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Project Ireland
2040

NTA
Údarás Náisiúnta Iompair
National Transport Authority

OCSC
O'CONNOR · SUTTON · CRONIN
MULTIDISCIPLINARY CONSULTING ENGINEERS

OKRA

C1071: CORK NORTH DOCKS PUBLIC REALM AND TRANSPORT INFRASTRUCTURE PROJECT

PART 8 REPORT

For
Cork City Council

26 May 2025

NOTICE

DOCUMENT CONTROL & HISTORY

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TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

1 INTRODUCTION

1.1 APPOINTMENT AND PROJECT TEAM

O'Connor Sutton Cronin and Associates (OCSC) and OKRA were appointed by Cork City Council (CCC) as Engineering and Landscape Consultants for the Cork North Docks Public Realm & Transport Infrastructure Project, to undertake the necessary design, planning documents, land acquisition/CPO documentation, construction tender documentation, contract administration and Project Supervisor Design Process (PSDP) role throughout the Stage (i) Preliminary to Stage (v) Handover of Works.

Engineering Consultants: O'Connor Sutton Cronin.
Landscape Consultants: OKRA.
Client: Cork City Council.

1.2 ADMINISTRATIVE JURISDICTION

Cork City Council.

1.3 SITE LOCATION

The subject site is located to the east of Cork City centre and extends from the western approach to the junction with Alfred Street, to the junction of the N8 Lower Glanmire Road and Water Street to the east, and from the quayside along Horgan's Quay to the existing Iarnród Éireann lands north of the current N8 Road alignment, as shown in *Figure 1: Site Location Map*.

It can be noted that the site boundary illustrated in Figure 1 represents the footprint of the emerging preferred layout, which has been identified during the options selection stage for the Cork North Docks Public Realm and Transport Infrastructure Project.

1.4 SCOPE OF REPORT

This document sets out the objectives and scope of the proposed scheme, the various layout options considered, and the characteristics of the emerging preferred option, in support to the Part 8 planning application for the Cork North Docks Public Realm and Transport Infrastructure Project.

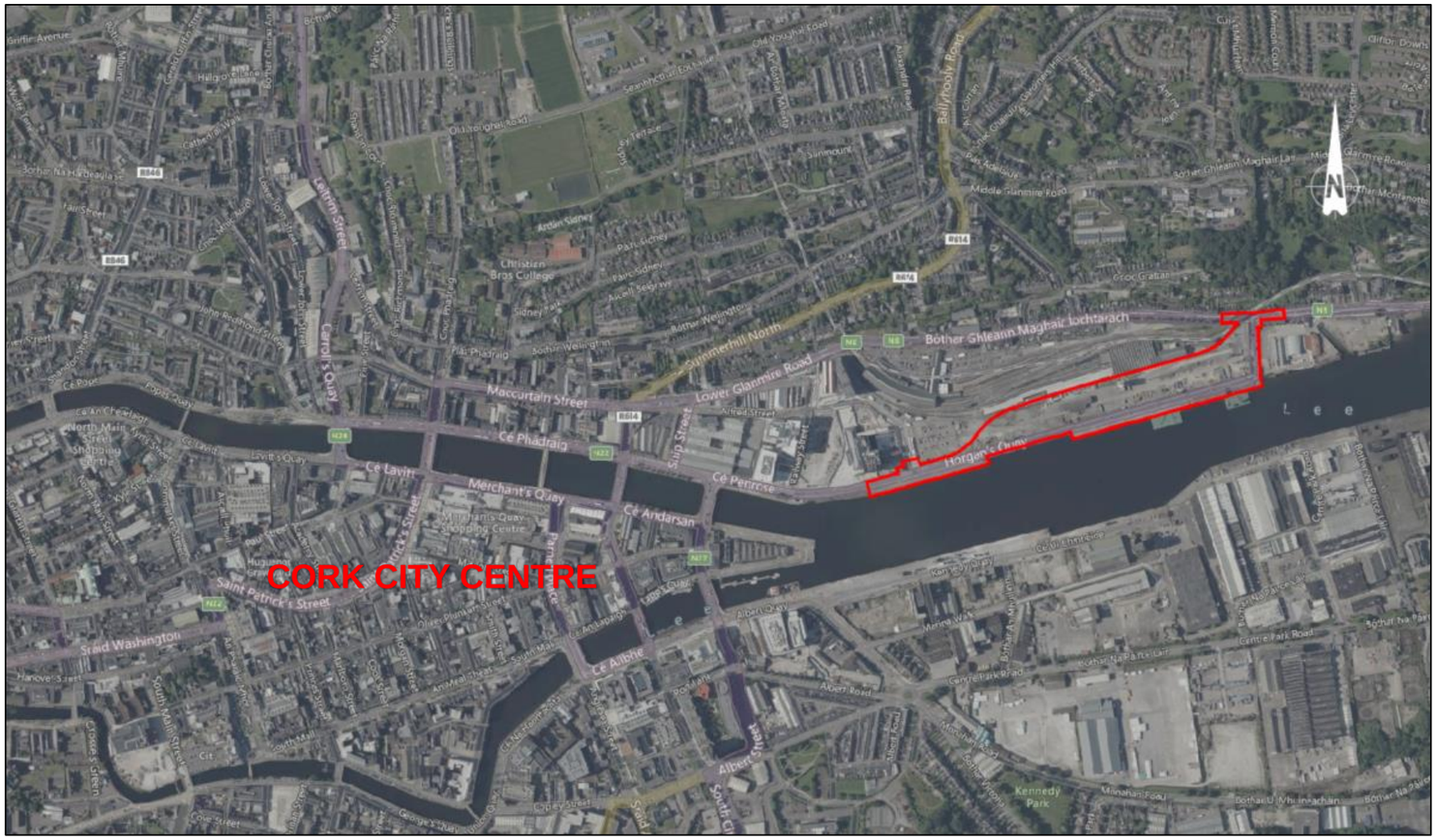


Figure 1: Site Location Map

2 PROJECT BRIEF

2.1 PROJECT SCOPE

The Project aims to:

- Transform the quayside of the North Docks from a traffic-dominated area into a high-quality, legible, accessible and connected public amenity space with an activated and engaged waterfront.
- Enhance the gateway to the city from the east and create a space to attract residents, workers, and visitors alike.
- Deliver urban realm, public open space, and transport infrastructure within the North Docks area in accordance with the vision and objectives of the Cork City Development Plan (2022 – 2028), the Cork City Docklands Framework Masterplan (2023, Draft) and the Cork Metropolitan Area Transport Strategy (2020).
- Reflect the maritime and industrial heritage of the Docklands in the public realm, in accordance with the Cork City Docklands Framework Masterplan (2023, Draft).
- Deliver the northern portion of the Kennedy Spine Urban Amenity Linear Park as outlined in the Cork City Docklands Framework Masterplan (2023, Draft).
- Provide multi-modal transport infrastructure which facilitates access to walking, cycling and public transport and acts as a catalyst for further private development in the area.
- Enhance the transition areas between the proposed works and the existing road and street network at both the eastern and western extents i.e., Lower Glanmire Road and Penrose Quay respectively; and
- Integrate the design with the adjacent streets, including Lower Glanmire Road, Alfred Street and Water Street, and with future infrastructural improvements such as the proposed Pathfinder Dunkettle to City Centre scheme, BusConnects Cork, CycleConnects Cork, and developments from private landowners within the study area.

2.2 PLANNING AND DEVELOPMENT CONTEXT

From a review of the Cork City Development Plan 2022-2028, the proposed Cork North Docks Public Realm and Transport Infrastructure Project is consistent with the planning and development objectives and policies of Cork City Council's development plan. The following development plan policies and objectives are relevant to this project:

Objective 4.1 – CMATS

Cork City Council will work in cooperation with the NTA, TII and Cork County Council to fully implement the Cork Metropolitan Area Transport Strategy subject to detailed engineering design and environmental considerations, including the projects and programmes in relation to walking, cycling, public transport, BusConnects, suburban rail, light rail, park and rides and roads infrastructure.

Objective 4.3 – Strategic Location of New Development

To ensure that all new residential, employment and commercial development are focused in areas with good access to the planned high frequency public transport network.

Objective 4.4 – Active Travel

To actively promote walking and cycling as efficient, healthy, and environmentally friendly modes of transport by securing the development of a network of direct, comfortable, convenient, and safe cycle routes and footpaths across the city.

To support the 15-minute city concept and walk-able neighbourhoods with adequate walking and cycling infrastructure connected to high-quality public realm elements, including wayfinding and supporting amenities (benches, water fountains, bike stands).

To support the expansion of the Cork Bikes scheme. To accommodate other innovations such as electric bikes, public car hire, and other solutions that will encourage active travel.

To support the rollout of the NTA 5 Year Cycle Plan. To support and engage with the Safe Routes to School programme.

Objective 4.5 – Permeability

a. All new development, particularly alongside the possible routes identified for public transport improvements, shall include permeability for pedestrians, cyclists, and public transport so as to maximise its accessibility.

b. To maximise permeability, safety, security and connectivity for pedestrians and cyclists by creating direct links to adjacent roads and public transport networks in accordance with the provisions of statutory guidance as prescribed.

Objective 4.7 – Protection of National Roads

To protect the strategic transport function of national roads, including motorways through the implementation of the 'Spatial Planning and National Roads Guidelines for Planning Authorities' DECLG, (2012) and the Trans-European Networks (TEN-T) Regulations.

Objective 6.3 – Access to Water Resources

Cork City Council will seek to work with stake-holders in facilitating safe, improved accessibility to the water environment including the River Lee and Cork Harbour and encouraging uses which optimise the amenity, tourism, recreation and leisure opportunities associated with this blue infrastructure, while contributing towards the protection of protected species and without adversely impacting on the day-to-day economic functions of these assets.

Objective 6.5 - Trees and Urban Woodland

To encourage the planting of new urban woodlands and trees where appropriate throughout the City and particularly where there are deficiencies in tree coverage as identified in the Cork City Green and Blue Infrastructure Study.

To support retaining existing trees and the planting of new trees as part of new developments subject to care on the species of tree and the siting and management of the trees to avoid conflict with transport safety and residential amenity in particular.

To promote the planting of pollinator friendly native deciduous trees and mixed forestry to benefit biodiversity.

Objective 6.6 – Rivers, Waterway and Wetlands

a. To protect and maintain the integrity, and maximise the potential, of the natural heritage and biodiversity value of rivers, associated watercourses and wetlands in Cork City.

b. To promote an integrated approach to optimising opportunities associated with rivers, waterways and wetlands generate biodiversity, recreation, tourism, and economic benefits.

Objective 6.9 – Landscape

To preserve and enhance Cork's landscape character, key landscape assets and views and prospects of special amenity value.

To ensure that new development meets the highest standards of placemaking, siting and design.

Objective 6.18 – Public Open Space

To protect, retain, improve and provide for areas of public open space for recreation and amenity purposes. There will be a presumption against development of land zoned Public Open Space for alternative purposes.

The development of open spaces should "aim to enhance and protect natural features and views and be set in safe and secure environments with the emphasis on active open spaces accessible to and enjoyed by all sectors of the community.

To follow an approach of qualitative as well as quantitative standards for open spaces providing high quality open spaces with high levels of access to recreation for local communities, including good practices of inclusive design.

Objective 6.19 – City Parks and Open Space Provision

Cork City Council will seek to:

a. Ensure that all residents have access to a hierarchy of parks and open spaces close to their home to provide recreational need and access to nature.

b. Provide for recreational amenity needs by protecting, retaining, and improving parks and open spaces within Cork City. There will be a presumption against development of land zoned for public open space for alternative purposes.

c. Ensure that developments of all land use types provide appropriate open space to meet the needs of residents, workers and visitors.

d. Deliver projects to provide and improve the network of City Parks.

Objective 6.20 – Active Recreational Infrastructure

To ensure that all residents have access to neighbourhood scale outdoor and indoor active sports recreational and play infrastructure within their neighbourhood or in accessible locations.

To support the development of active recreation infrastructure (including outdoor and indoor facilities) in Cork's City Parks while also ensuring the continued improvement of their passive recreational offer, natural setting and biodiversity credentials.

Active recreation and play infrastructure should meet current and future growth needs of the City and shall incorporate universal design principles to ensure accessibility for all ages and abilities and which is designed in a manner to reduce anti-social behaviour and shall be accessible by sustainable means of transport such as walking, cycling, greenways and public transport.

Objective 6.21 – River Use and Management Plan

To commission a river use and management plan to:

a. Examine the commercial and recreational potential of the River Lee and Upper Harbour area for all users (i.e. general public, visitors and tourists).

b. Identify essential infrastructure and appropriate locations for the delivery of this infrastructure in partnership with key stakeholders, such as a new public slipways, pontoon and additional facilities.

Objective 10.20 – The River Lee

a. To ensure that the River Lee is maintained as a defining feature of the City Docks.

b. To secure access to the riverside and provide walkway / cycleways (see Volume 2: Mapped Objectives).

c. To update the Public Realm Strategy for the City Docks to take into account the evolving masterplan for the City Docks (north and south).

d. Measures will be put in place to enhance the River Lee's biodiversity value.

e. To provide new active recreational infrastructure to improve access to the river, and to repair and enhance steps and slipways.

Objective 10.21 – City Docks Character Areas

It is an objective of Cork City Council to ensure that the City Docks is developed in a way that reinforces the identity and urban design, placemaking and architectural qualities of the eight character areas as distinct urban quarters.

Objective 10.22A – City Docks Built Heritage

It is an objective of Cork City Council to:

a. Conserve and enhance designated and, where possible, undesignated built heritage assets of the City Docks in accordance with the policies set out in Chapter 8: Heritage Culture and Arts and Chapter 11: Placemaking and Managing Development.

b. Utilise conservation strategies to ensure that built heritage assets are integrated into the urban design, architecture and public realm strategies for developments.

c. Require inventories for each development proposal to ensure that undesignated heritage assets are recorded, understood and conserved, where possible.

Objective 10.30 – Active Recreational Infrastructure

a. To ensure that the City Docks provides for the active recreational needs of the living and working community.

b. To develop an ARI Strategy for the City Docks that ensures that active recreational need is met whilst optimising use of all assets for public usage in accessible locations, and to prepare feasibility studies for necessary infrastructure (e.g. swimming pools / leisure centre, sports halls and sports hubs).

c. To undertake land acquisition, design and delivery of active recreational infrastructure within the City Docks to provide for the needs of the community.

d. To update the Docks Public Realm Masterplan with a view to integrate small-scale active recreational provision into the public realm to optimise the value of streets and spaces.

e. To encourage water-based leisure activities and land site facilities such as rowing, light craft and swimming.

Objective 10.31 – Cork City Docks Transport Strategy

To implement the City Docks Transport Strategy

and its key recommendations, including:

a. Achieving a 75:25 modal split in favour of sustainable transport modes.

b. The delivery of the City Docks Transport Network and a clear street hierarchy that confines vehicular access to the City Docks within traffic cells in order to optimise the placemaking and public realm potential of the City Docks.

c. High quality walking / cycling streets and strategic routes along the quays.

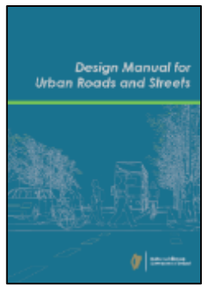
d. Transit orientated development, including the phased delivery of improvements to public transport from bus services.

Objective 10.32 – Public Realm and Public Open Space

The design of the quaysides will be a key priority as the provision of new public access and public realm on the River Lee waterfront is an early catalyst project that the City Council will seek to deliver to open up public access to the City Docks.

2.3 DESIGN GUIDANCE

The following design guidance have been reviewed as part of the development of this scheme:



Design Manual for Urban Roads and Streets (DMURS) – 2019

DMURS provides guidance relating to the design of urban roads and streets. It presents a series of principles, approaches and standards that are necessary to achieve balanced, best practice design outcomes regarding street networks and individual streets.

The manual places a significant emphasis on car dominance in Ireland and the implications this has had regarding the pedestrian and cycle environment. The document encourages more sustainable travel patterns and safer streets by proposing a hierarchy for user priorities. This hierarchy places pedestrians at the top, indicating that walking is the most sustainable form of transport and that by prioritising pedestrians first, the number of short car journeys can be reduced, and public transport made more accessible.

Second in the hierarchy are cyclists with public transport third in the hierarchy and private motor vehicles at the bottom. By placing private vehicles at the bottom of the hierarchy, the document indicates that there should be a balance on street networks and cars should no longer take priority over the needs of other users.

The manual emphasises that narrow carriageways are one of the most effective design measures that calm traffic. Standard width of an arterial and link street is 3.25m, however, this may be reduced to 3m where lower design speeds are being applied. Desirable footpath widths are between 1.8m – 4m, this value varies depending on the level of pedestrian activities. The focus of the manual is to create a place – based sustainable street network that balances the pedestrian and vehicle movements. The manual references the different types of street networks, including arterial streets, link streets, local streets, and highlights the importance of movement.

Priority Junction Tightening Measures (DMURS AN6) – 2023

This guideline was prepared by the National Transport Authority, following on from the Active Travel 2021 Programme and the allocation of funding to Local Authorities for "Low-Cost Junction Tightening/Pedestrian Crossing Schemes". The Advice note expands upon this Programme and the principles, approaches, and standards of DMURS to provide a range of design solutions to junction design, with a focus on the retrofitting of existing junctions. These are presented with reference to the place context/movement function of any priority junction, to improve the safety and comfort of vulnerable road users at existing priority junctions and pedestrian crossings in cities, town, and villages around the country.

Cycle Design Manual – 2023

The Cycle Design Manual is a national guidance document that details the principles of sustainable safety that offers a safe traffic environment for all road users including cyclists. The manual provides guidance on integrating the bicycle into the design of urban areas. The manual sets out five main requirements for providing cycle-friendly infrastructure:

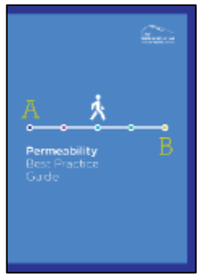
Safety: Cycle facilities should be designed so that they are safe for people of all ages and abilities to use. As well as being safe to use, facilities should be perceived to be safe i.e., people must feel safe using them. Perceptions of personal safety can vary from one individual to another, so facilities should generally be designed so that less confident users would feel safe using them.

Coherence: At a network level, cycle routes should be connected and easy to navigate. Cycle routes should not have gaps or be interrupted at difficult locations. Any weak links in the network will reduce the overall level of service, could deter new or less confident users to cycle and render a whole journey inaccessible for some people.

Directness: Directness is measured in both distance and time. Ideally cycle routes should connect origins and destinations using the shortest route with as little delay as possible. This includes providing facilities at junctions that minimise delay and the need to stop. Minimising the effort required to cycle, by enabling cyclists to maintain momentum, is an important aspect of directness. An indirect designated route involving extra distance or more stopping and starting will result in some cyclists choosing the most direct, faster option, even if it is less safe. However, it is sometimes advantageous to avoid steep gradients or major junctions by using an alternative route that is slightly longer but more convenient and easier to use.

Comfort: Cycle facilities should be designed and maintained so that they are comfortable to use. Anything that causes

unnecessary discomfort or delay is likely to reduce the comfortableness and therefore the attractiveness of the facility. There are several factors that influence the comfortableness of a facility including Width, Gradients, Stoppages and Delays, Surfacing, Shelter, and Maintenance.

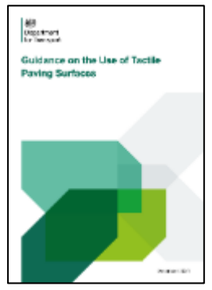


Attractiveness: Cycling is a sensory experience as people are directly exposed to the environment they are moving through. Therefore, the cycling environment along a route should ideally be as pleasant and interesting as possible.

Permeability Best Practice Guide - 2015

This document provides policy guidance on how best to facilitate demand for walking and cycling in existing built-up areas. This relates to the retention and creation of linkages within the urban environment for people to walk and cycle from their homes to shops, schools, local services, places of work and public transport stops and stations. In the latter case, by providing connections to existing public transport services, access to these services will be improved and increased levels of use may be expected. This in turn supports enhancement of these public transport services through increased frequency and improved stop facilities and can also make a key difference in decisions about service retentions.

Guidance on the Use of Tactile Paving Surfaces – 2021



This guideline is published by the UK's Department of Transport and represents a best-practice guide for the use of tactile paving surfaces. The use of tactile paving surfaces is important because these surfaces convey vital information to vision impaired and other people about their environment, including hazard warning and directional guidance, thereby supporting independent mobility. When moving around the public realm, vision impaired people will actively seek, and make use of, tactile information underfoot, in particular detectable contrasts in surface texture. It is therefore important that tactile paving is used correctly and consistently, so that conflicting and confusing information is not conveyed.

