

ABERDEEN CITY COUNCIL

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COMMITTEE	Communities, Housing and Infrastructure
DATE	8 November 2017
REPORT TITLE	South College Street – Corridor Improvement
REPORT NUMBER	CHI/17/020
INTERIM DIRECTOR	Bernadette Marjoram
REPORT AUTHOR	Ken Neil

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**1. PURPOSE OF REPORT:-**

The purpose of the report is to seek approval from Members for a preferred road layout and junction arrangement for South College Street corridor. The appraisal methodology takes into account the approved sequence of major transport interventions to support the City Centre Masterplan and the ongoing work in establishing a revised road hierarchy for the city beyond the opening of the Aberdeen Western Peripheral Route.

**2. RECOMMENDATION(S)**

It is recommended that Members:

- a) note the contents of this report; and
- b) confirm the approved scheme (Option 1) act as an interim solution for South College Street; and
- c) approve the principle of a traffic signal junction at the Queen Elizabeth Bridge/North Esplanade West junction and instruct the Head of Planning and Sustainable Development to take forward a review of the junction arrangement on completion of the AWPR and subsequent to the development of a new roads hierarchy; and
- d) subject to approval of c), and on completion of that review, instruct the Director of Communities, Housing and Infrastructure to report back to this Committee on a preferred option for South College Street/Queen Elizabeth Bridge junction; and
- e) instruct the Head of Planning and Sustainable Development to update the business case, detailed design and cost estimate of the currently approved scheme (Option 1) and report back these details within twelve months.

**3. BACKGROUND/MAIN ISSUES**

### 3.1 Introduction

- 3.1.1 South College Street was an integral part of the Central Aberdeen Transport Infrastructure determined in 2004 alongside the Union Street Pedestrianisation study. A scheme approved in 2007 was designed to provide relief to a heavily congested part of the network that would be significantly impacted by pedestrianisation.
- 3.1.2 Improvements on South College Street were designed and progressed to tender stage with construction planned for 2009/10, however, this was postponed while the Council made adjustments to its non-housing capital plan.
- 3.1.3 Reference is made to the decision of the Council on 24 June 2015 in regard to the report entitled 'Aberdeen City Centre Masterplan and Delivery Programme', which was agreed unanimously. It was further resolved that each project will be subject to detailed scrutiny and the normal development control processes and to agree in principle the interventions set out in the City Centre Masterplan and Delivery Programme.
- 3.1.4 Reference is also made to the report to Council on 11 May 2016, titled 'Transport Implications – City Centre Masterplan Projects', which considered the transport infrastructure required to support the City Centre Masterplan. In light of an option for Broad Street being approved, it was identified that the South College Street corridor required to be improved prior to any further major interventions being implemented and in particular it requires to be in place prior to the implementation of the Guild Street restrictions. It was further identified that the previously approved scheme at South College Street would need to be revisited to establish whether it is still the optimum solution at this location given the changes to traffic patterns that will flow from the City Centre Masterplan projects.

### 3.2 Assessment Process

- 3.2.1 In order to have the ability to undertake option testing with the best tools and information available, the traffic modelling element of the assessment used two relevant Paramics microsimulation traffic models for the City Centre and Access from the South, which were combined to significantly improve the traffic routing ability of the model at this key location on the network. The traffic models were developed using a range of data gathering techniques including junction turning movement counts, ANPR (automatic number plate recognition) and bus stop dwell time surveys. The model was also informed by the strategic model for the region – Aberdeen Sub-Area Model (ASAM). Options were then tested using a 2023 future year model which included predicted Local Development Plan build out to that year.
- 3.2.2 It should be noted that the corridor under investigation comprises of the following three junctions and the interaction of these junctions as a network:
- South College Street/Palmerston Road/ Milburn Street – existing traffic signal junction.
  - South College Street/North Esplanade West/Queen Elisabeth II Bridge/Riverside Drive – existing roundabout junction.

- Palmerston Road/ North Esplanade West – There is currently no junction at this location but an additional junction could be formed under all viable options.

3.2.3 The performance of each option relates to how each of these junction perform as a linked network, however, it should be noted that different junctions may be critical in each option. A traffic modelling report on the full assessment and option testing process is available on request, and will be available on the Council's website following the meeting, Some 15 options were tested but only 6 of these options were considered viable in providing sufficient benefits to key transport modes to be worthy of consideration. Plans of each viable option along with a layout plan of the currently approved scheme are provided in Appendix 1 and 2. Key results relating to the operation of the junction are provided in Appendix 3.

### 3.3 Assessment Outcomes

3.3.1 The following is a brief summary on the ability of each viable option to accommodate different modes including pedestrians, cyclists and public transport users, in line with approved policies.

**Option 0** – Do Nothing: There are significant junction capacity issues along with current facilities for pedestrians and cyclists, particularly at the Queen Elizabeth II Bridge / North Esplanade West roundabout.

