

Response to Submissions on the Separated Cycle Lane Proposals for State Highway 1, Dunedin



From consultation undertaken during November and December 2013

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1. Introduction

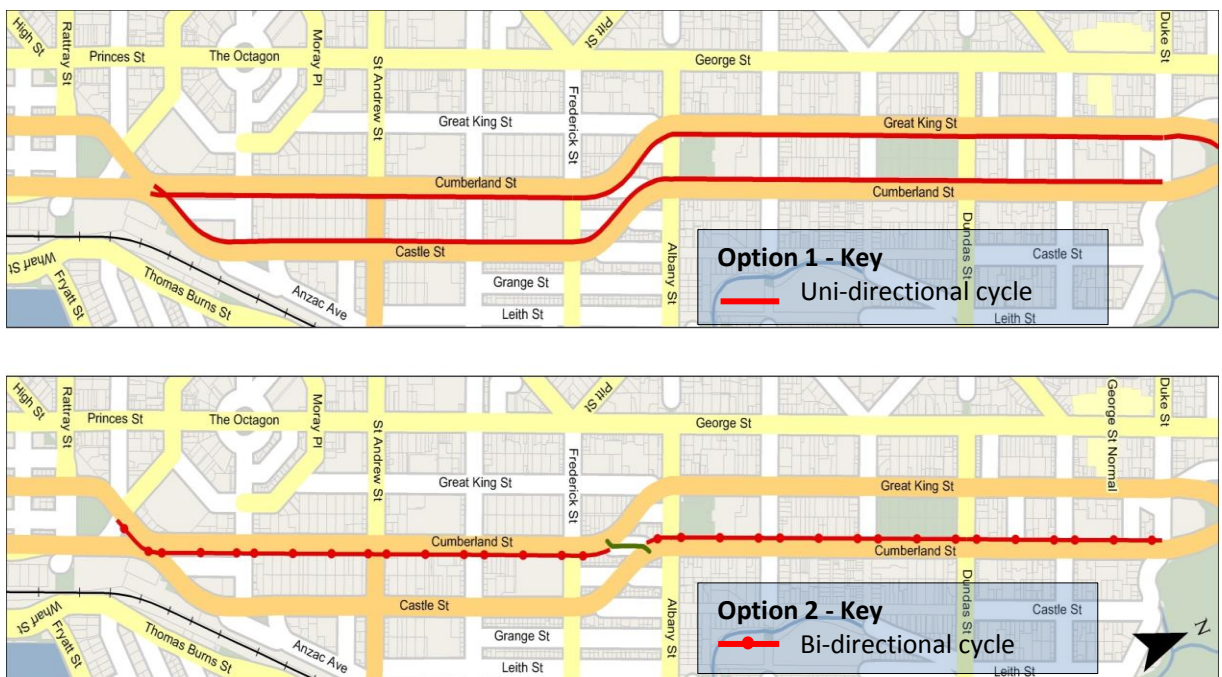
The NZ Transport Agency (Transport Agency) and the Dunedin City Council established a combined Working Group to consider the need and develop options to better provide for safe cycling within the central city area of Dunedin.

The options considered by the Working Group are presented in their report:

“Dunedin Central City Cycle Lanes Options, October 2013”

From this report two viable options were identified, both of which promote the introduction of separated cycle lanes on the State Highway 1, one-way street system. Despite other options then considered, the Working Groups focus continued with the one-way system as emerged as the route with the highest cycle use, the highest incidence of fatal and serious injury cycle crashes, and provides direct linkage to key central city destinations.

The two separated cycle lane options promoted are broadly illustrated here as:



Consultation on the two options was undertaken between November 8 and December 6 2013. Through the consultation process, the Working Group sought to learn from the community:

- a. the level of support for separated cycle lanes.
- b. the scale of potential use of a separated cycle lane, and option preference.
- c. any areas of concern and opportunity associated with these two options.

Following the close of submissions, a separate report summarising the consultation process and the feedback received was produced: “Submissions Summary Report, December 2013”.

