

Dear Expert Panel,

Request for Further Information Homestead Bay [FTAA-2506-1071]

1. We respond to the Expert Panel's request for further information in Appendix 1 of the Minute 4 of the Expert Panel dated 10 November 2025 from the Queenstown Lakes District Council (QLDC), being:

1. *Open Space, Parks and Reserves and Liquefaction risk*
o Provide a response to the applicant's 'Response to Written Comments' which are addressed to QLDC's concerns regarding the adequacy of provision for open space, parks and reserves; and liquefaction risk/hazard

RESERVES AND OPEN SPACES

The applicant's section 55 response to comments addresses reserves and open spaces at paragraphs 31 – 50. The comments below have been prepared by Council's Principal Parks and Reserves Planner, Ms Galavazi.

2. I have responded in general about each of the proposed reserves that I do not agree with the applicant, and I have included the table from Paragraph 49 of the applicant's response and have included a column where I respond specifically to their comments.

Proposed Lot 9005

3. I agree that proposed Lot 9005 should be reclassified as a Local Park rather than a Community Park. However, this reduces the provision of Community Park (by over 1.2 ha) to a point which emphasises the need for a 1.5 – 2ha Community Park reserve that is of a **suitable standard, size and purpose to be accepted by the Council**. It also results in only one Community Park being located in the Homestead Bay area, while the TTSC indicates 2-3 Community Parks in the Homestead Bay East area.

Proposed Lot 9003

4. I do not agree that proposed Lot 9003 is of a suitable size, standard and purpose that adheres to the QLDC Future Parks Provision Plan as it will not be a suitable Community Park. Council's position remains that Lot 9003 needs to be increased in size to accommodate more flat land so that it is predominantly flat. Community Parks across the district typically accommodate infrastructure above and beyond a playground, such as cricket nets, multiuse hardcourts, junior sports fields and require buildings such as changing rooms and small club rooms.
5. I remain firmly of the position that RCL should amend the reserve boundary of proposed Lot 9003 to incorporate more suitable flat land as, being the only Community Park for thousands of residents, it will be in high demand for a very wide range of community activities for all ages. It would be more appropriately sized at 2 hectares to meet this demand. It would result in a poor open space and recreation outcome for the future community if RCL did not do this and instead paid reserve land development contributions. It will be extremely difficult for QLDC to purchase the land from RCL (if not impossible – including from a property value perspective) once it is included on the scheme plan and open space and recreation needs of the Homestead Bay community will not be fully met. As a Community Park, proposed Lot 9003 will also need to accommodate sufficient carparking for reserve users, have sufficient road frontage to ensure it is highly accessible and should be on the public transport route.

Proposed Lot 9009

6. Paras 44 – 46 of the Applicant's response states that there is flexibility for the easements to remain within proposed Lot 9009 if agreed. This may be the case however I would note this parcel is to be incorporated into Jack Tewa Park. In accordance with the TTSC, Jack Tewa Park will be developed with Community Facilities so unencumbered land is important.
7. Paragraph 49 of the Applicant's response relates to whether the Aurora Designation can be removed and states: *The existing Aurora designation over a portion of the proposed Reserve Lot 9009 does not currently contain any infrastructure for this purpose and initial discussions with Aurora have indicated a willingness to consider alternatives or amendments to this.* QLDC needs more security that Lot 9009 will be unconstrained if it is to be accepted as Recreation Reserve land. QLDC has no intention to agree to take proposed Lot 9009 if subject to easements.

Proposed Lot 9002

8. Paragraph 48 suggests that proposed Lot 9002 that will contain the Wetland should be Local Purpose (Nature) Reserve. I expect this has been a misreading of the QLDC Parks and Open Space Strategy 2001 – given the existence of the wetland it would be categorised as a Natural Reserve rather than a Local or Community Park. How it is vested/gazetted under the Reserves Act 1977 can be determined at the subdivision stage.
9. In summary, by not including sufficient flat and/or unencumbered land within Lots 9001, 9003, 9005 and 9009, RCL has not provided the required amount of suitable, fit for purpose recreation reserve land. There is already a high demand for the existing reserve land and community facilities across the Whakatipu and the district and in the Southern Corridor (that currently only has playgrounds, two tennis courts, one sports field, cricket nets and no permanent community facilities on public land). Reserve land in the Homestead Bay area needs to provide for the thousands of new residents who will live in Homestead Bay and Southern Corridor for generations to come. It will not be possible, nor financially feasible for the Council to acquire more recreation reserve land once the area is developed.
10. In light of this, I have not amended my recommended conditions for Lots 9003 or 9009. My position on Lot 9001 has also not changed, however this can be addressed by the recommended condition. I agree with the applicant that Lot 9002 should be amended from Community Park to Natural Reserve.
11. The summary table from the Applicant's response (Paragraph 49) is set out below, with my specific comment.