**Option 1** – This option is the currently approved scheme. It provides a certain level of benefits to vehicles but no additional benefits to pedestrians and cyclists over the current layout.

**Option 2** – As Option 1 but includes stopping-up of Millburn Street. This provides additional benefits to vehicles over Test 1 but no additional benefits to pedestrians or cyclists.

**Option 3** – As Option 2 but replacing the Queen Elizabeth II Bridge / North Esplanade West roundabout with an all movements traffic signal junction. This provides no additional benefits to vehicles with a reduction in the junction's ability to cope with the overall demand. This option does, however, provide benefits to pedestrians and cyclists.

**Option 7** – As Option 3 but restricting key movements in and out of Riverside Drive. This option provides similar benefits to vehicles as Test 1. It also provides benefits to pedestrians and cyclists. It does, however, achieve these benefits by restricting certain vehicle movements through the Queen Elizabeth II Bridge / North Esplanade West junction limiting route choice.

**Option 9** – This test provides benefits to both vehicles along with pedestrians and cyclists at the junction. It does, however, achieve these benefits by restricting certain movements through the Queen Elizabeth II Bridge / North Esplanade West junction to the detriment of route choice. It also increases the amount of traffic accessing Market Street and forces all traffic on South College Street onto Riverside Drive.

Currently no local bus routes use these junctions so public transport accessibility is not impacted by any of the options.

- 3.3.3 The key findings of the assessment of options is that there is no solution at South College Street that provides additional benefits for all road users. Any option that provide benefits for sustainable modes (pedestrians, cyclists and public transport users), does so by restricting vehicle traffic movements. Conversely the options that provide improvements to vehicle traffic do not provide additional benefits to sustainable modes.
- 3.3.4 Further options were also tested which considered a one-way system clockwise via north Esplanade West, Victoria Bridge and South Esplanade West. This was a technical assessment to provide supporting information for an appraisal associated with the North Dee development area and the relationship with the south of the River Dee as set out in the City Centre Masterplan. These options did provide potential journey time benefits to all road users with the exception of public transport between Torry and the City Centre area, which could not route directly north across the Victoria Bridge. There may be an option to route the buses across Queen Elizabeth II Bridge and into the city centre via South College Street but this would need to be part of a wider road hierarchy consideration. There may also be local opposition to the movement of significant increases in traffic levels to the south side of the river. It should be noted that Options 3 and 7 would provide a solution that would complement future modifications discussed above in regard to North Dee.
- 3.3.5 In conclusion, all the options tested at South College Street alone do not provide an all inclusive design which caters for all traffic modes unless a major revision to the allowable movements at the junction is considered. While option 9 provides reduced levels of congestion it severely restricts movements through the Queen Elizabeth II Bridge / North Esplanade West junction and may conflict with future plans for the City Centre Masterplan including the potential options for the North Dee area. Option 7, on the other hand, would complement the options being considered for the North Dee area but would still require some movement restrictions at the Queen Elizabeth II Bridge / North Esplanade West junction.

#### 3.4 Way Forward

- 3.4.1 Any testing should take into account potential options for a future road hierarchy to ensure that the benefits anticipated for the road networks as a result of the Aberdeen Western Peripheral Route are 'locked in' and active and sustainable modes are developed within the network. This approach supports the aims and objectives of the Local Transport Strategy (LTS) and the Regional Transport Strategy (RTS).
- 3.4.2 The new road network hierarchy will consider the relative function of the roads approaching this corridor, especially given the significance of Wellington Road, which is currently being reviewed under a separate study. It is therefore important that whatever decision is taken now allows for adjustment and modifications in future, especially as the Queen Elizabeth II Bridge / North Esplanade West junction becomes a key node on the road network.

- 3.4.3 As an interim solution, the currently approved scheme (Option 1) should be promoted as a solution that provides improvements to vehicles traffic without any detriment to pedestrian and cyclists. This would still allow a future change to the QEB/NEW junction to be taken forward supporting the longer term need to reduce traffic levels in the city centre by 20% and to support the future city-wide road hierarchy. The principle of a traffic signal solution at the Queen Elizabeth II Bridge / North Esplanade West junction, as per Option 7, should be identified as a longer term solution subject to review following completion of the AWPR, approval of a new roads hierarchy and taking into account the future development and phasing of other City Centre masterplan projects.
- 3.4.4 The currently approved scheme, Option 1, will require to be reviewed and updated to ensure compliance with current standards and policies. The approach of separating the scheme into two stages will ensure that an improvement is implemented that caters for future traffic while acknowledging the need for further modifications that meets the needs of future development within the city centre and the Council's policy commitments to active and sustainable travel.

#### **4. FINANCIAL IMPLICATIONS**

- 4.1 Funding of £5.533M has been allocated within the Non Housing Capital Plan based on the previously approved layout. The project will require an updated business case and cost estimate reflecting current costs and policy considerations.
- 4.2 The on-going transportation assessment of specific and wider implications of the City Centre Masterplan (CCMP) continues to be funded from the Non Housing Capital with contributions from Nestrans.

