QUEENSTOWN LAKES DISTRICT COUNCIL

QLDC Council

26 June 2014

Report for Agenda Item 6

Department:

Planning and Infrastructure

6. Inner Links – Approval of a Preferred Option

Purpose

1 The purpose of this report is to obtain Council decisions on its preferred option and timing for construction of stages one and two of the Inner Links project.

Executive Summary

2 The Inner Links project has advanced the design and business case for the construction of new road links on the periphery of the town centre between Frankton Road and Henry St, and between Henry Street and Man Street. Plans showing the proposed design are attached (Attachment A). They show a realigned t-intersection at Frankton Rd/Melbourne Street intersection, the link between Melbourne and Henry Street with a maximum 12.5% gradient, a signalised intersection at the junction of Henry and Shotover Streets, and a direct link between Henry and Man Streets.

3 In undertaking this project, assumptions have been made regarding the future growth in and around the town centre, and in the wider Wakatipu Basin. Assessment of resulting traffic demands points to the staged construction of the road that would ultimately cost in the order of $22m to construct (including land acquisition). If current travel patterns continue, construction of the Melbourne-Henry segment would need to start around 2018/19 and the construction of stage 2 (Henry Street to Man St) would need to start around 2030.

4 However, an approach that relies solely on road construction is unlikely to be successful in either the shorter or longer terms.

- In the short term this approach will be unaffordable as it is unlikely to attract NZ Transport Agency funding support. NZ Transport Agency process now demands that the full range of potential transport solutions be explored before the case for implementation of a project will be considered. This points to the development of measures aimed at reducing projected traffic demands.

- In the longer term, a narrow focus on increasing road capacity to meet projected traffic demands is likely to further cement the district's preference for the single occupant car and will create congestion issues, albeit on Melbourne-Henry Streets rather than Stanley Street, over the next 20-30 years.

5 Traffic modelling undertaken for the project shows that if we can divert roughly a fifth of projected traffic into public transport, cycling and walking, this will be enough to keep traffic flowing in peak times and put off the time when construction of the new roading is needed. Importantly this could put back construction of Stage 1 of the project (Melbourne – Henry Street link) 15-20 years with construction of Stage 2 Henry Street to Man Street link commencing after 2040.

6 This reliance on 'travel demand management' has its risks. Work undertaken this year for the district wide transport strategy has highlighted the "disparate approaches to transport investment" (i.e. the private sector and the public agencies responsible for transport in the district ***not*** working together) as a key transport problem affecting the district. This, and the difficulty of getting even a small proportion of visitors and residents into 'alternative modes', reinforces the need to protect future Councils' ability to build the Inner Links roads. This report recommends that Council continue its approach of protecting its ability to build the roads and that this is extended to the Stage 2 (Henry-Man) section of the route.

7 In 2014/15 Council will be preparing its transport strategies, its inputs to the regional land transport plan, and its next Long Term Plan. It will also be notifying stage one of the District Plan review (including the Queenstown town centre). These activities provide an opportunity for the Council, ORC and NZ Transport Agency to develop a cohesive approach to managing traffic growth while resolving some of the uncertainties around protection of the route, the planning for the town centre and the convention centre.

Recommendation

8 *That Council:*

a. **Agree in principle, subject to further work, that** planning for Inner Links roading proposals is progressed alongside travel demand management measures for improving town centre access while deferring the need for road construction beyond 2018.

b. **Direct** Planning and Infrastructure Group to report to the Council on the proposed town centre transport strategy by February 2015.

c. **Approve** the Inner Links project design comprising the following design elements

i. Henry Street – Man Street link to follow the direct alignment

ii. 12.5%. gradient on Melbourne St - Henry Street link

iii. Maintain side street connection between Melbourne St - Henry Street link and Sydney Street, Beetham Street (upper section), Ballarat Street (lower section)

iv. Henry Street/ Shotover Street /Gorge Road intersection to be signalised and realigned to southern location option.

v. Frankton Road /Melbourne Street intersection to be design as a t-intersection with priority movement between the northern section of Frankton Road and Melbourne Street.

d. **Direct** Planning and Infrastructure Group to prepare by February 2015, in consultation with affected landowners, a property plan for the protection of the Melbourne Street – Henry Street and the Henry Street – Man Street sections of the Inner Links route.

Prepared by:	Reviewed and Authorised by:
	
Denis Mander Transport Policy and Stakeholder Manager	Marc Bretherton General Manager, Planning and Infrastructure
9/06/2014	10/06/2014

Background

9 The Inner Links project is a response to forecast growth in traffic on existing town centre arterials and the impact this will have on access to and through the town centre. At present the predominant mode for getting around is the single occupant car. Council surveys undertaken in March this year illustrate this:[1]

- 85% of people coming into the town centre on the three main arterials travel by car. Approximately 2% and 1% travel by bus and bicycle respectively, while 11% walk.[2]
- The average vehicle occupancy is 1.53 people.

10 The Council's annual surveys indicate that these patterns have been stable since 2009 when the surveys began.

11 Past surveys have shown the Queenstown town centre is the predominant destination for traffic approaching the town centre on the main arterials in the morning peak (as opposed to travelling through the town centre).

12 As the district grows so will travel demands. Attachment B explains the impact of travel demand growth assuming no changes to the way we get around, and no improvements to our roading infrastructure. It presents plots that have been generated by Council's strategic transport model. These plots compare current

[1] In March each year QLDC's Planning and Infrastructure Group undertake one-day screenline counts between 7am and 10am on the three main arterial roads (Frankton Road + Frankton Track, Gorge Road, and Lake Esplanade) serving the Queenstown town centre. These surveys have been undertaken annually since 2009. They record the numbers of people by travel mode. They also record vehicle occupancies and travel times.

[2] These figures are supported by 2006 Census 'journey to work' data which recorded that on a district wide basis 82% of people drive or are passengers, 1% use the bus, 3% bicycle and 15% walk.

levels of congestion with those projected for 2026 and 2041 and show the extended areas of the arterial route network that will be at/nearing capacity.

13 Against this background the objectives of Inner Links are:

a. To bring traffic into the town centre
b. To allow through traffic to avoid the town centre
c. To provide access to existing and planned carparks
d. To act as an arterial route, but to be an urban street and not an expressway
e. To support public transport.

14 The project has been in development for many years:

- In 2005, the Council's Future Links Strategy recommended investigation of the roading links comprising the Melbourne St to One Mile route.
- In 2007/8, the Inner Queenstown Transportation Study developed a scoping report for Inner Links. This formed the basis for QLDC Strategy Committee decision in 2008 that adopted a preferred route and recommended that the project proceed to scheme assessment for the sections of the preferred route between Melbourne Street and Man Street.
- In late 2013/14 Council engaged Aecom Ltd to undertake the scheme assessment report for Stages One (the Melbourne-Henry link) and Two (the Henry Man link).[3]

15 Shortly after engagement of Aecom, NZ Transport Agency advised its requirement that new projects follow its 'better business case' procedures. Although we had the option of carrying on under the scheme assessment process, the decision was taken to align the project with the NZ Transport Agency business case procedures.[4] This had no overall impact on project cost but will mean less work 'downstream' in providing the project assessments required to obtain further NZ Transport Agency funding.

16 The purposes of this project have been:

- To establish the business case for the Inner Links project, partly in order to secure future NZ Transport Agency funding for project detailed design and construction
- To recommend to Council a preferred design and construction timing
- To provide input to the review of the Long Term Plan

17 The completion of the Inner Links scheme assessment this current financial year is sought within the Chief Executive's performance agreement.

Comment

<u>Business case process</u>

18 The dovetailing of the scheme assessment report with the better business case approach has meant that the project has followed the following process.

[3] The 'scheme assessment' is the design phase between scoping and detailed design. The purpose of the phase is to identify a preferred option for detailed design and construction and to establish the funding case for that option.

[4] The better business case approach and previous approaches to project development are described in Attachment One.

a. Step One: Queenstown town centre/ town centre arterials strategic business case

   As a background input to this project a draft strategic business case has been prepared. It summarises the key transport related problems and the key benefits of resolving those problems. These were developed / confirmed through stakeholder workshops involving infrastructure portfolio Councillors, and stakeholders such as the Queenstown Chamber of Commerce, the Otago Regional Council and NZ Transport Agency. Importantly, this established the case for change.

b. Step Two: Development of the Programme / Indicative Business Case

   The process dovetails with the scheme assessment report in that the technical evaluation process (particularly transport modelling) are instrumental to defining the transport options and establishing the effectiveness of different options in addressing the problems and benefits identified by the Strategic Business Case.

   For the Inner Links project a process was followed where a long list of options was developed. This was narrowed to a preferred option using the strategic business case 'problems and benefits' as reference points.

c. Step Three: Refinement of Design

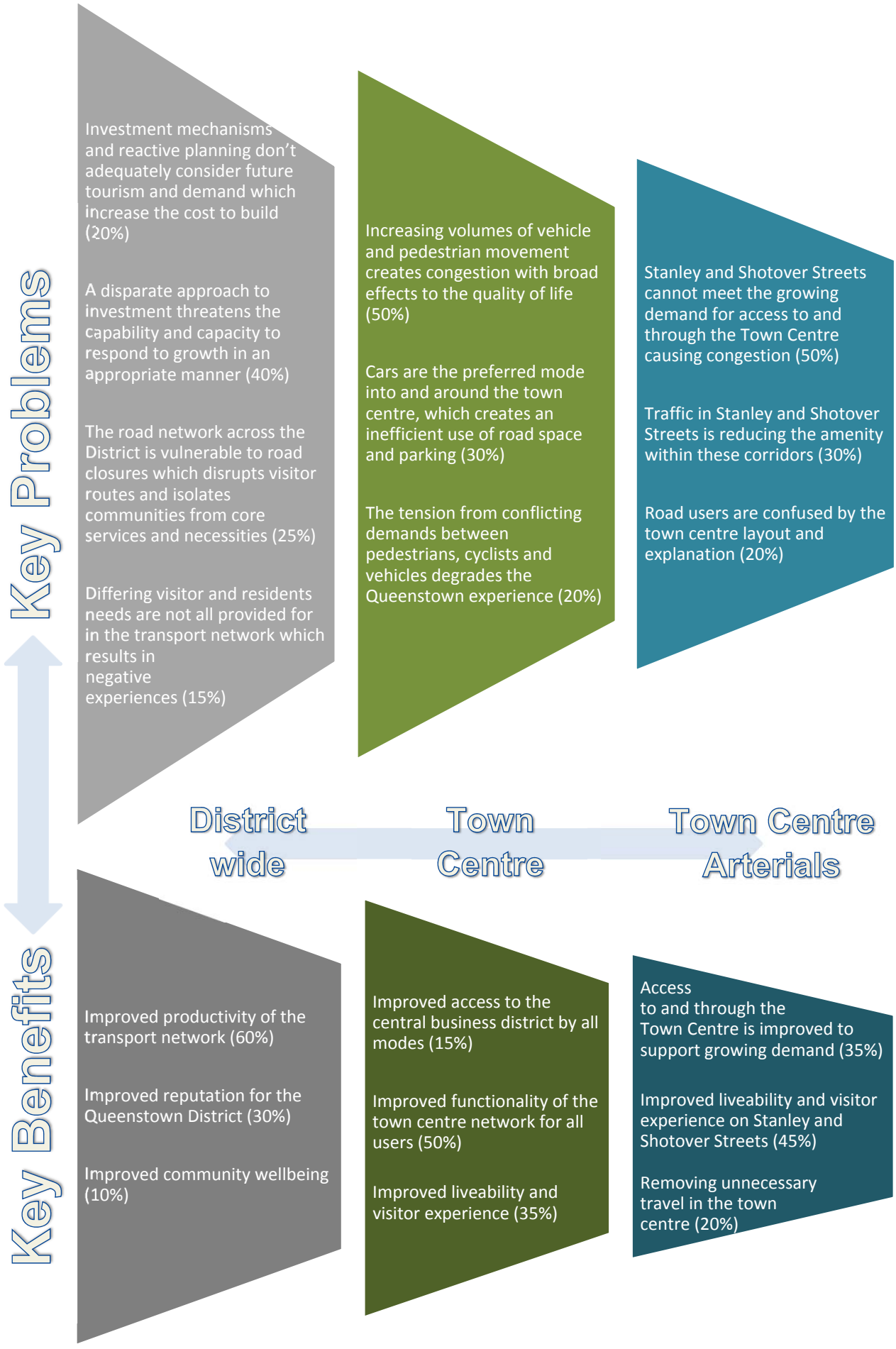
   This phase also merges with the scheme assessment report process in its dealing with design and project evaluation. It does not require some design work that is typically part of a scheme assessment report. Accordingly, some design work (geotechnical surveys and noise assessments) were dropped from the Aecom commission.

