

## Infrastructure Committee

23 February 2023

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

**Department: Property & Infrastructure**

**Title | Taitara :** Butlers Green retaining wall

**Purpose of the Report | Te Take mō te Pūroko**

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1. The purpose of this report is to present the options for the retaining wall between Butlers Green and Buckingham Street in Arrowtown.

### Recommendation | Kā Tūtohuka

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2. That Infrastructure Committee:
  1. **Note** the contents of this report.
  2. **Agree** on an option, and instruct staff to commence with delivery, noting that Option 1 and 2 are currently budgeted for, and Option 3 would be subject to prioritisation under a future Long Term Plan.

**Prepared by:**



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**Title:** Roading Operations and Contracts Manager  
**3 February 2023**

**Reviewed and Authorised by:**



**Name: Tony Avery**

**Title:** General Manager Planning & Development  
**3 February 2023**

### Context | Horopaki

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3. Butler's Green wall is a historic stacked stone feature constructed in the 1880's, located between Buckingham St and the Butler's Green reserve in Arrowtown. The wall is listed as a Category 2 Historic Place

with Heritage New Zealand (HNZ) under “Stone Wall” List number 2120, as of 24-Nov-1983. Category 2 historic places are of historical or cultural significance or value.

4. Movement of the wall has been an ongoing issue and apparent accelerating movement is prompting concerns that the wall could collapse during an earthquake if not before.

5. Since 2013, some works have occurred including monitoring, removing parking from the top of the wall, placing mesh over areas of rockfall concern, fencing off around the base of the wall, and closing the footpath under the wall with new steps provided to access the reserve.

6. An options study was commissioned in 2018 and used to inform a funding application through the Long Term Plan process for more significant repairs or reconstruction of the wall. As the wall is a roading asset, a typical approach would be for QLDC to apply for co-funding for the proposed works, and align the scope to approved co-funding. This was taken to QLDC’s Engineering Challenge Group (ECG) in Dec-2019 and it was thought that a new wall with rock capping would be an appropriate solution. QLDC officers applied for funding from NZTA via the 2021-24 NLTP (National Land Transport Programme) process. The funding was not approved and subsequently in late 2021, officers recommended deferring the project.

7. The approach to defer was not preferred by key Arrowtown based stakeholders, and Cr Heath Copland raised this at the 03-Feb-22 Council meeting (ref agenda item 5) where it was moved (Councillor Copland/Councillor Ferguson): That Council note with concern the ongoing deterioration of Butlers Wall and instruct the Chief Executive to bring forward an internal submission to the 2022/23 Annual Plan a budget and project to undertake the reconstruction of the wall in year 2 of the Long Term Plan.

8. A site meeting was held on 15-Feb-22 attended by key stakeholders Cr Copland, Arrowtown Village Association (AVA) and Arrowtown Planning Advisory Group (APAG). The purpose of the meeting was for the QLDC project team to seek feedback from stakeholders on the options previously explored in 2018, and to firm up cost estimates given the inflationary environment.

9. With the wall being an important heritage feature, stakeholders unanimously preferred repairs to the existing wall over construction of a new wall. As such, the project scope entails a delicate balance between aesthetics and achieving an appropriately durable and safe engineering solution.

10. An updated options report was produced and funding of \$600k for the community’s preferred option was added as a Capex Internal Submission to the 2022-23 Annual Plan.

11. A preferred solution for the repairs was confirmed as rock bolts and mesh retention, at an affected party community meeting held at the Arrowtown Museum on 11-Nov-22).

12. The preferred repair option has continued to be developed in consultation with the community and the design has progressed to a level that would be suitable for appending to consent applications.

13. A QLDC Resource Consent is required and would require a Heritage Impact Assessment to be completed. In addition, an Archaeological Authority from HNZ is required before undertaking work that may affect an archaeological site (which would require an Archaeological Assessment).

14. Preliminary advice from HNZ and Origin Consultants (Archaeologist consultants) in Arrowtown suggest that the agreed solution of anchors and mesh is unlikely to be supported by HNZ or Origin.

15. Since the stakeholder consultation meeting held 11 November 2022 where the preferred repair option was agreed, feedback has been received and some members of the community have changed their opinion

on what the preferred option is. In particular the concern is with the aesthetics of the agreed solution which requires mesh to be pinned to the wall to hold the stacked rock in place. There are various mesh options with compromises between durability and visual impact (different mesh thicknesses or coatings), however this is not expected to allay the concerns regarding aesthetics.

16. With the design for anchors and mesh (Option 2 below) almost complete, but an estimate of a further \$20-30k to complete the consent application this is considered appropriate hold point to seek confirmation of the preferred approach prior to incurring this expense.

### Analysis and Advice | Tatāritaka me kā Tohutohu

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17. The initial (2018) Stantec report (attached) includes, and discussion to date rejects, various other options such as placing fill material or cantilevered columns adjacent to the wall.

18. This report does not have a recommended option. All 3 options are viable and depend on the weighting assigned by the Infrastructure Committee to each of the respective pluses and minuses. Noting that Option 2 is the currently funded and provided for option.

19. **Option 1** defer the project, complete do-minimum maintenance over time informed by routine inspections, and replace the wall in the future (decisions on the new wall may be far in the future and so details eg aesthetics and cost are not considered in scope of this report).

#### Advantages:

- No further cost is incurred on a design option that is not fully supported
- Allows for the 600k of funding less cost spent to date to be reallocated
- Heritage feature remains in its natural state until such a time (period unknown) as it falls down on its own or routine inspections recommend emergency work is necessary to repair or replace the wall. This is considered an advantage because it maximises the life achieved out of the wall before replacement, and subject to how the wall fails replacement may qualify for Waka Kotahi (NZTA) emergency works subsidy.