#### **5. LEGAL IMPLICATIONS**

None at this time although all options assessed will likely have property and environmental implications which will require legal input as part of the delivery of any approved option.

#### **6. MANAGEMENT OF RISK**

- 6.1 Financial - There is no financial risks as a result of the recommendations of this report. However, there is a risk inherent in not progressing a key transport infrastructure improvement set out in the Strategic Infrastructure Plan which will deliver air quality, road safety and economic benefits and support the key strategic priority around City Centre.
- 6.2 Employee - There is a risk that there will be insufficient staff resources available to deliver the proposed infrastructure. This situation will be monitored and workloads of Officers will be managed to optimise resources to best meet milestones/deadlines.

- 6.3 Customer/Citizens - There are risks affecting customers, citizens and visitors alike relating to a transport network which does not reflect the changing needs of the economy, society and personal health and wellbeing and specifically in access requirements for the movement of people and goods to major city centre facilities.
- 6.4 Environmental - There are no environmental risks as a result of the recommendations of this report and further consideration to such risks will be addressed through the detailed design stage and will be reported in future reports to committee at each key stage.
- 6.5 Legal - There are no legal risks as a result of the recommendations of this report, however, further consideration to any such future risks will be addressed through the future reports to committee.
- 6.6 Technological - There are no technological risks as a result of the recommendations of this report, however, further consideration to any future risks will be addressed through the future reports to committee.
- 6.7 Reputational - There is reputational risk to the City of not investing in transport infrastructure that caters for the needs of a high performing international city economy by providing roads with capacity to cope with the demands of a major city centre facilities.

## **7. IMPACT SECTION**

### **7.1 Economy:**

Positive decision making informing the progressive implementation of South College Street directly supports a range of policies and strategies that will benefit the economy including:

Aberdeen – the Smarter City vision:

- We will invest in the city where that investment demonstrates financial sustainability based on a clear return on investment
- We will encourage cycling and walking.
- We will provide and promote a sustainable transport system, which reduces our carbon emissions.

Local Outcome Improvement Plan:

The Local Outcome Improvement Plan (LOIP) 2016-26 for Community Planning in Aberdeen (CPA) recognises a commitment to investing in infrastructure that caters for the needs of a high performing international city economy by providing roads with capacity to cope with the demands of business along with extensive air and sea links. Delivery of improvements at South College Street will assist in the priority of improving access to a key facility within Aberdeen.

## 7.2 People:

A defined, fully resourced programme of delivery for transport schemes, which includes South College Street, will assist in improving access to key economic facilities, enabling all people to share in the success that such facilities will provide to the City.

The contents of this report are likely to be of public and media interest as it relates to transport infrastructure at a key location to the south of the city and therefore would contribute to a significant improvement to the movement of people and goods for the City and Region. A Privacy Impact Statement is not required for this report.

An Equalities and Human Rights Impact Assessment (EHRIA) has not been undertaken on this report as the City Centre Masterplan from which the transport infrastructure scheme is an integral part has been subject to the appropriate assessments. Future Committee reports on the detailed design of any preferred option would be the subject of an EHRIA.

## 7.3 Place:

The contents of this report and the recommendations relate to the delivery of transport infrastructure improvements to the south of the city which is a key intervention that will assist in improving access to City Centre. All options assessed will likely have environmental implications which will require appropriate mitigation as part of the delivery of any preferred and approved option. Consideration will be given to environmental impact through the detailed design process.

## 7.4 Technology:

The assessment will include consideration of the use of appropriate intelligent transport technology to assist the flow of traffic at this location, therefore enabling all people to share in the success that such an improvement will provide to the City.

## 8. BACKGROUND PAPERS

Report to Council – 24 June 2015 - Aberdeen City Centre Masterplan and Delivery Programme

Aberdeen South College St Junction Report - V1.2-100717

Aberdeen River Dee Model Testing Report - V1.2-100717

## 9. APPENDICES

Appendix 1 – South College Street – Key Options Tested

Appendix 2 – General Layout of Currently Approved Scheme (Option 1)

