

Agenda Item	7
Report No	CIA 51/18

HIGHLAND COUNCIL

Committee: City of Inverness Committee

Date: 22 November 2018

Report Title: Riverside Way – Way Forward

Joint Report By: Director of Development and Infrastructure
Chief Executive High Life Highland

1. Purpose/Executive Summary

- 1.1 This report provides background to the development of the Riverside Way Project.
- 1.2 The Riverside Way Project brings together a series of related initiatives covering the whole area between the west side of the River Ness and the A82 Trunk Road (Glenurquhart Road) and the local roads of Tomnahurich Street and Young Street, stretching from the city centre to the new West Link.
- 1.3 The Project aims to make the Riverside area more accessible, more of a destination, with enhanced pedestrian and cycle connections.

2. Recommendations

- 2.1 Members are asked to:
 - i. note the contents of this report, including the background, engagement and feedback;
 - ii. delegate the Director of Development and Infrastructure, in consultation with the Provost and Depute Provost, to prepare and publish a series of Draft Road Traffic Regulation Orders covering the following proposals:
 - a. Inverness Riverside Area 20mph Speed Limit Order
 - b. Inverness Riverside - Ness Walk and Bught Road One Way Order
 - c. Inverness Riverside – Ness Walk and Bught Road Redetermination Order
 - d. Inverness Riverside Area Event Traffic Management Orderand to make the orders where there are no valid sustained objections.
 - iii. note that where there are valid and sustained objections an update report will be submitted to a future Committee; and
 - iv. subject to the making of the Road Traffic Regulation Orders, delegate the Director of Development and Infrastructure to further develop and implement the works associated with implementing the Road Traffic Regulation Orders.

3. Project Background

3.1 Policy context for the Riverside Way Project is taken from the Inner Moray Firth LDP (author emphasis highlighted below).

Central Inverness

*Maximising the economic potential of the Ness riverfront and Inverness waterfront by making it safer (flood alleviation scheme), more attractive (public art and other realm works), **more accessible (enhanced foot / cycle way provision) and more of a destination (tourism, leisure and cultural facility allocations).***

South Inverness

***Enhanced pedestrian and cycle connections** to existing sporting and recreational facilities at the Bught and Torvean and better access routes to the countryside.*

3.2 The Riverside Way Project was established to identify options for the design and management of the routes through this area, that will minimise the impact of major events on the local community, enhance active travel infrastructure (walking and cycling) and access to the Bught Area, and investigate options for improving amenity and the leisure experience in this part of the city.

3.3 Observations show that the level of regular activities taking place at various locations across the Bught Park area have increased substantially in recent years. The recent investment in the rugby pitches and pavilion and improvements at other key attractions have resulted in increased numbers of users regularly visiting the area. A notable activity that has seen considerable growth since first starting is the weekend Park Run.

3.4 The Bught Users Stakeholder Group, representing sporting organisations and businesses across the Bught Park area have previously discussed events and operational matters. The Group came to the conclusion that a one way system (southbound towards Bught Park) would enhance users experience and also assist with event traffic management.

3.5 Input across a range of Council Services covering active travel, events, traffic, roads operations, as well as High Life Highland has been fed into various stages of the Project.

3.6 Transport Consultants were appointed by the Council to prepare design options to improve the 'Riverside Way' in Inverness. A key feature of the Project involved internal and external consultations with stakeholders.

3.7 There are a number of initiatives that already exist or have already been started. These will continue/develop regardless of the outcome of any decisions for the Riverside Way Project. These separate initiatives include:

- Ballifeary Resident's Permit Parking Scheme;
- Events and Festivals already scheduled; and
- Riverside Arts Development.

4. Engagement and Potential Measures

4.1 The commission of the consultant placed much emphasis on consultation. The table below summarises the activities that were undertaken by the consultant and Council Officers.

Date	Activity
11/06/18	Press release about Project and appointment of consultant
25/06/18	Internal stakeholder meeting - Presentation and Q&A
	Elected Member meeting - Presentation and Q&A
	Communication with Bught Park Stakeholders – seeking key issues
19/07/18	Letter drop to properties about the upcoming consultation event
	Elected Member meeting – Presentation and Q&A
	Internal Stakeholder Group Meeting - Presentation and Q&A
	Public Engagement Sessions – Presentation and Q&A
08/10/18	Sustrans – Option Design Discussions
08/10/18	Ballifeary Community Council Presentation and Q&A
26/10/18	Sustrans – Follow Up Design Discussions

4.2 A series of concerns that were raised through the consultations have been collated. The key concerns directly targeted by the Project proposals are summarised at **Appendix 1**. These topics cover aspects including road safety, enhancements for active travel, vehicle speeds, parking, coach traffic and coach parking, and potential implications from a one-way system.

4.3 Following the meeting with the Ballifeary Community Council a series of communications were received highlighting particular concerns noted by the Community Council. These included:

- increased traffic using Ballifeary Lane and other streets;
- Riverside route north of Bishops Road/Ness Walk junction would benefit from improvements for non-motorised users;
- concerns about difficulties with additional traffic for the situation of parked cars on the residential streets; and
- request for a traffic monitoring system be put in place.

4.4 At the time of writing this report a further letter from the Community Council is anticipated. The letter will be shared with the Committee.

4.5 The consultant considered 17 different potential road layout arrangements to improve conditions for road users in the area. Factors that contributed to the sifting process that identified the preferred arrangement included:

- create a riverside pedestrian only route
- remove conflict of large vehicles
- enable Bught Park as a destination
- safeguard trees along the route
- lower vehicle speeds
- retain access to hospital

- enable two-way cycle journeys
- provide coach parking/disabled parking for events
- provide opportunity for future security measures (event only barriers)
- provide new street lighting in the vicinity of the Archive Centre

5. Way Forward

5.1 A comprehensive report has been prepared by the consultant and is attached at **Appendix 2**. The proposals cover the following topics:

- enhance pedestrian infrastructure along riverside (west);
- Area Wide 20mph Mandatory Speed Limit;
- strategic use of 'Unsuitable for coaches' signs;
- One Way (with cycle contraflow) – Southbound Ness Walk and part of Bught Road; and
- Area Wide 'Event Zone' including waiting restrictions and parking bays.

5.2 Traffic surveys were carried out from 17th to 20th August 2018 inclusive. The choice of survey dates were limited due to the programmed works to be undertaken by Scottish Gas Networks on Ness Walk. The traffic survey data has been assessed by the consultant and the key data has been provided in their report.

5.3 During September 2018 Scottish Gas Networks (SGN) carried out work on the gas main on the part of Ness Walk between Ballifeary Lane junction and the Fisherman's Car Park for a period of 4 weeks. The road was closed, except for access to properties on this section. Information from Community Services confirms that there were no reported traffic problems during this period. This situation gives evidence that the introduction of a one-way system on this stretch of Ness Walk would be straight forward.

5.4 Enhanced Pedestrian Infrastructure

The riverside path network is very busy with pedestrian activity. The level of pedestrian movements across the Infirmary Bridge peak at 60,000 across July/August/September months. There are a series of locations where path widths are barely adequate to serve users. Through the active travel funding improvements can be delivered. The aspiration is to deliver a continuous pedestrian route along the riverside. Three notable locations where significant change is proposed are:

- Ness Walk/Bishops junction to Ness Walk/Ballifeary Lane junction
This requires a radical approach to relocate the existing footway to the riverside. This is achievable through the introduction of a one-way system and will also enable drainage improvements along the route.
- Fisherman's Car Park
Currently the pedestrian route is through the car park area. The proposal is to construct a new footpath around the car park and introduce new seating in the area.
- Bught Road/Bught Drive junction to Bught Road/Bught Lane junction
A new shared use track of minimum 3m width is proposed. This will include the installation of new street lighting which will enhance the situation for visitors to the Archive Centre and also winter festival events.

5.5 20mph Speed Limit

To address the aspect of road safety concerns, in particular noting the level of vulnerable road user accidents across the area (shown in the report at **Appendix 2**), the introduction of an area wide mandatory 20mph speed limit is recommended. The opportunity to take forward a consistent approach on both sides of the river means that Ness Bank and Cavell Gardens will be included in the proposed speed limit order. A draft Speed Limit Order Plan is attached at **Appendix 3**. Emergency services and other statutory consultees have already been consulted on this proposal and no adverse comments have been raised.

5.6 Strategic Use of Signs

5.6.1 In response to the issue raised about coaches in residential areas it is proposed to install a series of 'unsuitable for coaches' signs. The details will be developed in consultation with the Community Council.

5.6.2 As part of the proposals for the introduction of an 'Event Zone' a scheme of signs will be developed for erection at key gateway locations. This will support improved traffic management.

5.7 Event Zone (Waiting Restrictions/Parking Bays)

5.7.1 Concerns about indiscriminate parking, especially during events, have been raised. There is already a proposal to introduce a new resident's permit parking scheme to a part of the area. This will be taken forward separately. The introduction of an 'Event Zone' Road Traffic Regulation Order is considered to best enable an area wide approach to be operated during events. Through Decriminalised Parking Enforcement (DPE) arrangements, supported by a back-office system, residents will in the future be able to 'register' their vehicle details to ensure effective enforcement (avoiding inappropriate issuing of PCN). The Event Zone Order Plan is attached at **Appendix 4**.

5.7.2 The importance of ensuring the free flow of traffic on the primary route to Bught Park from the A82 Trunk Road means that some traffic management is required along a part of Bught Drive. The proposal is to identify designated parking bays alongside some waiting restrictions. During larger events the bays would be temporarily suspended to ensure unrestricted access.

5.7.3 Observations during the Scottish Gas Networks closure of part of Ness Walk showed that the temporary waiting restrictions on the south side of Ballifeary Lane were effective in deterring indiscriminate parking and ensuring access.

5.7.4 Details of the parking and waiting restrictions will involve a variation to The Highland Council (Prohibition and Restriction of Waiting and Loading and Parking Places) (Decriminalised Parking Enforcement and Consolidation) Order 2018. The Parking Services Team in Community Services will provide documents to identify the changes to the original Order. The Committee is requested to delegate the Director of Development & Infrastructure, in consultation with the Provost and Depute Provost, to prepare and publish the Draft Road Traffic Regulation Orders.

5.8 One Way (with cycle contraflow)

5.8.1 Concern has been raised in relation to the passing of larger vehicles at narrow sections of Bught Road and Ness Walk. The desire to provide an enhanced Active Travel Network route (ATN4) means that road space needs to be 'allocated' to cyclists

travelling in the opposite direction. Coach parking on Bught Road provides a facility for visiting coaches to stay while their passengers visit Inverness City Centre. The proposed arrangement will provide for coach parking. On the occasion of large events there will be disabled parking allocated along the one-way section of Bught Road for blue badge holders. Dialogue with Officers dealing with events raised the need for consideration of catering for future 'security measures' for events with large numbers of people. A combined way of dealing with these issues is to introduce a one-way (southbound) system. The businesses and facilities managers at the Bught Park support the introduction of a one-way system. The majority of consultees support the introduction of the one-way system. However, some consultees have raised concerns about the implications for traffic flows on Ballifeary Lane and Ballifeary Road. The data from the traffic surveys show that the level of traffic from the Riverside Gardens/Infirmary site is 69 vehicles in the PM peak hour. The introduction of a one-way southbound system would mean that the future worse-case scenario would mean that these 69 vehicles would use Ballifeary Lane (1600-1700). It should be noted that a portion of these vehicles are already using this route for their trips. This situation is considered to be acceptable and would be supported through the proposed waiting restrictions proposals on Ballifeary Lane and be monitored over the subsequent 12 month period with an update report brought back to Committee.

5.8.2 The Draft One Way Order (with cycle contraflow) Plans are attached at **Appendix 5**. Due to the Cycle contraflow there will be a requirement to publish a Draft Redetermination Order.

5.9 The consultant has prepared a set of drawings showing the indicative road layout that would be expected should the Orders be made. The drawings are attached at **Appendix 6**.

6. Implications

6.1 Resource

6.1.1 Funding for the commission of the consultant has been jointly provided through active travel budget and a grant of £9,500 from the Common Good fund.

6.1.2 Funds for new/enhanced active travel infrastructure and supporting measures such as new speed limit has already been secured through the Community Links PLUS programme. The funding is only available until 2021. Budget is in place for ongoing traffic surveys and further consultations with the community.

6.1.3 Funding for the Residents Parking Scheme (Ballifeary Road) is separate and is in place.

6.1.4 Should the Orders be approved, and made, then there will be monitoring of the situation on the road network over the subsequent 12 month period. A situation report will be brought back to Committee which would include input from the Community Council and other stakeholders.

6.2 Legal

6.2.1 The preparation of Draft Road Traffic Regulation Orders is required to adhere to the prevailing Scottish Government guidance to local authorities. Plans and documents will be available for review in accordance with the procedure for Road Traffic

Regulation Orders. The Orders will be permanent when they are made. Police/Scottish Ambulance Service/Scottish Fire & Rescue Service have already been consulted on the proposed 20mph speed limit. No unfavourable comments have been received.

6.2.2 In the event of no objections being raised to the RTRO they will be made. Only where valid objections are received will a further report be brought back to Committee.

6.3 Community (Equality, Poverty and Rural)

Enhancing infrastructure for pedestrians through this project will be a major positive outcome. Significant elements of new and enhanced pedestrian infrastructure are proposed. Addressing road safety concerns through the introduction of a 20mph speed limit will be a major positive outcome for vulnerable road users and the wider community. Initial public consultation has already been undertaken with stakeholder groups. The Ballifeary Community Council has raised concerns about the proposals. The traffic analysis shows the anticipated change to the traffic movements. Measures to address the concerns of the Community Council have been included in the proposals.

6.4 Climate Change / Carbon Clever

The enhancement of Active Travel Network Route 4 is part of the overall network of active travel routes across Inverness. The objective is to achieve more than 10% of every day journeys across Inverness by bicycle by 2020. Attendees to special events at Bught Park are already encouraged to walk and cycle. Through this project walking and cycling journeys will be encouraged even more.

6.5 Risk

Risk	Severity	Likelihood	Mitigation
Lack of support for investment in pedestrian infrastructure	high	low	Clearly identify locations where pedestrian infrastructure will be enhanced
Lack of support for 20mph speed limit	high	low	Consultant has reviewed collision data. Highlight evidence of support already received through consultation.
Lack of support for One Way Order	high	medium	Majority of views raised through consultation prefer the proposed southbound direction. Highlight the advantages for access to Bught Park. Provide observed traffic survey information. Traffic survey data used to identify levels of future traffic. Traffic monitoring to be undertaken over 12 months.

Risk	Severity	Likelihood	Mitigation
Lack of support for Waiting Restrictions	medium	low	Highlight the existing traffic/parking problems Highlight the temporary waiting restrictions used for SGN works
Lack of support for Event Traffic Zone	medium	medium	Highlight the breadth of events already taking place at Bught Park. Highlight the value of enhancing the role of the Bught Park area for continued/expanded major events
Constraints on Active Travel Funding	High	medium	Highlight the need to deliver works within the funding period

6.6

Gaelic

Gaelic place names will be used in any new destination signs.

Designation: Director of Development and Infrastructure
Chief Executive High Life Highland

Date: 7th November 2018

Author: Richard Gerring, Transport Planning Manager
Andy MacLeod, Outdoor Facilities and Events Manager [High Life Highland]

Background Papers: Held by authors.

APPENDIX 1

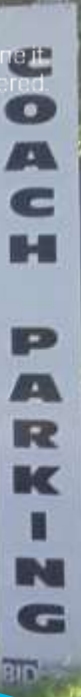
CONSULTATION TOPICS

Consultation Concerns

Comments were captured verbally, through surveys and e-mails. The key concerns that will be directly targeted by the proposals in this report are listed below.

Concerns Directly Targeted by Report Proposals

Ref.	Issue / Concern
A1	Improve road safety along riverside
A2	Introduction of 20mph speed limits and traffic calming
A3	Improve pedestrian facilities along riverside
A4	Provide ATN4 Route
A5	Move footway / footpath to the riverside for entire route
A6	Improve the situation for events held at Bught Park
A7	Reduce traffic on Bught Road and Ness Walk
A8	Protection of existing mature trees
A9	Protection of existing riverside railing
A10	Desire to retain two-way for vehicles on Bishops Road
A11	One way southbound for vehicles along riverside
A12	Safe contraflow cycling facilities along riverside
A13	Improve access between riverside and Eden Court
A14	Improve access to Ness Walk properties from riverside footpath
A15	Improve existing drainage issues
A16	Protection of access to properties
A17	Parking and access (wider area and specific locations)
A18	Protection of Great Glen Way route
A19	Engagement with local schools
A20	Desire to reduce street clutter
A21	Provide coach parking at Bught Road
A22	Avoid coaches entering residential streets
A23	Consider impact of traffic on Ballifeary Lane
A24	Residential parking protected during major events
A25	Parking restrictions on Ballifeary Lane
A26	Traffic surveys to be undertaken for the area



Riverside Way and Bught Park Event Traffic Management

Feasibility Study

The Highland Council

Project number: 60578174

July 2018

Quality information

Prepared by



Ross McNeill
Consultant

Checked by



Peter Leslie
Principal Engineer

Verified by



Richard Hernan
Senior Consultant

Approved by



David McKechnie
Regional Director

Revision History

Revision	Revision date	Details	Authorized	Name	Position
0	1 Jun 18		Yes	Peter Leslie	Principal Engineer
1	10 Oct 18		Yes	Peter Leslie	Principal Engineer
1.1	29 Oct 18		Yes	Peter Leslie	Principal Engineer
1.2	7 Nov 18		Yes	Peter Leslie	Principal Engineer

Distribution List

# Hard Copies	PDF Required	Association / Company Name

Prepared for:

The Highland Council
Richard Gerring, The Highland Council, Glenurquhart Road, Inverness, IV3 5NX

Prepared by:

Ross McNeill
Consultant
E: ross.mcneill@aecom.com

AECOM Infrastructure & Environment UK Limited
7th Floor, Aurora
120 Bothwell Street
Glasgow G2 7JS
United Kingdom

T: +44 141 248 0300
aecom.com

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1 Introduction

1.1 Project Scope

The Highland Council commissioned AECOM to undertake a study on the Bught Area Event Zone and Active Travel Route Number 4 (ATN4) in Inverness; also known as the Riverside Way. The Bught Area Event Zone and Riverside Way combine several aspects of the design and management of the public realm in the Bught Area. The key objectives of the study are:

1. Investigate options for the introduction of effective traffic management arrangements, and any associated operational protocols, that will minimise the impact of major events on the local community and the overall amenity of the area;
2. Enhance active travel infrastructure (walking and cycling) and access to the Bught Area from Ness Bridge to the new West Link (part of the Inverness City Active Travel Network – ATN4); and
3. Investigate options for upgrading of infrastructure and leisure experience that is available in the area.



1.2 Study Objectives

The priority of the study is to cater to the needs of residents and businesses living and operating in the study area through:

1. The introduction of new traffic management arrangements;
2. The adoption of a new traffic system to be implemented to assist residents during major events;
3. The creation of a public events diary for the area to inform residents, local businesses, local facility users, community groups and event organisers facilitate the programme of activities and events staged in the Bught area;
4. To ensure that the active travel route proposals from Ness Bridge to the West Link take account of the options for the Bight Area Events Zone to ensure there is a full match of the objectives and outcomes including the delivery of:
 - a. All associated RTRO drawings and schedules; and
 - b. Design drawings for modifications to the road network including traffic calming and a cycle contra-flow scheme.

2 Desktop Study

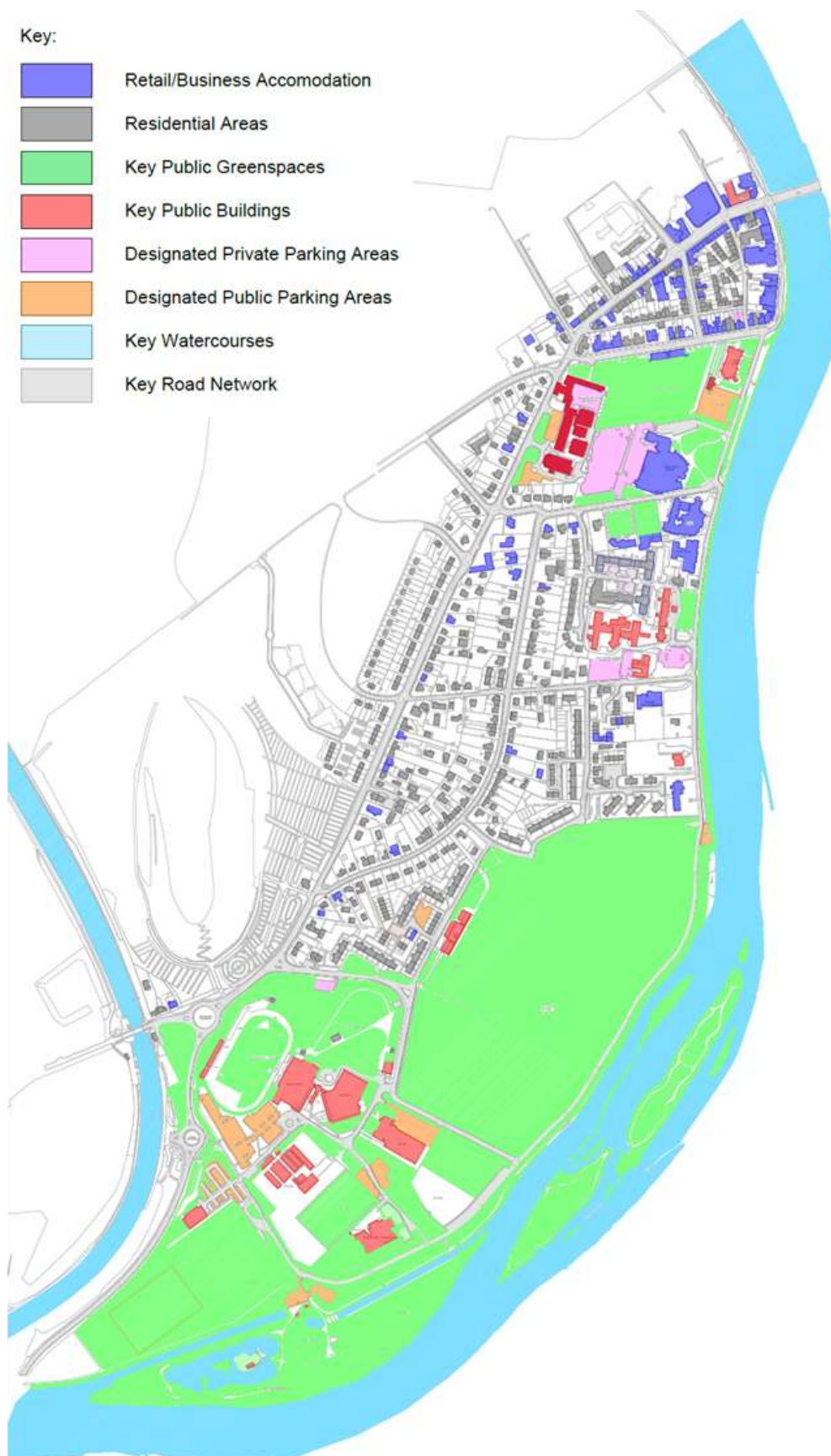


Figure 2. 1 Project Study Area and Land Use

2.1 Background Information

The Bught Park area of Inverness is the sporting hub of the Highlands. Bught Park is the largest park in Inverness and is home to a variety of different sports teams. It is also a major venue for events such as Highland Games, music festivals, charity events, international shinty/hurling tournaments. The park often forms a key stage or even the start or finish location of many running or cycling events.

When hosting major events at the park there is a significant increase in traffic in the area. This increase in traffic can often cause major disruption in and around the events zone, to local residents and to active travel journeys.

Active Travel Route Number 4 (ATN4) or “The Riverside Way” runs from Dochgarroch Locks to the south-west along the River Ness and Caledonian Canal to the city centre and Inverness High Street; passing through the Bught Park along the River Ness.

The Highland Council has recognised the importance of the link and the great potential contribution to encouraging people to travel on foot or by bike in the area, particularly alongside the significant development works associated with the new Western Link road and proposals for future residential expansion to the south-west of the city.

The city's ice rink, sports centre, swimming pool and BMX/Skate track are all located in the Bught Park area and are a major part of the leisure experience for people in the area. The Highland Council have invested in these facilities and have upgraded them in recent years and continue to do so.

Figure 2.1 on the previous page shows the wide ranging land uses within the study area from the businesses and retail to the north by the town centre to the wide open greenspaces around Bught and Whin Parks to the south. The proximity of these large and open spaces to the town centre makes them a very attractive and convenient location for large scale events. The figure also shows that there are nine entry points on the road network to the study area.

2.1.1 Gaelic Signage

The Highland Council developed a Gaelic Language Plan 2012 - 2017 and at time of writing was in the process of updating the plan with the Draft Gaelic Language Plan 2017 – 2022¹. The plan sets out Council aims and ambitions for Gaelic and how these will be achieved.

The Gaelic Language Plan commits welcome signage to towns, city and villages and road signs to be bilingual. Gaelic will be green and English in black on these signs. Where new signs are being erected or existing signs are being replaced, bilingual signs will be erected.

Historic and visitor signs commissioned by the Council to direct people to historic and visitor events and venues are encouraged unless this conflicts with Scottish Government regulations. In relation to these signs, consultation will take place with local Community Councils and local Members.

It should be noted that a 2009 Gaelic Language Signage Report by The Highland Council Chief Executive states that Statutory highway signs e.g. Give Way will not be produced bilingually. Similarly Bi-lingual directional road signs are only to be erected where there is a true Gaelic name – since a bilingual sign can only be meaningful where there is both a Gaelic and an anglicised name².

2.1.2 Key Events in the Area

In addition to the key trip attractors, the area is a very important hub for regular festivals and events which include:

- Music concerts
- Civic bonfire
- Highland Games
- Etape Loch Ness
- Loch Ness Marathon
- Race for Life
- Shinty / Hurling events
- Highland RFC rugby events

¹ https://highland.gov.uk/info/283/community_life_and_leisure/335/gaelic/2

² https://highland.gov.uk/news/article/3119/council_agrees_minor_changes_to_gaelic_plan

2.1.3 Key Trip Attractors in the Area



1. Whin Park
2. Highland Archive Centre
3. Highland Rugby Football Club
4. Inverness Skate Park
5. Inverness Crazy Golf
6. Inverness Botanic Gardens
7. Inverness Ice Centre
8. Inverness Leisure Centre
9. Queens Park
10. Florians Theatre
11. Bught Park Caravan Park and Campsite
12. Bught Park Pitches
13. Bught Park Stores
14. Bught Park
15. Ballifeary House Residential Home
16. The Church of Jesus Christ of Latter-day Saints
17. Riverside Medical Practice
18. RNI Community Hospital
19. University of the Highlands and Islands Offices
20. Glenurquhart Road Shops
21. Inverness Bowling Club
22. Inverness Tennis and Squash Club
23. Highland Hospice
24. Eden Court Theatre and Cinema
25. Highland Council Offices
26. Northern Meeting Park
27. St. Andrew's Cathedral
28. Ardross Street Businesses
29. Tomnahurich Street Businesses

Figure 2. 2 Key Trip Attractors in Study Area

Whilst a relatively small area, the study area is home to some of the city and indeed the region's most important key trip attractors including those shown in Figure 2.2.

