

Assets & Infrastructure Committee

3 September 2026

Report for Agenda Item | Rīpoata moto e Rāraki take [2]

Department: Property & Infrastructure

Title | Taitara: Ramshaw Lane Bus Stop

Purpose of the Report | Te Take mō te Pūroko

The purpose of this report is to recommend the location of the Ramshaw Lane bus stop in Arrowtown.

Recommendation | Kā Tūtohuka

That the Assets & Infrastructure Committee:

1. **Note** the contents of this report; and
2. **Approve** changes to the existing restrictions to enable bus stop construction as set out in Attachments C and D. These will come into force once constructed, sign posted and line marked.

Prepared by:



Name: Hugo de Cosse Brissac
Title: Civil Engineer (Roading)

5 August 2026

Reviewed and Authorised by:



Name: Tony Avery
Title: General Manager, Property & Infrastructure
7 August 2026

Context | Horopaki

1. The original Ramshaw Lane bus stop was deemed unsafe following concerns raised by Otago Regional Council (ORC) bus operator in July 2025. A Queenstown Lakes District Council (QLDC) assessment confirmed issues relating to passenger safety, pedestrian access, and conflicts with coach movements, resulting in the implementation of a temporary stop to maintain bus access to the Arrowtown CBD.
2. Council investigated several permanent locations, including rerouting services via the Arrowtown Library bus stop and formalising the temporary stop. However, rerouting was considered financially unviable by ORC, while the Arrowtown Promotion & Business Association (APBA) opposed options that resulted in the loss of parking or established vegetation. Alternative locations suggested by APBA were also assessed but were considered less accessible and provided a lower level of service.
3. An independent safety review was subsequently commissioned to reassess the original site and identify other viable options. Following the review and supporting arborist assessment, QLDC met with the APBA Board in May 2026 to discuss a preferred location requiring minor tree pruning, footpath construction, and bus stop markings. The APBA Board informally accepted the recommended location, recognising its safety benefits and the limitations of alternative options.

Analysis and Advice | Tatāritaka me kā Tohutohu

4. This report identifies and assesses the following reasonably practicable options for assessing the matter as required by section 77 of the Local Government Act 2002 (LGA).
5. Option 1 Ramshaw Lane opposite Coachmans Hall (between the two raised platforms)

Advantages:

- Aligns with the recommendations of the independent road safety review.
- Addresses operational and safety concerns raised by the bus operator.
- Improves passenger access, waiting, boarding, and disembarking conditions.
- Provides a formalised and identifiable bus stop location.
- Supports safer interactions between buses, pedestrians, and other road users.

Disadvantages:

- Results in the loss of approximately nine on-street parking spaces.
- May reduce parking availability for nearby businesses, residents, and visitors.

- Requires implementation costs for road markings, signage, and associated infrastructure.

6. Option 2 Decline the proposed changes and keep status quo of informal bus stop

Advantages:

- Retains all existing on-street parking spaces.
- Avoids capital expenditure associated with constructing a formal bus stop.
- No changes required to the existing road layout and parking arrangements.

Disadvantages:

- Does not implement the recommendations of the independent road safety assessment.
- Fails to address safety and operational concerns raised by the bus operator, public, and Council officers.
- Continues to provide limited space for safe passenger waiting, boarding, and disembarking.
- Does not improve pedestrian connectivity, including footpath links and crossing opportunities.
- Retains existing conflicts between pedestrians, buses, general traffic, and coach parking manoeuvres near the intersection.
- Maintains the current level of uncertainty around bus stopping location and passenger movements.

7. This report recommends **Option 1** for addressing the matter because it addresses issues raised by the bus operator, safety consultant and Council officers to improve safety and operations.

Consultation Process | Hātepe Matapaki

Significance and Engagement | Te Whakamahi I kā Whakaaro Hiraka

8. This matter is of low significance, as determined by reference to the Council's Significance and Engagement Policy 2024 because amended and additional parking restrictions are based on community feedback, Council officer recommendations and outputs from transport strategy requirements. The Traffic & Parking Bylaw 2025 (the bylaw) was adopted following consultation completed in accordance with section 156(1)(b) of the LGA. The bylaw details specific decision-making delegation to officers, the Assets & Infrastructure Committee and the Wānaka-Upper

Clutha Community Board. Decisions made under these delegations do not require further consultation.

9. The persons who are affected by or interested in this matter are residents/ratepayers, visitors, business associations, emergency services, schools, large tourism transport operators, passenger service vehicles, heavy motor vehicle users, and Waka Kotahi New Zealand Transport Agency.
10. The Council completed a full bylaw review in 2025. Significant formal and informal engagement was completed with the community and key stakeholders.

Māori Consultation | Iwi Rūnaka

11. The Council has not sought the specific views of iwi for these operational changes.

Risk and Mitigations | Kā Raru Tūpono me kā Whakamaurutaka

12. This matter relates to the Regulatory/Legal/Compliance risk category. It is associated with RISK10021 Ineffective operations, maintenance or renewal of property of infrastructure assets leading to failure(s) within the QLDC Risk Register. This risk has been assessed as having a very high residual risk rating.
13. The approval of the recommended option will allow Council to implement additional controls for this risk. This will be achieved by ensuring operational processes are consistent with legal and regulatory requirements to support education and enforcement activities.

Financial Implications | Kā Riteka ā-Pūtea

14. The cost associated with installing the required signage and road markings will be met from current budgets.

Council Effects and Views | Kā Whakaaweawe me kā Tirohaka a te Kaunihera

15. The following Council policies, strategies and bylaws were considered:
 - Reference alignment with and consideration of the principles of the Strategic Framework including the Vision Beyond 2050: Our Strategic Framework | Queenstown Lakes District Council;
 - Long Term Plan 2024-2034 strategic framework contributing to efficient and effective infrastructure and a responsive organisation;
 - Traffic and Parking Bylaw 2025;
 - QLDC Disability Policy;

- Draft Parking Strategy;
- Draft Parking Management Plans; and
- Parks and Open Spaces Strategy 2021.

