Higher professionals
C: Lower professionals
D: Non-manual workers
E: Manual skilled
F: Manual unskilled
G: Own account workers.

Note: *Typically 20% of the Irish Population is classed as non-manual workers compared to 28% in Wexford Town. Jobs range from retail service, bus drivers, barbers, waiters to Gardai.

Source: CSO

Map 2: Deprivation Index Mapped from CSO



Source: CSO 2011 data by AIRO

The CSO data from 2011 on the map above,¹ produced by the All-Island Research Observatory of Maynooth University (AIRO), show areas of affluence outside Wexford town with small pockets of deprivation nearer the town centre coloured orange. The light yellow colour represents areas that are marginally below average while the lightest green indicates that these areas are marginally above average in affluence. This compares well with other towns of a similar size. It is notable, however, that the areas of affluence are not connected to the town proper but are just outside in semi-rural areas. Wexford Urban 2 (the southern ED) with its population of just over 4,000 is classed as 'Disadvantaged' by the CSO.

¹ All-Island Research Observatory, Maynooth University (AIRO): 'Wexford Socio-Economic Baseline Report', April 2015, Wexford County Council.

2.2.2 Employment and Unemployment

The principal economic status of persons aged 15 and over resident in Wexford Town in 2011 is shown in Table 2.2. In both County and Town, there is a labour force participation rate of around 60%. While this is a little lower than the national average (61.9%), it is influenced by the relatively high share of retired persons in the total.

Table 2.2: Principal Socio-Economic Status of Persons aged 15 years and over, 2011

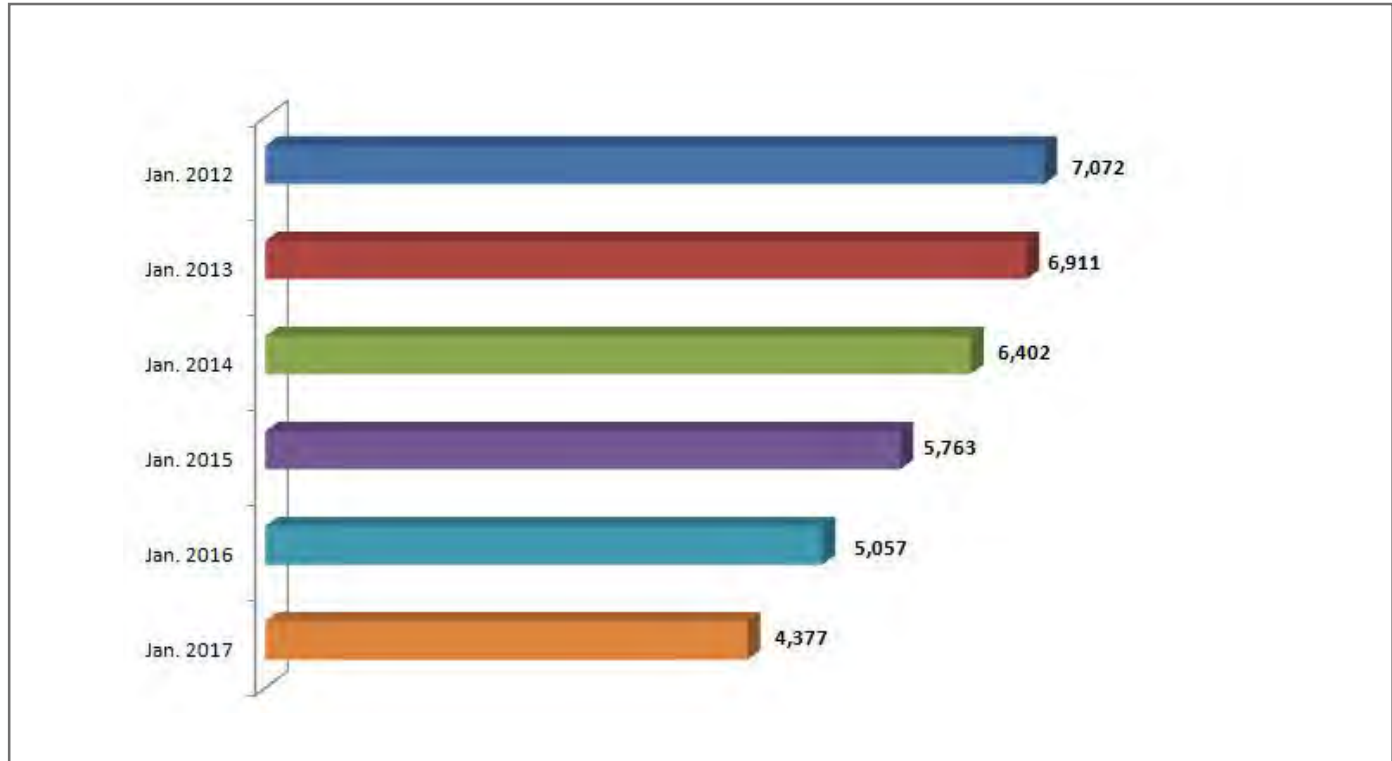
	County		Town (4 EDs)	
	No.	%	No.	%
At work	51,307	45.7	6,849	44.3
Unemployed	16,170	14.4	2,411	15.6
Student or pupil	10,304	9.2	1,303	8.4
Looking after home/family	12,946	11.5	1,533	9.9
Retired	15,518	13.8	2,369	15.3
Permanent illness/disability	5,698	5.1	973	6.3
Others not in labour force	313	0.3	27	0.2
Total	112,256	100.0	15,465	100.0

Source: CSO

Unemployment was very high in Wexford at the time of the 2011 Census. The AIRO² report notes that the rate in Wexford at that time was the third highest among local authorities, and significantly higher than the national and South-East averages. Data for the Wexford area Social Welfare Office for successive Januaries from 2012 to 2017 show a substantial fall in persons on the Live Register, particularly during the past three years, as shown in Figure 4. Note that the Wexford Area office covers Wexford Town and the south-east of the County including Kilmore Quay, Blackwater, Taghmon and Rosslare.

² AIRO: 'Wexford Socio-Economic Baseline Report', April 2015, Wexford County Council.

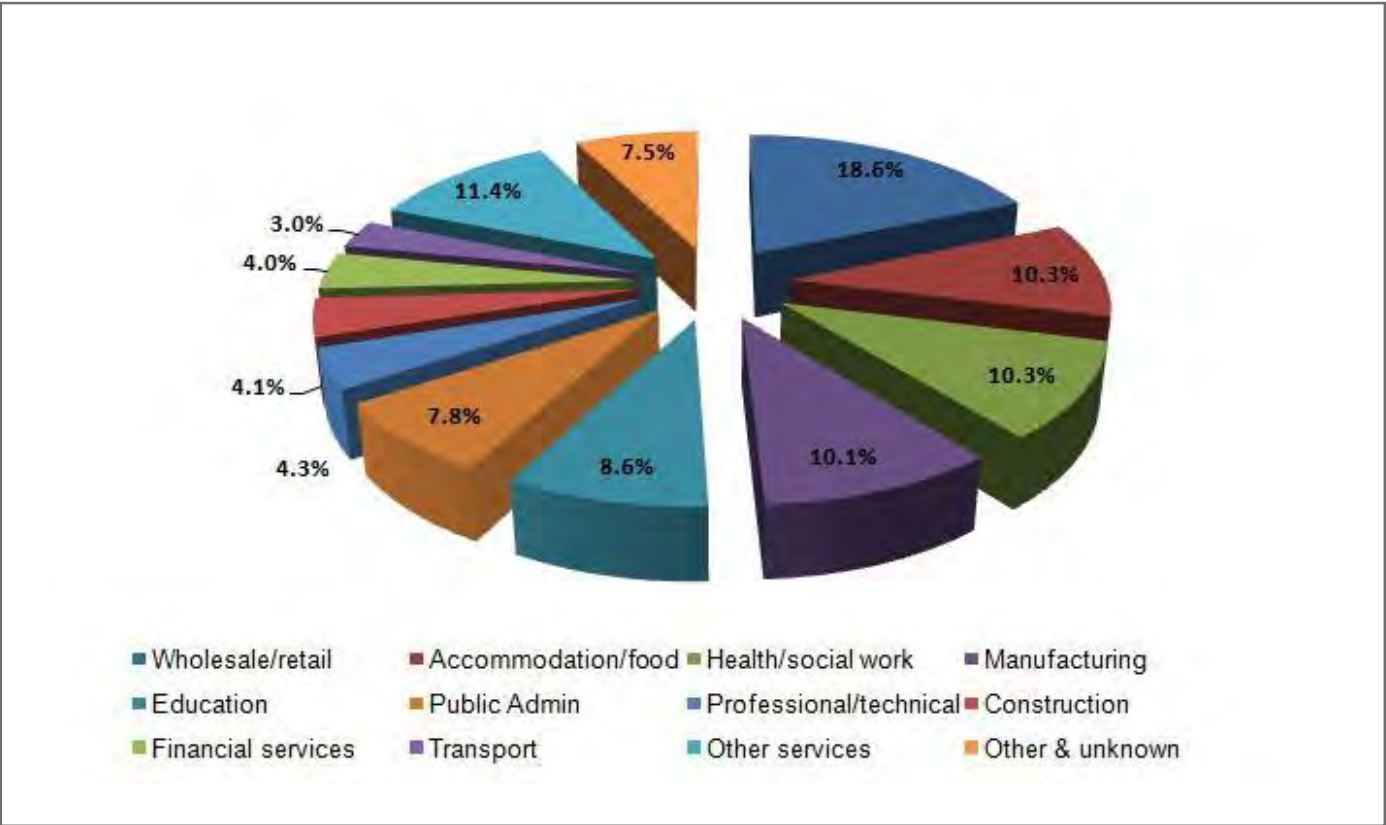
Figure 4: Wexford Area Live Register Figures, Januaries 2012 – 2017



Source: Wexford Area Social Welfare Office (covers Wexford Town and the South-East of Wexford County).

The sectoral distribution of employment among the residents of Wexford Town in 2011 is shown in Figure 5. The major sectors are: Wholesale/retail trade, accommodation & food service, health & social work, manufacturing, education and public administration. Between them, these sectors then accounted for almost exactly two-thirds of total employment. It is likely that the current distribution is broadly similar, although employment in retail, tourism and leisure activities, will have risen.

Figure 5: Persons in Wexford Town in Employment by Industry Group, 2011



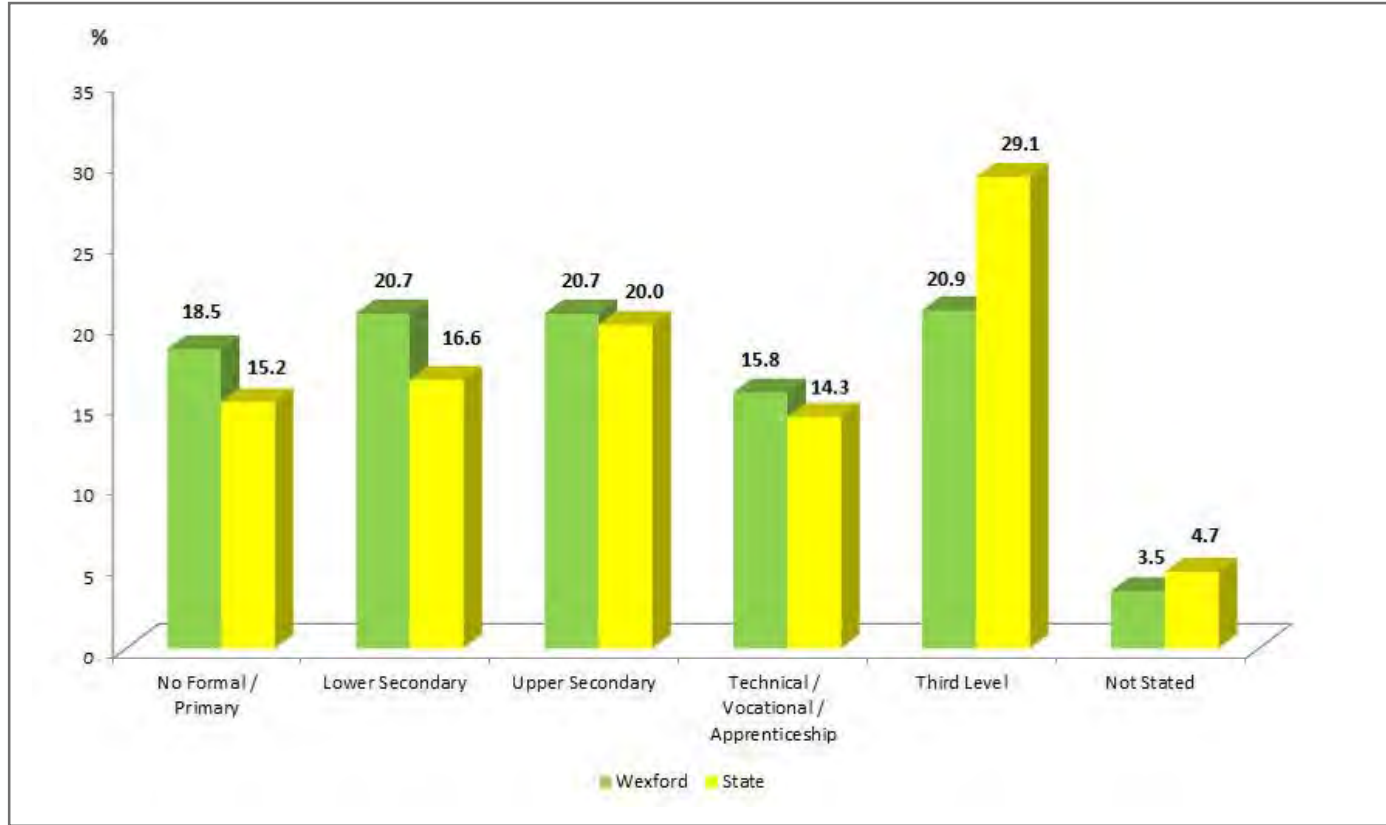
According to the 2011 Census, just 63% of Wexford Town residents classed as being at work are employed in Wexford Town – a total of 4,425 persons. An additional 6,219 workers were commuting into Wexford Town every day, the vast majority of whom commuted from elsewhere in the County. A large proportion of these were residing within 20km of the Town. The largest private sector employers in the Town and immediate environs are in manufacturing (notably food sector), financial services, hospitality, business services and retail.

2.2.3 Educational Attainment

The Wexford Socio-Economic Baseline Report states that ‘a major area of concern for the Council and LECP (*Local Economic & Community Plan*) is the below average educational attainment level within Wexford.’³ Using data from the 2011 Census and other sources, the report shows that Wexford has a relatively low level of educational attainment. The proportions of the population whose education terminated at primary or lower secondary levels are much higher than the average for the State, while the proportion completing 3rd level education is well below the national average - see Figure 6. With regard to the latter point, the report notes that the figure is affected by the fact that the very limited job opportunities for third level graduates in Wexford.

³ All-Island Research Observatory, Maynooth University (AIRO) “Wexford Socio-Economic Baseline Report”, Wexford County Council, April 2015.

Figure 6: Percentage of the Population aged 15+ by Highest Level of Education Completed, 2011



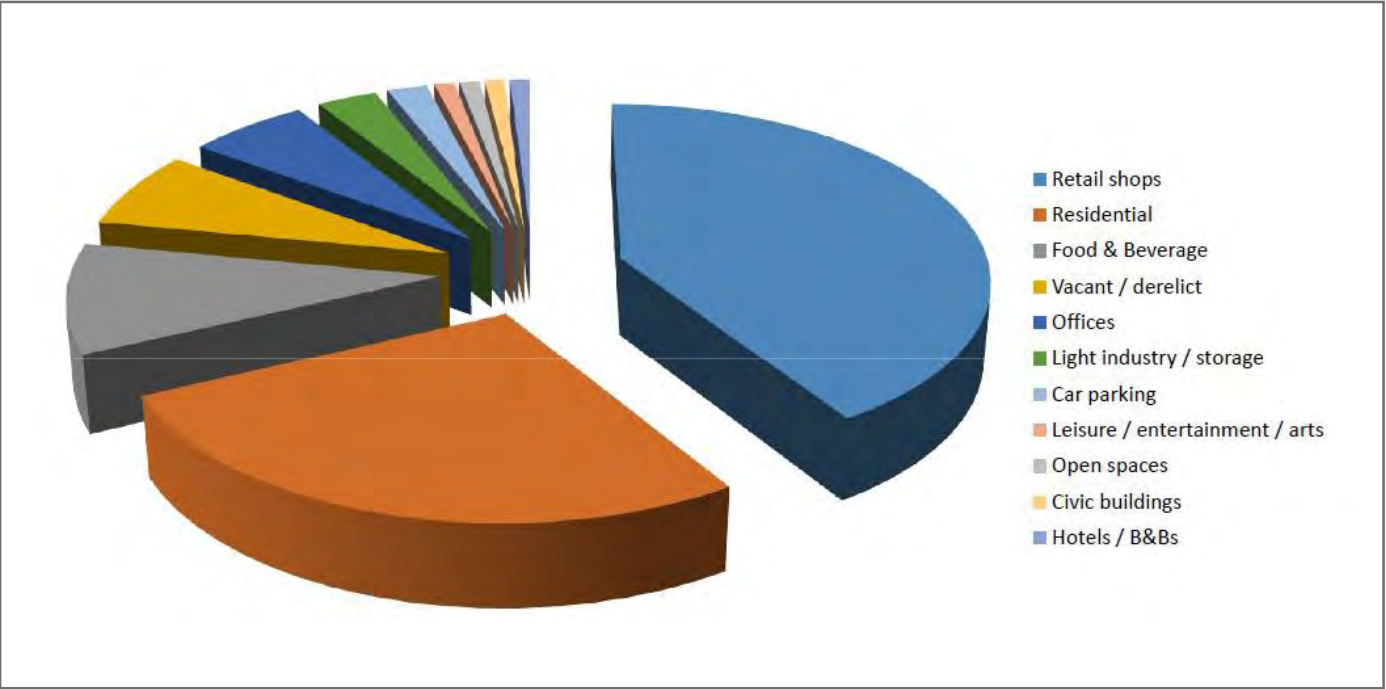
The Wexford Local Economic and Community Plan prioritises this issue, and lists a series of actions intended to address identified weaknesses. This is a critical economic consideration as an educated population is an essential resource for the contemporary businesses that many towns in Ireland would like to attract.

2.3 Economic Activity in the Project Area

2.3.1 Range of Activity

The range of economic activity in the Project area is indicated in Figure 7. It is important to note that the pie-chart shows the distribution of premises but not the respective scale of activity nor the space allocations to each activity. However, it provides a useful picture of the nature and relative importance of property uses.

Figure 7: Distribution of Premises in the Project Area (as % of total number of premises)



A number of relevant points may be drawn from the distribution depicted by the chart, and reference is also made to Map 3 and division of the project area into three sections.

- Retailing is the dominant economic activity, accounting for just over 40% of premises; retail units are concentrated in the northern and central zones (1 and 2), with very little in the southern zone (3).
- Residential units are significant in the northern and southern zones, but not in the central zone; overall, residential units comprise around 27% of all premises.
- There is a large amount of space allocated to car-parking throughout the area, although they account for a relatively small number of 'premises'.
- Restaurants, cafés and pubs are significant in number, accounting for almost 10% of premises, and they tend to be concentrated in the northern zone.
- There are very few hotel and B&B premises, but the two hotels, in particular, occupy large premises and offer 264 rooms between them (excluding Talbot Hotel managed apartments).

Map 3: Wexford Quays Land Use Plan



2.3.2 Linkages Between the Project Area and Wider Town

The distribution of employment by sector, described in Section 2.2.2, and the distribution of premises shown in Figure 7, indicate that a significant share of the town's employment is in the Project Area. In particular, the two leading generators of employment – retail trade and accommodation & food service – are concentrated in the Area.

In terms of the distribution of activity, it can be said that the town has turned its back on the Quays to some extent. There is much more activity along Main Street, and the economic dynamic between Main Street and the Quays is fractured. The area around the Crescent, which previously has been very actively animated by restaurants, bars and shops, is now little used, and the departure of Tesco to another location clearly had a negative impact on footfall.

The boardwalk is a very valuable asset for the Town, and is an important location for festive events. However, for much of the time, it is largely unused, and the railway line between it and the roadway acts as a form of barrier.

2.4 PESTEL and SWOT

2.4.1 PESTEL

A PESTEL Analysis is a useful tool for evaluating the external environment that will influence the implementation of a project, development or business. It focuses attention on key **P**olitical, **E**conomic, **S**ocial, **T**echnological, **E**nvironmental and **L**egal trends and factors. Table 2.3 summarises a PESTEL analysis for Wexford Town. It is not intended to be an exhaustive list of factors but rather a flagging of key considerations.

The factors highlighted in Table 2.3 show that the environment within which the development plan for the Quays will be prepared and implemented is changing in many aspects. A number of the factors, including Brexit, continuing technological development and evolution in consumer preferences, will need to be considered carefully and sufficient flexibility built in to project concepts to accommodate change. Other factors are more predictable – the regulatory environment, variable weather and established opportunities, such as the Grants Scheme for Large Tourism Projects, 2016-2020, being administered by Fáilte Ireland.

Table 2.3: Wexford PESTEL

	Factor	Risks/Benefits
Political	<ul style="list-style-type: none">Local Government Act 2014New Spatial Strategy: Ireland 2040South East Action Plan for Jobs	<ul style="list-style-type: none">Expanded responsibilitiesDiverting growth away from DublinPromotion of regional employment growth
Economic	<ul style="list-style-type: none">Continuing national economic growthBrexitImprovements in public expenditure: current & capitalTourism Capital Grant Scheme	<ul style="list-style-type: none">Rising consumer demand; more domestic holidaysPossible drop in demand from UK; risks to food, tourism, and SME export sectors; transport/trade concerns.Funding opportunitiesSupport for tourism product development.
Socio-cultural	<ul style="list-style-type: none">Demand for experiences rather than productsDemand by employers for higher skillsKey role of local community in destination development, for arts, culture and tourism	<ul style="list-style-type: none">Shift from infrastructure to unique experience developmentNeed to improve local skills base, and encourage Wexford migrants to return.Active local engagement underpins engagement by visitors.
Technological	<ul style="list-style-type: none">Continued growth of technology-driven sectors – technology skills driving business start-upsDevelopment in visitor attraction and marketing technologies.Ag-tech a growth sectorRapidly growing automation/robotics.	<ul style="list-style-type: none">Identify opportunities to attract investment / employers in these sectors; ensure skills are available.Need to catch up and exploit these technologies to grow business.Opportunity for Wexford.Risk of job losses in processing industries or sectors with repetitive task structures.
Environmental	<ul style="list-style-type: none">Continued growth in importance of natural and built environmentGrowing emphasis on sustainable transportBad-weather is an issue	<ul style="list-style-type: none">Essential area for growth in both residents and visitors.Greater priority to pedestrians and cyclists.Can attractors be weather-proofed?
Legal	<ul style="list-style-type: none">Regulatory environment has become more burdensomeLitigious environment	<ul style="list-style-type: none">Facilitate business start-upsRisk of health & safety becoming the dominant concern with a negative impact on new experience development.

2.4.2 SWOT

A SWOT – Strengths, Weaknesses, Opportunities & Threats – analysis is presented in Table 2.4. Again, the approach is to highlight key issues rather than attempt an exhaustive listing of every possible factor. It is important to note that Wexford enjoys a number of significant strengths. These include the Town’s unique heritage and identity, its connectivity, cultural and retail offerings, and the appeal of key parts of the town – notably Main Street which was rated one of the ten best streets in Britain and Ireland by the Academy of Urbanism in 2015. There are also notable economic weaknesses and challenges. These include the small scale of the available local market, lower than average educational attainment, tired public realm, relatively high unemployment (although this has dropped significantly during the past three years), and hot competition from other towns in the South-East and further afield.

There are significant opportunities that provide a balance to the analysis, and those highlighted in Table 2.4 can provide a real platform for future economic growth. The economic interventions that are outlined in the following sections are intended both to meet the challenges and exploit the opportunities identified in Table 2.4.

Table 2.4: Wexford SWOT

Strengths	Weaknesses
<ul style="list-style-type: none">• Compact Centre – Unusual streetscape• Main Street – Academy of Urbanism (2015)• National Opera House & Festival• Good/improving road/rail infrastructure• Proximity to Rosslare Harbour• Good retail/service sectors• Existing base of financial and technology companies	<ul style="list-style-type: none">• Limited economic base• Quay is under-performing - potential waterfront asset.• Some challenges on education achievement – skills• Limited Foreign Direct Investment (FDI)• Difficult to “stand out” as a regional hub• Town public realm requires a refresh.
Opportunities	Threats
<ul style="list-style-type: none">• Tourism (Ireland’s Ancient East)• Financial Services• High-Tech Industries/Services• Leisure/culture/entertainment• Niche retail• River, Coastline – Marina• Variety of available development land.	<ul style="list-style-type: none">• Proximity to Waterford & Kilkenny.• Competition for FDI.• Challenge to grow indigenous business base• Best educated workers may move away.• Development of undifferentiated retail space, that simply copies other towns• Failure to define “competitive advantage”

2.5 Constraints to Economic Growth and Employment

The constraints or barriers to economic growth in Wexford Town and, particularly, the Project Area have, to a large degree, been highlighted in the PESTEL and SWOT analyses. Apart from the obvious constraints of finance, the physical environment and need to accommodate established activity and circulation patterns, there are real concerns that may be articulated here.

A significant constraint is the size of the available market, a fundamental consideration in a market economy. The immediate local population of Wexford Town is too small to support economic growth on its own. Previous projections of a much larger local market are now unlikely to be realised within the next 20 years or more.⁴ Therefore, Wexford must depend on bringing more people into the town for shopping, services, leisure and recreation, and selling goods and services produced in the town to remote markets. The potential source markets for visitors to the town are summarised in Table 2.5.

Table 2.5: Market Base

Category	Origin	Number
Catchment Population (2016)	Wexford Town	20,167
	Co. Wexford	149,605
	Within 65kms	369,560
Tourism in Wexford (2014)	Overseas overnight	240,000
	Domestic overnight	501,000

Two key points emerge – first, there is a sizeable residential market within an hour's drive and, second, there is a large tourism market in County Wexford. These markets present real opportunities for Wexford but success will depend on competing effectively with other destinations that fall within, or attract business from within, the catchment area, including Waterford and Kilkenny.

A second constraint is the below-average level of educational attainment in Wexford. An educated population is a vital resource for businesses that many towns in Ireland would like to attract, particularly foreign direct investment. Educational attainment levels in Wexford are below the national average, and this is a barrier to economic growth.

A third potential constraint is the extent to which the existing physical environment, including infrastructure and available sites and buildings, places limits on development opportunities. The Quays are a major traffic artery and also carry a main railway line, and these cannot be easily changed. The sites and buildings available for new economic use also have their limitations and may not be readily converted to meet the needs of contemporary users (retailers, etc.)

At the heart of the development challenge is how best to address these constraints in a way that builds on Wexford's strengths and exploits effectively the opportunities available.

⁴ A number of planning documents based their economic assessment on the exceptionally high growth in Wexford's population between 1996 and 2001 (see Section 2.1) and projected continuing high growth which has not materialised. These include the National Spatial Strategy, the Wexford County Development Plan 2013 – 2019, the Wexford Town & Environs Development Plan 2009-2015 (as extended) and the Wexford Local Economic and Community Plan 2016-2021.

3.0 ECONOMIC STRATEGY

3.0 ECONOMIC STRATEGY

3.1 Competitive Advantage and Strategic Direction

3.1.1 Competitive Advantage

A central challenge is the need for Wexford to establish a clear position of competitive advantage for itself. Competitive advantage in this sense relates to the capacity of the town to **stand out** and capture the attention of investors, tourists and consumers to an extent that is greater and more compelling than neighbouring urban centres. In a conventional business context, this can be approached in three ways: the town can do things better than other locations, it can be a cheaper place to do business than other locations, or it can simply do things differently than other locations. In the case of Wexford Town, this latter point appears to offer the greater opportunity – the town should set out a unique point of difference for itself and very deliberately trade on that difference.

Wexford’s unique heritage has been shaped by its maritime prominence and relationship to Europe. Today, the form and function of Wexford is required to meet a different set of contemporary needs as a destination for business, a regional centre for retail and a desirable place to live and work. However, its origins give Wexford a distinctiveness from other towns on the East coast and these should not be overlooked in imagining Wexford as a more significant destination for culture and leisure: aspects of a vibrant town which contribute greatly to strengthening the economic drivers of business, retail and creating a desirable place to live and work.

To a significant extent, Wexford’s distinctiveness is reflected in the town’s streetscape, public realm, its existing retail offer and service economy. It has the potential to deepen and strengthen these attributes as a platform from which a distinct competitive advantage can be built.

The SWOT analysis presented in Table 2.4 presents a basis for this assessment.

3.1.2 Strategic Direction

Based on the analysis in Section 2, which set out an understanding of the current economic conditions of the town, the next step in building a future economic narrative for Wexford is to identify appropriate candidate activities that will support further economic development within the Town. This is presented in the following pages as a response to the project Terms of Reference which requested ‘a *targeted set of strategic economic activities for revitalising the project area*’ and in addition activities which would ‘*stimulate further significant sustainable economic activity, employment creation or other desirable consequential development*’.

The proposed set of ‘**strategic economic activities**’ is summarised in Figure 8, and a more detailed commentary on each element is presented in the following pages.

Figure 8: Strategic Economic Activities



3.1.3 Differentiation – Place Branding

Place branding is an emerging concept among town planners, architects and master-planners which looks beyond logos and slogans to better understand and communicate the essence of a particular place. It is concerned with defining the offer and experience associated with a particular location, and communicating that offer and experience to consumers, residents, workers, investors and visitors. There is considerable online dialogue on the subject matter, and an illustration of the type of issues discussed is available at <http://placebrandobserver.com/>.

This is a familiar concept in certain industries such as tourism where private companies have for a long time offered their services as Destination Management Organisations (DMOs) promoting the attractions and services available at a particular tourism destination. In many respects, place branding is an extension of the DMO concept where (typically) a public authority, such as a town or regional council assume responsibility for managing and leading the public promotion and communications for that town or region.

Done properly, place branding could support the focus on differentiation as a basis for the Town’s competitive advantage, and consequently could merit further exploration as a work-stream in the Economic Action Plan.

Table 3.1: Place Branding Actions

Action	Owner	Dependency	Outcomes
1. Use existing structures or establish a Town Centre Management Partnership (Town Team) comprised of WCC, Chamber, business, leisure, and community interests. ⁵	WCC	Local stakeholders	Creation of organisational “engine” to drive the first three years of town renewal.
2. Prepare and deliver a “Place Making Programme” that will promote and profile Wexford’s assets and attributes – the things that make Wexford an Attractive place in which to live, work and to visit.	WCC	Local stakeholders	The development of a new Wexford Brand (not simply a logo, but an expression of unique identity).

⁵ As described in “A Framework for Town Centre Renewal” (p13) (DBEI 2017)

3.2 Strategic Economic Activities

‘Wexford’s character is shaped by its cramped environment on a steep incline, squeezed in between the seashore and high ground, with a marshy valley to the south. The principal street flowed along the contours parallel to the sea, with steep laneways dropping off to the waterfront. The organic and incremental layout, dictated by the topography, create a feeling of randomness with tightly packed houses ascending to the slope. Unexpected, but welcome, glimpses of the harbour add to the town’s appeal.’⁶

3.2.1 Public Realm

Investment in public realm is an essential feature of Wexford Town’s economic future. Public realm may frequently be considered as simply a feature of the spatial development and planning of an urban centre. However, public realm improvements also have a direct economic impact, and are frequently referenced by economic and business agencies as a pre-requisite for economic development and renewal in town centres.⁷ More immediately, public realm improvements can play a significant role in helping town centres to stand out as more attractive urban environments in which to invest, shop, or visit. Moreover, although the correlation between public realm investment and increased consumer expenditure can be difficult to establish, there has been a number of case studies in recent years supporting the existence of such a link.

A good example of such an analysis is contained in a report to Lancashire County Council in Britain setting out the details of an economic assessment and value for money (VFM) study which was carried out in relation to a project in Preston which was designed to improve public realm and reduce property vacancies in the city centre.⁸ The study found that, in the case of their most favourable option, the net value-added per annum was almost 6 times the initial capital cost.

Although only one case has been selected for illustration purposes here, this example suggests that a significant correlation exists between investment in public realm and consequential economic gain. Public realm improvements can therefore be understood not just as a matter of aesthetics and town planning, but also as an economic development instrument which a local authority can use to deliver local economic benefits.

In Wexford’s case, the quayside and Crescent are vital parts of the public realm, with the potential to have a considerable positive impact on the perceptions of, and interest in, the town by both visitors and residents. The quayside is discussed here, and the Crescent in Section 3.2.5.

The northern section of the quay, between the bridge and the Crescent, known as Commercial Quay, is already in modest but regular use by commercial promoters for live events and by local groups for a variety of community-based initiatives. The existing public realm is underwhelming and not particularly functional. Considerable opportunity exists in delivering a space which can be animated by a range of users across the year. For example, the National Opera House could offer a series of lunch time concerts in the summer time; the existing operator of the Speigeltent Festival, Lantern Events, currently operate this successful festival from late September to mid-October. 17,000 people attended events at the 2016 festival and, with improved infrastructure, such as 3-phase electrical points and open WIFI plus an aesthetic, functional public realm, operators such as Lantern Events could view the Wexford Quays as an attractive and viable site for seasonal commercial programming.

⁶ Wexford. A Town and its Landscapes; Billy Colfer 2008, The Personality of Wexford pg 202

⁷ IBEC (Retail Ireland) [http://www.finance.gov.ie/sites/default/files/109_Retail_Ireland_\(Ibec\)_-PBS_2017.pdf](http://www.finance.gov.ie/sites/default/files/109_Retail_Ireland_(Ibec)_-PBS_2017.pdf)

⁸ Preston Public Realm Gateway Improvements (Business Case): Lancashire County Council, August 2015

Figure 9: Quayside Boat Museum at Douarnenez, Brittany



The quayside could become a destination which expresses the Wexford experience through markets showcasing local produce, arts and craft, maritime and fishing history and heritage with a permanent outdoor museum or seasonal exhibits including the boats already moored there - see the example from Douarnenez, Brittany, in the above photograph.

The Dunbrody in New Ross is a good example of a successful quay-side, marine attraction. An outdoor museum with boats actually on the quay would be unique to Ireland and would be both educational and fun. The first steps would be to study the feasibility of this project.

Sporting events, using the quay as a linear park for fun runs or linking into water-based activities for charity or competitive eventing, could add to the creation of a vibrant destination for locals and visitors.

Table 3.2: Public Realm - Economic Actions

Action	Owner	Dependency	Outcomes
1. Promote Public Realm as an “economic asset”, and as an essential precursor of economic development in the town.	WCC	Local Residents and Businesses	Wider understanding of the role of public realm in presentation and positioning of Wexford.
2. Prepare an audit (health check) of existing public realm conditions – and introduce and implement a Public Realm Improvement plan over the short (24 months) and medium term (3-5 years); to include necessary infrastructure for outdoor events. (See Sections 4.0 and 5.0)	WCC	Business & Community Engagement	The delivery of an enhanced public realm and town presentation.
3. Consider the development of a programme of events and exhibitions on Commercial Quay relating to the maritime history of the town.	WCC	Maritime sector; businesses	The delivery of a unique new visitor experience highlighting an important part of Wexford’s heritage.
4. Identify events, including markets and an amusement fair, that could be run on the boardwalk and establish a programme in conjunction with promoters.	WCC	Event/market/ amusement/ music promoters	The animation of Wexford Quays as a destination for residents and visitors, increasing tourism in the Town.

3.2.2 Heritage Tourism

Wexford has always been a prominent player in Irish tourism. The development by Fáilte Ireland of the *Ireland’s Ancient East* brand presents an opportunity for Wexford Town to present its story within the context of this new and heavily promoted tourism proposition. A particular opportunity exists to develop the existing town walking trail.

Extensive consumer research in the tourism industry shows that visitors to Ireland are looking for a unique local experience. They are not interested in anything that is commoditised and homogenous – in other words they are not interested in anything they could see anywhere else. A second and important point is that these visitors are also looking for an authentic “experience”. They want to become involved in the destination they visit, to understand it, and appreciate its stories and its sense of place. In Ireland much of our heritage is implicit - it’s rooted in our culture and folklore.

Wexford Town is particularly fortunate to have in Selskar Abbey, a very fine example of Ireland’s ecclesiastical built heritage. An opportunity therefore exists to develop a new visitor experience using Selskar Abbey as the primary hub in conjunction with Westgate Tower. This would involve developing the existing town trail, by emphasising a unifying story or theme that would allow the visitor to walk around the Town and explore the different sites that present different aspects of the Town’s story. Rather than saying to the visitor “there are fifteen different sites to visit on the town trail”, a re-developed visitor experience would be deliberately designed and presented as an outdoor entertainment telling one overarching story (for example “*Religion and Rebellion – Unrest in the Model County*”). Selskar Abbey could be developed as the starting point and central hub for this experience.

There are two main barriers that limit the visitor experience in Ireland: one is physical access - where the visitor cannot physically access heritage buildings and sites; the second is intellectual access - where the visitor cannot find out about these sites or hear their stories. The purpose of the redeveloped town trail will be to improve the presentation of Wexford’s heritage assets to the visitor. This will require capital development in facilitating access to sites, in the sites themselves, and in interpretation systems and technologies. The Fáilte Ireland Capital Grants Scheme for Large Tourism Projects could be a source of financial support in this regard, and it is expected to reopen for new applications in early 2018.

A key metric in tourism is dwell-time – how much time a visitor spends at a particular location. This also influences how much money a visitor will spend. Clearly the development of a compelling visitor attraction, based on Wexford Town’s heritage and using modern interpretation technologies, should serve to extend that dwell-time and increase tourism spend in the Town. Fáilte Ireland research suggests that a visitor experience that attracts an additional 70,000 tourists per annum (for example) would give rise to an associated spend of over €6 million (based on a one-night stay in Wexford for each additional tourist with associated average expenditure of €89 per head and the potential creation of up to 175 jobs.⁹ This volume of visitors would seem a reasonable target for a re-imagined town trail in Wexford. Tourism development could therefore play a significant role in the town’s future economy.

Table 3.3: Heritage Tourism Actions

Action	Owner	Dependency	Outcomes
1. Develop a plan for Selskar Abbey as the hub for a revitalised trail, in conjunction with Westgate Tower, and including the historic town walls.	WCC	Heritage site owners	Costed plan for development of significant new visitor site at Selskar Abbey and revitalisation of town heritage trail.
2. Assess development and interpretation needs at other key sites that form part of the heritage trail, including access requirements.	WCC	Heritage site owners	Improvements to access to, and presentation of, sites on revitalised heritage trail.
3. Seek financial support for the development of heritage projects from State Agencies including Fáilte Ireland.	WCC	Heritage site owners	Financial support for the heritage project.
4. Development of new downloadable guide to the heritage trail and individual heritage sites - suitable for use on mobile phones.	WCC	Heritage site owners	Better heritage experience for visitors.

⁹ Visitor Spend – Fáilte Ireland Tourism Facts 2015.

3.2.3 The Crescent

The Crescent is a central site within the Project Area. In terms of competitive advantage, it represents a unique feature of the Town’s public realm that few (if any) other Irish towns can match. It therefore is an important element in enabling Wexford Town to maintain a sense of differentiation – and a confidence to state that it exudes a different sense of place to other regional towns. Despite its current condition, the Crescent could, with appropriate public realm interventions, serve as a highly attractive location for leisure, culture and niche retail activity. This approach is consistent with the findings in the February 2017 Wexford Town Centre Retail Report ¹⁰.

In particular, the Crescent serves as a point of connectivity between the fixed heritage assets and the dynamic cultural heart of the town. The Crescent has the potential to perform as a significant economic engine at the heart of the town and should therefore be considered as a primary and early candidate for a significant public realm improvement investment.

Like the Harbour, the water basin in the Crescent has been heavily affected by silting. By putting in place an engineering system which would allow this impressive centrepiece to be presented either dry or filled with water, Wexford could create something unique which would re-orientate the town and open up the West – East axis in terms of visitor flows. The optimum solution would allow the Crescent to retain its water-based heritage while expanding its use as a dry, amphitheatre-style outdoor performance area. This would be best suited to high visibility, all-ages experiences such as a traditional fun fair, a viewing platform, street theatre or concerts when dry, and all-ages, low impact water leisure when wet, for example, row-boating and pedalos.

This is not just an opportunity to re-define the Crescent as the town’s centrepiece, but crucially it unlocks the potential for associated leisure businesses such as cafés, bars, restaurants, arts and craft shops facing into the Crescent, to establish and thrive. Medium- and long-term opportunities for artists’ live / work spaces in this area should be examined in the development model. Perhaps a small number of artist residency spaces could be incorporated into the vacant buildings or sites up for development at Custom House Quay and Paul Quay, extending the capacity of the town’s two leading cultural operators, the National Opera House and the Wexford Arts Centre, to draw national and international artists into the town.

In leading this development initiative, the Ballast Office performs an important function as a potential anchor to the cultural / leisure heart of the town. This impressive heritage property is ideally located to house the ‘Wexford Story’, bringing together the stories from the town’s rich history through to the association with John Barry and its contemporary resonance as a town deeply associated with creativity and arts. Existing collections at Wexford County Council and in private ownership could be curated to establish a small but uniquely interesting visitor experience in the ground floor of the Ballast Office while the first-floor accommodation is ideally suited for a café / bar with a superb view of the harbour and newly refurbished Crescent. Accommodation could also be allocated for administration which would be necessary on site for the expanded range of operators who would be using Commercial Quay and the Crescent and other spaces in the town for events and activities.

Conceivably, the present Tourist Office which is set apart from the town in a remote location on the far side of the railway tracks at Paul Quay, could be moved into the Ballast Office, offering a combined service of both information and experience. There is existing capacity in the tourist office to create an operating model for the Ballast office, along with a commercial café operator.

The current tourist office offers an excellent opportunity to test the level of interest in an additional gallery space for the town. With the existing commercial galleries and the planned development of the Wexford Arts Centre by 2020, the provision of gallery space is currently adequate for a town of this scale. However, with a re-focus on Destination Wexford, it would be attractive to offer a site which can be made available for a range of exhibitions including local work, touring shows and visiting artists. Both the waterside location and the design of the tourist office would lend itself well to this use and create a hook for the quays running south to Trinity Wharf. In time, Paul Quay could become characterised by semi-permanent, ‘pop-up’ style infrastructure which could enable local operators, such as the Talbot Hotel, to have a seasonal presence on the quays. Specific infrastructure would be operator-based and at their expense. However, like the Commercial Quay recommendations, effective general infrastructure such as power supply and WIFI plus some public realm enhancement would go a long way to signposting the potential of this aspect of the quay.

The reinvigoration of the Crescent and Paul Quay offers a significant improvement in connectivity to Trinity Wharf (see Section 3.2.6 below), while retaining the commitment to the central principle of making Wexford a great place to live, work and visit. Paul Quay may be characterised, for example, by imagery and reference to The Faythe, the old industrial, fishing and boat building communities there, and the connection between innovators of the past and of today in the technology sector.

Table 3.4: The Crescent Actions

Action	Owner	Dependency	Outcomes
1. Traffic Management and Public Realm Improvements	WCC		Delivery of an enhanced public realm and to improve private investment confidence
2. Design & install water flow and level control system.	WCC		Flexible use of Crescent water basin for wet and dry activities.
3. Refurbish Ballast Office and convert for modern use	WCC		Multiple active uses will generate activity and a focus for the Crescent

¹⁰ Wexford Town Centre Retail Report prepared by Bannon Commercial Property Consultants - February 2017

3.2.4 Trinity Wharf

Wexford County Council believes that Wexford town offers a very attractive environment for international companies seeking to locate in the county or for existing companies looking to expand. Although Wexford has been very successful in growing the international companies established here such as Waters Technology, BNY Mellon, Zurich Insurances, etc., the flow of new investors has been modest. Wexford County Council consider that part of the difficulty is the absence of suitable property solutions to meet investors’ expectations and that it is essential to make available a range of suitable options for companies considering Wexford as a location to invest.

Because of Wexford’s historic pattern of development, there has been very limited scope in the past to provide large-scale office space in the town centre. Instead recent commercial office development has located in car dependent single use business parks adjacent to industrial or retail parks.

However, modern business trends are rapidly changing with the accelerating technological shift away from ‘processing’ sectors involving repetitive task structures to innovative knowledge-based sectors developing new technologies, start-ups and creative services (including financial-technology, software and systems development, etc.) These businesses seek high quality urban locations where they can cluster, create synergies, where people can interact and think creatively, with an easy walk to high quality amenities, uniqueness of place, and a broad range of town centre uses all providing a high quality of life for employees.

These trends are recognised in recent Government Policy documentation that emphasise the importance of ‘place-making’ in all our towns to attract FDIs and create sustainable, balanced growth locally and nationally.

Trinity Wharf represents a significant opportunity to expand the economic profile and performance of Wexford Town. In terms of urban planning, it provides the best location to attract new business into Wexford town centre, due to it’s size, flexibility and proximity to the town centre.

Trinity Wharf could be developed on a phased basis to an overall masterplan as a new signature business district with a mix of office/employment buildings including ‘an IDA supported office-based employment centre’ as well as supporting uses including arts, culture, leisure and recreation to form a vibrant part of the town centre over the next five to ten years. This would support the transition of the town economy towards a higher-value knowledge and leisure economy.

