

URS

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Public Inquiry
Technical Paper

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Provision Summary

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TABLE OF CONTENTS	1.	INTRODUCTION.....	1
	2.	REVISED YORK STREET ROAD LAYOUT	1
	2.1	Original Road Layout	1
	2.2	Summary of Public Consultation Responses.....	1
	2.3	Revised Road Layout.....	2
	3.	COMPARISON OF CYCLING PROVISION WITH LCDS .	3
	4.	SUSTRANS OBJECTIONS TO THE PROPOSED SCHEME.....	13
		APPENDIX A CYCLING DRAWINGS	

1. INTRODUCTION

This paper describes the proposed changes to the layout of the Proposed Scheme in response to views raised as part of the statutory public consultation process and subsequent meetings with DRD Cycling Unit and Sustrans.

In June 2015, TransportNI adopted the London Cycling Design Standards (LCDS) (TfL, 2014) as its design manual going forward for the design of cycling schemes in Belfast. The revised layout for York Street within the Proposed Scheme has been developed in line with these standards, although it is recognised that it has not been possible to fully comply with all aspects of the standards owing to the constraints presented by existing built infrastructure engineering constraints.

A brief description of the revised layout is presented in Section 2 of this paper, with a comparison between the requirements of the LCDS and the provision within the revised layout included in Section 3. Where it has not been possible to meet the LCDS, an explanation is provided. Section 4 outlines the background to Sustrans' objection to cycling provision within the Proposed Scheme and the efforts made to address these concerns to their satisfaction.

2. REVISED YORK STREET ROAD LAYOUT

2.1 Original Road Layout

In the original road layout for York Street, presented for public consultation in February 2015, cycle lanes were proposed in both northbound and southbound directions, reflective of normal provision for cycling within Belfast City Centre. In the northbound direction, a mandatory 1.5m wide cycle lane was proposed between Frederick Street and Dock Street, whilst in the southbound direction, a 1.5m wide cycle lane was proposed between Dock Street and Galway House, with a shared bus/cycle lane of 3.5m width proposed between Galway House and Frederick Street.

A drawing showing the original layout on York Street is included for reference in Appendix A.

Consultation on the proposed layout had been undertaken in May 2014 with DRD Cycling Unit, who had considered that quieter routes away from York Street, such as North Queen Street, should be enhanced with additional measures/provision. Nonetheless, the design team considered that some provision for cycling should be incorporated reflecting the envisaged provision within the Belfast Metropolitan Transport Plan and the shown provision was thereafter included.

2.2 Summary of Public Consultation Responses

A significant proportion of responses to the statutory public consultation were objections to the scheme on the basis of its cycling provision. In general, these objections were on the basis that:

- 2m wide segregated cycle lanes should be provided in both directions, with segregation by kerb (whether in the form of a kerbed island or a stepped lane)
- the shown advanced stop lines (ASLs), many of which were reflective of existing markings, were not acceptable to cyclists
- the proposed signalised junctions did not incorporate any measures to prioritise the movement of cyclists over other motorised road users

- bus stop bypasses were not included
- a number of left-turning lanes for vehicles cut across cycle lanes
- provision for cyclists at the junction of York Street and Frederick Street, given the relocation of the university campus
- provision for cyclists at the junction of York Street and Dock Street, particularly their access to Yorkgate railway station.

A notable objector to the proposal was Sustrans and accordingly, TransportNI and URS engaged with Sustrans to identify opportunities to address their concerns. A revised layout has been prepared that addresses the majority of concerns and this is described in Section 2.3.

As highlighted above, a number of objectors have raised concerns over the provision for cyclists at the junction of York Street and Frederick Street. However, TransportNI is separately developing, in conjunction with DSD, plans to change the layout of the junction as part of the Belfast Streets Ahead Phase 3 project and therefore any related objections on this basis cannot be addressed within the remit of the Proposed Scheme. Similarly, a number of objectors have raised concerns over the provision for cyclists at the junction between Dock Street and York Street, specifically for onward connection to the Yorkgate railway station. As the Proposed Scheme terminates at the southern arm of this junction, TransportNI considers that any further changes to the junction to improve cycling provision should be undertaken as a separate scheme. Importantly, the interim layout in the Proposed Scheme would not preclude such a scheme from being completed.

2.3 Revised Road Layout

Following consultation with both DRD Cycling Unit and Sustrans, a number of changes have been proposed for the layout of York Street to address concerns raised. These are outlined below.

- Widening of the northbound cycle lane to a minimum width of 1.75m, with 2m typically provided along the majority of its length. This has required a reduction in the width of remaining traffic lanes and footway widths.
- Widening of the southbound cycle lane to a width of between 1.75m and 2m between the junction with Dock Street and Galway House, before increasing in width to 2m as it bypasses the jug-handle arrangement. Thereafter, a 1.5m dedicated width is provided southbound between Galway House and Frederick Street within a wider shared 4.5m wide bus lane.
- Continuation of cycle lanes through junctions as recommended by LCDS.
- Separation of the cycle lanes, where running adjacent to general purpose traffic lanes, using light segregation in the form of cycling bollards. Segregation will be via road marking only in the shared bus/cycle lane, as permitted by LCDS.
- The relocation of cycle lanes at junctions to minimise the conflict between cyclists and left-turning traffic.
- The use of a bus stop bypasses adjacent to the existing bus stop at Cityside Retail Park and a potential new bus stop in the southbound direction in a similar location. The

number and layout of these bus stops and cycle bypasses would be further considered as part of detailed design.

- A revised junction arrangement at the start of the southbound bus lane to allow cyclists to cross over into the southbound bus lane without conflict from other road users.

3. COMPARISON OF CYCLING PROVISION WITH LCDS

The published LCDS makes recommendations for several key aspects for cycling provision, including:

- cycle lane widths
- stepped cycle tracks
- kerb segregated cycle tracks
- light segregation
- mandatory cycle lanes
- bus stop bypasses
- shared bus/cycle lanes
- cycle lanes at priority junctions
- cycle lanes at signalised junctions
- hold the left turn at signalised junctions
- two-stage right turn at signalised junctions
- advanced stop lines at signalised junctions.

Table 1 provides a summary of how these aspects have been considered within the revised layout for York Street.

