



Memo

To: Laura Galt – Hamilton City Council

From: Yrish Estoce – Beca **Date:** 2 December 2025

Subject: Ruakiwi Reservoir Requirement – Technical Specialist Report for Section 42A Reporting

Technical Area: Traffic

Version: Final

Purpose

1. This memorandum has been prepared to provide technical assessment under section 42A of the Resource Management Act 1991 (RMA), in respect of traffic in relation to the Ruakiwi Reservoir Alteration to Designation (the Requirement).

Introduction

2. My name is Yrish Mae Estoce, a Senior Transport Planner at Beca Ltd. in Hamilton and I am a member of the Transport Planning Society. I hold a Postgraduate Diploma in Urban and Regional Planning (major in Transportation Planning) and a Bachelor of Science in Geography from the University of the Philippines - Diliman and completed the University of Southern Queensland's Planning for Moving People (2021).
3. I have over 14 years of transport planning experience across New Zealand, Australia, the Philippines, and Malaysia. Prior to joining Beca in April 2023, I held transport planning roles with GHD Pty Ltd, WSP Philippines, and Halcrow.

Code of Conduct

4. I have read the Environment Court Code of Conduct for expert witnesses contained in the Environment Court Practice Note 2023 and agree to comply with it. I confirm that the opinions expressed in this memorandum are within my area of expertise except where I state that I have relied on the advice of other persons. I have not omitted to consider materials or facts known to me that might alter or detract from the opinions I have expressed.

Scope

5. This memorandum covers the following:
 - a. The traffic effects of allowing the Requirement and whether any such adverse effects will be acceptable.

- b. Relevant matters raised, and relief sought, in submissions.
- c. Relevant statutory considerations
- d. Recommended amendments and/or additions to the Requiring Authority's proposed designation conditions.

Executive Summary

- 6. This memorandum provides a technical assessment under section 42A of the Resource Management Act (RMA), focusing on traffic aspects related to the Ruakiwi Reservoir Alteration to Designation (the Requirement). Following a review of pertinent documents, an on-site visit, and analysis of specific issues raised in submissions, I conclude that the effects are no more than minor.
- 7. The proposed works for which the designation is sought will generate temporary construction effects that can be managed by appropriate designation conditions, including the new or modified conditions that I recommend below¹, or similar conditions; and will have adverse traffic effects that are generally no more than minor.
- 8. I have reviewed the submissions on traffic matters and recommended responses to them.

Documents considered

- 9. The following documents have been considered in the preparation of this assessment:
 - a. *Central City Reservoir - Ruakiwi: Notice of Requirement for an Alteration to an Existing Designation, August 2025, prepared by Bloxam Burnett & Olliver Ltd (BBO) for Hamilton City Council (the NoR).*
 - b. *HCC Central City Reservoir Project Construction Transport Assessment, July 2025, prepared by BBO for Hamilton City Council*
 - c. *HCC Central City Reservoir Project: Draft Construction Traffic Management Plan, July 2025, prepared by BBO for Hamilton City Council*
 - d. The Submissions listed in Table 1.

Table 1 Submissions that raise traffic matters

Number	Submitter
001	Ernest Ross Needham
005	Glenda Morrissey

Site visit

- 10. I visited the site on 4 August 2025. The visit included a walkover of the site and its access locations, and discussions with the author of the Traffic Assessment and Construction Traffic Management Plan (CTMP).

¹ See paragraph 32.

Analysis

Introduction

11. In my opinion, the Construction Traffic Assessment (Appendix F1 of the NoR) provides a good analysis of the effects of the works on traffic matters.
12. I largely agree with and adopt that analysis for the purposes of this memorandum.

Existing Transport Environment

13. Ruakiwi Road has a posted speed limit of 50 km/h and a mean operating speed of approximately 46 km/h (MegaMaps).
14. There are 1.5m-wide footpaths on both sides of Ruakiwi Road but no separate cycling facilities.
15. Parallel on-street parking is provided on both sides of Ruakiwi Road south of Clarence Street. Nearby properties generally have dedicated off-street parking.

Traffic effects

16. Overweight and over-dimension (OWOD) deliveries
 - a. OW-OD movements will follow established processes, including route evaluation and Temporary Traffic Management (TTM), typically with pilot vehicles, and require approval by the Road Controlling Authority (RCA). Details will be set out in the CTMP.
 - b. The Lake Road/King Street intersection is a small single-lane roundabout with tight geometry, which constrains access from the north for long and heavy vehicles. The preferred route is from the south (SH1C - Ohaupo Road - Lake Crescent - Pembroke Street - Ruakiwi Road), to be confirmed through the CTMP.
 - c. To accommodate the transport of large reservoir components, temporary adjustments at pedestrian refuge islands (e.g., removal of belisha beacons) may be required and will be managed under Site-Specific Traffic Management Plans (SSTMPs) to maintain pedestrian safety and minimise disruption.
17. Construction access and vehicle tracking
 - a. Site Access 1: 10 m wide access accommodating twoway movements and a 19.45 m articulated High Productivity Motor Vehicle (HPMV) for delivery of large precast panels and pipes. No impact on on-street parking. If larger vehicles are required, separate tracking shall be undertaken. The access will be reduced postconstruction to comply with Operative District Plan (ODP) width standards for ongoing use.
 - b. Site Access 2: 6.0 m wide access suitable for an 11 m rigid truck (e.g., 6 m³ concrete truck) with adequate on-site manoeuvring. Approximately six on-street parking spaces on the western side of Ruakiwi Road will be temporarily removed during Phase 1 (~30 months) to ensure safe entry/exit and maintain clear manoeuvring space and sight lines.
18. Construction traffic generation and road network capacity

