The background is a vibrant red color. It features several abstract geometric shapes: a large teal semi-circle in the top-left corner, a blue semi-circle in the top-right corner containing a white circle, a dark blue horizontal bar in the top-right, a teal semi-circle in the bottom-right, and a blue semi-circle in the bottom-left containing a white circle. There are also smaller white circles and shapes in the bottom-left and bottom-right corners.

# Appendix I

## Accessibility Audit Report

# Ringsend to City Centre Core Bus Corridor Scheme

## Accessibility Audit Report

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# 1. INTRODUCTION

## 1.1 Introduction

Roughan & O'Donovan has been commissioned by the National Transport Authority to carry out an Accessibility Access Audit of the existing Ringsend to City Centre Bus Corridor (CBC). An Accessibility Access Audit is an assessment of a building, the external environment or a service to benchmark its accessibility for disabled people.

The Disability Act 2005 places a statutory obligation on public service providers to support access to services and facilities for people with disabilities. This report will assess the existing access support along the Scheme route, identify any existing shortcomings, and make recommendations to address any such shortcomings. The report will also set out any design criteria considered imperative to maintaining the dignity of people with disabilities as they interact with the external environment, including structures, people and services.

## 1.2 Project Description

The Ringsend to City Centre Core Bus Corridor (CBC) commences at Talbot Memorial Bridge. The scheme encompasses bus lane and cycle infrastructure on both north and south quays linking the City Centre with the Docklands and onto Ringsend and Irishtown. The scheme will involve works on existing streets and new road links.

Continuous bus lanes are proposed in both directions on Custom House Quay and North Wall Quay between the Matt Talbot Bridge and the Tom Clarke Bridge. This will secure improved bus priority along the north quays. In order to protect bus priority right turning restrictions are proposed at most junctions along the north quays and alternative access is available from Seville Place and Sheriff Street Upper.

The two-way cycle infrastructure on North Wall Quay will be enhanced and continued along the full extent of the north quays. A general landscaping arrangement is proposed along the north quays, with two lines of trees along the proposed cycleway. There are width constraints at the two small restaurant buildings at the Excise Walk junction where a new boardwalk is proposed to overhang the river for a wider pedestrian space on the riverside.

As a result of the proposal for continuous two-way bus priority on the north quays, the extent of interventions proposed along the south quays is not as intensive. Existing traffic circulation will be maintained along the south quays with the following exceptions:

- a westbound bus lane will be provided on City Quay west between Lombard Street East and Moss Street, reducing the existing two-lane eastbound traffic arrangement to one lane;
- a westbound bus lane will be provided on Sir John Rogerson's Quay between Forbes Street and Cardiff Lane.

Alternative access to Cardiff Lane from Sir John Rogerson's Quay is available via Forbes Street and Misery Hill.

At the eastern end at Britain Quay it is proposed to tie-in with the proposed Dodder Public Transportation Opening Bridge currently being progressed by Dublin City Council. This proposed bridge will facilitate buses, taxis, pedestrians and cyclists to cross the Dodder River to the south of the St. Patricks Rowing Clubhouse. No general traffic will be permitted to use this bridge crossing.

It is proposed to modify the existing cycle infrastructure along the south quays to ensure a continuous 2-way segregated cycle way will be provided on both sides of the Liffey.

The southbound bus lane across Samuel Beckett Bridge will be removed to allow the improvement of pedestrian and cycle facilities on the eastern side of the bridge and at the pinch-point on the south-eastern corner. The cycleway will be relocated to where the bus lane is currently. This will allow the pedestrian space to be significantly widened on that side of the bridge. The continuation of two-way bus lanes on North Wall Quay and Custom House Quay obviates the need for a right turn for buses from Samuel Beckett Bridge towards Sir John Rogerson's Quay West and City Quay.

While the above describes the extent of the proposed bus facilities as part of this scheme, the proposed cycle facilities will continue through to Ringsend and Irishtown. A direct cycle route is proposed towards the Poolbeg SDZ lands via the western edge of Ringsend Park. This will connect to the East Coast Trail at Sean Moore Road, and will also include a direct connection to the Poolbeg SDZ Lands via Kerlogue Road and Bremen Road. Cyclists will also be facilitated along York Road and Pigeon House Road, where they can share the roadway with local access traffic where traffic calming measures are provided.

### 1.3 Report Structure

The overall Ringsend to City Centre Core Bus Corridor (CBC) scheme can be broken down into three distinct sections, namely the North Quays, the South Quays, and the Ringsend Park Cycle Route, based on the varying levels of intervention as described above. These three sections form the macro-level basis of the report structure.

Within each of the three sections the recommendations for assessing the existing street infrastructure and its ability to support access for disabled users have been adopted mainly from the following documents:

- Irish Wheelchair Association [IWA] 'Best Practice Guidelines, Designing Accessible Environments'
- The National Disability Authority's [NDA] Shared Spaces, Shared Surfaces, and Home Zones from a Universal Design Approach for the Urban Environment in Ireland; and
- The National Disability Authority's [NDA] 'Building for Everyone: A Universal Design Approach'.

The National Disability Authority *Shared Space, Shared Surfaces and Home Zones from a Universal Design Approach for the Urban Environment in Ireland* report provides the following definitions for Universal Design and Vulnerable Pedestrians:

**Universal Design** – Universal Design is the design and composition of an environment so that it can be accessed, understood and used to the greatest extent possible by all people, regardless of their age, size, ability or disability.

**Vulnerable Pedestrians** – Vulnerable pedestrians is a term used to identify pedestrians such as older people, those with mobility, sensorial, or cognitive difficulties or children.

This report assesses the existing external environment as it affects the various vulnerable pedestrians and concludes with universal design considerations to be adopted for the detailed design of the Ringsend to City Centre Core Bus Corridor.

## 2. RINGSEND PARK CYCLE ROUTE

### 2.1 Description of the Route

Through this section of the route, the focus is primarily on improving the cyclist and pedestrian safety and permeability from the Sean Moore Road to the existing Tom Clarke Bridge and the proposed Dodder public transport bridge. Three separate pedestrian / cycle routes are proposed from Sean Moore Road and comprise the following:

- A combination of a two-way segregated cycle track and pedestrian footpath from Sean Moore Park, crossing Sean Moore Road via a new toucan crossing, and following adjacent to a length of Kerlogue Road before merging on road to form a shared cycle street. The cyclists will then divert off road once again to meet the entrance to the Irishtown Stadium pedestrian entrance route. The existing footpath running parallel to Pembroke Street and Kerlogue Street will also be reconstructed, meeting the cycle track at the Irishtown Stadium pedestrian entrance;
- A two-way segregated cycle track and pedestrian footpath the full length of the route from Sean Moore Road via Bremen Road across a green area south-west of the Irishtown Stadium, and following the existing Irishtown Stadium pedestrian entrance route;
- A shared cycle street with upgraded footpath facilities from the Sean Moore Road roundabout via Pigeon House Road / York Road.

The initial two routes, which merge at the entrance to the Irishtown Stadium, will continue through the Ringsend Car Park and through the Ringsend Park itself along the alignment of the existing western footpath. The existing path will be upgraded to provide a segregated cycle track and pedestrian footpath. On exiting the park via Cambridge Park, where cyclists join a shared cycle street, the route meets Cambridge Road to a proposed raised platform with zebra crossings for pedestrians. Cambridge Road is a lightly trafficked road, and the expected crossing manoeuvres by cyclists to Pembroke Cottages is readily achievable. Pembroke Cottages comprises two separate northbound and southbound quiet cul de sac streets, and cyclists will be on road the shared cycle street. Pedestrian facilities will be upgraded on the northbound street of Pembroke Cottages. The three above described routes will finally converge at the intersection of York Road and Pembroke Cottages, and follow the existing green area around St. Patrick's Rowing Club to meet the proposed Dodder Public Transport Bridge.

### 2.2 Problem Identification

#### 2.2.1 Accessible Parking – On-Street Disabled Parking Spaces

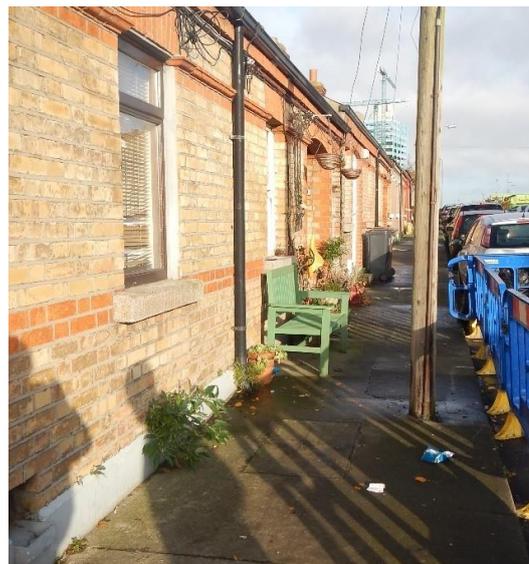
Along this section of the route, disabled parking spaces were identified on-street at Pigeon House Road and Pembroke Cottages [northbound]. It should be noted however that additional parking spaces may be present along the route and may have been obscured by vehicles parked within them during the walking audit if so.

The parking space identified on Pigeon House Road is approximately 5.2m in length and 2m wide while the parking space on Pembroke Cottages is approximately 5.75m long and 2m wide. It is likely that these parking spaces have been allocated to the opposing homeowners by Dublin City Council. It shall be investigated to determine whether all on-street parking spaces designated for disabled users are still required and replaced as part of the scheme if so.

## 2.2.2 Access Routes – General

The width of the existing footpaths varies from approximately 2.5m wide along the footpath parallel to Pembroke Street and Kerlogue Road, and the Irishtown Stadium pedestrian route, to 1.4m along the western footpath on Pembroke Cottages [northbound]. The eastern footpath of this street however has a footpath 2m wide. The effective width of most of these footpaths is constrained however by some vegetation overgrowth and inappropriately placed furniture.

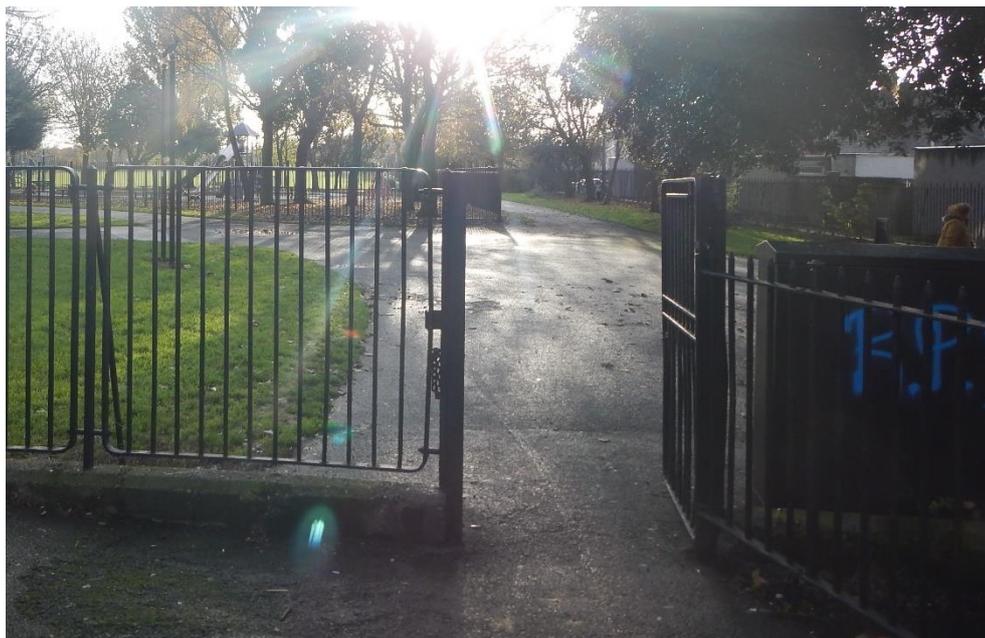
Overall, the existing footpath width provision is sufficient to cater for disabled users. However, the design should seek to maximise the width provision by providing, as a minimum, what already exists.



**Effective width of footpath reduced due a) to vegetation [left] and b) planter pots and benches [right]**

The existing access gates in Ringsend Park are constrained, particularly for both cyclist and pedestrian use. Constrained access arrangements similar to the image below create a high risk of collision between cyclists and pedestrians, in particular visually impaired pedestrians reliant on a cane or guide-dog. Improved permeability should be considered at these constrained locations to minimise the interaction between cyclists and pedestrians and prevent any risk of collision between these users.

The width of the path through Ringsend Park is also insufficient for shared pedestrian and cycle use. A narrow shared path can lead to conflict between vulnerable pedestrians and fast moving cyclists and should be avoided where possible. Full segregation should be considered with careful consideration of any resultant criss-crossing manoeuvres that may manifest from the implementation of full segregation of cyclists and pedestrians.



**Ringsend Park Access Arrangement**

### **2.2.3 Access Routes – Drainage**

During the walking audit there were some local drainage issues on the footpaths particularly where concrete footpaths have failed or trenches in the footpaths have been refilled crudely, causing rainwater to be trapped in the vertical deviations.

The crossfall gradient of the footpaths within this section of the scheme was not considered too steep at any particular point.

### **2.2.4 Access Routes – Guardrails**

Some guardrails were noted in certain locations along this section of the route, primarily on Pigeon House Road at the pedestrian links to Ringsend Park [parallel to Pigeon House Road]. The traffic calming ramps on Pigeon House Road are located at these pedestrian links, and the guardrails prevent visually impaired users from interpreting the ramps as crossing locations.



**Pedestrian Guardrails on Pigeon House Road**

Where works are taking place on the footpath of Pigeon House Road these guardrails should be replaced. Alternatively, the traffic calming may be relocated away from the locations of the pedestrian links, and the guardrails removed to maximise the effective width of the footpath.

Guardrails were also recorded on York Road at the pedestrian / cycle access to the Tom Clarke Bridge [see adjacent image]. These guardrails are strategic in preventing any vehicles from parking in this location, maintaining free and unobstructed access for both pedestrians and cyclists. Their presence points to a problem of high demand for parking in the area. Any proposed works in this area should consider the accessibility requirements of all users between Ringsend Park and the river quays, and the effect unsolicited parking will have on this accessibility.



### 2.2.5 Pedestrian Crossing Points

The standard of existing pedestrian crossing points through this section of the scheme varies with no dropped kerbs provided in some locations and dropped kerbs with inadequate width preventing wheelchair users and pushchairs from navigating the crossings comfortably. Drainage issues were also noted in the road carriageway within crossing locations, caused by flat or collapsed spots in the road surface.



The proposed scheme is slated to cross the Sean Moore Road at the Sean Moore Park, however there is currently no means of doing so. New controlled pedestrian crossings shall be provided to allow safe crossing for all users of the scheme.

There is currently no means for visually or mobility impaired users to travel straight from Pigeon House Road to York Road due to a lack of dropped kerbs to the refuge islands at the roundabout [see adjacent image] and a complete absence of tactile paving. The layout of this roundabout should be reviewed and, if possible, the geometry made more constrained to reduce crossing widths for pedestrians, to discourage parking within the roundabout itself, and to encourage slower travelling speeds by motorists.

A review of permeability for visually impaired and wheelchair bound pedestrians shall be carried out to ensure crossing points are provided between all roads, and to ensure that all pedestrian desire lines are met.

### 2.2.6 Controlled and Uncontrolled Crossings

There are no controlled crossing points within this section of the scheme. Crossings at junctions are all uncontrolled, and there are no offline crossing points provided elsewhere.

The crossing facilities at junctions are of poor standard particularly when catering for the mobility and visually impaired. For instance, on Cambridge Road the dropped kerbs at the uncontrolled crossings are located on the curve of the road and not in the direct line of travel at any of junctions with Pembroke Cottages and Cambridge Park. Locating the dropped kerbs on the curve of a road can cause a risk of visually impaired users being misdirected by the orientation of the kerb.



### 2.2.7 Tactile Paving Surfaces

There is virtually no tactile paving currently provided at any of the uncontrolled crossings throughout this section of the route. Any crossing locations within the proposed scheme shall be upgraded to provide the necessary tactile paving surfaces.

There are existing steps between Kerlogue Road and the footpath that runs parallel to Pembroke Street and Kerlogue Road. There is no tactile paving provided to warn visually impaired pedestrians of the presence of the hazard and should be included as part of the proposed scheme.



**Steps Located at Kerlogue Road / Pembroke Street**

### 2.2.8 Changes in Level

There are no significant changes in level within the majority of this section of the scheme other than at Kerlogue Road to Sean Moore Road / Pembroke Street. Steps have been provided between Kerlogue Road and Pembroke Street [shown above]. There are no handrails provided on these steps and these should be included as part of the scheme design. The NDA guidance document states that where the clear width of a flight of steps is greater than 2m, additional handrails should be provided to divide the steps into channels. At over 3m wide, these steps should have an intermediate handrail providing two 1.5m wide channels.

The nearest ramp is located approximately 80m southeast of these steps on Sean Moore Road, or alternatively mobility impaired users may access either footpath via the Pembroke Street junction with Kerlogue Road, located approximately 70m northwest of these steps. The slope of the ramp located on Sean Moore Road is estimated at approximately between 8-10% and considered potentially difficult for wheelchair users. It also does not have a continuous handrail as required by the NDA guidance document. The feasibility of providing a gently sloped ramped access adjacent to these steps should be investigated as part of the design.