## Appendix 3 – Summary of Option Testing Outcomes

### 10. REPORT AUTHOR DETAILS

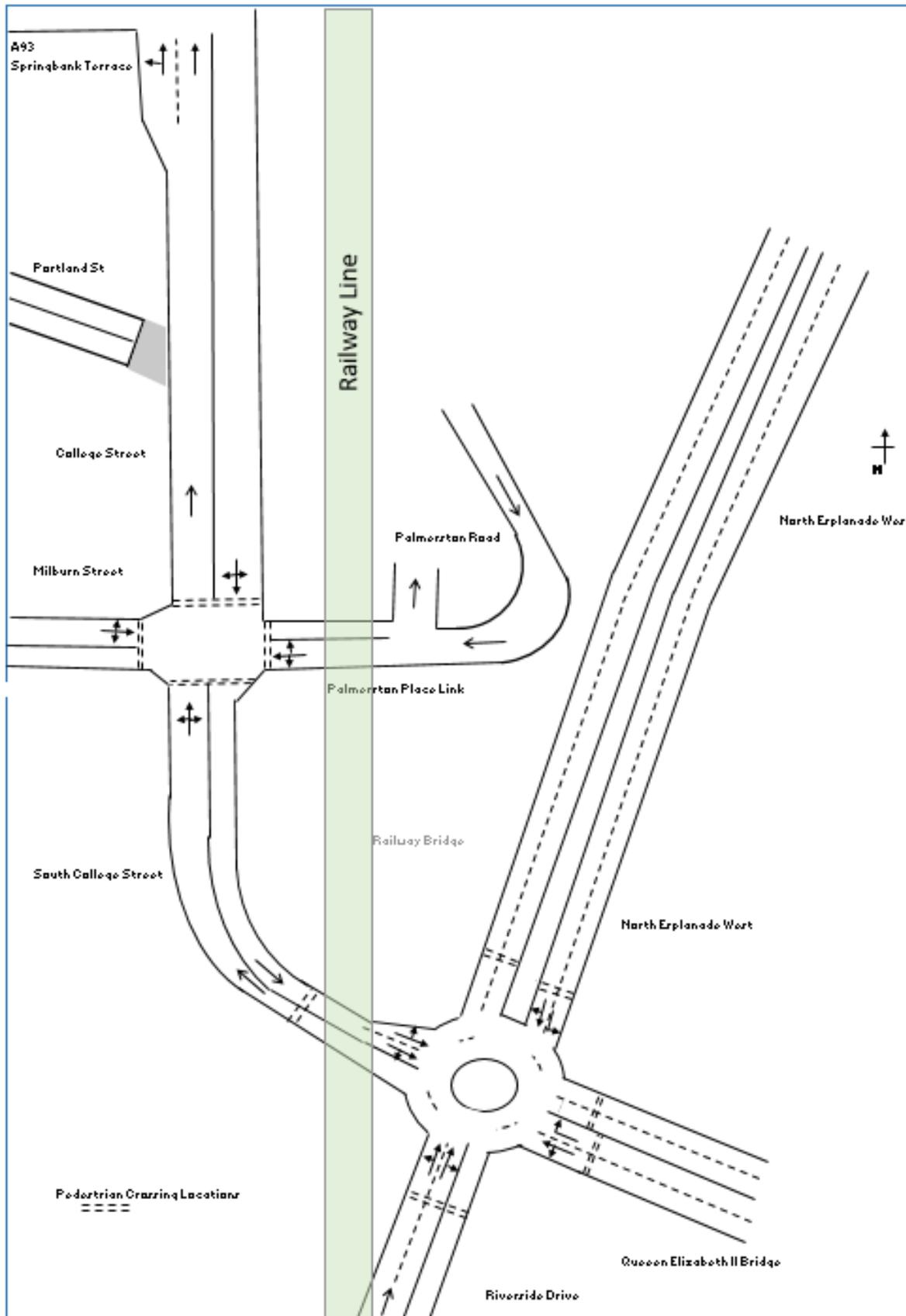
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