Access to Reports

All reports of the Working Group, including this report, can be downloaded from the Transport Agency website (below), or may be viewed at either the Transport Agency's Moray Place office, or at the Dunedin City Council (contact Simon Underwood – Transport Agency; or Sarah Connolly at the Dunedin City Council. The direct web page link and contact email addresses are:

- W. <http://www.nzta.govt.nz/network/projects/project.html?ID=236>
E. DunedinSHCycleLanes@nzta.govt.nz

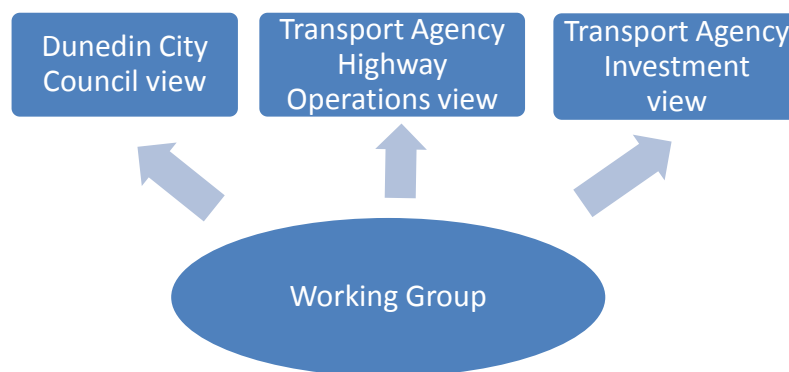
2. Report Purpose and Context

The purpose of this report is to provide feedback from the Working Group, to those persons who made submissions on the separated cycle lane option proposals, during the consultation period last year (November/December). The areas of feedback provided in this report, generally provide response to those matters of submission as collated and presented in the Submission Summary Report.

In evaluating the submissions and preparing this response report, only those members of the Working Group who are also employees of either the Transport Agency or the Dunedin City Council who have been involved.

The role of the Working Group to date has been to identify and consult upon the most workable long term options for safe cycling within the central city. The findings of the Work Group would then contribute to those decision making bodies and process involved in the consideration and development of any proposal to replace the existing un-protected cycle lanes, with separated cycle lanes on the one-way system.

As illustrated below, there are three 'decision making views' which will draw upon the findings of the Working Group to date.



The roles of the three 'decision making' bodies, are clarified as:

i. The Council view.

The Dunedin City Council, in terms of the city's wider transportation needs, has a critical interest in the safety and operational performance of the one-way system. The Council is also the highest level of local community representation, recognising that these corridors are a key feature of the inner city built and 'people' environment; from which both transport and non-transport related perspectives will apply.

The Council also manage on-street parking, and where there is sufficient road space available then determine the type (mobility/general/motorbike) and conditions of parking permissible (time and cost – metering); so as to best accommodate parking need.

ii. The Transport Agency - highway operations view.

The Transport Agency is ultimately responsible for the safety and operational performance of the one-way system – as it is a part of the state highway network. As a project is developed from concept to design, the Transport Agency has various technical/operational review processes to ensure that any works which progress through to construction are correctly engineered, meet various design/development protocols, and are overall fit-for-purpose. A key input in to the shaping and evaluation of these proposals is the community and Council view.

iii. The Transport Agency - investment view.

Sitting alongside the technical/operational review process, is a funding or investment review process. This process involves review of the overall project assessment profile (strategic fit, effectiveness, value for money); and prioritises funding of this project, alongside those of other walking/cycling projects from a national perspective.

At this stage the proposals have been developed from a strategic and functional view point only. Pending the outcome of the above ‘views’, the next stage would be to undertake preliminary design work to more accurately define the physical scope of the work (ie pavement, kerb, lighting, landscaping requirements etc), confirm functionality (ie traffic signal design), confirm parking changes, and costs etc. In terms of the Transport Agency’s project development cycle, this next step is referred to as the ‘Indicative Business Case’ stage. While planning for future implementation may occur from now, any commitment to construction can only be determined, once this more preliminary design stage is completed.

3. Summary of activities/changes to proposals in response to submissions

This section describes those key areas of focus and change to proposals by the Working Group, since the close of consultation period in November/December last year.

Inner city cycle traffic counts.

A large number of cycle traffic surveys were undertaken during the course of mid-December, and mid-January to early February. The findings of these surveys are discussed under “Cycle use of the state highway”, which is separately presented as a response to submissions.