Table 3.5: Trinity Wharf Actions

Action	Owner	Dependency	Outcomes
1. Develop high-tech office space at Trinity Wharf, suited to the financial services, IT and communications sectors.	WCC	Developers; IDA / Enterprise Ireland; prospective tenants / purchasers	Establishment of a dynamic new economic hub adjacent to the town centre; deliver better opportunities for 3rd Level graduates.
2. Provide affordable office/meeting space – for young companies. Particular focus on the creative economy – media, animation, movies, music, software development, game development.	WCC	Local businesses; developers; IDA / Enterprise Ireland	Early initiatives to build momentum and support eventual location of a creative economy hub at Trinity Wharf.
3. Develop quality apartment accommodation at Trinity Wharf to provide living spaces.	WCC	Developers; prospective tenants / buyers	Establishment of a dynamic economic hub, adjacent to the town centre.

Business activity at Trinity Wharf could perhaps include higher-end financial services, software development, a corporate meetings and communications centre, a Wexford base for an allied third-level education institution or business school, and perhaps a location for an emerging high-technology hub. This should be accompanied by high quality residential accommodation that would attract companies and encourage people with the necessary knowledge and expertise to relocate to or, for former Wexford residents, return to the Town. Some of the residential component may be in the form of a ‘managed-to-let’ development associated with a key business occupant.

Trinity Wharf can become a model of sustainable urban living which combines workplace, living space and recreational leisure zones in one area. This approach which, to some extent, is emerging in the Dublin Docklands, is of increasing appeal and directly relevant to the type of business activity that might be located at the Wharf. The design of buildings to Near Zero Energy Building (NZEB) standards along with other environmental standards is essential to attracting business. This will require a local skilled workforce trained in sustainable construction.

Short-term ‘meanwhile’ uses to help bring the site into active use should also be considered. This may include establishing a park and/or informal event space that can also be used for marketing and meetings by young companies.

Wexford, with its strong heritage, unique identity, urban character and variety already has much to offer. It has the potential to attract these types of innovative, growth businesses by developing Trinity Wharf as a significant new urban quarter to the town centre, where companies can cluster together and where necessary infrastructure costs can be shared. Preparing a development strategy and masterplan for Trinity Wharf is the essential first step in giving competitive advantage over its neighbours in relation to positioning Wexford as an attractive location for business (Ref. 5.3.1).

Figure 10: Aerial View of Trinity Wharf and Town Centre from South-East



3.2.5 Technology

Wexford has been developing a growing level of activity in the technology sector. There now are a number of domestic and international technology-based firms located at Wexford Town, including SCURRI, Waters Corporation, CRI Wexford, Sonru and Done Deal. There is also a significant level of employment in financial services operations in Wexford which, themselves, are also technology dependent.

The technology sector clearly is a target for Wexford - as it is for Ireland. It is a high growth area and one which has proved resistant to general economic downturns. Wexford has already experienced some success in attracting overseas technology companies to locate in the County, and it is also the home of a number of successful start-ups that have achieved expansion at national and international levels.

The County Council is keen to continue to expand this sector and, in 2016, published a brochure in conjunction with the IDA to support efforts to attract more investment ('Choose Wexford for Information Communications Technology'). It would be appropriate to include the Wexford Quays area as a potential location for technology companies - both start-ups and established domestic and international companies investing in expansion. Carlow Institute of Technology has a campus in Wexford Town which already offers a number of technology-based programmes. There would be potential to expand its range of programmes to give greater support to the development of a strong technology sector.

Two further fields of technology could be explored - these are areas in which there may be an opportunity for Wexford to take the lead. One is the 'Near Zero Energy Buildings' (nZEB) initiative which was first announced by the European Parliament in 2010. This initiative is of particular relevance as compliance with nZEB targets has now been introduced to the Irish Building Regulations. The nZEB targets require that, for non-domestic buildings, energy efficiency be improved by 60% compared to the current regulations; for domestic buildings, a 70% improvement is required compared to the 2005 regulations. The targets apply to new buildings and also to existing non-domestic buildings if more than 25% of the surface area is undergoing major renovation. The new regulations will apply from 31st December 2018 for buildings owned and occupied by public authorities, and by 31st December 2020 for all other buildings. This is an area in which Wexford could take an early lead - for example, all new buildings in the Quays area should be nZEB compliant. The possibility of Wexford taking a leading role is undoubtedly helped by the fact that the World nZEB Forum 2017 took place in Wexford Town during 15th - 16th November 2017.

Within the knowledge economy, Ireland has a strong position in ICT, software and systems development. Its universities and Institutes of Technology continue to produce graduates with skills in this sector. A growing sub-sector in the IT industry is the development of advanced (artificial intelligence) systems to support enhanced productivity in the agricultural sector – AgTech. As part of the economic and business plan for Wexford Town, consideration could be given as to whether the town should seek to re-connect with its agricultural hinterland and establish a position for itself as an AgTech hub for Ireland as a whole.

Table 3.6: Technology Sector Actions

Action	Owner	Dependency	Outcomes
1. Identify suitable sites in the Quays Area for high-tech companies, taking into account their requirements for high-speed, continuous broadband services (see also Section 3.2.4 - Trinity Wharf).	WCC	IDA, Enterprise Ireland	Attraction of new high-tech companies to Wexford.
2. Intensify programme to attract new high-tech companies, including start-ups, to Wexford Town.	WCC	IDA, Enterprise Ireland	Attraction of new high-tech companies to Wexford.
3. Ensure that all new buildings in the Quays Area are nZEB compliant.	WCC	Developers, builders, other public sector bodies	Leadership position for Wexford Town in nZEB.
4. Host national nZEB conference in Wexford, as follow up to World nZEB Forum, 2017.	WCC	CIT, DHPLG	Profile for Wexford as emerging nZEB hub.

3.2.6 Labour Market

Within the scope of this study, employment creation is referenced as an element of economic development. Labour is also a key component of the Town’s economic resource base and a significant determinant of how well Wexford positions itself on the supply-side or production end of the economy. In a knowledge economy, the skills and educational attainment of that local labour force are clearly important.

Some reference to demographic factors has already been presented in Section 2. Among other matters, these made reference to aspects of educational under-achievement in Wexford. Challenges in this area were also noted in a recent WIT report¹¹ which observed that:

“Unemployment in the South East is at crisis levels and rising (by 0.6% to 12.5% in Q1 2016); the South East has experienced an unemployment crisis since 2002. The quality of employment in the South East is dramatically lower than the national average, and continues to decline”.

The same report went on to note that the South East is characterised by *“lower educational attainment, a problem built up over the long-term by lower investment in higher education”.*

While there are undoubtedly matters to be addressed in relation to the development of knowledge-based skills through higher education, there are also particular challenges to be resolved that may require a greater focus on further education. Another report¹² published in 2016 presented comparative regional data on the important demographic cohort (aged 15 to 24) that are not in employment, education or training (NEETs). These data are summarised in Table 3.7.

The data reveal that, at 16%, the South-East region has the second highest NEET rate in the country. This indicates that 16% of the population in the South East aged between 15-24 are either unemployed or not involved in education and training. The equivalent figure was over 20% for those in the age cohort from 25-34. In the same report it was noted that educational achievement at third level (expressed as the share of population aged 30 to 34 with completed tertiary education) was lowest in the South East at 35%. The highest level was 65% in Dublin.

Table 3.7: Proportion of Labour Market Not in Employment, Education or Training (NEETS)

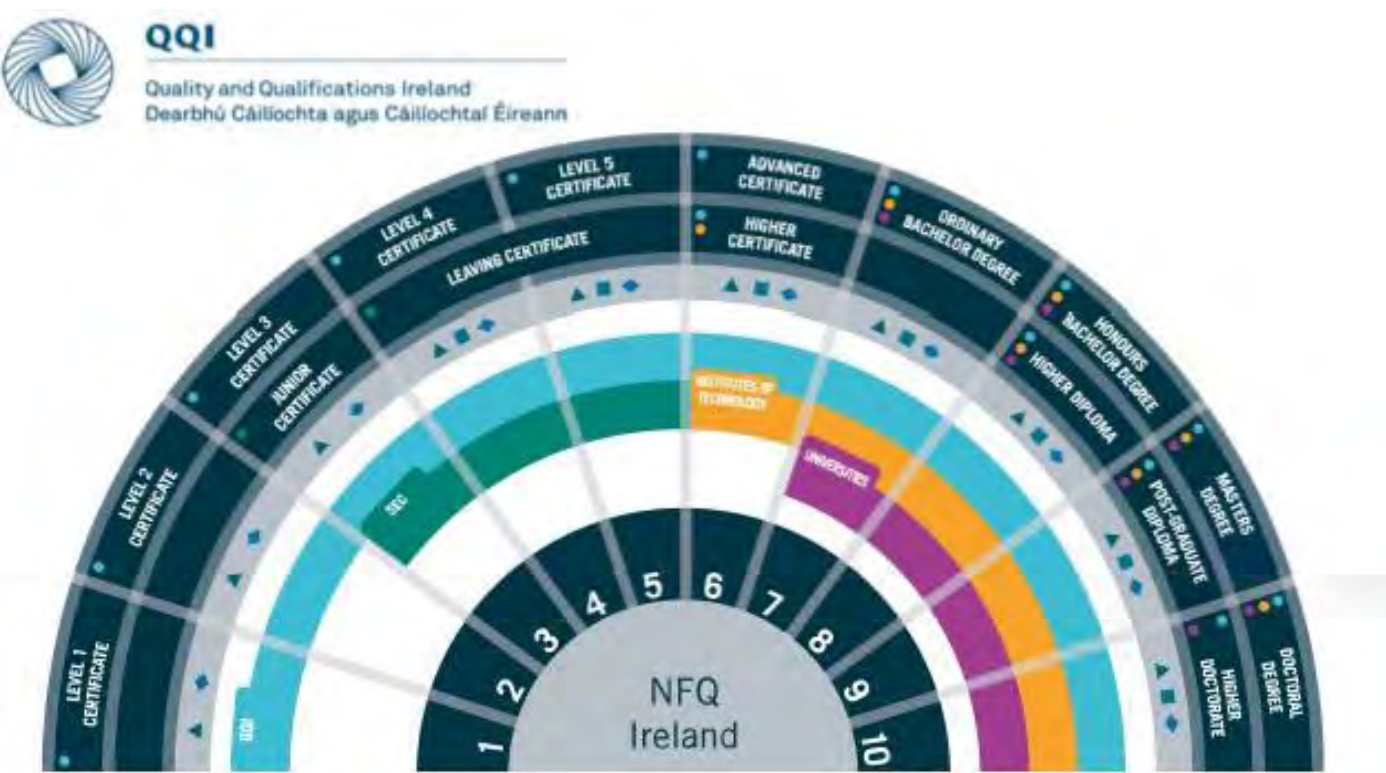
Region	No.
Border	11%
Dublin	9%
Mid-East	14%
Midland	19%
Mid-West	9.5%
South-East	16%
South-West	11%
West	15%

Source: SOLAS Regional Labour Markets Bulletin
October 2016

¹¹ South East Economic Monitor June 2016
¹² SOLAS. Regional Labour Markets Bulletin, October 2016

Given the steadily increasing importance of the knowledge economy, a persistent level of educational under-performance will act as a brake on economic development in Wexford, and constrain human capital participation in the supply-side of the local economy. However, while WIT makes reference to these problems in the context of higher education, it is arguable that there are perhaps greater and more pressing problems in the area of further education. Addressing these issues could involve the delivery of robust educational interventions at levels 4-6 of the National Framework of Qualifications developed by Quality and Qualifications Ireland - Figure 11 below.

Figure 11: National Framework of Qualifications



It is recognised that structures and services already exist within the County and Town to develop and deliver education and support services to those that need them. However the specific leadership that Wexford County Council could provide might help to sharpen the focus on these issues, and ensure that attention remains on the more enduring and more challenging of them.

Table 3.8: Labour Market Actions

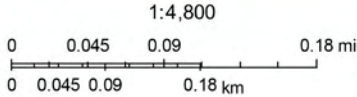
Action	Owner	Dependency	Outcomes
1. Support the LECP actions in the areas of education and training to facilitate the development of a knowledge economy, address employment challenges and increase local employment in key skill areas.	WCC		Educational training and interventions that support the development of a knowledge economy and address employment challenges in Wexford.
2. WCC to liaise directly with third level educational institutions with courses relating to conservation which are relevant to improving the quality of conservation in Wexford Town centre.	WCC		Employment and Town enhancement.
3. WCC to support training in nZEB construction skills as part of the nZEB initiative.	WCC		Develop the skills to support Wexford's position as an nZEB leader.
4. Create a dedicated, managed facility for local start-up projects, led by WCC with support from sponsors including a media concern to ensure good publicity.	WCC	Chamber of Commerce, LEO	Enable access to opportunity.
5. Implement LECP actions regarding rejuvenation of the south end of Wexford town including Trinity Wharf.	WCC	BIM Carlow IT	Strengthen this important traditional sector.

Note: the actions recommended here are intended to complement and support the long list of education and training actions in the Wexford LECP.

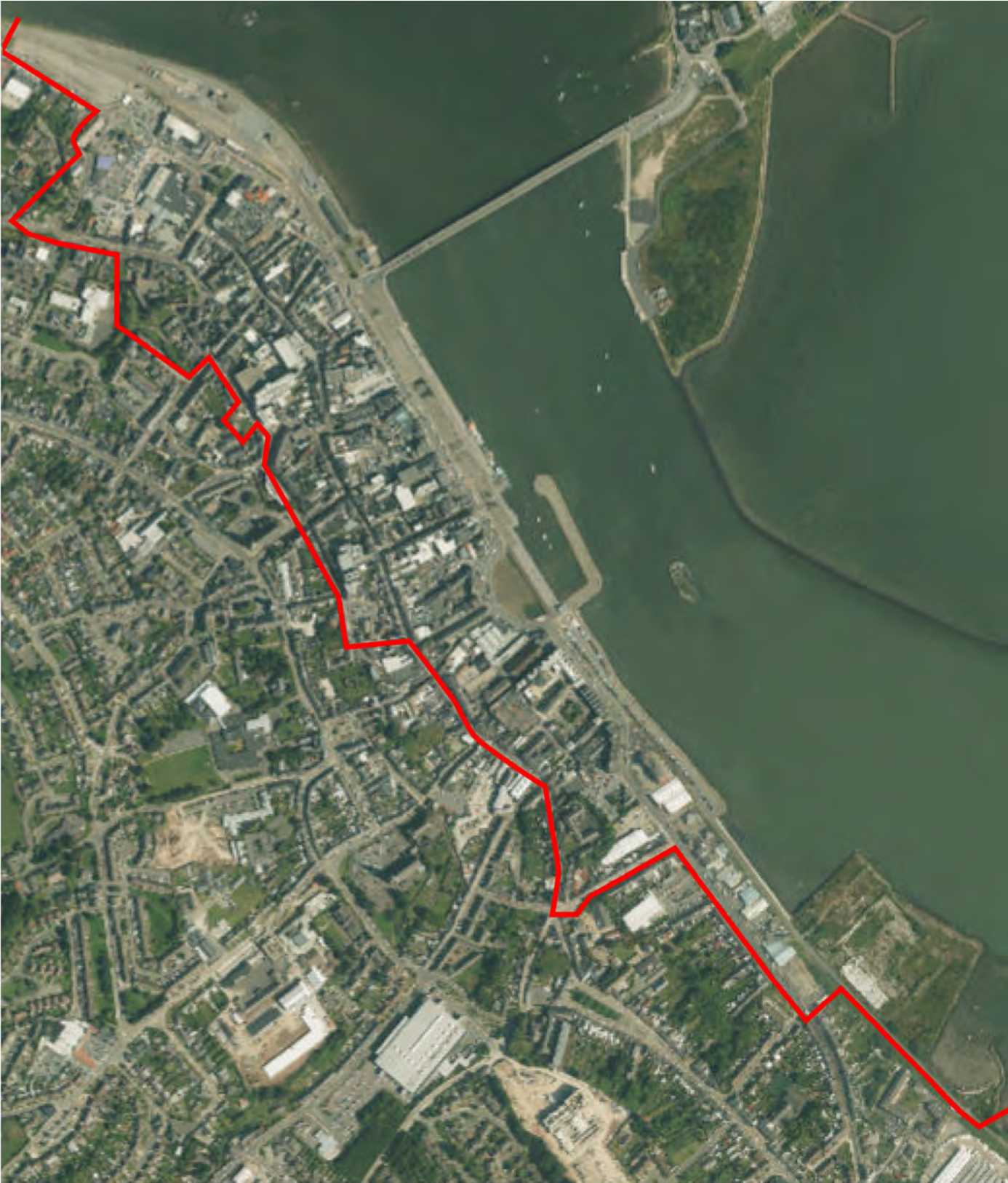
4.0 SPATIAL ANALYSIS



June 28, 2017



WEXFORD - 1848 MAP (Source: Wexford County Council)



WEXFORD - 2017 AERIAL VIEW (Source: Wexford County Council)

4.1 Introduction

The consultant team carried out a thorough analysis of the Wexford Quays study area and surrounding context. This comprised desktop studies, site visits and surveys, and various meetings with Council officials.

As the analysis revealed, Wexford has many qualities, including its historic urban fabric and strategic location as the lowest bridging point on the Slaney River. Key to the future of the town will be finding a way to successfully capitalise upon these, while also addressing the challenges the town faces.

Wexford town plays a pivotal role on many levels in its multi-layered relationships with its immediate and wider surroundings.

The location of the historic town is at a natural bend in the river with hills rising to the south-west. The natural arrival points are along the river from the north-west and south-east. Although the location of the town was established to meet the needs of the original Viking traders with their shallow bottomed long boats, the town's quayfront is exposed to the easterly swells and winds across the wide stretches of water of Wexford Harbour. There is a dramatic contrast between the sheltered, dense, historic centre around Main Street and the exposed expanse of the quayfront looking out across Wexford Harbour.

As the town developed, it has grown primarily to the south and west, with additional radial routes serving the local and immediate surrounding populations. In more recent times the N11/N25 bypass was developed to take through traffic travelling between Dublin and Rosslare around the town. This connects the radial routes on the outskirts of the town. The long-term planning of the town to meet population projections is by gradually filling in the areas between the existing town and by-pass. A consequence of this is that the town has spread out with suburban car-based development around the town. This pattern of convenient car-based development has introduced challenges for the town centre which is constrained by its dense, traditional human-scale urban form and layout.

However, in recent years there is growing concern with regard to the negative consequences of the suburban car-based model of planned development on the environment, climate, health and quality of life of people. Also, there has been a technological shift which has given people much greater flexibility in where and how they work, live and conduct business. No longer are people tied to a certain type of physical location for work, they are now more mobile and can choose to work wherever they like, as long as there is good internet access.

Consequently, there is a growing recognition of the economic, environmental and social benefits of high quality human-scale compact urban layouts where people can interact and meet. This approach informs retail planning, as well as business models including location decisions, such as technology companies who prefer a socially interactive way of working in contrast to the traditional desk-based approach.

In this sense, Wexford town centre has a natural competitive advantage with its traditional human-scale, organic urban form and with the availability of relatively large sites located in and around the town centre. Significant also is the uniqueness of its setting on the Slaney River and the contrast between the town's dense urban form and network of narrow streets and laneways with the expansive panorama and wide boardwalk along the quayfront. The quality, variety and type of retail offer and visitor attractions are all significant to making Wexford an attractive place to live, visit and do business.

The spatial analysis therefore focuses on working with these elements. It considers the condition and care of the existing built heritage and identifies areas of focus for the spatial implementation plan. It analyses the urban character, identifies challenges to be addressed and reviews the condition of the existing public realm, which then informs the proposed public realm plan. It also includes a visual analysis including identification of key viewpoints and visual sensitivities.

The spatial analysis identifies some recommendations on policy measures to help improve the condition and care of the existing urban fabric that is needed for Wexford to capitalise on its attractiveness to do business.

The spatial analysis also considers existing land use patterns in and around the town centre to inform how these may be developed as part of an integrated urban design and land use strategy for the town centre and study area.

The spatial plan is also informed by the findings and recommendations of the transport assessment. These include modifications to the traffic circulation system that are designed to improve car-based movement around the town centre and improve the quality and safety of the public realm for all people, which are essential for business in Wexford to maximise the town's economic potential as an attractive place to do business.

4.2 Built Heritage

The town of Wexford has stood on its present site for more than a thousand years and its form owes much to that early history. Like many coastal towns the basic framework of streets is largely derived from the sloping site, with contours running parallel to the shoreline and with shorter, less significant, streets running at right angles.

This typical layout does not produce a regular grid of streets in the case of Wexford, as the town's history has introduced its own character into the street form. This includes bends in streets for reasons that have long since disappeared, while even the reason for the existence of many of the streets is now obscure, though many were opened up to serve early quays or slipways that were privately owned in the medieval period. To this has been added the gradual expansion of the town over the shoreline, a factor that continued through the nineteenth century, when the railway spurred on the reclamation of land at the northern end of the town, including Redmond Square and the station. In the twentieth century the modern quaysides were reclaimed, until which time the sea lapped at the edge of the railway line. At Trinity Wharf, too, the land that was reclaimed in the nineteenth century to facilitate a dockyard was further expanded to provide for an iron works and further enlarged in the twentieth century.

The location of Wexford on the shores of Wexford Harbour ensures that there is a good view of the town from the Ferrybank side. This viewpoint progresses onto the bridge and the approach from this angle reveals the skyline of the town, changing gradually as the viewer gets closer to the western shore. This skyline is part of the essential character of Wexford, with the general heights of the buildings broken dramatically by the spires and towers of the various churches. Only two more recent buildings break this skyline – the Opera House and White's Hotel. Apart from those two the town retains its historic profile and care needs to be given when considering any newer buildings to ensure that the skyline retains this traditional form. The town is also visible from Rosslare Point and the skyline is also significant from that angle, though the distance is greater and this viewpoint is not as important as that from Ferrybank and the bridge. Approaches to the town from other directions lead over the brows of hills and the town is not visible until the outskirts are reached, at which time the skyline is generally concealed by buildings with only occasional glimpses of landmark spires.



In any town or city the elements that distinguish it from any other urban area is a combination of the streets – whether broad or narrow, straight, curved or winding, hilly or flat – and the buildings – which may be multiple-storey or low-rise, concrete, brick, stone, render, glass or timber and with characteristic architectural styles, either unified, or in variety. The chief characteristics of Wexford’s streets are their relatively narrow widths and the traditional nature of the buildings that line either side of each street.

Despite its long history, the buildings of Wexford town are comparatively recent and most of the older buildings date from the nineteenth century. Many of these are comparatively modest in their design and ornament, but they nonetheless provide a cumulative effect through the unifying features such as rendered and painted facades, similar roof or parapet lines and styles of windows. The unity is not sufficiently prevalent to introduce monotony and even in those streets where the buildings are most similar, such as in High Street, there is still a liveliness brought about by the variation from two storey to three storey and back again, and by the use of paint on some facades and not on others.

In Wexford, as in most towns, the landmark buildings such as churches, banks, public buildings, bridges and monuments, are in a minority and the greater part of the length of any street tends to be made up of the more ordinary, whether shops, offices, industrial buildings or homes. Ordinary, in this context, does not necessarily mean uninteresting and the vernacular buildings of Wexford’s streets form a vital component of the character of the town.

In view of the high importance of buildings, individually and collectively, in defining the character of the town, it is important that change is regulated, to prevent gradual adverse changes to that character. The public realm in Wexford has been carefully thought through and implemented, as far as the paving, lighting and street furniture are concerned, but the street is more than its paving and street furniture.

The protection of the character of the buildings of Wexford has been boosted through the addition of more than three hundred buildings to the Record of Protected Structures. A significant proportion of these lie outside the town centre area that is the focus of this study, but many of them are within the area. This includes monuments such as the 1798 memorial and the statue of Commodore John Barry, the banks, public buildings, shops, houses and the towers on the town walls.



Many more buildings are potentially safeguarded through the use of architectural conservation areas. These are appropriate where an area or a group of buildings has a special character that is worth protecting, even though some or all of the buildings would not warrant being added to the Record of Protected Structures. Seven areas within the town have been identified as being suitable for designation as architectural conservation areas (ACAs), six of these being within the present study area.

The identification of such areas does not confer any control over the character of the area identified, however, unless the formal adoption of the ACA takes place. Without such an adoption the areas are merely candidate ACAs and the only control that may be exercised is when considering an application for planning permission within an area. Throughout the town huge numbers of windows have been replaced with windows that are not in character with the street or the building itself and this has led to a significant erosion of character. The surviving original windows need to be safeguarded, while encouragement is needed if any owners are to reinstate windows that are more appropriate. There are many other features in the town that help to define its character, including original front doors, many intricate and attractive fanlights and suchlike. Unless a building is a protected structure or in an ACA there is no means of ensuring that these features are not endangered.

There is a need for detailed statements to be researched and written for each candidate architectural conservation area, to determine the appropriate precise boundaries, to examine the buildings within the area, the boundary walls and any other built heritage features so as to define the essential character of the ACA. Once a character assessment has been carried out the formal adoption of an ACA can proceed and some measure of protection can be derived. This process also allows for the public to be engaged, as the protection of a vital elements of built heritage is part of the process of retaining the unique identity of a street or a wider area and ultimately of Wexford town itself. If the town is to retain its place as a historic town and to increase the visitor numbers to experience its unique character it must ensure that this character is not eroded and, where possible, it should seek to reinstate lost elements. Every original window, door, fanlight, door knocker, boot scraper or plaster surround to a doorway or window opening is part of the heritage of a building and of the street in which it stands.

Any endeavour to improve the built heritage of the town must bring the inhabitants of the town and the owners and occupiers of the buildings on board and should encourage a greater awareness of and pride in the individual elements that define the character. This can be achieved through such measures as public exhibitions, whether associated with a measure such as the preparation of an architectural conservation area character statement or whether it is on a more specific subject of relevance to a wider area, such as exhibitions to show the beauty of architectural elements such as fanlights or traditional windows. Preparation of guidance leaflets can also help and in some cases these may be available from external sources.

Pride of place can also be fostered through the use of competitions, such as a shopfront competition, launched amongst the traders of the town. This would help to raise an awareness of the quality that a shopfront can bring to a street. Through a repetition of such a measure this can help traders to gradually transform an area and to improve quality of the public face of the shops and business premises.

The display of Wexford's built heritage is an important element in the promotion of the town for visitors. There are some features in Wexford that are obvious to even the most casual visitor as being of special interest, whether purely historical or both historical and a contribution to the urban form of the town.

An important element is the town walls, which at once display the medieval origins of the town and act as a visual reminder of the size of the medieval town and the way in which towns worked in that period. Every endeavour should be made to increase the amount of the town walls that are accessible to the public at large, along with which the interpretation of the origin and purpose of the walls should be readily available.

Another building that is prominent and historic is Selskar Abbey and this needs to be readily available to visitors, with suitable information on its origins and history, as many hours and days of the year as possible.



A third major focus is The Crescent. This is a very high quality urban space, though at present it is not displayed in its best light. A stark reminder of this is that The Crescent is not amongst the areas that are proposed as an architectural conservation area. This is an obvious example of the viewpoint that an architectural conservation area should do more than conserve the character of an area, it should also seek to restore or improve the character. With the former bank, now Asple & Co., defining the northern corner of The Crescent, the Harbourmaster's Office forming the focus in the centre of the crescent of buildings, and the statue of Commodore Barry in the centre of the waterside the initial elements are present for the revitalisation of this as a major focus in the town.

Key Actions for the Built Heritage

Key actions to help safeguard and enhance the built heritage of Wexford:

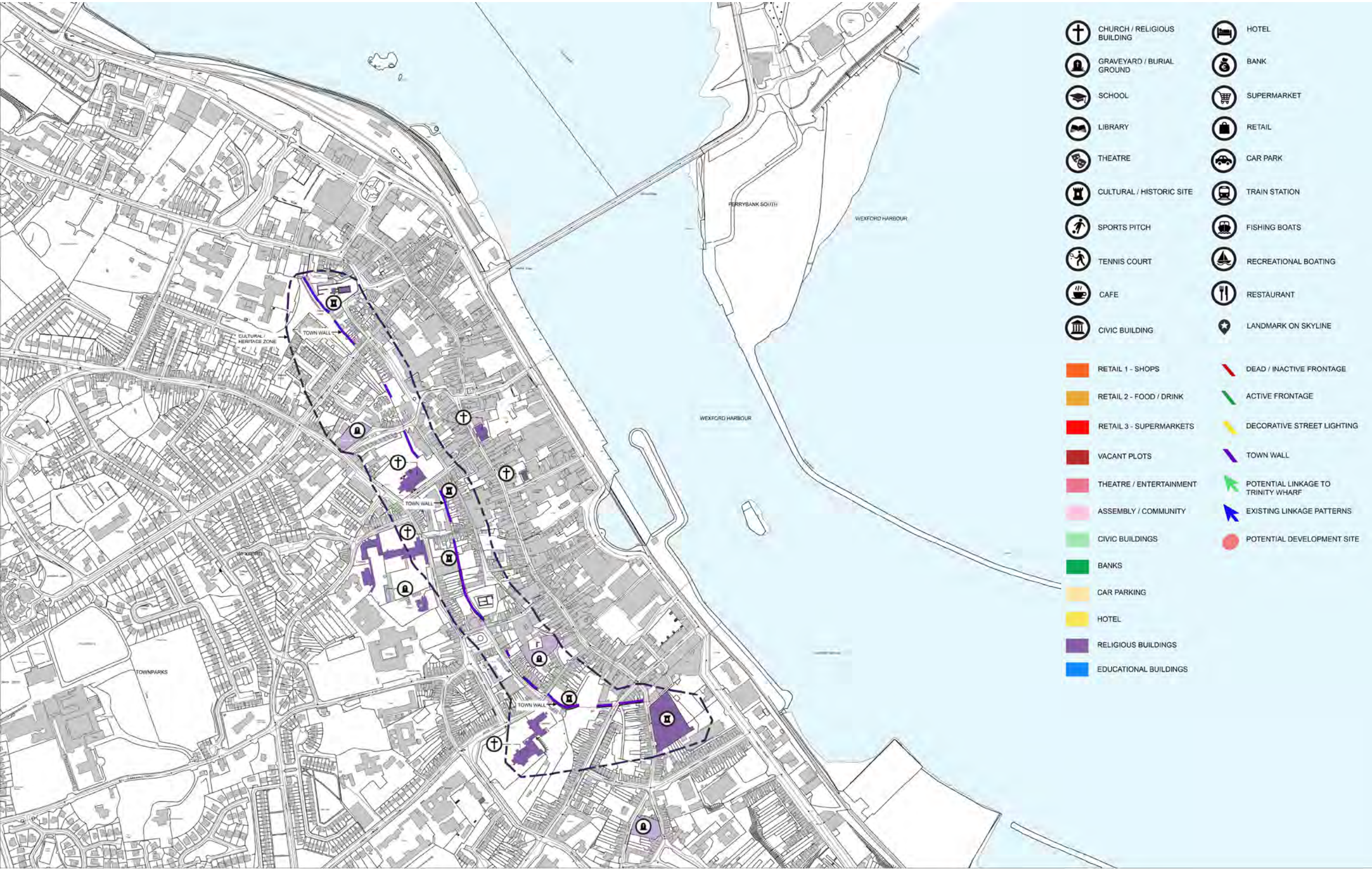
The following should be considered as part of the next review of the Town Development Plan:

- Policies to protect the skyline from inappropriate development
- Formal adoption of the proposed architectural conservation areas identified in the current plan with policies to protect their character
- Consider the adoption of an architectural conservation area at The Crescent
- Policy Objectives to improve the accessibility of areas of the town walls that are not publicly accessible at present

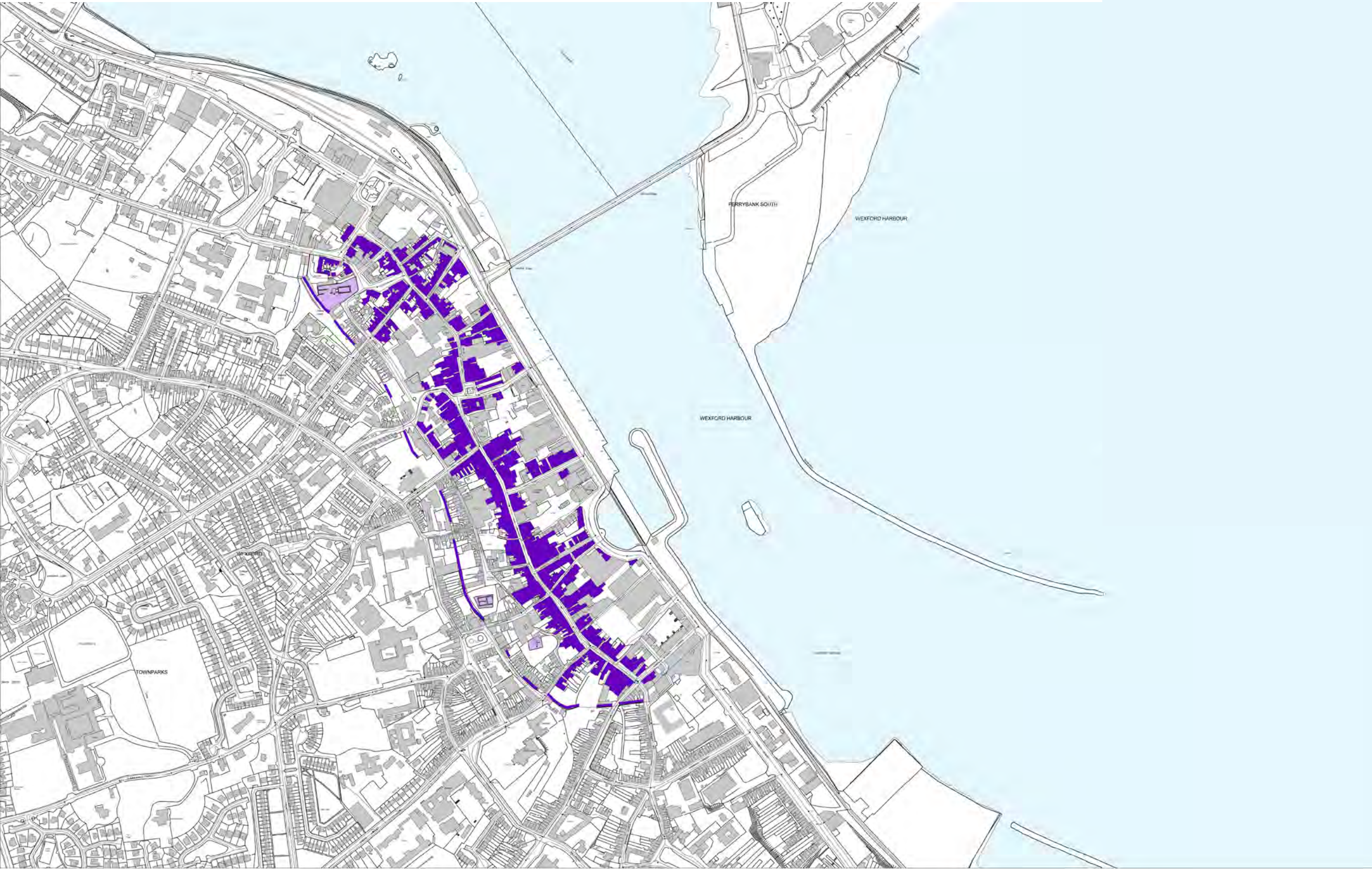
These should be supported by activities to gain support and understanding such as:

- Organise regular exhibitions and events that highlight the town's heritage for both townspeople and visitors as part of their 'living heritage'
- Organise annual 'best shopfront' competition amongst the traders of the town to encourage improved pride in the care and appearance of the town.

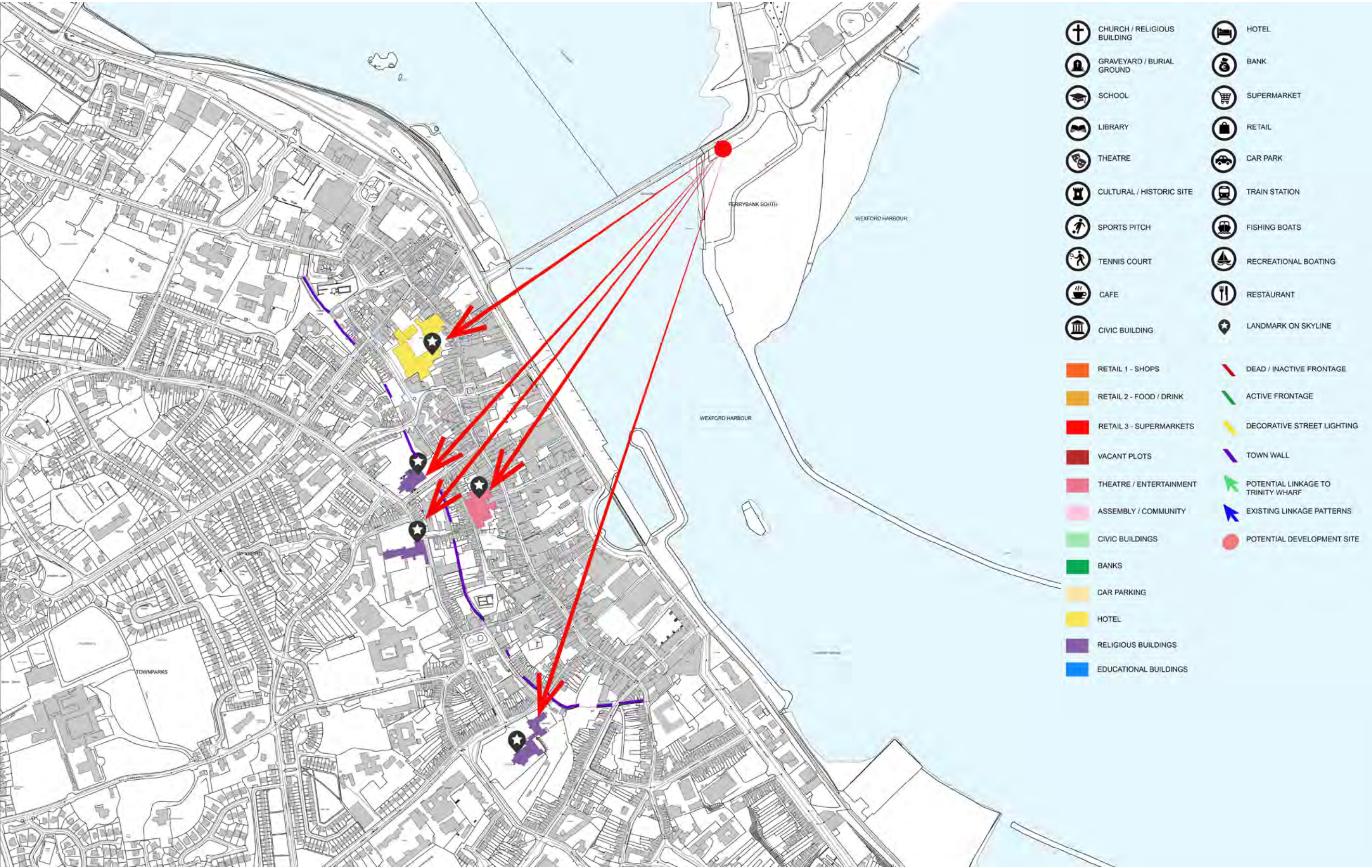




HERITAGE SPINE



REMAINING EARLY SETTLEMENT PATTERN



SKYLINE / LANDMARKS

4.3 URBAN CHARACTER

Wexford Town centre is made up of a number of distinctive character areas which are defined by their location, current uses and physical attributes. Although the boundaries are not always clearly definable and areas demonstrate more than one use, the analysis has identified dominant attributes and challenges which can be further defined and reinforced to create a stronger sense of place in specific areas and for the town as a whole. The main character areas identified are:

The Waterfront

The Waterfront is a unique and vast area in the context of the town as a whole. Its open aspect to the water, exposed nature and relatively low use accentuate the scale and peaceful nature. The fishing boats and timber boardwalk provide an authentic backdrop and activity along the main event spaces. The building quality and more intimate pedestrian and vehicular space around the Crescent help create a unique ‘civic’ connection between the town and water. This relationship highlights the severance between town and water which the railway, road and carparking create along the wider sections. The parking and waterside wall at Paul Quay has created a more functional environment which has lost its connection to the water and a sense of connectivity to the wider quays and town. The railway line is a feature that is unique to Wexford. Although it is an integral element to the character of the waterfront, it is not integrated functionally either in terms of movement or visually in the public realm.

The Retail Spine

The winding streets of Wexford’s retail spine are a busy collage of shopfront colour and pedestrian movement. The density and quality of the buildings combined with the high quality materials confirm the primary and secondary shopping areas. The overall character and feel is of pedestrian activity with a human-scale to the streets and buildings, interspersed with various historic architectural features and places of interest to stop, take time and pause, such as the Bullring. The shops have a familiar, individual character with relatively small frontages which contribute to the overall variety and visual interest. Local individual businesses add to the unique sense of place. This is exceptionally good quality urbanism that has an organic feel, but which has been affected in one or two places by recent interventions. At the northern end, this character

dissipates with larger retail development blocks around Redmond Square, while at the southern end there is a shift in character due to the change of predominant use from retail to more evening food outlets and bars.

The Quayside, Links and Lanes

The narrow alleyways connecting the Retail Spine to the Waterfront have a particular scale and topography which facilitates a wide range of uses and resulting experiences. The unifying characteristic is their scale and functional role to connect Main Street with the Quayfront. However the level of use and perception of accessibility varies considerably and creates a buzzing atmosphere only in certain places at certain times of day for particular uses. Overall there is an atmosphere of stark inhospitability with a poor quality public realm in many of the areas, with ill-defined parking, poor materials and finishes and a lack of maintenance and care.

The Gateway

This area, extending northwards from Wexford Bridge and including Redmond Square and Redmond Road is a confluence of routes for car, rail, bus, bike and pedestrian access. It is well located on the edge of the quayfront and retail spine but congested, poorly connected and defined. The lack of a sense of arrival and legibility for vehicles results in traffic dominating most streets and the overall character becoming a poorly functioning transport one rather than being part of the town centre public realm.

The Hidden Heritage

Scattered around the town there are only scattered glimpses of Wexfords heritage. This is plentiful but often incorporated into the grain of the towns more recent development. The hidden nature of the heritage assets provides an interesting experience when discovered unexpectedly but often results in it being overlooked and appearing to be a sporadic rather than cohesive experience for visitors and locals. In addition to historic gems such as Selskar Abbey and other religious ruins, the hidden heritage includes more recent history including the Barracks and various cultural and religious buildings which are all connected along the line of the

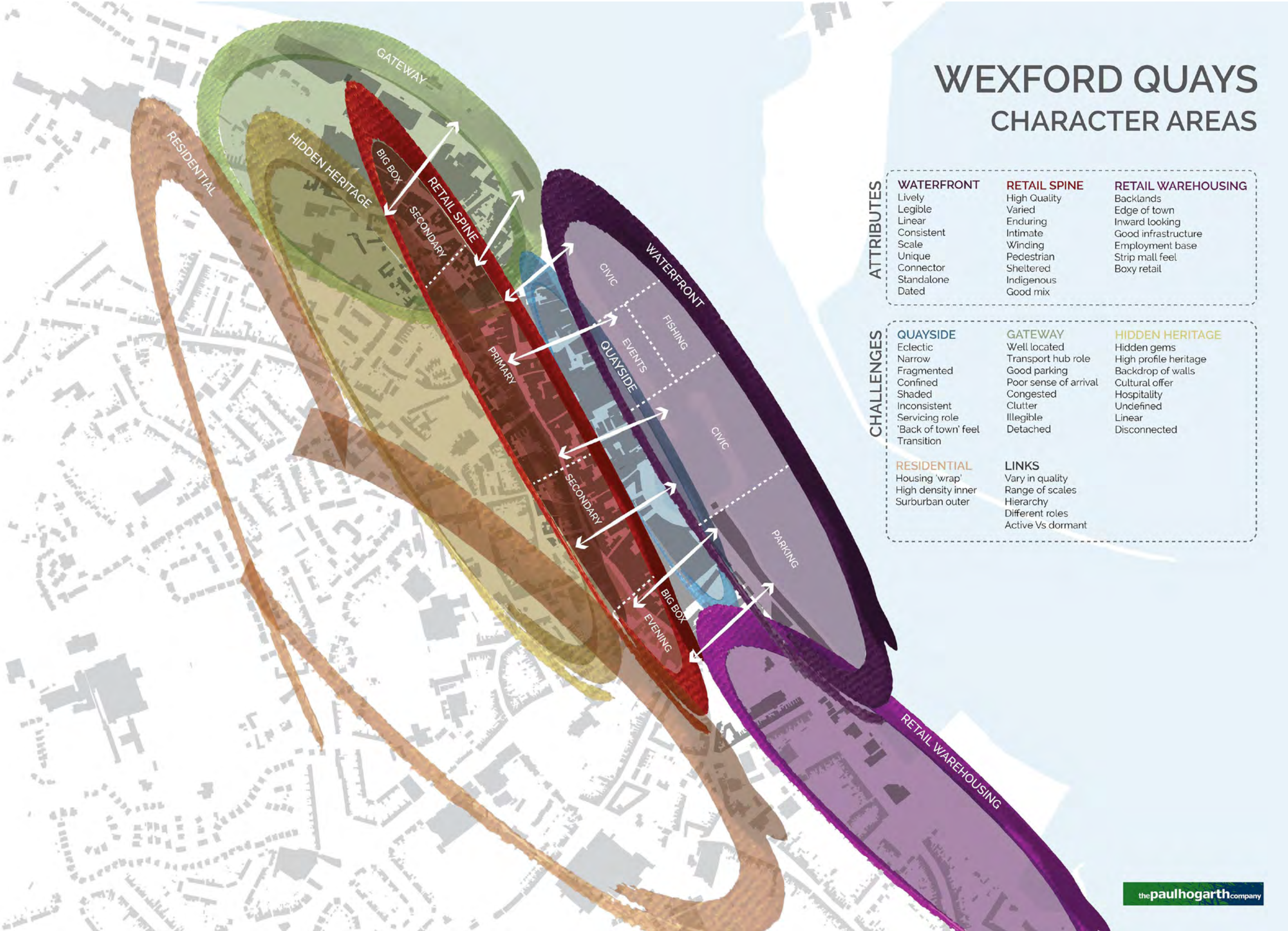
town walls.

