LIMERICK DOCKLANDS
FRAMEWORK STRATEGY

future proofing the docks

Shannon Foynes
PORT COMPANY

HRA | PLANNING
chartered town planning consultants

Limerick Docklands Framework Strategy Written and Prepared by:
HRA | Planning
Limerick | Dublin
w: www.hraplanning.ie
e: info@hraplanning.ie
t: 061 435000

Illustration and Document Design by HRA | Planning
With Input From:
ILTP Consulting
Enviroscope Environmental Consultancy
Punch Consulting Engineers
Judith Hill Architectural Historian

Shannon Foynes Port Company - Limerick Docklands Framework Strategy - Future Proofing the Docks

Further information can be obtained from the Limerick Docklands Framework Strategy team by contacting us at :

Tel: 069 73102
Email: masterplan@sfpc.ie

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Executive Summary

1.0 Purpose

Ted Russell Dock within Limerick Docklands is part of the network of SFI C's ports in the M id West. It presently operates as a viable core port and continues to be a core contributor to SFPC's profitability. It supports a total of 440 FTE's generating €25.2 million in employment income among companies engaged with SFPC. Whilst the Port Estate at Limerick comprises 45.5 hectares, existing port operations only utilises circa 14.7 hectares (Ted Russell Dock). There remains 30.8 hectares of land, in the ownership of SFI C, which is surplus to current port operation requirements. The objective of the Framework Strategy is to facilitate:

- A viable working port at Ted Russell Dock;
- Better transport and access to the operational port and
- A commercial return on the non-core assets which are surplus to port operational requirements.

The Framework Strategy is intended to guide prospective developers and port users of emerging schemes and proposals, by providing a cohesive strategy which ensures that an operational port and commercial industry can operate in synergy. By its nature the Framework Strategy should be considered as a robust yet flexible tool and will serve as a user manual to improve efficiencies within the operational port and to facilitate future development.

Consideration of environmental issues have influenced and dictated the scope of this Framework Strategy from the outset. Specialist ecological, flooding, transport and built heritage expertise was retained to guide the process, overcome the challenges and ensure the protection and enhancement of important environmental considerations on the site.

2.0 Vision

Limerick Docklands represents a key expansion area for Limerick City. The port lands stretches for 2.15 kilometres along the waterfront, river Shannon to the north and is bounded by the Dock Road (N69) to the south. Whilst the future development potential of Limerick Docklands is obvious with 30.8 hectares of land to be developed and a number of established historic buildings surplus to port operation requirements, this potential and vision must be balanced with the operation of Ted Russell Dock as a viable working port in a city under transformation.

The vision underpinning the Framework Strategy seeks to, "Use a focused approach, to reconnect Limerick Docklands with the city and the motorway, to maintain the working docks and to effectively redevelop lands and buildings which are no longer central to the core operations of Ted Russell Dock, with a focus on the development of a Limerick Docklands Economic Park".

The Framework Strategy identifies 10 no. development objectives and these will be delivered through a number of key interventions.

'...The Framework Strategy is intended to guide prospective developers and port users of emerging schemes and proposals...'

3.0 Development Objectives

i. To define the operational port and facilitate greater efficiencies in terms of internal reorganisation of opera tional activities;

ii. To acknowledge the three different character areas in the advancement of development proposals and use natural features in defining and facilitating development proposals.

iii. To identify uses for a number of protected struc tures throughout Ted Russell Dock and visually enhance their setting through demolition of insignificant buildings and landscape treatment.

iv. To facilitate use of Bannatyne Mills and ensure that the building and the identified ground around it can adapt to different needs and demands overtime.

v. To enhance public & transport linkages to Ted Rus sell Dock by supporting the R510 Dock Road Improvement Scheme and encouraging provision of a new access to Ted Russell Dock from Atlas Avenue.

vi. To facilitate the OPW in developing future defence proposals along the banks of the River Shannon and Limerick Docklands and which seeks to protect the Docklands and Limerick City from potential future flood ing

vii. To maintain the wet ditch habitat at the western end of the site at Corcanree and protect it in any future de velopment proposal going forward but to facilitate ap propriate development within the green buffer area due to its insignificant ecological value, but with adequate protection afforded to the river and the Natura 2000 designated sites.

viii. To explore controlled public access to restricted areas within Ted Russell Dock and to promote SFPC's archival material and historic records as part of the tourism offer of Limerick city

ix. To promote the use of greenfield land within Corcanree Business Park for industrial / maritime related use

x. To market Limerick Docklands as a 'Limerick Docklands Economic Park' and secure appropriate funding.

4.0 Interventions

Six interventions and deliverable projects have been identified for the Docklands. Whilst the delivery of many of these interventions will firmly rest with SFPC and others will require a partnership approach, delivery of the transport and access intervention firmly lies in the hands of Limerick City & County Council. Realisation and implementation of an alternative access route into Ted Russell Dock is critical in underpinning the successful delivery of a number of interventions set out in this strategy.

Intervention 1 Transport & Access

The Framework Strategy explores an Access Strategy to facilitate the optimisation of Ted Russell Dock and the use of non-core assets within the wider Docklands. An alternative port access must be explored if the primary port access is to be removed from the congested Dock Road. The existing secondary port access from Atlas Avenue should be explored as a viable alternative to the primary port access on Dock Road. However the existing configuration of Atlas Avenue and the proximity of the current port access to the junction with Dock Road, means that the existing Atlas Avenue/Dock Road junction is inadequate to accommodate current port related traffic, or any future traffic arising from development of third party lands.

The existing alignment of Atlas Avenue and it's junction with Dock Road would require upgrading in order to facilitate two-way HGV turning movements. Delivery of this intervention is beyond the reach of SFPC and firmly lies in the hands of Limerick City & County Council. Its provision will need to be identified in the R510 Dock Road Improvement Scheme and will require action by Limerick City & County Council and most likely funding by Transport infrastructure Ireland.

Intervention 2 Operational Port

Relocating the primary vehicular access to Ted Russell Dock, away from Dock Road and onto Atlas Avenue, will necessitate the relocation of internal operating facilities from the eastern end of the Docks to the western end adjoining Atlas Avenue. The weighbridge currently located at the eastern extremity of the Docks in proximity to the main entrance gates off James Casey Walk will be relocat-ed to the proposed new entrance off Atlas Avenue, along with a new support administrative building.

Remediated lands will increase and enhance the functional area of Ted Russell Dock. However, there is also a need to reorganise the internal operational port area to provide Bannatyne Mills and Ranks Silo with adequate curtilage and service space to function as independent units. In overall terms, land reorganisation within the operational port, will result in an overall net gain (0.38 hectares) of function-al port area.

Intervention 3 Bannatyne Mills & Ranks Silo

The focus of 'intervention 3' within Ted Russell Dock is to ensure that Bannatyne Mill can function as an independent, commercial unit, in harmony with but separate to port activities. The adaptation of Ranks Silo into a future use will need to be carefully examined and explored and assessment of its feasibility and viability undertaken having regard to its internal construction arrangements. Identifying future potential uses for this building are particularly challenging but are most likely to be of public, cultural or recreational use.

To facilitate the use of Bannatyne Mill, either separate to or in conjunction with port activities, the operational port area of Ted Russell Dock has been modified and set back from the edge of the Dock Road, thereby affording dedicated and independent, operational space to Bannatyne Mill and Ranks Silo.

The area of land between Bannatyne Mill and Ranks Silo has been identified for car parking in the short to medium term, the long term use of this land should be re-evaluated having regard to its proximity to the city centre and its location within an identified strategic employment hub proximate to existing multi storey car parking. It is proposed to redesign the boundary wall between Bannatyne Mill and Ranks Silo thereby opening up the view and enhancing the vista of both buildings and the port.

These works, along with improvements proposed to the Dock Road streetscape, which shall be outlined in the forthcoming R510 Dock Road Improvement Study prepared by Limerick City & County Council will significantly enhance the visual appearance of Dock Road and seek to reconnect the ar-ea with the city centre.

Intervention 4 Heritage Cluster

The eastern end of the port adjoining James Casey Walk has suffered from a number of inappropriate interventions over the years and following a detailed conservation assessment of the buildings, features and area, it is proposed to visually enhance the setting of the cluster of heritage buildings through the demolition and removal of insignifiicant buildings and features. SFPC also commits to making Ted Russell Dock more aesthetic and socially integrated by building on its existing public access strategy which facilitates organised tours including school tours.

Intervention 5 Corcanree Business Park

Comprising a greenfield (12.9 hectares) and brownfield site (1.9 hectares), these lands are suitable for immediate development / occupation with appropriate industry / maritime related uses.

Perhaps of most significance to these landbanks is the potential to provide for a direct, internal connection to the operational port, without reliance on the Dock Road. Extending from the greenfield site to Atlas Avenue along the northern boundary of the Docklands and adjoining the embankment of the River Shannon, the land has the potential to accommodate an access road, or alternatively a walkway / cycle path.

Such provision could be accommodated in association with Limerick City & County Council should the need arise in the future and has the potential to provide for excellent connectivity within and throughout the Docklands and Corcanree Business Park..

Intervention 6 Limerick Docklands Economic Park

Whilst each piece of land and each structure within the Docklands can operate in isolation a platform has been proposed as part of this Framework Plan to promote the Docklands as a Limerick Docklands Economic Park with a focus on business, technology and marine energy uses and testing. Limerick Docklands Economic Park will support the development of high technology businesses as set out in the Limerick City Development Plan and will capitalise on its unique marine setting adjoining a working port and Limerick city centre.

The Limerick Docklands Economic Park offers a multi-user facility;

- As a working and operational port;
- To accommodate high technology business use; and
- For the testing, research, manufacture, storage, assembly and deployment of renewable energy devices.

Promoting a Limerick Docklands as an Economic Park at this location is a platform from which to promote Limerick Docklands, the city and the region. It has the potential to secure significant economic benefit.

5.0 Implementation

The Limerick Docklands Framework Strategy will be implemented through collaboration and engagement with all relevant stakeholders, proactive project management and ongoing monitoring of progress, together with consultation and feedback from key stakeholders. The Strategy recommends a number of objectives, the delivery of which are dependent on other third parties and public bodies. Innovative ways of delivering infrastructure and facilities by levering implementation through imaginative strategic partnerships such as joint ventures with the private sector will be pursued.

'....A Limerick Docklands Economic Park at this location is a platform from which to promote Limerick Docklands, the city and the region.....'

1.0 Introduction

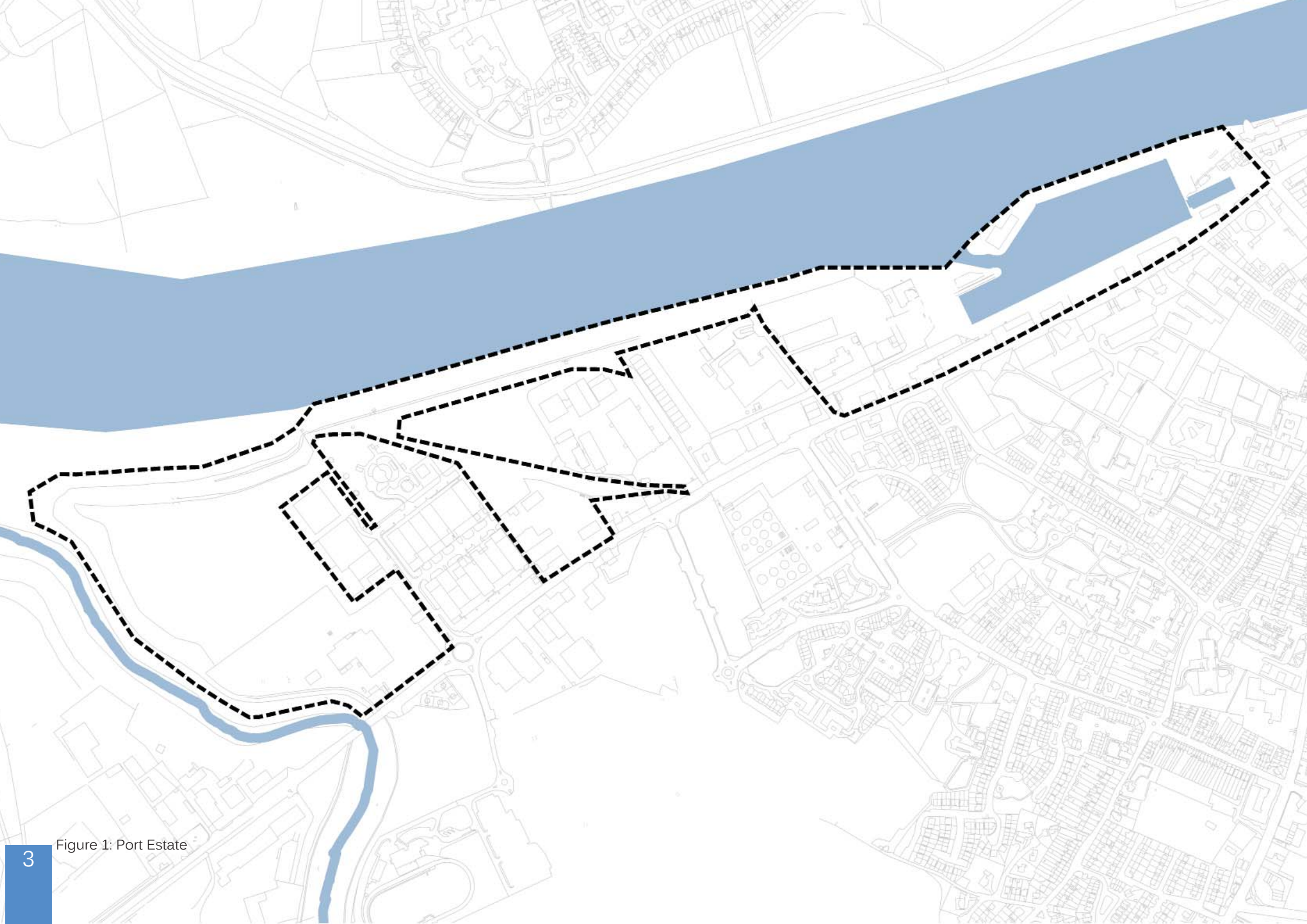


Figure 1: Port Estate

Introduction

1.1 Overview

This document is a Framework Strategy for Limerick Docks and adjoining land in the ownership and control of Shannon Foynes Port Company (SFPC). This strategy has been prepared to underpin Shannon Foynes Port Company Vision 2041 a thirty year strategic framework setting out the ports' future aspirations for the medium and long term.

The objective of the Framework Strategy is to facilitate:

- A viable working port at Ted Russell Dock;
- Better transport and access to the operational port; and
- A commercial return on the non-core assets which are surplus to port operational requirements.

SFPC is Ireland's second largest port operation currently handling in excess of 11.3 million tonnes per annum with the value of trade handled at €7.6 billion. The port is designated as a Core Network Port (TEN-T) by the European Union and a Tier 1 Port in the National Ports Policy. SFPC port activities are significant in the context of the local economy and the region with the economic impact of all SFPC port related activity on the local economy estimated to be €1.9 billion in 2014, supporting 3,372 FTE's[1]. The regional economic impact of SFPC and associated service providers is also significant and was estimated to be €95.8 million per annum[1]. This reinforces the economic benefit associated with main-taining and expanding port operations in the Mid West region.

Limerick Docks is part of the network of SFPC's ports in the Mid West. It presently operates as a viable core port and continues to be a core contributor to SFPC's profitability. As clearly stated in Vision 2041 it is anticipated that Limerick Docks will continue to maintain its existing cargo through-put with potential for significant projected new business.

With a quay length of almost 1km Ted Russell Dock can continue to successfully operate with no significant land expansion required into the future.

Whilst the Port Estate at Limerick comprises 45.5 hectares, existing port operations only utilises circa 14.7 hectares (Ted Russell Dock). There remains 30.8 hectares of land, in the ownership of SFPC, as surplus to current port operation requirements. As these lands are surplus to requirements and SFPC is very much focused on its commercial mandate as a port operator, the effective use of these lands will only be realised through either their disposal or through some form of a partnership approach with other bodies and companies, or as a joint venture.

This document, together with Vision 2041, will guide future investment and development at Limerick Docklands. The purpose of this Framework Strategy is to:

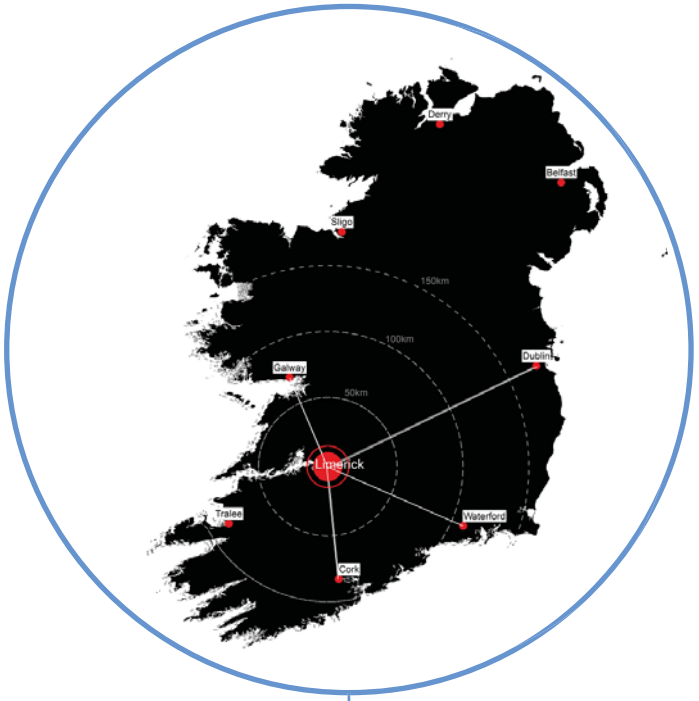
- Facilitate continued port operations at Ted Russell Dock
- Define the working port area and future land uses
- Facilitate better road transport access to Ted Russell Dock
- Manage and facilitate change
- Highlight key interventions and priority projects with a focus on a detailed response to the redevelopment of Bannatyne Mill
- Provide design guidance and identify parameters to ensure that development is of the highest quality
- Better integrate the Docklands area into the urban fabric of Limerick City Centre
- Encourage investment and developer interest in the Docklands
- Advance and promote the Docklands as a viable Marine Economic Park

The Framework Strategy is founded on a desire to develop a viable and deliverable spatial plan that responds to the marine character of the area, that promotes high quality innovative design alongside high levels of sustainability and with careful consideration of environmental and heritage issues and infrastructure implications.

Limerick Docklands plays a key role in realising the wider vision of Limerick 2030: An Economic & Spatial Plan for Limerick. As well as maintaining Ted Russell Dock as a viable working port, the Framework Strategy promotes the regeneration and reuse of existing vacant buildings and land on the periphery of the Port, providing a range of commercial opportunities to strengthen the overall offer of Limerick city.

'...SFPC is Ireland's second largest port operation currently handling in excess of 11 million tonnes per annum with the value of trade handled at €7.6 billion...'

1 Economic Impact Assessment – Shannon Foynes Port Company, W2 Consulting, August 2015



A National Port

A Metropolitan Port

A Regional Port

1.2 Status of the Framework Strategy

Without an overarching plan or framework for the future, it is difficult to plan and prioritise works with-in the Docklands. A Framework Strategy is necessary to ensure that works are delivered in an effective and timely manner consistent with the overarching aim which is to maintain Ted Russell Dock as a viable working and operational port. Additionally, there is a need to ensure that separate investments within the Docklands are consistent and compatible with an over-riding strategy to make the working port more efficient and to realise non-core assets into profitable uses.

The Framework Strategy is intended to guide prospective developers and port users of emerging schemes and proposals, by providing a cohesive strategy which ensures that an operational port and commercial business can operate in synergy. By its nature the Framework Strategy should be considered as a robust yet flexible tool and will serve as a user manual to improve efficiencies within the operational port and to facilitate future development.

The Framework Strategy has been framed within the context of regional and local spatial and development policies and strategies and therefore is in full compliance with relevant statutory policy.

It has been informed by a large body of technical background work, engagement with key stakeholders and consultation with Limerick City and County Council. The study area and the key interventions proposed have been subject to a detailed Sustainability Appraisal with ecological, cultural heritage, and natural environmental factors influencing and guiding development on the site. As such it will be regarded as a significant material consideration in the preparation and determination of development proposals on the site.

1.3 Limerick on the Map

Limerick is the main cultural and economic centre of the Mid West Region and is Ireland's third largest city, with a population of 100,000 people, rising to 450,927 within a 60 minute radius of the city. The Mid-West region is home to over 115 IDA clients employing over 14,000 people across a range of sectors principally ICT, Life Sciences and Financial Services. The city benefits from world class education facilities such as the University of Limerick, Limerick Institute of Technology and Mary Immaculate College.

Strategically positioned in the centre of the country, Limerick city benefits from good national transport connections with motorway access to Dublin and Galway. Shannon Airport, within 25km of the city centre, offers great connectivity with daily flights to the United States, United Kingdom and mainland Europe. Commute times to work are much lower than in the rest of the country with two-thirds of the population in work in less than thirty minutes.

Limerick offers value for money. The city has the second highest level of disposable income in the country and is 6.3% above the National Average. Limerick also has a high quality stock of housing which is much more affordable than other parts of the country. The National Competitiveness Council/ ForFas 'Cost of Doing Business in Ireland 2007' report benchmarked Limerick as the most cost competitive location in the Republic of Ireland – it is 13 per cent cheaper than Dublin. It is the Regional Cities in Ireland who continu e to demonstrate an overall cost advantage against most EU-15/ US locations.

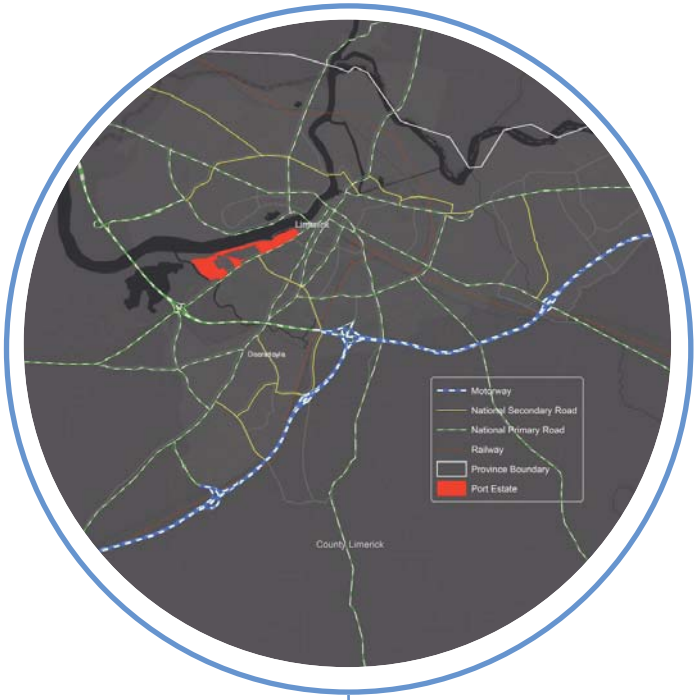
1.4 Study Area

Limerick Docklands represents a key expansion area for Limerick City. The study area comprises three definable sub-areas, each with its own unique character. From the robust urban environment of Ted Russell Dock, which gives way to the more open landscape, dotted with object buildings, along the confluence of the Ballynaclogh and Shannon Rivers, to the low-lying land of Corcanree Industrial Park. The area is, for the most part, bounded by strong natural and /or manmade features. The Shannon and the Ballynaclogh rivers form physical boundaries that are bridged whilst the Dock Road is the dominant traffic artery into the city from the west and south.

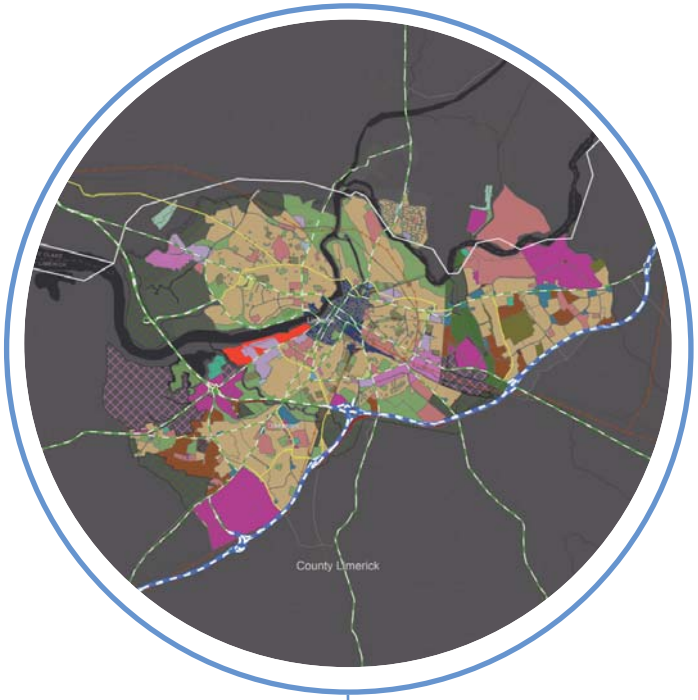
The visual character of the area is dominated by Ted Russell Dock, with its stone boundary walls and the bulky presence of Bannatyne Mills, Ranks Silo and the Neo-Classical stone wall to the old Gas-works. The Graving Dock, although largely invisible to passing traffic, is a spectacular enclosed body of water with immense potential for new uses complimentary to existing water based and port activities.

Moving southwards the more calm edge of the South Circular Road, on the eastern side of the Dock Road, is dominated by well established, good quality housing and education institutions such as Mary Immaculate College.

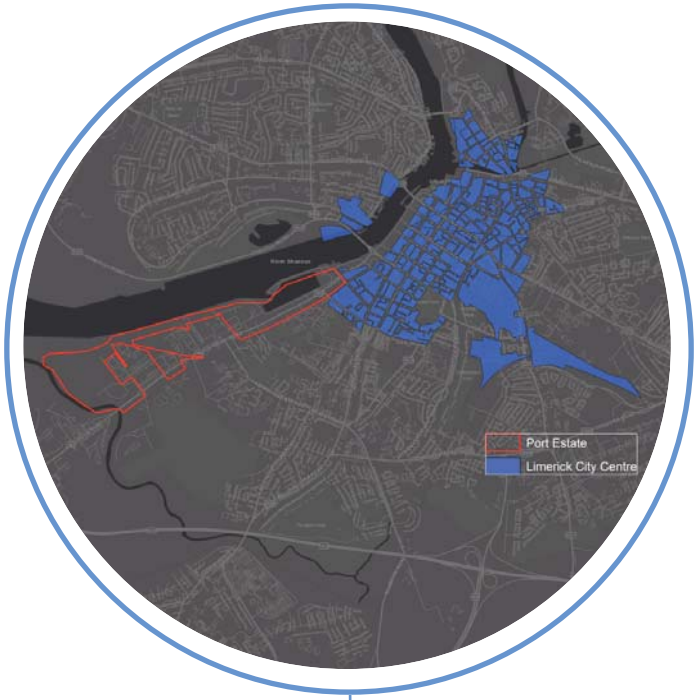
In contrast the western side is dominated by low rise industrial and commercial buildings positioned in an ad hoc manner.



A Connected Port



A City Port



An Established Port

1.5 Environmental Considerations

Consideration of environmental issues have influenced and dictated the scope of this Framework Strategy from the outset. Specialist ecological, flooding, transport and built heritage expertise was retained to guide the process, overcome the challenges and ensure the protection and enhancement of important environmental considerations on the site. A Sustainability Statement summarising how sustainability considerations have been integrated into the Framework Strategy, and the proposed measures for monitoring the impacts of the Strategy are provided for in Chapter Seven

'....The Graving Dock, is a spectacular enclosed body of water with immense potential for new uses complimentary to existing water based and port activities....'

1.6 Structure of the Framework Strategy

The structure of the Framework Strategy is as follows:

Chapter 1: Introduction	Defines the purpose and rationale for the Framework Strategy and introduces the study area.
Chapter 2: Limerick Docklands: Today and the Future	Provides the existing socio-economic and policy context and outlines the range of issues and challenges to be met in building an effective delivery model that can implement the objectives and vision for Limerick Docklands.
Chapter 3: The Framework	Provides a clear and defined roadmap for Limerick Docklands into the future. It outlines the strategic principles for the future operation of Ted Russell Dock and the use of non-core assets.
Chapter 4: Achieving the Framework and Development Principles	Undertakes an assessment of the relationship of Limerick Docklands to its strategic context, together with an appreciation of the individual characteristics of form and the way a place is used. This analysis is then applied to the proposed framework.
Chapter 5: Delivering the Framework	Details deliverable projects and key interventions within the Docklands with the express purpose of enhancing port operations within Ted Russell Dock and realising commercial return from non-core assets.
Chapter 6: Implementing the Framework	Outlines how the identified interventions will be delivered through collaboration and engagement with all relevant stakeholders, proactive project management and ongoing monitoring of progress.
Chapter 7: Environmental Considerations	Signposts key and relevant environmental considerations and the outcomes from a strategic level of environmental and ecological assessment undertaken to support the preparation of the Framework Strategy.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2.0 Limerick Docks

Today and the Future

Figure 2: City Context

2.0 Limerick Docklands Today and the Future

Limerick Docklands is an extremely attractive strategic location adjoining Limerick city centre, benefitting from a waterfront environment. The port lands stretches for 2.15 kilometres along the water-front bounded by the Dock Road (N69) to the south.

The Docklands boasts a wealth of maritime history dating back to the 13th century. It has a rich and diverse landscape including the River Shannon; the historic character of many of its landmark buildings including Bannatyne Mills and the Ranks Silo; a number of established commercial operators; and Ted Russell Dock a vibrant working port which handled 769,000 tonnes of throughput in 2017.

Whilst the future development potential of Limerick Docklands is obvious with 30.8 hectares of land to be developed and a number of established historic buildings surplus to port operation requirements, this potential and vision must be balanced with the operation of Ted Russel Dock as a viable working port in a city under transformation. An understanding of the socio-economic characteristics of Limerick city, the economic contribution of the Docks to the region and the policy framework within which we operate is important as it informs the approach and strategy for the overall development framework.

2.1 Socio Economic Factors

The socio-economic characteristics of a city will generally influence the pattern of development and movement within that city and accordingly an understanding of the key trends is important in the consideration of any framework strategy moving forward.

With a population of 104.952 in the Limerick Mertopolitan Area, Limerick City dominates the urban srtucture within the Mid West region. The city centre, including areas around the city environs and the rural settlements within commuting distance of the city, have all experienced population increase. Whilst the outer suburban areas are by far the most populated communities, it is the city centre that has seen the biggest rise in population in the last intercensus period.

Limerick city functions as an important employment hub for its hinterland and the region with over 18 per cent of the working population commuting to the city from counties Tipperary and Clare. The percentage of the hinterland population working in Limerick city and its suburbs is high providing employment to the 7,001 businesses currently functioning in the city and suburbs[1] .

The city, in contrast to the region, has an employment structure that is more similar to the State, with a higher proportion of employment in professional services and the private sector,

Limerick city has a favourable age structure with a high proportion (16%) of the population aged between 15 and 24 years well above the national average of 12 per cent. This fact associated with a high educational attainment, on par with the national average, points to a growing workforce over the next ten years. A future workforce could also be harnessed from the student population in the city, with third level institutions recording full-time student enrolment figures of 20,889[2] in 2015/2016. The city also has a low age dependency ratio, well below the national average of 35per cent. This is a positive indicator of strong economic performance, assisted by the presence of large employers and strong industries.

The socio-economic analysis would indicate that Limerick City needs to look beyond its immediate surroundings to its role in the region and wider hinterland. Whilst the population of the city centre may be shrinking its suburbs and rural settlements within commuting distance are growing. It confirms Limerick as a city of significant economic standing with the ability to attract a workforce from the wider region. These facts have influenced the direction of this Framework Strategy and in particular the nature and scale of potential employment generating opportunities that may be attracted to the Docklands.

1 GeoDirectory Information

2 Higher Education Authority (HEA) Website

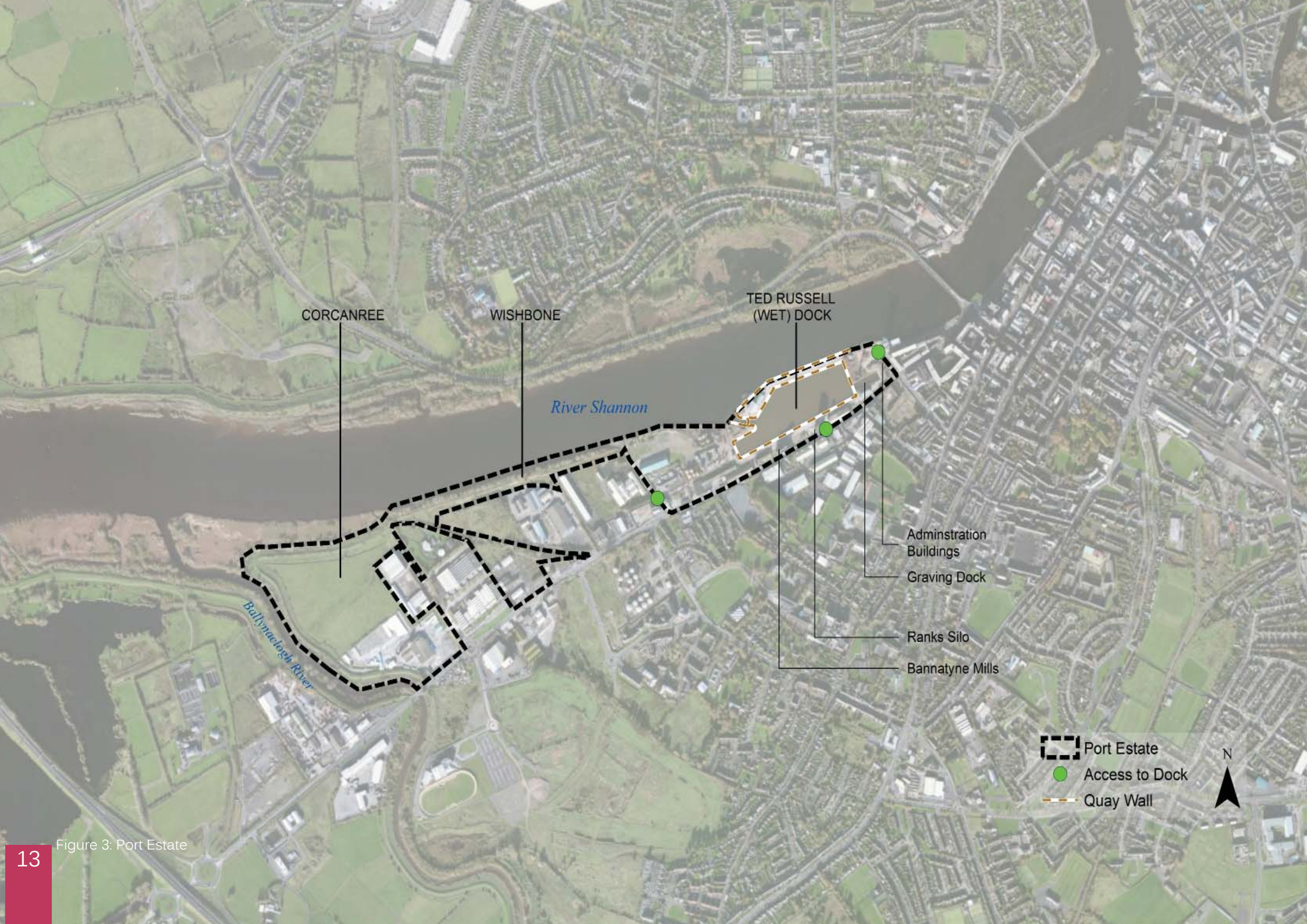


Figure 3: Port Estate

2.2 Policy Considerations

Existing policy documents and guidance at national, regional and local level is a critical consideration in the formulation of a new direction for Limerick Docklands. Such support is necessary to advance development proposals and enhancement strategies. On the one hand existing policy, particularly at national and regional level, recognises the important contribution of the physical infrastructure that comprises Limerick Port. On the other hand, local policy, whilst recognising the importance of port facilities in the city also identifies Limerick Docklands as an under-utilised asset for the future economic development of the city.

