



Memo

To: Laura Galt – Hamilton City Council

From: Carolyn O’Neil – The Heritage Studio **Date:** 26 November 2025

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

Technical Area: Built heritage

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 built heritage in relation to the Ruakiwi Reservoir Alteration to Designation (**the Requirement**).

Introduction

2. My name is Carolyn O’Neil. I am a heritage consultant and director of The Heritage Studio Ltd, a built heritage consultancy established in 2012. I hold a first class honours degree in Architectural and Building Conservation from the University of South Wales, and have over 20 years’ experience in the field of built heritage. Following several years working as a local government Conservation Officer in the United Kingdom, I have spent the past 16 years working in New Zealand – initially as a specialist heritage officer (architecture) at Auckland (City) Council and subsequently as a heritage consultant.
3. During that time, I have gained considerable experience preparing historic heritage evaluations and providing specialist built heritage advice on proposals for notices of requirement, private plan changes, and resource consents that relate to historic heritage matters. Relevant examples include:
 - a. A Notice of Requirement seeking alterations to a designation to the North Island Main Trunk railway line and works within the context of a heritage railway station.
 - b. A private plan change for new buildings and increased building height within the context of several historic heritage places, including the Auckland War Memorial Museum.
 - c. A resource consent for the Auckland Downtown Ferry Basin Redevelopment within the context of several historic heritage places, including Queens Wharf and the Ferry Building.
4. I am a full member of the Institute of Historic Building Conservation and the ICOMOS Aotearoa New Zealand/Te Mana o Nga Pouwhenua o Te Ao.

5. I confirm that there is no conflict of interest that has not previously been disclosed and cleared by Hamilton City Council.

Code of Conduct

6. 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

7. This memorandum covers the following:
 - a. The environmental effects on built heritage 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

8. This memorandum provides a technical assessment under section 42A of the RMA, focusing on built heritage aspects related to 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 and have been managed by appropriate designation conditions.
9. I have reviewed the submissions on built heritage matters and recommended responses to them.

Documents considered

10. The following documents have been considered in the preparation of this assessment:
 - a. Notice of Requirement (**NoR**) lodged documentation, particularly:
 - i. *Central City Reservoir – Ruakiwi: Notice of Requirement for an alteration to an existing designation*, prepared by Bloxam Burnett & Olliver Ltd (**BBO**) for Hamilton City Council (**HCC**), August 2025 (Final).
 - ii. *Appendix C – Designation drawings*, prepared by Holmes, undated.
 - iii. *Appendix I1 – Ruakiwi Reservoir: Assessment of Effects – Heritage (Heritage Assessment)*, prepared by Archifact – Architecture & Conservation Ltd (**Archifact**) for HCC, 30 June 2025 (Final).
 - iv. *Appendix I2 – Heritage Structural Memo (Supplementary Heritage Assessment)*, prepared by Archifact for BBO, 18 August 2025.

- v. *Appendix I3 – Memo: Reservoir Heritage Options*, prepared by BBO on behalf of HCC for Heritage New Zealand Pouhere Taonga (**HNZPT**), 28 August 2025.
 - vi. *Appendix M – Ruakiwi Reservoir Detailed Seismic Assessment*, prepared by WSP for HHC, 22 August 2025.
 - vii. *Appendix O2 – Landscape Appendices*, including architectural and landscape concept designs prepared by BHW Studio and Edwards White Architects, in association with Adrian Morton Landscape Architects Ltd and HCC.
- b. Responses to information requests issued 9 September 2025.
 - c. *Draft NoR Conditions – Ruakiwi Reservoir*, 31 October 2025 version.
 - d. *HNZPT Support Letter*, prepared by Ben Pick, 4 September 2025.
 - e. The Submissions listed in Table 1.

Table 1 Submissions that raise built heritage matters

Number	Submitter
1	Ernest Ross Needham
5	Glenda Morrissey

- f. *Schedule 8A: Built heritage (structures, buildings and associated sites) (Schedule 8A)* of the Hamilton City Operative District Plan (**HCODP**).
- g. *ICOMOS New Zealand Charter for the Conservation of Places of Cultural Heritage Value* (Revised 2010).
- h. *HCC Built Heritage Inventory Record Form: Hamilton Water Tower*, prepared by Matthews & Matthews Architects Ltd, 2012.
- i. *HNZPT: Water Tower, List entry 4210*.

Site visit

- 11. I visited the site on 11 October 2025. This involved a walkover at various accessible locations.