3 EXISTING CONDITIONS

3.1. SURROUNDING DEVELOPMENTS

The proposed scheme runs alongside the River Lee to the south and is bounded to the north by Iarnród Éireann's Kent Station. It connects with the Lower Glanmire Road to the east and Penrose Quay to the west. The scheme also lies adjacent to the property of McMahon's Builders Providers along the western side of Water Street.

Figure 2: Extents of the proposed scheme

3.2. CHARACTERISTICS & HERITAGE

OCSC conducted a desktop study to identify recorded monuments potentially impacted by the scheme, which are listed overleaf. Information regarding the archaeology and recorded monuments of the area was taken from the website Historic Environment Viewer (archaeology.ie) and the Cork City Development Area Plan 2022-2028.

- **Reference 20506358:** Classified as quay/wharf, Horgan's Quay, dated from the 1850s-1870s, is a monument of regional importance and is described as a limestone quay running along north bank of the River Lee, c. 1860, having set of limestone steps. With later concrete wharf extension.

- **Reference 20507180:** locomotive shed, dated from 1870-1890m at Water Street. It is a monument of regional importance, described as a detached railway engine shed, c. 1880, consisting of single and double height spaces, possessing cut-stone entrances and various small single storey buildings around yard. Pitched roof with apex glazing. Saw tooth roof with corrugated asbestos sheeting. Buff coloured brick with arched grid construction; articulated by blind open arcading. Round headed windows to recessed arches. Double height openings to eastern gable. Within railway yard. Limestone and sandstone perimeter all with red brick dressing. The building is not being directly impacted by the scheme, however, the same is noted due to its proximity to the realigned N8 Road.

- **Reference 20507082:** railway bridge at Lower Glanmire Road, 1880-1900. It is a single span iron truss railway bridge, c. 1895, with rusticated limestone support, of regional importance. The bridge is not being directly impacted by the scheme, however, the same is noted due to its proximity to the realigned N8 Road.

3.3. OVERVIEW OF EXISTING INFRASTRUCTURE

The section of the N8 National Road within the study area is a key arterial route in Cork City's strategic road network. Situated just east of the city centre and south of Kent Railway Station, it connects the Lower Glanmire Road to the central areas of Cork. As described below, the N8 Road within the study area can be divided into three areas as follows:

1. N8 Lower Glanmire Road: this section of the N8 is surrounded by terraces and is served with footpaths approximately 2.25m wide on both sides of the road, inbound cycle lane 1.50m wide, and 3.50m wide carriageway lanes comprising an overall width of 13m approximately.

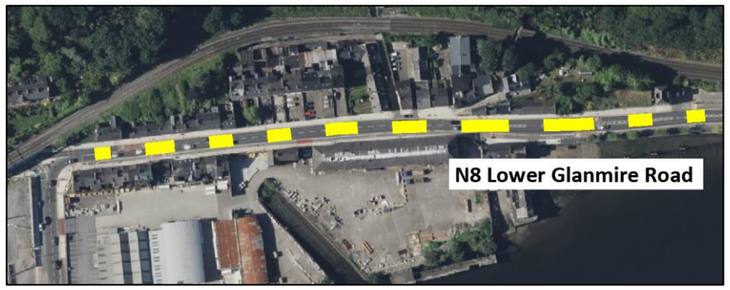


Figure 3: N8 - Lower Glanmire Road

Figure 4: N8 cross section at Lower Glanmire Road.

2. N8 Water Street: Water Street has two inbound carriageway lanes of approximately 5 meters each, making an inside kerb radius of approximately 10m at Lower Glanmire corner and approximately 4m at Horgan's Quay corner, neither of which is compliant with current design standards. There are 3.30m and 2.60m wide footpaths on both sides of the road, resulting in an overall width of 15.90m from boundary wall to boundary wall. Currently there are no dedicated cycle facilities.

Figure 5: N8 - Water Street

Figure 6: N8 cross section at Water Street.

3. N8 Horgan's Quay: Currently at this section the N8 is a car-dominant road, with a speed limit 50kph, and it accommodates two in-bound traffic lanes, one in-bound cycle lane and one footpath over approximately 500 meters. On the approach to the junction with Alfred Street, the road space is increased to accommodate in-bound buses in a shared bus-cycle lane. The typical arrangement and widths of the lanes are shown in the following figures:

Figure 7: N8 - Horgan's Quay

Figure 8: Typical Cross Section of existing N8 at Horgan's Road (inbound cycle lane)

Currently there is a 2.30m wide footpath, 1.5m cycle lane protected with bollards, and 3m wide carriageway lanes comprising an overall width of 10m approximately.

Figure 9: Typical cross section of existing N8 Horgan's Road - approach to Alfred Street

There are numerous aspects of the existing road that are not compliant with current design standards (DMURS, CDM, Guidance on the Use of Tactile Paving Surfaces, etc.), for example private vehicular accesses, carriageway width, kerb heights, road horizontal alignment, pedestrian connectivity, cycle facilities, stopping sight distance.

The visual assessment of the site reveals a strong industrial and harbour character on both sides of the river, reflecting the area's historical and functional importance. These industrial elements contribute to the unique identity of the site, and by emphasising certain existing structures, the sense of place can be further strengthened and celebrated. There are a number of existing buildings and features along the study area that can contribute to the narrative of the harbour city and enhanced public realm.

Figure 10: Horgan's Quay

The proposed scheme will consider and incorporate some of the existing structures along the scheme. One example is the iron truss railway bridge above Lower Glanmire Road, which serves Kent Train Station.

The existing entrances to businesses and adjacent properties have been considered and connectivity has been provided to the proposed road alignment and public realm areas.

The water edge profile reveals varying relationships between the water and the structure of the quayside, with some areas showing a clear disconnect between the land and the river, both visually and physically. Adjustments and modifications to the quay areas presents an opportunity to redesign the interface, improving both the visual and physical connection between the land and water.

Figure 11: Kent Station Railway Bridge

Figure 12: East (service) entrance to train station

The following sections illustrate the current conditions of the quayside from Fishguard Wharf to North Deep Water Quay. The existing stone wall acts as a barrier blocking physical and visual connection to the river. The narrow pathway and the N8 road also contribute to the disconnection to the waterfront. The quay is being used mainly for harbour activities; recreational activity is not observed in the area.

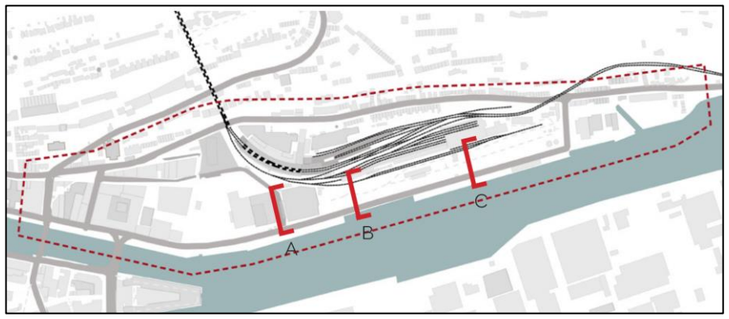


Figure 13: Study Area Plan View

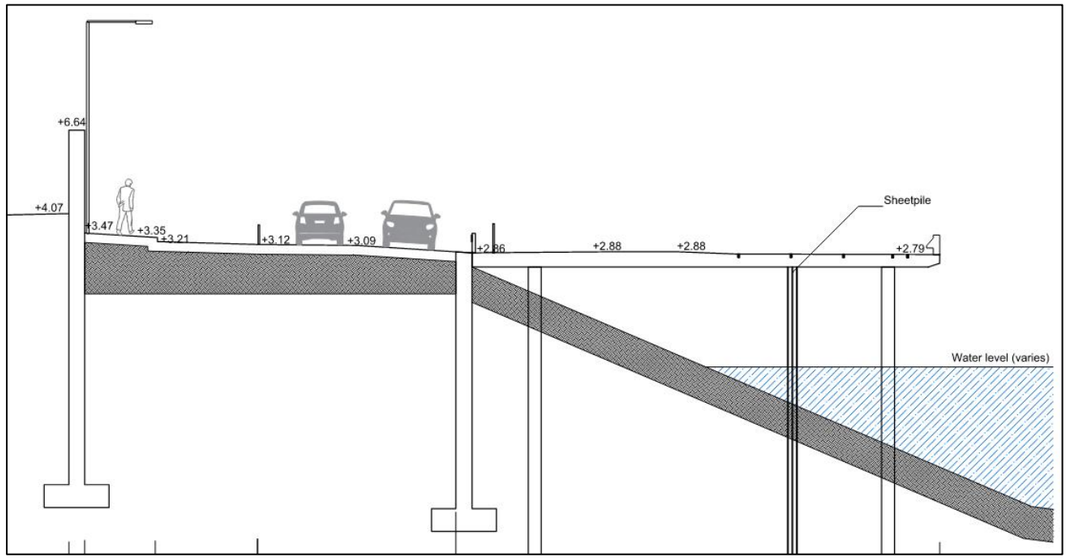


Figure 14: Section A - Horgan's Quay

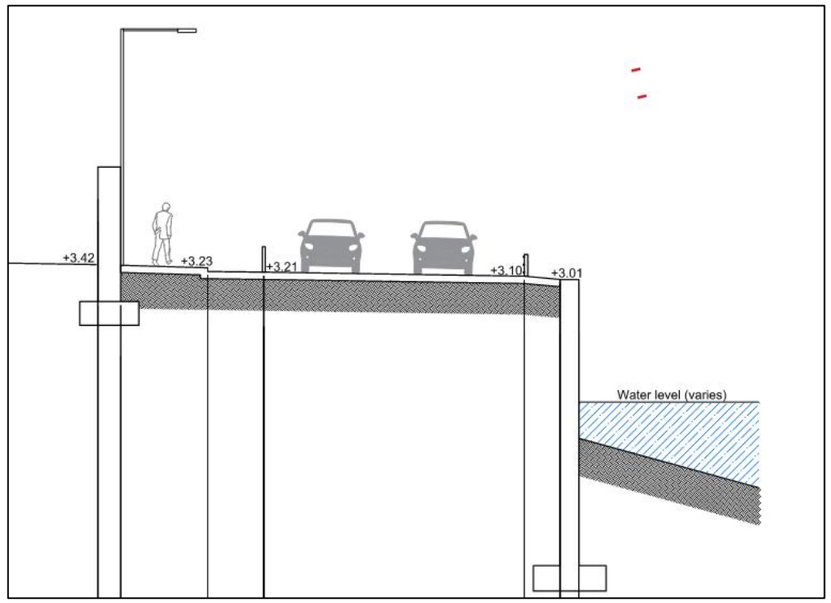


Figure 15: Section B - Turning Basin

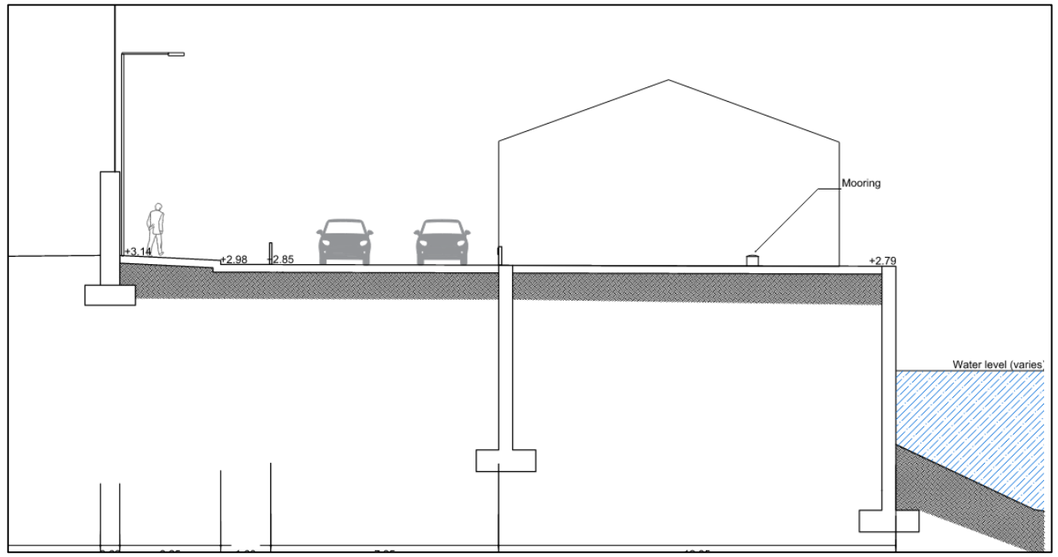


Figure 16: Section C - North Deep Water Quay

4 ALTERNATIVE OPTIONS CONSIDERED

As part of the Stage 1: Feasibility & Preliminary Appraisal, OCSC and OKRA, the appointed consultants, reviewed the project scope, the policy and guidance documents, and developed a number of alternative options associated with the scheme. These options are described in section *4.1 Alternative Options.*

4.1. ALTERNATIVE OPTIONS

To facilitate the options assessment, the design team produced different options related to the public realm and the road alignment. These options were developed and assessed considering the coordination and connectivity between the two elements of the project, ensuring that the emerging preferred option from the options selection stage represents the most balanced and effective solution for the scheme.

4.1.1. PUBLIC REALM OPTIONS

To facilitate the options assessment, the study area has been divided into six zones, as shown on Figure 17. For each zone, as part of the scope of the report, a minimum of two potential “Do-Something” options were assessed against one “Do-nothing” option, which serves as a base case for comparison.

The base case considered minimal or no modifications. This option, considered unrealistic, has been used as a comparison scenario for the multi-criteria analysis, as it does not meet the safety and mobility principles to be achieved by the scheme.

The tables on the following pages give the summary description of the options developed for each zone.

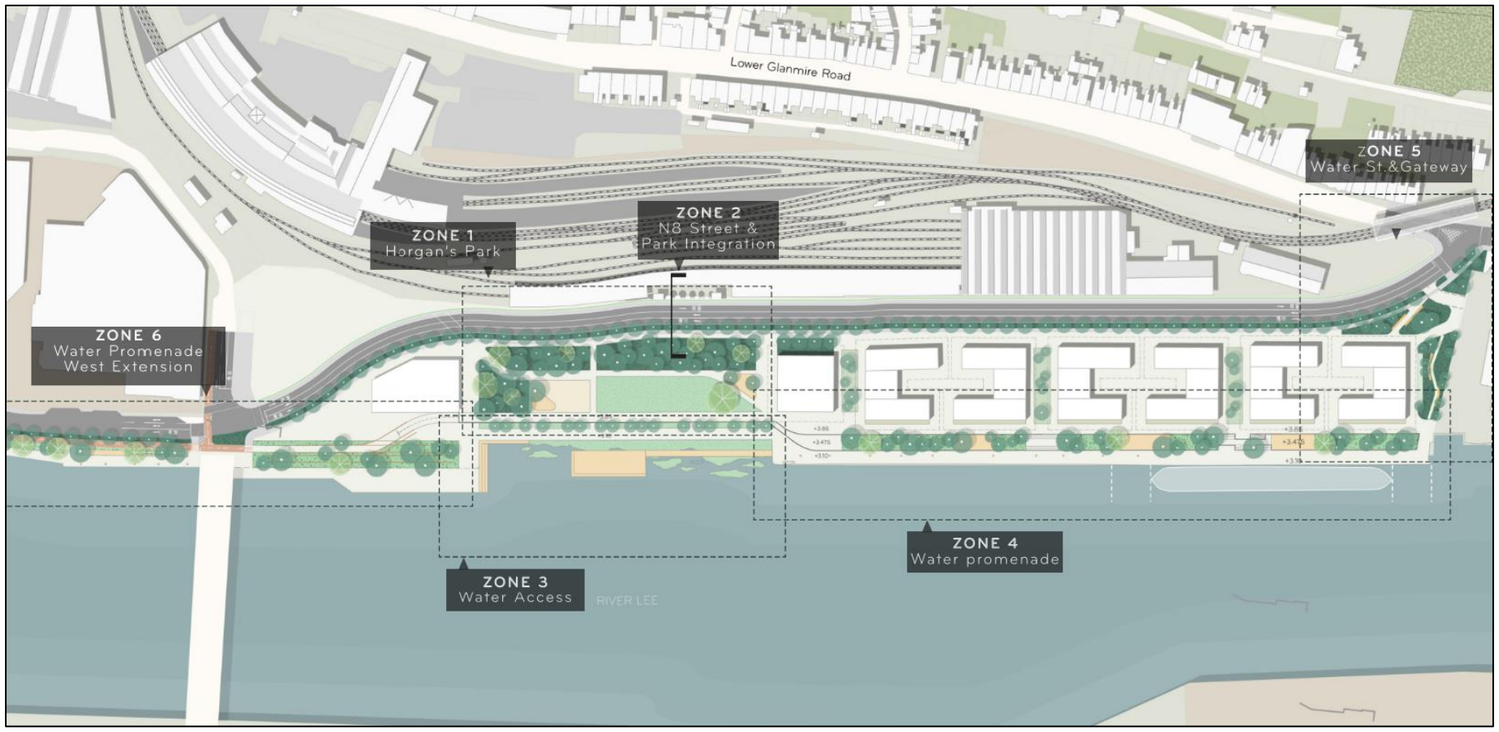


Figure 17: Public Realm - Zones

Table 1: Zone 1 – Public Realm Options Description

Options For Zone 1	Summary Description
Option 1 Horgan's Park	Horgan's Park will be a key destination for locals and visitors, featuring green spaces, play and seating areas in a pedestrian-only zone. A mini forest will buffer the park from the N8 road, reducing noise and visual impact. The design integrates with nearby infrastructure and future housing, embracing the site's level changes. However, the riverside location, while offering great views for cyclists, has a disconnect between the park and the Promenade due to terrain and facility placement.
Option 2 Horgan's Park	The park is divided into two levels: a wide promenade and open lawn area, located at the existing quay level. The remaining area interfaces with future housing to provide continuous connection. Shared facilities meander through the park, allowing cyclists to enjoy the atmosphere. The change in levels provides an opportunity to design an amphitheatre along the edge of an open lawn. However, the shared facilities disrupt the area's linearity, potentially detracting from the overall experience. The level changes create discontinuity between the mini forest, the open lawn and the promenade.

Table 2: Zone 2 - Options Description

Options For Zone 2	Summary Description
Option 1 N8 and Park Integration	A clear separation is maintained between the road, SuDS (Rain Garden), and pathway, ensuring functional zoning and safety. However, the narrow distance between the road and the pathway limits the noise mitigation impact of the 3.00-meter-wide rain garden. This buffer contributes to creating a more pleasant pedestrian environment by softening the transition between the road and the pathway.
Option 2 N8 and Park Integration	The integration of the pathway within the mini forest offers pedestrians an enhanced experience by immersing them in a natural environment, creating a more enjoyable path. The 8.25m green strip provides a significant buffer, contributing to noise mitigation from the adjacent road, improving overall comfort for park users.
Option 3 N8 and Park Integration	The Mini-Forest is maximized, providing an expansive green space that enhances the overall public realm. However, the design completely separates the road and pathway from the park and the promenade. The option provides the least invite gateway to the city in comparison to the other options.

Table 3: Zone 3 - Options Description

Options For Zone 3 – Water Access	Summary Description
Option 1 Floating Deck	The design showcases the river's dynamic nature, allowing users to access water and interact with the aquatic environment. The movable platform offers seating for city views and water interaction, while floating planting beds revoke the natural landscape of the River Lee. However, a careful consideration is needed in the preliminary design stage, including the maintenance and installation of the green islands to ensure year-round quality of planting, given the high tide differences. Additionally, maintaining the quay wall and edge treatment is crucial, as low tide exposes the quay wall.
Option 2 Open River Access	The design enables users to swim alongside the river, enhancing recreational opportunities, fostering community engagement and offers stunning views of the river and the city centre. The terraces on the west side of the turning basin feature small water elements for interaction while overlooking the river.

Options For Zone 3 – Water Access	Summary Description
	However, this option requires safety and practical facilities. This will be considered as part of a broader river use plan.
Option 3 Extended Terrace	The amphitheatre, descending toward the river, facilitates access for water activities enhancing community engagement and recreation. The quay edge transforms into seating terraces for relaxing and enjoying city views. Access to the river is available all around the turning bay, ensuring that users can engage with water from multiple vantage points, allowing water activities such as canoeing and kayaking to take place. However, it is essential to consider wind mitigation elements, this will be explored further in a design stage.