The European Commission is seeking to develop a Trans-European Transport Network (TEN-T) by integrating land, sea and air transport infrastructure components. The ultimate policy objective of the TEN-T is the establishment of a single, multimodal network covering both traditional ground based structures and equipment (including intelligent transport systems) to enable safe and efficient traffic Some €31.7 billion will be invested between 2014-2020 in TEN-T and seaports feature prominently in the framework. Only a total of eighty three ports and port clusters across Europe were selected as part of the core network and SFPC is one of the three identified core ports in Ireland along with Dublin and Cork.

The T-ENT designation of SFPC as a core port in Ireland is further reinforced in the National Ports Policy 2013 which establishes a set of overarching principles to underpin a policy framework that will allow the commercial ports sector to develop in a sustainable manner. Commercial shipping in Ireland is centered on the five Ports of National Significance and SFPC, including Limerick Docks, is desig-nated a Tier 1 Port of National Significance.

The significance of the Shannon Estuary and its ports in Limerick and Foynes, are recognised as important elements of physical infrastructure in the National Planning Framework (NPF). The NPF recognises Limerick City as an important driver of national growth and a key regional centre. The NPF strategy seeks to accelerate the development of and strengthen Limerick City with the population anticipated to grow by an additional 50% up to 2040. The NPF supports Implementation of the Limerick 2030 economic strategy to create a modern city and seeks "to extend the ambition of the Limerick 2030 Plan to include extension of the city centre towards Limerick Docks". This recognition provides significant sup-port in the strategy set out in this framework plan.

The significance of ports in Ireland and the significance of SFPC as an economic driver is recognised at a regional level. The Mid West Regional Planning Guidelines (RPG's) and the Mid West Area Strategic Plan (MWASP) recognises the significance of the Shannon Estuary and its ports as providing a major goods transport link for the region. The regional guidelines and strategy seek to protect the capacity of the ports and also seeks to improve access to them as a regional priority.

Perhaps the single most important regional document to be prepared in terms of the Shannon Estuary is the inter-jurisdictional Strategic Integrated Framework Plan (SIFP). It seeks to safeguard the role and function of Limerick Docks as a key strategic driver of economic growth within the Estuary and wider region. It also seeks "to facilitate and support sustainable development of Limerick Docks and lands adjacent and support the diversification and re-use of lands not considered core Port assets for complementary, compatible and sustainable uses".

The Docklands area is identified in the Limerick City Development Plan 2010 – 2016 as an underutilised asset for the future economic development of the City and the City Region. The Limerick City Plan fully supports the retention of the Port and development of the surrounding lands as a strategic employment location within the City (Policy EDS.3) and has zoned the lands for marine related industry use.

The Limerick 2030 – An Economic and Spatial Plan for Limerick, which has been adopted into the City Development Plan, sets out a number of objectives to change the infrastructure of the city centre and deliver a new vision for Limerick as a leading centre for commercial investment in the Mid-West region. The Plan has three main elements; an Economic Strategy; a Spatial Strategy; and a Marketing Plan. The objectives of the Plan is to create conditions for long-term growth and maximising the local employment impact from the development and regeneration of the city. It sets out a major regeneration initiative for Limerick City and provides a vision of its future growth and investment

The strategic spatial and land use policy context is supportive of the retention of port activities at Limerick Docklands and the expansion and diversification of activities on land that is surplus to port requirements. The existing policy context provides a solid platform on which to move forward and develop a new and innovative strategy for the Docklands.

'...Existing policy documents and guidance at national, regional and local level is a critical consideration in the formulation of a new direction for Limerick Docklands...'

2.3 Economic Influences

The economic value and potential of Limerick Docklands as an operational port and its additional land bank in proximity to Limerick city centre has informed the overall strategy and vision for the study area.

Shannon Foynes Ports handled over 11.3 million tonnes of goods in 2017. It remains the largest dry bulk port in Ireland. Primary research has indicated that the estimated value of trade handled through SFPC in 2014 was €7.6 billion[3].

The delivery of maritime and port services is effectively a conglomerate of service providers delivering an integrated approach to shipping in the Docks and on the estuary. The assessment of the economic impact of direct service providers highlights the wider value generated for the area as a result of the variety of local services required to support port activity. The economic importance of SFPC and its role in stimulating economic activity is reflected in the €1.9 billion contributed to Gross Domestic Product[4].

Combined with the overall employment impact, the scale of value generated for the region is very significant as a direct consequence of port related activities. It is thus critical that Ted Russell Dock remains as a working port serving local businesses in the city as long as it is commercially viable to do so.

- *A total of 440 FTE's are supported byTed Russell Dock generating €25.2 million in employment income among companies engaged with SFPC.*
- *The total employment impact of Ted Russell Docks, including indirect and induced impacts is 814 FTE's generating €52.2 million.*
- *The commercial activity of customers of Ted Russell Docks resulted in €77.2 million of expenditure in the regional economy on non-labour goods and services.*

2.4 Existing and Future Role of Limerick Docklands

In order to devise a solid platform for new proposals, it is important that the existing context is well understood. While there are many positive factors in the existing operation of Ted Russell Docks and current policy provision, there is also a range of issues and challenges to be met in building an effective delivery model that can implement the objectives and vision for Limerick Docklands. The following key areas emerged from an analysis of the existing context.

2.4.1 Function/Role of Docklands in the City

The strategic focus on economic development has been a key driver in regenerating Limerick city to date. Whilst the Docklands has been identified as a significant employment land bank for the future development of the city, it does not appear to be a priority area for regeneration. Instead the focus by local government concentrates on a number of employment generating sites within the city centre. In order to thrive the Docklands must not be seen as a competing force and instead must concentrate on a niche market centred on its unique selling points, including accessibility, waterside location, its cultural and heritage significance and active port operations. A set of support systems and infrastructures, necessary to expand and nurture the economic ecosystem proposed for the Docklands, needs to be supported by governance and embedded in the development framework.

2.4.2 Land-use

Good urban places tend to incorporate a lot of diversity and a wide mix in landuse. This helps to create animation and character and ensure activity over the life-cycle of the day and through weekends. While a primary economic use, such as port activity, is a valid strategic objective for the Docklands area, it must be livened by other uses which reflect the urban philosophy, including economic, social, and cultural activities. Provision of residential units within the Docklands is not desirable having regard to existing flood policy and ongoing port operations.

Therefore reconnecting the Docklands to other established, adjoining residential and commercial areas will be critical including enhanced vehicular access and improved public realm.

3 Economic Impact Assessment – Shannon Foyes Port Company, W2 Consulting, August 2015 pp.6
4 Economic Impact Assessment – Shannon Foyes Port Company, W2 Consulting, August 2015 pp.8

2.4.3 Movement

On a city map the Docklands appears to be close to the City centre, yet the experience when one is there is of not being connected. This results partly from the historic physical separation of the working port from the city and from the physical separation enforced by the Dock Road. Improvements to and a regrading of the existing road network and its junctions will be necessary to underpin the the strategic network and re-establish links with the city core.

2.4.4 Heritage/Sense of Place/ Maritime

The maritime legacy of Limerick must assume increasing importance and must be more understood as an important extension of the Georgian heritage of the city. This involves an adjustment of mindset to expand beyond the traditional focus on the Georgian Squares and embrace the river corridor and its 18th and 19th century industrial archaeology. The legacy of maritime infrastructure including surviving built fabric has great potential to underpin the character and sense of place in contemporary regeneration. The re-imagination of historic fabric must inform the framework strategy and inspire development proposals rather than be seen as a negative constraint.

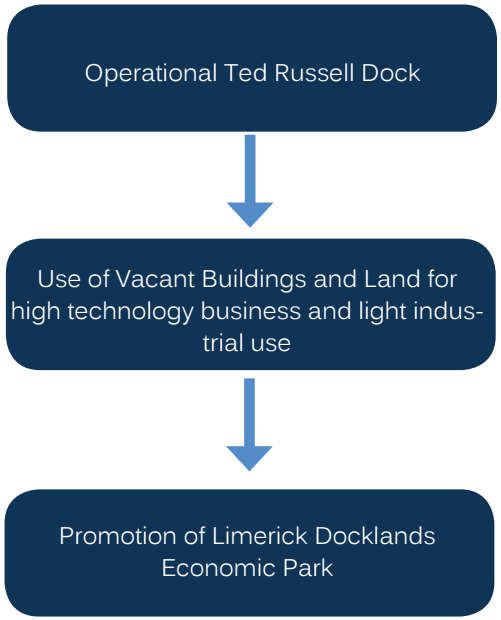
2.4.5 Public Realm and Infrastructure

The design and maintenance of an attractive and generous public realm is fundamental to an area's identity and this is an area where SFPC intends to concentrate its efforts in re-imagining the Docklands of Limerick City as an interesting and attractive location in which to do business. There are of course other utility and service components that must be considered; Drainage, Water, Energy, Communications, Sea Protection, and Contamination. These services must be assessed and planned for in an integrated manner in the context of phasing and funding options.

3.0 The Framework

3.0 The Framework

The purpose of this Framework Strategy is to provide a clear and defined roadmap for Limerick Docklands into the future and once that vision has been devised to set out clear steps for its delivery. Chapter Two clearly set out the external influences shaping existing and future operations and activities at Limerick Docklands through policy and existing socio-economic factors. There are also a number of existing initiatives in the region which will influence the overall framework for the Docklands.



3.1 Capitalising on Existing Initiatives

A central requirement of the Economic Strategy for Limerick[1] seeks to create and attract highly productive knowledge based employment in an attempt to diversify the economy. It focuses on the potential of the educational institutions and a highly skilled labour force to facilitate and attract such employment and details a number of potential initiatives. These included the promotion of Limerick as a 'green economy' to achieve and facilitate the economic strategy. Diversification of activities within Limerick Docklands will complement such initiatives but will also focus on the city's 'unique selling point', which is immediate access to the Shannon Estuary.

There are a number of 'green' and renewable initiatives within the Mid West region, which seek to capitalise on the asset of the Shannon Estuary, build on the quality of neighbouring educational institutions and focus on recent industrial trends. It is critical that Limerick Docklands embraces these initiatives as they represent joint collaborations in an effort to stimulate economic development in the region and the city.

One such initiative is the 'Shannon Energy Valley' concept. The estuary is recognised as a significant economic driver in the region with strong economic and development policies focused on growing its potential. This is very much recognised by the Universities in the region as they have launched a suite of complementary undergraduate energy programmes thereby expanding the population of skilled workers and graduates with energy knowledge/training. They have also signed a memorandum of understanding with a group of leading firms in Silicon Valley with the aim of creating a "world-class cluster" of sustainable and renewable energy companies between Galway and Limerick.

SFPC continues to work closely with national bodies and organisations to promote and market the Shannon Estuary as 'Europe's Ocean Energy Hub', particularly in terms of providing a land base to access and service generating platforms, including deep water. The Ocean Energy Hub is not only promoted on the facilities provided by the Shannon Estuary but also on the positive attributes of the wider region, including; access to the largest wave energy resource in Europe; access to the best wind energy regime in Europe; its close proximity to Shannon International Airport; the benefits derived from Limericks gateway designation and its advanced third level institutions; access to electricity grid and gas supplies; and supports and incentives for new enterprise.

3.2 Limerick Docklands Economic Park

In full support of the Shannon Energy Valley concept, SFPC promotes the development of a Limerick Dockloands Economic Park, within Limerick Docklands, with a focus on marine and renewable energy research and production. An Economic Park at Limerick Docklands will support the development of high technology businesses as set out in the Limerick City Development Plan and will capitalise on its unique marine setting adjoining a working port and Limerick city centre.

Limerick Docklands offers a big space in which to do business, in the right place, with substantial quays built to accommodate shipping and which can also accommodate the testing and deployment of large industrial components to the Estuary and beyond - all this, in the heart of Limerick City close to research facilities and third level institutions. It provides a natural testing and demonstration site with associated supporting infrastructure to help accelerate the industry's ambitions for commercialisation of technologies as well as attracting investment in the sector .

The Limerick Docklands Economic Park provides a multi-user facility;

•	*As a working and operational port;*
•	*To accommodate high technology/business use;*
•	*For the testing, research, manufacture, storage, assembly and deployment of renewable energy devices.*

Promoting the Port Estate as an Economic Park is a platform from which to promote Limerick Docklands, the city and the region. and hasIt has the potential to secure significant economic benefit

1 Contained in the 'Limerick 2030 – An Economic and Spatial Plan for Limerick'

3.3 Influencing Factors

These factors emanate not only from current policies and changes in port activity but also from existing physical opportunities and challenges attributable to Limerick Docklands. The SCOT analysis summaries these issues which influence the overall vision.

GKinetic lauching Tidal testing device at Ted Russell Dock


GKinetic Tidal testing device at Ted Russell Dock

SCOT Anaylsis

Strengths

- An existing operational port
- Proximity of undeveloped land to city core
- Good transport network and accessibility opportunities
- Unique historical and architectural qualities
- Riverine setting
- Designation of Ted Russell Dock as a marine testing site by MaREI

Opportunities

- Available port capacity to grow working port
- Natural maritime attributes of the Docks and its historical relationship with Georgian Limerick
- Proximity of a working port to its customers and the city
- Significant opportunity to develop Bannatyne Mills as central to the Marine Energy Park and/or other employment generating uses
- Proposed visual upgrade works to the R510 Dock Road
- Potential to harness and create synergies with other regeneration initiatives within the city
- Recognition in the National Planning Framework that the city can extend to encompass Limerick Docks
- Potential alternative access arrangment into Limerick Docks from Atlas Aenue.

Concerns

- Environmental factors including habitat designations and flooding
- Poor visual appearance of R510 Dock Road
- Existing access arrangements into the Docks
- Competing uses of Ted Russell Docks as a commercial port and its promotion as a Marine Energy Park
- Accessibility to lands within Port Estate and buildings within Ted Russell Dock

Threats

- Existing road network, if R510 is not upgraded and visually enhanced.
- Existing and proposed environmental designations
- Flooding
- Third party land ownerships
- Distance of Limerick Docklands from the mouth of Estuary

'Limerick Docks has strong links and associations with research institutions such as the University of Limerick, the Limerick Institute of Technology and a number of start-up and testing companies.'

3.4 Framework

To deliver this ambitious Vision and provide a framework for change, a series of Strategic Objectives have been developed in response to consultation with the port users, local authority and other bodies and the findings of technical work. The Guiding Principles set out in Chapter Five of this Framework Strategy have been prepared as a direct local level response to these over-arching objectives:

3.5 Framework Statement

'Using a focused approach, to reconnect Limerick Docklands with the city and the motorway, to maintain the working docks and to effectively redevelop lands and buildings which are no longer central to the core operations of Ted Russell Dock, with a focus on the development of a Limerick Docklands Economic Park.

SO1. Ted Russell Dock: To support a growing, thriving Port

(i) To facilitate the delivery of the adopted SFPC Vision 2041Masterplan and provision of a modernised and consolidated port. To support and promote the important role of the port within the local and wider economy.

(ii) Improve road connectivity from the motorway to Atlas Avenue junction as well as the improvement and up grade of Dock Rd/Atlas Avenue junction.

SO2. Economy and Employment: To stimulate the local economy and provide new jobs

To provide new high quality employment floorspace and to focus on expanding and growing the Limerick Docklands Economic Park theme through further collaboration with the educational centres and MaREI

SO3. Sustainable Development: To promote reuse of vacant buildings and non-core sites

To promote the reuse of existing vacant building and brownfield sites and to ensure that all new developments use energy and water as efficiently as possible and to incorporate innovative approaches to open space and biodiversity.

SO4. Sustainable Connections: To improve connections and maintain linkages with the city

To ensure adequate provision of car parking in proximity to employment floorspace, to assist in the reprioritisation of the Dock Road from a vehicle dominated artery to one with enhanced pedestrian and cycle provision and to maintain and enhance connectivity in particular between Ted Russell Dock and greenfield land in Corcanree.

SO5. Flood Risk: To reduce the risk of flooding and adapt to climate change

To ensure that development avoids and reduces the risks from flooding and that risks are not increased elsewhere as a result. To ensure that any development accords with relevant flooding guide-lines[2].

SO6. Local Environment: To conserve and enhance the harbour's environmental assets

To protect and enhance the area's important environmental assets and wildlife habitats including Natura 2000 designated sites.

SO7. Identity: To promote high design quality and improve townscape

To promote developments of high design quality that maximise the waterfront setting and complement the identity of Limerick Docklands as an Economic Park. To respect local character and form and enhance key gateways, including the port's historic assets and protected structures.

2 The Planning System and Flood Risk Management: Guidelines for Planning Authorities, 2009


IWP
HOME IMPROVEMENT CENTRE
TOPAZ
IRISH WIRE PRODUCTS
James Barry Motors
LIEBHERR
FLINTERBRIGHT
ROTTERDAM


NEDNOR
SAILOR
SELVA
SWL 8T
DAF
XF

4.0 Achieving the Framework

and Development Principles

4.0 Achieving the Vision and Development Principles

An assessment of the relationship of Limerick Docklands to its strategic context, together with an appreciation of the individual characteristics of form and the way a place is used, will lay the foundations for the continued operation of Ted Russell Dock, the successful introduction of other port related activities and the reuse of existing building currently surplus to SFPC requirements.

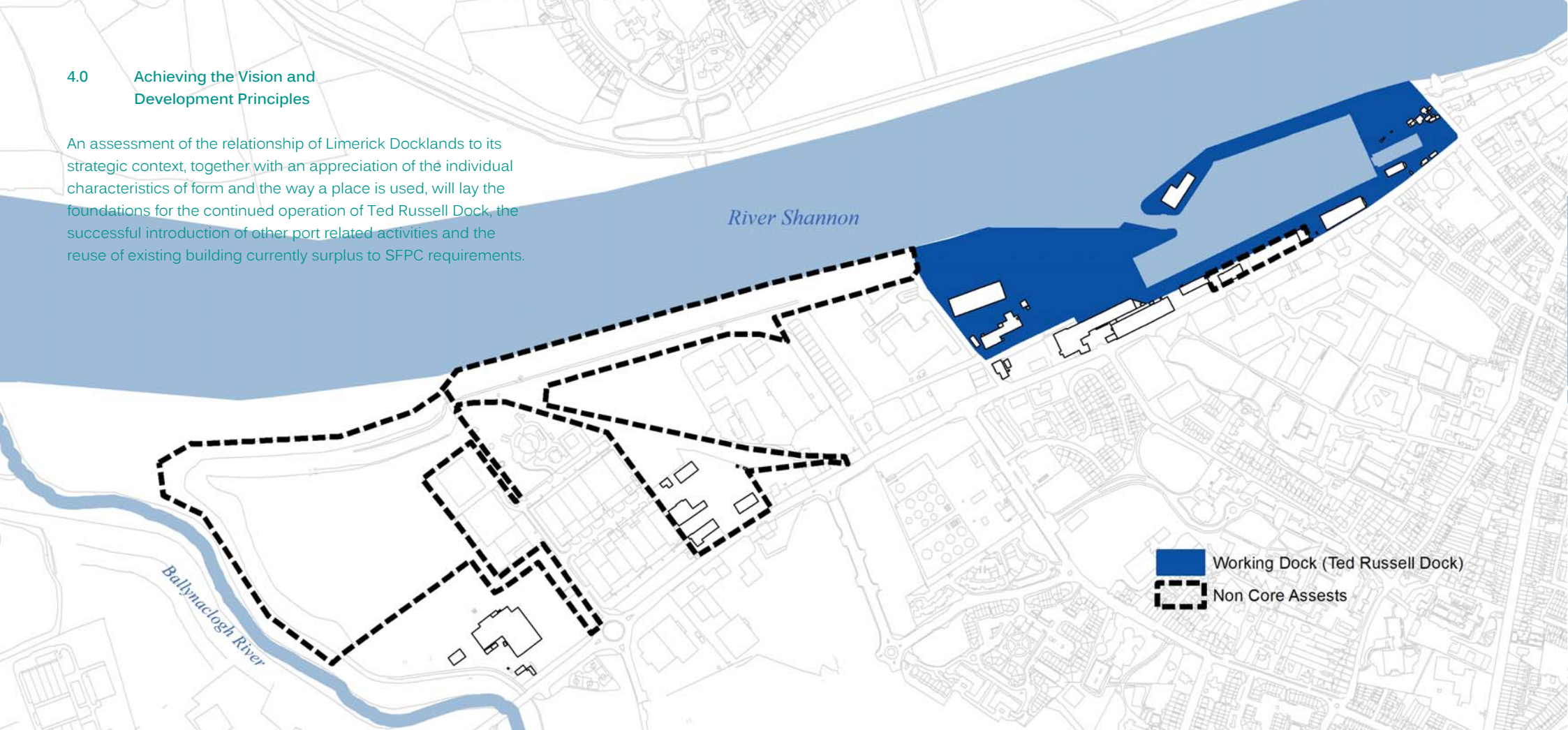


Figure 4: Operational Port

4.1 Ted Russell Dock Operation

A key consideration in planning for the Docklands is the close proximity to the operational areas of the port and associated noise, smells and disturbance

The long term viability of port operations is a priority and the ntroduction of new uses needs to be carefully managed in terms of location, design and mitigation measures to prevent any future conflicts arising. The SFPC Masterplan Vision 2041 identified the non-core assets of Limerick Docks and identified three specific areas that could be redeveloped[1].However the port operational land requirements were never defined in the context of enabling redevelopment opportunities, including the reuse of vacant buildings such as Bannatyne Mills.

A holistic approach needs to be taken in defining the operational area of the port including its existing and future needs. Defining the operational port area must take account of any internal reorganisation of activities that may result from increased efficiencies, decontamination of land and revised access arrangements. SFPC has defined and demarcated the operational area for port activities which provides clarity on the extent of enabling works that can be undertaken in and around existing vacant buildings. As part of this process SFPC consulted with the Limerick Port Users Group. The defined operational port area will facilitate efficient and effective future port operations at Ted Russell Dock.

1 The three areas were Corcanree Business Park, The Wishbone and Bannatyne Mills

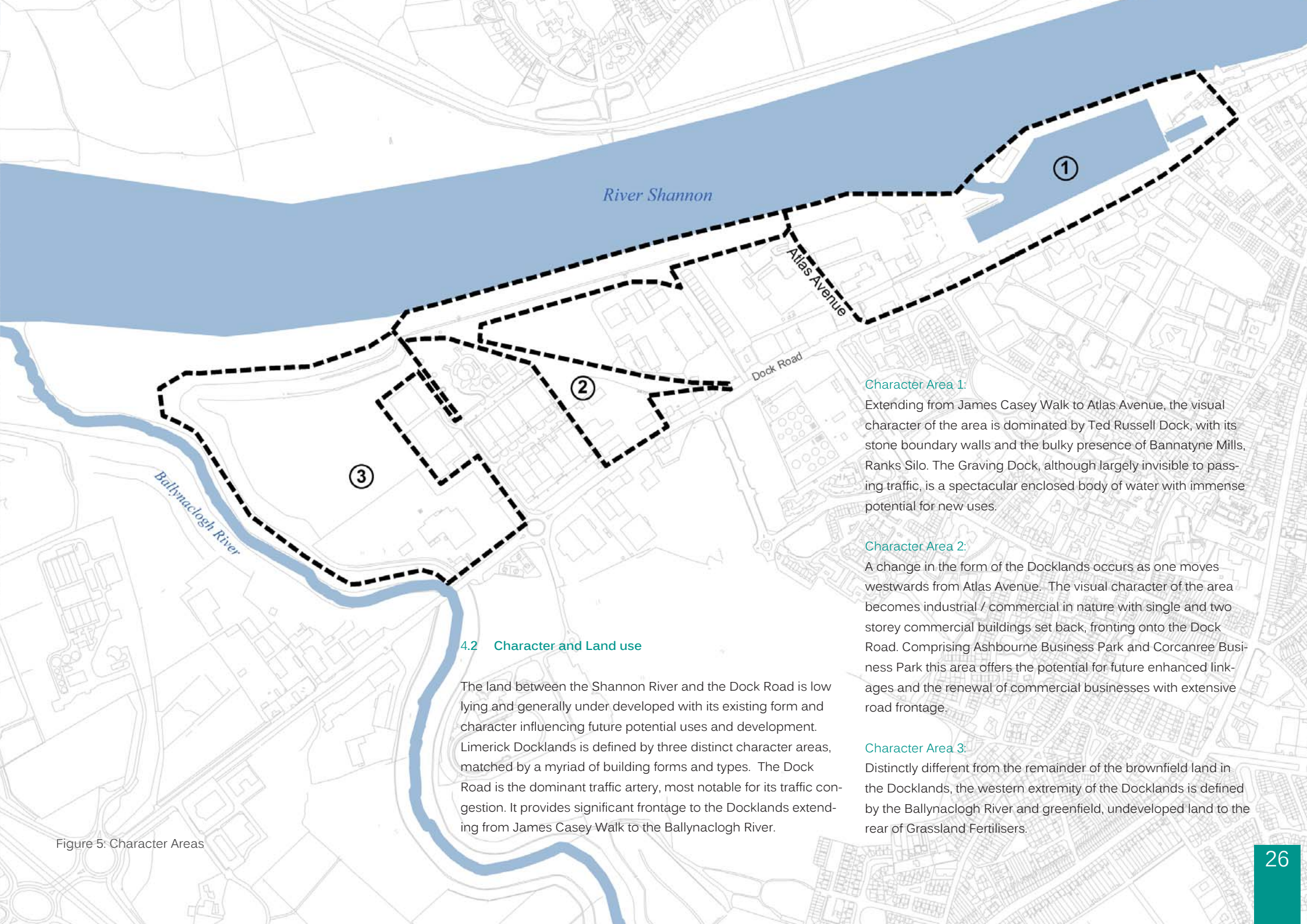


Figure 5: Character Areas

4.2 Character and Land use

The land between the Shannon River and the Dock Road is low lying and generally under developed with its existing form and character influencing future potential uses and development. Limerick Docklands is defined by three distinct character areas, matched by a myriad of building forms and types. The Dock Road is the dominant traffic artery, most notable for its traffic congestion. It provides significant frontage to the Docklands extending from James Casey Walk to the Ballynaclogh River.

Character Area 1:

Extending from James Casey Walk to Atlas Avenue, the visual character of the area is dominated by Ted Russell Dock, with its stone boundary walls and the bulky presence of Bannatyne Mills, Ranks Silo. The Graving Dock, although largely invisible to passing traffic, is a spectacular enclosed body of water with immense potential for new uses.

Character Area 2:

A change in the form of the Docklands occurs as one moves westwards from Atlas Avenue. The visual character of the area becomes industrial / commercial in nature with single and two storey commercial buildings set back, fronting onto the Dock Road. Comprising Ashbourne Business Park and Corcanree Business Park this area offers the potential for future enhanced linkages and the renewal of commercial businesses with extensive road frontage.

Character Area 3:

Distinctly different from the remainder of the brownfield land in the Docklands, the western extremity of the Docklands is defined by the Ballynaclogh River and greenfield, undeveloped land to the rear of Grassland Fertilisers.

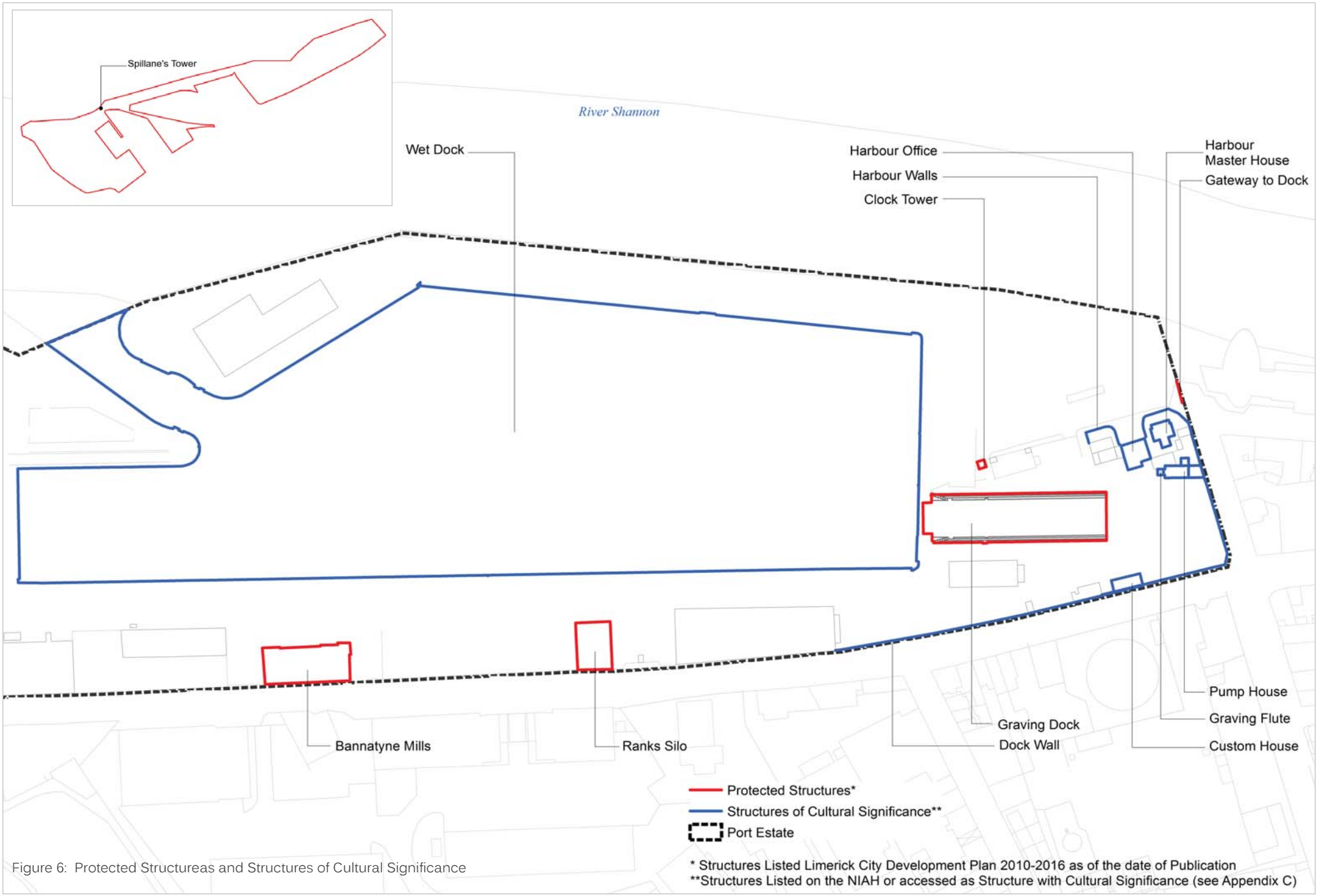


Figure 6: Protected Structureas and Structures of Cultural Significance

4.3 Historic Assets

Established in 1853 Limerick Docks is of significant cultural heritage interest and a comprehensive cultural heritage assessment of the Docklands has been undertaken to inform this brief. Identification of protected structures[2] and buildings of historic importance including their curtilage and attendant grounds has significantly influenced the overall approach to port operations and future uses within the Docklands. A conservation approach has been adopted which seeks to preserve, conserve and re-use existing vacant buildings in so far as possible. It is not only the buildings themselves that have been influential but also the historical evolution of Ted Russell Dock itself.

The floating dock at the southern end of the quays commenced port operations in the nineteenth century and this was followed by a second quay to the east. The Graving or Dry Dock, constructed later provided a connection to the wet dock by a movable bridge and iron sluice gate.

However, since its construction in the nineteenth century the eastern third of the dry dock has been removed and this has impacted significantly on the configuration of building patterns within the Docks itself.

Subsequently, the area of river in front of the quay was reclaimed to increase the surface area of the port, the port gates were moved to address James Casey Walk to the east, and a Harbour Masters House was built adjacent to the Harbour Office. The reclaiming of the land and the demolition of most of the offices means that the Dock Clock has now lost its role as a marker on the quay and appears to be marooned in the centre of the dock.

'....A conservation approach has been adopted which seeks to preserve, conserve and re-use existing vacant buildings in so far as possible....'

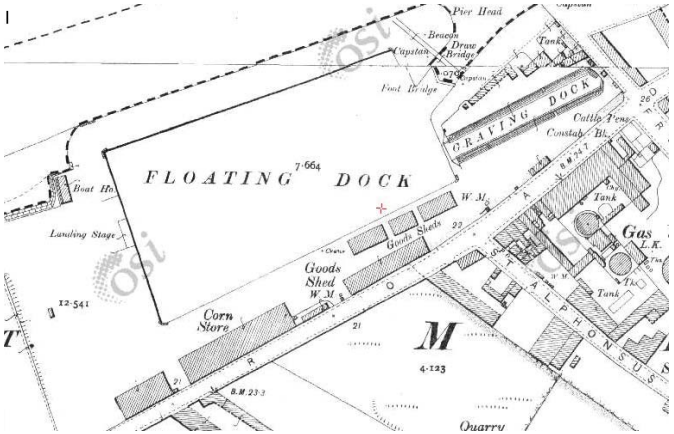


Figure 7: Historical OSI Map Of Ted Russel Dock

2 Buildings protected under legislation due to their historical, architectural, social importance etc.


Bannatyne Mills


Ranks Silo


Clock Tower & Graving Dock


Gateway to Dock Yard


Spillane's Tower


Wet Dock


Dock Wall


Custom House


Graving Flute & Pump House


Harbour Master House


Harbour Office


Harbour Wall

Figure 8: Existing Port Activities

4.4 Access, Transport and Highways

The location of Ted Russell Dock on the cusp of the inner city area, means that Limerick Port is essentially a gateway point into Limerick City. However, the R510 Dock Road is narrow and congested; it is also forbidding and unwelcoming, especially to pedestrians, because of the intensity of traffic and the lack of activity at street level.

The flow of port related truck traffic on the Dock Road contributes to the congestion currently experienced and whilst Ted Russell Dock is served by a number of access points. The level of traffic at peak hour generated by the Port is in overall terms very low, when compared to the overall traffic flows along the Dock Road. It is thus considered that any moderate future increases in operational port related activities would not result in significant increases in overall traffic to and from the Docks. However, it is the movement of port related traffic to and from the Dock Road that can cause difficulties due to the location and size of the existing accesses and restrictions on Dock Road.

One of the key objectives of the Framework Strategy is to enhance linkages (public & transport linkages) to Ted Russell Dock and inform the future optimisation of access arrangements and internal transport network for the operational port and other adjoining lands in the ownership of SFPC. Accordingly a comprehensive traffic and transportation assessment was undertaken to inform this brief.

It is not just the external flow of port related traffic that required evaluation but also the internal circulation of traffic within the port itself.

Presently the eastern end of the port contains the weighbridge, the harbourmasters office and a conglomeration of protected structures in closest proximity to the city centre.

All trucks entering and leaving the port must go to and from the eastern end of the port. Yet it is the western end of the port that provides the greatest area of operational and storage space. The internal reorganisation of port traffic is essential for a number of reasons including more efficient port operations and work practices but also to facilitate the viable reuse of existing vacant properties within the Docklands itself.

A detailed Traffic & Transport Assessment was undertaken of the Docklands area and the recommendations emanating from this study has significantly influenced the overall Framework Strategy.

'....Limerick Port is essentially a gateway point into Limerick City....'