Retail Warehousing - Trinity Street/Trinity Wharf

The tight urban grain of the town centre and vast open spaces along the quay end rather abruptly at Trinity Street where larger retail and warehousing units generate a more edge of town commercial character. Pockets of traditional attached housing remain particularly on the southern side of the street dissipating into a more suburban character on Trinity Street as you pass beyond Trinity Wharf. The Wharf itself is a wasteland dominated by emergent vegetation self-seeding through the abandoned soft and hard landscape areas. The water on three sides and rail line to the fourth creates a sense of isolation and divorce from the rest of the town which is accentuated by the windswept nature.

Surrounding Residential/ Institutional Area

To the immediate west of the town centre there is a contrast between intimate, small-scale urban housing in narrow streets and larger religious and educational institutions which are often set within their own grounds. The larger institutions with high quality historic buildings provide strong vistas and orientation points but their grounds tend to be either private or used as commercial car parking compromising their setting and the overall permeability of the area. The area has developed a transitional and functional character rather than a welcoming or community atmosphere.



Key Actions Emerging from Urban Character Analysis:

The Waterfront:

- 1) The severance caused by the railway, existing road and on-street car parking causes both operational and functional conflicts between rail, pedestrian and vehicular movement. Access to and use of the waterfront needs to be defined as part of a planned well-designed public realm with regular crossing points to overcome safety concerns. This includes integration of the railway line functionally and visually into the public realm.
- 2) The parking and the waterfront is to be reviewed to provide a sense of connectivity between the water and the wider quays and town, particularly in the context of the proposed connection to Trinity Wharf.
- 3) The Crescent should be revitalised with public realm improvements and new uses as the centrepiece of the quayfront, connecting to the new Trinity Wharf development.
- 4) The overall rugged and robust character of the quayfront should be maintained but enlivened with defined areas for a variety of active and passive uses, including formal and informal activities.

The Retail Spine:

- 1) The high quality of urbanism along the retail spine is key to Wexford's attractiveness. The small intimate scale needs to be protected from large scale development which if allowed will reduce the vitality and variety of the street.
- 2) The quality of the public realm can be further improved by removing visual clutter, managing shopfront design through introducing development management controls and working with the community

The Quayside, Links and Lanes

- 1) The lanes between Main Street and the Quayfront require improvement in terms of quality of pedestrian realm through better materials and finishes, and better upkeep and management.
- 2) The footpath along the Quayside should be widened to provide more appropriate proportions along the street and a start /end to the lanes which connect to the Retail Spine
- 3) The specific role of each lane should be defined with a flexibility of uses being a priority so that these areas can support and incubate urban activity in conjunction with the more consistent and formal retail spine.

The Gateway:

- 1) Traffic movement needs to be reconfigured to reduce conflict, particularly for pedestrians crossing Slaney Street, Redmond Road and along Wellington Quay as part of a public realm improvement scheme. Consideration should be given to relocating the coach stops either off-street to the Redmond Road car park, or on Slaney Street as part of the Redmond Square traffic reorganisation.

The Hidden Heritage:

- 1) The hidden heritage needs to be made more accessible with a heritage trail connecting the Gaol with the Barracks. This should include access to parts of the town walls, Selskar Abbey and the historic church yards, Wexford Arts Centre and the landmark churches. The heritage trail will require improvements to the public realm, including creation of pocket parks, improved lighting, landscaping and paving along the extent of the route.
- 2) The hidden heritage also includes the laneways connecting High Street to Main Street and the Quayfront, as well as various other buildings around the town. These all need to be included in the trail to provide various loops and routes for the visitor to explore and gain a full knowledge and understanding of Wexford's rich and colourful urban heritage.

The Retail Warehousing - Trinity Street/Trinity Wharf

- 1) This area offers potential for a new high quality, sustainable urban quarter as a major extension of the town centre. To achieve this an urban masterplan for Trinity Wharf and the surrounding area is required which will set out high quality design and development requirements that incorporate best practice urban design and environmental sustainability.

4.4 EXISTING PUBLIC REALM CONDITION SURVEY

A review of the condition of the existing landscape materials was undertaken. Its purpose was to summarise the physical condition of the public realm in the project area and highlight specific issues or opportunities. Parts of the Public Realm in the town have received significant investment over the last 5-10 years and are demonstrating considerable suitability for purpose including aesthetic value and robust construction.

By comparison the previous improvement schemes are now appearing somewhat dated and reaching the point in their lifespan where maintenance requirements are increasing considerably.

Parts of the town which have not been improved in the past 15+ years are demonstrating significant deterioration and non compliance with recent accessibility and health & safety requirements. This is particularly relevant in relation to Wexford improving it's attractiveness in terms of being age friendly and universally accessible.

General Comments include:

Selskar Street & Main Street North - Significant recent upgrade utilising high quality materials. Very minor ongoing maintenance requirements which should have budget/resources allocated. End section incorporates asphalt carriageway rather than stone.

Main Street Central - Minor upgrade recently with drainage channels only installed. Ongoing maintenance required as materials and construction approach the end of their lifespans.

Main Street South - Significant recent upgrade utilising high quality materials. Very minor maintenance budget/resources should be allocated. End section incorporates asphalt carrigeway rather than stone.

Commercial Quay – Good quality materials and furniture installed 10-15 years ago. Consistent maintenance required to paving, trees and decking. Sand jointed paving and under ground tree construction is deteriorating resulting in trip hazards. Tree species, size and condition is variable suggesting difficulties in establishment of planting in the marine environment. Ongoing maintenance required which require budget/resources to be allocated. Regular formal review of Health and Safety risks associated with walking surfaces should be considered.

Crescent Quay - Historic quay walls and granite kerbs are

significant high quality features. The condition of footpaths, crossings and pedestrian access for all is poor. Lighting of the public realm and buildings is particularly poor (2 street light columns were not working) Ongoing maintenance required which require budget/resources to be allocated. Regular formal review of Health and Safety risks associated with walking surfaces should be considered.

Paul Quay - Concrete sea wall, concrete footpaths and asphalt road surface are in good condition. Recent bollard, lining and surface patching create a confused entrance arrangement for pedestrians and vehicles. Tree condition degrades towards the Trinity Street side and should be considered for replacement with an alternative species and specification.

Bull Ring - Good Quality materials and furniture installed 15-20 years ago. Ongoing maintenance required as materials and construction approach the end of their lifespans. Engraved stone slabs are deteriorating at a significant rate with trees maturing at varying rates.

Lanes/Links -The condition of footpaths, crossings and pedestrian access for all is in general very poor. Church Lane and Common Quay Street have been upgraded with good quality materials associated with adjacent developments. Ongoing maintenance required which require budget/resources to be allocated.

Actions Emerging from Landscape Condition Survey:

- 1) A detailed public realm improvement strategy is required for the town centre. Decisions of capital funding improvement projects should take into consideration the developing 'physical need', health and safety risks and the ongoing maintenance costs associated with areas where the public realm infrastructure is dated and deteriorating. . Priorities identified include:
 - Crescent Quay and Paul Quay to be prioritised for upgrading to meet accessibility and health & safety requirements
 - Commercial Quay - improvements to paving, crossing points and planters required as part of overall improvement plan including traffic andhealth and safety upgrading works
 - Lanes/Links - require upgrading works including repaving, improved lighting, burying of overhead services, creation of pocket places for people to sit with passive surveillance
- 2) Resources should be defined for proactive maintenance inspections and upgrades actively learning from recurring issues and resolving with minor capital investments from a defined budget where required. This active learning regarding how the spaces are being used may result in additional or relocated bins, planting amendments, additional drainage etc. Therefore protecting existing investments and informing future projects

A detailed condition survey will be required as part of any public realm improvement works.



1. Varying Materials and construction at interfaces



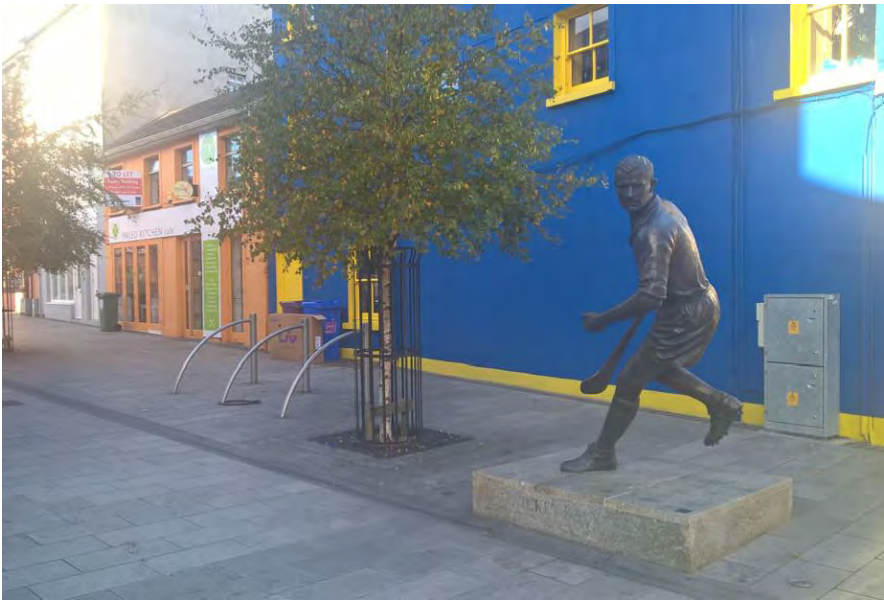
2. Signage Retrofitted to columns. Various styles and branding



3. Commercial Quay. Range of tree species, specifications and conditions



4. Commercial Quay: Patch Repairs to paving in alternative materials



5. Selskar Street: New tree, maintenance/specification/species issues hiding signage



6. Commercial Quay: Timber decking in various conditions with maintenance issues



7. Crescent Quay: Historic Stone Quay Wall



8. Paul Quay: Surface patching over pedestrian lining/delineation



9. Main Street: Public Realm Improvements with Full Natural Stone

4.5 ANALYSIS OF EXISTING TOWN CENTRE USES

Wexford is a unique town full of history that combines the old and new, with a unique blend of commercial, retail, cultural and leisure activities, all of which is reflected in the town's urban structure and varied architecture.

The consultant team carried out a high level survey of existing uses within and around the study area. This particularly focused on the predominant retail nature along and around Main Street, the extent of active frontage, and vacancy / parking. The team also noted that good quality street lighting is located in areas of high retail uses and pedestrian footfall.

These clearly confirmed that the main retail spine is concentrated primarily along Main Street, with only pockets of secondary retail extending towards the quays, for example Henrietta Street. The main exceptions to this in retail terms are:

- Pettits supermarket and an associated small cluster of service retail/cafe type uses with active frontage limited onto a laneway adjoining Custom House Quay and car park
- Paul Quay from TK Maxx to the Talbot Hotel

Both of these areas are disconnected from Main Street in terms of retail use, active frontage and quality of public realm.

The type of retail use and size of units varies along Main Street, with several larger retail units distributed in a mix of varied smaller-scale units. There is a mix of types of retail, from family run independent businesses to chain store and IT/phone outlets. Most retailers are destination type 'comparison retailing'.

Along Main Street, the larger retailers tend to have premises with fairly narrow frontages that open directly onto the main pedestrian route but which then extend out further back within their blocks to give functional floorplates (eg. Shaws). The demand from retailers is for wider shop-frontage onto main pedestrian routes. However, there is limited capacity to accommodate more similar large-floorplate retail development directly onto Main Street without adversely impacting on its varied and attractive existing retail offer and urban character. Focusing on providing Main Street frontage may also adversely reinforce the Quayfront area as a 'non-active' delivery/service area. The attractiveness of the Quayfront as a pedestrian destination needs to be improved to overcome this issue.

Extending the town's retail core from the Main Street to the Quayfront is recommended in Bannon's Wexford Town Centre Retail Strategy February 2017.

There are several existing vacant and underused large sites with capacity for larger retail units along parts of the quayfront (similar in size to TK Maxx). These locations can become commercially attractive by expanding the pedestrian area from Main Street to the Quayfront through a combination of varied attractions and offers on and around the Quayfront, and by improving the quality of the public realm. The potential is most apparent around The Crescent which with a high quality public realm could become a focal space, with a variety of activities, a sense of history and place, combined with adjoining development opportunity sites, with car parking close by. The commercial attractiveness of this area will be improved in coordination with development of Trinity Wharf and extended quayfront connection with Paul Quay.

As infill sites become viable for development, the existing temporary car parking will be removed, increasing the usage of other available existing parking areas close to the retail areas - particularly those around Redmond Square and around the southern end of Main Street. Retail theory is that areas close to parking will become increasingly attractive for 'convenience' retail, with the more central areas of the town centre being more 'destination' retail where people are attracted to stay and linger. The location of different types of retail in the town in many ways already reflects this pattern.

There are currently four 'convenience' retailers located around the town centre. Of these only Pettitts/Supervalu is located centrally next to Custom House Quay. Both Dunnes and Tesco's have already located from more central locations to ones with convenient vehicular access and parking. Aldi is also located with convenient vehicle access and parking. These location decisions reflect convenience retailing requirements to provide convenient access for vehicles, both suppliers and customers. Tesco's and Aldi are both a little distant to casually attract passing footfall from Main Street.

However as a retailer of both convenience and comparison goods, the location of Dunnes directly adjacent to both the main pedestrian area, transport arrival point and car parking strategically reflects the commercial nature of its business. The location of Pettitts/Supervalu appears less convenient for vehicles commercially and, because of the consequent vehicular/pedestrian conflict does not encourage people to stay and linger so discourages 'destination' shopping. Retail theory would suggest that in the longer term the type of retail offer at Pettitts / Supervalu may shift from mainly 'convenience' to a more 'speciality retail' type offer.

There are also 'pockets' of small-scale specialist artisan retailers, including the Bullring market which add diversity and broaden the retail offer available. These, combined with various events and activities, should be encouraged as will help further improve the town's attractive retail offer.

A detailed retail management strategy should be prepared to ensure a varied retail offer and mix is provided for the town centre. This should be consistent with 'Guidelines to Planning Authorities - Retail Planning' (DECLG April 2012) and its companion document 'Retail Design Manual' (DECLG April 2012) and the 'A Framework for Town Centre Renewal' (DBEI April 2017).

The detailed retail management strategy should include a 'health-check' assessment covering the diversity of uses, the competitiveness of the current mix, retailer representation including street markets, rents, vacancy, accessibility, physical condition of the town centre, quality and upkeep of public realm, regular survey of customer views and habits, perception of safety, commercial yields, pedestrian flows. The analysis of these indicators can be used to inform the town centre management strategy and provide context for considering the implications of retail impact assessments. An assessment of existing retail floorspace is required to inform future requirements and planning policy. WCC can then better assess retail development proposals and their impact on the existing town centre, and monitor and manage change to ensure that a diverse retail offer is integrated with the unique character of the town. This is a key action of the Economic Strategy re 'stand out retail offer'.

Other uses along the Quayfront include pubs and service providers such as solicitors, property firms and banks. Many of these are located in corner buildings.

There are concentrations of the 'evening economy' around South Main Street and around Monck Street and Charlotte Street. Generally the uses along the Quayfront and laneways are inactive, with extensive areas that are either vacant or dead frontage.

There are also areas of residential use, including pockets of own-door terraced housing and more recent apartment developments. There is scope for existing buildings to provide 'over the shop' residential accommodation and small-scale professional businesses (eg. Blue Egg Gallery, 22A John's Gate Street), and for new infill development on sites with constraints. eg. overshadowing, restricted access, and in locations requiring passive surveillance.

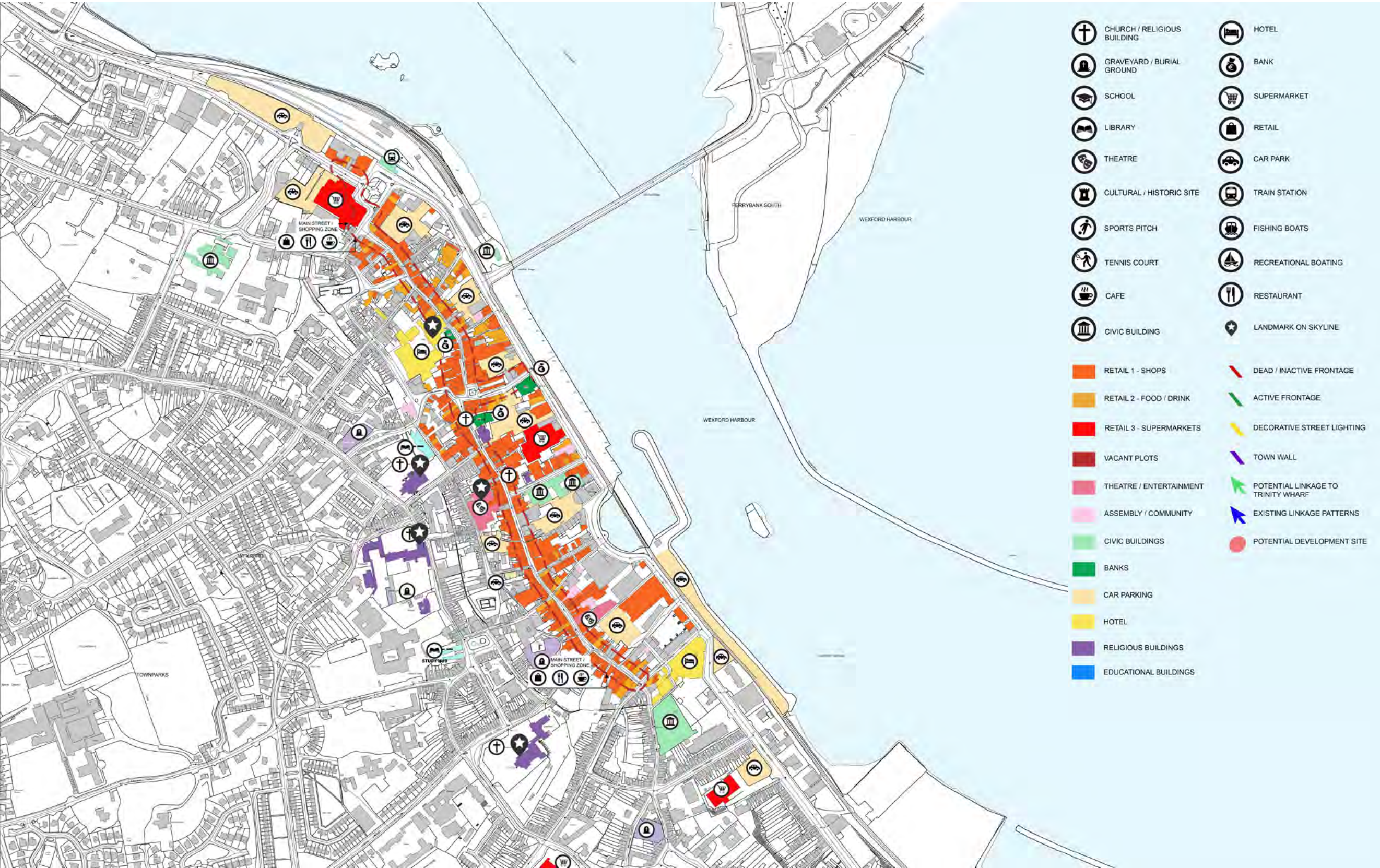
The types of uses and potential development of sites forms part of the overall spatial vision (section 5.0).

Key Points

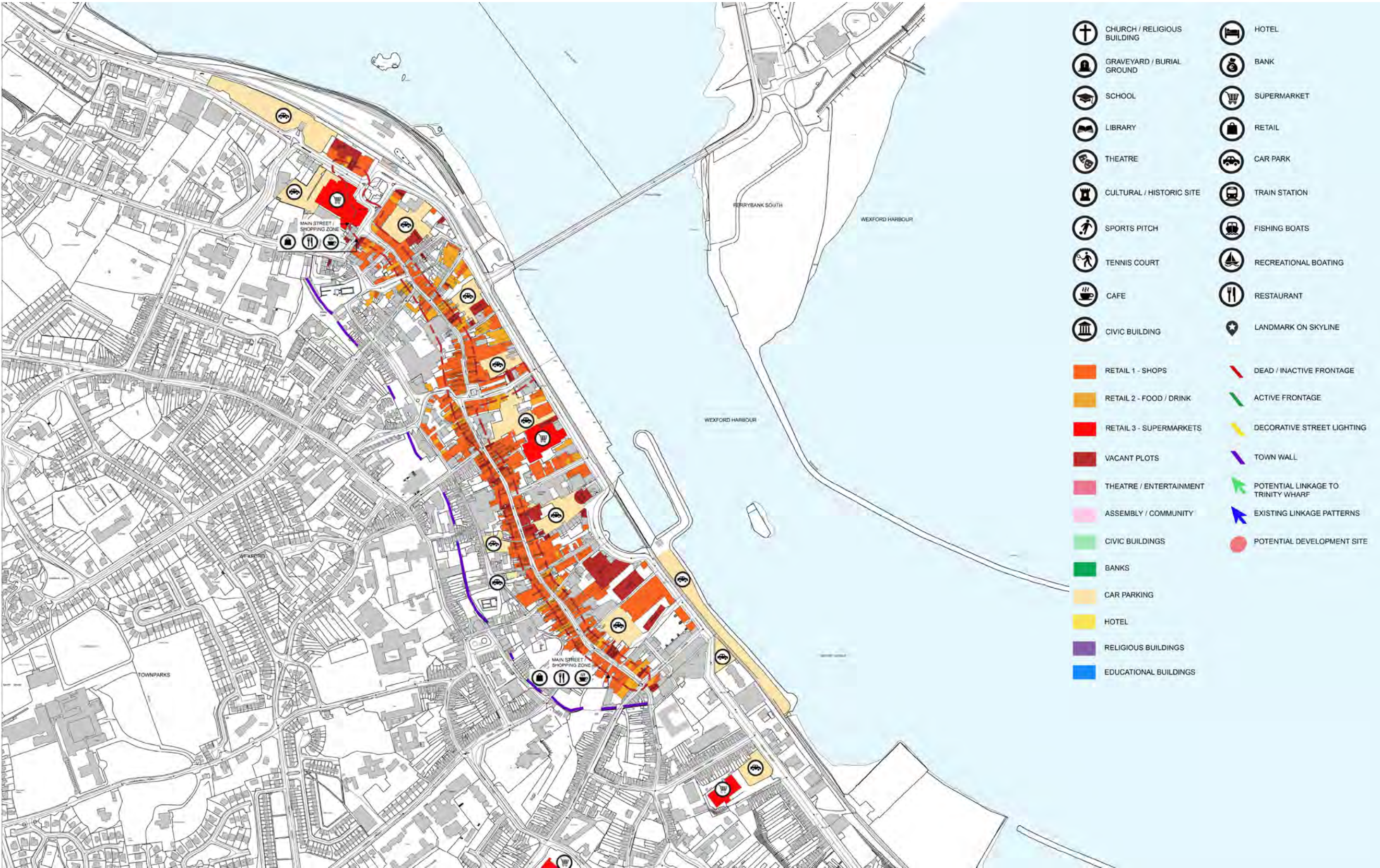
- Existing retail varied but concentrated on Main Street
- Vacant sites available for large retail in town centre
- Town centre has physical capacity for diverse retail offer with available sites
- Providing a mix of retail is key to consolidating and sustaining town centre viability
- Challenge is that most sites are off Main Street - attractors needed to pull people to Quays (eg. The Crescent) so that the retail area can expand
- Otherwise there is a risk of loss of diversity on Main Street through site assembly leading to reduced retail offer and economic vulnerability

Actions Emerging from Analysis of Existing Uses

- Public Realm Improvement Strategy to provide key spaces along the Quayfront to attract people and extend movement from Main Street and address deficiencies as identified.
- Overall Vision to include new routes connecting with development opportunities
- Planning policies should ensure the town retains a variety with mix of uses, and mix of types of retail offer are required to ensure town retains commercial robustness
- Opportunity sites to be identified and tested for appropriate uses that maximise active frontage and which fit in with the massing and scale of the surrounding urban context
- WCC to commission a detailed Retail Management Strategy including analysis of retail offer, including vacancy, unit size and space, and future potential demand. This should be regularly updated to ensure that a varied retail offer and mix in the town centre can be provided in planning decision-making
- WCC to commission design briefs for specific infill sites as planning guidance for developers to provide greater development certainty. These will take account of site context, urban design and built heritage qualities and advise on appropriate design and development quantum.
- WCC to commission Detailed Residential Vacancy Study to assess residential provision, vacancy and quality in town centre to inform strategy to populate town centre in tandem with other uses. The National Planning Framework (DHCLG 2017) requires consolidation of towns and villages including reusing brownfield sites, vacant and under-used buildings.



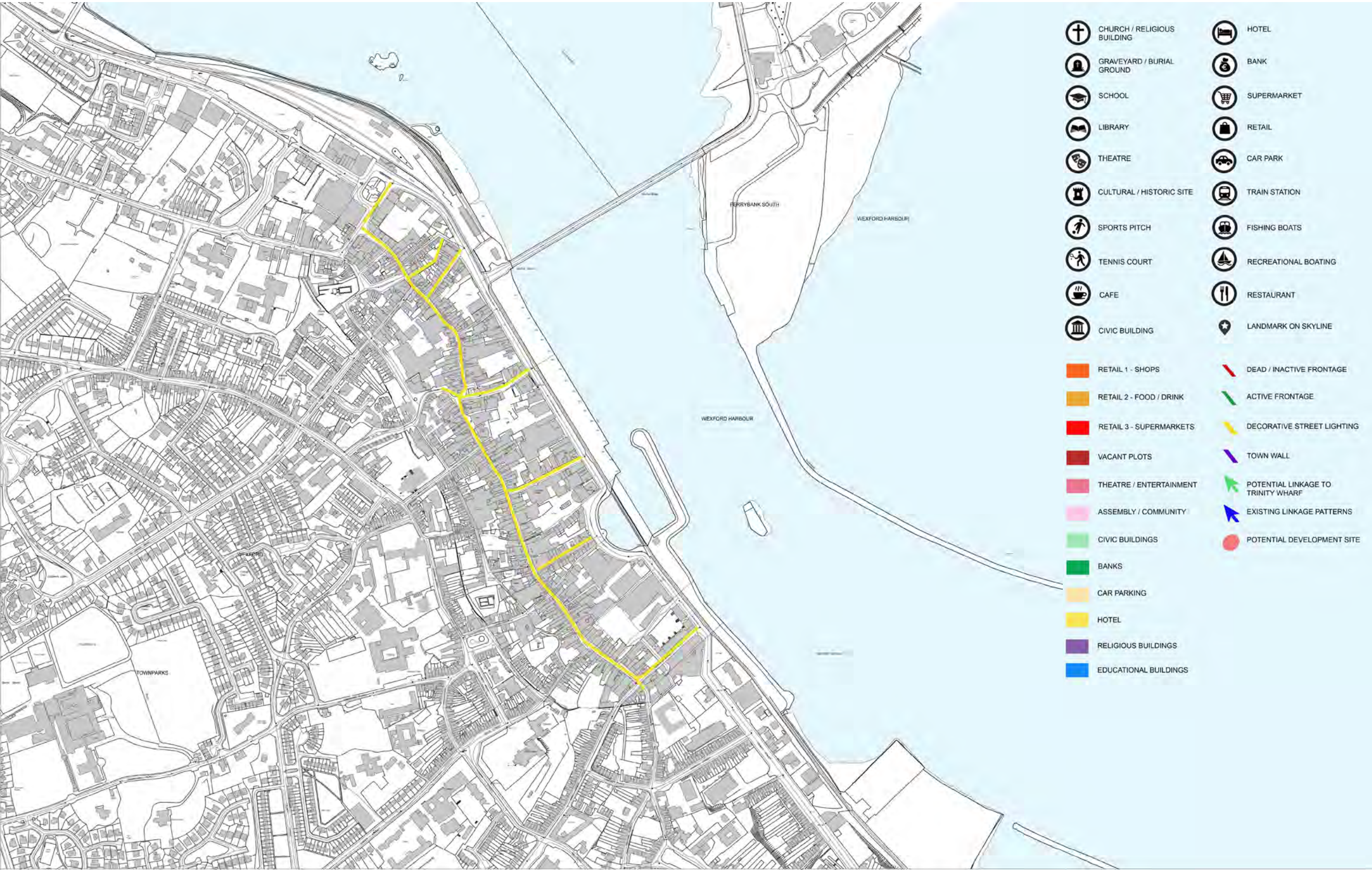
TOWN CENTRE LAND USAGE



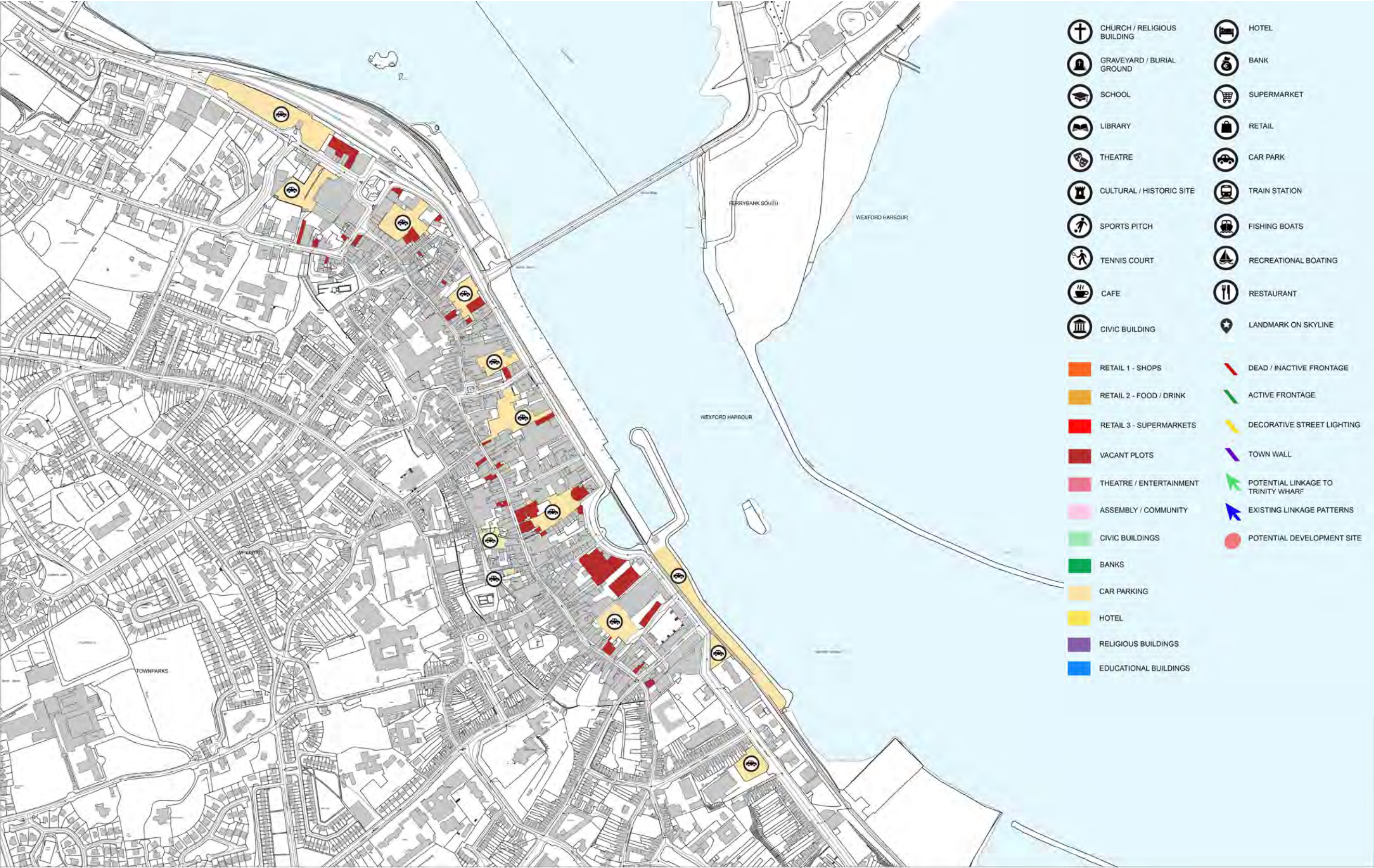
RETAIL BREAKDOWN



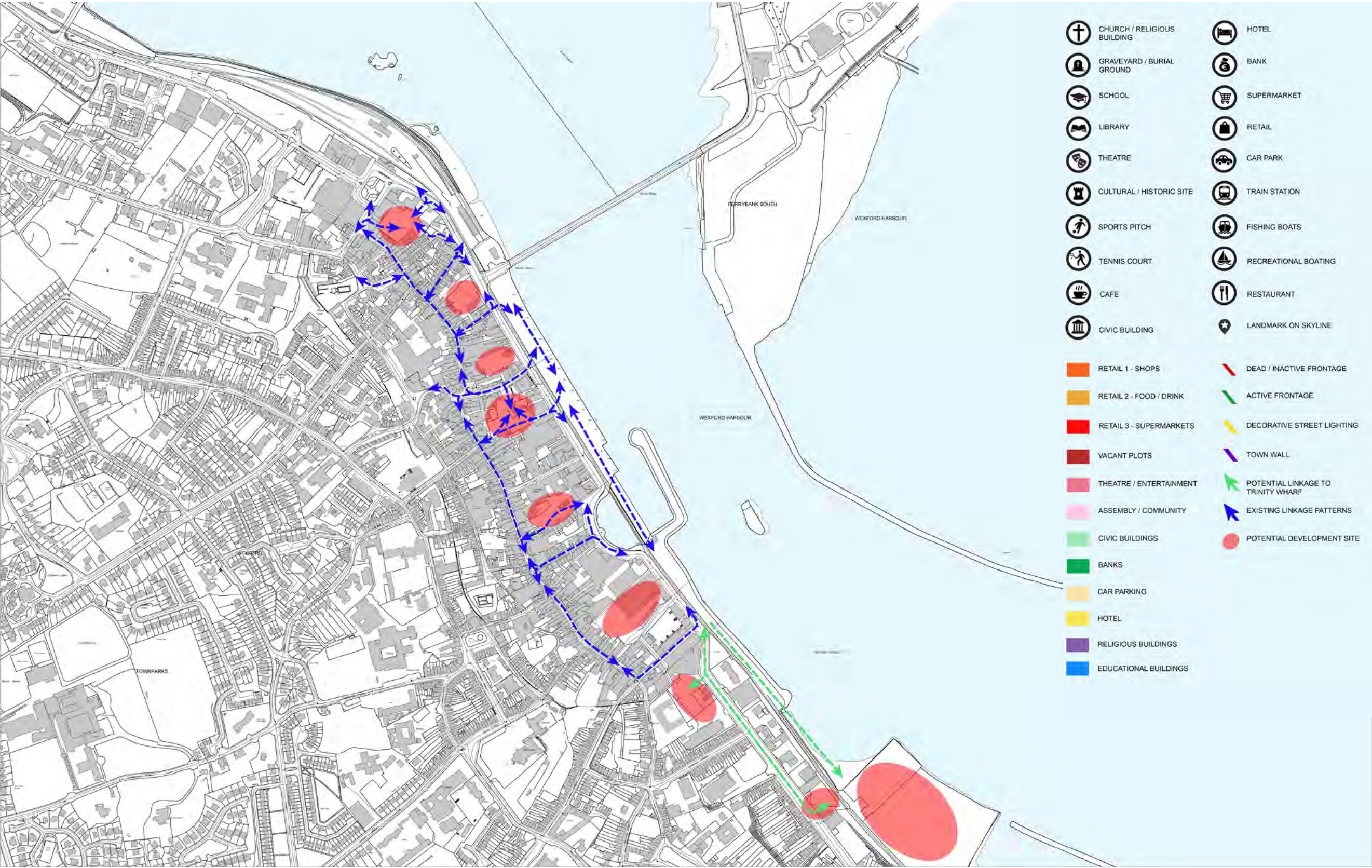
FRONTAGE & VACANCY



WELL-LIT STREET CONNECTIONS



VACANCY & PARKING



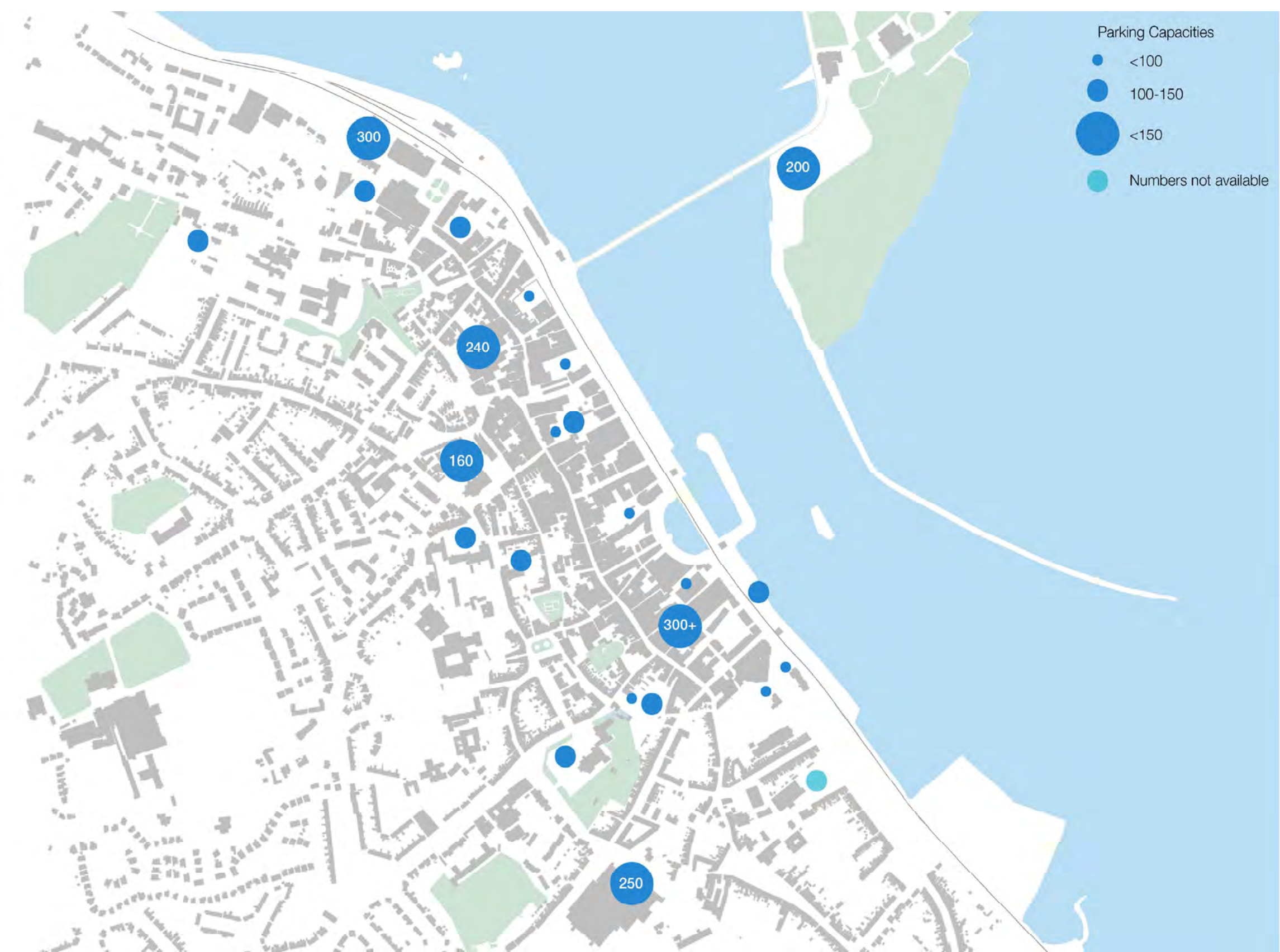
LINKAGE & POTENTIAL DEVELOPMENT SITES



EXISTING RETAIL OFFER



PROPOSED RETAIL OFFER



EXISTING PUBLIC OFF-STREET CAR PARKING



PROPOSED PUBLIC OFF-STREET CAR PARKING WITH WALKING DISTANCES

4.6 TRAFFIC / MOVEMENT ANALYSIS

Wexford depends on bringing more people into the town for shopping, services etc. The location of parking facilities distributed along and at key intervals of the main development is vital for persons with a disability and the elderly.

Providing universal access and creating an Age Friendly Town are essential to ensuring Wexford's attractiveness as a destination for everyone and as a good place to live as independently as possible. Applying the design principles of universal access to a physical environment generally means that it also automatically becomes an age friendly environment. In practice being age friendly is also about small design considerations that greatly improve an area for older people, for example the provision of suitable seating with handles, longer pedestrian crossing times at larger junctions or the pleasant microclimate of an area all contribute positively to walkability for older people.

The principles of universal design and accessibility at all design stage of the proposals will ensure and support sustainability; 13% of County Wexford's population is registered as having a disability this equates to 18,000 people (Census 2011). This along with an aging population (forecasts 21% of population will be over 65 in the next 25 years) necessitate universal access so that this cohort of the population can be considered a potential and growing customer base.

The opportunity exists to develop an accessible tourism branding attracting both domestic and international visitors to Wexford, universally accessible and age friendly. Providing a universally accessible town centre is therefore an essential factor in the town's economic well-being.

Achieving universal access involves both traffic management and public realm design. This includes the provision, location and design of bus stops for local links and shuttle bus services and 'connectivity points/hubs' between bus, train, cycle and parking areas as part of an integrated and universally accessible traffic and movement plan.

It also requires an audit of existing parking for the disabled and the provision of age friendly parking in suitable locations to ensure maximum accessibility.

These principles are essential to improving the attractiveness of the town centre as a destination and will be incorporated into detailed development proposals to improve the public realm.

Roughan & O'Donovan Consulting Engineers conducted traffic studies to inform the Spatial Implementation Plan. Their report is provided as an appendix to this document.

The focus of the traffic studies were:

- a) To capture the current traffic circulation patterns within the town centre so as to establish the relative importance of each route and street in traffic terms;
- b) To inform traffic capacity assessments where relevant for key junctions and to assess the scope for improvement and the likely impact of further development and growth in the town centre;
- c) To identify where traffic interactions with high pedestrian flows may be of concern, and to inform proposals for potential extension of pedestrianised streets;
- d) To assess the potential for expansion and improvement of the pedestrian zone in the town centre to benefit retail and economic activity;
- e) To develop proposals for better integration between the quay-front area and Main Street for pedestrians;
- f) To inform public realm improvement proposals at key locations;
- g) To illustrate what car parking capacity is available as appropriate to the demands across the town centre area, and to allow the impact of any potential changes to be assessed;
- h) To develop access proposals for development of the brown-field Trinity Wharf site.

Roughan & O'Donovan identified key actions relating to changes to the town centre traffic system, improved pedestrian crossings across the Quays, proposed areas for public realm improvements.

Where the traffic study has proposed removal of on-street parking to enable public realm improvements, this does not apply to disabled parking spaces which should be retained and incorporated within the improved street paving works. A further detailed study may be required to assess the adequacy and appropriate location of disabled parking provisions within the town centre generally.

As part of their study, Roughan & O'Donovan conducted traffic capacity studies at the Wexford Bridge junction. Their findings, which identified that queuing times could be reduced by adjusting traffic signalling cycle times, have been implemented.

Roughan & O'Donovan also conducted a town centre parking review which found that there is substantial existing parking capacity within the town centre.

Key Actions Emerging from Traffic / Movement Studies

Preparation of a Town Centre Accessibility/Movement Audit addressing existing provision and identifying requirements for the disabled and older people and to incorporate these into any traffic / public realm improvements. This includes provision for parking and public transport stops.

Street system alterations at and around Redmond Square, Slaney Street, West Gate and Redmond Street to reduce vehicle and pedestrian conflict and improve flow

Changes to the Town centre traffic system including:

- Pedestrianise Slaney Street;
- Pedestrianise Selskar Street;
- Pedestrianise Charlotte Street;
- Traffic Link from Rowe Street across Main Street to Pettit's car park to be closed;
- Allen Street to Main Street and Henrietta Street closed to traffic (eastbound);
- Harper's Lane link to Main Street closed to traffic (westbound);
- Peter Street link to Main Street closed to traffic and one-way direction reversed from Patrick Square towards School Street;
- Bride Street to Main Street traffic direction reversed for link into Main Street Southbound for final block to Kings Street.

Improved pedestrian crossings across the Quays including:

- Align existing pedestrian crossings with boardwalk locations on the quay where possible;
- Additional crossing at Charlotte Street to align with boardwalk on the quay – signal linked with the Wexford Bridge junction;
- Three additional crossings on the Crescent and Paul Quay which will be zebra crossings on raised ramps;
- Signal Crossing at the King Street junction

Proposed public realm improvements including:

1) The Crescent;

- Remove existing parking apart from spaces for the disabled.
- Remove Traffic Turning Lanes
- Narrow Carriageway Width to 6.5m
- Provide additional width to footpath on both the town and water sides
- Retain bus stop(s).