Table 4: Zone 4 - Options Description

Options For Zone 4 – Water Promenade	Summary Description
Option 1 Double Green	The double linear green structures provide extra shelter during the summer months and helps reduce wind velocity on both levels. Maximized green areas promote biodiversity and a healthier urban environment. However, it results in relatively narrow pathways particularly the central pathway. Additionally, locating shared facilities next to the river may require edges indicator for safety, potentially creating a visual boundary to the river, which will be further explored in the next stage.
Option 2 Enlarged Upper Promenade	The upper level has been enlarged into a spacious linear space, featuring active frontages and lush green areas along its sides. Adjacent to the river, a pedestrian-only zone has been established, fostering a safer environment for pedestrians. This shared facilities space is secured at the flood protection level, ensuring safety during adverse weather conditions. However, the lower promenade along the river has become less prominent, resulting in a relatively narrow width of just 4.00 meters, which may limit its functionality and accessibility compared to the vibrant activities occurring on the upper promenade.
Option 3 Enlarged Riverside Promenade	The lower level has transformed into an urban promenade with a spacious open area extending to the river, enhancing connection to the waterfront. While the widened promenade creates an inviting environment, the green area is limited to 3-3.5 meters, potentially insufficient for biodiversity and wind mitigation. The shared facilities space lacks flood protection, raising concerns during bad weather. Additionally, strong winds may affect the comfort and usability of the promenade for pedestrians and cyclists.
Option 4 Wider Green & Shared Facilities at the Upper Level	The area next to the river is now pedestrian-only, enhancing safety and creating a welcoming atmosphere for visitors and users. Green space has been expanded to 8-10 meters, allowing for various activities and enriching the community experience. Shared facilities are secured at the flood protection level, ensuring safety during bad weather. However, their placement limits cyclists' visual connection and may cause minor disturbances in active frontage areas.
Option 5 Wider Green & Shared Facilities at the Waterside	The proposed options enhance the connection between the upper and lower-level promenade improving accessibility and interaction with the river. Widening the lower promenade emphasizes the dockland's distinctive character and creates a seamless waterfront connection. Green space has been expanded to 8-10 meters, allowing for various programs and activities and enriching the community experience. However, shared facilities lack flood protection, raising concerns during adverse weather and potentially disturbing pedestrians and other users who enjoy the river view.

Table 5: Zone 5 - Options Description

Options For Zone 5 – Water Street and Gateway	Summary Description
Option 1	Maximizing green space allows for greater flexibility in the planting palette and additional seating, creating meandering pathway which invites visitors to walk from N8 to the river. Dense trees and shrubs will screen the McMahon's site, enhancing aesthetics and promoting a sense of seclusion. However, service access will be limited and will need to be shared with the pathway alongside the proposed residential building, which may require careful planning to ensure that both service needs and pedestrian flow are adequately accommodated without compromising the green space's integrity.
Option 2	Separating service access from the shared street improves operational efficiency, allowing for greater flexibility in service delivery and maintenance while simultaneously enhancing safety for pedestrians and cyclists. However, this design narrows the green space to a minimum of 1.5 meter in width and limited space for green screening from McMahon's Site. Considering the service road's infrequent use, the loss of green space should be carefully evaluated to ensure it is justified.

Table 6: Zone 6 - Options Description

Options For Zone 6 – Water Promenade West Extension	Summary Description
Option 1	The proposed design preserves existing trees where possible, and maximizes green space, with two rows of green space segregating cyclists and enhancing environmental quality. However, the Sustainable Urban Drainage Systems (SuDS) area has become relatively narrow, which may limit its effectiveness in managing stormwater runoff. The promenade along the water is constrained in size, restricting activities and programs that can be accommodated in this space, potentially impacting its vibrancy and community usability.
Option 2	This design option features a spacious promenade that enhances accessibility and social interaction among visitors. However, it affects the green area and Sustainable Urban Drainage Systems (SuDS), which are limited in size within this configuration. The existing trees will need to be relocated or removed, affecting the area's character and biodiversity. While the larger promenade presents opportunities for recreational activities, careful consideration will be required to balance the green elements and environmental benefits of the site.
Option 3	This design option features a spacious promenade that enhances accessibility and community interaction, making it appealing for residents and visitors. The large green area supports biodiversity, providing habitats for local flora and fauna and contributing to ecological health. However, this plan necessitates relocating or removing existing trees, which could impact the area's established character and the ecosystem services.

4.1.2. ROAD OPTIONS

Similar to the public realm, the study area has been divided to facilitate the road options assessment. A minimum of three options have been developed for each of Areas A, B, and C. Area A comprises the west section of the road corridor, Area B comprises the straight section of the road corridor, while Area C comprises the east section of the road corridor. All options have been assessed against the base case "Do-nothing", which considered minimal or no modifications to the existing arrangements. The following tables give a description of the various options for the three areas.

Table 7: Area A - Options Description

Options for Area A	Summary Description
Option 1	Option 1 proposes a DMURS-compliant road alignment, with 104m horizontal curvature radius. However, to facilitate this a portion of the land use zoning ZO 02 New Residential Neighbourhoods is being affected by the scheme.
Option 2	Option 2 complies with DMURS in terms of horizontal alignment (104m radius) and of carriageway widths. This option also compromises the adjacent lands on zoning ZO 02 New Residential Neighbourhoods but reduces the degree of severance of the zoned area when compared to Option 1.
Option 3	Option 3 further reduces impact on adjacent lands, however, provides a substandard alignment, not compliant with DMURS recommendations. In order to accommodate the turning movements of larger vehicles, extra carriageway space would be required at the non-compliant curves.
Option 4	Option 4 proposes a DMURS-compliant road alignment with 104m horizontal curvature radius, resulting in encroachment on the ZO 02 lands. In order to tie-in with Area B, Option 4 would take 73m^2 of ZO 15 Public Open Space, and leaves on ZO 02 New Residential Neighbourhoods approximately 7,287m^2 to the north-west and 590m^2 to the south-east side of the road.

Table 8: Area B - Options Description

Options for Area B	Summary Description
Option 1	The road alignment proposed in this option is positioned far north, where the scheme is constrained by the adjacent Irish Rail buildings, allowing for a minimum of 1m horizontal clearance. The road alignment follows the building line. This option would leave 9,562m^2 of ZO 02 New Residential Neighbourhoods and 4,696m^2 of ZO 15 Public Open Spaces south of the realigned road.
Option 2	Option 2 follows the Irish Rail buildings boundary alignment to the north with the road set at least 5m south of the wall, as per the Kent Station Transport Masterplan 2022. It reduces the area of ZO 02 and ZO 15 to the south, leaving 8,567m^2 of ZO 02 New Residential Neighbourhoods and 4,221m^2 of ZO 15 Public Open Spaces on the southern side of the road.
Option 3	Option 3 is positioned at the same horizontal clearance from the boundary wall as Option 2; however, option 3 would require slightly more lands on the southern side. This option would leave 8,425m^2 of ZO 02 New Residential Neighbourhoods and 4,120m^2 of ZO 15 Public Open Spaces south of the realigned road.

Table 9: Area C - Options Description

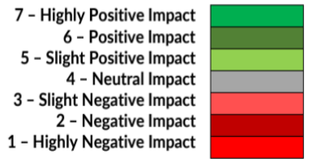
Options for Area C	Summary Description
Option 1	Option 1 creates a junction at Lower Glanmire Road, expanding from one inbound lane to two, plus a dedicated bus lane. The junction has a traffic island filtering the outbound traffic at Lower Glanmire Road returning to the inbound route towards Horgan's Quay. The layout impacts on adjacent Irish Rail lands, within ZO 14 – Public Infrastructure and Utilities zoning area, with no impact on the terraced houses at Lower Glanmire Road and the McMahon's Builders Providers property within ZO 02. This option leaves 11,870m^2 of ZO 02 New Residential Neighbourhoods and 2,690m^2 of ZO 14 Public Infrastructure and Utilities.

Options for Area C	Summary Description
Option 2	Option 2 proposes a gradual transition from Lower Glanmire Road to the realigned N8 Road, the alignment being compliant with DMURS. This option impacts on the row of terraced houses at Lower Glanmire Road, from property No. 16 to No.22 at the corner and would take approximately 26m^2 McMahon's Builders Providers property, without affecting their business operation. This option leaves 11,853m^2 of ZO 02 New Residential Neighbourhoods and 2,727m^2 of ZO 14 Public Infrastructure and Utilities.
Option 3	Option 3 proposal shows a gradual transition from Lower Glanmire Road to the realigned N8, the alignment being compliant with DMURS. It impacts the terraced houses along Lower Glanmire Road, from property No. 11 to No. 19 and would take approximately 1,065m^2 McMahon's Builders Providers property. Option 3 leaves 10,327m^2 of ZO 02 New Residential Neighbourhoods and 3,240m^2 of ZO 14 Public Infrastructure and Utilities.
Option 4	Option 4 follows the same route as Option 3, however, with a different approach at the connection with Lower Glanmire Road as it proposes a junction arrangement, as opposed to a continuous alignment connecting the two roads. Option 4 impacts five houses and would take approximately 865m^2 of McMahon's Builders Providers property. Option 4 leaves 10,580m^2 of ZO 02 New Residential Neighbourhoods and 3,240m^2 of ZO 14 Public Infrastructure and Utilities.
Option 5	This option is non-DMURS compliant as it compromises the road alignment to mitigate major impacts on adjacent zoned lands. Extra space would be required to allow for turning movement of larger vehicles. Option 5 leaves 11,400m^2 of ZO 02 New Residential Neighbourhoods and 3,280m^2 of ZO 14 Public Infrastructure and Utilities, with no impact on existing houses at Lower Glanmire Road and McMahon's Builders Providers property within ZO 02.
Option 6	Option 6 is a variation of Option 1 in terms of horizontal radius and corner radius. It impacts one of the terraced houses on Lower Glanmire Road. The option also impacts on ZO 14 – Public Infrastructure and Utilities zoning area (leaving 2719m^2 available) and ZO 02 New Residential Neighbourhoods (leaving 2719m^2 available), with no impact on McMahon's Builders Providers property within ZO 02.
Option 7	Option 7 is non-DMURS compliant in terms of horizontal radius. This option has no impact on existing terraced houses, however, has greater impact on ZO 14 – Public Infrastructure and Utilities, leaving 2429m^2 available. Option 7 leaves 12,150m^2 of ZO 02 New Residential Neighbourhoods available for its planned use.

4.2. ASSESSMENT OF THE OPTIONS

The options assessment was carried out following recommendations from the Transport Appraisal Framework (TAF), published by the Department of Transport, which states "*The Transport Appraisal Framework (TAF) provides appraisal and implementation guidance that aims to promote investment in the transport system which meets the needs of society, fulfils strategic policy objectives, and delivers value for money through a common framework for appraising transport investments in accordance with the Infrastructure Guidelines (IG)".*

The TAF guidance documents recommends that the options assessment is completed through a Multi-Criteria Analysis (MCA), which establishes preferences between scheme options by referencing to a set of criteria, sub criteria and objectives. An MCA scoring scale from 1 to 7 is recommended, however, it is also noted that there are different methods for conducting MCAs where scoring scales and weighting of criteria can differ considerably.



7 – Highly Positive Impact	The option is likely to significantly improve conditions in the relevant criteria.
6 – Positive Impact	The option is likely to improve conditions in the relevant criteria.
5 – Slight Positive Impact	The option is likely to somewhat improve conditions in the relevant criteria.
4 – Neutral Impact	The option will result in no changes to conditions in the relevant criteria.
3 – Slight Negative Impact	The option is likely to somewhat worsen conditions in the relevant criteria.
2 – Negative Impact	The option is likely to worsen conditions in the relevant criteria.
1 – Highly Negative Impact	The option is likely to significantly worsen conditions in the relevant criteria.

Figure 18: Example of Scoring Scale for Transport Appraisals – (TAF Module 7)

The MCA scorecard of the North Docks Public Realm and Transport Infrastructure Project has been produced following TAF recommendations, where the assessment is undertaken under the seven appraisal criteria below.

Road Options:

- Transport User Benefits and Other Economic Impacts
- Accessibility Impacts
- Social Impacts
- Land Use Impacts
- Safety Impacts
- Climate Change Impacts
- Local Environmental Impacts
-
- Public Realm Options:
- Place Making & Public Amenities
- Sustainable and Resilient:
- Accessibility & Inclusive for All
- Distinct 'Cork Feel'
- Land Use Impact
- Cost Effectiveness

4.3. EMERGING PREFERRED OPTION

Based on the assessment of the road alignment options, the emerging preferred option of the Road Alignment is a combination of:

- Area A: Option 4
- Area B: Option 3
- Area C: Option 7

As part of the Public Realm assessment, the emerging preferred options are as follows:

- Zone 1: Option 1
- Zone 2: Option 2
- Zone 3: Option 2
- Zone 4: Option 4
- Zone 5: Option 1
- Zone 6: Option 1

The emerging layout options listed above were refined and combined into a single layout. These refinements consisted of improvements to increase the separation of pedestrians and vehicles, along with further refinements to the Public Realm proposals.

The optioneering assessment for Zone 3 Water Access determined the Open River Access arrangement as the preferred design option. However, this proposal will no longer form part of this project as a broader study of the entire river within the city environs, 'River Use and Management Plan' will be undertaken separately. This will determine the best use of the river and its resources to ensure that the overall ambition of the city and the Cork Docklands Framework Masterplan is realised.

5 CONSULTATION

5.1. STATUTORY BODIES

As part of the Options Selection Stage, regular meetings were held with Cork City Council (the client). These meetings consisted of conceptual design development, addressing any issues of concern and discussing potential solutions or variations to the design.

Cork City Council have also engaged with key stakeholders such as Cork City Council Directorates, The Cork Docklands Delivery Office, Dept. Housing, Local Government & Heritage (URDF) and National Transport Authority (NTA).

As part of the planning process for this project, the project proposals including scheme drawings will be available for public consultation at the offices of the Cork City Council and on Cork City Council's online consultation portal **https://consult.corkcity.ie**.

Further engagement will be undertaken with stakeholders such as Transport Infrastructure Ireland (TII) in relation to the proposed light rail project Luas Cork.

5.2. AFFECTED LANDOWNERS

Preliminary meetings have been held between Cork City Council and the following affected landowners:

- Port of Cork,
- Iarnród Éireann,
- Cork City Council.

6 PROPOSED WORKS

6.1. PROPOSED WORKS EXTENTS

This project with the larger ambition for the Docklands brings a once-in-a-generation opportunity to transform the perception of the river from a barrier into an open space that connects the communities to the north with the river, mending links between east and west: a place to meet the waterfront and meet each other to enjoy an enviable sense of openness and connection to nature, healthy movement and well-being in the heart of an international city.

The proposed development consists of the following:

- The realignment of a section of the N8 Road, from the junction with Lower Glanmire Road on the eastern approach to the junction with Alfred Street.
- The proposed road cross-section comprises:
  - 1.00m verge.
  - 2.00m footpath.
  - 3.25m inbound traffic lane.
  - 3.00m inbound traffic lane.
  - 3.25m inbound bus lane.
  - 3.00m verge.
  - 2.00m footpath.
- A total of 5no. signalised pedestrian crossings are being provided along the realigned N8 Road, comprising 3no. pedestrian crossings located at the junction with Lower Glanmire Road, 1no. mid-block crossing allowing pedestrians to cross the N8 Road from Kent Station to the Park area, and 1 no. pedestrian crossing at the junction with Alfred Street. The number and type of pedestrian / cyclist crossings may be subject to change during the statutory Part 8 consultation process and the detailed design stage.
- Accesses to existing businesses and services, such as to McMahon's Builders Providers and to Kent Station.
- Provision of extensive public realm and quayside areas for active travel along the waterfront.
- The eastern approach will serve as a new Gateway to the city, with green areas, wide footpaths and space for play/activities.
- A water promenade along Horgan's Quay, with the area adjacent to the river designated as a pedestrian-only zone, and a wide shared area at the upper level. The space between these two areas will incorporate green/activities spaces.
- A seating area at the waterfront, along with bicycle parking and other provisions.
- A mini-forest and rain garden with a pathway, to maximise the sense of nature and creating a more enjoyable route for pedestrians.

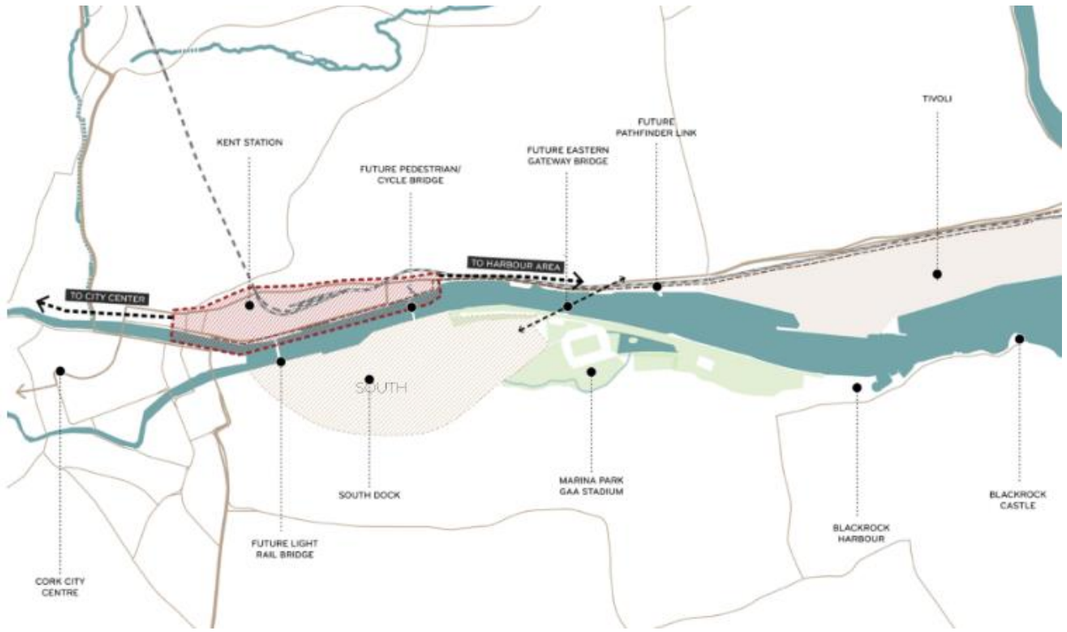


Figure 19: Site Context

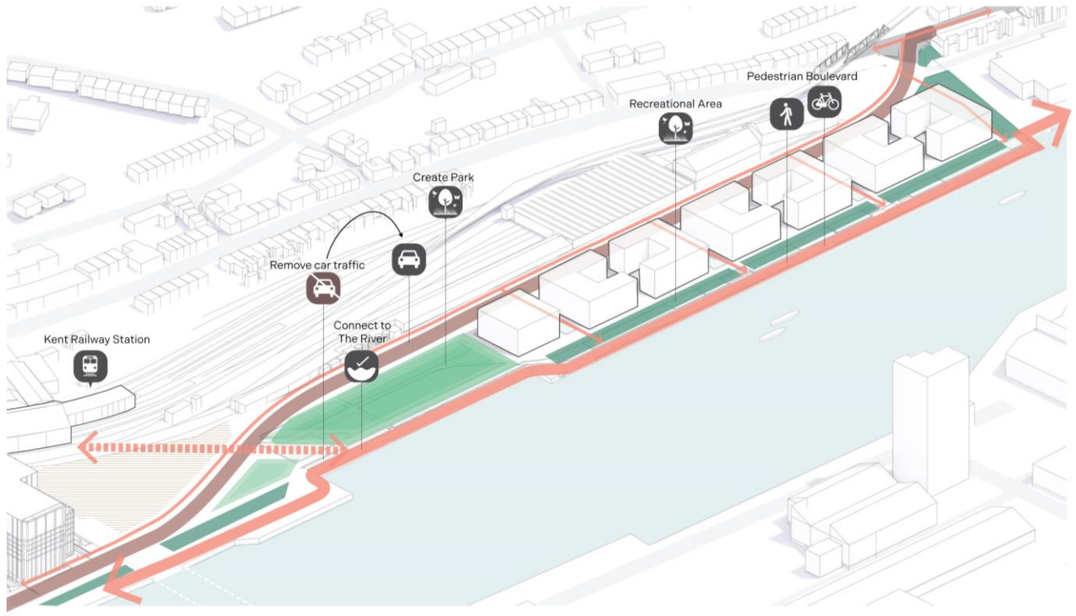


Figure 20: Site Schematic

6.2. PUBLIC REALM OBJECTIVES

1
North Docks will be implementing the most advanced **sustainable and resilient** principles for the environment, people and community.