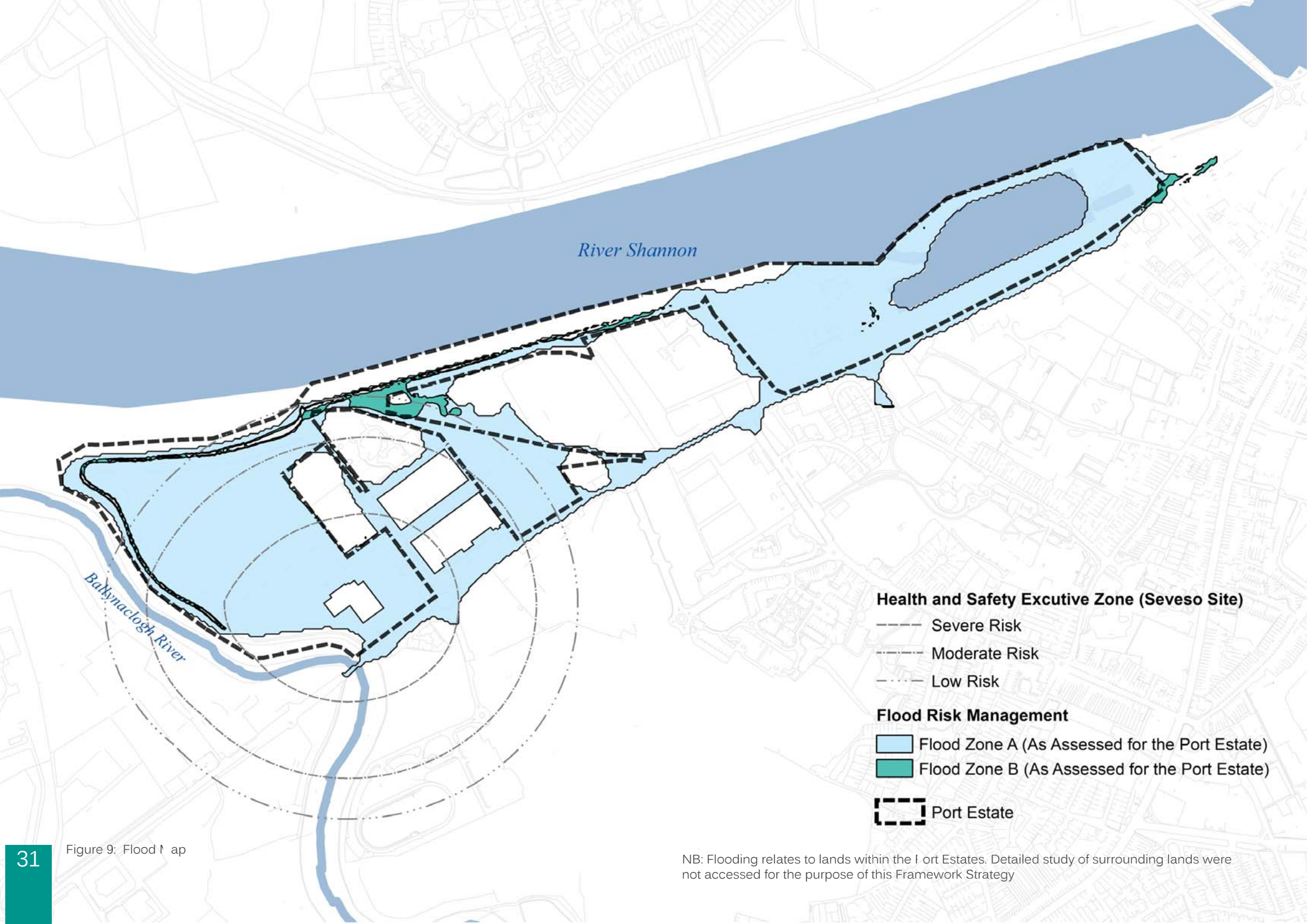


Figure 9: Flood Map

NB: Flooding relates to lands within the Port Estates. Detailed study of surrounding lands were not accessed for the purpose of this Framework Strategy

4.5 Site Topography and Flooding

Limerick Docklands comprises many sub-areas, each with its own unique character, from the robust urban environment of Ted Russell Dock, to the more open landscape, dotted with commercial buildings, along the confluence of Ballynaclogh and Shannon rivers. The area is, for the most part, bounded by strong natural and /or manmade features. The Shannon and the Ballynaclogh rivers form the basis of the river valley and subsequent sloping topography resulting in a Flood Zone A designa-tion over most of the Docklands area.

A Flood Risk Assessment was undertaken with reference to the requirements of "The Planning System and Flood Risk Management Guidelines" as published by the Department of Environment in November 2009. This study has informed the Framework Strategy. The Shannon CFRAM confirm that Limerick Docklands is located in an area where extreme water levels are driven by tidal rather than fluvial events. A 3d ground model of Limerick Docklands was generated and in conjunction with the CFRAMS estimates of food levels, the extent of Flood Zone A, B and C were predicted. The majority of the lands in question are located within Flood Zone A with smaller sections in Flood Zone B. The location of the Docklands in Flood Zone A informs the overall Framework Strategy and in particular the non-port uses which can be considered within the Docklands.

The flood study states that any new buildings constructed within the Docklands should have a finished floor level of 5.3m with highly vulnerable buildings requiring a finished floor level of 5.81m.

It may be permissible to construct new developments at levels lower than the recommended levels in certain limited cases. This exception however would only apply in relatively minor extensions where it is critical for connectivity that the extension must be the same level as the existing building and robust mitigation measures are proposed to address the flood risk.

Currently there are embankments surrounding much of the SFPC lands. In general, the levels of the embankments will protect the lands against an event slightly below a 1:200 year event (4.71 m). However, there are a number of areas where the defences are below these levels, in particular the area around the Slipway at Atlas Avenue. Ground levels behind the slipway are 4.2 m which would suggest if the Shannon Estuary were to experience a flood of 4.2 m, flood waters would flow into the low lying areas behind the slipway. The Flood Study advises that raising the ground levels behind the slip-way will provide additional protection to the low lying areas within the proposed development lands. However much of the lands around the Docks are at a level of 4.5 m OD Malin so raising the ground levels around the slipway will have limited effect as the once the flood waters reach 4.5 m there will be additional flow paths to the lower lying areas.

Ideally the entire of Limerick Docklands and other land extending along Dock Road, should be defended using flood defences. The Flood Study recommends the provision of a system of embankments or barriers along the perimeter of lands at risk to a minimum level of 5.3 m Malin which allows for climate change. A detailed redesign of all stormwater networks would also be required to avoid flow paths into at risk areas.

However, such work goes beyond the scope of this Framework Strategy and should form part of an overall strategic plan for the protection of existing and future development land on the Dock Road and Limerick City to be advanced by the OPW and Limerick City & County Council.

4.6 Technical Constraints

A Health and Safety Executive Zone ('Seveso Site') which determines boundary zones for different types of development at a distance from a 'major hazard' based on the current use of the land exists at the western extremity of the Docklands. Grassland Fertilisers has been designated as a 'Seveso' site[3] and this means that in general public use / access to these lands is restricted. However general commercial / industrial uses accommodating general workforce would be acceptable. Having regard to the nature and type of business that operates from the Docklands area it is considered that the Health and Safety Executive Zone will not adversely restrict future uses on the greenfield land at Corcanree.

The Docklands area is crossed by several underground water mains and sewers serving the general industrial and commercial areas of Dock Road. This infrastructure needs to be protected and new development needs to ensure its operation remains unaffected. A Limerick County Council infrastructure wayleave also exists at the western extremity of the Docklands within the greenfield land to the rear of Grassland Fertilizer and this needs to be acknowledged and maintained in any development proposal going forward.

3 Generally means that restrictions apply to proposed land uses in the surrounding area. The nature of these re-strictions is conveyed to the Planning Authority by the H.S.A. in the form of land use planning guidance.

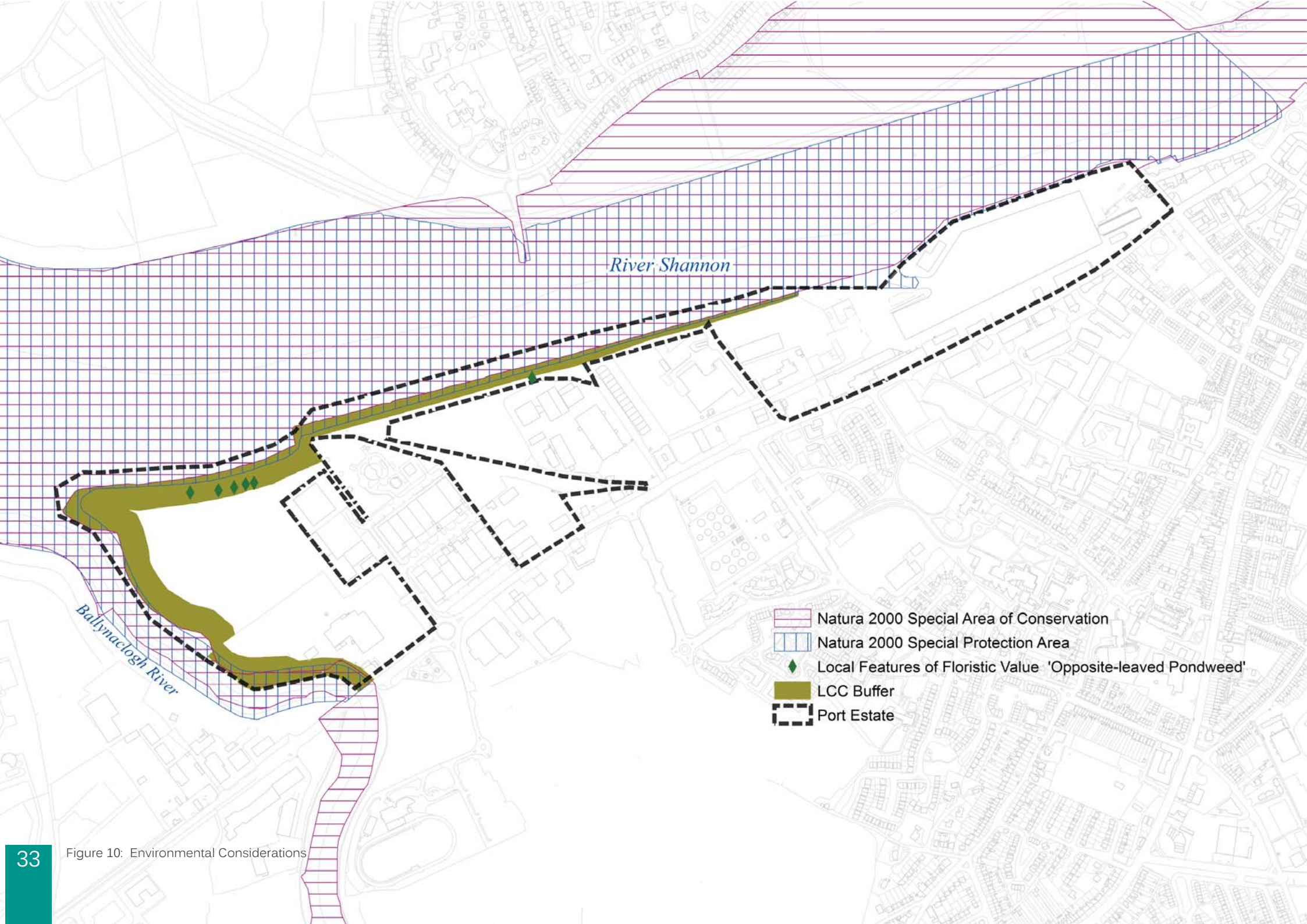


Figure 10: Environmental Considerations

4.7 Natural Environment

Limerick Docklands is located within a uniquely distinctive natural environment and is directly adjacent to the boundary of the Lower River Shannon Candidate Special Area of Conservation (cSAC) .[4] A 'buffer area' designated in the Limerick City Development Plan is provided for along the western and northern boundaries of the Docklands and which is intended to separate the Ballynaclogh River and the River Shannon from any existing and future development. This buffer area is substantial with a width of up to 50m in places and absorbing some 7.8 hectares of land.

A comprehensive ecological survey of the lands within the Docklands has been undertaken and informs this Framework Strategy. The survey confirms that agricultural grassland habitat dominates both the buffer area and much of the land within the survey area and is of low ecological value. The small areas of wet grassland and broadleaved woodland which occur within the Docklands is also considered to be of relatively low ecological value. The study acknowledges that the areas of wet ditch habitat which occur south of the embankment adjoining the River Shannon adds floristic diversity to the site.

The legally protected plant species opposite-leaved pondweed grows in this wet ditch and the report recommends that populations of this species should be conserved in the future. The habitats which occur within the buffer survey area, that is the embankment and associated wet ditch on the landward side, do not correspond to any habitats listed in Annex I of the EU Habitats Directive.

Based on the findings of the ecological assessment the framework strategy seeks to maintain the wet ditch habitat and protect it in any future development proposal going forward. Due to the insignificant ecological value of the buffer area this land is accommodated within the developable area of the Docklands but with adequate protection afforded to the river and the Natura 2000 designated sites.

Going forward it will be necessary that any future development project within the Docklands is cognisant of inherent environmental features and designations. The assessment of any potential adverse environmental effects must be taken into consideration as part of any development proposal pursuant to any National or European obligations on environmental protection.

'...Limerick Docklands is located within a uniquely distinctive natural environ ment....'

4 The legal basis on which SACs are selected and designated is the EU Habitats Directive, transposed into Irish law as amended in 1998 and 2005. The Directive lists certain habitats and species that must be protected within SACs.

4.8 Public Realm

Creating an attractive and high quality public domain is at the heart of making successful urban places. The Public Realm refers generally to the public space of the city, the streets squares and parks, and in the case of Docklands the water bodies. Public space is there primarily to facilitate a rich public life and to provide opportunities for citizens and visitors to enjoy the city in a multitude of ways. However, Limerick Docklands remains as a working port. and SFPC has a strong commercial mandate from Government as well as stringent statutory security requirements under the ISPS Code on Port Security regarding the day to day working operations of the Ports. While itSFPC acknowledges the public interest in itport s activities SFPC has to remain diligent of this its commercial mandate and other statutory obligations. It is in this context that SFPC intends to better socially integrate the Docklands and a general cleaning up of Port activity will be promoted.

When considering specific enhancement proposals, there must be a realisation that SFPC can only undertake works on land within their control, but yet access and physical connections between the city and the Docklands needs to be significantly enhanced. Realisation and implementation of the R510 Dock Road Improvement Scheme prepared by Limerick City & County Council, will thus be critical in advancing change and integrating the Docklands back into the city.

4.9 Land Use and Mix

The mono-centric zoning of the Docklands for marine related industry uses, effectively prohibits a mixed use approach within the Docklands. Accordingly the focus is on maintaining a working port and facilitating port related industry and commerce on land and within buildings which are surplus to SFPC's immediate and long term requirements. Whilst the zoning of the land operational port (Ted Russell Dock) for marine related industry is currently appropriate having regard to the potential flood risks associated with the site, a mixed use zoning on land and buildings surplus to SFPC's operational requirements would facilitate a more diverse and vibrant city quarterlong term use. It is thus important that this Framework Strategy is presented in a flexible manner and that buildings and spaces can adapt to different needs and demands over time.

'....The relationship between cities and their ports remains one of interdependency and should be ruled by long-term strategic vision and planning....'

Development Objectives

1.	To define the operational port and facilitate greater efficiencies in terms of internal reorganisation of operational activities;
2.	To acknowledge the three different character areas in the advancement of development proposals and use natural features in defining and facilitating development proposals.
3.	To identify uses for a number of protected structures throughout Ted Russell Dock and visually enhance their setting through demolition of insignificant buildings and landscape treatment.
4.	To facilitate use of Bannatyne Mills and ensure that the building and the identified ground around it can adapt to different needs and demands over time.
5.	To enhance public & transport linkages to Ted Russell Dock by supporting the R510 Dock Road Improvement Scheme and encouraging provision of a new access to Ted Russell Dock from Atlas Avenue.
6.	To facilitate the OPW in developing future defence proposals along the banks of the River Shannon and Limerick Docklands and which seeks to protect the Docklands and Limerick City from potential future flooding
7.	To maintain the wet ditch habitat at the western end of the site at Corcanree and protect it in any future development proposal going forward but to facilitate appropriate development within the green buffer area due to its insignificant ecological value, but with adequate protection afforded to the river and the Natura 2000 designated sites.
8.	To explore controlled public access to restricted areas within Ted Russell Dock and to promote SFPC's archival material and historic records as part of the tourism offer of Limerick city
9.	To promote the use of greenfield land within Corcanree Business Park for industrial / maritime related use
10.	To market the Docklands as an Economic Park with a focus on technology and marine energy uses and testing.


VIRAGE
WERKENDAM
IMO 9411824
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INTERNATIONAL TRANSPORT

5.0 Delivering the Framework

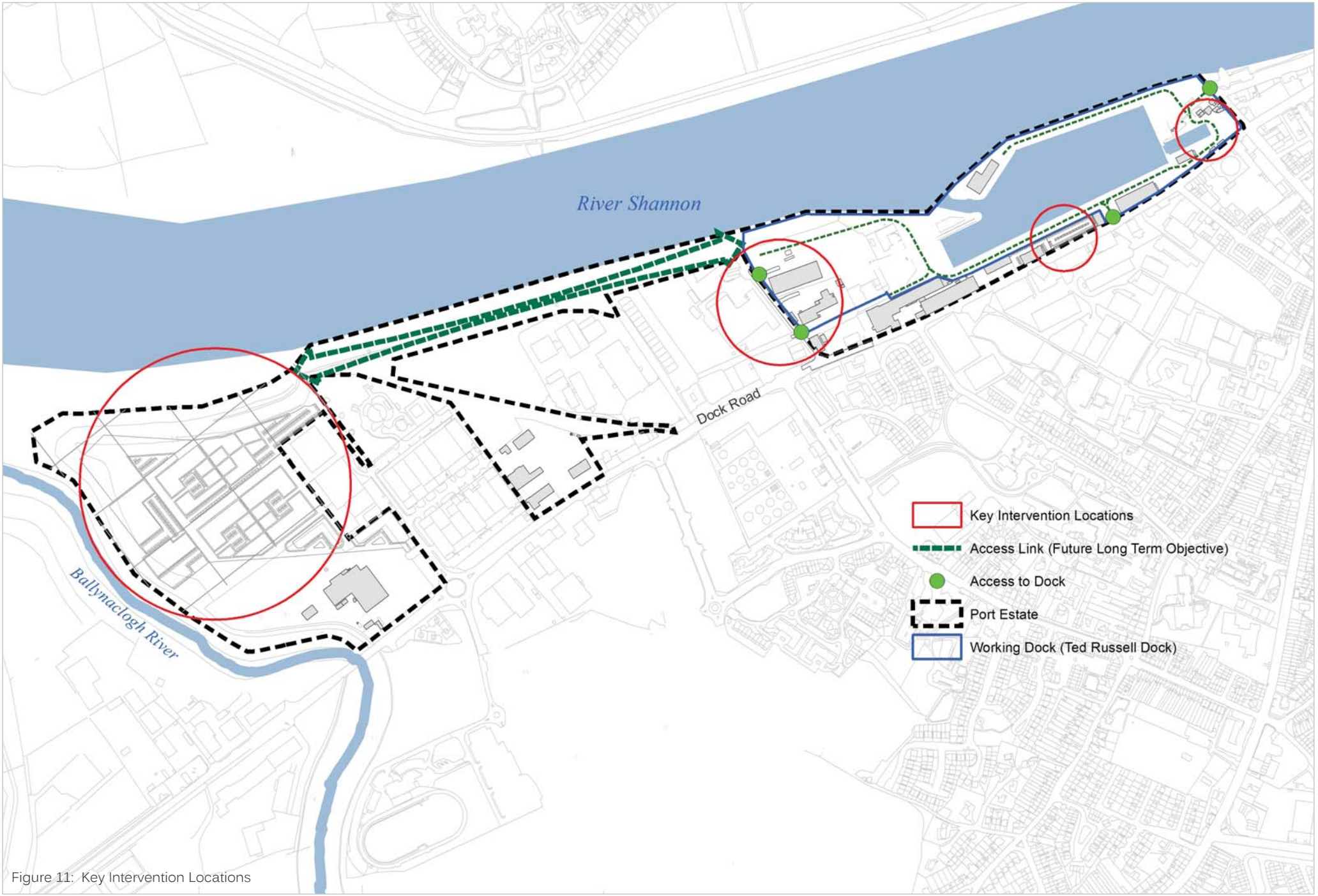


Figure 11: Key Intervention Locations

5.0 Interventations

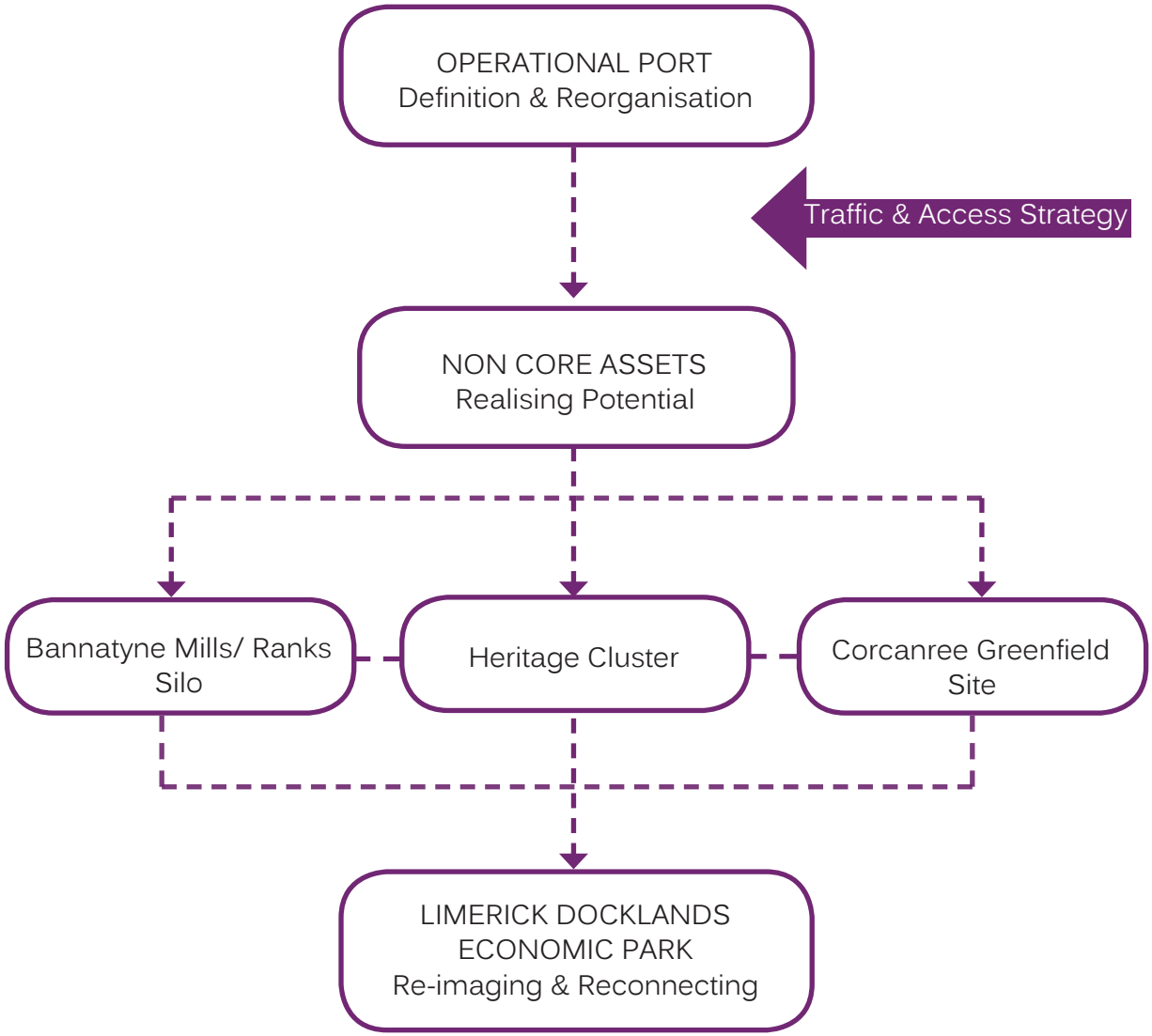
This chapter translates the previous identified themes, principles and objectives into deliverable projects within the Docklands. A number of interventions have been identified for the Docklands with the express purpose of enhancing port operations within Ted Russell Dock and realising non-core assets with the Docklands.

The interventions are not intended to be prescriptive and should not be treated as such. They should be read in conjunction with the Guiding Principles set ou t in Chapter 4.0 which provide clear targets and criteria for consideration in relation to future development in the Docklands.

Facilitating an efficient and effective operational port is of priority to SFPC and only when this has been achieved can consideration be given to realising the potential of the non-core assets within the Docklands. Both these objectives, however, are dependent on agreeing and implementing a traffic and access strategy which will not only benefit port operations but will also enhance the wide cityscape.

A revised access is proposed to Ted Russell Dock via Atlas Avenue which will, limit port traffic and heavy goods vehicles on the Dock Road fronting the Docks and Bannatyne Mills; facilitate internal port reorganisation so that port activity is re-orientated away from the city towards the western end of the Docks; reduce port activity at the eastern extremity of the Docks thereby enabling visual enhancement works to existing heritage buildings and features; and release port land to enable Bannatyne Mills to function as an independent unit separate to the operational port area.

Accordingly the realisation and implementation of an alternative access route into Ted Russell Dock is critical in underpinning the successful delivery of a number of interventions set out in this strategy.



5.1 Intervention 1 –Access & Movement

The Framework Strategy explores an Access Strategy to facilitate the optimisation of Ted Russell Dock and the use of non-core assets within the wider Docklands. The Access Strategy extends beyond the boundaries of the Docklands and takes a holistic approach to traffic management on the Dock Road. Its delivery is beyond the reach of SFPC and firmly lies in the hands of Limerick City & County Council. It is intended to retain all the existing access points into Ted Russell Dock for occasional but essential use by port traffic. However, the nature, size and function of the different access points may change to reflect the land uses they serve.

Now is an opportune time to consider a revised access arrangement to Ted Russell Dock for the betterment of the port and the city,. It is understood that Limerick City & County Council are preparing a R510 Dock Road Improvement Scheme. Accordingly, it is anticipated that the Access Strategy prepared to inform this Framework will be utilised to inform the R510 Dock Road Improvement Scheme and to ensure delivery of Objective No.5 of the Framework Strategy which identifies a need to "enhance public & transport linkages to Ted Russell Dock by supporting the R510 Dock Road Improvement Scheme and encouraging provision of a new access to Ted Russell Dock from Atlas Avenue".

5.1.1 Access Strategy

It is likely that traffic flows will increase along the Dock Road in future. This will comprise of:

- Growth in background traffic;
- Growth in port traffic;
- Traffic generated by undeveloped port lands east of Atlas Avenue;
  and
- Traffic generated by the development of lands along the R510 west of Atlas Avenue

The Access Strategy has identified three distinct zones along Dock Road, compatible with the three character areas already identified in the preceding analysis, and which are likely to have different traf-fic demands and traffic types in the future.

Zone 1 from the Greenpark Roundabout to the N18 National Road Network, is likely to see significant increases in traffic movement associated with new non port related development. This means that this section of road may need to be upgraded to dual carriageway or similar standard to accommodate general traffic.

Zone 2 which connects port traffic from Greenpark Roundabout to Atlas Avenue, will also experience some traffic increases. This zone accommodates port owned, greenfield land at Corcanree and which is surplus to port operational needs.

Future development on this land could be directed to enter at the Greenpark Roundabout, thereby reducing the amount of traffic further along (mid section) Dock Road. This section of Dock Road could also be upgraded and widened on a phased basis and there is an opportunity to include a shared bus and port only HGV traffic lane inbound to Atlas Avenue, where a bus gate could be provided to give bus priority into the city centre.

Zone 3 between Atlas Avenue and James Casey Walk is unlikely to experience any significant increase in traffic volumes over time, consistent with radial routes into other city centre areas. Accordingly the strategy should accommodate existing traffic levels on this section of Dock Road, facilitating a design approach which assumes a more urban character and which should be reflected in the road cross section and design treatments.

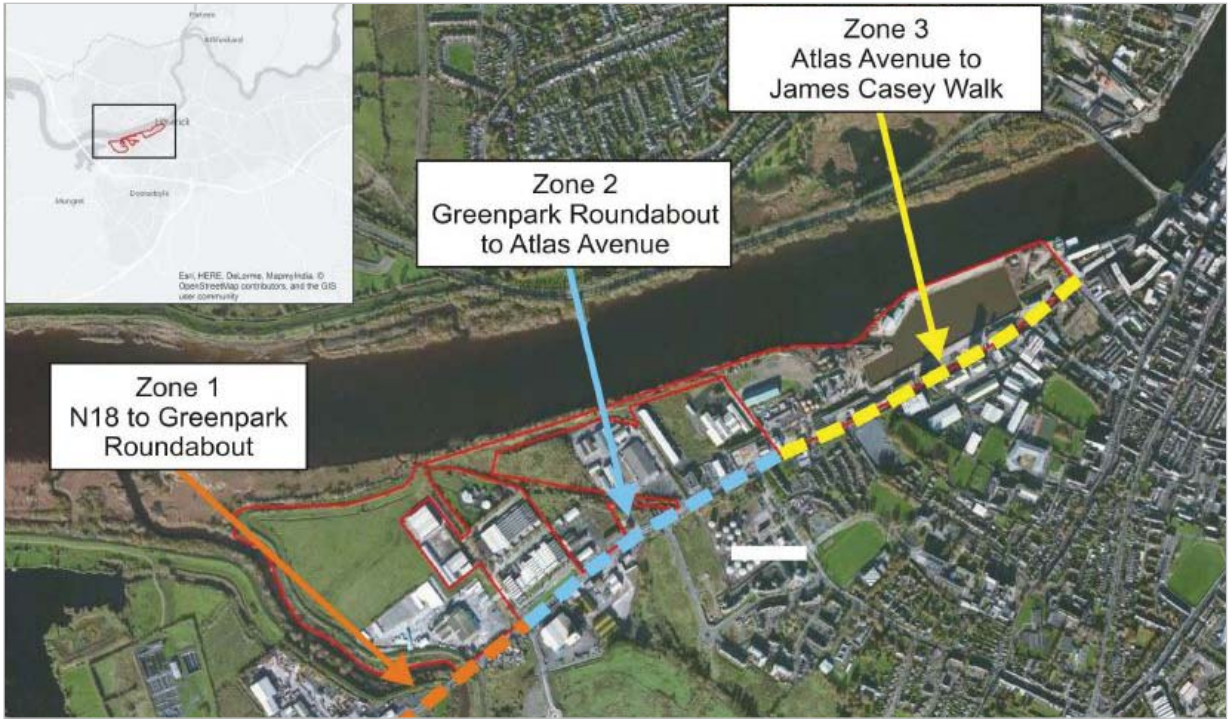


Figure 12: Zoning of Dock Road

Opportunities therefore exist to consider a reconfiguration of this section of the road, providing a more distinct transition between the more industrial and manufacturing activities to the west.

To reconfigure Zone 3 and to facilitate an improved design approach to this section of Dock Road, it will be necessary to reduce the movement of traffic and in particular HGV traffic, on this part of the Dock Road in so far as possible. The overall level of traffic at peak hour generated by Ted Russell Dock is in overall terms low particularly when compared to existing traffic flows along the Dock Road. At its peak, Ted Russell Dock generated 35 truck movements in and out in the morning peak and 39 truck movements in and out in the evening peak. Comparatively, a HGV in an urban setting has the equivalent impact of three to five cars. Therefore removing most port related HGVs from Zone 3 of the Dock Road would have a positive impact on this important gateway to the city and allow for significantly urban improvement to occur. This is conditional on the reconfiguration of the Atlas Avenue junction as mentioned above.

5.1.2 Ted Russell Dock Access

The majority of traffic in and out of the port is through the main entrance on Dock Road with the Atlas Avenue Access and Clarion Gate (James Casey Walk) used secondarily. The most constrained section of the Dock Road is within Zone 3 (at Bannatyne Mill) proximate to the main port entrance on Dock Road. Traffic to and from the port currently has difficulty manoeuvring this access and congestion is evident at this location during peak periods, due in part to the poor junction configuration. However it remains the best available access to the port at present.

An alternative port access must be explored if the primary port access is to be removed from Zone 3. The existing secondary port access from Atlas Avenue is located within Zone 2 and it is logical that this access is explored as a viable alternative to the primary port access on Dock Road.

However the existing configuration of Atlas Avenue and the proximity of the current port access to the junction with Dock Road, means that the existing Atlas Avenue/ Dock Road junction is inadequate to accommodate current port related traffic, or any future traffic arising from development of third party lands.In order to serve as the primary port access, the existing alignment of Atlas Avenue and it's junction with Dock Road would require upgrading in order to facilitate two-way HGV turning movements. An indicative layout is provided for improvement works to the Atlas Avenue junction to include general road widening works and the inclusion of left-turn and right turn lanes turning from Dock Road into Atlas Avenue.

In addition, access into Ted Russell Dock would need to be located further north along Atlas Avenue to ensure adequate queue capacity for port traffic.

'....The Access Strategy will infom the R510 Dock Road Improvement Scheme.....'

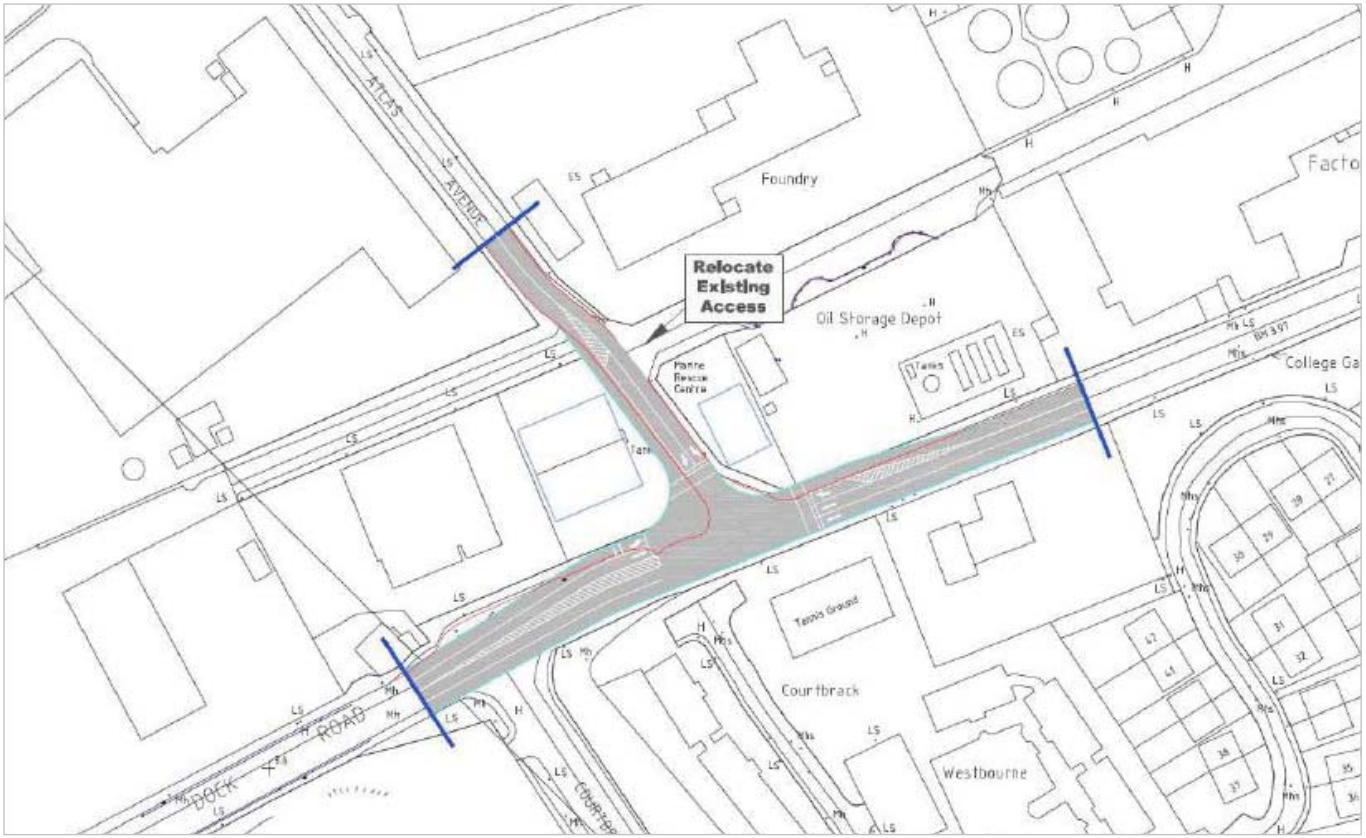


Figure 13: Proposed Atlas Avenue Junction Upgrade

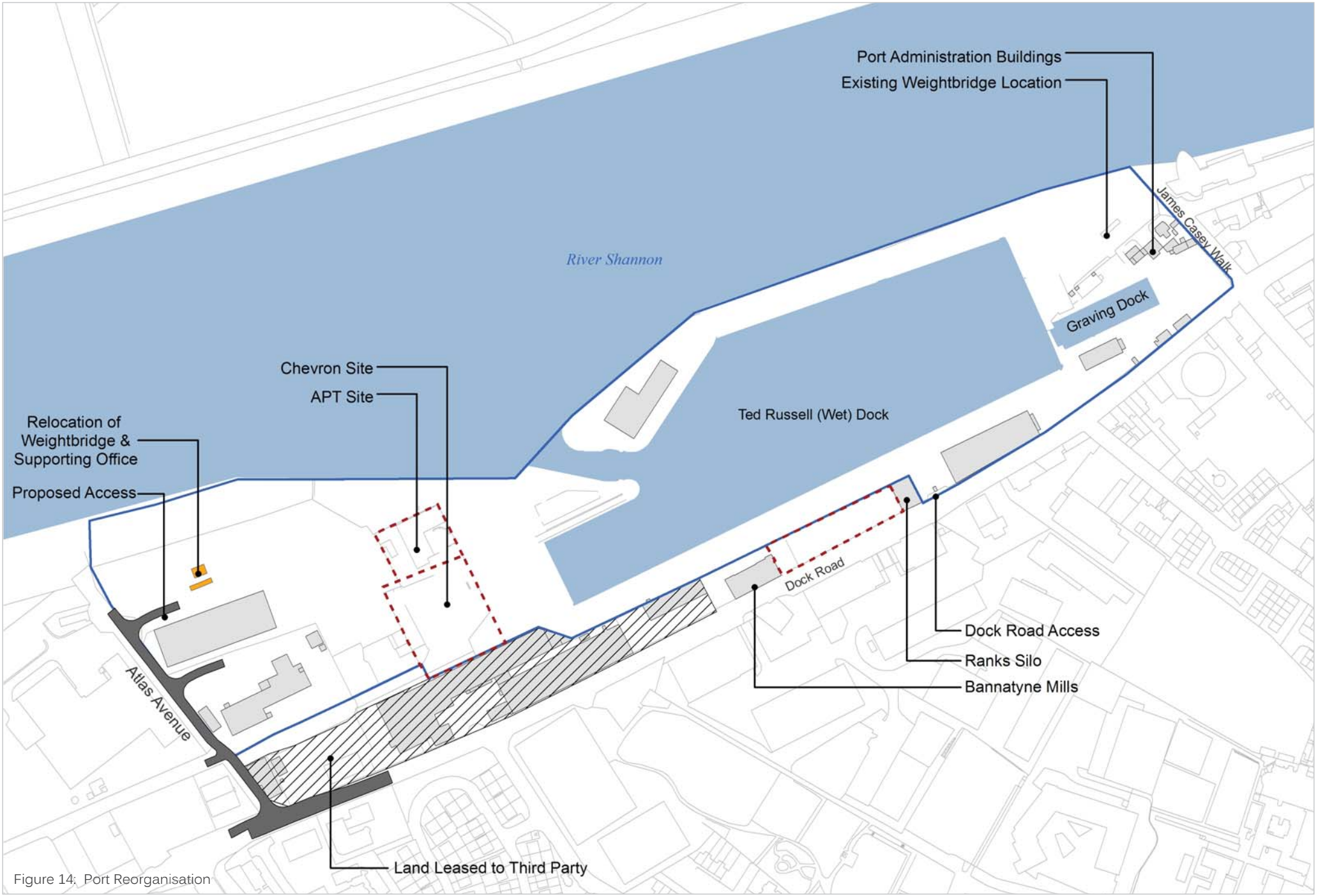


Figure 14: Port Reorganisation

5.2 Intervention 2 - Operational Port

Total tonnage throughput at Ted Russell Dock is significant increasing from 565,000 tonnes in 2015 to 769,597 tonnes in 2017. The value of Ted Russell Dock to the region is also significant. Commercial activity of customers of Ted Russell Docks is estimated to have resulted in €77.2 million of expenditure in the regional economy on non-labour goods and services in 2014[5]. In line with Development Objective No.1 there is a need "to define the operational port and facilitate greater efficiencies in terms of internal reorganisation of operational activities".