#### Disadvantages:

- Sudden failure of the wall could occur, causing minor disruption (there is alternative access off Ramshaw Lane carpark), cost to reinstate which could be of similar scope to Option 3, risk of harm and total loss of the asset and potential damage to services. Safety mitigation can be put in place to reduce the possibility of injury or death, however, the safety mitigation itself will only as effective as people's inclination to obey it. As such, a sign may not be sufficient and further fencing may be required, and this fencing will not be desirable aesthetically
- The nuance of 22. above being an advantage is also a disadvantage depending on the time that passes until the wall fails. The main concern for the wall is the risk of sudden failure during a significant flood or earthquake, so if one of these events doesn't occur for a long time, the approach of inspecting and repairing the wall over time could result in aesthetic concerns with ad-hoc repairs and the maintenance cost adding up

- Opportunity is lost to spend 600k of funding which is currently allocated to the project. Should this decision be revisited down the line, future planned work would be subject to available funding and prioritisation
- Would not be a typical approach to place heritage importance ahead of safety

20. **Option 2** continue with the recommended design option of mesh and anchors to tie back the existing wall

Advantages:

- Funding is currently allocated, and the design documentation is close to tender ready, subject to consent applications
- Considered the minimum level of engineering intervention that allows retention of the existing heritage wall, and as such is a compromise between these conflicting priorities
- Accelerates a reasonable standard of repair to the whole wall in what may inevitably end up happening ad-hoc over time under Option 1

Disadvantages:

- Some community opposition to this approach as it will significantly change the look of the wall
- The risk of global failure in a very large earthquake still remains, however implementing this option will greatly reduce the risk of injury or death. The risk of damage to the wall in a light to moderate earthquake will be significantly reduced. This could result in the need to still consider a full rebuild (Option 3 in some form) post-earthquake.

21. **Option 3** remove the existing wall and replace with an engineered solution sufficient to meet 100% of current NZ building standards and using a stone facade that satisfies HNZ

Advantages:

- Lowest risk of future failures as the wall will be engineered. This is the only option that could practically obtain code compliance
- In recent correspondence with key stakeholders, it is understood this may now be the communities' preferred option and most likely to be supported by HNZ and Origin Consultants. It is not clear whether this option is fully supported by the community and may require further consultation to establish
- This would allow a solution without mesh that reuses the existing rock, however note the look of the wall will change as a result of the nature of constructing a new engineered wall.

Disadvantages:

- Longer timeframe and greater disruption during construction
- Highest cost option and challenging to get cost certainty due to the unique nature of reusing the existing stone in a new facade. The 2022 Stantec report indicates a cost estimate of \$952k. This concept estimate carries a high contingency margin of 50% with a total estimate in the order of \$1.5m
- Funding is not currently approved and would need to go through a future Long Term Plan prioritisation process. As per 6. above, NZTA did not approve funding to construct a new wall in the 2021-24 NLTP, so this option may need to be funded 100% by QLDC unless alternative funding assistance can be sourced.

## Consultation Process | Hātepe Matapaki

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### Significance and Engagement | Te Whakamahi I kā Whakaaro Hiraka

22. This matter is of **medium** significance, as determined by reference to the Council's Significance and Engagement Policy because it involves a high level of community interest.

23. The persons who are affected by or interested in this matter are the residents/ratepayers of the Queenstown Lakes district community and Heritage New Zealand, along with people who have an interest in historic infrastructure.

24. The Council has undertaken the following recent consultation with stakeholder groups:-

- Site meeting Feb-2022 to discuss the options in the Stantec report and establish the community's preferred option, prior to requesting the funding via internal submission to the annual plan.
- Community engagement session at the Museum in Nov-2022 to explain the key features, constraints and compromises of the selected option and seek community input on the design details.

## Māori Consultation | Iwi Rūnaka

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25. The Council has not undertaken any consultation with iwi on this matter.

## Risk and Mitigations | Kā Raru Tūpono me kā Whakamaurutaka

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26. This matter relates to the **Community Risk Category**. It is associated with Risk00010 Operational Asset failure results in damage to private property and/or loss of community services within the [QLDC Risk Register](#). This risk has been assessed as having a **moderate** inherent risk rating.

27. Selecting one of the options will support the Council by allowing us to **Mitigate the risk (Option 1 or 2) or Eliminate the risk (Option 3)**.

## Financial Implications | Kā Riteka ā-Pūtea

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28. Option 1 or 2 are consistent with current Ten Year Plan budget allowances. Option 3 would require further investigations and design to confirm the estimated cost, and then a project could be added into the Ten Year Plan prioritisation process.

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

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29. This matter is included in the Ten-Year/Annual Plan

- Through internal submission as its own specific project, but only for \$600k (aligned to the cost estimate for Option 2).

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

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30. At this stage level advice has not been sought, but may be if required as part of working through the following three consent processes (which would be necessary for Option 2 or 3).

- A building consent will be required under the Building Act 2004.
- A resource consent will be required under the Resource Management Act 1991.
- An archaeological authority will be required under the Historic Places Act 1993.

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

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31. The recommended option:

- Section 10 of the Local Government Act 2002 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.

As such, the recommendation in this report is appropriate and within the ambit of Section 10 of the Act.

The recommended option:

- Can be implemented through current funding under the Ten-Year 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.
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