

PART 8 REPORT

BINNS BRIDGE PART 8

Dublin City Council

D542

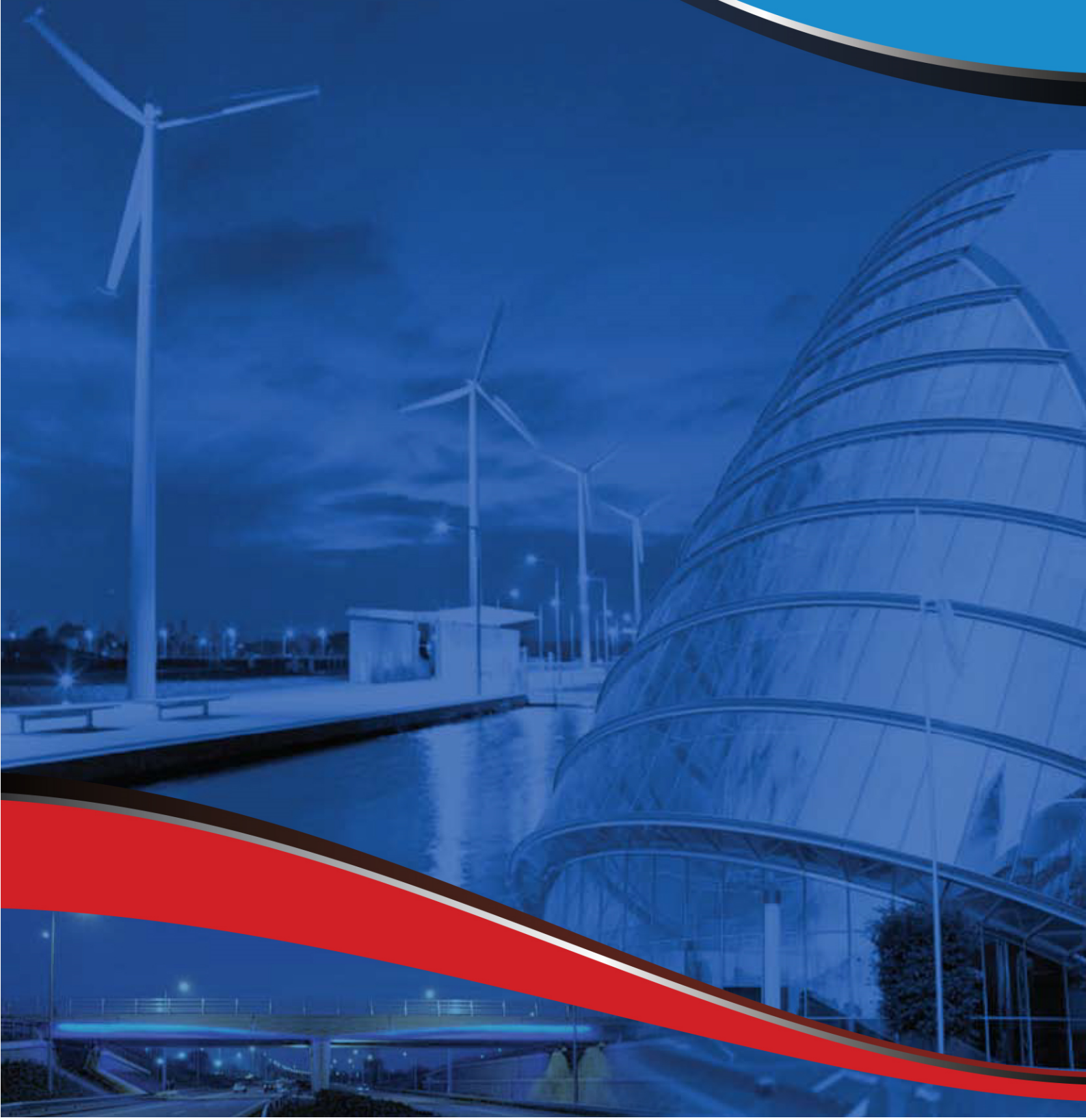
22 June 2023



OCSC

O'CONNOR | SUTTON | CRONIN

Multidisciplinary
Consulting Engineers



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1 INTRODUCTION

O'Connor Sutton Cronin & Associates (OCSC) have been appointed by Dublin City Council (DCC) to prepare a Part 8 submission for a section of ramp which will form part of the Royal Canal Greenway Phase 3 and associated public realm improvements. This represents an amendment to the Part 8 permission in place for the Royal Canal Greenway Phase 3 (Planning Register Reference: 2870/15). For clarity, this proposed amendment is referred to as the Binns Bridge Part 8.

The Royal Canal Greenway Phase 3 runs for approximately 2.1km between North Strand Road and Phibsborough and involves the expansion of the existing canal tow path to facilitate primarily segregated pedestrian and cycle infrastructure with supporting structures, road crossings and public realm works as necessary. The approved greenway also includes support infrastructure such as public lighting, CCTV and additional services.