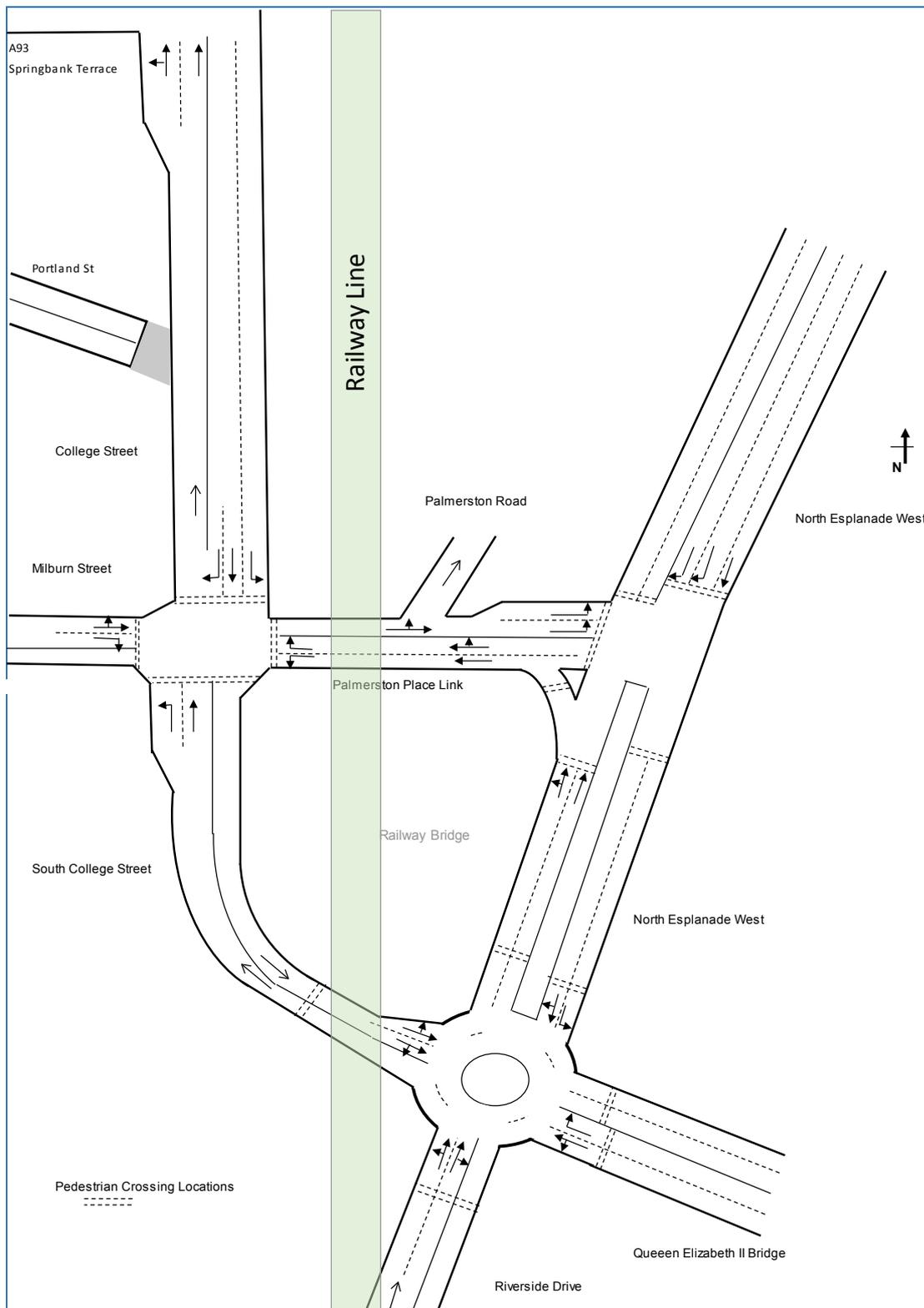
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## Appendix 1 – South College Street – Key Options Tested