2
North Docks will be **liveable, accessible** and **inclusive** for all. A destination, places to stay, play and sports.

3
North Docks will be of regional and national importance with a distinct '**Cork Feel'**, reflective of the maritime and industrial heritage of the area.

Hafencity Riverside Park, Hamburg, GE.

Westerkade Rotterdam, NL

Domino Park, Brooklyn, New York

Figure 21: Public Realm Objectives

6.3. STRATEGIC OVERVIEW

The vision for the North Docks is centered around three core pillars: **Creating Resilience** (Resilient and Sustainable Docks) - The North Docks will implement cutting-edge sustainable and resilient principles, prioritizing the environment, people, and community well-being. **Livable and Accessible to All** - The North Docks will be a livable, inclusive, and accessible destination—a place to stay, play, and engage in recreation and sport for people of all ages and abilities. **A Distinct 'Cork Feel'** - Cultural and Industrial Heritage The North Docks will celebrate its regional and national significance with a distinct 'Cork Feel', honoring the area's maritime and industrial heritage through design and public space. The design proposal integrates these principles through various strategies and developed into Part 8 design proposals.

LEGEND

1 Horgan's Park
2 New N8 Road Alignment
3 Waterfront Promenade
4 N8 Gateway & Biodiverse Pocket Park
5 Indicative Future Development
6 Indicative Feature Water Element
7 Western Green Link
8 Indicative Future Light Rail Bridge
9 Kent Station

Figure 22: Strategic Overview Plan

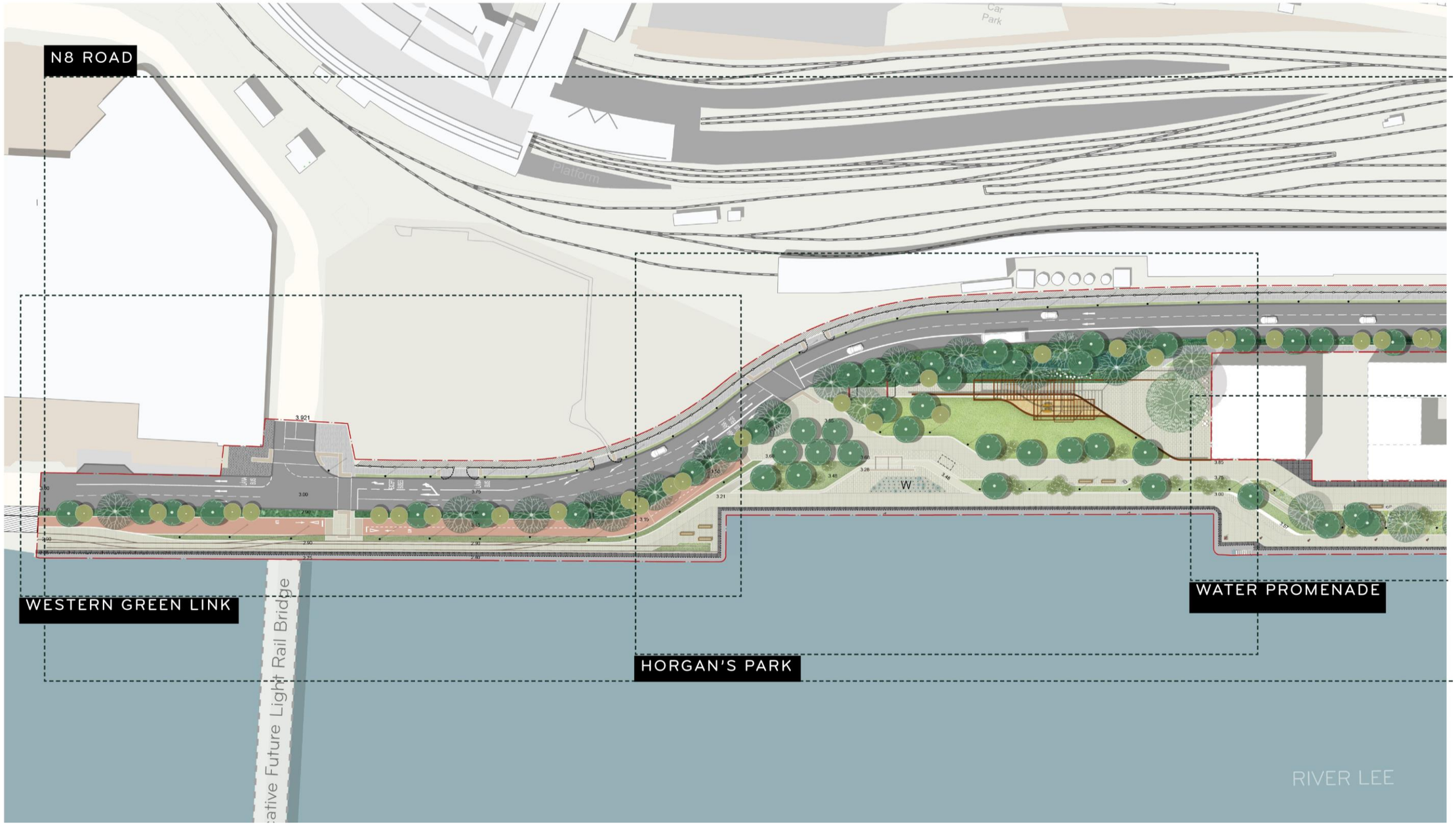
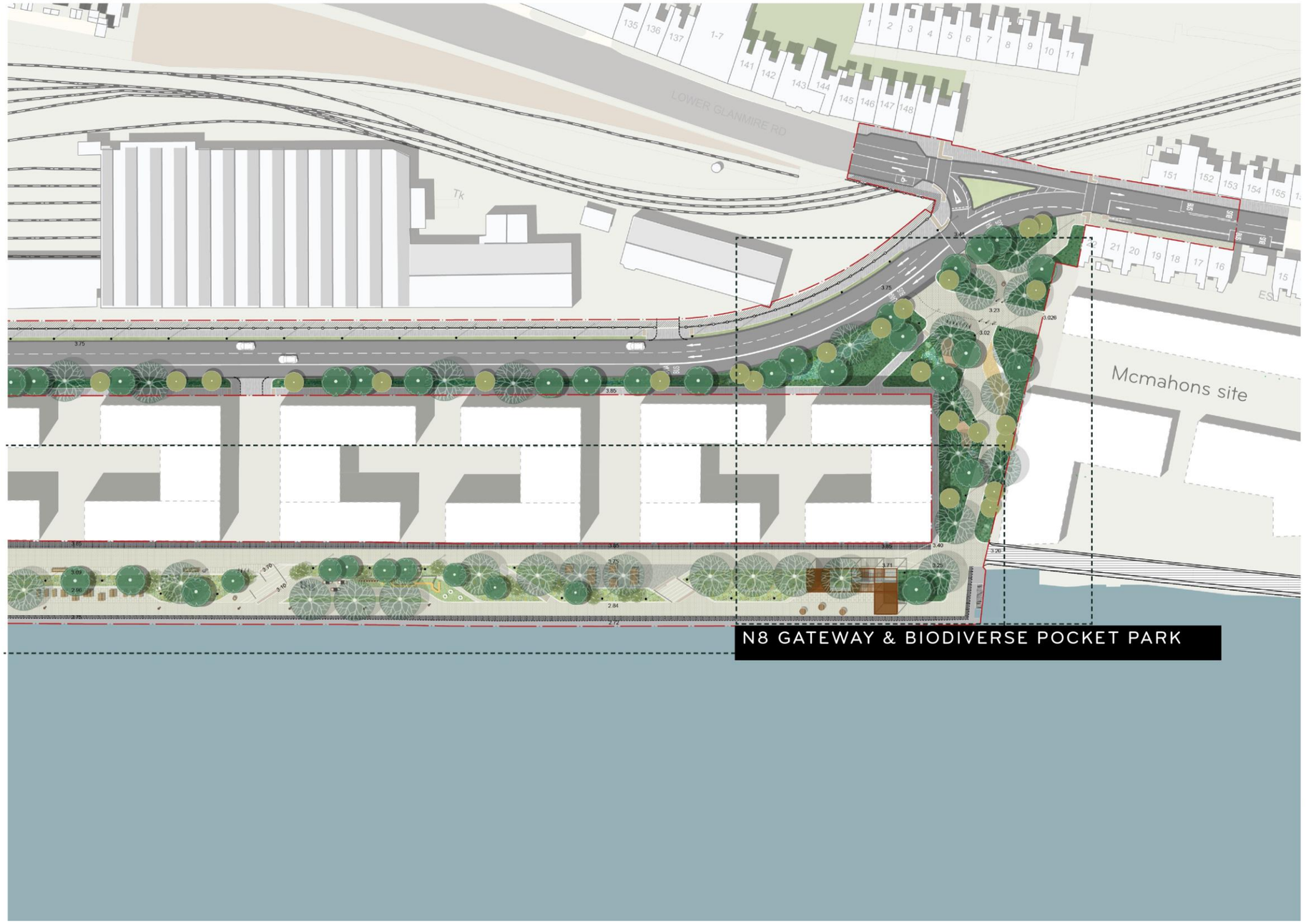


Figure 23: Strategic Overview Area Plan - West Side



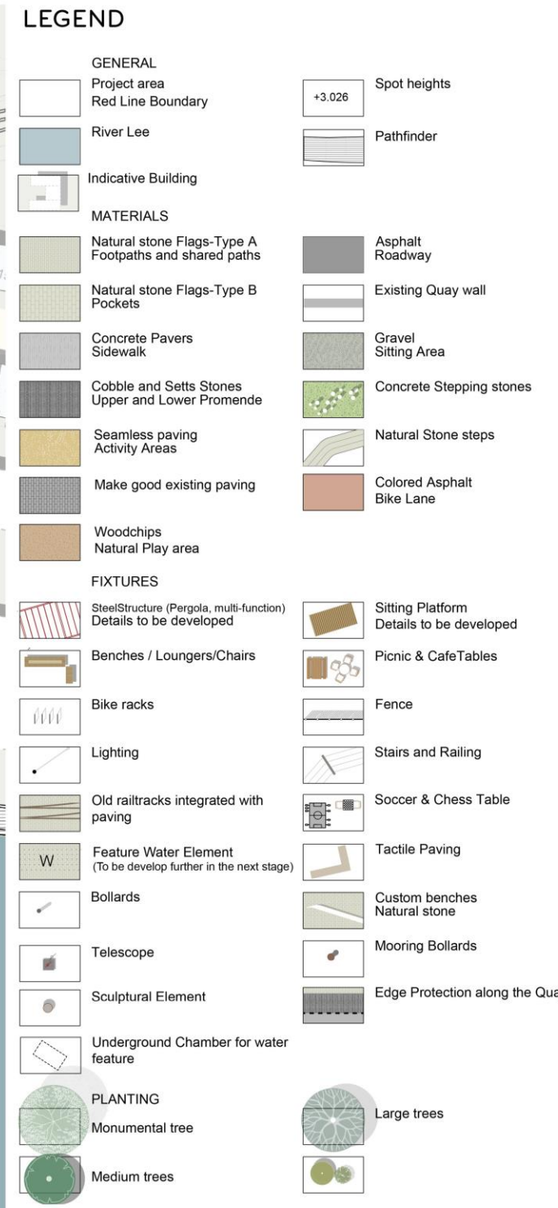


Figure 24: Strategic Overview Area Plan – East Side

6.4. PLAN CHARACTERISTICS

1. Entrance Square
2. Amphitheater and Feature Element
3. Passive Lawn
4. Event Square
5. Covered Walkway/Industrial structure
6. Mini-Forest Buffer and Rain Garden
7. Seating Corner
8. Shared Facility
9. Promenade
10. Two-ways cycle lane
11. Carriageway

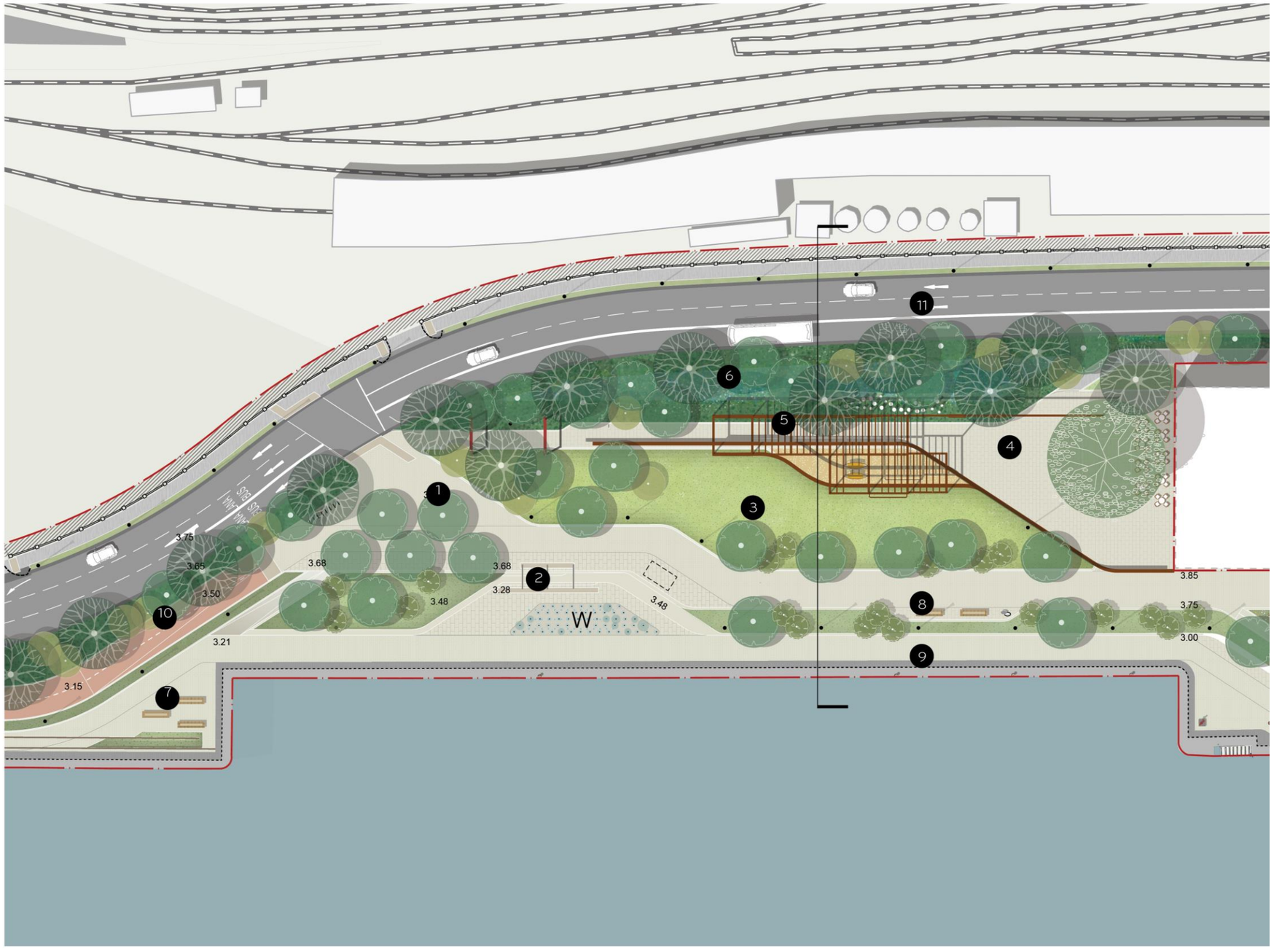
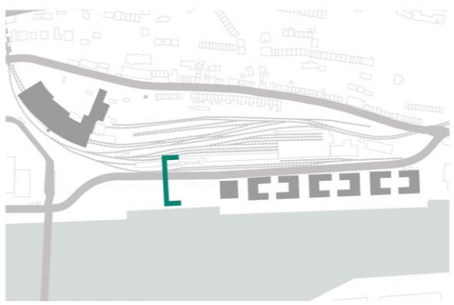


Figure 25: Horgan's Park – Plan

KEY PLAN



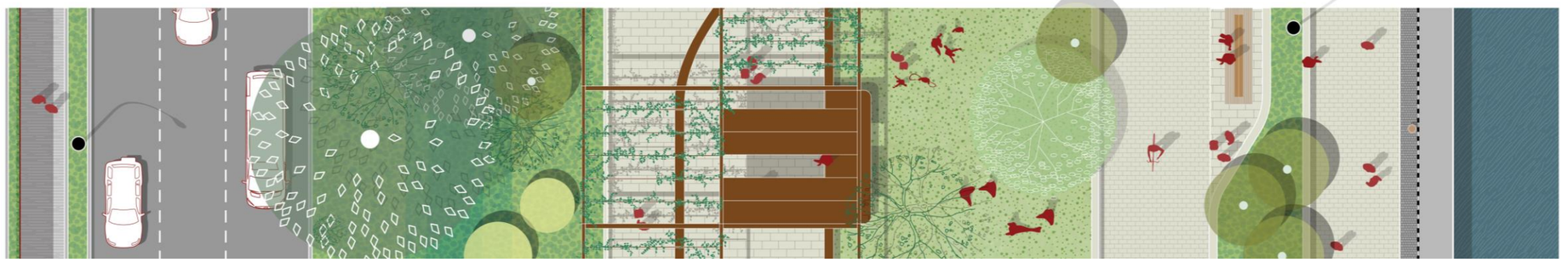


Figure 26: Horgan's Park – Section

1. Rain Garden
2. Two-Ways Cycle lane
3. Existing Railway Tracks
4. Promenade
5. Indicative Future Light Rail Bridge
6. Sidewalk
7. Carriageway