2.1.4 Conservation Status

Inverness Riverside is a designated Conservation Area³ shown in Figure 2.3 overleaf. Additional care must be taken to ensure that impacts on the Conservation Area are minimised and do not jeopardize the overall character of the Conservation Area.

In addition to the Conservation Area there is one Tree Preservation Order (TPO) Area within the Study Area shown overleaf in Figure 2.4:

- TPO Number HC58
- TPO Name: Maple Court Hotel Ness Walk

It is not anticipated that any proposals would have an impact on this TPO area.

³ [https://www.highland.gov.uk/info/192/planning - listed buildings and conservation areas/167/conservation_areas](https://www.highland.gov.uk/info/192/planning_-_listed_buildings_and_conservation_areas/167/conservation_areas)



Figure 2. 3 Inverness Riverside Conservation Area Figure 2. 4 Maple Court Hotel Ness Walk TPO

2.1.5 Riverside Art Developments

At the time of writing, concept proposals had been generated by The Highland Council for creating a public art project currently known as the 'My Ness' project⁴. This will involve the creation of a circular amphitheatre occupying both sides of the riverbank sited by the Little Isle Pool, Fisherman's Car Park located just off Bught Road. Proposals include a walkway which could link with the Riverside Way.

There have also been proposals to build a new interactive Children's Water Feature on Ness Islands⁵. These proposals will not interfere with any Riverside Way proposals.



Figure 2. 5 'My Ness' Concept Proposals (May 2018)



Figure 2. 6 Children's Water Feature Proposals (July 2018)

⁴ https://www.highland.gov.uk/news/article/11055/my_ness_%E2%80%93_the_new_gathering_place
⁵ <https://wam.highland.gov.uk/wam/caseDetails.do?caseType=Application&keyVal=PBFYNMIHIEG00>

2.2 Road Traffic Accident Analysis

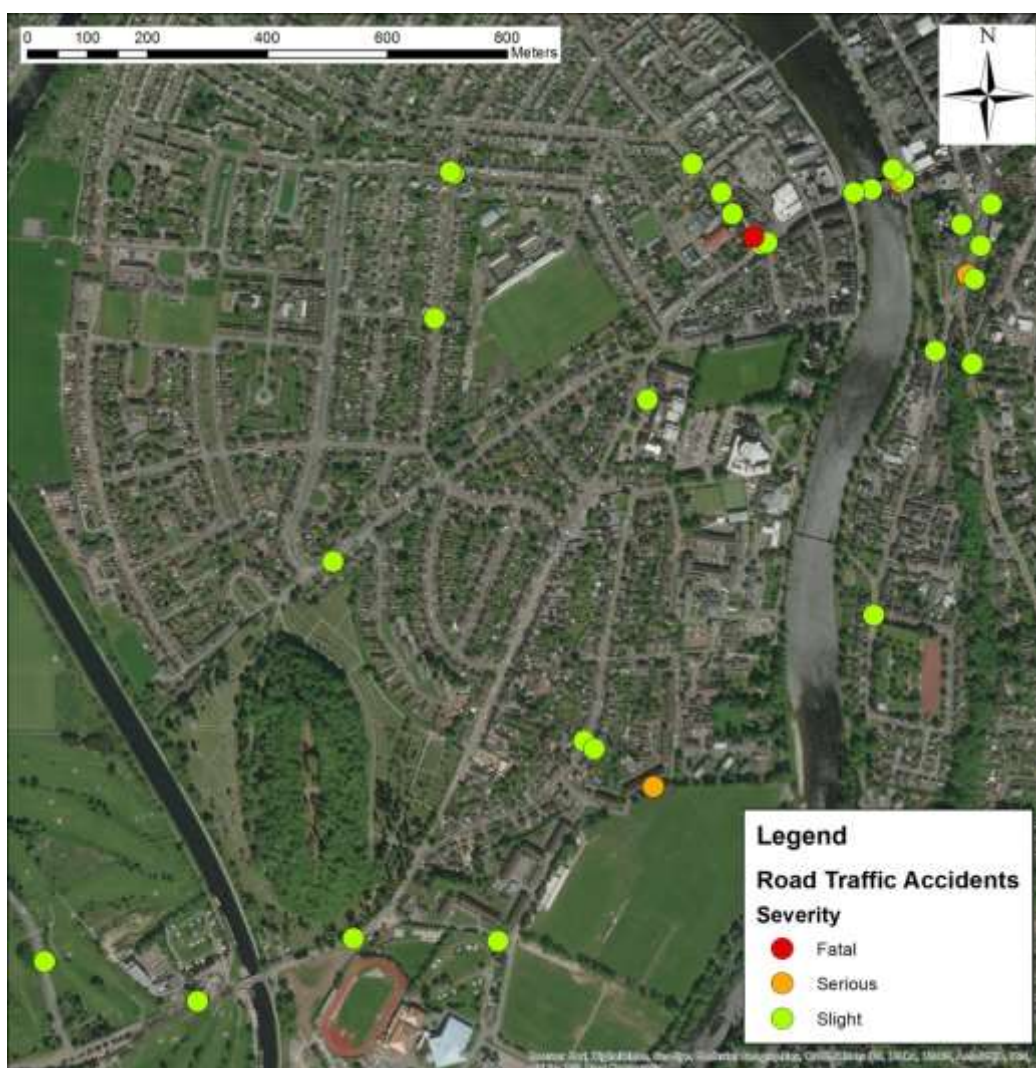


Figure 2. 7 RTAs by Severity

An analysis of available Road Traffic Accident (RTA) information has been undertaken for the project and wider area. Table 2.1 below shows a summary of the recorded RTA information available for the study area and wider catchment. Figure 2.7 above shows the location of recorded RTAs by severity, Figures 2.8 and 2.9 show those RTAs involving pedestrians and pedal cycles respectively.

Table 2. 1 Road Traffic Accident Summary

RTA Date Range	January 2013 – July 2017	
Number of Reported Injury Accidents	34	
Accident Severity	Fatal	1
	Serious	3
	Slight	30
Road Surface	Dry	24
	Wet	10
RTAs involving vulnerable road users	Pedestrians	11
	Cyclists	6

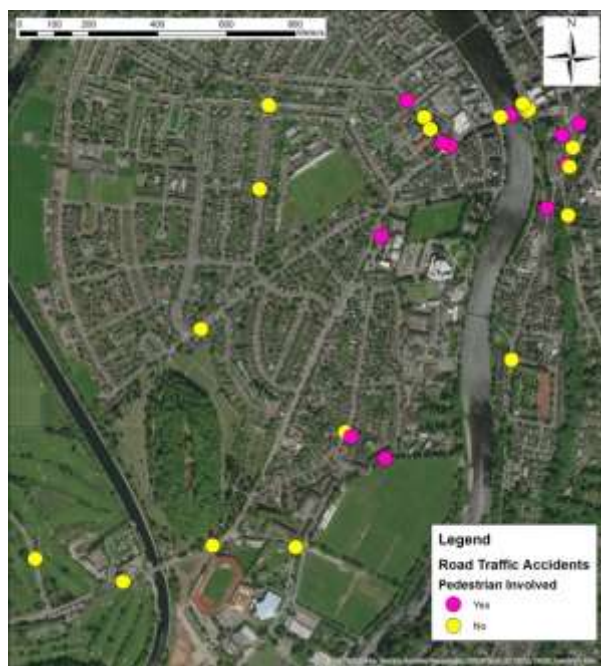


Figure 2. 8 RTAs involving pedestrians



Figure 2. 9 RTAs involving pedal cycles

Figures 2.7, 2.8 and 2.9 show the locations of the RTAs and show that the majority of the incidents occurred out with the study area. Of these incidents only a small number were recorded as occurring within the study area.

There was one fatal RTA involving a pedestrian casualty just north of the study area at the A82 Tomnahurich Street junction on the 4th of March 2017. Two further injury incidents involving pedestrian casualties occurred and were recorded as serious incidents; one of these occurred within the study area on Springfield Gardens on the 18th of July 2017. All other RTAs involving pedestrian casualties were recorded as slight severity.

Of all the RTA involving pedal cycle casualties all six incidents were recorded as slight severity and only one of these incidents occurred within the study area on Bught Drive on the 8th of April 2013.

Road safety will continue to be of the utmost importance to any proposed designs. Proposals arising from this study will take cognisance not just of the RTA history of the study area but of the wider area which can have similar road environments and therefore potentially similar road traffic risks to that of the study area.

The history of RTAs in the wider area provides justification for road safety improvements to be implemented wherever possible through the designs proposed as part of this study through measures most significantly including:

- Reducing potential conflict between all road users;
- Introducing traffic calming measures on key streets; and
- 20mph speed limits on an area wide basis.

2.3 Ballifeary Residential Parking Permit Proposals

It is important to note that during the timeline of this project, separate proposals were being explored to implement a residential parking permit scheme on Ballifeary Road. These proposals were still in development during the timescales of this project and the project team has been working closely with the Parking Team in the Council to ensure these proposals work alongside each other.

3 Traffic Regulation and Management

3.1 Traffic Regulation in The Highland Council



Figure 3. 1 The Highland Council Policy Document on TRO and Charging Policy for Events and Processions on the Public Road

The existing legislative requirements for road closures are summarised in the Highland Council Report: *Traffic Regulation Orders and Charging Policy for Events and Processions on the Public Road* (February 2018)⁶ and Policy Statement. Some key details are summarised below.

Currently events which require the closure of an adopted road must obtain the required permissions from The Highland Council in the form of a Traffic Regulation Order (TRO). Temporary Traffic Regulation Orders (TTROs) and Permanent Traffic Regulation Orders (PTROs) are promoted under the Road Traffic Regulation Act 1984 to either restrict or prohibit traffic for safety reasons. There is no other legal means by which the Council can support the closure of a road. Road closures without the appropriate TRO are open to legal action by any objector which may also impact events insurances.

The procedure for Local Authorities in Scotland to adopt a TRO is set out in the Local Authorities' Traffic Orders (Procedure) (Scotland) Regulations 1999⁷.

TTROs cannot be produced for the same section of road more than once per year without the express consent of the Scottish Ministers. This significantly increases the cost and time associated with producing an order. TTROs have a maximum time limit of 18 months' duration except where an order is for road works that cannot be executed within that time⁸.

To reduce costs involved in making TTROs each year, where feasible it is intended to arrange for permanent TROs. Permanent orders would be introduced in locations where a series of events in a year or annual events are arranged. Signage would be installed allowing modification to enforce the TRO restriction where required.

It is also important to note that the costs of providing stewards, signage or cones will not be met by The Highland Council.

All events which require a road closure must be entered onto the Scottish Road Works Register by The Highland Council in undertaking its statutory obligation.

Several conversations and meetings have been hosted with Council Officers of different departments to gain a greater understanding of the implementation and operation of TROs and TTROs within the Highland Council. This informed project staff on how best to take these TRO elements of the project forward.

⁶

https://highland.gov.uk/download/meetings/id/73098/item_14_traffic_regulation_orders_and_charging_policy_for_events_and_processions_on_the_public_road

⁷ <http://www.legislation.gov.uk/ukxi/1999/614/made/data.pdf>

⁸ <http://researchbriefings.parliament.uk/ResearchBriefing/Summary/SN06013>

3.2 Event Traffic Management Case Studies

3.2.1 Celtic Park / Emirates Arena, Glasgow

Part-time parking restrictions are currently in operation in the area around Celtic Park and the Emirates Arena in Glasgow. These restrictions are implemented by a small sign mounted on a pole or lighting column advertising the TRO with a temporary sticker which advertises the next period of operation.



Figure 3. 2 Temporary parking restrictions, Nuneaton Street, Glasgow



Figure 3. 3 Temporary parking restrictions, London Road, Glasgow

3.2.2 Hampden Event Day Parking Zone, Glasgow

Glasgow City Council operates an Event Day Parking Zone around Hampden Park Stadium. Part-time parking restrictions come into operation three hours before an event and two hours after events. This includes the residential streets in the vicinity of the stadium and local residents are required to park elsewhere locally.

3.3 Event Traffic Management

As mentioned previously, there are frequent road closures on Bught Road and Ness Walk for major and scheduled events throughout the year (see Figures 3.4 and 3.5). These road closures are currently implemented through use of TTROs with signage in advance of closures with event staff and traffic marshals in place during events. Residents are notified in advance of these closures through letter drops and the temporary signage in advance of the event closures. One of the key challenges during these road closures is providing access to properties during these events.

In more recent years Police Scotland have taken a step back from traffic marshalling these events and the responsibility has fallen more to event organisers to make these arrangements.

In addition to regular road closures on Bught Road and Ness Walk due to events, during September 2018 Scottish Gas Networks carried out work on the gas main on the part of Ness Walk between Ballifeary Lane junction and the Fisherman's Car Park for a period of 4 weeks. Information from Community Services confirms that there were no reported traffic problems during this period.



Figure 3. 4 Ness Walk Event Road Closures



Figure 3. 5 Ness Walk Event Road Closures

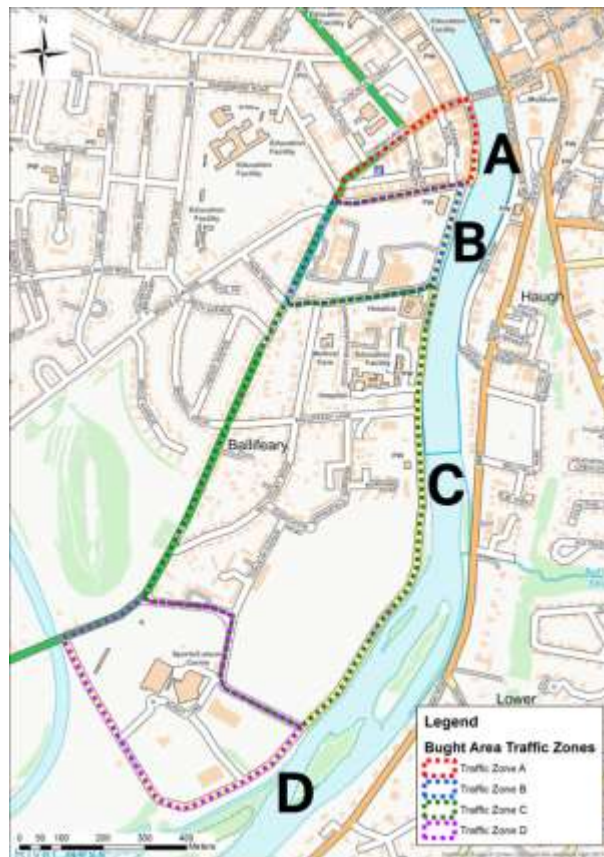


Figure 3. 6 Bught Area Traffic Zones

Figure 3.6 above shows the existing Bught Area Traffic Management Zones currently use by The Highland Council and event organisers to organise traffic management and restrictions. Table 3.1 overleaf details the extents of those traffic zones and preliminary proposals by The Highland Council.

Table 3. 1 Bught Area Traffic Zones

Zone Streets/Changes

A	<p>Bordered by Tomnahurich Street and Young Street; Ardross Terrace and Ardross Street.</p> <p>No changes are proposed to the current arrangements in this area</p>
B	<p>Bordered by Ardross Street and Bishops Road (from its junctions with Ardross Street to Glenurquhart Road) and Glenurquhart Road.</p> <p>No changes are proposed to the current arrangements in this area</p>
C	<p>It is proposed that Ness Walk from its junction with Bishops Road to its end at Bught Road; and Bught Road from the end of Ness Walk to its junction with Bught Avenue be converted to a one way road heading in a westerly direction towards the Caledonian Canal. This will enable additional space to create a cycle contra-flow route. This zone subject to temporary traffic prohibition during special events</p>
D	<p>In order to accommodate the needs of the businesses in this area – no changes are proposed to the current arrangements for Bught Road – at its junction with Bught Avenue – to Whin Park – Highland RFC and onward via Bught Lane and Bught Drive to Glenurquhart Road. This is viewed as a priority route which must be kept open at all times.</p> <p>Potential impact on other streets: Bught Drive</p>

In addition to the above table, the need for special arrangements to accommodate special events has been identified for:

1. For certain events – Race for Life and Loch Ness Marathon (for example) TTRO's will be required to close the Riverside routes through Traffic Zones A, B & C.
2. For other events – Civic Bonfire (for example) TTRO's will be required to close the Riverside route through Traffic Zone C only.

3.3.1 Event Security

Public security at major and scheduled events in the Bught Park area is of the utmost importance. Designs and event traffic management proposals must therefore go hand in hand with event security measures. This covers all aspects of event security from event traffic management to the threat of hostile vehicle attack.

There are a number of key sources of guidance and documents relating to health, safety and security at these events relevant to the area which include:

1. The Health and Safety Executive⁹
2. The Purple Guide to Health, Safety and Welfare at Music and Other Events¹⁰
3. Police Scotland¹¹
4. The Highland Council¹²

The Highland Council required event organisers to submit an Event Management Plan requiring the submission of a Traffic Management and Parking Plan as part of the submission. The Event Management Plan reinforces that traffic management is the responsibility of the event organiser.

⁹ <http://www.hse.gov.uk/>

¹⁰ <https://www.thepurpleguide.co.uk/>

¹¹ <http://www.scotland.police.uk/>

¹² https://www.highland.gov.uk/directory_record/738741/public_entertainment

3.3.2 Highland Games Traffic Management Summary

Consultation was undertaken with various Council Officers to identify existing traffic management arrangements in the area during major and scheduled events. Project staff additionally attended events including the Inverness Highland Games on the 21st of July 2018 and associated events and road closures the previous day. Table 3.2 below shows photographs from the event, specific road closures and parking arrangements on the day.

Table 3. 2 Inverness Highland Games Photographs 21.08.18

	
<p>Highland Games in Bught Park</p>	<p>Event parking signage on Glenurquhart Road</p>
	
<p>Residents vehicle survey sheet on display</p>	<p>Designated disabled parking for event</p>
	
<p>Nursing home access only at Ness Walk road closure by Ballifeary Lane</p>	<p>Bught Road closure by Bught Avenue</p>

3.3.3 Upcoming Events in the Bught Area

The list below shows a number of the confirmed and expected events planned for the Bught Park area in 2019:

- 10/2/2019 Snowman Rally - *Expected*
- 10/03/2019 Loch Ness Half Marathon – *Confirmed*
- 28/04/2019 Loch Ness Etape - *Confirmed*
- 26/5/2019 Race for Life – *Expected*
- 26/6/2019 European Pipe Championships – *Confirmed*
- 19/7/2019 Inverness Gala Parade – *Confirmed*
- 20/7/2019 Inverness Highland Games - *Confirmed*
- 08/09/2019 Kirking of the Council – *Confirmed*
- 20-21/10/2019 Loch Ness Knitting Festival - *Expected*
- 26-27/10/2019 Halloween on Ness Islands - *Confirmed*
- 5/11/2019 Civic Bonfire and Fireworks Display - *Confirmed*
- 17/11/2019 Inverness Christmas Lights Switch On - *Confirmed*
- 13-15/12/2019 Winter Wonderland - *Confirmed*
- 31/12/2019 Red Hot Highland Fling Hogmanay Show – *Confirmed*

The objective of the events dairy is currently being developed and managed by the Bught Events Management Group.

3.4 TRO Implementation

The diagram below shows the “family” of TRO measures which would be expected to be implemented as part of the proposals. This “family” does not show the full or complete list or individual TRO measures but the wider groupings of TROs which are expected to be implemented as part of the proposals.

“Family” of TROs			
Full-time TROs			Variable TROs
Riverside Way TROs	Other Area TROs	20mph Zone	Event Zone TROs

4 Engagement and Consultation

A detailed programme of engagement and consultation was undertaken as part of this project with a wide group of stakeholders. Table 4.1 below summarises some of the key engagement undertaken with Council Officers and Elected Members, key stakeholders, local residents and businesses throughout the timeline of these works.

In addition to key stakeholders, consultation has been hosted with Bught Park Management Group which represents several key organisations and business representatives within the wider Bught Park area. This table does not include details of consultation with individual key stakeholders or regular meetings with the project steering group.

4.1 Key Consultation Timeline

Table 4. 1 Key Consultation Summary Timeline

Date	Details
Thursday 24 th May	Project Inception Meeting (<i>The Highland Council Headquarters, Inverness</i>)
w/b 11 th June	Initial press release by The Highland Council about work and AECOM's involvement.
Monday 25 th June	Closed Stakeholder Group Meeting - Presentation and Q&A (<i>Inverness Townhouse</i>)
Monday 25 th June	Councillor Meeting - Presentation and Q&A (<i>Inverness Townhouse</i>)
w/b 9 th July	Invites to public consultation sent to local residents and businesses, posted online on The Highland Council website and on The Highland Council Facebook and Twitter pages.
Thursday 19 th July	Bught Park Management Group Meeting - Presentation and Q&A (<i>Canal Park, Inverness</i>)
Thursday 19 th July	Public Drop-in Consultation Evening (<i>Canal Park, Inverness</i>)
w/b 23 rd July	Consultation with Inverness Business Improvement District Manager (<i>Phone and E-mail</i>)
Wednesday 8 th August	Sustrans Officers Meeting Briefing (<i>The Highland Council Headquarters, Inverness</i>)
Wednesday 8 th August	Closed Stakeholder Group Meeting (<i>Inverness Townhouse</i>)
Thursday 20 th September	Council Officer TRO Discussion (<i>Canal Park, Inverness</i>)
Monday 8 th October	Riverside Way Sustrans Officers Consultation Briefing (<i>Online Webex</i>)
Monday 8 th October	Ballifeary Community Council Meeting
Friday 26 th October	Sustrans Officers Riverside Way Design Workshop (<i>Inverness Townhouse</i>)

Throughout the project programme other individual and more local consultations were carried out, particularly with those local stakeholders whom may be affected by the proposals. AECOM also developed a tailored consultation e-mail address for the project which was circulated at public consultation events: RiversideWayInverness@aecom.com.

4.2 Stakeholder and Public Consultation



Figure 4. 1 Scan of Key Stakeholder Consultation Notes

As outlined in Table 4.1 there were a wide number of stakeholder consultation sessions carried out as part of this project which significantly including Council Officers and Elected Members, Bought Park Management Group, Inverness Business Improvement District Managers, Ballifeary Community Council Members, Local Businesses and Sustrans Officers.

A number of key themes emerged throughout these consultations many of which will be explored within the following chapter of this report in the Consultation Key Issues Assessment. Significantly, it was the majority consensus of the consultations with Key Stakeholders and Residents that if a one-way for general traffic were to be implemented along the riverside; this should be southbound in order to be consistent with the direction on Ardross Street and to take traffic to Bought Park as a destination, rather than away.

Figure 4.1 shows a scan of key issues and design notes marked up by one particular stakeholder on a plan during a consultation session with key stakeholders and Council Officers. Further key issues and concerns raised during these sessions will be explored further in the following chapter of this report.

4.2.1 Inverness Business Improvement District



Figure 4. 2 Short Term Coach Parking, Ardross Street



Figure 4. 3 Long Term Coach Parking, Bought Road

Consultation was undertaken with the Inverness Business Improvement Team on proposed designs and potential impacts. The existing coach parking arrangements in the study area were highlighted as a very important feature to the city and local economy. At present an 11 bay coach short stay (30 minutes) pick up and drop off facility is in operation on Ardross Street with longer term parking redirected to Bought Road. In the four years since the designation of the coach park Inverness has seen a 64% increase in the number of coaches. In 2016 Inverness was given 'Coach Friendly' status by the Confederation of Passenger Transport.

As of 27th September 2018 there had been a recorded 2,636 coaches using the Ardross Street facility compared with 2,251 in 2017 and representing a 17% increase from 2017.

These 2018 coaches using the Ardross Street facility consisted of:

- 51% Coaches from British Tour Companies
- 13% Foreign Coaches
- 35% Coaches from Cruise Liners

The busiest day in 2018 was the 20th of July which saw 46 coaches using the facility, a drop from the busiest day in 2017 which saw 54 coaches on the 23rd of August.

Maintaining good facilities for coaches to access the city centre remains a key priority and it must be ensured that proposed improvements arising from this project do not impede or discourage coach tourism in the city centre.

4.2.2 Sustrans Consultation

Preliminary and working designs were discussed with Sustrans Officers throughout the duration of the project, issues were identified and designs updated where required to meet funding requirements. A number of meetings, online meetings and workshop sessions were hosted to ensure that the proposals met strict finding criteria and were aligned with the most current national active travel concepts.

Close consultation was undertaken and design and funding feedback given from Sustrans. Sustrans confirmed support in principle for the following as part of the Riverside Way / ATN 4 project:

1. The introduction of 20mph speed limits for the area;
2. A southbound one-way system for general traffic along the riverside;
3. The improvement of pedestrian infrastructure along the route including a new riverside footway;
4. The progression of Design Option A for The Highland Council November Committee Meeting with design comments raised by Sustrans to be addressed through the detailed design stage; and
5. Where design changes requested by Sustrans lead to significant increases in project costs, The Highland Council will review these elements and discuss these cost implications with Sustrans.

It was agreed that certain further elements of design feedback would be dealt with during a detailed design stage of the project going forward.

4.2.3 Public Consultation Sessions

The Highland Council prepared an initial press release to advertise the project and the appointment of AECOM to the works¹³. AECOM took lead responsibility for communications through a tailored consultation e-mail address:

AECOM and The Highland Council conducted early public engagement and consultation at an early stage of this project further to the more general engagement that has been undertaken last year as part of the Community Links PLUS submission.

The public and local residents were principally engaged through evening consultation drop-in sessions on Thursday the 19th of July at Canal Park, Inverness. Invites to this event were sent out via a letter drop to residents, the text of which is contained within Appendix A of this report. Key Stakeholders, Bught Park Management Group and Ballifeary Community Council were invited to these events. Invites were also sent out via The Highland Council website, local press and through Social Media (see Figures 4.4 and 4.5 below). Figures 4.6 and 4.7 below show two of the different drop-in sessions on the 19th of July which were well attended. Project information boards were prepared to take consultees through the project (see Appendix B) and a slideshow was prepared.



Figure 4. 4 Consultation Adverts on Twitter



Figure 4. 5 Consultation Adverts on Facebook



Figure 4. 6 Public Consultation Drop In Session 19/07/18



Figure 4. 7 Public Consultation Drop In Session 19/07/18

¹³ https://www.highland.gov.uk/news/article/11108/riverside_way_design_project_underway

Concerns and issues were highlighted by members of the local community and key stakeholders at these sessions and recorded by project staff, survey sheets and sent via e-mail.