RESERVE LOT	QLDC S.53 DESCRIPTION AND RECOMMENDATION (SUMMARISED)	APPLICANT RESPONSE	COUNCIL RESPONSE
9001	Can meet the Local Park criteria with a change to the reserve boundaries at the top of the slope to create more flat usable land.	<p>This proposed Local Park is sufficiently larger (1.36ha) than the 0.3-0.5ha requirement for a Local Park under the QLDC's Future Parks and Reserves Plan.</p> <p>A flat area of approximately 0.6ha is provided at the top of the reserve area (adjacent to</p>	<p>The flat usable space at the top of the reserve area needs to accommodate carparking and recreation improvements/infrastructure. While I agree that sloping land can create interest and view points, Reserve Improvements must be easily accessed for users with limited mobility and for</p>

RESERVE LOT	QLDC S.53 DESCRIPTION AND RECOMMENDATION (SUMMARISED)	APPLICANT RESPONSE	COUNCIL RESPONSE
		Lots 1 – 9) and renders of one possible development scenario for the reserve were attached as Appendix U to the Fast Track application which show a large flat rectangular open space area in front of Residential Lots 1 – 4, a flat car parking area and a smaller flat area adjacent to the Southwest gully (Lot 9018) that could contain a toilet.	maintenance purposes, and as such Council's position remains that reserve improvements need to be located on suitably flat areas of the reserve.
9003	Does not meet the Community Park criteria as it is too small, has several encumbrances and is hilly.	<p>As noted above, the QLDC Parks and Open Spaces Strategy allows for undulating land to be utilised for Community Parks.</p> <p>The QLDC Future Parks and Reserves Provision Plan states that Community parks are typically 1-2ha in size. The proposed Reserve Lot 9003 is 1.51ha in area.</p> <p>The location of the proposed reserve is in a prime area of the site valued for its panoramic views over Lake Wakatipu.</p> <p>There are multiple ways that this reserve lot could be improved for recreational use, or it may be that its benefit is in remaining relatively uncluttered to respect its landscape amenity values. Regardless, it is considered that this reserve will be an area that future residents of the subdivision will value for its scenic views.</p> <p>Areas of the site can be earthworked to create flat areas and this can be worked through as part of detailed design under the proposed condition of consent.</p> <p>The extinguishing of the no build encumbrance is addressed above.</p> <p>The interaction with the adjoining land treatment area and the difference in</p>	<p>As per the DC Policy <i>Land offered to the Council in lieu of cash development contributions for reserve land acquisition must be of a suitable standard, size and purpose to be accepted by the Council. This shall be at the discretion of the Council and must adhere to the QLDC Future Parks and Reserves Provision Plan 2021.</i> Only one Community Park is now being proposed by RCL and as such it is anticipated that it will be in high demand for a very wide range of community activities for all ages. Council's position remains that the Park needs to be increased in size to accommodate more flat land and would be more appropriately sized at 2 hectares to meet demand. Community Parks across the district often accommodate Community Sportsground facilities such as cricket nets or junior sportsfields and require buildings such as changing rooms and small club rooms. With the development of the future lots (totalling 2,531 lots) Homestead Bay could have over 4000 residents (assuming 2.2 residents per dwelling), more than the population of Arrowtown. Considering the density and relatively low provision of recreation reserve land and community facilities compared to other residential areas in the district, it is important that Homestead Bay recreation reserve land must accommodate a wide range of sport and recreation infrastructure, such as carparking, changing rooms, play equipment, public toilets, hard courts,</p>