16. The recommended option is consistent with the principles set out in the named policies.

17. This matter is not included in the Long Term Plan/Annual Plan

Legal Considerations and Statutory Responsibilities | Ka Ture Whaiwhakaaro me kā Takohaka Waeture

12 This report satisfies the decision-making requirements of Council under the new bylaw pursuant to the Land Transport Act 1998 and the LGA. The report provides a robust platform for the decisions to restrict parking and control vehicle use that are implemented on land under Council's control. The approach has been confirmed by Council's legal advisors as appropriate.

Local Government Act 2002 Purpose Provisions | Te Whakatureture 2002 o te Kāwanataka ā-Kiaka

18. Section 10 of the LGA states the purpose of local government is (a) to enable democratic local decision-making and action by, and on behalf of, communities; and (b) to promote the social, economic, environmental, and cultural well-being of communities in the present and for the future.

19. The recommended option:

- Can be implemented through current funding under the Long Term Plan and Annual Plan;
- Is consistent with the Council's plans and policies; and
- Would not significantly alter the intended level of service provision for any significant activity undertaken by or on behalf of the Council or transfer the ownership or control of a strategic asset to or from the Council.

Attachments | Kā Tāpirihaka

A	Background & Timeline of Events
B	Independent Safety Review of Bus Stop Locations on Ramshaw Lane, Arrowtown
C	Bus Stop Details
D	Bus Stop Layout

Background and Timeline of Events

1. Original Bus Stop Location

The original Ramshaw Lane stop operated between the Hansen Place car park entrance and the designated coach parking area.

2. Operator Concern – July 2025

In July 2025, Ritchies advised they would no longer service the Ramshaw Lane stop, due to safety concerns. Trips would bypass Ramshaw Lane and continue to Centennial Ave bus stop at Jack Reid Park.

3. QLDC Safety Engineer Review

Council officers went to site to assess the original bus stop and identified several safety concerns:

- No safe waiting or disembarking area for passengers
- No footpath connections or safe pedestrian crossing points
- Proximity to the intersection and conflicts with coach parking manoeuvres

4. Temporary Bus Stop Implementation

To maintain service to the Arrowtown CBD after Ramshaw Lane was deemed unsuitable, Council officers established a temporary bus stop. This required removing six car parking spaces and was implemented through an TMP.

5. Initial Permanent Options Considered

Two options were shortlisted and recommended by Council Officers:

- Rerouting services around the CBD and using the Library bus stop for both inbound and outbound trips
- Formalising the temporary stop as the permanent solution

6. Feedback from ORC

ORC advised that the rerouting option would incur additional operating costs of approximately \$25,000 per year, making this option not feasible.

7. Feedback from APBA

APBA opposed the formalisation of the temporary stop due to the loss of car parking spaces.

8. APBA Location Suggestions:

We invited feedback from APBA for their suggested locations. APBA proposed alternative locations; however, these were significantly further from the CBD and raised Level of Service concerns, particularly affecting passengers with mobility impairments.

9. Further Location Review – Wiltshire Street

Council Officers identified Wiltshire Street (opposite the library) as the next viable option. This would require:

- Removal of the majority of a hedge in the road reserve
- Raising the footpath to create a safe boarding area
- Improvements to the Buckingham/Wiltshire intersection corner

10. Additional APBA Feedback

APBA opposed this option on the grounds that the loss of hedge vegetation was unacceptable.

11. External Safety Consultant Review

An independent consultant has been engaged to undertake safety review of bus stop locations on Ramshaw Lane, Arrowtown:

- Reassess the original bus stop and identify feasibility and safety upgrades
- Review APBA concerns regarding the temporary stop
- Evaluate the Arrowtown CBD for any other viable locations
- Provide recommendations based on operational safety, accessibility, and cost considerations

12. Arborist report on tree at recommended bus stop location

The tree at this location has relatively low amenity value compared with other notable trees in the area. Any proposal for its removal requires consideration of the surrounding historic character, landscape values, and existing protected trees.

Due to its size, growth habit, and proximity to a high-use area, the tree requires ongoing maintenance.

13. APBA Board Meeting following safety review

QLDC Officer met with APBA Board May 2026 to discuss the outcome from the External Review. Understanding the safety implications and alternative options being less desirable. The works entailing:

- Removal of tree limb/s to allow unobstructed bus movements
- Footpath construction to delineate footpath
- Asphalt surface with bus stop markings

The Board informally accepted the location for the bus stop.

Attachment B: Independent Safety Review of Bus Stop Locations on Ramshaw Lane, Arrowtown



Memo

To: Adam Sampara
Stantec Queenstown

From: Mike Smith
Level 3, 2 Hazeldean Road
Addington, Christchurch 8024
NEW ZEALAND
Mail to: PO Box 13052,
Christchurch 8140

Project/File: 310206247-200.001

Date: 26 March 2026

Reference: Ramshaw Lane Bus Stop Safety Review

Executive Summary

Ramshaw Lane Bus Stop Safety Review – Arrowtown

Queenstown Lakes District Council (QLDC) commissioned an independent safety review of bus stop locations on Ramshaw Lane, Arrowtown, following safety concerns raised by the bus operator (Ritchies) and feedback from the local business and community associations. The original bus stop was deemed unsafe by the operator, leading to the installation of a temporary stop that has itself generated further safety and amenity concerns, including the loss of parking.