Heritage context

- 12. The site of the existing Ruakiwi Reservoir designation has long been associated with the history of Hamilton’s municipal water supply. Located alongside Ruakiwi Road, the designation boundary encompasses a strip of land at the eastern edge of the Hamilton Lake Domain, a park-like area characterised by undulating topography, mature trees, and open grassed spaces.
- 13. Positioned at the highest point of the site is the Ruakiwi Reservoir/Water Tower (**Water Tower**), a significant and relatively uncommon heritage place. Built in 1932, the imposing concrete structure has stood as a distinctive and recognisable landmark in the local landscape for almost a century. Directly north of the Water Tower is the remnant circular base of another reservoir.

14. Innovatively designed by engineer, James Reginald Baird, and overseen by Rupert Worley, who became one of New Zealand's best-known consulting engineers, the Water Tower was notably the largest arc-welded reinforced concrete structure in the southern hemisphere at the time of its construction. Built by Christchurch-based contractors, W. M. Fadder & Co., the structure has a diameter of 25.6m, an inside depth of 18.6m, and a capacity almost 12 million litres.
15. The outer walls of the Water Tower have a natural (unplastered and unpainted) concrete surface with an exposed aggregate finish, which reinforces the utilitarian appearance of the structure. A key architectural element is the series of Doric columns, which, together with the cornices, create a strong relief to the tower's cylindrical form and reflect the Classical Revival style preferences of the interwar period.
16. Over time, changes have occurred to the Water Tower to support its ongoing functional use, including the addition of a metal roof, access stairs, ancillary structures, and telecommunication equipment. Nevertheless, it continues to maintain integrity and legibility in its design, form, fabric and features.

Heritage significance

17. The Water Tower is included in Schedule 8A of the HCODP as a **Plan Ranking A** built heritage place of **outstanding** heritage significance locally, regionally or nationally (ID# H27). It is of significance for its *outstanding* technological qualities and *high* historical, physical/aesthetic/architectural, context, and cultural qualities. The interior of the Water Tower is not identified as protected.
18. The place is included on the New Zealand Heritage List/Rārangi Kōrero (**the List**) administered by HNZPT as a **Category 2** historic place of historic or cultural significance (List No. 4210).

Proposed works

19. The Requirement seeks to extend the existing designated land at the Ruakiwi Reservoir site to allow for the staged construction, operation, and maintenance of two 25 million litre reservoirs and supporting infrastructure, including a valve chamber and pipelines. Proposed to be located to the south of the historic Water Tower, the two new reservoirs have been identified as a critical part of Hamilton's future water network.
20. The proposed works also include the decommissioning and earthquake strengthening of the scheduled Water Tower, the removal of ancillary structures at the base of the structure, and landscaping across the site.

Analysis

Introduction

21. In my opinion, the Heritage Assessment, including the Supplementary Heritage Assessment (Appendices I1 and I2 of the NoR), prepared by Archifact provides a comprehensive analysis of the effects of the works on built heritage matters.
22. I largely agree with and adopt that analysis for the purposes of this memorandum.

Environmental effects

23. For purpose of this analysis, the effects of the proposed works on built heritage have been split into two key matters: the effects of the new reservoirs on the heritage values/qualities and setting of the Water Tower, and the effects of physical changes to, and near, the Water Tower on its heritage values/qualities.

Effects of the new reservoirs on the heritage values/qualities and setting of the Water Tower

24. The main focus of the Requirement is to extend the existing designation boundary at the domain to enable the staged construction of two 25 million litre reservoirs to the south of the scheduled Water Tower. The location has been selected to provide sufficient elevation for potable water via gravity supply.
25. The two circular reservoirs, each measuring 62.65m in diameter and 10.2m in (external wall) height, are proposed to be clad in corten steel set against textured and patterned concrete walls. The associated landscape design incorporates terraced seating, natural play areas, and educational and interactive features.
26. In assessing the potential effects of the two reservoirs on heritage values, the Heritage Assessment considers the offset of the proposed new structures adjacent to the Water Tower has been carefully considered to respect and maintain sufficient distance and relative height so as not neither dominate the heritage structure, its context or its setting, nor lessen the heritage values for which it has been recognised. The assessment concludes that the proposed development retains, protects, and enhances the heritage values of the Water Tower. I broadly agree with this assessment.
27. The site of the scheduled Water Tower within the domain has long been associated with the history of Hamilton's water supply. The proposed introduction of two new reservoirs into the landscape therefore provides continuity of this historic use, while offering opportunities for the enhancement of public understanding and appreciation of the heritage place through interpretative material and interactive features.
28. Given the considerable scale of the proposed new reservoirs and their proximity to the historic Water Tower, I consider that the heritage values that could be most compromised by the proposals are *physical/aesthetic/architectural* and *context*. Among other things, these values speak to the distinctive visual and landmark qualities of the Water Tower and its contribution to, or association with, its wider historical context and physical setting.
29. Occupying the highest point of the domain, adjacent to Ruakiwi Road, the Water Tower is a highly visible feature within the local landscape. It is also perceptible from other vantage points across the city. The proposed reservoirs are located directly south, on land that drops away from the Water Tower. This change in topography, together with their intentionally low profile and integrated design, will, in my view, reduce the perceived bulk of the new reservoirs within the context of the Water Tower. Despite some effects on its setting, I am of the opinion that the Water Tower will remain the key feature on the site, and will maintain the architectural quality, strength of presence, and visual prominence that contribute to its overall heritage significance.
30. To manage potential indirect effects on the heritage fabric during construction works, I support the inclusion of the proposed designation condition requiring the preparation of a Heritage Management Plan (**HMP**) that will, among other things, ensure that the structural