2) Henrietta Street: repave as a shared space to match Main Street

3) Anne Street: re-pave as a shared space to match Main Street.

4) Common Quay Street: Reduce width for traffic to 6m maximum in adjusted paving and extend all the way to Commercial Quay with removal of the few on-street parking spaces beside the Old Market. Upgrade crossings at car park entrances to Bank of Ireland and Pettit's Supermarket for continuous footpath priority. retain bus stops and loading bays.

5) Cornmarket / Abbey Street Junction: reduce size of roundabout with small painted island and widen footpaths all around the perimeter, especially in front of the Arts Centre.

6) Railway corridor / road side of the Quays from Wexford Bridge to Trinity Street: remove all on-street parking, widen the footpath on the town side and provide better integration of the railway into the paving of the quay side. Add planter boxes alongside the railway for some colour in the rather drab street space and to highlight the segregation between road and railway track.

7) Wellington Place / Monck Street / Charlotte Street (Food and Pub zone):

- Develop a small plaza to create more pedestrian space along the western side of the R730 regional traffic route to link Skeffington Street past Monck Street and through the Bridge Junction to Charlotte Street.
- There is already a variable step back in the building line, and for the short section nearest Charlotte Street, the road can be shifted towards the sea-front by 2m because the traffic lanes are too wide.
- Provide some features to enclose the space at the northern end of Monck Street and separate this from the busy traffic route along Wellington Place.
- Retain limited traffic access to Skeffington Street for residents

8) Two-way cycleway along the quays boardwalk and linking over Wexford Bridge to the northern shore for connection towards Curracloe. (Refer to separate report by ROD for Wexford Harbour Cycleways).

These actions have been incorporated into the Spatial 'Vision' and public realm strategy set out in the next Section.

5.0 PROPOSED SPATIAL STRATEGY

5.1 Overall Vision

The strategic economic activities (Section 3.0) identify investment in Wexford’s rich built heritage and in the public realm as essential to the economic development of the town.

This includes visitors experiencing the Viking origins of the town reflected in the historic street layout and laneways, the Anglo-Norman expansion with the town walls (including West Gate Tower) and medieval churches and ruins such as Selskar Abbey, Wexford’s growth as a trading centre through the variety of 18th and 19th century buildings along the quayfront and within the town such as granary stores, civic buildings and churches, and Wexford’s 20th century role with the railway lands and industrial sites around Trinity Street and Trinity Wharf.

The strategic economic activities identified in Section 3.0 focus on:

- Development of Trinity Wharf as a new urban mixed-use business quarter within walking distance of the town centre
- The Crescent as the town’s centre-piece with active uses around.

The economic strategy specifically identifies connectivity between Trinity Wharf and The Crescent as essential to maximising the potential of both of these areas.

The economic strategy also identifies improvements to the quayfront and public realm generally, and the development of heritage and tourism related activities and routes around the town.

These recommendations reflect the spatial analysis and form the basis for the spatial strategy.

The spatial analysis identifies the need to better protect Wexford’s built heritage (Section 4.2) as an economic asset by:

- Introducing effective protective policy actions,
- Improving public awareness of the built heritage as an asset through marketing/publicity and regular events to engender pride in Wexford of their unique heritage.

The Urban Character Analysis (Section 4.3) forms the basis for developing the public realm strategy. It identifies specific actions to address the need to expand the main pedestrian areas beyond the existing narrow spine along Main Street by:

- Improving the attractiveness of the east-west streets, laneways and spaces as active pedestrian routes areas
- Managing traffic and pedestrian movement in areas such as The Crescent, Cornmarket / Common Quay Street and Redmond Square in tandem with attracting new development.
- Improving the pedestrian areas along the Quays and addressing the severance between the waterfront and the town created by both the railway and vehicular traffic, extending to Trinity Wharf
- Creation of a heritage trail around the town

The public realm condition survey (Section 4.4) identifies :

- The need for an overall coordinated public realm improvement strategy to ensure continuity and consistency,
- Priority public realm improvement works to Crecent Quay, Commercial Quay and associated streets/ lanes connecting with Main Street
- The need for resources to provide for ongoing maintenance, monitoring and upgrades generally

The Traffic and Movement Analysis conducted by Roughan & O’Donovan (Appendix: Traffic and Movement Report) confirms the priority actions identified in the public realm condition survey. It identifies simple signal modifications at the Wexford Bridge/ Commercial Quay junction to improve traffic flow and surveys parking capacity and also prioritises works to provide and improve pedestrian crossings along Paul Quay, Custom House Quay and Commercial Quay to address safety concerns.

Analysis of the existing uses considers how the changing nature of retail and parking can be accommodated in such a way as to improve the attractiveness of the town centre as a retail location while also protecting and valuing the quality of the built heritage as an economic asset.

All of these findings and recommendations inform the overall vision. The overall vision is therefore informed by and is a result of the Economic and Spatial Analysis.

The key components of the ‘Vision’ are:

- 1) To add to the high quality built heritage of Wexford as an attractive place to work, live and visit.
- 2) To identify development sites and propose uses that will contribute and add value to the quality of Wexford.
- 3) To create an attractive high quality public realm integrated with the existing Main Street, that people want to come to, stay in and enjoy using
- 4) To propose appropriate uses for areas along the Quays that will activate and animate the Quays, bring people into the town, and complement and enhance the existing Town Centre.
- 5) To provide a strategy for the changing access and parking requirements for the town centre as a retail destination as development takes place.

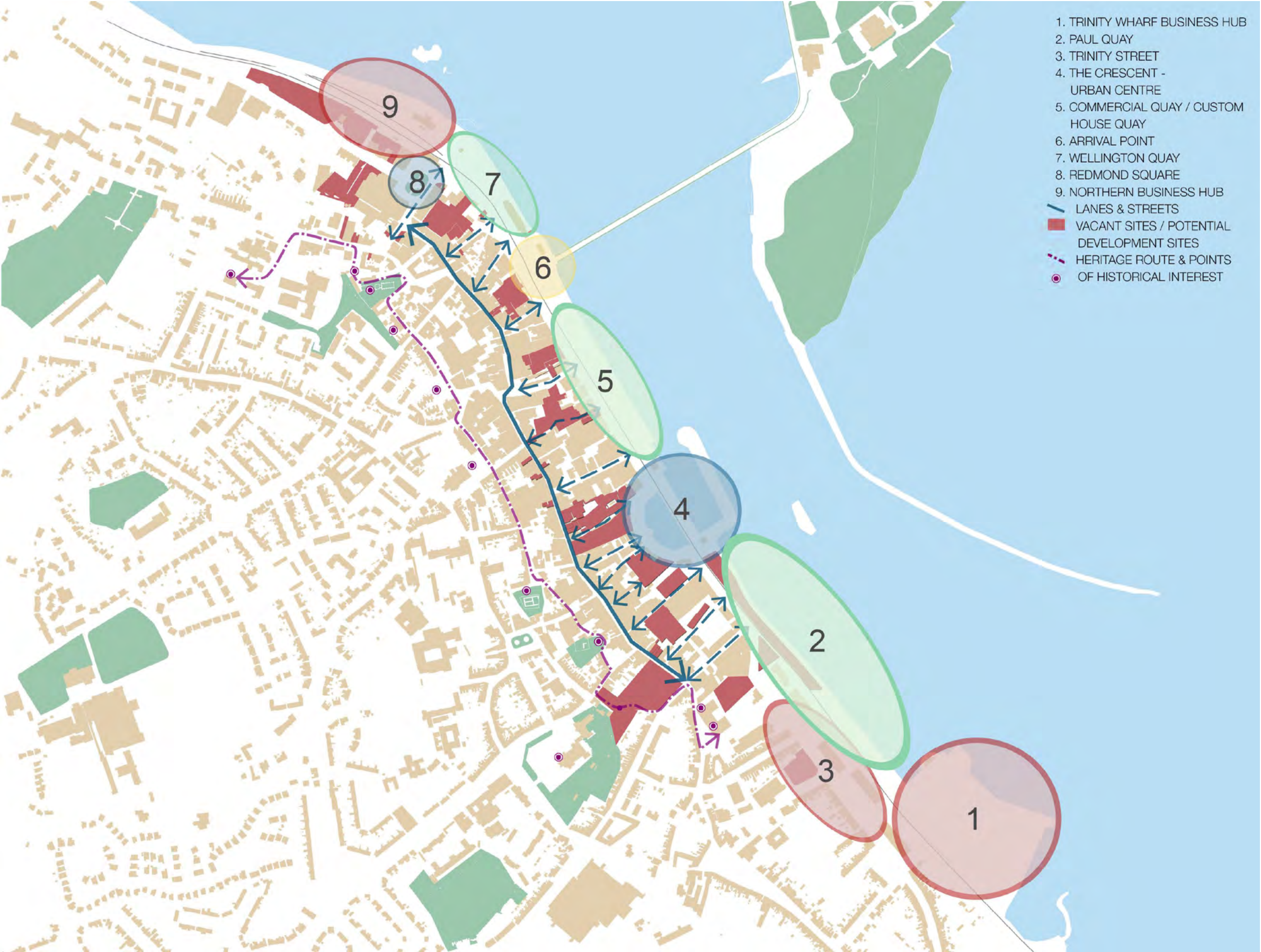


OVERALL VISION

5.2 Development Objectives

The following development objectives are the basis for the more detailed proposals in Section 5.3:

- 1) Development on a planned basis of Trinity Wharf as a flexible serviced urban business quarter and as an extension of the town centre southwards.
- 2) Critical to the success of Trinity Wharf is improved connectivity with the Town Centre by extending and transforming Paul Quay into an active public space to directly link with The Crescent, and by public realm improvements to Trinity Street.
- 3) Trinity Street can then gradually transform into a high quality urban mixed commercial/residential waterfront area including landscaped parkland that connects to and integrates with Trinity Wharf.
- 4) Creation of the Crescent area as a focal point for the Town Centre at the mid-point of the Historic Quays between Wexford Bridge and Trinity Wharf. This involves a series of works including public realm improvements to create a people centred place, reuse of existing buildings and redevelopment of adjoining lands to create varied active uses with a sustainable mix of town centre uses. It also includes cleaning and restoring the Crescent to create a controlled, usable water feature and reconfiguring the protective arm to improve water flow and desilting so that this section of the quays can be better utilised.
- 5) Commercial Quay/Custom House Quay to be improved as an accessible multi-functional space for managed events and maritime berthing
- 6) Wexford Bridge/ Commercial Quay junction to be transformed as a high quality public space signifying it as the major arrival point into the centre of Wexford at the northern end of the boardwalk to Trinity Wharf.
- 7) This space will draw people along Wellington Quay to Redmond square and open up the opportunity to redevelop the existing sites on Wellington Quay
- 8) Public realm improvement to the Redmond Square area as a main arrival point into the town centre from the north and by public transport – improving both traffic movement and quality of pedestrian experience
- 9) Potential town centre expansion northwards with a residential/ business/ transport hub as part of a long-term public transport strategy (eg. possible improved rail connectivity between Dublin and Rosslare Europort)
- 10) Extend pedestrian permeability by creating active frontage and improving the quality of public realm on lanes and streets between Main Street and the Quays, and along the Quays.
- 11) Upgrading and improving the quality and care of the existing built fabric throughout the town centre – in particular along the side lanes off and behind Main Street, through infill development, upgrading of existing built fabric, general upkeep and tidiness, high quality lighting, planting and ‘pocket parks’ and introducing active uses with passive policing, giving people a sense of welcome, care and safety. High quality urban design and architecture that complements the existing urban fabric and respects the existing skyline is essential.
- 12) Development of the north-south ‘Heritage Route’ with increased active uses and visitor offer and experience, including public access and appropriate active use of historical attractions, improving quality of place by reducing vehicular dominance and introducing high quality hard and soft landscape around significant cultural and religious buildings.
- 13) Lighting is a fundamental integral part of the overall strategy. The quality of lighting will contribute to the Quays being considered to be a safe place after dark. Integration of accent or dynamic lighting can contribute to the area becoming a destination in the evening. This has successfully contributed to the economic development of places such as Lyon, Edinburgh and Portrush. The proposed strategic approach in Wexford provides an opportunity for lighting to be designed as an integral part of the Quays, to optimise the safety benefits and play an important role in defining the quality of place.



KEY DEVELOPMENT AREAS ALONG QUAYFRONT

Key Actions to deliver the development objectives:

The thirteen spatial objectives consist of:

- area based objectives, including the Crescent Quay area and Trinity Wharf,
- broader urban design objectives including traffic and movement, built fabric and public realm,
- and site development principles, including uses, frontage and massing.

The successful implementation of these objectives will require key actions by Wexford County Council in the following areas:

- progressing partnerships with State and Local Agencies for the development of a third level educational institute (see Section 6.2)
- investigate options with a view to preparing applications for funding for visitor attractions / tourism related development (see Section 6.3)
- developing and implementing policies relating to heritage, conservation and urban design (see Section 6.4).
- setting up of a 'town team' and preparation of a public realm management plan (see Section 6.5)
- implementing a programme of works related to the Crescent including traffic management, public realm improvements, building refurbishment and site development (see Section 6.6)
- commissioning a site-specific masterplan for Trinity Wharf including appropriate permissions to enable development (see Section 6.7)
- implementing a coordinated programme of traffic management measures, public realm improvements and site development on an area by area basis. (see Section 6.8)
- ongoing monitoring, management and maintenance.

The implementation and successful delivery of these objectives require commitment by Wexford County Council to coordination, management and resourcing on a long-term basis.



OVERALL VISION - MOVEMENT AND ACTIVITY ZONES

5.3 Proposed Development Areas

5.3.1 Trinity Wharf, Paul Quay Extension, Trinity Street

A key action of the Economic Strategy (Section 3.2.4) is the development of Trinity Wharf as a new signature urban business quarter over the next five to ten years to support the transition of the town towards a higher-value knowledge and leisure economy.

Trinity Wharf will be an exemplary waterfront development designed to attract a range of higher end financial services / software development / technology companies with a corporate meetings/ communications centre. It may also provide a Wexford base for an allied third-level education institution, and a hub for start-up companies in emerging new economic sectors.

The potential for a business hotel and high quality residential accommodation to attract companies (eg. managed-to-let) should be considered as part of a masterplan to help provide the variety and mix of uses for Trinity Wharf to become a vibrant urban quarter. Providing this residential component with views along the waterfront would be particularly attractive.

Providing good quality direct connectivity with the rest of the town centre along the waterfront with Paul Quay will be critical to maximising the economic potential of both Trinity Wharf and the Crescent.

The location of a marina with Trinity Wharf will provide water based activity and interest. RPS Engineers were commissioned separately by Wexford County Council to prepare initial preliminary studies regarding the size and location for a marina. Further work is required regarding the business operating model and on-shore requirements.

The quantum and phasing of development needs to be flexible to meet various economic conditions and opportunities. Each phase should be designed as a complete entity within the overall plan. Short-term ‘meanwhile’ uses may be considered as part of the overall development strategy for creating interest and to bring Trinity Wharf into active use at an early stage of development. These may include establishing a park and/or an informal event space. An overall landscape and infrastructure plan is required with supporting design standards and plot design briefs to ensure high quality.





TRINITY WHARF AND PAUL QUAY EXTENSION - CONCEPTUAL PLAN



TRINITY WHARF - INDICATIVE MIXED USE BUSINESS HUB DEVELOPMENT

Preliminary site capacity studies indicate that Trinity Wharf could provide an urban scale of up to 5-8 storey buildings with limited parking provided as a lower level under-croft and/or in a separate structure. The layout, height, scale and quantum of development are subject to site investigations. Existing ground conditions may be a major constraint as much of the land is reclaimed and was previously in industrial use. These require full investigation to inform the overall site strategy.

Another constraint is work that may impact on the foreshore and surrounding marine biodiversity. The existing condition of the sea wall appears in some disrepair and needs upgrading. Other works that are likely to impact on the foreshore include a drainage connection to the Trinity Street WW Pump Station. All foreshore works including the marina, sea walls, drainage, etc. must protect the marine environment. These will require environmental assessments as part of the consent process.

Vehicular accessibility is also a constraint, which may limit the development capacity. The Traffic and Movement Report (see Appendix) recommends that the town centre parking standards in the current Town Development Plan should be reviewed to reduce over provision and car dependency in the town. Provision for more sustainable modes of transport such as facilitating 'active' movement would reduce traffic demand. This includes good connectivity and provision of facilities for pedestrians and cyclists, as well as off-site parking solutions such as provision of a 'park and ride' at the ring road with shuttle bus and bicycle parking facilities.

Achieving the objective to transform Trinity Wharf into a signature business quarter over the next 5-10 years will require careful planning and management of the development process for that period. The development of Trinity Wharf will also increase private sector interest in the lands along Trinity Street which will need to be carefully managed.

The design of buildings to Near Zero Energy Building (NZEB) standards along with other environmental standards is essential to attracting business. This will require a local skilled workforce trained in sustainable construction.



TRINITY WHARF - PRELIMINARY URBAN DESIGN STUDY WITH 8 STOREY LANDMARK BUILDING AND PUBLIC SPACE

Key Actions

- 1) WCC to commission Trinity Wharf Development Plan. This will involve site investigations, preparation of an overall masterplan including proposed uses, phasing/implementation, preparation of overall scheme design and all information required for consents. Once planning approval and other consents are received, the initial phases can commence, including site preparation works and the provision of infrastructure so that serviced development sites are available on a 'ready to go' basis. Amendments to the overall planning application will be possible to provide for specific user requirements.
- 2) WCC to review and update parking standards to provide for town centre type density at Trinity Wharf and other town centre locations. These should also inform an overall movement strategy in the new Wexford Municipality District LAP to encourage sustainable 'active' movement and reduce car dependency.

5.3.2 The Crescent and Paul Quay

The Crescent

The Crescent is midway along the Quays between Wexford bridge and Trinity Wharf. It is a semi-circular space originally designed for boat-turning. Today it is somewhat neglected, dominated by vehicles, vacant buildings and disconnected from the waterfront. However, as identified in the Economic Strategy, its location, shape and history mean it is significant to Wexford’s future revitalisation.

The team explored several possibilities, including draining and filling the water body and/or redirecting the traffic parallel to the rail-line. Each of these diminish the special quality of the Crescent as a major focal point and the only place in the town where there is still a historic relationship between Main Street and the river. They also conflict with the protected status of The Crescent Quay walls and basin which is understood to still be cobbled.

Therefore, the team explored a programme of maintenance, repair and restoration of the water body combined with traffic management and public realm improvements around the Crescent designed to create an attractive public space with water-based activities.

The proposed works, which may be phased include:

- 1) Improve the quality of the public realm by removing on-street parking, reducing road widths, removing turning lanes and widening footpaths on both town and water sides, with space for pedestrians to congregate around the Statue
- 2) Installation of good quality paving, lighting and street furniture that complements the existing historic buildings including across the road surface
- 3) Provide for active ground floor uses around The Crescent – particularly restaurants and cafes with outdoor seating areas extending into The Crescent
- 4) Put in place an engineering system to control water levels and prevent silting so that the Crescent can be used for a variety of water-based leisure activities – that retain its water-based heritage while expanding its use as a dry amphitheatre style outdoor performance area. This would be a highly visible, all-ages event space with traditional fun fair, outdoor performances, concerts, etc. when dry, and low-impact water leisure when wet, for example boating, kayak – polo, etc.

These will encourage associated businesses such as cafes, bars and restaurants, arts and craft shops facing into The Crescent to thrive, and to unlock the development potential for adjoining areas as identified in the Wexford Town Centre Retail Strategy produced by Bannon in February 2017.

The Riverfront

The connection with the river can be further strengthened by differentiating the boardwalk in front of The Crescent so that it reads more like a bridge or narrow causeway, and by proposed works to the protective arm to reduce silting, improve waterflow and increase moorings.

The Ballast Office

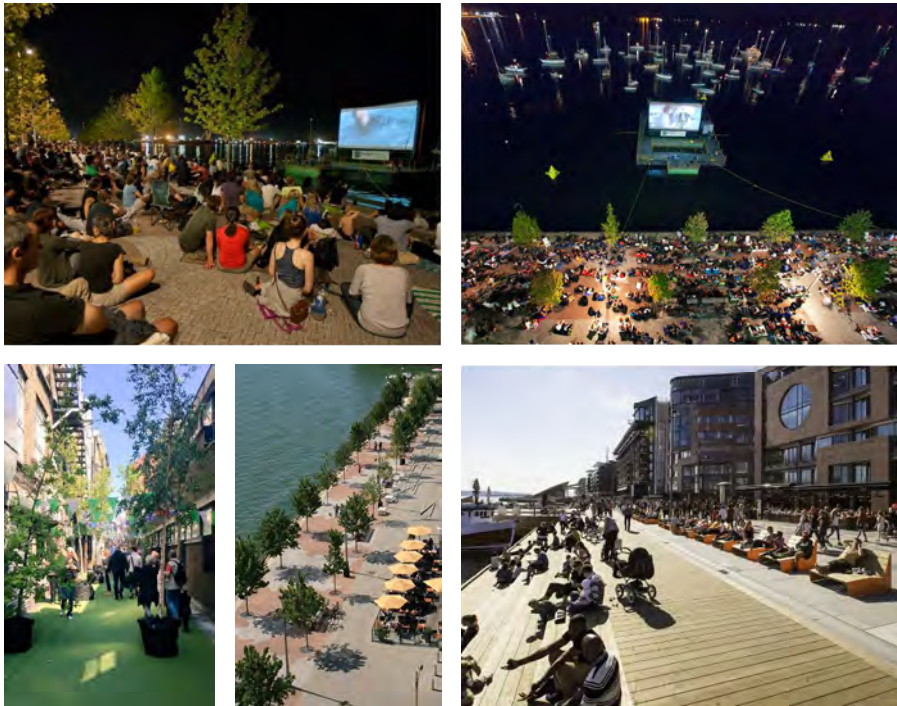
The historic Ballast Office is an important historic landmark at the centre of The Crescent. Urgent repair works are needed to maintain and protect this building. The economic strategy identifies it as having an important function as a public visitor attraction telling the ‘Wexford Story’ with tourist information, a small cafe and arts/cultural activities.

Henrietta Street

Henrietta Street is an important connection between The Crescent and Main Street. It will be included as part of the traffic management and public realm improvements around The Crescent to provide increased pedestrian footfall.

Keyser’s Lane

Keyser Lane is one of several historic laneways opening off Main Street to the river. Today it opens into a backland area with car park. There is potential for small-scale 2-3 storey urban infill development that re-establishes the urban laneway pattern with a mix of live/work spaces for creative artists and start-up businesses. These may include residency spaces which would extend the capacity of organisations such as the National Opera House and Wexford Arts Centre to increase their attraction to draw national and international artists into the town, and link with events in the Ballast Office and The Crescent. The detailed plan should restore building lines and include green pocket spaces with passive surveillance to create interest and provide a feeling of safety. Connections to the north and south could provide a secondary pedestrian route as part of creating a tight urban grain and improving pedestrian permeability.



The Crescent - Potential



THE CRESCENT AND PAUL QUAY



THE CRESCENT - PUBLIC REALM AND INFILL DEVELOPMENT

South of Henrietta Street

The attraction of The Crescent as an active public place and strengthened footfall along Henrietta Street increases the development potential for a large retail and other mixed use development in the area south of Henrietta Street which will allow this area to be opened up as a vibrant, busy connection between Main Street and The Crescent. This is consistent with the recommendations in Bannon’s Wexford Town Centre Retail Strategy February 2017.

Paul Quay

The traffic and movement analysis identified pedestrian safety concerns on Paul Quay due to the lack of paving and pedestrian crossing points. This is a priority that needs to be addressed by:

- 1) relocating the Paul Quay car park entrance to the King Street junction opposite the Talbot Hotel
- 2) to provide several defined pedestrian crossing points across the rail-line and street.
- 3) creating a landscape feature along either side of the rail-line. This will require reconfiguration of existing parking spaces within Paul Quay car park and along the street.

Paul Quay will in time become an important connection between the Crescent and Trinity Wharf. It is therefore envisaged that it will become an integral part of the quayfront and used for informal and passive activities. General infrastructure such as power supply and WIFI would be provided as part of public realm enhancement to allow ‘pop up’ uses such as coffee and ice cream vendors or to allow seasonal out-door use by local operators, such as the Talbot Hotel or by independents. The development of a marina between the Crescent and Trinity Wharf may also provide animation and interest along Paul Quay.

Key Actions

Short Term (2018-2020):

- 1) Implement Traffic calming and public realm improvements to The Crescent and Henrietta Street
- 2) Implement public realm improvements and safety measures along Paul Quay
- 3) Prepare and implement maintenance programme for the Ballast office
- 4) Prepare business and urban design development plans for Keyser’s Lane car park and adjacent lands (Ballast Office) in consultation with stakeholders
- 5) Prepare urban design development plan for area between Oyster Lane and Henrietta Street in consultation with landowners
- 6) Prepare plans for the reconfiguration of the Protective Arm

Medium - Longer Term (2021-2025):

- 1) Implement restoration/renovation programme for the Ballast Office as a public building
- 2) Implement engineering system to control water levels and prevent silting of the Crescent
- 3) Implement reconfiguration works to create the ‘boardwalk’ across the front of The Crescent and to the Protective Arm to create functional and protected Moorings
- 4) Prepare and implement detailed proposals for Paul Quay as part of the public quayfront in coordination with proposed Trinity Wharf and Marina Masterplan.
- 5) Coordinate development proposals for neighbouring sites

5.3.3 The Northern Quays

The northern quays extend from The Crescent to Wexford Bridge. This area includes the quayfront boardwalk, Custom House Quay and Commercial Quay, and various streets and lanes connecting to Main Street. Particular regard has been given to the better use of the public realm and infill development. These are described below.

An important feature of the Quays is the urban character created by the fine urban grain of the historic urban form, which has determined the width of plots and buildings. The floor to floor height of most existing buildings is much lower than is expected by modern developments. The contrast is quite evident where new development is juxtaposed alongside older buildings such as the ‘Centenary Stores’, and where new development has been inserted behind other buildings, such as Shaws department store. The cumulative impact of this with further development may ‘tip the balance’ and adversely affect the overall urban character of the town’s heritage.

It is therefore recommended that planning policies are adopted to safeguard the overall urban character with urban design guidance prepared and available to inform specific development proposals. This should include urban design principles for specific areas and sites and a requirement for all planning applications to include an urban design statement.

Policies are also needed to create continuous active ground floor frontage along the quayfront, with retail and non-retail uses such as restaurants, cafes and shop displays providing interest for passers-by to stay and linger.

Shopfronts, signage and window displays need to be carefully managed and coordinated by the Council to ensure that they reflect and enhance the quality of both the existing commercial buildings and the proposed public realm investment.



THE NORTHERN QUAYS

Quayfront

The expanse of the wide quayfront opening out to the wide river dramatically contrasts with the intimate compact scale of the town. The broad expanse of the quayfront is interrupted by the rail-line which provides an element of interest and activity. These are key features unique to Wexford and part of the town's identity. The overall character and feel of the quayfront must remain one of 'rugged robustness'.

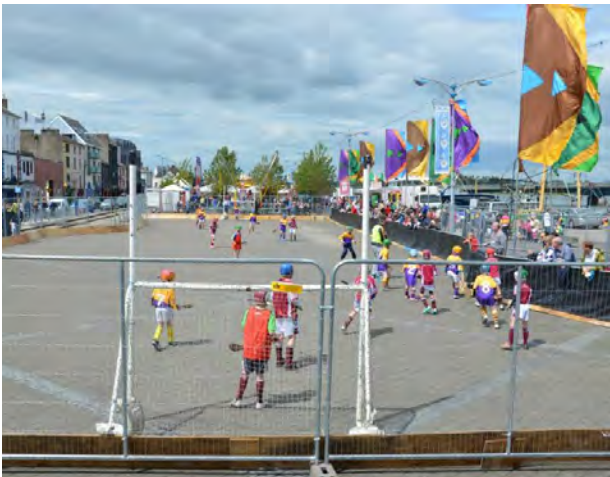
As identified in the Public Realm condition survey, the existing materials and finishes have suffered from wear and tear and need to be upgraded in some areas.

The quayfront is currently used, but not designed for, managed temporary events. Services need to be integrated into the public realm to improve safety at events including fixing positions for temporary screens/ fencing and finishes in areas used by vehicles and equipment needs to be fit for purpose. This area can then become a totally flexible multi-purpose space for both organised, managed events and informal activity.

The quayfront along Commercial Quay is still used for mooring of fishing boats. These provide visual interest and an element of activity. As identified in the Economic Strategy, there is scope to develop this activity as an 'open air' maritime visitor attraction. as part of providing a permanent attraction. This would also involve provision of permanent servicing as part of the public realm improvements.

The RNLI station on the north side of Wexford Bridge should be retained in its current location for operational reasons. There is an RNLI shop attached to the RNLI station. The use of the area around it could be enhanced by providing a boatbuilding workshop/ museum which, with the existing berthing would form part of the maritime visitor attraction.

The rail-line needs to be integrated into the design of the space, with defined crossing points to improve safety. Further details on this are provided in the Public Realm Strategy (section 5.3).



Cornmarket / Bullring / Common Quay Street

Cornmarket, the Bullring and Common Quay Street all form part of a potentially high quality sequence of urban spaces at the heart of the town centre.

At the western end St John's Gate Street curves down past the new Library by the town wall and opens into a triangular space in front of the Wexford Arts Centre which currently contains a mini-roundabout. The prevailing scale and character is mainly traditional three storey domestic height with the exception of a modern five storey office building on one side. The Wexford Arts Centre faces towards Cornmarket. Pavement widths are very narrow with a prevalence of bollards meaning that pedestrians walk on the street.

On Cornmarket the height of some of the buildings increases to four storey with more active frontage provided by shops and a pub. The paving largely disappears as Cornmarket curves and opens onto Main Street, which is an 'ad-hoc' shared pedestrian/vehicle space. This looks into the Bullring which is framed by the single storey market buildings on the eastern side and 2 storey buildings to the north and south. The long gable wall of Shaws Department Store is visible in the background.

Common Quay Street then continues eastwards past the market and leads out to the Quayfront. By the market, there is an overall comfortable human-scale to the buildings and street with mainly two storey buildings, a mix of uses and good quality architectural heritage. However, the pavement widths are narrow. Further eastwards there is a vehicular access into the public car park serving Supervalu, Argos and several banks. The Bank of Ireland is a modern four storey building on the southern side of the street. On the northern side are several 3-4 storey commercial buildings with ground floor shopfronts. This section of the street has two-way traffic and is dominated by vehicular traffic accessing the car park.

Although vehicular traffic crossing the central area south of the Bullring may appear to conflict with the pedestrian flow along Main Street, the amount of traffic appears low. Because of the lack of kerbs and street signage there is an accidental 'shared space' feel with drivers tending to give way to pedestrians.

This east-west route is maintained for local access to service businesses and the market in the traffic and movement report. Detailed design proposals will be prepared to improve and expand the pedestrian environment using best practice 'shared space' principles in compliance with DMURS.

This would help encourage the area to develop as a 'destination' with external cafe areas, local 'artisan' retailers associated with the market, with the Bullring as a public event space.

Church Lane Square

For this study, 'Church Lane Square' is the car parking area between Common Quay Street and Church Lane serving several commercial businesses including Supervalu, Argos and several banks with a high pedestrian footfall. This has a street level pay and display car park over a basement car park. Church Lane is used as a through route from Main St to Custom House Quay and vehicles pull-in directly outside shop entrances.

The space is irregular and undefined with unfinished areas. Backs of buildings, rear walls and utilities compete visually with vehicles and vehicular paraphernalia such as barriers, ramps and signage.

There is evident pedestrian/ vehicular conflict with this 'road engineered' approach and dominance of vehicular traffic, with consequent safety concerns.

Short term measures to improve pedestrian safety and access to shops and businesses include closure of Church Lane at Main St to vehicles, removal of car parking in front of shops, and replanning of the parking area with defined pedestrian and set-down areas. Displaced traffic can be accommodated in the basement car park which is currently underused.

A detailed urban design strategy is required involving adjoining landowners and businesses to agree the preferred approach. This would include short-term measures, such as painting walls and utilities, and creating areas for out-door seating with planting, in addition to medium-term measures for infill development of the small gap sites to provide a sense of enclosure, with ground floor uses providing animation and interest. In the longer-term, there may be potential for part of the car park to be redeveloped for ground floor retail with residential/commercial over.

Anne Street and Fettit's Lane

Anne Street provides a direct connection between Main Street and Custom House Quay. There is a high footfall due to the Post Office and Employment Office. It is accessible by cars, but becomes a dead end at Main Street where it is used by drivers as a short-term waiting area. There are several laneways opening off Anne Street that connect behind buildings to Fettit's Lane and Church Lane. These lanes are currently uninviting because of the numerous corners and changes of direction, blank frontage, the poor sense of safety and security, and untidiness. A detailed study is required to address these issues, working with local stakeholders to improve the public realm with passive surveillance, better lighting and finishes, active frontage and more legible wayfinding.

North of Common Quay Street

Behind the buildings on the north side of Common Quay Street there is a gap site used as temporary parking accessed off Commercial Quay. This creates a significant gap in the frontage along Commercial Quay. The gable wall of Shaws Department Store which forms the northern site boundary is highly visible from around the town.

The development potential of this is constrained by the potential impact on the low-scale of the market buildings and Bullring to the south, as well as the height of the gable wall to the north. This suggests that a new building along the northern boundary could reduce the visual impact of the gable wall and provide good quality, south-facing residential/office development with balconies enjoying views. A raised landscaped courtyard would potentially allow a large retail floorplate, that could either extend back from Main Street or open onto Commercial Quay. Building frontage and height onto Commercial Quay should be restored, with active frontage at street level. The potential for a direct pedestrian connection with the Market and Common Quay Street should be explored as part of extending permeability with the market uses.

An urban design brief for this site is required.



INFILL DEVELOPMENT NORTH AND SOUTH OF COMMON QUAY STREET

Wexford Bridge & Commercial Quay

The panoramic views from Ferrybank emphasis the historic scale and setting of the old town below the natural ridgeline with just various church spires piercing above. This creates a sense of place that is unique to Wexford. This view shows that the height and scale of recent buildings are mostly relatively low-scale, respecting the sensitive urban context, with only two exceptions – the Opera House fly-tower and Whites Hotel.

On crossing Wexford Bridge and arriving at Commercial Quay there should be sense of having arrived into the centre of the town. The scale and quality of buildings and design of the public realm at this location sets the quality and tone for the rest of the town. To achieve this, any proposed development of the gap site on Commercial Quay opposite the bridge must be of the highest architectural quality and set a new high standard benchmark for development within the Town, with active ground floor frontage onto Commercial Quay, and an overall height and scale that is integrated with the surrounding urban setting.

With the adjacent Charlotte Street and Monck Street bars and clubs there is potential for the development of this site to form the central point for the evening economy with a hotel providing ground floor active frontage (foyer/restaurant/bar) opening onto Commercial Quay and a new internal square linking Charlotte Street with the bars that extend back from Monck Street.

As with other infill sites, a design development brief for the site should be prepared to guide development and help ensure outstanding design quality.

Monck St / Skeffington St / Wellington Quay

Monck Street and Skeffington St are both east-west connections between Main Street and the Quays at O’Rahilly Place. Monck St contains several bars and restaurants and can be very busy in the evening, while Skeffington Street is a fairly quiet residential enclave in the town centre.

These character differences, typical of all the east-west streets and lanes that connect Main St and the Quayfront, should be reflected in the public realm strategy to create a series of ‘eclectic lanes’ between Main Street and the Quayfront which aims to enhance the environmental quality for pedestrians by limiting vehicles and introducing areas of external seating and improving materials, finishes, lighting, etc. as set out in the Public Realm Design Approach (section 5.3.2).

This can be a gradual process involving residents and businesses, but should start with an intensive maintenance and tidiness programme to improve appearance so that people feel comfortable using these areas, in parallel with an annual ‘best street competition’ to raise awareness.

Proposals include repaving Skeffington Street and O’Rahilly Place to create a pedestrian ‘pocket space’, replanning and introducing new hard and soft landscaping to the existing surface car park serving MacCauley’s Pharmacy, widening the pavement along Wellington Quay, with a new 3-4 storey development along Wellington Quay with ground floor active retail/non-retail frontage to the quayfront with office/residential over. The public realm quality of the existing surface car park should be improved with new materials and finishes, and soft landscaping so that it also functions as an amenity space, overlooked by residential and live/work units.

As with other infill sites, an urban design development brief should be prepared to guide and manage these changes.

Key Actions

- 1) Preparation of detailed public realm improvement schemes for the streets and laneways connecting Main Street and the Quayfront that recognise and reflect the individuality of each street. This includes Monck St pedestrianisation, creation of pocket spaces and improving pedestrian quality in compliance with DMURS.
- 2) Preparation of public enhancement scheme for the Quayfront as a managed event space and as a berthing area for fishing boats.
- 3) Design development briefs and guidelines to be prepared for infill/gap sites and car parking areas along the Quays as identified, setting out potential uses related to appropriate building height, scale and to address particular site constraints in a creative way to improve the urban character and quality of the town centre.
- 4) WCC to organise a ‘town team’ as part of strategy to improve the overall physical and economic attractiveness of the town centre as a retail and visitor destination. The team will convey that everyone has a responsibility to improving the town’s attractiveness, and that a concerted effort is needed, The team will act as an ‘enabler’ for landowners and businesses to work together in achieving development that is appropriate to the urban heritage, for everyone’s mutual benefit, and to encourage civic pride and stewardship.





INFILL DEVELOPMENT TO COMMERCIAL QUAY AND WELLINGTON QUAY

Redmond Square

Redmond Square, located at the northern end of Main Street is the main arrival point from the north into the retail heart of the Town Centre. However pedestrian connectivity between the retail area and the large car-parking area to the north is compromised by the existing traffic gyratory system.

The traffic analysis identified that the traffic flows around Redmond Square are suitably modest to enable a change from the current gyratory system to a simple two way traffic route along the northern and eastern sides of Redmond Square. This involves some additional works to facilitate this at Westgate Street and Temperance Row. As part of the changes, the entrance to the car park will be reconfigured with a new compact roundabout.

These changes will enable the extension of the fully pedestrianised zone from Main Street along Selskar Street and across Slaney Street, connecting to Dunnes Stores, and will remove the largest conflict point between pedestrians and traffic in the retail zone. Access to Abbey Street would be rerouted along West Gate (two-way) and through a give-way shuttle arrangement at a pinch point at Temperance Row.

Redmond Square can be redesigned as a significant public space and create a very positive impression of the town for people arriving by train or coach. Bus and taxi locations can be reconfigured around Redmond Square to reduce congestion at the station entrance.

These measures would also strengthen the attractiveness of the Redmond Square area for retailers. The cinema is a key attractor to bringing people into the town centre. This location also has potential for a larger retailer element with adjacent parking and increased footfall associated with the above traffic and public realm improvements.

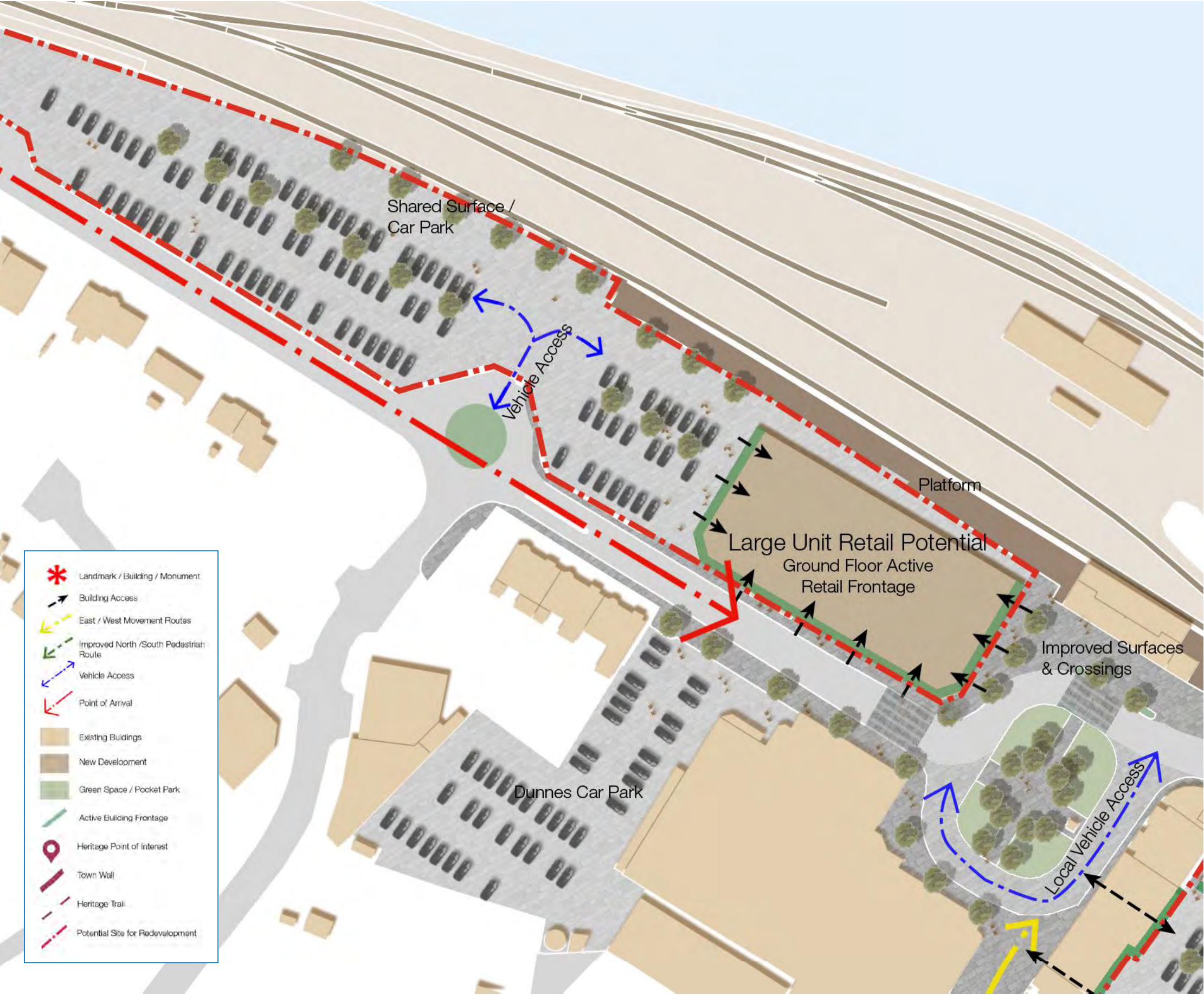
In the longer term, as part as part of an integrated and universally accessible traffic and movement plan (in accordance with EU and national policies to provide for and develop public transport services) a ‘connectivity points/hub’ between bus, train, cycle and parking areas could be located at part of Redmond Road car park adjacent the train station and old cinema site. This would allow direct access between services and also provide an area for tourist coaches to park.

Consultation should also take place with CIE with regard to the future long-term redevelopment of the lands between the rail-line and river with an extended quayfront walkway to the Boat and tennis club.

Key Actions

- 1) replacement of Gyratory with two way traffic system including relocation of bus stops and taxi pick-up/set-down areas and public realm enhancements
- 2) preparation of development design guidelines for redevelopment of the cinema site
- 3) coordination with transport operators on long-term strategy including future redevelopment of CIE lands to extend riverfront.
- 4) long-term development strategy for CIE lands and river walkway.





5.3.4 Town Wall & Barracks Area

The Heritage Spine

The economic strategy (section 3.0) identifies investment in Wexford’s rich built heritage and in the public realm as essential to the economic development of the town. It identified Selkar Abbey as a potential focus for ‘heritage tourism’.

The spatial analysis (section 4.0) identifies a ‘heritage spine’. The Urban Character analysis (section 4.2) identifies that much of the heritage is ‘hidden’ waiting to be discovered, revealed and explored. This is due in part to many places being closed or inaccessible, but also reflects the many layers of history in the town’s development.

Therefore, the spatial strategy proposes developing a route along the ‘heritage spine’ which would include various ‘pearls’ such as Selskar Abbey, parts of the town wall, old churchyards and historic buildings that would be of interest along the route.

This route runs close to and parallel with Main Street. It is also connected with Main Street by old streets and laneways with good pedestrian permeability. Public realm enhancements with new paving and landscaping would improve the visitor attraction.

This would enable people to easily mix activities combining heritage, retail and leisure. The economic strategy identifies that this mix of activity combined with improved public realm will increase the visitor offer and encourage more people to visit and stay longer.

The spatial analysis also identified a varied and interesting range of public buildings and arts/cultural activities along this route which will also add to the visitor experience. (the Gaol, Wexford Opera House, Library, Wexford Arts Centre and the Barracks). There is potential for these to be physically connected or associated with the route. Reconfiguration and relandscaping of the public realm around the 19th century churches would also improve the visitor offer as part of this strategy.

This mix and permeability means that Wexford can offer a wide variety of activities for a wide range of age groups and interests. It is this rich mix that needs to be nurtured and cared for with complementary new development that repairs the town and improves the visitor offer, as well as allowing for future growth and development - all consistent with the economic objectives in Section 3.0.

Acheiving these objectives is particularly significant in relation to any development for Rope Walk Yard.

Rope Walk Yard / Stonebridge Lane

Rope Walk Yard is a large backland site on two levels dissected by the Town Wall running north-south through the site. Access/egress is confined to two restricted lanes off South Main St and King St or through a Council owned car park off Bride Street. This site is occupied by temporary surface parking, surrounded on most sides by poor quality rear walls of buildings and overlooked by Bride St. Church and Convent which form a strong landmark and dominate the site, particularly on entering from South Main Street.