A site inspection was undertaken in February 2026 during a peak visitor period. The assessment considered operational safety, pedestrian behaviour, accessibility, connectivity, congestion, and Crime Prevention Through Environmental Design (CPTED) principles. Five bus stop options were reviewed: the original stop, the current temporary stop, an alternative temporary stop near the lower car park, and two possible locations on Wiltshire Street.

Key Findings

- **Original Bus Stop (Option 1)**

The original location is fundamentally unsafe. Pedestrian movements conflict with tour coach parking, reversing vehicles, car park access, and traffic on a curved section of road with poor visibility. There is no safe waiting or loading area, no effective pedestrian infrastructure, and unacceptable intermixing of pedestrians and heavy vehicles. Making this site safe would require major changes, including removal of tour coach parking and reconfiguration of car park access, which is not considered realistic without a broader township upgrade.

- **Current Temporary Bus Stop (Option 2)**

This location provides the best overall connectivity to amenities, Buckingham Street, and the opposing-direction bus stop, and is relatively accessible for mobility-impaired users. However, safety issues remain due to the bus being unable to fully pull out of the traffic lane, poor pedestrian guidance, limited visibility, and retained parking that constrains bus movements. These shortcomings are considered **addressable** through targeted infrastructure changes.

Reference: Ramshaw Lane Bus Stop Safety Review

- **Alternate Temporary Location near Lower Car Parks (Option 3)**

While space exists for a bus to pull out of traffic, this area experiences significant congestion during peak periods, poor pedestrian connectivity, limited accessibility for mobility-impaired users, and complex traffic movements near a key intersection. Even with upgrades, congestion and safety risks would remain high. This option is not recommended without substantial infrastructure investment and further congestion analysis.

- **Wiltshire Street Options (Options 4 and 5)**

Both Wiltshire Street locations offer potential longer-term alternatives with better legibility and proximity to the existing opposing bus stop near the iSite/library. However, each would require changes to parking, footpaths, crossings, and potentially bus routing. Option 5 (near the library/red phone box) shows promise from a safety and legibility perspective but would require design development and route confirmation.

- **CPTED Assessment**

Across Ramshaw Lane, pedestrian routes are poorly defined, lighting is inadequate for winter and evening periods, and sightlines are restricted by vegetation and layout. Wayfinding is weak, accessibility for vulnerable users is limited, and the overall environment lacks clarity and “ownership.” These conditions increase both perceived and actual safety risk.

Key Recommendations

1. **Do not reinstate the original bus stop** in its current or lightly modified form due to unacceptable safety risks.
2. **Retain and upgrade the current temporary bus stop (Option 2)** as the preferred short-to-medium-term solution, subject to:
 - Removal of all remaining adjacent car parks.
 - Construction of a fully indented bus bay with suitable pedestrian platform.
 - Conversion of adjacent raised tables to formal zebra crossings with signs, markings, and lighting.
 - Installation of pedestrian guidance fencing and improved footpath connections.
 - Improved lighting and vegetation management.
3. **Do not pursue Option 3** unless major infrastructure upgrades and congestion impacts are addressed.
4. **Investigate Wiltshire Street (particularly Option 5)** as a potential longer-term alternative, including bus route implications, accessibility upgrades, and integration with township planning.
5. **Implement broader pedestrian, wayfinding, lighting, and CPTED improvements** along Ramshaw Lane to support safety, accessibility, and visitor experience regardless of final bus stop selection.

Overall, the review concludes that while no option is without compromise, upgrading the current temporary bus stop provides the best balance of safety, accessibility, operational efficiency, and town centre connectivity in the short term, while Wiltshire Street options may warrant future consideration as part of a wider Arrowtown streetscape and transport strategy.

Reference: Ramshaw Lane Bus Stop Safety Review

Brief

Queenstown Lakes District Council (QLDC) have requested a safety assessment of bus stop locations on Ramshaw Lane, Arrowtown, following concerns raised by the bus operator, and in response to 'business association' feedback.

The brief requested details the following:

In July last year, ORC advised that the bus operator (Ritchies) had assessed the existing drop-off location on Ramshaw Lane as unsafe. As a result, Ritchies notified QLDC that they would no longer use this stop and requested an alternative location be provided.

QLDC engineers assessed the area and identified several safety concerns:

- No safe area for passengers to wait or disembark
- No footpath connections or safe pedestrian crossing points
- Proximity to the intersection and coach parking activities

A temporary bus stop was subsequently installed nearby, which required the removal of eight car parks.

Screenshots of both the original and temporary stops are presented below.



Figure 1: Original Bus Stop Position



Figure 2: Current (temporary) Bus Stop Position



Figure 3: Temporary Bus Stop Position

Since then, several options for a new permanent stop have been investigated, but none have been positively received by the business community, who have also raised concerns about the safety of the temporary stop at its current location.

Key issues raised include:

- The temporary stop is positioned in line with live traffic, and vehicles have been observed overtaking stationary buses and then braking suddenly to avoid pedestrians.
- The Community Association has requested that the original stop be reinstated, subject to the necessary safety improvements being implemented.

Reference: Ramshaw Lane Bus Stop Safety Review

Given the competing feedback and the need for a safe long-term solution, we are looking to engage an independent safety expert to assess options for a permanent stop.

This assessment will consider safety requirements alongside the preference for retaining a centrally located stop.

In the meantime, we are proposing to relocate the temporary stop to the location illustrated in Figure 3 to address the safety concerns raised.

Site Inspection

A site inspection was undertaken on Monday 23rd February 2026. The inspection was undertaken mid-afternoon. At the time of the inspection there was a high number of visitors to Arrowtown, enabling observations of behavioural characteristics of users and the interaction with traffic.