RESERVE LOT	QLDC S.53 DESCRIPTION AND RECOMMENDATION (SUMMARISED)	APPLICANT RESPONSE	COUNCIL RESPONSE
		<p>maintenance requirements can be addressed via installation of a simple post and wire or post and rail fence between the two lots if QLDC desires. Regardless, the land treatment areas will be safe for human contact and consequently the interaction between the two areas is not as fraught as anticipated by the QLDC.</p>	<p>BBQ's and small community rooms (eg a scout hall).</p> <p>By comparison Arrowtown has six Local Parks, five Community/Sportground Parks, a library, historic town hall, swimming pool, bowls clubs and tennis courts on council administered land for a population of 2900 as well as several Churches that are regularly used by community groups.</p> <p>Interaction with adjoining land – landscape plans should be updated to show where fences would be required and how connectivity and pathways would be provided for. The third party should be responsible for fence maintenance.</p>
9005	<p>Does not meet the Community Park criteria. Hilly, linear, too small and have a no build covenant.</p> <p>Recommended to expand the reserve boundaries to accommodate 0.3ha (Local Park) or 1-2ha (Community Park) or predominantly flat suitable land. Remove no build covenant.</p>	<p>As detailed in the AEE, Reserve Lot 9005 is proposed to be classed as a Local Park. Its size (1.36ha) exceeds the 0.3-0.5ha required by the QLDC Future Parks and Reserves Provisions Plan for a Local Park. Consequently, although the lot is predominantly linear (due to following the higher ground area which allows for panoramic views) it is significantly greater in size than required.</p> <p>This reserve is also capable of containing a number of amenities indicated as being suitable for a Local Park including a flat, 30m x 30m kick around space, areas for socialising, landscaping.</p> <p>As outlined above for Lot 9003, areas of earthworks could be undertaken on parts of this proposed lot to extend the areas of flat land if this is desired by QLDC.</p>	<p>Agree this reserve is more suitably classified as a Local Park.</p> <p>Consequently the Homestead Bay development will only deliver one Community Park (which is constrained by configuration and topography as discussed above) and as such this is a further departure from the TTSC Structure Plan which requires 2-3 Community Parks and 4-5 Local Parks and Civic Spaces in the Homestead Bay East area.</p>
9009	Can meet Recreation Reserve criteria is the encumbrances are	Reserve Lot 9009 is proposed as a Community Park and meets the requirements for this in the	Reserve Lot 9009 will be incorporated into existing reserve land to enhance Jack Tewa Park and as such does not meet the criteria as a Community Park

RESERVE LOT	QLDC S.53 DESCRIPTION AND RECOMMENDATION (SUMMARISED)	APPLICANT RESPONSE	COUNCIL RESPONSE
	removed to allow for the development of community facilities.	QLDC Future Parks Provision Plan. The existing encumbrances and designation on this lot were acknowledged in the AEE and are addressed above.	on its own. It also must be free of encumbrances which the applicant still has not guaranteed.

Ecology/Wetland

12. Para 58 of the applicant's response- Council acknowledges the changes the applicant has made to the wetland maintenance period and agree this is suitable.
13. Para 59 of the Applicant's response – Council support amending of the predator control wording.

NATURAL HAZARDS / LIQUEFACTION

14. The applicant has responded to QLDC's written comments in paragraphs 171-172 of its written comments and provided Appendix H.
15. QLDC's comments from its review of that information is set out below.

Reservoir Site (Lot 12 - north)

16. The applicant says that the site is glacial till and is therefore a low risk to liquefaction. As part of the TTSC, QLDC geotechnical consultant undertook a liquefaction hazard assessment as per the MBIE (2017) 'Planning and engineering guidance for potentially liquefaction-prone land' guidance. The TTSC report is **attached** to this response.
17. For the reservoir area the assessment level of detail is in accordance with 'Level A' basic desktop assessment. No physical investigations were undertaken as part of the TTSC study, but that area near the reservoir was also mapped as Glacial Till. It is agreed that glacial till is unlikely to result in liquefaction, however, the Applicant references test pits that were done near the site. These referenced test pit logs or physical investigation that confirm it is glacial till cannot be seen in the initial application nor the additional information provided. As part of this consent, physical investigation should support geotechnical assessment.

WWTP / WTP Site (Lot 12 - south)

18. The data provided for each of the four Cone Penetration Test (CPT) varies in the Appendix H:
 - (a) Depth of CPT 4 is not provided. Ideally CPT would extend to a 20-30m depth. The depth needs to be confirmed to understand whether the data is reliable.
 - (b) For CPT 4 ground water level of 6m was used, corresponding to the water depth encountered at the borehole adjacent which is reasonable.
 - (c) For CPT 1 the water depth is not stated. Confirmation of the water depth or if it was dry is requested. This will allow for this CPT to be compared to the CPTs QLDC consultants undertook nearby at Tewa Park, where further investigations were recommended (as discussed in #172)

(d) It is unclear if SPT (Standard Penetration Test) testing was undertaken at the bore hole that was drilled to 30m, or if this was just to inform the water depth. Confirmation and justification (if required) as to why no SPT was undertaken in the borehole, given refusal was met in CPT2 & 3, is needed to understand whether the data is reliable.

19. Geotechnical investigations suitable for the liquefaction assessment are defined by MBIE (2017) as machine boreholes with Standard Penetration Testing (SPT) or Cone Penetration Tests (CPT) that characterise the ground to at least 10–15 m depth for residential or light commercial development, or at least 20–25 m depth for heavier structures or critical facilities. The recommended densities of subsurface investigations required for each assessment detailed by MBIE (2017) are outlined below.