19 The key inputs to this process were

a. Project workshops. Several workshops were undertaken involving infrastructure portfolio Councillors, ORC and NZ Transport Agency staff, Chamber of Commerce and transport operator representatives.
b. Technical inputs. Traffic engineering, transport modelling, urban design and resource management planning inputs were provided through the Aecom commission.
c. Public consultation. Public consultation, principally over design options, was undertaken in April 2014. A summary of the public consultation is attached (Attachment C).
d. Urban Design Panel review. The Council's urban design panel reviewed the project material at the same time as the public consultation occurred. The Panel's report is attached as Attachment D.

20 As the design process progresses, the business case approach requires that outcomes of previous planning phases be revisited and checked for their veracity.

Figure One: Queenstown Lakes Investment Logic Mapping – Problems & Benefits (weightings are in parentheses)



Step One: The Strategic Business Case for Town Centre Transport

21 Figure One (previous page) summarises the investment logic mapping (ILM) outcomes for district wide, central area and central area arterials. The key themes coming out of the three processes centred on the impacts of our reliance on the car for getting around. This is perceived as affecting access and amenity/visitor experience as well as driving the inefficient use of road space and parking.[5]

22 The system is seen as not coping well with the needs of different road users whether they be categorised along the lines of visitors and locals, or categorised by mode (i.e. pedestrians, cyclists and vehicles).

23 The benefits of resolving these problems are expressed in terms of improved liveability and visitor experience, and improved capability of the town centre to cope with growing demands.

24 The outcomes sought by the business case cover the following areas

- Outcome One: Access to the town centre is improved.
- Outcome Two: That people believe parking is always available in Queenstown town centre.
- Outcome Three: Traffic flow on Town Centre arterials for all road users through the management of the transport infrastructure and services is at 'level of service D and for LoS E for short periods in the daily travel peak'.[6]
- Outcome Four: Management of the transport network leads to increases in residential, visitor and business satisfaction.

Step 2: The Programme Business Case

25 Typically, a transport strategy comprises a series of complementary initiatives that work together for the achievement of the desired outcomes. This recognises that attention to the different parts of the transport system increases the effectiveness of individual initiatives. To arrive at a package of initiatives that target the town centre's transport problems the Inner Links project has followed the following process

a. Definition/assessment of broad transport packages
b. Refinement of the preferred broad package

26 The worksheet in Attachment E lists seven high level transport packages. The weightings given to the strategic interventions convey their contribution towards delivering the percentage of benefits achieved by that option. The 'land-use' package (option 2) focuses on measures to deal with traffic demands through

[5] Notably, at the highest level, the key problem was identified as the disparate approach to investment threatens the capability and capacity to respond to growth in an appropriate manner. This problem, where the different transport agencies are not working in unison creates significant risk to implementation of transport strategies.

[6] Levels of service are a measure of the speed and density of traffic. A LoS A represents free-flowing conditions. LoS D is approaching an unstable flow. LoS E is unstable traffic flow. Through previous strategies (Future Link, 2005) Council has recognised the unaffordability of avoiding LoS E at all times and signalled its preparedness to tolerate this for short periods.

heavy reliance on measures that influence where activities locate. Increased road capacity (package 4) makes use of the Inner Links road proposals. The targeted public transport package (package 5) makes use of improved public transport services, management of parking, better road user information and park & ride.

27 The ability of each package to deliver the town centre benefits identified in the preceding strategic business case was then assessed.

28 The following table summarises the programme business case evaluation set out in more detail in Attachment E.

Table One

<table>
<tr><td colspan="2">Evaluation of package options against the ILM benefits.</td></tr>
<tr><td colspan="2">The 7 package options were:
1. Education + technology,
2. Land use
3. Parking focus
4. Increased roading capacity
5. Improved public transport (20% diversion)
6. ‘Public transport plus’ (30% diversion)
7. High infrastructure (20% diversion)</td></tr>
<tr><td>Evaluation inputs
Option costings derived from road design (2014) and historical examinations of transport options (2006/07). These are intended to give high level comparisons of options

The costs for the public transport options are for Wakatipu Basin-wide systems.

The scoring of the options and the review of the risks was undertaken by the project team workshop – this included participation of the Council’s infrastructure portfolio Councillors.</td><td>Summary of Evaluation
Options 4, 6 & 7 are considered the most likely to be effective in delivering the benefits sought.

The options involving building of road capacity are the highest cost.

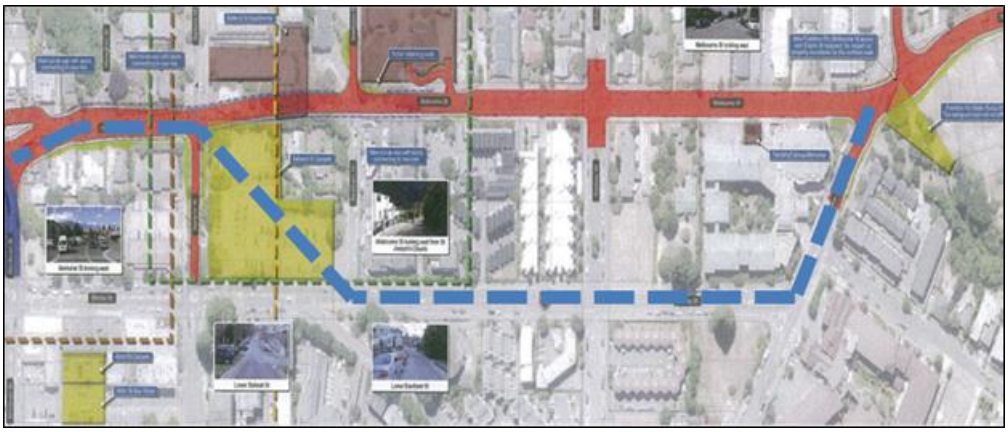
The public transport options are highest risk – to work, they need significant changes in travel behaviour. However, if successful they hold the prospect of enabling the road construction to be pushed further out into the future, with associated savings in costs.

Option 7 (high infrastructure) is considered the preferred option and the best way of managing risks – investing in travel behaviour changes while retaining the ability to construct roading if this is needed.</td></tr>
</table>

31 The evaluation has taken the ‘High Infrastructure’ option and sought to further define it in terms of roading developments, the effectiveness of travel demand management measures, costs and timing. The focus has been on the refinement of the arterial roading elements, because of scope of the original scheme assessment report. This means that the definition of the travel demand management measures has stayed at a relatively high level. This will need to be

refined as part of the completion of the transport strategy/programme business case for the town centre in 2014/15.

32 Through the consultation process one suggestion was made for a route making use of Stanley Street, and the Ballarat Street Carpark. This is shown (blue dotted line) below.



33 The assessment of this option is described in Attachment F. This has been rejected for the following reasons

- It has a significant adverse effect on the Ballarat St carpark
- It is not as effective as the Melbourne Henry route in addressing future congestion
- Route is circuitous compared to direct Melbourne Henry route
- It would create a significant barrier between the core of the town centre and the eastern side of Stanley Street, and would work against expansion of town centre to this area

34 Accordingly, this option has not been carried forward

35 The spreadsheet in Attachment G sets out the options evaluated at this level. This presents the do nothing / do minimum, roading development and the travel demand management options as follows:

- Do nothing / do minimum. These options reflect the lowest level of 'intervention'. The do minimum option represents the minimum achievable upgrades to the CBD intersections on Stanley and Shotover Streets to improve level of service and pedestrian access. The assumption is that the roundabouts will be replaced with traffic signals at the intersections of Stanley and Ballarat Streets, Stanley and Shotover Streets, and Stanley and Camp Streets. No land purchase is assumed.
- Road building options:
  - These options represent the progressive development of the Inner Links roads, starting with Melbourne Henry link, followed by the Henry – Man link and then by the Man – One Mile link
  - Stages 1 and 2 have an estimated cost of $22m
- Travel demand management. This option represents the development of alternative modes: public transport, cycling and walking and supporting education/information initiatives. The costs of these options as presented in

the spreadsheet relate to application of measures across the Wakatipu Basin as therefore exaggerate the cost of measures that should be apportioned to the town centre.

36 Sole focus on either road building or travel demand management is assessed as being relatively ineffective in delivering the benefits sought from Queenstown town centre transport. In contrast, the effectiveness of embarking on a hybrid option combining travel demand management with long term road building is highlighted by the evaluation of options 5 (Inner Links Stage 1+TDM), 7 (Inner Links Stage 1+2+TDM) and 8 (Inner Links Stage 1+2+3+TDM). These options illustrate the potential to defer investment in roading if a proportion of projected traffic can be diverted into alternative modes.

37 The modelling has examined a TDM scenario for the 'diversion of projected traffic into alternative modes. For many reasons, a 20% diversion is ambitious for a provincial town but is easily achieved in a metropolitan district.[7]

38 The transport modelling tested the scenario where traffic growth continues with no interventions. This points to the need for investment in the Melbourne Henry and Henry Man links by 2018-19 on the basis of the levels of congestion that would be experienced on the town centre arterials. The modelling also shows that if we can divert traffic into other modes or travel periods than we can push back the time when construction of the new links would be needed, as set out in table 3.

