**Binns Bridge ramp structure and associated public realm works**

**Text Description of Drawings**

**Background**

A part 8 application was approved by Dublin City Council in 2015 at this location (ref. 2870/15). It is now proposed to amend this Part 8 application to provide more appropriate gradients at Binns Bridge.

The section of the approved Part 8 design included a 10% (1/10) gradient for approximately 30 metres of the route to ensure that the cycle route was below the level of the basement vents of the Portland Lock apartments. While the 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. As a result the design has been amended to ensure that gradients do not exceed the maximum 5% at any point.

A total of 9 no. drawings are provided with the Part 8 application and are described in detail below.

1. **Site Location Map – Drawing No. D542-SK010 P05**

**Description**

This is a plan drawing of the area at a scale of 1:1000. There is a red line boundary around the project area. The site is located on the banks of the Royal Canal immediately adjacent to Binns Bridge/Dorset Street Lower. There is a blue dot on the plan at the junction of Dorset Street Lower/Binns Bridge and the Royal Canal towpath which indicates the location of the site notice relating to the Part 8 application.

1. **Site Plan – Drawing No. D542-SK012 P01**

**Description**

This is a plan drawing of the area showing the red line boundary at a scale of 1:500 showing the proposed works in context to the neighbouring environment. A blue dot is also on this plan showing the position of the site notice. The total site area amounts to 1,063.64sqm (or 0.1 hectares). The project area is located within the existing towpath of the Royal Canal. The site is bounded by the Portland Lock Apartments to the south, the Royal Canal to the north and Binns Bridge to the west. The proposed works are described in more detail in the general arrangement drawing.

1. **General Arrangement – Drawing no. L100-P06**

**Description**

This is a plan drawing at a scale of 1:100 outlining the extent of the works proposed within the project area. The description of the proposed works on this plan will commence at the western section of the site (i.e. at the junction of the towpath with Binns Bridge/Dorset Street) and continue eastwards to the bottom of the proposed ramp.

The existing wall at the junction of Binns Bridge will be partially removed in order to allow for a 4 metre wide access from the street. A granite capped seat wall, 450mm high, will be located in the area of the existing kissing gates (which are proposed to be removed). Existing inspection chambers at this location and elevation and surrounding surface material are to be retained.

East of the area of the existing kissing gates (i.e. in the location of the existing steps down to beneath Binns Bridge), it is proposed to provide steps comprised of granite, including stepped seating, down to a proposed accessible footway beneath the existing bridge. The step level change will be 2.4 meters. Tactile paving will be provided at the top and bottom of the steps. The existing gate lock to the west of Binns Bridge will be retained in position. The lower lock gates beneath the eastern end of Binns Bridge will also be retained in position. In ground lighting will be provided beneath Binns Bridge flush with proposed paving. A new railing is proposed beneath Binns Bridge (type and location to be determined through detailed design).

It is proposed to provide a 4 metre wide greenway from the junction of Binns Bridge which will increase to 4.6 metres and 4.8 metres in width going eastwards. The greenway will be a shared surface from the junction of Binns Bridge for approximately 76 meters eastwards where it will then consist of a segregated path for pedestrians and cyclists. The pedestrian path will be located nearest the canal. The segregation will be in the form of a 50mm chamfered kerb with the start of the segregation being marked with proposed bollards. The greenway will be comprised of an asphalt surface.

Hedge screening is proposed on the southern side of the greenway, i.e. next to the Portland Lock Apartments basement air vents. This hedging is proposed at a minimum width of 800 metres, will begin directly opposite the proposed granite steps and will continue eastwards for a distance of approximately 50 metres. The gap between the hedge screening and the existing air vents of the apartments will be approximately 0.5-0.7 metres in order to allow for maintenance space. At the northern side of the proposed greenway there will be proposed vegetation, a new masonry retaining wall to abut the existing canal retaining walls and proposed granite cladding.

On the eastern end of the site, it is proposed to relocate the existing jetty eastwards by approximately 30 metres. A life buoy is proposed on the jetty with final location to be determined at detailed design. Access to the new jetty will be at a flush level to the proposed greenway near the bottom of the ramp.