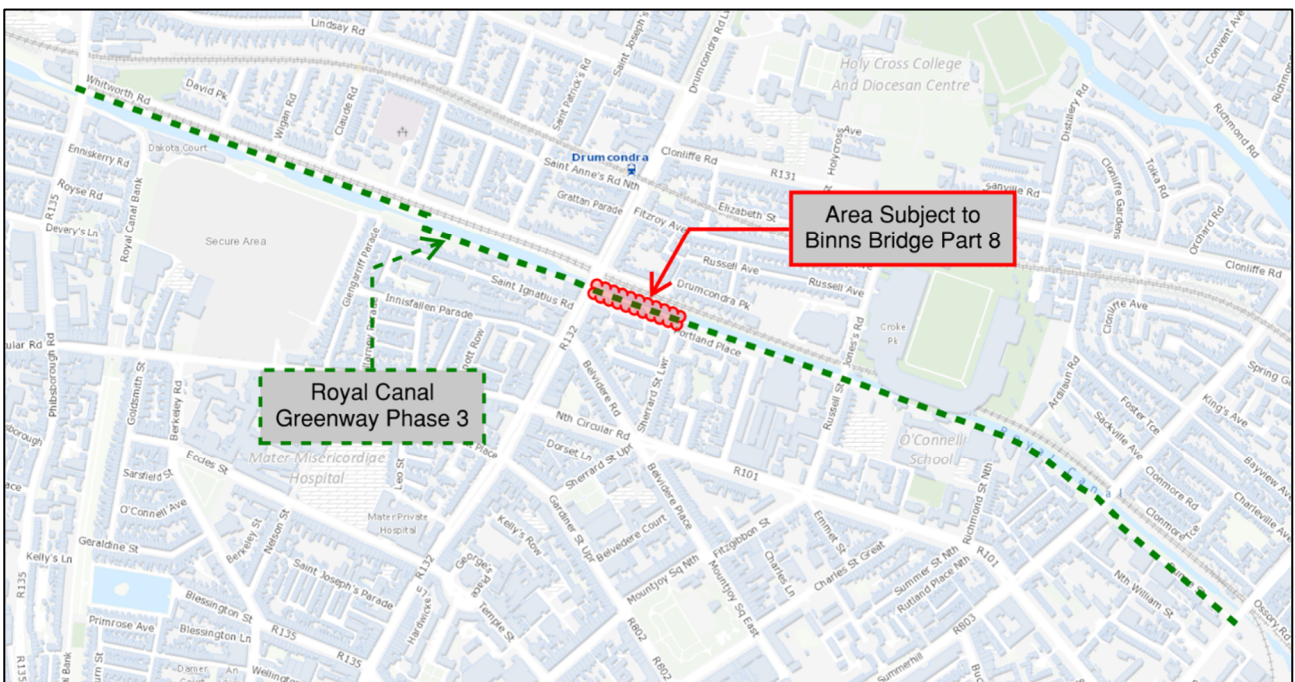


Figure 1: Site Location

The proposed amendment relates to changes to a previously proposed ramp structure adjacent to Binns Bridge which will be modified to provide more appropriate gradients while also allowing appropriate consideration of and integration with adjacent structures and properties accordingly. It also includes public realm and safety improvements to the area around the Royal Canal's 2nd Lock.

The core objective of the Greenway project is to provide a high quality cycle and pedestrian route to facilitate and encourage movement by active modes within Dublin City. This Part 8 proposal will further enhance the quality of the Royal Canal Greenway scheme by improving localised gradients making it more accessible and user friendly while also providing public realm improvements, particularly in the context of Binns Bridge which is a protected structure of notable heritage value and the 2nd Lock Gate which is also of significant heritage value.

2 SITE LOCATION & DESCRIPTION

The site is located on the banks of the Royal Canal immediately adjacent to Binns Bridge/Dorset Street Lower. Key characteristics of the area include:

- The proximity of Binns Bridge (Canal Bridge Registration No. 50060189) which is a protected structure with significant heritage value, included in the Record of Protected Structures Reference No. 908 and in the National Inventory of Architectural Heritage. Binns Bridge is also included as an entry on the Dublin City Industrial Heritage Record (DCIHR);
- The proximity of the 2nd Lock on the Royal Canal (Royal Canal Registration No. 50060188) which is located beneath Binns Bridge and has a controlled access to the canal tow path. The 2nd Lock is also included as an entry on the DCIHR;
- The immediately adjacent Royal Canal which is a proposed Natural Heritage Area (pNHA, Site Code 002103);
- An underground gas installation on the site which lies between the tow path and the canal lock;
- An existing number of apartments blocks and associated basement structure bordering the tow path directly;
- A jetty alongside the tow path located within the canal.

The greenway intends to upgrade the existing tow path in this area and as part of the overall project approved under separate Part 8. At this location, the tow path is approximately 4m in width and experiences a significant change in level on approach to Dorset Street, which the tow path ties into. This has resulted in a relatively steep gradient far in excess of the required 5% (1/20) for ramps as stipulated by the National Cycle Manual.



Figure 2: Existing Site Layout Showing Steep Tow Path Gradient to Dorset Street, 2nd Lock & Binns Bridge



Figure 3: Existing Site Layout Showing Tow Path, Adjacent Residential Properties & Jetty

Of particular note with respect to the above is the vents from the basement level serving the bordering apartment blocks which front onto the tow path. The location of these vents and their level relative to the tow path formed the basis for the original Part 8 design which sought to

provide a ramp at an approximate 10% gradient so as to avoid covering the vents and thereby impacting their function.

However, through further consultation with the National Transport Authority, it is now deemed essential to ensure that all gradients along the Greenway comply fully with the National Cycle Manual meaning that the previously proposed 10% gradient must be redesigned to ensure the maximum 5% gradient is not breached. This is the core rationale for this Part 8 proposal.