All consultation sessions were very useful in informing the project team of situations that arise with regular occurrence at events and issues that exist on the current Riverside Way and surrounding streets. They also provided an opportunity for local Councillors' and internal stakeholders, investors, key local stakeholders and the public to contribute to the design of the traffic management and the development of the Riverside Way.

Some of the key recurring topics/issues that were mentioned in the internal stakeholder and Council meetings were; the provision of parking for residents and parking in the Bught area especially during events, maintaining access to the hospital and hospice was identified as a priority and the introduction of a left turn only from Bught Drive on to Glenurquhart Road. There were several other ideas/contributions but these were the ones in particular that were reoccurring.

From the initial consultation meetings with THC and internal stakeholders AECOM were able to go to the key local stakeholder and public consultations in mid-July with several traffic management options for the attendees to see and query. There was also a proposal for the Riverside Way shown to the groups and an open Q&A session was held.

From the Q&A session the feedback was mostly positive from all attendees. There were a few concerns raised about potential traffic increases in surrounding residential streets should the Riverside Way become a one way system, as was proposed. Parking in the Bught Area for events both annual and weekly was again a key issue raised in both consultation groups and is something that there was certainly a high demand for.

The proposal for the active travel development was also well received by the majority of attendees at the various drop-in sessions and there was a definite appetite to improve active travel and road safety in the area. The local residents and stakeholders were keen on the idea to make the area a destination for active travel and increasing participation in the area as well.

Both the local stakeholder and open public consultations were very informative and useful to AECOM going forward for the technical work for both the TRO and Riverside Way.

A further presentation was given to Ballifeary Community Council on Monday the 8th of October by The Highland Council Officers where proposals were discussed and feedback received from the Community Council. Many of the key issues and concerns raised during this session are explored further within the following chapter of this report.

5 Consultation Key Issues and Concerns

The following maps and tables show a number of the important issues or improvements requested by consultees during the various stages of consultation for this project. Consultees included Elected Members, Council Officers, Local Businesses, Residents and other key stakeholders. Comments were captured verbally, through surveys and e-mails. These key issues are split into those which will, and those which will not be directly targeted by the proposals. Where not directly targeted, these issues have been split for consideration in the short, medium and long term.

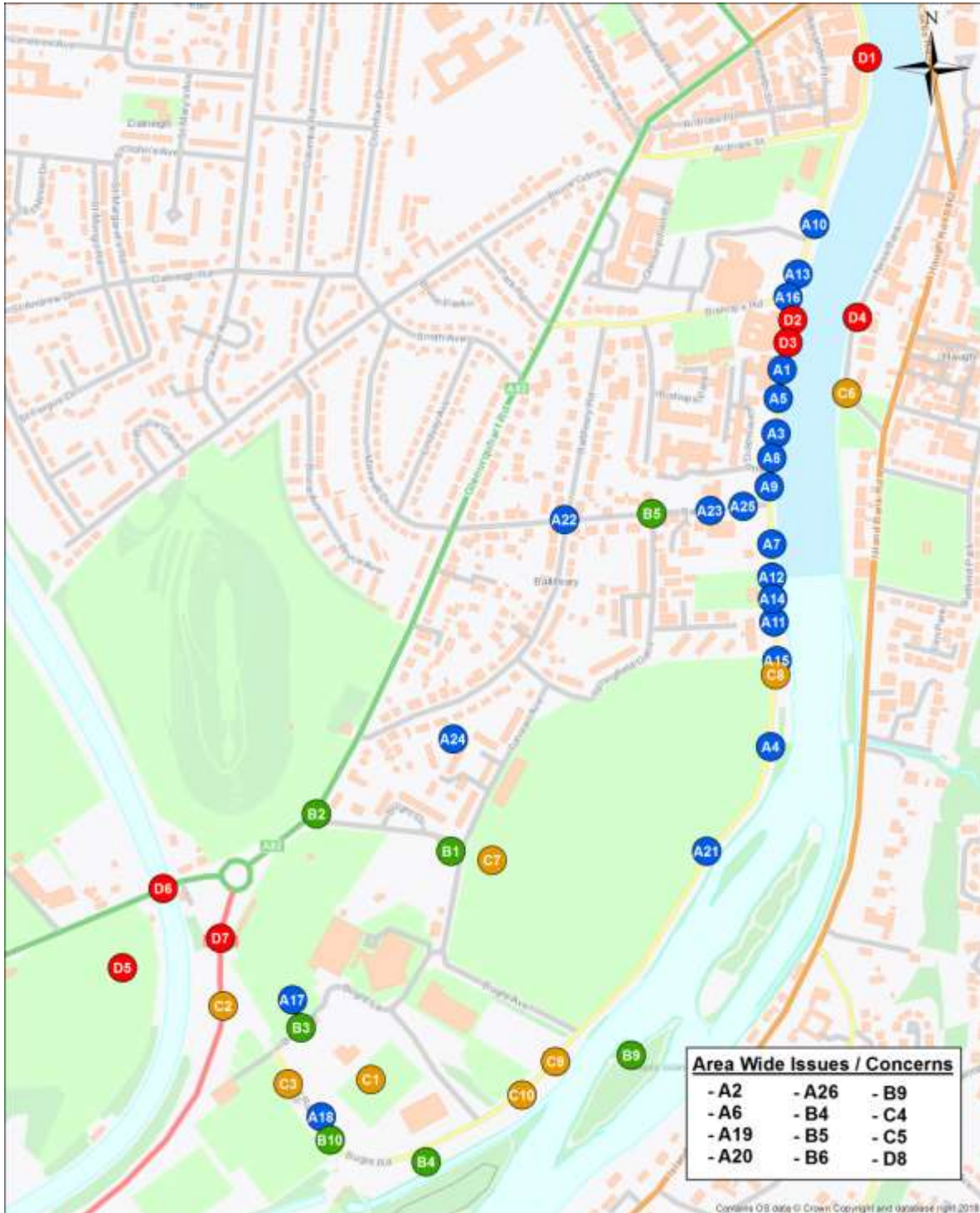


Figure 5. 1 Key Consultation Issues and Concerns by Location

5.1 Issues/Concerns Directly Targeted by Proposals

Table 5. 1 Issues Directly Targeted or Improved by Proposals

Covered by Proposals	Timeframe for Delivery / Consideration	Ref.	Issue / Concern
Yes	Directly Improved by Proposals	A1	Improve road safety along riverside
		A2	Introduction of 20mph speed limits and traffic calming
		A3	Improve pedestrian facilities along riverside
		A4	Provide ATN4 Route
		A5	Move footway / footpath to the riverside for entire route
		A6	Improve the situation for events held at Bught Park
		A7	Reduce traffic on Bught Road and Ness Walk
		A8	Protection of existing mature trees
		A9	Protection of existing riverside railing
		A10	Desire to retain two-way for vehicles on Bishops Road
		A11	One way southbound for vehicles along riverside
		A12	Safe contraflow cycling facilities along riverside
		A13	Improve access between riverside and Eden Court
		A14	Improve access to Ness Walk properties from riverside footpath
		A15	Improve existing drainage issues
		A16	Protection of access to properties
		A17	Parking and access (wider area and specific locations)
		A18	Protection of Great Glen Way route
		A19	Engagement with local schools
		A20	Desire to reduce street clutter
		A21	Provide coach parking at Bught Road
		A22	Avoid coaches entering residential streets
		A23	Consider impact of traffic on Ballifeary Lane
		A24	Residential parking protected during major events
		A25	Parking restrictions on Ballifeary Lane
		A26	Traffic surveys to be undertaken for the area

5.2 Issues Not Directly Targeted by Proposals

Table 5. 2 Issues Not Directly Targeted or Improved by Proposals

Covered by Proposals	Timeframe for Delivery / Consideration	Ref.	Issue / Concern
No	Short Term Consideration	B1	Clearway along Bught Drive
		B2	Right turn ban from Bught Drive to Glenurquhart Road
		B3	Cycle contraflow and parking restrictions on Bught Lane outside the Floral Hall
		B4	Opportunity to relocate long term coach parking
		B5	Improve junction between Springfield Gardens and Ballifeary Lane
		B6	Vehicle weight restrictions on smaller roads
		B7	Formal event pick up and drop off desired
		B8	Additional or overflow parking to be considered in area
		B9	Improve connectivity between Ness Islands and Leisure Centre
		B10	Removal of stone wall / widening of road at Whin Park to help coach movements
		B11	Opportunity to identify greater cycle parking opportunities
	Medium Term Consideration	C1	One-way gyratory for vehicles could be implemented along Bught Road, Bught Lane, Bught Avenue
		C2	Greater linkages with the second phase of Westlink Developments
		C3	Improve coach turning at the Highland Rugby Club
		C4	Increase opportunity for pedestrian and cycle permeability through area
		C5	Signed recreational running routes through park
		C6	Possibility of encouraging an event pick up / drop off on the east side of the river
		C7	Potential for formalising parking within Bught Park
		C8	Vehicle turning area at Fisherman's Car Park
		C9	New footway opposite skate park
		C10	New crossing opposite skate park
	Long Term Consideration	D1	Improve existing contraflow on Ardross Terrance and Ness Walk
		D2	Restriction of vehicles on Ness Walk to access only
		D3	Consideration of banning all vehicles along Ness Walk / Bught Road
		D4	Creation of an enhanced walking and cycling route on east side of river
		D5	Consideration of a new park and ride facility in the area as part of the second phase of Westlink Development
		D6	Traffic delays during bridge closures
		D7	Vehicle access from Westlink to area or additional vehicle route to south
		D8	Opportunity to create a coherent paid parking strategy for car parks in the area

6 Riverside Way / ATN4

An analysis of the Strengths, Weaknesses, Opportunities and Threats (SWOT) of a wide variety of potential design configurations which could be implemented along the Riverside Way / ATN 4 has been undertaken. The full SWOT Analysis is contained within Appendix C of this report. Table 6.1 below shows the design layout arrangements appraised through this SWOT analysis.

Table 6.1 Layout Arrangements Analysed

Reference	Description	Minimum Required Width (m)	Cross Section
1	Existing arrangement / Do nothing	n/a	n/a
2	Shared space for all users	n/a	n/a
3	Road closure to vehicles, pedestrians and cyclists permitted	3.0m	
4	One-way to vehicles southbound, shared use path	6.0m	
5	One-way to vehicles northbound, shared use path	6.0m	
6	One-way to vehicles southbound, contraflow cycle lane northbound, pedestrian footway	7.0m Not between 7.1-7.9m	
7	One-way to vehicles northbound, contraflow cycle lane southbound, pedestrian footway	7.0m Not between 7.1-7.9m	

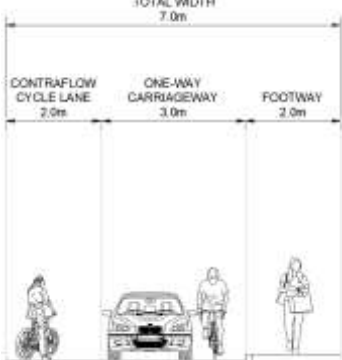

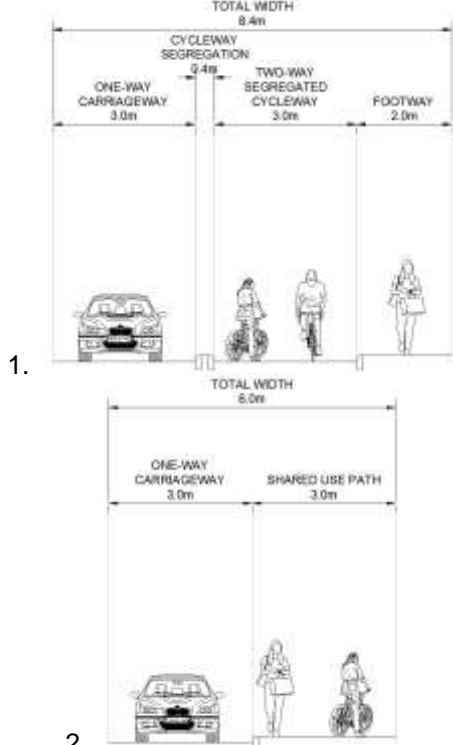
Reference	Description	Minimum Required Width (m)	Cross Section
8	Two-way road, cyclists share carriageway, pedestrian footway	8.0m	
9	Two-way road with filtered permeability, cyclists share carriageway, pedestrian footway	8.0m	
10	Two-way road with vehicle restricted access, cyclists share carriageway, pedestrian footway	8.0m	
11	Two-way segregated cycleway, one-way vehicles, pedestrian footway	8.4m	
12	One way road lane, cycle lane and contraflow cycle lane, pedestrian footway	8.5m	
13	Two-way road, shared use path	9.0m	
14	One-way vehicles, one-way segregated cycleways on both sides of road, pedestrian footway	9.3m	

Reference	Description	Minimum Required Width (m)	Cross Section
15	Two-way road, two-way segregated cycleway, pedestrian footway	11.4m	
16	Two-way road, on-road cycle lanes, pedestrian footway	11.5m	
17	Two-way road, one-way segregated cycleways, pedestrian footway	12.3m	

6.1 SWOT Analysis Summary

The SWOT Analysis provided within this section gives an overview of some of the key considerations for each type of arrangement and the minimum design widths required for each arrangement. This SWOT analysis and the local environmental and space constraints have led to three design configurations being brought forward which will be brought forward for further development through this study.

Table 6. 2 SWOT Analysis Summary

Option	Typical Minimum Cross Section(s)
<p>Option A</p> <p>One-way to vehicles southbound, contraflow cycle lane northbound, pedestrian footway</p>	
<p>Option B</p> <p>One-way to vehicles northbound, contraflow cycle lane southbound, pedestrian footway</p>	
<p>Option C</p> <p>Combination of two main arrangements:</p> <ol style="list-style-type: none"> Two-way segregated cycleway, one-way vehicles, pedestrian footway; and One-way to vehicles southbound, shared use path 	

7 Traffic Surveys

Appendix D of this report contains an Analysis of the Traffic Survey information gathered as part of this project. This chapter summarises some of that information.

7.1 Survey Introduction

An Automatic Number Plate Recognition (ANPR) Surveys were carried out for the study area from Friday the 17th of August to Monday the 20th of August 2018 capturing two-way vehicle registration plate information from 07:00-19:00 each day.

25 cameras were installed at 14 locations in order to gain a greater understanding of vehicle movements, identify existing vehicle route choices and assess the likely impact of proposals.

The key objectives for undertaking the study were:

1. Lack of any historic or relevant survey data for the study area;
2. Identifying route choices for key recorded origin and destination data; and
3. Assessment of the likely impact of a one way system.

Figure 7.1 below shows the locations where cameras were installed.



Figure 7. 1 ANPR Survey Camera Locations

7.2 Total Movements at Each Camera Over Four Days

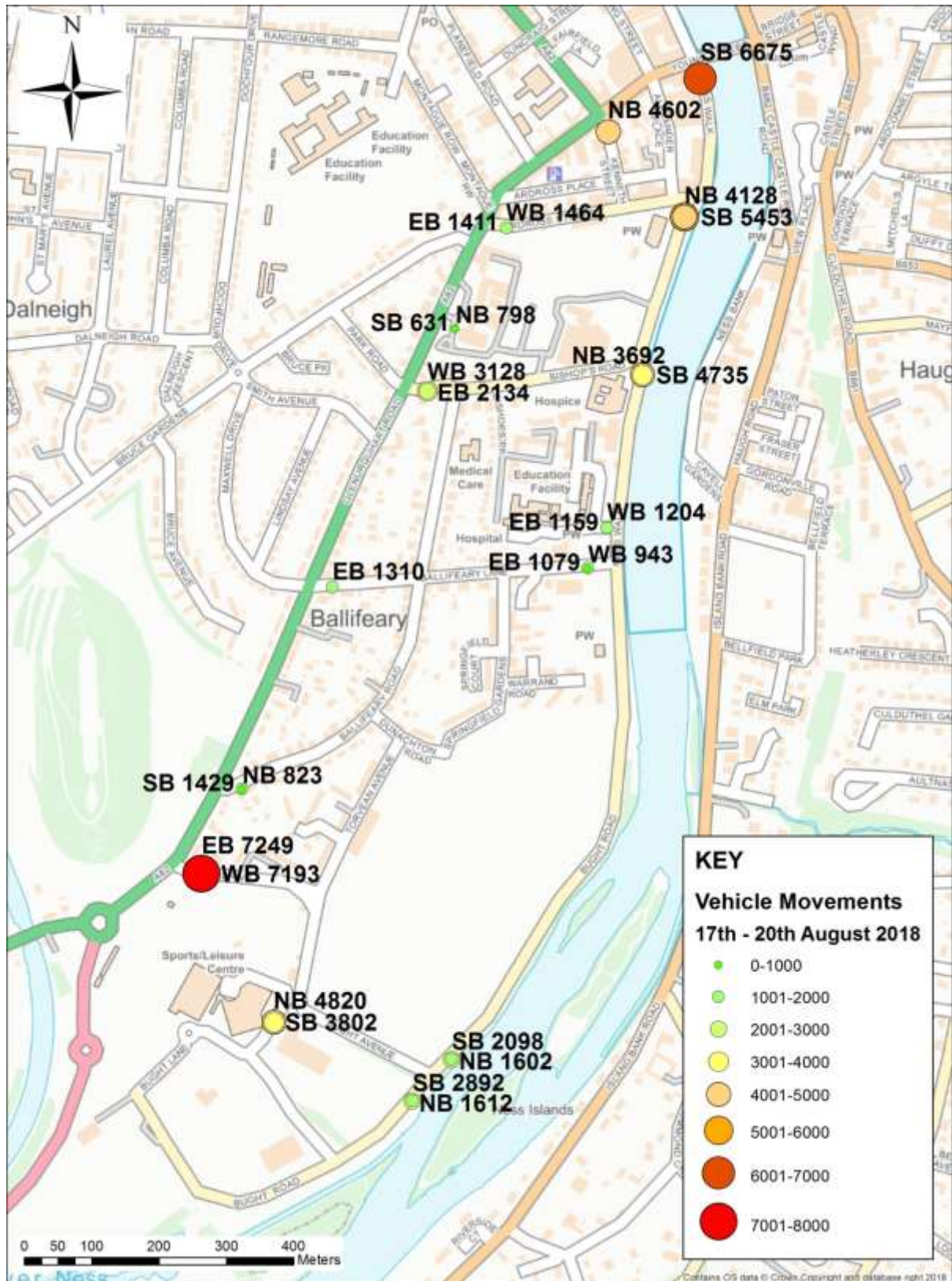


Figure 7.2 Vehicle Movements Over All Survey Days

Figure 7.2 above shows the vehicle movement numbers and direction at each camera location during all four days of the ANPR surveys (NB = Northbound, EB=Eastbound, SB = Southbound and WB = Westbound). The Figure shows that the most significant numbers are experienced at Bught Drive in both directions and the northern Ness Walk site by the city centre.

7.3 Riverside Gardens

7.3.1 Riverside Gardens Origin-Destination Vehicle Movements

Figures 7.3 and 7.4 below show the five most frequent journey origins over the four recorded days from Riverside Gardens and destinations from Riverside Gardens respectively. Table 7.1 below shows the four day northbound and southbound split of the origin-destination data to and from Riverside Gardens.

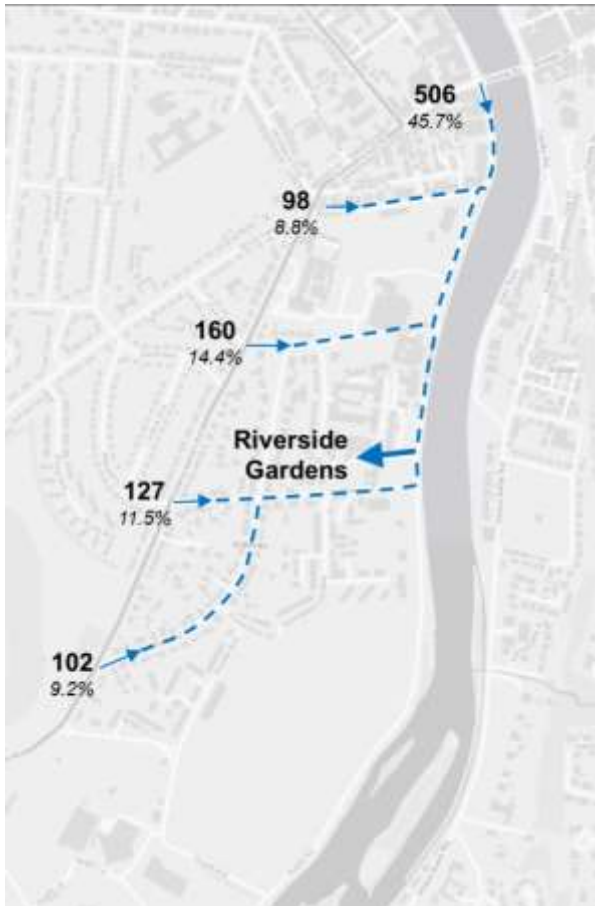


Figure 7. 3 Key Recorded Journey Origins to Riverside Gardens

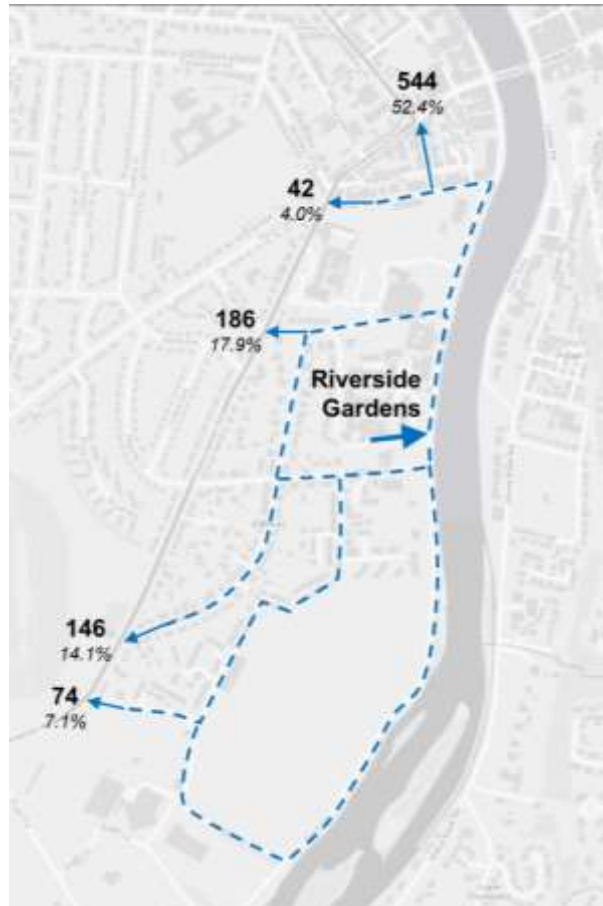


Figure 7. 4 Key Recorded Journey Destinations from Riverside Gardens

7.3.2 Riverside Gardens Origin-Destination North-South Split

Table 7. 1 Riverside Gardens Origin-Destination North-South Split Recorded Over Four Days

Riverside Gardens as a Trip Destination			Riverside Gardens as a Trip Origin		
Direction	Number	%	Direction	Number	%
From North	775	70.8%	To North	777	75.9%
From South	319	29.2%	To South	247	24.1%
Total	1094	100%	Total	1024	100%

7.3.3 Riverside Gardens Origin-Destination Data by Time of Day

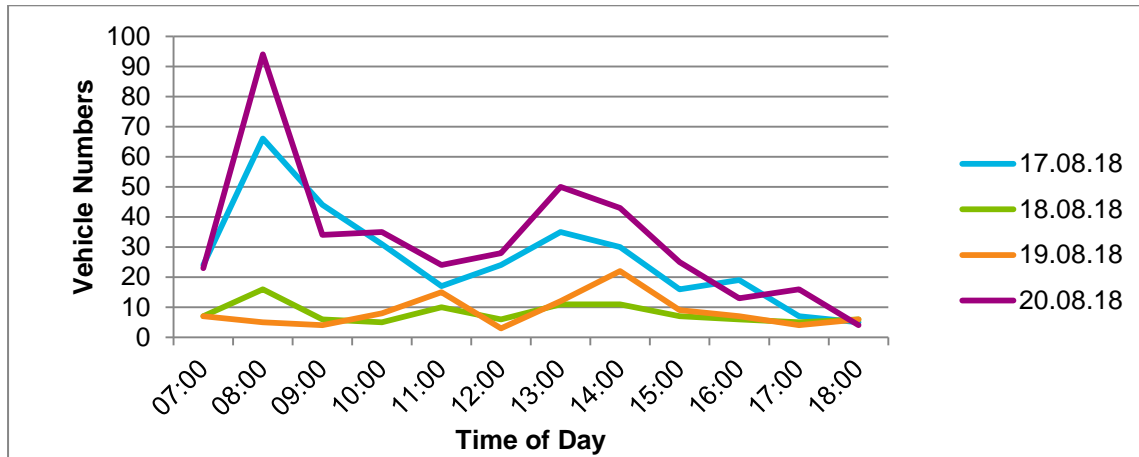


Figure 7. 5 Riverside Gardens – Vehicles Entering by Time of Day for Each Day

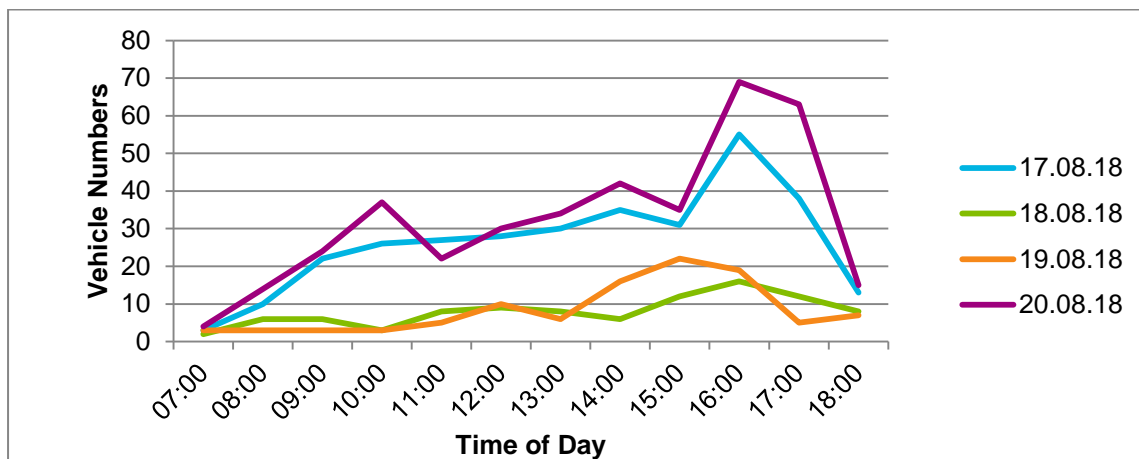


Figure 7. 6 Riverside Gardens – Vehicles Leaving by Time of Day for Each Day

Table 7. 2 Greatest Traffic Movements Recorded In and Out of Riverside Gardens

Movement	Date	Time	Vehicles
Entering Riverside Gardens (Site 10)	20.08.18	08:00-09:00	94
Exiting Riverside Gardens (Site 10)	20.08.18	16:00-17:00	69

Figures 7.5 and 7.6 above show the vehicle numbers by time of day for each survey day both entering and departing Riverside Gardens. The Figures show clear peaks in arrivals and departures and Table 7.3 shows the busiest periods recorded over the four survey days.