Off highway parking opportunity

This has involved assessment of occupancy rates of existing car parks, evaluation of opinion and shopper surveys in relation to their parking, the potential to better manage short term parking needs through re-allocation of parking spaces. It also involve an evaluation of how the layout of streets adjacent to the one-way system

could be adapted to enable new car parking spaces to be created. Details on this parking opportunity assessment is separately presented in the report:

“SH 1 Cycle Lanes Parking Study, March 2014”

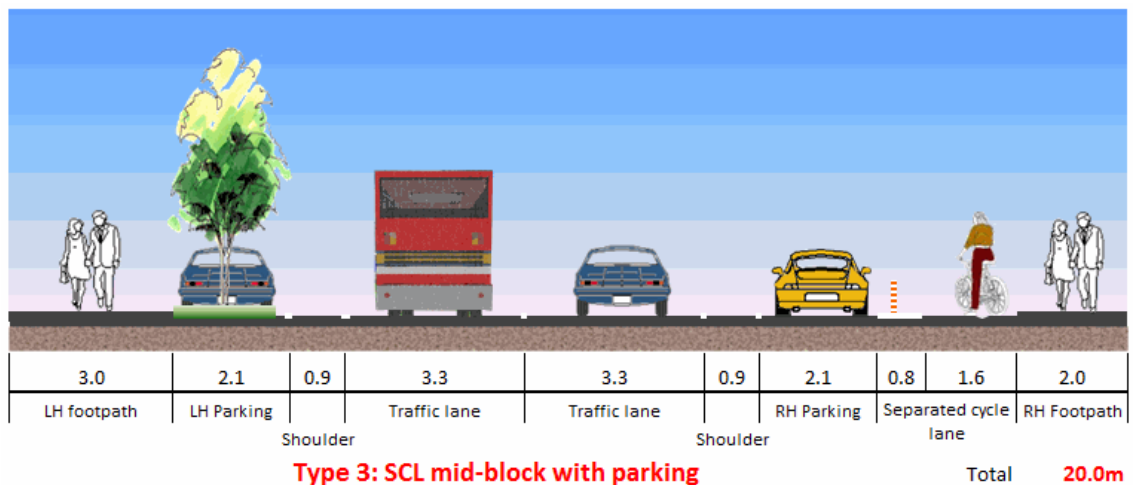
The findings of this report, are discussed under “Parking Concerns” which is separately presented as a response to submissions.

New option: Option 1A (uni-directional cycle lanes – with partial parking)

In light of the ‘user’ preference for uni-directional cycle lanes on each of the routes of the one-way system, together with the concern raised in relation to net parking loss, the Working Group developed a further option. This option, which is continues to be based on Option 1, seeks to also incorporate parking adjacent to the cycle lane on some blocks. This is referred to in this report as Option 1A.

The key difference for Option 1, is that in a number of situations it is proposed to narrow the footpath from its’ nominal 3m width, to 2m width. Combined with a narrowing of the cycle lane, this would enable parking to be retained between the new cycle lane and the near traffic lane. In this way, it is the car parking spaces (and cars within them) that achieve the desired separation from through traffic.

Details of this additional option are illustrated Appendix 1- Option 1, Option 1A, Option 2 Cross Sections, and Appendix 2 – Option 1A example plan. One of the cross-sections for this option is here illustrated:



Cross- section for Option 1A: uni-directional cycle lane with parking.

This modified cross-section is only potentially suitable for those blocks with no, or few, accesses; and where the level of pedestrian use of the footpath can still be managed.

Although attractive in terms of reducing parking loss, it also comes with its own set of consequences. Within the originally promoted 2.6m cycle lane width, the buffer between cyclists and parked cars needs to be accommodated. There is also an introduced risk between pedestrians and cyclists, as people alight to and from their parked vehicles. While the safety consequences are less – than incidence between cyclists and moving traffic, they are safety consequences all the same. It is a

however a treatment which is applied in other some cities internationally, and one also suggested in some form or another, through the consultation process.

Further consultation

Consultation will be on going as the project develops; particularly during through the next “Indicative Business Case” stage. In the meantime, the aim of the Working Group is to keep interested parties up-to-date. As such the project website from which all reports and option proposals can be accessed, is planned to remain available through the life of the project.

Integration of the proposed separated cycle lanes with the existing cycle infrastructure.

Illustrative plans as to how the proposed separated cycle lanes could integrate with existing infrastructure are still under preparation. Descriptively however this can be conveyed as follows.

At the northern end of the one-way system, traffic signals would need to be installed on Cumberland at the Duke St/Brook St intersection. This would be necessary so as to enable cyclists to cross the southbound traffic flow, when moving between the existing cycle path around the Botanical Gardens and the new separated cycle lane – as they are on opposite sides of the road. This would be common all separated cycle lane options.