Table 3: Commencement of construction of Inner Links Stages

Inner Links Stage:	No TDM	TDM (20%)
Stage 1	in 5 years	15-20 years
Stage 2A/B	15-20 years	25+ years
Stage 3	15-20 years	25+ years

Step Three: Refinement of Road Design

39 Table Two presents the evaluation of road design options.

Table Two

Melbourne St Frankton Road Intersection
Consultation material proposed priority is given to the Melbourne – Frankton Rd through movement. Traffic approaching the intersection from Stanley St would need to give way to this through movement.

[7] The 2006 Census recorded over 40% of people resident in Wellington City travelling to work by modes other than the car.

Options	Summary of Technical Evaluation:
▪ Retain Existing Intersection ▪ Roundabout ▪ Priority ▪ Traffic signals	Existing intersection and roundabout options would not encourage use of Melbourne Henry Street as arterial. Roundabout: large footprint would require additional land acquisition. Melbourne-Frankton Priority: Similar arrangement to Frankton/Stanley intersection; supports use of Melbourne Henry as arterial. Some minor land acquisition required on southern side of intersection. No direct impact on other properties. Traffic signals: Not required to improve capacity at intersection. Could be desirable in future to provide for pedestrians and bus priority at intersections, but likely to require road widening on approaches.

Recommendation: Melbourne-Frankton priority arrangement, because it promotes use of the Melbourne Street - Henry Street route and appropriate to projected traffic demands.

Melbourne – Henry Link Gradient and Side Street Connectivity

Consultation material outlined the effects of the steep and shallow options. These centre on property and side street accesses. Both options result in less side street connectivity, although the shallow option is worse in this regard.

Options	Summary of Technical Evaluation:
▪ The Steep Option (12.5% gradient) ▪ The Shallow Option (10% gradient)	Steep option: Retains Melbourne-Henry connections to some side streets (Sydney St, Upper Beetham, and Lower Ballarat). Retains direct vehicular access between Queenstown Hill and the Queenstown town centre (via Beetham and Ballarat Streets). Least impact on St Joseph's Church & School (level access retained). Gradient may result in louder traffic noise. More expensive, largely as result of retaining walls needed in vicinity of Beetham St. Shallow option: Loses most Melbourne-Henry side street connections (except Sydney Street). Changes access to St Josephs – difficult for Church functions and school access.

Issues raised through consultation (where appropriate the response is in italics):

- Concern that lack of side street connections would make getting out of properties very difficult in winter. The example was given of Ballarat Street where vehicles have trouble travelling up the street in icy conditions. *The technical team believe this can be addressed to changes to road surfacing and, if necessary, use of heated pavements, as used in North America.*
- Concern over impacts of shallow option on property and side-street accesses. Preference of some property owners towards the steeper

option.

- Concern over construction, potential noise and vibration effects. *These effects have not been evaluated as part of the current project. The steeper option will result in more traffic noise. However options exist to mitigate this through pavement treatments. The impacts on buildings such as the St Joseph's Church will be given particular regard during the detailed design and the construction phases.*

Recommendation: Steep option, principally because of increased side street connectivity and less impact on property accesses.

Henry St/Shotover St/Gorge Road Intersection

Consultation material showed roundabout and signalised intersection options. Two of the options showed significant impact on the south east corner of the Henry / Shotover / Gorge Rd intersection where approximately half the property owned by CCS would be required for the intersection. A further signalised option was developed to show a signalised intersection arrangement that would not require land acquisition.

Options

- Roundabout
- Signalised Intersection
- Northern versus southern alignment

All intersection options significantly affect the degree of on-street parking on Henry Street.

Roundabouts perform slightly better in traffic terms that signalised intersection options; have larger 'footprint' (more land required); better able to cope with the demand for the right turn from Henry St to Gorge Rd than intersection option.

Signalised intersections require less land, cope reasonably with traffic demands, provide safe crossing points for pedestrians; more easily understood by the range of drivers using Queenstown roads; may require consequential changes to the Stanley / Shotover intersection to deal with queue-backs at peak times.

Northern intersection alignment. This option avoids the need for land acquisition on Henry Street. It relies on the removal of on-street parking on the northern side of Henry Street. Its key failing is that access / egress for Turner Street becomes very difficult to maintain. The alignment is more skewed than the southern alignment, and this may have safety implications. This option is not favoured for safety and access reasons.

Southern intersection alignment. This option would require purchase of land presently owned/occupied by the CCS (Gilmour Lodge). It would be possible to retain parking on the northern side. Land acquisition may present opportunities for providing off-street parking in this area.

Issues raised through consultation (where appropriate the response is in italics):

- Acknowledgement of benefits of signalised intersections for pedestrian and road safety
- Concern over loss of parking, particularly under the northern alignment where businesses on the northern side of the intersection would lose adjacent on-street parking.
- Concern over direct impacts on properties such as the CCS property on the corner of Shotover Street and Henry Street

Recommendation: Install the signalised intersection on the southern alignment.

Stage 2 Alignment

The consultation presented both the direct option and the Boundary Street option.

Options

- Boundary St
- Direct Route

The assessment of these options is presented in Attachment H. The direct route is seen as more effective as evidenced by the assessment in terms of

- improved access to and through the town centre to support growing demand, and
- improved liveability and visitor experience on Stanley and Shotover Streets

The estimated construction cost of the direct option is $1.1m.

Issues raised through consultation (where appropriate the response is in italics):

- Concern over fairness of compensation and lack of certainty as to acquisition process.
- Willingness to work with Council to address the above. *It is proposed that a land acquisition plan be developed with the landowners and presented to Council.*

Recommendation: The direct option subject to the satisfactory completion of a property acquisition plan.

Road design

Options	Recommendation
Two traffic lanes, with variations on footpaths, cycle lanes, central medians, on-street parking	Little comment was received on the road layout. It is proposed that the alignment shown on the plans in attachment A be pursued. This will comprise • Two traffic lanes generally 4m wide, and 4.5m wide uphill between Ballarat and Beetham Streets. • Central median – minimum width 2m. • Footpaths generally 1.8m wide and on both sides of the road. However, on the south side only of the new link between Beetham and Ballarat Streets. • On-street parking retained on Melbourne Street.

No on-street parking on the new link between Beetham St and Ballarat St or on the link between Henry Street and Memorial Street

- Reduction of on-street parking on Henry Street, potentially off-set in part by land acquisition for the intersection.

Summary of preferred option

50 Plans presenting the preferred option are attached. (Attachment A)

Next Steps

51 The 2029 timing for the construction of stages 1 and 2039 for Stage 2 is predicated on the early introduction of measures that are effective in reducing the growth in traffic. Against a background of increasing numbers of people wanting to travel to/from and through the town centre, this requires greater use of alternatives to the single occupant car.

There are significant risks particularly around land acquisition, governance, and planning for the future of the town centre which do need to be addressed following Council decision favouring the proposed Inner Links option. This points to the following strands of work over the coming 6 months, in preparation for the Council's 2015/16 Long Term Plan:

a. Protection of land required for Stages 1 and 2.

   The project has identified land beyond the existing road boundaries that will be required for the construction of stages 1 and 2. Land between Beetham and Ballarat Streets, required to link Melbourne Street and Henry Street is already in Council ownership. Additional land will be required in order to construct the Henry St / Shotover St / Gorge Road intersection and to construct the Stage two link.

   There is a need to provide the owners of the land affected by the proposal certainty of Council's intentions, noting that if Council, the ORC and NZ Transport Agency are effective in creating effective travel demand management the construction may be 15-20 years away. In some instances this may include potential land exchanges.

   It is proposed that an approach to the acquisition of the land be determined and reported back to the Council. The recommended approach also needs to address NZTA funding for land acquisition.

b. Development of Programme Business Case for Central Area Transport. It is essential that Council, ORC and NZ Transport Agency move quickly to articulate the programme business case for Central area transport. The work to date has developed the arterial roading section of this business case, but now needs to provide plans to a similar level of detail for improvements to the other elements.

Given that responsibilities for transport are distributed, this work must be carried out jointly by QLDC, ORC and NZ Transport Agency.

Progress on the programme business case (effectively a transport strategy and action plan for the Queenstown town centre) is timely given work occurring concurrently on the town centre for the district plan review, and the Queenstown convention centre.

It is proposed that this work be undertaken in the first half of 2014/15, with reports to Council in January/February 2015.

Financial Implications

52 This report recommends future expenditure that is proposed to be provided for through carry-forwards in 2014 under-expenditure or that will be considered through the development of the next Long Term Plan.

Local Government Act 2002 Purpose Provisions

53 The matters addressed by this report fall within the purpose of local government set down in section 10 of the Local Government Act 2002. This report presents the outcomes of investigations into the construction of new/upgraded road infrastructure. A key considerations of the investigation is whether the roading is required and, if so, what design options should be preferred and the appropriate timing for construction.

54 The investigations are following NZ Transport Agency's requirements for such projects to be considered through a 'better business case' approach. This process ensures infrastructure quality is addressed appropriately in the Local Government terms of being "efficient, effective and appropriate to present and future circumstances." (section 10(2) of the Act).

Council Policies

55 The following Council Policy was considered:

- Policy on Significance. This policy was considered. The decision sought by this report is not significant within the terms of the policy. The decision to fund the construction of Inner Links will be significant and will be addressed through consultation over the Council's Long Term Plan

56 No other Council policies are directly relevant to the Inner Links project.

Consultation

57 Consultation was carried out as part of this phase of the project. The consultation processes and outcomes are described in Attachment C and discussed in the 'Comment' section of this report.

58 In addition the project was undertaken with close involvement of NZ Transport Agency (Planning & Investment and Highway Network Operations Groups) and the Otago Regional Council.

Publicity

59 The Council's decisions on the Inner Links project will be of interest to submitters and land owners. Following the Council decision, all submitters and land owners will be contacted by letter advising them of the Council's decisions. In addition, information on the decision will be placed on the Council's website.