5.2.1 Operational Area

The established operational port area extending from Atlas Avenue to James Casey Walk is 16.9 hectares in area. However not all of this area is devoted to the workings of the port with land leased to Irish Wire and other existing warehousing. When this land is deducted the operational port has a land area of 14.7 hectares. Within the 14.7 hectares there were 2 no. contaminated sites comprising buildings and storage tanks and which were previously used for the storage of oil products. Although located within the operational port area these areas have not contributed to the functional working area of the port for many years and remain unutilised. SFPC are currently in the process of remediating these sites. They have already remediated the Chevron site (0.52 hectares) and are currently in the process of remediating the APT site (0.33 hectares), thereby reintroducing 0.85 hectares of land back into the operational port area and increasing the functional area available to port users.

In addition to increasing and enhancing the functional area of Ted Russell Dock, there is also a need to reorganise the internal operational port area. Bannatyne Mills and Ranks Silo, both currently vacant and identified as non-core assets are two protected structures which must be not only conserved and enhanced but also returned to a commercial use. Dominating the Dock Road, both buildings stand in the midst of the operational port area, devoid of any demarcated curtilage or service space. Storage of material for export separate both buildings, dominating views from the city side.

They now lie outside the defined operational port are and it is proposed to relocate this current port storage area to within the newly demarcated operational port area. It is noted that 0.47 hectares of land will be available for the setting and servicing of these two important buildings.

In overall terms, land re-organisation within the operational port, will result in an overall net gain (0.38 hectares) of functional port area.

5.2.2 Operational Activities

Relocating the primary vehicular access to Ted Russell Dock, away from Dock Road and onto Atlas Avenue, will necessitate the relocation of internal operating facilities from the eastern end of the Docks to the western end adjoining Atlas Avenue. The weighbridge currently located at the eastern extremity of the Docks in proximity to the main entrance gates off James Casey Walk will be relocated to the proposed new entrance off Atlas Avenue, along with a new support administrative building. Relocating these facilities will:

- *Support the provision of a new primary access point into the Docks;*
- *Ensure that port activity is concentrated at the western end of the Docks in proximity to the main functional and operating area of the Docks and away from the city centre;*
- *Minimise unnecessary truck movements past a number of protected structures including Bannatyne Mills, Ranks Silo and the cluster of heritage buildings and protected structures located at the eastern access gates adjoining James Casey Walk.*

Overall it will result in more efficient internal movement patterns and result in reduced operation times.

5 Economic Impact Assessment – Shannon Foynes Port Company, W2 Consulting, August 2015

5.3 Intervention 3 - Bannatyne Mills & Ranks Silo

Two imposing buildings dominating the Dock Road, both buildings stand on the edge of the operational port area. Both protected structures of significant architectural and industrial interest, they have formed and shaped the character of the Dock Road and the port. Although identifying and promoting a use for the Ranks Silo may be somewhat difficult, in line with Development Objective No.4 there is a need "to facilitate the use of Bannatyne Mills and ensure that the building and the identified ground around it can adapt to different needs and demands over time".

5.3.1 Bannatyne Mill

Bannatyne Mill is an imposing five-storey over vaulted ground floor limestone building. Built between 1873 and 1874 this former corn store is a rare example of Victorian industrial architecture. Bannatyne Mill is technically significant as the building's frame is made of cast-iron and is encased in cut stone and rubble.

With a floor area of 3,129sqm the building has enormous development potential and could facilitate either single or multiple occupation. Zoned for light industry use there is a specific objective in the Limerick City Development Plan to provide for marine related industry at this location. There is also an objective to provide for high tech, educational, business uses. For example use of the building for research and innovation purposes or as incubator units particularly related to the concept of a Limerick Docklands Economic Park at this location, is to be encouraged. Such uses would also conform with Policy EDS.3 in the Development Plan where it states that "it is the policy of Limerick City Council to facilitate the sustainable development of the Limerick Docklands as a Strategic Employment location within the City".

Although it would be desirable to facilitate marine related industrial uses within the building and which would be compatible with the promotion of the Docks as a Marine Economic Park, high tech, educational, business and other light industrial / manufacturing uses could also be considered and are not to be excluded.

The building has already benefited from significant investment by SFPC and has been made water-tight over the last number of years with a new roof. However, returning the building to active use will require significant additional investment and refurbishment, with significant internal modification envisaged.

5.3.2 Ranks Silo

Built in 1935, Ranks Silo is a freestanding, multi-storey reinforced concrete structure. With a floor area of 2,928sqm, the structure is windowless except for openings at ground floor and a circular opening at attic level. The building is of architectural, historical and technical interest due to its internal concrete construction frame.

The adaptation of this building into a future use will need to be carefully examined and explored and assessment of its feasibility and viability undertaken having regard to its internal construction arrangements Identifying future potential uses for this building are particularly challenging but are most likely to be of public, cultural or recreational use. A recent international competition hosted by DoCoMoMo Ireland and Limerick City of Culture, to develop ideas for what this iconic building might become, presented interesting and imaginative concepts. Entrants to the competition identified a diversity of uses including a craft centre, a piano recital space, an energy centre, a boat building facility, a swimming complex, a museum, a 3D printed fabrication laboratory and a library depot. There are many examples of converted silos across the world but Ranks Silo would necessitate significant investment to facilitate conversion and as a result would most likely necessitate public investment.

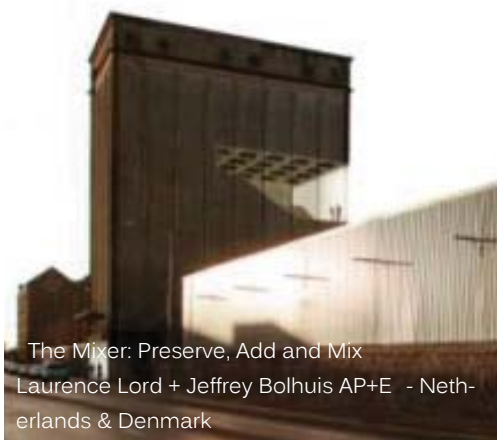
'....Both protected structures of significant architectural and industrial interest, they have formed and shaped the character of the Dock Road....'


View of Bannatyne Mill & Ranks Silo


Ranks Silo

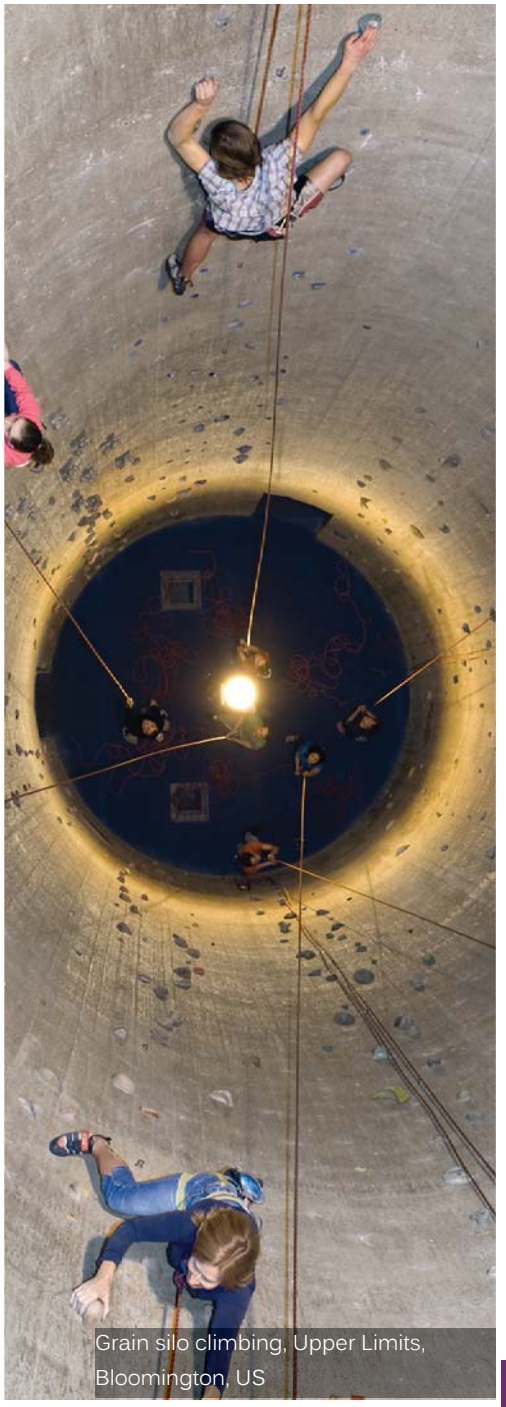

Bannatyne Mill

Internal entrance detail - Bannatyne Mill



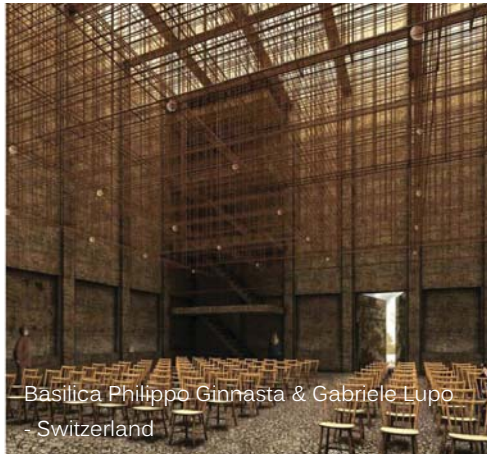
The Mixer: Preserve, Add and Mix
Laurence Lord + Jeffrey Bolhuis AP+E - Netherlands & Denmark

Independent Cinema
GAAD



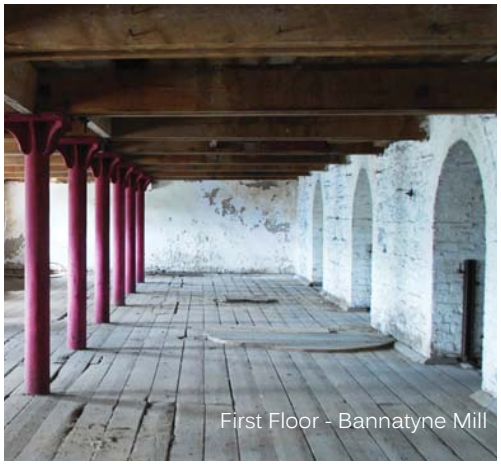
Grain silo climbing, Upper Limits, Bloomington, US

InterSpiral Staircase - Bannatyne Mill



Basilica Philippo Ginnasta & Gabriele Lupo - Switzerland

silOH!, Strolling in Limerick, On a High!
Simone Picano, Daria Passaro



First Floor - Bannatyne Mill

Irish National Seed Vault_Stephan Brugger & Eva Hierzer - Austria

Digital Docks
Sinead Delaney & Brendan Feeney

5.3.3 Development Potential

The focus of 'intervention 3' within Ted Russell Dock is to ensure that Bannatyne Mill can function as an independent, commercial unit, in harmony with but separate to port activities.

To facilitate the use of Bannatyne Mill, either separate to or in conjunction with port activities, the operational port area of Ted Russell Dock has been modified and set back from the edge of the Dock Road, thereby affording dedicated and independent, operational space to Bannatyne Mill and Ranks Silo. The indicative site layout plan demonstrates how Bannatyne Mill can be accessed and serviced directly from the Dock Road, utilising existing and established access points into the port.

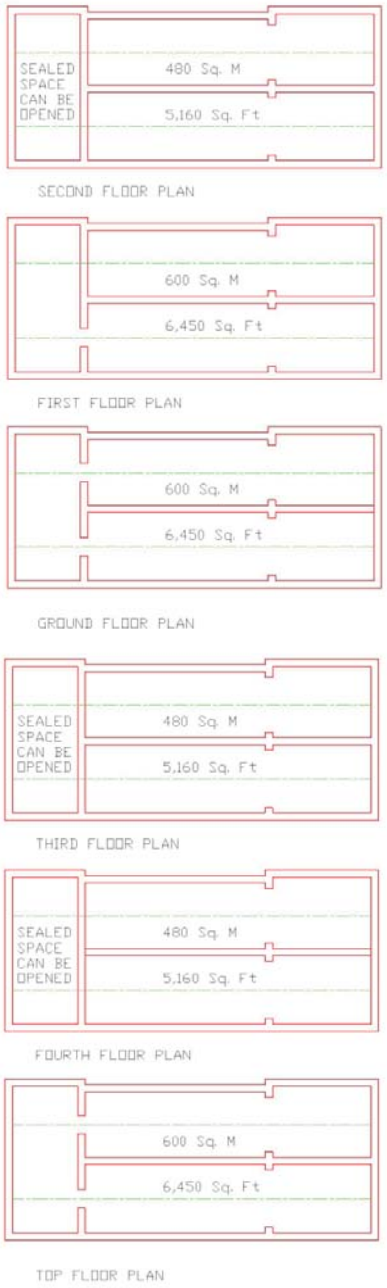
The area of land between Bannatyne Mill and Ranks Silo is sufficient to provide for 110 no. car parking spaces in accordance with the car parking requirements of the Development Plan, which stipulates that a building of this size would necessitate 125 spaces if put into office use and 89 spaces if put into light industrial use. Whilst this land has been identified for car parking in the short to medium term, to facilitate the efficient operational use of Bannatyne Mill, the long term use of this land should be re-evaluated having regard to its proximity to the city centre and its location within an identified strategic employment hub proximate to existing multi storey car parking.

Any existing or future car parking demand arising from the use of Bannatyne Mill, Ranks Silo or future development on site can be accommodated on remediated non-core port lands. Direct access to these lands can be accommodated from Atlas Avenue with provision for future internal pedestrian linkages.

In order to enhance the visual appearance and setting of the building, it is proposed to relocate the existing substation that presently masks the entrance to Bannatyne Mill and to remove the existing single storey structure located immediately west of the building. It is also proposed to redesign the boundary wall between Bannatyne Mill and Ranks Silo thereby opening up the view and enhancing the vista of both buildings and the port. Redesigning of the existing port boundary will also have the effect of reconnecting the port with the city and Dock Road. These works, along with improvements proposed to the Dock Road streetscape, which shall be outlined in the forthcoming R510 Dock Road Improvement Study will significantly enhance the visual appearance of Dock Road and seek to re-connect the area with the city centre.

In conjunction with the OPW and other relevant bodies, adequate flood mitigation measures will need to be factored into the regeneration and reuse of Bannatyne Mills. Because it is not possible to raise the finished floor levels above the design flood level, consideration could be given to the erection of demountable flood barriers to provide additional protection. It is also likely that extensive investigations and works will have to be undertaken to seal off any flow paths through walls.

'....Regeneration for Bannatyne Mills will significantly enhance the visual appearance of Dock Road and seek to reconnect the are with the city centre...'



Floor Plans of Bannatyne Mills

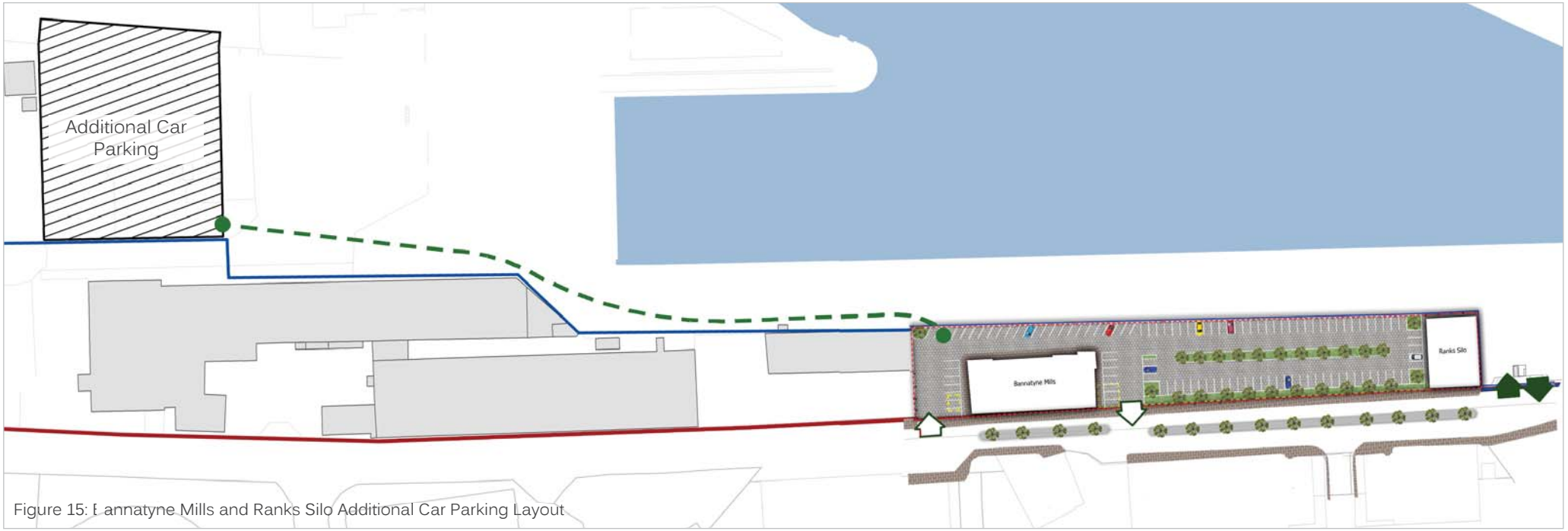


Figure 15: Bannatyne Mills and Ranks Silo Additional Car Parking Layout

Figure 16: Bannatyne Mills and Ranks Silo Proposed Layout

Figure 17: Proposed View of Bannatyne Mills and Ranks Silo

Figure 18: Proposed View of Bannatyne Mills

5.4 Intervention 4– Heritage Cluster

The eastern end of the port, adjoining James Casey Walk and in proximity to the city centre, still contains many of the original port buildings and features constructed in the nineteenth century. This end of the port is rich in cultural and architectural heritage containing many fine buildings and features which are protected structures. Although this area still remains and will continue to remain part of the operational port, the proposed relocation of the weighbridge and administrative offices, will reduce the flow of traffic and opera tions in this area.

An opportunity is therefore afforded to reconnect this area of the port with the city and in line with Development Objective No.3 and No.8 there is an opportunity *"to identify uses for a number of protected structures throughout Ted Russell Dock and visually enhance their setting through demolition of insignificant buildings and landscape treatment"* and *"to facilitate controlled public access to restricted areas within Ted Russell Dock and to promote SFPC's archival material and historic records as part of the tourism offer of Limerick city".*

5.4.1 Historic Significance

The configuration of the port at the end of the nineteenth century is clearly shown on the second edition Ordnance Survey map of 1900. This area of the port was substantially altered in the early twentieth century and along with a reduction in size of the Graving Dock, the area of river in front of the quay was reclaimed to increase the surface area of the port. Some buildings including the Harbour Office, Harbour Masters House, Customs Office and limestone boundary wall fronting onto the public road are significant but are not protected structures within the development plan whilst others such as the Dock Clock, Graving Dock and the James Casey Walk port entrance gates, have been afforded adequate recognition as protected structures.

This area of the port has suffered from a number of inappropriate interventions over the years and following a detailed conservation assessment of the buildings, features and area, it is proposed to visually enhance the setting of the cluster of heritage buildings through the demolition and removal of insignifiicant buildings and features. Additional hard and soft landscaping will be undertaken to visually enhance the setting of the buildings, mindful of their location within an operational port.

5.4.2 Future Uses & Approach

The Harbour Masters Office is currently an administrative office for SFPC and this use will continue into the future notwithstanding relcoation of the weighbridge and associated administrative functions.

The Harbour Office, dominated by two Crimean Cannons, presently accommodates significant archival material which is open to the public on an appontment basis and subject to archival regulations. SFPC intends to continue to make its archive available to the public on a limited basis and within the prescribed archive regulations. With a clear commercial mandate, the primary fucntion of SFPC is to facilitate and enhance shipping on the Estuary and to develop and manage port infrastructure in its Harbour (Limerick Docks included).

However, consistent with its Corporate Social Responsibility (CSR) policy, SFPC explore subject to its governance requirements, a future working relationship with relevant organisations such as Limerick Civic Trust, with the aim of presenting the archival material on a more permanent basis to the public and promoting the port as a visitor attraction in its own right.

SFPC commits to making Ted Russell Dock more aesthetic and socially integrated by building on its existing public access strategy which facilitates organised tours including school tours. Whilst port operations themselves are of general public interest, so too is the significant archival resource and associated port infrastructure including the boiler and pump house associated with the Graving Dock. SFPC intents to provide, where practical external display / information cabinets within this area of the port to adequately disseminate information to organised tours and groups.

There are a number of other initiatives which SFPC will consider in order to effectively integrate the port back into the city and create societal links. SFPC will examine and consider hosting, where practicable, maritime events such as European Maritime Day and will continue its highly successful and popular bi-annual schools competition. Consideration will also be given to building on the concept of Ted Russell Dock as a 'Venue' for ad hoc music concerts or cultural activities. Ted Russell Dock already hosted a tented music gig in that area of the working port, north of the main entrance gates adjoining the Clarion Hotel, in 2009.

Existing View of Clock Tower

Figure 19: Proposed Historical Cluster Layout

Existing View of Custom House

Figure 20: Proposed View of Custom House

'...SFPC commits to making Ted Russell Dock more aesthetic and socially integrated by building on its existing public access strategy which facilitates organised tours including school tours...'

Existing View of Heritage Cluster

Figure 22: Heritage Cluster Operating as Working Dock

Figure 21: Informal / Occasional Public Space

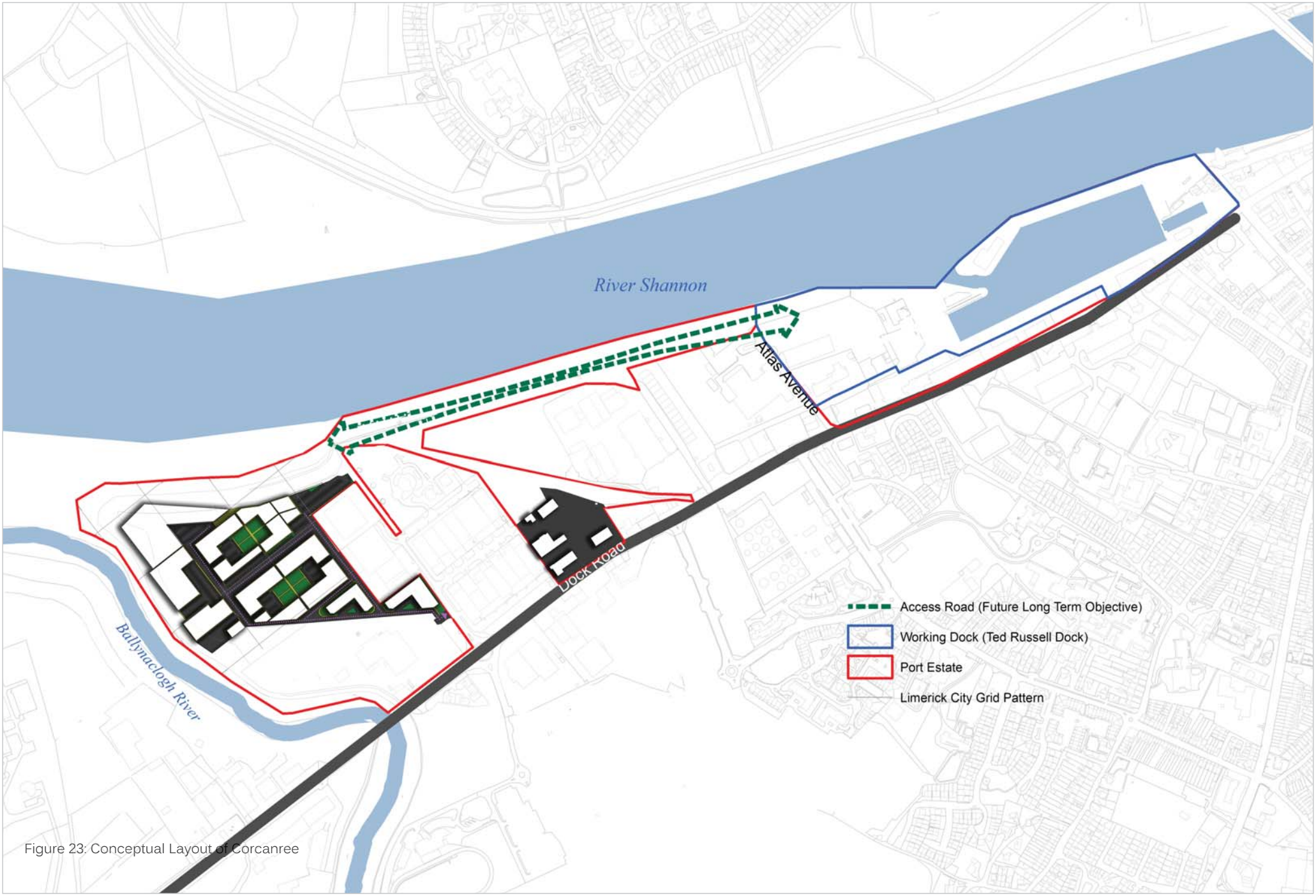


Figure 23: Conceptual Layout of Corcanree

5.5 Intervention 5 – Corcanree Business Park

SFPC owns a significant landbank within Corcanree Business Park, removed from the operational port area and surplus to current and future needs of the port. This strategic landbank proximate to the city centre could potentially accommodate industrial type development either related to port operations or separate to it. In line with Development Objective No. 9 there is an opportunity "to promote the use of greenfield land within Corcanree Business Park for industrial / maritime related use"

5.5.1 Landbank

There are two parcels of land comprising a greenfield and brownfield site. The greenfield site is substantial, comprising 12.9 hectares, and is located at the westernmost extremity of the Docklands. The site is directly accessed via an internal road within the business park which has direct access onto a roundabout on the R510 Dock Road just east of the Dock Road Interchange providing linkage to the M7, M20 and M18. A wayleave maintained by Limerick City Council runs in an east – south west direction through the site. This is the last greenfield site remaining in the Corcanree Business Park and is the only undeveloped commercial / industrial site located in such close proximity to the city centre, whilst also having direct linkages to the national road net-work.

The brownfield site with an area of 1.9 hectares comprises the former Heiton Buckley retail unit and associated lands with direct access onto the Dock Road. In a vacant and idle state for quite some time, there is a need to return the property to commercial use, if not for financial return but also to visually enhance the appearance of Dock Road and the businesses fronting onto it.

5.5.2 Development Potential

Both landbanks are suitable for immediate development / occupation with appropriate industry / maritime related uses. The greenfield land in Corcanree has been laid out in a grid pattern, suitable for accommodation of a number of smaller units or one large unit. The layout of the site has had regard to the ecological sensitives of the site adjoining the River Shannon and has also sought to protect the wet ditch containing in places the legally protected opposite leaved pondweed.

Perhaps of most significance to these landbanks is the potential to provide for a direct, internal connection to the operational port, should the need arise in the future. Comprising two narrow strips of land which meet at the north eastern corner of the greenfield site, the land has a v-shape (wishbone) appearance. Extending from the greenfield site to Atlas Avenue along the northern boundary of the Docklands and adjoining the embankment of the River Shannon, the land has the potential to accommodate an access road, or alternatively a walkway / cycle path. Such provision could be accommodated in association with Limerick City & County Council should the need arise in the future. This land has the potential to provide for excellent connectivity within and throughout the Docklands and Corcanree Business Park and could also be accommodated as third party lands are developed / redeveloped within the Docklands.

'.... Perhaps of most significance to these landbanks is the potential to provide for a direct, internal connection to the operational port, should the need arise in the future. ....'

5.6 **Intervention 6 –** Limerick Docklands Economic Park

Whilst each piece of land and each structure within the Docklands can operate in isolation and accommodate a wide range of technological and industrial associated uses, a platform has been proposed as part of this Framework Plan to promote the Docklands as an Economic Park with a focus on technology and marine energy uses and testing. The intention is to further position SFPC's continuing commitment to the promotion and commercialisation of the energy industry and to facilitate a commercial use and return from its non core assets. These aspirations are in line with Development Objective No.10 which seeks "to market Limerick Docklands as a 'Economic Park' and secure appropriate funding".

The locational qualities of Limerick Docks proximate to the city centre but with immediate access to the national road network are attractive qualities to potential investors and are recognised in promoting the concept of a Limerick Docklands Economic Park. In addition its access to sheltered and protected waters for testing and experimenting purposes supports the emphasis places on the energy industry.

The Docks offers a ready made 400m X 150m tidal test facility site and a 80m x 50m dry dock to facilitate construction and repair. It also offers the necessary infrastructure, ports, grid and supply chain capability which developers/investors need in order to deliver a commercial scale energy project.

It is considered that a Limerick Docklands Economic Park would serve three distinct but mutually interdependent functions:

- *As a viable operational port;*
- *As a technological hub and research cluster in proximty to the city centre*
- *As a prototype energy demonstrator site, promoting renewable energy and educating the public*

Branding of Limerick Docklands as a Marine Energy Park was first proposed in SFPC's Masterplan Vision 2041, in 2013. Since then a number of initiatives have progressed which confirm the potential of Limerick Docklands as a Marine Energy Centre of Excellence. Ted Russell Docks is now recognised as a viable marine testing site by the Centre for Marine and Renewable Energy in Ireland (MaREI). This 'testing site' is already in use by the University of Limerick Mobile & Marine Robotics Research Centre for the testing of a marine renewable energy remote operation vehicle (MRE-ROV) for challenging wave, tidal, and wind conditions. GKinetic Limited successfully tested its 8kW prototype at the testing site in Limerick Docks for the past few years. Tests at Limerick Docks, have supported the initial results from one of the world's leading tidal laboratories, the IFREMAR centre in Boulogne-Sur-Mer, France. The developed 25kW device will also be tested at Limerick Docks prior to being deployed at certified river or estuary test sites These operations demonstrate how a working port and a live test facility can operate in tandem without conflict.

This Framework Strategy extends the concept of a Marine Energy Park to that of an Economic Park in recognition of current market conditions and the unique qualities offered by Limerick Docklands, which could be attractive to many investors and business operators. The unique historical city environment that is steeped in heritage with buildings of exemplary historical and architectural, and industrial significance are qualities that make Limerick Docklands a desirable and attractive hub for economic research and development.

'....Irish marine energy sector is one of the fastest growing in Ireland in terms of renewable energy....'