It is noted that at the time of inspection corresponded to the Chinese New Year holiday, and a higher volume of tourist experiencing the New Zealand summer.

For the purpose of this report, I detail the three sites as follows:

- Option 1 – Bus Stop at its Original Location
- Option 2 – Bus Stop at its Current Temporary Location
- Option 3 – Bus Stop at an Alternate Temporary Location

The individual site locations are identified in *Figure 4*.

During the site visit, additional locations were identified, with a quick assessment of matters explored. These are identified in *Figure 5* and detailed in Option 4, Alternate Bus Stops.



Figure 4: Bus Stop Positions to be assessed (indicated)

Reference: Ramshaw Lane Bus Stop Safety Review



Figure 5: Alternate Bus Stop Locations Identified. (indicated)

In undertaking this assessment, I have considered the position of the bus stops to be reviewed, and how that position would serve patrons for pick up for the opposing direction. Best practice would have them close to each other, giving clarity to patrons (often visitors) on facility location.

Observations and findings are made in the following sections.

Assessment and Findings

Option 1

Option 1 has the bus stop located immediately alongside the rubbish bins currently located at the end of the landscape feature. The site is characterised as being on the outside of a curve, between the diagonal parking for tourist coaches and coach / trailers, and the movement lane for the Hansen Place car park. At the time of the inspection there was a mixture of front in parking and reverse parking. While on its own this may not appear problematic, reverse in parking has passengers discharge near the traffic lane, with passengers more prone to walk direct over the through movement traffic lanes. Front in parking would discharge passengers to a footpath.

In the vicinity of the bus stop location there is very limited safe and effective pedestrian movement facilities.



Figure 6: Original Bus Stop Position



Figure 7: Temporary Bus Stop Position

Observations

People alighting from the tour coaches mix and mingle within the road lanes, due, in part, to lack of effective and safe pedestrian movement space. As stated, there was mixture of front in parking and rear in parking. This resulted in passengers alighting from the vehicle and mixing in between stationary vehicles, at the same time other vehicles were parking into an available space, as demonstrated in Figure 9.



Figure 8: Pedestrian movement from public toilets across bus parking



Figure 9: Bus parking. Mixture of front in and rear in parking with passengers intermixing between bus.

It was observed that there were car park movements on the curve to the east of Ramshaw Lane. The entry and exit movement are constrained in width and has poor intervisibility due to physical features on road edge.

Public toilets result in uncontrolled movements across the road. People (pedestrians) not familiar with NZ rules and driving conditions wander across the road unaware of the likely hazards from approaching traffic.

Linkage to Buckingham Street at the eastern end is via a path behind a hedge, discharging into the road curve. The height of hedge masks intervisibility between pedestrians and vehicles, resulting in pedestrians stepping into the path of vehicle. No warning signs or markings are installed for the pedestrian crossing points over the traffic lanes.

User Safety Issues identified

Observations on site, watching the interaction and behaviours of users has raised several significant safety issues. These include:

- Discharge and movement of pedestrians clash with movement of tour coach and other traffic. Complex movements and decision making required from drivers using car park and negotiating to find available car parks.
- Tour coach and bus with trailers manoeuvring within this area – unsafe to have pedestrians walking in reversing areas of large vehicles. Drivers chose front in parking or rear in parking. Rear in parking has patrons discharging onto road edge and walking direct across Ramshaw Lane.
- No safe landing area for patrons of the bus
- Crossing on curve unsafe, pedestrians not aware of vehicles approaching around curve

Reference: Ramshaw Lane Bus Stop Safety Review

- Movement into and out of the car park clashes with bus movement – exiting driver not seeing vehicle approaching in closest lane.
- Bus parks partially in the through lane, requiring drivers passing parked bus to enter into opposing lane with no intervisibility of opposing vehicle
- Pedestrian movements from car park and adjacent toilets conflict with bus stop manoeuvring.
- Bike hire pick-up opposite – within no-stopping zone. Van with trailer on inside of curve (random event); affects intervisibility.
- Poor connectivity to Buckingham Street. Patrons are forced to walk within the live lane to access footpath on opposite side of road.



Figure 10: Original Bus Stop Position. Note short length available at rubbish bins.



Figure 11: Coach with trailer manoeuvring in area of bus stop.

It is acknowledged that from a coherent delivery of service perspective, this stop is directly opposite the current opposing direction bus stop outside the *iSite* and museum.

Improvement Options

In assessing potential improvements, I am cognisant that the current layout has tour coach parking on one side, and a car park entrance on the other. This, combined with pedestrian movement observed, leads to a determination that there is no suitable safety improvement option that could be applied without significant effect on tour coach parking and the car park access movement.

Suitable treatment options would require:

- Removal of tour coach parking to enable a suitable length bus stop laydown area that is clear of heavy vehicle movement
- Changes to the car park access, potentially change to one way through car park with discharge onto Merioneth Street / Bedford Street. Both these streets are narrow and would potentially require upgrade to enable movement from car park. This would require access over reserve land.

Recommendations

The original bus stop location is considered unsafe and should not be utilised in the current form, considering the significant user safety impacts of the current road configuration. The significant infrastructure changes to make this location safe do not appear appealing unless undertaken as part of significant township improvements programme.

Option 2

Option 2 considers the temporary bus stop currently located south of the public toilets located opposite the movement path through the shops, onto Buckingham Street.

Reference: Ramshaw Lane Bus Stop Safety Review



Figure 12: Current Temporary Bus Stop Position



Figure 13: Current Temporary Bus Stop Position

An overview of the bus stop location is given in Figure 14 below. The available movement path to and from Buckingham Street is indicated by arrows.