Table 1: Comparison between key aspects of LCDS and provision in revised York Street layout

LCDS Recommendations	Revised York Street Cycling Provision
Cycle Lane Widths	
<p>Para 4.4.1 Recommended lane and track widths</p> <p><i>Recommended minimum cycle lane width – 2m (Figure 4.11)</i></p> <p><i>Lanes of 1.5 to 2m may be acceptable provided that the adjacent traffic lane does not have fast-moving traffic and a high proportion of HGVs and is not less than 3.2m wide (Figure 4.11)</i></p> <p>Para 4.3.7 Shared bus/cycle lanes</p> <p><i>“...For bus lanes of 4.5 metres or above, a mandatory cycle lane of at least 1.5 metres in width may be included on the nearside. This offers cyclists some degree of separation from other users of a bus lane...”</i></p>	<p><u>General Approach</u></p> <ul style="list-style-type: none"> • 2m wide cycle lanes provided where possible. <p><u>York Street northbound:</u></p> <ul style="list-style-type: none"> • 2m wide cycle lanes provided from Great Patrick Street to Cityside Retail Park. • 1.75m wide cycle lane provided from the northbound bus stop at Cityside Retail Park to Dock Street junction. Providing more than this would require reduction in lane and footway widths below acceptable standards. It should be noted that lane widths are already at minimum of 3m i.e. less than that recommended by LCDS even to fit in the increased cycle lane width of 1.75m. <p><u>York Street southbound:</u></p> <ul style="list-style-type: none"> • 2m wide cycle lane from Dock Street junction past bus stop bypass before reducing to 1.75m in width at junction for access to Galway House. The 1.75m width is continued southbound to start of the jug-handle junction. • Cycle lane width increases to 2m over section past the jug-handle at Galway House, where the cycle lane runs around the back of the jug-handle loop. • 1.5m cycle lane from signalised junction at York Street/M2 on-slip, over the York Street bridges and continued to Great Patrick Street junction to allow for minimum lane widths and minimum footway widths. A width of 1.5m is considered acceptable by LCDS for shared bus/cycle lanes.

LCDS Recommendations	Revised York Street Cycling Provision
Stepped cycle tracks	
<p>Para 4.2.5 Stepped Cycle Tracks</p> <p><i>“Stepped tracks are vertically separated from the footway and main carriageway in order to provide greater protection, safety and comfort than a cycle lane. They offer less separation and less protection than kerb-segregated lanes/tracks, but they may be regarded as a more subtle intervention and can offer more flexible access to the kerbside.”</i></p> <p>Para 4.2.3 Segregated cycle lanes/tracks</p> <p><i>“...It should be noted that physical barriers reduce the effective width of the facility – 200mm for a low upstand such as a kerb...”</i></p> <p>Para 4.3.4 Light segregation</p> <p><i>“...Cyclists stay further from lower separating objects but are more comfortable riding nearer to moving motor vehicles where they are separated by high objects such as flexible posts. This is an important consideration for the effective width of the cycle lane, and the potential for overtaking within the lane...”</i></p>	<p><u>General Approach</u></p> <ul style="list-style-type: none"> Stepped cycle tracks have not been included within the revised layout as they would have created issues for the road drainage proposals and required a wider cycle lane that could not be accommodated within the constraints of the scheme. <p><u>Explanation</u></p> <ul style="list-style-type: none"> York Street, particularly the sections north and south of the proposed bridges, is relatively wide and flat. For such scenarios, combined kerb drainage (CKD) units are proposed in lieu of kerb and gulleys to avoid ponding of surface water run-off. Furthermore, on bridge structures, CKD units are proposed (and typically used) in lieu of kerb and gully systems for durability reasons. CKD units available on the market do not have the shallow (50mm) upstand recommended for a stepped track layout (i.e. a 50mm upstand between the running lane and the cycle lane). Typically the kerbs are of a half-battered shape with an upstand in the range of 75-100mm. The use of a CKD kerb in such a scenario (with a typical 100mm upstand) would increase the risk to cyclists of clipping a pedal on the kerb. There is therefore a resultant loss in effective width within the cycle lane to cyclists (c. 200mm) and to overcome this, the cycle lane would have to be further widened. Such additional width is not available within the constraints of existing built infrastructure and the clearance envelopes to the new underpasses. It is noted from LCDS that the use of alternative light segregation methods would have a lower reduction in effective width to cyclists.

LCDS Recommendations	Revised York Street Cycling Provision
Kerb segregated cycle tracks	
<p>Para 4.2.3 Kerb segregated cycle lanes/tracks</p> <p><i>“Segregated lanes and tracks involve the use of features such as kerbs, separating strips, islands grass verges or lines of planting to create a continuous physical barrier between moving motor vehicles and cyclists on links...”</i></p> <p><i>“Recommended minimum width for islands segregating one-way, with-flow cycle traffic (Figure 4.8):</i></p> <ul style="list-style-type: none"> - 0.5m (on a link) - 1.0m (at the beginning of the segregation to accommodate a blank bollard (300mm wide))” <p>Para 4.3.4 Light segregation</p> <p><i>“...Cyclists stay further from lower separating objects but are more comfortable riding nearer to moving motor vehicles where they are separated by high objects such as flexible posts. This is an important consideration for the effective width of the cycle lane, and the potential for overtaking within the lane...”</i></p>	<p><u>General Approach</u></p> <ul style="list-style-type: none"> • The use of kerb segregated cycle lanes has been ruled out on the basis of the width required for the cycle lane and the required use of battered/splay kerbs on the inside faces of the route to mitigate the risk of cyclists clipping pedals. <p><u>Explanation</u></p> <ul style="list-style-type: none"> • As per LCDS, the minimum width of a separation island would be 500mm, increasing at beginning of the island to 1m to allow for the use of a bollard to direct motorised road users. • Allowing for a 2m wide cycle lane, this would therefore increase the overall width of the lane, plus segregation, to typically 2.5m, with a maximum of 3m required at the ends of the scheme. • The additional width required to facilitate this on both sides of York Street would not be available for its entire length owing to the constraints presented by existing built infrastructure and the clearance envelopes to the new underpasses. • In addition, the road drainage system would be based on the use of CKD units owing to the generally flat topography of York Street. Similar CKD units would also be used on the bridge decks of the new bridges at York Street, for durability reasons. • As per the guidance of para 4.2.3 of LCDS, kerbs on separation islands adjacent to cycle lanes should be battered or splay kerbs with an upstand of 50mm to ensure cyclists do not clip pedals etc. • CKD units available on the market do not have the shallow (50mm) upstand recommended for a stepped track layout (i.e. a 50mm upstand between the running lane and the cycle lane). Typically the kerbs are of a half-battered shape with an upstand in the range of 75-100mm. • The use of a CKD kerb in such a scenario (with a typical 100mm upstand) would increase the risk to cyclists of clipping a pedal on the kerb. • There is therefore a resultant loss in effective width within the cycle lane to cyclists (c. 200mm) and to overcome this, the cycle lane would have to be further widened. • Such additional width is not available within the constraints of existing built infrastructure and the clearance envelopes to the new underpasses. • It is noted from LCDS that the use of alternative light segregation methods would have a lower reduction in effective width to cyclists.