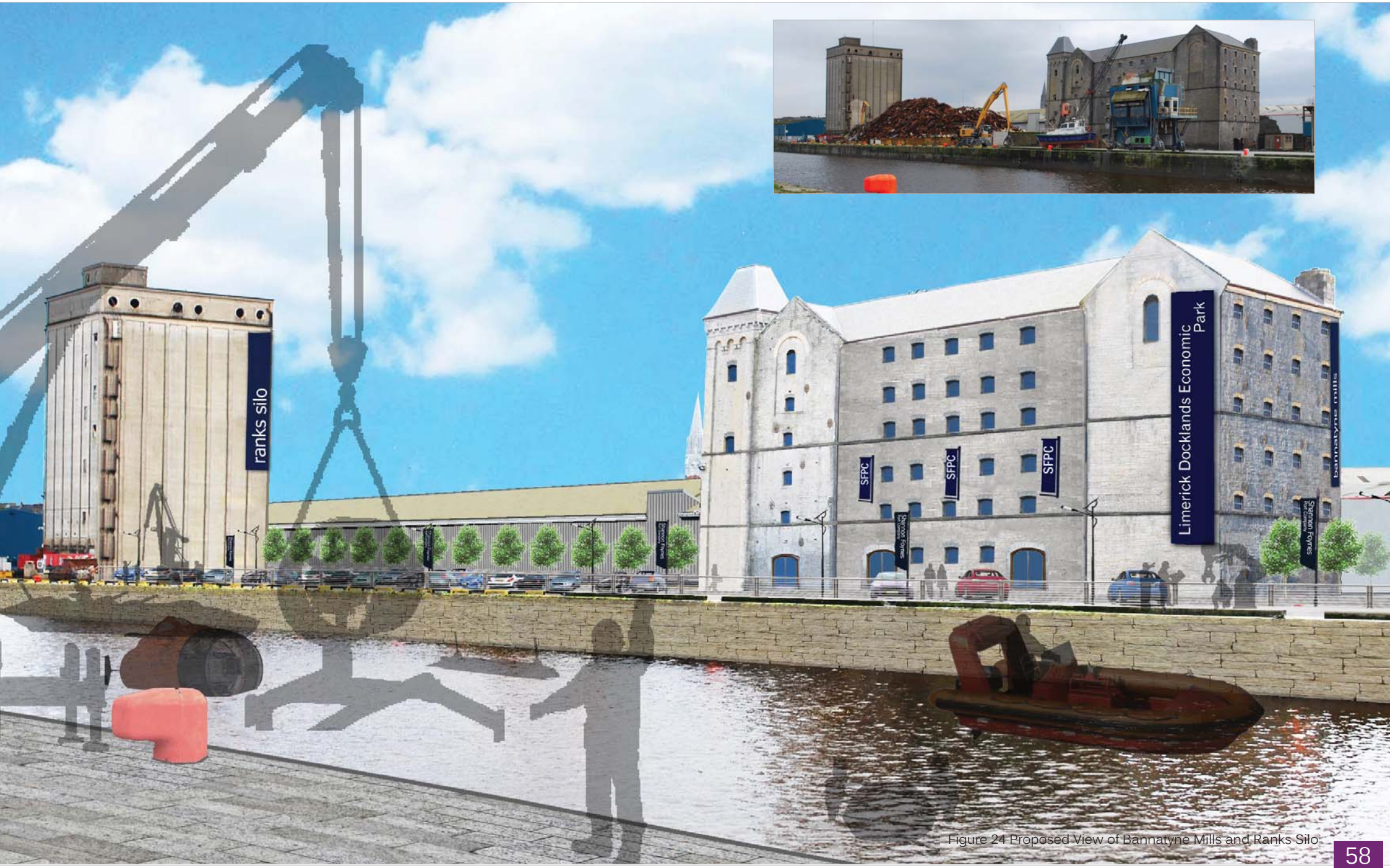


Figure 24 Proposed View of Bannatyne Mills and Ranks Silo

6.0 Implementing the Framework

6.1 Co-ordination of Delivery

The Limerick Docklands Framework Strategy recommends a number of objectives, the delivery of which are dependent on other third parties and public bodies. The Framework Strategy will be implemented through collaboration and engagement with all relevant stakeholders, proactive project management and ongoing monitoring of progress, together with consultation and feedback from key stakeholders. Innovative ways of delivering infrastructure and facilities by levering implementation through imaginative strategic partnerships such as joint ventures with the private sector will be pursued.

SFPC will seek to coordinate with all relevant stakeholders, including Government Departments and agencies responsible for the provision of infrastructure to ensure coordinated delivery and funding. In particular the provision of a new access from Atlas Avenue into Ted Russell Dock will need to be identified in the R510 Dock Road Improvement Scheme and will require action by Limerick City & County Council and most likely funding by Transport Infrastructure Ireland. It is acknowledged however, that Limerick City & County Council is responsible for a huge range of services – economic development, urban regeneration, roads and transportation, and it will be necessary to draw on the range of expertise, skills and responsibilities of the organisation in ensuring the successful delivery of the Framework Strategy.

There are of course also many actions that can be delivered by SFPC in consultation with stakeholders without the need for formal permitting consent. Table 6.1 provides implementation details on the specific objectives detailed in the Framework Strategy and endeavours to provide a realistic timeframe within which the objectives can be delivered.

The following timescales should be noted:

- Short term: 1- 2 years
- Medium term: 3 – 5 years
- Long term: Beyond 5 years

6.2 Statutory Policy

Limerick Docklands is part of the wider Dock Road Area, which itself lies on the edge of Limerick City centre. The reintegration of the area into the city in both policy terms and actual physical connections is essential in regenerating the area. The Limerick City Development Plan sets out the strategy for the sustainable development of the city into the future, including a set of specific policies and objectives applicable to the Docklands. However, the Development Plan will need to be amended to give clarity to a number of proposals within the Framework Strategy as necessary, including re-examination of the extensive buffer area within Corcanree Business Park and the potential future community / cultural/ recreational use of Ranks Silo within an area zoned for light industrial use.

The urban regeneration of the Docklands must be set within the wider context of the city in an integrated way, locking the area into the shared vision for a sustainable city. The only way that this can be comprehensively achieved is through the Limerick City Development Plan and the integration of key concepts and objectives from the Framework Strategy into the statutory development plan for the city.

6.3 Future Development Projects

The Framework Strategy is not an application for planning permission and will not of itself grant approval for any works. Rather it provides a framework for setting out the Port's aspirations, and will assist in informing the consideration of projects and planning applications made as and when necessary. All development projects will be subject to capital appraisal and cost benefit analysis at the time of implementation and those requiring planning and/or marine consents will be subject to full and appropriate appraisal, as may include compliance with the Habitats Directive 92/43/EEC as amended by Council Directive 97/62/EC1 and the Birds Directive (2009/147/EC) in respect of Appropriate Assessment (AA).

6.4 Marketing

Limerick Docklands, along with the wider city, requires specific marketing to attract investment and high value development. An unrivalled urban quarter with unique marine and heritage qualities in the Mid West region, the Docklands must be branded and marketed internationally as an attractive and prime location for investment. Limerick Docklands can build on these qualities and become a vibrant, creative, heritage-rich and contemporary part of the city. Successful implementation of the Framework Strategy will require continued communication about the real benefits of working in the area, and creating strong relationships with individual businesses and sectors, communities and cultural actors to build, share and promote a tangible vision of the end product envisaged in the Framework Strategy. Drawing on the views and expertise of key stakeholders such as the IDA, Enterprise Ireland, Limerick Chamber, and multi-nationals/ big companies will be essential.

Table 6.1 List of Actions arising from the Framework Strategy

Action	Responsibility	Timeframe	Funding
Improve the junction at Atlas Avenue to accommodate an alternative primary access to Ted Russell Dock thereby reducing traffic movement on the Dock Road in proximity to the city centre.	Limerick City & County Council	Short Term	Transport Infrastructure Ireland Limerick City & County Council
Provide an alternative primary access to Ted Russell Dock (operational port) from Atlas Avenue	SFPC	Following improvements to Atlas Avenue junction	SFPC
Relocate the weighbridge and associated administrative support offices to the western end of the operational port	SFPC	Following provision of new access	SFPC
Remediate non-functional port land and reconfigure the operational port area.	SFPC	Short Term	SFPC
Redefine the space around Bannatyne Mill and provide new boundary fencing between the operational port and the Dock Road.	SFPC	Short to Medium Term	SFPC
Redesign the wall fronting onto Dock Road connecting Bannatyne Mill and Ranks Silo thereby opening a vista to the working port. Redefine the space with attractive boundary treatment.	SFPC	Short to Medium Term	SFPC
Adequately landscape the space around Banantyne Mill and Ranks Silo whilst providing for future car parking.	SFPC	Short to Medium Term	SFPC
Implement public realm works on the Dock Road in accordance with the R510 Dock Road Improvement Scheme	Limerick City & County Council	Short to Medium Term	Transport Infrastructure Ireland Limerick City & County Council
Facilitate occupation of Bannatyne Mill by commercial operators	SFPC Enterprise Ireland IDA	Medium Term	European Funding - ERDF Private Investment Funding
Explore adaptation of Ranks Silo into a cultural, recreational, public venue	SFPC	Long Term	European Funding - ERDF Private Investment Funding
Demolish modern interventions in proximity to historical and culturally significant buildings at the eastern extremity of the operational port and provide for improved landscape treatment.	SFPC	Short to Medium Term	SFPC Architectural Conservation Grants Scheme
Provide external information boards / panels and facilitate controlled, organised tours of Ted Russell Dock	SFPC	Short to Medium Term	SFPC Heritage Council LEADER
Facilitate the use of greenfield and brownfield land within Corcanree Industrial Park through appropriate lease arrangements.	SFPC IDA Enterprise Ireland	Short, Medium to Long Term	Private Investment
Explore the viability and practicality of formally providing for an internal link road along the Shannon Embankment as part of a wider future masterplan for the Corcanree Industrial Park and surrounding lands.	Limerick City & County Council	Long Term	Private Investment
Promotion of a Limerick Docklands Economic Park at Ted Russell Dock	SFPC University of Limerick Limerick Institute of Technology Limerick Clare Energy Agency SEAI MaREI Limerick City & County Council IDA Enterprise Ireland	Short, Medium to Long Term	SFPC University of Limerick Limerick Institute of Technology Limerick Clare Energy Agency SEAI

7.0 Environmental Consideration

7.0 ENVIRONMENTAL CONSIDERATIONS

There are a range and diversity of environmental matters applicable to Limerick Docklands. The purpose of the Limerick Docklands Framework Strategy is not to go into the same degree of environmental assessment as would be necessary for a planning application but to signpost key and relevant environmental considerations and the outcomes from a strategic level of environmental and ecological assessment undertaken to support the preparation of the Framework Strategy.

This section highlights how an operational port and adjoining unrelated port development can operate in harmony having regard to a number of environmental parameters including in particular noise and air quality.

7.1 Environmental Obligations

In discharging its role and promoting development within Limerick Docklands, SFPC remains committed to continual compliance with all applicable environmental legislation, related EIA Directives and other relevant requirements in the pursuit of their duties and powers and will take these fully into account in their actions and decisions alongside its pursuit of the sustainability objectives established nationally.

Environmental and ecological assessments have been undertaken to assess at the earliest possible opportunity, the potential of environmental consequences as a result of the interventions proposed within the Framework Strategy and detailed in Chapter Five. Such studies were also undertaken to incorporate specific strategic environmental objectives into the strategy and consequently, to influence any future site-specific projects undertaken. This integrated approach ensures that critical environmental interests are safeguarded, and adds value to the project as it promotes sustainable decision making.

SFPC has signed up to ECOPORTS which will involve the development of an Environmental Management System (EMS) for Limerick Docks. It will also allow for the exchange of experiences and the implementation of good practice in respect of port related environmental issues across Europe. By developing this EMS it also meets with recommendations outlined in the EC Guidance on the implementation of the EU nature legislation in estuaries and coastal zones.

7.2 Key Environmental Considerations

7.2.1 Air Quality

There are two areas in which Port activities have the potential to impact upon air quality, including port operations and transportation movements. Certain Port operations, notably the handling of dry bulks, have the potential to generate dust, whilst transportation movements to and from the Port can impact on sensitive receptors such as residential properties.

The handling of dry bulks is an important and ongoing part of the SFPC strategy at Ted Russell Dock, including commodities such as scrap metal, grain, animal feeds, fertiliser biomass, and rock salt. SFPC is committed to working with all of the relevant agencies in addressing air quality matters both upon and adjoining their operational landholdings.

The promotion of any new port-related project which has the potential to cause emissions and have a significant environmental impact would require a planning application and an accompanying environmental impact assessment to include a study into air quality. In cases whereby an existing site or future development project entails the storage and/or use of hazardous substances there are further legislative requirements in place for operators in compliance with the Seveso Directive. This is a matter for determination by Limerick City & County Council taking into account any advice or recommendations of the Health Safety Authority. In terms of managing and mitigating the effects upon air quality a number of physical and management practices are employed by SFPC and other port operators, including the minimisation of dust emissions emanating from the handling of dry bulk commodities. Such practices include working bulk stockpiles on the leeward side of the wind, sheeting of vehicles, and the deployment of road sweepers for cleansing of internal roadways.

7.2.2 Biodiversity

A detailed ecological assessment of Limerick Docklands is contained in Appendix A. SFPC operates within an estuarine environment such that shipping activity and port operations co-exist with a number of nature conservation sites of national and international importance.

The Habitats Directive 92/43/EEC), together with the Birds Directive (2009/147/EC) which form the basis of European nature conservation policy, has resulted in two international designations on the River Shannon bounding Limerick docklands – the Lower River Shannon Special Area of Conservation SAC (SAC site code 002165) and the River Shannon and River Fergus Estuaries SPA (SPA site code 004077). Taking into account the emerging policy framework applicable to the marine environment, there are likely to be further assessments and designations associated with the Shannon Estuary. SFPC will continue to work with all relevant stakeholders to inform and reconcile potential Port issues with biodiversity interests through for example, the National Parks & Wildlife Service (NPWS). Although the designations on the Shannon Estuary are based on nature conservation, it is accepted at a European level and in European guidance[6] that a balanced approach is required and is achievable between conservation of biodiversity and economic port development and activity.

6 European Commission Guidance Documents, Integrating Biodiversity and Nature Protections into Port Development (2011) and the Implementation of the Birds and Habitats Directives in Estuaries and Coastal Zones (2011)

SFPC seeks to maintain an acceptable balance, conducting their undertakings in such a way as to ensure the ecological designated areas are protected and their associated habitats and species are not put at risk.

Outside of the Habitats Directive there are other ecological sensitivities. The ecological study acknowledges that the areas of wet ditch habitat which occurs south of the embankment adjoining the River Shannon adds floristic diversity to the Docklands. The legally protected plant species opposite-leaved pondweed grows in this wet ditch and the report recommends that populations of this species should be conserved in the future.

7.2.3 Dredging

The approach channel and enclosed Dock at Ted Russell Dock requires maintenance dredging annually with quantities of up to 6,000 tonnes. A Maintenance Dredging Foreshore License is secured from the Department of Environment, Community and Local Government to facilitate such works. There are two approved dump sites for silt and mud dredged from Ted Russell Dock in Limerick which have been used since 1999, including a site lying just west of Cratloe Creek on the southern shore of the estuary and a site just west of the River Maigue and Mellon Point, directly in front of Sod Island in the centre of the river channel.

SFPC undertook (August 2011) an Appropriate Assessment of dredging activities with the specific aim of achieving the least impact on Natura 2000 conservation objectives through the identification of all appropriate mitigation measures. SFPC will continue to work with relevant stakeholders and statutory bodies to ensure that continued least impact is achieved. In addition to the requirements of the Habitats Directive such an approach also addresses the requirements under the EU Water Framework Directive and the EU Environmental Quality Standards Directive in respect of maintenance dredging.

7.2.4 Flooding

A Flood Risk Assessment was undertaken with reference to the requirements of "The Planning System and Flood Risk Management Guidelines" as published by the Department of Environment in November 2009. This study has informed the Framework Strategy and is contained in Appendix B. The Shannon CFRAM confirm that Limerick Docklands are located in an area where extreme water levels are driven by tidal rather than fluvial events. A 3d ground model of Limerick Docklands was generated and in conjunction with the CFRAMS estimates of food levels, the extent of Flood Zone A, B and C were predicted.

The majority of the lands in question are located within Flood Zone A with smaller sections in Flood Zone B. The location of the Docklands in Flood Zone A informs the overall Framework Strategy and in particular the non-port uses which can be considered within the Docklands.

In promoting Port projects for both new harbour infrastructure and new build premises or other bespoke projects, it shall be a requirement for any regulatory applications to be accompanied by a Flood Risk Assessment (FRA). Such assessments would be expected to evaluate the sources of flooding from rivers and tidal waters, from overland runoff, from groundwater, and from sewers and drains. The specifics of the project and local circumstances may be such that mitigation measures may be required.

7.2.5 Heritage

SFPC is fully aware of its obligations under the Planning & Development Act, 2000, as amended, as set out in the Architectural Heritage Protection Guidelines published by the Department of Environment Heritage and Local Government and will secure the preservation of all Protected Structures within Limerick Docklands. Ted Russell Dock is steeped in maritime history with many of the historical features and buildings still remaining today.

There are a total of six protected structures in and around Ted Russell Dock which fall under the control of SFPC including the Clock Tower, the Graving Dock, Gateway to Dock Yard Ranks Silo, Bannatyne Mills, and Spillane Tower.

A conservation approach has been adopted in the preparation of the Framework Strategy which seeks to preserve, conserve and re-use existing vacant buildings in so far as possible and a detailed Cultural Heritage Assessment of the building and Ted Russell Dock are contained in Appendix C.

7.2.6 Noise

SFPC seeks to both minimise and mitigate the impacts arising from Port operations upon nearby residential occupiers within the parameters of operating the business. Examples of such mitigation, where practical, includes the relocation of noisiest operations away from apartments and residential units, the incorporation of noise attenuation screening, good management practice and where practicable reducing noise at source.

In the case of significant development projects lying in close proximity to sensitive receptors, such as residential use, a detailed noise assessment should accompany a planning application setting out background noise levels, any anticipated increases, and the provision of mitigation measures. In terms of existing Port activity and potential noise nuisance there is a protocol of engagement in place between SFPC and Limerick City & County Council to jointly investigate and remedy any such incidences.

'.... a detailed noise assessment should accompany a planning application setting out background noise levels...'

7.2.7 Water Quality

SFPC has an important function in managing water quality, whether within the Port limits or within impounded dock systems such as Limerick Docks and it is critical that any future development which is brought forward is assessed for compliance with the Water Framework Directive (WFD).

In meeting the requirements of the WFD, the Shannon River Basin Management Plan 2009 – 2013 (SRBMP) has been prepared setting out the ecological status of the water body and if improvements are required how they will be secured. SFPC has worked closely with the local authorities in the development of the SRBMP to secure an appropriate strategy for protection of water quality on the Shannon Estuary. SFPC is implementing a rolling retro-fit of interceptors throughout its own property to improve water quality and to deliver future compliance with the EU Water Framework Directive.

The Marine Strategy Framework Directive (2008/56/EC) (MSFD) provides a more comprehensive view and deals also with ecosystem services in marine areas. Marine strategies must apply an ecosystem-based approach to the management of human activities. The provision of environmental safeguards necessary to minimise the incidence of oil pollution to "controlled waters" is an important function of SFPC, through preparation of emergency response plans to deal with oil spill incidents in its ports. In recognising this responsibility, SFPC is part of a consortium of parties in SEA-PT Limited, the Shannon Estuary Anti-Pollution Team, which maintains state of the art equipment to provide an immediate response to marine related oil pollution incidents and engages in ongoing training and development, as well as liaison with organisations world-wide, to ensure that any necessary response is world-class. This response provides the Shannon Estuary with the most effective and modern counter pollution measures in Europe.

7.3 Likely Effects of the Interventions Proposed

Limerick Docklands has already undergone a process of Strategic Environmental Assessment (SEA) undertaken by Limerick City & County Council in zoning the land for light industrial use. Accordingly this statement confirms that the subject land is suitable for a development purpose subject to appropriate mitigation measures in certain instances.

Some of the proposed interventions to be delivered on foot of this Framework Strategy will require formal planning consent and accordingly detailed environmental assessment will need to be undertaken in support of and to justify the development proposed. The ecological assessment undertaken for the preparation of this Framework Strategy will inform these future assessments.

7.4 Monitoring Environmental Effects

It is proposed to base monitoring on a series of indicators which measure changes in the environment, especially changes which are critical in terms of environmental quality, for example water or air pollution levels. The indicators aim to simplify complex interrelationships and provide information about environmental issues which is easy to understand. A list of environmental indicators is provided in Table 7.1 and have been derived from knowledge of the existing environmental issues within the Docklands area and also from legislation, guidelines and higher level Plans.

Environmental indicator assessment during monitoring can show positive/neutral impacts or negative impacts on the environment. Where an indicator value highlights a positive/neutral impact on the environment, it is likely that the policies and objectives of the Strategy are well defined with regard to the environment. Conversely where the objectives of the Plan have a negative impact on the environment, it may be necessary to review the objectives of the Strategy or to take some other form of intervention.

Table 7.1 Monitoring Programme

Environmental Category	Targets	Selected Indicators	When	By Whom	Source / Method
Biodiversity	To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	Project level HDA to be carried out Net area of new green infrastructure established as development projects advance.	Planning application stage	Limerick City & County Council Individual Promoters	Habitat Directive Assessment (HDA)
		Number of rare or threatened species.	5 year review	SFPC	
Population & Human Health	P01: Improve peoples' quality of life through the advancement of employment opportunities and enhancement of the public realm	Good quality design, setting and finishes. Facilitating a range of scale of employment types. Increase the percentage of port area open to controlled public access	Throughout the implementation of the Framework Strategy	SFPC Limerick City & County Council Individual Promoters	Planning applications and surveys
	Increase modal shift towards sustainable transport	Availability of public transport to the Docklands Use of transport modes by employees travelling to work	Planning application stage	Limerick City & County Council Individual Promoters	Travel & Traffic Surveys
	Minimise adverse safety impacts upon people arising from harbour related activities	Number of health and safety incidents	5 year review	SFPC	Accident Reports
Soils & Geology	No incidences of soil contamination	Number/severity of recorded pollution incidences	5 year review	SFPC	Incident Reports
	No incidences of soil contamination	Number/severity of recorded pollution incidences	5 year review	SFPC	Incident Reports
	Extensive use of SUDs measures in all development	Extent of SUDs systems put in place as part of new development	Planning application stage	Limerick City & County Council Individual Promoters	Application Drawings
Water	Prevent pollution and contamination of groundwater, maintain and improve coastal water quality	Compliance with discharge parameters.	5 year review	SFPC Limerick City & County Council	Water Quality Surveys Shannon River Basin Management Plan
	Minimise any potential flood risk	Provision of flood risk evaluations with proposed developments. % of planning applications that utilise SUDS.	Ongoing	SFPC Limerick City & County Council OPW	Flood Risk Assessment at planning application stage CFRAM maps
Air Quality	Promote sustainable air quality	Building compliance with Standards on Sustainable Design (2002/91/EC standards)	Planning application stage	SFPC Limerick City & County Council	Building Design drawings
	Maintain air quality standards within the port operations area	Air Quality Monitoring	5 year review	SFPC	Monitoring Surveys
Climate Change	To contribute to the reduction of greenhouse gas emissions arising from transport-related activities	Levels of Sectoral GHG emissions & Atmospheric Carbon Dioxide Levels Mode of travel patterns	5 year review	SFPC Limerick City & County Council EPA	Monitoring Surveys
Material Assets	Increase modal shift towards sustainable transport Travel	Increased use of sustainable transport forms Increase in public transport to and from Dock Road	Planning application stage 5 year review	SFPC Limerick City & County Council Individual Promoters	Travel and Traffic Surveys
	Facilitate brownfleld development	Ratio of brownfield site development to greenfield sites.	5 year review	SFPC Limerick City & County Council	Land use survey
Noise	Minimise noise impacts from uses within the Harbour	Monitoring and reporting associated with a Noise Action Plan	Planning application stage Ongoing monitoring as need / issues arise	SFPC Limerick City & County Council Individual Promoters	Noise surveys
Cultural Heritage	No loss of features of architectural or archaeological importance	Number of recorded features lost. Consideration of visual impact assessment studies	Planning application stage	SFPC Limerick City & County Council Individual Promoters	Cultural heritage and archaeological impact assessment
Landscape	Ensure that new development integrates and respects the natural form and character of the Docklands and the cityscape of Limerick whilst respecting its maritime setting	Appropriate scale, height and design of buildings Appropriate landscaping	Planning application stage	SFPC Limerick City & County Council Individual Promoters	Landscape & visual impact assessment

Appendices

Appendix A

An Ecological Survey of Lands Along the Banks of the River Shannon at Corcanree

October 2015

A report prepared by

Dr. John Conaghan,
Enviroscope Environmental Consultancy,
11 Dun Ard,
Craughwell,
Co. Galway.

Table of Contents

1. INTRODUCTION

Limerick City Council has recently established a zoning buffer along a section of the Shannon estuary on the western fringes of Limerick City (Grid reference R 550 561). This buffer strip is dominated by a river side embankment which runs along the southern banks of the river Shannon and the eastern banks of the Ballynaclough river (Figure 1). The buffer area also includes some flat agricultural land to the east and south of the embankment. The embankment is typically between 20 and 30 metres wide and is up to 5 metres tall in places. The buffer area adjoins the Lower River Shannon Special Area of Conservation (Site No. 002165) (Figure 1). In this general area the Shannon estuary margin which lies within the SAC is fringed by a wide zone of tall and dense reedswamp vegetation dominated by Phragmites australis (Common reed) with occasional small groups of willows (Salix spp.).

The main purpose of this survey is to describe and assess the composition and quality of the habitats which occur

2. METHODS

The site was visited and surveyed on the 28th of August 2015 and the 20th of January 2016. Habitats occurring within the site were classified according to the scheme outlined in "A Guide to Habitats in Ireland" (Fossitt 2000). During the site survey particular attention was paid to the possible occurrence of Annex I Habitats listed in the EU Habitats Directive and plant species listed in either the 1999 Flora Protection Order or the Irish Red Data Book (Curtis and McGough 1988). Vascular plant species nomenclature in this report follows (Stace 2010) while that of mosses follows Smith (2004).

In addition to surveying and describing the distribution of habitats and vegetation within the site, a number of digital photographs were taken and a selection of these have been included in this report.

3. RESULTS

The main habitats occurring within the survey area are described in the following sections. A map which shows the distribution of habitats within the survey area is presented in Figure 2.

within the buffer zone area and in the adjoining areas of land which lies within the ownership of the Shannon-Foynes Port Company.

3.1 Agriculturally improved grassland (GA1)

The majority of the land within the site, including the river embankment, which dominates the new buffer zone along the boundary of the SAC, is dominated by agriculturally improved grassland (Photograph 1). At the base of the embankment there is usually an abrupt transition to the adjoining reedswamp vegetation within the SAC which is influenced by river/tidal conditions. The dominant species in the vegetation include grasses such as Yorkshire Fog (Holcus lanatus), common bent (Agrostis capillaris), cocks foot (Dactylis glomerata) and perennial rye grass (Lolium perenne) with other weedy species such as creeping thistle (Cirisum arvense), common nettle (Urtica dioica) and bindweed (Calystegia sepium) locally abundant. The flat land directly behind the embankment is also dominated by this type of weedy agricultural grassland with creeping thistle conspicuous (Photograph 2). See Table 1 for a plant species list for the habitat.

In places there is localized development of low growing scrub in which bramble (Rubus fruticosus) is dominant. There are also occasional, well scattered, low bushes of hawthorn (Crataegus monogyna) growing on the embankment however areas of continuous scrub/woodland cover do not occur. At the eastern section of the site there are a number of large patches of the invasive alien plant Japanese knotweed (Fallopia japonica).

The buffer area and adjoining land to the east and south was grazed by a herd cattle on the day of survey and this has resulted in the localized poaching of soil on the top of the embankment.

Table 1. Species list for improved agricultural grassland.

Latin name	English name
Achillea millefolium	Yarrow
Agrostis capillaris	Common bent
Anthoxanthum odoratum	Sweet vernal-grass
Arrhenath erum elatius	False oat-grass
Bellis perennis	Daisy
Calystegia sepium	Bindweed
Centaurea nigra	Knapweed
Cerastium fontanum	Common mouse-ear
Cirsium arvense	Creeping thistle
Cirsium vulgare	Spear thistle
Cynosurus cristatus	Crested dogs tail
Dactylis glomerata	Cocks foot
Elytrigia repens	Common scutch grass
Holcus lanatus	Yorkshire fog
Lathyrus pratensis	Meadow vetchling
Lolium perenne	Perennial ryegrass
Matricaria discoidea	Pineappleweed
Odontites verna	Red bartsia
Plantago lanceolata	Ribwort plantain
Plantago major	Greater plantain
Poa pratensis	Common meadow-grass
Potentilla anserina	Silverweed
Potentilla reptans	Creeping cinquefoil
Prunella vulgaris	Self heal
Ranunculus acris	Meadow buttercup
Ranunculus repens	Creeping buttercup
Rhytidiadelphus squarrosus	A moss
Rubus fruticosus	Bramble
Latin Name	**English Name**
Rumex obtus ifolius	Broad-leaved dock
Senecio jacobea	Ragwort
Taraxacum officinale agg.	Dandelion
Trifolium pratense	Red Clover
Trifolium repens	White clover
Urtica dioica	Common nettle
Vicia sepium	Bush vetch

Photograph 1. A general view of the embankment area looking to the west. Note the grassy nature of the vegetation. In this area the embankment is wide and has a flat top (Photo taken August 2015).

Photograph 2. At the western edge of the site the embankment is dominated by tall vegetation with weedy species, such as creeping thistle, common (Photo taken August 2015) .

Photograph 3. A general view of the large field which dominates the western half of the survey area. Agricultural grassland with prominent creeping thistle dominates (Photo taken August 2015).

3.2 Wet grassland (GS4)

Wet grassland occurs throughout the survey area. The vegetation is visually dominated by hard rush (Juncus inflexus) (Photograph 4). Other frequent species include creeping buttercup (Ranunculus repens), creeping bent (Agrostis stolonifera), jointed rush (Juncus articulatus), meadowsweet (Filipendula ulmaria) and the wetland moss Calliergonella har asp . The habitat often occurs in mosaic with the dominant agricultural grassland habitat.

Latin Name	English Name
Bellis perennis	Daisy
Cynosurus cristatus	Crested dogs tail
Filipendula ulmaria	Meadowsweet
Holcus lanatus	Yorkshire fog
Juncus articulatus	Jointed rush
Juncus inflexus	Hard rush
Plantago lanceolata	Ribwort plantain
Poa pratensis	Common meadow-grass
Poa trivialis	Rough meadow-grass
Potentilla anserina	Silverweed
Potentilla reptans	Creeping cinquefoil
Prunella vulgaris	Self heal
Ranunculus acris	Meadow buttercup
Ranunculus repens	Creeping buttercup
Rhytidiadelphus squarrosus	A moss
Trifolium pratense	Red clover
Trifolium repens	White clover

Photograph 4. Wet grassland dominated by hard rush in the west of the survey area (Photo taken January 2016).

3.3 Broadleaved woodland (WD1)
A small area of planted broadleaved woodland/scrub occurs between a roadway and buildings in the centre of the survey area. Common species include ash (Fraxinus excelsior), hawthorn (Crataegus monogyna), sycamore (Acer pseudoplatanus) and birch (Betula sp.).

3.4 Drainage ditch (FW4)
Stretches of deep drain occur on the landward side of the embankment. These drains vary between 1 and 2 metres in depth and on the day of survey there was a shallow depth of water generally with little surface flow evident. The vegetation of the majority of the ditch is dominated by the floating duckweed (Lemna minor) (Photograph 5) with common water plantain (Alisma plantago aquatica) also frequent. Most of the steep ditch banks are dominated by the tall wetland grasses common reed or canary reed grass (Phalaris arundinacea). The legally protected aquatic plant species opposite-leaved pondweed (Groenlandia densa) (Photograph 6) was noted growing sparingly in the drain. This species is known to be occasional in wet ditches in the Limerick City area (Reynolds 2013).

See Table 3 for a plant species list from the habitat.

Latin Name	English Name
Alisma pantago-aquatica	Common water plantain
Callitriche stagnalis	Common starwort
Catabrosa aquatica	Water whorl grass
har asp.	Stonewort species
Equisetum fluviatile	Water horsetail
Equisetum palustre	Marsh horsetail
Filipendula ulmaria	Meadowsweet
Glyceria fluitans	Common flote grass
Groenlandia densa	Opposite-leaved pondweed
Lemna minor	Common duckweed
Lotus uliginosus	Marsh birds foot trefoil
Mentha aquatica	Water mint
Phalaris arundinacea	Canary reed grass
Phragmites australis	Common reed
Potamogeton pectinatus	Fennel pondweed
Stachys palustris	Marsh woundwort
Typha latifolia	Common bulrush
Urtica dioca	Common nettle
Vicia cracca	Tufted vetch

Opposite-leaved pondweed was recorded growing in two stretches of wet drain (see Figure 2 and Table 4). The species grows in areas of shallow water along c. 120m of wet drain in the west of the survey area and here it appears to be more frequent in areas where the water depth is less than 20cm. Frequently associated plant species include common water-plantain and fennel pondweed (Potamogeton pectinatus).

Table 4. Grid references for opposite-leaved pondweed locations.

Grid References	Comments
R 55726 56325	Species occurs along a 10m stretch of wet drain.
R 55194 56123	Larger western population. Occurs along c. 120 of drain.
R 55178 56120	
R 55156 56114	
R 55126 56108	
R 55072 56104	

In the middle of the survet area the species occurs along a 10 metre stretch of deep drain, growing in c. 1 metre of water.

Photograph 5. A general view of the wet ditch in the west of the site. A film of floating common duckweed dominates the water surface (Photo taken August 2015).

Photograph 6. Opposite-leaved pondweed growing submerged along a stretch of wet ditch in the west of the survey area (Photo taken August 2015).

3.5 Phragmites reedswamp (FS1) with scattered willow
The SAC area along the river Shannon which adjoins the fringing embankment is tidal and dominated by tall reedswamp vegetation on muddy substrate characterised by common reed (Phragmites australis) and occasional willow (Salix trees). The associated vegetation is quite species-poor however there is usually a scattering of wetland species such as water mint (Mentha aquatica), marsh bedstraw (Galium palustre) and canary reedgrass (Phalaris arundinacea) present.

4. CONCLUSIONS
The agricultural grassland habitat which dominates both the buffer area and much of the land within the survey area is considered to be of low ecological value. The constituent plant species of this habitat are typical of the habitat and are common and widespread throughout the country. Agricultural grassland of this type does not provide habitat for any rare or protected plant species.
The small areas of wet grassland and broadleaved woodland which occur within the survey area are also considered to be of relatively low ecological value.
The areas of wet ditch habitat which occur behind the embankment is a wetland habitat which adds floristic diversity to the site. The legally protected plant species opposite-leaved pondweed grows in this wet ditch and the populations of this species should be conserved in the future.
The habitats which occur within the buffer survey area, i.e. the embankment and associated wet ditch on the landward side, do not correspond to any habitats listed in Annex I of the EU Habitats Directive.

References

Curtis, T.G.F. and McGough, H.N. (1988). The Irish Red Data Book. 1. Vascular Plants. The Stationery Office Dublin.

Fossitt, J.A. (2000). A Guide to Habitats in Ireland. The Heritage Council, Kilkenny.

Reynolds, S.C.P. (2013). Flora of County Limerick. National Botanic Gardens, Dublin.

Smith, A.J.E. (2004). The Moss Flora of Britain and Ireland (2nd edition). Cambridge University Press.

Stace, C. (2010). New Flora of the British Isles (3rd edition). Cambridge University Press.

Figure 1. An aerial photograph which shows the SAC area in relation to the area within the lands owned by Shannon-Foynes Port Company and the Limerick City Council buffer zone.

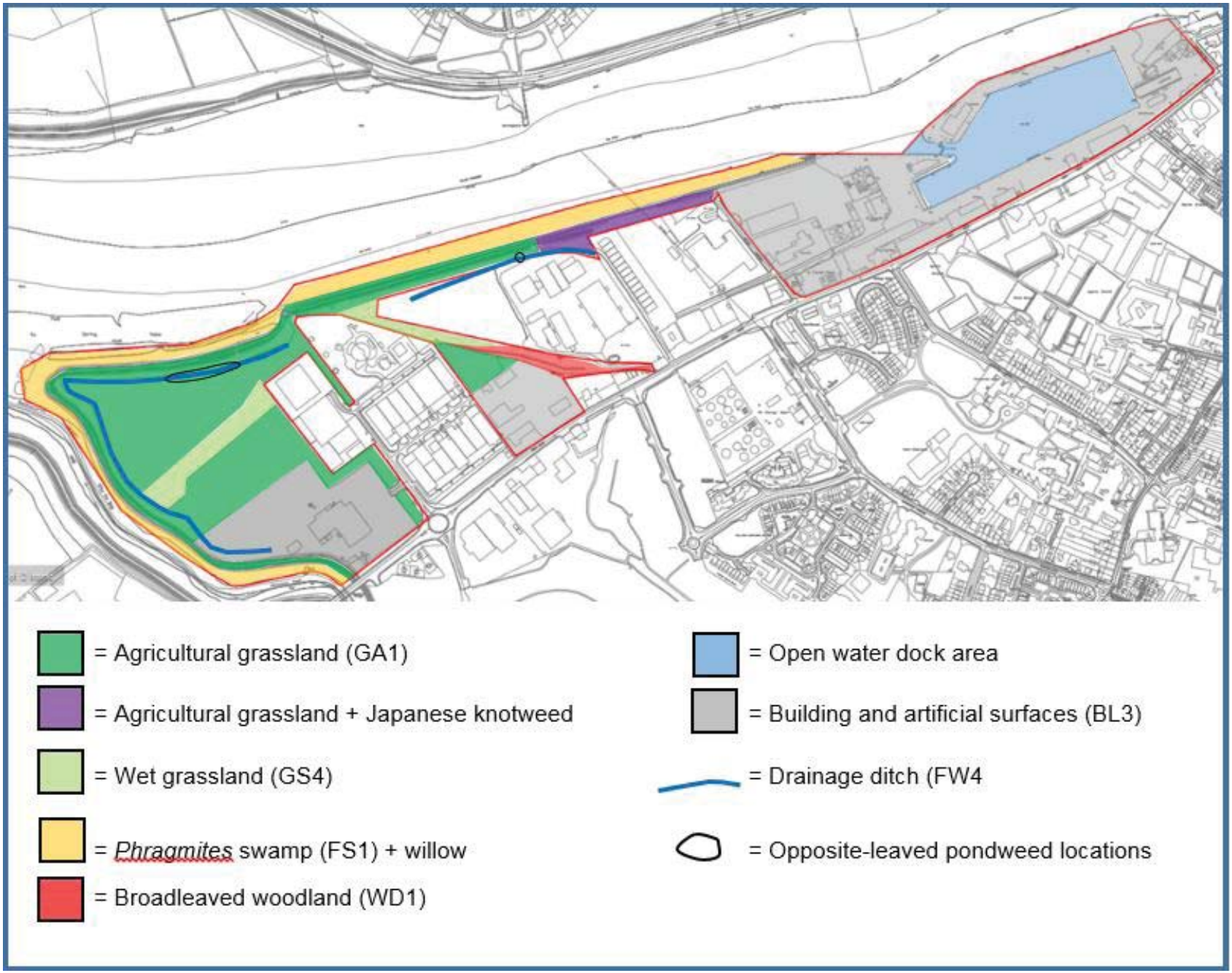


Figure 2 - A map which shows the distribution of habitats within the survey area

Appendix B

Limerick Docks Framework Plan
Recommendations Report
January 2016

PUNCH
consulting engineers

Table of Contents

1.0 Introduction

1.1 Background

PUNCH Consulting Engineers was appointed by HRA Planning carry out a Flood Risk Assessment of proposals for the Limerick Docks area of Limerick City. This report discusses the proposals for the Limerick Docks – Development Framework Plan with regard to potential flood risk in the area. This assessment has been carried out in with reference to the requirements of "The Planning System and Flood Risk Management Guidelines" as published by the Department of Environment in November 2009.