Any development of the site must respect the Town Wall and its setting and retain the existing permeability. To achieve viable floorplates development may need to include existing buildings addressing South Main Street. However, the scope to do this is limited as they are within an architectural conservation area and because the culverted river runs under that part of the site.

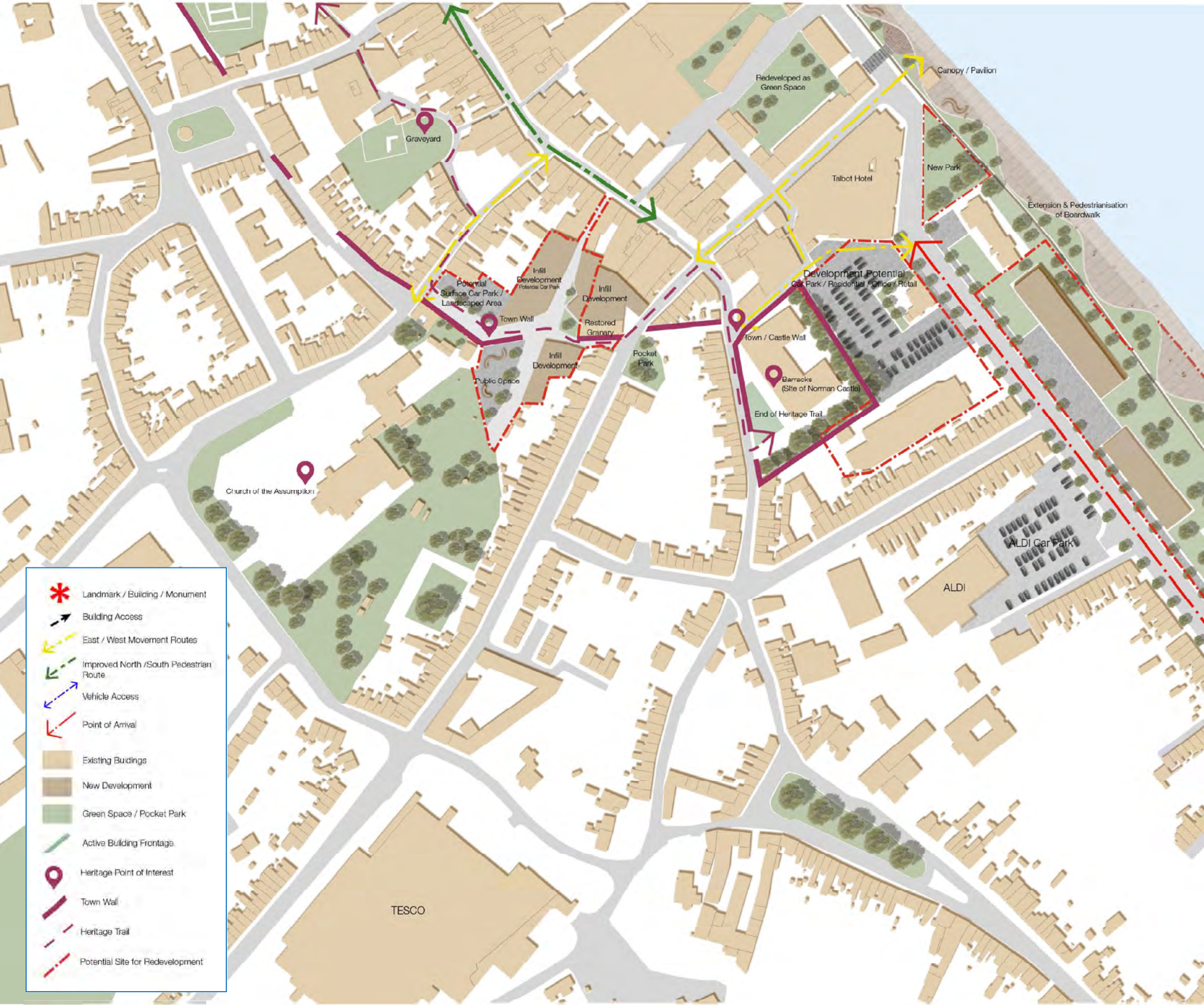
The spatial strategy proposes that permeability is maintained with two pedestrian routes - one alongside the town wall from Bride Street to King Street and the other from Stonebridge Lane across the site and following the Ropewalk to Joseph Street with a connection to the Church. This would provide a high quality landscaped pedestrian/cycle route to Tesco, as an alternative to King Street. A public space and play area could be provided where these routes converge with a south-west orientation to optimise light and views of the Church.

Three infill development plots would provide new frontage. Bride Street car park could be resurfaced and planted, and extend into the northern infill plot, possible on 2-3 levels. The eastern plot would need to be developed in combination with reuse of the rear of the Colman Doyles building as potential retail on 2 floors. The southern plot could potentially provide infill residential that helps provide passive surveillance, and/or commercial use. A full design development study is required to assess viability.

From this site the pedestrian route following the town wall would continue eastwards by Stonebridge River to arrive at the old castle site. There is potential to reuse this as a museum if vacated by the Irish Army and extend the pedestrian route along Slaughterhouse Lane to connect to Trinity Street by the Talbot Hotel car park which has development potential.



HERITAGE TRAIL - ACTIVITIES AND SIGNAGE



TOWN WALL & BARRACKS AREA



ROPE WALK YARD, OLD CASTLE SITE AND ADJACENT AREAS

5.4 Public Realm Strategy

Wexford Quays Public Realm demonstrates a range of spatial opportunities and challenges. Functional roads and carparks need to work efficiently and be integrated with networks of streets and open spaces where town life can be experienced, expressed and celebrated in safe and pleasant surroundings.

Some of these spaces can be categorised into typologies which take on greater local and regional significance than others. These spaces may be required to carry out important local, civic or regional roles compared to other more functional areas. The significance of these areas should help guide the intensity of design response, uniqueness of design detailing and associated increase in development budget allocation. These include:

Culturall Amenity Space - The Crescent

The opportunity exists to provide a space that can be used for cultural events at the Crescent. The setting of this space and its proximity to existing venues such as the Opera House, provide an exciting opportunity, to deliver a space which can be used for a range of cultural activities. This will require significant and discrete mechanical and engineering infrastructure as well as spatial flexibility and management to ensure that large events can be staged with minimal disruption or sterilisation of the space when events are not happening. The highest quality of materials should be utilised to ensure that a robust and attractive setting is provided.

Civic Space - Trinity Wharf

Spaces in key locations and outside significant buildings such as the Opera House can play a ‘civic’ role where town celebrations are held and social interaction can happen between a wide range of citizens from Wexford and beyond. To fulfil this civic role spaces should demonstrate a sufficiently high quality design and specification to differentiate them from the wider public realm. Consideration should be given to safe pedestrian seating areas, high quality lighting and the potential for public art (including temporary creative expressions).

Streets & Meeting Places - Redmond Square

Larger spaces should be complemented and connected by a network of streets and pocket parks. These spaces should be people friendly environments allowing businesses to be accessed and serviced safely and with ease. By their nature space on streets and pocket parks is at a premium so carefully managing permanent and temporary street furniture will be essential to ensure that spaces do not become cluttered. Designated furniture ‘zones’ are helpful to partially sighted users and can create an informal barrier between vehicles and pedestrians. It is important that cycling infrastructure is not limited to large spaces and bikes can be navigated and secured at various locations around the town.

Gateways - Wexford Bridge / Commercial Quay junction

It should be clear to a visitor when they have entered the town centre. Also upon entering the town where the most convenient and cost effective place is to deposit their vehicle (if they have one). Clustered transport interchanges and parking allows for a sense of arrival to be defined via signage and landscape treatments creating a transition between transport infrastructure and town centre character. The clustering of transportation requirements at Gateways provides the opportunity to present a good first impression and also frees up capacity within town centre to create a more people friendly environment.

ACTION: Town wide needs and opportunities as well as the role of adjacent spaces should be considered when developing the brief for any public realm projects.



Meeting Place at Redmond Square



Cultural Amenity Space at The Crescent



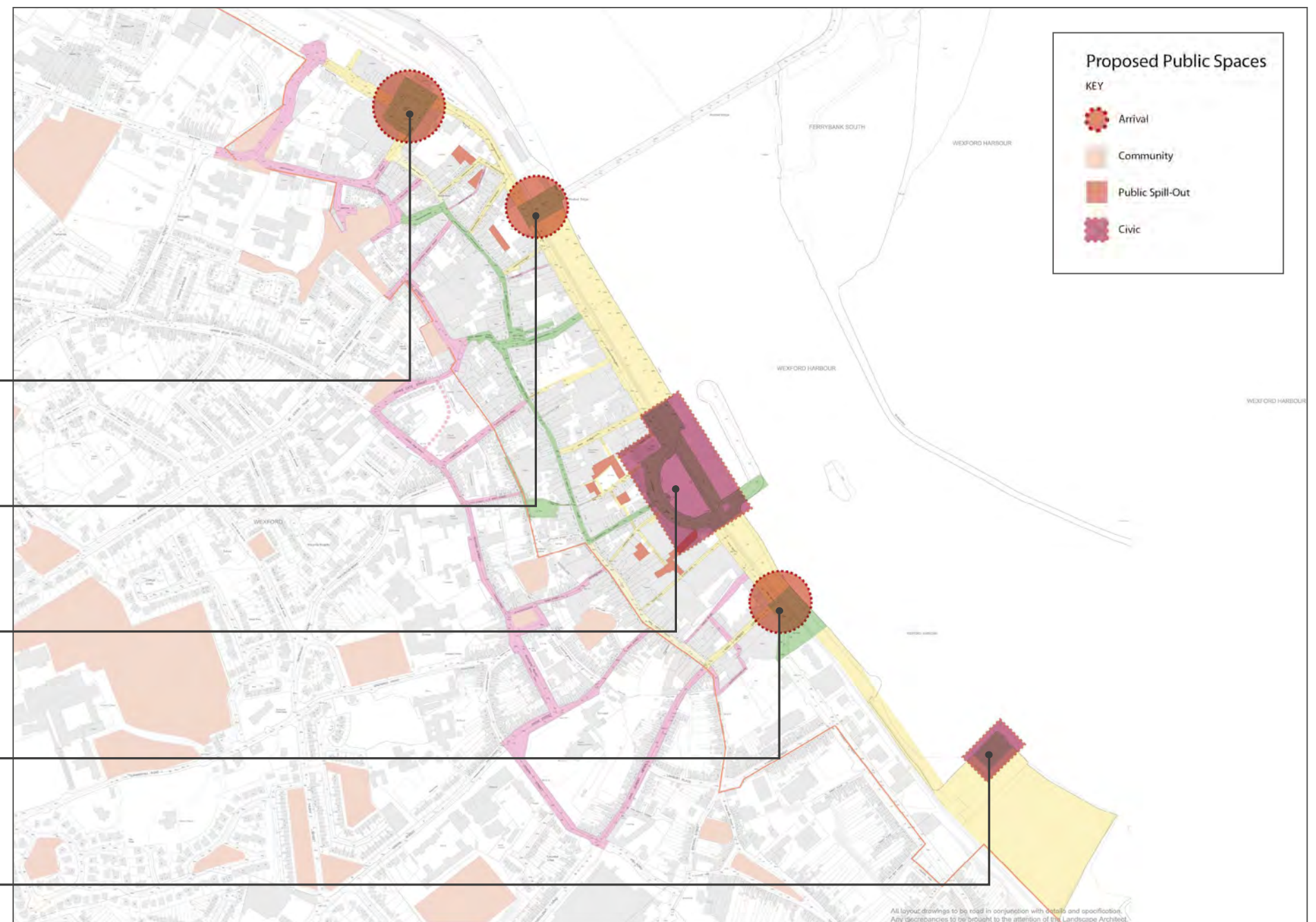
Civic Space at Trinity Wharf



Quays Gateway at Wexford Bridge



Spill Out On Quays at Paul Quay



PROPOSED PUBLIC SPACES

5.4.1 Public Realm Design Approach

While the highest design standards are intended to be applied to the entire town it would not be appropriate or practical to apply one type of public realm solution to all areas. The public realm approach highlights a hierarchy of aesthetic, investment and design intensity. This has been formulated to tie into and complete the existing high quality public realm delivered in areas like Main Street therefore capitalising on the investment and footfall generated in those areas.

The palette of materials and finishes

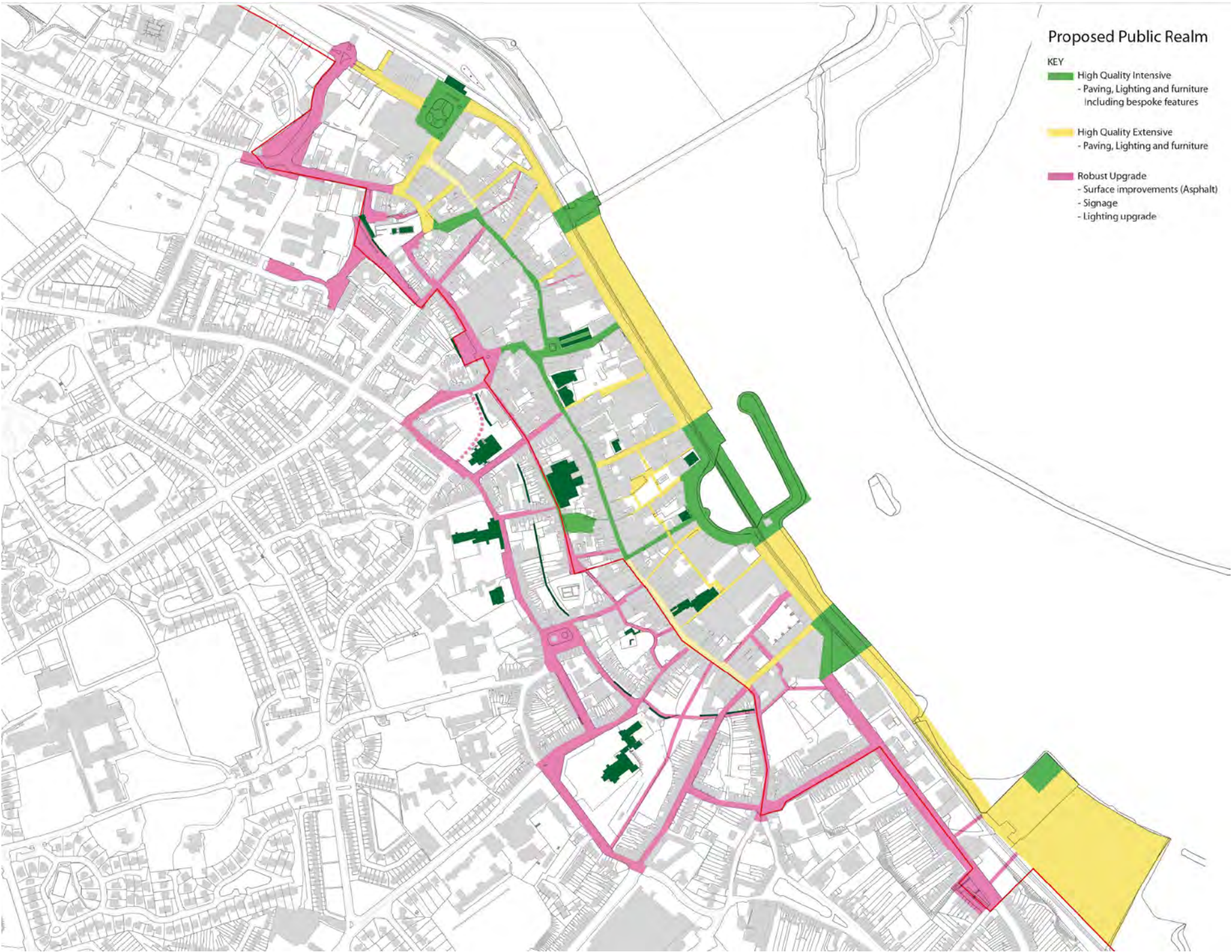
The three categories of area and materials are:

- Type 1: High Quality Intensive Materials
- Type 2: High Quality Extensive Materials
- Type 3: Robust Upgrade Materials

The palette of materials and finishes needs to be consistent throughout the town centre and quay area, while reflecting and meeting the requirements of how the spaces and streets will be used. Type 1 and 2 areas are broadly similar, with Type 1 including bespoke elements, while Type 3 features will be primarily functional and robust.

The public realm improvements will require coordination with utility providers, including relocating overhead services and cabling into underground ducting. A permit scheme would assist coordination and monitoring of works by utility providers and local builders, with fines for repair of unauthorised works.

TYPE 1: HIGH QUALITY INTENSIVE MATERIALS



PROPOSED PUBLIC REALM

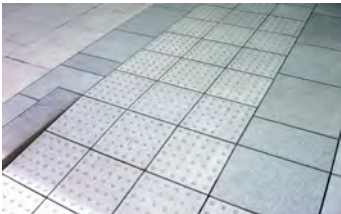
These spaces include the major focal spaces along the Quays, intensively used connections to Main Street such as Henrietta Street and Common Quay Street / Bullring/Cornmarket and meeting places including Redmond Square. All of these spaces are intensively used and require high quality robust materials and finishes.

These areas are proposed to provide a civic role for the town and region and therefore must deliver a sufficiently unique and distinctive experience to deliver and reinforce that role and status.

High quality materials including paving, lighting and furniture should be delivered in a consistent way with the overall town aesthetic. These core elements should be accentuated with bespoke elements such as feature lighting, bespoke seating, and interpretative art which provide a drama, inspiration and surprise. High quality existing features should be restored and utilised where possible to integrate the new proposals into the towns own history, culture and characteristics.

The estimated budget cost for this type of finish is approx €550 per sqm.

Paving, Kerbs



Granite Crossing Detail



Stone Oversized Kerbs



Small Vehicular Paving



Granite and Timber Surfaces



Recessed Manhole Cover

Lighting



Indirect Lighting



Street Lighting



Bespoke Street Lighting

Furniture



Informal Seating



Bespoke Seating



Interpretation Signage



Orientation Signage



Recessed Tree Grilles

Features



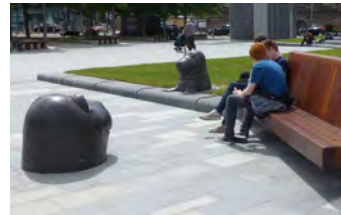
Existing Quay Wall



Existing Public Art

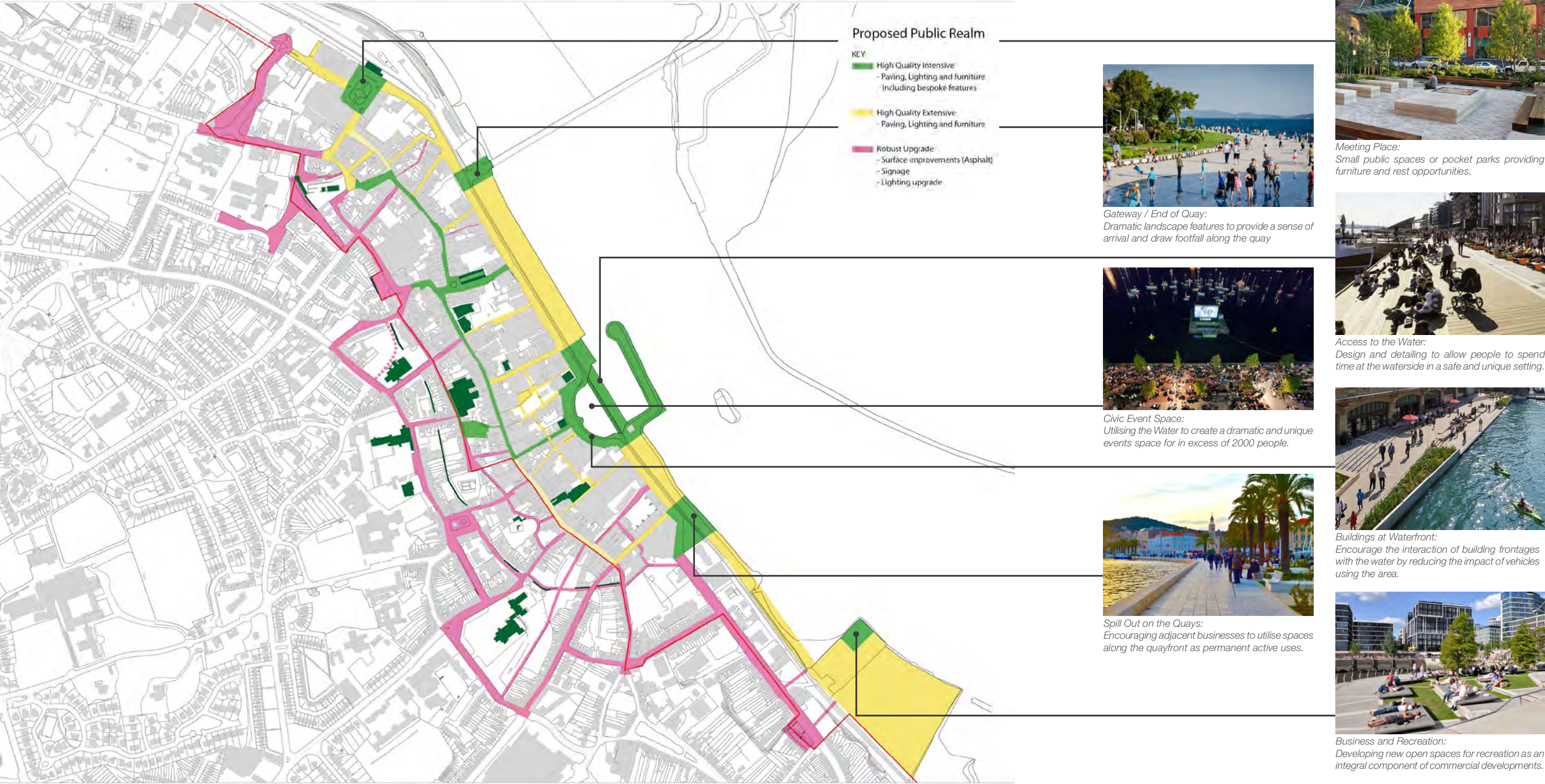


Accent Lighting



Interpretative Art

High Quality Intensive Exemplars



TYPE 2: HIGH QUALITY EXTENSIVE MATERIALS

These spaces include the main connecting spaces along the Quays, lanes and streets connecting the Quays with Main Street, extending the public realm on North and South Main Street and the overall public realm for Trinity Wharf.

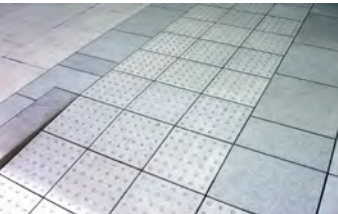
These areas will create the spine of the towns public realm which complements and completes the upgrades already provided to improve Main Street.

A complementary pallet of paving materials will be proposed and supplemented with high quality and consistent lighting and furniture. All furniture materials should provide consistency within the town centre and incorporate distinctively Wexford characteristics. They should be aesthetically pleasing, functional and low maintenance when intensively used in the marine environment.

High quality existing features should be restored and utilised where possible to integrate the new proposals into the towns own history, culture and characteristics.

The estimated budget cost for this type of finish is approx €400 per sqm.

Paving, Kerbs



Granite Crossing Detail



Stone Oversized Kerbs



Exposed Aggregate Surface



Granite and Timber Surfaces



Recessed Manhole Cover

Lighting



Indirect Lighting



Street Lighting

Furniture



Informal Seating



Wexford Seating



Interpretation Signage



Orientation Signange



Recessed Tree Grilles

Features



Existing Quay Wall



Existing Public Art

High Quality Extensive Exemplars



TYPE 3: ROBUST UPGRADE MATERIALS

These areas connect a number of the less intensive town centre assets such as heritage features and community places creating a network of safe and quality streets and spaces and includes the ‘Heritage Trail’. These areas connect to the High Quality town centre public realm and can be delivered at a relatively modest cost over a wide geographic area.

A pallet of robust surfacing and edging materials should be utilised with quality street light levels. The towns overall signage system would be consistently delivered to ensure that the visitor can easily orientate and interpret the town and its outlying assets. High quality existing features such as the town walls should be restored, represented and utilised where possible to integrate the new proposals into the towns own history, culture and characteristics.

The public realm improvement works primarily focuses on improving the existing streets and lanes. The heritage trail is very extensive with large section just needing new kerbs, asphalt footpath resurfacing, street lighting (1 per 15m) and signage of different varieties (1 per 20m). The estimated budget cost for these works is approx €250 per sqm.

It is intended to upgrade existing open spaces by improving and adding community play (skateboarding etc.) and heritage play facilities, public space and art installations, etc. An allowance for 3 or 4 lump sums of between €50k-€100k may be considered for significant investments.

The above would include feature up-lighting to the town walls that are currently visible and form part of the public realm.

Implementation of these works may best be considered in terms of spreading overall benefit in stages depending on budget availability and funding packages. eg. improving lighting and servicing, and/ carrying out the signage strategy rather than concentrating funding on specific streets.

Paving, Kerbs



Asphalt Footpath



Traditional Concrete Edge

Lighting



Street Lighting Upgrade

Furniture



Robust Bench



Building Signage



Interpretation Signage



Orientation Signage

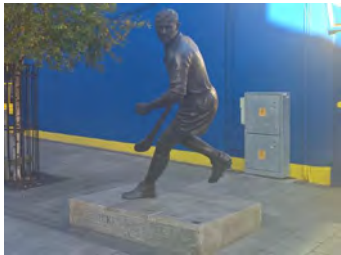


Resin Tree Grille

Features

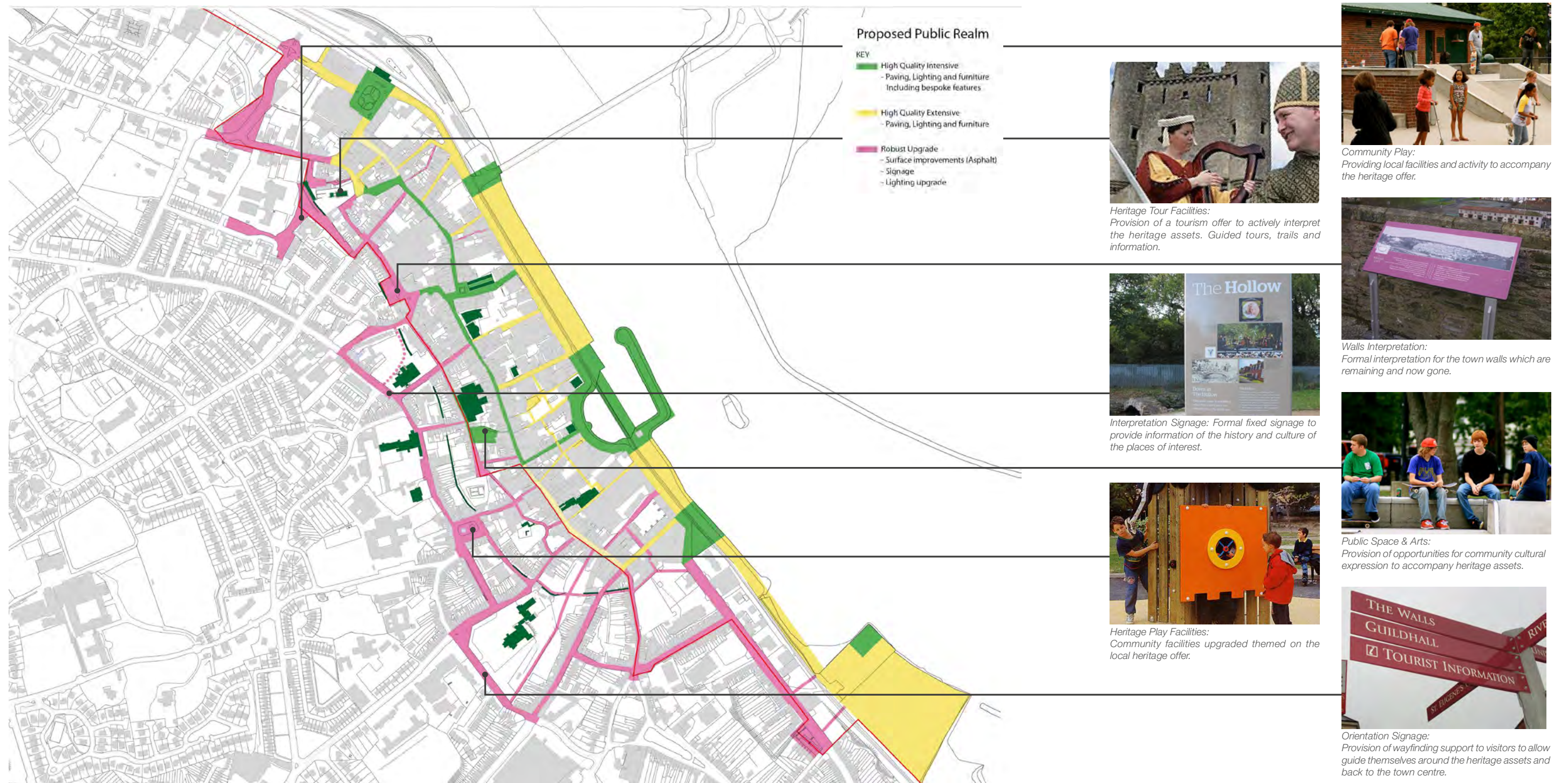


Town Walls



Existing Public Art

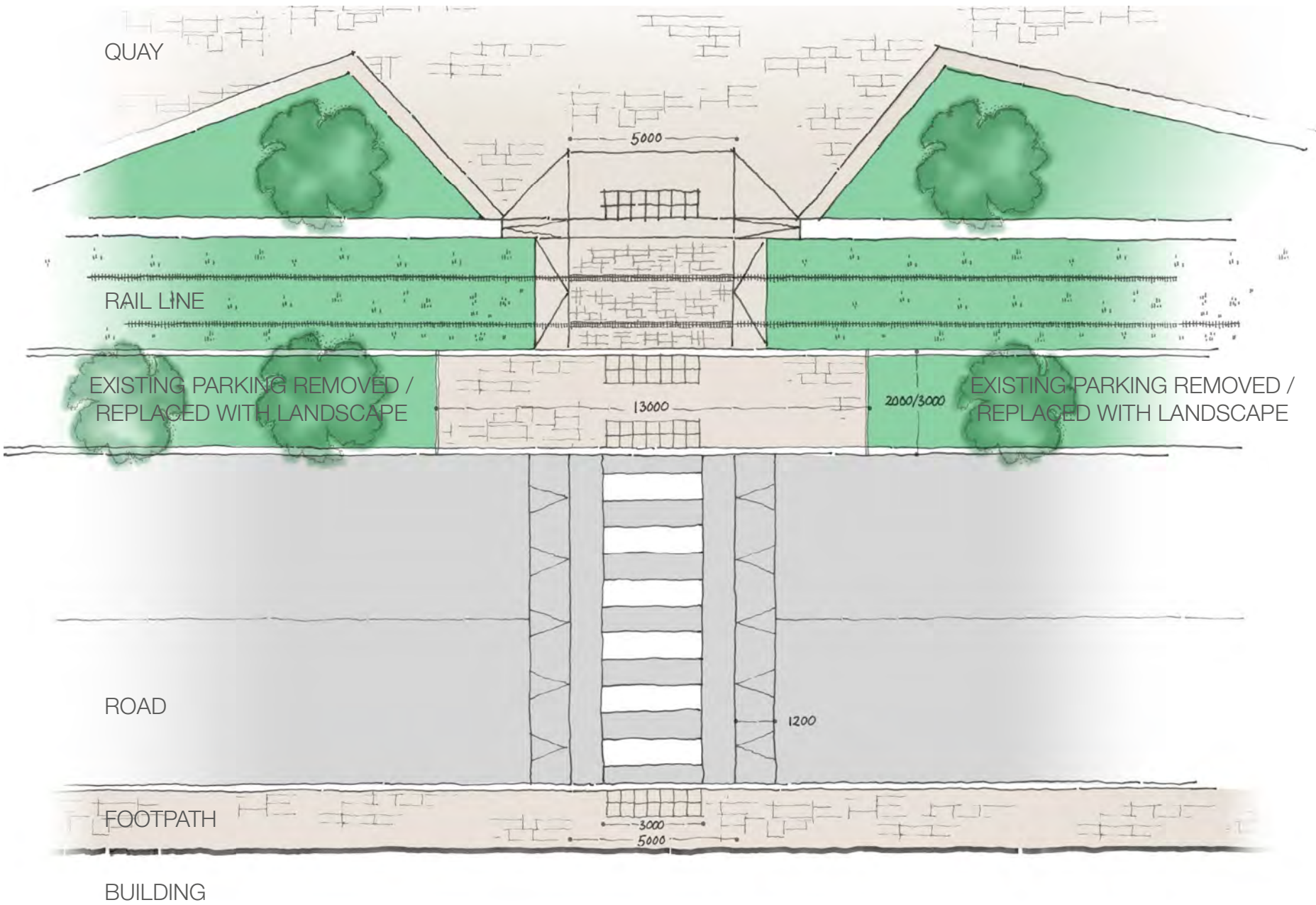
Robust Upgrade Exemplars



5.4.2 Design Principles

Rail / Road Crossing

Encouraging pedestrians to easily and responsibly cross the railway line and road along the quays can improve the relationship between the town centre and the waterfront. Direct and generous pedestrian priority crossing principles are proposed to make it easier and logical to cross in defined locations than arbitrarily. This typical crossing detail should be applied at appropriate locations along the Quays to provide a consistent approach to pedestrian movement and traffic calming.



TYPICAL CROSSING ARRANGEMENT

Edge Treatments

The edges of the railway line provide the opportunity to attractively define useable human scale spaces along the quays as well as create an attractive transport corridor which provides a positive first impression to visitors and users of the area. Providing a semi permeable soft landscape edge will encourage people to use the designated crossing points but not fence them in or out. It will also provide informal seating and gathering areas which benefit from roadside supervision and refuge from the vastness of the quays larger events areas and spaces.



Seating Refuge



Landscape To Rail Line



Seating and Landscape Edge



Spill Out On Quays



Group Seating Areas



RAILWAY - QUAYSIDE CORRIDOR VISUAL



RAILWAY - QUAYSIDE CORRIDOR SECTION

5.4.3 [Materials specification](#)

It is intended that this section of the Plan be used to guide the specification of materials for Public Realm areas in both Public and Private areas of Wexford Town Centre. The intention of this document is not to be prescriptive but rather to provide a palette of materials based on the role and civic significance of the particular area in question which can be maintained and augmented in the future.

Paving and Kerbing

Wexford County Council, wish to ensure that all paving and kerbing materials used in future town centre Public Realm projects meet high standards in aesthetics, robustness, durability and sustainable supply.

Lawful CE Marking:

Natural stone supplied must meet the mandatory law to Conformité Européenne Law and be CE marked to BS EN 1341:2012 Annex A ZA.3 figure ZA.1 and Annex ZA.2.2 along with supplier marking be evidenced from date valid testing in a UKAS or EUAS registered testing laboratory.

EU Declaration of Conformity:

Natural Stone supplied must meet all mandatory requirements of BS EN 1341:2012 annex ZA.2.2 and come with a declaration of conformity by supplier.

BS7533-12 2006:

Natural Stone supplied must meet the requirements of BS7533-12 2006 Table C.1 the LEV on the flexural strength must be 12Mpa; Abrasion Resistance no higher than 18mm and Water Absorption no greater than 0.4%. For these tests the supplier must support their CE Marking & EU Declaration of Performance with date valid actual lab tests completed by a UKAS or EUAS accredited laboratory test house. Testing should be in line with BSEN 1341 / 42 / 43 which sets out the testing requirements for both initial type testing (TT) and factory production control (FPC) and the frequency of testing.

Slip Resistance:

Paving on footpaths and roads should provide appropriate 'slip resistance' in both wet and dry conditions, on both flat areas and slopes. All paving used should be tested as outlined above to demonstrate Unpolished slip resistance - PSV of minimum value of 55 (BS EN1341:2012)

Design:

The design of all paving and kerbing materials must meet the requirements for appropriate use outlined in:

Flags: BS EN 1341 2012;

Setts: BS EN 1342 2012;

Kerbs: BS EN 1343: 2012.

6.0 IMPLEMENTATION

6.1 Next Steps

The Economic Strategy (Section 3.0) provides a strategic direction for Wexford with six strategic economic activities. These relate to:

- Investment in the Public Realm to encourage more people to come to Wexford and stay longer (section 3.2.1)
- Development of the Heritage Tourism Sector with visitor attractions (section 3.2.2)
- Transformation of the Crescent Quays area as a cultural amenity/ leisure space (section 3.2.3)
- Development of Trinity Wharf to create a signature business district (section 3.2.4)
- Target development and growth in the Technology Sector (section 3.2.5)
- Initiatives to train a local workforce to support and service the above. (section 3.2.6)

The Spatial Strategy identifies thirteen spatial objectives to achieve the actions in the Economic Strategy (see Section 5.2). These consist of specific area based objectives, including for the Crescent Quay area and Trinity Wharf, and wider urban design objectives for traffic management, public realm, active frontage, upkeep of the built fabric and lighting.

The successful implementation of these projects requires long-term commitment by Wexford County Council including the development and implementation of policies and the provision of management and resources.

Maintenance by Wexford County Council will also require coordinated management and resourcing on a long-term basis.

The strategy identifies the following key actions for implementation by Wexford County Council:

- progressing partnerships with State and Local Agencies for the development of a third level educational institute (see Section 6.2)
- investigate options with a view to preparing applications for funding for visitor attractions / tourism related development (see Section 6.3)
- develop and implement Council policies relating to heritage, conservation and urban design (see Section 6.4)
- setting up of a ‘town team’ and preparation of a public realm management plan (see Section 6.5)
- implementing a programme of works related to the Crescent including traffic management, public realm improvements, building refurbishment and site development (see Section 6.6)
- commission a site-specific masterplan for Trinity Wharf including appropriate permissions to enable development (see Section 6.7)
- implementing a coordinated programme of traffic management measures, public realm improvements and site development on an area by area basis. (see Section 6.8 and 6.9)

6.2 Partnerships with State and Local Agencies

The Economic Strategy (section 3.0) includes specific key actions to broaden employment skills and developing new areas of economic development. The purpose of these actions is to create a local skills base so that investment in projects by Wexford County Council supports the local economy. The overall objective is to create a circular economy and maximise the ‘return’ to the local economy on investment in projects by the Council.

This includes supporting the training of people in the areas needed where Wexford County Council will be making direct investment decisions, such as heritage tourism, improving the physical fabric of the town through maintenance, upkeep and care of existing buildings, public realm improvements and the construction skills necessary for the development of Trinity Wharf as a sustainable nZEB urban quarter.

As support, Wexford County Council should liaise and coordinate with Solas, Wexford Chamber, Business Groups, LEO, Social Welfare and Educational Institutes to ensure that the skills needed to deliver this plan are available locally.

Wexford County Council should work pro-actively with Enterprise Ireland, third level educational institutions, Teagasc and other organisations to identify, develop and grow new technology economic sectors. In doing so, these will improve Wexford’s reputation as a ‘can do’ business location, which in turn will increase development potential for sites and locations within the town, including Trinity Wharf.

This includes an assessment of the feasibility for creating a third-level educational facility at Trinity Wharf, in the short-, medium-, or long-term, as a basis for discussion with third level institutes and relevant educational authorities.

6.3 Visitor Attractions / Tourism Related Development

Key economic actions include studies for visitor attractions / tourism related development with a programme of funding applications to Failte Ireland. These include:

- the development of the ‘Heritage Trail’ with sensitive improvements to existing monuments and historic places of interest; public realm improvements, signage and lighting; interactive events programme and guides,
- events and/or exhibitions relating to Wexford’s maritime history.

These studies will inform development proposals and public realm improvements. It is envisaged that these feasibility studies will be prepared in early 2018 to be ready to accompany any application under Failte Ireland Capital Grants Scheme for Large Tourism Projects (see Section 3.2.2).

6.4 Wexford County Council Policy Actions

Wexford County Council should initiate the following policy actions:

- Preparation and implementation of conservation policies to protect and enhance Wexford’s unique architectural character as an economic and heritage asset. (see Section 6.4.1)
- Preparation and implementation of urban design policies to enhance the quality and attractiveness of the town as a place to spend time in. (see Section 6.4.2)
- Introduce town centre parking standards as part of a review of the town movement and parking policies. (See Section 6.4.3)
- Site specific project masterplans and design briefs are essential to ensure appropriate development that enhances Wexford’s quality as a destination (see Section 6.4.4)

6.4.1 Conservation Policies

Identification and adoption of conservation areas, and implementation of conservation policies are essential to protect and enhance Wexford's unique architectural character as an economic and heritage asset. (Refer Section 4.2)

It is recommended that Wexford County Council adopts the proposed Architectural Conservation Areas (ACAs) identified in the Wexford Town and Environs Development Plan 2009-2015.

Wexford County Council should carry out character assessments involving research and detailed statements to define the essential character of for each candidate ACA and defines the protection measures.

This should be supported by Wexford County Council with public exhibitions, preparation of guidance and various events such as regular shop-front competitions to raise awareness and promote civic pride.

Further candidate ACAs should be identified for the forthcoming Wexford Municipal District Local Area Plan as part of a rolling programme.

A specialist Conservation Architect/Officer should be appointed to prepare conservation guidelines on best practice, manage implementation and to identify future conservation areas and measures as part of the ongoing long-term programme to protect and enhance Wexford's heritage as an economic asset.

6.4.2 Urban Design Policies

The adoption of urban design planning policies by Wexford County Council is a prerequisite to safeguarding the overall urban character of the town including the quality of it's skyline, buildings, public realm and streetscape.

It is recommended that Wexford County Council includes the preparation and adoption of urban design policies as an objective of the forthcoming Wexford Municipal District Local Area Plan.

Recommended urban design policies include:

- a building height strategy to protect and enhance the town's skyline and the distinctive tight small-scale urban character of the town's streets and spaces
- adoption of standards to enhance the quality of the public realm, including streetscape, landscaping, building materials and finishes, signage and lighting (Refer Section 5.4)
- a requirement for all planning applications in the town centre to include an urban design statement demonstrating how the proposed development is designed to integrate with the town's urban heritage in accordance with established best practice principles
- preparation of urban design guidelines for specific areas and vacant/infill lands to provide certainty to private sector developers on proposed appropriate development. Potential locations include Trinity Street, Ropewalk Yard/ Stonebridge Lane, South of Henrietta Street, Keyser's Lane, Church Lane Square, infill sites on Commercial Quay, Wellington Quay, Redmond Road car park and waterfront (Refer Section 5.3).

6.4.3 Traffic and Movement Policies

It is recommended that Wexford County Council review and revise parking standards for new development across the town centre including Trinity Wharf as part of an overall coordinated movement strategy for the town in the new Wexford Municipality District LAP, that promotes sustainable 'active' movement, public transport and reduces car dependency.

6.5 Town Team and Public Realm Management

It is recommended that Wexford County Council set up a 'town team' consisting of key players from within the Council and external stakeholders. The purpose of the 'town team' is to:

- Develop a long-term programme for improvement, maintenance, and care of buildings and spaces throughout the town centre - repairs, painting, planting, etc.
- Establish a programme and incentives to improve appearance, maintenance and care of the existing built fabric, as well as tidiness and cleanliness (eg. annual best shopfront award).
- Develop a 'civic stewardship strategy' to enable townspeople to look after their town rather than depend solely on the Council. This involves engaging with and involving community and business organisations in various activities designed to improve awareness, understanding, care and pride in the town centre.
- Communicate with the public, convey understanding of the value of public realm measures, and gain public confidence.
- Develop a coordinated events programme that celebrates the many qualities of Wexford - there should be a festival event every week to draw people into the town and onto the quays.
- Guide, manage and monitor implementation of the traffic management and public realm improvements programme.

The town team should include local stakeholder/ business representatives, traffic and services consultants, town architect/ urban designer and WCC town management. The team should include a 'project champion/ coordinator' and a liaison/contact person and review progress on an ongoing basis.

A general maintenance and upkeep programme for the Wexford Quays area should involve community engagement from the outset on an ongoing basis to form part of a long-term 'civic stewardship' programme, managed and implemented by the community, with support and guidance provided by the Wexford County Council.

6.5.1 Public Realm Management Plan

A public realm management plan should be prepared by the 'Town team'. It will include an ongoing town centre events programme, an ongoing maintenance and care plan, and programme for the public /stakeholder participation as part of developing greater civic stewardship. It will be reviewed regularly by the 'Town Team'.

The public realm management plan will identify appropriate spaces and places throughout the town centre for a wide range of events from large-scale gatherings and concerts to busking spaces as part of a coordinated strategy to celebrate the town's public realm offer at every opportunity thereby maximising activity and interest.

Celebrating the town's heritage and culture are important components of public life. The public realm management plan should invite and support ideas for creatively using the public realm for special events - to celebrate completion of each public realm project, temporary events in existing spaces awaiting development such as Trinity Wharf.

It will also expand the current events programme for the boardwalk to include other established places around the town centre, such as Bullring, Selskar Abbey, Redmond Square, Trimmer's Lane, and also consider events using other spaces such as the Lanes and Alleys in a creative way. It will also support the temporary use of various car parks and laneways for creative art and cultural purposes. The events programme will involve promoters, heritage and other organisations, businesses and individuals wanting to hold an event and help manage and coordinate those events.

6.5.2 Communication / Coordination

Communication is essential to conveying to the public the benefits and value of public realm improvements. This includes creating a wider understanding to local residents and businesses that the public realm is an 'economic asset' and to encourage them to become actively involved in its stewardship, including various public awareness activities such as exhibitions and competitions for 'best shop-front', 'best kept street/lane' and regular clean-up events.