For the two uni-directional options (Option 1 and Option 1A), northbound cyclists would continue to follow the route as they do now through the Gt King St/Pinehill Rd intersection, in a similar fashion as they do now.

At the southern end – Queens Garden, there is a sufficient combination of traffic signal operation, road space, footpath space; to readily enable connection to Crawford St, Vogel St or Cumberland St.

In terms of connectivity to the wider city cycle networks, it is ultimately proposed to establish a Central City Cycle Network as set out in Councils’ Strategic Cycle Network, 2011. The central location of the one-way system, with its’ very high level of connectivity to other routes throughout the central city, would lend itself to be an integral part of any such central city cycle network.

4.0 Response to specific preferences/concerns raised through submissions.

Feedback on the submissions received through the consultation process, including individual issues raised and scale of commonality between issues, was presented in the “Submissions Summary Report on the Dunedin Separated Cycle Lane options, December 2013”. The Working Group’s response to those key areas of preference and concerns as identified in that report, are individually presented as follows.

4.1 Support and preference for a separated cycle lane

As detailed in the Submissions Summary Report, there was very strong support for a separated cycle lane; and submissions from those most expected to use the cycle lane preferred Option 1 (uni-directional cycle lanes on each of the one-way routes).

The Automobile Association also conducted their own local members' survey, and while this revealed support for a separated cycle lane, preference was for Option 2 (a two-way separated cycle lane on Cumberland St); this corresponded to a concern recognising the difference in parking impact between the two options.

4.2 Parking concerns

As presented in the Submissions Summary Report, although submissions related to parking were fewer in number than those expressing support for a separated cycle lane: parking loss came through as a key concern held by motorists, business and retailers.

In reviewing the submissions, the Working Group recognised that there were two emerging philosophical views, expressed here as:

- i. Either option would enable cyclists to more safely use these roads, for their own transport purposes, and that this would be without compromise to any other road user in terms of road safety and overall traffic flow.*
- ii. The central city environment is an area of high tertiary and economic activity, and either option (Option 1 in particular), reduces choice and convenience for people to park their vehicle. Further, those retail and business premises close by, have assumed a degree of economic dependence on the close availability of parking.*

In the context that accommodation of a separated cycle lane entails a loss of parking, these two perspectives, can appear mutually exclusive. The Working Groups response has however, been to endeavour to recognise both views, and to seek out opportunities to both reduce parking loss from the affected routes and to increase parking supply on adjacent roads.

To this extent, Option 1 (uni-directional cycle lanes, on both one-way routes) was re-engineered as described above, and through this modification the previously assessed loss of 391 car parks, can be reduced by some 160 -195 car parks.

The other option: Option 2 (a two directional separated cycle lane on Cumberland St) has remains largely as it was; although a minor adjustment is made to the number of car parks affected, to recognise that there would be potential for 8 car parks between Burlington St and the Leviathon hotel could remain.

In addition, a review of parking layout changes on roads adjoining the one-way system, has shown potential for some 100 - 110 new car park spaces. Details relating to how these new car parking spaces can be achieved are separately presented in the report:

“SH 1 Cycle Lanes Parking Study, March 2014”.

A summary of potential net parking change is table here as:

	Loss of car parks from affected routes	Addition of car parks on adjacent side roads*	Net difference (less car parks)*
Option 1 <i>(uni-directional cycle lanes on both one-way routes)</i>	391	100 - 110	280 - 290
Option 1A- Modified <i>(as per Option 1 - with limited parking)</i>	200 - 230*	100 - 110	85 - 130
Option 2 <i>(two-way cycle lane on Cumberland St)</i>	180 -185*	100 - 110	80 - 85

** a range of car park numbers is quoted, pending the outcome of the next stage in the project design and development process.*

Other concerns raised related to the type of parking (ie short term parking need, mobility parking need, metered/un-metered). This was concern expressed in relation to both specific businesses along the one-way system, and also in the vicinity of the hospital / physio pool. At this stage the Working Groups focus has been to optimise the net car parking opportunity. It is however, acknowledged that a revised parking plan for the one-way system (both sides) and adjoining side roads will need to developed, so as to redefine the type and distribution of car parks to best meet the public and business need.

The appropriate time to develop such a revised parking plan, would be in the next stage of the project (ie as part of the Transport Agency's Indicative Business Case stage); should the project progress to this stage.