LCDS Recommendations	Revised York Street Cycling Provision
Light segregation	
<p>Para 4.3.4 Light segregation</p> <p><i>“Light segregation refers to the use of physical objects intermittently placed alongside a cycle lane marking to give additional protection from motorised traffic...”</i></p> <p><i>“...Interim results from off-street trials show that in comparison to lane markings only, users felt safer when light segregation was placed next to the marking...”</i></p> <p><i>“...Cyclists stay further from lower separating objects but are more comfortable riding nearer to moving motor vehicles where they are separated by high objects such as flexible posts. This is an important consideration for the effective width of the cycle lane, and the potential for overtaking within the lane...”</i></p> <p><i>“...Types of light segregation that may be considered include:</i></p> <p><i>...pre-formed separators ...</i></p> <p><i>...planters...</i></p> <p><i>...flexible posts...”</i></p>	<p><u>General Approach</u></p> <ul style="list-style-type: none"> TransportNI has proposed this form of segregation for cycle lanes running adjacent to general purpose traffic lanes within the revised layout. <p><u>Explanation</u></p> <ul style="list-style-type: none"> In the revised layout, mandatory cycle lanes are proposed that are segregated by solid white lines and 920mm high cycle bollards at 3.2m centres on the northbound cycle lane on York Street. Cycling bollards have been used by TransportNI elsewhere on the road network and are currently proposed for other cycling improvements in the City Centre (i.e. at Alfred Street / Upper Arthur Street). Mandatory cycle lanes from the Dock Street junction to the jug-handle junction would have light segregation using a similar method. Once the cycle lane combines with the 4.5m wide bus lane, it is permitted under LCDS para 4.3.7 to reduce the cycle lane width to 1.5m and segregate only by a solid white line (i.e. without cycling bollards) as shown on the drawings.

LCDS Recommendations	Revised York Street Cycling Provision
Mandatory cycle lanes	
<p>Para 4.3.3 Mandatory cycle lanes</p> <p><i>“Mandatory cycle lanes, with a solid lane marking, are spaces on carriageway dedicated to cyclists within the signed hours of operation (if this is limited)....”</i></p> <p><i>“...it is usually recommended to break mandatory cycle lanes to allow motorised vehicles to cross legally (whilst giving way to cycle traffic)”</i></p> <p>Para 4.4.2 Traffic Lane Widths</p> <p><i>“...Where mandatory cycle lanes are provided, the adjacent general traffic lane must be at least 3.0 metres wide...”</i></p>	<p><u>General Approach</u></p> <ul style="list-style-type: none"> All cycle lanes proposed for York Street are mandatory lanes, changing to advisory lanes where appropriate at vehicular crossing points into accesses or left-turning lanes.
Bus stop bypasses	
<p>Para 4.2.8 Bus stop bypasses</p> <p><i>“...In a bus stop bypass, a segregated cycle lane or track continues through the bus stop area behind the shelter, thereby creating an island for passengers boarding the bus and alighting to the stop...”</i></p>	<ul style="list-style-type: none"> The final number, location and layout of bus stops on York Street would be confirmed as part of future detailed design work in consultation with Translink and Sustrans. Provisionally, two bus stops have been proposed within the revised layout, one northbound adjacent to Cityside Retail Park and one southbound in a similar position on the opposite site. A bus stop bypass has been proposed at the northbound bus stop. Shallow kerbs are used to define the cycle lane from the adjacent footway and bus stop area. This is a provisional design of this section. A bus stop bypass has also been proposed at the southbound bus stop.

LCDS Recommendations	Revised York Street Cycling Provision
Shared bus/cycle lanes	
<p>Para 4.3.7 Shared bus/cycle lanes</p> <p><i>“...For bus lanes of 4.5 metres or above, a mandatory cycle lane of at least 1.5 metres in width may be included on the nearside. This offers cyclists some degree of separation from other users of a bus lane...”</i></p>	<ul style="list-style-type: none"> • Along the York Street route within the scheme, the 4.5m bus lane over the York Street bridges includes a 1.5m mandatory cycle lane, segregated by a solid white line, from a 3m wide bus lane. 1.5m is the minimum width recommended by LCDS for a cycle lane within a 4.5m bus lane. • Cyclists and buses are required to share a lane in the southbound direction before the signalised junction at Great Patrick Street for approximately 4.8m. This is to allow for a minimum footway width of 2.5m on the southbound side of York Street.
Cycle lanes at priority junctions	
<p>Para 5.3.3 Cycle lanes at priority junctions</p>	<p><u>General Approach</u></p> <ul style="list-style-type: none"> • The number of priority junctions is limited in the layout and generally, it is proposed to use enhanced road markings to alert drivers to the presence of cyclists at junctions. <p><u>Explanation</u></p> <ul style="list-style-type: none"> • Dashed markings TSR diagram 1010, cycle symbol marking TSR diagram 1057 and coloured surfaces are used for cycle lanes at all priority junctions along York Street within the scheme extents. • In the revised layout, the northbound cycle lane is realigned to minimise the conflict with traffic entering the car park, with pedestrians and cyclists crossing on a ramp. The ramp is intended to slow approaching vehicle speeds. • The southbound cycle lane at Cityside Retail Park and the cycle lane on York Street carried through the Little York Street / Great George’s Street junction are highlighted with colour, dashed markings TSRGD diagram 1010 and cycle symbol marking TSRGD diagram 1057 to highlight that these paths should be crossed with care by other road users.

LCDS Recommendations	Revised York Street Cycling Provision
Cycle lanes at signalised junctions	
<p>Para 5.4 Signal controlled junctions</p>	<p><u>General Approach</u></p> <ul style="list-style-type: none"> • Cyclists will generally be subject to signal control at the junctions within the revised layout. Cycle lane markings will be continued through the junctions as per LCDS recommendations. • The layout of the signalised junctions at Frederick Street and Dock Street for cyclists will be addressed as part of other schemes being developed by TransportNI separate to this scheme. This will include the potential use of two-stage right turns for cyclists (with associated additional signalling and road markings). • Cyclists would not receive priority treatment at the other signalised junctions within the scheme and would proceed in flow along with other road traffic. The only exception to this would be the junction at the start of the southbound bus lane, where the movement of cyclists from the southbound cycle lane into the bus lane would be controlled by signals. The signals would not be provide “on-demand” priority to approaching buses/cyclists for traffic capacity reasons. • A right turn from the southbound bus/cycle lane on York Street into Great Georges Street would be prohibited by order.
Hold the left turn at signalised junctions	
<p>Para 5.4.5 Hold the left turn</p> <p><i>“...This requires some segregation of lanes, a dedicated left-turning lane for general traffic, space for inclusion of islands for signal infrastructure, and provision for right-turning cyclists...”</i></p>	<p><u>General Approach</u></p> <ul style="list-style-type: none"> • Hold the left turn is an option when there is a dedicated left turn lane for traffic, space for inclusion of islands for signal infrastructure and provision for right-turning cyclists. In essence, the left-turning traffic is held by signals until the associated ahead movement for other traffic lanes and cycle lanes is first completed, removing the potential conflict. • Such an arrangement would require separate signalling of the left turn and would therefore require changes to existing phasing and staging of signals. • The use of hold the left turn would preclude the use of auxiliary left-turning lanes at junctions which would normally operate on priority. The signalisation of this movement would also have an impact on the operational efficiency of the junction. • For these reasons, hold the left turn would only be proposed where there is a significant proportion of left-turning traffic. • Within the revised layout, left-turning movements would conflict with ahead cyclist movements at the junctions with Great Georges Street, Galway House, Yorkgate Business Park and Dock Street.