Establishing communication channels and process between the Council and affected parties, including utility companies to coordinate proposed works, is essential to planning and managing proposed projects.

6.6 The Crescent Quay Area

The Spatial Analysis (section 4.0) and Spatial Strategy (section 5.0) identify that the current concentration of retail business and footfall along Main Street should be expanded to the surrounding streets and onto the Quays for Wexford to consolidate and enhance the town's attractiveness as a retail, business and visitor location.

To achieve these objectives an overall coordinated public realm masterplan is required for the Quays area with a programme of public realm and traffic management improvements.

The Crescent is identified as the major focal point for Wexford. Starting work first on the Crescent area is key to unlocking and maximising the potential of the rest of the Quays area.

Maximising the potential of both the Crescent and Trinity Wharf with direct pedestrian connectivity along Paul Quay will in turn benefit the whole town centre.

The Crescent has the potential to become a centre-piece public space that people identify as unique to Wexford nationally and internationally.

Short-term measures include traffic calming and public realm improvements and repairs to the Ballast Office.

Medium-term works include restoration of the Crescent Basin, full refurbishment of the Ballast Office as a public amenity and modifications to the marina and protective arm, infill development of the Keyser's lane car park.

These measures will in part encourage development and investment of adjacent lands, including the area south of Henrietta Street and Keyser's Lane and coordination with adjoining landowners on development of adjoining lands.

6.6.1 Short-Term Measures - 2018 to 2020

6.6.1.1 Traffic Calming and Public Realm Improvements

These works include improved pedestrian crossings to the Boardwalk from Anne Street to Oyster Lane, closure of Henrietta Street as a vehicular route onto Crescent Quay, relocation of the Paul Quay Car Park entrance to the Talbot Hotel signalised junction and provision of new pedestrian crossing points along Paul Quay with landscaping 'buffers' to rail-line for improved safety.

The works also include removal of on-street parking, narrowing road widths and widening paving on both sides of the Crescent to give people space to safely move about. The works also include new paving, lighting, street furniture and finishes as set out in the Public Realm Strategy.

6.6.1.2. Ballast Office - Repairs

The Ballast Office is a protected structure and the centrepiece building on the Crescent located on the corner of Henrietta Street. It requires immediate repair work to ensure that it is weather tight including repairs to roof, drainage and treatment for damp. A full condition survey is required to assess the extent of repair works required. The condition survey needs to be carried out under the supervision of an accredited Conservation Architect.

6.6.1.3 Maintenance and Upkeep

A programme to provide for on-going maintenance and upkeep of public realm and guidance on appropriate building finishes, materials and signage for the area. This will inform and be informed by the the public realm management plan (6.5.1) public realm improvement masterplan and works for the Crescent Quay area (6.6.1.1).

6.6.2 Medium-Term Measures - 2021 to 2024

6.6.2.1 Restoration of the Crescent Basin

Restoration of the Crescent Basin includes installation measures to ensure the Crescent basin has clean, clear, high quality water, with weirs installed as silt traps and to control water flow so that the basin can be drained at times for special events.

As part of the works the public realm management team will consult with Event Management Companies, National Opera House and Wexford Arts Centre on proposed reuse to ensure that the space can be used as flexibly as possible.

6.6.2.2 Restoration of the Ballast Office

The strategy proposes the permanent reuse of the Ballast Office as a public visitor attraction with tourist information, exhibition, arts/ cultural activities, meeting spaces, cafe and management space. A business case will be required and used to support any funding application from Failte Ireland and to agree an accommodation brief. The proposed reuse of the building and universal access requirements may include extending the existing building. As a protected structure, the works will require supervision by an accredited Conservation Architect.

6.6.3 Long-Term Measures - From 2025

6.6.3.1 Marine Modifications and Promenade

This includes works to the Protective Arm to improve the water flow and eliminate silting so that existing moorings can be fully utilised, with additional moorings, embarkation points for touring boats, and improved connectivity at the water's edge. If possible, the design of the promenade in front of the Crescent should emphasise the 'connection' between the river and the Crescent Basin.

6.6.4 Adjacent Development Sites

Wexford County Council to include as part of the next town development plan policies to provide guidance on appropriate development or the following areas:

6.6.4.1 South of Henrietta Street

Wexford County Council to provide urban design guidelines as policy document to guide and provide certainty to private sector developers on proposed appropriate development, with particular regard to overall height and scale, the spatial relationship with the Crescent and surrounding streets, greater permeability through the urban block, high quality materials and finishes that complement the surroundings. This will inform consultations with stakeholders on development proposals.

6.6.4.2 Keyser's Lane Development

The preparation of urban design guidelines and an accommodation brief in consultation with Wexford Arts Centre, National Opera House and other art/cultural organisations with development planned to take place in 2020/2021. The urban design guidelines will inform and guide development proposals . with particular regard to overall height and scale, the spatial relationship with the Crescent and surrounding streets, greater permeability through the urban block, high quality materials and finishes that complement the surroundings. This will also inform consultations with stakeholders on development proposals.

6.7 Trinity Wharf

The development of Trinity Wharf as a new signature urban quarter is a key action of the Economic Action Plan (Section 3.2.4) with the following economic actions for Trinity Wharf (Table 3.5):

- development of affordable office/meeting space for young companies, particularly focusng on the creative economy (media, animation, movies, music, software development, game development)
- development of high-tech office space suited to financial services, IT and communications sectors
- provision for high quality apartment accommodation for people working at Trinity Wharf
- assessment of the feasibility for creating a third-level educational facility at Trinity Wharf

The Spatial Strategy (Section 5) builds upon the economic actions by proposing Trinity Wharf as a new urban business quarter that has density, flexibility, a mix of uses, and direct connectivity with the Crescent and the rest of the town centre.

Section 5.3.1 provides an overview of the proposed objectives for Trinity Wharf. To progress these objectives the next step is for WCC to commission the Trinity Wharf Development Plan. The Trinity Wharf Development Plan will involve site investigations, preparation of an overall masterplan including proposed uses, phasing/implementation, preparation of overall scheme design and all information required for consents.

The masterplan will include proposed uses, establish building form and massing criteria, and include landscape, infrastructure and phasing strategies. A scheme design will be prepared setting out the design parameters while allowing flexibility for changes in response to specific user needs. A planning application for the full development will be accompanied by an Environmental Impact Assessment Report (EIAR).

Once planning approval and other consents are received, the initial phases can commence, including site preparation works and the provision of infrastructure so that serviced development sites are available on a 'ready to go' basis. This will allow amendments to the overall planning application to meet specific user requirements.

The Trinity Wharf Development Plan will be informed by revised parking standards to encourage sustainable 'active' movement and reduce car dependency. (see also item 6.3.2), a feasibility study for creating a third-level educational facility at Trinity Wharf as part of a business viability plan. These will be prepared in parallel with the preparation of the masterplan element of the Trinity Wharf Development Plan.

Indicative Timeline:

- Confirm Scope: January - March 2018 (12 wks)
- Masterplan: April 2018 - June 2018 (12 wks)
- Scheme Design: July - August 2018 (6 wks)
- Planning Application: August - October 2018 (12 wks)
- Planning Approval and other Consents: October 2018 - March 2019 (24 wks)
- Phase 1 Detail Design: April - August 2019 (16 wks)
- Phase 1 Tendering: August 2019 - January 2020 (24 wks)
- Phase 1 Site Commencement: April 2020

Construction of the marina and works related to the sea wall and Paul Quay will require a foreshore licence application and may affect phasing. Consents and approvals may extend the programme.

6.8 Area Based Improvements

Implementation of area by area improvements involves coordination of traffic management measures, public realm improvements and site development guidance to achieve best results. The following areas are identified in Section 5.0 with an overall coordinated public realm strategy incorporating traffic management measures in Section 5.3.

The proposed project areas are:

- The Quayfront north of the Crescent
- Cornmarket, Bullring, Common Quay Street
- Church Lane Square
- Anne Street and Fetti's Lane
- Commercial Quay
- Monck Street, Skeffington Street, Wellington Quay
- Redmond Square
- Ropeyard Walk/Stonebridge Lane

The high level public realm strategy will be developed on a project-by-project basis with detailed audits, surveys and stakeholder consultation to confirm exact requirements, commencing with The Crescent.

High level indicative cost per square metre are provided for public realm improvements based on the types of materials and finishes as follows:

Type 1: High Quality Intensive Materials.

Type 2: High Quality Extensive Materials.

Type 3: Robust Upgrade Materials.

These have been applied to each area of public realm improvements for indicative purposes only.

The public realm works for each area may need to be implemented on a phased basis to avoid excessive disruption and for managability. Therefore the timelines provided are indicative and based on immediate approval for each element. A programme of works is to be developed with Wexford County Council and 'Town Team'.

6.8.1 The Quayfront north of the Crescent

A detailed assessment of existing materials and finishes is underway with a programme for short-term repairs and upgrades. This should be informed by, and coordinated with a public realm masterplan which develops in more detail the overall public realm strategy (Section 5.3). The public realm masterplan will include provision of integrated services for the events and boats along the quay-side, to avoid use of generators. Sustainable energy sources should be considered.

The public realm masterplan will be informed by a review of the functional and service requirements of the quayfront as an organised event space and service provision for the permanently moored fishing boats.

The public realm masterplan may be informed by a feasibility study for other attractions including outdoor events and museum relating to Wexford's fishing industry (See Section 3.2.1). On completion of the masterplan, a full scheme design can be prepared, approvals sought with implementation taking place in 2019.

Indicative Timeline: Short Term (2018 - 2020)

6.8.2 Cornmarket, Bullring, Common Quay Street

The Traffic and Movement Report recommends the following public realm improvements:

- Common Quay Street: Reduce width for traffic to 6m maximum in adjusted paving and extend all the way to Commercial Quay with removal of the few on-street parking spaces beside the Old Market. Upgrade crossings at car park entrances to Bank of Ireland and Pettit's Supermarket for continuous footpath priority. Retain bus stops and loading bays, with local access to service businesses and the Bullring market.
- Cornmarket / Abbey Street Junction: reduce size of roundabout with small painted island and widen footpaths all around the perimeter, especially in front of the Arts Centre.

These measures form part of the public realm design proposals to help the area to develop as a 'destination' with external cafe areas, local 'artisan' retailers associated with the market, with the Bullring as a public event space. High quality design, materials and finishes are proposed as identified in the public realm strategy (see Section 5.4)

The public realm design proposals will consider improvements to and expansion of the pedestrian environment using best practice 'shared space' and other principles in compliance with DMURS so that the area is integrated with the existing high quality public realm of Main Street and around the Bullring.

Indicative Timeline: Medium Term (2021 - 2024)

6.8.3 Church Lane Square

The Spatial Strategy identifies Church Lane and the existing car park as a potential urban space. (see Section 5.3). It recommends the preparation of an overall urban design strategy, including measures to improve pedestrian safety and access in the short-term. Delivery of this is subject to agreement with and buy-in from private landowners.

The Traffic and Movement Report also recommends closure of the traffic link from Rowe Street across Main Street to Pettit’s car park for safety reasons (Appendix Section 3e.)

Indicative Timeline: Short Term (2018 - 2020)

6.8.4 Anne Street and Fettit's Lane

The Traffic and Movement Report (Appendix Section 3.5(2)) recommends repaving Anne Street as a shared space to match Main Street.

The Spatial Strategy recommends a detailed assessment of, and public realm improvements to the network of lanes off Anne Street linking to Fettit’s Lane and Church Lane so that they become attractive, animated spaces. (see Section 5.3)

Indicative Timeline: Medium Term (2021 - 2024)

6.8.5 Commercial Quay

The Traffic and Movement Report recommends improving the traffic signalling at the Wexford Bridge junction, which has already been implemented, and improving pedestrian crossing points to reduce pedestrian / rail / traffic conflict (Appendix Section 3.3).

These can be achieved by:

- realignment of existing pedestrian crossings to connect with boardwalk locations,
- providing an additional crossing at Charlotte Street signal linked with Wexford Bridge.

The public realm masterplan for the Quays and quayfront should coordinate the design of these works with the proposed pedestrian routes/desire lines, proposed boardwalk locations and safety measures along the railway line. These initial works should be completed by Autumn 2018.

It is also proposed that urban design guidelines are prepared for Commercial Quays generally - to improve the overall appearance, maintenance and up-keep, encourage more active frontage and street interface - and for specific sites (see Section 5.3).

Indicative Timeline: Medium Term (2021 - 2024)

6.8.6 Monck Street, Skeffington Street, Wellington Quay

This area extends from Wexford Bridge to Redmond Square.

It is proposed that urban design guidelines are prepared for the lands along the west-side of Wellington Quay setting out appropriate development principles. These should consider the multiple ownerships, appropriate urban form and quantum of development. This will inform consultations with stakeholders on specific development proposals.

This guidance should be prepared in parallel with proposals for improving traffic management and the public realm with, for example, on-street parking incorporated into development proposals, and creating an active building edge with the street.

These policy guidelines and the timing of development will inform the timing and sequencing of public realm improvement works to Wellington Quay, Monck Street, O’Rahilly Place and Skeffington Street.

The Traffic and Movement Report (see Appendix) proposes public realm improvement works related to the food and pub zone in the Wellington Place / Monck Street / Charlotte Street area as part of the development of the Commercial Quay site (see Page 90/91). This includes:

- increasing pedestrian space along the western side of the R730 regional traffic route to link Skeffington Street past Monck Street and through the Bridge Junction to Charlotte Street
- features to separate the space at the northern end of Monck Street from the busy traffic route along Wellington Place.
- Retain limited traffic access to Skeffington Street for residents

Indicative Timeline: as part of the next town development plan

6.8.7 Redmond Square

The Spatial Strategy (Section 5.3) identifies Redmond Square as a significant public space and part of a fully pedestrianised zone connecting into Main Street. Achieving this involves replacement of the gyratory traffic system with a two-way traffic system including relocation of bus stops and taxi pick points/ set-down areas (see Section 6.9.4 and Traffic and Movement Report Section 3.2) The replacement of the gyratory system would be carried out in advance of, but coordinated with the public realm design. Further studies in relation to traffic movements and impacts will be required.

Indicative Timeline: Short Term (2018 - 2020)

6.8.8 Ropewalk Yard / Stonebridge Lane

The Spatial Strategy (Section 5.3) sets out various constraints and opportunities to transforming this backland car parking into a high quality urban area and recommends that a full development study is carried out to assess viability.

This requires a full site appraisal, involving landowners, which can then lead to an agreed urban design development plan with potential development sites and a defined public realm. This plan will guide and manage new development for this area.

Indicative Timeline: Medium Term (2021 - 2024)

6.9 Traffic Management

In addition to works associated with area based public realm improvements, the Traffic and Movement Report (See Appendix) also identifies the following specific traffic management measures that can be carried out separately or as part of other works. These include:

- rephasing of traffic signalling at Wexford Bridge junction
- alterations to existing and provision of new pedestrian crossings along the Quays
- changes to the Town Centre traffic system
- reorganisation of the Redmond Square gyratory system.

6.9.1 Rephasing of Traffic Signalling at Wexford Bridge

Rephasing of traffic signal sequencing to improve traffic flow along the Quays were recommended by the Traffic Consultants in the earlier stages of the study. These works have been carried out by Wexford County Council.

Indicative Timeline: Works completed

6.9.2. Pedestrian Crossings and Railway Corridor from Wexford Bridge to Trinity Street

Alterations to existing and additional new pedestrian crossings in locations identified will reduce severance along the quays, reduce pedestrian / rail / traffic conflict and improve the pedestrian environment. Measures include the replacement of existing on-street parking spaces alongside the railway, with planter boxes to contribute to the public realm and direct people to the crossing points.

These can be carried out in the short-term in coordination with longer term public realm improvements proposals.

Indicative Timeline: Completion Autumn 2018

6.9.3 Town Centre Traffic system changes

Changes to the traffic system and extending pedestrian areas will improve the pedestrian environment, reduce pedestrian / traffic conflict and improve traffic flow. These can be carried out in the short-term in coordination with longer term public realm improvements. Areas include:

- pedestrianise Slaney St, Selskar St. and Charlotte St.
- close eastbound traffic route from Rowe St across Main St. to Pettit's Car Park
- close westbound traffic route along Harper's Lane to Main St.
- close traffic link on Peter St. to Main St. and reverse one-way direction from Patrick Square towards School St.
- Bride St. to Main St. traffic direction reversed for link into Main St. southbound for final block to King St.

Indicative Timeline: Completion Autumn 2018

6.9.4 Redmond Square

Proposed traffic management works to Redmond Square include changing the current gyratory system to a two way route along the eastern side of Redmond Square and rerouting access to Abbey Street along West Gate. This work will enable the pedestrian area to be extended from Main Street to include Redmond Square, improving pedestrian safety by reducing pedestrian / traffic conflict at the end of Main Street, which is key to increasing pedestrian activity in the area. The works include relocation of bus stops and taxi pick-up / set-down areas and new public realm design for Redmond Square and surrounding streets.

Indicative Timeline:

- Traffic Reconfiguration: October 2019
- Completion of Public Realm Works: October 2020

Wexford Quays: Indicative Implementation Programme

ACTION		SHORT-TERM												MEDIUM TERM												LONG TERM					
		2018				2019				2020				2021				2022				2023				2024				2025	
6.0	WCC ORGANISATIONAL/POLICY ACTIONS																														
6.2	Progress Partnerships with State and Local Agencies (ongoing)																														
6.3	Feasibility Studies / Funding Applications for Tourism Related Development																														
6.4	Wexford County Council Policy Actions																														
6.4.1	Adopt ACAs identified in current Development Plan																														
	Prepare further Draft Conservation Policies for inclusion in Wexford MD LAP																														
6.4.2	Prepare Draft Urban Design Policies for inclusion in Wexford MD LAP																														
6.4.3	Prepare Draft Movement Policies for inclusion in Wexford MD LAP																														
6.5	Town Team (WCC and Local Stakeholders)																														
6.5.1	Prepare Public Realm Management Plan																														
6.5.2	Establish Communication Structures																														
6.6	THE CRESCENT QUAY AREA																														
6.6.1	Short Term Measures																														
6.6.1.1	Traffic calming & Public realm improvements																														
6.6.1.2	Ballast Office - repairs																														
6.6.1.3	Prepare guidance on building finishes, materials and signage																														
6.6.2	Medium Term Measures																														
6.6.2.1	Restoration of the Crescent Basin																														
6.6.2.2	Restoration of the Ballast Office																														
6.6.3	Long Term Measures																														
6.6.3.1	Marine Modifications - Protective Arm																														
6.6.4	Adjacent Development Sites																														
6.6.4.1	South of Henrietta Street																														
6.6.4.2	Keyser's Lane Development																														
6.7	TRINITY WHARF																														
	Confirm Scope																														
	Masterplan, Scheme Design, Planning and other Consents																														
	Phase 1 Detail Design, Tender process																														
	Phase 1 Construction																														
	Following Phases																														
6.8	AREA BASED DEVELOPMENT / PUBLIC REALM IMPROVEMENTS																														
6.8.1	Quayfront North of the Crescent																														
	Short-Term Upgrade																														
	Medium-term Public realm Improvements																														
6.8.2	Common Quay/ Bulring/ Common Quay Street																														
6.8.3	Church Lane Square																														
6.8.4	Anne Street and Fetti's Lane																														
6.8.5 & 6.8.6	Commercial Quay and Wellington Quay Area																														
	Development Guidelines																														
	Public Realm Improvements																														
	Commercial Quay and Wellington Quay Developments																														
6.8.7	Redmond Square - Site Development Guidelines																														
6.8.8	Ropewalk Yard / Stonebridge Lane																														
6.9	Traffic Management Plan																														
6.9.1	Traffic signalling at Wexford Bridge Junction (Completed)																														
6.9.2	Pedestrian Crossings and Railway Corridor along Quays																														
6.9.3	Town Centre Traffic System changes																														
6.9.4	Redmond Square: Phase 1 - Traffic reconfiguration/ Public Realm Improvements																														
LEGEND																															
WCC POLICY ACTIONS: EG. URBAN DESIGN AND DEVELOPMENT GUIDANCE																															
PROJECT DESIGN, APPROVALS, TENDER PROCESS																															
PROJECT IMPLEMENTATION ON-SITE																															
PRIVATE DEVELOPER-LED																															

APPENDICES : TRAFFIC AND MOVEMENT REPORT



1.0 INTRODUCTION

1.1 Background

Roughan & O'Donovan was commissioned by Scott Tallon Walker (STW) Architects to carry out traffic studies in support of the economic and spatial development study being led by STW for Wexford County Council. This Stage 2B report was preceded by an earlier Stage 2A report issued in May 2017 which contains additional detail for traffic analysis in respect of certain issues.

2.0 STUDY AREA AND SCOPE OF REPORT

2.1 Site Location

The study area for the Economic Development and Spatial Implementation Plan has been defined by the Client as extending along the Wexford Harbour shore for a length of 1.6km from Redmond Road at the railway station at the northern end to the Trinity Wharf site at the southern end. On the inland side it is defined by the historic town wall that is about 300m west of the shore.

For the traffic study element a slightly wider area needed to be considered, and this extends further inland to include the main north-south traffic route along the R889 regional route following John Street Lower and School Street, which is located about 50m to 100m west of the town wall. Combined with the R730 coastal route and cross links via the R769 at West Gate at the northern end and the R733 at Distillery Road / Parnell Street at the southern end, there is a rectangular traffic box around the town centre as shown on the followin

Within the town centre there is a dense network of narrow streets, most of which carry low flows of one-way traffic for access purposes, and pedestrian laneways that connect through and across the heart of the town.

2.2 Scope of Transport Assessment

The focus of the traffic study was as follows:

- a) To capture the current traffic circulation patterns within the town centre so as to establish the relative importance of each route and street in traffic terms;
- b) To inform traffic capacity assessments where relevant for key junctions and to assess the scope for improvement and the likely impact of further development and growth in the town centre;
- c) To identify where traffic interactions with high pedestrian flows may be of concern, and to inform proposals for potential extension of pedestrianised streets;
- d) To assess the potential for expansion and improvement of the pedestrian zone in the town centre to benefit retail and economic activity;
- e) To develop proposals for better integration between the quay-front area and Main Street for pedestrians;
- f) Public Realm improvement proposals at key locations;
- g) To illustrate what car parking capacity is available as appropriate to the demands across the town centre area, and to allow the impact of any potential changes to be assessed;
- h) To develop access proposals for development of the brown-field Trinity Wharf site.

3.0 POTENTIAL STREET SYSTEM ALTERATIONS

3.1 Redmond Square

The traffic flows around Redmond Square are suitably modest (< 1,000 vehicles per hour in each direction at peak) to enable a change from the current one-way gyratory system to a simple two-way traffic route along the northern and eastern sides of Redmond Square as shown on Drawing Number 16.167 - 001 in Appendix A. Some additional works will be necessary to facilitate this at Westgate Street and Temperance Row as shown on Drawing Number 16.167 - 001 in Appendix A.

This change will enable the extension of the fully pedestrianised zone from Main Street along Selskar Street and across Slaney Street, connecting to Dunnes Stores, and will remove the largest conflict point between pedestrians and traffic in the retail zone.

Access to Abbey Street would be rerouted along West Gate (two-way) and through a give-way shuttle arrangement at a pinch point at Temperance Row.

With flows re-routed to the eastern/ northern sides of Redmond Square, there appears to be additional space on the southern and western sides of Redmond Square where consideration should be given to the inclusion of a transportation hub. A taxi rank is already in-situ outside of the Dunnes Stores unit; this could be augmented with some additional bus parking bays along the southern side of Redmond Square and along onto Slaney Street. As Slaney Street is to be largely pedestrianised, with through traffic banned as discussed in section 3.2, a ‘bus only’ corridor could be incorporated along Slaney Street and on to Westgate Street, to allow additional bus parking bays along Slaney Street providing further bus parking and maintain a town centre transport hub, and prevent awkward reversing manoeuvres by buses within Redmond Square.

Some minor alterations may be required to the railings at the north-western corner of Redmond Square as shown on Drawing Number 16.167 - 003 in Appendix A to facilitate two-way HGV movements in the area. Alterations have already occurred in this area with a small build out added to the square, this may be all that is needed to be removed, however this will need to be confirmed at detailed design stage using a full topographical survey. With this approach, Redmond Square would become more pedestrian friendly with improved drop-off facilities, taxi rank and enhanced bus interchange areas, connecting with the Railway Station and the Main Street pedestrian area.

Creating a roundabout around Redmond Square would sever the small public space from the pedestrian core of the town and require pedestrians to cross two main traffic routes rather than one when walking to the railway station. To use the square as a major traffic roundabout would have no traffic flow benefits apart from avoiding the need for the minor adjustment at the north-western corner to accommodate very small numbers of large vehicles.

Revised junction layouts would be required on 1798 Street on the northern side of the street block. Mini-roundabouts are proposed at the junction of West Gate (beside the old Gaol) at the western end, and at Redmond Road at the eastern end as shown on the layout drawing in Appendix A. This form of junction control is compact and efficient and accommodates all turning movements. It also suits sharp turns of direction in the main R769 regional route along 1798 Street and Hill Street, as seen at the junction with Spawell Road.

Pedestrian zebra crossings should be provided in each approach arm adjacent to the series of mini-roundabouts along the R769 route on the northern edge of the town centre. The overall effect of the dog-legged traffic route with a series of mini-roundabouts and zebra crossings will calm traffic and support a low-speed environment for the comfort and safety of all road users.

Roundabouts may potentially be problematic for cyclists if they are large in size and have high traffic speeds as is highlighted in the National Cycle Manual. However, if they are located in a low-speed environment and are compact in size, then they may be safely and comfortably shared by cyclists with general traffic.

As described later for cycling facilities in general it is desirable that a cycle route network plan is developed for Wexford Town, including appropriate provisions in the town centre area where there may be either “integrated cycling” sharing the road with low speed traffic, or “segregated cycling” with dedicated cycle tracks and cycle lanes.

If, as suggested later, a 30 km/h speed limit is adopted in the town centre generally, then traffic conditions would be more suitable for integrated cycling without segregated cycle tracks.

The removal of the existing one-way traffic gyratory system at Redmond Square will slow traffic and improve conditions for cyclists and pedestrians by simplifying movements across multiple lanes and at junctions. A suitable new road layout will need to be designed for general traffic and cyclists from Newtown Road to the Quays along Hill Street, 1798 Street, Redmond Road, Redmond Square and Wellington Place. If a segregated cycle route is proposed, then the chain of compact roundabouts along the route could be arranged as shown in the example below right from Denmark.



Existing Mini-Roundabout on R769 at Junction of Hill Street and Spawell Road



Example of Compact Roundabout with Cycle Track in Denmark

3.2 Town Centre Traffic Alterations

The following potential changes to the town centre traffic system have been identified;

- a) Pedestrianise Slaney Street; 850 vehicles per hour conflicting with 800 pedestrians. Traffic re-routed to Redmond Road and 1798 Street;
- b) Pedestrianise Selskar Street; 100 – 150 vehicles, at peak times will be rerouted to Westgate Street and Temperance Row;
- c) Pedestrianise Charlotte Street at western end – Currently a local access street, with limited vehicular movements due to the current pedestrianised Main Street;
- d) Pedestrianise Monck Street at western end – Currently a local access street, with limited vehicular movements due to the current pedestrianised Main Street;
- e) Traffic Link from Rowe Street across Main Street to Pettit's car park to be closed for traffic safety reasons because of the steep hill and blind corner at the Main Street junction where pedestrians may not expect crossing traffic. Peak hourly traffic flow of 78 vehicles crossing a pedestrian flow of 800 per hour. Traffic diverted to Cornmarket and Common Quay Street;
- f) Allen Street to Main Street and Henrietta Street closed to traffic (eastbound) during the day, with exit route via Peter Street to School Street, *subject to minor alterations of parking on Peter Street to ease the right-turn into the street*. This route will only be suitable for cars and small vans due to the restricted width. Peak hourly traffic flow of 91 vehicles crossing a pedestrian flow of 225 per hour. Traffic re-routed to main circulation routes around edges of town centre;
- g) Harper's Lane link to Main Street retained open to traffic (westbound) for access from the quays to Main Street South;
- h) Peter Street link from Main Street one-way direction reversed from towards School Street to enable exit route westward from High Street;
- i) Bride Street to Main Street traffic direction reversed for link into Main Street Southbound for final block to King Street, as an offset to the loss of access from Allen Street further north.

No change to the existing one-way system at King Street and Parnell Street is proposed as these streets are too narrow to facilitate two-way traffic and maintain on street resident parking.

All proposed alterations to the town centre traffic system are shown on Drawing Numbers 16.167 – 004 to 16.167 – 006 in Appendix A.

Deliveries to premises affected by the proposed changes will be facilitated as close to current operational procedures where possible, however it is likely that these operations are already held outside the typical peak pedestrian periods in the town and thus will be largely unobstructed by the proposed alterations. However specific consideration will be required at detailed design stage to ensure proposed route changes can still facilitate delivery vehicles critical to the operations of the town businesses.

3.3 The Quays

Currently there are three pedestrian crossing points, zebra crossings, at Common Quay and Commercial Quay, with no other controlled crossings along the remaining length of The Crescent and Paul Quay, which creates considerable severance. The existing zebra crossings have raised platforms, with a stagger at the adjoining crossings of the railway line. The raised table is a suitable inclusion and assists

with traffic calming, however the stagger at the railway is unnecessary given the low frequency of train movements and very low train speeds

Proposed alterations in this area include;

- a) Align existing pedestrian crossings with boardwalk locations on the quay where possible;
- b) Additional crossing at Charlotte Street to align with boardwalk on the quay – signal linked with the Wexford Bridge junction;
- c) Three additional crossings on the Crescent and Paul Quay which will be zebra crossings on raised ramps;
- d) Signal Crossing at the King Street junction

All proposed additions to the pedestrian crossings on the Quays are shown on Drawing Number 16.167 - 007 in Appendix A.

3.4 Newtown Road / Hill Street / John Street Upper Junction

The current right-turn restriction at the junction of Hill Street and John Street Upper could potentially be considered for relaxation in the context of an amended junction control to improve accessibility from the Newtown Road direction to the western side of the town centre, which would avoid diversion of traffic towards the quays.



Restricted Right-Turn from Newtown Road to John Street Upper

3.5 Public Realm Improvements

The following proposals are suggested to improve the public realm;

- 1) The Crescent;
 - Remove all parking apart from the disabled parking space, and possibly add another disabled space
 - Remove Traffic Turning Lanes
 - Narrow Carriageway Width to 6.5m
 - Provide additional width to footpath on both the town and water sides.
 - Retain bus stop(s).
- 2) Anne Street: re-pave as a shared space to match Main Street;
- 3) Common Quay Street: Reduce width for traffic to 6m maximum in adjusted paving and extend all the way to Commercial Quay with removal of the few on-street parking spaces beside the Old Market. Upgrade crossings at car park entrances to Bank of Ireland and Pettit's Supermarket for continuous footpath priority. Retain bus stops and loading bays.
- 4) Cornmarket / Abbey Street Junction: reduce size of roundabout with small painted island and widen footpaths all around the perimeter, especially in front of the Arts Centre;
- 5) Railway corridor / road side of the Quays from Wexford Bridge to Trinity Street: remove all on-street parking, widen the footpath on the town side and provide better integration of the railway into the paving of the quay side. Add planter boxes alongside the railway for some colour in the rather drab street space and to highlight the segregation between road and railway track.
- 6) Wellington Place / Monck Street / Charlotte Street (Food and Pub zone):
 - Provide more pedestrian space along the western side of the R730 regional traffic route to link Skeffington Street past Monck Street and through the Bridge Junction to Charlotte Street.
 - There is already a variable step back in the building line, and for the short section nearest Charlotte Street, the road can be shifted towards the sea-front by 2m because the traffic lanes are too wide.
 - Provide some features to enclose the space at the northern end of Monck Street and separate this from the busy traffic route along Wellington Place.
 - Retain limited traffic access to Skeffington Street for residents
- 7) Two-way cycleway along the waterfront and linking over Wexford Bridge to the northern shore for connection towards Curracloe. (Refer to separate report by ROD for Wexford Harbour Cycleways with maps in Appendix B).
- 8) Redmond Square/ Slaney Street augmentation with 'transportation hub' with additional bus parking bays provided and a 'bus only' corridor provided along Slaney Street.

Benefits of Proposed Public Realm Improvements

The main benefits of the proposed public realm improvements will be the improvements to pedestrian priority throughout the main retail and leisure zones within the town centre. Pedestrians and vulnerable road users will have complete priority within these zones ensuring a more pleasant experience for visitors and locals alike, which will strengthen the economic performance of the town centre.

The inclusion of an improved public transportation hub at Redmond Square will provide better connectivity between all forms of public transport within Wexford Town and thereby creating a link with the greater Wexford area. In the long-term there is scope to provide a high-quality transportation hub, either on Slaney Street, or in an adjacent redevelopment site to give suitable prominence to sustainable transport modes as the main access provision to the town centre. This should assist and support a significant modal shift away from the private car and diminish the volume of general traffic within the town centre to underpin the overall improvement of the amenity and ambience within the town centre as sought by the Spatial Implementation Plan.

Overall accessibility of the town centre for pedestrians and mobility impaired people will be improved as a result of modifications to the traffic system to extend the pedestrian only streets and redirect traffic movements from minor streets onto the main traffic circulation route around the edge of the town centre. There will be fewer conflict points between pedestrians and traffic, as well as increased accessibility for pedestrians from the town centre core to the harbour waterfront along the quays.

4.0 SUSTAINABLE TRANSPORT

4.1 Walkability

The key focus of the spatial implementation plan will be the improvement of the walkability of the town centre through rationalisation of the traffic system along a main circulation route around the edge of the town centre. The number of traffic routes across the town centre will be reduced to the minimum with the closure of several minor streets to traffic movements across the main pedestrian spine route along Main Street.

This pedestrianised spine route is currently 500m long from George’s Street Lower to Allen Street. The pedestrian spine route will be extended northwards by 225m along Selskar Street to Slaney Street and Redmond Square. At the southern end it will be extended eastwards by 100m along Henrietta Street to The Crescent where a new pedestrian plaza will be developed to occupy most the space currently used for on-street parking and an excessively wide road area. Thus the core pedestrianised area of the town centre will be increased 2/3rds in extent.

There will also be associated improvements for pedestrian priority on a number of side streets such as Charlotte Street and Monck Street at the northern end of the town centre core and along the frontage of Wellington Place on the eastern side of the area.

4.2 Public Transport

There is a town bus service in Wexford operated by the private company Wexford Bus with 2 loop routes linked through the town centre and extending to Clonard and Drinagh on the outskirts of the town to the west and south at distances of 3km from the town centre. Bus stops for these services are located along the quays in the town centre and at Redmond Square. These stops will be incorporated in the various proposed public realm improvements identified in the Spatial Implementation Plan. As noted in Chapter 3 earlier, there is potential to enhance the provisions for bus stops at Redmond Square in reorganisation of the traffic layout.

4.3 30 km/h Speed Limit for Town Centre

In line with Government policy for low speed zones in town centres and residential areas, Wexford County Council should consider the adoption of a general 30 km/h speed limit across the whole of the town centre zone, including along the main traffic circulation routes on the quays and radial streets. This arrangement would enhance comfort and safety for all road users, especially for pedestrians and cyclists and would respect the historical narrow medieval town centre street network.

4.4 Cycling

There are cycling facilities on several of the main radial roads leading into the town centre over lengths of 2km or so. However, none of these cycle routes extends properly into the town centre. For example on the R769 Newtown Road, shown below, there is a cycle lane that ends 300m short of the town centre at the junction with Hill Street and John Street Upper. (Cycle lanes are fairly poor quality facilities compared to cycle tracks that offer better security for cyclists from encroachment by traffic.)



Map of Wexford Town Bus Service Routes

Further work is required in a follow on task to develop a fully integrated cycle network plan for Wexford Town. This should seek to upgrade the facilities to fully segregated cycle tracks along the main radial routes and to extend these to connect to a north-south spine cycleway along the waterfront of the harbour as identified in Item 7 within Section 3.4 earlier.

It may be appropriate to share the road with traffic on suitable town centre streets within a low speed 30 km/h environment. This would overcome the difficulty of limited road space on the narrow historic streets.



Existing Cycle Lane along Newtown Road (R769)



Existing Road Layout on Wexford Bridge - No Cycling Facilities

Wexford Cycling Hub

In an earlier study for Wexford County Council, Roughan & O'Donovan assessed the feasibility of developing cycle routes around Wexford Harbour towards Curracloe to the northeast and Rosslare to the southeast. Maps of these potential routes are shown in Appendix B. The harbour cycle routes would be centred on the Wexford Quays at the town centre and radiate from there around the shoreline where possible. The centrepiece of the cycle route network would be a 1.3km long cycleway along the quays from Wexford Bridge to Trinity Wharf.

Cycleway on Wexford Bridge

A key link in a cycle route network for Wexford Town will be on the bridge spanning the harbour and linking northward to Castlebridge and onward to Curracloe. Accommodation of a formal cycle route on Wexford Bridge will require modification of the cross-sectional layout. The existing bridge has a 7.5m wide carriageway with two 1.5m wide footpaths either side in an overall width of 10.5m between parapet railings. To accommodate both cyclists and pedestrians on the bridge a minimum 3m wide shared footway/cycleway is required.

Alternatively a cheaper and practical alternative is to narrow the road carriageway to 6.0m or 6.5m in accordance with the lower standards of the Design Manual for Urban Roads and Streets (DMURS) and different options can be reviewed for cycle/ footpath provision. This will provide a safe environment for cyclists and pedestrians to access the north side of the harbour from Wexford town centre. The reduction in the carriageway width will also help reduce the speed of traffic using the bridge which in turn will provide a safer environment for all road users.

4.5 Universal Access

The various proposals for public realm improvements will enhance the provisions for pedestrians in the town centre, and especially for those with mobility impairments. Extended pedestrianised areas will link the central business area of the town centre with a smaller number of large car parks in two clusters at the northern and southern ends of the Main Street spine.

Enhanced access will be provided to the harbour waterfront area through pedestrianisation of Charlotte Street and Henrietta Street with an additional 5 priority crossing points (either zebra or signal controlled) on top of the existing 3 crossings.

All existing on-street disabled parking spaces will be retained and may be augmented following a detailed review.

5.0 TRAFFIC CAPACITY AT WEXFORD BRIDGE

Junction Turning Counts were undertaken by Nationwide Data Collection (NDC) on Thursday 1st and Saturday 3rd of December 2016 and this data was used to evaluate the traffic capacity and performance of the signal controlled junction at Wexford Bridge.

In 2016 the main location in the town centre experiencing traffic congestion at peak times was at the Wexford Bridge Signalised Junction. The operation of the junction was analysed to review if there were any alterations to the signal arrangement that could be implemented to reduce queuing and congestion at this important junction. The findings of the analysis enabled the signal operations to be revised in 2017 and the performance of the junction has been improved.

A study should be undertaken to address the potential impact on traffic of the proosed additional pedestrian crossings along the quayfront.

6.0 PARKING REVIEW

Existing Car Parking Provisions and Usage;

There are 12 off-street public car parks available in the town centre as well as on-street parking on certain streets (with an estimated overall total number of 1,800 spaces) as shown in the following table.

Table 6.1

Wexford Town Centre Parking Observations.								
Wednesday 30th November from 4pm to 5:15.								
					Charges			
	Location	Occupied	Available	Total	% Full	Hourly	Daily	Comments
1	Trinity Street Talbot Hotel	57	34	91	63%	€1	€5	
2	Talbot small car park	25	17	42	60%	€1	€5	
3	Paul Quay	109	20	129	84%	€2	€2	
4	Paul Quay on street	13	7	20	65%	€1.40	€5.60	Max 4 hours
5	Sinnott place multi storey	85	235	320	27%	€1.00	€3	
6	Crescent off street South	52	18	70	74%	€1.20	€3	
7	Crescent on street	25	4	29	86%	€1.40	€5.60	Max 4 hours
8	Crescent North off street	46	11	57	81%	€1.40	€5.60	Max 4 hours
9	Custom House Quay on-street	28	0	28	100%	€1.40	€5.60	Max 4 hours
10	Pettit Supermarket: surface	45	0	45	100%	€2	n/a	6 cars excess
11	Pettit Supermarket Underground	48	52	100	48%	€2	n/a	Max 2 hours
12	Custom House Quay off-street	14	50	64	22%	€2	?	
13	Bridge Street car park	58	12	70	83%	€1.20	€5	
14	Wellington Place off-street	68	42	110	62%	€1.40	€5.60	Max 4 hours
15	DUNNE's	40	60	100	40%	€1.50	n/a	Max 2 hours
16	Old Cinema	44	256	300	15%	€1.50	€6	
17	Whytes Hotel underground	98	142	240	41%	€2	€16	
		855	960	1815	47%			

A number of the small to medium sized off-street car parks (Numbers 6, 12 and 13 in Table 6.1) with 200 spaces are temporary facilities on derelict sites with potential for redevelopment. The public parking that is currently available at these sites will eventually be displaced to a large degree as those sites are redeveloped.

On-street parking is limited due to the narrow streets, with the only substantial section of parking being along the quays where there are about 100 spaces, including 29 spaces along Crescent Quay.

A car park survey was conducted at the entrance/ exit of each of the main car parks within the town, as shown on Drawing Number 16.167 – 008 in Appendix A, these car park surveys were conducted by Nationwide Data Collection (NDC) on Thursday 1st and Saturday 3rd of December 2016. These surveys were conducted at a number of key locations between the hours of 08:00 and 20:00 on the Thursday and 12:00 to 18:00 on the Saturday.

These surveys have shown that the accumulation of cars parking in a number of the car parks were not close to capacity with some operating between 33% and 50% capacity values.

By removing on street car parking along Paul Quay / The Crescent less than 4% of overall parking available within the town would be removed.



Sinnott Place Car Park

Additionally to further remove traffic from the quays area of the town, consideration should be given to the removal of the off street car park in the Paul Quay area which would account for less than 7% of available parking within the town.

Overall both these proposals could easily be incorporated in the various other public and private car parks outside the town centre.

Indeed significant parking is available just outside the study area, as shown on Drawing Number 16.167 – 009 in Appendix A, in addition to the improvement of pedestrian facilities these areas could be employed to further enhance the availability of car parking close to the town centre.

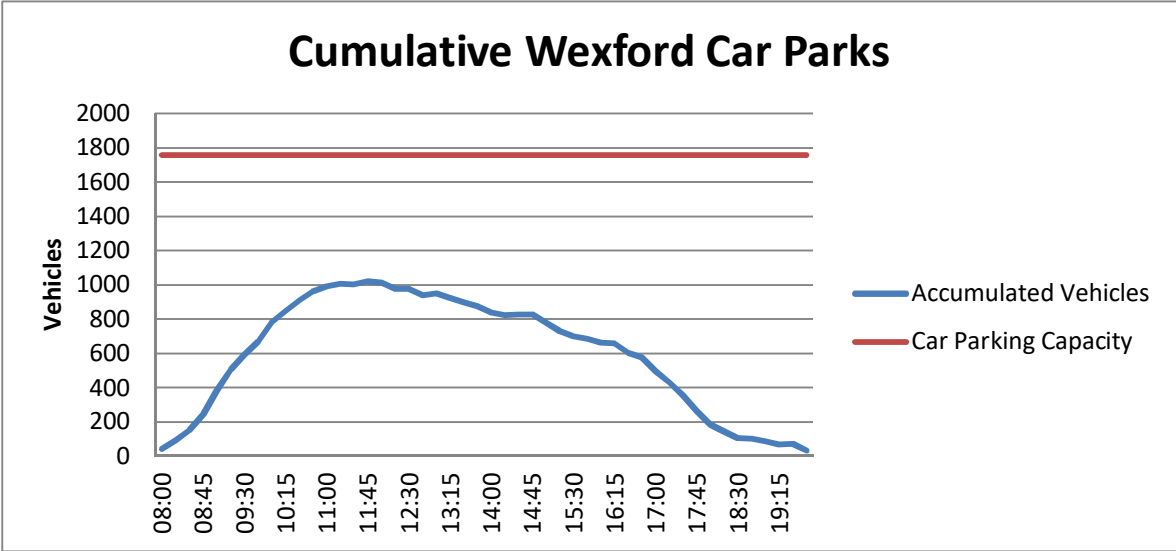
As can be seen from the graph above the cumulative accumulation of vehicles parked in car parks around the town centre, there is significant additional capacity available around the town, as a result, the removal of some areas of car parking will have a limited effect on the town. Graphs for each of the individual car parks were included in the Stage 2A Report.

Disabled Parking

There are disabled parking spaces provided on various streets throughout the town centre. This study has not evaluated the adequacy of these provisions which would involve a careful assessment of the need for disabled parking to suit specific requirements of residents and businesses.

An in-depth review, during detailed design phases, of parking provision for disabled motorists should be conducted to ensure that the level of provision and location of provision is adequate to ensure that all motorists are suitably catered for, in any re-imagined space.

Where it has been proposed that some on-street parking should be removed to enable public realm improvements, this does not apply to disabled parking spaces which should be retained in each location within improved street paving works pending further detailed study to assess the adequacy and appropriate location of disabled parking provisions within the town centre generally.