### 2.2.9 Shared Spaces, Shared Surfaces

While not explicitly designated a shared surface, the paths through the green area just north of York Road are used as shared spaces between cyclists and pedestrians. As a shared amenity, the width of the paths in this area are too narrow at approximately 1.75m wide. If the scheme is intended to increase the number of cyclists along this section of the route, improved segregation and wider paths are required to reduce the sense of intimidation for vulnerable road users and reduce the chances of conflict.

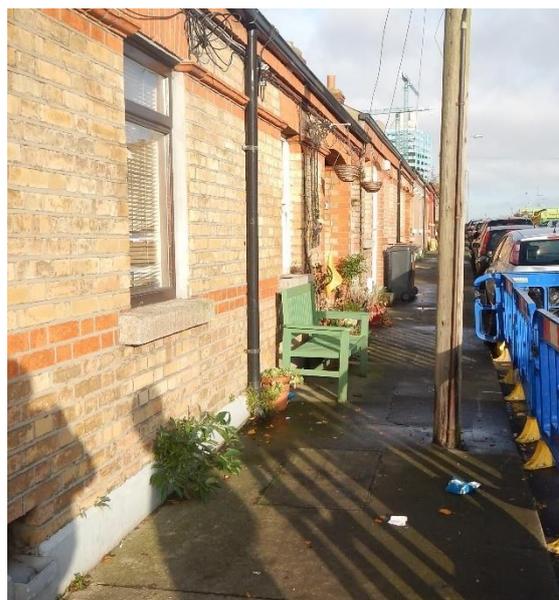
### 2.2.10 Surface Material

The footpath surface material within this section of the scheme varied from asphalt along paths within green areas [not adjacent to the road carriageway], such as adjacent to Pembroke Street and within Ringsend Park, and concrete where footpaths followed directly beside the road carriageway. Some repairs within concrete footpaths were performed using asphalt material.

The logical use of asphalt [away from the road carriageway] and concrete [adjacent to the road carriageway] as footpath materials may be replicated for the proposed scheme. The footpaths shall be homogenous in material, however, and where concrete footpaths have been patch repaired with asphalt, and vice versa, full sections of the footpaths shall be broken out and replaced to provide a smooth finish along the footpath.

### 2.2.11 Street Furniture

Varying aspects of street furniture were recorded during the walking audit of this section of the scheme. Junction boxes, benches and planter pots, where present, were generally located to the back of footpaths while public lighting and electricity poles were generally located to the front of the footpath. Only one such instance of conflict between the locations of the benches to the back of the footpath and public lighting posts to the front of the footpath arose on Pembroke Cottages [northbound] [see adjacent picture]. The placement of the bench and planter pot restricts the effective width of the footpath and has the potential to force awkward weaving manoeuvres for wheelchair users and visually impaired pedestrians with guide dogs or canes. These planter pots and benches shall be relocated during construction to prevent such conflicts occurring again.





The presence of traffic signs along this section of the route was minimal, however it was noted at the junction between Pembroke Cottages [northbound] and Cambridge Road that some poles were located directly in the line of travel. These traffic signs shall be relocated out of the direct line of travel as part of the overall design and construction of the scheme.

Bollards are used on Pigeon House Road to restrict vehicular access along the pedestrian links to Ringsend Park [parallel to Pigeon House Road] and from York Road to Pembroke Cottages [southbound]. On Pigeon House Road a single bollard is placed adjacent to a lighting column as a means of reducing the access width of the pedestrian link. The width of these links between Pigeon House Road and Ringsend Park are approximately 2.5m wide. The IWA Access

Guidelines states that bollards should be placed 1.2m apart minimum, which suggests that there is insufficient width for a wheelchair user to use these links. These bollards on Pigeon House Road should be removed as part of the scheme and the removal of the corresponding bollards on Ringsend Park to be suggested to Dublin City Council.

Similarly on York Road, the bollards to Pembroke Cottages are tightly spaced and placed in such a manner that a wheelchair user travelling from the east is forced to make what appears to be a 180 degree turn to access the footpath on Pembroke Cottages [southbound]. The use of bollards to restrict vehicular access should be reconfigured to provide easier access by all mobility impaired pedestrians, with minimum spacing of 1.2m between bollards.



**Bollard location affecting wheelchair accessibility**

### **3. NORTH QUAYS – NORTH WALL QUAY**

#### **3.1 Description of the Route**

This section of the route extends between the Tom Clarke Bridge and Talbot Memorial Bridge via North Wall Quay and Custom House Quay. The scheme proposes a full reconfiguration of the north campshires to allow improvements to the existing cycle facilities from their current arrangement of weaving on and off-road in the westbound direction and segmental advisory lanes in the eastbound direction, to a single continuous two-way cycletrack. Bus lanes are also proposed along the full length of the scheme, achievable only through the strategic relocation of the Scherzer Bridges at George's Dock and Spencer Dock.

The existing footpath provision on the northern campshires will also be reconfigured to provide a clear route for pedestrians. The northern footpath will be retained in its current configuration with some local upgrade works envisaged as necessary.

There are various buildings located on the northern campshires, which at present cause serious constraints to pedestrians and cyclists. Through landscaping and specific paving materials, the scheme will improve on the current situation of unclear routes for both cyclists and pedestrians.

The scheme along this section of the route will be required to balance the interactions between the myriad of activities which take place on the campshires, including building accessibility, cyclists, pedestrians, bus stops and Dublin Bikes stations.

#### **3.2 Problem Identification**

##### **3.2.1 Accessible Parking – Set-down Points**

Indented parking bays and set-down areas are provided outside several buildings along the north quays. The majority of parking bays have been constructed using cobble-lock with a colour contrast to the footpath paving. This alerts visually impaired pedestrians to the presence of the change in level. More recently constructed set-down bays outside the Central Bank have been constructed using the same silver-grey granite colour paving, albeit with cobbles. It was noted that the contrast between the footpath and these similarly coloured set-down areas were not as easily distinguished as those described above and necessitate the use of bollards to guide visually impaired pedestrians away. These bollards are counterintuitive as they restrict mobility impaired passengers' ability to alight from the vehicle within the set-down area. All set-down areas shall be reviewed and reconstructed as necessary to ensure a high contrast is achieved between the footpath.

In one particular instance [see image over], outside the recently completed building east of the Central Bank, the set down area has been constructed with a shallow kerb level difference. The kerb height was not measured during the walking audit however it was observed that it was not sufficient to ensure the vehicle does not encroach on the footpath space. The shallow height, if less than 50mm, could present as a trip hazard since the paving colour did not sufficiently contrast with the footpath to ensure visually impaired pedestrians could identify and avoid the set-down area.



**Shallow kerb height a potential trip hazard**

### **3.2.2 Accessible Parking – On-Street Disabled Parking Spaces**

There is minimal parking along the length of the North Quays, however some on-street parking remains on North Wall Quay to the east of the Samuel Beckett Bridge. Between Castleforbes Road and North Wall Avenue two disabled bays have been identified. It is unclear for whom these bays serve since there are currently no buildings or residential dwellings nearby. Should it transpire that these bays are required by particular patrons, they should be relocated closer to the area of need.

### **3.2.3 Access Routes – General**

The northern campshire is a wide 10.5m wide area made up of various elements, including a two-way cycle track, heritage railway tracks [opposite the Point Depot], Dublin Bikes stations, landscaping and pedestrian amenities. The landscape architecture of the area however constrains pedestrians along two apparent routes at approximately 1.6m each. Given the wide expanse along the northern campshires, improvements to the pedestrian route should be improved to provide, as a minimum, a single 2m wide clear pedestrian route.



**Northern Campshires [eastern end]**

The width of the northern footpath along the North Quays varies between 2.2m and 4m, however the effective width of the footpath is lower when the impact of the street furniture is taken into consideration. Cognisance of the extent of existing street furniture is required to allow the provision of 2m wide clear width to be provided where possible in the proposed design, and local widths of 1.5m minimum where obstacles cannot be avoided.



Significant construction works were also taking place along the northern footpath during the walking audit, particularly along the eastern end of the North Docklands. It was noted that temporary hoarding in certain locations was negatively impacting the ability for pedestrians to safely use the footpath. Documented opposite is the hoarding interacting with the bus stop sign to seriously curtail the available width for an able-bodied pedestrian to pass, notwithstanding the needs for a wheelchair user to pass. Consideration for disabled persons during construction must be incorporated in any Traffic Management Plans, particularly where other construction is taking place alongside the route.

Access to an island bus stop on North Wall Quay near the Central Bank is poor, particularly for mobility and visually impaired pedestrians. Pedestrians are forced to cross a two-way cycle track without any visual aid, such as buff tactile paving to indicate the crossing. The dwell area is also insufficient for wheelchair users. Where such island bus stops are proposed there shall be clear indicators of its presence for all users, and increased dwell space to accommodate the expected volume of users. Facilities for crossing any cycle infrastructure shall also be included where necessary.



### 3.2.4 Access Routes – Drainage

During the walking audit there were some local drainage issues on the footpaths particularly where concrete footpaths have failed or where sections of paving slabs have collapsed, causing rainwater to be trapped in the vertical deviations.

The crossfall gradient of the footpaths within this section of the scheme was not considered too steep at any particular point.

Fallen leaves were also noticed in certain areas along the pedestrian routes, particularly at the Dublin Docklands building. Fallen leaves can become saturated with rainwater and are a serious slip hazard when wet. The location of the leaves, towards the back of the path, is in line with the preferred path of visually impaired cane assisted pedestrians who tend to prefer walking close to the back of the path. Regular cleaning of the pedestrian routes, particularly where located next to deciduous trees, will be required and any landscaping plans to be cognizant of proposed tree types next to footpaths.

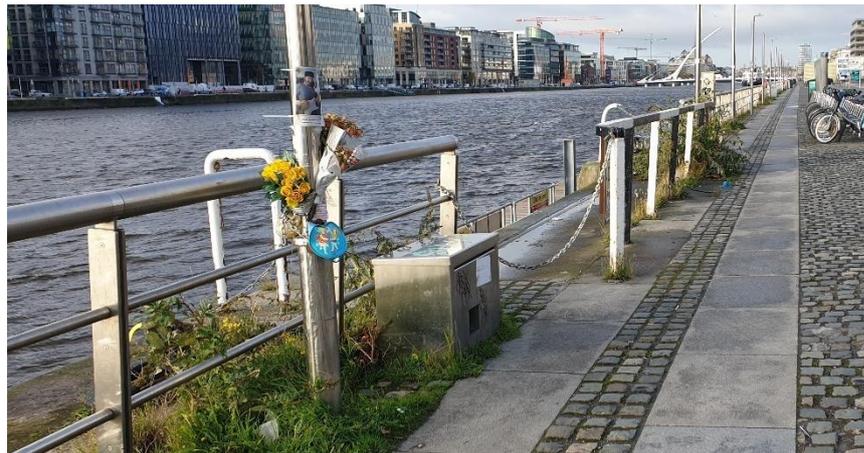
Some drainage channels were noted in certain areas along both sides of the North Quays. These channels are generally located out of the direct line of travel. Drainage channels, where required by the scheme, shall remain out of the direct line of travel.



### 3.2.5 Access Routes – Guardrails

Guardrails are provided along the length of the north quays between the northern campshires and the River Liffey. The guardrails are generally sufficient to provide visually impaired pedestrians protection from falling into the River Liffey. In some localised areas old railings were present that lacked a knee rail. These knee rails are required to prevent assistance dogs from walking underneath and to prevent children

reaching the quay wall. These sections of railing should be replaced to match the three rail guardrail type either side.



**Protective Railing along the River Liffey**

Guardrails were only noted in one other location along the North Quays, along the footpath from the Tom Clarke Bridge to the northern campshires. The guardrails are required due to the significant change in level between the footpath and the campshires at this location. Any proposals to this area should consider the need for the guardrail if the change in level is to be retained, or the change in level should be designed out to improve permeability to the campshires.



**Tom Clarke Bridge footpath and Northern Campshires interface**

### **3.2.6 Pedestrian Crossing Points**

Crossing points have been provided along the North Quays at every junction. All but one of these pedestrian crossings are controlled. Crossing between the campshire and the northern footpath is also readily provided at all junctions except at Castleforbes Road and a controlled pedestrian crossing point should be provided at this junction to ensure all pedestrian desire lines are met.



**Poor Crossing facilities on North Wall Quay**

Poor drainage at some crossing points were also noted, such as at Castleforbes Road shown above, and on the minor street between the Conference Centre and Kilmore House (PWC Building). The gradients of the road carriageway at the crossing points shall be designed to ensure water drains away from the line of travel. Drainage issues had previously been noted at the North Wall Avenue crossing point however this issue appears to have been overcome through the post-construction of a mastic channel to drain water towards the gullies, and the dished kerbs modified to compensate for the subsequent level difference between the road. The mastic channel however may cause a difficulty for wheelchair users and buggies where the wheels may get caught.

It may be preferable to provide raised platforms at crossing points, as part of the design, to provide greater flexibility with road levels to ensure water drains away from the direct line of travel.



**Retrofitted drainage solution on North Wall Avenue**

### 3.2.7 Controlled and Uncontrolled Crossings

All but one of the crossing points along the North Quays are controlled crossings at junctions. Pushbutton units are provided at all controlled crossing locations, however the majority were not audible. A braille tactile diagram of the crossing and its orientation is not provided on any of these units. The existing pushbutton units should be replaced with alternative units that are audible, pulsating, and can demonstrate the orientation of the crossing in braille form.

Pedestrian crossing lines are provided at all controlled crossing points, as required. It should be noted that pedestrian crossing lines are not recommended at uncontrolled crossings as pedestrians may interpret their presence as their having crossing priority across the junction.

Dished kerbs were provided at all crossing points along this section of the scheme, however in some instances the dished kerbs at uncontrolled crossings were located within the curve of the road. As previously advised, the tactile paving and dished kerbs on uncontrolled crossings shall be placed perpendicular to the line of travel away from the curve of the road.

Across minor access streets pedestrians have crossing priority, and this is reinforced through the continuation of pavement materials. This priority shall be maintained as part of the proposed scheme to reduce the level of uncertainty and stopping that disabled pedestrians will be forced to do if vehicles are provided with priority across all minor accesses.

### 3.2.8 Tactile Paving Surfaces

Blister tactile paving has been provided at all crossing points along the North Quays except where crossing is required at the access to the development between Park Lane and New Wapping Street, pictured over. Tactile paving shall be provided as required by the proposed crossing type, whether controlled [red blister] or uncontrolled [buff]. Red blister tactile paving has been provided at all controlled crossings, as is required, and buff provided on the uncontrolled crossing on Castleforbes Street.



**Missing tactile paving**

The layout of the tactile paving at some crossing points did not meet the requirements or recommendations of the NDA guidance, by not extending to the rear of the footpath or to building lines. In other instances where services chambers were located within the tactile paving, stick-on tactile paving was not applied. The number of rows of tactile paving required across the full width of the dropped kerbs in some instances do not follow the required standards.



**Incomplete tactile paving provision**



Outside the Conference Centre [pictured above] buff coloured blister tactile paving was provided adjacent to a dropped-kerb at the set-down area. This blister tactile paving should be removed since there is a chance that a visually impaired person may interpret this location as a crossing point, given that it is placed in the direct line of travel. Corduroy tactile paving should be installed where a kerb adjacent to a set-down point is dished in the direct line of pedestrian travel.

Most building accesses were at footpath level, and any recent developments, such as the Central Bank and the Conference Centre where the access to the building was

located at a higher level to the public footpath, hazard tactile paving has been provided at the top and bottom of the access steps. At older buildings, where there is a level change and steps, hazard tactile paving has not been provided. A review of the need for hazard tactile paving at all steps to buildings shall be carried out and included in the design where necessary.



### Discrepancies in Hazard Tactile Paving provision

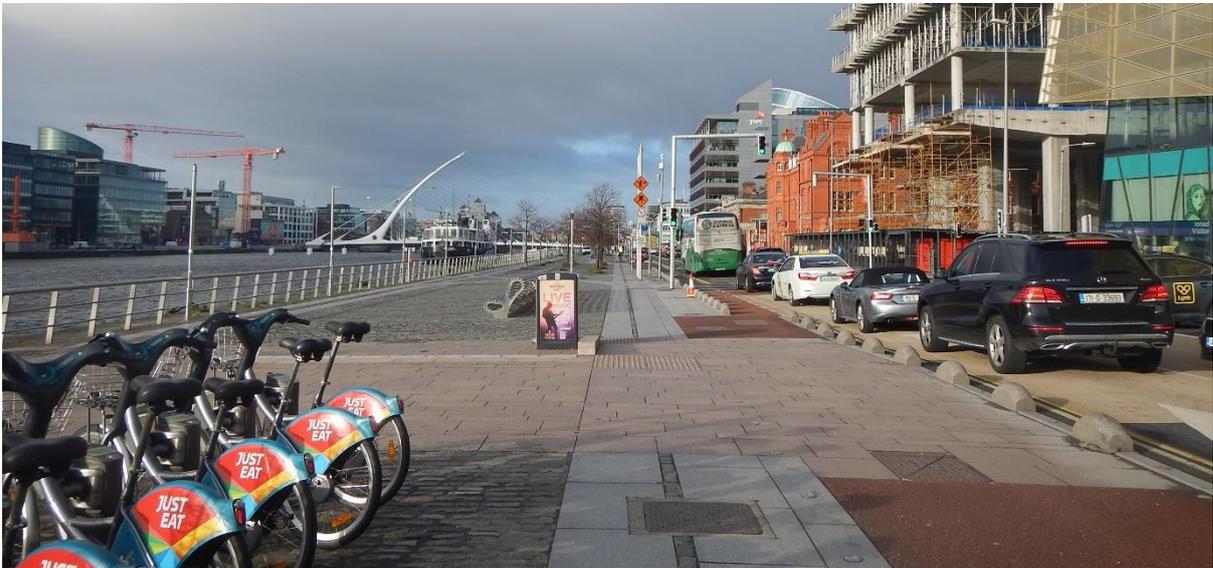
The few instances where segregated bicycle tracks meet the footpath to share facilities [along North Wall Quay to Samuel Beckett bridge, and near Talbot Memorial Bridge] there is no corduroy and tramline tactile paving. The use of such paving can cause issues for all users however, such as water freezing in the grooves causing a slip hazard, therefore improved segregation should be considered first before accepting the current shared arrangement and adding such tactile paving.