Figure 14: Pedestrian movement path to walkway towards Buckingham Street

Observations

At this location Ramshaw Lane can be described as approximately 7.9 m wide, two-lane road. Perpendicular parking is provided on the northern (river) side of Ramshaw Lane. A footpath and some indented movement space is located on the southern (Buckingham Street) side of Ramshaw Lane.

Raised platforms are located either side of the Option 2 bus stop, with a footpath formed between the raised platforms, river side. The raised platforms assist in the enforcement of slower speeds through the area.

Reference: Ramshaw Lane Bus Stop Safety Review

A pedestrian level fence is currently installed alongside the top of the embankment (river side), offering fall protection. This location has a good vista towards the activities on the lower platform and gold panning in the river.

A large tree overhangs the parking areas, with low branches in the space that could be occupied by campers or larger vehicles. At the time of the inspection a portion of the perpendicular parking was coned out, with signs indicating a bus stop. This limits use, with drivers of larger vehicles often not identifying the hazard until they commence a turn in movement, then requiring them to reverse out due to the hazard. This limitation is not conspicuous, and results in undesirable vehicle movements.

Discussions with patrons waiting at the bus stop revealed that this was the location that they set down from the bus earlier in the day. They also queried the location of where the bus would pick them up. This location was not apparent to them to be a bus stop.



Figure 15: Temporary Bus Stop Position (marked by cones and barely visible signage, no pavement markings indicating a bus stop)

At the time of inspection, 3 car parks were still available within this zone, terminating at the western raised crossing point.

The raised crossings are located at the pedestrian desire lines and appear to be frequently used. Pedestrians were observed to be hesitant at times not understanding the priority at these crossing points, as while raised, they are not formed as a formal pedestrian crossing. Experience overseas reveals that international rules in some locations give priority to the pedestrian, regardless of a formal zebra crossing.

User Safety Issues identified

The bus currently parks partially indented, resulting in following drivers traversing into the opposing traffic lane, with limit forward visibility. There is minimal space on the opposite side of the road for evasive movement, due in part to the formed kerb and hedge lines.

Patrons of the bus are discharged onto a gravel surface, resulting in them traversing around the bus to road edge. Patrons traversing across the front of the bus will not have intervisibility to their right until they pass the driver's side of the bus, placing themselves at risk of being struck by a passing vehicle.

Parked vehicles limit the ability of a bus driver to pull fully out of lane into the bus stop area, resulting in partial blockage of the through lane.

Reference: Ramshaw Lane Bus Stop Safety Review



Figure 16: Pedestrian platform (west). Note schist wall at edge of parking space.



Figure 17: Pedestrians walking along live lane to access walkway to Buckingham Street.

The location of this stop best serves access to amenities such as toilets and tour coach, should a transfer be required. Access to the lower car parks, hiking trails and the Millenium Path is achieved via a series of steps at the western end of the temporary stop.

This bus stop location best serves mobility impaired users, and users of low vision / blind, as it is generally at grade, and could connect to access towards Buckingham Street.

Improvement Options

In assessing the potential improvement options, I have considered the location, its connectivity to the opposing bus stop, engagement to retail, and connection to Buckingham Street.

- Remove all parking (3 parks additional to that already removed)
- Form a fully indented bus bay, with appropriate footpath and guidance for patrons alighting from the bus.
- Install fencing alongside the bus stop with openings in the fence located at the doors of the scheduled bus type. This will give guidance to patrons to enter onto the dedicated footpath and enable appropriate wait space if required.
- Convert both raised tables to full pedestrian zebra crossing points. This prioritises pedestrian movement over Ramshaw Lane, acknowledging that even at a zebra crossing, there is a requirement for all users to determine if it is safe to cross.
- Install additional lane markings leading into the raised crossings, providing guidance to drivers for lane discipline (retain existing raised tables)

Recommendations

The temporary bus stop location is well suited for connectivity to Buckingham Street, and adjacent car park facilities in the lower parking area.

It currently has inherent user safety concerns, arising from the obstructions inhibiting a driver from pulling fully out of lane to discharge patrons. The retention of three (3) car parks significantly inhibits safe movement of the bus.

The following recommendations are proposed:

1. Convert both raised crossings to full zebra crossings, including all markings, signs and lighting.

Reference: Ramshaw Lane Bus Stop Safety Review

2. Remove the three remaining car parks, establishing a larger area for safe movement of the bus into the indented bus bay.
3. Install appropriate lighting to the pedestrian movement paths, especially for winter use.
4. Install control fencing between bus and footpath to direct patrons onto existing footpath system.
5. Trim overhead vegetation and limbs to provided unrestricted access to the bus bay. (Note – it is my opinion that trimming is required even if an alternate bus stop location is selected).

Option 3

Option 3 considers a temporary bus stop located in the current diagonal parking area immediately north of the Buckingham Street / Berkshire Street / Ramshaw Street intersection. The site is located on the curve in the road leading behind the retail area of Arrowtown, and close to the entry / exit lane for the lower area parking.

Observations

A temporary bus stop could be established within the perpendicular parking area immediately north of the Buckingham Street / Berkshire Street / Ramshaw Lane crossroad intersection.

This intersection is characterised as having a dominant movement from Berkshire Street into Buckingham Street (right turn), with a free through movement into Ramshaw Lane. Ramshaw Lane (southbound) is Give Way controlled for the movement from Berkshire Street into Buckingham Street (east). Buckingham Street (east) is one way eastbound. Buckingham Street (west is Give Way controlled for all movements



Figure 18: Alternate temporary bus stop (arrowed)



Figure 19: Congestion caused by access and egress movements to lower car park.