Proposed Town Centre Car Parking Strategy

In Table 6.1 it is clear that there are numerous small to medium sized car parks spread widely across the town centre. There are 7 main car parks with 100 or more spaces and these are mainly concentrated in clusters at the northern and southern ends of Main Street. Numerous studies have found that a significant proportion of the traffic volume on a town centre street network is associated with drivers searching for a parking space. If car parking capacity were consolidated in a small number of larger car parks in clusters, with variable message signs to direct drivers to available spaces, this can help to reduce the volume of traffic on the street network. Such a Car Parking Strategy is recommended for Wexford town centre with 2 clusters as shown in Table 6.2:

Potential Removal of Some Town Centre Parking

As temporary car parks on derelict sites are redeveloped there will be a loss of 200 spaces, or 11% of the overall parking capacity. If the on-street parking is removed along the quays and The Crescent for public realm reasons and safety along the railway line, this will lose another 77 spaces, or 4% of the existing overall capacity. As demonstrated earlier in the car parking observations, the existing capacity is only utilised to a level of between 50% and 60%, so these modest reductions in car parking capacity should not have a negative impact on the business of the town centre in terms of perceived availability of car parking.

Potential Additional Town Centre Parking

The existing private car parks at Main Street South and King Street and the small public car park at Bride Street are located on adjoining sites with potential for redevelopment and consolidation as shown on the spatial implementation plan drawings by Scott-Tallon-Walker Architects. The capacity of this potential future expanded car park could perhaps be doubled from 166 spaces to over 300 in a multi-storey structure.

Table 6.2

Town Centre North Car Park Cluster	
Location	Spaces
Wellington Place	110
Dunne's	100
Old Cinema / Redmond Road	300
Whyte's Hotel	240
Total in Town Centre North	750
Town Centre South Car Park Cluster	
Sinnott Place	320
Paul Quay	129
Talbot Hotel	133
Main Street South / King Street / Bride Street	166
Total in Town Centre South	748
Town Centre - Other Parking	
Pettit's	145
On-Street	77
Temporary Car Parks	200
Total Other Parking	422

Paul Quay Car Park

The existing surface car park at Paul Quay with 129 spaces is mainly used for all-day parking by people employed in the town centre, as encouraged by an all-day charge of just €2, which is the cheapest parking in the town centre. The future development of a high-quality public realm promenade along the harbour front could entail the removal of some or all of this existing parking. The users of this car park could be displaced to other car parks nearby with spare capacity such as the Sinnott Place car park where the daily charge is not much greater at €3 (in 2017).

Car Parking at Trinity Wharf

Redevelopment of the Trinity Wharf site, 500m south of the Crescent and 200m from Paul Quay at the nearest, could potentially provide additional public parking to increase the overall capacity in the Town Centre South Car Park Cluster.

Under current development plan standards for offices in Wexford, the ratio of parking required is unusually high at 1 space per 25m². This ratio would support almost 100% mode share by car, which is not sustainable and out of step with national “Smarter Travel” policies. By comparison in Drogheda, County Louth, the parking standard for offices is just 1 space per 100m² in the town centre and 1 space per 50m² in the environs. It is recommended that Wexford County Council considers adopting a lower requirement for car parking in office developments in the town centre to make better use of the available development sites including Trinity Wharf.

In advance of a proper master-plan for the Trinity Wharf site, an outline assessment of the development potential on the site indicates the potential to provide 750 car parking spaces in a single level under-croft beneath a podium surrounding a number of buildings. Subject to a suitable mix of land-uses such as offices and residential, with appropriate parking standards, it may be possible to accommodate 200 or so public parking spaces within the development to augment the overall parking capacity in the Town Centre South Cluster.

7.0 TRAFFIC RELATED PUBLIC REALM IMPROVEMENTS PRIORITY

The earlier suggested proposals to improve the traffic related public realm are further separated based on ease of implementation. A number of the proposals, due to their nature, will require some time and investment to ensure proper planning, while others are relatively simple to implement with minimal capital investment or planning requirements.

7.1.1. Short Term (12 to 18 Months)

To provide some benefits in the short term, which would require minimum input, in terms of both resources or planning the following elements of the above proposals could be implemented in the following 12 – 18 months;

- Restrict delivery hours along the quays and main street to either before or after the hours of 08:00 – 19:00 to ensure that delivery vehicles are not causing interruptions or delays to traffic flows in these areas.
- Removal of on street parking along the Quays will also remove vehicles crossing traffic lanes, or holding traffic up to complete parking manoeuvres. This will improve traffic flows and reduce conflicting movements.

7.1.2. Medium Term (Years 2 & 3)

Less immediate proposals which would require small capital investment, further analysis, planning and potentially phased implementation are as follows;

- Alter the entrance location to Paul Quay, away from the end of Crescent Quay to the signal junction at King Street.
- The routing of traffic around Redmond Square forming two way traffic along Redmond Road / 1798 Street. This would require the provision of a compact roundabout at the 1798 Street/ Redmond Road / Old Cinema Car Park, with some minor kerb realignment works at Redmond Square to facilitate two way traffic.
- Once traffic had been diverted away from the south and east of Redmond Square and off Slaney Street, works to provide a 'transportation hub' in these areas could begin.
- Closing off of side streets and/ rerouting of traffic along Main Street / Selskar Street.
- Additional Pedestrian Crossings could be provided along the Quays

7.1.3. Long Term (Year 4 Plus)

The main benefits of the proposed public realm improvements will be the improvements to pedestrian priority throughout the main retail and leisure zones within the town centre. Pedestrians and vulnerable road users will have complete priority within these zones ensuring a more pleasant experience for visitors and locals alike. Proposals for longer term solutions that will require significant capital investment and planning are as follows;

- Once main traffic flows have been rerouted through Redmond Square and other minor routes have been altered, works for the change of Selskar Street / Main Street to a more pedestrian priority zone can be planned and phased over a longer period of time.
- Close Paul Quay Car Park, moving these vehicles to use car parks on the fringes of the town centre

8.0 SUMMARY CONCLUSIONS

The conclusions of this Traffic Study in support of the Wexford Quays Spatial Implementation Plan are as follows:

- a) The Crescent should be reorganised to form a central public plaza within an extended town centre public realm scheme;
- b) Henrietta Street should be pedestrianised to link The Crescent to the pedestrian spine along Main Street.
- c) The traffic link from Rowe Street across Main Street should be closed in the interest of pedestrian safety;
- d) The Redmond Square traffic gyratory system can be altered to facilitate two way traffic, allowing a greater area of the town centre to have priority reassigned to pedestrians;
- e) A Public Transport Hub should be developed at Redmond Square with space for bus marshalling on Slaney Street and Redmond Road arising from the conversion of the one-way traffic gyratory system to two-way flow along Redmond Road and 1798 Street;
- f) A mini-roundabout should be provided to replace the signals at the junction of Hill Street and John Street Upper, which would remove the restriction on the right-turn from Newtown Road into John Street Upper;
- g) Surveys in late 2016 revealed that car parking capacity exceeds actual demand by a considerable margin and there is scope to remove some on-street parking from the quays to enable footpath widening and public realm improvements;
- h) There is scope to rationalise and consolidate car parking in two clusters at the northern and southern end of the Main Street spine which would reduce the volume of traffic on town centre streets searching for a parking place.
- i) The operation of the traffic signals at Wexford Bridge in 2016 gave rise to significant queuing delays, which was attributed to an excessively long cycle time length and malfunctioning detector loops. These problems were addressed in an upgrade of the signal equipment and operations in 2017
- j) A Wexford Cycling Hub should be developed on the basis of a further study for a full town centre cycle network plan to consolidate previous proposals in a complete cycle route network across the town and linking to rural destinations;
- k) The provisions for disabled parking should be reviewed in detail and additional parking provided where appropriate.

DRAWINGS LIST

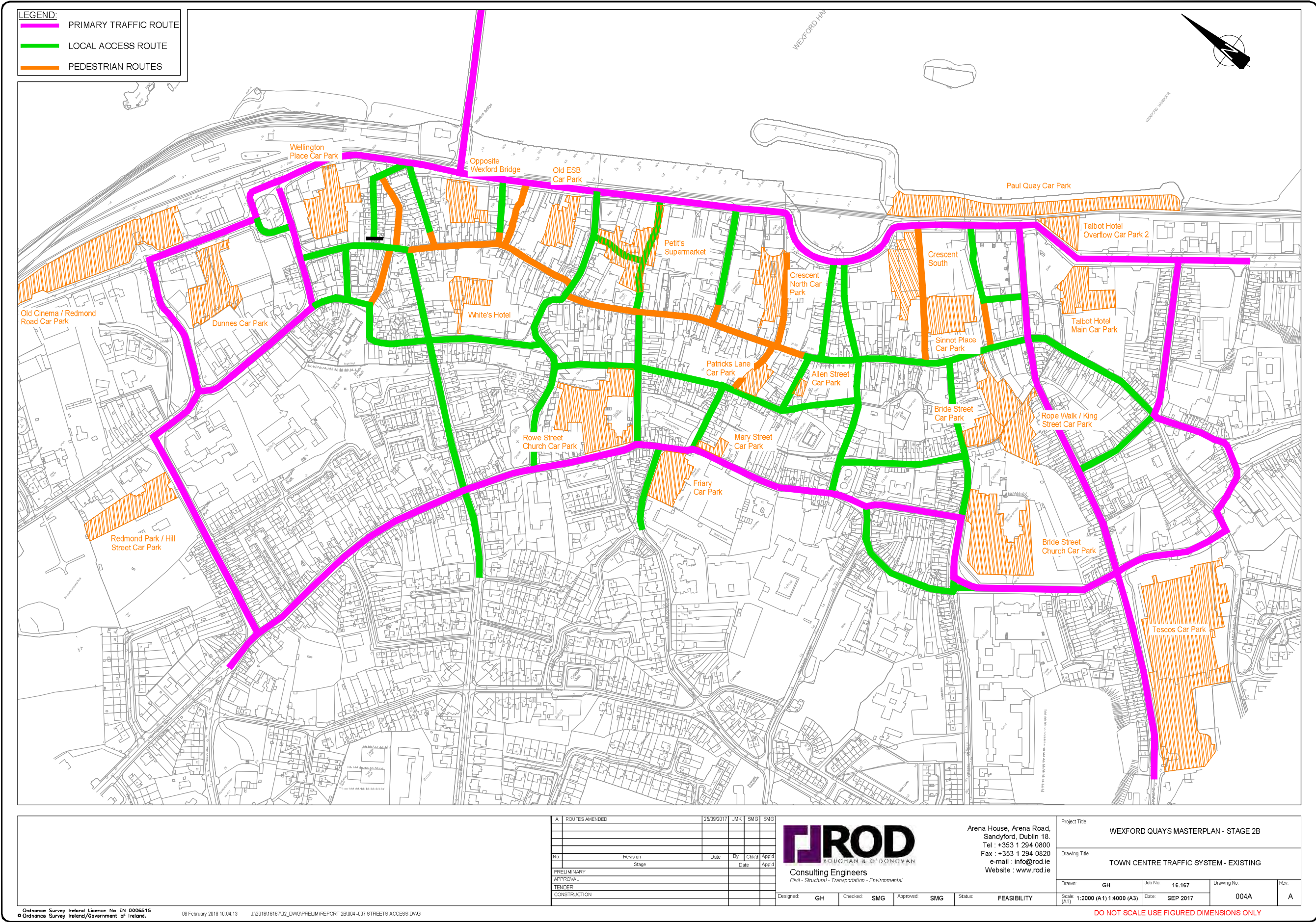
Drawing No.	Title
001	Redmond Square: Proposed Revised Traffic System
002	Redmond Square: Proposed Revised Road Layout
003	Redmond Square: HGV Auto-Track
004A	Town Centre Traffic System - Existing
004B	Town Centre Traffic System - Proposed
005	Existing Traffic Flow Directions
006	Proposed Traffic Flow Alterations
007	Wexford Quays Pedestrian Crossings
008	Wexford Town Centre Car Parks

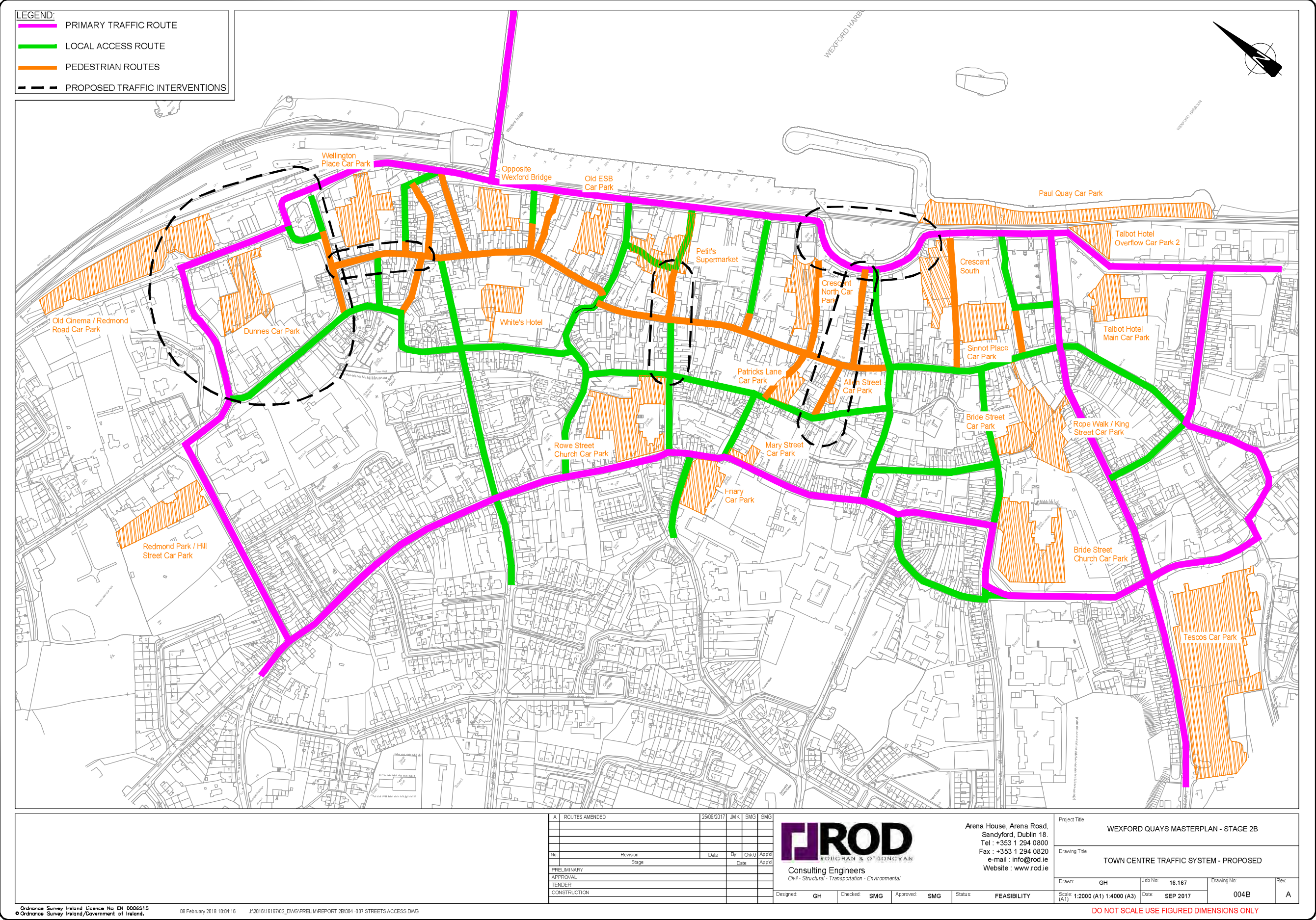
TRAFFIC & MOVEMENT REPORT APPENDIX A : FIGURES



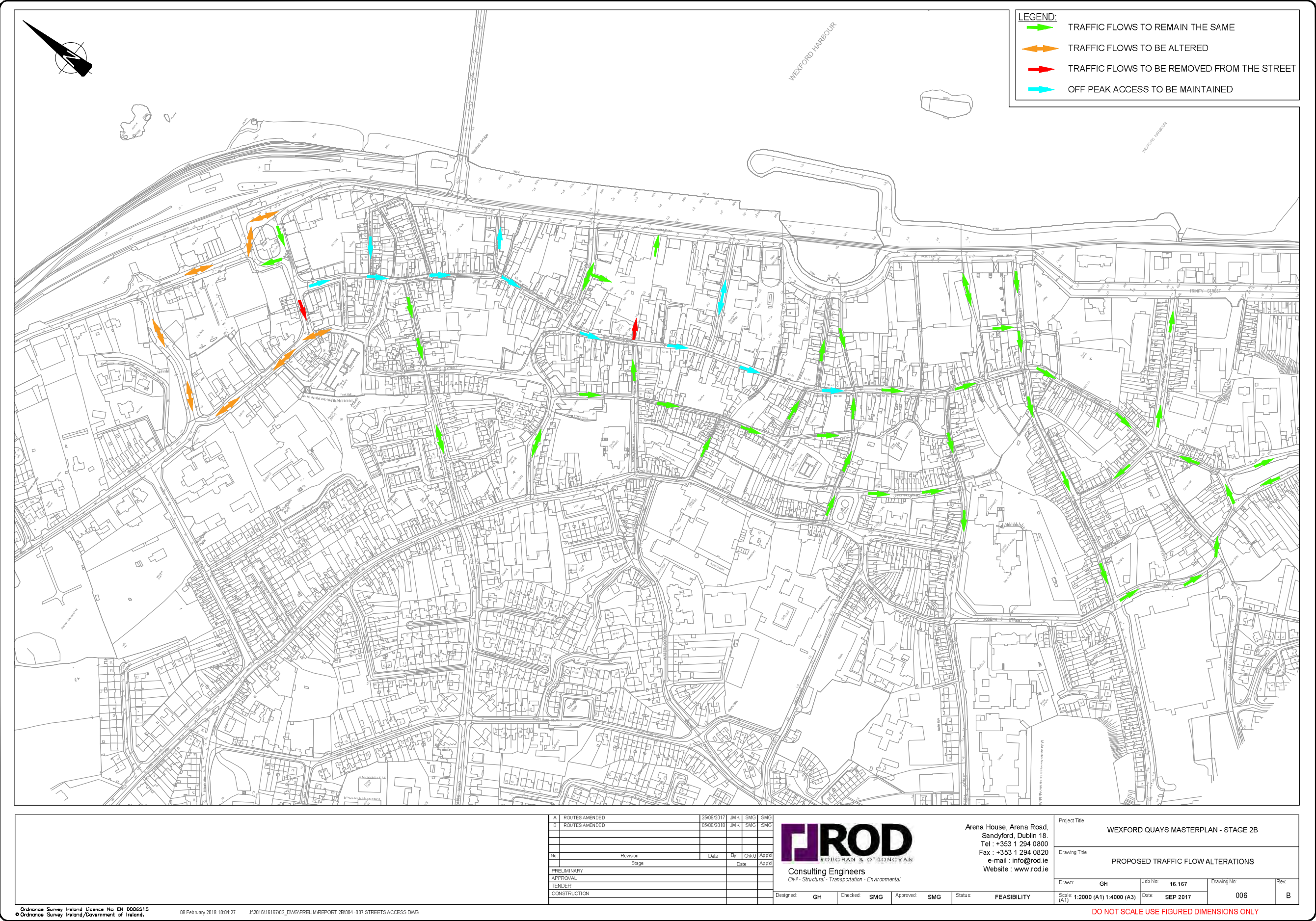










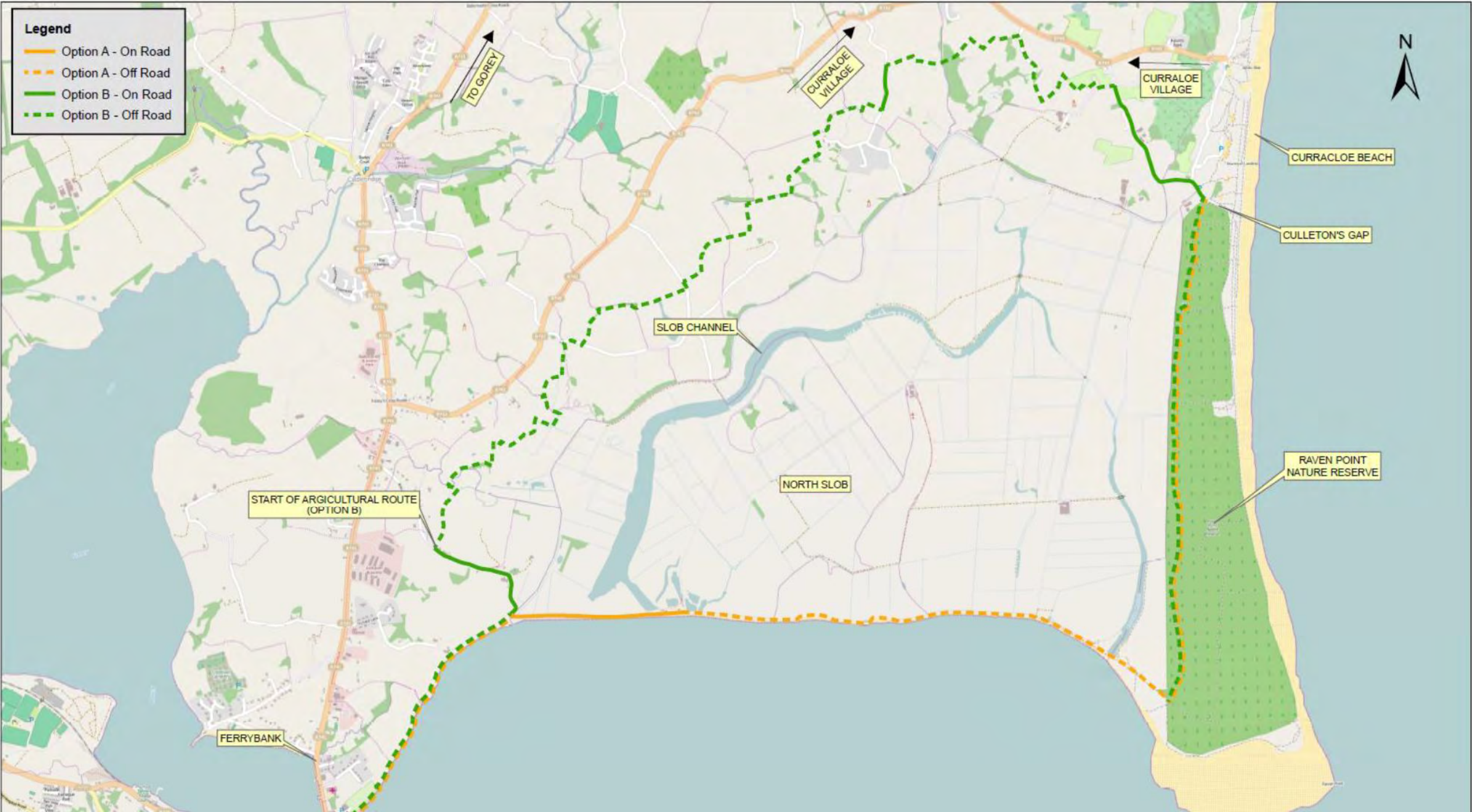






TRAFFIC & MOVEMENT REPORT APPENDIX B: PROPOSED WEXFORD CYCLE HUB





Potential Cycle Routes around Wexford Harbour North

Wexford Bridge

Accommodation of a formal cycle route on Wexford Bridge will require modification of the cross-sectional layout. The existing bridge has an approximate 7.5m wide carriageway with two 1.5m wide footpaths either side. To accommodate both cyclists and pedestrians on the bridge a minimum 3m wide shared footway/cycleway is required.

One option is to provide a cantilevered pedestrian/cyclist bridge off the edge of the existing structure which can prove expensive.

Alternatively a cheaper and practical alternative is to narrow the road carriageway to 6.0m and increase the eastern footpath to 3.0m wide. This will provide a safe environment for cyclists and pedestrians to access the north slob area from Wexford town centre. The reduction in the carriageway width will also help reduce the speed of traffic using the bridge which in turn will provide a safer environment for all road users.





Potential Cycle Routes around Wexford Harbour South



Potential Sea-Front Cycle Route Southward from Paul Quay, Wexford

Dublin
19 Merrion Square, Dublin 2,
D02 VR80, Ireland
Tel: +353 (1) 669 3000
Email: michael.tallon@stwarchitects.com

London
10 Cromwell Place, London,
SW7 2JN, UK
Tel: +44 (207) 589 4949
Email: eoin.omorain@stwarchitects.com

Cork
72 South Mall, Cork,
T12 VX9A, Ireland
Tel: +353 (21) 432 0744
Email: david.flannery@stwarchitects.com

Galway
22 Eyre Square, Galway,
H91 XP3Y, Ireland
Tel: +353 (91) 56 4881
Email: bryan.roe@stwarchitects.com

Appendix 5.1.1

Correspondence in Relation to T3 99

21st May, 2018

S/WQP/3.16

Ann McCarthy
Aquaculture and Foreshore Management Division
Department of Agriculture Food and the Marine
National Seafood Centre
Clonakilty
Co Cork
P85 TX47

RE: Wexford Harbour Application for Aquaculture Licence T3/99

Dear Ms McCarthy,

I refer to the application by TL Mussels Ltd for an aquaculture licence as described by the application reference T3/99.

Wexford County Council wishes to comments as follows:

1. The area identified by T3/99 in the vicinity of Wexford town, extending from Crescent Quay to Trinity Wharf, is an area of high amenity value and of major importance for the spatial and economic development of Wexford town, harbour & quays area.
2. Trinity Wharf
Wexford County Council is currently advancing plans for the re-generation of the Trinity Wharf site (located between Paul Quay and Batt Street) that will include works to the sea walls and the development of a 61 berth marina off the north eastern corner of the wharf. The Council has appointed Scott Tallon Walker Architects to lead an integrated design team to prepare a master plan, complete Appropriate and Environmental Impact assessments for the project and will be submitting an application for planning and related consents in September/October 2018. Detailed design and tendering will be completed quarter three of 2019 with a construction start on site planned in early 2020.

The locations and areas required for development of these projects are shown on the attached drawing and are within the area identified by the above application T3/99. Wexford County Council requests that consideration be given to exempting these areas from any licence that may be issued to facilitate the development and implementation of these projects.



3. Crescent Quay / Breakwater Arm Area

Wexford County Council plans the installation of passenger pontoon facilities adjoining the breakwater arm. In addition, Wexford County Council is proposing an area for town side visitor moorings and to allow for the future expansion of the Trinity Wharf marina.

The location and areas required for these facilities are shown on the attached drawing and are within the area identified by the application referenced T3/99. Wexford County Council requests that consideration be given to exempting these areas from any licence that may be issued to facilitate the development and implementation of these projects.

As part of the proposed works in and around Crescent Quay Wexford County Council also intend to put in place a plan, subject to consent, to dredge the silt from the area between the road and the protective arm. As part of this work, and to reduce the future build up of silt in this area, proposals are being developed that will require works to the southern section of the breakwater arm. The area required to accommodate these works is included in the area identified for the passenger pontoon facilities and town side visitor berthing above. These works will reduce siltation within the breakwater areas and ensure that Crescent Quay is covered with water at all states of tide.

These works identified above will make this area of the town significantly more attractive, facilitating tourism, leisure, recreational water based activities and related commercial opportunities allowing for the economic growth and development of Crescent Quay and the adjoining areas.

4. Wexford County Council is seeking that consideration be given to providing an area exempted from licence, to allow for the maintenance, repair and upgrading of the existing North and South Training walls. The Council is, therefore, seeking that an area, of minimum 30m width, is exempted from any licence each side of the training walls.
5. Wexford County Council also has a number of related projects that while not within the area subject to application T3/99 should be considered as part of this process. The Council plans to provide visitor moorings off the north training wall (Ardcavan Visitor Moorings) and to develop and construct a pedestrian walkway below the high water mark to link Paul Quay to Trinity Wharf. The location and areas required for these projects are also included on the attached drawing.

These projects are critical to Wexford County Council's plans to develop the harbour in a way that will facilitate the economic development of the central and southern areas of



Wexford town adjoining the water. The projects will be facilitated by Wexford County Council and will see significant investment of public and private resources as part of an overall economic and spatial development plan for Wexford town.

Should you require further information, please contact me.

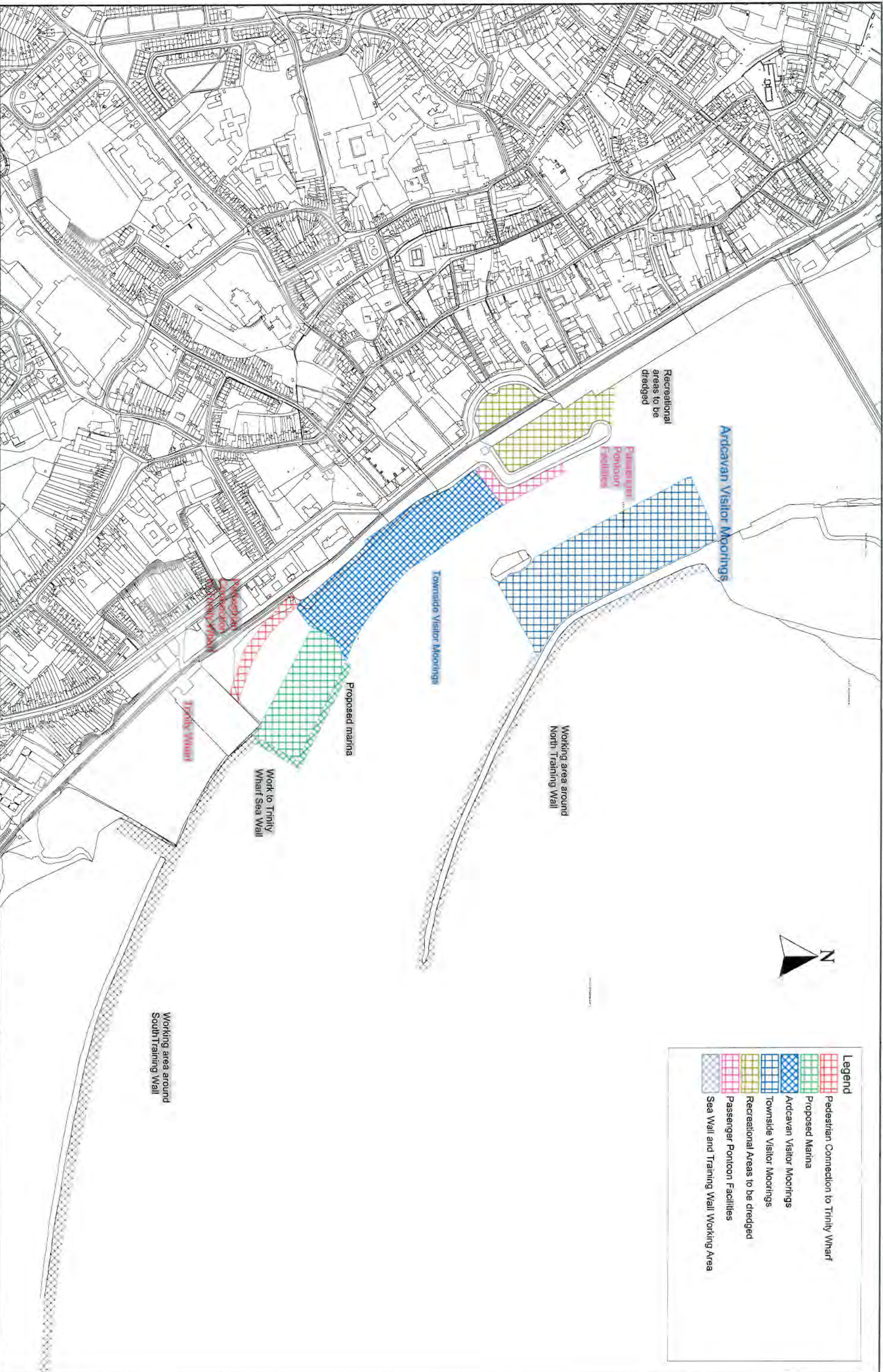
Yours sincerely,



Brian Galvin,
Senior Engineer,
Special Projects.

Cc: Capt Phil Murphy, WCC
Eddie Taaffe, WCC
Gerry Forde, WCC





Legend

- Pedestrian Connection to Trinity Wharf
- Proposed Marina
- Ardcavan Visitor Moorings
- Townside Visitor Moorings
- Recreational Areas to be dredged
- Passenger Pontoon Facilities
- Sea Wall and Training Wall Working Area



Wexford
County Council

Wexford Quayfront Development

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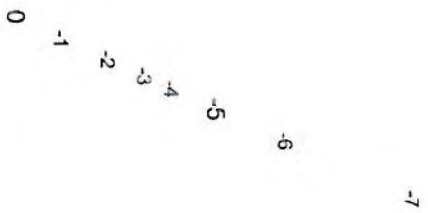
Title: Marina Options

Drawn by: FB

Date: 17.05.2018

Checked by: BG

Scale 1:5000



**Proposed marina layout
(61 berths shown)**

**Series of (5x20m) wave absorbing
Floating Breakwaters**



10m Vessels (48)

gm Vessels (x16)

Coronary Vessels (x28)

© 1997 by The McGraw-Hill Companies, Inc.

Pietra Walkey and Iqbal Masih

Pochman, David

Verifying Functionality

The cardinal for each Verity document against the following changes or other conditions is provided for this part of the work.

[www.pearson.com](#)

only information concerning the location of existing sources are mentioned in this drawing is attributed to general guidelines and only if all the responsibility of the contractor for information and only the exact horizontal and vertical alignment of all cables, pipes, etc. (both underground and overhead) have to work consistently on.

business and the prospects of a new generation of leaders.

to be effective, and are not a convenient vehicle for the sharing of other relevant information. You are expected to be an uninvolved manager and not work yourself out beyond your chosen time slot. In the next weeks (even with 1992) will not accept any responsibility for any errors arising from the use of these notes, either by human error by the recipient, lack of sufficient information or misinterpretation, or responsibility on ours. With the recipient's assistance, and any errors arising when these notes are used to aid the recipient, allowing freedom from, or suffering from, any other

Introduction to Probability Theory

All our measurements were taken to protect within a 100 m radius of

CONCLUSIONS

436 *Chen et al.*



Client

Wexford County Council

Project
Trinity Wharf
Feasibility Study

**Proposed Marina
Northern Corner - Option 2
Floating Breakwater**

Drawing Status	Sheet Size	Drawing Scale
Preliminary	A3	As Shown

Drawing Number

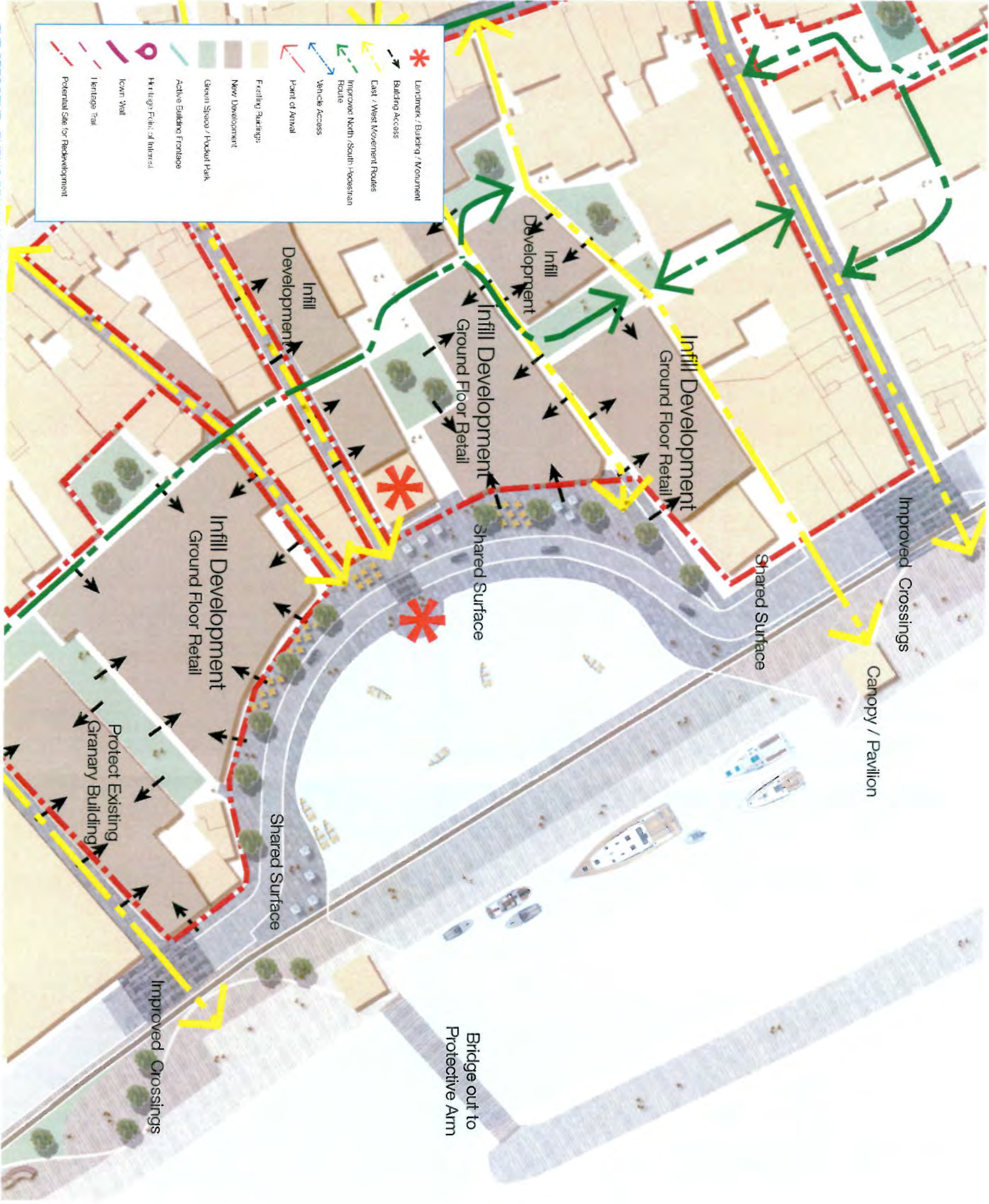
REV

IBE / 1115

Rev01

Project Number	Drawn By	Date	Initial Review
AB	KC	1/7/11/2016	-





THE CRESCENT - PUBLIC REALM AND INFILL DEVELOPMENT

28th June, 2018

S/WQP/3.16

F.A.O. Ann McCarthy
Aquaculture and Foreshore Management Division
Department of Agriculture Food and the Marine
National Seafood Centre
Clonakilty
Co Cork
P85 TX47

RE: Wexford Harbour Applications for Aquaculture Licences

Dear Ms McCarthy,

I refer your letter dated the 15th of June 2018 and to the following aquaculture applications:-

- T3/30A2 TL Mussels Ltd
- T3/46C Fjord Fresh Mussels Ltd
- T3/47A Loch Garman Harbour Mussels Ltd
- T3/93A Eugene Duggan
- T3/99 TL Mussels Ltd

Wexford County Council wishes to comment as follows:

The area of the harbour in the vicinity of Wexford town, extending from Crescent Quay to Trinity Wharf, between the training walls is an area of high amenity value and of major importance for the spatial and economic development of Wexford town, harbour & quays area.

1. Trinity Wharf - Reference T3/99 TL Mussels Ltd

Wexford County Council is currently advancing plans for the re-generation of the Trinity Wharf site (located between Paul Quay and Batt Street) that will include works to the sea walls and the development of a 61 berth marina off the north eastern corner of the wharf.

Wexford County Council proposes to construct a pedestrian walkway below the high water mark to link Paul Quay to Trinity Wharf.



The Council has appointed Scott Tallon Walker Architects to lead an integrated design team to prepare a master plan, complete Appropriate and Environmental Impact assessments for the project and the Council will be submitting an application for planning and related consents in September/October 2018. Detailed design and tendering will be completed in Q3 of 2019 with a construction start on site planned for early 2020.

The locations and areas required for the development of these projects is shown on the attached drawing of Wexford Harbour, and are within the area identified in the above application. Wexford County Council requests that consideration be given to exempting these areas from any licence that may be issued to facilitate the development and implementation of these projects.

2. Crescent Quay / Breakwater Arm Area - Reference T3/99 TL Mussels Ltd

Wexford County Council plans to install passenger pontoon facilities adjoining the breakwater arm. In addition, Wexford County Council is proposing an area for town side visitor moorings and to allow for the future expansion of the Trinity Wharf marina.

The location and areas required for these facilities are shown on the attached drawing of Wexford Harbour, and are within the area identified by the above application. Wexford County Council requests that consideration be given to exempting these areas from any licences that may be issued to facilitate the development and implementation of these projects.

As part of the proposed works in and around Crescent Quay, Wexford County Council also intends to put in place a plan, subject to consent, to dredge the silt from the area between the road and the protective arm. As part of this work, and to reduce the future build up of silt in this area, proposals are being developed that will require works to the southern section of the breakwater arm. The area required to accommodate these works is included in the area identified for the passenger pontoon facilities and the town side visitor berthing. These works will reduce siltation within the breakwater areas and ensure that Crescent Quay is covered with water at all states of tide.

These works will make this area of the town significantly more attractive, facilitating tourism, leisure, recreational water based activities and related commercial opportunities, allowing for the economic growth and development of Crescent Quay and the adjoining areas.



3. Training Walls – Reference T3/30A2 TL Mussels Ltd, T3/93A Eugene Duggan, T3/46C Fjord Fresh Mussels Ltd, and T3/47A Loch Garman Harbour Mussels Ltd

Wexford County Council is seeking that consideration be given to exempting from the licence, areas adjoining the training walls, to allow for the maintenance, repair and upgrading of these walls. The Council is seeking that an area with a minimum width of 30m, is exempted from any licence on both sides of the north and south training walls.

4. Ferrybank Visitor Moorings - Reference T3/99 TL Mussels Ltd

Wexford County Council also has a number of related projects that while not within the area subject to the above applications should be considered as part of this process. The Council plans to provide visitor moorings off the north training wall (Ferrybank Visitor Moorings).

These projects are critical to Wexford County Council's plans to develop the harbour in a way that will facilitate the economic development of the central and southern areas of Wexford town adjoining the water. The projects will be facilitated by Wexford County Council and will see significant investment of public and private resources as part of an overall economic and spatial development plan for Wexford town.

Should you require further information, please contact me.