### 3.2.9 Changes in Level

Changes in levels occur between several building accesses and the public realm however any proposals to address any accessibility issues to these buildings are not feasible as the remedial works would take place on private land.

There are no severe changes in level on the northern footpath along the North Quays, and dished kerbs are provided to accommodate crossing as described earlier. On the campshires there are some local spots where changes in level occur, namely where the Tom Clarke Bridge footpath meets the campshires, and opposite the Central Bank. A step down from the footpath to the campshires and a ramp extension of the footpath are provided at the Point Roundabout location [Tom Clarke Bridge]. Guardrails have been provided here however handrails would be more appropriate for mobility impaired pedestrians to maintain balance and control over their speed.

A short ramp and 3 steps are provided opposite the Central Bank [pictured below]. A handrail has not been provided between the ramp and steps at this location. The NDA guidance document states that where the clear width of a flight of steps is greater than 2m, additional handrails should be provided to divide the steps into channels. At over 8m wide, these steps should have multiple channels of handrails. In both instances however, where possible, these changes in level should be designed out since the changes in level do not appear significant.



### 3.2.10 Shared Spaces, Shared Surfaces

There are no public shared spaces between vehicles and pedestrians along this section of the route, except for emergency access [on Excise Walk]. Shared areas between cyclists and pedestrians are predominantly found at significant junctions, such as at Talbot Memorial Bridge and Samuel Beckett Bridge, and adjacent to the Scherzer Bridges at George's Dock and Spencer Dock. The shared space at the Samuel Beckett Bridge junction is insufficient for the volumes of both pedestrians and cyclists that are forced to interact with each other. Similarly, the campshire's path adjacent to the Scherzer bridge at Spencer Dock is inappropriate for the existing volumes of pedestrians and cyclists. It is noted that an alternative bridge crossing was under construction during the walking audit.

While not explicitly intended in the original design of the two-way cycle track along the North Campshires, the functionality of the cycle facility lends itself to allowing cyclists avoid being controlled by the traffic signals [see image above] and potentially interacting with pedestrians waiting to cross. The abrupt end to the eastbound cycle lane at these traffic signals forces all such cyclists to weave [potentially at speed] onto the footpath and interact with any pedestrians or other oncoming cyclists in the vicinity. Maximum segregation should be considered as part of the design of the scheme, with improved functionality of the two-way cycle track [if it is to be retained] to eliminate forced but undesignated shared spaces.

The design should seek to maximise separation between cyclists and pedestrians where possible.



**Shared Pedestrian / Cyclist Areas along with North Quays**

### 3.2.11 Surface Material

The existing surface materials used along the North Quays varies extensively. The pedestrian routes along the campshires comprise silver grey granite flags with a central, longitudinally laid line of antique cobbles. Localised areas of the campshire have also been paved in red coloured flags, potentially granite or sandstone. Cobbles create an uneven and uncomfortable surface to walk on and may present a trip hazard. Red paving surfaces may cause confusion for visually impaired pedestrians since the colour red is mostly associated with controlled crossings. The proposed landscaping plan for any pedestrian route throughout the entire scheme shall omit the use of cobbles, shall not be red in colour [except in the use of red tactile paving slabs at controlled crossings], and shall be slip resistant in wet or dry weather.

The northern footpath on the north quays is predominantly constructed with silver grey granite flags. In some locations asphalt was used for footpath repair, in lieu of replacing removed flagstones, creating undulations in the surface and potential trip hazards due to poor finishing. Where such paving flags have been removed and patch repaired with asphalt, the asphalt shall be broken out and the flags replaced. At the CHQ building in particular there is an extensive use of setts on both footpaths. These setts shall be removed within the direct line of travel and replaced with flags. Setts, similar to cobbles are difficult for wheelchair users and buggies to cross, create an uncomfortable surface to walk on, and may present a trip hazard.

East of the Conference Centre on the northern footpath where sites have not been redeveloped to date, or are currently under construction, the footpaths comprise solid concrete. Due to construction activities, certain sections of these footpaths have been subjected to patch repairs [due to the extensive redevelopment taking place]. Where these footpaths will not ultimately be completely reconstructed as part of the overall redevelopment of the various sites, full sections of the footpaths shall be broken out and replaced to provide a smooth finish along the footpath.



**Cobbles and red paving on the campshire [left] and poor asphalt repairs [right]**

### 3.2.12 Street Furniture

Street furniture was considered to be prolific throughout the north quays, particularly through a potential overuse of bollards in certain areas and a significant number of traffic signs. The bollards installed along the North Quays vary from black in colour to stainless steel. Stainless steel bollards may potentially lead to glare in bright sunshine and may not be sufficiently contrasted in colour with the pavement to alert visually impaired pedestrians of their presence. The inconsistency in the use of bollards along footpath edges and at set-down areas suggests a problem with either parking on footpaths or an issue with poor distinction in paving materials. The use of and need for the extent of bollards along the quays should be reviewed, and only used where there is an overwhelming reason to do so.



**Examples of the overuse of street furniture constraining the footpath width**



The extent of existing traffic signs and posts shall be reviewed to identify those that can be removed or relocated to lighting columns or other signposts. The need for new traffic signs shall be done with a view to only providing those that are statutorily required. Similarly, rationalisation of the Bus Stop infrastructure should be carried out along the north quays. All bus stops along the route were observed with multiple Bus Stop signs for individual bus companies, closely spaced within the bus stop cage. In some instances, Real Time Passenger Information (RTPI) signs were also present, creating a mass of unwanted street clutter. This clutter creates boarding difficulties by limiting the space available for wheelchair ramps to be extended to the

footpaths. These closely spaced signs also restrict the locations at which a bus driver can stop in ensuring wheelchair users are not obstructed from boarding.

Various other forms of street furniture were noted, particularly along the campshires. These comprised, inter alia, benches, electricity supply boxes, advertising and information panels, memorial sites, trees, wayfinding signage and bins. These forms of street furniture were generally placed outside the line of travel, and careful consideration of their relocation during construction shall ensure a clear, tidy path is provided to pedestrians once the scheme is complete.



**Various forms of Street Furniture along the North Quays**

## **4. SOUTH QUAYS – CITY QUAY / SIR JOHN ROGERSON’S QUAY**

### **4.1 Description of the route**

Similar to the previous section, the route along the south quays will extend between Talbot Memorial Bridge and the Tom Clarke Bridge via City Quay and Sir John Rogerson’s quay.

Short sections of bus lanes are proposed along the south quays as it is envisaged that the continuous, two-way provision along the North Quays will become the primary bus route for many services. A new public transport bridge will be constructed by others to complement the scheme and will include provision for a two-way cycle track and pedestrian facilities.

This part of the route will form the primary cycle link between Ringsend and the City Centre until such time as the future pedestrian / cycle bridge adjacent to the Tom Clarke Bridge is constructed. Two-way cycle tracks are envisaged along the full extent of this section leading to numerous interaction points with pedestrians at junctions in particular.

### **4.2 Problem Identification**

#### **4.2.1 Accessible Parking – Set Down Points**

There are several indented set-down points along the South Quays. The majority of these indented bays are designated Pay and Display parking, while the remainder are loading bays. The surface of the loading bays comprise an asphalt continuation of the road carriageway and are readily distinguished from the footpath surface. Similarly, the parking bays are distinguishable from the footpath through the use of setts with larger joints to those in the footpath.

#### **4.2.2 Accessible Parking – On-Street Disabled Parking Spaces**

One on-street disabled parking space was identified during the walking audit to the east of Samuel Beckett Bridge, in an indented bay between Asgard Road and Blood Stoney Road. The parking space appears to be 5m in length or less. This parking space appears to serve the general public rather than any particular patron. A disabled parking space shall be retained at this location, however it shall be demarcated to conform to the requirements of the Department of Transport’s Traffic Signs Manual.

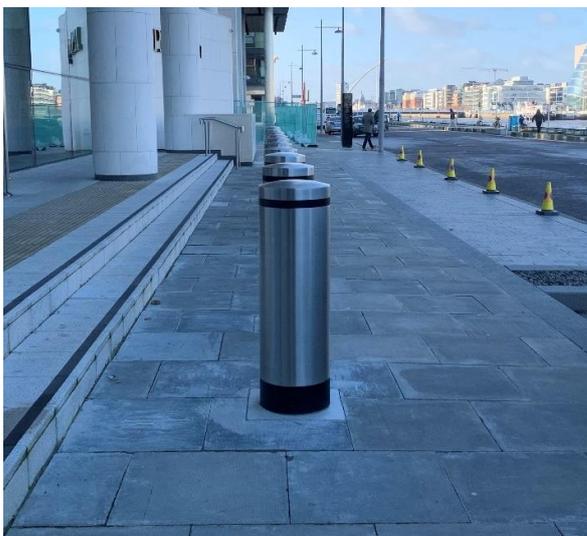
A disabled parking space was also located on City Quay just east of Lombard Street. The parking space appears to be 4.5m in length. It is likely that this parking space is intended to serve a particular patron of the residential buildings along this path. There is no dished access to the footpath from this parking space and a lamp post is positioned directly in front of the parking bay. This would make it difficult for the disabled user to transfer safely between the footpath and the car without an aid, and also prevents access to the rear of the car using a ramp or tail lift.

### 4.2.3 Access Routes – General

The footpath widths along the south quays vary considerably between 2m and 3m along the southern footpath on Sir John Rogerson's Quay east of the Samuel Beckett Bridge, and between approximately 1m to 3m west of the Bridge. The severe constraint in footpaths was due to construction works taking place on sites. Some of the effective width of these footpaths were also severely compromised due to various forms of street furniture placed in the direct line of travel.



The southern campfires east of the Samuel Beckett Bridge, despite being over 10m wide, allocates two narrow paths of no more than 1.3m each to pedestrians. The recently constructed flood wall also creates a pinch point in the footpath and two-way cycle track at the bridge creating a severe point of conflict between fast moving two-way cycle traffic in an area of high pedestrian volumes.



#### Poorly placed street furniture affecting the effective width of the footpaths

West of the Samuel Beckett Bridge along the campfires the footpath provision varies, between a single footpath less than 1.2m wide in places and two footpaths measuring approximately 1.5m each.

Given the vast amount of space available along the south quays, a better effort to maximise the effective footpath widths to 2m should be made through the design.

### 4.2.4 Access Routes – Drainage

During the walking audit there were some local drainage issues on the footpaths particularly where concrete footpaths have failed or where sections of paving slabs have collapsed, causing rainwater to be trapped in the vertical deviations.

The crossfall gradient of the footpaths within this section of the scheme was not considered too steep at any particular point.

Some drainage channels were noted in certain areas along both sides of the south quays. These channels are generally located perpendicular to the direct line of travel.

Drainage channels, where required by the scheme, shall remain out of or perpendicular to the direct line of travel as recommended by the NDA.

#### 4.2.5 Access Routes – Guardrails

Similar to the north quays, guardrails are provided along the length of the quay wall west of the Samuel Beckett Bridge, except where replaced by the flood wall. East of the Samuel Beckett Bridge however there is a distinct lack of edge protection between the River Liffey and the campshire. The need for edge protection in this area should be reviewed in connection with the proposed pedestrian routes through the campshire.

Guardrails were noted in three other locations along the south quays, all to the west of the Samuel Beckett Bridge. A guardrail has been provided to the front of the footpath at the base of the ramp just west of Creighton Street and should be replaced as part of the scheme. A length of guardrail has also been provided outside St Mary's Creche & Preschool, and finally at the junction with the Talbot Memorial bridge to separate pedestrians from the complicated cycle track arrangements through the junction. The design shall replace the guardrail outside St Mary's Creche & Preschool for the safety of all children exiting the building, and the layout of the Talbot Memorial Bridge junction shall be reviewed to simplify the cycle manoeuvres through the junction to negate the need for guardrails.

#### 4.2.6 Pedestrian Crossing Points

Crossing facilities between the campshires and the southern footpath are generally located at junctions with main streets, such as Lombard Street, Samuel Beckett Bridge Cardiff Lane among others. Along the 700m between the Talbot Memorial Bridge and Samuel Beckett Bridge junctions, there are two crossing points – one controlled and one uncontrolled. The dished kerb and tactile paving for the uncontrolled crossing at the Samuel Beckett Bridge control station is located on a buildout on the southern footpath, rather than in the footpath where visually impaired pedestrians are more likely to see the crossing. The need for the uncontrolled crossing at this location should be reviewed and a more accessible location for the crossing be determined where possible.



**Uncontrolled crossing within a buildout**

There are currently two crossing points between the campshire and the southern footpath along the remaining 700m east of the Samuel Beckett Bridge. There is 500m of the campshire which is not connected to the southern footpath and it is unlikely that disabled persons will use this section of the campshires as a result. In the interest of

improving accessibility for all, the provision of additional crossing points shall be provided.

The controlled crossing at Lombard Street comprises a staggered island crossing. This arrangement increases the crossing distance particularly for vulnerable pedestrians. The island also results in a constrained dwell area for potentially high volumes of pedestrians. The layout of the junction should be revised as part of the scheme to remove the staggered crossing, thereby improving the overall crossing facility and the dwell space at footpaths, and decreasing the required crossing distance.

It was noted during the walking audit that along the campshire, particularly between the Talbot Memorial Bridge and Lombard Street, the flood wall encloses all footpath routes and no compensatory crossing facility is provided to the southern footpath, creating a disconnect for mobility and visually impaired pedestrians. This should be addressed in the proposed design to ensure that in the event the flood walls are closed to pedestrian traffic, that all pedestrians have a safe, direct means of travel along the south quays.

#### **4.2.7 Controlled and Uncontrolled Crossings**

The pedestrian crossing facilities between the campshire and the southern footpath, located at Lombard Street, Cardiff Lane and Forbes Street are controlled while the above-mentioned crossing near the Samuel Becket Bridge is uncontrolled. Apart from these crossings all other side street crossings are uncontrolled. Pushbutton units are provided at all controlled crossing locations, however majority were inaudible. A braille tactile diagram of the crossing and its orientation is not provided on any of these units. The existing pushbutton units should be replaced with alternative units that are audible, pulsating, and can demonstrate the orientation of the crossing in braille form.

Pedestrian crossing lines are provided at all controlled crossing points, as required. It should be noted that pedestrian crossing lines are not recommended at uncontrolled crossings as pedestrians may interpret their presence as their having crossing priority across the junction.

The side street crossings along the southern footpath east of the Samuel Beckett Bridge all incorporated dished kerbs or kerbs flush to raised platforms, of which most were appropriately located perpendicular to the line of travel and away from the curve of the road. At the controlled crossings on Forbes Street and Cardiff Lane, ramps were constructed in the road ramping down to meet the dished kerbs, which is unhelpful for wheelchair users in particular. If ramps are required at crossing points, they shall of uniform height across the line of travel, made flush with full height kerbs.



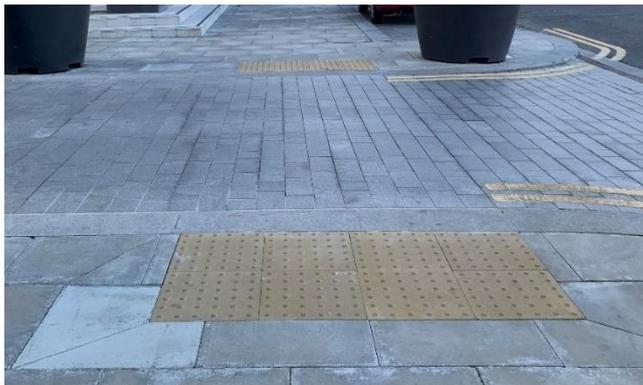
**Ramps at crossing points with dished kerbs**



West of the Samuel Beckett Bridge the footpaths have generally been upgraded over time and dished crossings provided. The most recent public realm upgrade has taken place on Windmill Lane and Creighton Street where the road has been raised as a platform to meet the kerb level and tactile paving provided. This creates a smooth travel experience for all pedestrians and should be replicated where possible throughout the scheme. In one location however, between Lime Street and the Samuel Beckett Bridge, the footpath does not have any dished kerbs or tactile paving to warn of the step hazard. The site fronting this footpath is currently under

development, but it is unclear if this footpath will be included in the overall redevelopment. If not, it should be upgraded as part of the overall scheme to provide dished kerbs, a raised platform or a continuous level footpath surface to allow wheelchair users to travel without any difficulty.