Attachments

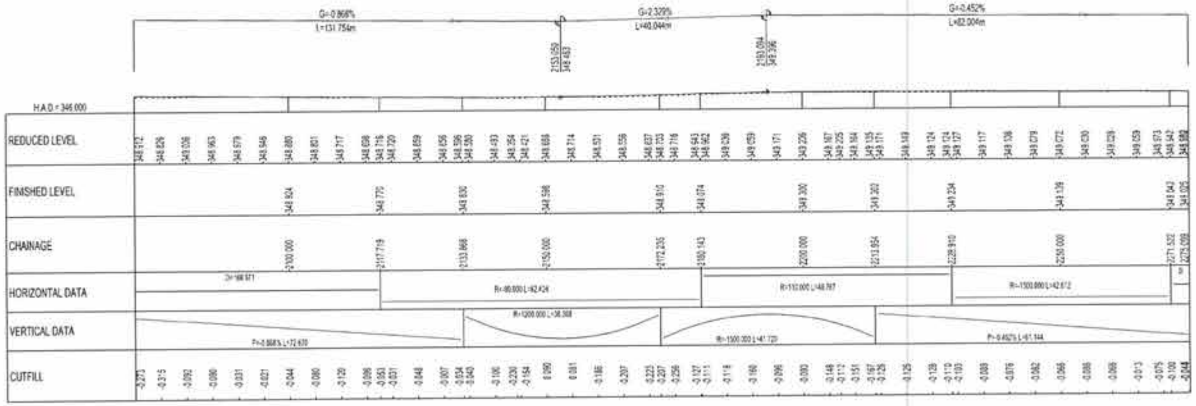
A Inner Links Stages 1 and 2 – Draft Proposed Design
B Forecast traffic growth and the impact of travel demand management
C Inner Links Queenstown Consultation - Summary
D Urban Design Panel Report
E Town Centre Strategic Options
F Assessment of Stanley Street / Ballarat Street Option
G Strategic Options Analysis
H Options assessment

Attachments

A Inner Links Stages 1 and 2 – Draft Proposed Design

Attachment A

PLAN



LONGITUDINAL SECTION

AECOM

PROJECT

Queenstown Inner Links

CLIENT

QUEENSTOWN LAKES DISTRICT COUNCIL

CONSULTANT

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SAFETY IN DESIGN INFORMATION

ARE THERE ANY ADDITIONAL HAZARDS / RISKS NOT NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING?
☐ NO
☐ YES

REGISTRATION

FOR INFORMATION ONLY

PROJECT MANAGEMENT INITIALS

DESIGNER	CHECKED	APPROVED

ISSUE/REVISION

I/R	DATE	DESCRIPTION
A	07.05.14	For Information Only

KEY PLAN

PROJECT NUMBER

60300901

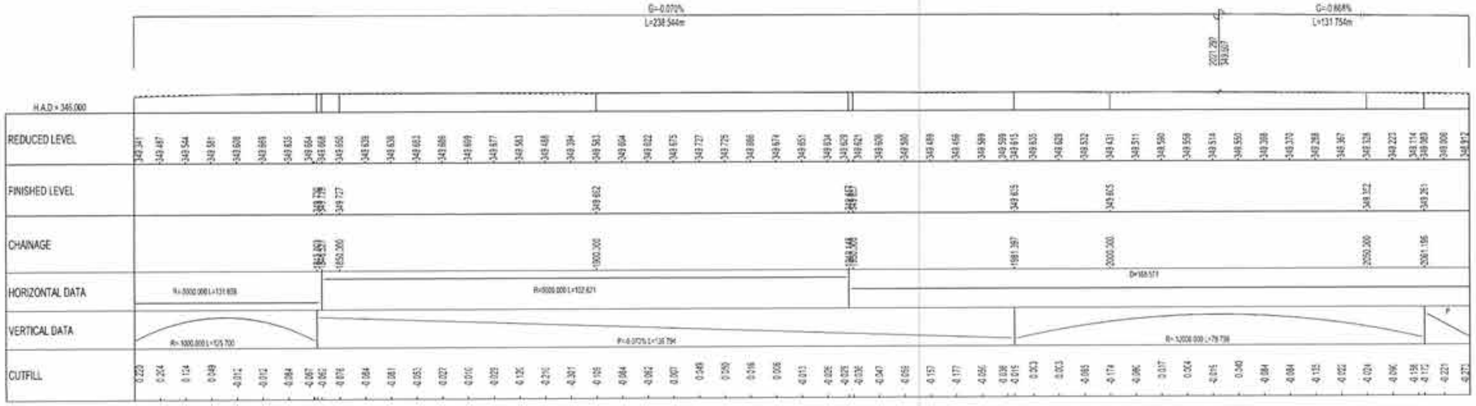
SHEET TITLE

Plan & Long Section

SHEET NUMBER

60300901-SHT-20-0000-SK-0107

PLAN



LONGITUDINAL SECTION

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AECOM

PROJECT
Queenstown
Inner Links

CLIENT
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PROJECT MANAGEMENT INITIALS

DESIGNER	CHECKED	APPROVED

ISSUE/REVISION

I/R	DATE	DESCRIPTION
A	07.05.14	For Information Only

KEY PLAN

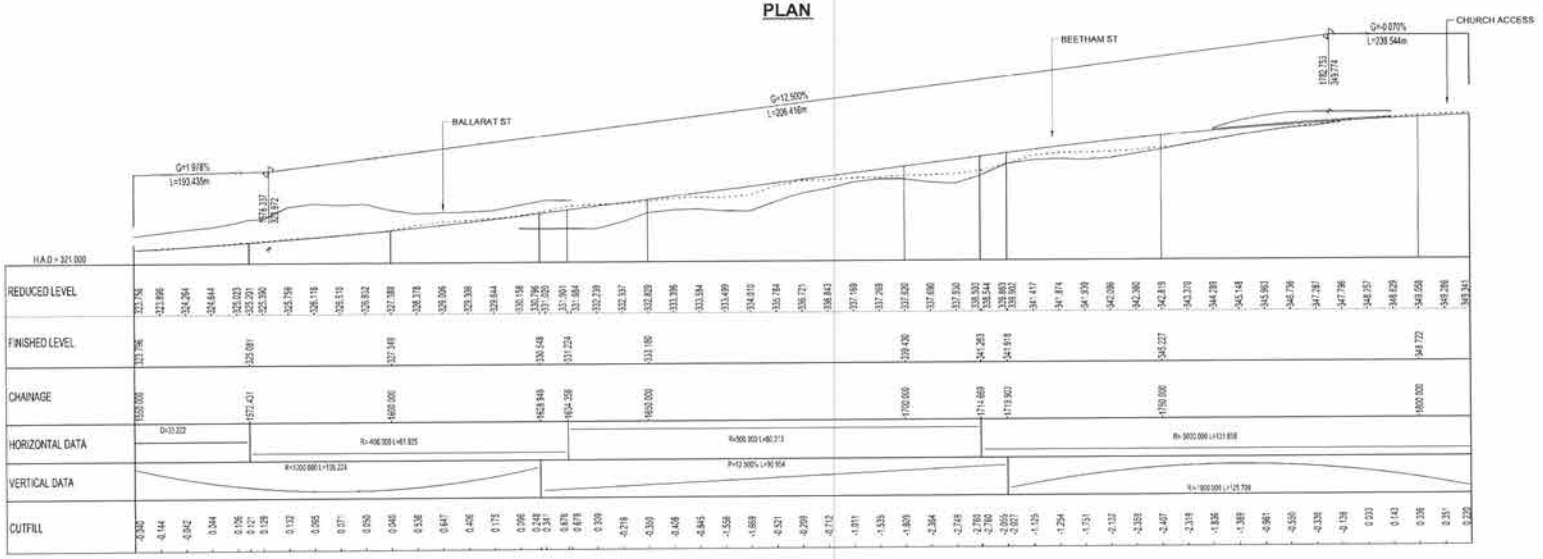
PROJECT NUMBER
60300901

SHEET TITLE
Plan & Long Section

SHEET NUMBER
60300901-SHT-20-0000-SK-0106

ISO A1 564mm x 841mm

PLAN



LONGITUDINAL SECTION

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AECOM

PROJECT
Queenstown
Inner Links

CLIENT
QUEENSTOWN LAKES DISTRICT COUNCIL

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ISSUE/REVISION

ER	DATE	DESCRIPTION
A	07.05.14	For Information Only

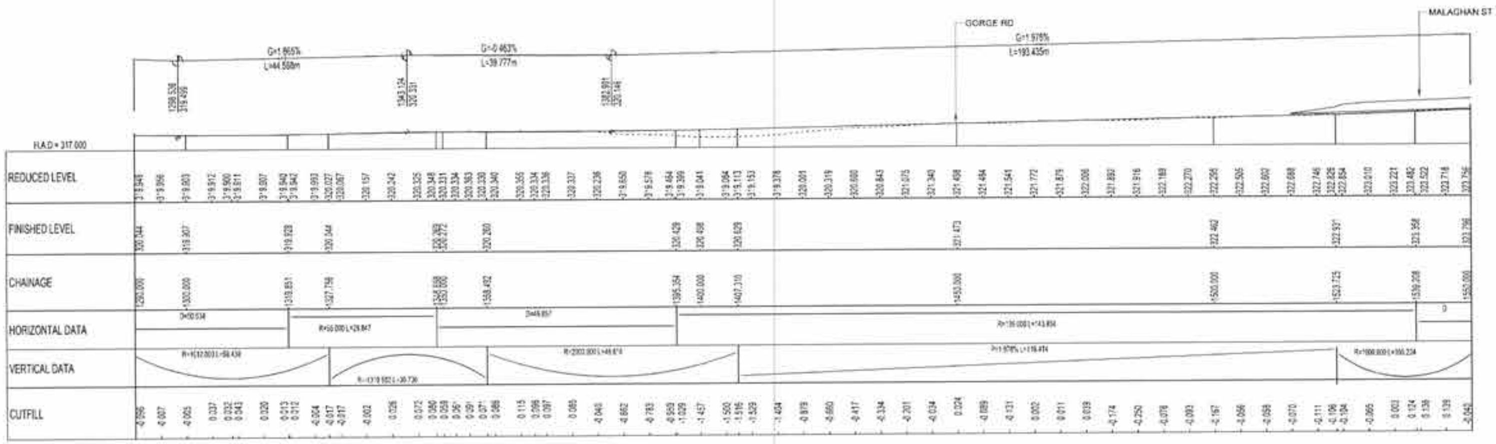
KEY PLAN

PROJECT NUMBER
60300901

SHEET TITLE
Plan & Long Section
Ballarat Street - St Joseph's Church
12.5% Gradient Option

SHEET NUMBER
60300901-SHT-20-0000-SK-0104

PLAN



LONGITUDINAL SECTION

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A	07.05.14	For Information Only

KEY PLAN

PROJECT NUMBER

60300901

SHEET TITLE

Plan & Long Section
Signalised Intersection

SHEET NUMBER

60300901-SHT-20-0000-SK-0101

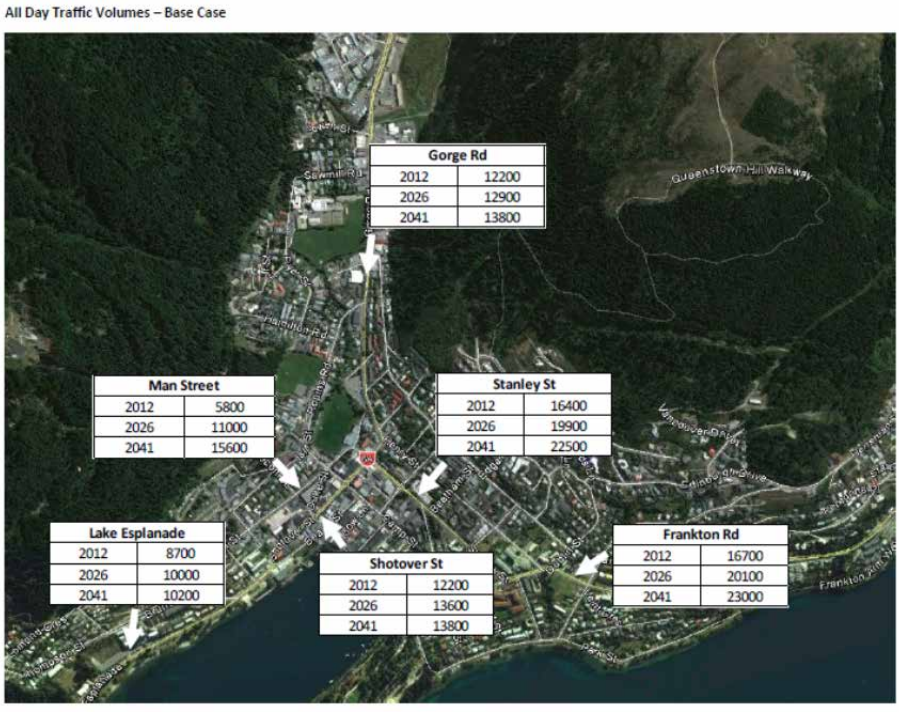
B Forecast traffic growth and the impact of travel demand management

As part of the Aecom commission, Council's strategic transport model was updated using growth projections from the Council's district wide growth forecasts. The model was used to provide future year projections of traffic volumes for 2026 and 2041.