7.4 Proposals Traffic Impact Summary

7.4.1 One-Way Southbound Traffic Impact

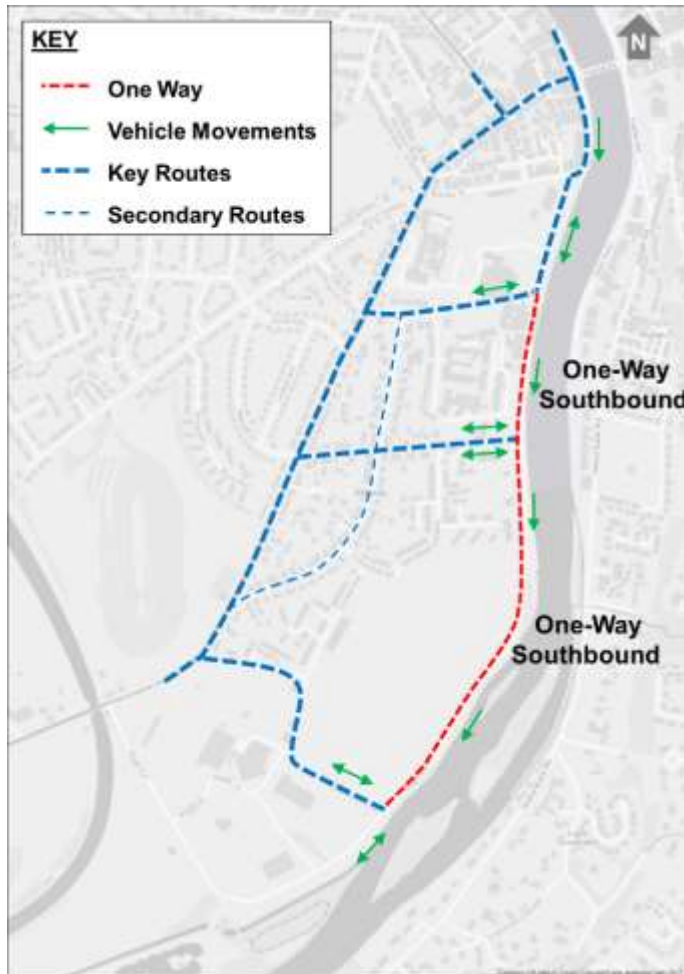


Figure 7. 7 One-Way Southbound Impact Map

longer be able to make this movement.

Given the majority of the recorded vehicle journeys originated from and departed to the north of the study area, the majority of vehicles would be able to access the site using the same roads but have to depart using other signed roads.

The data from Table 7.3 indicates that a one-way southbound arrangement along the riverside could have the potential to add an additional 69 vehicles to Ballifeary Lane between 16:00-17:00 in the worst case scenario.

This section explores the impact of a one-way southbound arrangement for general traffic along Ness Walk and Bught Road between Bishops Road and Bught Avenue.

The direct impact of the southbound one-way would be the prohibition of northbound movements along the riverside route.

Access to Riverside Gardens, RNI Community Hospital, and UHI Offices could only be taken from the north accessing Ness Walk from Bishops Road. Vehicles exiting would be permitted to exit southbound either turning left onto Ballifeary Lane or straight through to Bught Road.

Similarly River Cottage, the Church of Jesus Christ and the Latter Day Saints and Ballifeary House would only be able to take access from the north via Ness Walk and only be able to exit southbound

1,602 northbound movements recorded over four days at Site 12 to the south of Bught Road; vehicles would no longer be able to make this movement.

Similarly the 3,692 northbound movements recorded over four days at Site 9 to the north of Ness Walk would no

7.4.2 One-Way Northbound Traffic Impact

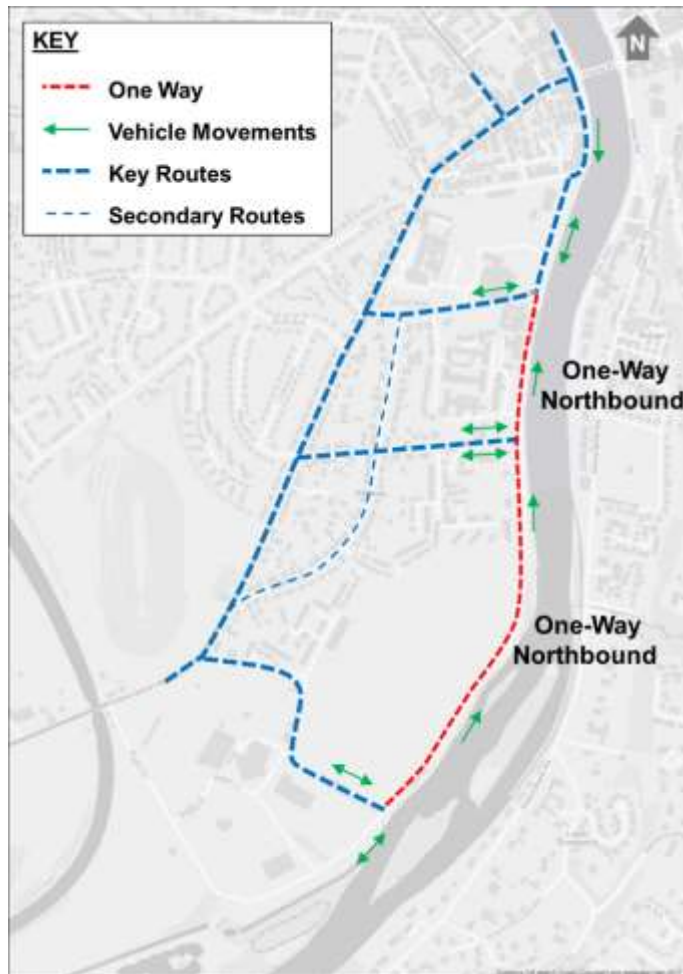


Figure 7. 8 One-Way Northbound Impact Map

would no longer be able to make this movement.

Given the majority of the recorded vehicle journeys originated from and departed to the north of the study area, the majority of vehicles would have to access the site using different signed routes but depart from the site using the same routes.

The data from Table 7.3 indicates that a one-way northbound arrangement along the riverside could have the potential to add an additional 94 vehicles to Ballifeary Lane between 08:00-09:00 in the worst case scenario.

This section explored the impact of a one-way northbound arrangement for general traffic along Ness Walk and Bught Road between Bishops road and Bught Avenue.

The direct impact of the northbound one-way would be the prohibition of southbound vehicle movements along the riverside route.

Access to Riverside Gardens, RNI Community Hospital, and UHI Offices could only be taken from the south accessing Ness Walk from Ballifeary Lane and Bught Road. Vehicles exiting would be permitted to travel northbound out of Bishops Road.

Similarly River Cottage, the Church of Jesus Christ and the Latter Day Saints and Ballifeary House would only be able to take access from the south via Bught Road and exit via Ballifeary Lane or continue along Ness Walk to the north.

2,098 southbound movements were recorded over four days at Site 12 to the south of Bught Road; these vehicles would no longer be able to make this movement.

Similarly the 4,735 southbound movements recorded over four days at Site 9 at Ness Walk by Bishops Road

7.5 Traffic Survey Summary

Route Origin-Destination data was interpreted for vehicles entering and leaving Riverside Gardens at the RNI Community Hospital; showing that a majority of trips to and from the site originate from and depart to the north of the study area.

A one-way southbound system along the riverside would allow this majority of vehicles to access the site in the same way but have to depart using alternative signed roads. A one-way system northbound would mean the opposite; this majority of vehicles would have to access the hospital via alternative signed routes.

Origin-Destination data shows the maximum potential impact of a one-way southbound or northbound arrangement along the riverside should all vehicles chose this Ballifeary Lane as their alternative route:

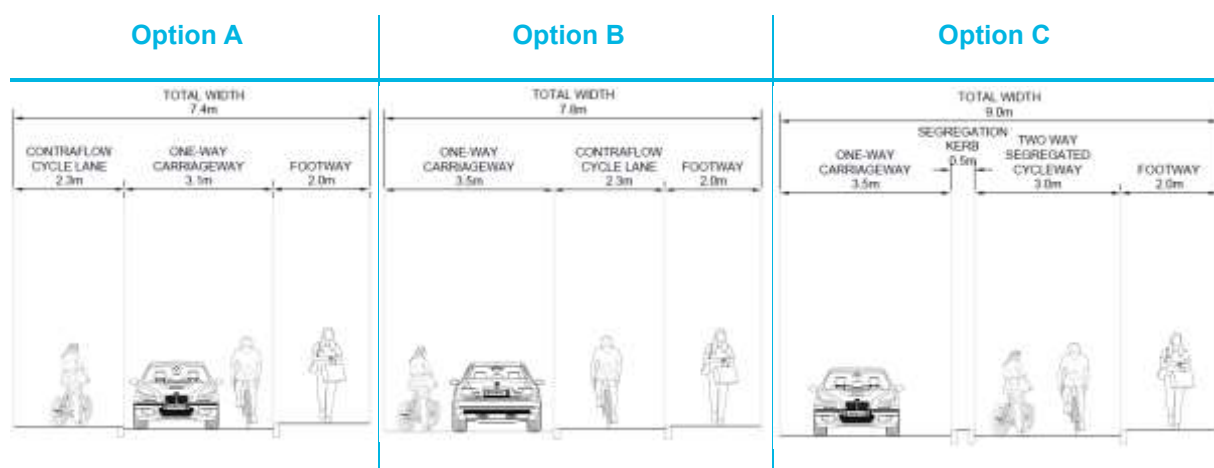
- One-Way Southbound – maximum of 69 additional vehicles expected during 16:00-17:00
- One-Way Northbound – maximum of 94 additional vehicles expected during 08:00-09:00

8 Riverside Way Option Appraisal

8.1 Design Options

Table 8.1 shows the typical cross sections of the three Design Options which were taken forward from the SWOT Analysis in Chapter 6 of this report. Full preliminary design options for each of the three options (as introduced earlier in this report) are provided in Appendices E, F and G of this report.

Table 8. 1 Typical Cross Sections for Design Options



8.2 Final Option Appraisal

The three options have been appraised based upon a combination of design criteria from Cycling by Design and recent Community Links PLUS guidance. The following criteria have been taken from the Core Design Principles of Cycling by Design:

- **Safety:** Design should minimise the potential for actual and perceived accident risk. Perceived risk is a key barrier to cycle use and users should feel safe as well as be safe. It is important to provide consistency of design and avoid ambiguity.
- **Coherence:** Cycling infrastructure should form a coherent network which links origins and destinations. Coherence is about giving people the opportunity to access places by bicycle and to integrate cycling with other modes of travel. Routes should be continuous from an origin to a destination, easy to navigate and of a consistently high quality.
- **Directness:** Cyclists should be offered as direct a route as possible based on existing and latent trip desire lines, minimising detours and delays. It should be recognised that directness has both geographical and time elements, and delays at junctions and crossings as well as physical detours will affect use.
- **Comfort:** Non-sports cyclists prefer sheltered, smooth, uninterrupted, well-maintained surfaces with gentle gradients. Routes should minimise the mental and physical stress required. Routes should meet surface width, quality and gradient standards and be convenient, avoiding complex manoeuvres.
- **Attractiveness:** The perception of a route is important, particularly in attracting new users. Infrastructure should be designed in harmony with its surroundings in such a way that the whole experience makes cycling an attractive option. A route should complement and where possible, enhance the area through which it passes. The treatment of sensitive issues including lighting, personal security, aesthetics, environmental quality and noise are important considerations.

In addition to the Core Design Principles from Cycling by Design there are additional criteria set out in the guidance for Community Links PLUS which have been included in this option appraisal:

- **Accessible:** Design should not disadvantage any user group, particularly those with impaired mobility, wheelchair users, people pushing buggies / prams etc. Design must be logically laid out so as not to disadvantage those with visual impairments.

- **Adaptable:** Future adaptability must be considered to meet changing needs of the future and be able to cater to increased future use of infrastructure.
- **Socio-Economic:** Design should help and not disadvantage any local businesses or organisations. There should be socio-economic benefits to the local community and businesses where possible.

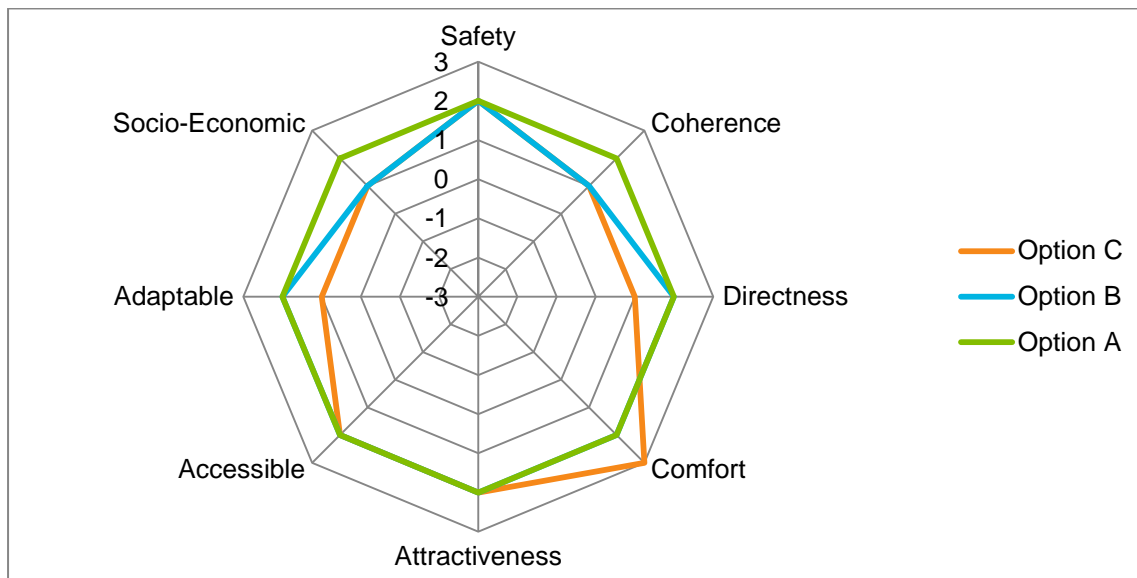


Figure 8.1 Option Appraisal Based Upon Cycling by Design and Community Links PLUS Design Criteria

Figure 8.1 above shows the Option Appraisal for the three design options explained and developed within this report. As the Figure shows, all three design options provide significant benefit to potential users with certain options scoring differently in certain areas. For example, Option C which provides two-way segregated cycling facilities scores highest for user comfort, whilst lower for route coherence as this would introduce a third significant infrastructure provision within a relatively short area.

Further to the Option Appraisal shown above, the results of consultation and the deliverability of the three options have been taken into account.

8.3 Recommended ATN4 / Riverside Way Design

Option A comes out on top of the Option Appraisal based upon the Core Design Principles identified in Cycling by Design and the guidance set out by Sustrans in their recent Community Links PLUS guidance.

In addition, Option A is considered to most closely address the majority of the concerns and issues raised by Council Officers, Elected Members, Key Stakeholders and Local Residents.

Finally, Option A is considered to be the most deliverable of the three options proposed.

It is therefore recommended that Option A is progressed to a detailed design stage which will address further comments and concerns raised by Key Stakeholders and Local Residents.

9 Traffic Regulation Order Proposals

This section of the report summarises the TROs required for the ATN4 / Riverside Way proposals and the immediate Event Zone proposals. Table 9.1 below shows the “family” of TROs which are anticipated to be implemented and how they relate to the wider scheme.

Table 9.1 "Family" of TRO Measures

"Family" of TROs			
Full-time TROs			Variable TROs
Riverside Way TROs	Other Area TROs	20mph Zone	Event Zone TROs

It is important to note that other proposed TROs in the area such as the Ballifeary Residential Parking Permit Proposals whilst in the same area, are not being developed as part of this project and are being carried forward by the Traffic & Parking team within The Highland Council.

For ease of implementation the immediate Riverside Way TROs have been split north and south of Ballifeary Lane. Therefore the following TRO Schedules and corresponding drawings have been developed for this scheme:

Table 9.2 Proposed TROs

Category	Reference	Order Name	Description
20mph	1	t.b.c.	20mph Speed Limits Order
Riverside Way North	2	THE HIGHLAND COUNCIL (U4158 NESS WALK UPPER, INVERNESS) (ONE WAY) ORDER 2019	One-Way Order
	3	THE HIGHLAND COUNCIL (U4158 NESS WALK UPPER, INVERNESS) (REDETERMINATION OF MEANS OF THE EXERCISE OF PUBLIC RIGHT OF PASSAGE) (CYCLE TRACK) ORDER 2019	Redetermination Order
	4	THE HIGHLAND COUNCIL (U4158 NESS WALK UPPER, INVERNESS) (REDETERMINATION OF MEANS OF THE EXERCISE OF PUBLIC RIGHT OF PASSAGE) (FOOTWAY) ORDER 2019	Redetermination Order
Riverside Way South	5	THE HIGHLAND COUNCIL (U3823 BUGHT ROAD AND U4158 NESS WALK UPPER, INVERNESS) (ONE WAY) ORDER 2019	One-Way Order
	6	THE HIGHLAND COUNCIL (U4158 NESS WALK UPPER AND U3823 BUGHT ROAD, INVERNESS) (REDETERMINATION OF MEANS OF THE EXERCISE OF PUBLIC RIGHT OF PASSAGE) (CYCLE TRACK)	Redetermination Order

		ORDER 2019	
	7	THE HIGHLAND COUNCIL (U2828 BUGHT ROAD, INVERNESS) (REDETERMINATION OF MEANS OF THE EXERCISE OF PUBLIC RIGHT OF PASSAGE) (SHARED USE FOOTPATH) ORDER 2019	Redetermination Order
Event Zone	8	THE HIGHLAND COUNCIL (VARIOUS ROADS, BUGHT PARK, INVERNESS) (20MPH SPEED LIMITS) ORDER 2019	Event Zone Order
	9	The Highland Council (Traffic Restrictions and Prohibitions During Events) ORDER 2019	Event Parking Restriction Order

TRO Schedules are provided in Appendix H of this report and corresponding drawings / plans are provided in Appendix I of this report.

It is recommended that Bught Park Management Group supported by The Highland Council and Highlife Highland continue to take a leading role in keeping local businesses, organisations and residents informed of upcoming events and road closures taking place during major and scheduled events within the study area.

AECOM has established that a TRO covering the event area of Bught Park is achievable, however, during the research and developed of the proposed TRO(s) established that amendments would be required to **The Highland Council's Decriminalised Parking Enforcement Traffic Regulation Order (on street) 2016**¹⁴. Amendment of existing TROs will be required to ensure that a proposed Event TRO would not affect the legality of existing TROs such as the decriminalised parking TRO highlighted.

Consultation with Council Officers has indicated that the Event TRO could be titled: **The Highland Council (Traffic Restrictions and Prohibitions During Events) ORDER 2019**

To permit the Event TRO to be progressed further dialogue will be required with the relevant Council Officers and Departments. This dialogue will take place following the outcome of The Highland Council Committee Meeting on the 22nd of November 2018 with the final Event TRO and its schedules completed by the end of January 2019.

¹⁴ https://www.highland.gov.uk/info/20006/parking_and_car_parks/711/decriminalised_parking_enforcement

10 Next Steps

The following are the next steps recommended for the further development of the project:

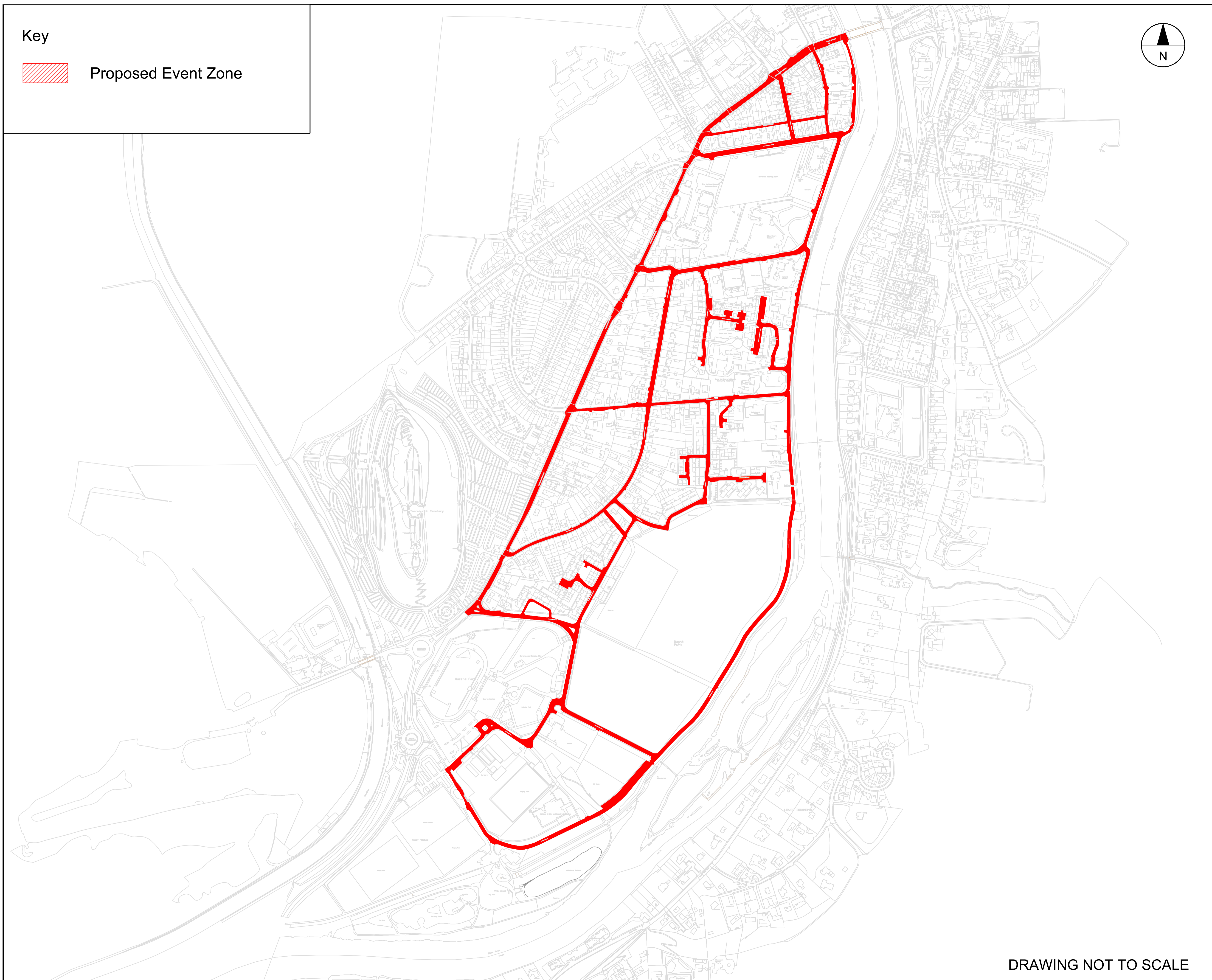
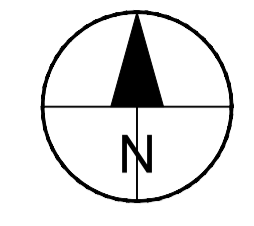
- Continued development of Traffic Regulation Orders;
- Topographical Surveys for Riverside Way Route;
- Landownership Investigation for Riverside Way Route;
- Public Utilities and Drainage Investigation for Riverside Way Route;
- Detailed Design of ATN4 / The Riverside Way taking on board key consultation design feedback;
- THC Community Engagement and Consultation;
 - Further Consultation with all Key Stakeholders along Riverside Way Route;
 - Statutory TRO Consultation Process;
 - Other consultation THC deems appropriate for delivery of the scheme; and
- Investigation of Potential Feasibility for Development of Further Improvements Indirect to Proposal Identified by Consultation (Table 5.2).

