

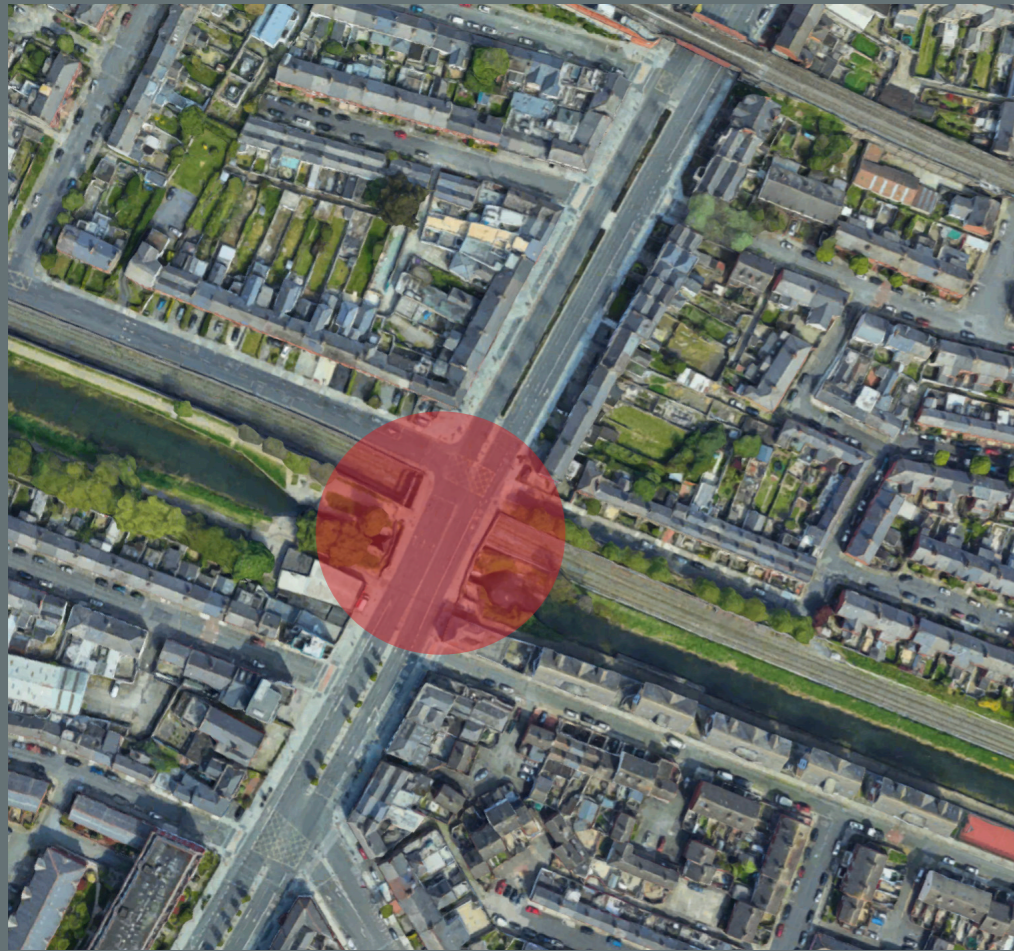


Architectural Heritage Impact Assessment

Royal Canal Greenway Phase 3,
Development Works at Binns Bridge,
Drumcondra Road Lower/Dorset Street ,
Dublin 7.

June 2023

Rev 00



Site Location
(Google Maps)

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I. Introduction

01 Introduction

Shaffrey Architects RIAI Grade I Conservation Architects have prepared this Architectural Heritage Impact Assessment as part of a planning application submission by Dublin City Council under the Planning and Development Act 2000-2021 (Part XI) and Planning And Development Regulations 2001-2022 (Part VIII).

The planning application is for a variation to the Royal Canal Greenway Phase 3 (RCP3) project approved development works proposed to the canal tow path to the Royal Canal on approach to Binns Bridge Drumcondra Road Lower/Dorset Street Lower, Dublin 7.

The Architectural Heritage Impact Assessment (AHIA) provides appropriate detail to allow an assessment to be made appropriate to the nature and scale of the proposed works.

The report provides historical context, description of the existing structure, the statutory context, description of proposed works, description of potential adverse impact with recommended mitigation. The Royal Canal Greenway Phase 3 (RCP3) project is part of the Dublin City Council's (DCC) core active travel network, and is funded by the National Transport Authority (NTA). The route is identified as a primary Greenway route in the Greater Dublin Area Cycle Network Plan, published by the National Transport Authority in 2013.

The Royal Canal Greenway Phase 3 (RCP3) will provide high quality walking and cycling facilities along the banks of the Royal Canal, extending from Newcomen Bridge, North Stand to Cross Guns Bridge, Phibsborough. It is a primary route in the NTA Greater Dublin Area Cycle Network Plan.



Fig 1. Binns Bridge (protected structure) view from northern embankment.

The RCP3 Project will:

- Provide high quality, continuous safe and accessible protected cycling and walking facilities to cater for all ages and abilities to meet existing and future demand.
- Deliver improvements by creating a community plaza, tree planting and delivery of soft landscaping.



Fig 2. Urban Context: Aerial view of Binns Bridge crossing of the Royal Canal.

2. Statutory Heritage Protection

02 Statutory Heritage Protection

General:

All development should be assessed on consistency with statutory heritage policies, designations and guidelines.

Ireland has ratified several European and International conventions in relation to the protection of its built heritage. This large body of conservation charters and associated conventions, declarations, documents etc are an essential framework for good practice in the protection and enhancement of the historic environment. The Government Policy on Architecture 2009-2015 and beyond recognises the place of architecture in society as an expression of cultural, aesthetic and social values both past and present.

The legal framework upon which the protection of Architectural Heritage is based stems from UNESCO's "Convention Concerning the Protection of the World Cultural and Natural Heritage" ratified by Ireland in 1991 and the "Granada Convention" ratified by Ireland in 1997. The Granada convention in particular formed the basis for our national commitment to the protection of our architectural heritage. The legislative provisions for protection are contained in Part IV of the Planning and Development Act 2000 (as amended).

The principal means by which the historic urban environment is protected, is set out in the Planning and Development Acts 2000 (as amended) and comprises principally the Record of Protected Structures (Section 51).

The Planning and Development Act 2000 (as amended) requires each planning authority to compile and maintain a Record of Protected Structures (RPS). The RPS is a mechanism for the statutory protection of the architectural heritage. A protected structure is a structure that a local authority includes in its Record of Protected Structures because of its special interest from an architectural, historical, archaeological, artistic, cultural, scientific, social or technical point of view.

The Record of Protected Structures, is part of the Development Plan for the Local Authority's functional area. Each owner and occupier of a protected structure is legally obliged to ensure that the structure is maintained and protected from endangerment.

Binns Bridge is included on the Record of Protected Structures (RPS), RPS ID: 908

Description: Binns Bridge

The RPS entry does not make a distinction between the canal and railway bridge.

Binns Bridge has two entries in National Inventory of Architectural Heritage

Canal Bridge
Reg. No. 50060189
Rating: Regional
Categories: Architectural, Social, Technical
Date: 1769

Railway Bridge
Reg. No. 50060296
Rating: Regional
Categories: Architectural, Social, Technical
Date: 1864

The National Inventory of Architectural Heritage (NIAH) survey of Dublin City has identified the 2nd Lock on the Royal Canal of Regional importance rating.

The purpose of the NIAH is to identify, record, and evaluate the post-1700 architectural heritage of Ireland, uniformly and consistently as an aid in the protection and conservation of the built heritage. NIAH surveys provide the basis for the recommendations of the Minister for Housing, Local Government and Heritage to the planning authorities for the inclusion of particular structures in their Record of Protected Structures (RPS).

Reg No 50060188
The 2nd Lock Royal Canal
Rating: Regional
Categories: Architectural, Social, Technical
Date: 1795

There is a standard Ministerial recommendation to Local Authorities to add any structure rated of regional or higher importance by the NIAH, to the Local Authority's Record of Protected Structures (RPS). Notwithstanding this, the decision to add a structure to the RPS is a reserved function of the elected members of the City Council. To date the 2nd Lock has not been added to the RPS.

The Dublin City Industrial Heritage Record (DCIHR) has two entries for Binns Bridge and one entry for the 2nd Lock on the Royal Canal.

Heritage Protection under Planning and Development Act 2000 (as amended) Part IV: Architectural Heritage Section 52 (1) of the Planning and Development Act 2000 obliges the Minister to issue guidelines to planning authorities concerning development objectives (i.e. protecting structures), and Section 28 of

the Act requires planning authorities (including An Bord Pleanála) to have regard to them in the performance of their functions.

Published Guidelines:
Architectural Heritage Protection Guidelines for Planning Authorities, Guidance on Part IV of the Planning and Development Act 2000 (DoAHG 2012).

Planning authorities preserve the special heritage character of places and townscape by designating them Architectural Conservation Areas. Objectives for the protection of structures and preservation of the character of areas are included in the authorities development plan.

The Royal Canal, its tow path and Binns bridge are within a non statutory conservation area. The Royal Canal is not included in DCC's RPS but is recorded as a Protected structure in The Fingal County Council RPS (Ashbourne to St Catherine' Park Leixlip).

Statutory Protection under Dublin City Council Development Plan 2022-2028:

The application site lies within the administrative functional area of Dublin City Council where development is guided by the provisions of the Dublin City Council Development Plan 2022-2028

The Dublin City Council Development Plan contains objectives and policies to protect and enhance the city's built heritage.

The Dublin City Development Plan 2022– 2028 also contains the Record of Protected Structures (RPS).

The policy mechanisms used to conserve and protect areas of special historic and architectural interest include Land-use zonings: Architectural and Civic Design Character Areas. All new development must have regard to the local context and distinctiveness and the contribution to the local scene of buildings, landmarks, views, open spaces and other features of architectural, historic or topographical interest. The general design principles are set out in a separate policies in the Development Plan but it is particularly important within Conservation Areas that design is appropriate to the context and based on an understanding of Dublin's distinctive character areas.

The following heritage protection policies & objectives contained within the Development Plan are of relevance.

Chapter 11 Built Heritage and Archaeology of the Dublin City Council Development Plan 2022-2028.

Heritage Policies of relevance:

BHA1

Record of Protected Structures (a) To include those structures that are considered to be of special architectural, historical, archaeological, artistic, cultural, scientific, technical or social interest in the Record of Protected Structures, and to remove those structures where protection is no longer warranted. (b) To maintain and review the RPS whilst having regard to recommendations for additions to the RPS made by the Minister under Section 53 of the Planning and Development Act, 2000 (as amended).

BHA2

Development of Protected Structures That development will conserve and enhance protected structures and their curtilage and will: (a) Ensure that any development proposals to protected structures, their curtilage and setting shall have regard to the Architectural Heritage Protection Guidelines for Planning Authorities (2011) published by the Department of Culture, Heritage and the Gaeltacht. (b) Protect structures included on the RPS from any works that would negatively impact their special character and appearance. (c) Ensure that works are carried out in line with best conservation practice as advised by a suitably qualified person with expertise in architectural conservation. (d) Ensure that any development, modification, alteration, or extension affecting a protected structure and/or its setting is sensitively sited and designed, and is appropriate in terms of the proposed scale, mass, height, density, layout and materials. (c) Ensure that the form and structural integrity of the protected structure is retained in any redevelopment and ensure that new development does not adversely impact the curtilage or the special character of the protected structure. (d) Respect the historic fabric and the special interest of the interior, including its plan form, hierarchy of spaces, structure and architectural detail, fixtures and fittings and materials. (e) Ensure that new and adapted uses are compatible with the architectural character and special interest(s) of the protected structure. (f) Protect and retain important elements of built heritage including historic gardens, stone walls, entrance gates and piers and any other associated curtilage features. (g) Ensure historic landscapes, gardens and trees (in good condition) associated with protected structures are protected from inappropriate development. (h) Have regard to ecological considerations for example, protection of species such as bats.

BHA3

Loss of Protected Structures That the City Council will resist the total or substantial loss of protected structures in all but exceptional circumstances.

BHA4

Ministerial Recommendations To have regard to the National Inventory of Architectural Heritage (NIAH) rating of a structure and any associated Ministerial

Recommendation in the assessment of planning applications.

BHA5

Demolition of Regional Rated Building on NIAH That there is a presumption against the demolition or substantial loss of any building or other structure assigned a 'Regional' rating or higher by the National Inventory of Architectural Heritage (NIAH), unless it is clearly justified in a written conservation assessment that the building has no special interest and is not suitable for addition to the City Council's Record of Protected Structures (RPS); having regard to the provisions of Section 51, Part IV of the Planning and Development Act, 2000 (as amended) and the Architectural Heritage Protection Guidelines for Planning Authorities (2011).

BHA6

Buildings on Historic Maps That there will be a presumption against the demolition or substantial loss of any building or other structure which appears on historic maps up to and including the Ordnance Survey of Dublin City, 1847. A conservation report shall be submitted with the application and there will be a presumption against the demolition or substantial loss of the building or structure, unless demonstrated in the submitted conservation report this it has little or no special interest or merit having regard to the provisions of the Architectural Heritage Protection Guidelines for Planning Authorities (2011).

Designated Conservation Areas

Whilst designated conservation areas do not have a statutory basis they are recognised as areas that have conservation merit and importance and warrant protection through zoning and policy application.

Designated Conservation Areas include the canals.

These areas require special care in terms of development proposals. The City Council will encourage development which enhances the setting and character of Conservation Areas. There is a general presumption against development which would involve the loss of a building of conservation or historic merit within the Conservation Areas or that contributes to the overall setting, character and streetscape of the Conservation Area. Such proposals will require detailed justification from a viability, heritage, and sustainability perspective.

BHA9

Conservation Areas To protect the special interest and character of all Dublin's Conservation Areas – identified under Z8 and Z2 zoning objectives and denoted by red line conservation hatching on the zoning maps. Development within or affecting a Conservation Area must contribute positively to its character and distinctiveness and take opportunities to protect and enhance the character and appearance of the area and its setting, wherever possible. Enhancement

opportunities may include: 1. Replacement or improvement of any building, feature or element which detracts from the character of the area or its setting. 2. Re-instatement of missing architectural detail or important features. 3. Improvement of open spaces and the wider public realm and reinstatement of historic routes and characteristic plot patterns. 4. Contemporary architecture of exceptional design quality, which is in harmony with the Conservation Area. 5. The repair and retention of shop and pub fronts of architectural interest. 6. Retention of buildings and features that contribute to the overall character and integrity of the Conservation Area. 7. The return of buildings to residential use. Changes of use will be acceptable where in compliance with the zoning objectives and where they make a positive contribution to the character, function and appearance of the Conservation Area and its setting. The Council will consider the contribution of existing uses to the special interest of an area when assessing change of use applications, and will promote compatible uses which ensure future long-term viability.

BHA10

Demolition in a Conservation Area

There is a presumption against the demolition or substantial loss of a structure that positively contributes to the character of a Conservation Area, except in exceptional circumstances where such loss would also contribute to a significant public benefit.

BHA12

Industrial, Military and Maritime, Canal-side and Rural Heritage

To promote an awareness of Dublin's industrial, military and maritime, canal-side (including lock-keepers' dwellings, locks and graving docks), rail, and rural (vernacular) heritage.