Key assumptions of the model were

- The convention centre site would be 50% occupied by 2026 and fully occupied by 2041.
- Intensification within the town centre of 20%
- The Wakatipu High School Site, due to be vacated from 2017, would be developed in accordance with its underlying zoning (high density residential) by 2026
- The at-grade carparks at Ballarat Street and Boundary Street would be developed in line with their underlying zoning (high density residential)
- The town centre boundary would be expanded outwards towards Isle St and Man Street, but would otherwise be unchanged.

The following figure illustrates the changes in winter pm peak period traffic volumes between the base year (2012) and 2041. These assume no changes to transport and roading infrastructure.



Intuitively these projected changes in traffic volumes make sense. The significant 'movers' in terms of traffic growth are

- Stanley Street and Frankton Road – with 37% and 38% growth respectively, reflecting the importance of this route as part of the main link between the town centre and the growth areas of the Wakatipu Basin.

- Man Street – the 168% growth reflect the current low traffic volumes and the impact of the construction of the convention centre.

Conversely, Shotover Street and Lake Esplanade experience more moderate traffic growth, reflecting the incremental residential growth expected to the west of the Queenstown town centre

The model has used estimates of road capacity to translate these traffic volumes into indicators of congestion. A 'levels of service' concept is used describe traffic conditions ranging from completely free-flow to completely unstable with severe congestion.[8]

The diagram to the right reflects traffic conditions in the base year (2012). This indicates

- Levels of service (winter pm peak) on Lake Esplanade, Frankton Rd and Stanley Street (inbound and out bound) ranging between generally free flow and near capacity.
- The outbound section of Stanley St between Ballarat and Beetham Street at capacity

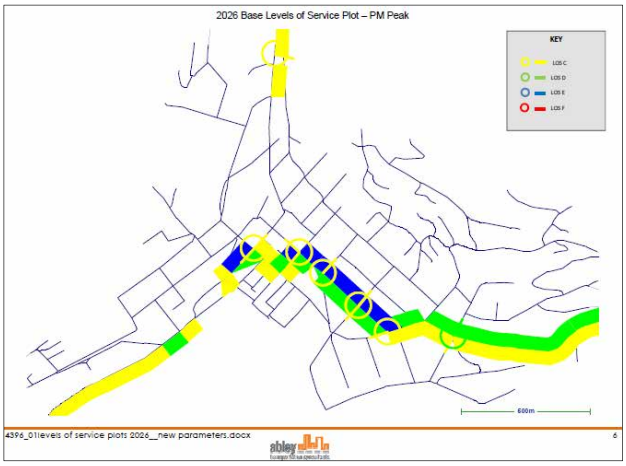
On the next page plots show predicted traffic conditions (winter, pm peak) with and without travel demand management. The road network is the same as today's. The diagrams on the left (next page) illustrate traffic conditions we predict for 2026 and 2041 (winter pm peak) if we do nothing. These show the deteriorating traffic conditions on Frankton Rd / Stanley Street, with more extensive sections of LoS D. The deterioration in traffic conditions on Man Street is largely linked to the growing traffic demands in that area (convention centre, expansion of town centre zone.

The plots on the right illustrate the impact of reducing traffic volumes by 20%, through effective travel demand management. These show, not unsurprisingly, that in the short-term effective travel demand management (based on 20% diversion of demand from vehicles to other modes) present the prospect of good traffic conditions being retained. However, in the longer term (2041) traffic conditions deteriorate significantly on Stanley Street presenting the case for more effective travel demand management and/or road building.

[8] The following table explains the 6 levels of service:

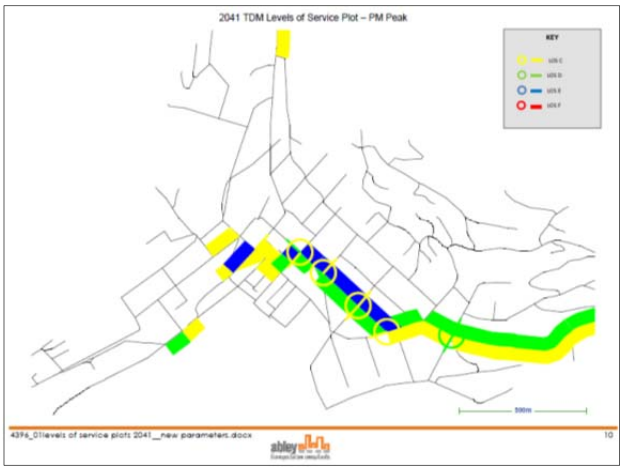
LoS	Colour	Traffic conditions
A	None	Free flow
B	None	Reasonably free-flow
C	Yellow	Reliable travel times and near free flow
D	Green	Approaching unstable flow. Trip times less predictable
E	Blue	The road is operating at capacity. Travel times very sensitive to incidents
F	Red	Complete breakdown in traffic flow

No road building,
No travel demand management



No road building,
With travel demand management (20% diversion of traffic demand into other modes)


2041 Base Levels of Service Plot – PM Peak
KEY
4396_01levels of service plots 2041__new parameters.docx
9


2041 TDM Levels of Service Plot – PM Peak
KEY
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10

C Inner Links Queenstown Consultation - Summary

Consultation was carried out in April and May this year. It focused on the design elements of the Inner Links project. Questions over scope and timing will be canvassed when funding for detailed design and construction is sought through the Council's Long Term Plan. This consultation covered the following matters:

- The design of the Melbourne/ Frankton Road intersection
- The steepness of the Melbourne - Henry Street Link and maintenance vs. closure of connections to the side roads
- The quality, function, and design of the link roads
- The design of the Henry Street/ Gorge Road intersection
- The Direct option vs. the Boundary Rd option for linking Henry and Man Streets
- The effects on on-street parking, trees, reserve, etc.

The consultation methods included:

- A public open day. Notification of this and of the availability of the open day material on the website occurred through public notices in newspapers, Facebook posts, letters to owners and occupants of properties on the route and on the side streets that might be affected by the project
- Letters/ emails to key stakeholders. For a number of these, the letters were followed up with meetings.
- A press release
- A web-based feedback option was provided. All the open day material, along with an online feedback form, was posted on the Council's website and a 3 week period was provided for feedback,

Approximately 30 people attended the open day and many made comments on the forms provided. 12 people made comments through the on-line process provided on the Council's website. In addition, meetings were held with a series of key stakeholders. Copies of written feedback and meeting notes have been made available to Councillors separately.[9] The remainder of this attachment summarises the feedback received.

Because of the small amount of feedback, the summary steers away from talking about the number of people that made a particular point. Instead, the points made are recorded.

The design of the Melbourne/ Frankton Road intersection

- Responses varied greatly, with no strong common theme; with some considering no change is necessary, some that it should be controlled/ prioritised for through traffic (as proposed), and others; that it should be a roundabout.

The steepness of the Melbourne - Henry Street Link / Closure of side road connections

- Concerns raised around how residents of upper sections of Ballarat St and Malaghan would exit their properties in winter if they are unable to drive downhill from their properties.
- Given that the small number of properties served by the lower section of Beetham Street, a turning bay on lower Beetham Street may be unnecessary.

[9] This information is 'publicly available' can be obtained by contacting the Council's Planning and Infrastructure Group.

- Some favoured making the Melbourne Henry link as least steep as possible due to winter conditions.
- The traffic flow benefit of closing all side roads was noted.
- Some considered the proposed link was a good option for diverting traffic from Stanley Street.
- With respect to access to the St Joseph's Church (and school) it was noted that the steeper option has the least impact on access and impact on the Church grounds.

The quality, function, and design of the Link Roads

- Many expressed a preference for footpaths on both sides of the road and served with regular, safe crossing points. Pedestrian routes for school children and tourists must be well thought out.
- Where the streets are closed and pedestrian access maintained, it was queried how disabled and cycle access (i.e. rolling access) would be provided.
- Iwi consider that the project as a whole should contribute to health and wellbeing and encourage cycling and walking. Iwi also highlighted that Maori cultural landscaping should be considered in the streetscape design and that iwi could be included in the design of any art installations along the route.

Effects on amenity and property access

- There were some concerns expressed about Melbourne-Henry becoming a main road. These related to traffic noise; safety; a loss of visual amenity and privacy as a result of high retaining walls and a loss of existing vegetation; the difficulty reversing in/ out of properties; and that all the hotels' service entries/ bus parks are on Melbourne St, which will cause further major disruption to traffic flow.
- Because of the potential impacts of the scheme on St Joseph's Church and School, several meetings were held with church / school representatives. Their concerns may serve to illustrate the impacts that may be felt by others along the route. These covered the following areas:
  - Traffic noise and particularly that from heavy vehicles travelling up the Melbourne Henry link on church services and classroom activities.
  - The impact of vibration on the historic church structure.
  - Impacts from construction on the operation of the school and church
  - Access to the St Joseph's site, including ambulance access.
  - Use of the forecourt in front of the Church steps, which comprises a combination of Church property and Council property (road).
- Solutions proposed by residents to help retain amenity is that any footpath and parking should be on the northern side of Melbourne St to give some buffering/ separation for the permanent residents on this side of the road and to provide turning lanes to enable residents access to their driveways.