1.2 Nature of the Proposed Development

The Development Framework Plan consists of a number of proposals to develop sections of the Limerick Docks area of Limerick City. The lands identified for development are currently in the ownership of Shannon Foynes Port Company (SFPC). Figure 1 illustrates the extent of the lands which stretches along the bank of the Shannon Estuary from O'Curry Street/ Steamboat Quay to the bank of the Ballynaclogh River. These lands include the existing Dock area, commercial developments adjacent to Atlas Avenue and within Corcanree Industrial Park along with and greenfield areas adjacent to the N18.

Figure 1 – Extent of SFPC land ownership (Red Line)

There are a number of different proposals included in the framework. The list below gives a short description of each element (A to I) and the location of the proposals can be seen in Figure 2.

- Enhanced access to port operations: Primary access to the port will be from an upgraded Atlas Avenue Junction with port operations focused at the southern end of the port estate away from the city (marked 'A').
- Bannatyne Mills Redevelopment: Reuse of the existing building (marked 'B'), provision of car parking on adjoining lands (marked 'C') and in the very long term possible provision of commercial / industrial buildings within the car parking area and relocation of car parking to within the port area (marked 'D').
- Visual enhancement / enhanced linkage with city: Demolition of existing old buildings around port offices (marked 'E) and identification of future use as marine research offices. Use of old building (marked 'F') as an historical, archival building for the public / tourist market. Public realm works to area (marked 'G') to facilitate public access / interest.
- Internal connectivity: In the long term possible provision of a road, cycle-path and walkway along the wishbone adjoining the embankments and connecting the operational port to the Corcanree Industrial Park (marked 'H')
- Corcanree Industrial Landbank: Provision of multiple industrial / commercial buildings on this greenfield site with a buffer maintained along the southern and western boundaries (marked 'I').
- Currently, the proposals do not include for basements.

2.0 Flood Risk Study

2.1 Flood Risk Identification

The proposed development lands are located adjacent to the Shannon estuary, which is tidal in nature and The Ballynaclogh River, which flows along the western boundary of the proposed development lands. Due to the fact that the Ballynaclogh River discharges to the Shannon Estuary it can also be considered to be tidal. Various sources were examined in order to further

quantify the potential flood risk to the proposed development lands and these and are discussed in further detail in the following sections.

2.2 OPW Flood Hazard Identification Mapping

The OPW Flood Hazard Mapping Website identifies previous flood events but is not a complete record. The map below indicates that the lands in question have been subject to flooding associated with the Shannon Estuary previously. The most recent flood events along this stretch of the River Shannon occurred in 1999, 1997 and January 2014.

2.3 Irish Coastal Protection Strategy Study – Phase 4

The OPW commissioned RPS to carry out a study to assess coastal flooding and erosion extents in Ireland, known as the Irish Coastal Protection Strategy Study (ICPSS). This study has produced predictive flood maps and levels for flood events with various probabilities of occurrence (e.g. the 1% AEP event). 26 nodes were analysed starting at the Shannon Estuary and moving up along the estuary towards Limerick City. The predicted water levels at these nodes are based on analysis and modelling. The node closest to Limerick City is node 26 and as such was deemed the most relevant to this study. Appendix A contains an OPW map illustrating predicted water levels for various flood events in Limerick City based on Node 26. From this we note that the ICPSS predicts during an event with a 0.5% AEP (1: 200 year event) the water level in the Shannon Estuary at node 26 will be 4.59 m. Please note that this does not include an allowance for climate change.

For the more extreme 1:1000 year event (0.1% AEP), water levels of 5.0 m are predicted at node 26 m. When the water level of all the nodes is studied, it can be clearly seen that the predicted water is higher moving from the estuary towards Limerick City. Given that the Dock Road area is further upstream than node 26 it is assumed that water levels will higher there than at node 26.

It is important to note that the flood hazard mapping undertaken in this ICPSS study is for strategic purposes. Furthermore, any defence works potentially protecting the coastal floodplain are not taken into account. This means that areas may be shown to flood, even though at present a flood defence is protecting them. In

Figure 2 – Locations of Framework Proposals

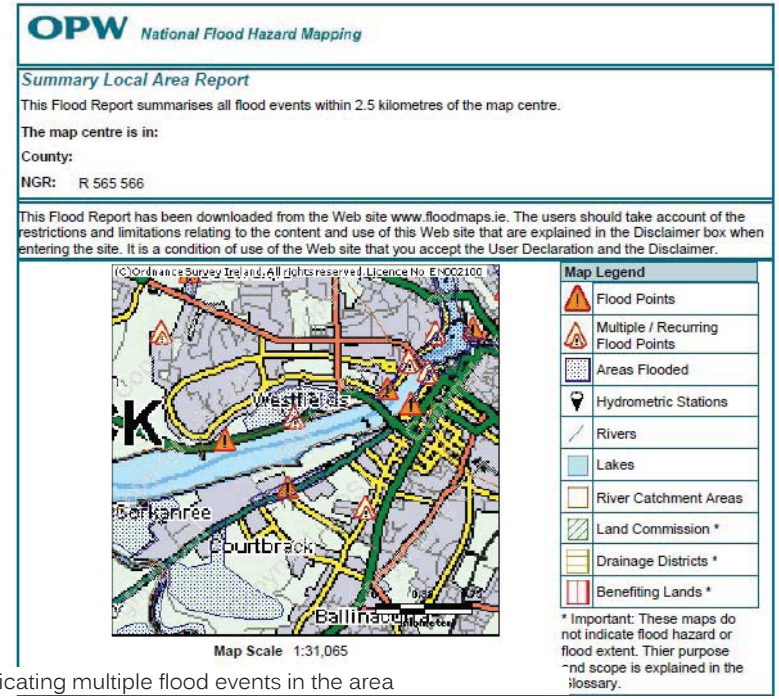


Figure 3 - OPW Flood maps indicating multiple flood events in the area

addition the flood extent mapping only takes into account coastal flooding; any significant impact from fluvial or other sources (sewers etc.) is not accounted for and needs to be considered separately.

As node 26 is located downstream of Limerick City, the map illustrating Limerick City does not include additional estimated flood levels. The predicted levels at node 26 were projected eastward toward Limerick City and do not take account of increasing ground levels moving upstream. Figure 4 illustrates the areas at risk of coastal flooding during a 1 in 200 year event. This map indicates that the proposed developments lands may be at risk during a 1 in 200 year event.

2.4 CFRAM Mapping - Estimates of flood zone and flood risk

The Shannon CFRAMS study was an extensive study on flood risk in the Shannon catchment and estuary. The latest maps were published in March 2015, and are available for viewing on the http://shannoncframstudy.ie/. These maps contain flood extents for tidal events for current and future scenarios; see Figure 5 and Figure 6. The Shannon Foynes Port Company lands are considered to be located in an area where extreme water levels are driven by tidal rather than fluvial events. As such, we consider that the predominant flood risk at site of the proposed development is a tidal flood risk rather than a fluvial flood risk.

2.5 Estimated Flood Levels

For the purposes of this study we chose to adopt the flood levels from the Shannon CFRAM study as it is considered to be the most comprehensive study on flood risk in the Shannon Estuary to date. While the site of the proposed development would be l

ocated within the 2D domain of the Shannon CFRAM Hydraulic model, the CFRAMS project has only publically released the 1D results. However, we deem that the site of the proposed development is located sufficiently close to node 04LSH01214 that any difference in water level would be relatively minor. Table 1 contains the predicted water levels for the present day and future scenarios (taking climate change into account) at node 04LSH01214.

Table 1 - Predicted CFRAMS extreme water levels

Flood mechanism	Scenario	1:200 year coastal flood level (m)	1:1,000 year flood level (m)
Coastal	Present Day	4.71	5.17
Coastal	Future Scenario	5.21	5.67

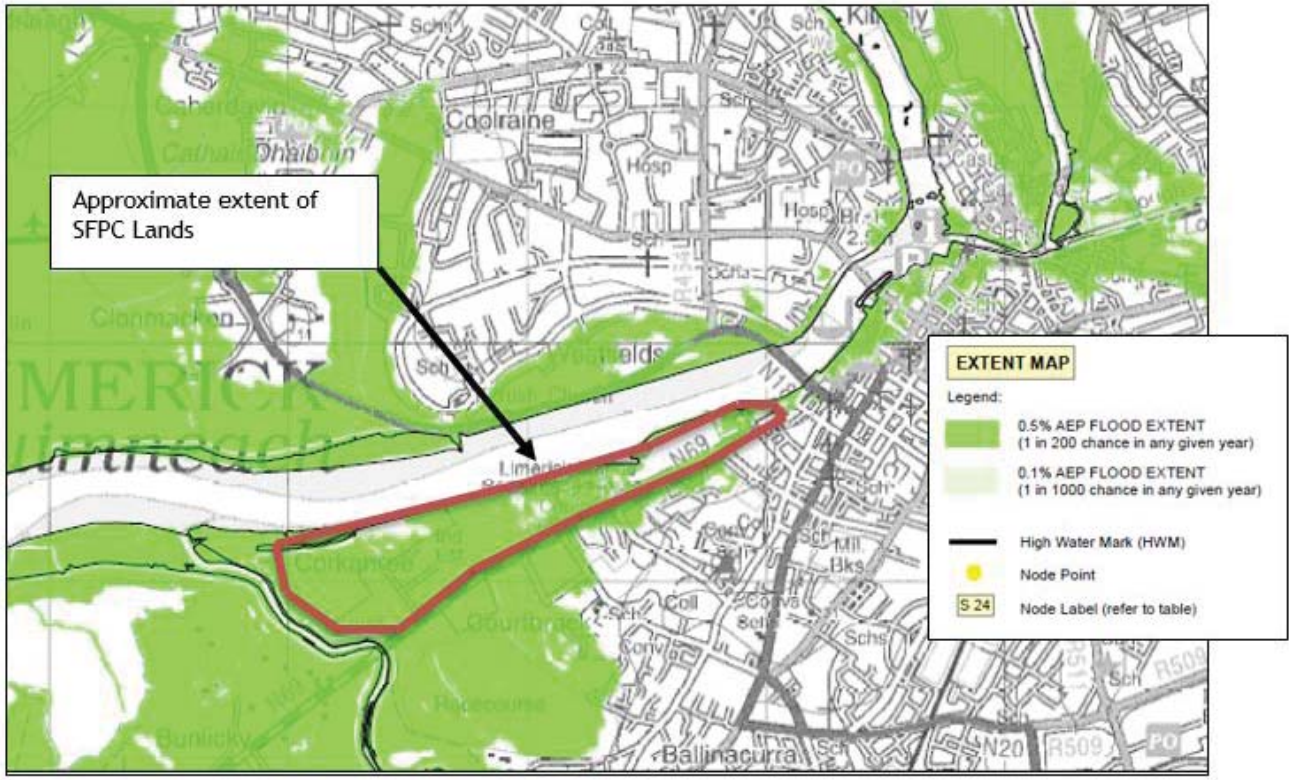


Figure 4 - ICPSS map of the Limerick City/ Dock Road area (image taken from www.opw.ie showing that the site may be at risk during a 1 in 200 year coastal event. Refer to Appendix A for the full map.

2.6 Site Assessment and Flood Zone

A topographical survey of the proposed development lands has been used to generate a map indicating areas that may be at risk of flooding associated with the current day 1 in 200 and 1 in 1,000 year flood events in the Shannon Estuary. The estimated levels associated with such events have been taken from the Shannon CFRAM study, see section 2.5. The existing ground levels within the study area range from approximately 1 m OD Malin to 5 m OD Malin and the existing embankments along the Shannon Estuary range in level from approximately 4.7 m OD Mail to 6.3 m OD Malin based on a topographical survey supplied to PUNCH Consulting Engineers.

PUNCH Consulting Engineers developed a 3d ground model of the SFPC lands and used this model in conjunction with the CFRAMS estimates of food levels to predict the extent of Flood

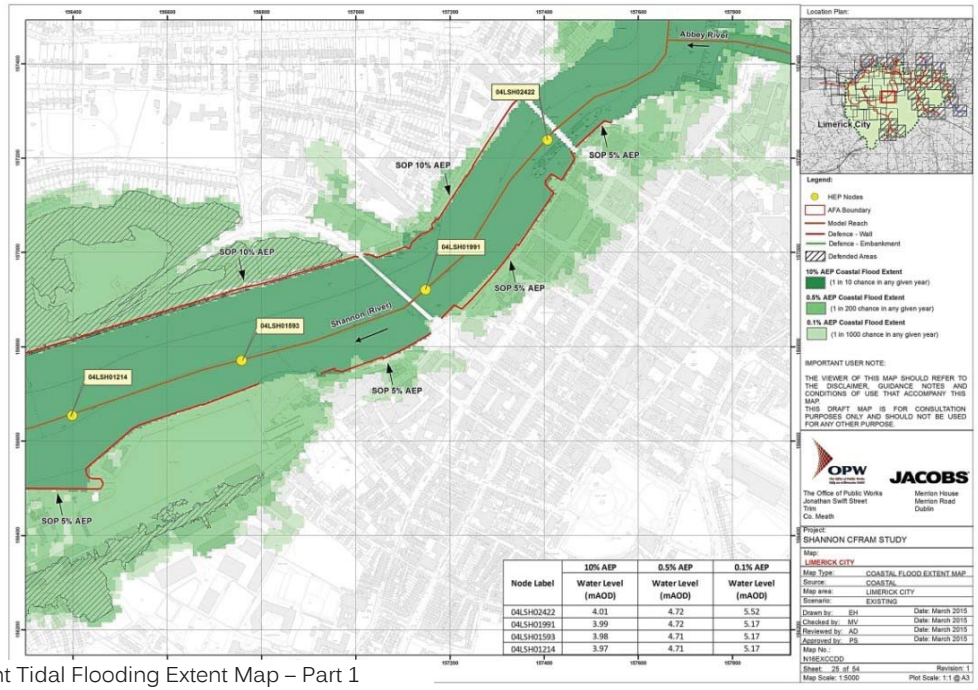


Figure 5 - Current Tidal Flooding Extent Map – Part 1

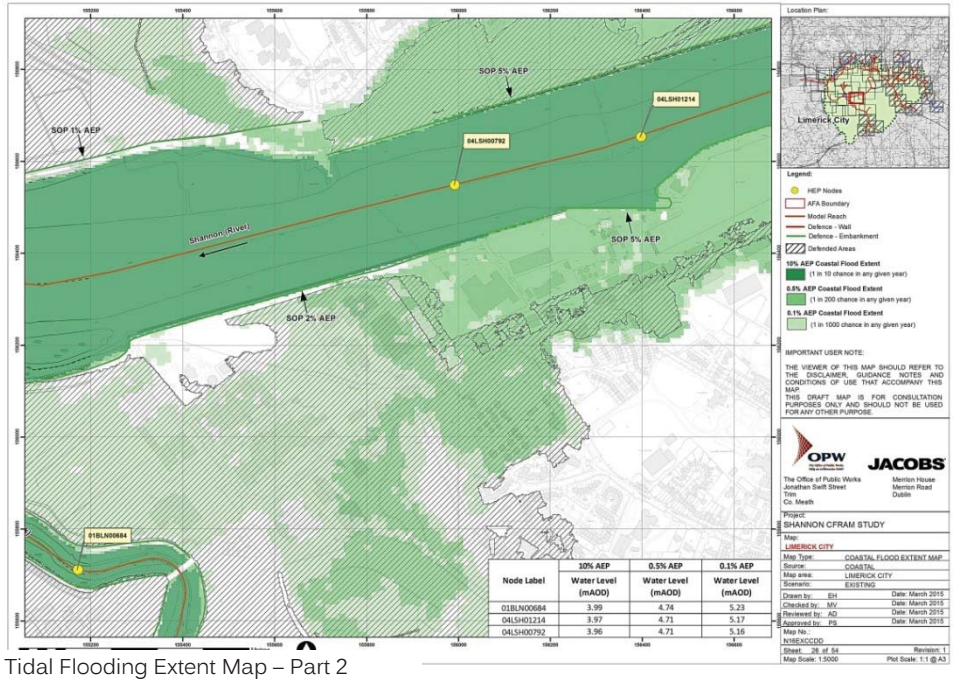


Figure 6 - Current Tidal Flooding Extent Map – Part 2

Zone A, B and C. Flood Zone A is defined as an area at risk from a 1:200 year event, Flood Zone B is defined as an area at risk from a 1:1000 year event and Flood Zone C is an area at risk from an event with a return period of greater than 1:1000, see the Flood Risk Management Guidelines for further details. Figure 7 contains the results of this exercise with Flood Zones A, B and C being identified by dark blue, orange and green colours respectively.

3.0 Proposed Development

As outlined in Section 2.25 of the Planning System and Flood Risk Management Guidelines, the estimation of flood zones should disregard the presence of defences. Areas that benefit from an existing flood relief scheme or flood defences have a reduced probability of flooding but can be particularly vulnerable due to the speed of flooding should overtopping or a breach or other failure occur. Because this residual risk of flooding remains, the sequential approach and the Justification Test will apply to such defended locations.

3.1 Vulnerability and Flood Risk Management Guidelines

As outlined in Section 3.1, the majority of the lands in question are located within Flood Zone A with smaller sections in Flood Zone B. The Planning System and Flood Risk Management Guidelines published by the OPW outlines the types of development that are suitable for Flood Zones A, B and C (Tables 3.1 and 3.2). In generally only water-compatible development, such as docks and marinas, dockside activities that require a waterside location, amenity open space, outdoor sports and recreation, would be considered appropriate in Flood Zone A unless the Justification Test as defined by the Planning System and Flood Risk Management Guidelines.

4.0 Recommendations

4.1 Proposed layouts and Buildings

Where development takes place in areas at risk of flooding, the risks to both infrastructure and life should be mitigated and managed through the location, layout and design of the development to reduce such risks to an acceptable level. The residual risks to the proposed development should be considered carefully, taking into account the type of development and its vulnerability, how flood risks to the occupants will be managed, insurance provi-

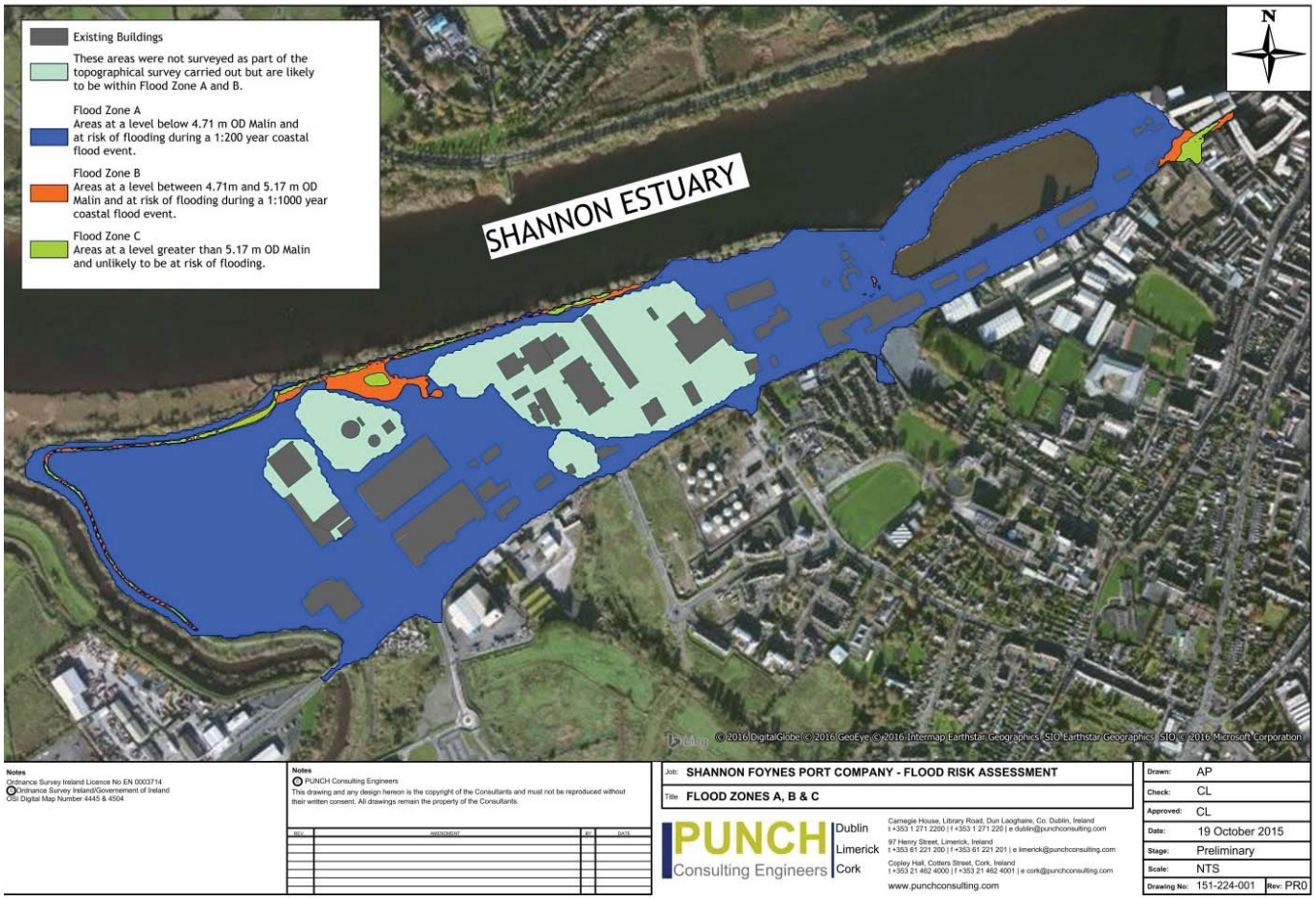


Figure 7 – Estimated extent of Flood Zones A and B of the SFPC lands

sion, scale of the risks and the provision of flood defence works. A precautionary approach would be to set floor levels of commercial developments above the 0.5% flood level and ignore the presence of flood defences.

To ensure that the proposed framework complies with the Planning System and Flood Risk Management Guidelines it is recommended that the following are incorporated in the proposals:

- The finished floor levels of any proposed buildings are set above the 1 in 200 year flood level in the Shannon Estuary, at a minimum. Reducing the finished floor levels below this will place the buildings at high risk of flooding and it will be unlikely that these buildings would be insurable from a flood risk point of view.
- The finished floor levels of any buildings that are considered highly vulnerable or buildings that may con tain significant sources of pollution are set above the 1 in 1,000 year flood level.
- Consideration of the effects of climate change on the estimated flood levels in the Shannon Estuary should be considered and it is recommended that the finished floor levels are raised a further 0.55 m over present day flood levels for buildings with a medium to long term design life. This is to allow for 0.5 m sea level rise and 0.05 m land movement over the next 100 years. This implies that buildings should have a finished floor level of 5.3 m with highly vulnerable buildings requiring a finished floor level of 5.81 m.
- It must be demonstrated that emergency access to the proposed development can be maintained during a 1 in 200 year flood event and that all persons on site can be evacuated to site of safe refuge during floods.
- It must be demonstrated that there will be no risk to the receiving environment as a result of any flooding within the site of the proposed development.
- It is not recommend that basements are incorporated into the proposed developments. Basements in flood risk areas pose a significant risk to life due to the poten tial rapid inundation and the potential for personal to be trapped within the basement.
- It may be permissible to construct new developments

at levels lower than the recommended levels in certain limited cases. This exception however would only apply in relatively minor extensions where it is critical for con nectivity that the extension must be the same level as the existing building and robust mitigation measures are proposed to address the flood risk.

4.2 Flood storage

Under the Flood Risk Management Guidelines it is not permissible to remove flood storage from the flood plain, however due to the tidal nature of the flood risk, loss of flood storage is not a concern for this development.

4.3 Flood Defences

Currently there are embankments surrounding much of the SFPC lands. In general, the levels of the embankments are between 4.7 m OD Mail to 6.3 m OD Malin, which will protect against the lands against an event slightly below a 1:200 year event (4.71 m). However, there are a number of areas where the defences are below these levels, in particular the area around the Slipway at Atlas Avenue. Ground levels behind the slipway are 4.2 m which would suggest if the Shannon Estuary were to experience a flood of 4.2 m, flood waters would flow into the low lying areas behind the slipway.

Raising the ground levels behind the slipway will provide additional protection to the low lying areas within the proposed development lands. However the much of the lands around the Docks are at a level of 4.5 m OD Malin so raising the ground levels around the slipway will have limited effect as the once the flood waters reach 4.5 m there will be additional flow paths to the lower lying areas.

We would not recommend relying on the existing flood embankments for protection of the lands. At the time of writing, there was no data on the structural integrity of the embankments or an assessment of any non-return valves on storm water networks that discharge to the estuary through the embankments. If the area is to be defended using flood defences we would recommend provision of a system of embankments or barriers along the perimeter of lands at risk to a minimum level of 5.0 m which would allow for 300 mm freeboard over the present day 1:200 year flood. However, given the strategic nature of the developments we would recommend allowing for climate change in the design and protecting the site to a level of 5.3 m Malin. A detailed redesign of all stormwater networks would be also required to ensure there are no unidentified services would provide flow paths into at risk areas.

The failure of any part of the flood defences may result in a rapid inundation of the lands during an extreme event. There have been a number of issues with flood defences in the greater Limerick area as many of the flood embankments constructed for flood defences have found to be settling in places leading to a reduction in the level of protection. If the flood embankments surrounding the site are to be relied upon we would recommend regular monitoring of the embankments to ensure that there is no settlement. In any event, under the flood risk management guidelines, it is not permitted to rely on Flood Defences.

Demountable flood barriers can be erected in front of buildings to provide additional protection to buildings however, it is generally the view of Local Authorities that demountable barriers are only considered suitable for existing buildings where it is not possible to raise the finished floor levels above the design flood level. It is also likely that extensive investigations and works will have to be carried out on existing buildings to seal off any flow paths through walls to make demountable barriers at doors, windows and other openings effective.

4.4 Justification of Proposed Development

As any development taking place in these lands is likely to be considered to be unsuitable for Flood Zone A, the Justification Test will have to be applied to any development. This report considered the requirements of Box 5.1 of the Guidelines. Table 2 contains a comment on each element of the Justification Test.

Table 2 – Response to criteria outlined in Box 5.1

Item		Response
1.0	The subject lands have been zoned or otherwise designated for the particular use or form of development in an operative development plan, which has been adopted or varied taking account of these Guidelines.	Planning concords to be addressed by others
2.0	The proposal has been subject to an appropriate flood risk assessment that demonstrates:	
2.1	The development proposed will not increase flood risk elsewhere and, if practicable, will reduce overall flood risk.	There are a number of potential aspects to consider when assessing if the proposed development will increase the flood risk elsewhere. In general the considerations would be as follows: • Loss of Flood Storage • Diversion of flood waters • Increased runoff from the proposed development The tidal nature of the flood risk eliminates the concerns of all of the above.
2.2	The development proposal includes measures to minimise flood risk to people, property, the economy and the environment as far as reasonably possible.	The principle measure taken to will be to raise all buildings are above the 1:200 year flood level and that the design of the buildings will address climate change concerns by allowing for increased flood levels. An example of this would be to raise all vulnerable infrastructure e.g. IT or electrical infrastructure above the 1:200 year plus 0.55 m for sea level rise. PUNCH Consulting Engineers recommend that flood risk areas are evacuated prior to the onset of a flood and access is not permitted during times of perceived flood risk. Ares of safe refuge must be identified.
2.3	The development proposed includes measures to ensure that residual risks to the area and/or development can be managed to an acceptable level as regards the adequacy of existing flood protection measures or the design, implementation and funding of any future flood risk management measures and provisions for emergency services access.	The proposed Finished Floor Level of the buildings is all above the 1:200 year flood event (with consideration for climate change) which ensures that the buildings will not be inundated by flood waters during such an event. Plans to ensure Emergency access must maintained during extreme events.
2.4	The development proposed addresses the above in a manner that is also compatible with the achievement of wider planning objectives in relation to development of good urban design and vibrant and active streetscapes.	It is PUNCH Consulting Engineers opinion that this can be achievable.

5.0 Conclusion

PUNCH Consulting Engineers was appointed by HRA Planning carry out a Flood Risk Assessment of proposals for the Limerick Docks area of Limerick City. A number of reports on flooding and Flood Risk in the Shannon Estuary were reviewed and the Shannon CFRAMS report was deemed to have to must up-to-date estimates of potential flood levels for various return periods. The CFRAMS report suggested that the 1:200 and 1:1000 year floods (corresponding to Flood Zone A and B) have water levels of 4.71 and 5.17 m OD Malin respectively. To allow for the effects of sea level rise a further 0.5 m should be added to the present day estimates of flood levels. This places the future 1:200 and 1:1000 year floods at 5.21 and 5.67 m OD Malin respectively. It is also recommend allowing 0.05 m for land movement over the next 100 years.

In terms of building layouts, it is recommended that the finished floor levels of any proposed buildings are set above the future 1 in 200 year flood level in the Shannon Estuary and allow for land movement and climate change. The finished floor levels of any buildings that are considered highly vulnerable or buildings that may contain significant sources of pollution should be set above the 1 in 1,000 year flood level plus an allowance for climate change and land movement. This implies that all buildings except highly vulnerable buildings should have a finished floor level of 5.3 m with highly vulnerable buildings requiring a finished floor level of 5.81 m. It must be demonstrated that emergency access to the proposed development can be maintained during a 1 in 200 year flood event and that all persons on site can be evacuated to site of safe refuge during floods. Due to the flood risk in the area, basements are not recommended.

Appendix C

Part 1

Shannon Foynes Port Company Development Framework

Cultural Heritage: Historical conservation issues

Judith Hill
Architectural Historian

12 Harbour View Terrace
South Circular Road
Limerick
Tel: 087 9240187
Email: hill@elive.ie

September 2015

The site was visited on 19 and 25 August 2015 when photographs were taken.

Definitions
Source: Department of the Environment, *Architectural Heritage Protection: Guidelines for Planning Authorities*.
Curtilage: 'the parcel of land immediately associated with the [protected] structure and which is (or was) in use for the purposes of the structure.' (para 13.1.1, p. 191)

Considerations to be taken into account when making a decision as to the extent of the curtilage of a protected structure:
a) Is, or was there a functional connection between the structures?
b) Was there a historical relationship between the main structure and the structure(s) within the curtilage which may no longer be obvious?
c) Are the structures in the same ownership? Were they previously in the same ownership?

Attendant Grounds: 'The attendant grounds of a structure are lands outside the curtilage of the structure but which are associated with the structure and are intrinsic to its function, setting and/or appreciation.' (para 13.2, p. 192) This may incorporate a designed landscape deliberately laid out to complement the design of the building or to assist its function.

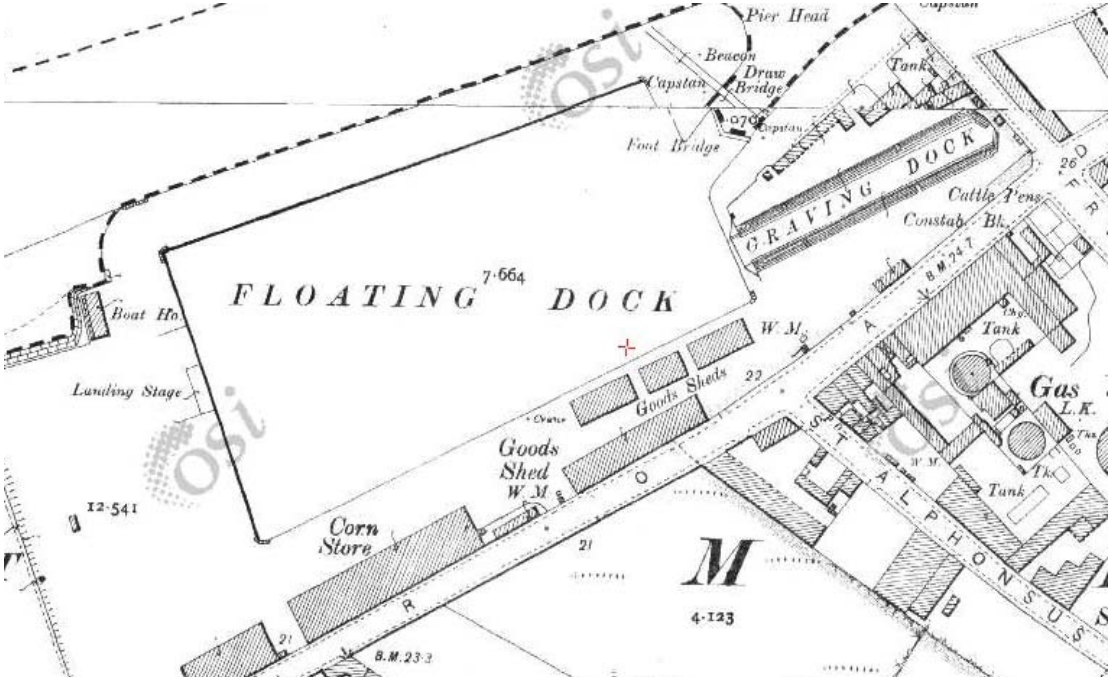
Architectural Heritage Protection: Guidelines for Planning Authorities makes it clear that it is the role of the local authority to define curtilage, and that ideally this should be done prior to including a structure in the RPS (para 13.1.4, p. 191). Failing this it can be determined through a declaration.

The view taken here is that the protected structures were built within the area of an existing wet dock (not a protected structure) and contributed to its function. Together they form the dock we see today. Only the Graving Dock has a structure within what might be regarded as a curtilage. In all other cases attendant grounds have been identified and the particular settings described. This identifies the visual impact of the structures and their relationships to one another. See the series of images at the end of this report. This account needs to be considered in relation to any opinion established by Limerick City Council.

Ted Russell Docks, Limerick: brief overview
There had been debate about the location of a dock in Limerick since the 1820s. The present location of the dock, at the southern end of the quays along the River Shannon, was established in 1853 when the floating dock was opened, four years after the laying of the foundation stone. Subsequent development in the nineteenth and twentieth centuries would be concentrated in two areas: to the south of the floating dock, towards the Dock Road; and to the east of the floating dock, towards Steam Boat Quay.