BHA16

Industrial Heritage

To have regard to the city's industrial heritage and Dublin City Industrial Heritage Record (DCIHR) in the preparation of Local Area Plans and the assessment of planning applications. To review the DCHIR in accordance with Ministerial Recommendations arising from the National Inventory of Architectural Heritage (NIAH) survey of Dublin City.

BHA17

Industrial Heritage of Waterways, Canals and Rivers

To support and promote a strategy for the protection and restoration of the industrial heritage of the city's waterways, canals and rivers, including retaining features such as walls, weirs, millraces, and the graving dock structures at Ringsend.

Non Statutory Guidance:

Joint ICOMOS – TICCIH
Principles for the Conservation of Industrial Heritage Sites,
Structures, Areas and Landscapes
«The Dublin Principles»
Preamble

Around the World, a great diversity of sites, structures, complexes, cities and settlements, areas, landscapes and routes bear witness to human activities of industrial extraction and production. In many places, this heritage is still in use and industrialisation is still an active process with a sense of historical continuity, while in other places it offers archaeological evidence of past activities and technologies. Besides the tangible heritage associated with industrial technology and processes, engineering, architecture and town planning, it includes many intangible dimensions embodied in the skills, memories and social life of workers and their communities

The global process of industrialisation observed over the past two centuries constitutes a major stage of human history, making its heritage particularly important and critical to the Modern World. Precursors and beginnings of industrialisation can be recognized in many parts of the world well back into ancient times through active or archaeological sites, and our attention extends to any examples of such process and its heritage. However, for our purposes, these joint principles' primary interests coincide with the common notions of the Modern Era Industrial Revolution, marked by distinctive and dedicated production, transportation and power generating or harnessing processes and technologies, trade and commercial interactions, and new social and cultural patterns.

The industrial heritage is highly vulnerable and often at risk, often lost for lack of awareness, documentation, recognition or protection but also because of changing economic trends, negative perceptions, environmental issues or its sheer size and complexity. Yet, by extending the life cycle of existing structures and their embodied energy, conservation of the built industrial heritage, can contribute to achieving the goals of sustainable development at the local, national and international levels. It touches the social as well as the physical and environmental aspects of development and should be acknowledged as such.

I Definition: The industrial heritage consists of sites, structures, complexes, areas and landscapes as well as the related machinery, objects or documents that provide evidence of past or ongoing industrial processes of production, the extraction of raw materials, their transformation into goods, and the related energy and transport infrastructures. Industrial heritage reflects the profound connection between the cultural and natural environment, as industrial processes whether ancient or modern depend on natural sources of raw materials, energy

and transportation networks to produce and distribute products to broader markets. It includes both material assets, immovable and movable, and intangible dimensions such as technical know how, the organisation of work and workers, and the complex social and cultural legacy that shaped the life of communities and brought major organizational changes to entire societies and the world in general.

2 Industrial heritage sites are very diversified in terms of their purpose, design and evolution over time. Many are representative of processes, technologies as well as regional or historical conditions while others constitute outstanding achievements of global influence. Others are complexes and multiple site operations or systems whose many components are interdependent, with different technologies and historical periods frequently present. The significance and value of industrial heritage is intrinsic to the structures or sites themselves, their material fabric, components, machinery and setting, expressed in the industrial landscape, in written documentation, and also in the intangible records contained in memories, arts and customs.

Principles:

I Document and understand industrial heritage structures, sites, areas and landscapes and their values.

II Ensure effective protection and conservation of the industrial heritage structures, sites, areas and landscapes.

III Conserve and maintain the industrial heritage structures, sites, areas and landscapes.

IV Present and communicate the heritage dimensions and values of industrial structures, sites, areas and landscapes to raise public and corporate awareness, and support training and research.

3. Site In Context

03 Site in Context

Historic Context:

By the middle of the eighteenth century a number of proposals were being considered for building canals throughout Ireland. In 1788 the Irish Parliament introduced a scheme to help finance private companies to build canals. Canals were seen as an instrument to assist economic progress by encouraging trade and industrial development. The attraction of linking Dublin with the River Shannon was obvious and in 1755 two alternative routes were put forward to the Irish Parliament. A survey in 1755 by Thomas Williams and John Cooley for a canal from Dublin to the north Shannon was carried out and the more southerly Grand Canal route was chosen by the Commissioners of Inland Navigation. The Southerly route via Sallins and Tullamore to reach the Shannon near Banagher) was approved and this became the Grand Canal.

In the 1780's a director of the Grand Canal Company John Binn had a falling out with his fellow directors and then changed his allegiance to the Royal Canal Company to build a rival link to the Shannon using a more northerly route. A member of Dublin Corporation in the 1700's, he had made his fortune as a wholesale silk merchant. The Royal Canal Company was established by Act of parliament in 1789 and work began at Phibsborough in 1790, although it must have been doubtful even then as to whether the level of traffic could justify two canals.

Ten locks were built on the first four miles of the canal by 1792. The double lock at Binns bridge is the 2nd Lock on the Royal Canal. Binns bridge is one of the two bridges, one each over the Royal and Grand Canal that are named after John Binn.

In 1792 the English Canal Engineer Sir Thomas Hyde Page came to consult on the canal. He found the workings on the canal in total chaos particularly on the Dublin section.

The canal reached the Shannon in 1809. The canal was completed in 1817 by the Commissioners of Inland Navigation and handed over to a new company formed in 1818.

In the 1840s the Midland Great Western Railway Company was established with a view to opening a rail link between Dublin and Galway. In 1845 the Midland and Great Western Railway Company purchased the canal with the intention of building a railway on its bed. However they were legally obliged to operate the canal as a separate transport system. The canal gradually went into decline and trade diminished.

The railway line was constructed alongside the canal, initially to the canal's Broadstone terminus. In 1864 a link from this railway line to the North Wall

was constructed alongside the canal, with a new bridge erected adjacent to Newcomen Bridge on its northern side. A new railway junction was formed adjacent to the bridges in 1892, connecting the line to Connolly Station.

There were thirteen boats operating on the canal in 1923. There was a brief revival of trade during the Emergency Years (World War 2).

In 1944 ownership of the Royal Canal was transferred to Córas Iompair Éireann (CIÉ). The last bye-trader or independent boat company, James Leech of Killucan, ceased to operate in 1951. Four years later in 1955 Douglas Heard's 'Hark' was the last officially recorded boat to pass through the canal. The Royal Canal was closed to navigation in 1961. Thereafter it fell into disrepair.

The 'Save the Royal Canal' campaign by the IWAI began in 1974 and the Royal Canal Amenity Group was formed. The canal passed into the care of the Office of Public Works in 1978, was gradually restored through a concerted programme of work. Responsibility for the Royal Canal had transferred to Waterways Ireland, one of the six North/South Bodies established in 1999 under the British Irish Agreement for the management and maintenance of inland navigable waterways. It took longer to refurbish than it had to construct, work on the last part of the Royal Canal was completed in 2010 and officially reopened to navigation.

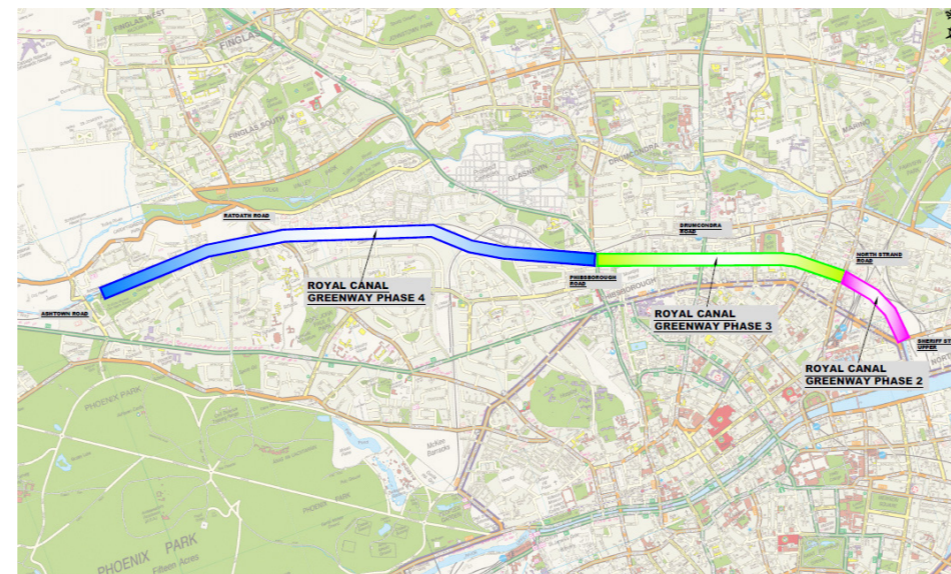


Fig 4. Royal Canal Greenway route.

Current Context:

The canal is used as a pleasure waterways, while providing walking/cycling routes along its tow-paths. The canal corridor provides an important biodiversity habitat and open space amenity. The Royal Canal Greenway currently under

construction will improve the existing landscape setting to the canal providing a segregated cycling /pedestrian facility along a 2.1km route that extends from North Strand Road (Newcomen Bridge) along the banks of the Royal Canal to Phibsborough Road (Cross Guns Bridge). The stretch of canal tow path under consideration has a significant level change from canal level to road level, currently transitioned by a steep ramp. Access to the lower lock chamber gates is by steps alongside a Gas Networks district regulator installation at the top of the ramp. High railings, graffiti and a lack of maintenance give the location an inhospitable appearance

Structure Description

Binns Bridge consists of two distinct bridges one over the canal and one over the Royal Canal.

Royal Canal Bridge

The bridge has a three-centered or elliptical arch ring of dressed granite on either side, with a vermiculated granite keystone. The main walling of the spanrels and parapets is calp limestone rubble and the parapets are capped with cut granite copings. At the end of the parapets the walling ends in a stone drum with a circular granite cap and in the centre of the parapet on each side, facing the canal, there is a plaque bearing the legend "1793 Binns Bridge and Lock". There are substantial pipes running past the faces of the bridge on both sides.

Railway Bridge

Double-arch stone bridge, erected 1864, carrying road over railway line. Snecked limestone parapet wall with dressed granite copings and round arches with rusticated voussoirs. Snecked limestone wing walls with dressed granite copings. Abuts single-arch stone canal bridge neatly juxtaposing the eras of the canals and railways, the railway company having acquired the canal in the 1850s. The bridge is a good example of the high quality structures associated with the Midland Great Western Railway Company.

2nd Lock

The 2nd lock dates from circa 1792/93. The double canal lock chamber is constructed of dressed ashlar limestone. The lower chamber is located beneath the bridge with sloped and battered wing walls flanking approach from the canal. The lower wooden gates are operated by balance beam. The tow path walkway extends either side under the bridge to the lower chamber upper gates.



Fig 5. A Survey of the City Harbour Bay and Environs of Dublin on the same scale as those of London Paris & Rome / by John Rocque Cartographer to his Majesty with Improvements & Additions to the Year 1773, by Mr. Bernard Scale- Prior to construction of the canal , limited urban development.



Fig 6. Fadden Map 1797 - Canal constructed, but still limited development beyond the circular road - map does not extent to cover Binns Bridge.



Fig 7. Map by William Wilson (1798) from the Statistical Survey Of The County Dublin by Joseph Archer was published in 1801 and produced for the Dublin Society (later the Royal Dublin Society). It is a survey of the economic and social conditions in Dublin city and County at the turn of the 19th century. Observations On Mr. Archer's Statistical Survey Of The County Dublin by Hely Dutton was published the following year was critical of Archer's original survey.

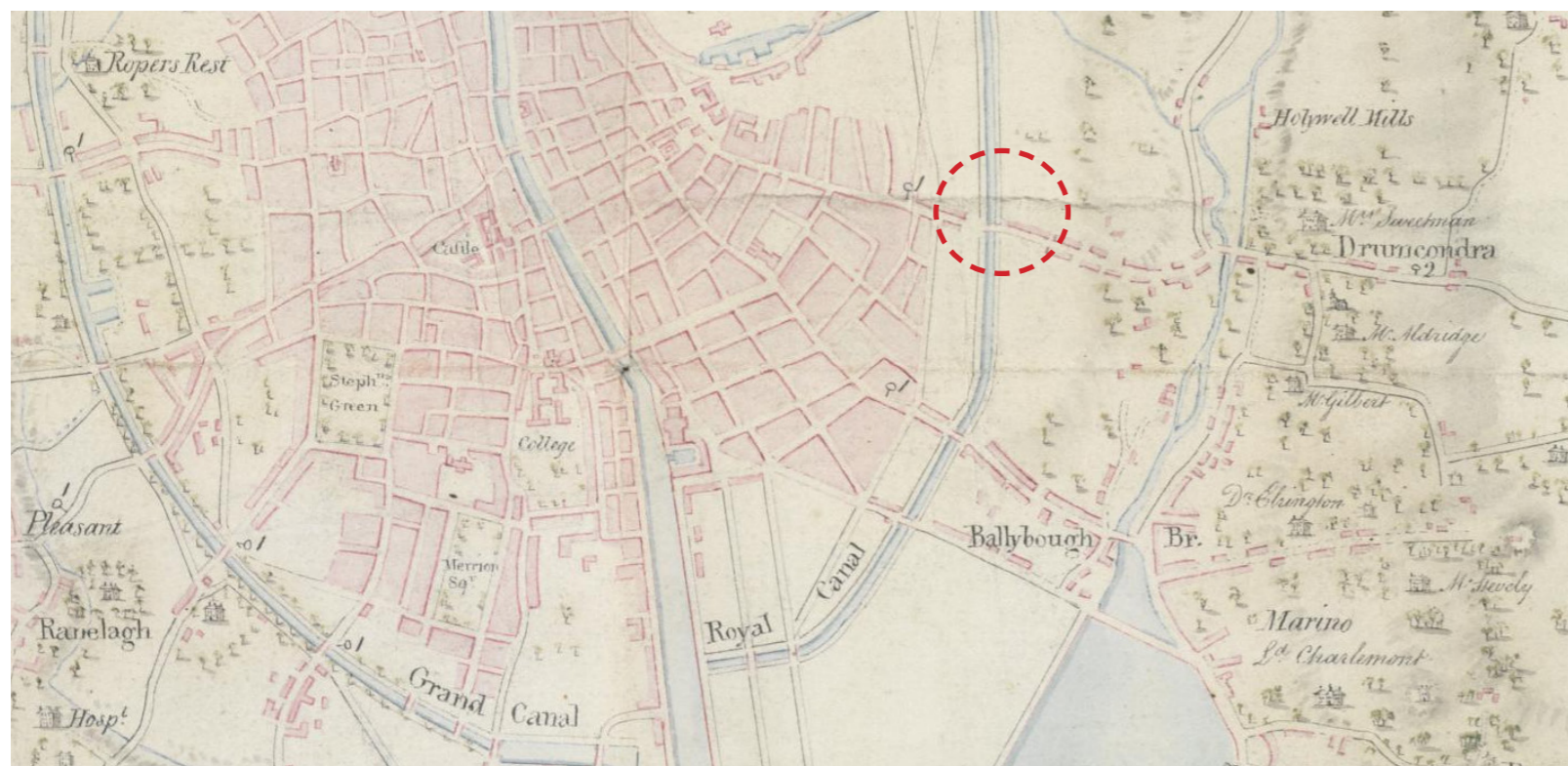


Fig 8. Sketch of the environs of Dublin by Major Alexander Taylor.



Fig 9. Fraser's Map of Dublin and Suburbs 1859.