20. The applicant needs to confirm the level of detail of the liquefaction assessments for both the reservoir site and the WTP/WWTP site in accordance with MBIE (2017) and demonstrate that it is suitable level for this stage of the consent.

LEVEL OF DETAIL IN THE LIQUEFACTION ASSESSMENT ^{1,2}	AVERAGE INVESTIGATION DENSITY	AVERAGE SPACING BETWEEN	MINIMUM TOTAL NUMBER OF INVESTIGATIONS
Level A³ Basic desktop assessment	0.01 to 1 per km ²	1 to 10 km	–
Level B Calibrated desktop assessment	0.5 to 20 per km ²	220 to 1400 m	3 for each geological sub-unit
Level C Detailed area-wide assessment	0.1 to 4 per Ha	50 to 320 m	5 if area > 1 Ha 3 if area 0.25 – 1 Ha 2 if area < 0.25 Ha
Level D⁴ Site-specific assessment	2 to 40 per Ha	15 to 70 m	2 within or very close to the building footprint

21. The liquefaction analysis undertaken for CPT 4 was for both IL3 and IL4 – QLDC requires reservoirs and WTP to be designed for IL4, so the results for IL4 have been considered. The liquefaction analysis undertaken from CPT 4 shows settlements for IL4 SLS2 (1 in 500) and ULS (1 in 1000) of 50mm and 60mm respectively. Appendix H does not conclude the classification of the liquefaction risk, but it does refer that “the liquefaction risk to be similar to eastern areas of the wider Homestead Bay site to the south” which stated: medium vulnerability, the initial report states it can be mitigated with robust foundation slabs similar to MBIE TC2 slabs (pg 511 of Eng Report Part 2). This mitigation was provided for residential buildings.

22. Confirmation of the classification of the liquefaction risk for the WTP/WWTP is required along with suitable mitigations for the intended use of the site, being for heavier structures which are also critical facilities in accordance with MBIE (2017).

LIQUEFACTION CATEGORY IS UNDETERMINED			
A liquefaction vulnerability category has not been assigned at this stage, either because a liquefaction assessment has not been undertaken for this area, or there is not enough information to determine the appropriate category with the required level of confidence.			
LIQUEFACTION DAMAGE IS UNLIKELY There is a probability of more than 85 percent that liquefaction-induced ground damage will be None to Minor for 500-year shaking. At this stage there is not enough information to distinguish between Very Low and Low . More detailed assessment would be required to assign a more specific liquefaction category.		LIQUEFACTION DAMAGE IS POSSIBLE There is a probability of more than 15 percent that liquefaction-induced ground damage will be Minor to Moderate (or more) for 500-year shaking. At this stage there is not enough information to distinguish between Medium and High . More detailed assessment would be required to assign a more specific liquefaction category.	
Very Low Liquefaction Vulnerability There is a probability of more than 99 percent that liquefaction-induced ground damage will be None to Minor for 500-year shaking.	Low Liquefaction Vulnerability There is a probability of more than 85 percent that liquefaction-induced ground damage will be None to Minor for 500-year shaking.	Medium Liquefaction Vulnerability There is a probability of more than 50 percent that liquefaction-induced ground damage will be: Minor to Moderate (or less) for 500-year shaking; and None to Minor for 100-year shaking.	High Liquefaction Vulnerability There is a probability of more than 50 percent that liquefaction-induced ground damage will be: Moderate to Severe for 500-year shaking; and/or Minor to Moderate (or more) for 100-year shaking.

23. In response to paragraph 172 of the applicant's response:

- (a) CPTs were undertaken by the applicant across the entire site, however, only the CPTs in the upper platform were undertaken for liquefaction analysis, as stated in the Geosolve Liquefaction Assessment provided in the initial application: *"As discussed above only the CPTs in the upper platform where shallow groundwater is present have been analysed which include CPT8, 12-16, 20-24 and 26, which achieved variable depths of between 2.3 and 13.9 m. The deeper CPTs are considered more representative."*
- (b) This is what is written in the QLDC response: "Only the CPTs in the upper platform where shallow groundwater is present were analysed as part of the liquefaction assessment"

24. QLDC geotechnical consultant for the TTSC recommended further investigation is undertaken in this area to confirm the liquefaction risk. This differs from the applicant's assessment. Access to the land was not granted to QLDC to undertake physical investigation in this area. The location of CPT 1 is where further investigations were recommended.

Attachment: Te Tapuae/Southern Corridor Liquefaction Hazard Assessment, Beca, 9 September 2025