This route is also used as a pedestrian diversion route for construction works. This route precludes all disabled pedestrians and temporary ramps should have been constructed to compensate. During the construction of the scheme appropriate pedestrian routes shall be used with due consideration for mobility and visually impaired pedestrians.



Only one minor access street was noted on the south quays where pedestrians have not been given crossing priority over it. This is reinforced through the presence of tactile paving despite the continuation of pavement materials. It is recommended that priority be given to pedestrians across all accesses to reduce the level of uncertainty over priority on what appears to be footpath.

#### 4.2.8 Tactile Paving

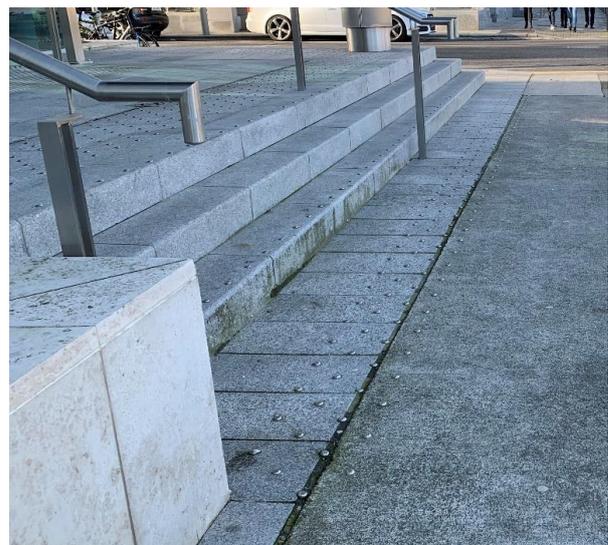
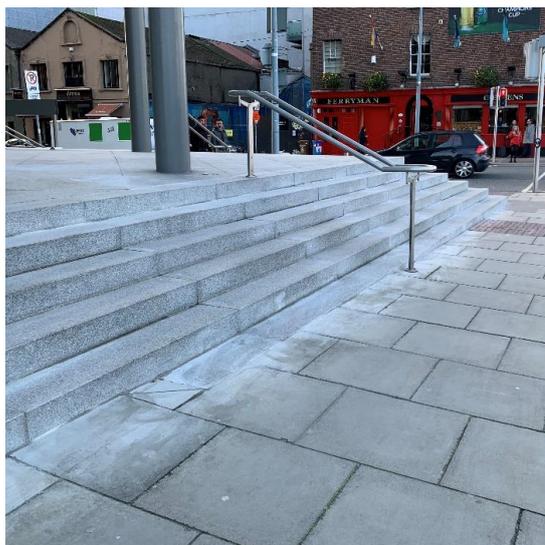
Red blister tactile paving has been provided at all controlled crossing points along the south quays, as is required. A significant number uncontrolled crossings do not have tactile paving at the dished kerbs. The existing buff coloured cobble lock used at these crossings should be replaced with buff colour blister tactile paving. Tactile paving shall be provided at all crossings as required by the crossing type, whether controlled [red blister] or uncontrolled [buff].



**Cobble lock used in lieu of blister tactile paving at uncontrolled crossings**

The layout of the tactile paving at some crossing points did not meet the requirements or recommendations of the NDA guidance, by not extending to the rear of the footpath or to building lines. The number of rows of tactile paving required across the full width of the dropped kerbs in some instances do not follow the required standards.

Almost all building accesses to the east of the Samuel Beckett Bridge are raised above the footpath level due to flooding potential. This requires steps up to the accesses and hazard tactile paving at the top and bottom. There were several instances where either hazard tactile paving provision was incomplete, not provided at all or the incorrect material was used.



**Poor Step Hazard Identification**

In some locations, blister tactile paving, grey in colour, was used in lieu of corduroy tactile paving at the top and bottom of the steps. One particular building used silver studs to replicate blister tactile surfaces. While it may not be possible, as part of this scheme, to enforce the correct corduroy tactile paving on the private landing areas, within the public realm the incorrect tactile paving surfaces shall be replaced as per the requirements of the NDA guidance document. Silver studs are not appropriate for use in lieu of tactile paving slabs as they become slippery when wet and can lead to glare in bright sunshine. Corduroy paving shall also visually contrast with the adjacent paving surfaces.

#### 4.2.9 Changes in Level

Changes in levels occur between several building accesses and the public realm however any proposals to address any accessibility issues to these buildings are not feasible as the remedial works would take place on private land.

There are no significant changes in level on the southern footpath along the south quays, and dished kerbs are generally provided to accommodate crossing as described earlier.

#### 4.2.10 Shared Spaces, Shared Surfaces

There are no public shared spaces between vehicles and pedestrians along this section of the route. Shared areas between cyclists and pedestrians are predominantly found east of the Samuel Beckett Bridge. The shared space at the Samuel Beckett Bridge junction is insufficient for the volumes of both pedestrians and cyclists that are forced to interact with each other.



**Shared Space at Samuel Beckett Bridge**

Good separation between cyclists and pedestrians has been achieved west of the Samuel Beckett Bridge. The design should seek to maximise separation between cyclists and pedestrians in all other locations where possible.

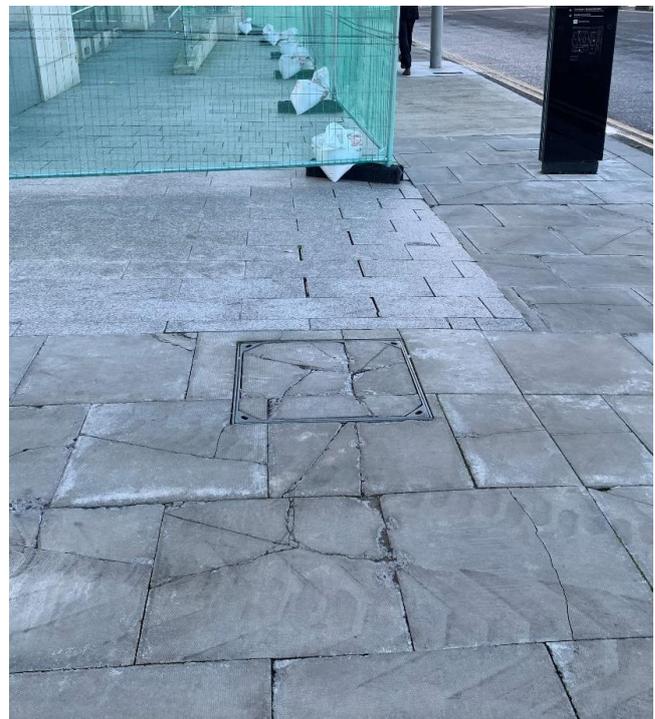
#### 4.2.11 Surface Material

The existing surface materials used along the south quays varies extensively. Similar to the north quays, the pedestrian routes along the campshires, east of the Samuel Beckett Bridge, comprise silver grey granite flags with a central, longitudinally laid line of antique cobbles. Large areas constructed using setts were noted at various locations along the entire length of the southern campshires affecting the direct line of travel. Cobbles and setts create an uneven and uncomfortable surface to walk on and may present a trip hazard. The proposed landscaping plan for any pedestrian route throughout the entire scheme shall omit the use of cobbles and shall be slip resistant in wet or dry weather.

West of the Samuel Beckett Bridge to Creighton Street the campshire surface materials vary between granite and concrete paving flags, and solid concrete. The southern footpath is predominantly constructed with silver grey granite flags east of the Samuel

Beckett Bridge, and predominantly constructed in concrete to the west. In some locations asphalt was used for patch repair in the concrete footpaths, creating undulations in the surface and potential trip hazards due to poor finishing. Just west of Lombard street two rectangles of concrete had been saw cut and broken out but not refilled creating a serious trip hazard [see left image below, second rectangle covered by leaves against the wall]. At these locations full sections of the footpaths shall be broken out and replaced to provide a smooth finish along the footpath.

In some locations along the southern footpath the surface material comprises concrete flags that have completely failed presumably due to construction works in the area. Where such paving flags exist, the broken flags shall be taken up and replaced.



**Poor Footpath surfaces**

#### **4.2.12 Street Furniture**

Street furniture was not considered to be as prolific throughout the south quays as on the north quays. Where street furniture was noted, such as post boxes, parking meters, bins etc, these were located out of the direct line of travel and invariably located in footpath buildouts. In some locations however bollards and lighting columns were placed in the centre of the footpath and should be relocated as part of the scheme design. Stainless steel bollards may potentially lead to glare in bright sunshine and may not be sufficiently contrasted in colour with the pavement to alert visually impaired pedestrians of their presence. They should be removed if considered unnecessary and improved upon visually if required as part of the design of the scheme.



### Well placed street furniture on the south quays

Generally, all signs and traffic signal heads were considered to have sufficient head height clearance. One particular sign appeared to have a low mounting height. It should be reviewed whether this Parking sign is relevant or required in this location, and if so, it should be mounted on a taller post.

The use of bollards on the south quays is kept to a minimum. At the south-eastern corner of the Cardiff Lane / Sir John Rogerson's Quay junction bollards have been constructed along the length of the building. The need for bollards along this section of the quays should be reviewed given that bollards are not considered necessary further east along the south quays.

One particular length of footpath on the south quays however seemed negatively impacted by street furniture within private landings. Outside the Ferryman pub, the loading bay sign reduces the already constrained footpath width and should be relocated to the buildout if possible. It can also be seen in the image below that concrete pavements have failed just beyond the signpost, adding a serious trip hazard to the myriad of other hazards along this footpath. The location of private landings should be reviewed, and the footpath widened at these locations to account for any potential constraint in the overall footpath width from street furniture.





**Negative interaction of Street Furniture on Private Landings**

## **5. SCHEME WIDE ACCESSIBILITY DESIGN CONSIDERATIONS**

### **5.1 Accessible Parking**

#### **5.1.1 On-Street Parking Spaces**

There are disabled parking spaces located in each section of the Ringsend scheme. A thorough investigation of the extent of disabled parking spaces is required and the need for same to be retained should be explored.

The Department of Transport Traffic Signs Manual Chapter 7, which sets out the road marking requirements, indicates that parallel disabled parking bays should be 7m long and preferably 3.6m wide. Alternatively, if a 2m buffer zone is provided the parking bay width can be reduced to 5.8m. Perpendicular parking bays should be 6m in length, 2.4m wide with 1.2m buffer zones either side of the parking bay.

Dished kerb access to the parking bays should be provided. Street furniture should not be placed adjacent to these parking bays to allow clear and unobstructed access to the vehicles.

#### **5.1.2 Set-Down and Pick-up point Facilities**

Bollards shall be removed around the various set-down points on the north and south quays to facilitate easier transfer from vehicles to the footpath, particularly by wheelchair users.

Dished access to the set-down facilities should be provided with a rear and side access zones. Such provision was only noted at the set-down area outside the Conference Centre, however only side entrances were provided.

### **5.2 Access Routes**

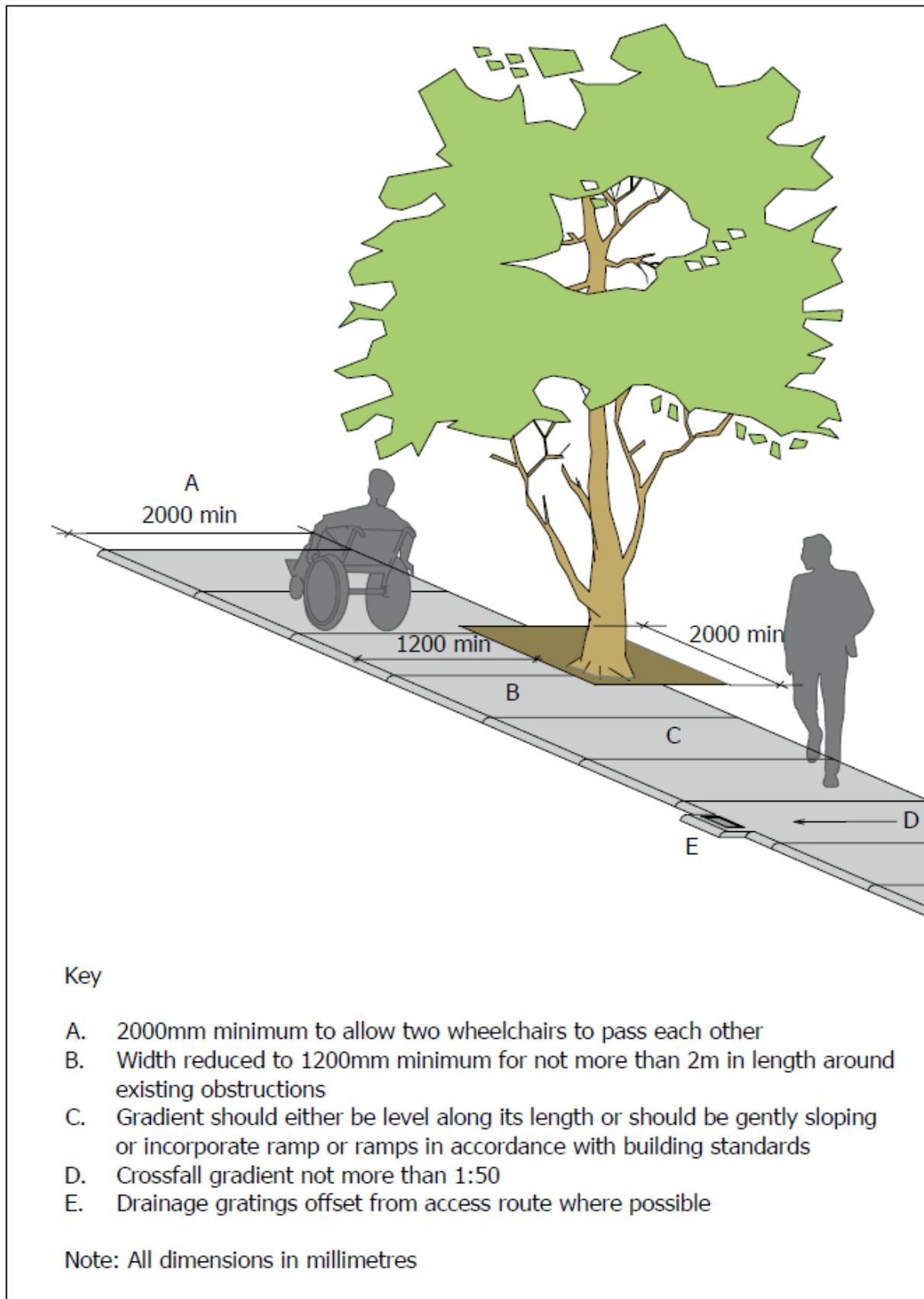
#### **5.2.1 General**

The recommended variations in widths of footpaths in urban environments are demonstrated in the illustration over. The design of the scheme should strive for a minimum footpath clear width of 2.0m, and a minimum 1.5m clear width where existing obstacles cannot be removed. Where existing trees constrain the route, the footpath clear width may be reduced to 1.2m only over a maximum distance of 2.m.

Where new footpaths are being provided, such as through grass amenity areas, a minimum footpath width of 2m shall be provided. To prevent the effective width of these footpaths being reduced due to vegetation encroachment, wooden edging kerbs shall be used to separate the footpath and the landscaping.

Access routes shall also be clear of other obstructions such as low hanging trees and branches. A minimum clear stem for all new trees shall be 3m. All mature trees being retained shall be trimmed as considered necessary and a maintenance plan put in place to ensure access routes remain clear in future.

Existing wayfinding signage, such as information signs and nameplates, shall be reviewed to ensure adequate provision for all pedestrian users. Refer to the Road Infrastructure Audit report for further information.



Extracted from NDA Guidance Document 'Building for Everyone: A Universal Design Approach'

### 5.2.2 Drainage

The proposed scheme should, as a minimum, accurately identify all areas of failed or badly repaired footpath surfaces to be broken out, and homogenous, complete sections of footpath to be constructed in their place with minimum cross fall gradients of 1:50. Paved footpaths where foundations have failed shall be reconstructed, and pavements replaced in areas where asphalt patchwork has been used instead.

Where footpaths are proposed to be widened, resulting in a need for a drainage channel, these channels should not be positioned directly in the line of travel. If drainage grills are required in the footpath, the direction of the grills should be set at right angles to the direction of travel. The gaps in the drainage grills shall be no more than 10mm.

### 5.2.3 Guardrails

The guardrails location on Pigeon House Road should be designed out where possible by relocating the traffic calming ramps away from the pedestrian links to Ringsend Park [parallel to Pigeon House Road]. If this is not possible, they shall be replaced if removed to facilitate any footpath upgrade works.

Edge protection along the River Liffey shall be provided where the proposed pedestrian routes run along the river side of the north and south campshires. The edge protection along the northern campshires was generally of high standard, however some localised areas of edging needs upgrading. The southern campshires to the east of Samuel Beckett Bridge is lacking and needs to be provided.

The guardrails in the following locations shall be maintained or replaced if upgrade works to the footpath are proposed:

- At the base of the pedestrian ramp just west of Creighton Street
- Outside St Mary's Creche & Preschool

Guardrails shall be designed out of the proposed scheme where possible, particularly at the Talbot Memorial Bridge junction with City Quay. Otherwise, all guardrails and handrails included as part of the scheme shall be constructed using materials of a low thermal conductivity shall be used as recommended by the NDA guidance.