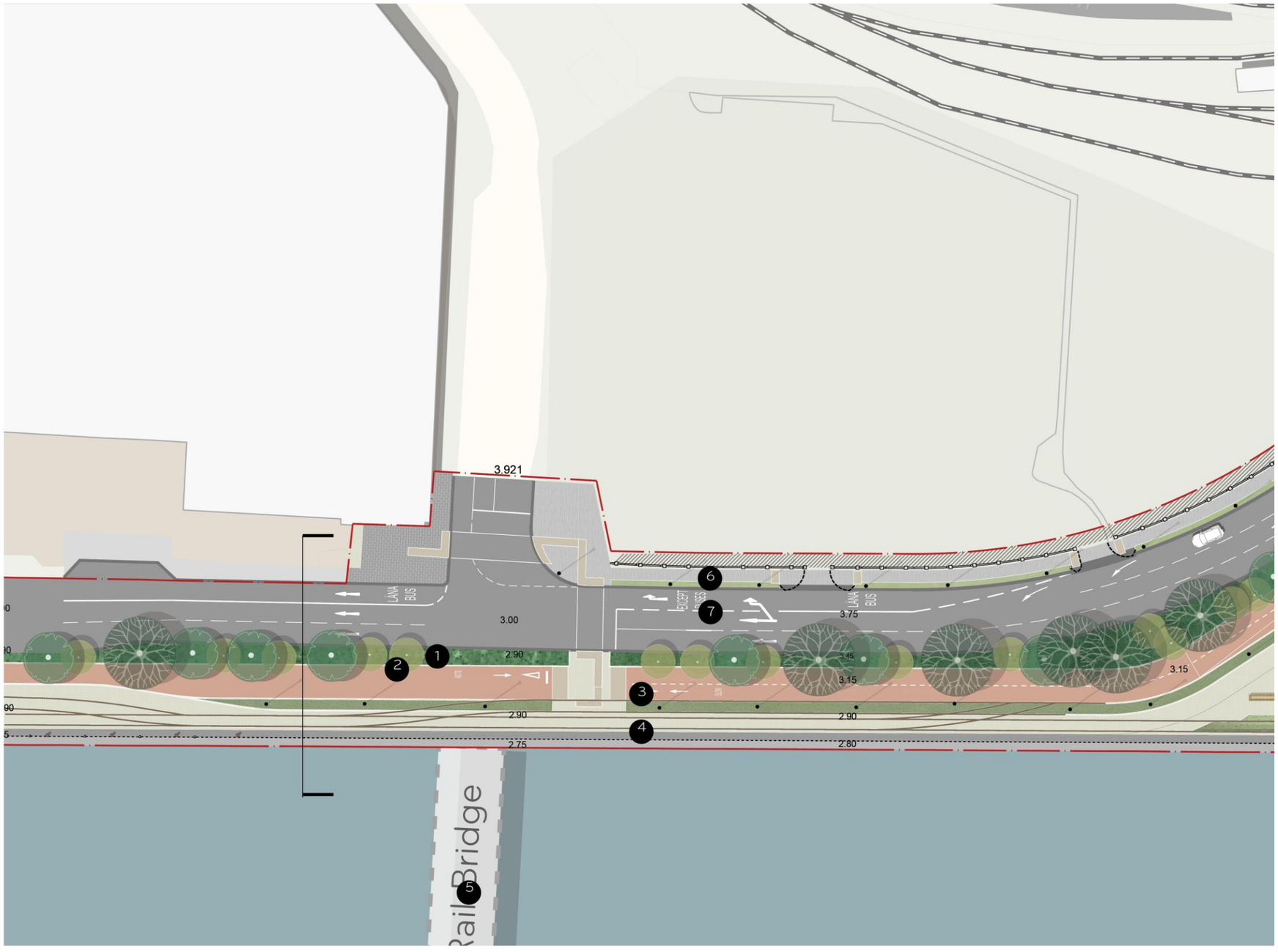
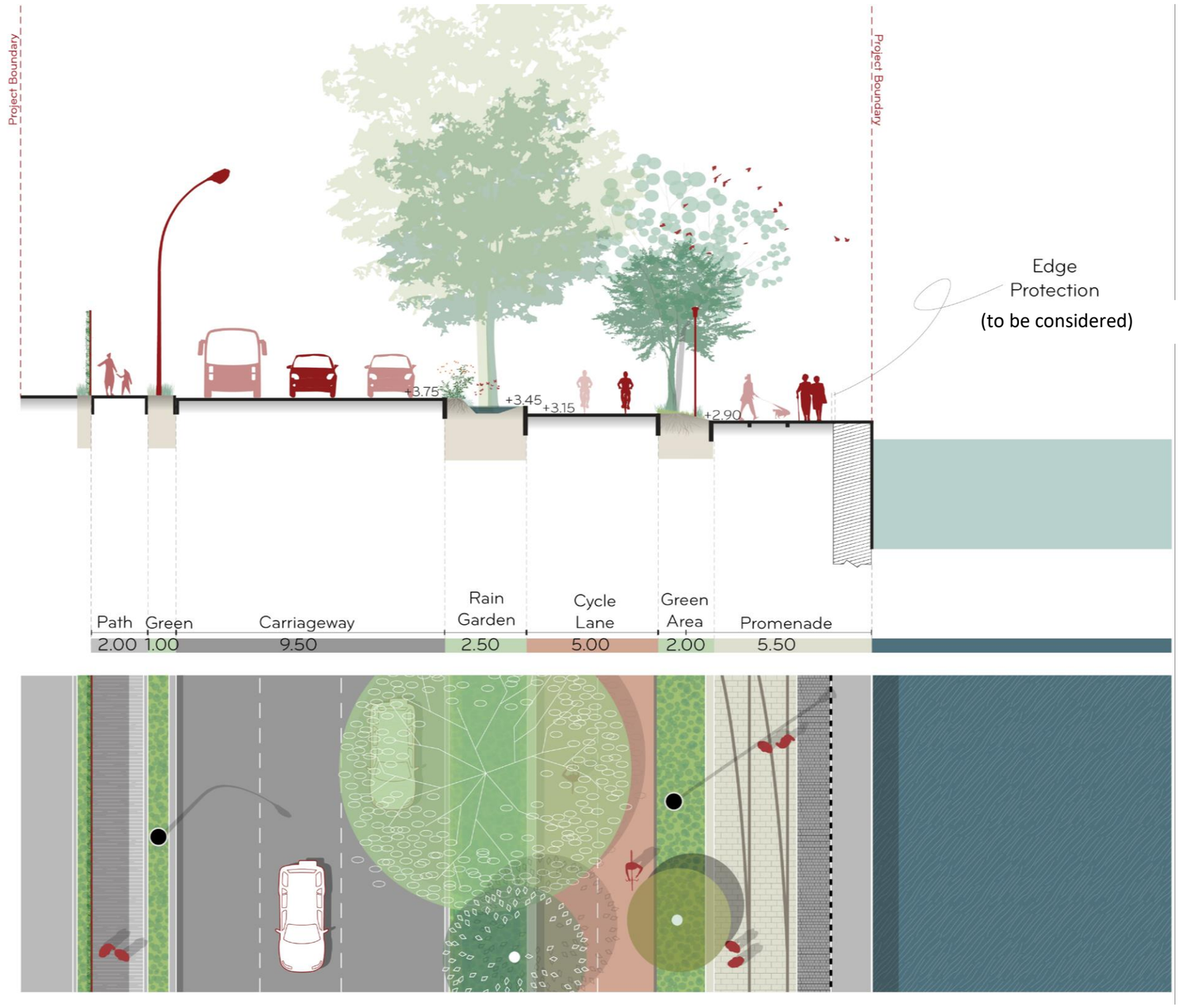


Figure 27: Western Green Link – Plan



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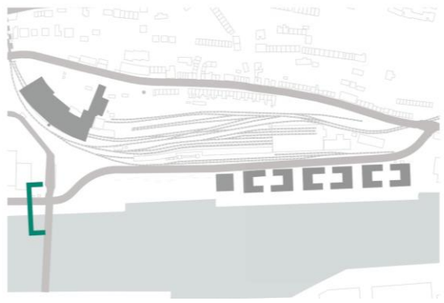
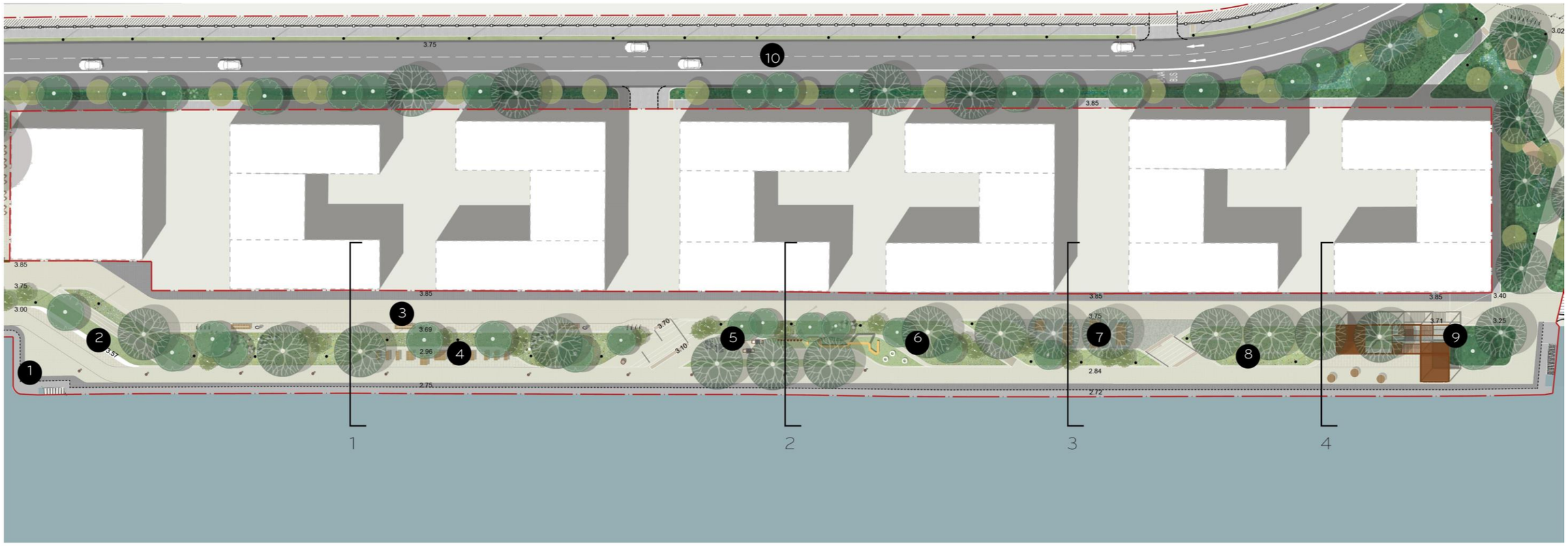
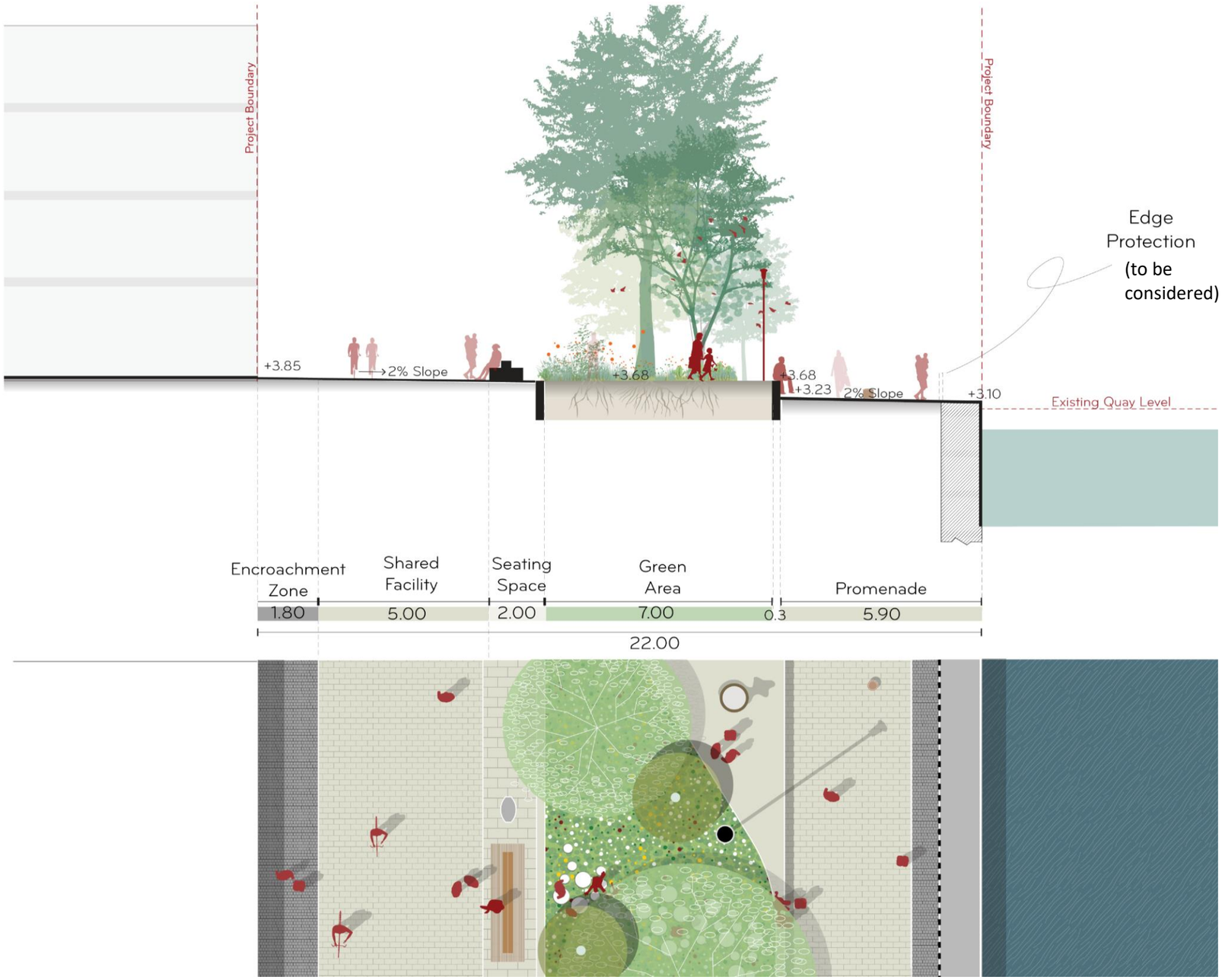


Figure 28: Western Green Link – Section



1. View Point
2. Seating Edge
3. Upper Promenade / Shared Facilities Space
4. Passive Seating
5. Active Play Area
6. Play Sculpture On Open Law
7. Outdoor Dining Area
8. Temporary Exhbition Area/ Small Event Space
9. Elevated Dock Viewpoint
10. Carriageway

Figure 29: Water Promenade – Plan



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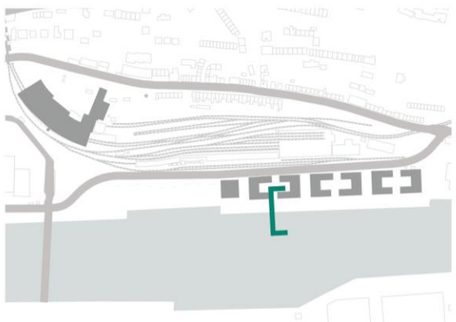
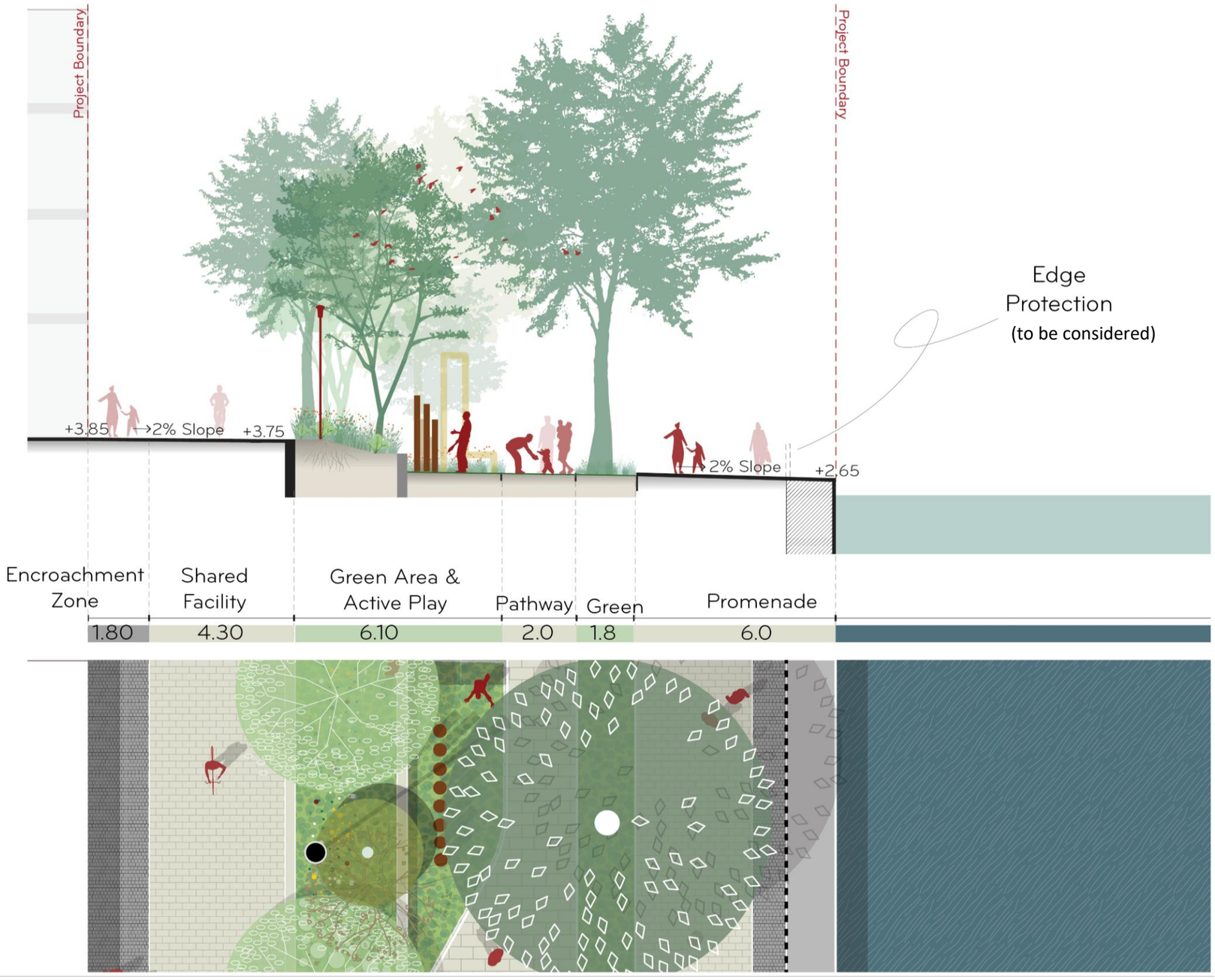


Figure 30: Water Promenade – Section 1 Passive Seating Area



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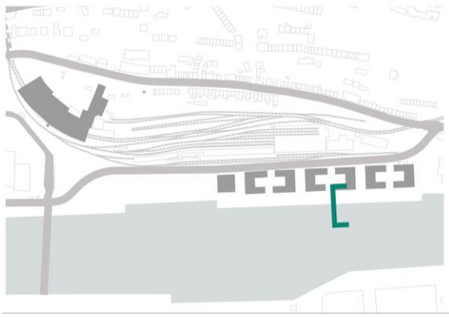
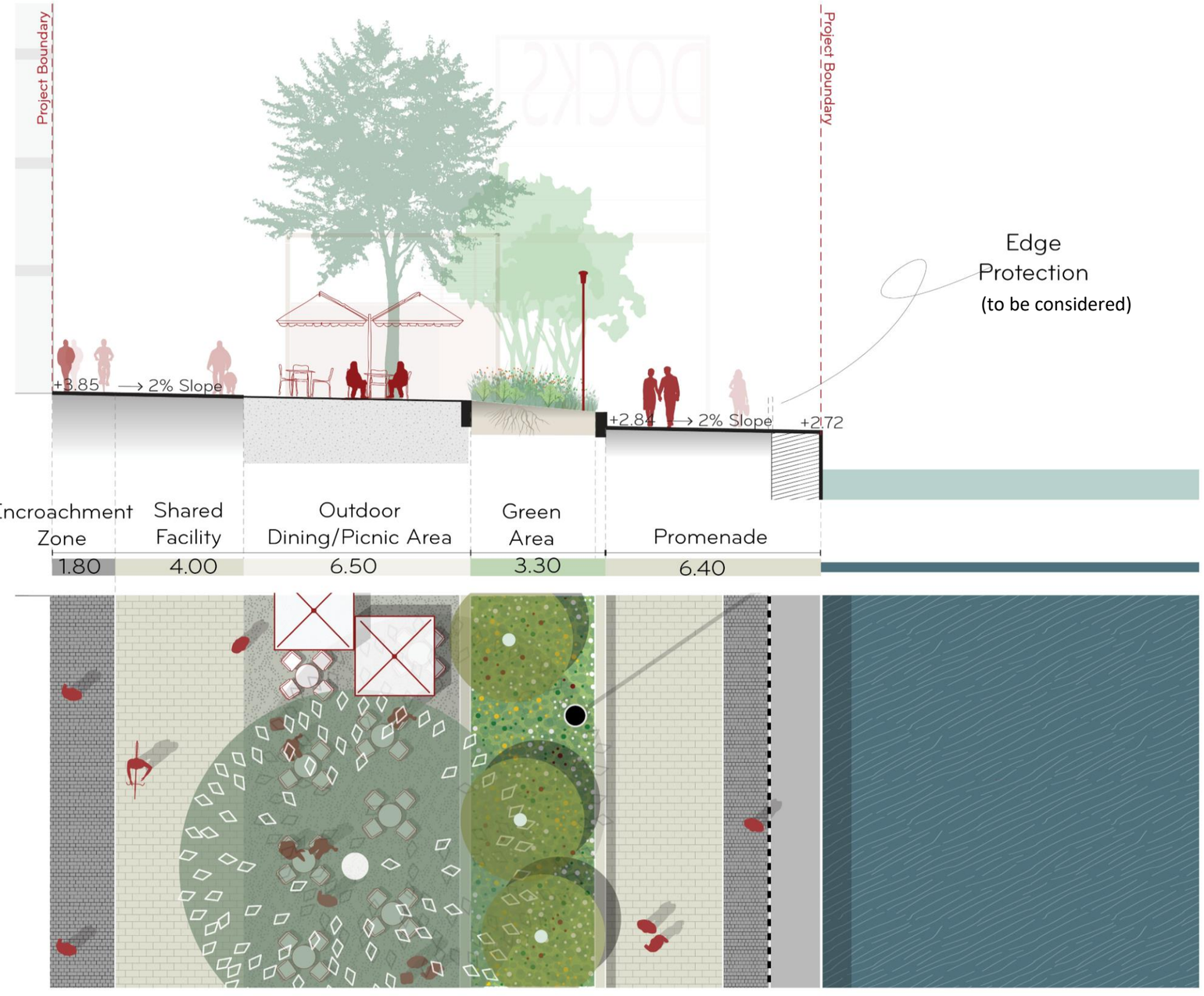