- a. Anticipated construction traffic is approximately 80 vehicles per day (vpd), with up to 20 vehicles per hour (vph) in peak periods. In Stage 1, vehicles are expected to use both accesses; in Stage 2, Site Access 1 is the only one expected to be used. Delivery trucks are expected to approach from the south, consistent with the access arrangements.
- b. On Ruakiwi Road, average daily traffic (ADT) increases are modest: ~0.47–0.57% (Stage 1) and ~1% (Stage 2), spread over an 8-hour window. These effects are assessed as less than minor.
- c. Based on typical mid-block capacities for urban roads with interrupted flow (900 passenger car units per hour per lane, pcu/h/l), peak flows on Ruakiwi Road remain within serviceable capacity. Pembroke Road and Ohaupo Road currently operate slightly above this threshold with construction adding only marginal increases (to ~963 and ~980 pcu/h/l, respectively).
- d. It is appropriate to monitor traffic during construction and to schedule intensive generation activities (e.g., concrete pours, heavy deliveries) outside peak periods to reduce temporary pressure on adjacent corridors.

19. Access location, separation, and sight distance

- a. Same-corridor vehicle access spacing complies with ODP Rule 25.14.4.1(a): Access 1 has 2 m separation to the maintenance accessway and ~15 m to 16 Ruakiwi Road; Access 2 has ~10 m to 9/19 Ruakiwi Road and ~40 m to 19 Ruakiwi Road.
- b. Minimum intersection separation (ODP Rule 25.14.4.1(c)): Access 1 is ~18 m from the Ruakiwi/Clarence Street intersection (below the 30 m ODP criterion) but is acceptable given clear sight lines, low volumes, and SSTMP controls during construction while Access 2 is ~80 m and complies.
- c. Sight distance (ODP Rule 25.14.4.1(e)): Access 1 has ~85 m northbound sight distance (below the 120 m ODP criterion) but meets Austroads truck stopping sight distance (SSD) for a 60 km/h design speed and 2.0 s reaction time on sealed roads. Advanced access signage and temporary reduced speed limits during enabling and construction works are recommended.

20. On site manoeuvring and loading

- a. On site loading spaces and manoeuvring comply with ODP Rule 25.14.4.2. Reverse movements onto the arterial transport corridor are avoided.
- b. Should occasional reversing be required for vehicles larger than a 19.45 m HPMV, this will be supervised by a Site Traffic Management Specialist (STMS) under approved SSTMPs.

21. On-street parking

- a. Temporary removal of 6 parking spaces on the western side of Ruakiwi Road to support Site Access 2 operations has minor to negligible effects, given the commuter parking function, alternative supply on adjacent streets, and reinstatement after construction.

22. Operations phase

- a. Operational traffic is low with up to 8 trips/day for maintenance and has negligible network effects.
- b. Periodic heavy maintenance (e.g., pump/pipe replacement) may require managed access for larger vehicles under appropriate traffic management supervision.
- c. Access 1 will be upgraded post-construction to meet ODP width requirements.

Matters raised in submissions

Submission 001 - Ernest Ross Needham

23. Discussion

The submission acknowledges low operational traffic effects but asserts that construction traffic will be excessive and poorly controlled, creating acute safety risks, particularly for Hamilton West School pupils who pass the site twice daily. Confidence in the CTMP process is low due to perceived limited early stakeholder input, potential contractor non-compliance under time pressure, and doubts about Council enforcement. The submitter also notes a perceived lack of peer review of supporting traffic reports.

24. Recommendation: Amend NoR Condition 25 to include the following additional matters the CTMP must address:

- a. Travel Demand Management: The Requiring Authority shall prepare and implement a Travel Demand Management Plan (TDMP) for construction workforce trips (e.g., carpooling/minivan shuttles, capped on-site parking), with measurable targets (such as average vehicle occupancy and daily trip totals), monitoring via gate logs, and monthly reporting to Council.
- b. School safety windows: To protect pedestrian movements associated with Hamilton West School, the CTMP shall prohibit heavy vehicle arrivals/departures during agreed school start/finish windows on school days and include a communication protocol with the school for advance notice of disruptive activities and temporary marshals/signage at the frontage where required.

25. Peak hour movement cap: Define peak period windows and set a cap on staff vehicle movements consistent with the Construction Impact Assessment; detail scheduling and gate management measures to achieve and monitor compliance.

26. Construction hours for heavy vehicles: Schedule heavy vehicle movements outside peak periods, except where essential access is required, and include contingency procedures to avoid coinciding with peak traffic or school safety windows.