LCDS Recommendations	Revised York Street Cycling Provision
	<ul style="list-style-type: none"> • For the junction at Galway House, where traffic would sweep left to join the M2, the layout proposed would hold the left-turning traffic during the pedestrian phase, whereby cyclists would also be able to cross over into the start of the bus lane without conflict. • Elsewhere, at the junctions with Great Georges Street and Yorkgate Business Retail Park, the numbers of left-turning traffic are expected to be small and therefore hold the left turn arrangements are not proposed. • For the northbound approach to Dock Street, the existing auxiliary left turn lane is maintained, with the mandatory cycle lane reduced to an auxiliary cycle lane via road markings. The introduction of a hold the left turn arrangement would require the removal of this auxiliary lane and would have an impact on the layout and operational capacity of the junction. It is noted that changes to the junction to extend onward cycling provision to the train station, National Cycle Network (NCN) Route 93 and North Belfast would be beyond the defined scope of this scheme and would be delivered as part of a separate scheme by TransportNI. • The shown arrangement within the revised layout would however provide a basic level of provision for cyclists similar to other junction layouts in Belfast (e.g. the junction between Cregagh Road and Upper Knockbreda Road). As with these and other examples, it would be proposed to use coloured surfacing and road markings to highlight the presence of cyclists to drivers.
<p>Two-stage right turn at signalised junctions</p>	
<p>Para 5.4.7 Two-stage right turn</p> <p><i>“...The cyclist crosses one arm of the junction in an ahead movement, pulls into the left and stops beyond the pedestrian crossing studs on the arm adjacent where they started. They then turn through 90 degrees to face their exist arm and wait for the traffic signals to allow them a second ahead movement. In this way they can stay on the nearside and avoid having to move across lanes of traffic in order to turn right...”</i></p> <p><i>“...TfL is trialling a specific junction design that would enable a ‘formal’ two-stage right turn, with a marked waiting area and early release for cyclists...”</i></p>	<p><u>General Approach</u></p> <ul style="list-style-type: none"> • Two-stage right turns are not being proposed for the junctions internal to the extents of the Proposed Scheme, i.e. the junctions at Great Georges Street and Cityside Retail Park. • At Great Georges Street, right turns from York Street will be prohibited by order. • At the junction for Cityside Retail Park, it is expected that the numbers of right turning cyclists would be very low, pending the further development of the site. It is proposed to widen the crossing width at the staggered pedestrian crossing to form a toucan crossing with a width of 4.5m, suitable for both pedestrians and cyclists. • At this time, limited implementation of two-stage right turns have been carried out in the UK. • The layout of the junction with Frederick Street is being developed by TransportNI as part of the Belfast Streets Ahead Phase 3 proposal to incorporate two-stage right turns. It should be noted that this is a separate scheme to the Proposed Scheme. • The introduction of two-stage right turns to the Dock Street junction would require significant layout changes and

LCDS Recommendations	Revised York Street Cycling Provision
	<p>signalling changes to the junction beyond the defined extents of the Proposed Scheme. Such changes are being considered as part of a separate scheme being considered by TransportNI.</p>
<p>Advanced stop lines at signalised junctions</p>	
<p>Para 5.4.9 Advanced Stop Lines</p> <p><i>“Where provision for cyclists is on-carriageway and unsegregated, signalised junctions should incorporate an advanced stop line (ASL). Where they are properly enforced, ASLs and associated facilities can be used to give cyclists a basic level of service and some degree of priority, and they can help to raise driver awareness of cyclists...”</i></p> <p><i>“...ASLs should not, however, be relied upon alone as a measure to cater adequately for cyclists at signalised junctions...”</i></p>	<p><u>General Approach</u></p> <ul style="list-style-type: none"> • The introduction of segregated mandatory cycle lanes on York Street avoids the need for the use of ASLs in the majority of cases. • The only remaining ASL would be on approach to the Dock Street junction, where an existing ASL is maintained to provide an opportunity to allow cyclists to manoeuvre into right turning lanes. • The provision shown is considered an interim measure pending the development of a subsequent scheme by TransportNI/DRD Cycling Unit to extend cycling provision through the junction to Yorkgate railway station, NCN Route 93 and North Belfast.

4. SUSTRANS OBJECTIONS TO THE PROPOSED SCHEME

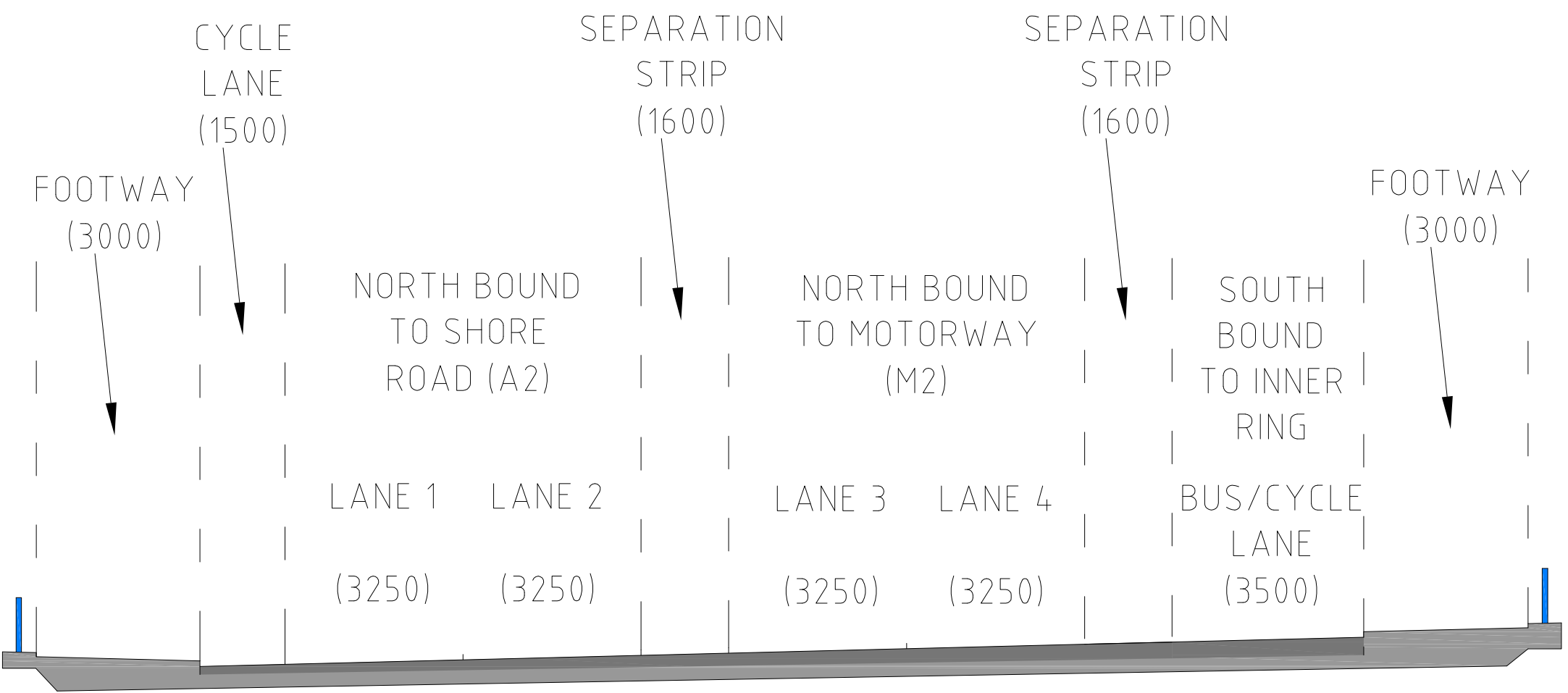
TransportNI has met with Sustrans to consider and refine its proposals for non-motorised users, particularly cyclists. As noted in Section 2.3, a significant number of changes have been made to the layout of York Street to address concerns raised over provision for cyclists. Sustrans has recognised that the revised layout represents a very significant improvement on the original design layout.