11 Appendices

File name: P:\UK\GL3-TP\PROJECTS\TRAFFIC - THC - BUGHT PARK\03 EXECUTION\CA020-SHEETS\TRO DRAWINGS\60578174-SHT-TRO-EVENT-ZONE.DWG
 Last saved by: MCNEILLR Last Plotted: 2018-11-07
 Project Management Initials: Designer: RM Checked: PL Approved: DM ISO A1 594mm x 841mm

Key

 Proposed Event Zone



PROJECT

RIVERSIDE WAY
BUGHT PARK
TRAFFIC
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CONSULTANT

AECOM
Aurora
120 Bothwell St
GLASGOW, G2 7JS
+44 (0) 141 248 0300 tel
www.aecom.com

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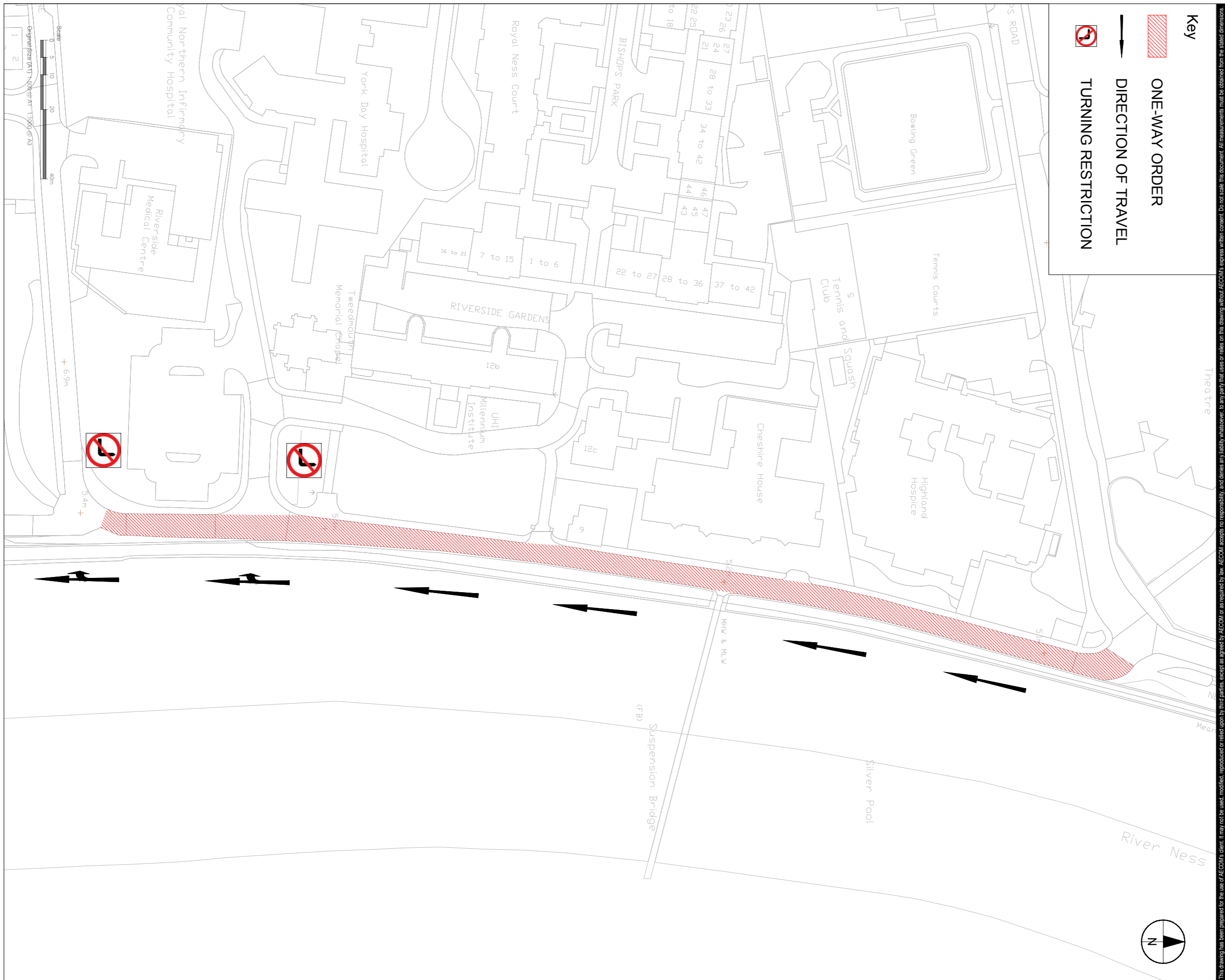
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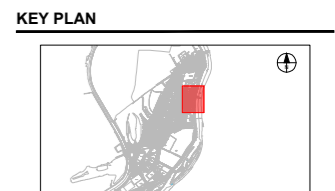


CONSULTANT
 AECOM
 Aurora
 120 Bothwell St
 GLASGOW, G2 7JS
 +44 (0) 141 248 0300 tel
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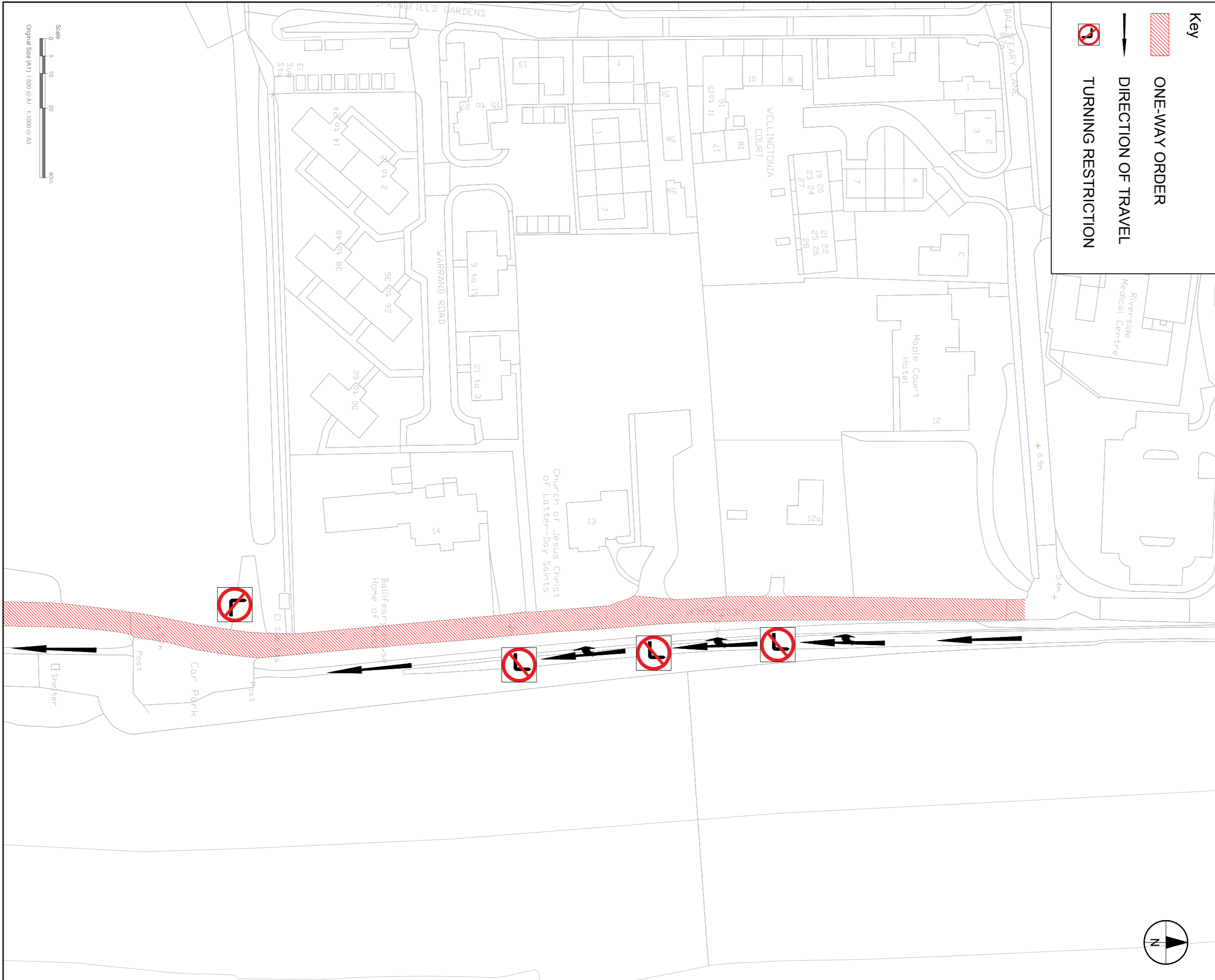
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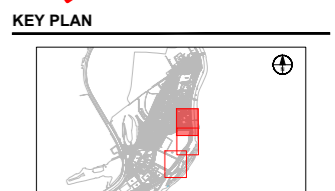
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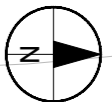


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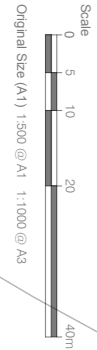
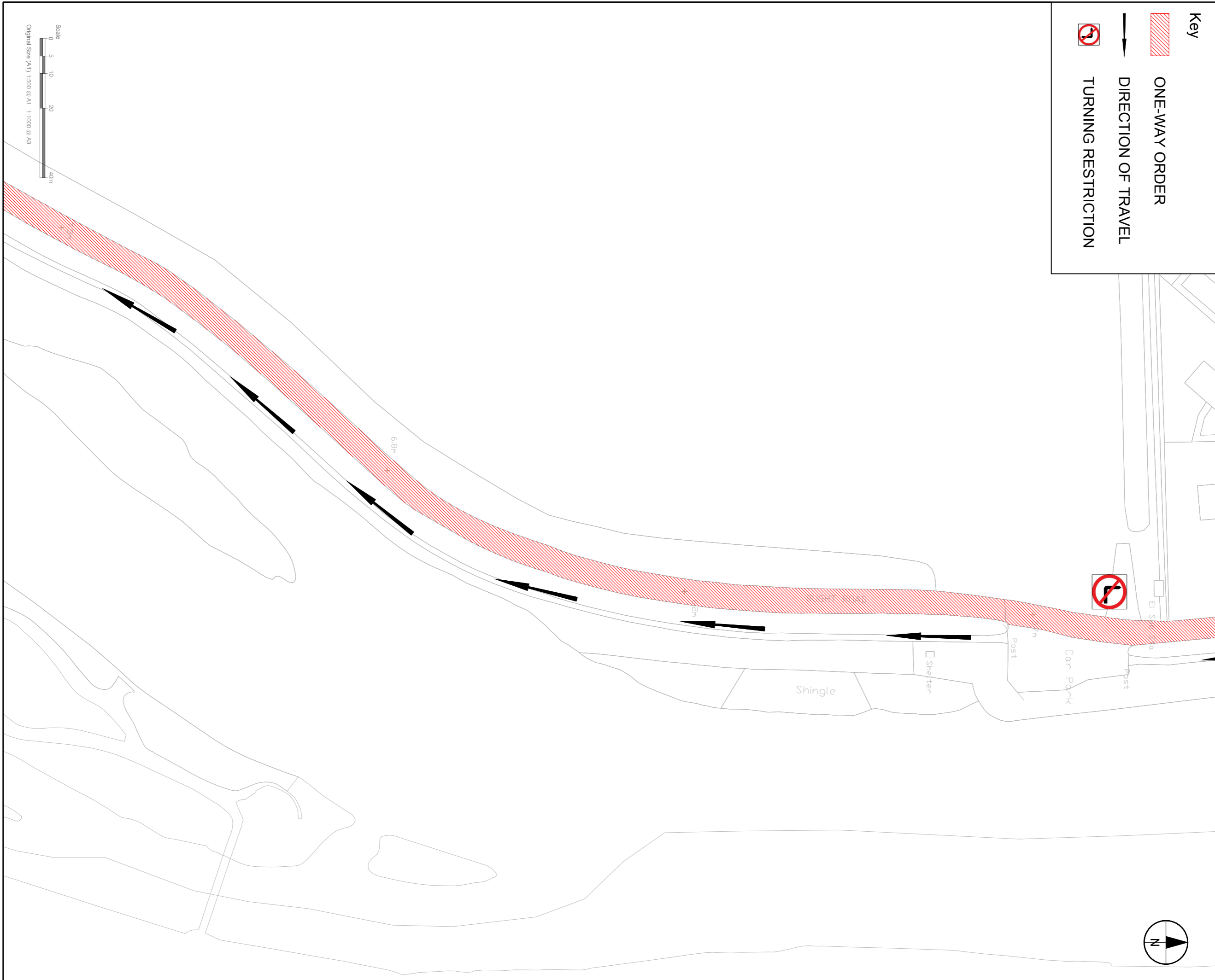
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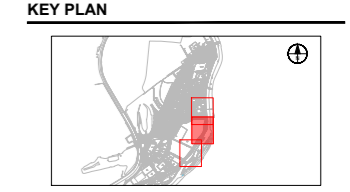
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CONSULTANT
 AECOM
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 GLASGOW, G2 7JS
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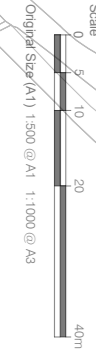
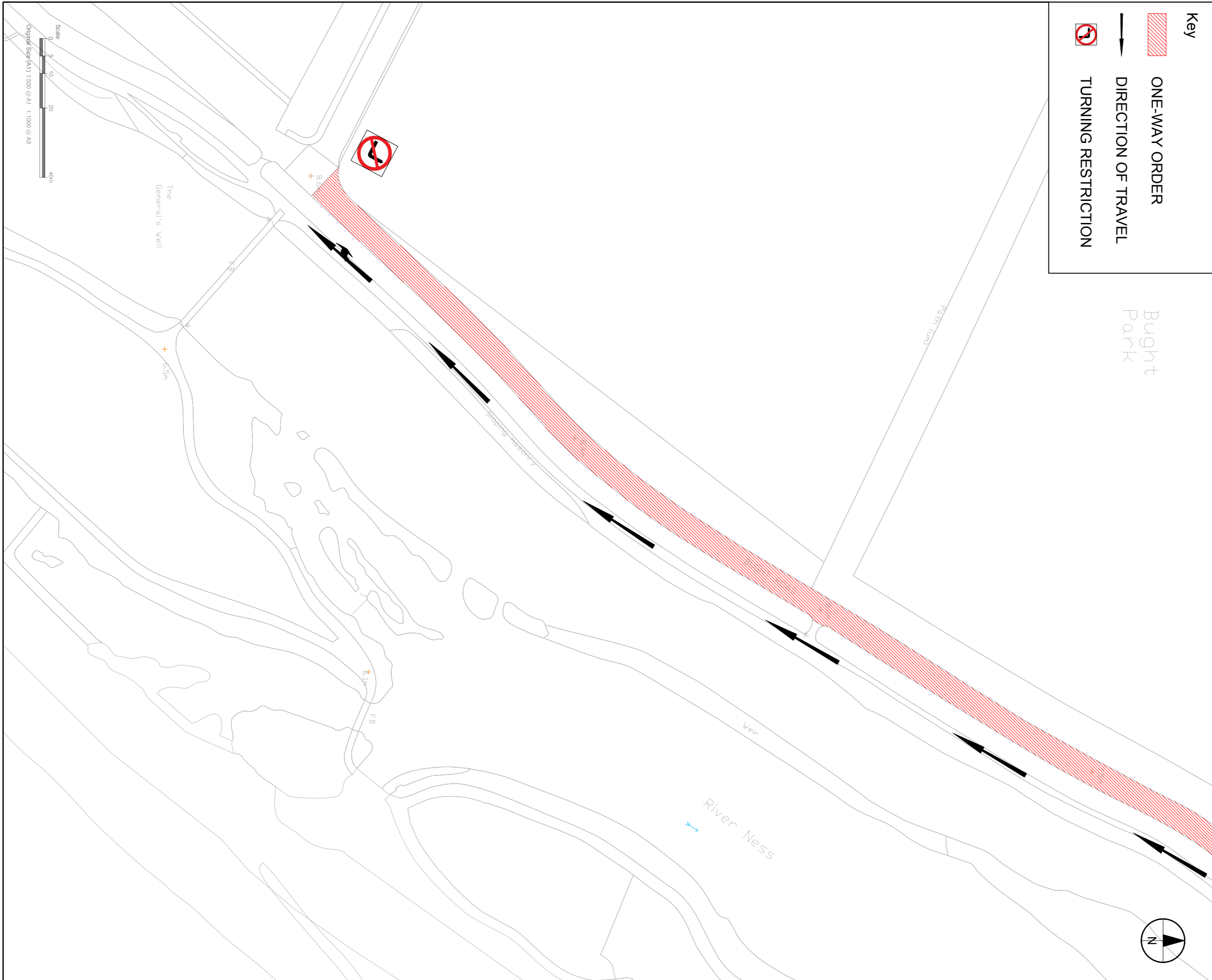
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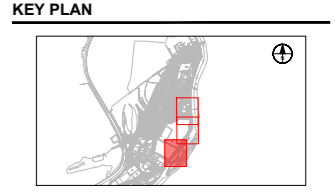
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Aurora
120 Bothwell St
GLASGOW, G2 7JS
+44 (0) 141 248 0300 tel
www.aecom.com

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ISSUE/REVISION

I/R	DESCRIPTION



PROJECT NUMBER
60578174

SHEET TITLE
RIVERSIDE WAY - TRO SOUTH

SHEET 3 OF 3

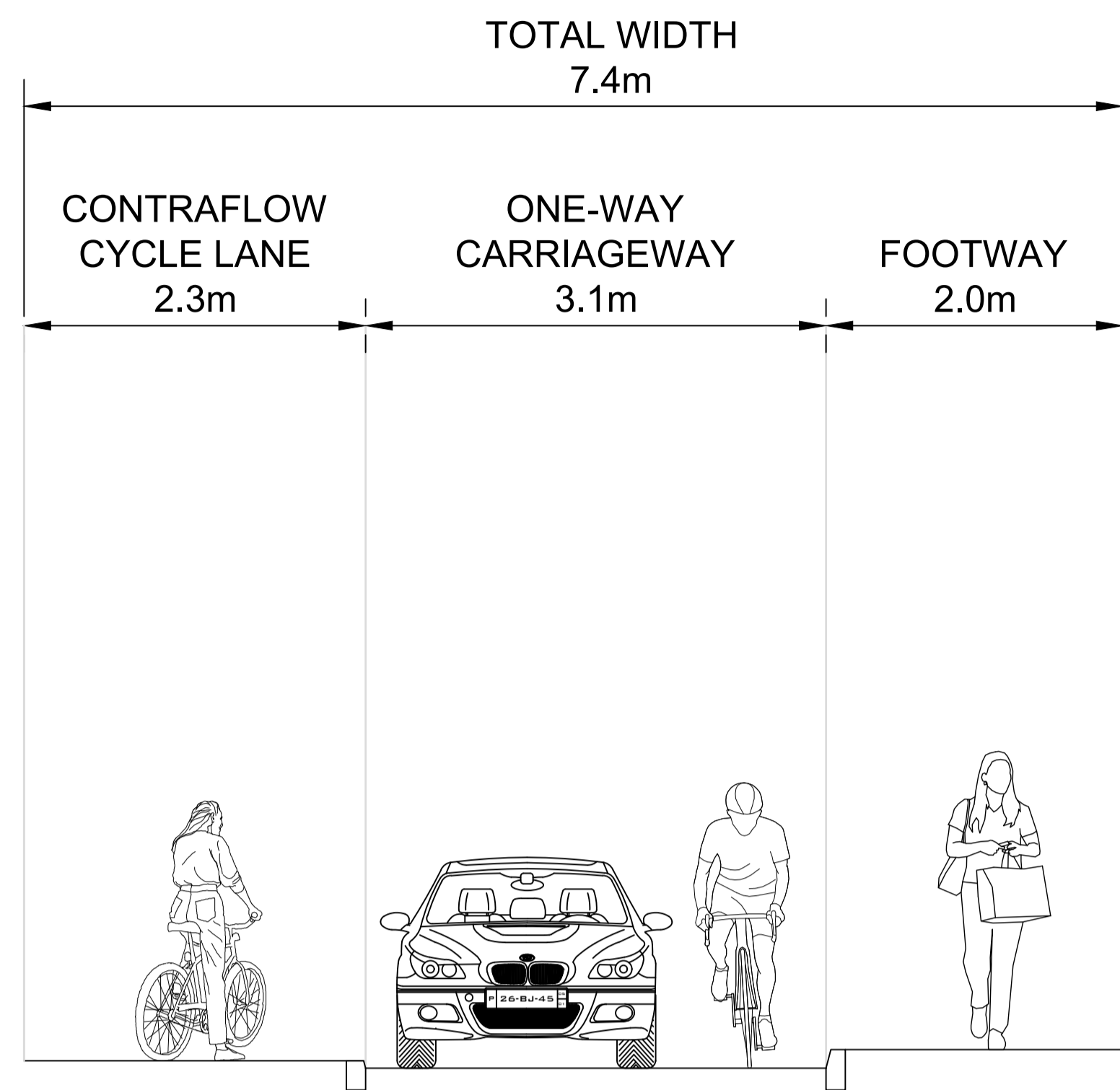
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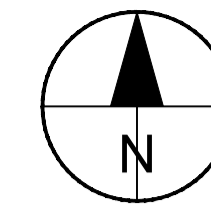
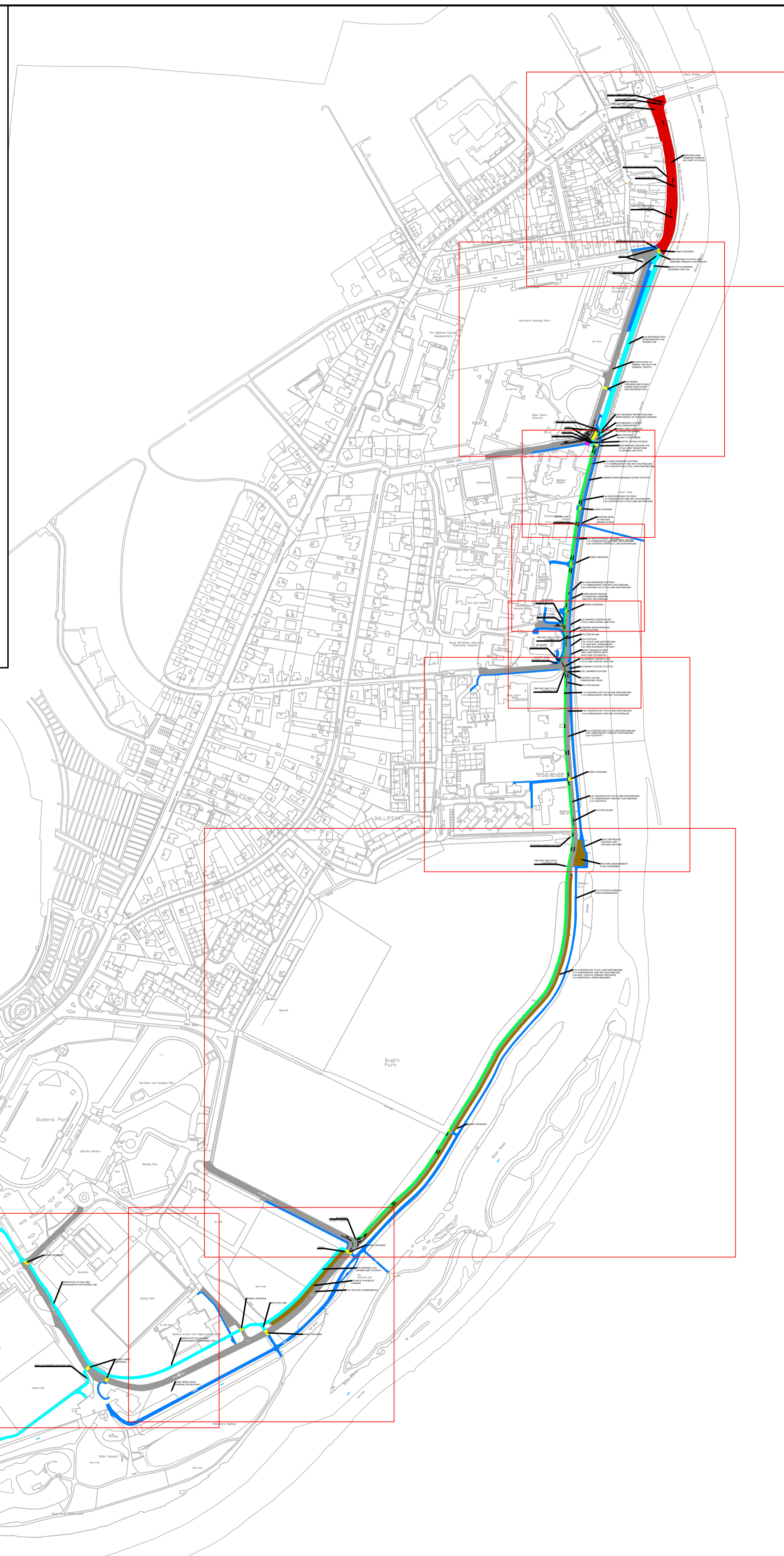
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ISO A1 594mm x 841mm
 Approved: DM
 Checked: PL
 Designer: RM
 Project Management Initials:
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 Last saved by: MCNEILLR Last Plotted: 2018-11-06

TYPICAL CROSS SECTION



INDICATIVE PROPOSALS



PROJECT
 RIVERSIDE WAY
 BUGHT PARK
 TRAFFIC
 MANAGEMENT AND
 CYCLE ROUTE

CLIENT



CONSULTANT

AECOM
 Aurora
 120 Bothwell St
 GLASGOW, G2 7JS
 +44 (0) 141 248 0300 tel
 www.aecom.com