4.3 Access related concerns

The Working Group recognise that Option 1 as a single directional use cycle lane, will be easier and safer for motorists to cope with at driveways. This aspect was emphasised in the submission from Cadbury, and is one of the key reasons why Option 1 is preferred over Option 2 (two-way use - Cumberland St only).

As with the existing cycle lanes, the need for motorists to cross the cycle lanes cannot be removed. And while relocation of the cycle lanes from the left, to the right, side of the one-way system will provide relief at some busy accesses (eg

Countdown and New World supermarkets), the same concern is instead transferred to those accesses on the right hand side of the road.

A key safety design criteria is to ensure that driveway users have good visibility along the separated cycle lane. Under either of the original options, the removal of kerbside car parking alone would substantially improve upon this. At busier access, there are measures that will need to be investigated further to better alert both cyclist and motorists (eg differential surfacing, signage, warning lights). Under Option 1 and Option 1A, there is also more ability to provide for drivers to pull-over prior to turning at busy driveways (eg the north-end BP service station).

4.4 Pedestrian safety concerns

Concerns were raised of a potential increase in mid-block crossing activity by pedestrians; this corresponds to the potential need for people to park further away from their intended destination.

The Working Group recognises this concern and common to all options a number of mid-block crossing treatments for pedestrians are included; particularly on those blocks where the distance between signalised pedestrian crossings is greatest. Just where such treatments are applied would remain subject to the detailed design stage of any option to be progressed, but for example this could include:

- Cumberland St, outside Radio Otago House
- Cumberland St, outside Cadbury
- Cumberland St, near New World
- Gt King St, between Dundas St and Howe St
- High St (one-way south) outside Toitu – Otago Settlers Museum

Re-distribution of the remaining on-street parking, so that short term parking is located closer to traffic signals or new crossing points, will also assist in alleviating this concern.

Should either option be progressed to detailed design and implementation, the Working Group would also encourage that the operation of the traffic signals is investigated with a view to providing increased pedestrian protection at key intersections.

4.5 Cost concerns

At this stage the proposals have been developed to a concept level only, although it is expected that implementation of a separated cycle lane option would involve a significant amount of physical works, including: road resurfacing, extensive kerb & channel work, pavement & footpath works, changes to the traffic signal equipment and operation, and landscaping. For these reasons the cost of works is expected to be in the order of \$3.5M and \$4.5M.

The typical approach in funding of works within a wider roading network is that works necessary to develop, maintain and operate the function of state highway routes, is fully funded by the Transport Agency. Because both proposals primarily affect the one-way system routes of State Highway 1, the cost of the works would similarly be largely met by the Transport Agency.

The Transport Agency costs would be funded from a dedicated category within the National Land Transport Programme for projects which develop cycling and walking infrastructure. While funding of any separated cycle lane proposal would need to be prioritised against other walking and cycling projects nationally, it would not compromise any road maintenance or other general road improvement activity.

In principle, it can be expected that the Transport Agency would develop the project such that it is able to be successfully implemented, without reliance on funding from the Dunedin City Council. It is not uncommon however, for 'roading' works in urban areas to be supplemented with additional works, where the costs of such supplementary works are funded by the local authority.

Examples of where cost contribution from the Council could be appropriate include:

- i. The creation of new parks remote from the one-way system, for example:
 - a. changes in road layout of adjacent side streets to enable more kerbside parking.
 - b. Promotion of existing off-street parking areas.
 - c. facilitating the development of new off-street parking areas.
- ii. Re-assignment of existing car parking spaces on the one-way system. The management of parking areas on the highway is a freedom and benefit of the Dunedin City Council, and includes the assignment of metred parking and collection of revenue.
- iii. Although of less direct impact on transport needs, it is likely that revised parking plan would be required for both the one-way system routes and adjacent roads, to best plan for and manage parking supply and demand, and parking meter related revenue expectations.
- iv. Upgrading of adjacent footpaths (eg asphalt to pavers) in certain areas
- v. Utility upgrades (eg water, foul sewer, power reticulation)
- vi. Amenity enhancement, landscaping, seats, litter bins etc.
- vii. New cycle parking facilities.

Note, detailing of landscaping treatments within the Transport Agency scope of works are yet to be defined – this would be part of any subsequent detailed design stage of the project development. Work in this area can however be expected to be consistent with the Transport Agency's environmental and urban design guidelines and policies.