### 5.2.4 Pedestrian Crossing Points

Pedestrian crossing points have generally been provided for along most pedestrian desire lines, however in the following locations additional crossings should be provided:

- From Sean Moore Park to Kerlogue Road across the Sean Moore Road
- Between Pigeon House Road and York Road at the roundabout with Cambridge Road
- Across York Road at Pembroke Cottages
- Between the north campshires and the northern footpath at Castleforbes Road
- At least one additional crossing between the south campshires and the southern footpath at yet to be identified locations between Lombard Street and the Samuel Beckett Bridge
- At least one additional crossing between the south campshires and the southern footpath at yet to be identified locations between the Samuel Beckett Bridge and the proposed Dodder Public Transport bridge.

### 5.2.5 Controlled and Uncontrolled Crossings

A common standard for pedestrian crossing points should be adopted. Preferably, raised platforms flush with the perpendicular line of kerbs should be provided at crossings. The ramps and dished at Forbes Street and Cardiff Lane [and others where located] shall be reconstructed to form flush crossings at footpath level, similar to that found at Creighton Street.

The existing pushbutton units at controlled crossings should be replaced with alternative units that are audible, pulsating, and can demonstrate the orientation of the crossing in braille form.

Pedestrians shall be given priority over vehicles across accesses, and the pavement materials reconstructed to enforced this.

Staggered pedestrian crossings, and particularly staggered toucan crossings where they exist, shall be designed out as per the Design Manual for Urban Roads and Streets [DMURS]. The space provided within the islands of staggered crossings is generally constrained and difficult for vulnerable pedestrians to navigate. Single stage crossings should be provided to improve dwell space, crossing legibility and to reduce crossing distances.

### 5.2.6 Changes in Level

Steps are provided between Pembroke Street and Kerlogue Road near Sean Moore Road without any handrail. Handrails shall be provided at all publicly accessible steps. The nearest ramped alternative to these steps for mobility impaired pedestrians is located between 70 and 80m away and does not have a handrail. The feasibility of providing a ramp adjacent to the steps should be explored.

The changes in level identified on the north campshires shall be designed out as part of the scheme.

In general, where steps or ramps are required as part of the design, both shall be provided and located nearby each other. Steps wider than 2m should be divided into channels using additional handrails. Continuous handrails shall also be provided on all ramps. Ramp gradients shall be no more than 1:20 without landings, and where steeper, landings provided at the required intervals.

## 5.3 Surface Materials

### 5.3.1 Surface Materials

In the direct line of travel along pedestrian routes cobbles or setts shall not be used. Larger flags, either concrete or granite preferably, or poured concrete shall be used. Asphalt may be used where the pedestrian routes do not follow directly adjacent to a road carriageway.

Areas where broken paving slabs have been identified shall be repaired, and localised areas of asphalt repair shall be identified, broken out, and replaced with the original surrounding material. Where the surrounding material is poured concrete, full sections of the footpath shall be broken out and replaced to provide a smooth finish along the footpath.

### 5.3.2 Tactile Paving

In several locations throughout the scheme there was a notable absence in tactile paving at crossing points. In some instances, coloured cobblelock paving was used instead of tactile paving. The tactile paving at all crossing points shall be reviewed and the following to be incorporated into the design:

- Red tactile paving slabs shall be used at controlled crossing points and buff tactile paving to be used at uncontrolled crossings
- All tactile paving at controlled crossings to extend to the rear of the footpath or to the building line as required
- All new service chambers to be located outside the area of tactile paving, and any existing chambers that are not feasible to relocate must have stick-on tactile paving applied
- Three full rows of tactile paving [1.2m deep] across the full width of the dropped / flush kerbs to be provided at inline crossing points and two rows [800mm deep] to be provided at offline crossing points
- All tactile paving at crossing points shall be blistered.

Corduroy tactile paving, buff in colour or in a high contrast colour to the surrounding footpath material, is used to identify step hazards for visually impaired pedestrians. Corduroy tactile paving is laid perpendicular to the line of travel and located at the top and bottom of a flight of steps. Metal studs shall not be used in lieu of corduroy tactile paving, and where they exist within the public realm shall be replaced with corduroy paving slabs.

### 5.3.3 Shared Spaces, Shared Surfaces

The predominant form of shared spaces throughout the scheme require the interaction of pedestrians and cyclists, particularly at junctions. Shared spaces should not be used in areas where space is constrained, such as the east side at either end of the Samuel Beckett Bridge. Shared spaces should be confined to areas where there is ample room for cyclists and pedestrians to maintain a wide berth.

There are currently no instance of crossover pedestrian / cycle facilities along the Ringsend route [where the pedestrians and cyclists suddenly switch sides of a path], however the need for such a facility should be carefully considered, and other design alternatives implemented instead where possible.

Existing constrained shared areas identified within the report should be designed out as part of the scheme. At signalised junctions, particularly those with high volumes of both pedestrians and cyclists, cyclists should not be forced off-road to merge with pedestrians in shared spaces. Improved junction design should seek to maximise segregation by adopting Dutch style cycle layouts or similar at junctions. Where it is not possible to eliminate shared spaces, pedestrian priority zones should be created to minimise potential conflict with fast moving cyclists and shared spaces should only be considered at junctions where the volume of cyclists is low.

Existing road marking shall be reviewed to ensure it is clearly understood and legible by all road users, particularly in the context where the road layout has dramatically changed from existing. Refer to the Road Infrastructure Audit report for further information.

## 5.4 Street Furniture

### 5.4.1 Placement of Street Furniture

The location of street furniture should be determined collectively rather than on an elemental case. Any new public lighting poles should be placed to the front of the path where possible and kept out of the direct line of travel. Existing public lighting columns inexplicably placed in the direct line of travel shall be at worst moved to the front of the path. Existing traffic sign poles shall be reviewed as to their necessity and moved out of the direct line of travel along footpaths if they must be retained. Any new traffic signs required by the scheme shall be mounted on public lighting poles or traffic signal poles, where possible, to reduce clutter. Where it is not possible to mount on existing public lighting or traffic signal poles the signposts shall be placed out of the direct line of travel.

All bus stops signs and infrastructure shall be rationalised to prevent clutter at stops and to ensure sufficient space for wheelchair users to access the bus doors. Where bus stop islands are proposed or being retained, they shall be reviewed in the context of appropriate dwell areas for the expected volumes of patrons and shall be easily located and accessible by vulnerable pedestrians in particular. The safety of all users shall be considered, particularly where pedestrians are required to cross any cycle track. Refer to the Bus Stop Usage Survey report for more information.

All signage and traffic signal heads shall be mounted with a head height clearance of 2.3m minimum.

The requirement for the extent of bollards along the quays in particular shall be reviewed. The effect the bollards on Pigeon House Road have on wheelchair users shall be considered and alternative means of vehicular restriction used. Stainless steel bollards may potentially lead to glare in bright sunshine and may not be sufficiently contrasted in colour with the pavement to alert visually impaired pedestrians of their presence. All bollards should be removed throughout the entire route if considered unnecessary. Where bollards may not be removed they shall be upgraded or replaced so that the colour contrast of these bollards against the pavement shall be improved upon where it is appropriate to do so.

Where private landings have been identified the potential for street furniture to constrain the overall footpath width in tandem with other street furniture such as signposts and public lighting poles shall be considered.

All existing and proposed street furniture should be reviewed and designed in the context of improved visibility. High contrast colours shall be considered, and the use stainless steel shall be restricted unless considered absolutely necessary to prevent glare in bright sunshine.

### 5.4.2 Public Lighting

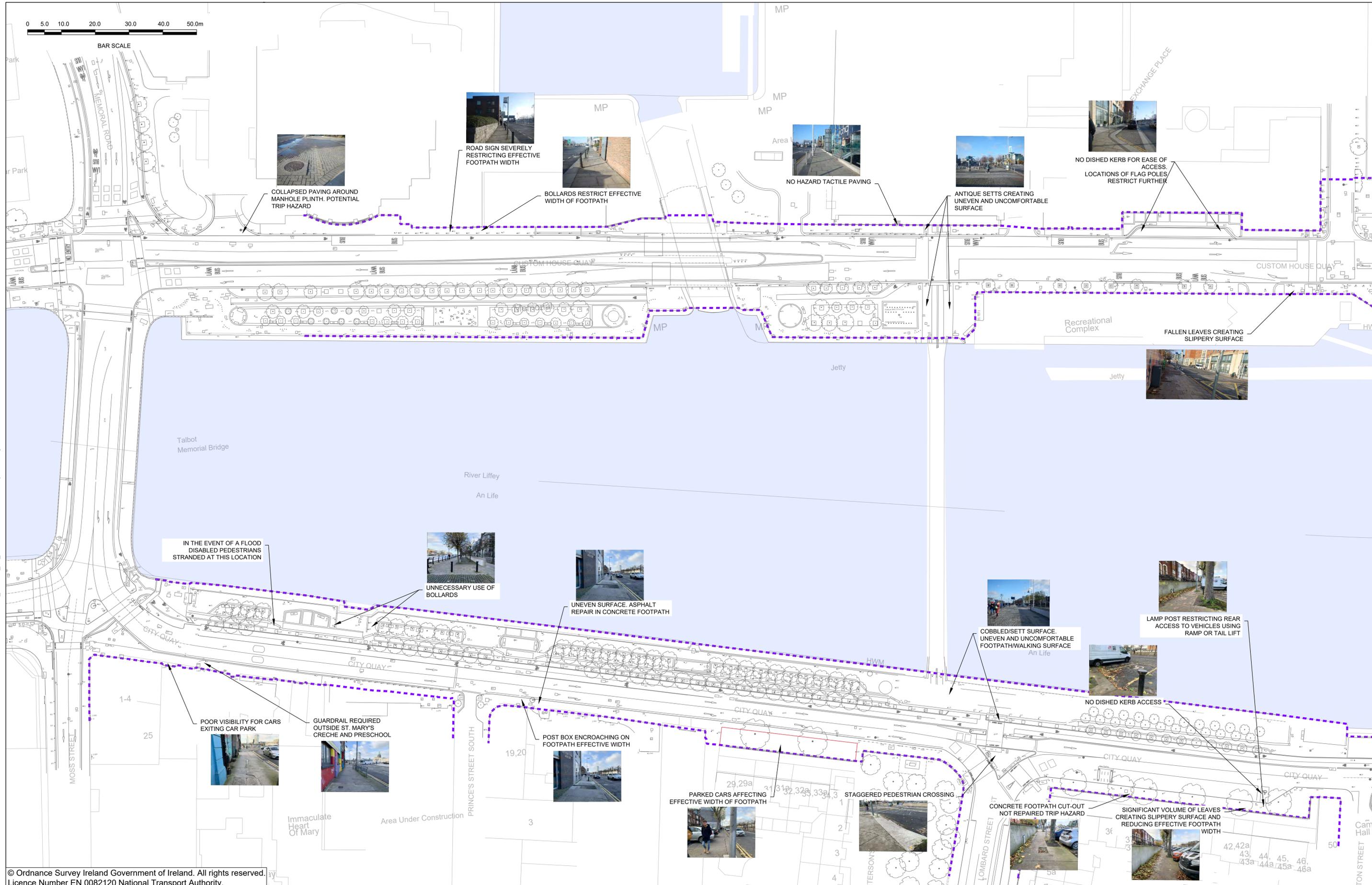
The NDA guidance recommends that where public lighting cannot be mounted on walls or buildings they should be placed to the back of the footpath. Where they are proposed on the road side of the footpath they shall be placed at least 500mm from the kerb edge, or 600mm if the road has a steep cross-fall or camber. Preferably the scheme design shall place the public lighting in build-outs as a means of completely removing them out of any line of travel by pedestrians.

Specifics of existing public lighting infrastructure have been identified in the Road Infrastructure Audit report, such as the use of LED lanterns or not. LED lanterns provide improved visibility over SOC lanterns and all older lanterns shall be upgraded to LED lanterns as identified in the Road Infrastructure Audit.

## **Appendix A – Drawings**

0 5.0 10.0 20.0 30.0 40.0 50.0m

BAR SCALE



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Client: **NTA** Údarás Náisiúnta Iompair National Transport Authority

Date: APRIL 2020 Scale: 1:500 @ A1, 1:1000 @ A3

Engineering Designer: **FIROD** TYPSA

Drawn: AG, Checked: EOC, Approved: SMG

Project Code: BCIDD, Originator Code: ROT, QMS Code: [blank]

Project Title: <b>BUSCONNECTS INFRASTRUCTURE DUBLIN</b>			
Drawing Title: <b>ROUTE 16: RINGSEND TO CITY CENTRE ACCESSIBILITY AUDIT</b>			
Drawing File Name: BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0001	Sheet Number: 01 of 10	Status: SO	Rev: K01

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0 5.0 10.0 20.0 30.0 40.0 50.0m

BAR SCALE



NO DISHED ACCESS. BOLLARDS SEVERELY CONSTRAINING SIDE ACCESS TO VEHICLES



BOLLARDS AFFECTING FOOTPATH WIDTH



FAILED CONCRETE FLAGS A TRIP HAZARD



ASHPALT INFILL FOR CONCRETE FLAGS A TRIP HAZARD



SIGNIFICANT NUMBER OF CHAMBER TOPS IN CROSSING PATH. DIFFICULT AND UNEVEN SURFACE



TRAFFIC SIGNAL INFRASTRUCTURE CONSTRAINING EFFECTIVE FOOTPATH WIDTH

ANTIQUE COBBLES LAID PARALLEL TO DIRECTION OF TRAVEL UNEVEN SURFACE. POTENTIAL FOR WHEELCHAIRS. WHEELS TO GET STUCK



SPOTLIGHTS IN FOOTPATH A SLIP HAZARD. CONSIDER REMOVING OR REPLACING WITH OVERHEAD LIGHTING



REMOVE BOLLARDS TO IMPROVE PERMEABILITY



LEVEL DIFFERENCE BETWEEN FOOTPATH AND AMENITY AREA. CONSIDER DESIGNING OUT



NO TACTILE PAVING (IF USED FOR FUTURE VEHICULAR ACCESS) OR DROPPED KERB



SHARED PEDESTRIAN AND CYCLE ZONE IN CONSTRAINED AREA



TOUCAN CROSSING INSUFFICIENT TO CATER FOR HIGH VOLUMES OF PEDESTRIANS AND CYCLISTS



COBBLE LOCK USED IN LIEU OF BLISTER PAVING DROPPED KERB WIDTH TOO NARROW

REPLACE GUARDRAIL TO PROVIDE IMPROVED PROTECTION FOR CHILDREN AND GUIDE DOGS



COBBLED SURFACE. UNEVEN AND UNCOMFORTABLE SURFACE



NO TACTILE PAVING. DISHED KERBS NOT ALIGNED WITH CORRESPONDING DISHED KERBS. ASPHALT SURFACE REPAIR IN CONCRETE FOOTPATH



NO TACTILE PAVING (IF USED FOR FUTURE VEHICULAR ACCESS) OR DROPPED KERB



UNCONTROLLED CROSSING LOCATED AWAY FROM ANY LINE OF TRAVEL AND OBSCURED BY STREET FURNITURE



CONCRETE IN FILL AND GUARDRAIL DUE TO CONSTRAINTS IN LANDSCAPING AND HOARDING LOCATION TO BE REMOVED FOLLOWING BUILDING CONSTRUCTION COMPLETION