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ISSUE/REVISION

I/R	DESCRIPTION

KEY PLAN

PROJECT NUMBER

60578174

SHEET TITLE

RIVERSIDE WAY - OPTION A
 STUDY AREA
 SHEET 1 OF 10

SHEET NUMBER

60578174-SHT-OPTION_A-001

STUDY AREA PLAN NOT TO SCALE

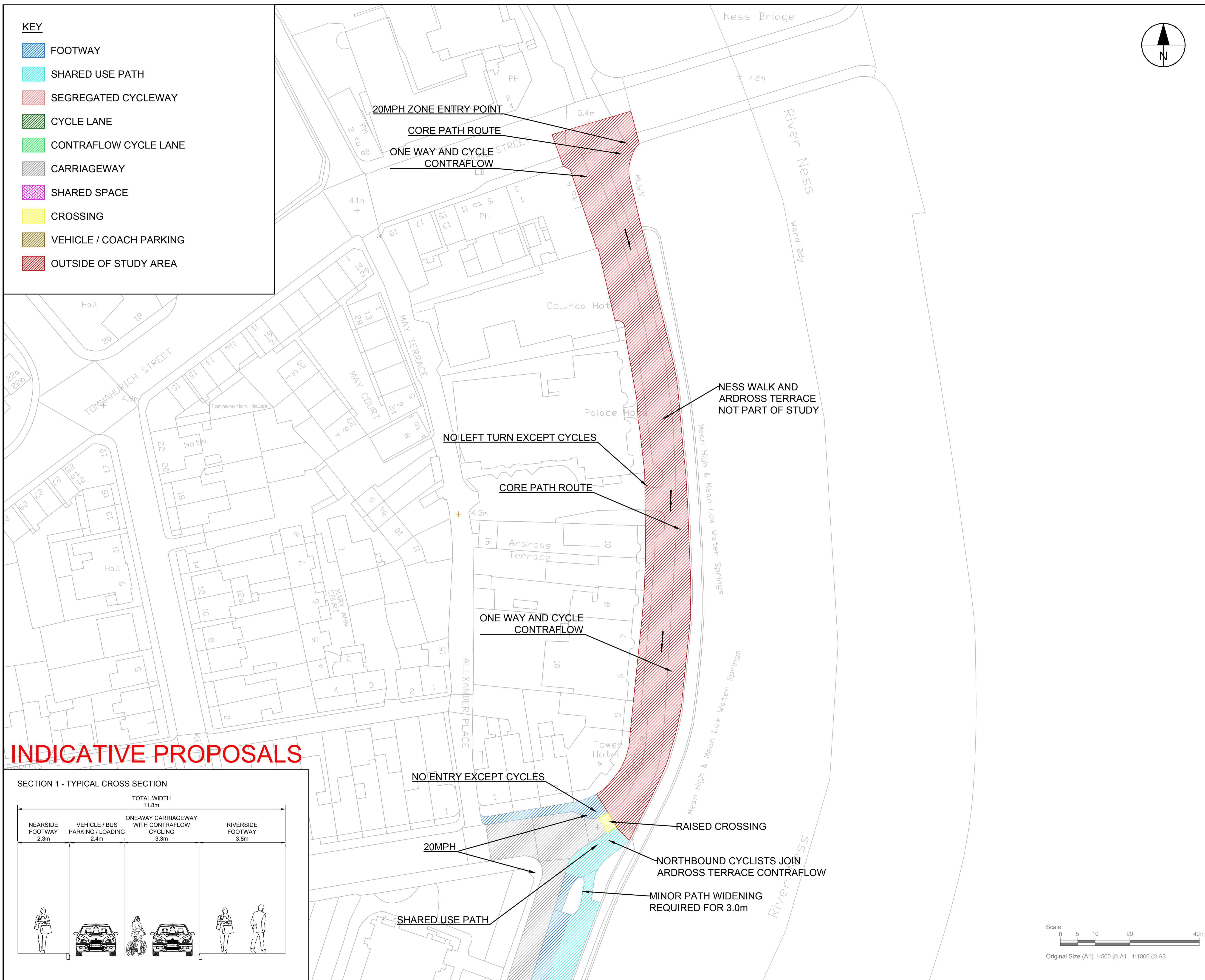
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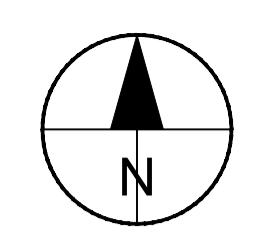
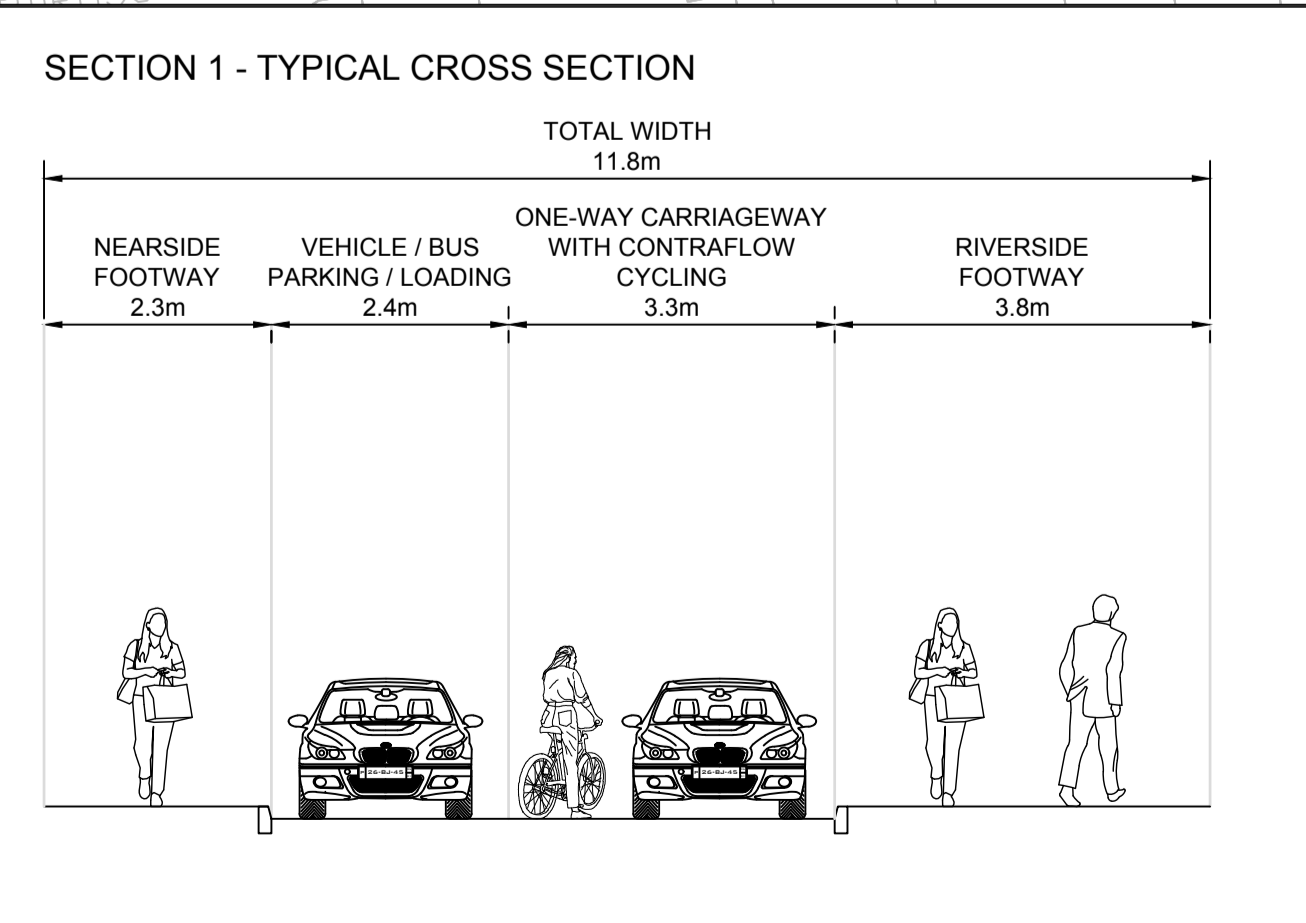
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 Project Management Initials: Designer: RM Checked: PL Approved: DM ISO A1 594mm x 841mm

KEY

	FOOTWAY
	SHARED USE PATH
	SEGREGATED CYCLEWAY
	CYCLE LANE
	CONTRAFLOW CYCLE LANE
	CARRIAGEWAY
	SHARED SPACE
	CROSSING
	VEHICLE / COACH PARKING
	OUTSIDE OF STUDY AREA



INDICATIVE PROPOSALS



PROJECT
RIVERSIDE WAY
BUGHT PARK
TRAFFIC
MANAGEMENT AND
CYCLE ROUTE



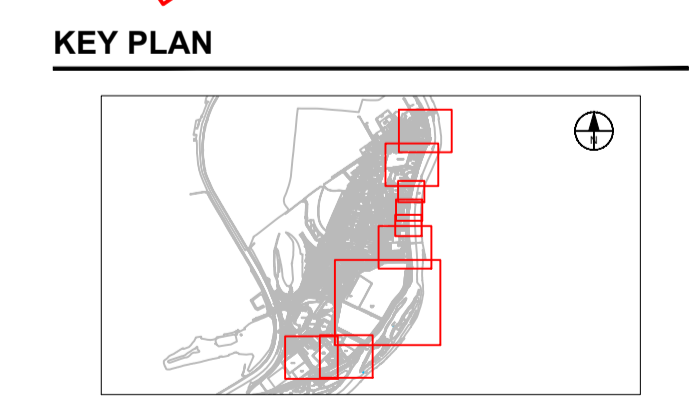
CONSULTANT

AECOM
 Aurora
 120 Bothwell St
 GLASGOW, G2 7JS
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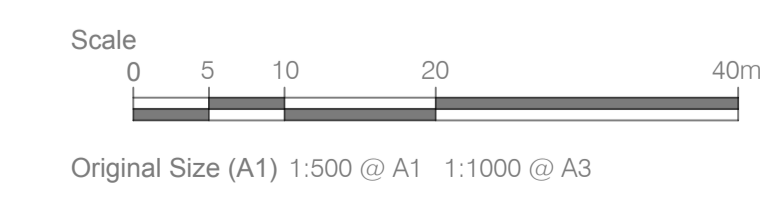


PROJECT NUMBER
60578174

SHEET TITLE
RIVERSIDE WAY - OPTION A

SHEET 2 OF 10

SHEET NUMBER
60578174-SHT-OPTION_A-002

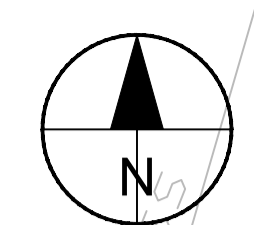
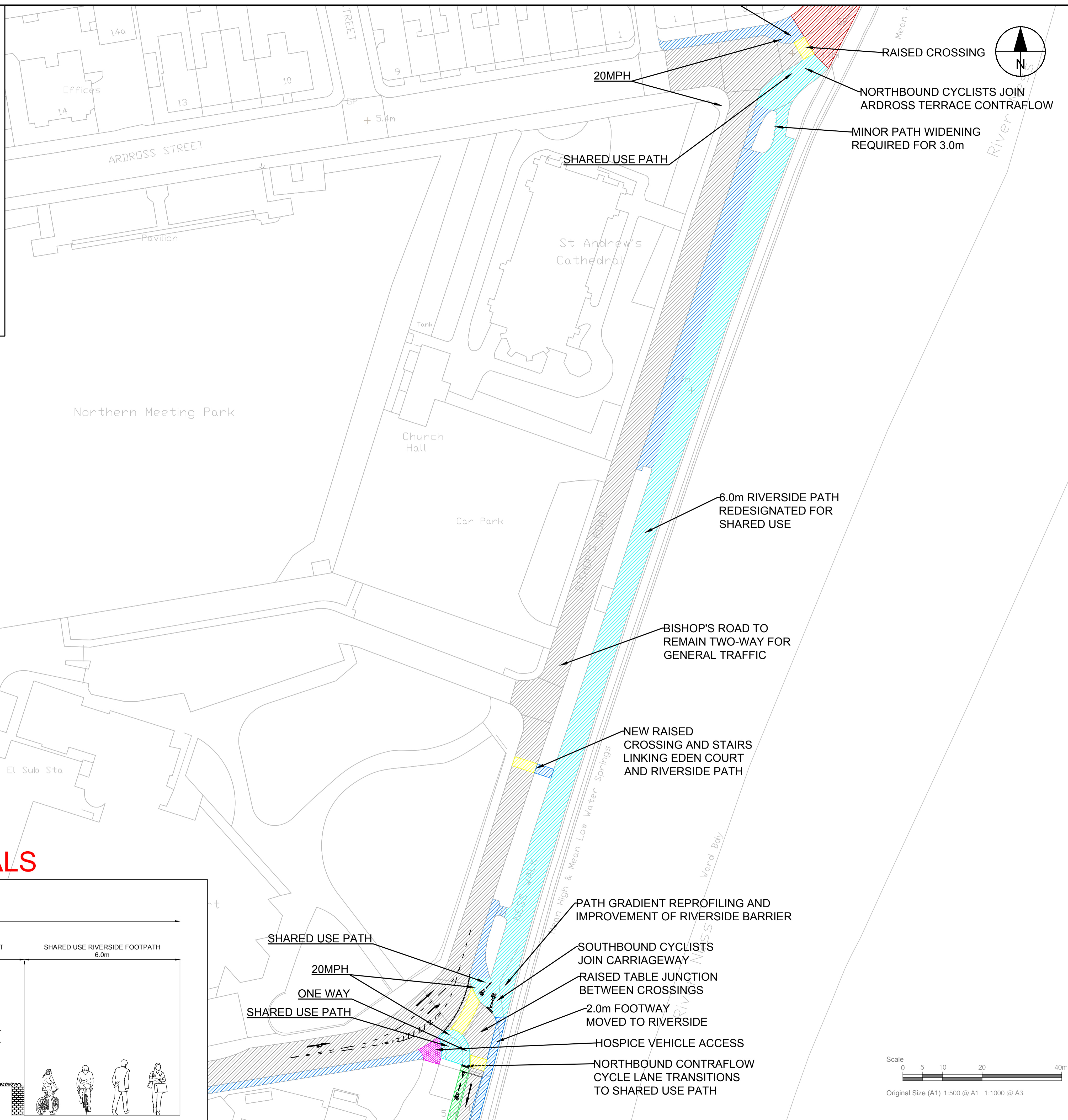


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 Project Management Initials: Designer: RM Checked: PL Approved: DM ISO A1 594mm x 841mm

KEY

	FOOTWAY
	SHARED USE PATH
	SEGREGATED CYCLEWAY
	CYCLE LANE
	CONTRAFLOW CYCLE LANE
	CARRIAGEWAY
	SHARED SPACE
	CROSSING
	VEHICLE / COACH PARKING
	OUTSIDE OF STUDY AREA



PROJECT
RIVERSIDE WAY
BUGHT PARK
TRAFFIC
MANAGEMENT AND
CYCLE ROUTE



CONSULTANT
 AECOM
 Aurora
 120 Bothwell St
 GLASGOW, G2 7JS
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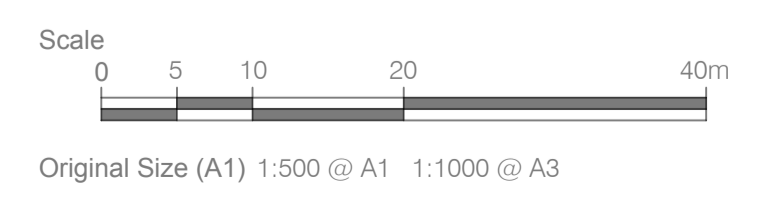
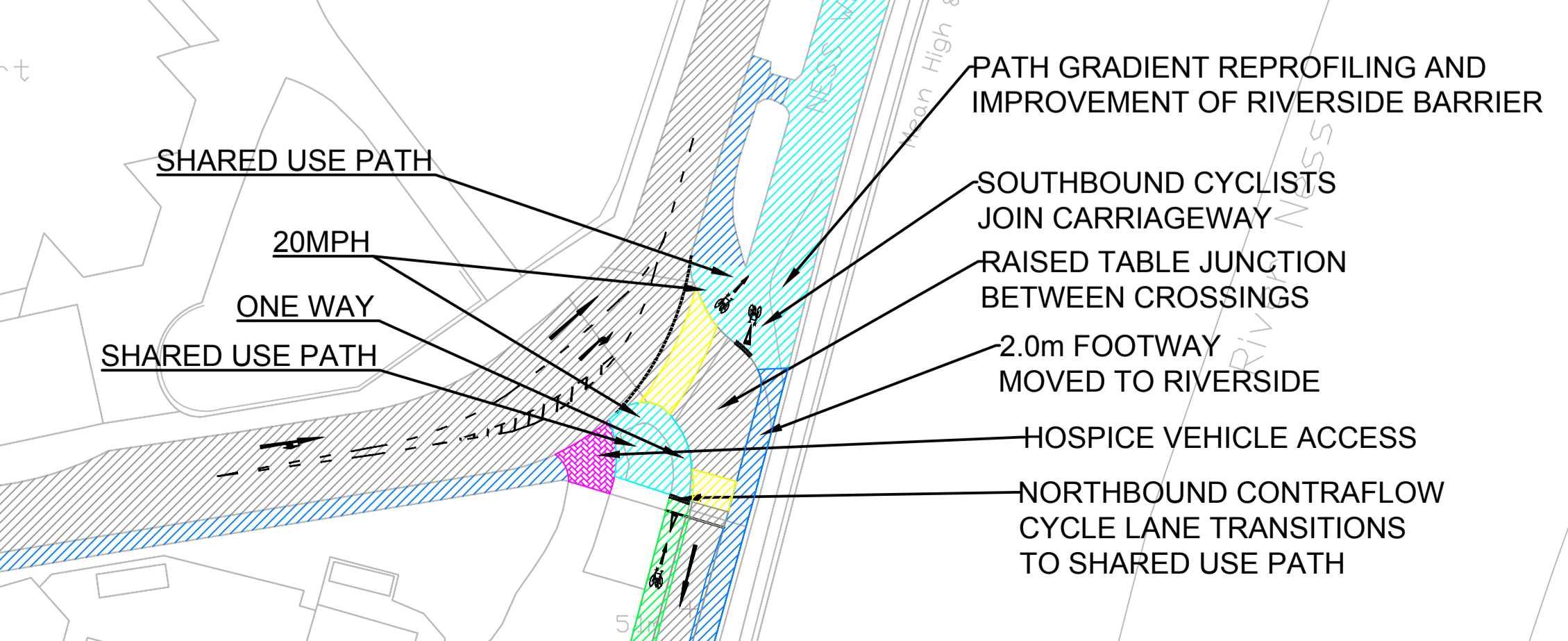
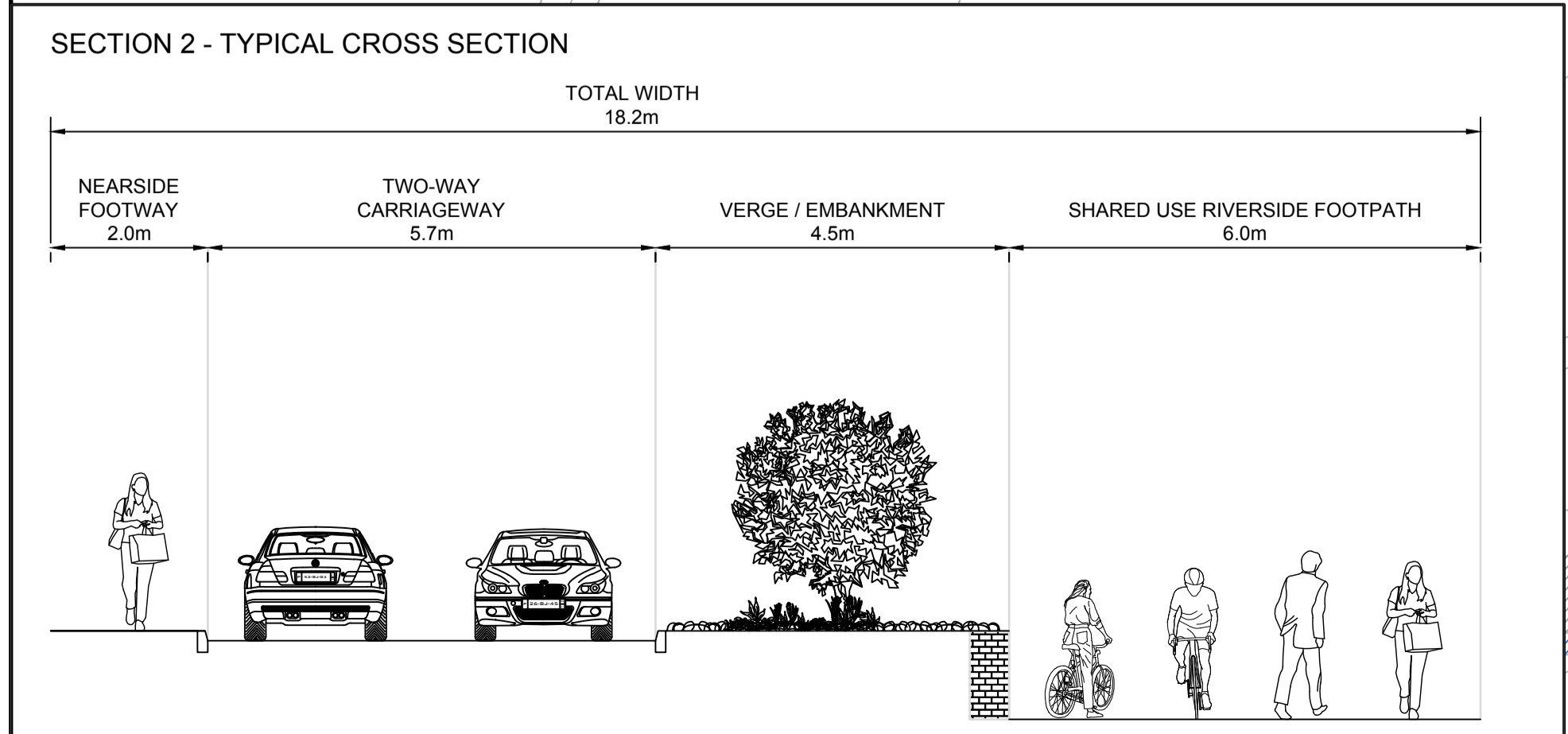
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ISSUE/REVISION

I/R	DESCRIPTION



INDICATIVE PROPOSALS



KEY PLAN

PROJECT NUMBER
60578174

SHEET TITLE
RIVERSIDE WAY - OPTION A

SHEET 3 OF 10

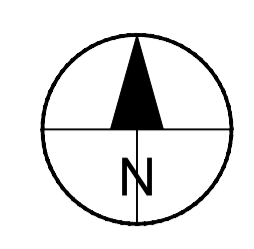
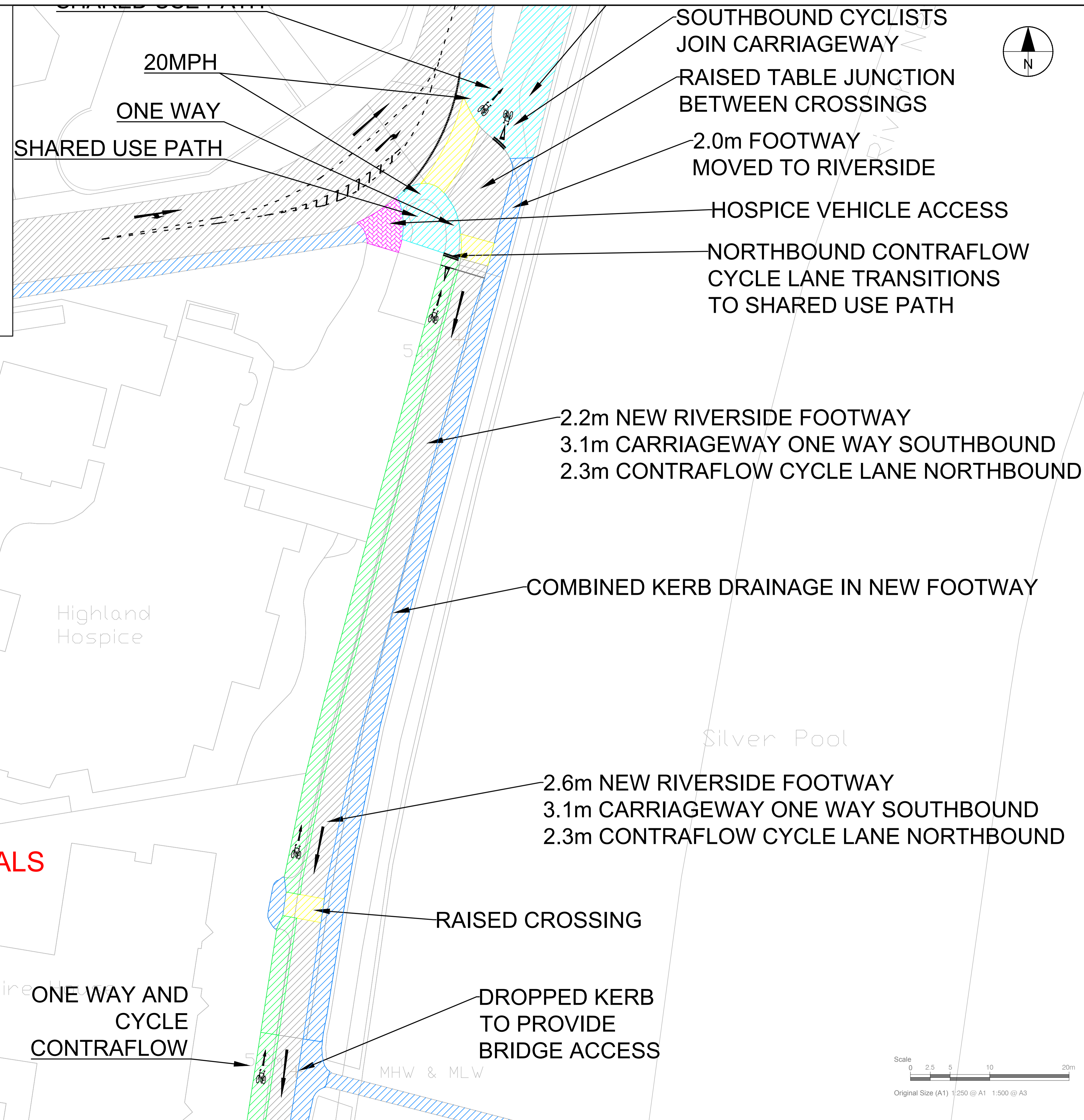
SHEET NUMBER
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 Project Management Initials: Designer: RM Checked: PL Approved: DM ISO A1 594mm x 841mm

KEY

	FOOTWAY
	SHARED USE PATH
	SEGREGATED CYCLEWAY
	CYCLE LANE
	CONTRAFLOW CYCLE LANE
	CARRIAGEWAY
	SHARED SPACE
	CROSSING
	VEHICLE / COACH PARKING
	OUTSIDE OF STUDY AREA



PROJECT
 RIVERSIDE WAY
 BUGHT PARK
 TRAFFIC
 MANAGEMENT AND
 CYCLE ROUTE

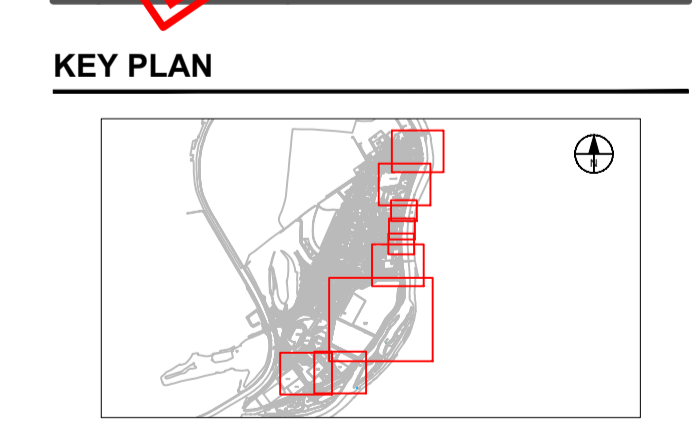


CONSULTANT
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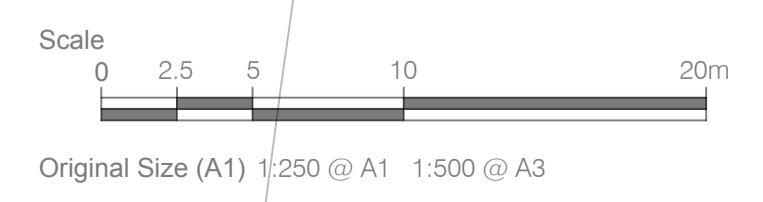
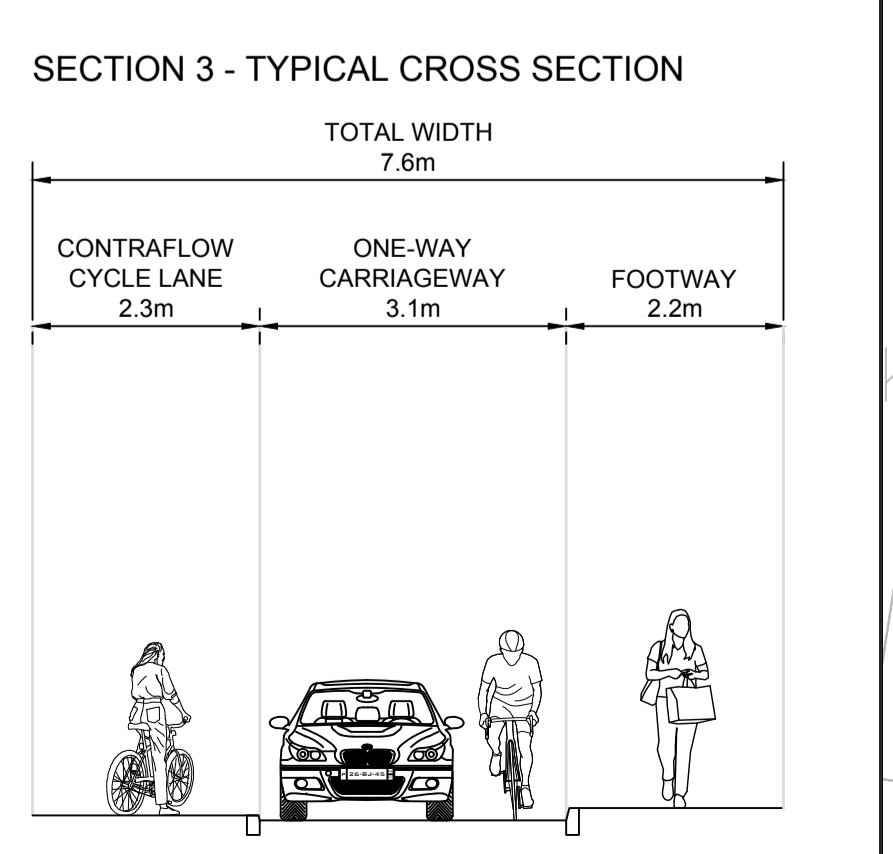
ISSUE/REVISION