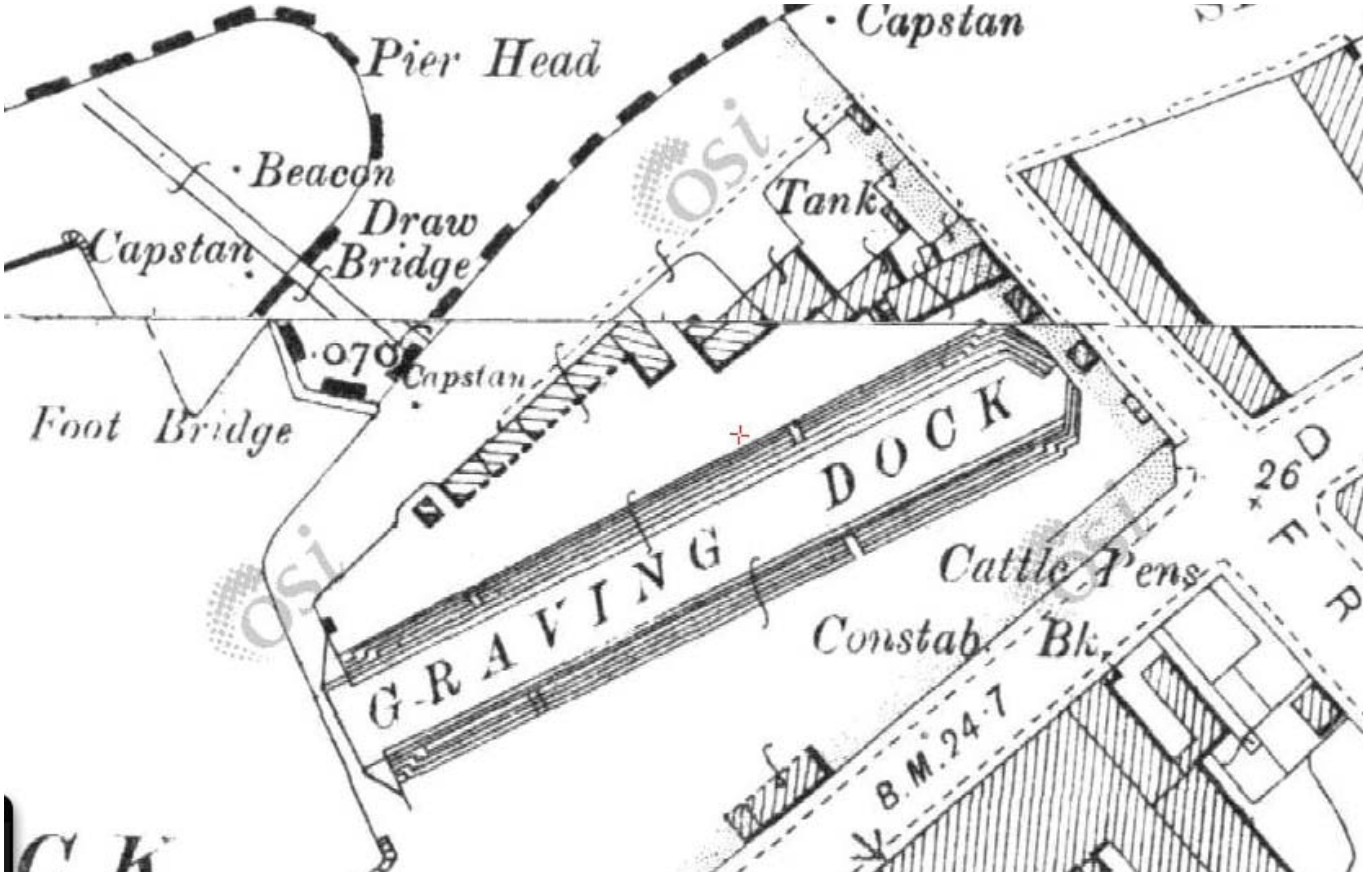
The first area between the flaoting dock and the Dock Road would see the construction of goods shed, warehouses and corn stores. The most innovative and architectural interesting of the stores was the Bannatyne building, completed in 1874. It survives today. A gate would give access from the Dock Road to the goods yards. Bannatynes built two vast concrete silos in this area in 1935, one of which survives.

The second area to the east had its own quay in the nineteenth century. Facing the quay was the Harbour Office (remaining), constructed sometime after the building of the flaoting dock, the Dock Clock (remaining), built in 1880, and a row of offices (mostly demolished; some walls remain). This area was accessed by a gate, the posts of which, relocated, have survived. Behind the line of buildings was the Graving or Dry Dock, built in 1873 and connected to the wet dock by a movable bridge and iron sluice gate. A large limestone post recording the building of both wet and dry docks was erected at the end of the dry dock. All this survives. However, the eastern third of the dry dock has been removed, so that the post is now isolated at the eastern end of the port. It is probable that the limestone wall that survives to the rear of the Graving Dock was built with it in 1873. A small domestic-scaled building, probably an office, set within the line of the wall, probably also dates from this period. The configuration of the port at the end of the nineteenth century is clearly shown on the second edition Ordnance Survey map of 1900.



Ordnance Survey map, 2nd edition, 1900. The Bannatyne building is on the extreme SW of the port.

The eastern end of the port was altered in the twenieth century. Apart from the reduction in size of the Graving Dock, the area of river in front of the quay was reclaimed to increase the surface area of the port. The gates were moved to address James Casey Walk to the east. A Harbour Masters House was built adjacent to the Harbour Office in the first or second decade of the twentieth century. The recaiming of the land and the demolition of most of the offices means that the Dock Clock has now lost its role as a marker on the quay and appears to be marooned in the centre of the dock. The port was renamed Ted Russell Docks in 1993.



Ordnance Survey map, 2nd edition, 1900. The dock clock is the small square-planned building at the end of the row of offices to the north of the Graving Dock. The Harbour Office is opposite the gates to the north of the Graving Dock.

Contemporary map. The Dock Clock is next to the red cross. The Graving Dock is reduced in size. The area to the north is the recalimed area of the port. The Harbour Master's House is to the east, next to the Harbour Office which is set back from it.

The floating dock was extended to the west in the twentieth century and with it the activity of the port.

Contemporary map showing enlarged Floating Dock

Status of buildings and structures

Protected Structures

Name: Spillane's Tower.
Original purpose: Navigation light
Present use: Navigation Light
Location: Corcanree Business Park, Dock Road.
Limerick City Development Plan 2010–16, RPS Ref: 258
NIAH Ref: 21527001
Situation: rear of Corcanree Business Park on bank of the river. No access to site.
Brief description: Three-storey cut limestone Gothic revival tower, late 19thC.
Curtilage: difficult to assess because of lack of access.
Setting: Riverside setting.
Comments: Built as a stand-alone tower, it is important that it maintains its integrity as a singular object and that it is visible from the river.

Name: Bannatyne Warehouse
Original purpose: Grain storage
Present use: Disused
Location: Ted Russell Docks, Dock Rd, Limerick
Limerick City Development Plan 2010–16, RPS Ref: 255
NIAH Ref: 21516002 Regional rating
Situation: When it was built it was immediately to the SW of the Floating Dock, separated by a substantial quay. Now it is to the south of the extended floating dock.
Brief description: 6-Storey, 8-bay squared limestone building with gables and towered entrance facing east. Designed by William Sidney Cox and built in 1873–4.
Attendant Grounds: Floating dock and associated quay. The warehouse was built as a structure which contributed to the function of the existing dock. Limestone setts survive around door openings on east elevation.
Setting: The walls and industrial structures of the Dock Road to the south, including Ranks silo (see below); the port to the north.
Comments: Attached single-storey structure to the east of the warehouse looks like a later addition, although a similar structure is shown on the 2nd edition OS map. This structure needs investigating for date of construction and historical significance. Its presence obstructs the view of the entrance of the Bannatyne Building from the road and obscures the role of the warehouse as a building that mediates between the dock and the road.

Name: Bannatyne (later Ranks) Silo
Original purpose: Grain storage
Present use: Disused
Location: Ted Russell Docks, Dock Road, Limerick
Limerick City Development Plan 2010–16, RPS Ref: 298
NIAH Ref: 21516001 Regional rating
Situation: Immediately to the south of the floating dock, separated by a substantial quay.
Brief description: Freestanding, 8-bay (east and west elevations) and 6-bay (north and south elevations) multi-storey concrete structure, windowless except for openings to ground floor and circular opening at attic level. Built in 1935.

Attendant Grounds: Floating dock and associated quay.
Setting: The walls and industrial structures of the Dock Road to the south including Bannatyne building (see above); the port to the north.
Comments: The silo is immediately adjacent to the entrance to the Dock Road.

Name: Graving Dock
Original purpose: Dry dock
Present use: unused
Location: Ted Russell Docks, James Casey Walk, Limerick
Limerick City Development Plan 2010–16, RPS Ref: 327
NIAH Ref: 21517043 Regional rating.
Situation: Central element in the eastern area of the docks.
Brief description: A rectangular plan dock with stepped sides constructed in large ashlar limestone blocks, connected to the Floating Dock by a moveable bridge and iron sluice gate. It was opened in 1873. To the NE (now at a distance since the dock was reduced; see above) is a tall cut limestone pedestal with limestone plaques set into two faces recording the opening of the Floating and Graving Docks.
Curtilage: Limestone pedestal
Attendant Grounds: The Floating Dock and Dock Clock.
Setting: The Graving Dock is an important element within the enclosure of the eastern side of the port.
Comments: Since the reduction in size of the Graving Dock the pedestal is marooned in an area of sheds to the rear of the Harbour Master's House and has lost its role within the port complex.

Name: Gateway to dock yard
Original purpose: Entrance to docks
Present use: Entrance to docks; positioned in present location in 20thC
Location: Ted Russell Docks, James Casey Walk, Limerick
Limerick City Development Plan 2010–16, RPS Ref: 325
NIAH Ref: 21517004 Regional rating.
Situation: Entrance to eastern part of docks on an area of land reclaimed in 20thC to the north of Harbour Master's House and Harbour Office.
Brief description: Three square plan limestone gate posts erected in 1853, now with mild steel gates.
Attendant Grounds: Eastern end of the port
Setting: The Harbour Masters House and Harbour Office
Comments: Although they have been repositioned their use as the main entrance to the port is a valuable gesture of continuity.

Name: Dock Clock
Original purpose: Public clock
Present use: Public clock
Location: Ted Russell Docks, James Casey Walk, Limerick
Limerick City Development Plan 2010–16, RPS Ref: 324
NIAH Ref: 21517001 Regional rating.
Situation: Now in the centre of the eastern end of dock to north of Graving Dock.
Brief description: Free-standing three-stage tower on a square plan with a model ship mounted on the pyramidal roof and the clock in the upper-most stage of the tower.
Attendant Grounds: Graving Dock. With the reclaiming of land to the north of the clock (see brief overview above) and the moving of the entrance the relationship of the clock to the entrance to the dock has altered. However, the relationship between the Dock Clock and the Graving Dock remains, with the clock marking its western end.
Setting: The clock is an important landmark for the entire dock area and the street around the port.
Comments: Because of the activity associated with the extension of the surface of the port to the north of the floating dock it is now necessary to protect the clock structure at ground level. At present this has been done in an ad hoc and visually unsatisfactory way.

Structures not recorded as protected structures in Limerick City Development Plan

Name: Harbour Office: SSL International Marine Ltd
Original purpose: Offices for Harbour Master's Dept and Harbour Engineers
Present use: Archives Shannon Foynes Port Company
Location: Close to the eastern entrance to the port.
NIAH Ref: 21517002 Regional rating.
Situation: Adjacent to the Harbour Master's House and part of the office area of the port.
Brief description: Three-bay two-storey detached building with parapet. Discreet limestone decorations: projecting limestone surround to door, limestone cills resting on limestone corbels, limestone quoins, and a projecting cornice at eaves level.
Setting: Rubble limestone walls with curved end to front defining a paved area in which are set canon from the Crimea War that once stood on Sarsfield Bridge with the Fitzgibbon Memorial. Remains of stone sheds and outhouses to west. Twentieth-century additions to rear.
Comments: It is a handsome building that once stood at the entrance to the dock. The detailing (quoins, cornice, arched windows) relates it to the nearby Sailor's Home on O'Curry Street built in 1858. The Harbour Office was probably built when the Graving Dock was constructed in the early 1870s. Both the Harbour Office and the Sailor's Home are unique building types in Limerick and both are built on former Harbour Board Land. The Sailor's Home (NIAH ref: 21517010), like the Harbour Office, has a regional rating and is in the RPS. The Harbour Office deserves protection.

Name: Harbour Master's House
Original purpose: House
Present use: Offices Limerick Cargo Handling Ltd.
Location: Adjacent to the eastern entrance to the port.
NIAH Ref: 21517003 Regional rating.
Situation: Adjacent to the Harbour Office and part of the office area of the port.
Brief description: Three-bay, two-storey building with two end bays projecting and a porch over the central door. Pitched slate roof. Ornamental timber bargeboards to gables front, side and rear. Built c.1910.
Setting: Low rubble stone wall supporting metal railing defining paved area in front of the house. Brick- and stone-built outbuildings to rear.
Comments: An important building marking the entrance to the port of similar scale to the Harbour Office but built in a different style. It deserves to be protected.

Name: Floating Dock
Original purpose: Wet dock
Present use: Wet dock
Location: Dock Road, Limerick
Situation: At centre of the port and focus of all activity.
Brief description: Large rectangular dock constructed of large squared limestone blocks. Opened in 1853. It was extended westwards in the twentieth century.
Setting: Adjacent quays and associated buildings, most notably: Bannatyne's Building, Rank's Silo, Graving Dock and Dock Clock.
Comments: Linked to the Graving Dock, constructed with similar limestone blocks and furnished with cut limestone steps, still functioning and central to the docks, this structure deserves to be protected.

Visual record of settings.

The Dock Road

Name: Wall to Dock Road and James Casey Walk
Original purpose: Defining and protecting the dock area
Present use: Defining and protecting the dock area
Location: East end of the port facing the Dock Road stretching from corner of James Casey Walk to contemporary entrance beside Rank's Silo. Wall to James Casey Walk.
Situation: On the southern and eastern edge of the docks.
Brief description: Dock Road: Four courses of random rubble limestone built to courses with projecting square-stone coping. Built c.1874. Incorporated are a pair of square-plan limestone piers of the same period making a former entrance. Also incorporated are contemporary limestone piers making a little-used entrance at corner with James Casey Walk. James Casey Walk: Uncoursed rubble limestone wall, similar in height to the Dock Road and with similar limestone coping.
Comments: The walls are not in the NIAH or on the Register of Protected Structures. However, they are attractive and well-built walls, each form calibrated to its situation on the main and secondary roads. They are good examples of late Victorian stone building in Ireland and integral to the dock area, forming an interface between the docks and the city. They merit protection.

Name: Customs Office
Original purpose: Customs Office
Present use: Presently unused; plans for use as training office
Location: On Dock Road, two entrances: one facing Graving Dock and one facing Dock Road.
Situation: Integral part of the Dock Road Wall and a building that provides a link between the road and the dock.
Brief description: Three-bay single storey building with hipped slate roof and two chimneys. Two windows to each side. No windows to Dock Road. Plan is undoubtedly a central corridor with access north and south (dock and Dock Road), giving access to two well-lit offices. Projecting quoins. Built c.1855.
Setting: The Dock Road wall.
Comments: This externally well-maintained cottage-style building is an unexpected and interesting survival from the nineteenth century. It has a strong presence on the Dock Road and within the port. It merits protection.

The relationship between Bannatyne's Building and Rank's Silo

The single-storey structure that masks the entrance of the Bannatyne Building and its role linking the port to the Dock Road

The dock wall and its relationship with the Custom Office at the east end of the port

The eastern area of the port

Immediately inside the entrance

The Graving Dock and the Dock Clock

The Customs Office and the dock wall with the Graving Dock in the foreground and the Bord Gais Wall beyond (outside the site)

The west end of the port

The relationship between Rank's Silo and Bannatyne Building and the Floating Dock

The relationship between Bannatyne Building and the Floating Dock

Appendix C

Part 2

Shannon Foynes Port Company Development Framework

Cultural Heritage: Historical conservation issues

Judith Hill
Architectural Historian

12 Harbour View Terrace
South Circular Road
Limerick
Tel: 087 9240187
Email: hill@elive.ie

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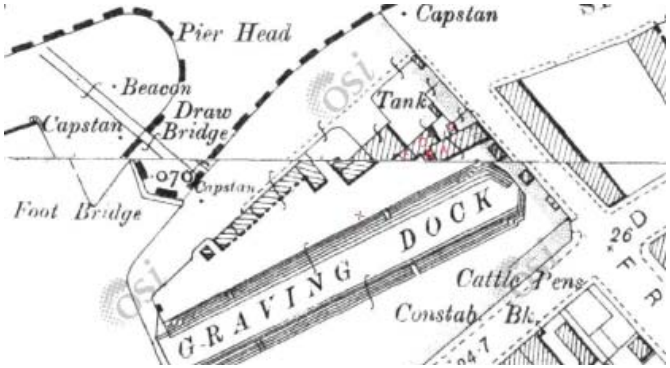
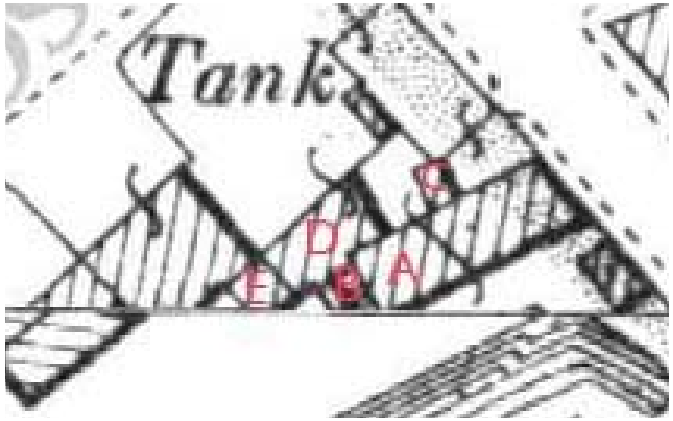
Status of buildings and structures (cont)

Structures within the curtilage of the graving dock.

Name: Graving Dock
Original purpose: Dry dock
Present use: unused
Location: Ted Russell Docks, James Casey Walk, Limerick
Limerick City Development Plan 2010–16, RPS Ref: 327
NIAH Ref: 21517043 Regional rating.
Situation: Central element in the eastern area of the docks.
Brief description: A rectangular plan dock with stepped sides constructed in large ashlar limestone blocks, connected to the Floating Dock by a moveable bridge and iron sluice gate. It was opened in 1873. To the NE (now at a distance since the dock was reduced; see above) is a tall cut limestone pedestal with limestone plaques set into two faces recording the opening of the Floating and Graving Docks.
Curtilage: Building containing the boiler and pump used to empty the graving dock; limestone pedestal which contained the flue for the boiler; forge.
Attendant Grounds: The Floating Dock and Dock Clock.
Setting: The Graving Dock is an important element within the enclosure of the eastern side of the port.
Comments: The buildings within the curtilage of the graving dock are clustered to the north-east of the dock to the rear of the Harbour Master's House. These buildings will be detailed below.
Structures within the curtilage of the graving dock.





A. Boiler and pump house
B Flue/pedestal
C. Coal bunker
D. Workshop
E. Extension to Harbour Office

South elevation of boiler and pump house attached to pedestal/flue. The entrance to the workshop is just visible to the left of the pedestal

Rear of pump house showing attached bunker.

Interior view of east end of pump house showing pump.

Interior of boiler and pump house showing roof structure.

Name: Boiler and pump house (A)
Original purpose: The west section housed the boiler, which has now gone. The eastern section housed the pump, which remains.
Present use: unused
Location: Ted Russell Docks, James Casey Walk, Limerick
Limerick City Development Plan 2010–16, RPS Ref: 327. Curtilage of the graving dock.
NIAH Ref: Not noticed in the NIAH.
Situation: Located to north-east of the graving dock
Brief description: Long narrow windowless single-storey structure with stone walls to south and east elevations (originally facing graving dock to south, and street to east) and brick walls to north and west elevations (originally facing yards to north and connecting to flue to west). It has a barrel-vaulted roof constructed from

curved steel I-section beams tied with circular rods and clad in a modern profiled covering. There is a parapet capped with cut stone to the north and south elevations, and curved gables to the east and west. There are cut stone quoins to the south-west. There is a small entrance to the north with a new lintel; a small original and a new large entrance to the south; the latter has brick jambs and a concrete lintel. The building is connected to the flue (B: see below) by a short length of brick wall to the west. To the north is a battered rubble stone windowless structure connected to the boiler room which was probably a coal bunker (C). There is a concrete wall dividing the boiler area from the pump room.
Comments: Built to assist in the operation of the graving dock, the date of construction will be 1873. The building has an impressive utilitarian façade to the south, which complements the stone pedestal/flue. The east gable is an integral part of the perimeter wall of the docks on James Casey Walk. There have been alterations to the structure. Most notably the roof is c.1950s steel, while the wide entrance to the south elevation, wide opening in the west gable to the flue and the internal wall are all later changes. The building merits retention for its presence in the docks, its historical and functional connection to the graving dock, and as one of the few survivals of industrial architecture of the late nineteenth century in Limerick.

Name: Pedestal/flue (B)
Original purpose: Emissions from the boiler and to commemorate the opening of the floating dock in 1853 and the graving dock in 1873.
Present use: No longer in use as a chimney, but important as a setting for the plaques and marker of the docks.
Location: Ted Russell Docks, James Casey Walk, Limerick
Limerick City Development Plan 2010–16, RPS Ref: 327 Curtilage of the graving dock.
NIAH Ref: Not separately noticed in the NIAH.
Situation: Located to north-east of the graving dock
Brief description: Cut stone base to a brick chimney (the chimney has now gone). The stone base is composed of a stepped plinth constructed in rubble and cut stone. It supports a central cut stone section in which are set two inscribed stone plaques. It is topped by a projecting cut stone cornice. The whole structure is constructed in local limestone. Only two faces are visible and on these are the plaques, one recording the opening of the floating dock on 26 September 1853 by the Lord Lieutenant Earl St Germans, and the other recording the opening of the graving dock on 13 May 1873. Both record the principle engineer, John Long.
Comments: The pedestal merits retention as an important monument recording the opening of the docks and as part of the functioning of the graving dock. This latter function should be more generally known.

Workshop to rear of pedestal: door to west of pedestal.
Interior showing blacksmith's forge.

Rear view of workshop
Name: Workshop (D)
Original purpose: Forge
Present use: Carpentry workshop
Location: Ted Russell Docks, James Casey Walk, Limerick
Limerick City Development Plan 2010–16, RPS Ref: 327 Structure within the curtilage of the graving dock
NIAH Ref: No mention
Situation: Located to the north and west of the pedestal/flue and the boiler house
Brief description: A largely brick-built windowless structure that has been adapted several times. It has a curved roof formed with timber trusses covered with what may be asbestos sheeting. The west-facing wall is formed of concrete blocks with three blocked windows and a timber door. The entrance to is the south immediately to the rear of the pedestal/flue. The blacksmith's brick-built forge and chimney survive inside, as do the bellows and bellows attachment.
Comments: The structure has no presence in the port being mainly concealed behind the pedestal and boiler house. It has no architectural merit. However, it is interesting as a historical structure related to the functioning of the port in the days of horses. If it needed to be demolished a case could be made based on its lack of architectural merit.

F: First Aid building
G: Shed
H: Perimeter wall to Harbour Office

I and J: Relic walls of demolished buildings.

Shed (G) to rear.

First aid post (F) to rear

Name: First aid post and derelict shed (F and G)
Original purpose. Unknown
Present use: First Aid Post and unused
Location: Ted Russell Docks, James Casey Walk, Limerick
Limerick City Development Plan 2010–16. Not protected
NIAH: No mention
Situation: Adjoining Harbour Office to west.
Brief description: F: A mid-twentieth-century single-storey rendered building. G: A small, brick-built shed, probably early twentieth-century with a curved roof.
Comments: Neither building has any architectural merit and neither was built in conjunction with the Harbor Office in the early nineteenth century. The brick shed is located within what remains of the perimeter stone wall that defined the boundary of the Harbour office. Both could be demolished.

Wall I

Wall J

Name: Walls (H, I, J)
Original purpose. I and J are all that remain of structures now gone. H is the perimeter wall of the Harbour office.
Present use: I and J have no function. H defines the area to the west of the Harbour Office.
Location: Ted Russell Docks, James Casey Walk, Limerick
Situation: H: Adjoining Harbour Office to west. I and J: Adjacent to H.
Brief description: H is composed of cut limestone of various shapes not laid in courses. It has a cut stone coping with stones lain length-wise. The return has a cut-stone opening with a coping composed of small stones. I is a random rubble wall laid in courses with a cut-stone coping similar to H, though incomplete. There are two pillars of ashlar blocks that define a passage way at the corner of H and I. J is of similar construction to H and has the remains of a cut stone opening.
Comments: H is a valuable part of the Harbour Office and should be retained. I and J have no function in the port and could be demolished. The stones, which are valuable because of their workmanship should be retained and re-used elsewhere in the port.

Appendix D

Limerick Docklands Framework Strategy
Client: Shannon Foynes Port Company
Traffic & Transport Input

CONTENTS :

1 INTRODUCTION

1.1 Background

1.1.1 ILTP Consulting were commissioned by Shannon Foynes Port Company (SFPC) to undertake a Traffic & Transport Study as part of a wider Limerick Docklands Framework Strategy, which is being developed in association with HRA Planning Consultants.

1.1.2 The objective of this Traffic & Transport Study is to enhance linkages to Limerick Dock and inform the future optimisation of access arrangements and internal transport network for the Dock and the remainder of the NCL (non core lands) within the port area and the remainder of the lands west of Atlas Avenue between the River Shannon and the R510 Dock Road.

1.2 Purpose of Report

1.2.1 The long-term success and sustainability of Limerick Dock depends on efficient and reliable transport linkages.

1.2.2 The Traffic & Transportation Study report examines five main issues:

- Optimisation of access arrangements to Limerick Dock and SFPC lands to safeguard the future workings of the facility.
- Identifying suitable access locations and associated traffic management arrangements with core assets (existing working Docks) and non core asset lands.
- Considering necessary improvements (if any) to the Dock Road to enhance linkages between the city centre and Limerick Docks.
- Undertaking a capacity assessment of the residual lands in the context of car parking requirements and internal layout arrangements within the Port Lands.
- Developing a Mobility Management Strategy for input into the Framework Strategy.

2 EXISTING ACCESSIBILITY AT LIMERICK DOCK

2.1 Overview of Limerick Dock

2.1.1 This chapter looks at the existing standard of accessibil ity and provides an appraisal of the capability of this infrastructure to accommodate Limerick Dock operations, as well as examining potential improvements and infrastructural needs of the Port for the medium to long term.

2.1.2 Limerick Dock is strategically located in Limerick City Centre along the River Shannon. The Port has direct access onto the R510 (Dock Road) and is positioned in close proximity to the Limerick Tunnel providing direct connections to Dublin, Cork and Clare via the M7, M21 and M18. The strategic location of the Port relative to Limerick City Centre and the primary national road network is highlighted in Figure 2.1.

Figure 2.1: Limerick Dock location relative to Limerick City Centre and Road Network

2.1.3 Via the existing access at Dock Road, the M7, M21 and M18 are easily accessible, providing high quality accessibility to the major radial national routes from Limerick City.

2.1.4 The location of the facilities at Limerick Dock, by way of their location on the cusp of the inner city area, means that Limerick Port is essentially a gateway point into Limerick City. Along the R510 Dock Road, to the south-west of Limerick Dock lies a substantial industrial area, while to the immediate north-east there are more urban residential and retail developments.

2.2 Existing Road-Based Access

2.2.1 Limerick Dock is served by a number of access points along the R510 Dock Road and the connecting Atlas Avenue (west of Port) and James Casey Walk (east of Port). The existing accesses to Limerick Dock are shown in the map in Figure 2.2 which is also included in Appendix A.

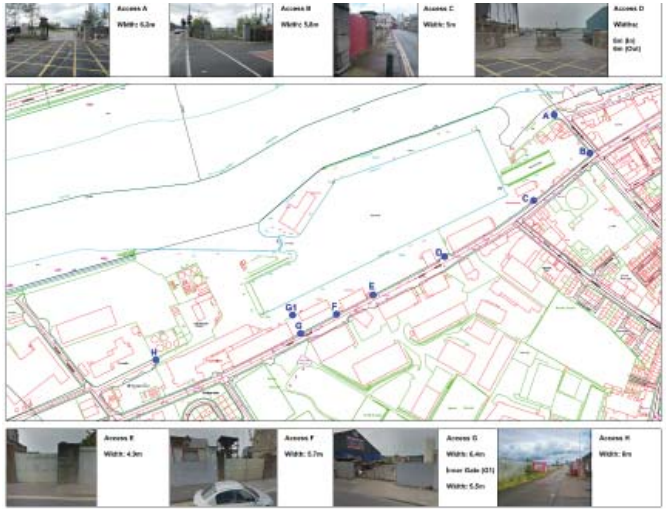


Figure 2.2: Limerick Dock Access Gates

2.2.2 The principle accesses can be summarised as follows:

- Access A – Clarion Gate, James Casey Walk (6.2m wide)
- Access B – Gate at Junction of Casey Walk and Dock Road (5.8m wide)
- Access C – Dock Road (5.0m wide)
- Access D – Main Entrance on Dock Road (6.0m In, 6.0m Out)
- Access E – Dock Road (4.9m wide)
- Access F – Dock Road (5.7m Wide)
- Access G / G1 – Dock Road – Irish Wire Access (Outer Gate 6.4m wide, Inner Gate 5.5m wide)
- Access H – Access off Atlas Avenue (6.0m wide)

2.2.3 The majority of traffic in and out of the port is through the Main Entrance (Access D), with the Atlas Avenue Access (Access H) and Clarion Gate (Access A) used secondarily.

2.2.4 For day to day operations Access G is used solely by Irish Wire.

2.2.5 All other accesses, Access B – C, and E – F, are used occasionally, but are nevertheless vital to the current dock operations to accommodate certain port related activities. It is proposed to retain all existing access points to the docks to provide sufficient flexibility for the smooth running of the docks.

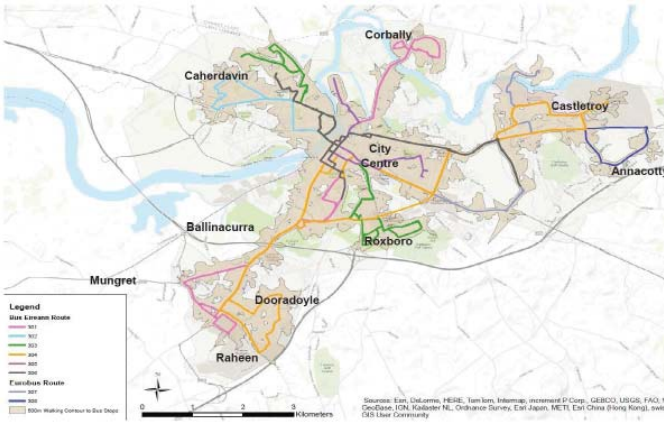


Figure 2.3: Bus Routes in vicinity of Limerick Dock (Source: LC&CC Limerick Metropolitan District Movement Framework Study)

2.3 Current Accessibility by Public Transport

2.3.1 The fact that Limerick Port is within easy walking distance from Limerick City would allow the port to benefit from the existing public transport facilities within the city centre. A map of current bus routes in the vicinity of Limerick Dock is shown in Figure 2.5.

2.3.2 There is also the option of providing a green bus route and cycle route along all or part of the R510 linking the N81 and M7 motorway with the city centre. This could also aid the promotion of smarter travel in the city.

2.4 Current Activity Levels at Limerick Dock

2.4.1 The main throughput of the port serves the agri-business sector, which predominantly includes fertiliser and feed grain inputs. The port has also experienced moderate growth recently in the export of recyclables such as metal and glass.

2.5 Review of Options for Future Development of SFPC Lands

2.5.1 Whilst there are no proposals to significantly increase Port operations at Limerick Port, there is a significant opportunity to better integrate the port facilities into the urban area of Limerick City to the east. Re-purposing a number of non-core assets could allow for a level of development within part of the Limerick Port lands that would effectively extend the urban catchment of Limerick City into the Port lands and further west along the Dock Road.

2.5.2 The development of the non-Core lands within Ted Russell Dock would require considerable re-organisation of core port facilities and management facilities. Chief among these was the need to relocate the current management facilities, relocate the weighbridge and to ensure that existing port users can continue to operate within the port.

2.5.3 Beyond the main Ted Russell Dock, SFPC are currently in ownership of approximately some 15.12 hectares of land. These lands were assessed to determine the core and non core lands.

3 EVALUATION OF EXISTING R510 DOCK ROAD

3.1 Overview

3.1.1 The Dock Road from Atlas Avenue to James Casey Walk varies considerable in width. Generally where permissible there are two outbound and one inbound traffic lanes provided. However due to the presence of protected structures on both sided of the road it would not be possible, nor necessarily desirable, to provide a consistent carriageway widening along this part of Dock Road.

3.1.2 The existing main Port access, adjacent to the Bannatyne building, has a single inbound and outbound traffic lane with right turn movement allowed to facilitate access on both sides of the Dock Road. Traffic to and from the port currently have difficulty manoeuvring this access; however it remains the best available access to the port at present. Two outbound lanes are provided from the Bannatyne building to be fore Atlas Avenue, where it reduces to a single outbound lane with a right turn lane into Atlas Avenue at the traffic controlled junction. Congestion is evident at this location in the AM and PM peak, due in part to the poor junction configuration.

3.1.3 The route has differing cross sections at various locations. The cross section of the Dock Road also varies along the boundary of the Port / SFPC lands, varying from one lane inbound / two lanes outbound to two lanes inbound / one lane out bound.

3.1.4 ILTP carried out an assessment of the road geometry along Dock Road, with particular emphasis on the key sections shown in Figure 3.1 and listed in Table 3.1.

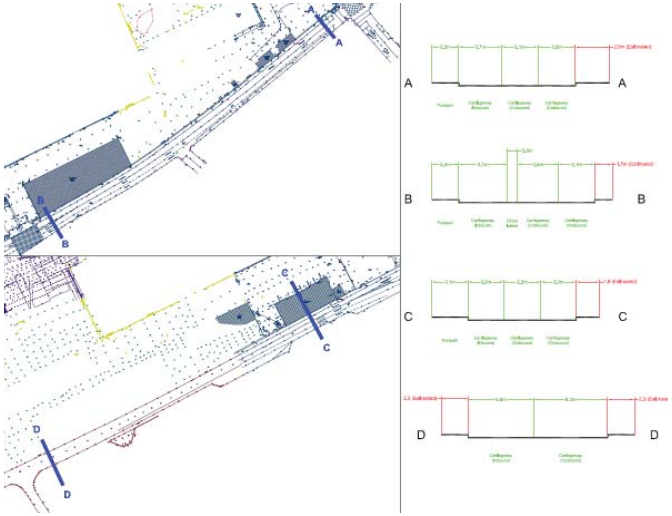


Figure 3.1: Existing Cross Sections on Dock Road

Table 3.1 Dock Road Cross Sections Assessed by ILTP

Section	Location on Dock Road	Carriageway Width	No. Of Lanes
A-A	West of James Casey Walk	12.3m	1 x Inbound, 2 x Outbound
B-B	East of Main Entrance	13.9m	1 x Inbound, 2 x Outbound
C-C	Bannatyne Warehouse	12.3m	1 x Inbound, 2 x Outbound
D-D	East of Irish Wire Entrance	11.9m	1 x Inbound, 2 x Outbound

3.1.5 The most constrained section of the R510 Dock Road is at the Bannatyne Building, to the east of Atlas Avenue. It is also at this section where the highest concentration of non-Port related development is likely to occur. Therefore this is the location that will dictate the overall urban design approach for this section of road.

3.2 Evaluation of Existing Dock Road Traffic Volumes

3.2.1 Traffic flow data collected to date at a number of locations along the Dock Road are shown in Figure 3.2. The data shows a high tidal flow along the western section of the R510 in the critical AM Peak, with 1,054 VPH inbound at the western section of Dock Road and reducing to 860 VPH at the Bannatyne building.