integrity of the Water Tower is not adversely affected by the construction of the new infrastructure and surrounding landscape elements.

Effects of physical changes to, and near, the Water Tower on its heritage values/qualities

Strengthening works

31. While the introduction of two new reservoirs at the domain will not cause the loss of the existing Water Tower, it will result in it becoming redundant as a reservoir. In the *Detailed Seismic Assessment* of the Water Tower, the New Build Standard (NBS) of the structure is currently determined to be < 34% due to its base wall connection being vulnerable to sliding failure. I understand that, once decommissioned, the structure will be considered a monument and categorised as an Earthquake Prone Building under the Building Act 2004.
32. Strengthening works are therefore proposed to the Water Tower to raise its seismic rating to >34% (ideally 100%) NBS by inserting a reinforced concrete ring beam around the internal circumference of the base of the lower tower wall. Drilled dowels will be used to fix the ring beam to the wall and base slab of the tower to reinforce the structural connection between the two sections. As strengthening works are proposed to the interior of the Water Tower, with no elements visible externally, I concur with the Supplementary Heritage Assessment that such changes are a permitted activity in accordance with section 19.3.1 of the HCODP.
33. The Supplementary Heritage Assessment concludes that the proposed strengthening works to the Water Tower will result in a relatively small, discrete, and positive intervention that presents no adverse effects on the significance of the heritage place. I agree with this analysis. While the decommissioning of the Water Tower means it will no longer serve its original purpose, the strengthening works will, in my view, conserve the integrity of its physical fabric, secure its long-term future, and safeguard its high physical/aesthetic/architectural and outstanding technological heritage qualities.
34. To manage this outcome, the HMP will, among other things, set out a programme for the strengthening works to the Water Tower; describe how the ongoing care and maintenance of the structure will be managed following decommissioning; and require the development of interpretative material to enhance public understanding and appreciation of the heritage place.
35. I am also cognisant of HCC's commitment to exploring options for the future adaptive reuse of the Water Tower. While an appropriate adaptive reuse of the structure is not part of the NoR or my analysis, the proposed works create opportunities for the tower to be repurposed in a manner that is compatible with, and further facilitates the retention and protection of, its heritage values.

Removal of ancillary structures and associated landscaping

36. The proposed works involve the removal of ancillary structures on the southeastern side of the Water Tower, which will become surplus to requirement when the tower is decommissioned. Currently housing a pump, generator, and electrical equipment, the structures comprise a small-scale concrete unit connected to the base of the tower and a more recent, freestanding structure with attached canopy.
37. Once the ancillary structures are removed, landscaping works in proximity to the Water Tower are proposed. Works include contouring the land on the southern side of the Water Tower to

reinstate the 'cone' shape at the base of the structure, and the removal and planting of a small number of trees within its immediate surrounds.

38. The Supplementary Heritage Assessment identifies the ancillary structures as non-original, non-heritage built elements, the removal of which is considered a positive outcome that enhances the heritage values and setting of the Water Tower. Similarly, the proposed landscaping is considered to enhance views to, and the setting of, the heritage place.
39. I share these findings. Although built to support the ongoing use of the Water Tower, the non-original ancillary structures do not, in my view, contribute to its identified heritage values and overall significance. Their removal will eliminate visual clutter at the base of the Water Tower and enable the reinstatement of the contoured 'cone' shape land that more closely reflects the structure's earlier surroundings. Overall, I consider these changes will enhance the structure's physical and visual qualities, particularly when viewed from the south and east, and is a positive aspect of the proposals.

Matters raised in submissions

40. Two of the six submissions received on the NoR raise matters relating to built heritage. These are Submission 1 (Ernest Ross Needham) and Submission 5 (Glenda Morrissey).