Sustrans have continued to provide comments to TransportNI on the developing layout, with a number of minor comments expected to be addressed in due course to their satisfaction.

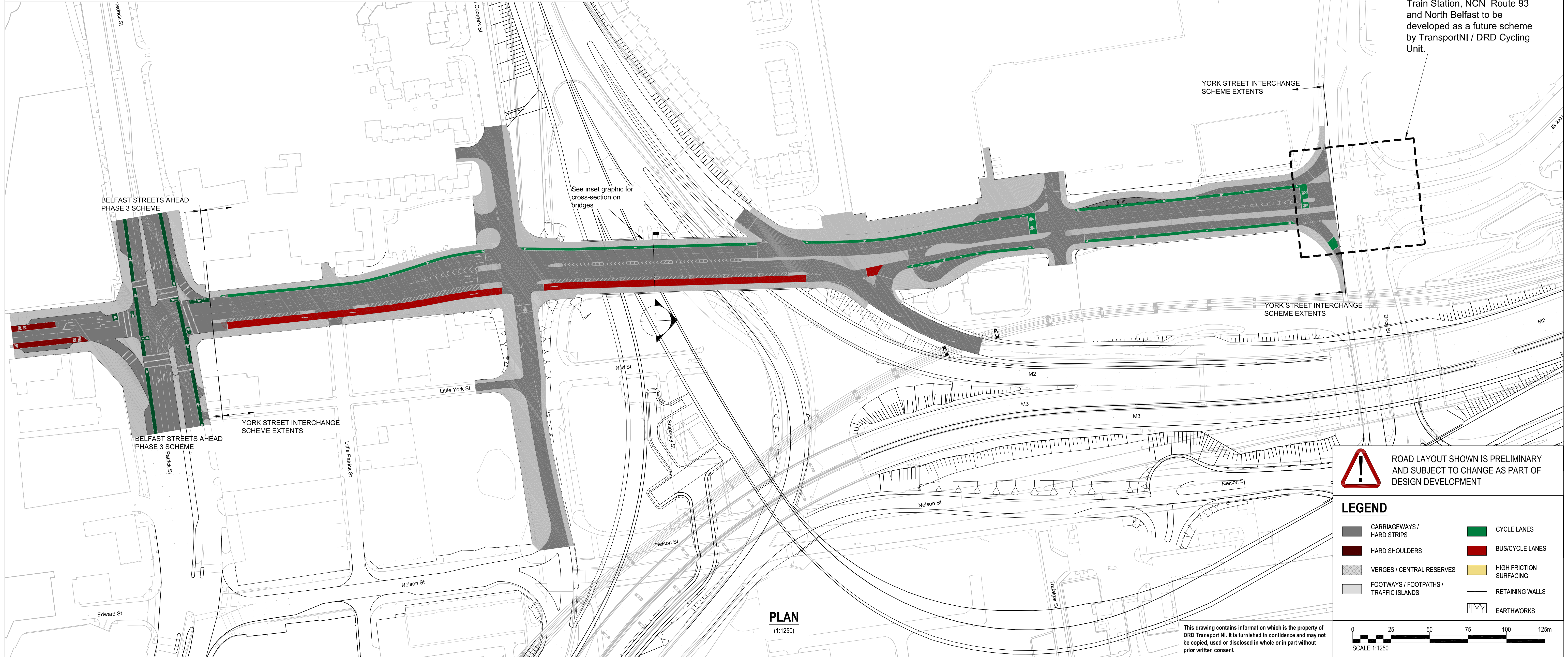
Whilst Sustrans has recognised that TransportNI has addressed the majority of their concerns, they are not in a position to fully endorse the proposals until changes to improve cycling provision at the Dock Street junction (including onward connections to the Yorkgate railway station, NCN Route 93 and North Belfast) are implemented.

TransportNI has noted on several changes that such changes would be beyond the defined extents of the Proposed Scheme. The changes requested by Sustrans would however be delivered by other schemes. The Belfast Streets Ahead Phase 3 scheme is presently considering improvements to cycling provision at the Frederick Street junction whilst the changes required at the Dock Street junction would be considered as part of a future scheme to be developed by TransportNI and DRD Cycling Unit.

APPENDIX A CYCLING DRAWINGS



**YORK STREET BRIDGES
SECTION 1-1**
(1:100)



N.B. Changes to Dock Street junction to facilitate onward cycling connections to Yorkgate Train Station, NCN Route 93 and North Belfast to be developed as a future scheme by TransportNI / DRD Cycling Unit.