Figure 4: Existing Site Layout Showing Binns Bridge & 2nd Lock

The existing layout also includes significant access restrictions to the area below Binns Bridge which houses the canal's 2nd Lock as shown. This includes a variety of railings, high fences and secured gates immediately adjacent to Binns Bridge which could be argued to detract from the views and setting of the heritage structure. The area beneath Binns Bridge and around the canal lock is simplistic in nature at present, with formal hard surfaces provided only around the lock gate and the arms used to operate it and no railings present.



Figure 5: Existing Site Layout Showing 2nd Lock Access Controls



Figure 6: Existing Site Layout Showing Underground Gas Installation & 2nd Lock Access Control

There are existing public lighting and CCTV installations along this section of the tow path which are to be upgraded as part of the approved Part 8.

3 PLANNING & DEVELOPMENT CONTEXT

The development of cycle and pedestrian routes in Dublin City is supported through the following objectives contained within the Dublin City Development 2023-2029:

- **SMT01: Transition to More Sustainable Travel Modes** – To achieve and monitor a transition to more sustainable travel modes including walking, cycling and public transport over the lifetime of the development plan, in line with the city mode share targets of 26% walking/cycling/micro mobility; 57% public transport (bus/rail/Luas); and 17% private (car/van/HGV/motorcycle);
- **SMT02: Improving the Pedestrian Network** – To improve the pedestrian network, and prioritise measures such as the removal of slip lanes, the introduction of tactile paving, ramps, raised tables and kerb dishing at appropriate locations, including pedestrian crossings, street junctions, taxi ranks, bus stops and rail platforms in order to optimise safe accessibility for all users;
- **SMT08: Cycling Infrastructure and Routes** – To improve existing cycleways and bicycle priority measures and cycle parking infrastructure throughout the city and villages, and to create protected cycle lanes, where feasible. Routes within the network will be planned in conjunction with green infrastructure objectives and the NTA's Cycle Network Plan for the Greater Dublin Area, and the National Cycle Manual, having regard to policies GI2, GI6 and GI8 and objective GI02;
- **SMT09: Greater Dublin Area Cycle Network Plan** – To support the development of a connected cycling network in the city through the implementation of the NTA's Greater Dublin Area Cycle Network Plan, subject to environmental assessment and route feasibility.
- **GI06: Metropolitan and Local Greenways** – To support the development of the following metropolitan greenways and local cycleways / walkways:
 - Royal Canal and the Grand Canal (including the inner Grand/Royal canal loop linking the two canals via the Phoenix Park).
 - Rivers Liffey (Dublin Galway Euro route) Dodder (Ringsend to Dublin Mountains).
 - Coastal corridor.
 - Local routes and extension of existing routes including along the Rivers Tolka, Santry, Poddle, Camac and Mayne.

The proposed development subject to this Part 8 aligns with the above objectives to deliver high quality cycle and pedestrian infrastructure and facilitate a modal shift to active travel modes.

4 CONSULTATION

Consultation took place with a number of key stakeholders as part of the design preparation.

OCSC and members of the DCC Environment and Transportation Department met on-site with representatives from Waterways Ireland and the National Transport Authority to establish the scope of works and discuss the design options and requirements. A number of follow up meetings were held with Waterways Ireland to refine the design proposals.

The initial scope of works sought to modify the previously proposed ramp structure to achieve the maximum 5% gradient permitted by the National Cycle Manual while not adversely affecting the sensitive Binns Bridge structure and the adjacent apartment blocks and their basement level vents. Through these and subsequent discussions with Waterways Ireland, the scope of works was expanded to offer public realm, access and safety improvements to the 2nd Lock area beneath Binns Bridge. Key design criteria, including the need to maintain a minimum 10m navigation width in the canal where any encroachment was proposed, were also established and incorporated into the design accordingly.

Waterways Ireland have provided agreement with respect to the Part 8 design as indicated in the Letter of Consent provided for and submitted as part of this Part 8 application.

Further pre-planning consultation also took place with various DCC Departments with a particular focus on Conservation & Heritage to ensure the requirements with respect to Binns Bridge and the Lock Gate were understood and incorporated into the proposed development. These discussions informed the detail required and now reflected in the Part 8 package.

Consultation with respect to Public Lighting has taken place as part of the design of the overall Royal Canal Greenway Phase 3 project and its associated compliance requirements.

5 EXTENT OF PROPOSED WORKS

APPROVED PART 8 DESIGN

The approved Part 8 design allowed for a simple solution with respect to the ramp design which addressed the issue of the apartment basement vents by setting the levels for the cycle route below the level of the vents which are highlighted below.



Figure 7: Existing Apartments Blocks Basement Vents Fronting Tow Path

This resulted in a 10% (1/10) gradient for the approximately 30m of the route which then reduced to approximately 5% (1/20) below the level of the vents.