At the time of the site inspection, significant congestion was observed with drivers wishing to access the main Ramshaw Car Park via the ramp to the lower parking area. Delays in the circulation of drivers in the lower area caused a queue to form back into the Ramshaw Lane / Buckingham Street intersection. Drivers approaching from Wiltshire Street, wishing to turn right into the lower car park area caused additional congestion as they blocked all movement along Ramshaw Lane for the westbound direction.

While the gravel parking area would be suitable for a bus to pull completely out of the traffic stream, the level of congestion, and the significantly high demand for parking in this location result in serious concerns.

Reference: Ramshaw Lane Bus Stop Safety Review

The proposed location for Option 3 does not enable good connectivity to the opposing bus stop, and without significant wayfinding guidance, the opposing bus stop would not be identifiable to a bus patron who had been dropped off at this location.

Connection to shops in this location is poor, with a lack of safe crossing points for pedestrians.

User Safety Issues identified

In assessing the potential improvement options, I have considered the location of the proposed bus stop, its connectivity to the opposing bus stop, engagement to retail areas, and the connection to the main street.



Figure 20: Pedestrians required to utilise traffic lane to access vehicles and parking



Figure 21: Two current access gaps in hedging (arrowed)

The matters identified are:

- A lack of suitable footpath and pedestrian movement facilities near the proposed bus stop. Pedestrians were observed walking along the traffic lane, unaware of traffic behind them, especially with silent EV type vehicles.
- Poor connection into the reserve grassed area. Two access points are enabled, but both discharge directly into the traffic lanes. Intervisibility at these locations is poor due to the hedge, especially for children.
- The lower access discharges on the inside of a descending horizontal and vertical curve.
- The bus driver would not be able to clearly observe approaching traffic from the intersection due to the general orientation of the side view mirror. Orientation of the bus leading into and out of the proposed bus stop restricts intervisibility.
- Very high potential for patrons of the bus walking around the front of the bus, with no intervisibility to approaching vehicles.
- Congestion from lower parking areas causing poor intervisibility to approaching traffic, very high risk of pedestrians stepping into the path of an opposing vehicle.
- Road corridor is constrained on the reserve side, with no suitable pedestrian space formed.
- The grassed reserve enables movement of people; however, these would only be fully able-bodied users. Mobility impaired, elderly or low vision / blind users could not safely traverse over the grassed slopes. This places a demand on use of the traffic able road surface to enable impaired user's access. This is considered unsafe.

Reference: Ramshaw Lane Bus Stop Safety Review

Improvement Options

In assessing the potential improvement options, I have considered the location, its connectivity to the opposing bus stop, engagement to retail, and connection to Buckingham Street.

- Undertake significant shoulder formation to enable a bus to pull safely out of the traffic stream and enable a safe re-entry into the traffic stream. Vehicle specific tracking of a bus would be required to confirm suitability in the first instance.
- Formation of an appropriate footpath system including a safe crossing point. Enabling access to Buckingham Street.
- Formation of paths, suitable for all users and abilities, through the grassed reserve.
- Creation of pedestrian priority crossings in a location that is safe and appropriate. Given the horizontal and vertical alignment of Ramshaw Lane, this would require significant treatment at the Buckingham Street / Ramshaw Lane intersection. The formation of a suitable facility would place additional controls on drivers travelling towards the lower car parks, with increased congestion through the Buckingham Street / Ramshaw Lane intersection.
- Significant wayfinding guidance to the opposing bus stop location.

Recommendations

While at face value, this location appears to be suitable, user safety and the observed congestion at peak holiday periods would have significant safety concerns that would need to be addressed.

Connection for safe movement at a complex decision-making zone (parking / movement / access movement) would require significant infrastructure improvements. Given the complexity of movement and controls at the Buckingham Street / Ramshaw Lane / Berkshire Street intersection additional and significant congestion could be expected, whereby a driver who had free entry into Ramshaw Lane would now be required to yield to pedestrian movement.

It is considered that even with the improvement options detailed above, , at peak holiday times drivers of a bus may have trouble in re-entering back into the traffic stream to complete the circuit. Recent changes to road legislation may improve this, with a proposal under consultation for all drivers to yield to a bus exiting a bus stop. This has not been passed and is considered outside of this assessment's capacity.

It is recommended that this bus stop not be developed and utilised without significant infrastructure change, and analysis of potential congestion impacts.

Alternate Options

Option 4 – Wiltshire Street (#51 Buckingham Street)

An area of parking is formed along the east side of Wiltshire Street, on the lead to the Buckingham Street intersection. This area currently enables parking for three vehicles, along with an area defined by wooden barrels for cycle parking and storage. Romans Lane is situated to the north of the current parking area. The three parking spaces formed are alongside the movement space of Wiltshire Street, at the Buckingham Street intersection. The parking spaces are poorly formed and manoeuvring within the intersection throat impacts on through movement traffic.

The storage area and cycle racks are currently situated within the defined P120 parking zone. Observations on site indicated that this large area is not effectively utilised, with hap-hazard parking

Reference: Ramshaw Lane Bus Stop Safety Review

controls (barrels) placed to prevent parking in this area. It is not clear if the time restricted parking designation remains, or if it has been revoked. Given the presence of the signs, I have assumed that the parking zone is legitimate, therefore any parking restriction features installed would be contrary to the permitted time restricted parking designation.



Figure 22: Current three parks and cycle storage



Figure 23: business storage. Note P120 sign within storage area.

The implementation of the sectioned off area for bikes has a significant impact on available parking in this area. The actual land occupied by cycle parking is small, compared to the area sectioned off.

It is considered that the informal sectioning of this area has a significant impact on parking in this vicinity. Access to any parking in this area is significantly affected by movement of vehicles along Ramshaw Lane. The parking is located on the outside of a curve, and immediately adjacent to pedestrian movement along Ramshaw Lane and to the public toilets located on the curve.