Submission 1 – Ernest Ross Needham

41. Ernest Ross Needham opposes the proposed works associated with the Requirement, considering that they are of a scale and impact that are out of character with the current environment and lake park amenity.
42. Mr Needham considers that the new reservoir structure does not represent the scale and character of the existing water tower, and identifies their "*impact on the existing reservoir heritage character*" as one of several reasons for opposing the NoR. The submitter also raises concern over the loss of established trees within the domain, and is strongly against the removal of trees no. 30 and 30a (shown on the 'Concept Landscape Plans' of the *Landscape Appendices*), which aid in buffering structures.
43. I acknowledge that the construction of the two new reservoirs will result in a marked change to the immediate setting of the scheduled Water Tower, and will be of a much larger scale as a result of having to meet Hamilton's future water storage requirements. From a heritage perspective, however, I do not consider that the new structures will have a detrimental impact on the heritage values or 'character' of the Water Tower.
44. With the exception of internal strengthening works, the proposals will not result in any changes to the historic fabric of the Water Tower. Moreover, I consider that the proposed positioning, low-level cylindrical forms, and utilitarian design and materiality of the new reservoirs appropriately respond to the physical and visual qualities of the historic structure without challenging its role as a key feature in the landscape.
45. The two trees identified by Mr Needham in his submission form part of a broader tree removal strategy within the proposed designation boundary, which is addressed in other technical assessments. I understand that the removal of trees no. 30 and 30a, located immediately west and south of the Water Tower, is opposed by the submitter because they aid in buffering structures. I assume one of these structures is the access stairs recently installed on the southern side of the Water Tower. When viewed from Ruakiwi Road, these

stairs are partially screened by tree no. 30a to the east. I am unclear what structure is buffered by tree no. 30.

46. While I accept that tree no. 30a provides some screening to a non-original element of the Water Tower, the removal of the trees also has the potential to enhance sight lines and reinforce the visual qualities of the historic structure. As a result, I do not consider that the requirement to retain the two trees on heritage grounds can be justified. I note, however, that several replacement trees are proposed to be planted as part of the landscaping works at the base of the Water Tower, including two specimens near the locations of no. 30 and 30a. This, together with the proposed HMP condition that requires details (location and type) of trees to be planted, may provide the opportunity to provide the screening that Mr Needham seeks to retain.
47. From a built heritage perspective, I do not support the relief sought in this submission.

Submission 5 – Glenda Morrissey

48. Glenda Morrissey also opposes the proposed Requirement and associated works, and raises heritage considerations as one of the reasons for her opposition.
49. In recognising the Water Tower as a Category A heritage structure that represents a key element of Hamilton’s historical infrastructure, Ms Morrissey considers that any new development in its vicinity should protect the tower’s visual integrity and cultural significance. In her view, the proposed reservoirs would dominate the site visually, diminishing the heritage value and landmark prominence of the existing tower.
50. While I acknowledge the introduction of two large-scale reservoirs in proximity to the scheduled Water Tower will alter its immediate setting, I do not share the submitter’s view that the new infrastructure will dominate the heritage structure and diminish its landmark quality and heritage values.
51. Located on lower ground, the low-level reservoir structures have, in my view, been positioned and designed to maintain sufficient distance and relative height so as to neither dominate the Water Tower nor diminish its heritage values. As shown in the site montages and concept designs in the *Landscape Appendices*, the landmark qualities of the Water Tower and the way it is experienced within the broader landscape will also remain largely unchanged.
52. Furthermore, any impacts caused by the changes to the setting of the Water Tower have, in my opinion, been offset by the positive aspects of the proposal (e.g., earthquake strengthening, removal of non-original elements, and landscaping), which will conserve the integrity of its physical fabric, secure its long-term future, and safeguard its high and outstanding heritage values.
53. From a built heritage perspective, I do not support the relief sought in this submission.

Statutory Considerations

54. I have reviewed the discussion in the Heritage Assessment of the NoR on the provisions in the statutory documents relating to built heritage. I agree with the comments on those provisions. In my opinion, based on that and my own analysis, the Requirement is consistent with the following provisions:
 - a. RMA – Section 5 – Purpose of RMA.

- b. RMA – Section 6 – Matters of national importance – (f) the protection of historic heritage from inappropriate subdivision, use, and development.
- c. Waikato Regional Policy Statement – Objective 3.18 – Historic and cultural heritage and Policy 10.3 – Effects of development on historic and cultural heritage.
- d. Hamilton District Plan – Chapter 19 Historic Heritage – Objectives 19.2.2 and 19.2.3, and Policies 19.2.2b and 19.2.3(d-l).

Conclusions

- 55. In my opinion, the proposed works for which the designation is sought is supportable from a built heritage perspective. Adverse effects on the heritage values of the Water Tower have been kept to a minimum and appropriately managed by the designation conditions.
- 56. Overall, I consider that the proposals conserve the integrity of the Water Tower’s physical fabric, secure its long-term future, and safeguard its heritage values and qualities as a place of outstanding significance.
- 57. For that reason, I do not support the relief sought in submissions 1 and 5 as they relate to built heritage.