The design of the Henry Street/ Gorge Road intersection

- Feedback in support of traffic signals cited the benefits to pedestrians and driver safety/ understanding, and the lesser land requirements as reasons for this preference.
- For most it was not necessary to provide fully for large vehicles turning left from Henry Street and two stated that such vehicles should continue to use Stanley

Street, given the presence of Plunket, the day-care facility, and residential uses on Henry Street

- Responses from two of the commercial landowners/ proprietors at the end of Henry Street: if the Melbourne Henry link is to proceed, then they preferred the option that retains the parking in front of their premises. There were residual concerns over access.
- CCS, owns Gilmore Lodge on the corner of Henry and Shotover Streets.
    - It prefers the intersection options that do not require use of their site.
    - It prefers the signalised option because it is easier/safer for pedestrians to negotiate

The Direct option vs. the Boundary Street option for linking Henry Street and Man Street

Direct Route

- Most respondents preferred the direct route, with reasons being that it is more logical, causes less traffic disruption, provides better opportunities to connect to the town centre, and avoids impacts on the Boundary Street carpark, the Recreation Ground and residential/educational facilities in Boundary Street
- Some felt that the direct route would retain the contrast between the bustling Town Centre and the tranquil Rec Ground.
- Whilst most respondents did not specifically express concerns that the direct route would separate the town centre and the recreation ground, it was suggested that a pedestrian underpass could be accommodated
- Queenstown Primary School highlighted the fact that a large number of students walk into town and therefore pedestrian access will need to be addressed if traffic on Memorial Street increases.
- Consideration be given to the access requirements of stage trucks using the Memorial Centre and the needs of ANZAC day services and the parade.
- The owners of land affected by the direct option expressed a need for certainty over what the Council's plans for the route are, and the clarification of Council's approach to land acquisition / compensation.

Boundary Street

- The Queenstown Primary School (QPS) is concerned that the Boundary Street option would adversely impact of Robins Rd
    - There is already congestion at peak times – more traffic would make this worse
    - If the Robins Rd pedestrian crossing was removed, students' access to the recreation ground and town centre would be worsened
    - Buses and cars need to turn from Robins Road into the drop-off area
    - Reduced carparking in the area would impact on those accessing the school. (QPS also noted be opportunities within the Boundary Street option to improve the existing parking and drop off issues.)
- It was stated that the Boundary Street option would result in better connectivity to the recreation ground and enable a bigger CBD.

Effects on on-street parking

- Respondents identified a need to provide parking in structures/ car parks (e.g. a transport hub at the existing Ballarat carpark) rather than through on-street parking.
- Concern over loss of parking highlighted the Henry Street area, Melbourne Street (near the St Joseph's Church and School. Losses in these areas would affect school access, and access to businesses and community facilities
- One respondent suggested that Council use its land presently used by Wakatipu High School and Queenstown Primary School for parking.
- If increased cars *are* encouraged into the Town Centre then the Council needs to be clear where all the additional cars will park.

Effects on Horne Creek and water quality generally

- In regard to structures across Horne Creek, the Otago Regional Council (ORC) is concerned principally with any effects on flooding. The preliminary view is that the direct route is marginally preferable to the Boundary Street option.
- Iwi interests highlighted that care needs to be taken at the resource consent stage in terms of designing and constructing the crossing over Horne Creek in order to protect the waterways/ water quality.
- Consideration should be given as to whether waterway and water quality generally can actually be improved by the project rather than simply being maintained.

Iwi issues

- The more detailed concerns of iwi (i.e. issues of maintaining water quality, managing earthworks, and an accidental discovery protocol at the time of construction) will be fully considered at the resource consent and designation stages.

Other Matters Raised

Although the focus of the consultation was on design matters, many took the opportunity to comment on wider issues

- Why is the Inner Link needed at all?
    - Some felt the Melbourne St-Henry St link is not the most practical or cost effective and, instead, suggest that more consideration needs to be given to improving the current route and making better use of Hallenstein Street.
    - Council should consider reducing (or banning) traffic entering the Town Centre (through a Park and Ride from Frankton, for instance); investing more in Public Transport; parking restrictions and signalising the intersections on Stanley Street.

- Alternative route
    - One submitter promoted a route that follows Stanley Street and then connects to Henry Street through the Ballarat Street site, as a means of avoiding impacts on Melbourne Street.

D Urban Design Panel Report

UDQ192

QUEENSTOWN URBAN DESIGN PANEL REPORT

Queenstown Lakes District Council – Inner Links project – Queenstown

10 April 2014

Panel members present:
Preston Stevens (Chair)
Peter Ritchie
Mary Jowett

QLDC staff present:
Matthew Paetz

In attendance:
Kevin Brewer – Brewer Davidson Architecture Urban Design
Vicki Jones – Vision Planning

Proposal

The Future Link Study for Queenstown suggested investigation of an alternative arterial route to relieve congestion on Stanley Street and Shotover Street in Queenstown's Town Centre. The Inner Queenstown Transportation Study, August 2008 considered options for this alternative route.

Two preferred options have been put forward for a current Scheme Assessment Study. Both options involve the creation of a new Stage 1 portion of the link running along Melbourne and Henry Streets from Frankton Road to Gorge Road. The options vary, as Stage 2, once the new arterial link reaches the Gorge Road / Henry Street intersection. Under **Option C1** the link would extend from the Gorge Road / Henry Street intersection across Home Creek and along Memorial Drive to the Man Street/Camp Street intersection. For **Option D1** the link would travel north along Gorge Road and then turn into Boundary Road to extend with a new bridge across Home Creek and then a new road on the west side of the Recreation Ground along to approximately the north end of Isle Street. Option D1 could connect either along Man Street or Isle Street to Thompson Street. The Stage 2, C1 and D1 options end at Camp Street, from where Stage 3 commences.

An Urban Design Context Report has been prepared by Brewer Davidson and this provided the basis for the Panel presentation. The report summarises urban design contextual issues that will be important in informing the detailed design and option comparison. The report considers opportunities and constraints for both options and does not attempt to decide on a preferred option.

Overview

Historical background on the project dates back to a 2007 scoping report prepared by Boffa Miskell and MWH, where 5 options for the inner link were identified. These 5 options have since been narrowed down to 2 options, C1 and D1. The inner links proposal has been previously reviewed by the QLDC Urban Design Panel on 12 August 2008 and this report was tabled at the meeting.

Work on the project is now being undertaken by AECOM together with Brewer Davidson and Vision Planning.

Key issues are how to resolve the traffic associated with Stanley and Shotover Streets and how the project relates to the town centre function, i.e. how the project might facilitate the function and growth of the town centre. The project has also been informed by the District Plan review and Town Centre Strategy.

Stage 1 of the project will afford a number of opportunities for Stanley Street. By reducing traffic volumes it will allow for better connections between the existing town centre and future development on the north side of Stanley Street. It will also allow the opportunity to prioritise bus, bicycle and pedestrian use of Stanley Street.

Key elements of the urban design considerations were proposed:

Urban structure: Integration, legibility
Amenity: "Gateway"
Accessibility: Pedestrian friendly

A key design philosophy for this link is for the road to be free-flowing but retain the character of an urban town centre road.

The Stage 1 alignment along Melbourne Street and Henry Street is largely set. However a number of influences require consideration along this alignment:

1. The type of intersection at Frankton Road and Melbourne Street and how traffic is prioritised.
2. Landscape design for the wide portion of Melbourne Street from Frankton Road along to St Josephs Church.
3. The gradient for the section of new road between the higher elevation at St Josephs Church/Beetham Street and the lower level at Ballarat Street. Consequently the resolve of the connections of Beetham and Ballarat Streets with this portion of the new link and the frontage of St Josephs Church.
4. Pedestrian cross linkages.
5. Activation of the street edge, particularly the south side of the Henry Street portion.
6. The type of intersection at Henry Street and Gorge Road and how this intersection connects to the Stage 2, C1/D1 extension.

A number of gradients have been considered for the new portion of road between Beetham and Ballarat Streets. A 10% gradient is preferred from an engineering perspective but this will result in severed connections with Beetham and Ballarat Streets, creating cul-de-sacs. A 12.5% gradient mitigates this problem and provides for some connection. A 15% gradient was also considered but connectivity was not improved and the compromise to safety was considered not acceptable. The width of the road carriageway is also a factor for this portion of new road, where the narrower the carriageway, the more flexibility there is to better manage the adjacent cut and fill earthworks. It was noted that in this context the existing basalt retaining wall adjacent to St Josephs Church would be kept, but that the access to St Josephs would need to be shifted further to the east.

The Panel were informed that the Stage 3 portion of the Inner link, south of Camp Street was impacted by the creation of the new road northwards and uphill from the existing 'one mile' roundabout. That this new portion of road was a long way off due to heritage issues and the potential cost of construction etc'. The Panel was also informed that the QLDC have advised that Isle Street south of Camp Street can no longer be considered as and option for part of the new Inner Link. We understand that this is due to the potential of a new convention centre being located at the nearby Lakeview site.

Thus the Stage 2 C1 and D1 options need to extend along Camp Street in order to connect with Shotover Street.

It was presented that severance was one of the main issues for consideration of the Stage 2 C1 and D1 options: C1, severance of the Recreation Ground and Memorial Hall; D1, severance of the Queenstown Primary School with the Recreation Ground. It was proposed that urban design effects are more adverse under D1.

The junction of Stage 1 with Stage 2 at the Gorge Road / Shotover Street intersection has been identified as a potential 'gateway'. Two possible solutions (however noted as not the only solutions) were illustrated for a gateway; a 'Built Gateway' or a "Landscape Gateway'. It was emphasised that the illustrations presented were just conceptual and should be viewed in that light. They were not precise in terms road alignment etc. It was noted that the Boffa Miskell Scoping Report preferred a 'Landscape Gateway', where as the Brewer Davidson preference is for a 'Built Gateway'.

Other matters presented were that pedestrian routes and access is considered critical and whether key intersections should be signalised or roundabouts. It was also presented that Beetham Street was seen as a key pedestrian opportunity and the idea of a linear park down the hill was suggested.

Panel comments

The panel proposes that the Inner Links project is fundamental to the evolving success of the Queenstown town centre and that consideration of the project is bigger than the other potential projects that relate to the centre of Queenstown. The panel suggests that very careful analysis needs to be undertaken as to the influences that other projects could bring to the success of the Inner Links outcome. In this context the dismissal of Isle Street for possible inclusion in the Link is of concern.

Also of concern is the potential long term continuation of Shotover Street in the link, due to the complexities of resolving the new road formation leading north from the 'one mile' roundabout. The Panel fundamentally questions whether Stage 2 of the project needs to be progressed when Stage 3 (connection to one mile) is uncertain as to its timing and/or whether it will even eventuate. The benefits of Stage 2 appear minimal without Stage 3.

A key question with regard to Stage 2 and indeed the whole project is the green space of the Recreation Ground. Both options skirt around the Ground and assume the Ground retains its existing form and function. There is various land use and design options for the Recreation Ground that should be considered before the Stage 2 options are resolved. A comprehensive review of the Recreation Ground should be undertaken alongside the study of the Inner Links project.