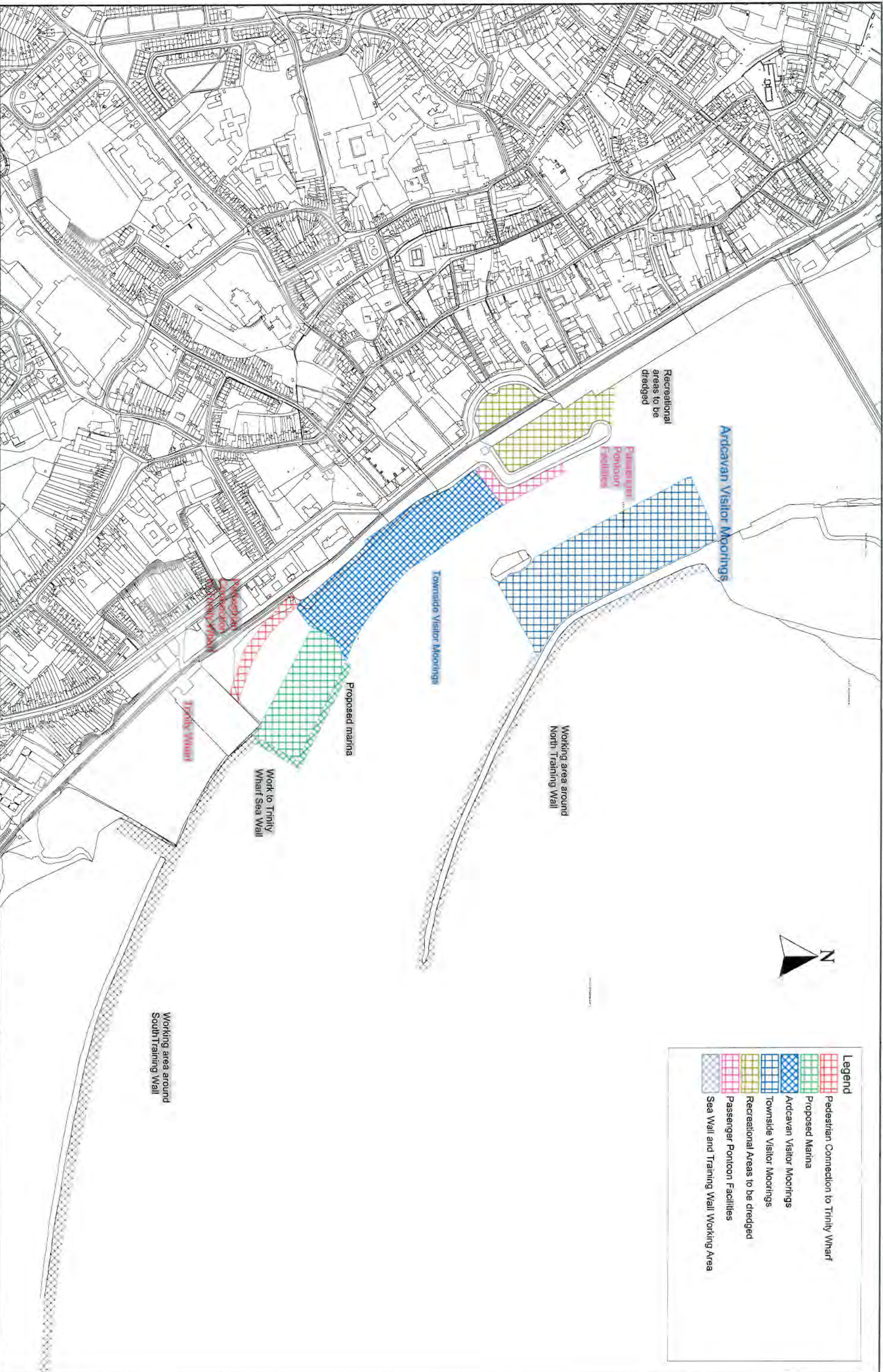
Yours sincerely,

Eddie Taaffe,
Director of Services,
Capital Development, HR & Corporate Services

Cc: Capt Phil Murphy, WCC
Brian Galvin, WCC
Gerry Forde, WCC



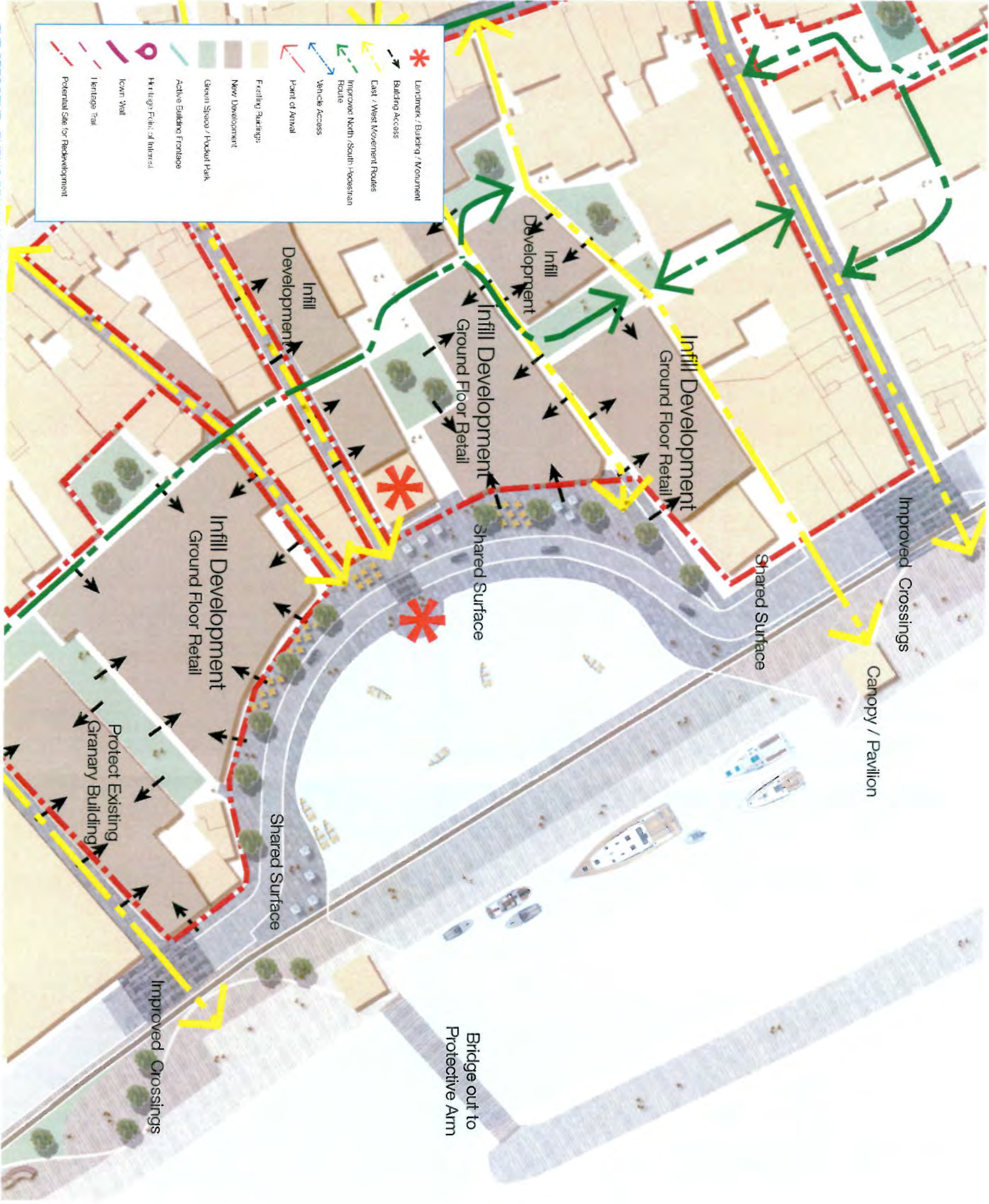




Legend

- Pedestrian Connection to Trinity Wharf
- Proposed Marina
- Ardcavan Visitor Moorings
- Townside Visitor Moorings
- Recreational Areas to be dredged
- Passenger Pontoon Facilities
- Sea Wall and Training Wall Working Area





24th July, 2018

S/WQP/3.16

F.A.O. Ann McCarthy
Aquaculture and Foreshore Management Division
Department of Agriculture Food and the Marine
National Seafood Centre
Clonakilty
Co Cork
P85 TX47
Email Ann.mccarthy@agriculture.gov.ie

RE: Wexford Harbour Applications for Aquaculture Licences

Dear Ms McCarthy,

I refer your letter dated the 15th of June 2018 and to our letter dated the 28th of June 2018 and also to the following aquaculture application:-

- T3/99 TL Mussels Ltd

In addition to our correspondence of the 28th of June 2018 Wexford County Council wishes to provide the following further information.

1. Trinity Wharf - Reference T3/99 TL Mussels Ltd

Wexford County Council is currently advancing plans for the re-generation of the Trinity Wharf site (located between Paul Quay and Batt Street) that will include works to the sea walls and the development of a 61 berth marina off the northern corner of the wharf.

The preliminary design of the marina and its breakwater system has developed further and we can now identify in greater detail, the area required to facilitate this development. A detailed drawing of the additional area required around the marina breakwater is attached. The revised area required for the development of the marina project is within the area identified in the above application. Wexford County Council requests that consideration be given to exempting this additional area from any licence that may be issued to facilitate the development and implementation of this marina project.



This project is critical to Wexford County Council's plans to develop the harbour in a way that will facilitate the economic development of the central and southern areas of Wexford town adjoining the water. This project will be facilitated by Wexford County Council and will see significant investment of public and private resources as part of an overall economic and spatial development plan for Wexford town.

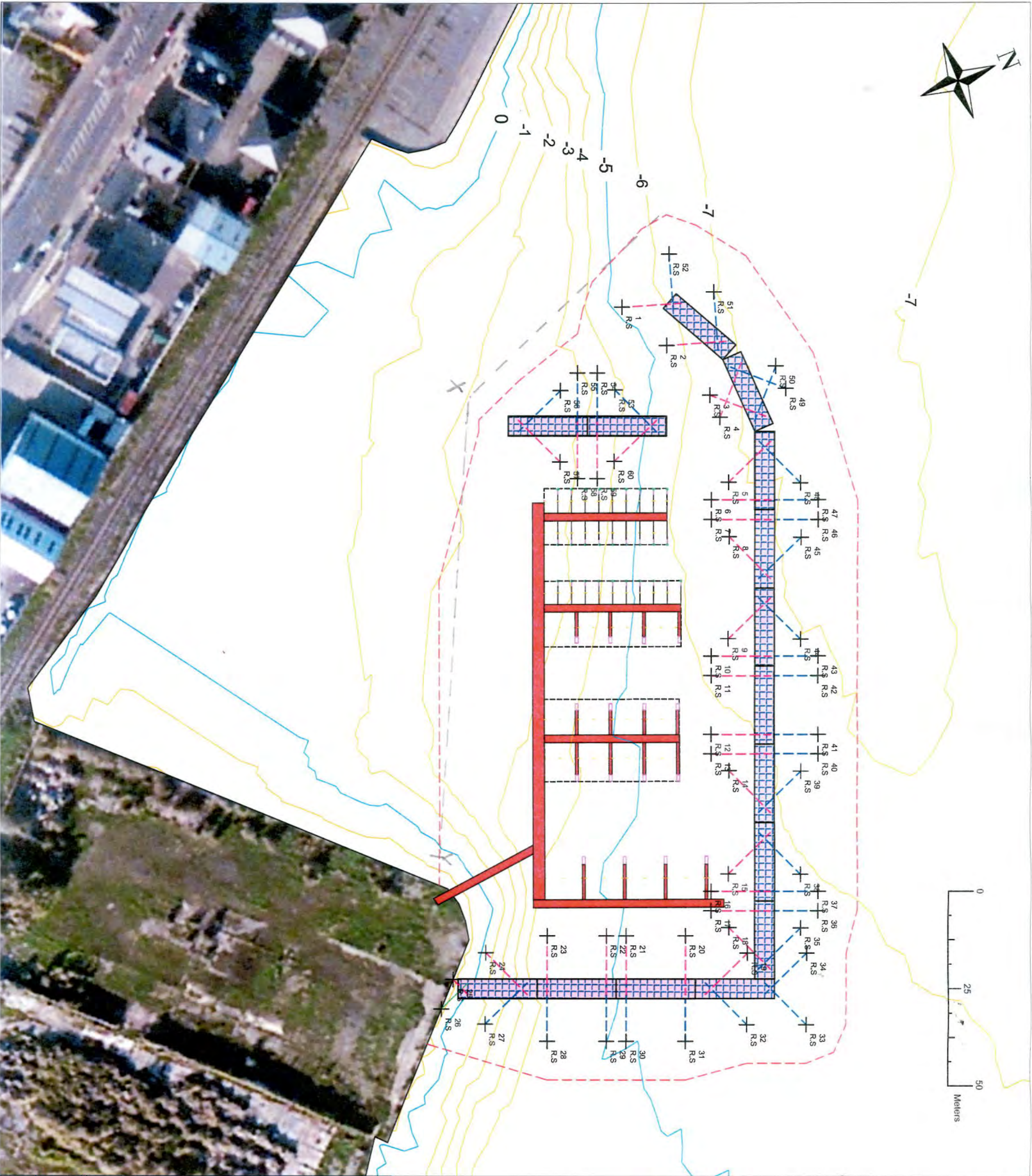
Should you require further information, please contact me.

Yours sincerely,



Brian Galvin,
Senior Engineer,
Head of Special Projects

Cc: Capt Phil Murphy, WCC
Gerry Forde, WCC



NOTES

1. Verifying Dimensions
The contractor shall verify dimensions against such other drawings or site conditions as pertain to this part of the work.
2. Existing Services
Any information concerning the location of existing services indicated on this drawing is intended for general guidance only. It shall be the responsibility of the contractor to determine and verify the exact horizontal and vertical alignment of all cables, pipes, etc. (both underground and overhead) before work commences.
3. Issue of Drawings
Hard copies, .dwg and .pdf will form a controlled issue of the drawing. All other formats (.dmg, .dxf, etc.) are deemed to be an uncontrolled issue and any work carried out based on these files is at the recipient's own risk. RPS will not accept any responsibility for any errors arising from the use of these files, either by human error by the recipient, listing of un-dimensioned measurements, compatibility issues with the recipient's software, and any errors arising when these files are used to aid the recipient's drawing production, or setting out on site.
4. Datum: Ordnance Datum Main
All measurements specified to metres unless otherwise stated

- Outer Restraint System
- Inner Restraint System
- +10m footprint of Restraint System
- Marina walkway and Portloors

rev	amendments	drawn	date
-----	------------	-------	------

RPS
Elmwood House
74 Boucher Road
Belfast
BT12 8RZ
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F +44 (0) 28 90 668286
W www.rpsgroup.com/ireland
E ireland@rpsgroup.com

Client

Wexford County Council

Project
Trinity Wharf
Feasibility Study

Title
Proposed Marina Layout
Restraint System Detail

Drawing Status Sheet Size Drawing Scale
Preliminary A3 1:1000

Drawing Number
IBE/1115
Rev
Rev02

Project Leader Drawn By Date Initial Review
AKB KC 23/07/2018 AKB

Appendix 5.1.2

Determination of Aquaculture/ Foreshore Licensing Application – T03/099A

"Determination of Aquaculture/ Foreshore Licensing application – T03/099A

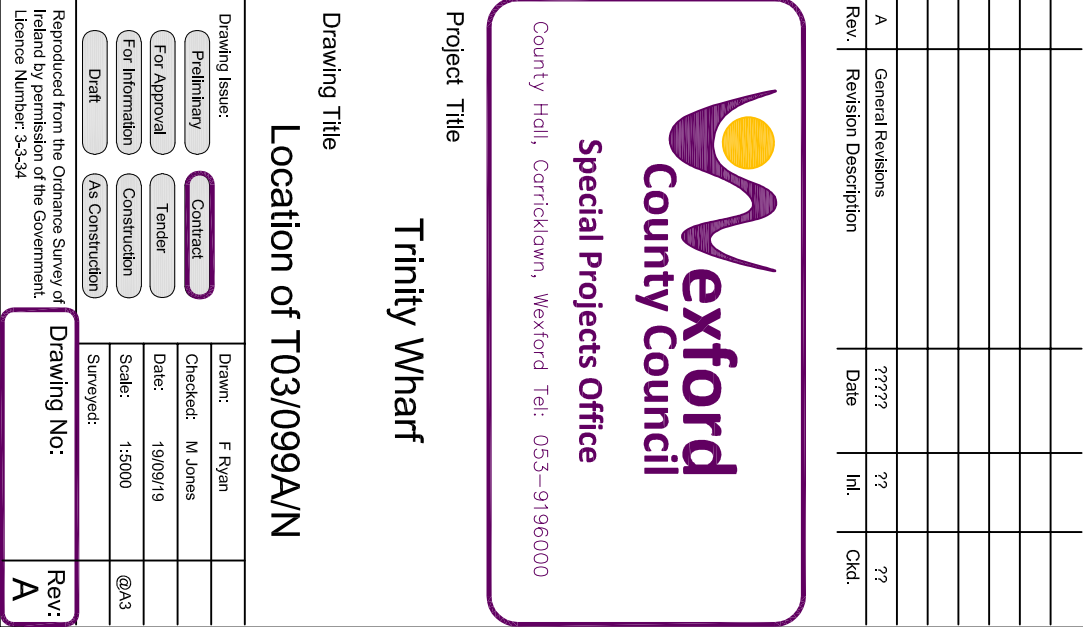
T.L Mussels Ltd., Clonard Business Park, Whitemill Industrial Estate, Wexford, has applied for authorisation for the bottom cultivation of mussels on the foreshore on an 56.323 ha site (T03/099A) in Wexford Harbour, Co. Wexford.

The Minister for Agriculture, Food and the Marine has determined that it is in public interest to grant **a variation** of the licences sought i.e. reducing the footprint of the site from 56.323 ha to 11.9141 ha. In making his determination the Minister considered those matters which by virtue of the Fisheries (Amendment) Act 1997, and other relevant legislation, he was required to have regard. Such matters include any submissions and observations received in accordance with the statutory provisions. The following are the reasons and considerations for the Minister's determination to grant a variation of the licence sought: -

- a. Scientific advice is to the effect that the waters are suitable. The site is located in Wexford Harbour Shellfish Designated Waters. Mussels in these waters currently have a "B" classification;*
- b. The proposed development should have a positive effect on the economy of the local area;*
- c. All issues raised during Public and Statutory consultation phase;*
- d. There are no effects anticipated on the man-made environment heritage of value in the area;*
- e. Shellfish have a positive role in the ecosystem function in terms of nutrient and phytoplankton mediation;*
- f. There are no issues regarding visual impact as the site to be utilised is for bottom culture;*
- g. No significant effects arise regarding wild fisheries;*
- h. The site is located within the Slaney River Valley SAC (Site Code: 00781), The Raven Point Nature Reserve SAC (Sited Code: 00710), Wexford Harbour and Slobbs SPA (Site Code: 4076) and the Raven SPA (Site Code: 4019). An Article 6 Assessment has been carried out in relation to aquaculture activities in the SAC's/SPA's. The Licensing Authority's Conclusion Statement (available on the Department's website) outlines how aquaculture activities in these SAC's/SPA's, including this reconfigured site, are being licensed and managed so as not to significantly and adversely affect the integrity of the Slaney River Valley SAC , The Raven Point Nature Reserve SAC , Wexford Harbour and Slobbs SPA and the Raven SPA.*
- i. Taking account of the recommendations of the Appropriate Assessment the aquaculture activity proposed at this (reconfigured) site is consistent with the Conservation Objectives for the SAC's/SPA's;*
- j. A licence condition requiring full implementation of the measures set out in the draft Marine Aquaculture Code of Practice prepared by Invasive Species Ireland;*
- k. The updated and enhanced Aquaculture and Foreshore licences contain terms and conditions which reflect the environmental protection required under EU and National law."*

NOTES:

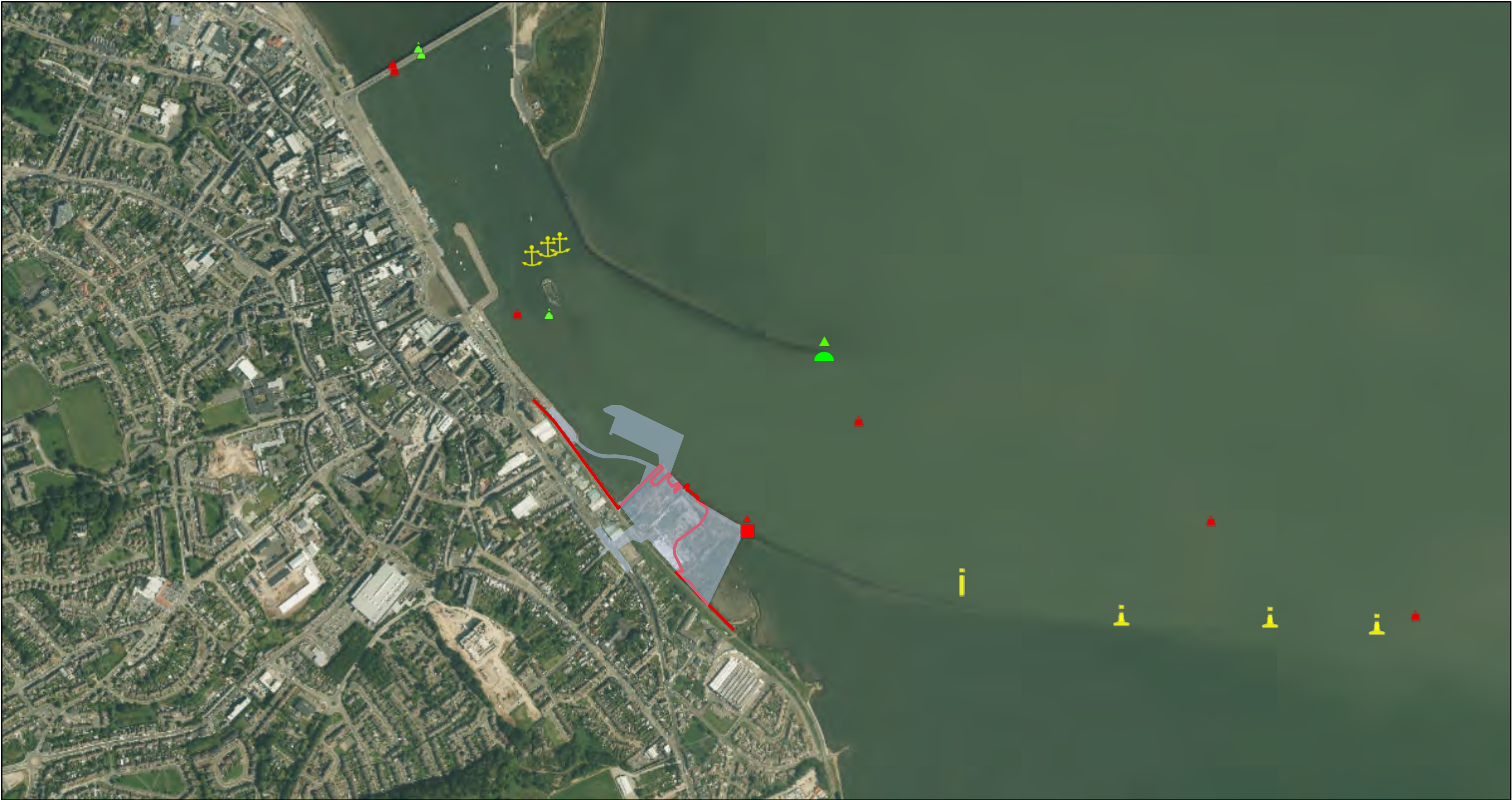
LEGEND:



Appendix 5.1.3


Harbour Navigation Map


2019 Harbour Navigation





9/20/2019, 12:57:42 PM


Harbour_Navigation_2019 - Navigation Buoys


- 


Lateral Port
- 


Lateral Starboard
- 


Special Mark Buoy
- 

Special Mark Pillar
- 

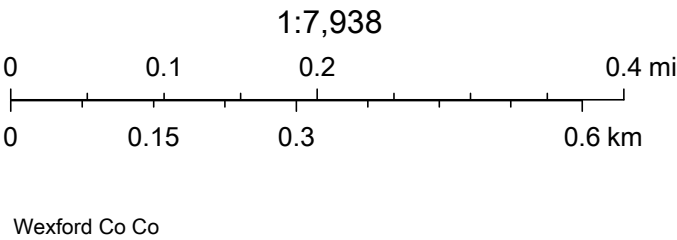
Stone Beacon Port
- 

Stone Beacon Stbd
- 

Vistor Moorings
- 

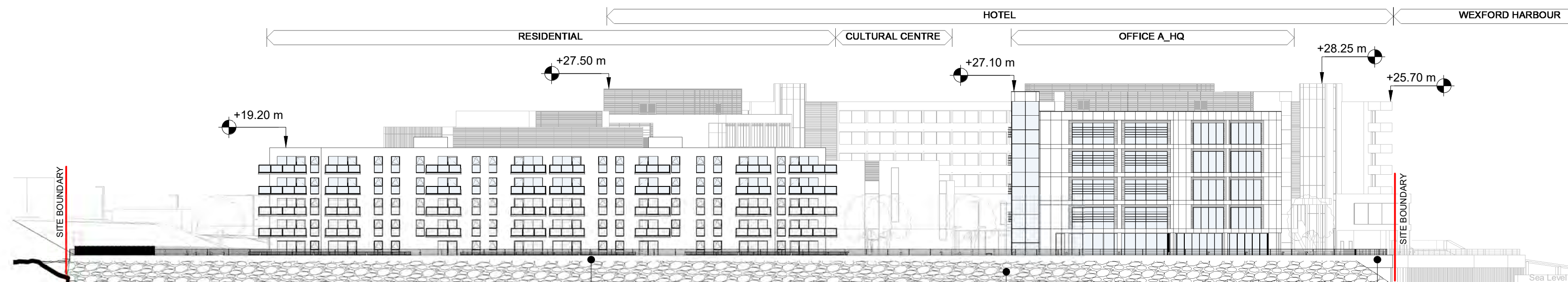
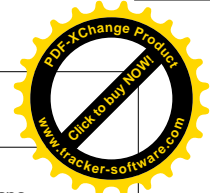
TrintyWharfSitePolygonITM - SPTrintyWharf
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ForeshoreLine



Appendix 5.2.1

Proposed Site Sections



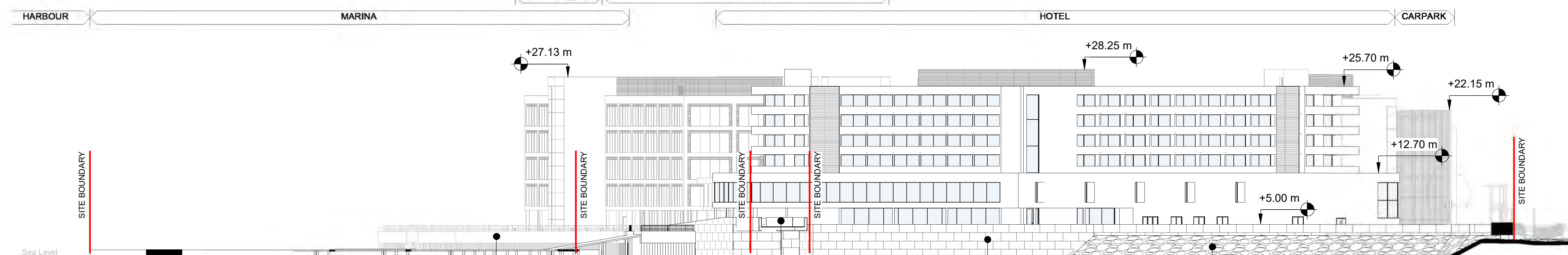
PROPOSED SEA WALL SECTION 1

1: 500 @ A1

Sea Wall Sheet Pile Concrete
Capping with Metal Railing on Top.
Refer to Roughan & O' Donovan
Sheet Number: 4082

Proposed Rock Armour. Refer
to Roughan & O' Donovan
Sheet Number: 4082

Sea Wall Sheet Pile Concrete
Capping with Metal Railing on Top.
Refer to Roughan & O' Donovan
Sheet Number: 4082



PROPOSED SEA WALL SECTION 2

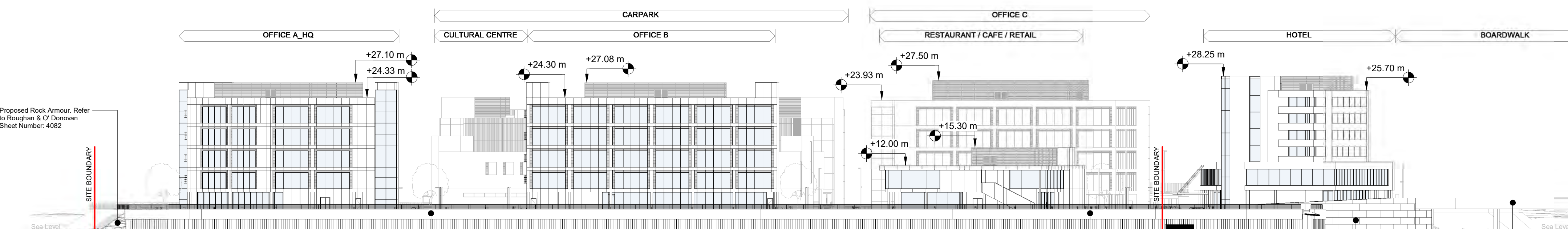
1: 500 @ A1

Sea Wall Sheet Pile Concrete
Capping with Metal Railing on Top.
Refer to Roughan & O' Donovan
Sheet Number: 4082

White Aluminium Outer Finish
to New Boardwalk. Refer to Roughan
& O' Donovan Sheet Number: 4086

New Precast Concrete Wall.
Refer to Roughan & O' Donovan
Sheet Number: 4082 & 4086

Proposed Rock Armour. Refer
to Roughan & O' Donovan
Sheet Number: 4082



PROPOSED SEA WALL SECTION 3

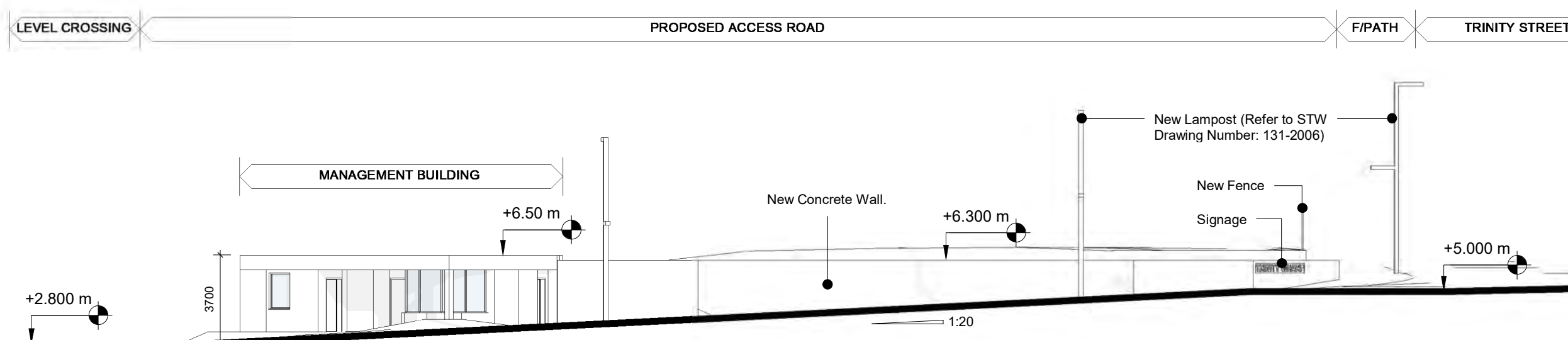
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Sea Wall Sheet Pile Concrete
Capping with Metal Railing on Top.
Refer to Roughan & O' Donovan
Sheet Number: 4082

Sea Wall Sheet Pile Concrete
Capping with Metal Railing on Top.
Refer to Roughan & O' Donovan
Sheet Number: 4082

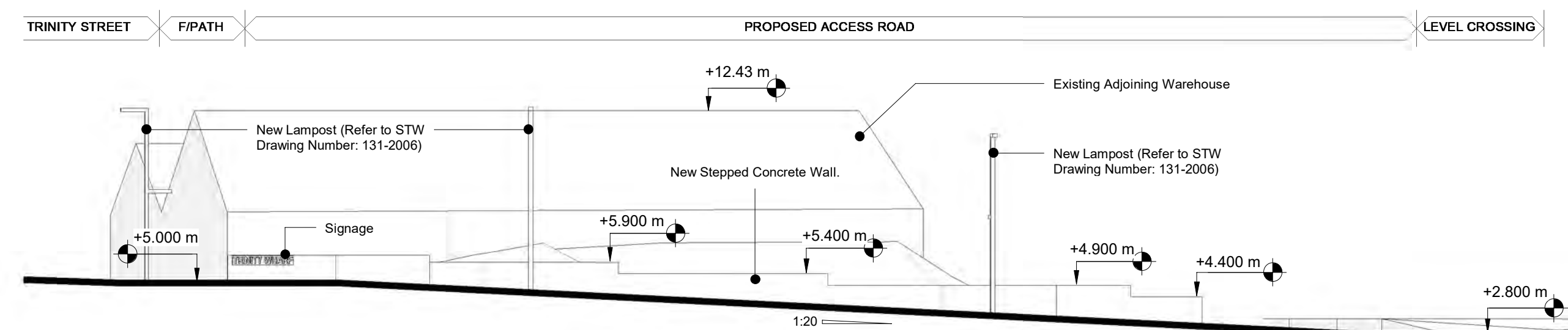
New Precast Concrete Wall.
Refer to Roughan & O' Donovan
Sheet Number: 4082 & 4086

White Aluminium Outer Finish
to New Boardwalk. Refer to Roughan
& O' Donovan Sheet Number: 4086



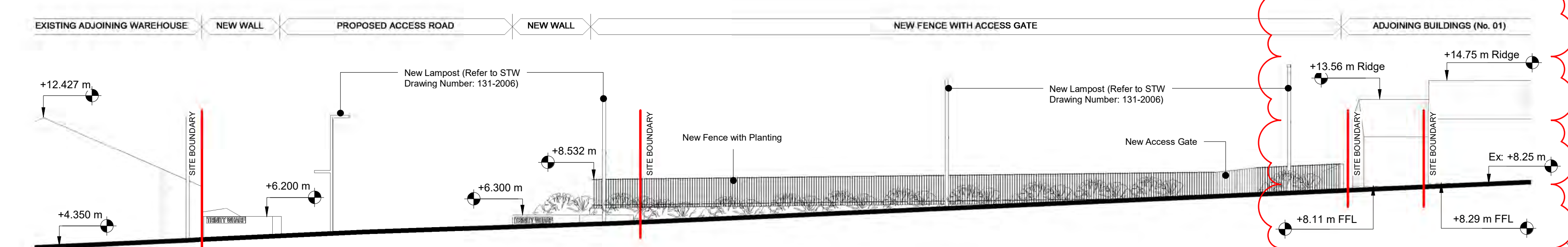
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1: 200 @ A1



PROPOSED SECTION B - ACCESS ROAD

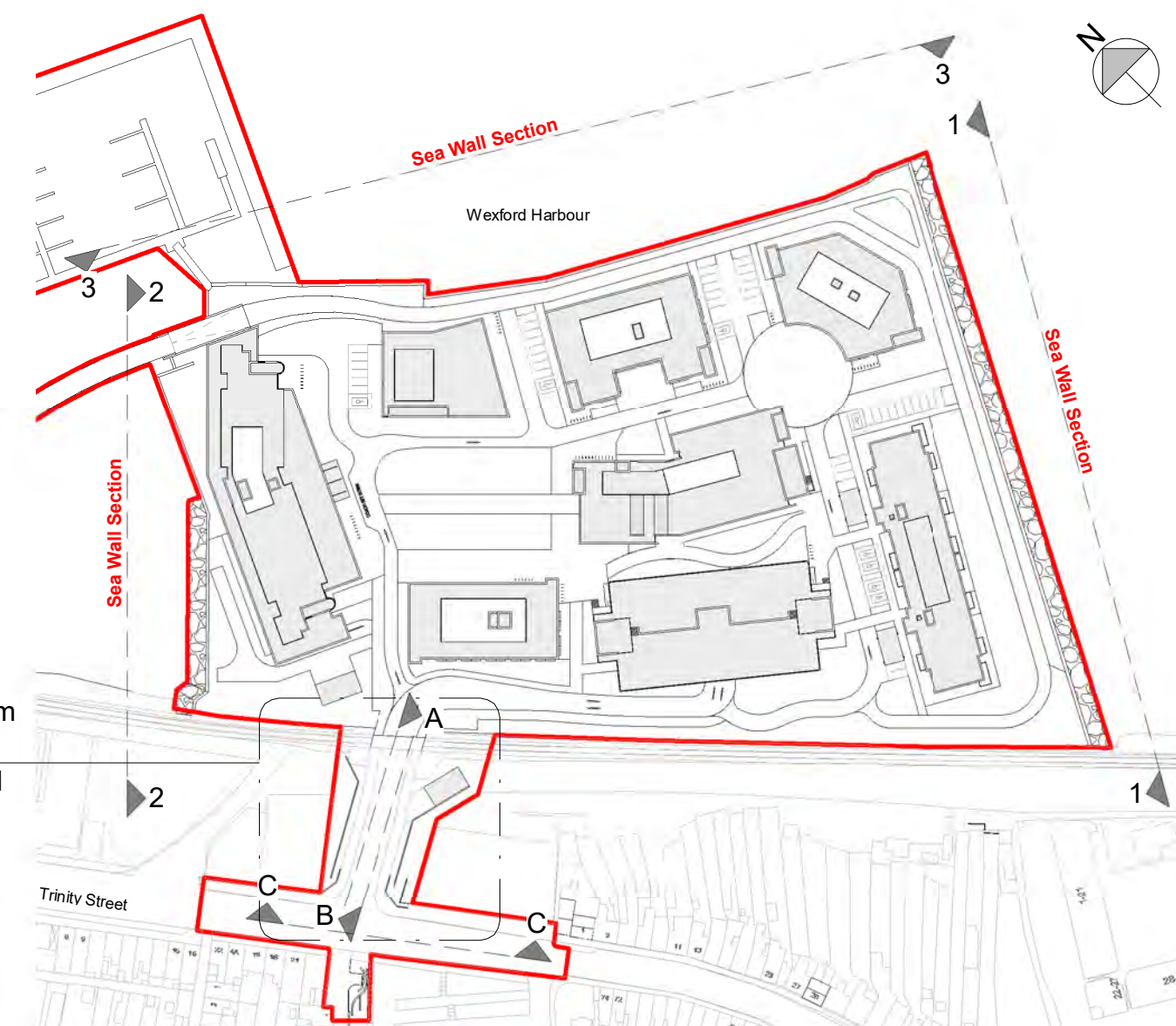
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PROPOSED SECTION C - ACCESS ROAD

1: 200 @ A1

Levels Added as per Survey



KEY PLAN - PROPOSED SEA WALL & ACCESS ROAD SECTIONS

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Levels and contours are relative to an Ordnance Survey Datum
Figured dimensions in millimetres.

REVISION SCHEDULE

NO.	DATE	DESCRIPTION
P01	2019.02.07	Issued for Planning
P02	2019.10.09	Request for Further Information

Mixed Use Development Trinity Wharf Wexford

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Web: www.stwarchitects.com

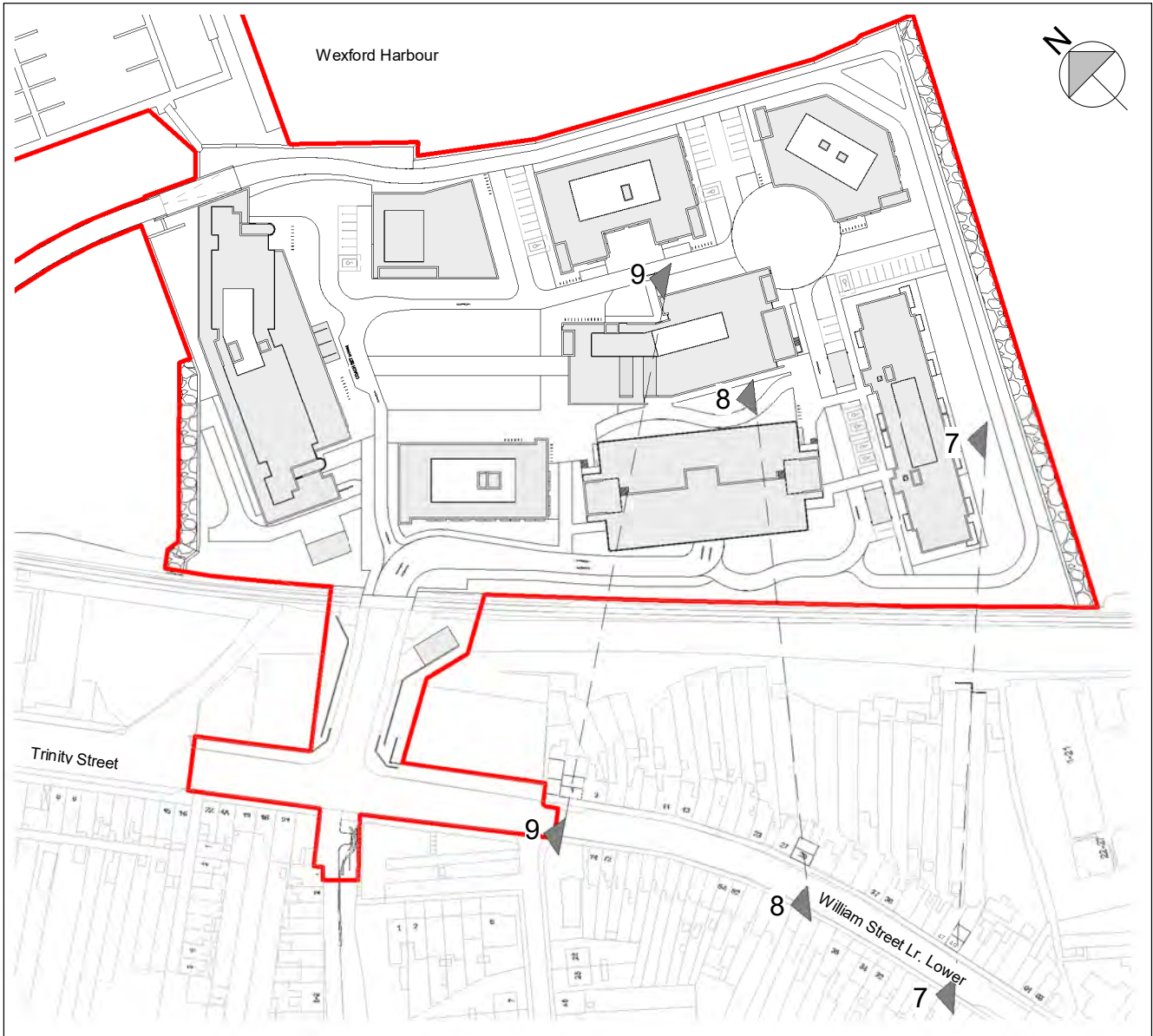
DRAWING PROPOSED SITE SECTIONS_SHEET 3 OF 3

SCALE @A1	ISSUED:
As indicated	2019.10.09
DRAWN BY:	CHECKED BY:
Author	Checker
PROJECT NO.	PROJECT ARCHITECT:
15058	Philip Jackson

DRAWING NO.	REVISION
TWW-STW-00-ZZ-DR-A-131-2052	P02

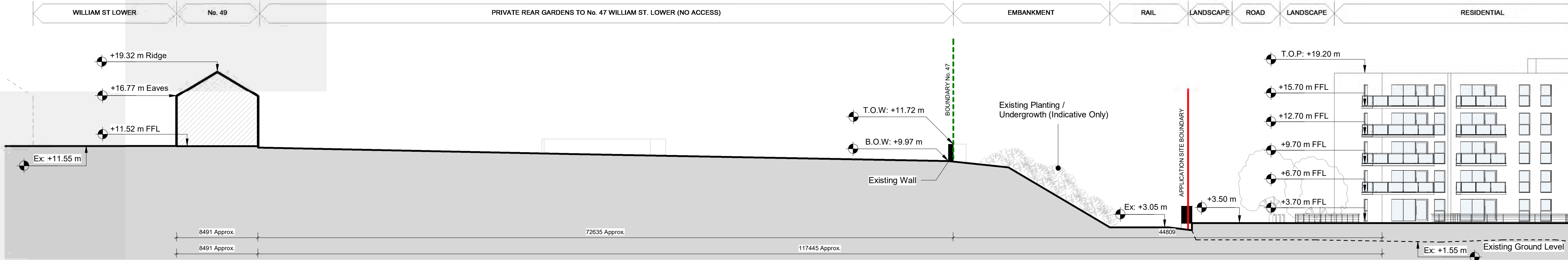
PROJECT STAGE: **Stage 4: PLANNING APPLICATION**

09/10/2019 14:39:59 TWW-STW-00-ZZ-M3-A-0000_SHEETS



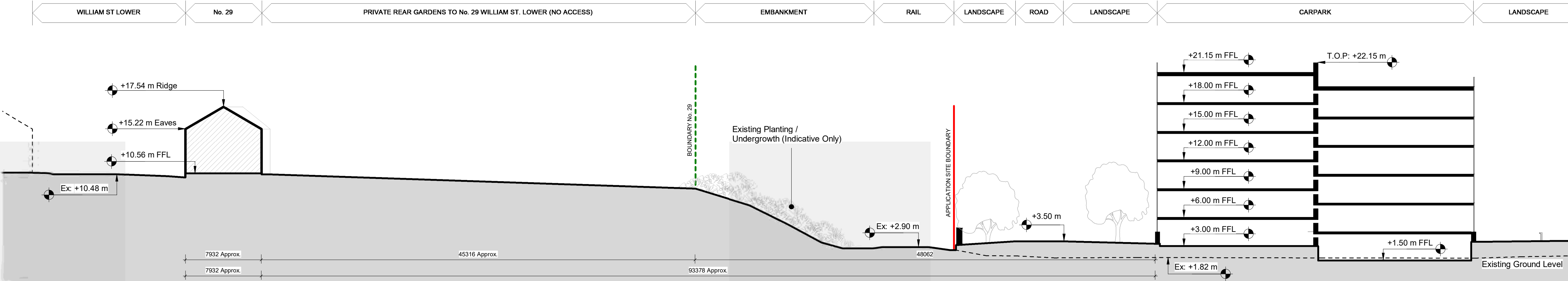
KEY PLAN - PROPOSED SITE SECTIONS 7

1 : 2000 @ A1



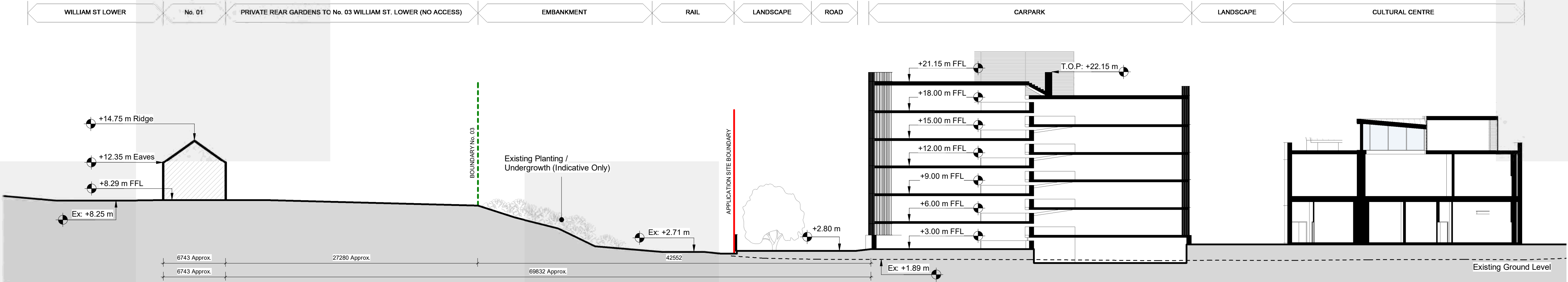
PROPOSED SITE SECTION 7

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PROPOSED SITE SECTION 8

1 : 250 @ A1



PROPOSED SITE SECTION 9

1 : 250 @ A1

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Levels and contours are relative to an Ordnance Survey Datum
Figured dimensions in millimetres.

REVISION SCHEDULE		
NO.	DATE	DESCRIPTION
P01	2019.10.09	Request for Further Information

Mixed Use Development Trinity Wharf Wexford

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Web: www.stwarchitects.com

DRAWING
PROPOSED SITE SECTIONS_SHEET 1 OF 1

SCALE @A1 As indicated	ISSUED: 2019.10.09
DRAWN BY: Author	CHECKED BY: Checker
PROJECT NO. 15058	PROJECT ARCHITECT: Philip Jackson
DRAWING NO. TWW-STW-00-ZZ-DR-A-131-2053	REVISION P01

PROJECT STAGE: **Stage 4: PLANNING APPLICATION**
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