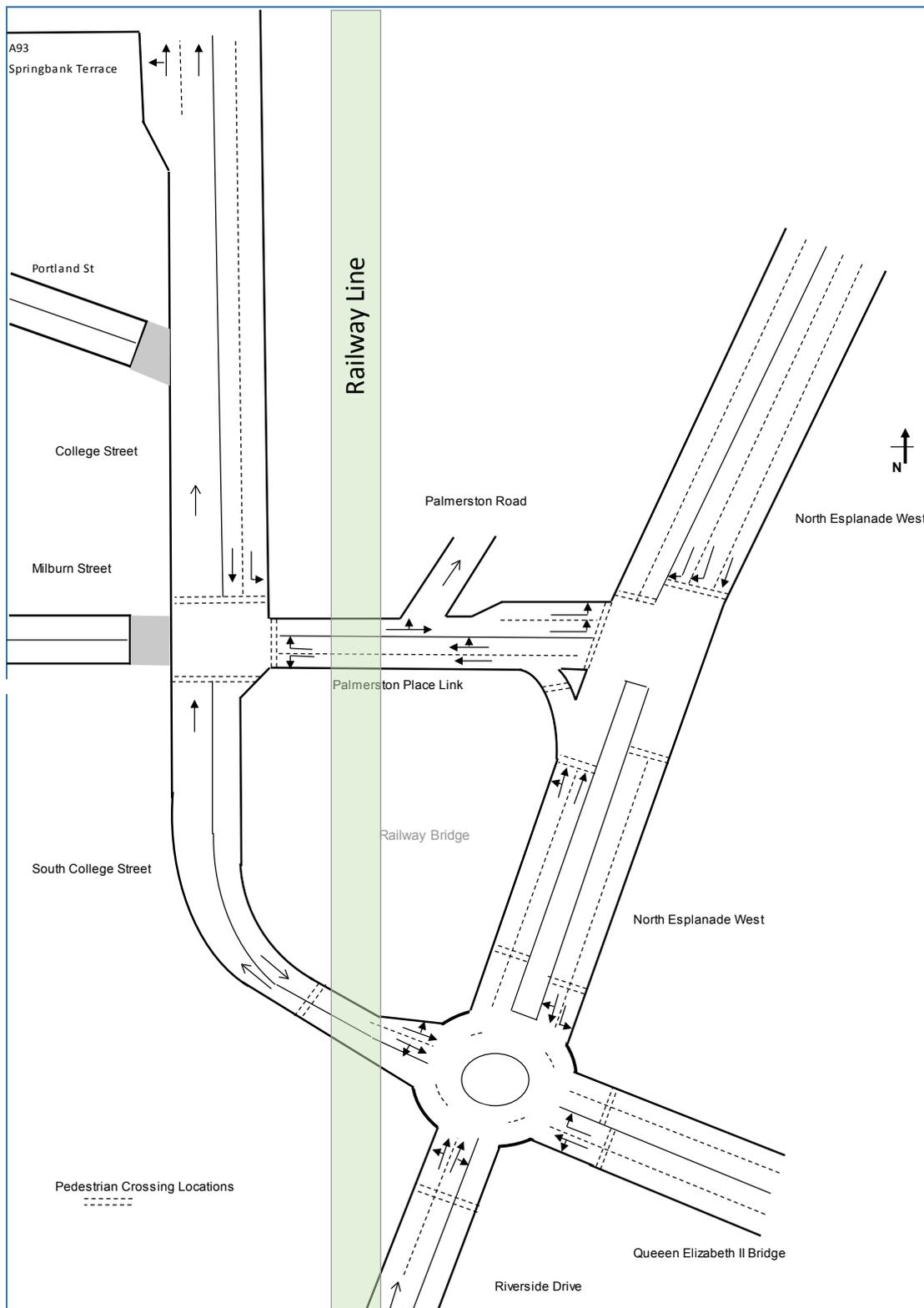
Option 0 – Do-Nothing



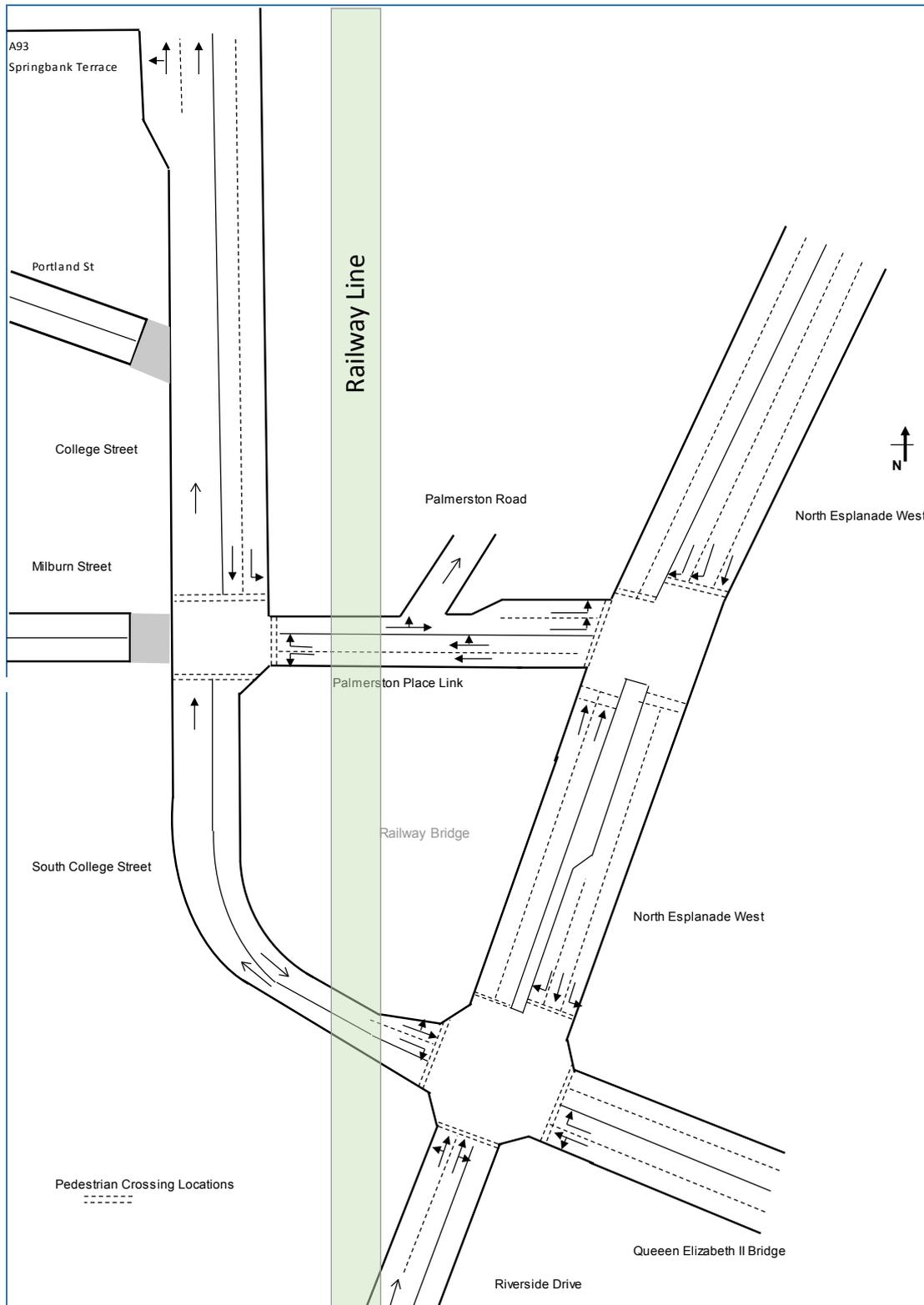
# Option 1 – Currently Approved