The Panel strongly supports Stage 1 of the Inner Links project, where it extends from Frankton Road to Gorge Road. The panel recognises and agrees with the benefits that will be bought to the environs of Stanley Street. In consideration of the above comments with regard Stages 2 and 3, the Panel proposes that Stage 1 should connect directly to the top of Shotover Street along the current road alignment from the intersection of Henry Street and Gorge Road. This solution allows Stage 1 to proceed without being impeded by the complexities associated with Stages 2 and 3 of the Link. Stages 2 and 3 can then be properly resolved.

With regard to the design of Stage 1, the key question relates to the detail of how the route is formed alongside the efficiency of traffic flow. The Panel welcomes the design team's questioning of various options with regard to route formation and gradient, and encourages an ongoing balancing exercise between safety considerations and positive urban design outcomes.

Differing design solutions need to be analysed for resolve of the influences on the Stage 1 route.

The panel recognizes the dilemma in the resolve of the design of key roading intersections and the resulting land use requirements for differing solutions that include prioritised carriageways or roundabouts or signalling.

The Panel encourages solutions that reduce the extent of solid pavement formation and provides for alternative and more positive landscape outcomes. Design solutions that recognise key features in the landscape and built form context should be promoted over other solutions. View axes and tree rows should be included in this context.

Pedestrian cross linkages need to be included with creative solutions that minimise compromise. The road design should activate the edges to engage with the immediate urban context.

Specific studies need to be undertaken for the new portion of road between Beetham and Ballarat Streets so that severance is minimised. Compromise of the road carriageway for this portion of the link should be considered over compromise to the landscape solutions that resolve the topographical issues.

The Panel supports the 'gateway' notion at the Henry Street, Gorge Road and Memorial Drive location. Of the two solutions illustrated the Panel prefers the 'built gateway' over the 'landscape gateway'. The Panel questions the approach taken in the illustration of the two gateway options that includes the sweeping road alignment. Such solutions require a significant take of land that should be avoided. Fundamental to a 'gateway' solution is the optimisation of key features in both the immediate and wider landscape and built context.

Desired Outcomes

The Panel encourages the applicant to consider these comments and explore options to advance the design.

The panel would welcome the opportunity to further review the design as it evolves, overall and in detail.

Checked and approved by:

Preston Stevens
Chair: Queenstown Urban Design Panel

* The findings of the Panel sit outside both the statutory processes of the Resource Management Act and other regulatory functions of Council. The report will however be taken into account during those statutory and regulatory processes in regard to matters relating to urban design

E Town Centre Strategic Options

Queenstown Town Centre Arterials
Improving Arterial Capacity

Investor:	Investor: QLDC, NZTA, ORC
Facilitator:	Facilitator: Edward Guy
Initial Workshop:	Initial Workshop: 12/05/2014
Version No.:	Version No.: 1.1
Last Modified by:	Last Modified by: Edward Guy 08/06/2014

Strategic options

Strategic Interventions	Option 1 Education + Technology	Option 2 Land Use	Option 3 Parking Focus	Option 4 Roading Capacity (1, 2A or 2B, 3)	Option 5 Target PT (20% Diversion)	Option 6 PT Plus (30% Diversion)	Option 7 High Infrastructure (20% Diversion)
Enhanced Public Transport (Examples: Discounted/free fares, CBD terminal development, increased frequencies, SH6A bus priority, CBD shuttles, more bus stops, themed)					**40%**	**45%**	**20%**
Park and Ride			**20%**		**10%**	**10%**	**10%**
Parking Supply and Pricing			**50%**		**30%**	**20%**	**20%**
Road User Information (Examples: VMS, Signage, Apps, Other Technologies)	**70%**		**30%**		**20%**	**15%**	**10%**
District Plan / Land Use (**Examples:** Frankton vs T/C, increased density for worker accommodation)		**50%**					
Encourage Greater Walking and Cycling	**20%**						
Ferry - Frankton Arm						**5%**	
Encourage Relocation of High Demand Businesses (e.g. rating policies)		**50%**					
Arterial Road Development - (Stages 1, 2A or 2B, 3)				**80%**			**30%**
Stanley / Shotover Development				**20%**			**10%**
Cordon Restraint / Congestion Charges						**5%**	
Travel Demand Education	**10%**						
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

NOTES

1 The range of strategic interventions that could respond to the identified problem and deliver the KPIs for the expected benefits are listed in the left-hand column.
2 Against the listed strategic interventions a spread of strategic options are structured to provide genuine alternative strategic responses to the problem.
3 Strategic options should be titled to reflect the underlying strategy.
4 The shaded boxes indicate which interventions are used in each option and the percentage (%) indicates the relative importance of each specific intervention within the option.
5 This is a balance of two factors: the importance of the intervention in delivering the KPIs and the likely effort/cost involved.

Strategic options

Benefits (1-5)			Option 1 Education + Technology	Option 2 Land Use	Option 3 Parking Focus	Option 4 Roading Capacity (1, 2A or 2B, 3)	Option 5 Target PT (20% Diversion)	Option 6 PT Plus (30% Diversion)	Option 7 High Infrastructure (20% Diversion)
Percentage of full benefit to be delivered			**37%**	**36%**	**53%**	**69%**	**56%**	**63%**	**80%**
Benefit 1	Access to and through the town centre is improved to support growing demand	35%	1	2	2	3	3	4	4
Benefit 2	Improved Liveability and Visitor Experience on Stanley/Shotover Streets	45%	2	2	3	4	3	3	4
Benefit 3	Removing unnecessary travel in the town centre	20%	3	1	3	3	2	2	4
Cost									
Investment cost (Range) -			$1 mil - $2 mil	$2 mil - $5 mil	$2 mil - $5 mil	$40 mil	$15 mil	$20 mil	$70 mil
Operational costs if significant (Range)			Included Above	Included Above	Included Above	Included Above	$5 mil p.a.	$9 mil p.a.	$5 mil p.a.
NPV			**$1 mil - $2 mil**	**$2 mil - $5 mil**	**$2 mil - $5 mil**	**$15 mil**	**$55 mil**	**$95 mill**	**$70 mil**
Time									
(Range)			1-2 Years	5-10 Years	3-5 Years	2018-2041	2014-2041	2014-2041	2014-2041
Risks (Criticality/Likelihood (H/M/L)									
Access			Will not materially change the Do Nothing LOS (H/H)	Will not materially change the Do Nothing LOS (H/H)	Without PT Access is Reduced (M/M)				
Liveability and Visitor Experience			Will not materially change the Do Nothing LOS (H/H)	Will not materially change the Do Nothing LOS (H/H)	Liveability and Visitor Experience Reduced				
Unnecessary Travel in the Town Centre					Parking charges do not change demand and generate more parking search traffic (M,M)				
Safety									
Travel Time Reliability						Shifts congestion onto new corridor (M/M)			
Resilience						**Improved**			**Improved**
Amenity			Will not materially change the Do Nothing LOS (H/H)	Will not materially change the Do Nothing LOS (H/H)		Severance (M/M)			Severance (M/M)
Other				Problematic process for amending the District Plan to address transport issues (M/M)		Unacceptable High Cost (M/H), Constructability (L,L), NZTA do not Co-Invest. (H,H)	Unacceptable High Cost (M/H), Low Uptake of PT (H/M), Community Dissatisfied With Parking (M/H)	Unacceptable High Cost (M/H), Low Uptake of PT (H/M)	Unacceptable High Cost (M/H), Low Uptake of PT (H/M), Community Dissatisfied With Parking (M/H), Constructability (L,L)
Dis-benefits									
Dis-benefit 1									
Dis-benefit 2									
Ranking									
1-3									
						2	**3**		**1**

Overall Assessment:

This is a preliminary assessment and requires more input from the Town Centre Transport Strategy. The assessment has identified preferred option is a combination of TDM measures and new road capacity.

Recommendation:

That the route for stages 1 and 2A is protected for the future. Develop a TDM Business Case. Continue to consider the value of stage 3.

F Assessment of Stanley Street / Ballarat Street Option

The public consultation highlighted an alignment option that has not previously been evaluated. This option, which would make use of Stanley Street, the Ballarat Street carpark and Henry Street, is depicted in figure two in the main report. As explained below, this option is not supported on the basis of our traffic management, geometric design and urban design assessments

A key benefit of the proposal is that Melbourne Street (including the intersection with Frankton Road and properties such as St Joseph's Church) would not be affected by the Inner Links project.

The proposed route has been modelled. The plot to the right shows the levels of services (2041) and its relatively poor performance with extensive road lengths operating at LoS D and E.

From a geometric perspective the proposal raises a series of considerations:

- The connection between Stanley Street and Coronation Drive would need to be changed as the local topography makes it too difficult to connect. We would need to sever the link between Coronation Drive and the new link, meaning Coronation becomes a free flow connection with Stanley west, and Stanley east becomes a free flow link to the new Stanley-Henry link. Presumably we could get a walking and cycling connection between the two, but not a bus link – buses would need to travel along the Frankton Rd – Coronation Drive -Stanley Street route to access the CBD.
- There is still a requirement for significant earthworks and retaining walls. The fill over the carpark is almost 5m, so depending on how the balance of the carpark would be used in future there is a likelihood that large walls would also be required to maximise the available space for development. The wall requirements on the low side of Henry Street are more onerous than in our other options.
- We have the same issues connecting to Malaghan Street and upper Ballarat Street as with our other options.
- The curves at the top and bottom of the hills are less than desirable for the crest near Ballarat Street, and less than the minimum for the sag near Beetham Street. There would be safety concerns in these cases.
- The link through the carpark is not flat but rises up quite steeply to Henry Street, similar to but not quite as steep as preferred link between Melbourne and Henry Streets.

From the urban design perspective the proposal is not favoured:

- A small retail building is typically 20 metres deep with storage/carparking located in a rear yard. Two buildings, one facing the diagonal link and the other facing Ballarat Street or Stanley Street will require a block depth of 50

metres minimum. Therefore there is insufficient space on the southern side of the link to have building frontages on all roads. Visitors to town will be confronted by a rear building face or storage areas on either the link road or Stanley Street.

- The two triangular parcels to the north of the link are too small for meaningful development and will be left as open space with no real purpose.
- Two of the urban design objectives are for legibility and conforming to the existing gridded street pattern. The diagonal link does not conform to the gridded pattern and because of this will become difficult in terms of legibility or driver usage. Visitors to town will approach along Stanley Street and then be directed away up to Henry Street which will be confusing.
- This will be exacerbated by the separate Coronation Drive /Stanley Street link that will be visible to the south.
- Drivers will be encouraged to use Coronation Drive to access town which will be a change in function for Coronation Drive and not something that has been consulted with those residents.
- The two links will be a road dominated approach with both streets and the associated retaining walls and probably safety barriers. This is not in keeping with the desired town centre character. Lack of development around the diagonal link will only further affect a traffic dominated area.