Figure 31: Water Promenade - Section 2 Active Play Area



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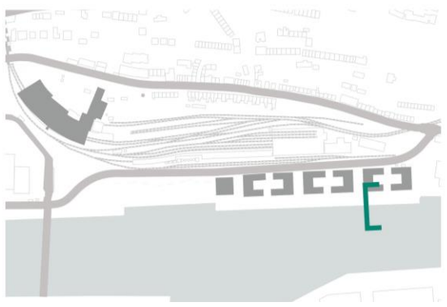
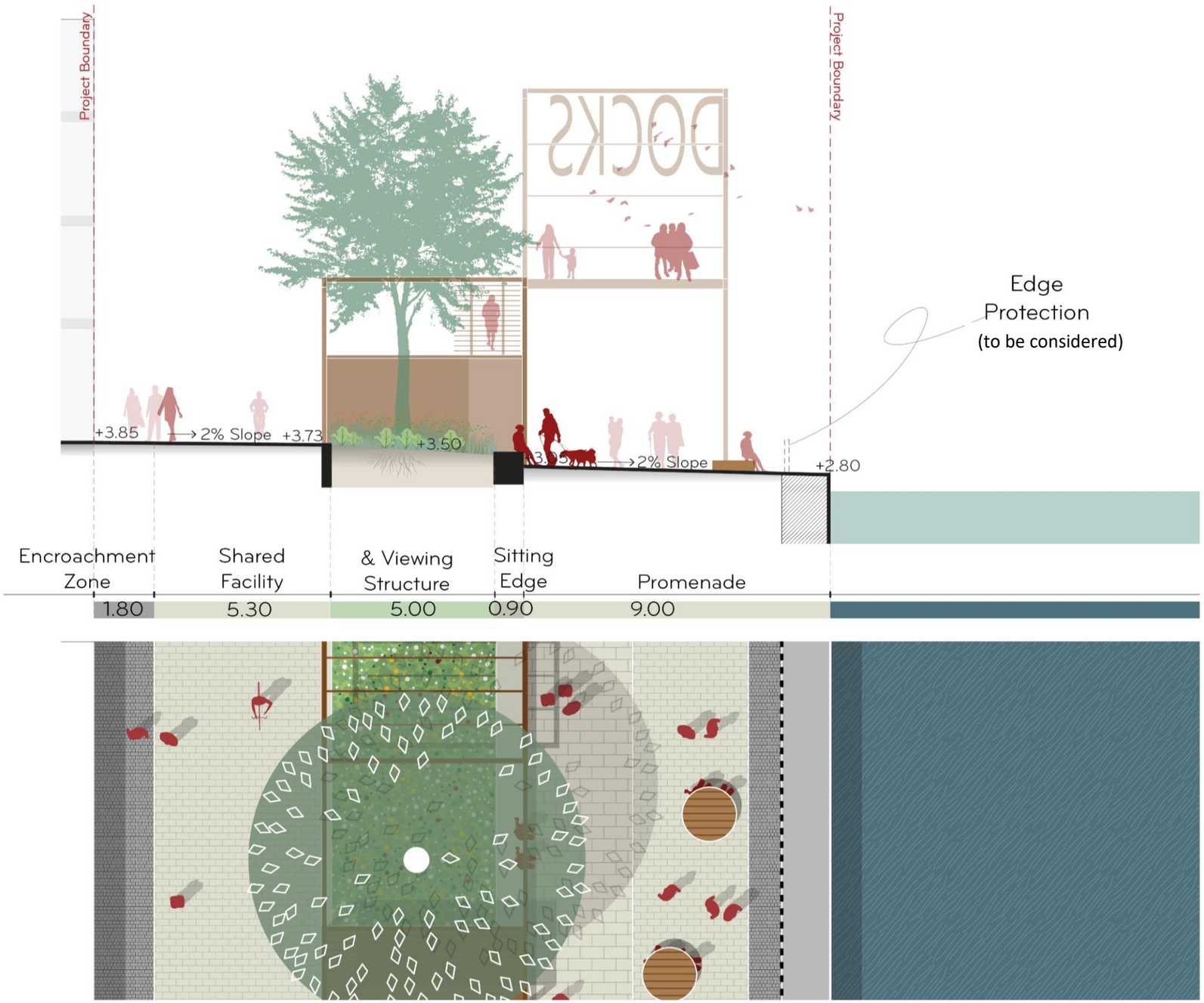


Figure 32: Water Promenade - Section 3 Outdoor Dining / Picnic Space



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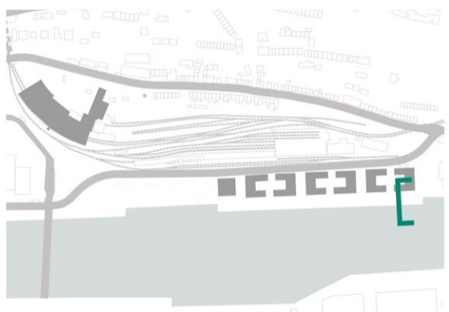
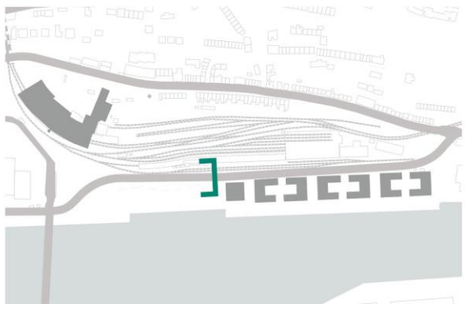


Figure 33: Water Promenade - Section 4 Elevated Dock Viewpoint

KEY PLAN



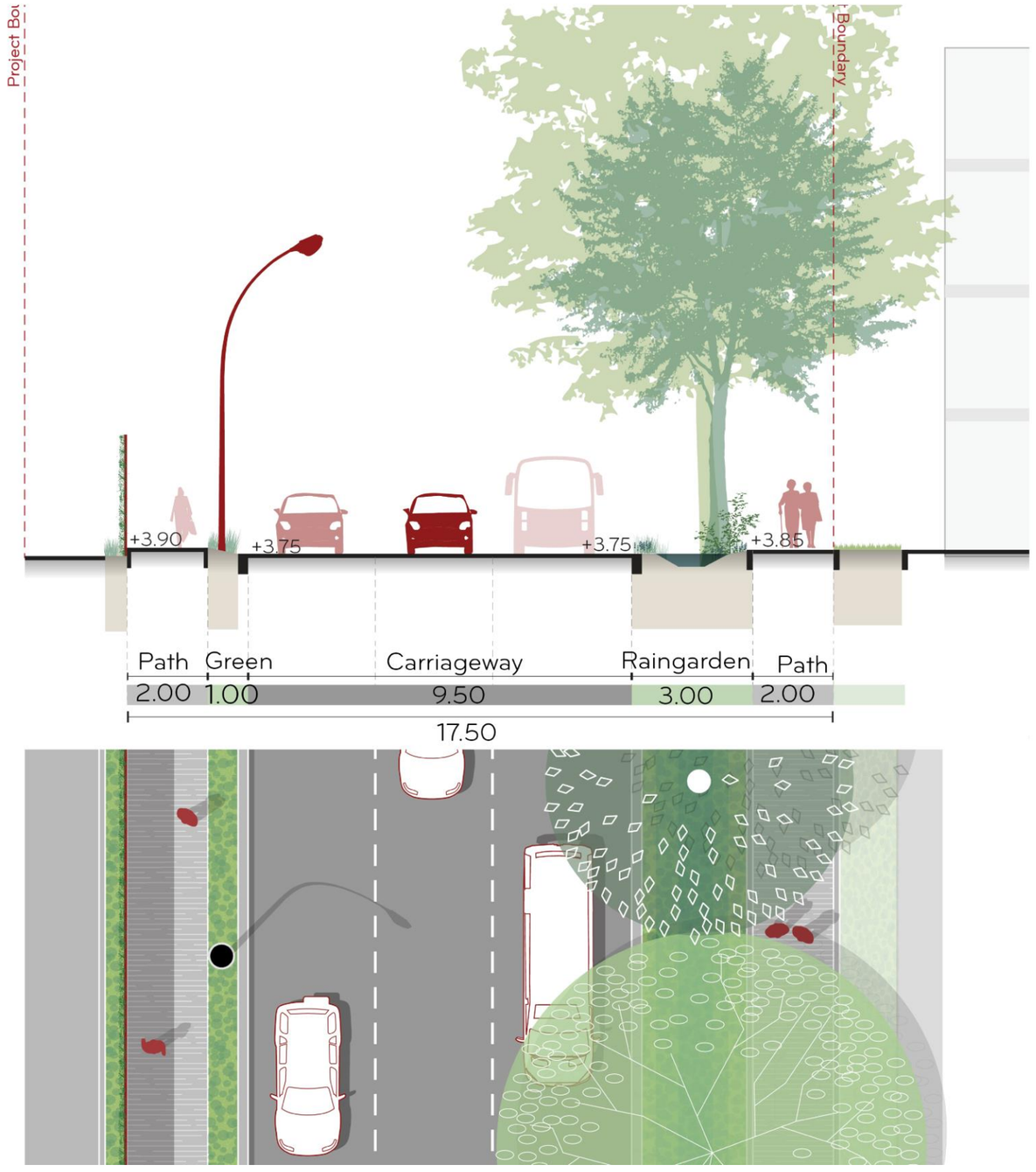


Figure 34: Carriageway and Edges – Section

1. Carriageway
2. Pedestrian Path
3. Service Lane to Mc Mcmahon's Yard
4. Bicycle Parking
5. Biodiverse Green / Wet Forest Plantation
6. Forest Play Space
7. Family Seating
8. Service Road / Emergency Access Road
9. Rain Garden
10. Elevated Dock ViewPoint
11. Existing River Access Stairs

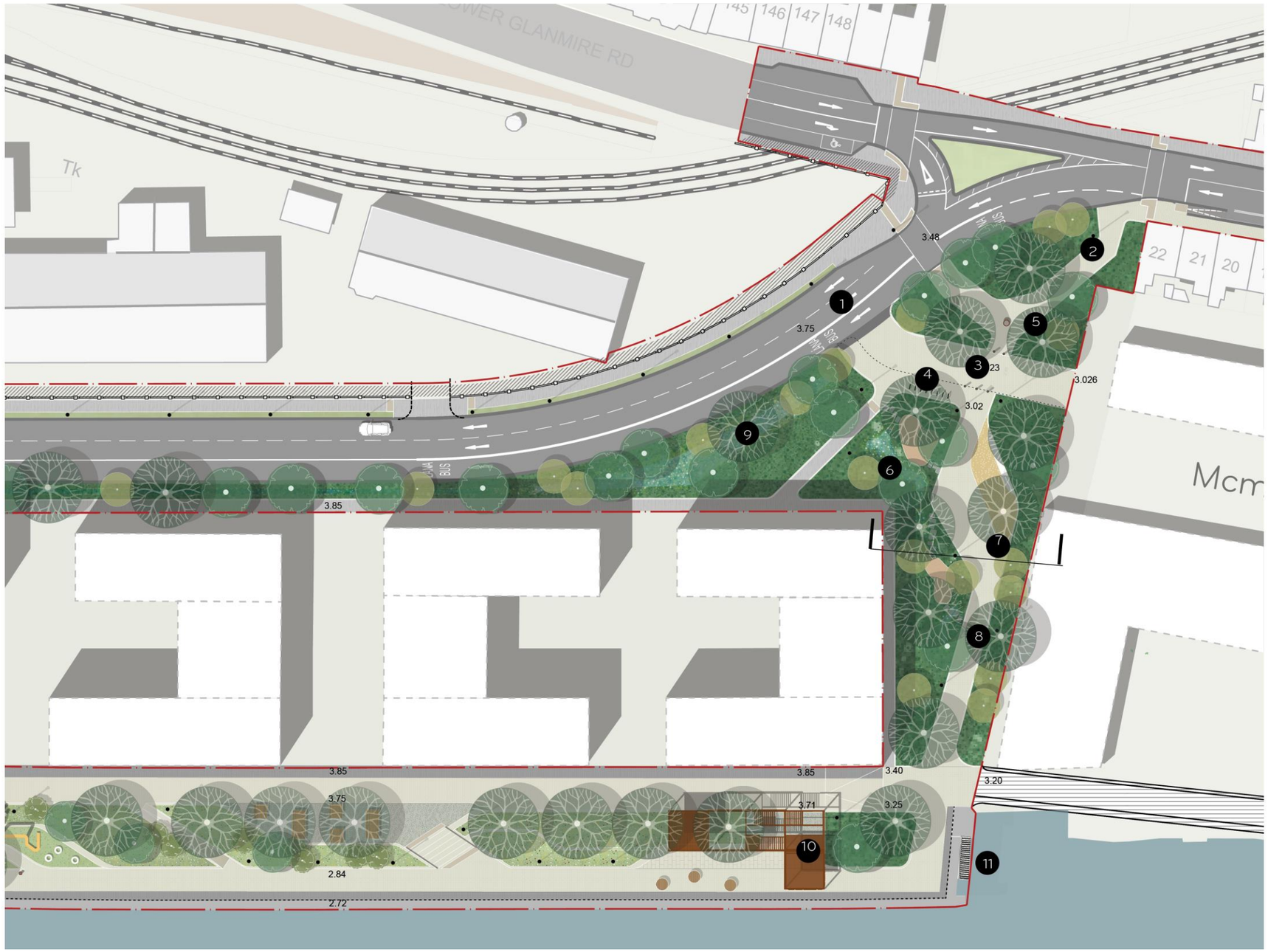
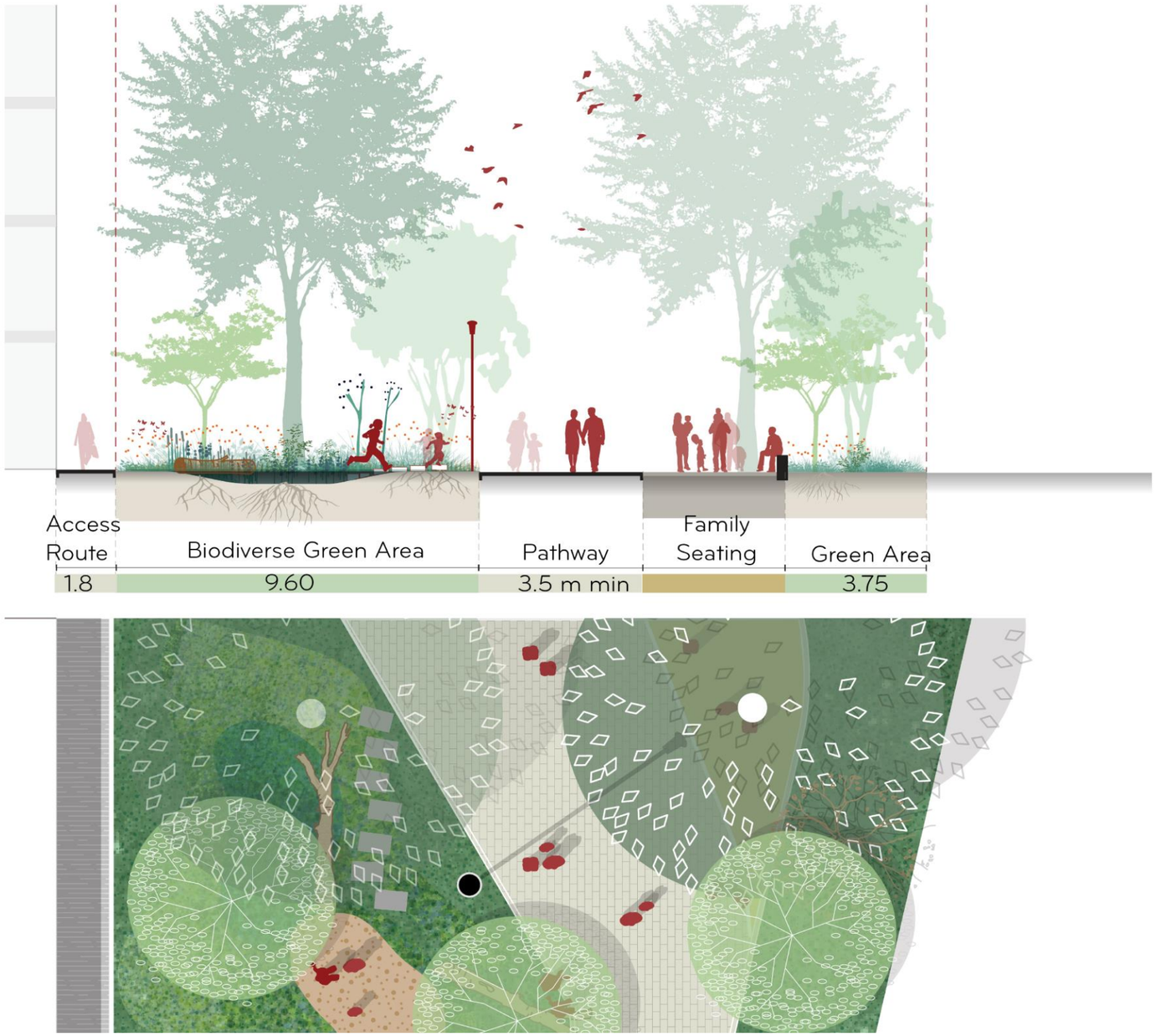


Figure 35: N8 Gateway & Biodiverse Pocket Park - Plan



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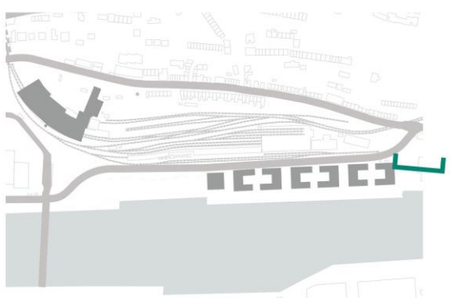
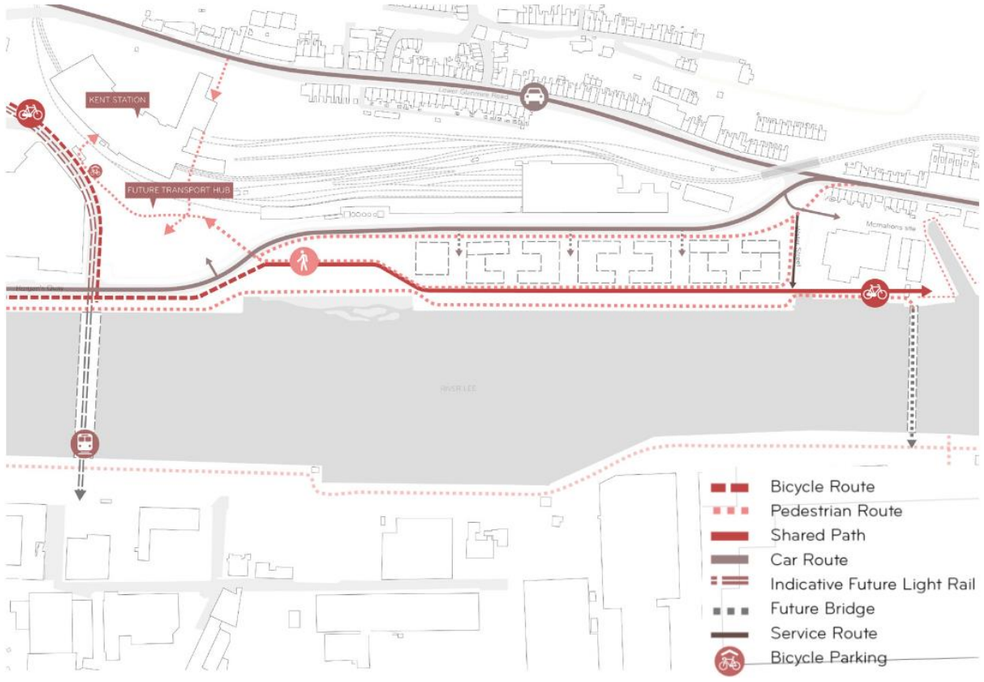


Figure 36: N8 Gateway & Biodiverse Pocket Park - Section

6.5. MOVEMENT AND ACCESSIBILITY

Different Experience of Movement.