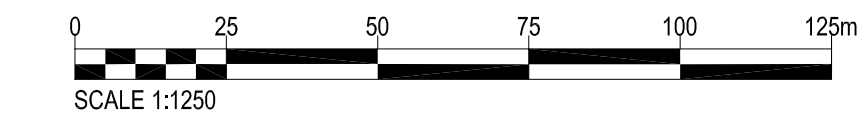
See inset graphic for cross-section on bridges

PLAN
(1:1250)

ROAD LAYOUT SHOWN IS PRELIMINARY AND SUBJECT TO CHANGE AS PART OF DESIGN DEVELOPMENT

LEGEND

CARRIAGEWAYS / HARD STRIPS	CYCLE LANES
HARD SHOULDERS	BUS/CYCLE LANES
VERGES / CENTRAL RESERVES	HIGH FRICTION SURFACING
FOOTWAYS / FOOTPATHS / TRAFFIC ISLANDS	RETAINING WALLS
	EARTHWORKS



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First Issue	EB	JM	28/10/15	P01
Revision Details	By	Check	Date	Suffix

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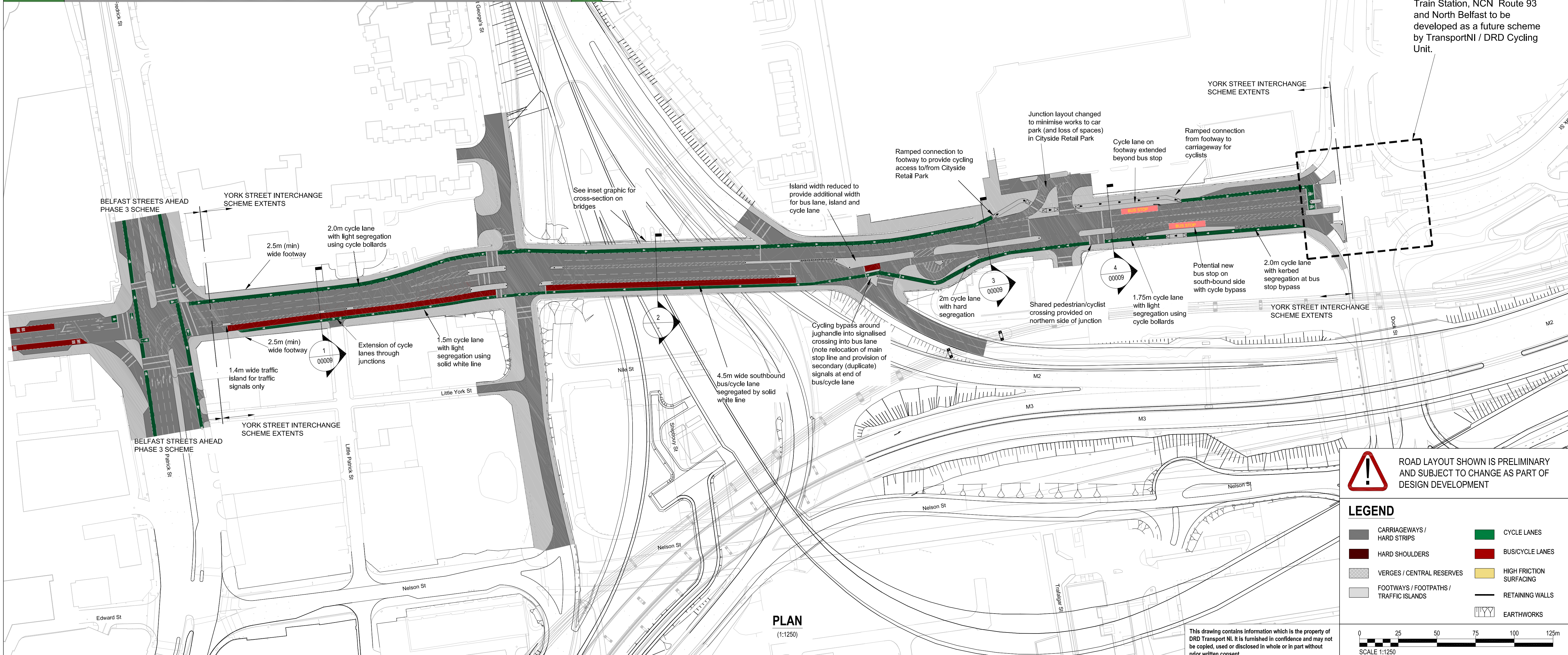
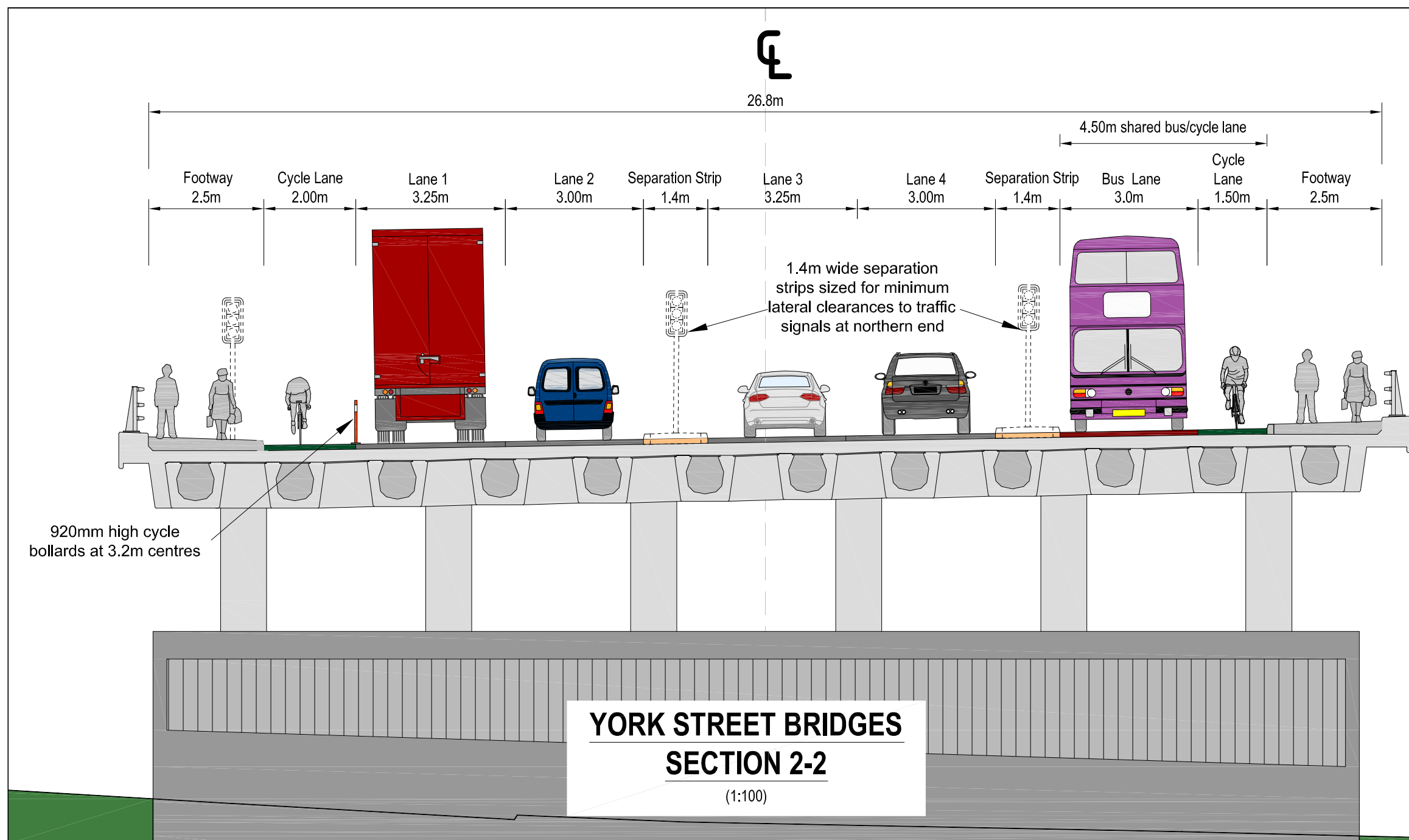
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Purpose of issue
INFORMATION