Scheme



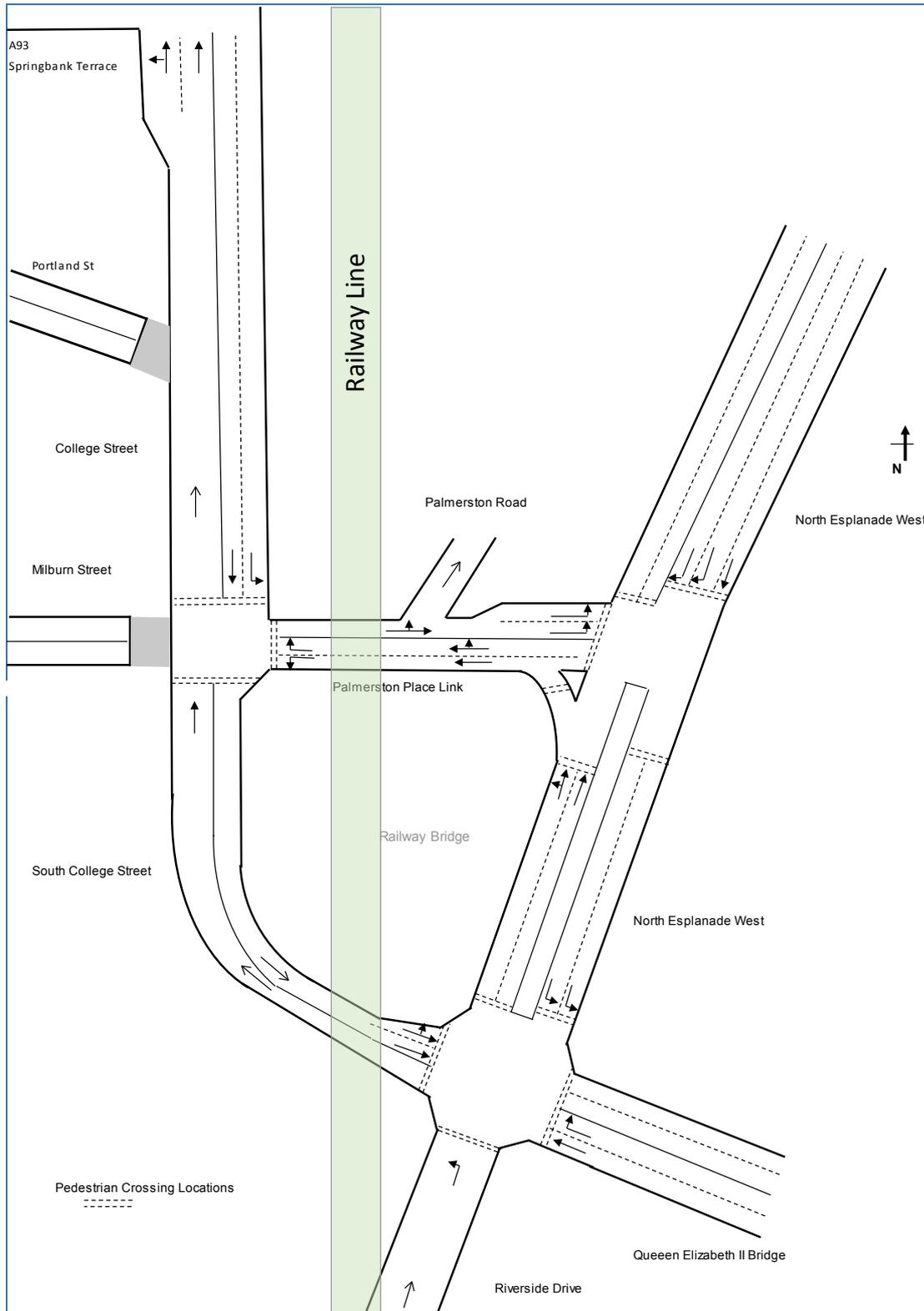
# Option 2 – Currently Approved Scheme (Including stopping-up of Millburn Street)