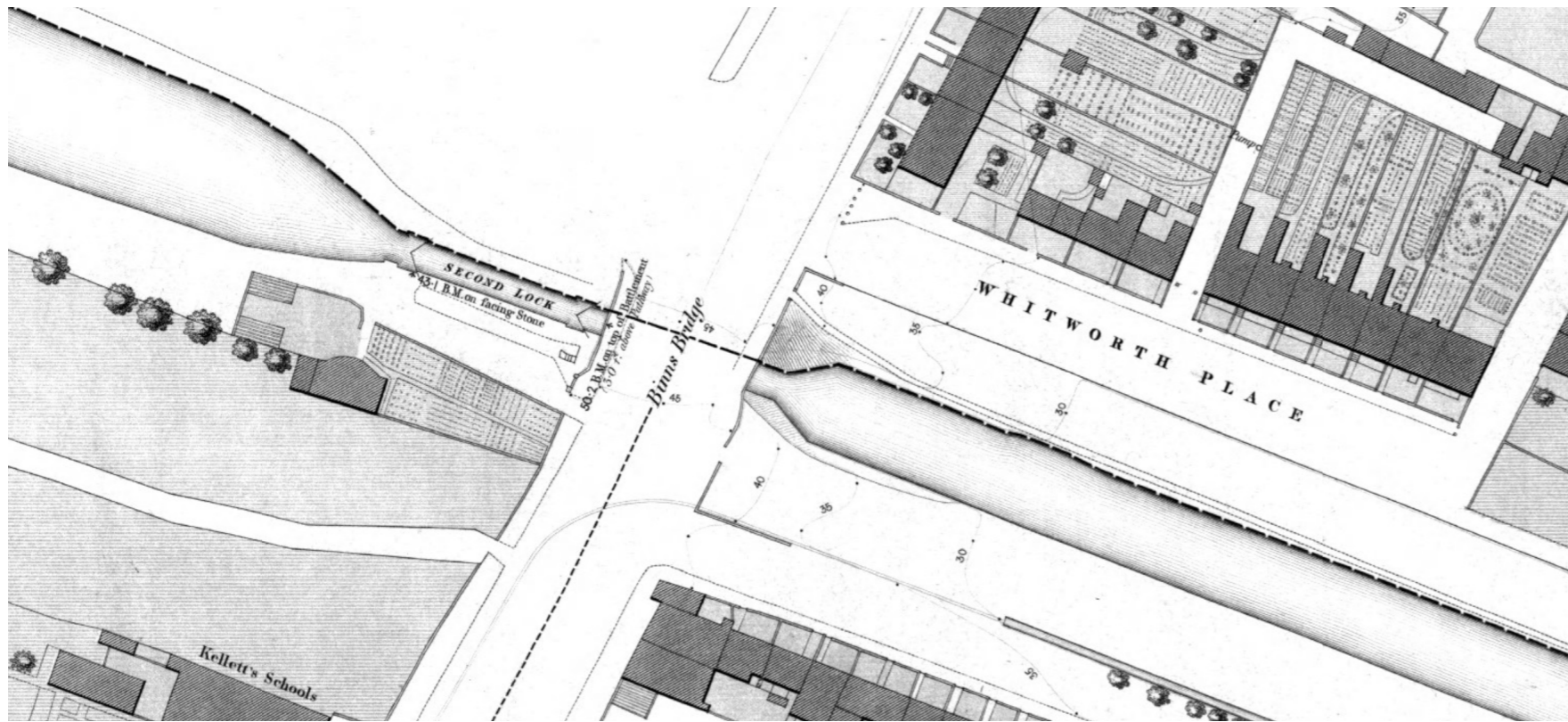


Fig 10. 1847- Binns bridge indicated as single span bridge over canal with pathway on northern embankment to canal. Lock keeper house is indicated on the eastern side of the bridge.

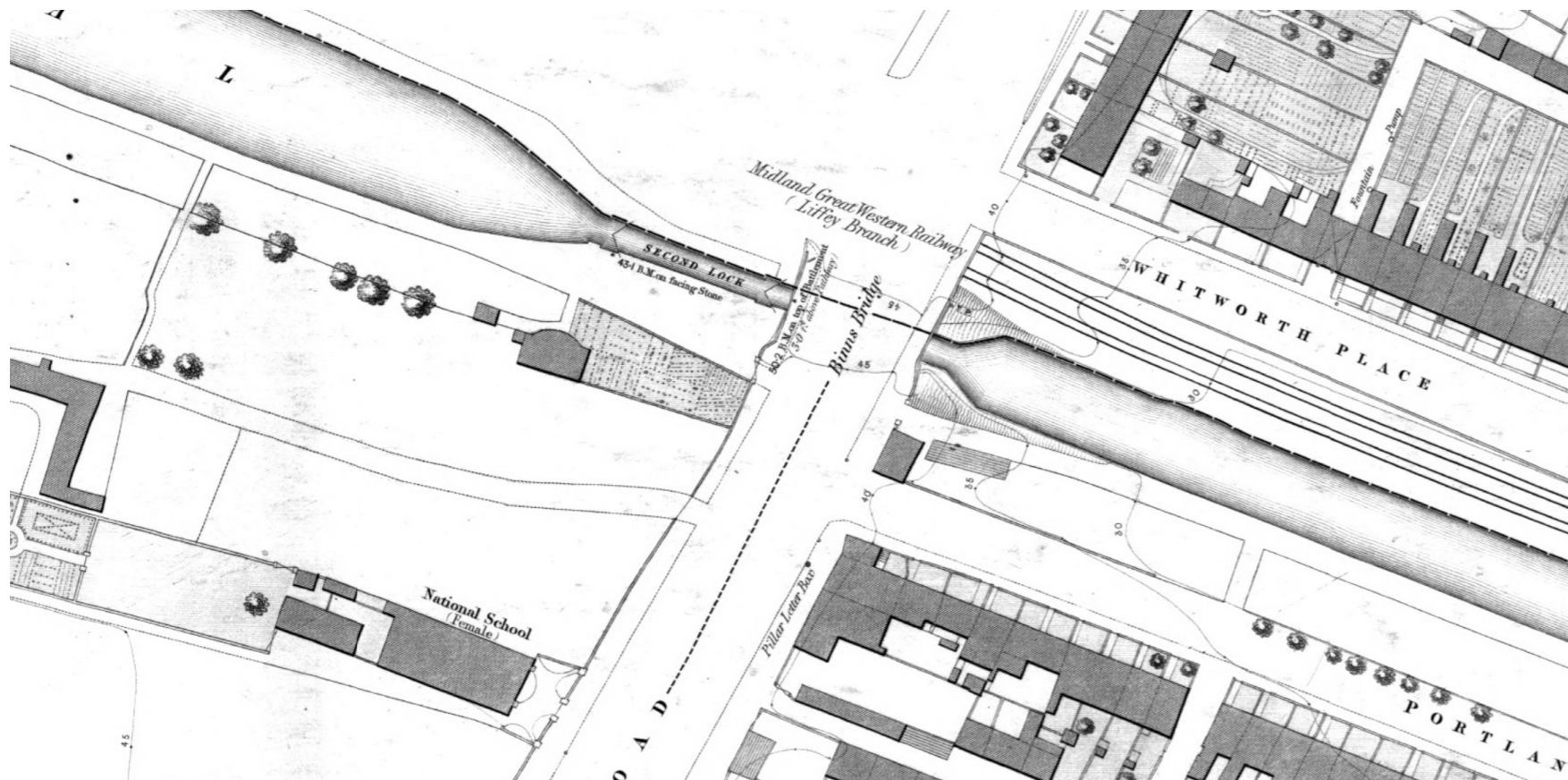


Fig 11. 1864 - Railway line indicated. Midland Great Western Liffey branch is constructed. Development along southern side has narrowed tow-path.

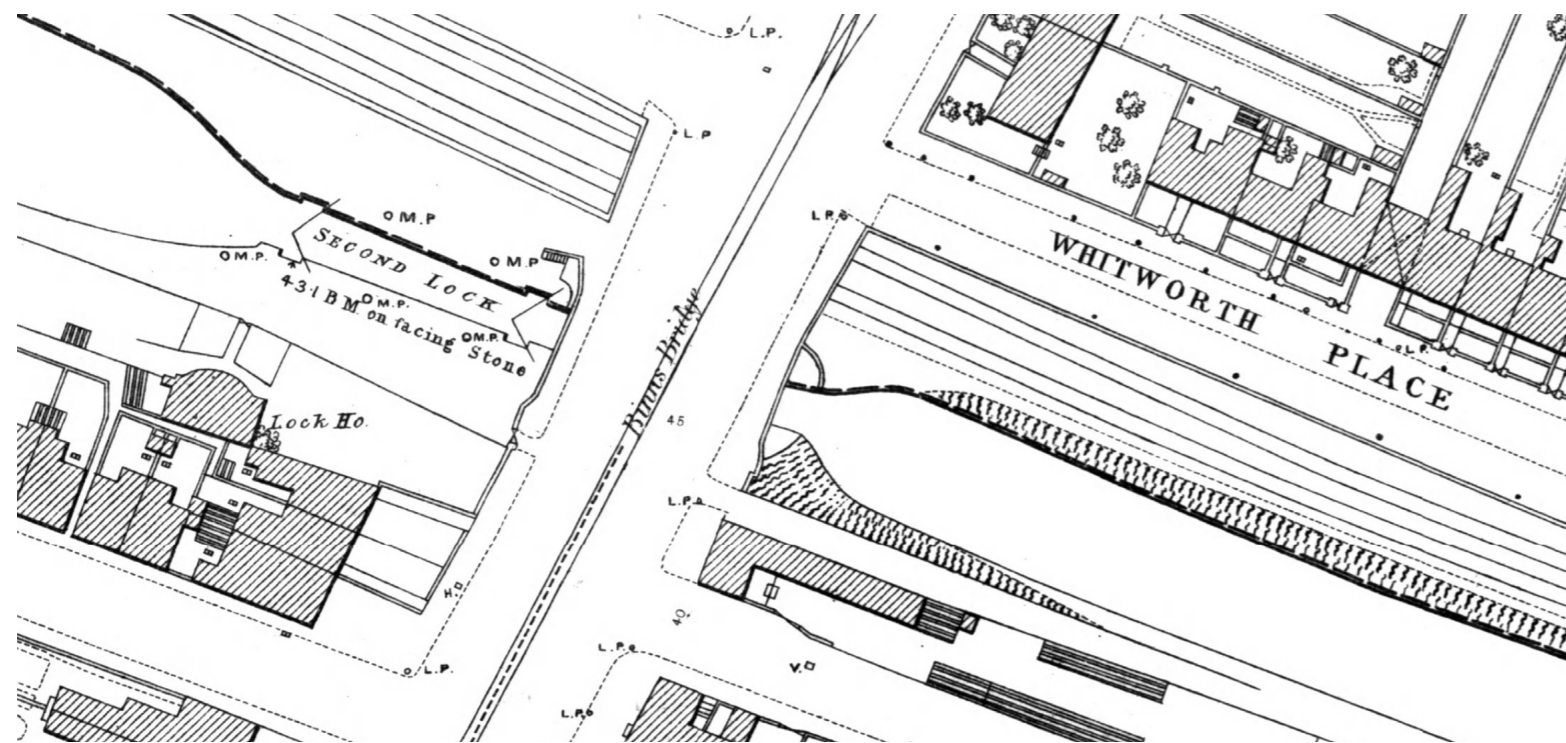


Fig 12. 1890 Tram line indicated over Binns Bridge.

CANAL BRIDGE
1793

RAILWAY BRIDGE
1864



2nd Lock Lower Chamber Royal Canal
1793

Fig 13. Binns Bridge consists of two distinct bridge's alongside each other.



Fig 14. Embankment landscaping softens transition.
Issues with anti social behaviour and graffiti make it an inhospitable environment - a sense of neglect pervades.



Fig 15. Google map plan view.



Fig 16. Current contextual views.



Fig 17. Remnant section of boundary wall to be altered to increase access width.



Fig 18. Remnant section of boundary wall to be altered to increase access width.



Fig 19. View towards bridge from top of ramp.



Fig 20. Upper surface of Gas District Regulator installation.



Fig 21. Upper surface of Gas District Regulator installation with railing enclosure.



Fig 22. View to wing wall on northern canal embankment.



Fig 24. Lock chamber gate with balance beam.



Fig 25. View southwards towards existing ramp transition.



Fig 23. View along ramped tow-path.



Fig 26. Extensive anti-entry railings create inhospitable atmosphere.



Fig 27. View eastward along canal from top of ramp.



Fig 28. View eastward along canal from top of ramp.



Fig 29. Jetty structure adjacent to tow-path.



Fig 30. View from northern railway embankment.



Fig 31. View from northern railway embankment.



Fig 32. View from northern railway embankment.

4. Heritage Interest Appraisal

04 Special Heritage Interest Appraisal

Description Overview:

Binns Bridge is a protected structure and is recorded in the National Inventory of Architectural Heritage and is recorded in Dublin City Industrial Heritage Record. The RPS entry does not make a distinction between the canal bridge and the railway bridge

Record of Protected Structures

RPS Reference number: 908
Entry Description: Binns Bridge Drumcondra

Appraisal:

Faro Convention Council of Europe's Framework Convention on the Value of Cultural Heritage for Society: Heritage definition: is a group of resources inherited from the past which people identify, independently of ownership, as a reflection and expression of their constantly evolving values, beliefs, knowledge and traditions. It includes all aspects of the environment resulting from the interaction between people and places through time.

The Planning and Development Act 2000 (as amended) defines the architectural heritage to be structures or parts of structures which are of Architectural Interest, Historical Interest, Archaeological Interest, Artistic Interest, Cultural Interest, Scientific Interest, Social Interest, Technical Interest. The categories of special interest can be taken as the criteria to be considered when evaluating the heritage value of a structure. The categories are not mutually exclusive and a structure may be attributed with several of the categories. The categories of Special Interest are rated regarding significance. The National Inventory of Architectural Heritage (NIAH) assigns rating values as follows International, National, Regional, Local and Record Only. Structures evaluated using the national inventory of architectural heritage criteria which are attributed with a rating value of international, national or regional importance generally warrant protected structure status.

National:

Structures or sites that make a significant contribution to the architectural heritage of Ireland. These are structures and sites that are of great architectural heritage significance in an Irish context.

Regional:

Structures or sites that make a significant contribution to the architectural heritage within their region or area. They also stand in comparison with similar structures or sites in other regions or areas within Ireland. Increasingly, structures that need to be protected include structures or sites that make a significant contribution to the architectural heritage within their own locality.

Local:

These are structures or sites of some vintage that contribute to the architectural heritage but may not merit being placed in the RPS separately. Such structures may have lost much of their original fabric.

The purpose of protection is also to control and manage future changes to a structure. This should be borne in mind when assigning those special interest categories which may not relate directly to the physical fabric, such as historical, social and cultural interests.

Protected structure definition:

A 'protected structure' is defined as any structure or parts of structures, which form part of the architectural heritage and which are of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest. A structure is defined by the Act as 'any building, structure, excavation, or other thing constructed or made on, in or under any land, or any part of a structure'. In relation to a protected structure or proposed protected structure, the meaning of the term 'structure' is expanded to include:

- the interior of the structure;
- the land lying within the curtilage of the structure;
- any other structures lying within that curtilage and their interiors, and
- all fixtures and features which form part of the interior or exterior of the above structures.

Dublin City Industrial Heritage Record:

The Dublin City Industrial Heritage contains three entries. The following entries relate to the bridges and the 2nd lock.