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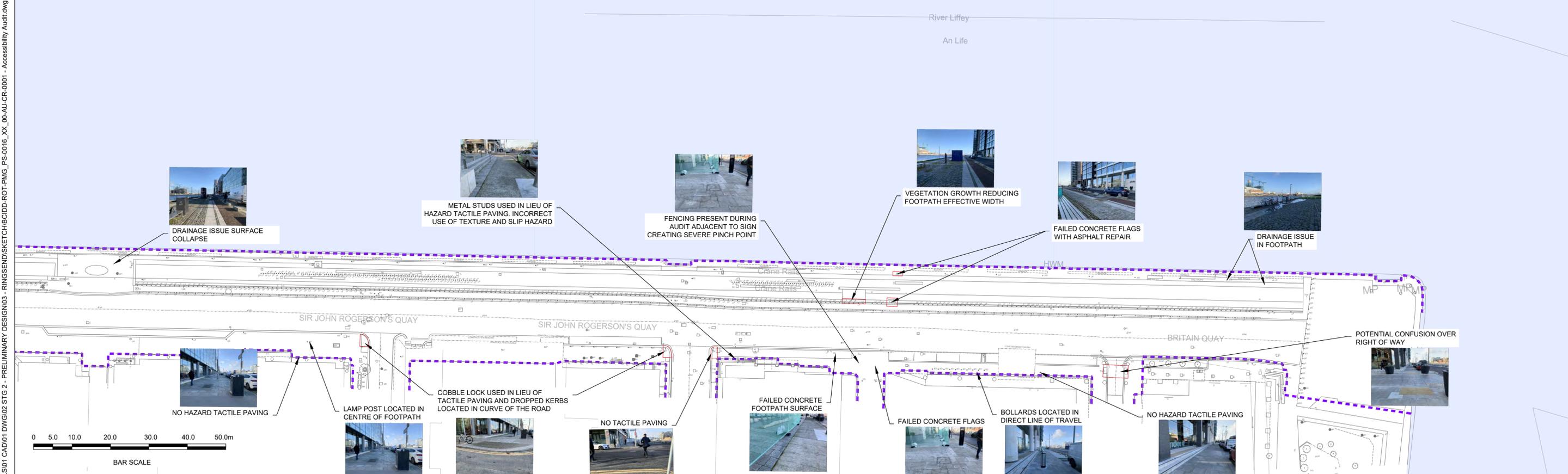
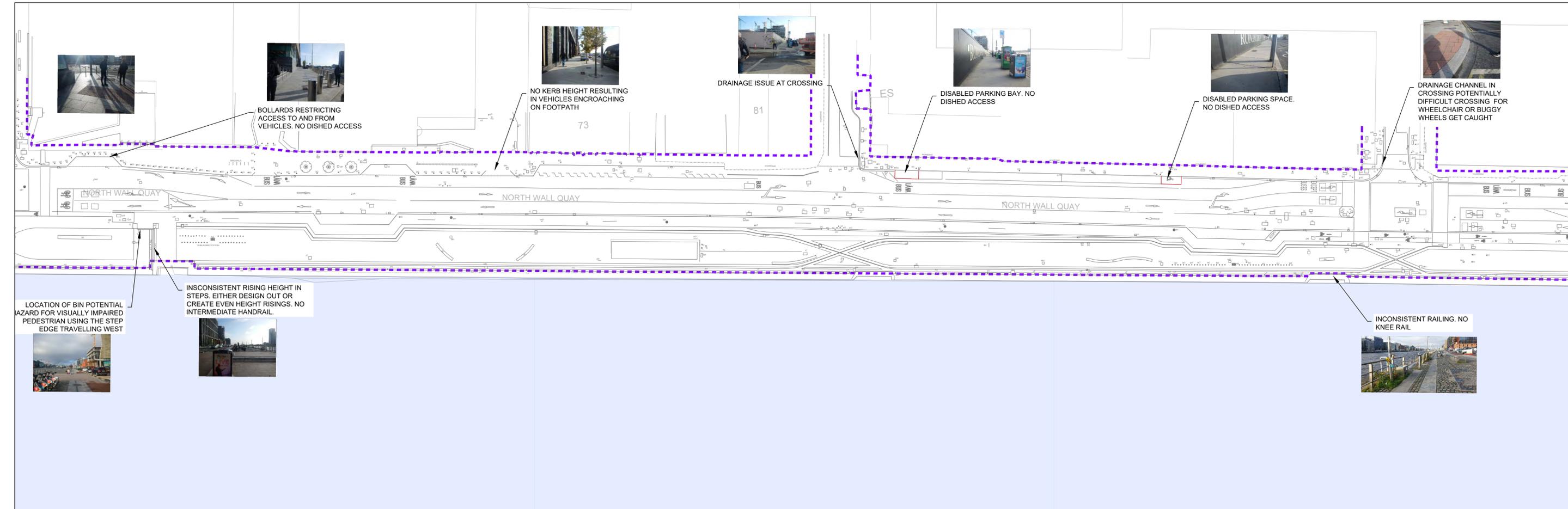
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Date APRIL 2020	Scale 1:500 @ A1 1:1000 @ A3	Drawn AG	Checked EOC	Approved SMG
Project Code BCIDD	Originator Code ROT	QMS Code		

Project Title <b>BUSCONNECTS INFRASTRUCTURE DUBLIN</b>				
Drawing Title ROUTE 16: RINGSEND TO CITY CENTRE ACCESSIBILITY AUDIT				
Drawing File Name BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0002	Sheet Number 02 of 10	Status SO	Rev K01	

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National Transport Authority

Engineering Designer: **FIROD**  
TYPSA

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Originator Code: ROT  
QMS Code: AG

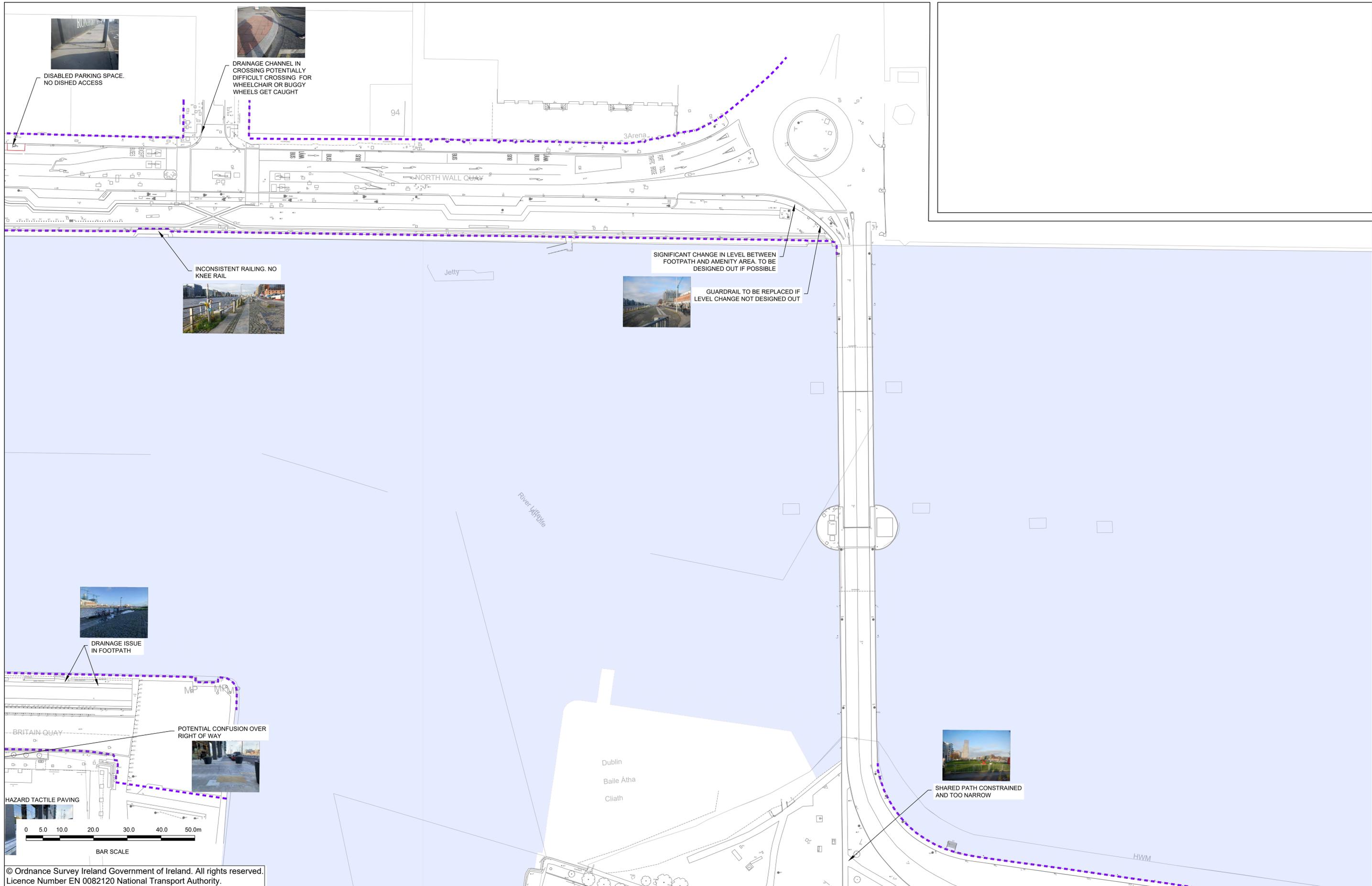
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Checked: EOC  
Approved: SMG

Project Title: <b>BUSCONNECTS INFRASTRUCTURE DUBLIN</b>			
Drawing Title: <b>ROUTE 16: RINGSEND TO CITY CENTRE ACCESSIBILITY AUDIT</b>			
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Engineering Designer  
**FIROD**  
 TYPISA

Project Title  
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Drawing Title  
**ROUTE 16: RINGSEND TO CITY CENTRE ACCESSIBILITY AUDIT**

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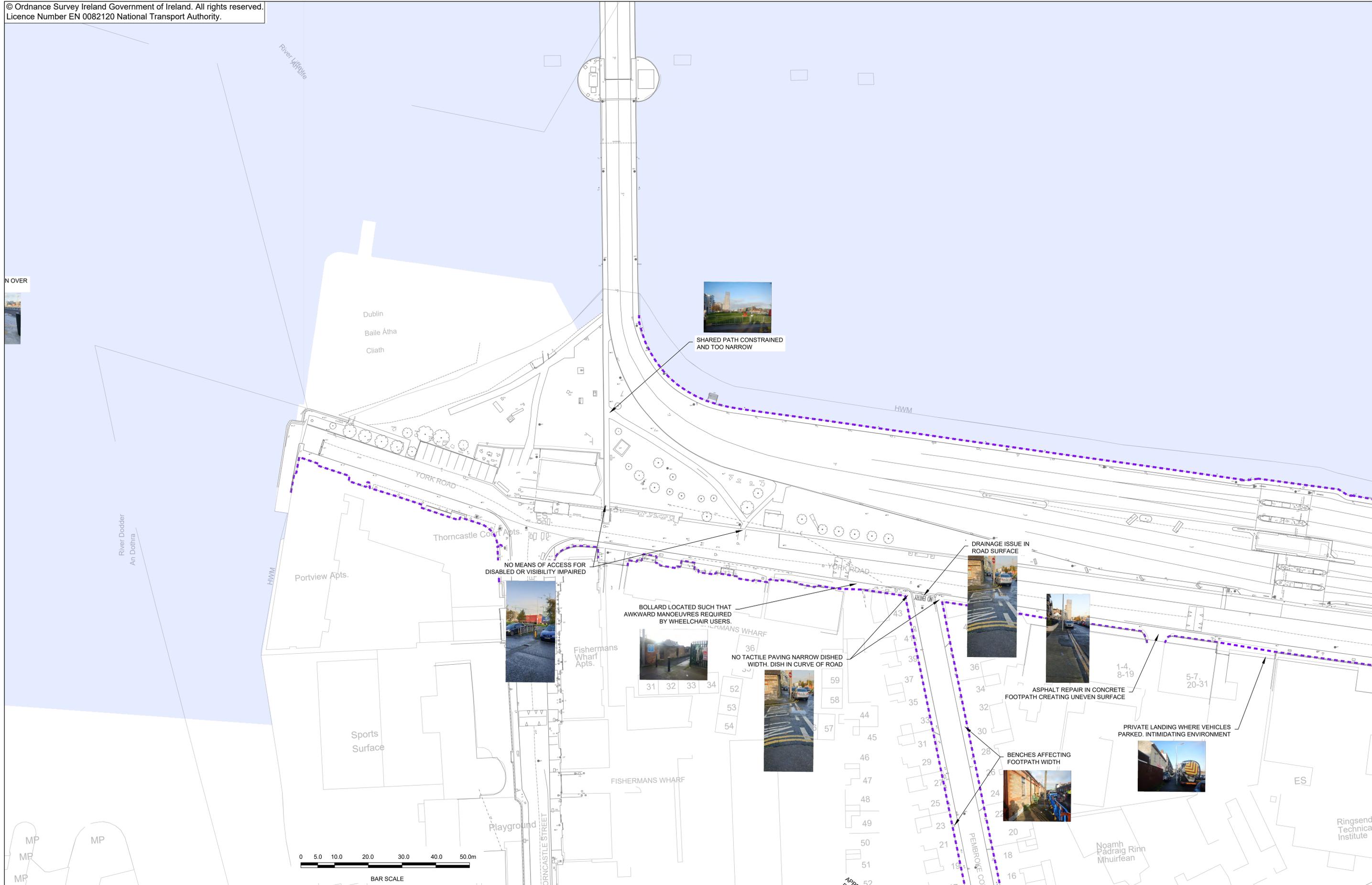
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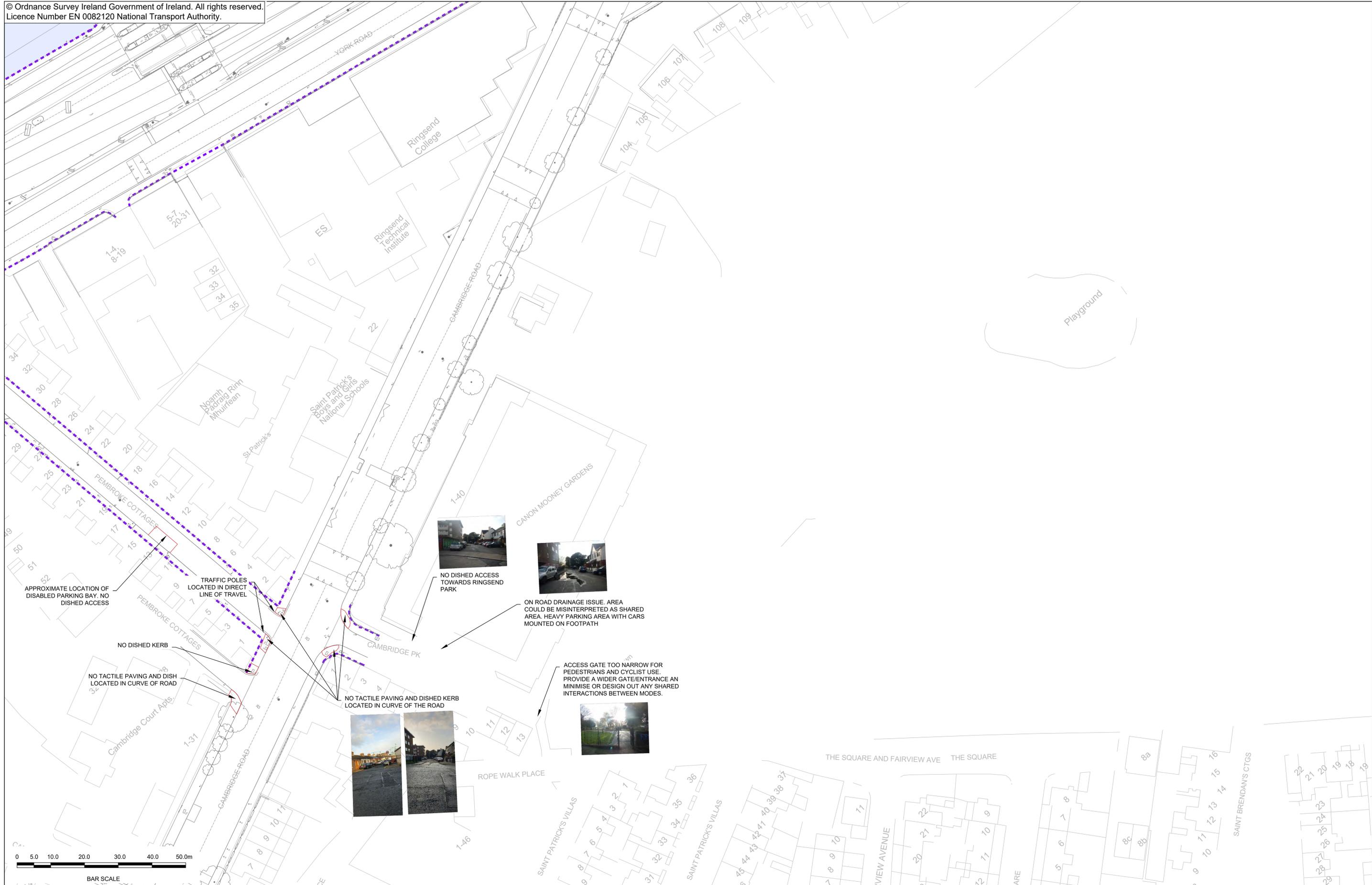
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		Engineering Designer 		
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BCIDD	ROT			