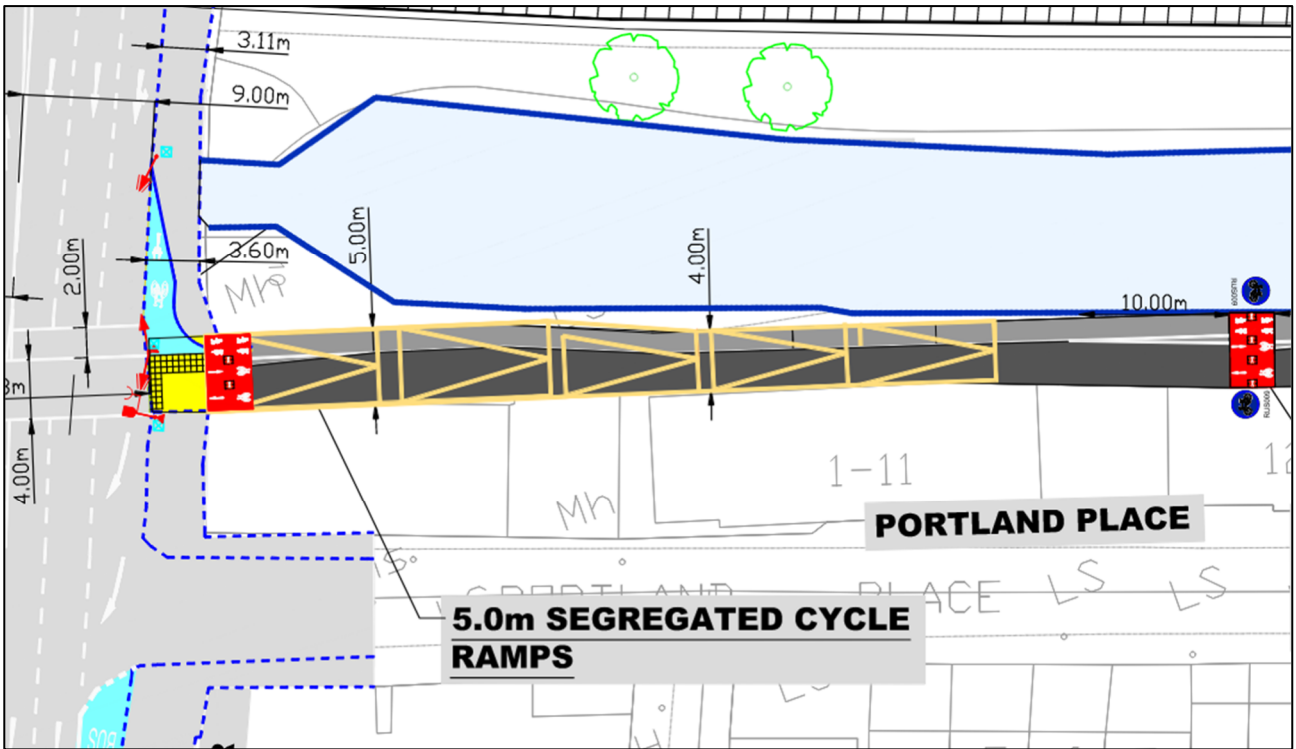


Figure 8: Extract from Permitted Part 8 Layout – Ramp to Dorset Street Lower

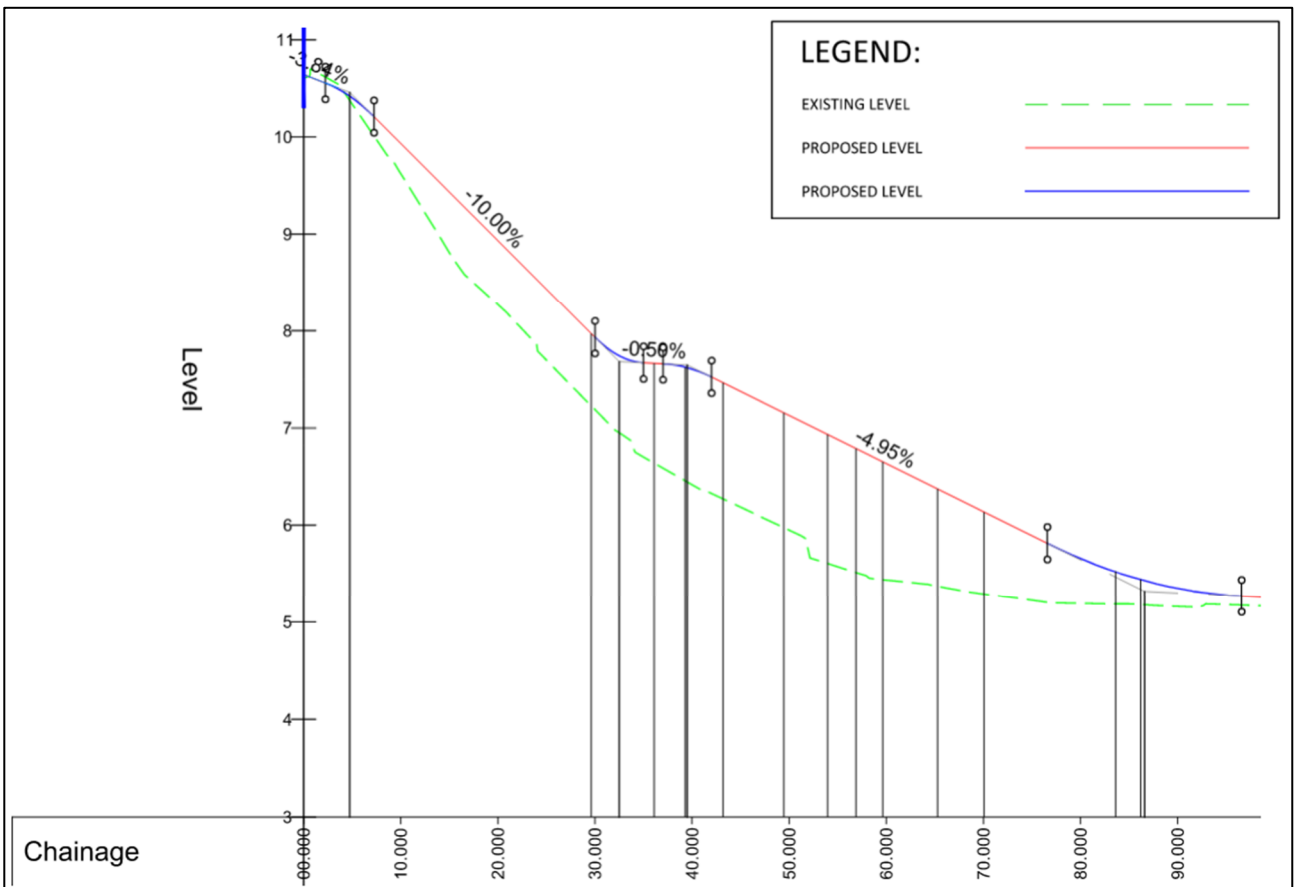


Figure 9: Previously Proposed Alignment Design

AMENDED PART 8 DESIGN PROPOSAL

While the previously proposed section of ramp with a 10% gradient was acceptable at the time of the approved Part 8 design development a number of years ago, it is now acknowledged that there is a need to provide the highest quality cycle and pedestrian infrastructure in line with the National Cycle Manual and the Design Manual for Urban Roads and Streets is critical. As a result, the design has been revised as set out in this Part 8 application to ensure that gradients do not exceed that maximum of 5% at any point in the study area.

In addition to addressing the issue of gradients, the design has been very conscious of its location within the curtilage of Binns Bridge, a protected structure. In order to respect and compliment the setting while also allowing for the aforementioned requirements of Waterways Ireland, the extent of works has been expanded to incorporate the full extent of existing hardstanding surfaces, railings, fences and gates in this area and the area around the 2nd Lock below Binns Bridge.