A new balance between motorized movement and pedestrian movement offers the opportunity to create a vibrant and sustainable public realm in this area. The idea is to make it easier to live without the car or use the car less, and to encourage and facilitate walking, cycling and public transport use. The proposed network of public spaces will maximize permeability for pedestrians and cyclists. The cycle route to be provided by the Pathfinder Glanmire to City Cycle Route (Phase 2) will be retained as a shared active travel facility along the waterfront public realm. The shared active travel facility has been designed in accordance with the Cycle Design Manual (CDM).




PEDESTRIAN PATH ALONG THE RIVER


PEDESTRIAN PATH THROUGH THE PARK


SHARED FACILITIES


SEGREGATED CYCLE LANE

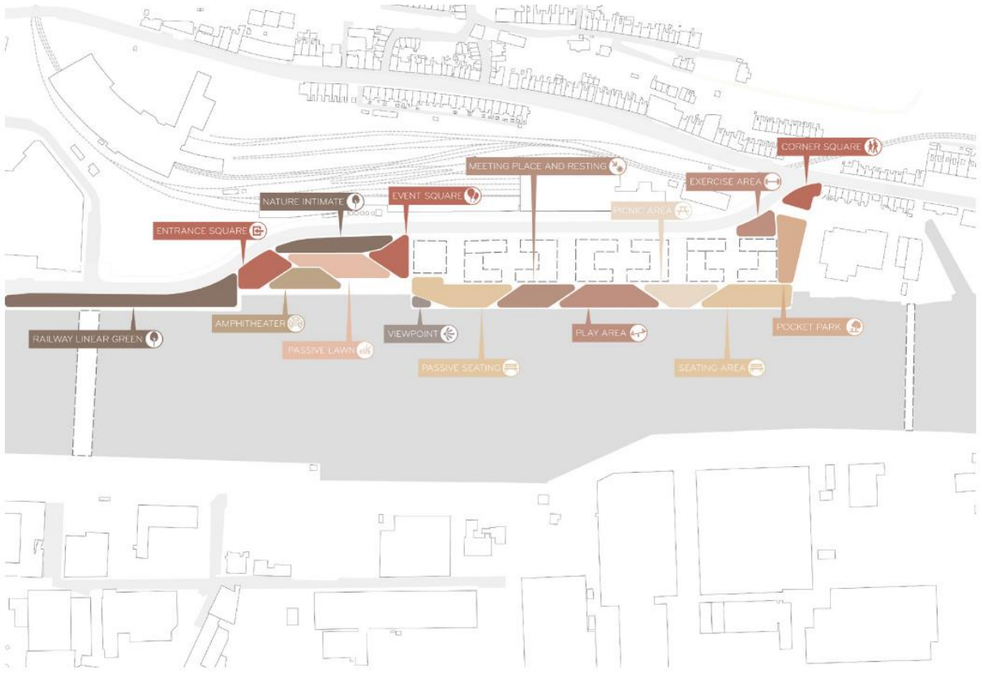
Figure 37: Different experience of movement

6.6. PLAY & STAY

On-ground programs.

The network of public spaces is designed to provide a coherent character across the North Docks as a whole, signified by high quality, multi-functional and contextual spaces that are open and accessible for people from all walks of life and provide a varied and vibrant range of activities.

Diverse range of programs all along the whole project area, creating an inviting environment and a place to stay for residents and daily visitors. Moreover, each area is intentionally oriented toward the River Lee, emphasizing the area's unique character.




OPEN LAWN


SWING


SMALL EVENT SQUARE


OUTDOOR TERRACE

Figure 38: On-ground Programs

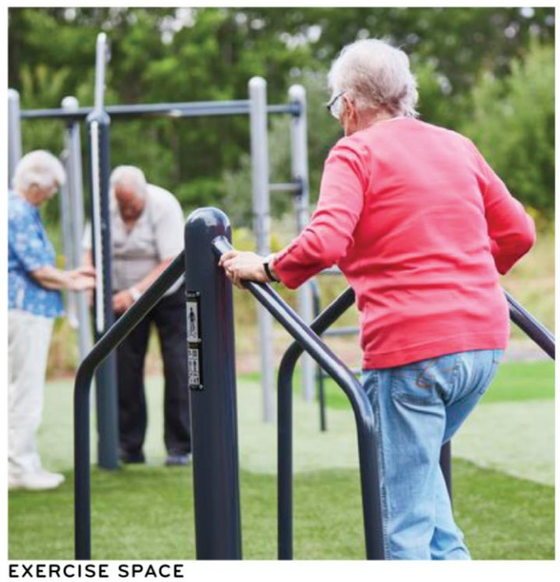

FOREST PLAY


VIEWING SPACE


TEMPORARY DANCE FLOOR


CHESS TABLE & FOOTBALL TABLE


MEETING SPACE


EXERCISE SPACE


AMPHITHEATER

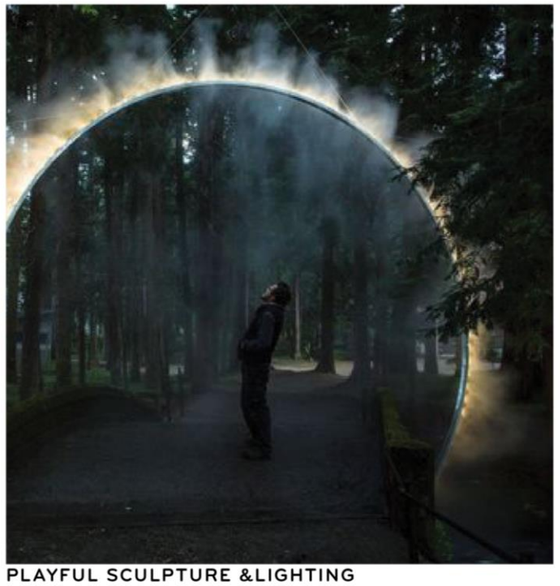
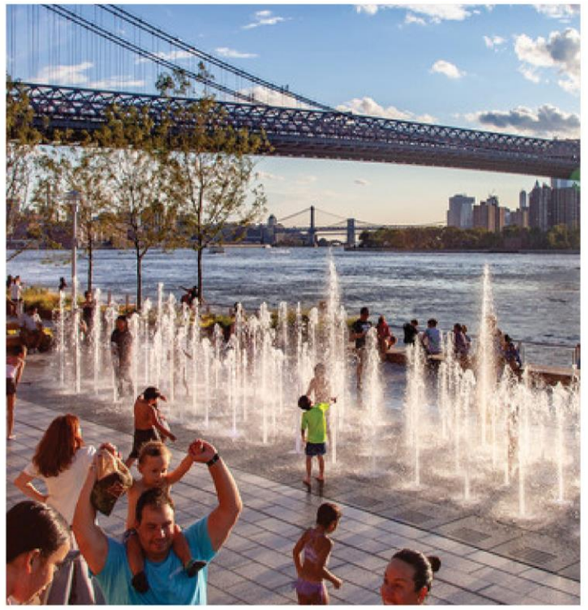

PLAYFUL SCULPTURE &LIGHTING

Figure 39: On-ground programs

Water related activities.

Encouraging engagement with the river through accessible water-based activities is key to reconnecting the public with the Docklands. A focal public amenity integrating water, art, and play will enrich the promenade, strengthening its connection to the river. This will create vibrancy and playfulness by day, and it will transform into a serene retreat at night, ensuring the space remains dynamic and engaging at all hours. Concepts such as fog sculptures, reflecting pools, and fountains are being explored.

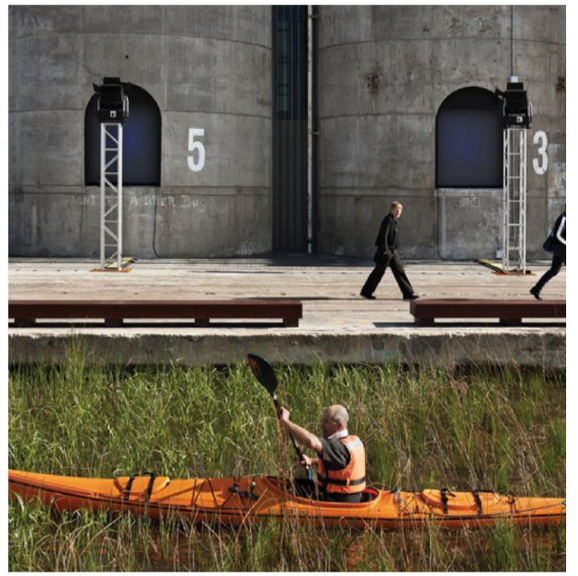
Through upcoming consultations, design development, and stakeholder engagement, the most suitable water feature will be refined and advanced. Additionally, inviting access points and recreational opportunities on the River Lee will deepen appreciation for Cork's maritime heritage while celebrating the waterfront's unique character.



WATER PLAY - FOUNTAIN

REFLECTING POOL / WATER MIRROR

FOG AND WATER ELEMENT



CANOEING IN THE RIVER

Figure 40: Potential Water-Related Activities

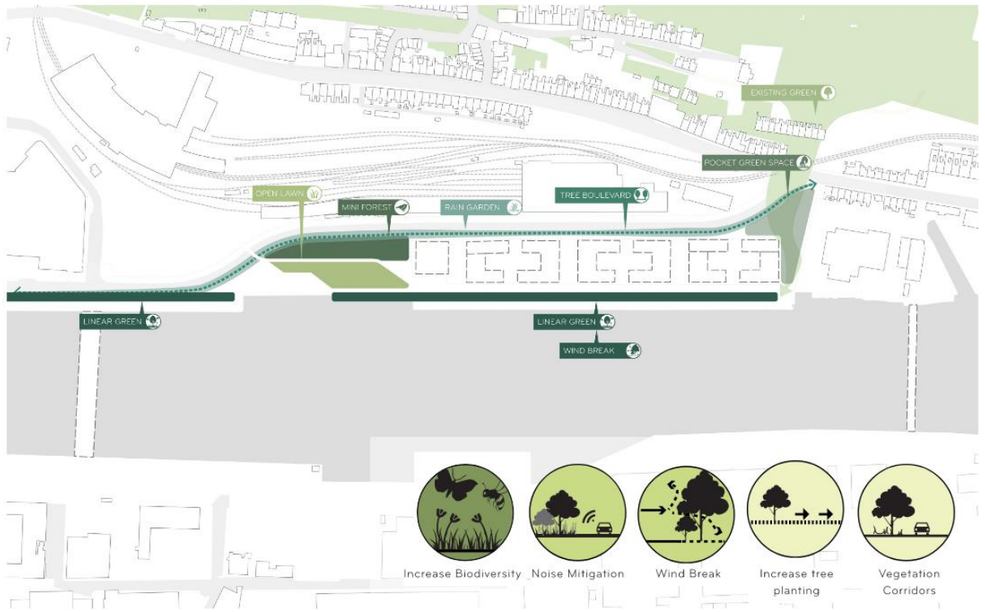
6.7. BIODIVERSITY

Greening the North West links, Water Street, Horgan's Park, N8 and the Water Promenade will set the ground for a new urban biotope, where humans and nature can thrive. Above all, this Green Spine provides space for recreation, connects the south and north side of the masterplan area, and is a base for cultural programming and socialising.

A green framework will form the connection between public realm open spaces, contributing to micro-climate and to carbon reduction it will improve Cork's docks city's climate, and it will be the perquisite of well-being for people of Cork in public realm.

A linear green along the N8 road including layered landscape structure and rain gardens, providing green buffer for the road. Linear green strip along the water promenade providing comfort, places to stay and biodiversity. Horgan's bay park, with open green space and 'Tiny Forest' area to screen the road. Water Street green link and gate way. Integrating green in the building links and roofs and façade.

Opportunity to include nature inclusive element in the project to increase biodiversity for the area.




BIRD/ BAT HOUSE


HABITAT TOWER/ FURNITURE


INSECT HOTEL


INTEGRATING NATURAL PLAY

Figure 41: Green & Biodiversity Elements

Proposed Planting


AMENITY GRASS


UNDERSTORY PLANTING - SHADED AREA


RAIN GARDEN


ORNAMENTAL GRASS & PERENNIAL


LARGE SIZE - FEATURE TREE


LARGE SIZE TREES - ALONG PROMENADE


MULTI-STEM TREES

Figure 42: Proposed Planting

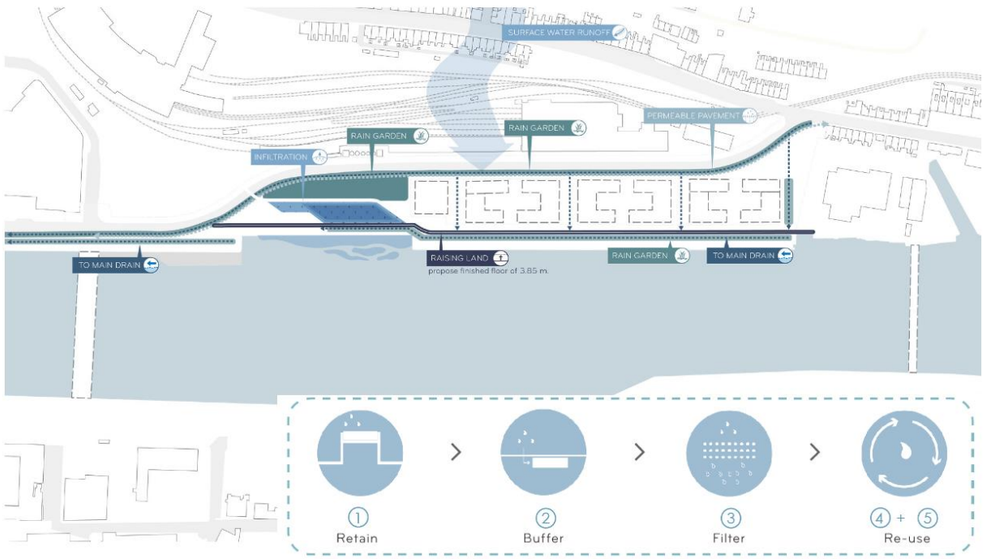
6.8. SUDS AND NATURE BASED SOLUTIONS

For the North Docks, the goal is to design a climate-adaptive public space through water-sensitive design and prevent or reduce water flooding.

Water Sensitive Design.

Implementing the water-sensitive design strategy for the Noth Docks consists of a layered approach with four components. It is a cascade of: Flood prevention, rainwater harvesting and buffering, reuse and delayed discharge and enhancing the water experience.

- Peak water discharge: ensure that in case of excessive rain flooding is prevented. NBS collection measures implemented along the road profile and public realm areas.
- Buffering rainwater in the area: Provide facilities with temporary water collection in the area. Efforts are also being made to reuse water and mitigate drought periods during the summer.
- Ensuring water quality: filtering and cleaning water before discharge.
- Ensure pleasant water: visible create water elements that play a role in urban life, which have visual quality and contribute to climate adaptation.




RAIN GARDEN

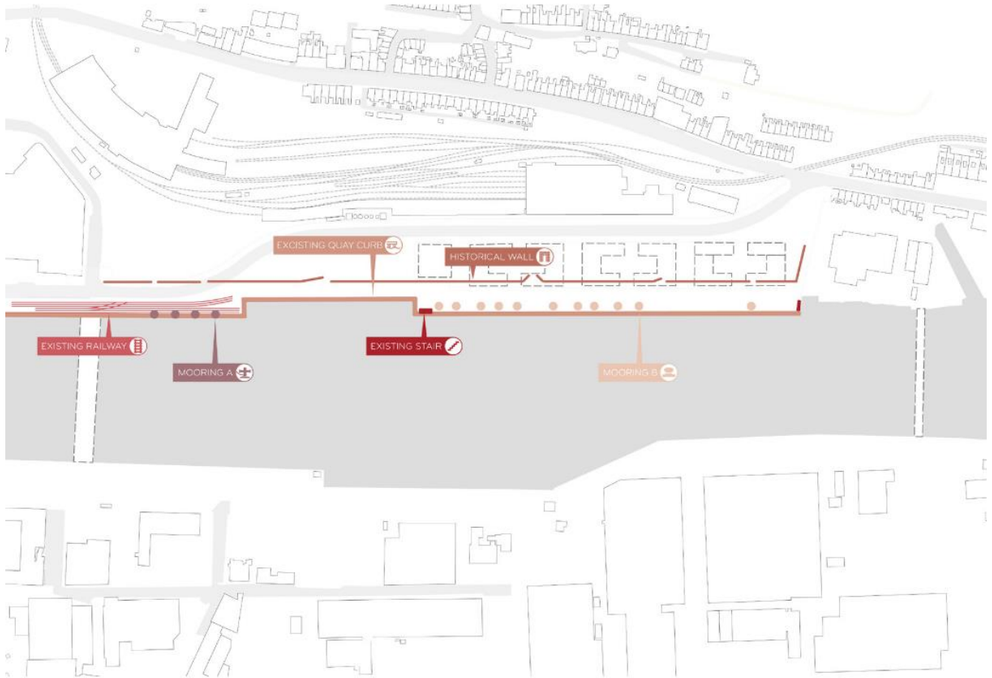

PERMEABLE PAVEMENT


INFILTRATION
through planting area

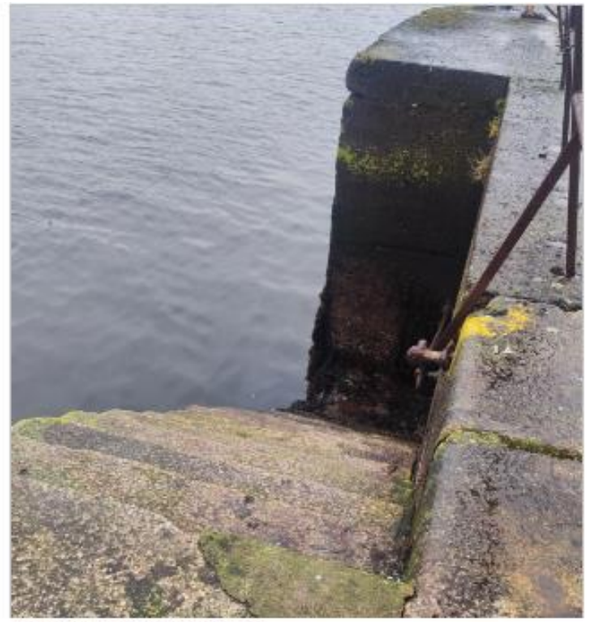
Figure 43: SUDS and Nature Based Solutions

6.9. HERITAGE

The existing maritime and industrial heritage is an important asset and is integrated into the design on different aspects and defining the unique character of the North Docks public realm. Key physical assets – such as historic structures, mooring points, the existing quay walls, railway lines, cobblestone paving – are and lime stone walls retained in situ ore creatively re-used within the public realm. For instance, salvaged wall and gate materials and entrance to the park, providing functional and interpretive elements throughout the site. These embedded heritage features and narratives enrich the overall experience of the public realm, contributing to the distinct identity and memorability of each space.



RAILWAY TRACK
To be relocated and integrated in the design



WATER ACCESS STAIRS
To be kept and integrated in the design

GRANITE STONE AND STEEL KERB
To be kept and integrated in the design

MOORING
To be kept and integrated in the design

Figure 44: Heritage

Integration with proposed structure.

The existing stone wall and gate will be seamlessly integrated into Horgan's Park, becoming distinctive design elements that highlight the character of the North Docks. By repurposing these prominent features, we honor the area's rich history while creating a visually striking and meaningful link to its past.

Additionally, the two structures in Horgan's Park and on the east side draw inspiration from maritime heritage. In the next phase, these elements will be further developed to incorporate play and artistic expression, enhancing the park's identity and reinforcing its role as a community landmark.


EXISTING STONEWALL


EXISTING STONE GATE


DESIGN FEATURE IDEA


PROPOSE INDUSTRIAL STRUCTURE IN THE HORGAN'S PARK


PROPOSE VIEWING STRUCTURE ON THE EASTERN END

Figure 45: Integration with proposed structure

6.10. ART & CULTURE

Art is seamlessly woven into the North Docks public realm through a combination of permanent installations and dynamic, ongoing programming. Fixed artworks – sculptures, steel structures, embedded pavement details, and interpretive pieces – are strategically placed throughout the site, drawing from the area's maritime, industrial, and cultural heritage.

These installations not only serve as visual landmarks but also invite reflection and engagement. Complementing the permanent features is a curated programme of temporary and participatory art events, performances, and community-led initiatives, ensuring the space remains vibrant and responsive over time.

This dual approach aligns with and leverages Cork city's 1% for Art programme, enabling the integration of high-quality, site-specific art that both reflects and amplifies the character of the North Docks. The result is a layered cultural landscape that fosters a sense of place and belonging for residents and visitors alike.