Client TRANSPORT NI	Project Title YORK STREET INTERCHANGE	Drawing Title YORK STREET INTERCHANGE PLAN NMU PROVISION PROPOSED SCHEME JAN 2015	Designed EB	Drawn EB	Checked JM	Approved JM	Date 28/10/15	URS Infrastructure & Environment Ltd (EMI) Beech Hill House 40 Beech Hill Road Belfast Tel: +44 2890 705 111 Fax: +44 2890 705 651 www.ursgroup.com		
			URS Internal Project No. 47037827	Sustainability Fit for Information						
			Scale @ A1 1:1250	Zone / Mileage Non-Motorised Users						
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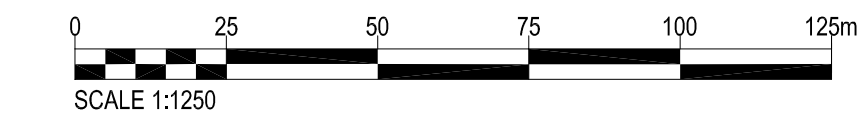


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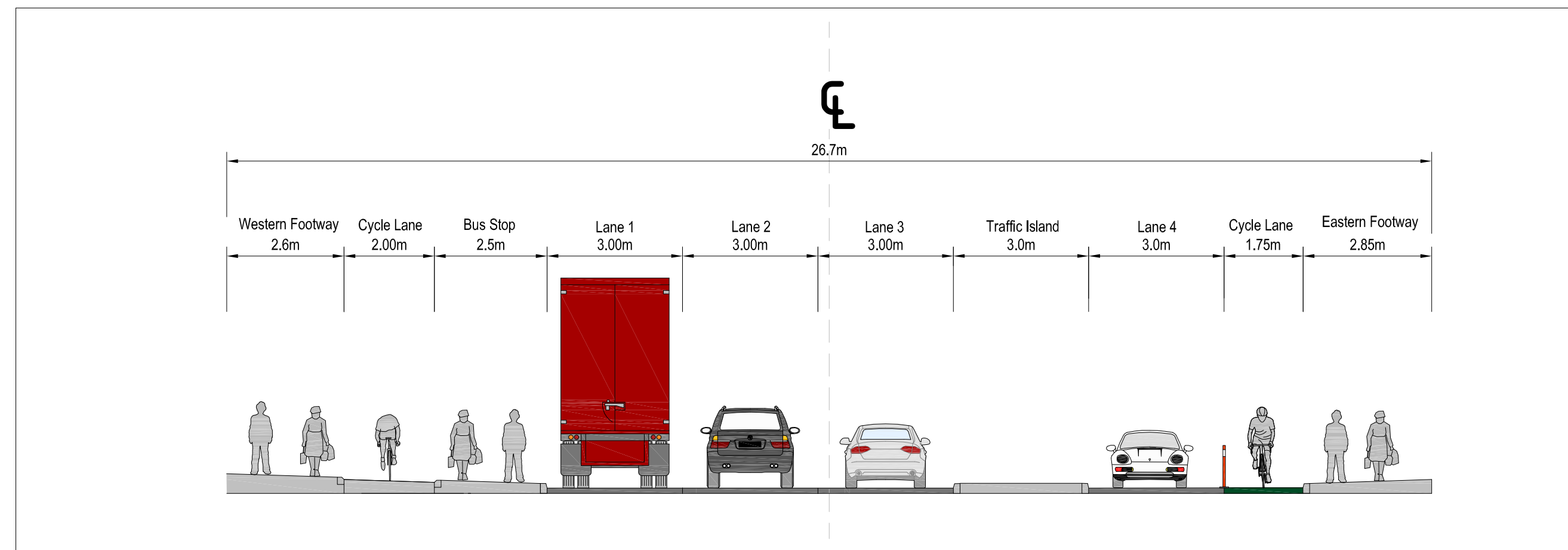
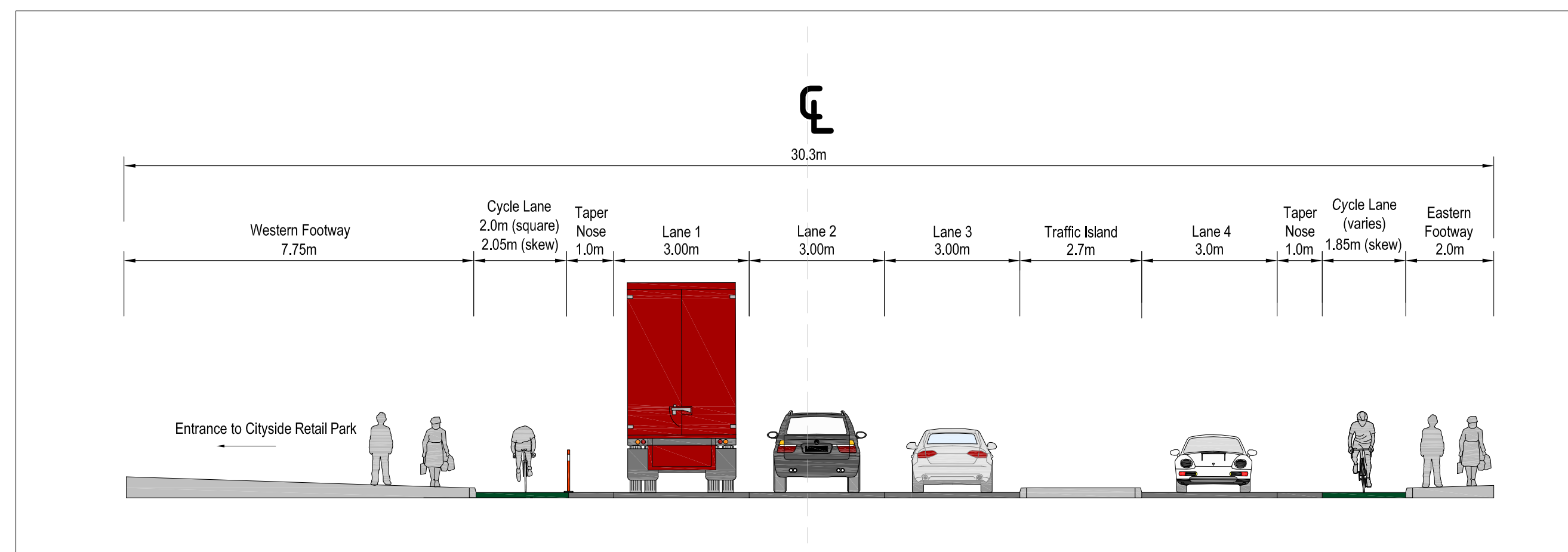
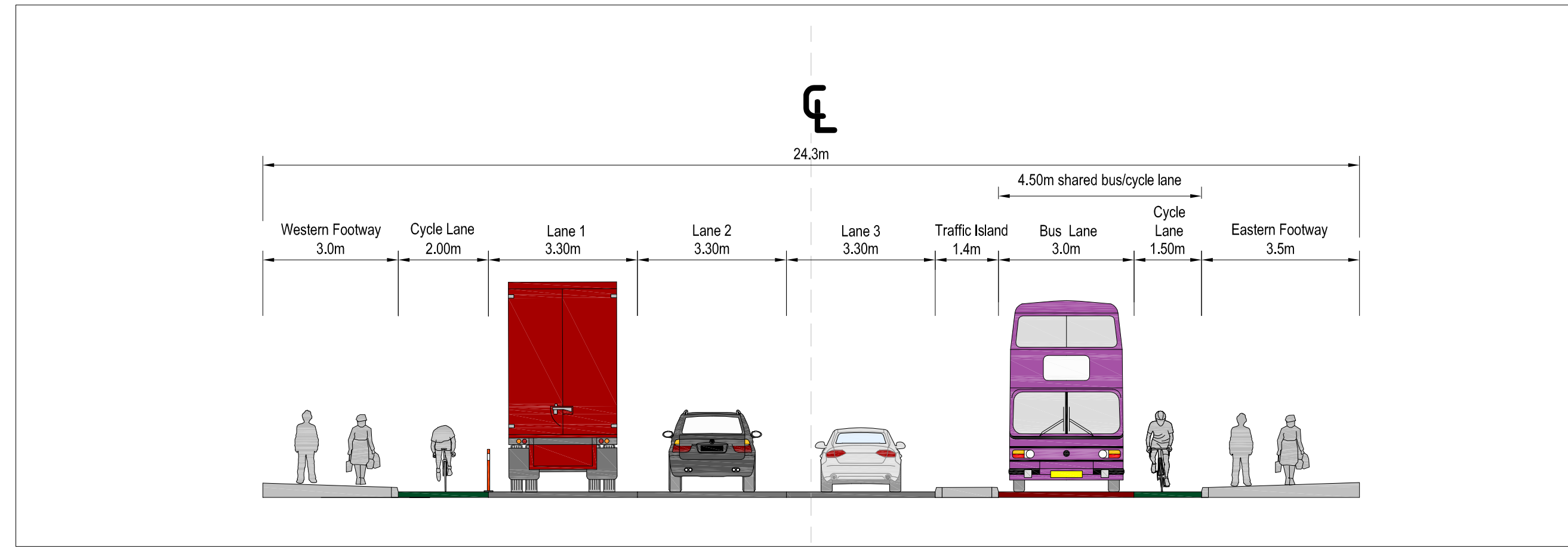
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LEGEND