The proposed layout and associated details are set out in the drawings submitted as part of this Part 8 package, with an extract of same shown following.

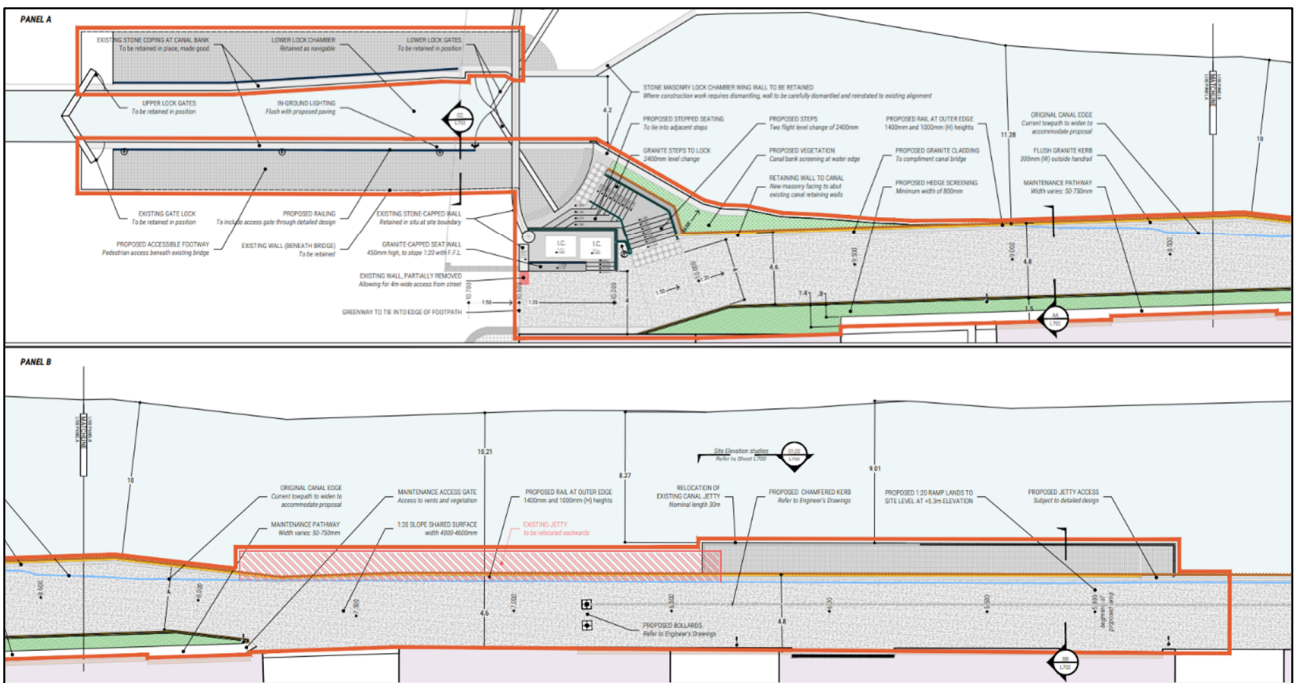


Figure 10: Proposed Amended Layout

The key aspects of the design are summarised as follows:

- The ramp gradient has been reduced to 4.99% along the entirety of its length;
- In order to protect the integrity and function of the basement level vents fronting on the tow path and the amenity and security of the ground floor apartments in these adjacent blocks, the greenway has been offset from the existing boundary by approximately 1.3m-1.5m. This offset starts in advance of the western corner of the first apartment block and continues for approximately 50m until the proposed greenway level is sufficiently low so as to have no impact on the adjacent vents and structures.
- The greenway will operate as a 4.6m wide shared space for the majority of this area, tying back to the previously permitted cross sections at either end.
- The 1.5m offset space will comprise a combination of a narrow maintenance path at existing ground level, approximately 0.5m-0.7m in width. The remainder of the space will form a planted soft landscape strip to provide screening and additional security as indicated by the following section.