Name	Binns Bridge
Purpose	Bridge (road/canal)
Description	Exterior Description: Single-span masonry road bridge, built c.1793, over the Royal Canal. Squared limestone rubble masonry with granite coping to parapet, granite stringcourse and granite cap-stone to terminating piers. Single round-headed arch with granite voussoirs having moulded archivolt detail and vermiculated key-stone. Limestone plaques to both elevations bear the inscription "Binns Bridge and Lock 1793".
Date Recorded:	07/16/2008
Appraisal:	
Function at time of survey:	Bridge
Site Accessed for Survey:	Full access
Survey Identified Remains:	Yes
Appraisal of Condition:	Substantial remains

Substantial remains Appraisal:

Elegantly proportioned with a finely detailed and well-executed construction Binns Bridge is one of the earlier surviving canal bridges on the Royal Canal. The vermiculated key-stone, moulded archivolt and plaque exhibit a level of competency and skill associated with the late eighteenth and the nineteenth centuries. This bridge is of particular note due to its incorporation of part of the second lock presenting the canal as a single co-ordinated achievement. Together with the adjacent rail/road bridge these structures form an important infrastructure-related group.

Name Bridge

Purpose	Bridge (road/rail)
Description	Exterior Description: Double-span masonry road bridge, built c.1864, to carry Drumcondra Road over the Midlands and Great Western Railway extension to North Wall. Squared and snecked limestone masonry with limestone capping to parapet wall. Two round-headed arches with rock-faced voussoirs.

Date Recorded: 07/16/2008

Appraisal Function at time of survey: Bridge

Site Accessed for Survey: Full access

Survey Identified Remains: Yes

Appraisal of Condition: Substantial remains

Appraisal: Built as part of the extension of the Midland and Great Western Railway the bridge charts the development of the railway in Ireland during the second half of the nineteenth century. Built of masonry and with a double span the bridge is one of the few arched bridges in the inner city area. The squared and snecked limestone is finely crafted with rock-faced voussoirs providing a rocky textured effect. Together with the adjacent Binn's Bridge and canal lock the bridge forms an important group of transport-related structures

Name 2nd Lock

Purpose	Lock
Description	Exterior Description: Double-chamber canal lock, built c.1790, as second lock along Royal Canal. Lock runs beneath Binns Bridge towards eastern end. Ashlar limestone walls to chambers with pairs of timber half gates to east and west ends and between chambers. Cast-iron moorings to sides western chamber. Some remains winding equipment beside gates. Central gates altered to facilitate pipes to west side bridge.

Date Recorded: 07/16/2008

Appraisal

Function at time of survey: Lock

Site Accessed for Survey: Full access

Survey Identified Remains: Yes

Appraisal of Condition: Substantial remains

Appraisal:

This canal lock is one of a group of six canal locks along a two mile stretch of the

Royal Canal as it climbs out of Dublin city and is one of five double-chambered canal locks along this stretch. The finely-executed ashlar walls are typical of the Royal Canal's locks and are a testament to the craftsmen involved in its construction. Canals were one of the major engineering achievements of the eighteenth century and locks were an integral part of their operations. This double-chambered example provides an important indication of the technical prowess of the canal engineers.

NIAH Record:

The NIAH has two record entries for Binns bridge and also has an entry for the 2nd Lock.

Reg No. 50060296 Railway Bridge

Binns Bridge, Drumcondra Road Lower, Dorset Street Lower, Dublin 7

NIAH appraisal

This railway bridge stands alongside an earlier canal bridge, neatly juxtaposing the eras of the canals and railways, the railway company having acquired the canal in the 1850s. The bridge is a good example of the high quality structures associated with the Midland Great Western Railway Company.

Reg No: 50060189 Canal Bridge

Binns Bridge, Drumcondra Road Lower, Dorset Street Lower, Dublin 7

NIAH appraisal

The canal bridge is well executed with good quality masonry. Together with the adjacent canal lock and railway bridge it forms an important group of transport-related structures. The Royal Canal was developed in the latter part of the eighteenth century to provide freight and passenger transport between Dublin and the River Shannon. This bridge was named for John Binns, one of the principal supporters of Royal Canal, and its construction is commemorated in a carved stone plaque on each face. In the mid-nineteenth century the canal was purchased by the Midland Great Western Railway company and a branch line to North Wall was constructed along this section of the canal in the 1860s.

Both bridges have been designated with category of special interest in architectural, social and technical with regional rating.

Reg No: 50060188 2nd Canal Lock

2nd Lock, Royal Canal, Dorset Street Lower, Drumcondra Road Lower, Dublin 7

NIAH Appraisal

This forms part of a group of three double canal locks (2nd Lock, 3rd Lock and 4th Lock) located between Binns Bridge at the southeast and Westmoreland Bridge at the

northwest. Construction of the Royal Canal began in the late eighteenth century to provide freight and passenger transport between the Dublin and the River Shannon. The chambers exhibit good quality stone masonry with fine joints. The well-built double locks have attractive sloping edges to cope with the change in height between the lower, middle and upper levels. On either side of the lock, the canal expands in width to provide a mooring place for waiting boats. The 2nd Lock is complemented by the nearby Binns Bridge to the east.

The 2nd lock is designated with category of special interest in architectural, social and technical with regional rating.

Appraisal Review:

Architectural Heritage Interest Value:

Architectural value is directly related to aesthetic value, the visual qualities, design and evolution of a building, object, or site and the sensory experience it offers but also in the integrity of all its components as a unique product of the specific building technology of its time.

The following is identified as contributing to the architectural heritage interest value.

- Quality architectural design
- Exemplar of period building typology
- Area character contribution

A review of the NIAH appraisal would concur with the assessment that the bridge and 2nd lock is of architectural heritage interest value.

Historical Heritage Interest Value

Value derived from the ways in which people draw sensory and stimulation from a place. The capacity of a place to convey, embody, or stimulate a relation or reaction to the past. Historical value can accrue in several ways: from the heritage material's age, from its association with people or events, from its rarity and/or uniqueness, from its technological qualities, or from its archival/documentary potential.

The following is identified as contributing to the historical heritage interest value

- Visual physical record associative with civil history and heritage of Ireland.
- Associations with John Binn (director of the Royal Canal Company).

Structure meets criteria for historical heritage interest value.

Archaeological Heritage Interest Value

Special archaeological interest is essentially defined by the degree to which

material remains can contribute to our understanding of any period or set of social conditions in the past (usually, but not always, the study of past societies). The characteristic of archaeological interest in the context of the RPS must be related to a structure. Structures of special archaeological interest may also be protected under the National Monuments Acts. Structures can have the characteristics of both archaeological and architectural interest as these are not mutually exclusive. A complex of industrial buildings may have archaeological interest because of its potential to reveal artefacts and information about the evolution of industry that may be useful to archaeologists, historians and the public.

Nothing identified as contributing to the archaeological heritage interest value. Structure does not meet criteria for archaeological heritage interest value.

Artistic Heritage Interest Value

Objects showing imaginative skill in arrangement or execution considered to be aesthetically satisfying that is creative or that requires a special art or craft skill.

Nothing identified as contributing to the artistic heritage interest value. Structure does not meet criteria for artistic heritage interest value.

Cultural Heritage Interest Value

The characteristic of cultural interest permeates the architectural heritage and can, in the broadest terms, include aesthetic, historic, scientific, economic or social values of past and present generations.

Special cultural interest apply to:

1. Those structures to which the Granada Convention refers as 'more modest works of the past that have acquired cultural significance with the passing of time';
2. Structures that have literary or cinematic associations, particularly those that have a strong recognition value;
3. Other structures that illustrate the development of society, such as early schoolhouses, library buildings, swimming baths or printworks. If these associations are not related to specific aspects of the physical fabric of a structure, consideration could be given to noting them by a tourism plaque or other such device.

Nothing identified as contributing to the cultural heritage interest value. Structure does not meet criteria for cultural heritage interest value.

Scientific Heritage Interest Value

The scientific interest, or research value, of a structure will depend on the importance of the data involved and on its rarity and/or quality. Its scientific interest should also be assessed as to how well it represents the area of research in question and the degree to which the structure may contribute further

objective information.

For example:

1. The results of scientific research may be seen in the execution of the structure.
2. The materials used in the structure may have the potential to contribute to scientific research.
3. The structure may be associated with scientific research that has left its mark on the place, such as early Ordnance Survey benchmarks carved into stonework.

No features identified as contributing to the scientific heritage interest value. Structure does not meet criteria for scientific heritage interest value.

Social Heritage Interest Value

Social value encompasses the significance of the historic environment to contemporary communities, including people's sense of identity, belonging and place, as well as forms of memory and spiritual association.

The following is identified as contributing to the social heritage interest value.

A safe crossing point was essential to providing a passage over a water body to provide transport networks between centres of economic activity. Urban growth naturally emerged at crossing points as canals allowed for water transportation and such means of transport were crucial in sustaining economic prosperity.

A review of the NIAH appraisal would concur with the assessment that the bridge is of social heritage interest value.

Technical Heritage Interest Value:

Technical interest in a structure relates engineering solutions construction which are important examples of virtuoso, innovative or unusual engineering design or use of materials.

The following is identified as contributing to the technical heritage interest value.

Exemplar of engineering masonry design practice of its time and construction evolution.

A semi-elliptical arch has a significant advantage over round-headed ones, by giving much better headroom over the full width of the bridge. They were more complicated to build, creating greater thrust against abutments.

Conclusion:

A review of the NIAH assessment and inspection of the structure concurs that the bridges and lock have special heritage interest value and Binns Bridge merits its protected structure status and the heritage protection the conservation zoning gives to the non-protected structures

These bridges and canal locks were an integral component of the canal system and railways, being fine example of civil engineering prowess and feat of the times, an important reminder of Ireland's civil engineering history and heritage.

5. Conservation Strategy

05 Conservation Strategy

This Conservation Development Strategy looks at Binns Bridge and its relationship with Royal Canal from a historical and contextual perspective. It sets out through analysis and understanding of the historical development of the site, settings and its capacity to absorb change, potential impacts and mitigation to avoid, reduce or compensate for potential adverse impacts, and to enhance positive benefits.

Conservation Development Strategy:

The design response to historic places and buildings requires a fully integrated and multidisciplinary approach to developing a design philosophy and the necessary detailed solutions/specifications which carefully address the architectural heritage sensitivity.

The historical and cultural significance of a place or a group of buildings, can lie in their social and spiritual value for past, present and future generations. Our historical environment is fundamental to our sense of place and are important aspects of the distinctive character of each place.

The recognition of landmarks, whether of historical, archaeological or environmental significance, play a major role in a community's collective memory and cultural consciousness. They can provide a focus for new development and have a positive influence on the design response..

The conservation response to building and site is based on a thorough understanding of the built historic environment and its significance that is informed by survey, research at an early stage in the design process and is ongoing to ensure informed decisions are made.

Historic buildings and places can by their intrinsic permanence have a capacity to absorb sensitive interventions without diminishing legibility and heritage value.

The historic location and buildings contained thereon provide a unique opportunity to physically engage with history and place, which can draw energy from the juxtaposition of the new and the previous, the static and the dynamic.

We see the conservation objective of the project being a successful integration into the historic context to maintain a sense of the historic place and character without diminishing the setting and architectural integrity of the protected structure.

The purpose of the Conservation Development Strategy is to provide.

- Assessment of the heritage value of the heritage building.
- Assessment of the heritage value of the setting and landscape.
- Identify capacity for change.
- Identify capacity to absorb appropriate development.
- Identify measures to protect the heritage value of the heritage asset.
- Identify opportunities to enhance the heritage asset value.

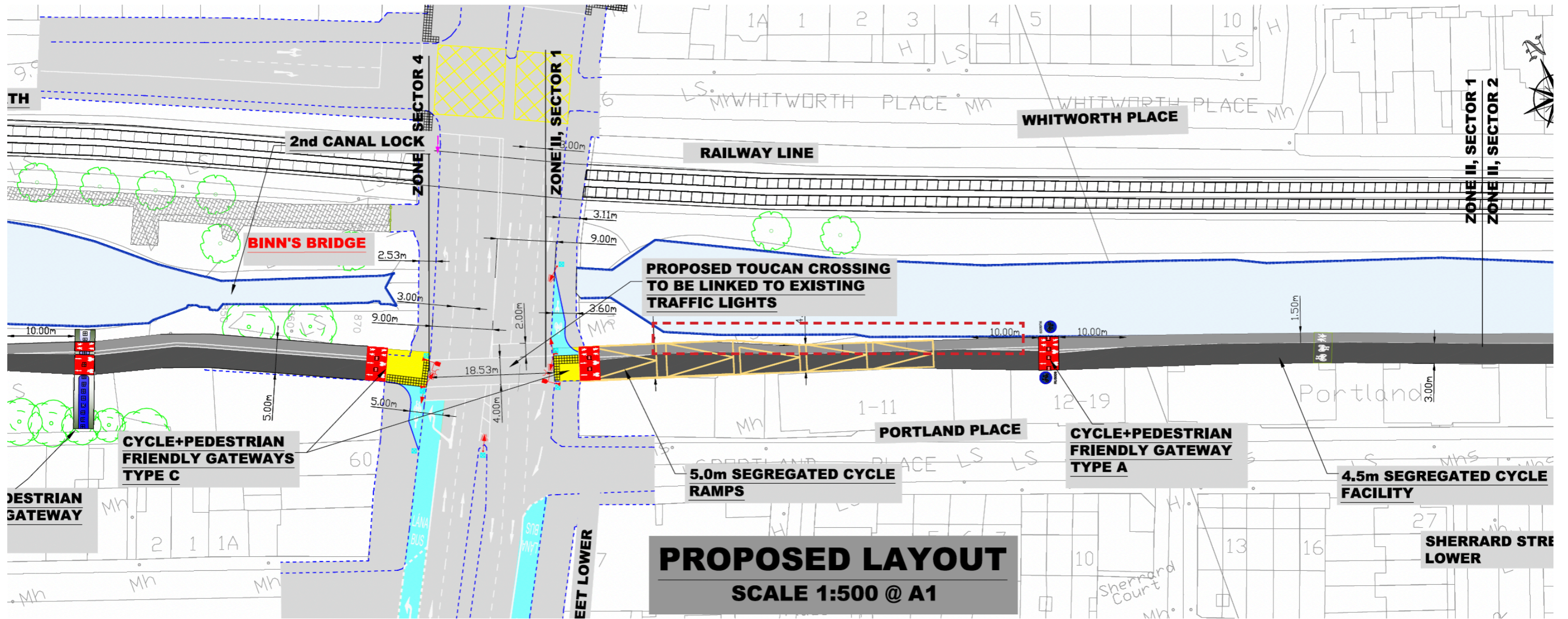
The conservation development strategy provides a relevant framework to ensure the appropriate protection, conservation and enhancement of all elements of the historic environment and allow the impact of proposed development on the historic environment and its setting to be assessed. Setting is more than the immediate surroundings of a site or building and may also be related to function or use of place.

Part of the assessment will be to assess the capacity to absorb sensitive interventions without diminishing the heritage value to ensure a coherence between historic and the new.