Access to Romans Lane further complicates safe movement. Pedestrian access along the east side of Wiltshire Street is poor and lacks definition.

Remodelling of this area, with cycle parking located at a safe and appropriate location, at a size appropriate to the scale of cycle parking demand experienced, is considered to be able to be achieved in and around Romans Lane. This would enable re-establishment of parking along the eastern side of Wiltshire Street, with an extent yet to be determined.

The intersection of Buckingham Street, east of Wiltshire Street is wide, with long radius kerb lines formed by raised schist stone. A path is formed on the eastern and western side.

Reference: Ramshaw Lane Bus Stop Safety Review



Figure 24: Note lack of suitable pedestrian facilities at Buckingham Street / Wiltshire Street intersection.



Figure 25: Note orientation of car (foreground) accessing park closest to Buckingham Street Intersection. Pedestrian movement along edge of traffic lane.

Considering the bus route, the placement of a suitable bus stop near the Buckingham Street intersection enables direct access to Buckingham Street. Wiltshire Street has priority movement over Buckingham Street. Buckingham Street (west) is a one-way system eastbound.

A bus stop in this location would require additional treatments to formalise the footpath system, and to enable safe crossing over Wiltshire Street. The provision of a raised pedestrian crossing table at the intersection would require a bus to yield to pedestrian movement prior to continuing their travel along the route. This bus stop location is in proximity to the existing *iSite* bus stop for the reverse direction movement of the bus route.

Option 5 – Wiltshire Street – (Red Phone Box)

A single car park is located opposite the red phone box, alongside the public library site and reserve land. This single park is time restricted as P120. At the time of the site inspection, the park was infrequently utilised, despite the parking pressures observed.



Figure 26: Single parking space, outside library site.



Figure 27: Shoulder formation outside library site.

An earth path is currently formed alongside Wiltshire Street, with similar poor levels of path and kerb protection at the Buckingham Street / Wiltshire Street intersection. Library users have limited off street parking formed.

Considering the site as an option for a bus stop, the position on the departure side of the intersection enables a bus to move safely into and out of the park. For an indented bus bay to be formed, modifications to the path and schist kerb lines would be required. This could tie into an improvement in

Reference: Ramshaw Lane Bus Stop Safety Review

amenity access for the library. Discharging patrons from the bus would have access to the historic library building and be guided behind the bus to access Buckingham Street. This places the bus patron in a safe location to move around a bus and cross the road.

Approximately three car parks are formed on the western side of Wiltshire Street, opposite the public library. These parks are bordered by a tall hedge, and use requires people alighting from their vehicle walking along the road edge. A bus stop at this location, being opposite the library bus stop, ensures that there is consistency in location, and is legible to patrons with appropriate wayfinding.

In assessing the location, and considering the current bus route, modifications in the routing may be required to enable use of this bus bay area. It is understood that the current bus route traverses along Buckingham Street, turning into Adamson Drive to end the route and commence the return journey.

CPTED

As an ICA Certified Practitioner for CPTED, I have considered the form and function of Ramshaw Lane, and how that impacts the safe and effective movement of people, considering key CPTED principles.

CPTED Defined

CPTED is a crime prevention philosophy based on proper design and effective use of the built environment leading to a reduction in the incidence and fear of crime, as well as an improvement in quality of life. CPTED reduces criminal opportunity and fosters positive social interaction among legitimate users of space. The emphasis is on prevention rather than apprehension and punishment.

National Guidelines for CPTED were adopted in 2005 and set the foundation for how CPTED works in New Zealand. Since this time, local Councils have integrated CPTED into their own planning framework and CPTED has become commonplace in projects.

There are four overlapping CPTED principles:

1. Surveillance – people are present and can see what is going on
2. Access management – methods are used to attract people and vehicles to some places and restrict them from others
3. Territorial reinforcement – clear boundaries encourage community 'ownership' of the space
4. Quality environments – good quality, well maintained places attract people and support surveillance

There are three approaches to managing the physical environment in ways that will reduce the opportunity for crime:

1. Natural – the integration of security and behavioural concepts into how human and physical resources are designed and used (e.g. border definition, windows).
2. Organised – the introduction of labour-intensive security (e.g. guards, police, security patrols).
3. Mechanical – the introduction of capital or hardware-intensive security (e.g. locks, closed circuit television, lighting).

The National Guidelines define seven qualities that characterise well designed, safer places. These qualities are summarised below and form the basis for the reviews of the Public Realm Works.

1. Access: Safe movement and connections - Places with well-defined routes, spaces and entrances that provide for convenient and safe movement without compromising security.

Reference: Ramshaw Lane Bus Stop Safety Review

2. Surveillance and sightlines: See and be seen - Places where all publicly accessible spaces are overlooked, and clear sightlines and good lighting provide maximum visibility.
3. Layout: Clear and logical orientation - Places laid out to discourage crime, enhance perception of safety and help orientation and wayfinding.
4. Activity mix: Eyes on the street - Places where the level of human activity is appropriate to the location and creates a reduced risk of crime and a sense of safety at all times by promoting a compatible mix of uses and increased use of public spaces.
5. Sense of ownership: Showing a space is cared for - Places that promote a sense of ownership, respect, territorial responsibility and community.
6. Quality environments: Well designed, managed and maintained environments - Places that provide a quality environment and are designed with management and maintenance in mind to discourage crime and promote community safety in the present and the future.
7. Physical protection: Using active security measures - Places that include necessary, well designed security features and elements.

While not a formal CPTED assessment, I make the following comments on the environment and identify some likely treatments.

Observations

Access:

Generally, poorly formed access and connection from Ramshaw Lane to and from Buckingham Street and the lower car park. Poorly defined routes and guidance to key destinations. Some connection paths are in areas of poor lighting and provide opportunity for malicious actors to hide and evade.