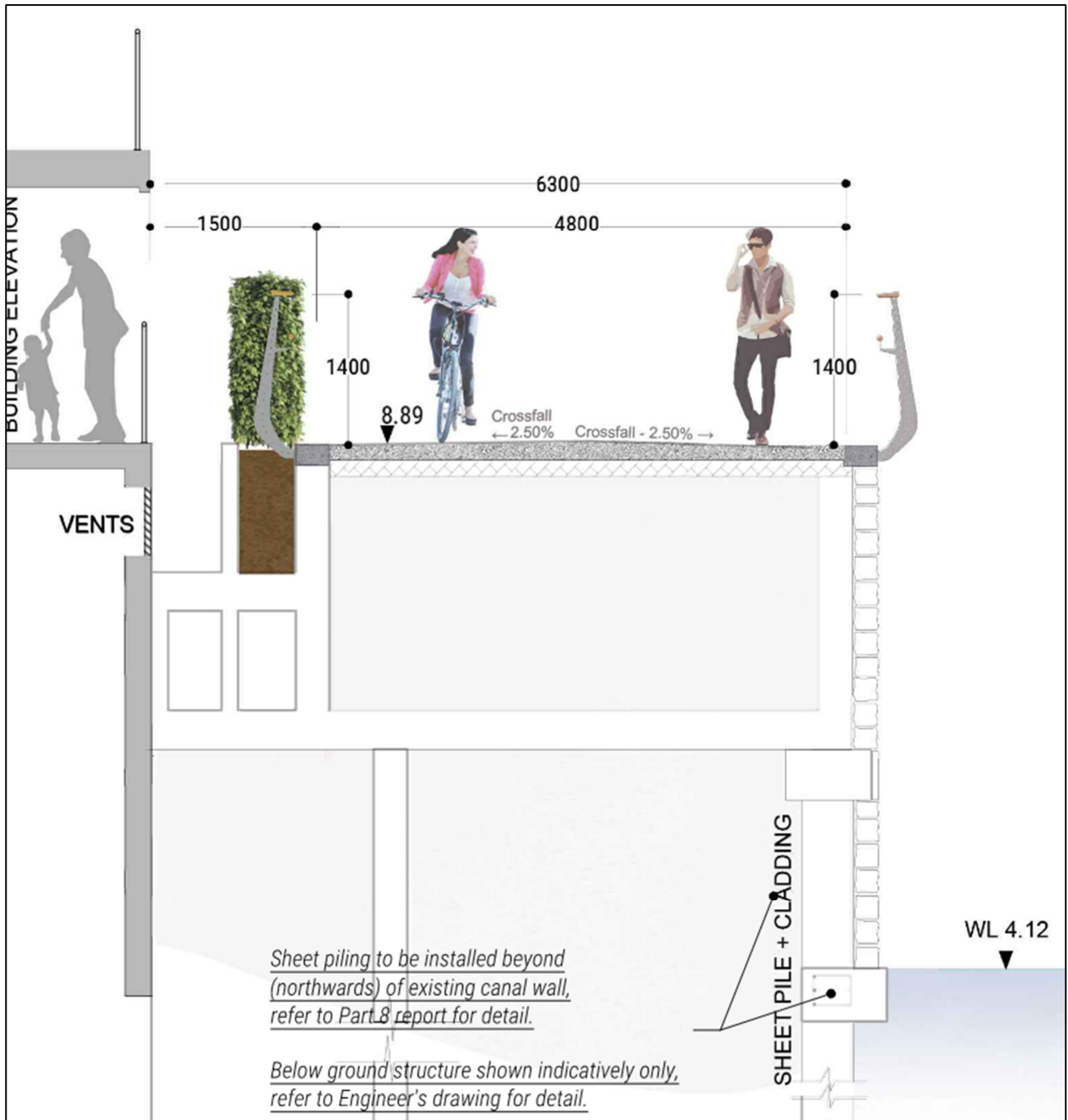


Figure 11: Proposed Cross Section Indicating Offset from Adjacent Structures

- The works will involve the removal of all existing railings, fences and gates in the area and the replacement of same with railings more in keeping with the heritage setting, opening up the views of Binns Bridge from the greenway.
- The existing stair access to the lock beneath Binns Bridge has been revised and opened up with additional stepped seating and soft landscaping provided to create an improved public realm area which invites people to enjoy the setting of Binns Bridge and adds additional amenity value to the area;

- The area immediately surrounding the lock gate is to be resurfaced with in-ground lighting provided to further compliment the public realm improvements. Railings are proposed along the lock gate itself as a safety feature due to the increased accessibility and given the unique nature of the lock gate in a constrained location beneath the bridge with notably greater depth than typically experienced at other lock gates along the canal. Gaps/gates are to be provided in the proposed railing to facilitate access to and from the lock when in operation and in emergency situations;
- The ramp will be constructed using sheet piling and appropriate stone cladding. The existing tow path wall will be removed and the stone assessed for re-use in the proposed cladding works. The area behind the sheet pile will be backfilled with suitable material to facilitate the increased width and ground level. Cladding works are expected to require de-watering of the canal to facilitate installation of masonry. No other works are proposed within the canal or below canal level. Sheet piling in the vicinity of the Lock Gate structure will seek to avoid impacting on same but may require temporarily taking down of some section of walls and reconstruction as detailed in the Architectural Heritage Impact Assessment (AHIA) submitted as part of this application and as discussed in the next section;
- Removal of the existing jetty due to its current poor condition and replacement with a new jetty in a new position slightly east of the current location. The design of the new jetty is to match the existing as per Waterways Ireland standard specification including all associated materials;
- Minor additional features including removal of a portion of the wall adjacent Binns Bridge, but which does not form part of the protected structure, to provide a public bench, removal of the existing kissing gates and barriers, provision of public lighting, CCTV services, relocation of existing services as required etc. It is stressed that the proposed works do not impact the existing underground gas installation in this area. Indeed, the removal of the existing kissing gates will improve access to same.