The conservation development strategy is an active and evolving during the design development process and address some of the following

- Assessment of special heritage significance value of the site.
- Assessment of the development capacity of site without adversely impacting the interest value.
- Provide guidance framework for development design.
- Framework for historic environmental protection constraints.
- Assess impact of design on heritage structures.
- Provide guidance to enhance and provide a new contextual setting for retained structure to ensure a coherence between the historic and new interventions.
- Provide guidance to managing change to the historic environment landscape.
- Provide guidance to the design to limit the impact on the existing buildings of historic value.

There are challenges to implementing a successful conservation and adaptation of historic structures that require careful consideration and carefully considered design approaches. A conservation guided approach will ensure that these challenges are met.



Blue Line - Original Canal edge alignment unaltered

Anticipated extent of dismantling & reconstruction of Quay wall back to original alignment arising from construction methodology .
 Canal Chamber Wing wall retained

New ramp indicated circa 48m in length.

Fig 33. Extract - General plan - Approved part 8 scheme.

Approved Scheme _ Part 8

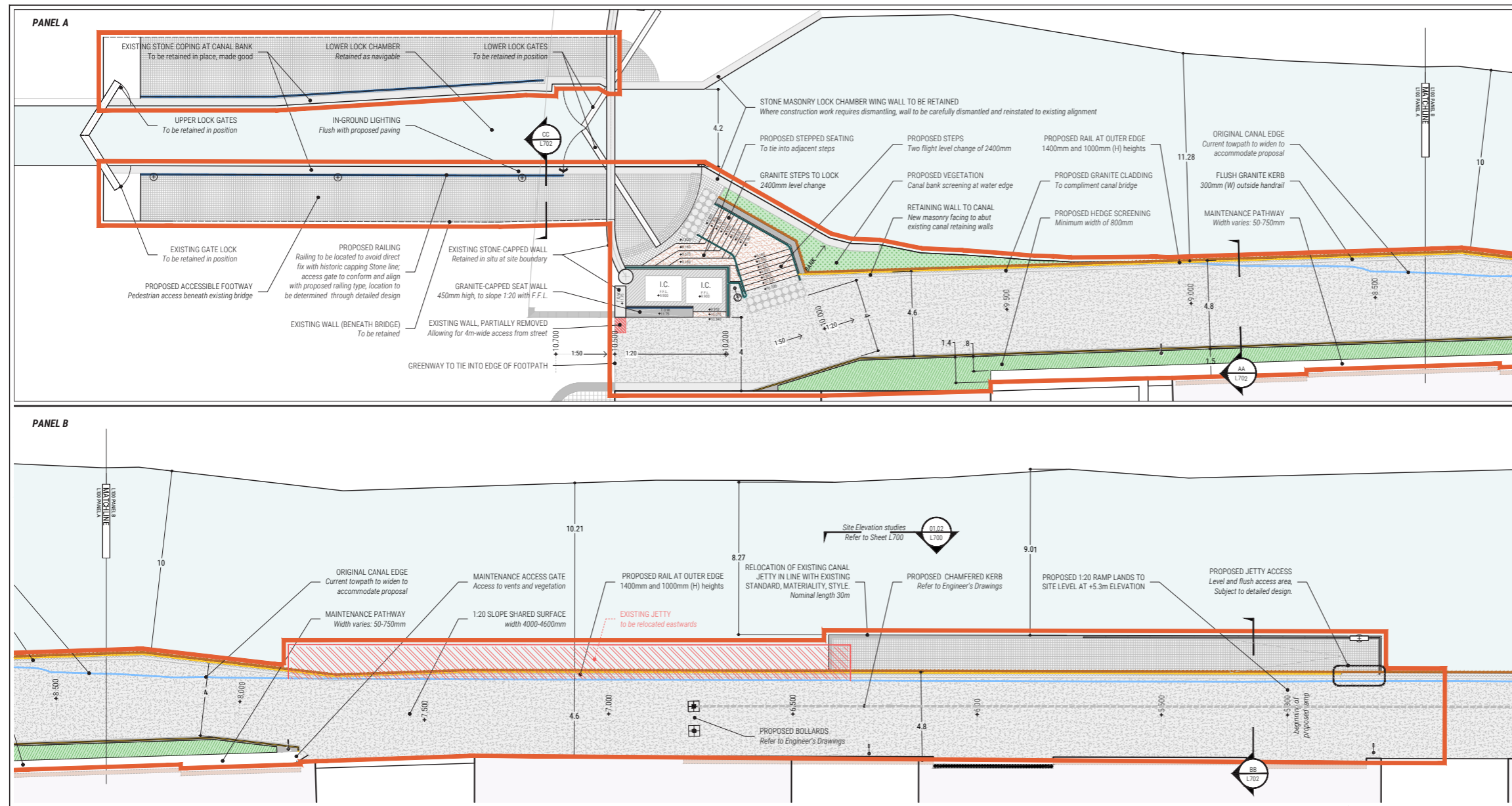


Fig 34. General arrangement plan - Paul Hogarth Landscape.

- Access Ramp length increased.
- Cycleway /Pedestrian carriage way width increased.
- Increased encroachment on canal width.
- Railing guarding to canal chamber.
- Widened stepped access to lower chamber gates.
- Landscaped separation to boundary.
- Jetty relocated.

Revised Approved Scheme _ Part 8



Approved alteration to canal edge.

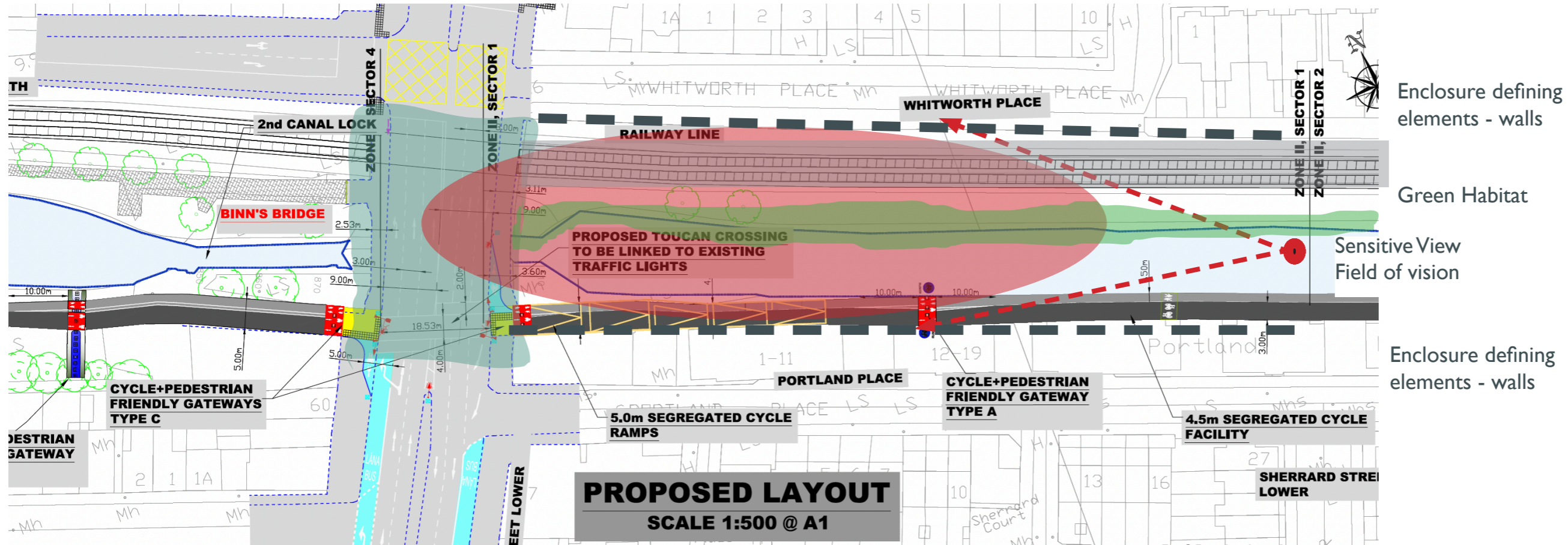
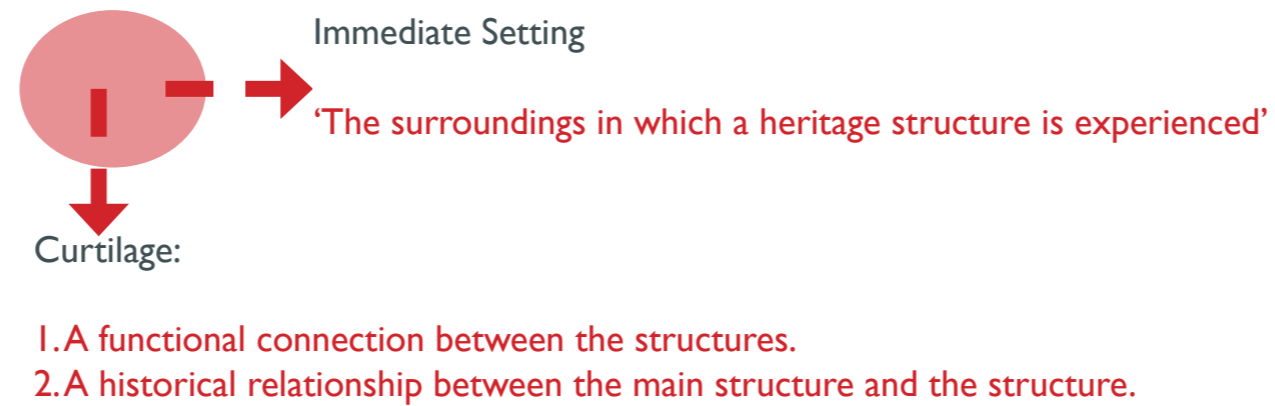


Fig 35. Analysis Diagram



Analysis

Understanding Place & Significance

Understanding the historical development of place and significance of the heritage structure should inform the design process.

Layers of history and associated development generate patterns within an area. An understanding of the historic evolution of a place is essential in determining whether a historic setting needs enhancement or whether lost elements should be restored.

- New design should consider and respond to these layers of history. The 'narrative' of the place.

Setting Character Sensitivity

Sensitivity refers to the inherent sensitivity of the landscape change. Can the setting absorb the change without losing its intrinsic character.

- Setting has limited capacity for change without adverse impact.

Setting Visual Sensitivity

Consideration of general inter-visibility between building and landscape. Is Protected structure likely to be affected by developments within its visual envelope (Setting)?
What views are valued?

- The field of vision is highly sensitive to change

Setting Value

The experiential qualities of the setting in terms of

- Amenity
- Visual appreciation
- Natural qualities,
- Strengthening of heritage value

Open Spatial separation provides mediative special relief from the surrounding urbanisation. It provides high amenity value.

Setting Capacity

Ability of a setting to accommodate change for a development of a specific type without adversely affecting the intrinsic character of the setting.

An evaluation of capacity derives from a combination of

- Setting sensitivity
- Visual sensitivity
- Setting value

The contribution of setting to the protected structure's architectural heritage value is an important facet of its appreciation.

The current landscape setting is a "Historic landscape corridor" within the city albeit man-made is of high natural biodiversity value and amenity value.

Materials and Detailing

'Traditional' materials make a strong contribution to local distinctiveness. Exemplify the use of local or indigenous materials and vernacular traditions in establishing their distinctive identity. The sensitive use of appropriate colour, texture and pattern of materials, whether traditional or contemporary, is important.

- New intervention should be of the place.

Views

Often historic buildings or clusters and features within rural, designed or urban landscapes are important because their distinctive character contributes strongly to the identity of a building/structure or an area. Views embrace open landscapes whereas existing vistas may be channeled or terminated by landscape features and buildings, intentionally or accidentally.

New designs provide the opportunity to create new vistas and create dynamic juxtapositions of old and new, so adding texture and variety.

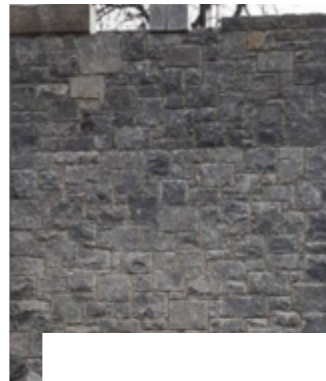
- View along sections canal are terminated by its bridges with enclosure provided by the built urban environment creating a channeled view. New intervention should not cause change to how views are experienced.



Fig 36. Materiality reference: Masonry calp retaining wall abutting bridge over railway on opposite bank to proposed cycleway.



Capping



Masonry

Fig 37. Proposed to face reconstructed canal edge wall with masonry. Wall on opposite side to provide reference point for masonry reconstruction, noting veneer masonry may prohibit large sizes.



Fig 38. Contemporary expression (St Luke's, St Luke's Avenue) : Ashlar masonry detailing - stone should not be thin cladding at critical junctions i.e. steps should be solid not made up in sections



Fig 39. Alternative Option 1 – Concrete facing : Potentially incongruous to surroundings. There is a concern that longterm it will not weather well.



Fig 40. Alternative Option 2 – Green Wall : Concern over long term viability.

Materiality

Edge Guarding:

Typically railing design along the canal is simple and functional in form. It is desirable that the new railing will be similar and not visually obtrusive.

Safety can be a major concern due to hazard provided by being in proximity to an open water body. The open unprotected edge is a characteristic of the canal and is an important visual element.

Publication such as “Managing Visitor Safety In The Historic Built Environment” provide guidance.

The guiding principles emphasises the importance of conservation and access to the built historic environment and the need to find a balance between safety and wider conservation objectives.

The current approach to accessing the canal acknowledges the personal responsibility of the individual and their awareness of the risks faced within this particular urban landscape.

It is reasonable to expect individuals to recognise the hazard particularly in instances where the hazards are obvious.

However where hazards are less obvious or the individual is brought in close proximity with the hazards, consideration needs to be given to mitigation of specific risks posed by the hazards. The level and type of intervention needs to be influenced by the characteristic of the location and its potential for adverse impact.

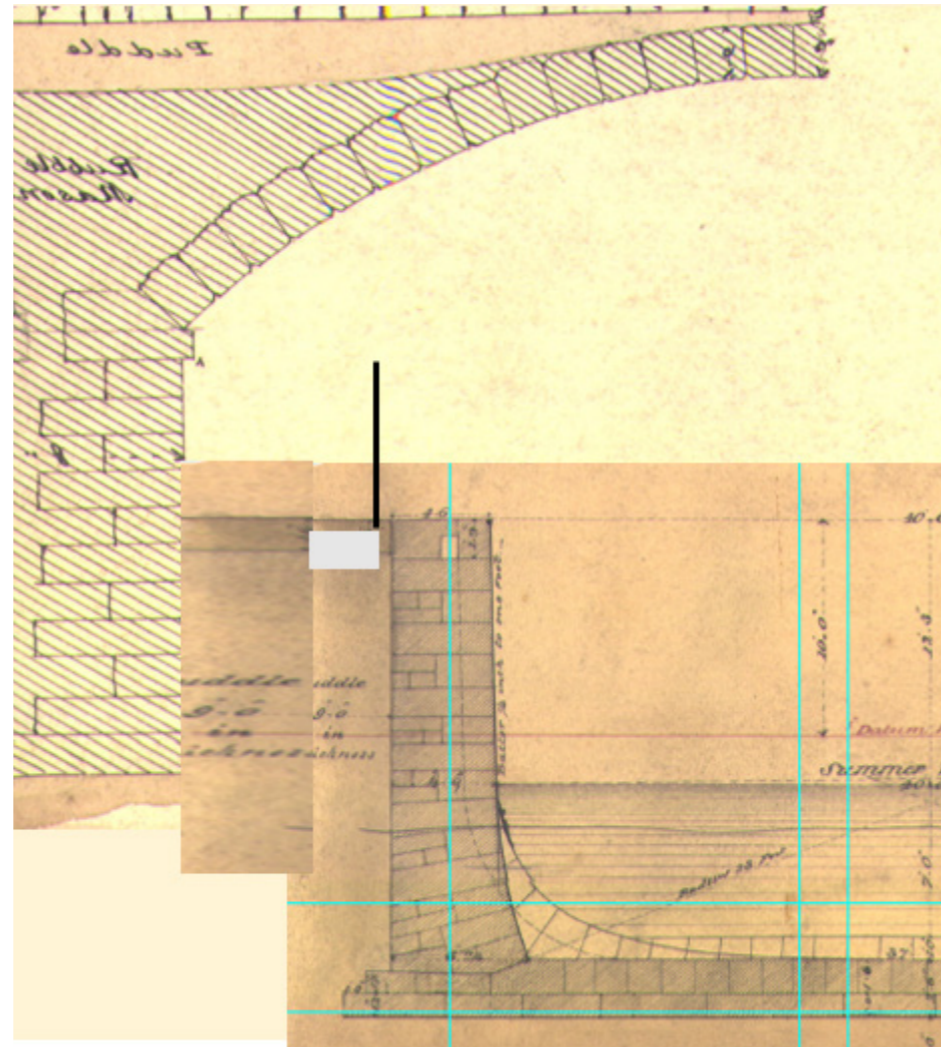


Fig 41. Locate railing to avoid capping



Fig 42. Maintain openness along canal with use of visually permeable railings.