Notwithstanding those example points above, until any one proposal is progressed to a more detailed design stage, the scope and cost of such works cannot accurately be defined. More-over, in some areas of overlapping interests, the assignment of cost responsibility between the Transport Agency and Dunedin City Council requires further clarity.

4.6 Cycle use of the state highway

Submissions raised questions as to the actual (and expected) use of the one-way system routes by cyclists; and also an 'in principle question' as to whether these streets, as state highway routes, should be used by cyclists from a safety perspective?

Cycle Survey Information

Within the summer holiday periods of 2011/2012 and 2012/2013, cycle counts were undertaken at Andersons Bay Rd (the Oval) and adjacent to North Ground. During the most recent holiday period, a more extensive regime of cycle counts within the central city areas was undertaken. The results of these surveys, which include comparison with those of the previous year surveys, are separately presented in the report: Dunedin One Way System (SH1) Cycle Survey Report – March 2014.

These surveys show that the present daily volume of cycle trips on the one-way system, south of Stuart St, is 300 trips; and between St Andrew St and Howe St this is increased to 430 - 460 cycle trips. To complement those surveys undertake mid-summer, further mid- university semester calibration surveys are planned.

In terms of future use of the separated cycle lane(s), overseas experience would suggest that a considerable increase can reasonably be expected. This in part depends on the extent to which wider cycle network connectivity is also established. Given the inner-city location however, together with existing linkages to North East Valley, South Dunedin, and the harbour side cycle networks, an increase in cycle usage in the order of two to three times above current levels is not unreasonable.

Should the one-way system accommodate cycle use?

Appreciably, cycling is a formally recognised form of transport, and that one-way system is a key element of the central city road network. Further, through both the consultation process and the cycle surveys undertaken, it can be shown that there is a demand for cycle travel both within the central city and in particular on the one-way system. For the Working Group, the question needed to be reframed to:

Why shouldn't the one-way system accommodate cycle use?

For the Working Group, the answers to this needed to be resolved in the context of whether:

1. It is possible and practical to safely accommodate cycle use of the one-way system?
2. If providing for safe cycle use of the one-way system, would other transport needs for the one-way system would be compromised?

These are the two key premises upon which the separated cycle lane options for the one-way system were developed. Through this, it remains the Working Groups view that is possible and practical to safely accommodate cycle use on the one-way

system; and further, that this would be without compromise to the overall flow of traffic use of the one-way system, including the needs of public transport and pedestrians.

The Working Group could not therefore, determine any basis to exclude cyclists from the one-way system. More-over, promoting that instead the focus should remain on providing for the safe use by cyclists of the one-way system, and to better enable access to central city locations.

It is recognised however, that a consequence of any of the separated cycle lane option is a reduction on on-street car parking. This links back to the perspectives presented under the 'Parking Concerns' above as to relative importance of the one-way system to provide for travel by cycle and, or, retain opportunity for parking of vehicles. And it is this consideration – the extent to which parking should, or is able to be, accommodated which is of key influence and difference across each of the separated cycle lane options.

4.7 Alternatives to the state highway

The wider view of the Working Group is that within the central city, a single route is not sufficient to manage the travel needs of people travelling by bicycle. This is in the same vein that it takes a network of roads to provide for people travelling by car. In so far that there are many key destinations within the central city area, regardless of how people travel.

In a network context, submissions which promoted the development and use of George St and Leith St, support this approach. As however, standalone alternatives to the one-way system they are less suitable. This is explained as follows.

Observed route choice.