I/R	DESCRIPTION



PROJECT NUMBER
 60578174
SHEET TITLE
 RIVERSIDE WAY - OPTION A
SHEET 4 OF 10
SHEET NUMBER
 60578174-SHT-OPTION_A-004

INDICATIVE PROPOSALS

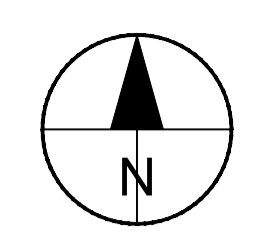


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KEY

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	CYCLE LANE
	CONTRAFLOW CYCLE LANE
	CARRIAGEWAY
	SHARED SPACE
	CROSSING
	VEHICLE / COACH PARKING
	OUTSIDE OF STUDY AREA



PROJECT
 RIVERSIDE WAY
 BUGHT PARK
 TRAFFIC
 MANAGEMENT AND
 CYCLE ROUTE
CLIENT

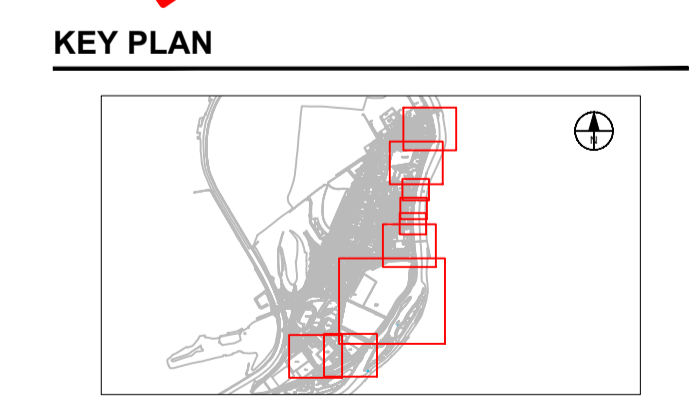


CONSULTANT
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 Aurora
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 GLASGOW, G2 7JS
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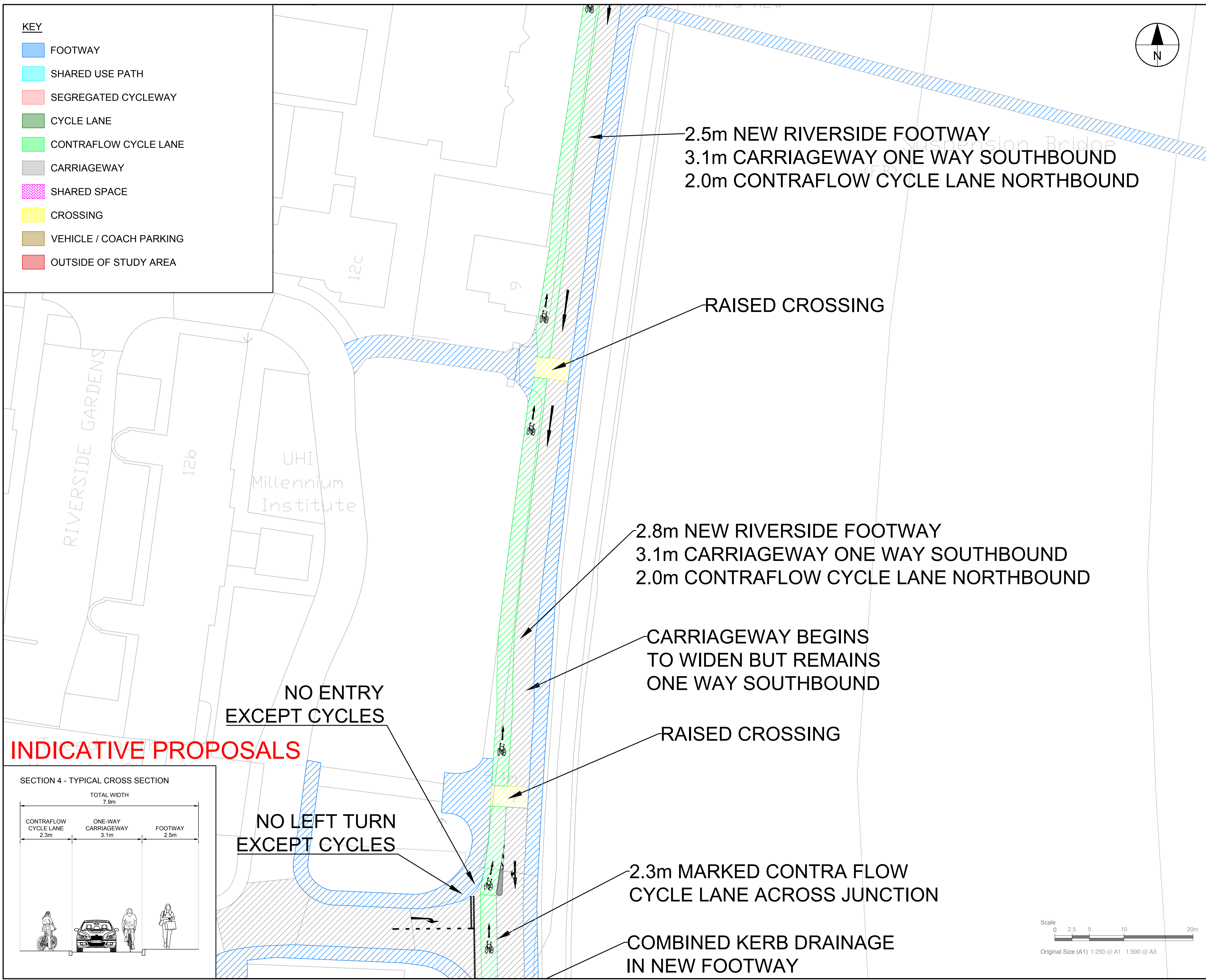
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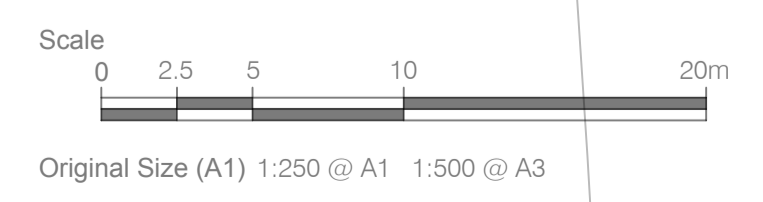
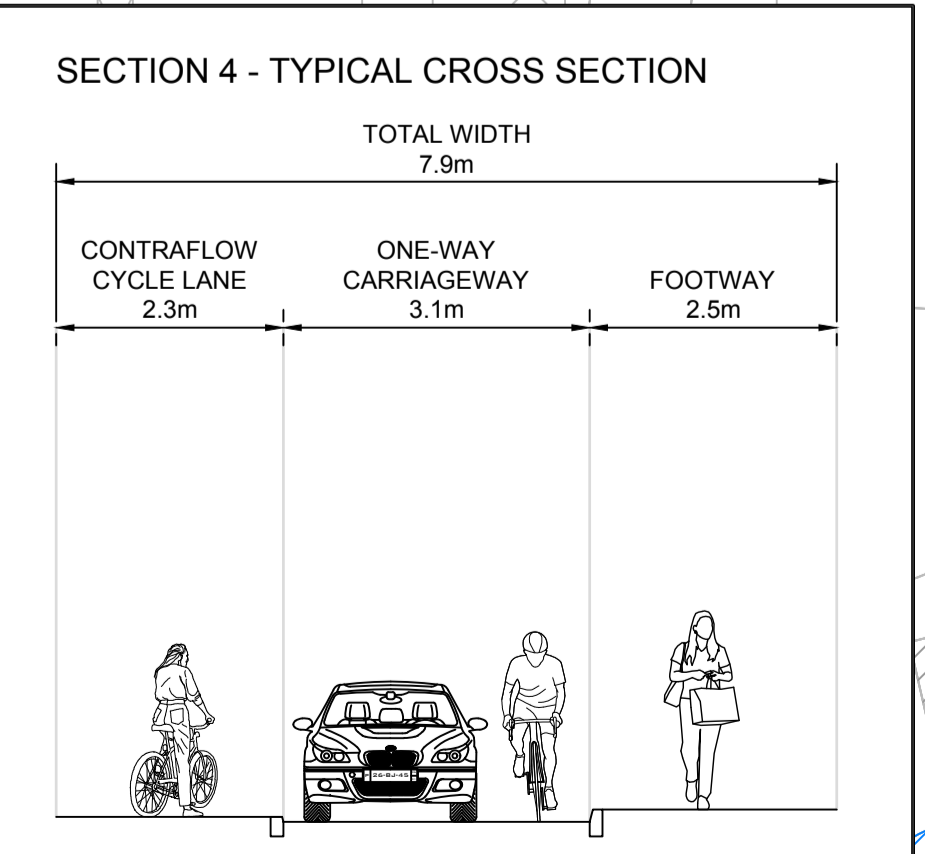
I/R	DESCRIPTION



PROJECT NUMBER
60578174
SHEET TITLE
RIVERSIDE WAY - OPTION A
SHEET 5 OF 10
SHEET NUMBER
60578174-SHT-OPTION_A-005



INDICATIVE PROPOSALS

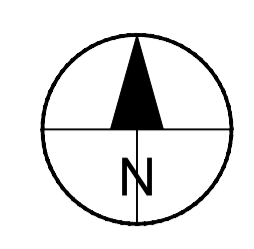
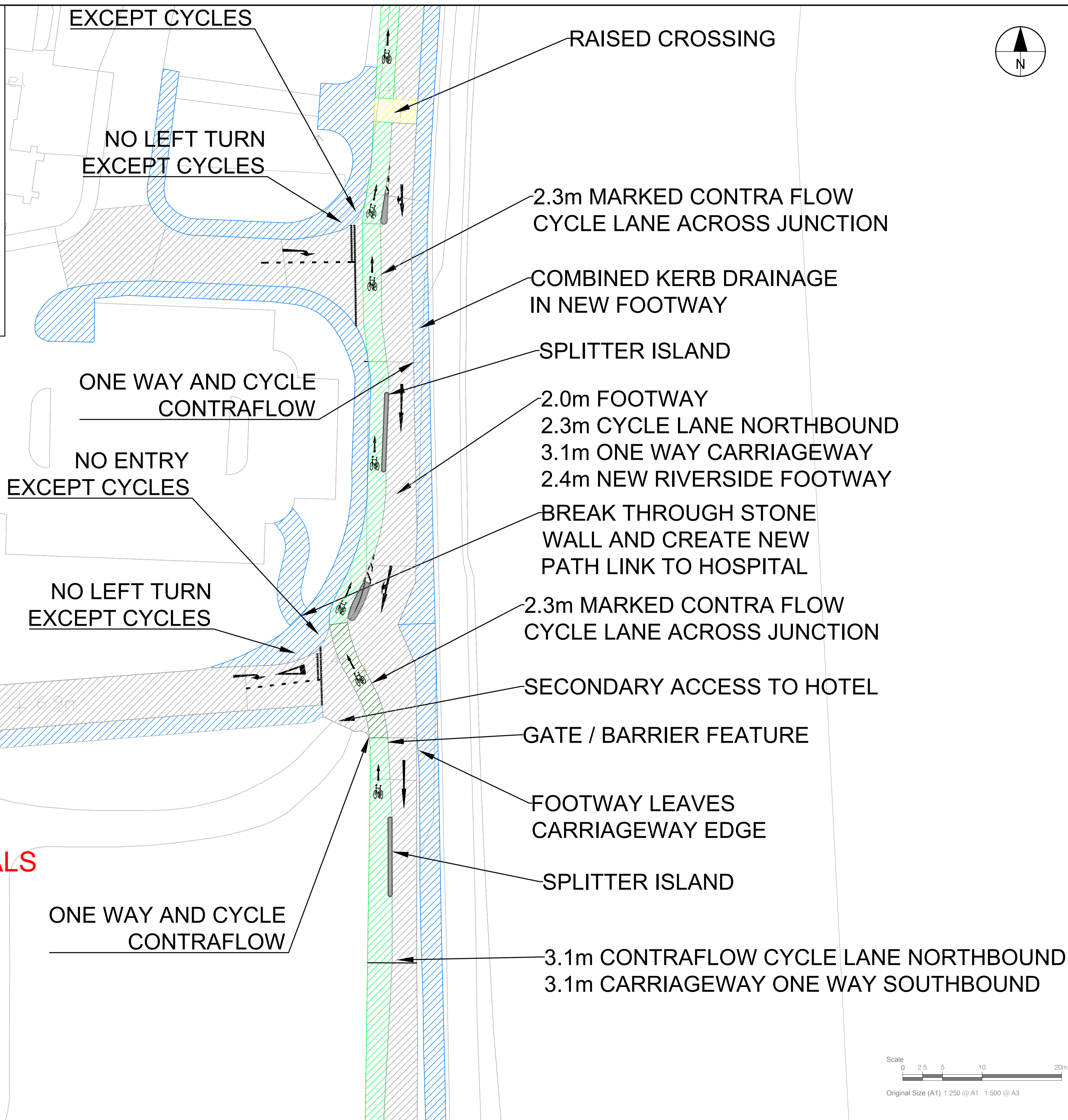


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KEY

	FOOTWAY
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	OUTSIDE OF STUDY AREA



PROJECT
 RIVERSIDE WAY
 BUGHT PARK
 TRAFFIC
 MANAGEMENT AND
 CYCLE ROUTE

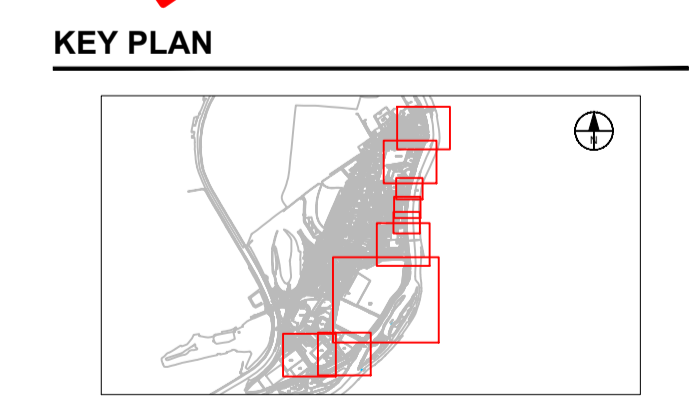


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ISSUE/REVISION

I/R	DESCRIPTION



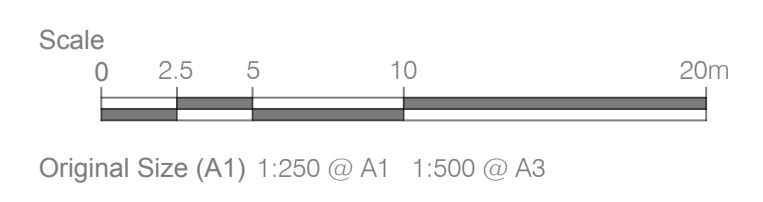
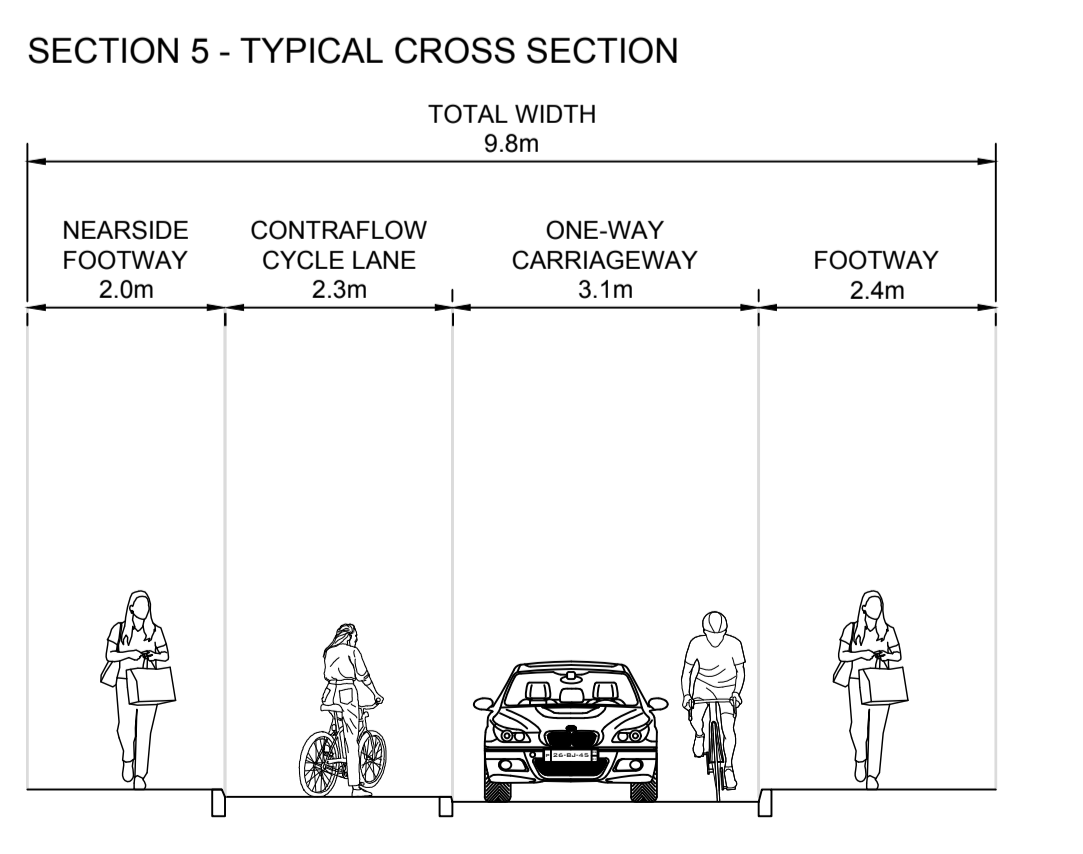
PROJECT NUMBER
60578174

SHEET TITLE
RIVERSIDE WAY - OPTION A

SHEET 6 OF 10

SHEET NUMBER
60578174-SHT-OPTION_A-006

INDICATIVE PROPOSALS

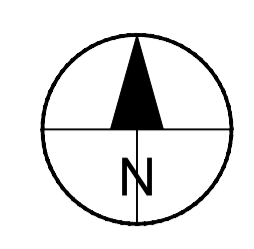
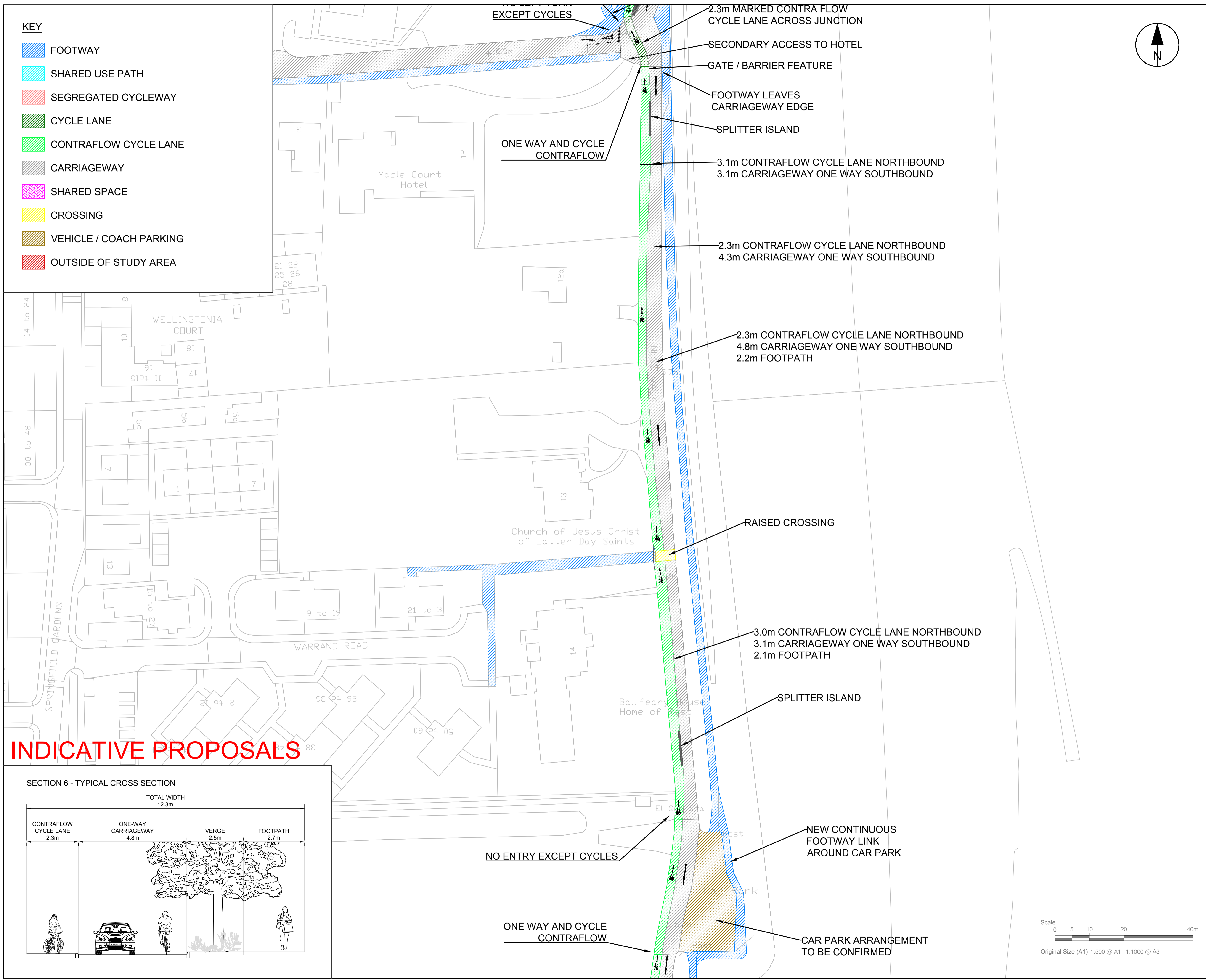


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 Last saved by: MCNEILLR Last Plotted: 2018-11-06
 Project Management Initials: Designer: RM Checked: PL Approved: DM ISO A1 594mm x 841mm

KEY

- FOOTWAY
- SHARED USE PATH
- SEGREGATED CYCLEWAY
- CYCLE LANE
- CONTRAFLOW CYCLE LANE
- CARRIAGEWAY
- SHARED SPACE
- CROSSING
- VEHICLE / COACH PARKING
- OUTSIDE OF STUDY AREA



PROJECT

**RIVERSIDE WAY
BUGHT PARK
TRAFFIC
MANAGEMENT AND
CYCLE ROUTE**

CLIENT



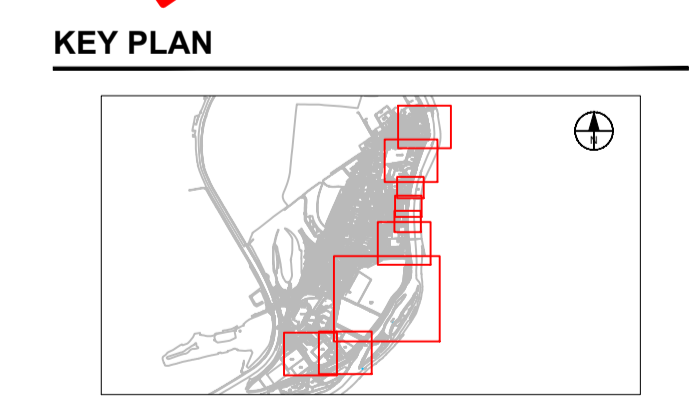
CONSULTANT

AECOM
Aurora
120 Bothwell St
GLASGOW, G2 7JS
+44 (0) 141 248 0300 tel
www.aecom.com

- NOTES**
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ISSUE/REVISION

I/R	DESCRIPTION
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2	
3	
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8	



PROJECT NUMBER

60578174

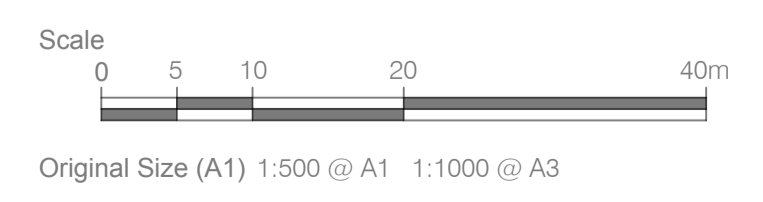
SHEET TITLE

RIVERSIDE WAY - OPTION A

SHEET 7 OF 10

SHEET NUMBER

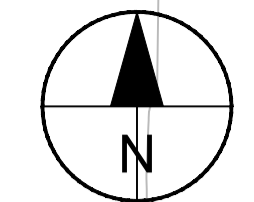
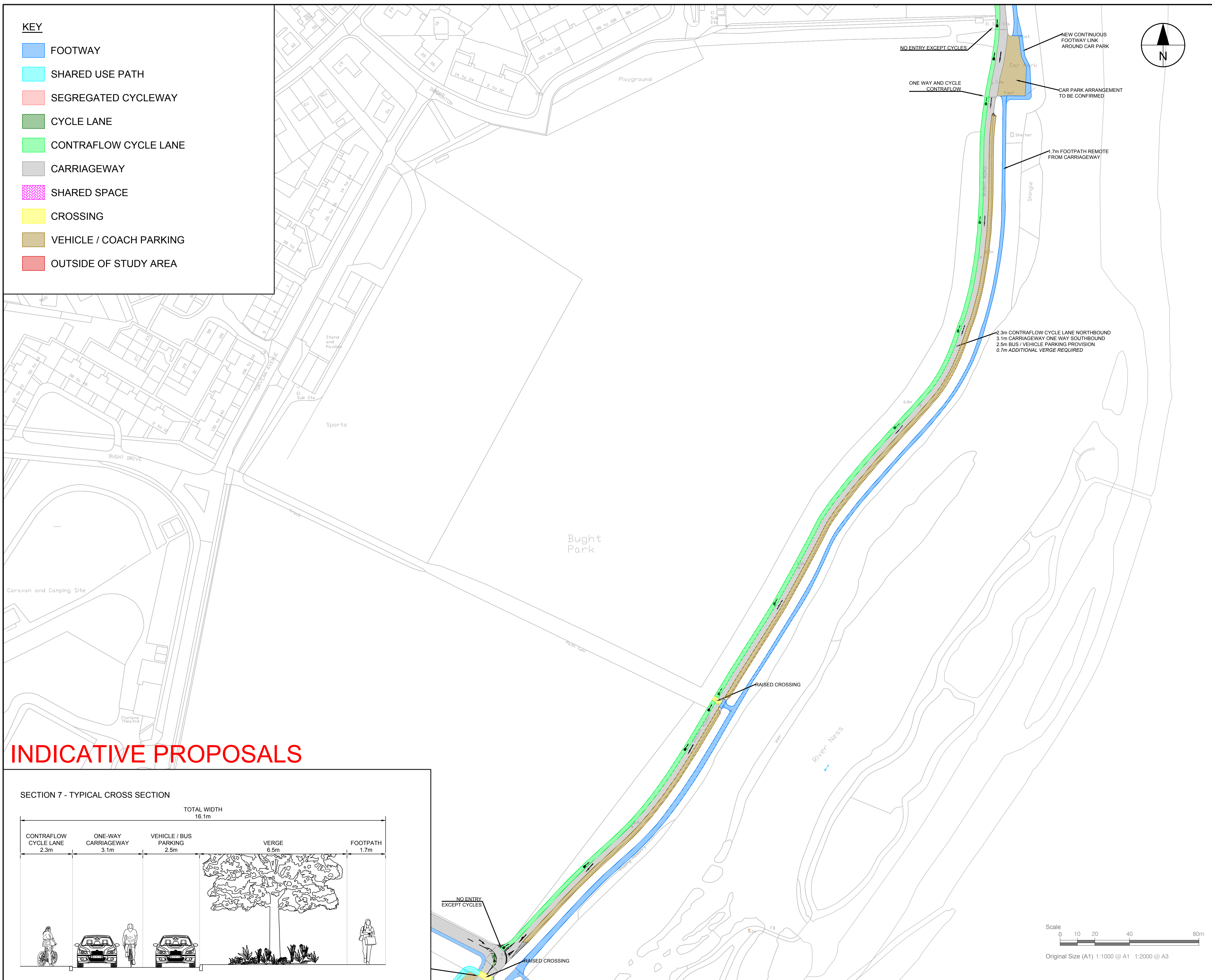
60578174-SHT-OPTION_A-007