6 HERITAGE CONSIDERATIONS

As noted, the Part 8 design has placed considerable focus on the site location immediately adjacent to Binns Bridge which is listed on the Record of Protected Structures (RPS ID: 908) and is included as an entry on the DCIHR, thereby representing significant heritage value to the area. The 2nd Lock is also listed on the National Inventory of Architectural Heritage with a regional rating (Register No. 50060188) and also included as an entry on the DCIHR.

As such, a key objective of the design has been to not only respect this sensitive setting and ensure the design does not detract from the existing environment, but also to offer an improvement on the existing environment and enhance the setting of Binns Bridge and the 2nd Lock in line with Chapter 11 of the Dublin City Development Plan 2023-2029.

The project team includes a Grade 1 conservation architect from Shaffrey Architects who have had extensive input to the design development based on consultation with DCC Archaeology, Conservation & Heritage Department. A detailed AHIA has been carried out and submitted as part of this Part 8 package.

The below images extracted from the AHIA emphasise the poor quality of the existing environment which detract significantly from the heritage structures in the area.



Figure 12: Existing Views from Tow Path on Approach to Binns Bridge & 2nd Lock

The removal of the extensive extent of high railing/gate and replacement with a more appropriate railing along the new structure will allow for a much improved view of the Bridge and Lock along the canal as shown by the following photomontages prepared by the project Landscape architects, The Paul Hogarth Company, for this Part 8. Other design aspects such as

material selection, including the cladding to the new structure, has been carefully considered to ensure they complement the existing heritage structures. Allowing for the proposed public realm improvements the Part 8 is considered to enhance the overall quality of environment in this area.