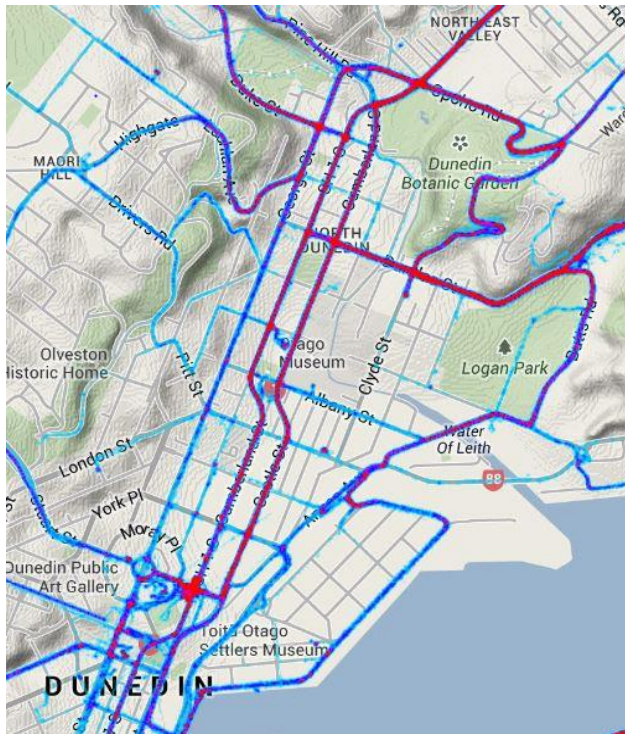
The cycle surveys undertaken of the most recent summer period included 'cycle route choice' surveys, by observing cycle movements at:

- The base of North East Valley - North Rd/Signal Hill/Bank St (which links directly into George St)
- At the Botanical Gardens cycle path – Cumberland St / Duke St / Brook St (which links to Castle St and Leith St.
- Anzac Ave / St Andrew St /Wharf St (which links to the harbour-side cycle routes)

There were also surveys undertaken on George St that could directly be related to those on Gt King St, to compare northbound cycle travel along these routes. The full results of these surveys are published in the report:

“Dunedin One Way System (SH 1) Cycle Survey Report – March 2014

From these surveys it is clear that it is the central city itself which is a strong destination for people travel by bicycle, and this generates a natural demand for cycle use of the one-way system. This is further emphasised by the 'heat-map' which is collated by tracking riders with activated smartphone GPS below.



GPS 'heat map' – as viewable from Race Shape.com. Red represents more intense cycle activity than blue.

Leith St route

This route was enhanced by the Dunedin City Council in the late 1990's where a shared path around the Botanical gardens was constructed to provide a separated link for cycle travel between North Rd and Brook St - which links to both Castle St and Leith St.

This route is recognised as an important route, in providing excellent connectivity between North East Valley and the heart of the university campus, the Otago Polytechnic, and also the harbour-side and from there to the South Dunedin Cycle Network.

Although it can link back to Stuart St, via Anzac Ave (in front of the rail station), to a large degree this route bypasses the central city area – which is where people want to go. The cycle surveys substantiate this, in that in the peak cycle flows observed apply to those cyclists approaching the central city in the morning and then leaving the central city in the afternoon. And further, as an example, if heading north from the central city, cyclists would need to traverse blocks, just to gain access to it.

A cycle fatality in 1999 on Gt King St, which was prior to the installation of the cycle lanes on the one-way system, also demonstrates that development of the Leith St route does not alleviate the demand for safe cycling on the one-way system.

None-the-less, the Leith St route is very much a key cycling route, and one particular submission soundly promoted the enhancement of this further still by enabling the cyclist to more closely follow the Water of Leith through the campus

area (in lieu of crossing and re-crossing the river, to remain behind the clock tower building). As this is within the university campus area, this would be a matter for the university to consider in the first instance; although the Working Groups understanding is that this is presently precluded.

George St route

The George St / Princes St route is indeed closely compatible with the one-way system in terms of overall connectivity to central city locations, and would complement well the Leith St route described above.

The connectivity provided through this route is good, but it also has its own set of safety consequences. It is also a busy traffic route, and while there is less in the way of truck movements, it is also a primary bus corridor – with high turnover bus stopping. The accommodation and retail function of this street is more pronounced than on the one-way system, such that parking demand and turn-over is higher still. Further, as a two way street, there are fewer options to safely provide for cyclists without impacting on other road users (eg at the Frederick St intersection, where the entire carriageway space is needed to accommodate the more numerous traffic lanes).

The Working Group, in their initial assessment of options suggested that it would take a considerable investment/and or change in function of George St (ie converted to a 'Quiet Street') to enable this option to be favoured. This was also recognised by submitters in promoting George St, that substantial change would concurrently be needed (eg measures to reduce vehicle of George St and removal of bus stops/bus travel). Further, the safety concerns associated with George St do not improve for travel further south along Princes St – where conditions if anything worsen.

Traffic bypass options

Some submitters took a different approach, proposing instead that heavy truck traffic, and/or the general traffic flow, instead take a bypass route around the central city. This would then enable one or other present highway routes be transformed to a more pedestrian and cycle friendly environment.