- a. Complaints/incidents register: The Requiring Authority shall maintain a complaints and incidents register for construction traffic matters, with a community liaison contact available during working hours. Summaries shall be provided to Council on request.

Submission 005 – Glenda Morrissey

27. Discussion

The submission raises concerns that the 30-month construction phase will result in significant disruption from heavy vehicle movements, especially early morning activities (e.g., concrete

pours from 5:00 am). It emphasises proximity of trucks to residential frontages on Ruakiwi Road (~10 m), with perceived impacts on nearby residents and domain users. The submitter considers the AEE underestimates construction-period traffic effects.

28. Recommendation:

- a. Adopt the Condition 25 amendments recommended for Submission 001.

29. Amend NoR Conditions 25(d) and 25(e) to include: Construction hours for heavy vehicles: Schedule heavy vehicle movements outside identified peak traffic and sensitive community periods (including school start/finish windows), except where essential works require otherwise. Any exemption must have prior approval from Council's authorised officer, sought with adequate lead time, and supported by a CTMP addendum covering routing, traffic management (e.g., marshals, temporary signage/speed management), and measures to avoid on-street queuing. Provide advance notice to affected residents. Avoid heavy vehicle movements on non-working days and public holidays unless essential access is required and is approved through the exemption process.

Statutory Considerations

30. I have reviewed the discussion in Section 13 of the NoR on the provisions in the statutory documents relating to traffic matters that are listed below. I agree with the comments on those provisions. In my opinion, based on that analysis, the Requirement is consistent with those provisions.

- a. RMA – Section 5 – Purpose of RMA
- b. Hamilton District Plan – objective 25.8.2.1(b). At this stage, I have not identified any higher-order statutory instruments directly relevant to this traffic review.

Conclusions

31. In my opinion, from a traffic perspective, the proposed works for which designation is sought:

- a. Will generate temporary construction effects that can be managed via appropriate designation conditions, including the new or modified conditions that I recommend below, or similar conditions; and will have adverse effects on traffic that are no more than minor and comply with the relevant statutory requirements discussed above.

Recommendations

Designation conditions

32. I recommend the following amendments and/or additions to the Requiring Authority's proposed designation conditions:

- a. Amend NoR Condition 22 to include the following additional matters the CTMP must address:
 - i. Haul routes and OW-OD movements: Construction traffic shall use the approved haul routes identified in the CTMP. Local residential streets shall not be used except for direct site access. OW-OD deliveries shall use the approved route from

the south and be managed under SSTMPs. Construction vehicles shall not queue, idle, or lay over along the Ruakiwi Road frontage. Remote holding areas shall be identified and used.

- ii. Workforce Travel Demand Management: The Requiring Authority shall implement a TDMP to reduce single-occupant trips, with measurable targets, monitoring (gate logs), and periodic reporting to Council on workforce trip generation and average vehicle occupancy.
 - iii. Peak hour movement cap: Consistent with the anticipated maximum staff vehicle movements in the Construction Impact Assessment, the CTMP shall define peak-period windows and set a cap on total movements to and from the site during those periods, with scheduling and gate management measures to achieve and monitor compliance.
 - iv. School safety windows: No heavy vehicle arrivals or departures shall occur during Hamilton West School start/finish windows on school days. The CTMP shall include a communication protocol with the school and temporary marshals/signage at the frontage where required.
 - v. Construction hours for heavy vehicles: Heavy vehicle movements shall generally occur only during off-peak daytime windows as defined in the CTMP. Exceptions for continuous pours or safety-critical works require prior approval from Council's authorised officer, a CTMP addendum, and resident notification. No on-street queuing/layover on Ruakiwi Road is permitted.
 - vi. Temporary parking removal and reinstatement: The CTMP/SSTMPs shall define the extent, signage, and duration of any temporary removal of public parking spaces to enable site access operations; include monitoring of parking conditions; and coordinate reinstatement with Council at completion of the relevant construction phase(s).
 - vii. Pedestrian refuge islands: Any temporary adjustments to pedestrian refuge islands or crossings (e.g., removal of belisha beacons) to accommodate deliveries shall be managed under SSTMPs, maintaining pedestrian safety and reinstatement at the earliest practicable time.
 - viii. Complaints/incidents register and liaison: The Requiring Authority shall maintain a construction traffic complaints/incidents register, provide summaries to Council on request, and maintain a community liaison contact during working hours to respond to traffic-related enquiries.
- b. Amend NoR Condition 23 to replace "Waka Kotahi New Zealand Transport Authority's Code of Practice for Temporary Traffic Management" with "NZ Transport Agency (Waka Kotahi) New Zealand Guide to Temporary Traffic Management (NZGTMM)". Require preparation/implementation by appropriately qualified personnel (e.g., STMS/TMD).
 - c. Amend Nor Condition 24 to include CTMP certification and approvals: No works within the road reserve shall commence until the CTMP has been certified by Council and approved by the Road Controlling Authority via the Corridor Access Request (CAR) process or TMP portal. CTMPs must be available on site at all times, and an STMS shall be present whenever temporary traffic management is in effect.