SMALL SCALE EVENT SPACE
Possibility to host a small scale events in the square

SMALL-MEDIUM SCALE EVENT SPACE
Possibility to host a small scale events in the square and Horgan's Park area.

LOCAL ART WORK
Possibility to temporary exhibit local artwork along the promenade

TEMPORARY OUTDOOR THEATRE
Possibility to be located in the Horgan's Park

PLAYFUL SCULPTURE
Possibility to be located along the promenade

Figure 46: Art and Cultural Activity Ideas

6.11. SEATING AND SITE FIXTURES


STEPPED SEATING


MOVABLE BENCH


SUN LOUNGERS


BIKE STAND


TWO SIDED BENCH

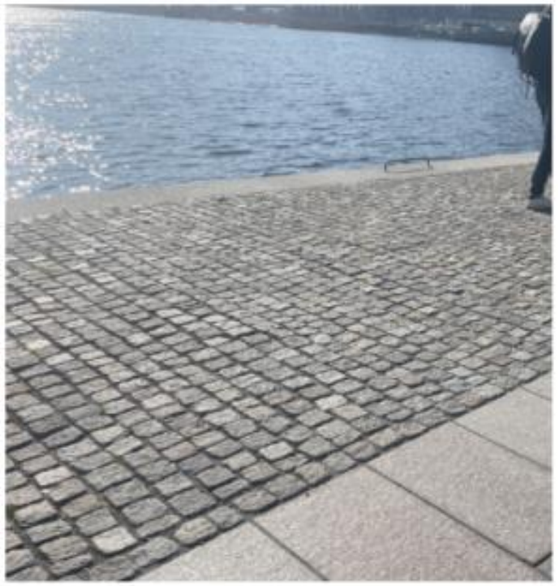

PICNIC TABLE


LONG BENCH


BOLLARD

Figure 47: Seating and Site Fixtures – Precedent Images

6.12. PROPOSED MATERIALITY



COBBLE AND SETT STONES
Paving Type 1: Upper and Lower Promenade

NATURAL STONE FLAGS - TYPE A
Paving Type 2: Footpaths and Shared Facilities

NATURAL STONE FLAGS - TYPE B
Paving Type 3: Pocket Space

CONCRETE PAVERS
Paving Type 4: Sidewalk

SEAMLESS PAVING
Paving Type 5: Activity/Exercise/Play Areas
Permeable Paving - Stabiliser

ASPHALT
Paving Type 6: Carriage way

EXISTING GRANITE EDGE
Paving Type 7: Lower Promenade Edge

COLOURED ASPHALT
Paving Type 8: Bicycle Path

Figure 48: Material Pallete

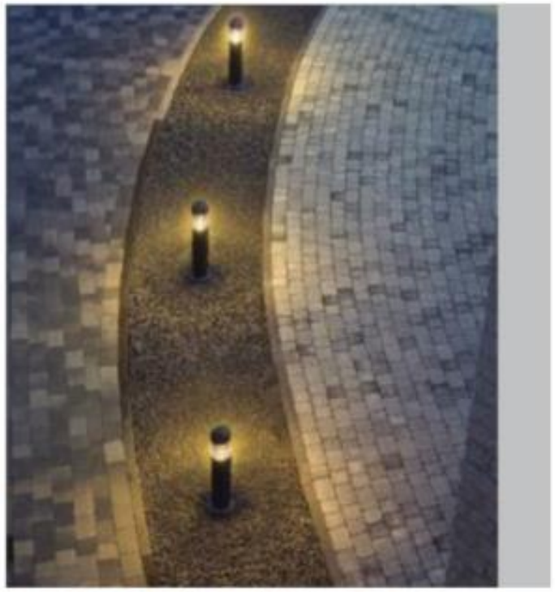
6.13. LIGHTING

The design of public lighting for the scheme will be in accordance with the requirements of BS 5489-1 (2020), Lighting of Roads and Public Amenity Areas – Code of Practice and I.S. EN13201-2 (2015) Road Lighting Part 2, Performance Requirements, and Exterior Lighting Design Requirements, Guidance & Specification Manual for Lighting Equipment Supply, Installation and Maintenance – Public Lighting Office, Cork City Council - Rev. 10. The installation of the lighting network will comply with the requirements of Series 1300 and 1400 of the Specification for Road Works as published by TII, BS5489, BS5649 and the Building Regulations Technical Guidance Document M (2022).

The Public Lighting Strategy will consider the height and position of the height and position of lighting poles, spotlights, flash lights and other public lighting features will be selected to accord with the scale of the built and planned environment and with consideration to the level of lighting required at different areas.

The Public Lighting Strategy will be developed in line with landscaping proposals to ensure tree species and positioning of same are appropriate. The Public Lighting Strategy will also consider colour temperature, dimming profiles and motion sensor lighting to ensure functional and accent lighting are optimised to complement the project.

LIGHTING POLES
functional lighting



BOLLARD
functional lighting

SPOTLIGHT POLE
functional lighting - for event/ special uses

PAVEMENT LIGHTING
functional lighting - guiding direction

WATER FEATURE LIGHTING
special lighting

FURNITURE LIGHTING
special lighting

FLASH LIGHT FOR PLANTING
special lighting

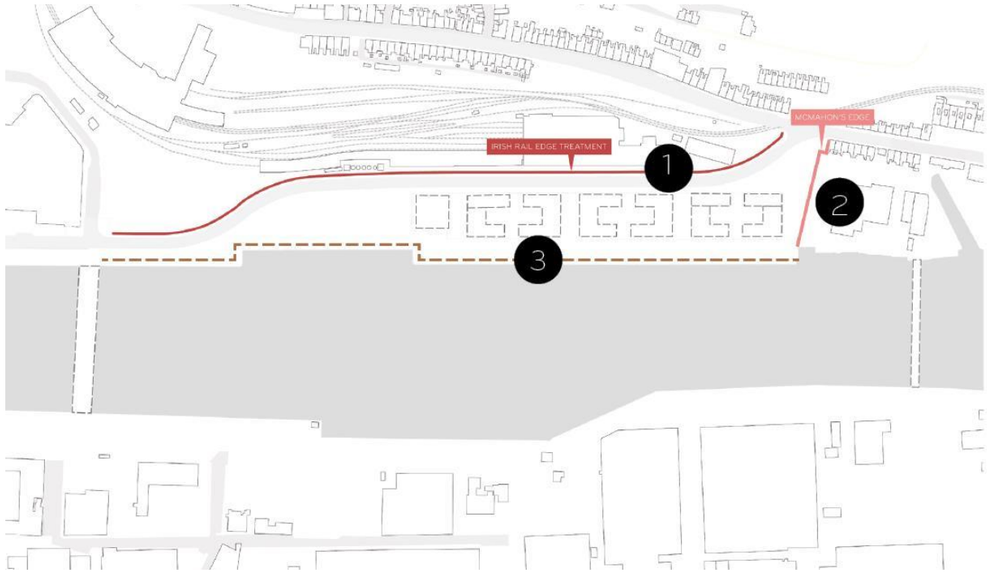
STRUCTURE LIGHTING
special lighting

Figure 49: Lighting – Precedent Images

6.14. BOUNDARY TREATMENT

The site borders the Iarnród Éireann compound to the north and the McMahons site to the east. While these boundaries require security to meet operational and safety requirements, the design ensures that boundary treatments are also visually appealing and contribute positively to the quality of the public realm. Materials, planting, and detailing will be carefully considered to create attractive, context-sensitive edges that screen utilitarian functions while enhancing the overall experience of the space. Edge protection at the quay wall will be developed as the detailed design of the project evolves. The boundary strategy here will cater for specific needs at each public realm area and will also accommodate access to water activities. The edge protection will respect the heritage value of the limestone capping along the quay wall.

1. Northern Boundary Treatment (Between Irish Rail Property and Project boundary line).
2. Eastern Boundary Treatment (Between Project boundary line and McMahons site).
3. Edge Protection at the quay wall (Along the Promenade)



OPTION FOR FENCING
Steel fence with open mesh

OPTION FOR FENCING
Gabion wall

OPTION FOR FENCING
Steel fence integrating with planting

Figure 50: Boundaries Treatment – Precedent Images

6.15. SITE ACCESS

The site is located along the extents of the N8 Road and encroaches on Iarnrod Eireann and Port of Cork lands, between the Lower Glanmire Road and junction with Alfred Street. Access to the project area will be from either end of the scheme, via public roads / streets.

During the construction stage of the project it will be imperative that access is maintained to all properties, businesses and lands within and immediately adjacent to the site boundary.

6.16. CONSTRUCTION METHODOLOGY

All construction activities will be controlled within the construction site. Materials, waste handling and storage will be within confines of the site. Temporary traffic management will be put in place. A construction demolition plan will be submitted prior to any works being undertaken.

All traffic management proposals will be agreed with the local authority in advance of the works being carried out.

Adequate warning signs will be on display to illustrate the required personal protective equipment (PPE) and risks associated with the works.

6.17. ARTIST'S IMPRESSION

Figure 51: Promenade and view towards city centre

Figure 52: Bird eye's view – East

Figure 53: Promenade and view towards Marina Park

Figure 54: Bird eye's view – West

Figure 55: N8 Road Corridor

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7 ECOLOGICAL AND ENVIRONMENTAL

7.1. APPROPRIATE ASSESSMENT SCREENING REPORT

The stage 1 screening for Cork North Docks redevelopment concludes that the works are unlikely to impact the nearest Natura site, Cork Harbour SPA due to the scale, nature, duration of the works. Although there is a hydrological connection between the site and the SPA (2.25km downstream), no in-stream works are required. Therefore, negative impacts to the SPA are unlikely subject to works being carried out under standard construction practice methods.

The AA screening process has considered potential effects which may arise during the construction and operational phases. Through an assessment of the pathways for effects and an evaluation of the project characteristics, taking into account the processes involved and the distance of separation from European sites, it has been evaluated that the works are unlikely to impact these sites in terms of the potential for adverse effects on the qualifying interests, special conservation interests, or the conservation objectives of these sites with an imperceptible effect.

This evaluation is made in view of the conservation objectives of the habitats or species for which these sites have been designated. Consequently, a Stage Two Appropriate Assessment is NOT required for the project.

7.2. ENVIRONMENTAL IMPACT ASSESSMENT SCREENING REPORT

The EIA screening process has considered potential effects which may arise during the construction and operation phases as a result of the implementation of the project. Based on the duration, nature, and scale of the proposed construction of the new road and public amenity space at Cork North Docklands, it is considered that the overall impact on the receiving environment will be unlikely, temporary, and not significant subject to implementation of all mitigation measures detailed in the CEMP. In addition, an AA Screening Report prepared by OCSC concluded that the proposed project is not likely to give rise to adverse effects on any designated European sites, alone or in combination with other plans or projects.

Based on this assessment, the preparation of an EIA is not required for the Proposed Development. However, the final determination with regard to the need for an EIA will be undertaken by the competent authority.

7.3. ECOLOGICAL IMPACT ASSESSMENT

An Ecological Impact Assessment (EcIA) for the Cork North Docks scheme was prepared by OCSC. The overall purpose was to assess the ecological standing of the site in its current condition in advance of the works beginning on Cork North Docks. The proposed works at Cork North Docks will not result in negative effects on the ecology of the area subject to identified mitigation measures being implemented. Overall, the residual effects are anticipated to be slight. Additionally, no mitigation is required for the protected sites.

The EcIA identified the baseline ecological status of the site along with ensuring compliance with relevant national and European statutory requirements to guarantee that works completed by Cork City Council will not negatively impact environmental receptors.

It is anticipated that the proposed road works have the potential to negatively impact on the immediate surrounding environment. Potential concerns arising from the works include:

- Temporary disturbance of species for the duration of the works,
- Habitat loss,
- Displacement of species, and
- Introduction of silt, sediment, and debris into the River Lee.

Although some negative impacts have been outlined above for the works in terms of siltation, species disturbance, etc., the implementation of detailed mitigation strategies will reduce the risk of impact on the ecology of the site with no long-term impact on the ecology of the site. It is recommended that invasive species surveys will be carried out, if more than 12 months has passed since previous surveys. All invasive species should be removed from the site prior to the commencement of construction work.

It is concluded that, subject to implementation of proper mitigation measures, the proposed project is not foreseen to give rise to any significant adverse effects, alone or in combination with other plans or projects.

8 OTHER SURVEYS AND STUDIES

8.1. ARCHITECTURAL HERITAGE

The Architectural Heritage Impact Assessment Report, produced in April 2025, identifies the following features of significance within the project area.

Structures featured on the NIAH included within the subject site include:

- Horgan's Quay (NIAH Reg. No. 20506358)
- Lower Glanmire Road Railway Bridge (NIAH Reg. No. 20507082)

The subject site is directly adjacent to 3 no. structures which are featured on the National Inventory of Architectural Heritage:

- Kent Railway Station (NIAH Reg. No. 20506288)
- Locomotive Shed (NIAH Reg. No. 20507180)
- Kent Railway Station Warehouse (Goods Depot) (NIAH Reg No. 20506289)

Other items of historic significance or features of note within the former train yard include:

- Southern boundary wall of the existing train yard.
- Brick arched wall forming north boundary of subject site adjoining the Locomotive Shed.

The recommended measures and conclusions are as follows:

- Undertake any necessary repair and maintenance works to the historic masonry and concrete of Horgan's Quay to match existing.
- Retention and repair as necessary of the existing wrought iron and cast iron elements of Horgan's Quay to match existing.
- Inspect and repair as necessary the arched brick wall of the Locomotive Shed and adjoining brick boundary wall to match existing.
- Inspect and repair as necessary the historic fabric of the Lower Glanmire Road Railway Bridge.
- Where historic fabric is to be removed, namely the south boundary wall, retain by record to ICOMOS standard prior to any works being undertaken. Serious effort should be given to incorporating any removed historic masonry into the proposed new development as much as possible.
- Efforts should be made to retain the main entrance arch in situ as it is the most significant part of the boundary wall. If removal is completely necessary it should be relocated and rebuilt as part of the new development with the original wooden gates reinstated.

The design team will seek to include recommended measures outlined above in the detailed design of the scheme. In conclusion, the proposal will ensure that the subject site will have a renewed purpose and prolong and improve the use of the area for many years. The proposed mitigation measures will ensure that the impact of the individual and overall impacts are mitigated and any loss of fabric will be retained by record to an internationally accepted standard.

The following mitigation measures are proposed:

- Black and White Archival Photographic Record- to be carried out before, during and after the works.
- High resolution digital photographs are to be taken on a regular and ongoing basis for the duration of the works and a detailed description of the works undertaken be kept and compiled.
- Any protected fabric scheduled for removal shall be 'Retained by Record ' to ICOMOS standard.

8.2. ARCHAEOLOGY

An archaeological impact assessment for the Cork North Docks Public Realm and Transport Infrastructure Project has been conducted in March 2025.

The impact assessment considered that the subject area currently comprises Horgan's Quay and significant parts of the Kent Station compound, outside of the railway red zone. Historical mapping and Aerial photography shows that this location once housed the yard and docks associated with the Kent Train station (1850-1900).

The docks/quays which originally connected Penrose Quay and Water Street now comprises the connecting two-lane, one-way roadway 'Horgan's Quay.' There are no Protected Structures within the subject area, however Horgan's Quay (NIAH Reg 20506358) itself is recorded in the NIAH.

The adjacent Kent Train Station (CO074-117) is located immediately to the north of the subject area. Many of the buildings, sheds and warehouses within Kent Train Station have been designated an RPS and NIAH number.

Finally, three test excavations (18E0431) immediately adjacent to the subject area uncovered further evidence of the 19th Century Railway Station which was infilled at some point post 1900 in this location.

Based on historical mapping and aerial photography it is likely that similar remains of the C19th Train Station will be uncovered in the subject area.

The site visit indicated the subject area has been heavily disturbed in modern times.

It is concluded that the archaeological potential of the site remains low to moderate.

The archaeological impact assessment recommended that Archaeological Test Trenching takes place in areas of proposed groundworks in any available space prior to construction.

8.3. QUALITY AUDIT AND ROAD SAFETY AUDIT

The Quality Audit considered an examination of the drawings supplied by OCSC and a daylight site visit undertaken on 2nd April 2025 between 07:00 – 08:30. The audit has been carried out following the guidance issued in TII documents GE-STY-01024 Road Safety Audit and GE-STY-1027 Road Safety Audit Guidance, DMURS and DMURS Advice Note 4.

The Quality Audit recommended measures to encourage cycling, walking, and to provide for universal access & accessibility at different locations along the scheme. Some of these measures are listed below:

- Pedestrian footpaths should be provided to access Kent Station Car Park entrance and exit.
- Ensure blistered tactile paving is located appropriately to avoid excessively wide crossing points.
- Ensure proposed works have facilities to tie into or are blocked off prior to completion.
- Ensure cycle facilities are clear of obstructions.
- If footpaths are shared, they should be sufficiently wide to accommodate both pedestrians and cyclists.
- Ensure that access is provided to Kent Station Car Park for wheelchair users and mobility impaired users and that the ramped accesses are shallow enough to allow for wheelchair access.
- Ensure that the disabled parking bay removed at Lower Glanmire Road (west of junction) has a suitably located replacement within the scheme.

The Road Safety Audit recommended revising the proposed corner radius at the Alfred Street junction, the repositioning of tactile paving at pedestrian crossings, and raised concerns in relation to visibility splays at entrances and forward visibility of drivers to pedestrian crossings.

The Road Safety Audit outlines recommended measures to improve the safety of the scheme. The design team have reviewed these measures and will look to address during the detailed design stage.

8.4. FLOOD RISK ASSESSMENT

A Stage1 and Stage2 Flood Risk Assessment was carried out in accordance with *The Planning System and Flood Risk Management Guidelines for Planning Authorities* (published by DOEHLG, November 2009). As the N8 National Primary road is considered primary transport infrastructure, the proposed realignment of the road is classed as Highly Vulnerable Development. The Indicative Flood Zone Maps of the Strategic Flood Risk Assessment included in the Cork City Development Plan 2022-2028 show that the site is almost entirely located in Flood Zone C, with only a small area within Flood Zones A and B. As such, a Justification Test has been provided as part of the Flood Risk Assessment.

Fluvial and tidal flood risk was assessed using the details flood data produced by the OPW's Lee Catchment Flood Risk Assessment and Management (CFRAM) Study and the OPW's Irish Coastal Protection Strategy Study (ICPSS).

The proposed scheme has been designed to coordinate with future plans for the area in accordance with the Draft Cork City Docklands Framework Masterplan and the City Development Plan 2022-2028. Significantly, it is expected that the lands between the proposed waterfront promenade and the realigned N8 road will be developed for residential development. The Draft Cork City Docklands Framework Masterplan establishes the Finished Floor Level (FFL) of this residential development to be 3.85mAOD; the public realm promenade adjacent to the waterfront will provide an upper level coordinated with these future floor levels and a lower level to tie in to the existing quay wall.

The Geological Survey of Ireland Groundwater Flooding Probability Maps indicate no potential areas of groundwater flooding in the vicinity of the subject site and there is no record of groundwater flooding for the subject site.

The OPW's Draft Preliminary Flood Risk Assessment (DPFRA), topographical survey and a walkover of the site and surrounding area were used to assess the potential risk to the site from pluvial flooding. Pluvial flood risk was found to be present across the site and adjacent lands. Existing main drainage infrastructure traversing the site will be retained and new drainage will be included to mitigate pluvial flood risk. Any excess surface water will flow overland towards the Lee Estuary adjacent to the site via the Water Street corridor and close to Alfred Street.

9 CONCLUSION

The scheme has progressed through the Options Assessment Stage of the project, completed Environmental and Heritage Assessments, and engaged in liaison with affected parties, along with the completion of preliminary design drawings. The proposed design aligns with the objectives set out in the Cork City Development Plan 2022-2028 and other strategic policy and design documents.

The proposed design aims to transform the North Docks area into a high-quality public space that promotes connectivity and sustainable transport options. By integrating multi-modal transport infrastructure, green spaces, and enhanced urban realm elements, the scheme will not only create a welcoming gateway into the city but also stimulate future development within the area.

The project's alignment with the Cork City Docklands Framework Masterplan, Cork City Development Plan, and the Cork Metropolitan Area Transport Strategy ensures that it meets both local and national planning goals. The next steps, with focus on progressing to the detailed design phase, will incorporate further design refinements as required, addressing additional stakeholder feedback where appropriate.

10 VERIFICATION

This report was compiled and verified by:

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