Fig 43. Cable type edge guarding: Example of railing references to maintain openness whilst meeting regulatory requirements. Existing railing at the Jetty structure are simple and open and provide precedent for new railings at the lock chamber edge.

Edges



Fig 44. Ramp at Russell Bridge (Russell Street/Jones Road). Ramp transition can have a significant impact on the setting. Landscape integration requires careful consideration.



6. Development Description

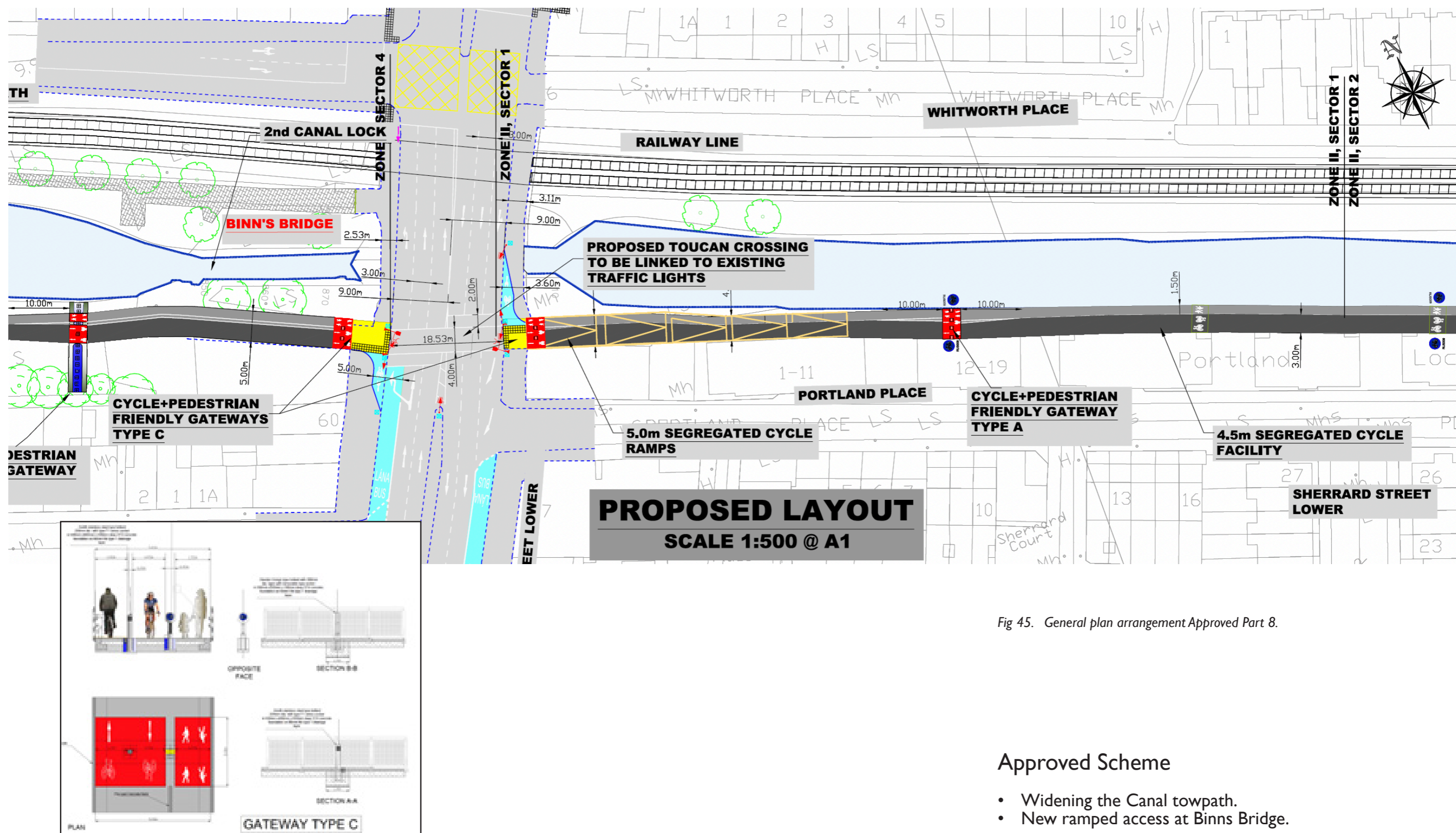


Fig 45. General plan arrangement Approved Part 8.

Approved Scheme

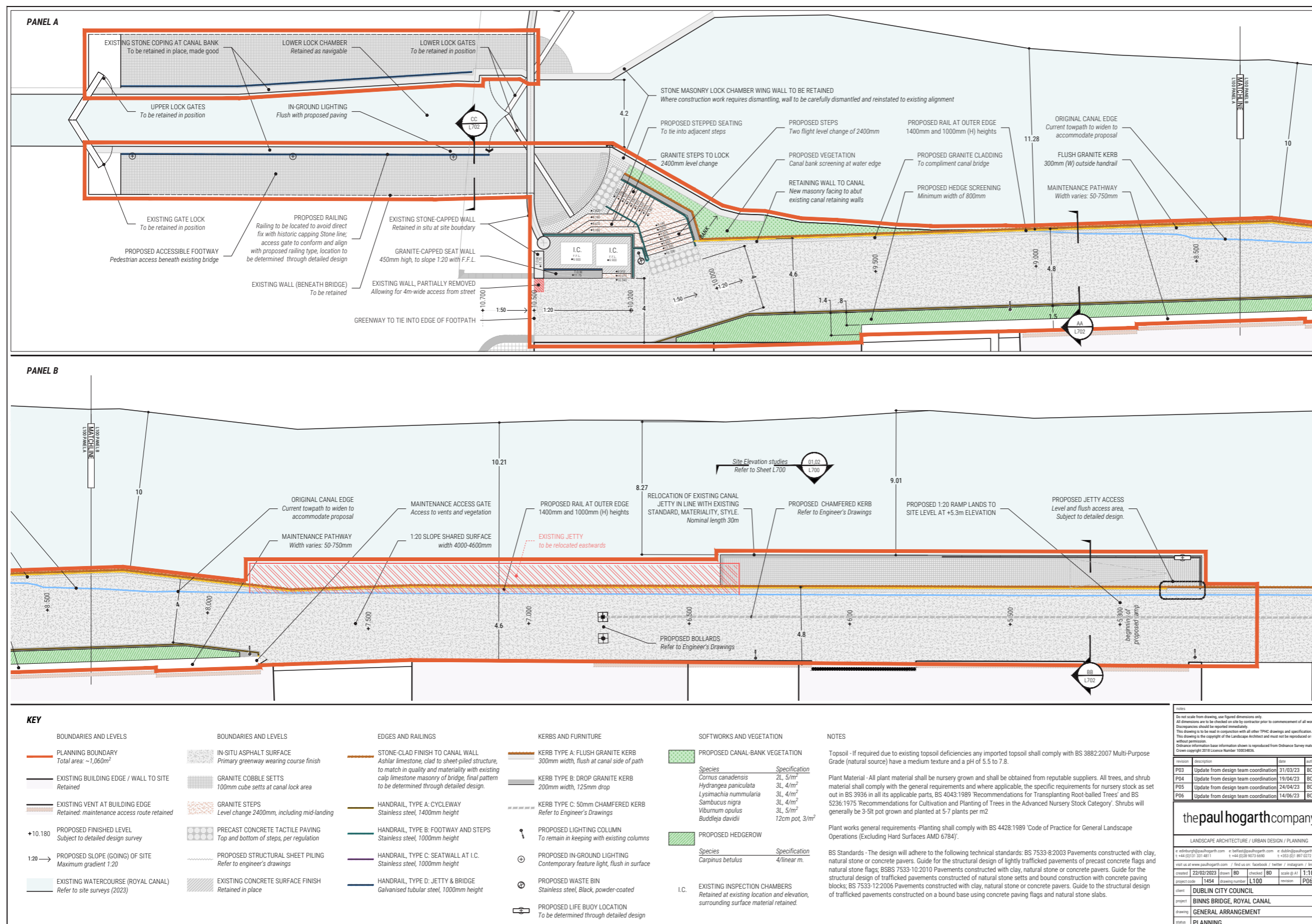
- Widening the Canal towpath.
- New ramped access at Binns Bridge.

Outline Description

The works proposed are a variation to works approved in the Part 8 application for the construction of the Royal Canal Greenway Scheme which proposes the construction of a Premium Cycle & Pedestrian Route along the Royal Canal from Sheriff Street Upper to Ashtown. The scheme is considered in four individual zones. It runs along the southern bank of the canal through the first three zones. Binns bridge is in Phase 3 of the scheme which runs from North Strand Road to Phibsborough. The approved works allowed for widening of the towpath along this section of the canal to achieve 4m width. This involves the dismantling and reconstruction of the canal edge with masonry veneer facing.

The existing towpath widths at the ramp transition at Binns bridge has sufficient width to accommodate the approved scheme, allowing it to be set back from the lock lower wing wall and maintain part of the existing canal edge alignment.

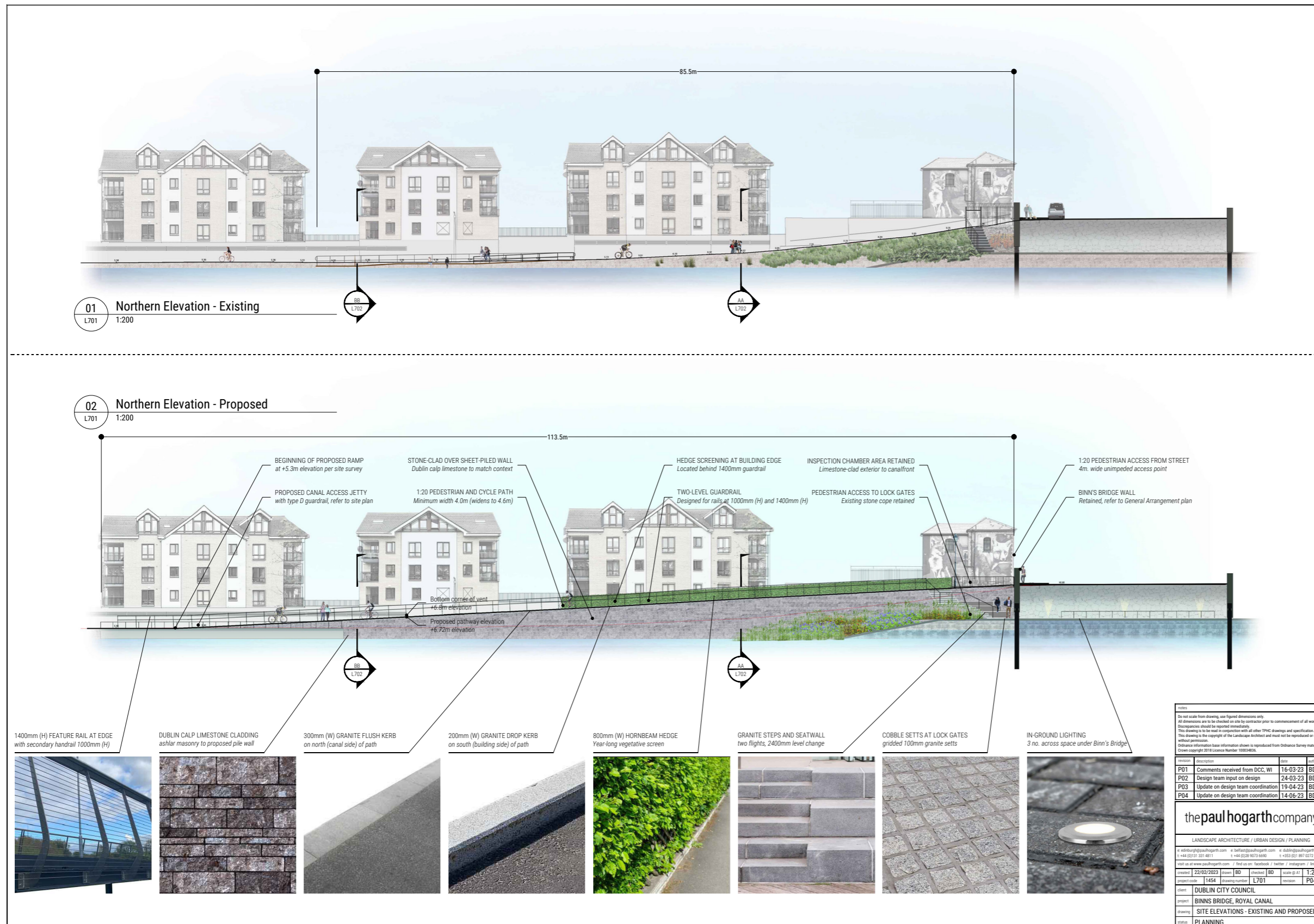
Further design development by design team lead O'Connor Sutton Cronin Consultant Engineers arising from site constraints and meeting the main statutory and non-statutory provisions governing cycling and the provision of cycle facilities now necessitates increasing the ramp width which brings the new ramp structure closer to the lock lower wing wall creating a vertical face along the canal at this section. The landscape design through careful detailing and consideration of materiality mitigates the visual impact.



Plans

Fig 46. General arrangement plan - Paul Hogarth Landscape general arrangement drawing.

Variation to Approved Scheme



Elevations

Fig 47. Elevations - Paul Hogarth Landscape.

Variation to Approved Scheme



Sections

Fig 48. Sections - Paul Hogarth Landscape.