3.2.2 Traffic is also less tidal on the Dock Road closer to the city centre. Long queues are evident in bound on the Dock Road

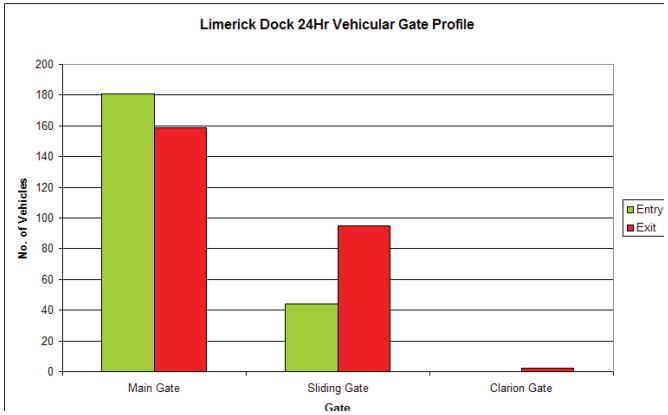
in the AM Peak.

Figure 3.2: Peak Hour Flows along the R510 Dock Road in VPH

3.3 Limerick Dock Traffic (Working Dock)

3.3.1 ILTP carried out a review of entry and exit profiles for Limerick Dock, which were provided by SFPC. These covered a range of dates throughout 2015, and included details of time and access gate for all entry and exit movements within a 24 hour period.

3.3.2 From this data ILTP have taken the day with highest recorded vehicular movements in and out of Limerick Dock to be Thursday 9th April 2015. The 24 Hour Entry and Exit Profiles for



this date are shown in Figure 3.3.

Figure 3.3: 24 Hour Entry & Exit Profile for Limerick Dock for Thursday 9th April 2015

3.3.3 Total Peak Hour Movements for the dock on Thursday 9th April 2015 are summarised in Table 3.2.

Table 3.2 Total Peak Hour Movements for Limerick Dock on Thursday 9th April 2015

	Entry	Exit
Morning Peak - 08:00 – 09:00	19	16
Evening Peak – 17:00 – 18:00	13	26

3.3.4 The overall level of traffic at peak hour generated by the Port is in overall terms low, when compared to the overall traffic flows along the Dock Road. From this data it is expected that moderate future increases in Core Port related activities would result in moderate increases in overall traffic to and from the Docks.

3.3.5 However, much of the traffic movement to and from the Working Dock are large HGVs. By comparison, HGVs in an urban setting have the equivalent impact of 3 to 5 cars. Therefore removing most port related HGVs from the section of the Dock Road between Atlas Avenue and James Casey Walk would have a positive impact on this important gateway to the city and allow for significant urban improvement to occur.

3.3.6 The movement of Port related traffic to and from the Dock Road can also cause difficulties due to the location and size of the existing accesses, in addition to current traffic restrictions on Dock Road.

3.4 Future Traffic Forecasts and Traffic Management and Sustainability

3.4.1 It is likely that traffic flows will increase along the Dock Road in future. This will comprise of:

- Growth in Background traffic,
- Growth in Core Port traffic
- Traffic generated by Non-Core Port Lands to East of Atlas Avenue
- Traffic generated by the development of lands along the R510 west of Atlas Avenue

3.4.2 Given the commitment to promoting sustainable travel modes provision for increased traffic movement into the city centre should not be required.

3.4.3 There are no proposals to significantly increase Port operations at Limerick Port, however as a worse case scenario for traffic assessment purposes it is assumed that traffic generated by core port activity may grow by 20% over the lifetime of SFPC's Masterplan, Vision 2041.

3.4.4 The non-core port lands to the East of Atlas Avenue that are proposed for development in the short to medium term comprise of the Bannatyne Building and adjoining land along Dock Road. ILTP have assessed a worse case scenario of traffic volumes that may be generated by the future redevelopment of this building, which is proposed to be accessed directly from the R510 Dock Road.

3.4.5 To estimate trip generation, ILTP have conservatively assumed that the Bannatyne building will be fully developed for office usage. For the Bannatyne Building, ILTP have estimated a usable office floor area of 450m2 per storey over 6 no. storeys, which equates to 2,700m2 of office space.

3.4.6 ILTP estimated Trip Generation figures using our own experience of comparable developments of similar size and nature in Ireland, and of a similar relative location to a major urban centre such as Limerick. ILTP also used the TRICS (Trip Rate Information Computer System) database. TRICS is a computerised database package which can be used for transport planning and development control. The database contains site and development information for approximately 1,800 development sites in the UK. Traffic entering and exiting each of these developments is recorded, and from this information trip rate calculations are carried out, which can be used to estimate traffic flows for a variety of development types.

3.4.7 The estimated Daily Trip Rates and Trip Generation figures can be seen in Table 3.3.

Table 3.3: Estimated Trip Generation for Proposed Future Office Development in Converted Bannatyne Building

Landuse	Area	AM Rate per 100sq.m (08:00-09:00)		PM Rate per 100sq.m (17:00-18:00)		AM Rate per 100sq.m (08:00-09:00)		PM Rate per 100sq.m (17:00-18:00)	
		Arr	Dep	Arr	Dep	Arr	Dep	Arr	Dep
Office	2,700m2	1.0	0.13	0.14	0.87	27	4	4	24

3.4.8 The traffic from such an office development would be expected to have a lower impact than core port traffic, as it would predominantly comprise of cars when compared to HGVs for the main working port.

3.4.9 Traffic generation from any non-core developments in Limerick Docks could also be minimised through effective Mobility Management measures, which include provisions to maximise the use of public transport and more sustainable forms of transport. The Mobility Management measures proposed for Limerick Docks are set out in Section 6 of this report.

3.4.10 It is expected that the zoned lands along the R510 west of Atlas Avenue will be developed on a phased basis over the medium to long term.

3.5 Other Factors affecting Future Traffic Volumes

3.5.1 There is likely to be a desire to promote more sustainable travel modes to the city centre in future. These could include a HGV ban in the city centre, coupled with removal of HGV tolls from the Shannon Tunnel as well as measures to promote public transport, cycling and walking.

3.5.2 When these factors are applied to the R510 Dock road it points to a road management strategy that would see the existing Dock Road transitioning from a major route as it approaches the N18 Interchange and to then gradually change function as it approaches the city centre.

4 REVIEW OF R510 DOCK ROAD PROPOSED UP GRADES

4.1 Review of Wider Proposals for Development of Dock Road

4.1.1 The Limerick Metropolitan District Movement Framework Study (MFS), prepared by Limerick City and County Council in 2015, sets out objectives, policies and proposals by the council for the orderly and sustainable improvement and upgrade of transport infrastructure within the urban environs of Limerick city. The objectives of this study are:

> "to firstly develop a long-term vision for the LMD in terms of accessibility, mobility and sustainability, and also to develop an implementation plan for comprehensive measures to upgrade the existing transportation network over a 5-year period, with a particular emphasis on prioritising and facilitating movement via sustainable modes of transport."

4.1.2 The MFS document categorises the R510 Dock Road as one of 9 no. major approaches to Limerick City Centre, as shown in Figure 4.1.

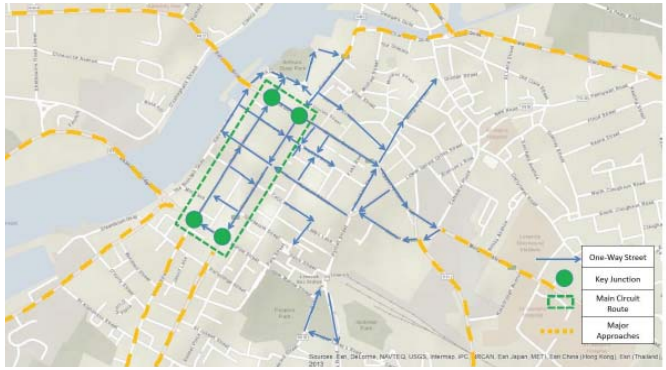


Figure 4.1: Major Approaches to Limerick City Centre (Source: LC&CC Limerick Metropolitan District Movement Framework Study)

4.1.3 The MFS document also includes proposals for the upgrade of the R510 Dock Road, including a new Secondary Bus Route (see Figure 4.2) and new cycle lane facilities (see Figure 4.3).

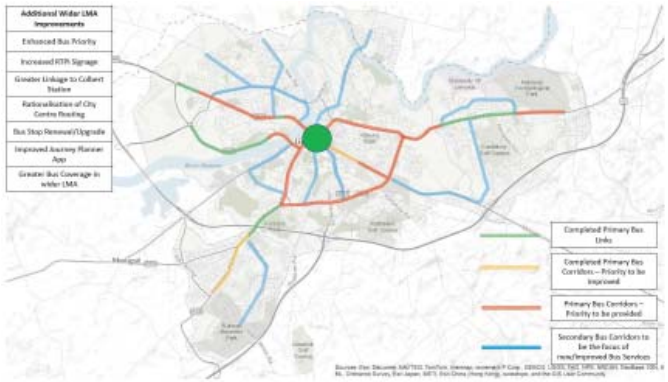


Figure 4.2: Proposed Bus Services for Limerick City Centre (Source: LC&CC Limerick Metropolitan District Movement Framework Study)

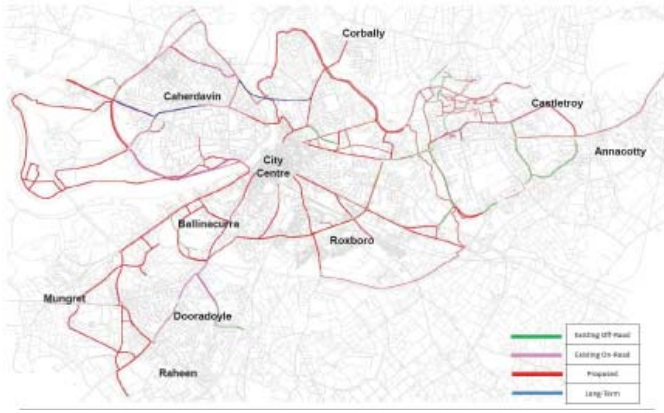


Figure 4.3: Proposed Cycle Lane Facilities for Limerick City Centre (Source: LC&CC Limerick Metropolitan District Movement Framework Study)

4.1.4 During recent meetings with SFPC, LC&CC confirmed that they are progressing with plans to implement route improvement works for the R510 Dock Road; however no design details have been made available at this stage.

4.2 ILTP Proposals for Development of Dock Road

4.2.1 There is likely to be different traffic demands and traffic types along various sections of the R510 Dock Road in the future. ILTP have therefore subdivided the Dock Road into different zones in terms of function and demand as listed below and shown in Figure 4.4.

- Zone 1 – N18 Roundabout to Greenpark Roundabout, with additional HGVs
- Zone 2 – Greenpark Roundabout to Atlas Avenue, with future mixed use development
- Zone 3 – Atlas Avenue to James Casey Walk, with reduce traffic

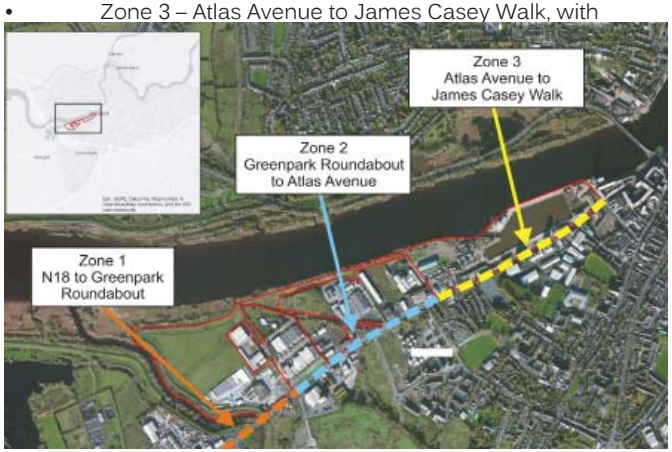


Figure 4.4: Dock Road fronting SFPC's landholdings – subdivision

into Zones 1, 2 & 3

4.2.2 Zone 1, from the Greenpark Roundabout to the N18 National Road Network, is likely to see significant increases in traffic movement associated with new development. This means that this section of road may need to be upgraded to dual carriageway or similar standard to cope with general traffic. However most of the traffic increases will come for non – port related activity.

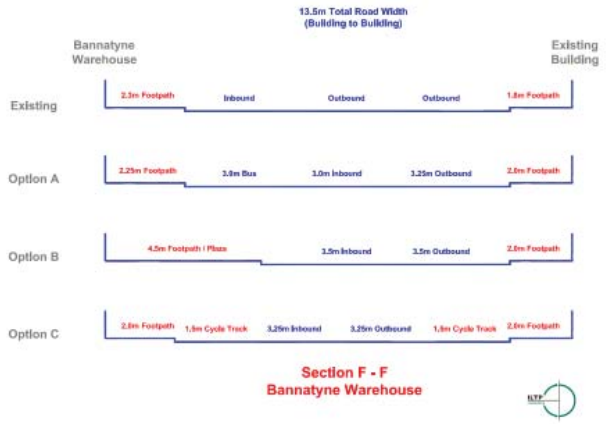
4.2.3 Zone 2, which connects port traffic from Greenpark Roundabout to Atlas Avenue, will also see some traffic increases. However depending on the internal road layout structure of non-core port lands to the north of the Dock Road, much of the non-core port development traffic could be directed to enter at the Greenpark Roundabout, thereby reducing the amount of traffic on the mid section of Dock Road. This section of Dock Road could also be upgraded and widened on a phased basis as development of the Framework Plan Lands is progressed. There is also the opportunity to include a shared bus and HGV traffic lane inbound to Atlas Avenue, where a bus gate could be provided to give bus priority into the city centre at this point.

4.2.4 For Zone 3, between Atlas Avenue and James Casey Walk, there should not be any significant increase in traffic volumes over time, which is consistent with radial routes into other city centre areas. Therefore the strategy should be to accommodate existing traffic levels on this section of Dock Road. This means that the design approach for this section of the road can assume a more urban character, which should be reflected in the road cross section and design treatments.

4.2.5 The section of the Dock Road in Zone 3 has a number of protected structures and cannot, nor should be significantly widened. The Non Core lands along the north side of the Dock Road from Atlas Avenue to the existing main entrance could have street fronting development that includes a redevelopment of the Bannatyne Building and Ranks Silo Building. The redevelopment of the Bannatyne and other buildings along this section of the Dock Road could be complimented with streetscape improvement.

4.2.6 Given the potential to limit traffic growth along the Dock Road between Atlas Avenue and James Casey Walk in the future, opportunities exist to consider a reconfiguration of this section of the road, which would provide a more distinct transition between the more industrial and manufacturing activities to the west.

4.2.7 The proposed Options A, B and C for the redevelopment of the Dock Road between Atlas Avenue and James Casey Walk are presented in Figure 4.5 and show a range of approaches that



could be deployed at this location.

Figure 4.5: Proposals for Dock Road Design for Zone 3 (Atlas Avenue to James Casey Walk)

4.2.8 The possible options proposed by ILTP for this section of Dock Road are summarised as follows:

- Option A includes for 3 metre wide inbound and out bound lanes with a dedicated inbound bus lane.
- Option B comprises wider 3.5m traffic lanes with the addition of a 4.5 metre Plaza, which could contribute to the overall enhancement of this urban area and increase permeability to the main city centre.
- Option C includes dedicated cycle lanes and footpaths.

4.2.9 While the LC&CC Corridor Study for the Dock can best determine the appropriate treatment of the Dock Road, any design should have regard to the existing development type and quantum that may arise in the future along the Dock Road and the potential for re-organising Port access and Operations within the Ted Russell Dock.

4.2.10 It is expected that any redevelopment / improvement works for the R510 Dock Road would be planned and implemented by LC&CC in consultation with key stakeholders such as SFPC.

5 REVIEW OF ACCESS STRATEGY FOR LIMERICK DOCK

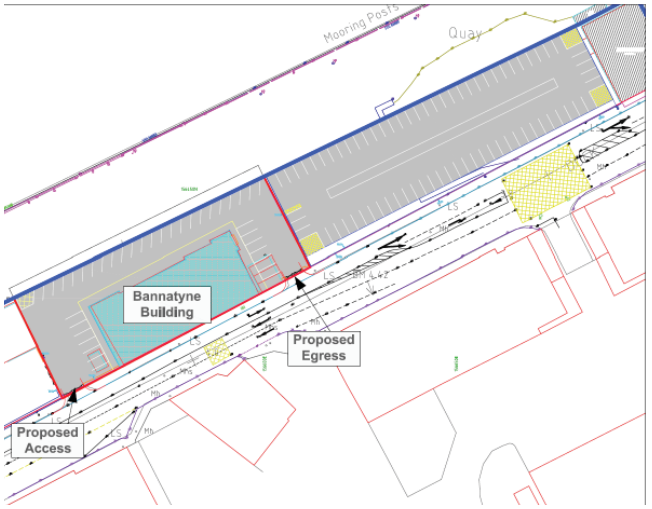
5.1 Overview

5.1.1 This section sets out the wider Access Strategy for Limerick Docks to facilitate the optimisation of the Working Dock and development of other non-core port areas within SFPC's landholding. Any redevelopment of the Port will need to occur in stages.

5.2 Bannatyne and Ranks Silo – Development Proposals

5.2.1 In the short to medium term it is proposed that a portion of lands adjacent to Dock Road within the working dock area be re-allocated for non-port related commercial development. This includes the Bannatyne Building and adjoining land to the east fronting Dock Road (see Figure 5.1).

5.2.2 ILTP have developed a general layout for re-a purposed Bannatyne Building, which could be utilised for Office Use, or potentially as an integrated modern Science & Technology Research Facility. This layout, shown in Figure 5.1, includes 110 no. parking spaces that could be allocated to the redeveloped Bannatyne Building, and also to the future redevelopment of the



nearby Ranks Silo Building.

Figure 5.1: ILTP Proposed Option for Commercial (Non-Port) Development of Bannatyne and Rank Silo Buildings

5.2.3 It is proposed that the converted Bannatyne building and surrounding car parking area be segregated from the main working dock area, with existing dock entrances onto Dock Road converted to serve as dedicated access and egress points for the building.

5.2.4 The car parking for the Bannatyne building could be later used for new development, but this would require the provision of car parking elsewhere on the non-Core Port lands. This could only occur however if alternative and suitable car parking was provided and a suitable access provided off Atlas Avenue for example.

5.2.5 In addition to developing the Bannatyne building improvement to this section of Dock Road could also promote

further rejuvenation on the opposite side of Dock Road.

5.3 Core Port Access - Proposed Relocation of Main Entrance

5.3.1 SFPC will have to expend significant resources in re-organising the internal port to take traffic off the more urban portion of Dock Road, which would be dependant on certainty on the relocation of the main access to port.

5.3.2 In order to serve as the primary port access, the existing alignment of Atlas Avenue and it's junction with Dock Road would require upgrading in order to facilitate 2-way HGV turning movements. This includes general road widening works and the inclusion of left-turn and right-turn lanes turning from Dock Road into Atlas Avenue. A proposal for possible upgrade works is presented on the ILTP drawing in Figure 5.3 and included in Appendix A.

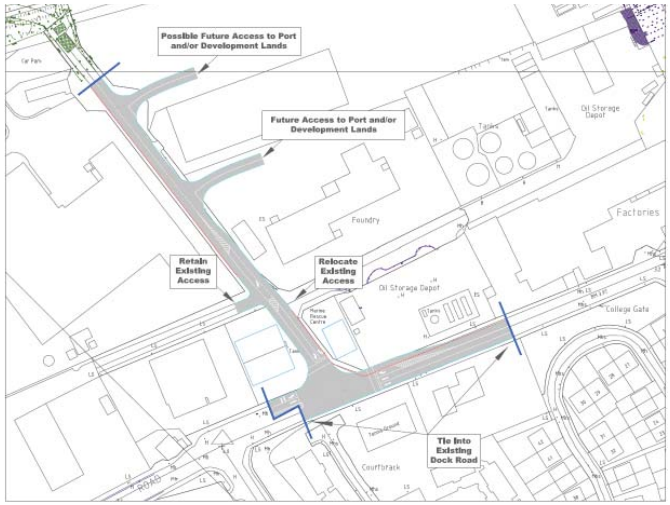


Figure 5.2: Proposal for Upgrade of Atlas Avenue to serve as Main Port Access

5.3.3 As shown in Figure 5.3, the Core Port access should be located further north along Atlas Avenue to provide segregation between port and non-port activity and ensure adequate queue capacity for port traffic.

5.3.4 The possibility of introducing a bus gate into the new junction at this location could also assist in promoting the use of more sustainable access to the city centre. Similarly the removal of HGV tolls on the N18 Tunnel would reduce HGV traffic in the city centre if implemented.

5.3.5 It is also intended to retain all the existing access points to the existing SFPC lands for occasional but essential use by Port Traffic. However, the nature, size and function of the different access points may change to reflect the land uses they serve.

5.3.6 From detailed operational assessments and consultations with existing Port User Groups it would not be possible to achieve the improvement set out in the Limerick Docklands Framework Strategy without the provision of alternative and appropriate access to the Port. Therefore a relocated main entrance is key to any major re-organisation of the Ted Russell Dock.

5.3.7 The cost of undertaking internal port re-configuration will be significant for SFPC. ILTP would not recommend any major changes in terms of current port operations without certainty of the provision of the alternative access strategy.

5.3.8 Fortunately LC&CC are currently undertaking a Corridor Study for Dock Road and this affords them the opportunity to co-ordinate the upgrade to the R510, including the junction with Atlas Avenue. This would facilitate the redevelopment of Limerick Docks, including making key buildings within the port available for alternative use and enhancing the setting and character of building along Dock Road beyond Atlas Avenue.

5.3.9 It would also be possible for LC&CC to implement Dock Road upgrade works on a phased basis, working out from the city centre. This could include the Atlas Avenue / Dock Road Upgrade and this would allow for the Framework Strategy to be implemented in a timely manner.

5.4 Non- Core Port Lands

5.4.1 The Options for access to non-core lands to the west of Atlas Avenue were considered as follows, and as shown in Figure 5.4:

- Option A would involve an on-line upgrading of the existing R510. This could be achieved in tandem with the development of the lands. It could also provide for a dedicated traffic lane from Greenpark Roundabout to Atlas Avenue, which could be reserved for Public Transport and HGV Port Traffic.
- Option B involves the construction of an Access Road along or adjoining the green buffer which run along the River Shannon to link to the Greenpark Roundabout. An access road at this location could be integrated with a greenway facility which links directly to Limerick city centre. This option would be difficult to deliver due to land ownership, cost and environmental constraints and at best is only likely to happen over a long period of years in conjunction with development of the adjacent land holding.
- Option C could involve a combination of the above options.

Figure 5.4: Non-Core Port Lands - Access Options A & B

5.5 Phasing of Implementation

5.5.1 The redevelopment of Limerick Docks can be implemented in phases; however the works are dependent on improvements to the R510 Dock Road and a relocated access of Atlas Avenue. ILTP have identified the following key phases for the development of Limerick Docks:

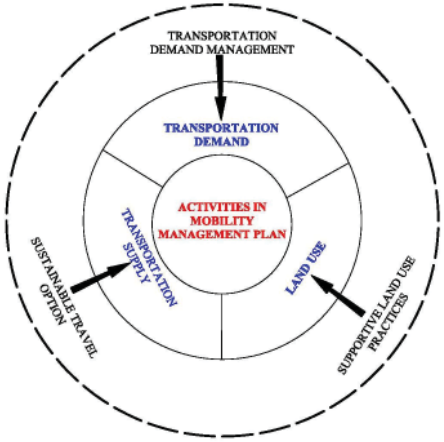
6 MOBILITY MANAGEMENT PROPOSALS

6.1 Introduction

6.1.1 The objective of the LC&CC Limerick Metropolitan District Movement Framework Study includes measures to "upgrade the existing transportation network over a 5-year period, with a particular emphasis on prioritising and facilitating movement via sustainable forms of transport." This document also refers to National, Regional and Local policy to inform a wider transport strategy for Limerick City and its environs. In addition to these wider measures site-specific Mobility Management measures should also be implemented to promote sustainable travel patterns as part of any new development in the city, including Limerick Docklands.

6.1.2 As part of this Traffic & Transportation Study ILTP have developed a series of key Mobility Management measures to ensure that future development on SFPC lands at Limerick Docks are developed with sustainable travel patterns in both the short and long terms. The objective of Mobility Management is to put in place a range of policies, programmes, services and products that influence how, why, when & where people travel in order to make travel behaviour more sustainable.

6.1.3 Figure 6.1 represent graphically the interlinking approaches and strategies utilised in the preparation of Mobility Management proposals. As part of these proposals ILTP have sought to consider transportation demand, transportation supply



and land use.
Figure 6.1: Mobility Management Strategies

6.1.4 Mobility Management can be described, as a transport demand management mechanism that seeks to provide for the transportation needs of people and goods. It can be applied as a strategic demand management tool or as a site-specific tool measure. The aim is to reduce the demand for and use of cars by increasing the attractiveness and practicality of other modes of transport. Mobility Management encourages individuals, companies or institutions to satisfy their transport needs by the efficient and integrated use of available transport facilities.

6.1.5 In early 2009 the Department of Transport published the policy document Smarter Travel A Sustainable Transport Future – A New Transport Policy Document for Ireland 2009 –2020. This document sets down the policies and measures required to reduce travel demand and ensure that a far greater proportion of travel is done using sustainable modes of transport.

6.1.6 The use of Mobility Management is an important element in meeting targets set down in the DTTAS guideline document Smarter Travel A Sustainable Transport Future.

6.2 Objectives of Mobility Management

6.2.1 Mobility Management for new development within Limerick Docklands would have the effect of reducing in overall terms both the amount of trips generated by commercial activity on the lands, and would ensure that greater numbers use public transport. A Mobility Management strategy would therefore act as a form of mitiga tion by reducing the overall level of traffic on the surrounding roads in the future.

6.3 Limerick Docklands Travel Patterns

6.3.1 As previously discussed in this Traffic & Transport Study there are no proposals to significantly increase Port operations at Limerick Port, however as a worse case scenario for traffic assessment purposes it is assumed that traffic generated by core port activity may grow by 20% over the lifetime of SFPC's Masterplan, Vision 2041.

6.3.2 It is further proposed in this Traffic & Transportation Study that the main port access be relocated to the west off Atlas Avenue. This would serve to remove HGV traffic from the Dock Road east of Atlas Avenue.

6.3.3 The non-core port lands to the East of Atlas Avenue that are proposed for development in the short to medium term comprise of the Bannatyne Building and adjoining land along Dock Road. It is expected that the zoned lands along the R510 west of Atlas Avenue will be developed on a phased basis over the medium to long term.

6.3.4 Traffic generation from any non-core developments in Limerick Docks could be minimised through effective Mobility Management measures, which include provisions to maximise the use of public transport and more sustainable forms of transport.

6.3.5 Measures to encourage non-car travel by staff and visitors to the Limerick Docklands area are perceived to be important from a sustainable development perspective. There may also be health benefits from encouraging walking and cycling. Measures such as parking control are important in encouraging alternative forms of travel to the private car. However, it is desirable that the quantum of parking should be set at a reasonable level in order to ensure illegal parking outside of the lands is not generated. Any proposed parking would adhere to these principles, and to Development Plan standards, and be appropriate for lands of this kind and location.

6.3.6 Any proposed future development would also include cycling parking facilities in accordance with CDP standards.

6.4 Proposed Measures

6.4.1 The recommended measures to promote sustainable travel patterns for future commercial developments in Limerick Docklands are set out below. These measures should be implemented as part of any development of non-core lands by the intended occupants of the development.

- Promote Public Transport initiatives and Offer Tax Saver Tickets
- Promote Cycle To Work Scheme and Cycling Initiatives
- Promote Car Sharing & Sustainable Travel
- Promote Walking

Promote Public Transport Initiatives and offer Tax Saver Tickets

6.4.2 Information on public transport serving the Limerick Docklands is vital to allow staff and visitors make informed decisions. It is recommended that Public transport information be displayed in the staff and public areas of any commercial building / facility, where appropriate.

6.4.3 It is recommended that all staff and regular visitors be provided with information on public transport provisions connecting with the facility.

6.4.4 It is recommended that public transport initiatives such as the LEAP card and Tax Saver Tickets.

6.4.5 It is recommended that staff be facilitated in participation in Revenue approved public transport initiatives, including Tax Saver Tickets.

<u>Promote Cycle To Work Scheme and Cycling Initiatives</u>

6.4.6 It is recommended that the Cycle To Work scheme be actively promoted, and all staff working in the Limerick Docklands area be encouraged to avail of the scheme.

6.4.7 A good provision of secure bicycle parking spaces would be vital to accommodate staff and visitor cycle parking.

6.4.8 It is recommended that good changing, locker and shower facilities be provided for staff, and ideally located in close proximity to proposed staff cycle parking facilities. This would promote a greater uptake of cycling as the primary commuting mode for staff.

<u>Promote Car Sharing & Sustainable Travel</u>

6.4.9 Car sharing is a commonly used strategy in reducing the number of private vehicular trips to the workplace. This strategy is particularly relevant as there is significant potential for a number of staff to travel to work in one vehicle.

6.4.10 It is recommended that a formal procedure be put in place and coordinated by the Mobility Man ager to ensure that the number of staff that travel in each car is maximised.

<u>Promote Walking</u>

6.4.11 It is recommended that good changing facilities and shower and locker facilities are in place for staff who walk to work. It is further proposed that regular walking promotional events be held, and to provide literature to encourage walking, emphasising the various health benefits.

7 SUMMARY & CONCLUSIONS

7.1 Summary

7.1.1 ILTP Consulting were commissioned by Shannon Foynes Port Company to provide Traffic and Transportation input into the Limerick Docklands Framework Strategy, which is being developed in association with HRA Planning Consultants. The objective of this Traffic & Transportation Study is to enhance linkages to Limerick Dock and inform the future optimisation of access arrangements and internal transport network for the Dock and the remainder of the NCL (non core lands) within the port area and the remainder of the lands west of Atlas Avenue between the River Shannon and the R510.

7.1.2 ILTP carried out a high level examination of the subject lands and the overall layout and access arrangements as part of the Traffic & Transportation study for the Framework Study.

7.1.3 The location of the facilities at Limerick Dock, by way of their location on the cusp of the inner city area, means that Limerick Port is essentially a gateway point into Limerick City. Along the R510 Dock Road, to the south-west of Limerick Dock lies a substantial industrial area, while to the immediate east and north-east there are more urban residential and retail developments.

7.1.4 Whilst there are no proposals to increase Port operations at Limerick Port, there is a significant opportunity to better integrate some of the port facilities and buildings into the urban area of Limerick City. Re-purposing a number of non-core assets could allow for a level of development within the Limerick Docklands that would effectively extend the urban catchment of Limerick City into the Port lands. This includes the redevelopment of the landmark Bannatyne Building for office or research uses.

7.1.5 The levels of traffic at peak hour generated by the Port are in overall terms very low, when compared to the overall traffic flows along the Dock Road. From the traffic data analysed by ILTP it is expected that moderate future increases in Core Port related activities would not result in significant increases in overall traffic to and from the Docks. The current movement of Port related traffic along the Dock Road can cause difficulties however due to the location and size of the existing accesses and restrictions on Dock Road.

7.1.6 From ILTP's appraisal and from further consultations with SFPC, LC&CC and Port User Groups it is considered that relocating the main port access to Atlas Avenue would have the following benefits:

- The majority of traffic to the core port currently uses the Main Entrance Gate on Dock Road. The relocation of the main port entrance to Atlas Avenue would serve to remove port traffic from the Dock Road, east of Atlas Avenue.
- A main port access off Atlas Avenue would be in closer proximity to the N18 and National Road Network, thereby allowing more efficient movement of traffic to and from the port.
- The relocated main entrance would allow an optimisation of internal operations within the working dock and release significant lands and building for public or alternative uses.
- The enhancement of the Dock Road from Atlas Avenue to the City would be facilitated and could result in significant streetscape improvement to this important approach to the city.

7.1.7 The Limerick City and County Council Limerick Metropolitan District Movement Framework Study (MFS) sets out objectives, policies and proposals by the council for the orderly and sustainable improvement and upgrade of transport infrastructure within the urban environs of Limerick city. The MFS document includes proposals for the upgrade of the R510 Dock Road, including a new Secondary Bus Route and new cycle lane facilities. During recent meetings with SFPC, LC&CC confirmed that they are progressing with plans to implement route improvement works for the R510 Dock Road; however no design details are available at this stage.

7.1.8 It is expected that any redevelopment / improvement works for the R510 Dock Road would be planned and implemented by LC&CC in consultation with key stakeholders such as SFPC.

7.1.9 The redevelopment of Limerick Docklands can be implemented in phases; however the works are dependent on improvements to the R510 Dock Road and a relocated port access of Atlas Avenue. Therefore a relocated main entrance is key to any major re-organisation of the Ted Russell Dock.

7.1.10 The cost of undertaking internal port re-configuration will be significant for SFPC. ILTP would not recommend any major changes in terms of current port operations without certainty of the provision of the alternative access strategy.

7.1.11 A Dock Road Improvement Scheme would afford LC&CC the opportunity to co-ordinate the upgrade to the R510, including the junction with Atlas Avenue. This would facilitate the redevelopment of Limerick Docks, including making key buildings within the port available for alternative use and enhancing the setting and character of building along Dock Road beyond Atlas Avenue.

7.1.12 ILTP have identified the following key phases for the development of Limerick Docks:

- Phase 1 – SFPC and LC&CC to agree design and overall strategy for an upgraded main port access off Atlas Avenue
- Phase 2 – Reorganisation of internal working Core Port Facilities by SFPC in conjunction with R510 Dock Road Route Improvement Scheme Phase 1. The early delivery of the upgraded Atlas Avenue junction would be a prerequisite to any internal re-organisation of the port activities however.
- Phase 3 – The planning and redevelopment of the Bannatyne Building as an independent non-core commercial facility, such as for office or research use, can proceed once new port access arrangements are in place.
- Phase 4 – Development of SFPC non-core lands in conjunction with agreements with LC&CC on access strategy to non-core lands and in conjunction with the balance of the Dock Road Improvement Scheme.

7.1.13 SFPC will have to expend significant resources in re-organising the internal port to take traffic off the more urban portion of Dock Road, which would be dependant on certainty on the relocation of the main access to port.

7.1.14 It would also be possible for LC&CC to implement Dock Road upgrade works on a phased basis, working out from city centre, which would see the Atlas Avenue upgrade implemented in Phase 1 and allow for the early implementation of the Limerick Docklands Framework Strategy.

7.2 Conclusions

7.2.1 The sustainable growth of Limerick Dock, particularly in the context of the existing industrial corridor along the Shannon Estuary that includes the port, will need to be done in the context of a sustainable transport strategy for the area immediately adjoining the Port and along the Dock Road which will also allow the Port to fulfil its role as a key national strategic asset.

7.2.2 The Limerick City and County Council Limerick Metropolitan District Movement Framework Study includes proposals for the upgrade of the R510 Dock Road, including a new Secondary Bus Route and new cycle lane facilities. During recent meetings with SFPC, LC&CC confirmed that they are progressing with plans to implement route improvement works for the R510 Dock Road.

7.2.3 It is expected that any redevelopment / improvement works for the R510 Dock Road would be planned and implemented by LC&CC in consultation with key stakeholders such as SFPC.

7.2.4 Whilst there are no proposals to increase Port operations at Limerick Port, there is a significant opportunity to better integrate the port facilities into the urban area of Limerick City which lies to the east. The redevelopment of Limerick Docks can be implemented in phases; however the works are dependent on improvements to the R510 Dock Road and a relocated access off Atlas Avenue.

7.3 Further Consultation

7.3.1 Further and ongoing consultation is proposed with LC&CC on the timing for the R510 Dock Road Route Improvement Scheme, including an upgraded Atlas Avenue junction.

7.3.2 The early implementation of a new main port access off an upgraded Atlas Avenue / Dock Road junction is critical to the optimisation and consolidation of working dock operations and the reallocation / redevelopment of SFPC's non core assets within their landholding. The benefits to the port and the city of both schemes progressing in tandem offers a unique opportunity to both rejuvenate the core and non Core Port lands, to redevelop key building within the port for commercial and cultural uses and to significantly enhance the streetscape of the Dock Road particularly between Atlas Avenue and the City centre.