Although this may have merit from a cyclist / pedestrian perspective, experience shows that such works tend to be very complex in terms of: modelling of traffic flow impacts, community and land impacts, new construction works (whether as new road, widening for heavy vehicles, or strengthening of existing roads), and inevitably much higher costs. Such proposals are nominally driven by desire to better provide for a much wider range of transport needs (eg Dunedin southern arterial), or to enable a better use of adjacent land (eg recent bypass around the stadium/university areas). This is beyond the scope of the Working Group, and the likely means by which road safety for cyclists can effectively be managed.

4.8 Can Skateboards, Mopeds, and Mobility Scooters use the separated cycle lane?

Under the Traffic Regulations, the separated cycle lanes would be a traffic lane, but one which is restricted to a specific type of vehicle – in this case bicycles. This would preclude the use of the separated cycle lanes, by skateboards, mopeds and mobility scooters.

Through these regulations, bicycles which are power assisted, would still be permitted to use the lanes, provided the maximum power output is 300 watts or less.

It would take a change to these Traffic Regulations to permit an expanded use of cycle lanes. This is beyond the remit of the Working Group, as any change would need to be promoted from a national perspective, and the full range of potential consequences more thoroughly considered (eg detection requirements at traffic signals; comparable protective/visual equipment needs; effect on the functional use of the cycle lane for cyclists).

4.9 Potential to attract younger/less skilled cyclists into the central city

The central city environment, including the one-way system, will remain quite unlike other city shared paths (eg the harbour-side network) which have a ‘recreational environment’ element to their use. The properties along the margins of the one-way system tend to be areas of business, employment, and tertiary education. And given the central city location, to reach the one-way system, also typically requires the confidence and skills associated with travelling from further afield. At present the demographics of those persons using the cycle lanes appear to be more adolescent/adult cyclists; and as the cycle lanes themselves do not provide the purpose for travel (ie unlike the more recreational pathways), this demographic is not expected to change.

At present, there are a number of networks which either already, or are planned to, link into the central city; these include: North East Valley with its existing cycle lanes, and the expanding harbour-side and South Dunedin networks). It is preferable that for cyclists using these more remote networks, that once they reach the inner city area they are afforded with a better, not poorer, quality of cycle facility.

4.10 Unsuitable climate and topography

It is accepted that the topography and weather in Dunedin is not always conducive to cycling; but in this does not preclude cycling as a valid form of travel for Dunedin people.

Dunedin’s mean temperature is comparable with Vancouver, Portland and Amsterdam – cities that have high rates of cycling. And despite Dunedin being a hilly city, some 33% of the population, live below the inner city green belt (below 50m above sea level). Of course some cyclists are not put off by the hills at all, and the advent of electric bikes, with lighter and longer lasting batteries, can further reduce the extent to which topography limits people’s take-up of cycling.

5. What happens next.

As described under Report Context, the proposals as developed by the Working Group need to be considered further by the Dunedin City Council – in terms of both a wider community and transport view, and also by the Transport Agency – in terms of a highway operations and funding/investment view.

Further the next stage of the project, is not construction, but rather the development of an Indicative Business Case. This involves a significant amount of work to more accurately detail the scope, affects, costs, and benefits of these proposals, together with further public consultation – particularly with those most directly affected. That stage is effectively a preliminary design stage for all aspects of the proposed work.

The next steps are therefore broadly presented as:

- 1) Present to and receive the view of the relevant Council committee.
- 2) Promote to and receive the view the Transport Agency from a highway operations and project development viewpoint.
- 3) Seek inclusion within the existing NLTP 2012-15 as a new project, for which funding to undertake an Indicative Business Case can then be contested.
- 4) Seek Transport Agency funding to undertake the Indicative Business Case stage of development work.
- 5) Parallel to, or in conjunction with the development of an Indicative Business Case, develop a revised Parking Plan for the one-way system and adjacent streets. These activities would be led by the Transport Agency and the Dunedin City Council respectively.
- 6) Pending the outcome of the Indicative Business Case, to effectively repeat the initial four steps above, but in context of then seeking committed support for the project and commitment of construction funds. This would likely fall within the project planning and prioritisation processes, as applicable to the upcoming National Land Transport Programme for 2015/16 – 2017/18.

Appendix 1 Option 1, Option 1A and Option 2 cross-sections

Appendix 2 Option 1A – example plan