Variation to Approved Scheme

01 Handrail Type A: Cycleway
L703 Isometric

02 Handrail Type B: Footway and Steps
L703 Isometric

03 Handrail Type C: Seatwall at Inspection Chamber
L703 Isometric

04 Handrail Type D: Jetty
L703 Isometric

1. Top guardrail at primary cycleway path - stainless steel finish, 1400mm above FFL, 200mm (W) x 50mm (H)
2. Secondary guardrail at cycleway and steps areas, stainless finish steel, 1000mm above FFL, 50mm Ø
3. Top guard rail at jetty, stainless steel finish, 900mm above FFL, 50mm Ø
4. Half rail at seat wall, stainless steel finish steel above concrete wall, 1000mm above FFL, 50mm Ø
5. Mid-height guardrail at jetty, stainless steel finish, 900mm above FFL, 30mm Ø
6. Base kick rail at guardrail, stainless steel finish, 150mm above FFL, 30mm Ø
7. Base seat rail at seat wall, stainless steel finish, 600mm above FFL, 30mm Ø
8. Steel plate post with steel cable wire at 60mm on-centre, height varies
9. Proposed seat wall at inspection chamber area to west of site.
10. Flush granite kerb at canal-side of path
11. Adjacent surface
12. LED lighting beneath handrail

12: LED Lighting beneath handrail
Exemplar image

Design of greenway bollards to materiality and stylistically match that of adjacent furniture, as below (or similar / equal approved).

notes
Do not scale from drawing, use figured dimensions only.
All dimensions are to be checked on site by contractor prior to commencement of all work. Discrepancies should be reported immediately.
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revision	description	date	author
P01	Update on design team coordination	19-04-23	BD
P02	Design detail amendment (lighting)	13-06-23	BD

the paul hogarth company
LANDSCAPE ARCHITECTURE / URBAN DESIGN / PLANNING
e: paul.hogarth@paulhogarth.com | paul.hogarth@paulhogarth.com | paul.hogarth@paulhogarth.com
t: +44 (0)11 331 4811 | t: +44 (0)20 9073 6696 | t: +353 (0)1 907 3272
visit us at www.paulhogarth.com | find us on: facebook / twitter / instagram / linkedin
created: 22/02/2023 | drawn: BD | checked: BD | scale: A1 | N/A
project code: 1454 | drawing number: L703 | revision: P01

client:	DUBLIN CITY COUNCIL
project:	BINNS BRIDGE, ROYAL CANAL
drawing:	GUARDRAILS
status:	PLANNING

Railings

Fig 49. Railing Details - Paul Hogarth Landscape.

Variation to Approved Scheme



Fig 50. View looking East from Binns Bridge.



Fig 52. View to new stepped arrangement to access lower gates creates more open transition.



Fig 51. View looking West along ramp towards Binns Bridge - Openness maintained.

7. Architectural Heritage Impact Statement

07 Architectural Heritage Impact Assessment

Architectural Heritage Impact Considerations:

This section addresses the impact of the proposed works relating to the protected structure (Binns Bridge) and other non protected structures (Canal and 2nd lock) considered to be of heritage value.

The architectural heritage impact assessment assesses the impact having regard to compliance with statutory policies, designations and guidance, in particular regarding impacts on the historic urban area, character of the protected structure and its special heritage interest value.

There are a number of aspects for consideration with regard to the proposed works and their respective impact.

- The impact of the proposed development on the historic urban context setting of the protected structure and non-protected structures.
- The impact of the proposed works on the special interest values (significance) of the protected structures, elements of the protected structures and non protected structure of heritage value.

The principal criteria for assessing impact are:

Policies and objectives for Built Heritage in Dublin City Council Development Plan 2022-2028.

Architectural Heritage Protection Guidelines for Planning Authorities: Guidance on Part IV of the Planning and Development Act 2000 (as amended).

The impact of the proposed development on the historic urban context and setting of the protected structure and non-protected structures of heritage value:

Binns Bridge (protected structure) and the Royal Canal is located within a conservation area zoning. Whilst designated conservation areas do not have a statutory basis they are recognised as areas that have conservation merit, importance and warrant protection through zoning and policy application. There is a presumption against development that would involve loss or changes that would adversely impact on the character and setting. There is also a primary objective to protect and improve the canal infrastructure.

The works proposed are contained within the canal corridor and do not impact on the urban streetscape, therefore this appraisal only gives consideration to the canal corridor setting and its character. The canal corridor provides part of the setting to the protected structure and the canal lock is within its curtilage.

The Royal Canal constitutes one of the major civil engineering achievements of the eighteenth century. The principle of narrowing of the canal width, reconstruction of side retaining wall and improvement works to tow-path including new ramp transition has already been established in the approved Part 8 permission.

The previously approved works would improve the visual presentation and amenity along side the canal and generally have a positive impact on the historic urban context and the overall setting of the canal corridor. The amendments proposed to the approved scheme to meet regulatory requirements, increase the scale of the transition ramp and require relocation of the existing Jetty.

An appropriate integration of new interventions into the historic context will be one that is carried out in a coherent manner that retains historical legibility of authentic material and the intrinsic character of place.

The re-design afforded opportunity to improve the relationship between the ramp and lock chamber gate access including removal of unsightly railings, providing a more open spatial connection improving the immediate setting at the bridge.

The design response is specifically responsive to the local environment, its scale required to provide an acceptable standard of segregated cycle/pedestrian carriageway adopting the established materiality in a contemporary expression to provide contrast. Railings are designed to be visually permeable to maintain a sense of openness.

Whilst the revised ramp design further impacts on the canal width closer to the bridge, it does maintain the lock chamber wing wall intact. The increase in ramp scale accentuating the outer vertical face of the ramp exacerbates the visual impact, but mitigation through good quality contemporary architectural design consideration and use of quality of materials in the design response will allow it to integrate successfully into the setting.

The amendment proposed to the approved scheme, whilst it increases the scale of intervention it does not significantly alter the impact of the approved scheme on the setting of the protected structure or the character of the canal corridor and its elements of heritage value.

The impact of the proposed works on the special interest values (significance) of the protected structures, elements of the protected structures and non-protected structures of heritage value:

Works in this context include removal, alteration, addition, repair and renewal. These impacts can often represent the more significant impacts as these will

result in physical intervention to the structure and fabric.

Alterations:

The works do not propose alteration to the bridge structure except to a section of remnant parapet walling. Alteration of the section of wall is a minor intervention in the context of the bridge structure and its special interest value. These works will not adversely impact on the special interest value of the protected structure.

Additions

It is proposed to provide railings along the canal chamber edge under the bridge arising from safety concerns expressed by Waterways Ireland. This area is the subject of anti-social behaviour which has raised safety concerns. In addition to the railings, low level ground lighting is proposed to deter some of the anti-social behaviour. The railing is set back from the edge to avoid damage to lock chamber coping stones and is of simple design to mitigate visual impact.

These works will not adversely impact on the special interest value of the protected structure and the 2nd Lock Chamber.

Impacts during construction phase.

The placing of the pile structure part of the new construction in close proximity of the canal lock chamber wing wall may pose a risk to the integrity of the wall. To mitigate against damage, sections of the wall considered at risk will be carefully dismantled and reconstructed. Appropriate repairs will be carried out to retained wall structure such as pointing to ensure its integrity and protection.

(Refer to Appendix A - Works Methodology).

These works will not adversely impact on the special interest value of the heritage structures.

Conclusion:

Having regard to the location of the proposed development within a 'sensitive landscape' part of Royal Canal corridor which is of significant heritage value and within the setting of Binns Bridge a protected structure, it is considered that the proposed amendments to the approved scheme will not result in a significant increased adverse impact on the character and setting of the protected structure and other structures of heritage interest value. Works provide opportunity to enhance and improve the landscape setting, improving access to an important amenity within the city.

Appendix A.

Works Methodology

Dismantling & Reconstruction

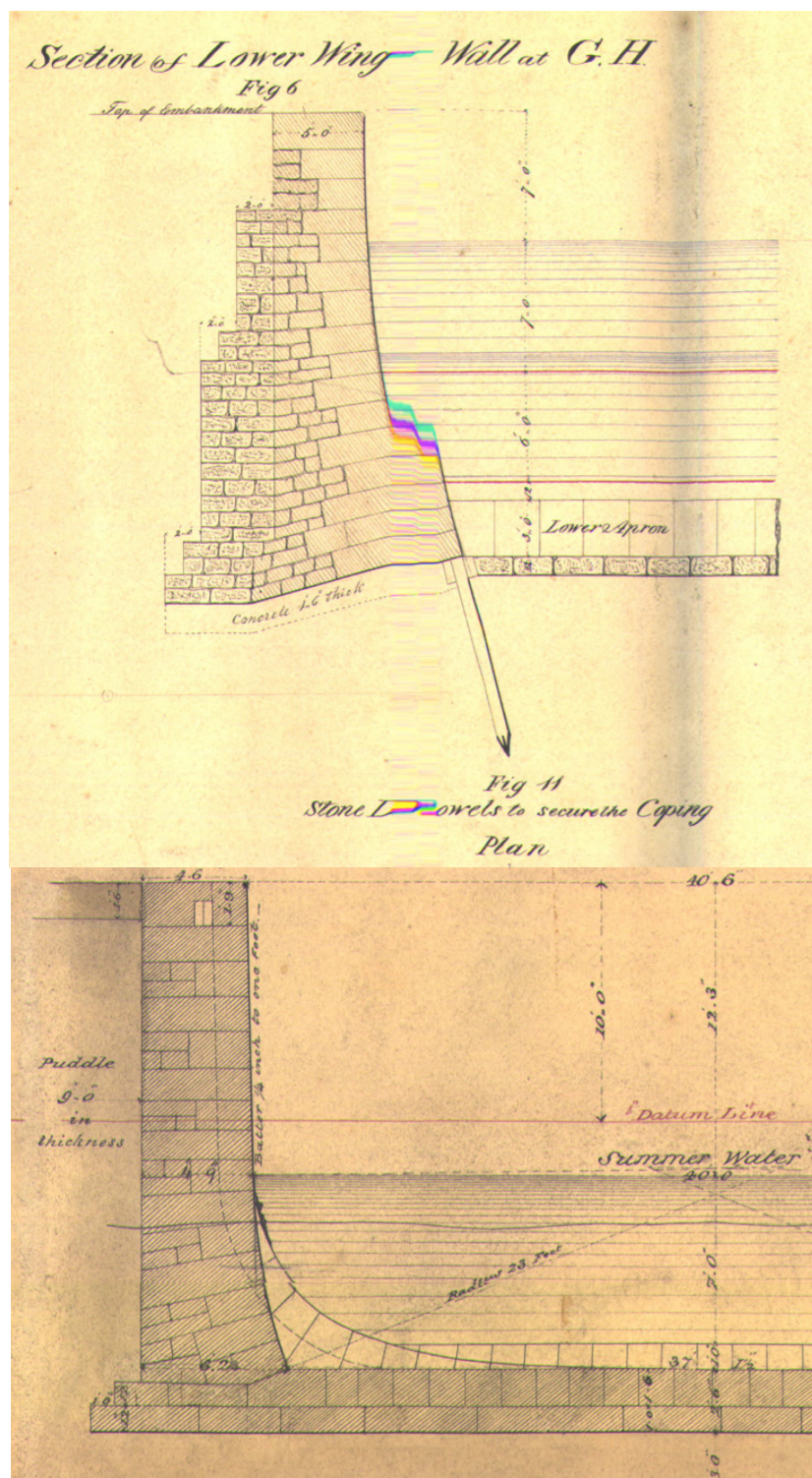


Fig 1. 1840 wing wall lock chamber Athlone - typical construction detail (Waterways Ireland Archive).

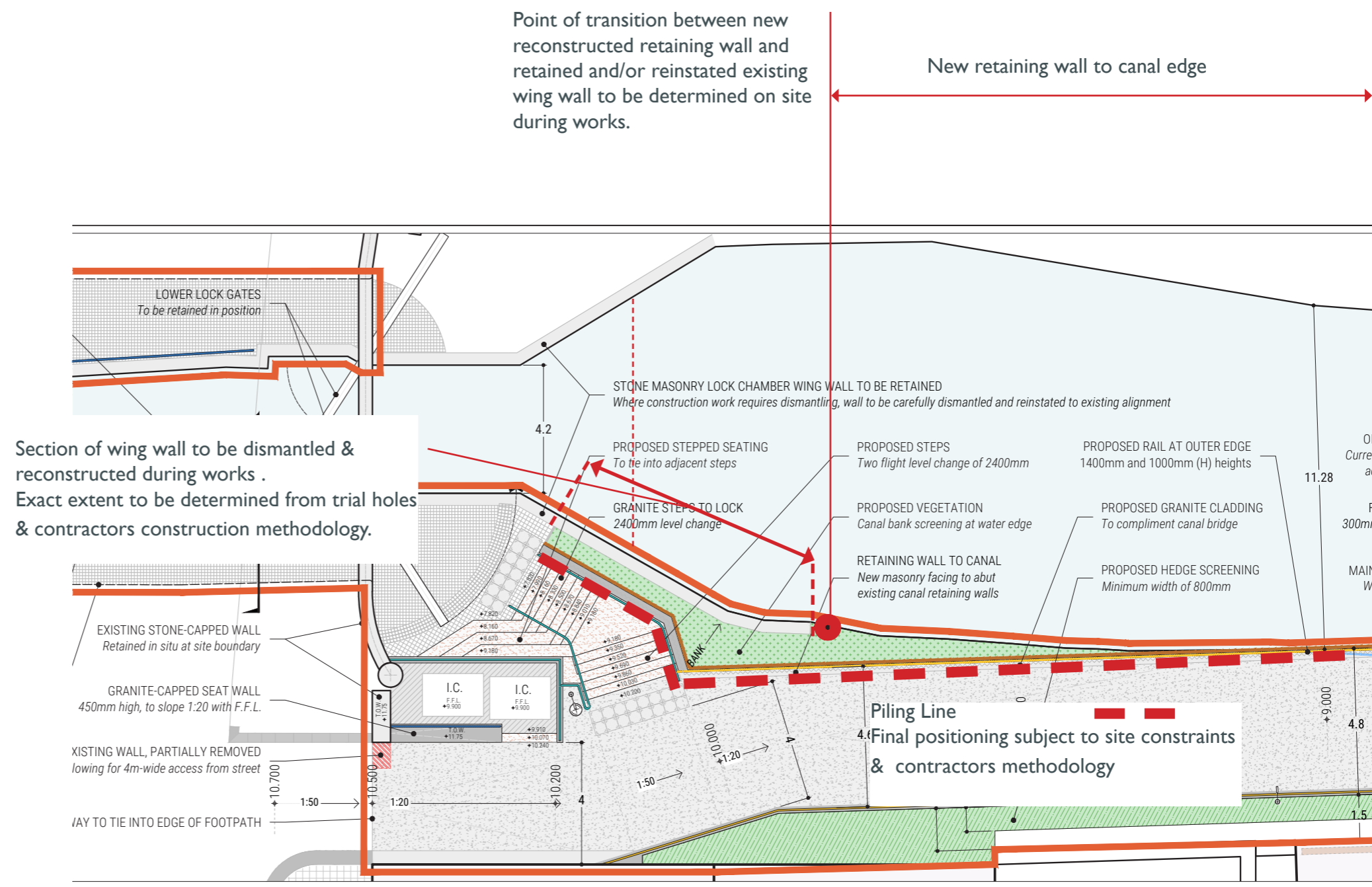


Fig 2. Extract Drawing Paul Hogarth Landscape : I454 L701 General Arrangement.

Methodology:

Proximity of piles has potential to pose a risk to existing retaining wall where it is retained during construction, Section of wall at risk will be dismantled and reconstructed to facilitate insertion of piles where determined appropriate to do so.

The works will be monitored by a Conservation Architect to ensure that the integrity of the structure is maintained and that all works are carried out in accordance with best conservation practice.