Project Title			
BUSCONNECTS INFRASTRUCTURE DUBLIN			
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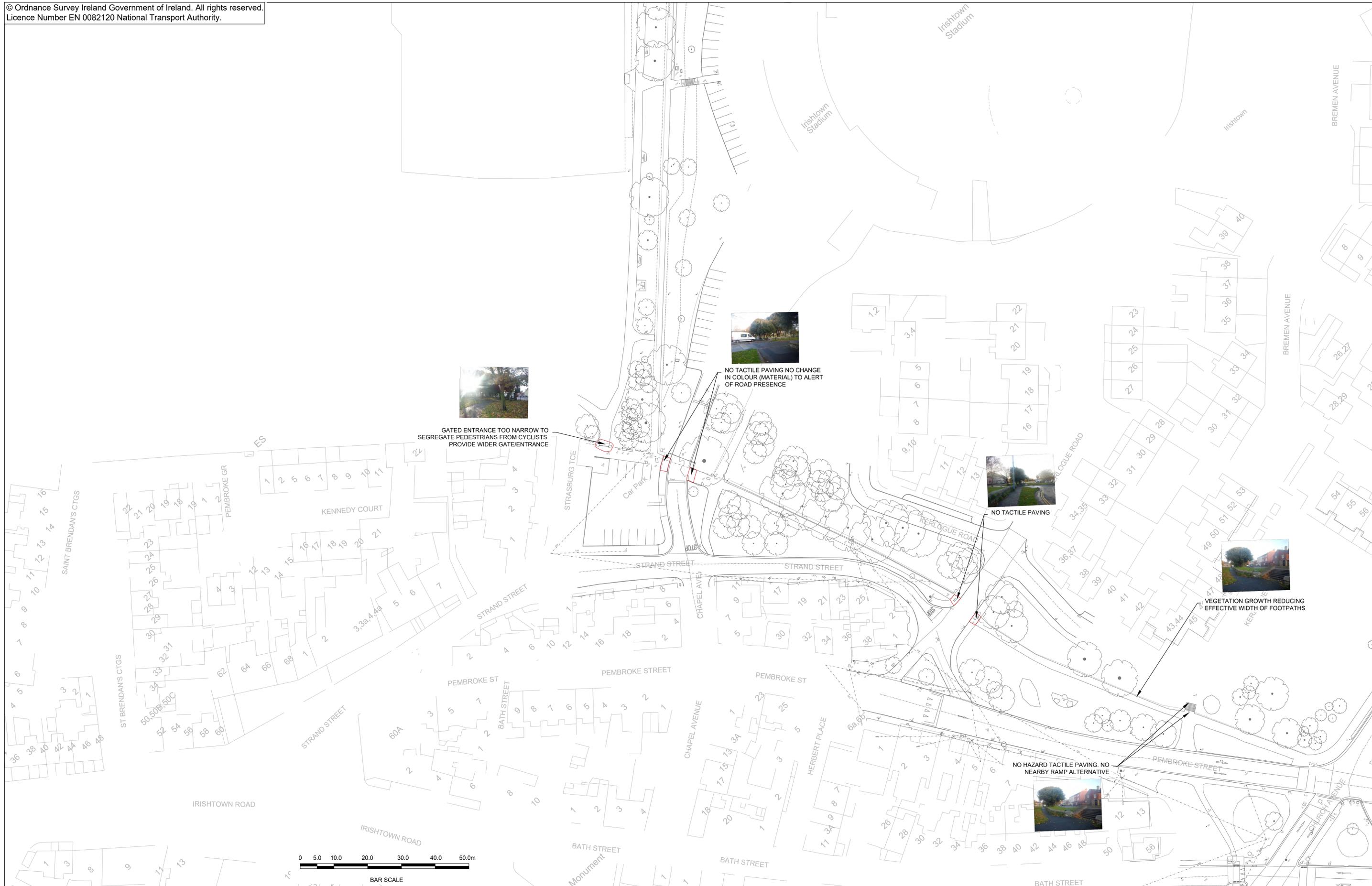


Rev	Date	Drn	Chk'd	App'd	Description

Date	Scale	Drawn	Checked	Approved
APRIL 2020	1:500 @ A1 1:1000 @ A3	AG	EOC	SMG
Project Code	Originator Code	QMS Code		
BCIDD	ROT			

Project Title			
BUSCONNECTS INFRASTRUCTURE DUBLIN			
Drawing Title			
ROUTE 16: RINGSEND TO CITY CENTRE ACCESSIBILITY AUDIT			
Drawing File Name	Sheet Number	Status	Rev
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0009	09 of 10	SO	K01

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Transverse Mercator Grid (ITM) as defined by OSI active local GPS station.  
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Rev	Date	Drm	Chk'd	App'd	Description

<b>Client</b> Údarás Náisiúnta Iompair National Transport Authority		<b>Engineering Designer</b> FIROD TYPISA		
Date	Scale	Drawn	Checked	Approved
APRIL 2020	1:500 @ A1 1:1000 @ A3	AG	EOC	SMG
Project Code	Originator Code	QMS Code		
BCIDD	ROT			

<b>Project Title</b> BUSCONNECTS INFRASTRUCTURE DUBLIN			
<b>Drawing Title</b> ROUTE 16: RINGSEND TO CITY CENTRE ACCESSIBILITY AUDIT			
Drawing File Name	Sheet Number	Status	Rev
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0010	10 of 10	SO	K01

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## **Appendix B – Designer’s Responses**

Scheme: Ringsend to City Centre				
Drawings	Assessment Comments	To Be Completed By Designer		
		Problem/Observation Accepted (yes/no/n/a)	Recommended measure accepted (yes/no/n/a)	Designers Comments
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0001	The collapsed paving around manhole plinth is a potential trip hazard and rainwater entrapment in the vertical deviations.	Yes	Yes	Pedestrian crossing and footpath will be reconstructed as part of the works
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0001	Road sign severely restricting effective footpath width. The extent of existing traffic signs and posts shall be reviewed to identify those that can be removed or relocated to lighting columns or other signposts. The need for new traffic signs shall be done with a view to only providing those that are statutorily required.	Yes	Yes	Traffic signs will be relocated appropriately during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0001	The existing bollards restrict effective width of footpath. There is a need to check that the size of the pavement is in compliance with the documents.	Yes	N/A	The pavement has been updated and increased in width. The use of and need for the extent of bollards should be reviewed during Detailed Design, and only used where there is an overwhelming reason to do so.
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0001	No hazard tactile paving in proximity of steps. Corduroy tactile paving, buff in colour or in a high contrast colour to the surrounding footpath material, is used to identify step hazards for visually impaired pedestrians. Corduroy tactile paving is laid perpendicular to the line of travel and located at the top and bottom of a flight of steps.	Yes	Yes	All tactile paving requirements will be reviewed as part of the Detailed Design process
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0001	Antique setts creating uneven and uncomfortable surface. These setts shall be removed within the direct line of travel and replaced with flags. Setts, similar to cobbles are difficult for wheelchair users and buggies to cross, create an uncomfortable surface to walk on, and may present a trip hazard.	Yes	Yes	This will be reviewed during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0001	There is no dish access to the footpath from this parking space and a post is positioned directly in front of the parking bay. This would make it difficult for the disable user to transfer safely between the footpath and the car without an aid, and also prevents access to the rear of the car using a ramp or tail lift.	Yes	Yes	This will be reviewed during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0001	Fallen leaves can become saturated with rainwater and are a serious slip hazard when wet. The location of the leaves, towards the back of the path, is in line with the preferred path of visually impaired cane assisted pedestrians who tend to prefer walking close to the back of the path. Regular cleaning of the pedestrian routes, particularly where located next to deciduous trees, will be required and any landscaping plans to be cognizant of proposed tree types next to footpaths.	N/A	N/A	Outside of scope of Proposed Scheme
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0001	Along the campshire, particularly between the Talbot Memorial Bridge and Lombard Street, the flood wall encloses all footpath routes and no compensatory crossing facility is provided to the southern footpath, creating a disconnect for mobility and visually impaired pedestrians. This should be addressed to ensure that in the event the flood walls are closed to pedestrian traffic, that all pedestrians have a safe, direct means of travel along the south quays.	N/A	N/A	Outside of scope of Proposed Scheme
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0001	Cars exiting City Quay Car Park have poor visibility and the footpath pavement is not in good condition. It is recommended that priority be given to pedestrians across the access to reduce the level of uncertainty over priority on what appears to be footpath.	Yes	Yes	Footpath and pedestrian crossing the parking entrance will be reconstructed as part of the works. Adequate surface treatment will be reviewed during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0001	The design shall replace the guardrail outside St Mary's Creche & Preschool for the safety of all children exiting the building.	Yes	N/A	The St Marys Creche & Preschool is permanently closed and the need for the guardrail will be assessed again during the detailed design process but should a childrens facility no longer have an active function in the building, the guardrail will no longer be required at this location.
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0001	In some locations of the South Quay bollards are placed in the centre of the footpath and should be relocated as part of the scheme design	Yes	Yes	The use of and need for the extent of bollards along the quays will be reviewed during Details Design, and only used where there is an overwhelming reason to do so.
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0001	The placement of Post box restricts the effective width of the footpath and has the potential to force awkward weaving manoeuvres for wheelchair users and visually impaired pedestrians with guide dogs or canes. These Post box shall be relocated during construction to prevent such conflicts occurring again.	Yes	N/A	There is more than 1.2m space between the wall and post box which is sufficient as per Universal Design requirements
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0001	Where asphalt is put in as a repair in concrete footpath it create an uneven and uncomfortable surface to walk on and may present a trip hazard	Yes	Yes	Resurfacing will be carried out as part of the project and the detailed design will indicate homogeneous paving / surface through out
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0001	The presence of cars parked near the apartment building affects the effective width of the footpath and restricts the passage of pedestrians.	Yes	Yes	This will be reviewed during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0001	Staggered pedestrian crossing. This arrangement increases the crossing distance particularly for vulnerable pedestrians. The island also results in a constrained dwell area for potentially high volumes of pedestrians. The layout of the junction should be revised as part of the scheme to remove the staggered crossing, thereby improving the overall crossing facility and the dwell space at footpaths, and decreasing the required crossing distance.	Yes	Yes	Junction layout updated, removing the central island and realigning pedestrian crossings.
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0001	Cobbles and setts create an uneven and uncomfortable surface to walk on and may present a trip hazard.	Yes	Yes	Pavement types will be reviewed during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0001	Rectangles of concrete had been saw cut and broken out but not refilled creating a serious trip hazard	Yes	Yes	Footpath will be reconstructed as part of the works
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0001	Significant volume of leaves creating slippery surface and reducing effective footpath width. Fallen leaves can become saturated with rainwater and are a serious slip hazard when wet. The location of the leaves, towards the back of the path, is in line with the preferred path of visually impaired cane assisted pedestrians who tend to prefer walking close to the back of the path. Regular cleaning of the pedestrian routes, particularly where located next to deciduous trees, will be required and any landscaping plans to be cognizant of proposed tree types next to footpaths.	N/A	N/A	Outside of scope of Proposed Scheme
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0001	There is no dish access to the footpath from parking space. This would make it difficult for the disable user to transfer safely between the footpath and the car without an aid, and also prevents access to the rear of the car using a ramp or tail lift.	Yes	Yes	Kerbs types will be reviewed during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0001	A lamp post is positioned directly in front of the parking bay and restricts rear access to vehicles using a ramp or tail lift. This would make it difficult for the disable user to transfer safely between the footpath and the car without an aid, and also prevents access to the rear of the car using a ramp or tail lift.	Yes	Yes	Public lighting will be relocated appropriately during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0002	There is no dish access to the footpath from parking space. This would make it difficult for the disable user to transfer safely between the footpath and the car without an aid, and also prevents access to the rear of the car using a ramp or tail lift.	Yes	Yes	Kerbs types will be reviewed during Detailed Design and bollards will be relocated appropriately during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0002	The existing bollards restrict effective width of footpath. There is a need to check that the size of the pavement is in compliance with the documents.	Yes	Yes	The use of and need for the extent of bollards along the quays will be reviewed during Details Design, and only used where there is an overwhelming reason to do so.
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0002	There are antique cobbles laid parallel to direction of travel with an uneven surface. There is potential for the wheels of wheelchairs to get stuck.	Yes	Yes	Pavement types will be reviewed during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0002	Failed concrete flags create an uneven and uncomfortable surface to walk on and may present a trip hazard.	Yes	N/A	Failed concrete flags repaired
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0002	Spotlights in the footpath create an uneven and uncomfortable surface to walk on and may present a trip hazard. Consider replacing with overhead lighting.	Yes	Yes	This will be reviewed during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0002	There is an asphalt infill for concrete flags which create an uneven and uncomfortable surface to walk on and may present a trip hazard.	Yes	N/A	Concrete flags repaired
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0002	There is a significant number of chamber tops in crossing path. This creates a difficult and uneven surface	Yes	Yes	This will be reviewed during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0002	Traffic signal infrastructure constraining the effective footpath width.	Yes	Yes	Footpath increased
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0002	Bollards are placed in the centre of the footpath and should be relocated as part of the scheme design	N/A	N/A	The use of and need for the extent of bollards along the quays will be reviewed during Details Design, and only used where there is an overwhelming reason to do so.
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0002	A guardrail has been provided to the front of the footpath and should be replaced as part of the scheme to provide improved protection for children and guide dogs.	Yes	Yes	This will be reviewed during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0002	Cobbles creating uneven and uncomfortable surface. These setts shall be removed within the direct line of travel and replaced with flags. Setts, similar to cobbles are difficult for wheelchair users and buggies to cross, create an uncomfortable surface to walk on, and may present a trip hazard.	N/A	N/A	Outside of scope of Proposed Scheme
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0002	There is a level difference between the footpath and the amenity area. Consider designing out	N/A	N/A	Outside of scope of Proposed Scheme
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0002	No hazard tactile paving at crossing. Buff tactile paving shall be used at uncontrolled crossings.	Yes	Yes	All tactile paving requirements will be reviewed as part of the Detailed Design process
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0002	No hazard tactile paving in proximity of vehicular access. Buff tactile paving shall be used at uncontrolled crossings.	Yes	Yes	All tactile paving requirements will be reviewed as part of the Detailed Design process
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0002	Cobble lock paving was used instead of tactile paving. The tactile paving at all crossing points shall be reviewed	Yes	Yes	All tactile paving requirements will be reviewed as part of the Detailed Design process
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0002	Uncontrolled crossing located away from any line of travel and obscured by street furniture. The dish kerb and tactile paving for the uncontrolled crossing is located on a buildout on the southern footpath, rather than in the footpath where visually impaired pedestrians are more likely to see the crossing. The need for the uncontrolled crossing at this location should be reviewed and a more accessible location for the crossing be determined where possible.	Yes	Yes	This will be reviewed during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0002	Uneven pavement surface and presence of guardrails due to the construction of the building underway during the audit.	Yes	N/A	Footpath surfaces will be upgraded or repaired as part of detailed design and unnecessary guardrails will be removed.