	CARRIAGEWAYS / HARD STRIPS		CYCLE LANES
	HARD SHOULDERS		BUS/CYCLE LANES
	VERGES / CENTRAL RESERVES		HIGH FRICTION SURFACING
	FOOTWAYS / FOOTPATHS / TRAFFIC ISLANDS		RETAINING WALLS
	EARTHWORKS		

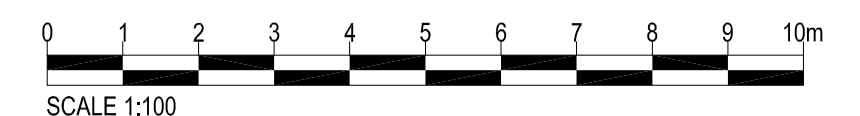


<p>General Revisions</p> <table border="1"> <tr> <th>Rev</th> <th>By</th> <th>Date</th> <th>Suffix</th> </tr> <tr> <td>1</td> <td>EB</td> <td>28/10/15</td> <td>P03</td> </tr> </table> <p>Revision Details</p>	Rev	By	Date	Suffix	1	EB	28/10/15	P03	<p>NOTES</p> <ol style="list-style-type: none"> THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DOCUMENTATION. DO NOT SCALE FROM THIS DRAWING. USE ONLY PRINTED DIMENSIONS. ALL DIMENSIONS IN MILLIMETRES. ALL CHANGES, LEVELS AND COORDINATES ARE IN METRES UNLESS DEFINED OTHERWISE. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE PROJECT HEALTH & SAFETY FILE FOR ANY IDENTIFIED POTENTIAL RISKS. 	<p>SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION BOX</p> <p>IT IS ASSUMED THAT ALL WORKS ON THIS DRAWING WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROPRIATE METHOD STATEMENT.</p> <p>THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE THAT IT WAS ISSUED FOR AND IS SUBJECT TO AMENDMENT.</p> <p>Purpose of issue</p>	<p>Client: TRANSPORT NI</p> <p>Project Title: YORK STREET INTERCHANGE</p> <p>Drawing Title: YORK STREET INTERCHANGE PLAN REVISED NMU PROVISION PRE-INQUIRY</p>	<p>Designed: EB Drawn: EB Checked: JM Approved: JM Date: 28/10/15</p> <p>URS Internal Project No. 47037827 Scale @ A1 1:1250 Zone / Mileage Non-Motorised Users</p> <p>URS Infrastructure & Environment Ltd (EMI) Beech Hill House 40 Beech Hill Road Belfast Tel: +44 2890 705 111 Fax: +44 2890 705 651 www.ursgroup.com</p> <p>Drawing Number: TNI_YSI-JRS-ENM-ZZ-DR-HY-000007 Rev: P03</p>
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	1	EB	28/10/15	P03								
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Revision Details	By	Date	Check	Suffix
Shallow kerbs introduced on cycle lane in Section 4-4	EB	28/10/15		P03

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Purpose of Issue
INFORMATION

Client
TRANSPORT NI

Project Title
YORK STREET INTERCHANGE

Drawing Title
**YORK STREET INTERCHANGE
TYPICAL SECTION
REVISED NMU PROVISION
PRE-INQUIRY**

Designed EB	Drawn EB	Checked JM	Approved JM	Date 28/10/15
URS Internal Project No. 47037827		Sustainability Fit for Information		
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