All monitoring arrangements will be agreed at the outset of the works. The consulting Engineers will liaise with Conservation Architect during works.

The stonework will be implemented by experienced restoration and conservation contractors.

Trial Inspection pits

A number of trial holes will be carried out to establish nature and condition of wing wall under consideration for dismantling and reconstruction.

Trial holes to determine

1. Rear profile of wing wall
2. Nature of construction
3. Nature of counter-fort
4. Extent of puddle clay layer

Information from trial holes and contractor methodology for construction will determine extent of wing wall to be dismantled for reconstruction.

Mortar Sampling & Analysis

Carefully remove mortar from joint, avoiding contamination with the material of which they are composed. Take each sample over the thickness of the structure of which it is intended to be representative and record that thickness. Samples for dispatch to the laboratory shall each be not less than 100 g in mass. Sample where possible should be solid.

Test should be carried out by recognised laboratory and by person with experience of analysis of historic mortars. Tests should be carried out in accordance with the requirements of the appropriate standards. A detailed analysis as required to inform reconstruction.

Cleaning

Techniques will be appropriate to avoid damage to masonry. The stonework shall be cleaned using a variety of tools such as water jet set at an appropriate

pressure level (BS 8221-1:2012 defines low pressure as ≤ 17 bar) or super-heated low pressure steam cleaning systems to avoid damage to stone surfaces. Scrapers and brushes may also be used to remove loose organic matter.

Numbering stones

Number facing stones of section of wall to be dismantled & record on survey photographs. Dismantle section of wall stone by stone. Dismantled stone to be laid out in sequence on timber pallets raised off the ground in order to facilitate reconstruction. Dismantled facing stone will be stored in secure location till reconstruction work is carried out.



Fig 3. Extent of wing wall under consideration for dismantling and reconstruction.

Dismantling

Wall masonry as appropriate shall be dismantled by hand. All temporary works shall be in place before commencement of dismantling masonry. Temporary support will have adequacy, stability, integrity, and rigidity. Masonry units are to be removed carefully and in one piece. Mortar from masonry units will be removed using a stiff brush on the mortar surface. Large pieces of mortar may be chipped away using a small chisel and scrapper and rasps. Extra care shall be taken not to damage underlying stone surface.

If mortar does not come loose easily methodology will be reviewed with the Conservation Architect. Stones will be methodically taken out, one by one from the top down, moving from left to right where possible. Each stone is cleaned and numbered on its top surface, the number facing the front, with a water-proof pen on a patch of white paint in its take down sequence, and the numbers noted, as work progresses, on a drawing. Retained masonry in the vicinity of dismantling works shall be disturbed as little as possible. Retained loose masonry units and those vulnerable to movement during works shall be propped or wedge so as to be firmly and correctly positioned. Existing retained masonry shall not be cut or adjusted to accommodate new or reused units.

The counterfort masonry backing (dependent on masonry construction) behind the facing is often random rubble masonry and will be dismantled for reuse.

Piling & construction works

Piling and construction techniques will consider context to ensure no damage to retained structures. All works will be subject to contractors RAMS. All appropriate monitoring will be in place during works.

Stone Reconstruction

Wall reconstruction will be carried out using lime mortar informed by analysis matching existing constructional techniques. New work will have continuity with the original structure and maintain the original profile and maintain the integrity of the original structure. Stonework shall be reinstated as original to fully match stonework in relation to the colour, sizing of stones, coursing, width of joints and pointing. Back filling including layer of puddle clay to replace original in areas determined by trial holes.

Appropriate repairs will be carried out to retained wall structure such as pointing to ensure its integrity and protection.

Finishing detail for ground surface to landscaping detail design.

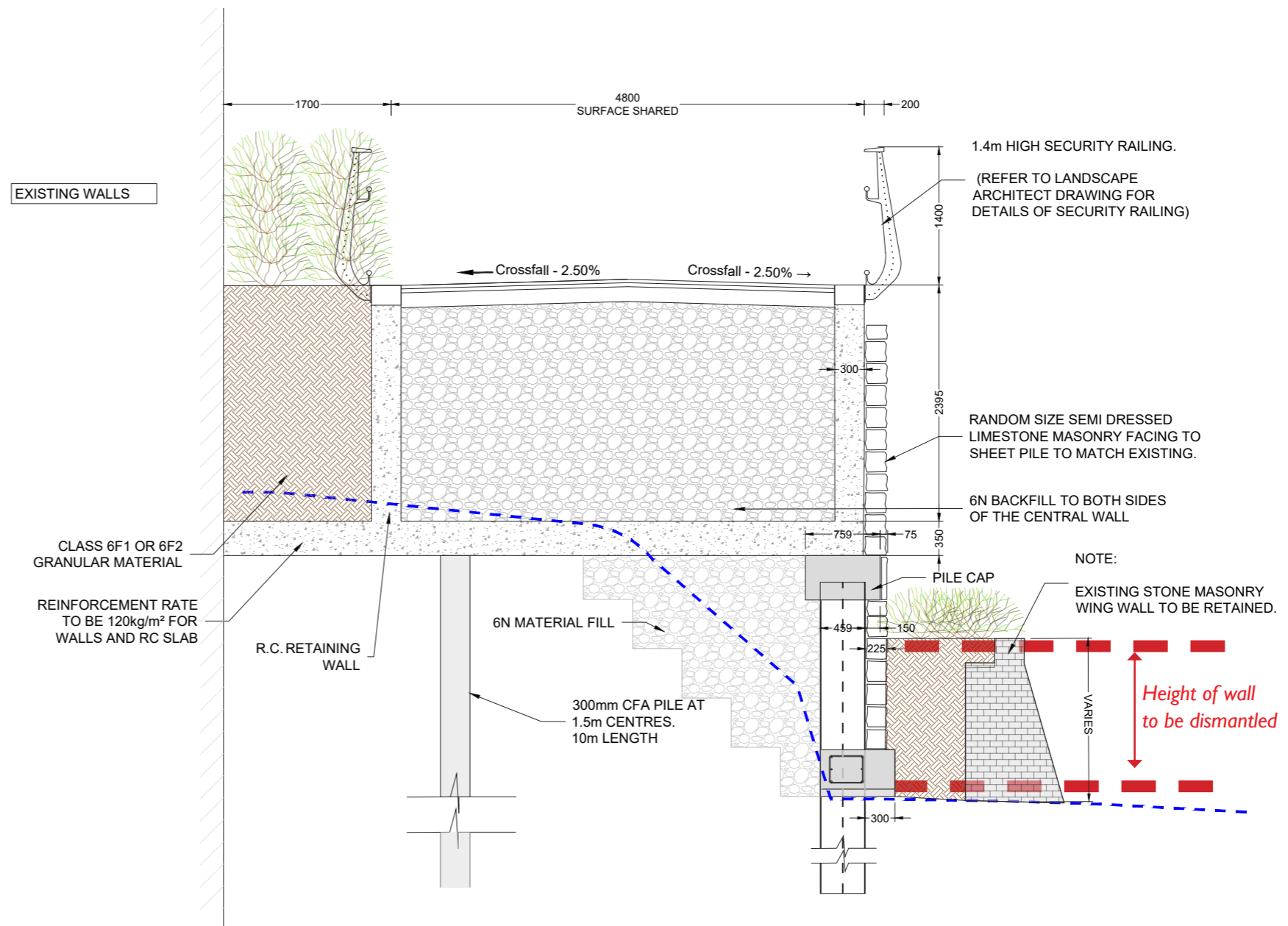


Fig 4. Cross section indicates relationship of piles to existing retain wall. Proximity of piles has potential to pose a risk to existing retaining wall where retained during construction, Section of wall if determines at risk will be dismantle and reconstructed to facilitate insertion of piles.

Graffiti Removal

Successful graffiti removal from historic masonry depends on achieving a balance between breaking the bond between the graffiti and the masonry surface without damaging the masonry.

The two primary components contained in most graffiti materials-pigment or dye, and binder-may simply remain on the masonry surface, or penetrate into the masonry to varying depths depending on a number of factors, including the characteristic of the host stone and graffiti medium used. The total removal of graffiti can be difficult to remove, particularly residual stains.

Removal techniques, will be chosen according to the type of graffiti and the masonry substrate. Graffiti removal will be managed by a specialist cleaning contractor with appropriate experience. It is anticipated that a chemical cleaning treatment using poulticing type technique will be used as it can be more discriminating than mechanical ones, and can also reach within the substrate's sub-surface. Dwell time of chemical agents and suitability for use will be established by trials. Appropriate protection will be place and cleaning process will be safely contained.

Cleaning process to remove graffiti will remove patina (pollution accumulation etc) on stone. It may be necessary to consider cleaning other areas to avoid jarring contrasts. Method of cleaning of pollution accumulation will be subject o trail test cleaning process.



Fig 5. Graffiti on face of bridge stone work to be removed

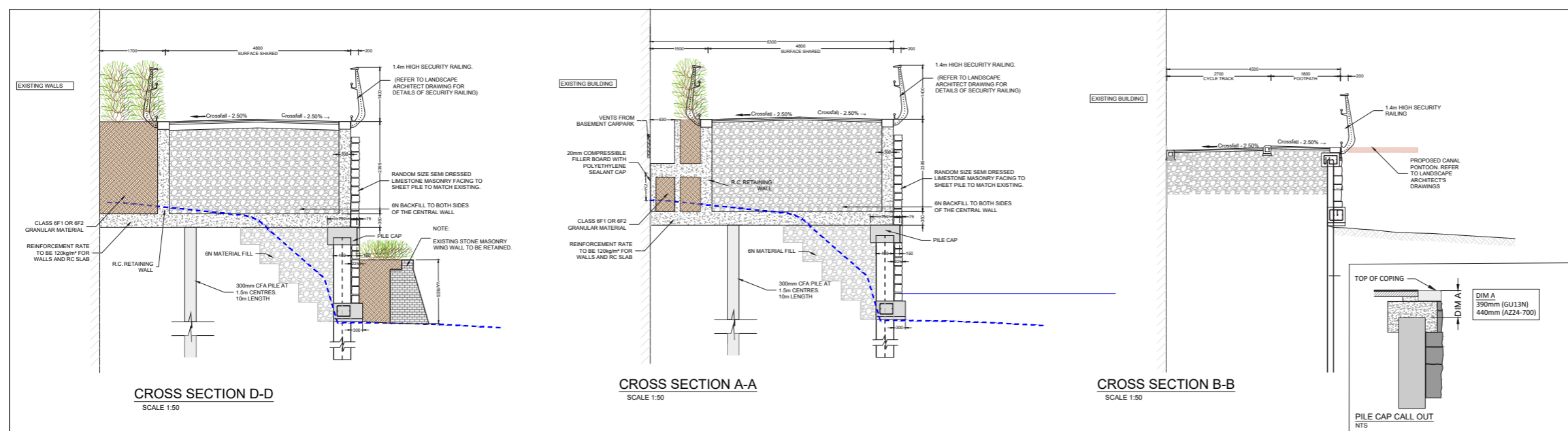


Fig 7. Sheet piling

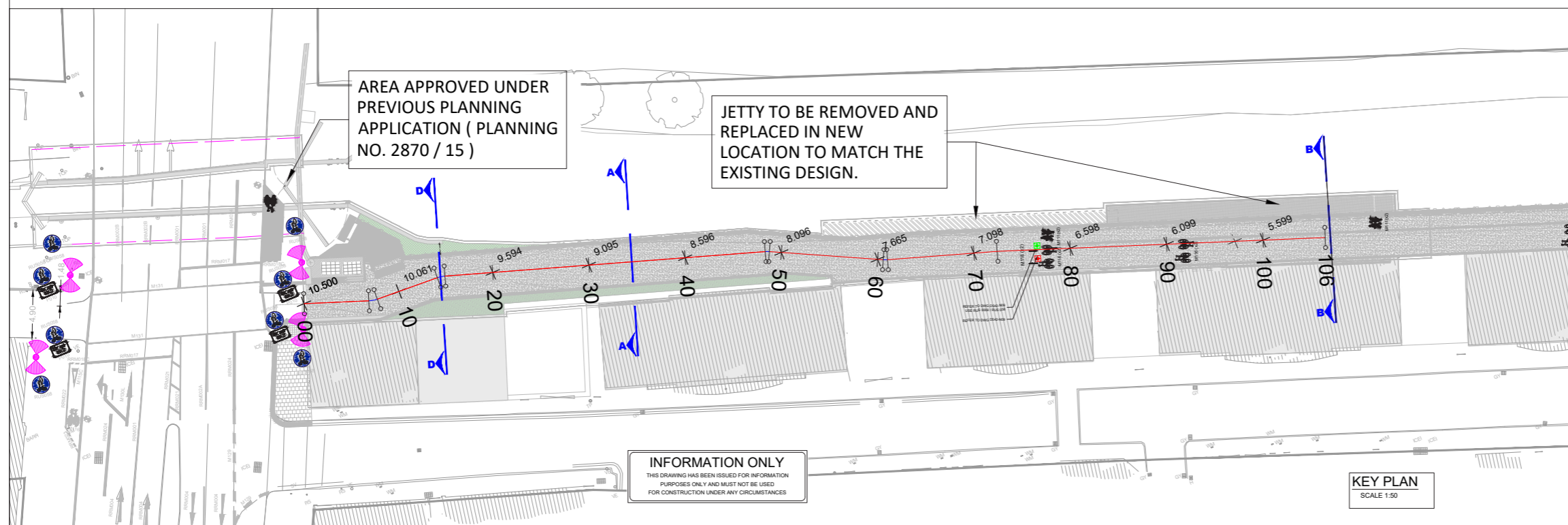


Fig 8. Capping beam to sheet piling

Notes	No.	Date	Revision/Description	By	Check
1. For setting out refer to Engineer's drawings.	01	21.03.23	ISSUED FOR INFORMATION	JT	SJ
2. This drawing to be read in conjunction with all other Engineering drawings and all other relevant drawings and Specifications.	02	20.03.23	ADDITIONAL SECTION PROVIDED	JT	SJ
3. DO NOT SCALE THIS DRAWING. Use figure dimensions only.	03	01.04.23	SECTION C-C REVISED	JT	SJ
4. No part of this document may be reproduced or transmitted in any form or stored in any retrieval system of any nature without the written permission of O'Connell Sullivan Corrin & Associates Ltd. except as agreed for use on the project for which the document was originally issued.	04	20.04.23	SECTION C-C CROSSFALL REVISED	JT	SJ
5. Contractors Survey of Inland Waters no. 020000202 © Government of Ireland	05	18.03.23	NOTES REVIEWED	JT	SJ
	06	21.03.23	SECTION NOTES REVISED	JT	SJ
	07	21.03.23	STAGE PLANNING	RU	SJ

Udarás
Náisiúnta Iompair
National Transport Authority

Comhairle Cathrach
Baile Átha Cliath
Dublin City Council

OCSC
Multidisciplinary Consulting Engineers
O'Connell Sullivan Corrin & Associates Ltd.
9 Prussia St.,
Dublin 7.
TEL: +353 (0) 8662000
FAX: +353 (0) 8662000
www.ocsc.ie

Client: DUBLIN CITY COUNCIL
Project: ROYAL CANAL GREENWAY, PHASE 3.
Title: BINNS BRIDGE ACCESS RAMP CROSS-SECTION
Scale: 1:50
Date: 22.03.23
Sheet: D542 -SK110 P07

Fig 6. Civil Engineering drawing OCSC.