G Strategic Options Analysis

Inner Links Queenstown
Sieve 2 Assessment

Investor: QLDC, NZTA, ORC
Facilitator: Edward Guy
Initial Workshop: 12.05.2014
Version No.: 1
Last Modified by: Shaun Lion-Cachet
11.05.2014

Project options

Project Interventions	Option 1 Do Nothing	Option 2 Do Min (Stanley/Shotover)	Option 3 Do Min + TDM	Option 4 Stage 1	Option 5 Do Min + TDM + Stage 1	Option 6 Stage 1 + Stage 2	Option 7 Do Min + TDM + Stage 1 + Stage 2	Option 8 Do Min + TDM + Stage 1 + Stage 2 + Stage 3
Do nothing	100%							
Do Min (upgrade Stanley & Shotover intersections)		100%	25%		2%		1%	1%
TDM			75%		20%		10%	4%
Stage 1 only				100%	78%	80%	74%	20%
Stage 2 only						20%	15%	10%
Stage 3 only								65%
Total	100%	100%	100%	100%	100%	100%	100%	100%

NOTES

1 The range of strategic interventions that could respond to the identified problem and deliver the KPIs for the expected benefits are listed in the left-hand column.
2 Against the listed strategic interventions a spread of strategic options are structured to provide genuine alternative strategic responses to the problem.
3 Strategic options should be titled to reflect the underlying strategy.
4 The shaded boxes indicate which interventions are used in each option and the percentage (%) indicates the relative importance of each specific intervention within the option.
5 This is a balance of two factors: the importance of the intervention in delivering the KPIs and the likely effort/cost involved.

Strategic options

Benefits (based on Queenstown Town Centre Arterials, Investment KPIs)			Option 1 Do Nothing	Option 2 Do Min (Stanley/Shotover)	Option 3 Do Min + TDM	Option 4 Stage 1	Option 5 Do Min + TDM + Stage 1	Option 6 Stage 1 + Stage 2	Option 7 Do Min + TDM + Stage 1 + Stage 2	Option 8 Do Min + TDM + Stage 1 + Stage 2 + Stage 3
Percentage of full benefit to be delivered			6%	19%	40%	39%	55%	40%	68%	72%
Benefit 1	Retaining a defined LOS	20%	1	2	3	3	3	3	4	4
Benefit 2	Stable journey time reliability for cars and PT	10%	1	2	3	3	3	3	4	4
Benefit 3	Increasing walking, cycling and PT usage	5%	0	1	3	2	3	2	3	3.5
Benefit 4	Increased resident satisfaction with the town centre	15%	0	1	2	2	3	2	4	4
Benefit 5	Increased visitor satisfaction with the town centre	15%	0	1	2	2	3	2	4	4
Benefit 6	Increased business vitality	15%	0	0	1	1	3	1	3	4
Benefit 7	Carpark user satisfaction	5%	0	0	1	1	1	2	2	2
Benefit 8	Tourist ability to find key destinations	15%	0	0	1	1	2	1	2	2

Cost

Investment cost (Range) - design and construct	0	$3 mil - $6 mil	$55 mil	$10 mil	$65 mil	$11 mil	$66 mil	$85 mil
Investment cost (Range) - property	0	0	0	0	0	$10 mil	$10 mil	$10 mil
	0	0	$55 mil	$10 mil	$60 mil	$22 mil	$76 mil	$95 mil
Benefits (2041 modelled)			$44 mil - $68 mil	$1 mil - $2 mil	$45 mil - $70 mil	$1 mil - $5 mil	$45 mil - $73 mil	$46 mil - $74 mil

Time

(Range)	0	1 - 5 yrs	1 - 10 yrs	2018	2031	2031	2041	2041 plus

Risks
(criticality/likelihood measures H, M, L)

Congestion	No improvement (H/H)	Small improvement only (H/H)	Improvements are limited over time (H/H)	Congestion on Shotover (M/H)	Similar to Stage 1	Similar to Stage 1	Similar to Stage 1	Improved outcome
Amenity	Congestion and modal conflict (H/H)	Similar to Do Nothing	Similar to Do Nothing	Improved although Shotover has issues (M/H)	Similar to Stage 1	Similar to Stage 1	Similar to Stage 1	Improved outcome
Town centre access	Constrained through congestion and layout (M/H)	Similar to Do Nothing	Similar to Do Nothing	failure to deliver improvement (H/L)	Similar to Stage 1	Similar to Stage 1	Similar to Stage 1	Similar to Stage 1
Funding and affordability		Low cost (L/L)	Moderate cost (M/M)	Moderate cost (M/M)	Moderate to high cost (H/M)	Moderate to high cost (H/M)	High cost (H/H)	Very high cost (H/H)
Land use changes	Poor land use / transport integration (H/H)	Similar to Do Nothing	Transport hub needs to be planned with land use (H/M)	Potentially a catalyst for land use change (M/M)	Land use and infrastructure need to be integrated (M/M)	Similar to Stage 1	Similar to Do Min + TDM + Stage 1	Improved outcome
Design and construction constraints		Constrained sites (M/H)	Similar to Do Min	Challenging conditions (H/H)	Similar to Stage 1	Similar to Stage 1	Similar to Stage 1	Similar to Stage 1

Dis-benefits

Project costs		low cost for minimal improvement	moderate	moderate to high	high	high	high	highest
Safety	remains poor							safest
Travel time reliability	remains poor	some improvement over do nothing with controlled intersections	worse than current, but not as good as with infrastructure build	improving				most reliable
Resilience	no resilience	no resilience	modal resilience but not route resilience	new infrastructure provides improving resilience, until best outcome with all 3 stages				
Optimal speeds	remains poor		remains poor, with some improvement	new infrastructure provides more stable/optimal journey speeds until best outcome with all 3 stages				
Accessibility	remains poor			improved accessibility to town centre and important destinations				
Amenity	remains poor			new infrastructure provides opportunity for improved amenity to be achieved along Stanley St and ultimately in Town Centre				

Ranking

1-3			4		3		1	2

Overall Assessment:

This is a preliminary assessment and requires more input particularly from the TDM assessment. The assessment has identified preferred option is a combination of TDM measures and new road capacity.

Recommendation:

That the route for stages 1 and 2A is protected for the future. Develop a TDM Business Case. Continue to consider the value of stage 3.

H Options assessment

Stage 2 options -- Direct vs Boundary

		Rank		**1**		**2**	
		Score		**1.7**		**0.3**	
Benefit	**Investment KPI**	**Weight**	**Criteria**	Option 1	Direct Route	Option 2	Boundary St Route
		%					
Access to and through town centre improved to support growing demand	Retain defined LOS	20%	Traffic flows LOS Safety Lane numbers	Best	2041 flows 10,900vpd -> more attractive LOS better than C, Stanley B, Shotover B / C / D -> better safety -> equivalent 1 lane each direction, no kerbside parking, decreased number of Memorial Hall parking spaces -> poor	Good	2041 flows 5,500vpd -> less attractive LOS better than C, Stanley B / C, Shotover C / D / E (but worse) safety -> equivalent 1 lane each direction, decreased number of Robins on-road parking spaces -> poor
	Stable journey time reliability for cars and PT	10%	Travel time and Reliability Resilience Optimal speeds Median treatment	Best	Travel time shorter -> better Resillience -> equivalent Optimal speeds unlikely over short length -> equivalent No median -> equivalent	Good	Travel time longer Resillience -> equivalent Optimal speeds achievable over midblock lengths but more intersections -> equivalent No median on Gorge (no change), no median on Boundary, median on Robins (no change) -> equivalent
	Increasing walking cycling and PT usage	5%	Ease of accessing PT Cycles Footpath widths and location Pedestrian crossing	Best	PT opportunities on Stanley St -> equivalent PT on Direct link closer to town centre -> better Cycle opportunities on Stanley -> equivalent Cycling on Direct link closer to town centre -> better Footpaths on Direct link required Ped crossing facilities required to prevent severance	Good	PT opportunities on Stanley St -> equivalent PT on Boundary link further from town centre Cycle opportunities on Stanley -> equivalent Cycling on Boundary link further from town centre Footpaths on Boundary link required Ped crossing facilities required to prevent severance
		%					
Improved liveability and visitor experience on Stanley and Shotover Streets	Increased resident satisfaction with Town Centre	15%	Access to town centre Access to residential properties Visual Amenity Retaining walls Public feedback	Best	Vehicle access to town centre at either end of Direct link -> equivalent No residential properties on Direct link, vehicle access to Templeton Way / driveway, improved opportunity on Stanley, Shotover less congested than do min -> equivalent Gateway opportunities for amenity -> equivalent Improved traffic conditions on Stanley provide amenity improvement opportunity -> equivalent Widening of Horne Creek bridge, minor change to hydraulic capacity, opportunities to upgrade visual impact -> better Preferred by public -> better	Good	Vehicle access to town centre at eastern end of Boundary link is good but worse at western end Residential properties on Gorge no change, vehicle access on Boundary via new service lane, properties on Robins no change, improved opportunity on Stanley, Shotover less congested than do min -> equivalent. Gateway opportunities for amenity -> equivalent Improved traffic conditions on Stanley provide amenity improvement opportunity -> equivalent New Horne Creek bridge on Boundary. Not preferred by public.
	Increased visitor satisfaction with Town Centre	15%	Access to town centre Access to key destinations and properties	Best	More legible access to town centre at either end of Direct link -> better Key destinations signposted (assumption) -> equivalent	Poor	Less legible access to town centre due to orientation of Boundary link ->poor Key destinations signposted (assumption) -> equivalent
	Increased business vitality	15%	Access to key destinations and town centre Business feedback Town centre growth	Best	Key destinations signposted (assumption) -> equivalent to do min Business feedback -> preferred Provides a logical town centre boundary -> better	Poor	Key destinations signposted (assumption) -> equivalent to do min Business feedback -> not preferred Provides a less defined town centre boundary -> poor
		%					
Unnecessary travel in the Town Centre	Carpark user satisfaction	5%	Access to key carparks On road parking	Poor	Directs traffic to Man carpark -> good No kerbside parking on Direct link, decrease number of Memorial Hall parking spaces -> poor	Poor	Directs traffic to Boundary carpark, loss in number of spaces in Boundary carpark -> poor Decreased number of Robins on-road parking spaces -> poor
	Tourist ability to find key destinations	15%	Access to key destinations Traffic flows - Shotover St	Good	Vehicle access to town centre at either end of Direct link -> better Key destinations signposted (assumption) -> equivalent Shotover St less traffic than do min, but higher than Boundary option - 18,600vpd 2014	Good	Vehicle access to town centre at eastern end of Boundary link is good but worse at western end. Key destinations signposted (assumption) -> equivalent Shotover St less traffic than do min, but lower than Direct option - 17,900vpd 2014
Cost				$1.0 mill to $1.5 mil design and construction		$2.2 mill to $3.2 mil design and construction	
Risks				Property purchase being successful Costs of private land being unafordable Critical link between Stage 1 and Stage 3		Safety outside QPS Critical link between Stage 1 and Stage 3	
Dis-benefits				Higher cost Potential town centre / Memorial severance Designation process timing Shotover traffic flows still high		Longer travel route and journey time Potential QPS / Rec Ground / town centre severance Shotover traffic flows still high New Horne Creek crossing	