1. **Site Elevations - Existing and Proposed – Drawing No. L701 P04**

**Description**

This drawing at a scale of 1:200 shows the existing and proposed elevations along the 113.5 metre long project area. The elevations are taken from the northern elevation (i.e. as seen from Whitworth Place on the northern side of the Canal). The existing drawing illustrates the level of the canal, the existing level of the towpath, the level of Binns Bridge on the right and the Portland Lock Apartment buildings located behind the towpath. The existing gradient from the level of Binns Bridge slopes down eastwards for a distance of 85.5 metres.

The proposed elevation drawing shows the proposed gradient reduction from Binns Bridge eastwards over a distance of 113.5 metres. Furthermore, this drawing shows the proposed access to the canal jetty and the proposed guardrail at a height of 1 metre and 1.4 metres in areas.

1. **Site Sections, Existing and Proposed – Drawing No. L702 P05**

**Description**

This drawing shows 3 no. existing section drawings (AA, BB and CC) and 3 no. proposed section drawings (AA, BB and CC), all at a scale of 1:50. The section drawings are from the viewpoint of facing westwards towards Dorset Street Lower/Binns Bridge.

Section AA

The existing section AA drawing is taken from approximately half way down the ramp. It shows the towpath in context with the ground floor level and level of the basement air vents of the Portland Lock apartments on the left. The existing ground level is shown as between 6.00 and 6.40 metres. The proposed section AA drawing shows the new level of the greenway at 8.89 metres. This is above the level of the basement level air vents and in line with the ground floor level of the apartments. This section shows a 1.5 metre set back from the apartment building to include 1.4 metre high hedging and a gap for maintenance. A 1.4 metre high railing is shown on the right at the boundary facing the canal.

Section BB

The existing section BB is taken further back from Binns Bridge at the bottom of the existing ramp. This section shows a 4.1 metre wide existing towpath at a ground level of 5.25 and 5.19 metres. The basement level air vents on the left are shown to be above the level of the towpath. The proposed section BB shows a 4.8 metre segregated cycle and pedestrian path at a ground level of 5.4 metres. A 1.4 metre high railing is proposed on the canal side on the right, beyond which is the proposed relocated jetty. The air vents are above the level of the greenway.

Section CC

The existing section CC is taken from underneath Binns Bridge and shows the ground level at 7.62 to 7.51 metres. The water level of the canal on the right is shown as 4.12 metres, therefore the existing ground level is approximately 3.5 metres above the water level. No railing is shown bounding the canal on the right. The proposed section CC drawing shows the ground level unchanged with a new 0.9 metre high railing between the towpath and the canal. This railing is Type D (Please refer to Guardrail Drawing L703 P01).

1. **Access Ramp Cross Section – Drawing No. D542-SK110 P08**

**Description**

This drawing shows the construction methodology of 3 no. cross sections taken near the top of the proposed ramp (Section DD), approximately halfway down the ramp (Section AA) and at the bottom of the ramp (Section BB). A plan is also provided showing the location of where the sections are taken from. Cross Section D-D and A-A shows the construction of 300mm CFA piles at 1.5 metre centres, 10 metres in length. Approximately 2.3 metres below the proposed ground level there will be 6N backfill to both sides of the central wall. Cross Section B-B shows a 4.5 metre wide greenway (2.7 metre wide cycle track and 1.8 metre wide footpath) with the canal jetty shown at the same level of the greenway.

1. **Plan and Profile – Drawing No. D542-SK100 P04**

**Description**

This drawing contains a plan type drawing showing the proposed level changes. The level proposed at the junction with Binns Bridge will be 10.500 metres and this will reduce to 5.599 metres at the end of the proposed ramp. A section type drawing is also provided showing the proposed changes in level versus the existing level. The proposed changes in level will be a slope gradient of -4.99%.

1. **Guardrails – Drawing No. L703 P01**

**Description**

This drawing shows the design of the proposed guardrails. Four types are illustrated; Handrail type A for the cycleway at a height of 1.4 metres, Handrail type B for the footway and steps at a height of 1 metre, Handrail type C at the seat wall at the inspection chamber at a height of 1 metre and Handrail type D at the jetty at a height of 0.9 metres. Guardrails are to be comprised of stainless steel finish.

1. **Guardrail Fixtures – Drawing no. L704**

**Description**

This drawing illustrates the construction methodology of the guardrails to the kerb and to the jetty. Fixing plates will be bolt fixed to the kerb edging and 4 no. bolts will be used for each fixing plate.