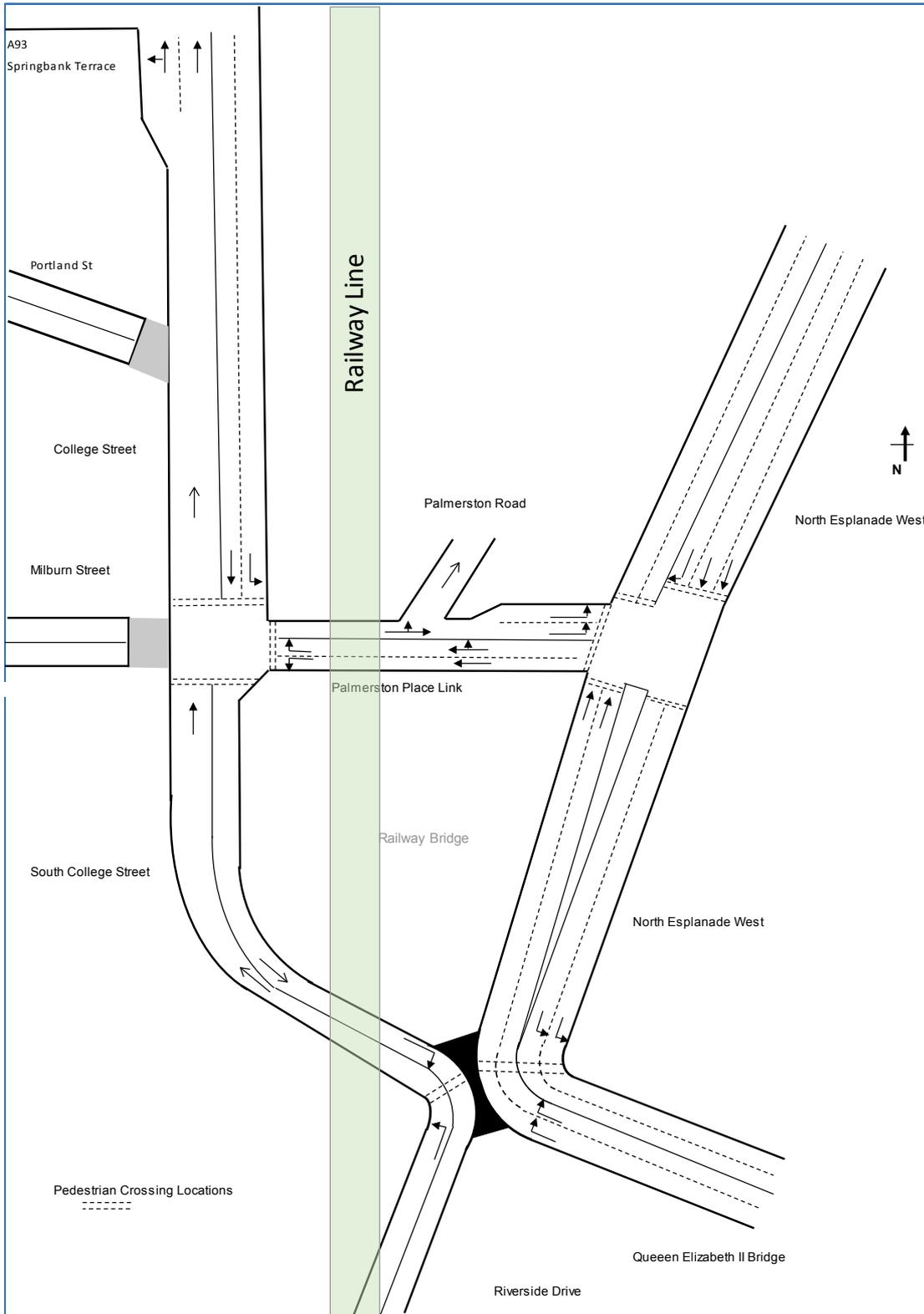
### Option 3 – As Option 2 with the addition of Traffic Signals at Queen Elizabeth Bridge/South College Street



Option 7 – As Option 2 with the addition of restricted movement Traffic Signals at Queen Elizabeth Bridge/South College Street



Option 9 – As Option 2 but splitting the Queen Elizabeth Bridge/South College Street junction to remove all conflicting movements



## Appendix 2 – General Layout of Currently Approved Scheme (Option 1)



## Appendix 3 – Summary of Option Testing Outcomes

## Appraisal – Summary Table

Option Tested	Critical Junction Demand/Capacity (2023)		Road Network Operation	Improvements for Sustainable Modes
	AM	PM		
Option 0 – Do Nothing	126%	131%	No change	No change
Option 1 – Currently Approved Scheme	93%	111%	Junctions are over capacity but there is a significant improvement over the existing layout.	No additional dis-benefits for walking, cycling and public transport over existing layout.
Option 2 - Currently Approved Scheme (Millburn Street stopped up)	84%	96%	Junctions are marginally over capacity but there is a significant improvement over the existing layout.	No additional dis-benefits for walking, cycling and public transport over existing layout.
Option 3 – As Test 2 with the addition of all movements Traffic Signals at QEB/NEW	135%	135%	Operation of the road network is worse than current layout.	Improvements for walking, cycling and public transport over existing layout.
Option 7 – As Test 2 with the addition of Traffic Signals at QEB/NEW (with restricted movements)	108%	103%	Junctions are over capacity but there is a significant improvement over the existing layout. There are significant movement restrictions at the QEB/NEW junction.	Improvements for walking, cycling and public transport over existing layout.
Option 9 – As Test 2 with the addition of a restricted Movement junction at QEB/NEW	68%	73%	Junctions perform within operational capacity but with significant movement restrictions at QEB/NEW junction.	Significant improvements for walking, cycling and public transport over existing layout.

- - QEB (Queen Elizabeth Bridge)
- - NEW (North Esplanade West)