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 Last saved by: MCNEILLR Last Plotted: 2018-11-06
 Project Management Initials: Designer: RM Checked: PL Approved: DM ISO A1 594mm x 841mm

KEY

	FOOTWAY
	SHARED USE PATH
	SEGREGATED CYCLEWAY
	CYCLE LANE
	CONTRAFLOW CYCLE LANE
	CARRIAGEWAY
	SHARED SPACE
	CROSSING
	VEHICLE / COACH PARKING
	OUTSIDE OF STUDY AREA



NO ENTRY EXCEPT CYCLES

ONE WAY AND CYCLE CONTRAFLOW

NEW CONTINUOUS FOOTWAY LINK AROUND CAR PARK

CAR PARK ARRANGEMENT TO BE CONFIRMED

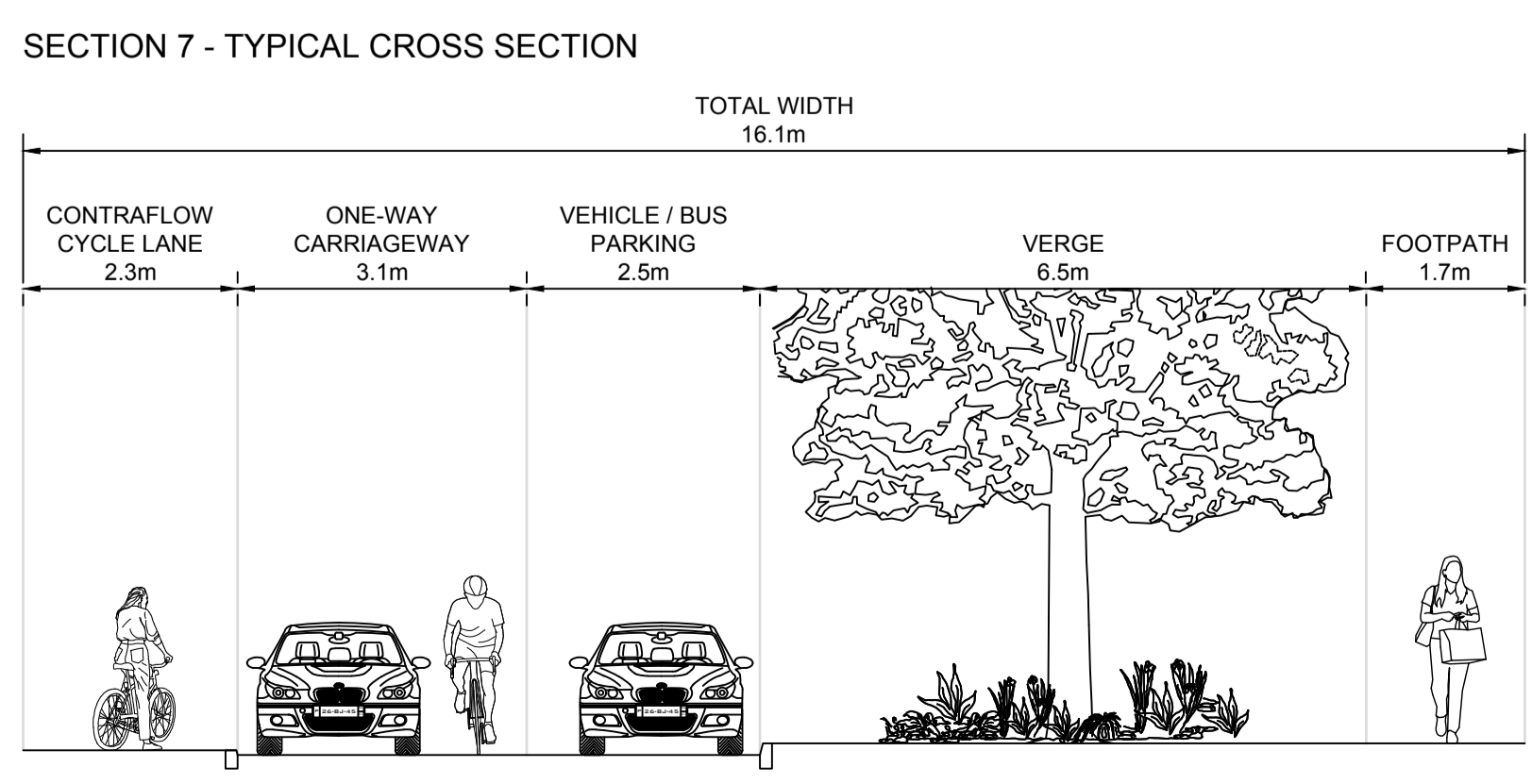
Shelter

Shingle

1.7m FOOTPATH REMOTE FROM CARRIAGEWAY

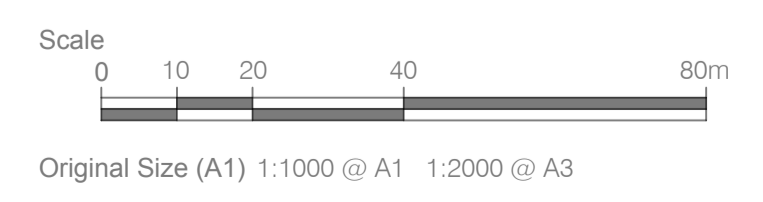
2.3m CONTRAFLOW CYCLE LANE NORTHBOUND
 3.1m CARRIAGEWAY ONE WAY SOUTHBOUND
 2.5m BUS / VEHICLE PARKING PROVISION
 0.7m ADDITIONAL VERGE REQUIRED

INDICATIVE PROPOSALS



NO ENTRY EXCEPT CYCLES

RAISED CROSSING



PROJECT

**RIVERSIDE WAY
BUGHT PARK
TRAFFIC
MANAGEMENT AND
CYCLE ROUTE**



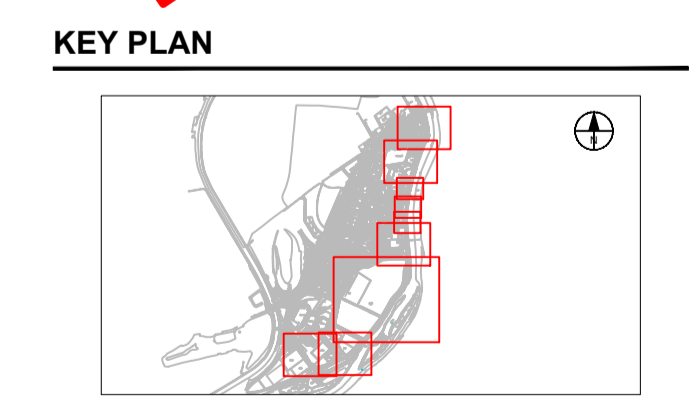
CONSULTANT

AECOM
Aurora
120 Bothwell St
GLASGOW, G2 7JS
+44 (0) 141 248 0300 tel
www.aecom.com

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ISSUE/REVISION

I/R	DESCRIPTION



PROJECT NUMBER

60578174

SHEET TITLE

RIVERSIDE WAY - OPTION A

SHEET 8 OF 10

SHEET NUMBER

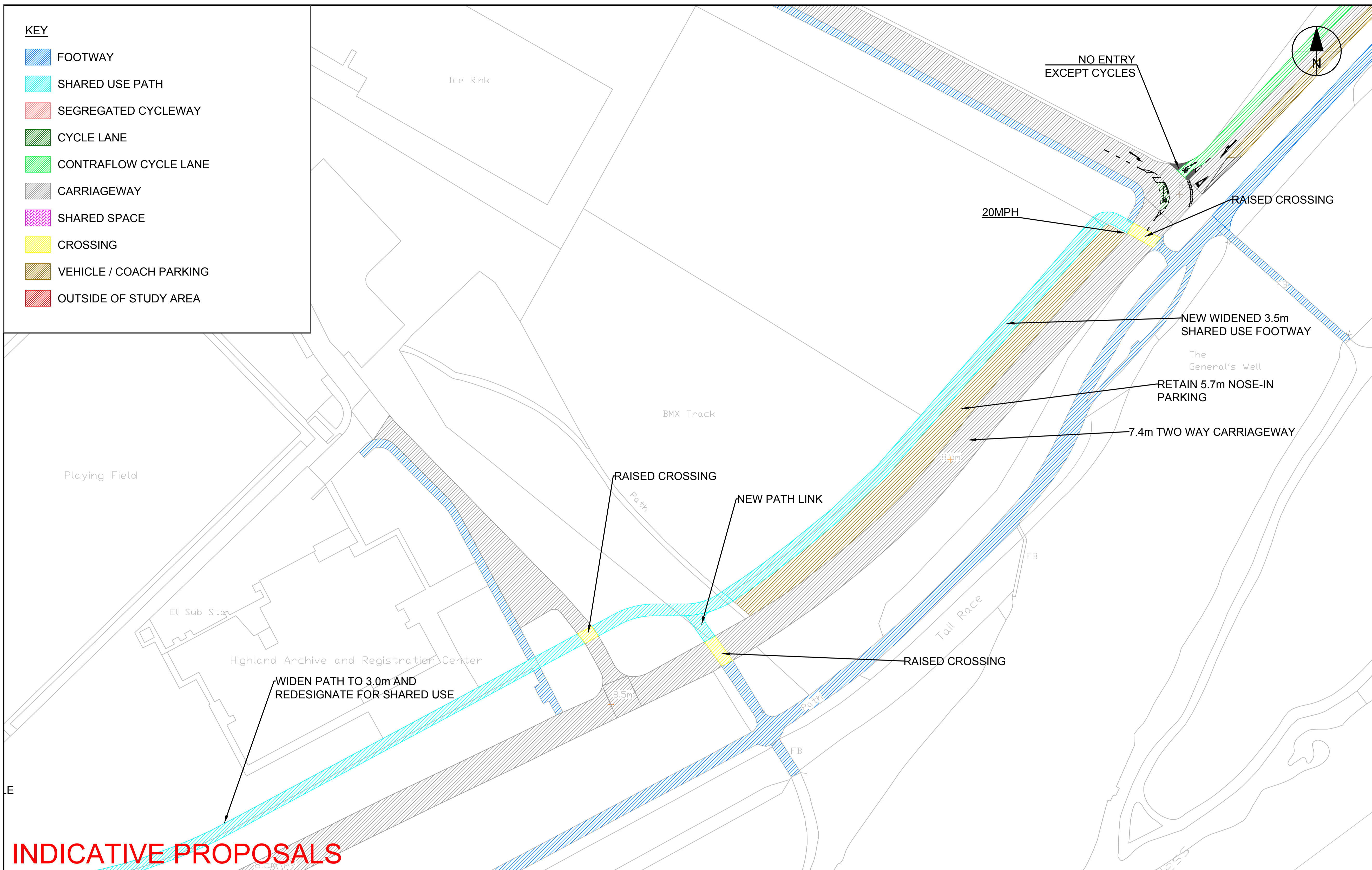
60578174-SHT-OPTION_A-008

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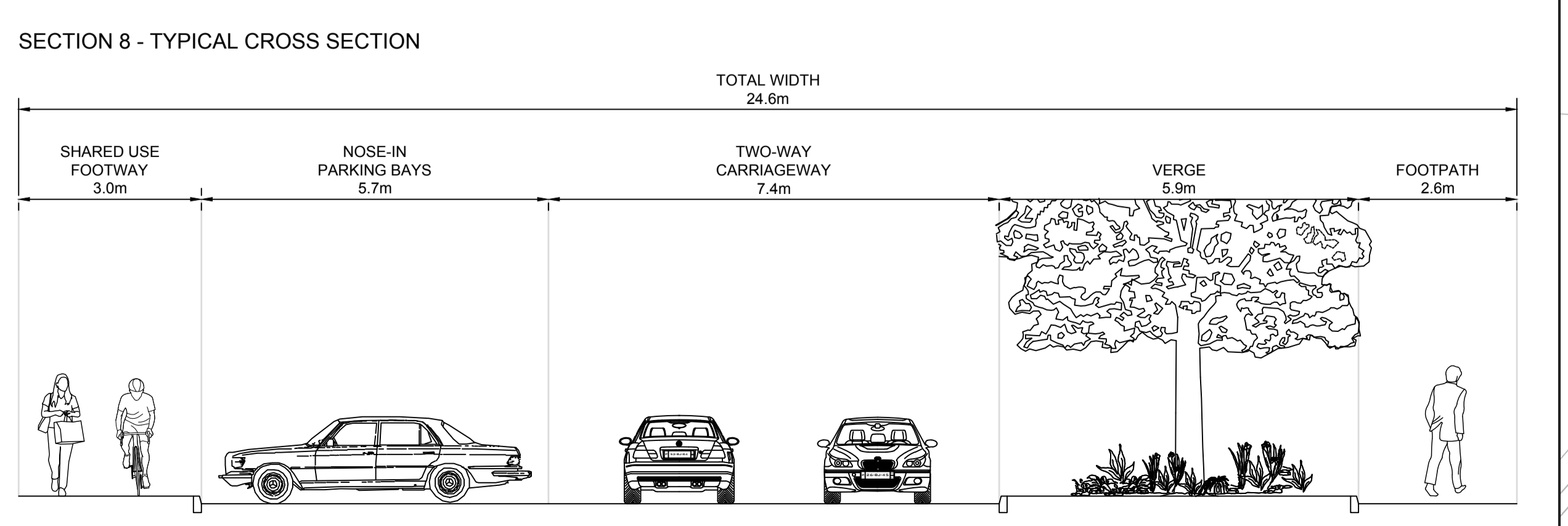
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 Last saved by: MCNEILLER Last Plotted: 2018-11-06
 Project Management Initials: Designer: RM Checked: PL Approved: DM ISO A1 594mm x 841mm

KEY

	FOOTWAY
	SHARED USE PATH
	SEGREGATED CYCLEWAY
	CYCLE LANE
	CONTRAFLOW CYCLE LANE
	CARRIAGEWAY
	SHARED SPACE
	CROSSING
	VEHICLE / COACH PARKING
	OUTSIDE OF STUDY AREA



INDICATIVE PROPOSALS



PROJECT
 RIVERSIDE WAY
 BUGHT PARK
 TRAFFIC
 MANAGEMENT AND
 CYCLE ROUTE



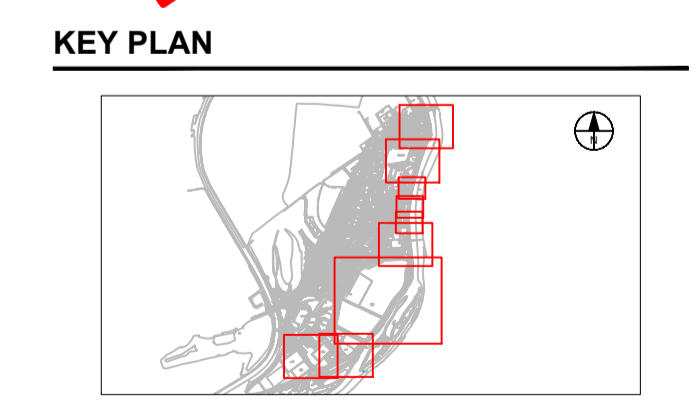
CONSULTANT

AECOM
 Aurora
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 GLASGOW, G2 7JS
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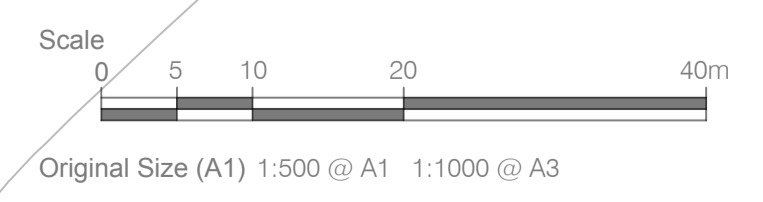


PROJECT NUMBER
60578174

SHEET TITLE
RIVERSIDE WAY - OPTION A

SHEET 9 OF 10

SHEET NUMBER
60578174-SHT-OPTION_A-009

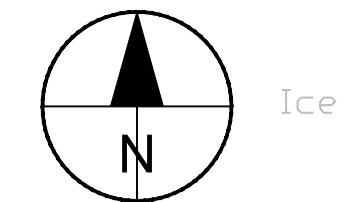


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KEY

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	CROSSING
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	OUTSIDE OF STUDY AREA



AECOM

PROJECT
 RIVERSIDE WAY
 BUGHT PARK
 TRAFFIC
 MANAGEMENT AND
 CYCLE ROUTE



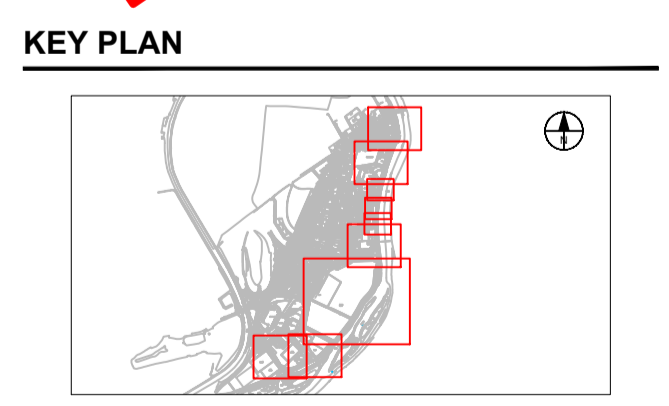
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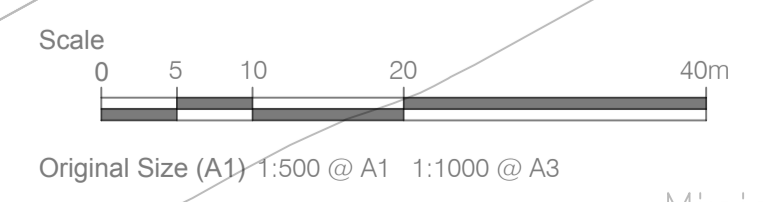
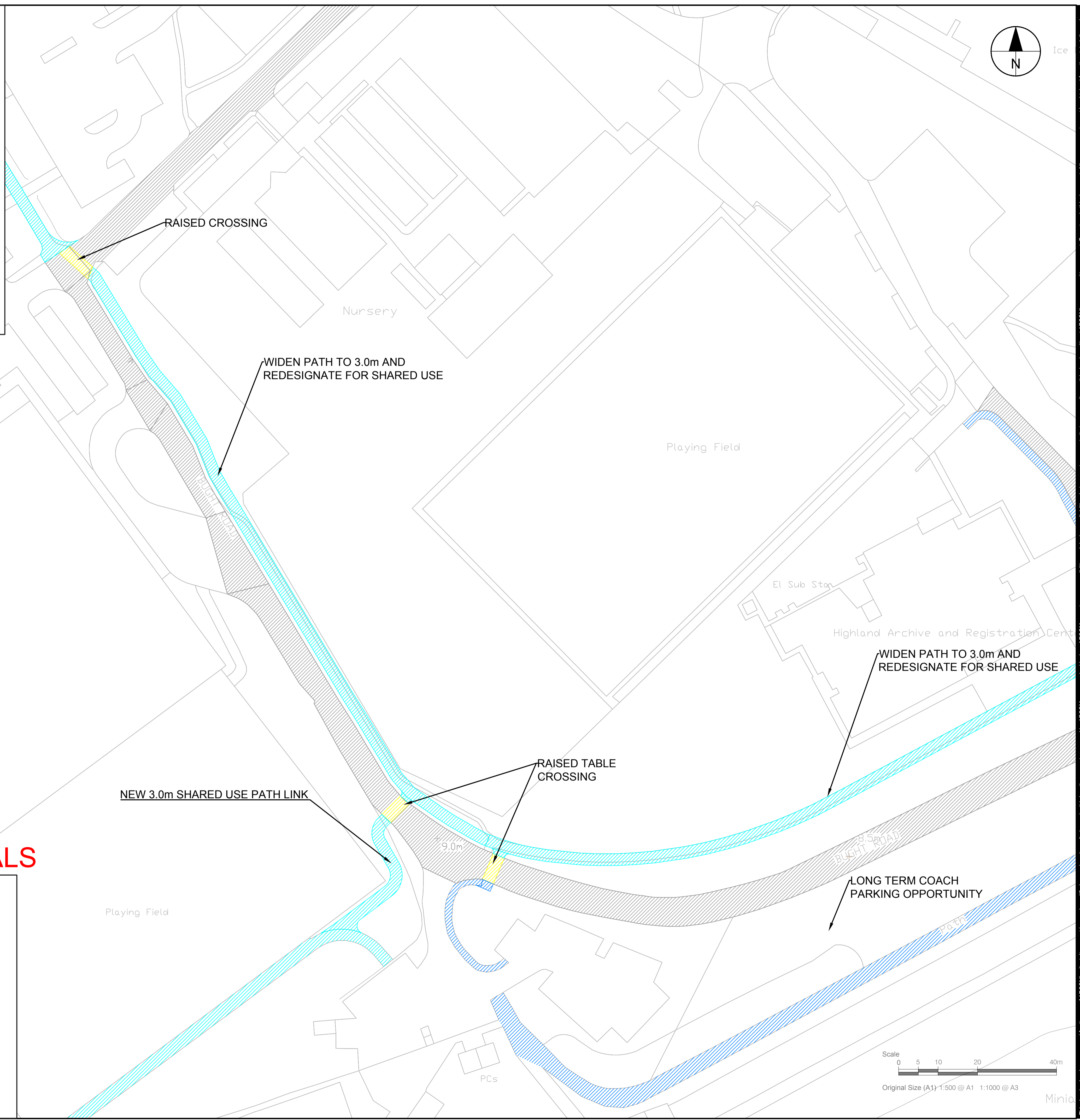
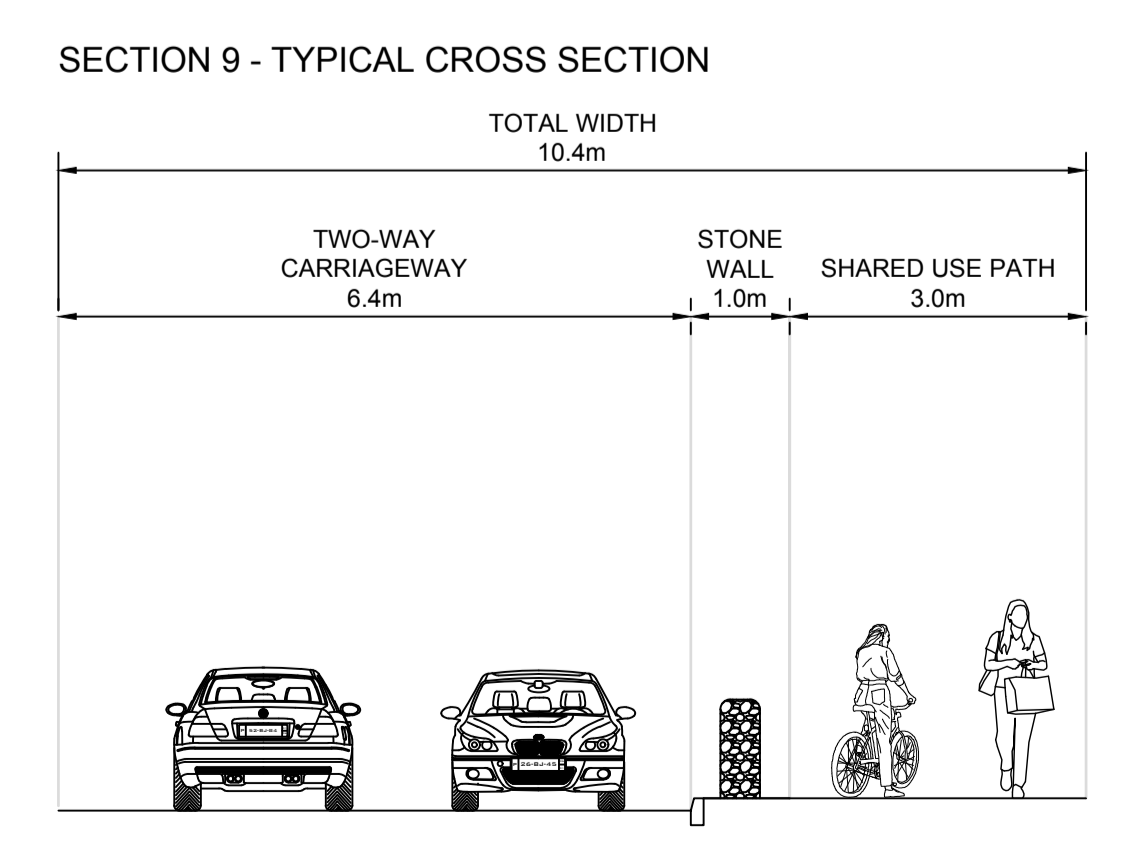
PROJECT NUMBER
60578174

SHEET TITLE
RIVERSIDE WAY - OPTION A

SHEET 10 OF 10

SHEET NUMBER
60578174-SHT-OPTION_A-010

INDICATIVE PROPOSALS



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