Mobility impaired users have some parking spaces defined on Buckingham Street. Provisions outside of this is very limited and does not connect effectively and safely to Buckingham Street. Cobbled pavers to central walkway to Buckingham Street has misshapen pavers that could cause trips or falls. For elderly these would result in serious injury due to frailty and inability to recover from significant trauma.

Opportunities:

- Establish a network of well-formed and connected pathways, including pedestrian priority over traffic lanes as required.
- Form pathways suitable for mobility impaired users to enable greater access to all of the retail areas

Surveillance and Sight lines:

During daytime operations, there is a level of natural surveillance occurring due in part to the mingling and movement of people, be they on foot, vehicle or cycle.

During winter months, and night-time, passive surveillance is reduced as the number of 'eyes on the street' decrease. Although a nighttime audit was not undertaken the coverage of streetlighting and type (appear to be heritage / period focussed than typical road street lighting) is assumed to provide inadequate streetscape lighting provision. Mature landscaping and trees will create 'dark spots' with dense foliage and canopies. The areas with greatest shadow invite persons of malicious intent to act unlawfully with less potential for apprehension or detection.

Opportunities:

Reference: Ramshaw Lane Bus Stop Safety Review

- Install suitable level lighting to illuminate dark areas and establish clear and well-lit walkways.
- Trim or remove vegetation that cannot be remedied by a higher level of illumination

Layout:

The current environment of Ramshaw Lane does not have clear and logical orientation. At the time of the inspection visitors approached asking for locations of a few facilities. It is assumed that as I was wearing high-visibility garments, I could assist.

Their questions related to facilities, and directions to locations around Arrowtown. This indicated that the current layout of Ramshaw Lane was not intuitive or logical. While there are a number of car parking areas around the location, a lack of awareness of used parking capacity resulted in significant drive around movement to find a car park. Poor parking space definition (stalls) resulted in a haphazard parking form, with capacity reduced by poor parking discipline.

Opportunities:

- Undertake an implementation of clear wayfinding and guidance. This also offers businesses good opportunities to advertise location. Even a tourist information / shop guide would help (people could photograph / QR code scan it on mobiles as an aid to navigation). This is considered low cost.
- Apply a consistent and legible network for movement of vulnerable people that limits, as far as reasonably practicable, exposure of vulnerable users to general movement traffic
- Provide clear parking number / car park full guidance to improve driver awareness of available parking capacity.

Activity Mix:

The different premises fronting Ramshaw Lane offer various levels of passive surveillance with two storey buildings (with upper windows overlooking the street) sharing space with ground floor food and beverage premises. This offers a reasonable level of surveillance however this is diminished somewhat by hedges and trees along the road edge masking sightlines. In contrast to the period frontages along Buckingham Street (west), the view from Ramshaw Lane frontage offers engaging views to the surrounding mountains at potential views of the tracks, recreational facilities such as skate park, and Arrow River. This frontage is also sun facing.

Opening the engagement area towards Ramshaw Lane has advantages in awareness of activity and will result in more 'eyes on the street'. The vista from the southern side of Ramshaw Lane has significant opportunity to blend a well-formed streetscape that enables a blend of engagement and movement.

A remodelling of the Ramshaw Street frontage has significant opportunity to enhance this space, creating an engaging environment that detours malicious behaviour.

Opportunities:

- Undertake an assessment for complete streets treatment whereby retail and hospitality activity engage onto Ramshaw Lane, enhancing observation of the environment, and the street environment.

Reference: Ramshaw Lane Bus Stop Safety Review

Sense of ownership & Quality Environments:

The movement paths and facilities along Ramshaw Lane have a wide variability in form and condition. In many places, footpaths and features are poorly defined, with gravel surfaces and lack of differentiation between car parking and pedestrian movement. The visual condition would suggest poor maintenance and a lack of ownership, respect and territorial definition. It is acknowledged that high use, associated with gravel surfacing can result in a surface condition change faster than scheduled maintenance activities

Simple actions such as wheel kerb stops, keeping footpaths clear and free from potholes / obstructions and defects that would impede the safe movement of people is critical to presenting an appearance of ownership and cared for place.

Opportunities:

- Implement a schedule of defect repair driven by use and surface condition, rather than fixed time schedules.
- Implement remedial treatments to maintain clear walkways and establishment of defined and appropriate path systems

Yours sincerely

Stantec New Zealand



Mike Smith FEngNZ, CPEng, IntPE, MET, NZCE (Civil), REA, RPEQ, ICA Cert CPTED Practitioner
Senior Principal Transportation Engineer/Road Safety Practice Leader
Phone: +64 3 343 8768
Mobile: +64274374963
mike.a.smith@stantec.com

stantec.com

Cc:

Attachment C: Bus Stop Details

Map Ref.	Reference to relevant section in QLDC Bylaw 2025 or Land Transport Road User Rule 2004.	RAMM Road Id	Road Name	Description of issue	Restriction Type	Action Required	Hours of operation	Use mobile roads or RAMM to get OPR for road direction / RPs.				Physical works completed
								Side of road	Start RP	End RP	Total length	
1	17 Bylaw	234	Ramshaw Lane	No stopping lines required for bus entry taper.	No Stopping	Mark no stopping lines.	At all times	Left	175	183	8	No
1	17 Bylaw	234	Ramshaw Lane	Bus stop markings.	Bus Stop	Bus stop markings and signs.	At all times	Left	183	195	12	No
1	17 Bylaw	234	Ramshaw Lane	No stopping lines required for bus exit taper.	No Stopping	Mark no stopping lines.	At all times	Left	195	200	5	No

Attachment D: Bus Stop Layout