Scheme: Ringsend to City Centre				
Drawings	Assessment Comments	To Be Completed By Designer		
		Problem/Observation Accepted (yes/no/n/a)	Recommended measure accepted (yes/no/n/a)	Designers Comments
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0002	The shared space at the Samuel Beckett Bridge junction is insufficient for the volumes of both pedestrians and cyclists that are forced to interact with each other.	Yes	Yes	Shared area increased
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0002	Toucan crossing insufficient to cater for high volumes of pedestrians and cyclists and generally constrained and difficult for vulnerable pedestrians to navigate.	N/A	N/A	The modification of this crossing is not applicable due to the presence of bridge constraints.
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0002	The shared space is insufficient for the volumes of both pedestrians and cyclists that are forced to interact with each other.	Yes	Yes	Shared area increased
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0003	Constrained footpath width due to Scherzer Bridge	Yes	Yes	Scherzer Bridge and Footpath updated
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0003	Severe crossfall due to dished kerb	N/A	N/A	The existing ground levels will be raised to match the new bridge levels across the Royal Canal to account for Climate Change. Finished paved levels will be confirmed as part of the detailed design process
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0003	Buff coloured blister tactile paving was provided adjacent to a dropped-kerb at the set-down area. This blister tactile paving should be removed since there is a chance that a visually impaired person may interpret this location as a crossing point, given that it is placed in the direct line of travel. Corduroy tactile paving should be installed where a kerb adjacent to a set-down point is dished in the direct line of pedestrian travel	Yes	Yes	All tactile paving requirements will be reviewed as part of the Detailed Design process
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0003	Dropped kerb located in curve of road consider tightening corner radius to overcome constraint	Yes	Yes	Pedestrian crossing updated with a pedestrian ramp. Surfaces, kerbs and all tactile paving provision will be design to Universal Design requirements as part of the detailed design process
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0003	Drainage issue at crossing line of travel	Yes	Yes	Proposed pedestrian ramp
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0003	bollards at taxi rank a constraint for access and egress from vehicles.	Yes	Yes	The use of and need for the extent of bollards should be reviewed during Detailed Design, and only used where there is an overwhelming reason to do so.
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0003	The footpath does not have any tactile paving to warn of the step hazard.	Yes	Yes	All tactile paving requirements will be reviewed as part of the Detailed Design process
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0003	The footpath does not have any tactile paving to warn of the step hazard.	Yes	Yes	All tactile paving requirements will be reviewed as part of the Detailed Design process
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0003	Significant construction works were taking place along the northern footpath. Line of hoarding affecting available width of dropped kerbs	N/A	N/A	Construction works completed and fence already removed and footpath updated
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0003	The layout of the tactile paving did not meet the requirements or recommendations of the NDA guidance, by not extending to building lines	Yes	Yes	All tactile paving requirements will be reviewed as part of the Detailed Design process
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0003	The campshire's path adjacent to the Scherzer bridge at Spencer Dock is inappropriate for the existing volumes of pedestrians and cyclists. It is noted that an alternative bridge crossing was under construction during the walking audit.	Yes	N/A	The alternative bridge crossing that was under construction during the walking audit was completed. This bridge allows enough space for new cycle way and a pedestrian path.
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0003	Antique setts creating uneven and uncomfortable surface. These setts shall be removed within the direct line of travel and replaced with flags. Setts, similar to cobbles are difficult for wheelchair users and buggies to cross, create an uncomfortable surface to walk on, and may present a trip hazard.	Yes	Yes	This will be reviewed during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0003	unclear path/ line of travel. Due to parked cars and construction work interacting with the street furniture	N/A	N/A	The permanent boundary line and the public realm following completion of the construction has been considered as part of the design and will be further refined as part of the detailed design process as necessary
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0003	Path blocked by mobile coffee trailer and parked car	N/A	N/A	Outside of scope
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0003	Drainage channel blocked with leaves, wet surface a slip hazard. Fallen leaves can become saturated with rainwater and are a serious slip hazard when wet. The location of the leaves, towards the back of the path, is in line with the preferred path of visually impaired cane assisted pedestrians who tend to prefer walking close to the back of the path. Regular cleaning of the pedestrian routes, particularly where located next to deciduous trees, will be required and any landscaping plans to be cognizant of proposed tree types next to footpaths.	N/A	N/A	Outside of scope of Proposed Scheme
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0003	Red paving could be misinterpreted for crossing indication (see diagonal paving west guiding towards controlled crossing)	Yes	Yes	Pavement types will be reviewed during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0003	Construction works were taking place along the northern footpath during the walking audit. It was noted that temporary hoarding in certain locations was negatively impacting the ability for pedestrians to safely use the footpath. Documented opposite is the hoarding interacting with the bus stop sign to seriously curtail the available width for an able-bodied pedestrian to pass, notwithstanding the needs for a wheelchair user to pass. Consideration for disabled persons during construction must be incorporated in any Traffic Management Plans, particularly where other construction is taking place alongside the route.	N/A	N/A	Fence already removed and footpath updated
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0003	The layout of the tactile paving did not meet the requirements or recommendations of the NDA guidance. Where services chambers were located within the tactile paving, stick-on tactile paving was not applied.	Yes	Yes	All tactile paving requirements will be reviewed as part of the Detailed Design process
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0003	The recently constructed flood wall reduced the footpath beside the cycleway and also creates a pinch point in the footpath and two-way cycle track at the bridge creating a severe point of conflict between fast moving two-way cycle traffic in an area of high pedestrian volumes	Yes	Yes	Footpath increased and cycle track moved
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0003	Cobbles creating uneven and uncomfortable surface for accessing quay wall pedestrian route. These setts shall be removed within the direct line of travel and replaced with flags. Setts, similar to cobbles are difficult for wheelchair users and buggies to cross, create an uncomfortable surface to walk on, and may present a trip hazard.	Yes	Yes	Pavement types will be reviewed during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0003	The recently constructed flood wall reduced the footpath beside the cycleway and the cobbles create an uneven surface. Cobbles creating uneven and uncomfortable surface for accessing quay wall pedestrian route. These setts shall be removed within the direct line of travel and replaced with flags. Setts, similar to cobbles are difficult for wheelchair users and buggies to cross, create an uncomfortable surface to walk on, and may present a trip hazard.	Yes	Yes	Footpath increased and cycle track moved. Pavement types will be reviewed during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0003	The recently constructed flood wall reduced the footpath beside the cycleway and also creates a pinch point in the footpath and two-way cycle track at the bridge creating a severe point of conflict between fast moving two-way cycle traffic in an area of high pedestrian volumes	Yes	Yes	Footpath increased and cycle track moved.
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0003	Difficult path access to diving bell	N/A	N/A	Outside of scope of Proposed Scheme
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0003	The layout of the tactile paving did not meet the requirements or recommendations of the NDA guidance, by not extending to building lines.	Yes	Yes	Pavement types will be reviewed during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0003	The layout of the tactile paving did not meet the requirements or recommendations of the NDA guidance, by not extending to back of path	Yes	Yes	Pavement types will be reviewed during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0003	Metal feature protruding from asphalt surface a potential trip hazard	Yes	Yes	This will be reviewed during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0003	Hazard tactile paving used elsewhere to warn of shared space/ segregated facilities. Inconsistent use. Design out shared spaces where possible	Yes	Yes	Pavement types will be reviewed during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0003	Antique setts creating uneven and uncomfortable surface. These setts shall be removed within the direct line of travel and replaced with flags. Setts, similar to cobbles are difficult for wheelchair users and buggies to cross, create an uncomfortable surface to walk on, and may present a trip hazard.	Yes	Yes	Pavement types will be reviewed during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0003	Failed concrete flags create an uneven and uncomfortable surface to walk on and may present a trip hazard.	Yes	Yes	Pavement types will be reviewed during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0003	Road sign severely restricting effective footpath width. The extent of existing traffic signs and posts shall be reviewed to identify those that can be removed or relocated to lighting columns or other signposts. The need for new traffic signs shall be done with a view to only providing those that are statutorily required.	N/A	N/A	Outside of scope of Proposed Scheme
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0003	Café seating restricting footpath width (private landing)	N/A	N/A	Outside of scope of Proposed Scheme
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0003	The existing bollards restrict effective width of footpath. There is a need to check that the size of the pavement is in compliance with the documents.	Yes	Yes	The use of and need for the extent of bollards along the quays will be reviewed during Details Design, and only used where there is an overwhelming reason to do so.
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0003	No hazard tactile paving in proximity of steps up to Irish Emigration Museum. Corduroy tactile paving, buff in colour or in a high contrast colour to the surrounding footpath material, is used to identify step hazards for visually impaired pedestrians. Corduroy tactile paving is laid perpendicular to the line of travel and located at the top and bottom of a flight of steps.	Yes	Yes	Pavement types will be reviewed during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0003	Ramps and dished kerbs create difficult crossing conditions. Design using one or other. Preferably raised flush crossings	Yes	Yes	The junction has been updated, with pedestrian crossings realigned and ramps on South Quay removed. Pavement and kerb types will be reviewed during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0003	The layout of the tactile paving did not meet the requirements or recommendations of the NDA guidance. Where services chambers were located within the tactile paving, stick-on tactile paving was not applied	Yes	Yes	All tactile paving requirements will be reviewed as part of the Detailed Design process
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0003	The layout of the tactile paving did not meet the requirements or recommendations of the NDA guidance.	Yes	Yes	All tactile paving requirements will be reviewed as part of the Detailed Design process
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0003	No hazard tactile paving at crossing. Buff tactile paving shall be used at uncontrolled crossings.	Yes	Yes	All tactile paving requirements will be reviewed as part of the Detailed Design process

Scheme: Ringsend to City Centre				
Drawings	Assessment Comments	To Be Completed By Designer		
		Problem/Observation Accepted (yes/no/n/a)	Recommended measure accepted (yes/no/n/a)	Designers Comments
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0003	There is no dish access to the footpath from parking space. This would make it difficult for the disable user to transfer safely between the footpath and the car without an aid, and also prevents access to the rear of the car using a ramp or tail lift.	Yes	Yes	Kerb types will be reviewed during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0003	The layout of the tactile paving did not meet the requirements or recommendations of the NDA guidance.	Yes	Yes	All tactile paving requirements will be reviewed as part of the Detailed Design process
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0003	No hazard tactile paving at crossing. Buff tactile paving shall be used at uncontrolled crossings.	Yes	Yes	All tactile paving requirements will be reviewed as part of the Detailed Design process
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0004	The existing bollards restrict effective width of footpath. There is a need to check that the size of the pavement is in compliance with the documents.	Yes	Yes	The use of and need for the extent of bollards along the quays will be reviewed during Details Design, and only used where there is an overwhelming reason to do so.
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0004	No kerb height resulting in vehicles encroaching on footpath	Yes	Yes	Kerb types will be reviewed during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0004	Poor drainage at Castleforbes Road. The gradients of the road carriageway at the crossing points shall be designed to ensure water drains away from the line of travel.	Yes	Yes	Drainage will be reviewed during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0004	There is no dish access to the footpath from parking space. This would make it difficult for the disable user to transfer safely between the footpath and the car without an aid, and also prevents access to the rear of the car using a ramp or tail lift.	N/A	N/A	Parking spaces removed
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0004	There is no dish access to the footpath from parking space. This would make it difficult for the disable user to transfer safely between the footpath and the car without an aid, and also prevents access to the rear of the car using a ramp or tail lift.	N/A	N/A	Parking spaces removed
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0004	Drainage channel in crossing potentially difficult crossing for wheelchair or buggy wheels get caught	Yes	Yes	This will be reviewed during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0004	location of bin potential hazard for visually impaired pedestrian using step edge travelling west.	Yes	Yes	Street furniture will be relocated appropriately during detailed design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0004	A short ramp and 3 steps are provided opposite the Central Bank. A handrail has not been provided between the ramp and steps at this location. The NDA guidance document states that where the clear width of a flight of steps is greater than 2m, additional handrails should be provided to divide the steps into channels. At over 8m wide, these steps should have multiple channels of handrails. In both instances however, where possible, these changes in level should be designed out since the changes in level do not appear significant	Yes	Yes	It is proposed to remove the steps. This will be reviewed during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0004	Inconsistent handrail. No knee rail	N/A	N/A	Outside of scope of Proposed Scheme
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0004	Drainage issues on the footpaths particularly where sections of paving slabs have collapsed, causing rainwater to be trapped in the vertical deviations.	N/A	N/A	Outside of scope of Proposed Scheme
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0004	metal studs used in lieu of hazard tactile paving. Incorrect use of texture and potential slip hazard	Yes	Yes	Pavement types will be reviewed during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0004	Fencing present during audit adjacent to sign creating severe pinch point	N/A	N/A	Outside of scope of Proposed Scheme
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0004	The effective width footpaths is constrained by some vegetation overgrowth	N/A	N/A	Outside of scope of Proposed Scheme
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0004	Asphalt was used for footpath repair, in lieu of replacing removed flagstones, creating undulations in the surface and potential trip hazards due to poor finishing. Where such paving flags have been removed and patch repaired with asphalt, the asphalt shall be broken out and the flags replaced	N/A	N/A	Outside of scope of Proposed Scheme
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0004	Drainage issues on the footpaths particularly where sections of paving slabs have collapsed, causing rainwater to be trapped in the vertical deviations.	N/A	N/A	Outside of scope of Proposed Scheme
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0004	The footpath does not have any tactile paving to warn of the step hazard.	Yes	Yes	All tactile paving requirements will be reviewed as part of the Detailed Design process
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0004	Lamp post located in centre of footpath	Yes	Yes	Public lighting will be relocated appropriately during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0004	Cobble lock paving was used instead of tactile paving. The tactile paving at all crossing points shall be reviewed	Yes	Yes	All tactile paving requirements will be reviewed as part of the Detailed Design process
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0004	No hazard tactile paving at crossing. Buff tactile paving shall be used at uncontrolled crossings.	Yes	Yes	All tactile paving requirements will be reviewed as part of the Detailed Design process
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0004	Failed concrete create an uneven and uncomfortable surface to walk on and may present a trip hazard.	Yes	Yes	Pavement types will be reviewed during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0004	Failed concrete flags create an uneven and uncomfortable surface to walk on and may present a trip hazard.	Yes	Yes	Pavement types will be reviewed during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0004	Bollards located in direct line of travel	Yes	Yes	The use of and need for the extent of bollards along the quays will be reviewed during Details Design, and only used where there is an overwhelming reason to do so.
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0004	No hazard tactile paving in proximity of steps. Corduroy tactile paving, buff in colour or in a high contrast colour to the surrounding footpath material, is used to identify step hazards for visually impaired pedestrians. Corduroy tactile paving is laid perpendicular to the line of travel and located at the top and bottom of a flight of steps.	Yes	Yes	All tactile paving requirements will be reviewed as part of the Detailed Design process
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0004	On a minor access street was noted on the south quays where pedestrians have not been given crossing priority over it. This is reinforced through the presence of tactile paving despite the continuation of pavement materials. It is recommended that priority be given to pedestrians across all accesses to reduce the level of uncertainty over priority on what appears to be footpath	Yes	Yes	Footpath and crossing updated
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0005	Significant change in level between footpath and amenity area. To be designed out if possible	Yes	Yes	Done
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0005	Guardrail to be replaced if level change no designed out	N/A	N/A	Outside of scope of Proposed Scheme
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0006	The shared space is insufficient for the volumes of both pedestrians and cyclists that are forced to interact with each other.	Yes	Yes	Junction updated
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0006	No means of access for disabled or visually impaired	N/A	N/A	Outside of scope of Proposed Scheme
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0006	On York Road, the bollards to Pembroke Cottages are tightly spaced and placed in such a manner that a wheelchair user travelling from the east is forced to make what appears to be a 180 degree turn to access the footpath on Pembroke Cottages [southbound]. The use of bollards to restrict vehicular access should be reconfigured to provide easier access by all mobility impaired pedestrians, with minimum spacing of 1.2m between bollards.	Yes	Yes	The use of and need for the extent of bollards should be reviewed during Detailed Design, and only used where there is an overwhelming reason to do so.
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0006	The existing pedestrian crossing have dropped kerbs with inadequate width preventing wheelchair users and pushchairs from navigating the crossings comfortably and no tactile paving	Yes	Yes	Kerbs types will be reviewed during Detailed Design. All tactile paving requirements will be reviewed as part of the Detailed Design process
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0006	drainage issue in road surface	Yes	Yes	This will be reviewed during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0006	The placement of the bench and planter pot restricts the effective width of the footpath and has the potential to force weaving manoeuvres for wheelchair users and visually impaired pedestrians with guide dogs or canes. These planter pots and benches shall be relocated during construction to prevent such conflicts occurring again	Yes	Yes	Street furniture will be relocated appropriately during detailed design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0006	Asphalt was used for footpath repair, in lieu of replacing removed flagstones, creating undulations in the surface and potential trip hazards due to poor finishing. Where such paving flags have been removed and patch repaired with asphalt, the asphalt shall be broken out and the flags replaced	Yes	Yes	Pavement types will be reviewed during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0006	Private landing where vehicles parked. Intimidating environment	N/A	N/A	Outside of scope of Proposed Scheme
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0007	There is currently no means for visually or mobility impaired users to travel straight from Pigeon House Road to York Road due to a lack of dropped kerbs to the refuge islands at the roundabout and a complete absence of tactile paving. The layout of this roundabout should be reviewed and, if possible, the geometry made more constrained to reduce crossing widths for pedestrians, to discourage parking within the roundabout itself, and to encourage slower travelling speeds by motorists.	Yes	Yes	Pavement and kerbs types will be reviewed during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0007	The placement of the bench and planter pot restricts the effective width of the footpath and has the potential to force weaving manoeuvres for wheelchair users and visually impaired pedestrians with guide dogs or canes. These planter pots and benches shall be relocated during construction to prevent such conflicts occurring again	Yes	Yes	Street furniture will be relocated appropriately during detailed design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0007	Guardrail present due to pedestrian link and traffic calming ramp located in line. Move ramp in design or replace guardrail	Yes	Yes	This will be reviewed during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0007	There is no dish access to the footpath from parking space. This would make it difficult for the disable user to transfer safely between the footpath and the car without an aid, and also prevents access to the rear of the car using a ramp or tail lift.	Yes	Yes	Kerbs types will be reviewed during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0008	Guardrail present due to pedestrian link and traffic calming ramp located in line. Move ramp in design or replace guardrail	Yes	Yes	This will be reviewed during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0009	There is no dish access to the footpath from parking space. This would make it difficult for the disable user to transfer safely between the footpath and the car without an aid, and also prevents access to the rear of the car using a ramp or tail lift.	Yes	Yes	Kerbs types will be reviewed during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0009	Traffic poles located in direct line of travel	Yes	Yes	Traffic poles will be relocated appropriately during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0009	No dish access toward ringsend park	Yes	Yes	Kerbs types will be reviewed during Detailed Design

Scheme: Ringsend to City Centre				
Drawings	Assessment Comments	To Be Completed By Designer		
		Problem/ Observation Accepted (yes/no/n/a)	Recommended measure accepted (yes/no/n/a)	Designers Comments
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0009	On road drainage issue. Area could be misinterpreted as shared area. Heavy parking area with cars mounted on footpath	Yes	Yes	Pavement types and drainage will be reviewed during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0009	On Cambridge Road the dropped kerbs at the uncontrolled crossings are located on the curve of the road and not in the direct line of travel at any of junctions with Pembroke Cottages and Cambridge Park. Locating the dropped kerbs on the curve of a road can cause a risk of visually impaired users being misdirected by the orientation of the kerb.	Yes	Yes	Pavement and Kerbs types will be reviewed during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0009	No hazard tactile paving at crossing. Buff tactile paving shall be used at uncontrolled crossings.	Yes	Yes	All tactile paving requirements will be reviewed as part of the Detailed Design process
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0009	No hazard tactile paving at crossing. Buff tactile paving shall be used at uncontrolled crossings. The dropped kerbs at the uncontrolled crossings are located on the curve of the road and not in the direct line of travel	Yes	Yes	All tactile paving requirements will be reviewed as part of the Detailed Design process. Pavement and Kerbs types will be reviewed during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0009	Access gate too narrow for pedestrians and cyclists to use. Provide a wider gate/ entrance and minimise or design out any shared interactions between modes	Yes	Yes	Wider gate provided
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0010	Gated entrance too narrow to segregate pedestrians from cyclists. Provide wider gate/ entrance	Yes	No	The existing entrance is wide enough to allow a shared entrance.
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0010	No hazard tactile paving at crossing. Buff tactile paving shall be used at uncontrolled crossings.	Yes	Yes	Crossing for cyclist and pedestrian updated with ramp. Pavement types will be reviewed during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0010	No hazard tactile paving at crossing. Buff tactile paving shall be used at uncontrolled crossings.	Yes	Yes	Crossing for cyclist and pedestrian updated with ramp. Pavement types will be reviewed during Detailed Design
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0010	No hazard tactile paving in proximity of steps. Corduroy tactile paving, buff in colour or in a high contrast colour to the surrounding footpath material, is used to identify step hazards for visually impaired pedestrians. Corduroy tactile paving is laid perpendicular to the line of travel and located at the top and bottom of a flight of steps.	Yes	Yes	All tactile paving requirements will be reviewed as part of the Detailed Design process
BCIDD-ROT-PMG_PS-0016_XX_00-AU-CR-0010	The effective width footpaths is constrained by some vegetation overgrowth	N/A	N/A	Outside of scope of Proposed Scheme