Figure 13: Proposed View from Greenway on Approach to Binns Bridge & 2nd Lock



Figure 14: Proposed View from Binns Bridge along the Greenway

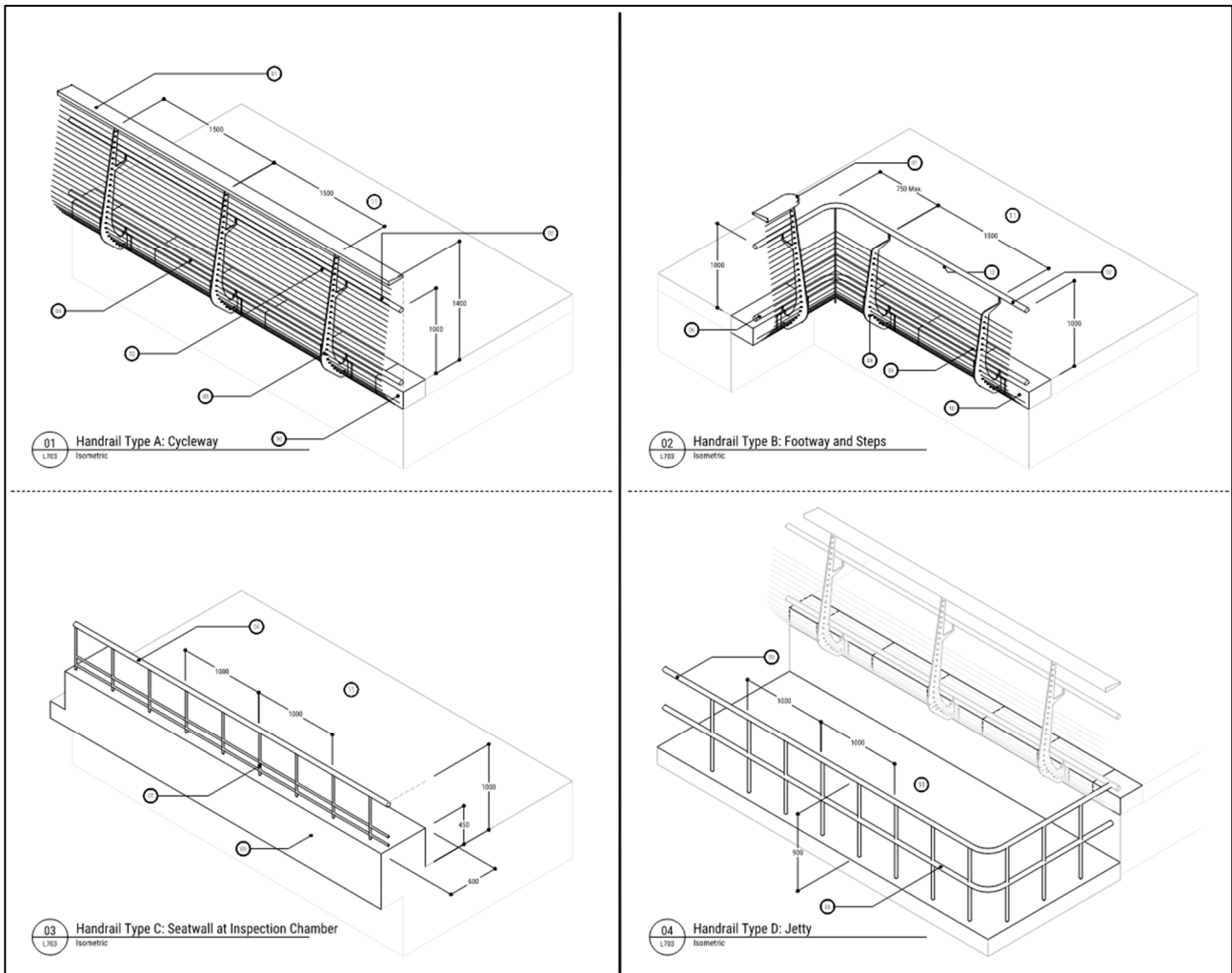


Figure 15: Proposed Railing Types

The AHIA concludes the following:

“Having regard to the location of the proposed development within a ‘sensitive landscape’ part of Royal Canal corridor which is of 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”.

The AHIA also includes a works methodology where dismantling and reconstruction of heritage structures may be required. Specifically, this relates to the existing lock wing wall and the proposed piling to be located behind it. This methodology ensures that the small section of heritage structure potentially impacted by the construction works will not be damaged in any way and will be reinstated to its current condition.

7 ADDITIONAL CONSIDERATIONS

ENVIRONMENTAL IMPACT ASSESSMENT SCREENING

An Environmental Impact Assessment (EIA) Screening Report has been prepared for the proposed Part 8 design and submitted with this application. This report concludes:

“Based on the size and nature of the proposed project, it is considered that the overall impact on the receiving environment will be low subject to implementation of all mitigation measures detailed in the CEMP”.

A screening checklist is included in the report in accordance with the European Commission publication Environmental Impact Assessment of Projects, Guidance on Screening (2017). It concludes that the impacts during construction will generally be minor and short term, subject to the implementation of a Construction Environmental Management Plan (CEMP) for the overall project, which will be updated to include the Part 8 proposals should they be granted permission. It also notes that the long term impact for people will be positive by creating a new amenity.

On that basis, it has been concluded that the proposed scheme does not exceed the thresholds that trigger the mandatory requirement for EIA and the proposed development is deemed to be a sub-threshold development.

APPROPRIATE ASSESSMENT SCREENING

An Appropriate Assessment (AA) Screening Report has been prepared for the proposed Part 8 design and submitted with this application. The report noted that there are no Natura 2000 sites located either within or directly adjacent to the site, however, the Royal Canal has an indirect hydrological link via the River Liffey to Dublin Bay where several Natura 2000 sites are located.

The Screening Report states that screening process took no account of any controls, conditions or mitigation measures intended to wholly or partly avoid or reduce impacts on any European Site. It goes on to conclude:

“Given the nature of the development, its scale, and the localised and temporary nature of the construction effects identified as potential sources, it is concluded that the proposed project is not foreseen to give rise to any significant adverse effects on any designated European sites, alone or in combination with other plans or projects”.

DRAINAGE

The proposed drainage strategy is in line with that proposed for the overall Royal Canal Greenway Phase 3. For the proposed shared space, the crossfall will be directed towards the canal edge.

Where segregated, the footpath section will again crossfall to the canal edge. However, the cycle lanes are required to be at a lower level than the footpath. As a result, collection via a traditional gully and pipe system is not possible given the level of the greenway relative to the public drainage infrastructure, which is at a much higher level in Dorset Street. Furthermore, Waterways Ireland have confirmed that point discharges into the canal are not permitted to maintain the integrity of the canal bed. On that basis, a permeable surface and build-up drainage solution is proposed which is also noted to be a positive Sustainable Drainage System (SuDS) measure.

PUBLIC LIGHTING & CCTV

Public Lighting and CCTV are proposed in accordance with the design for the overall Royal Canal Greenway Phase 3 and with only minor alterations to relocate infrastructure based on the slight amendments to the layout, particularly where the greenway is offset from the adjacent structures.

In the area below Binns Bridge in the control of Waterways Ireland, in-ground lighting is proposed to provide adequate visibility and improved amenity given the increased accessibility. The detailed design of the lighting will be subject to agreement with DCC but will give appropriate consideration to offset any potential for vandalism and account for any maintenance requirements.

8 CONCLUSIONS

This report details the key aspects of the proposed Part 8 for a ramp structure and associated public realm works which results in amendments to the permitted Royal Canal Greenway Phase 3. The works will:

- Provide a longer, primarily shared space ramp connecting the greenway to Dorset Street;
- Improve gradients on the scheme to below the maximum permitted 5% (1/20) as per the National Cycle Manual and DMURS;
- Narrowing of the canal channel but maintaining the required 10m navigation width adjacent to the new structure which will include sheet piling and stone cladding;
- Improvements to the public realm area surrounding Binns Bridge and the 2nd Lock including replacement of existing barriers, high fences and gates and provision of more appropriate finishes and edge treatments;
- Provision of additional soft landscaping features which will also provide improved screening for adjacent properties;
- Include the removal of the existing jetty replacement with a new jetty in new location to match the existing design.

Overall, the works will result in a significant improvement to the design for this area and improve the quality of the greenway as an amenity. The design has given significant consideration to the sensitive setting next to Binns Bridge and the 2nd Lock to ensure they are not unduly impacted and to offer improvements to the environment where feasible.

9 VERIFICATION

This report was compiled and verified by:

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