Jeffreys tank replacement location and design consultation

Consultation feedback - overview and project team response

Key issues and suggestions	Project team response
• Adverse effect on neighbouring properties esp visual effects (14 submissions including one submission representing adjacent property owners and via lawyer) esp directly affected properties 45, 45A Waiwetu and potential new house at 184/184A and 190 Clyde Road. However, at least two members also submitted separately. • properties as Jeffreys Residents group), • also access to two properties via existing bridges Key suggestion – relocate away from houses	The site presented to the residents was selected based on the following factors: • Low capital costs. • It had the least impact on the existing pump station site (low risk to the existing structures) and the existing facilities on the reserve (rugby field, tennis court, playground). • All planning rules were complied with at this site • There are no other services at the site that may need relocating. The allowable building height under the District Plan for an Open Space Community Park is eight metres. We decided to reduce the maximum height to five metres in order to reduce potential visual effects on the neighbours. The proposed site will be architecturally designed, landscaped and constructed in a manner sympathetic with the reserve setting. However, concerns raised in consultation about the height and the look of the proposed tank design along with CPTED, antisocial behaviour and access concerns have prompted the project team to consider other options.
CPTED concerns 5 submitters indicated concerns about • increased risk of crime/ antisocial behaviour based on the location or the tank • lack of information in the consultation material about effective ways to keep people out of the area behind the tank. • any screening for adjacent properties would add to safety/security issues. Suggestions • security fencing, • dense/spiky plants	The Detailed Design will take into consideration the CPTED principles and the Seven Qualities of Safer Places. Which are: 1. Access: Safe movement and connections, 2. Surveillance and Sightlines: See and be seen, 3. Layout: Clear and logical orientation, 4. Activity Mix: 'Eyes on the street', 5. Sense of Ownership: Showing a space is cared for, 6. Quality Environments: Well designed, managed and maintained environments, 7. Physical Protection: Using active security measures. The Detailed Design will take into consideration CPTED principles and will prevent access to the areas between the tank and the property boundaries, for example a fence. However, under the current proposal, this will mean loss of access to the reserve via private property, and given the concerns raised, the project team is considering other options for the location of the tank. The security fence around the existing tank is part of the wider existing pump station compound. The proposed tank has been designed to prevent access without requiring it to be physically fenced.
General visual concerns including 'eyesore', blot on landscape, 'far too intrusive' higher than surrounding buildings' not adequate screening, too much of a change from existing tank Reduces useable space in the reserve Why such a large tank? Suggestions: • Design OK but suggest relocation • Recommend reduction in height to fit in with surrounding buildings e.g. library and environment (8) • Should be underground or partly buried (6 submitters) • Needs adequate landscaping to surround/screen and mitigate views across park	See above The visual effects have been considered in conjunction with other factors. The architectural design and landscaping at the proposed location will visually soften and integrate the tank with the amenity of the reserve. However, given the concerns raised about the visual effects of the tank as well as CPTED and access concerns, we are considering the advantages and disadvantages of other location and design options within the reserve. Concerns raised in consultation about the height and the look of the proposed tank design along with CPTED concerns have prompted the project team to consider other options. Reducing the tank height below five metres would result in a larger footprint. This would take up more reserve space. Hence the proposed five metre height which is well below the maximum permissible eight metres.

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	Burying the tank deep has earthquake resilience issues (as demonstrated by the current below ground tank), constructability issues owing to groundwater levels and water quality – E Coli and water ingress (contamination) could be an issue as it has been in other parts of the city. The proposed tank design is not to be buried more than 0.5 m. This ensures that the tank is well above the water table. Most of Jeffreys Reserve appears on the ECan Listed Landuse Register which implies that it might have had site contaminating activities in the past. Further investigation and mitigation requirements will be undertaken and determined at detailed design. Agreed the proposed site does reduce the usable space in this corner of the reserve. The proposed foot print is 150 m2 (could extend to 300 m2 with fencing around the tank). The proposed architectural design and landscaping aims to provide visual relief to the size of the tank, visually soften and integrate the tank with the amenity of the reserve. We are considering the advantages and disadvantages of other location options within the reserve as a result of concerns raised in the submissions. Reasons for the larger tank requirement include : (i) provision of sufficient additional buffer capacity for peak demand and emergencies (fire fighting) (ii) additional capacity for sand settlement/removal (iii) the larger suction tank enables more chlorine contact time (when chlorination is required) (iv) Better flow equalisation from 4 wells, facilitates smoother operation (v) the 500 m3 tank would future proof the network requirements for the next 50-100 years than the smaller tank would (v) (vi) The cost benefit of the larger tank outweighs that of the smaller tank. The tank dimensions are always larger than the work volume of water storage. This is because there is always an air gap between tank roof and the maximum water level. The net volume of water storage will be 500 m3. Round and rectangular tanks have been considered. For this site the rectangular tank was considered most suitable. This is because tank options with the longest flow path offer better sand removal. The longest flow path also offers the longest contact time in case chlorination was required. The handrail is a necessary health and safety feature for staff for their three-monthly inspection. We will investigate whether any other Health and safety measures can be used instead of handrails.
Existing use of site, replacement landscaping and existing tank One commented the rugby players use the site, another that it is a good picnic spot, and general comments that it is part of the park What will happen to the old tank/site - remove? Dispose/ landscape/ integrate? Will landscaping survive?	The existing pump station will remain. The existing tank will be demolished and the area tidied up. Agreed the proposed site does reduce the usable space in this corner of the reserve. The proposed foot print is 150 m2 (could extend to 300 m2 with fencing around the tank) . The proposed architectural design and landscaping aims to provide visual relief to the size of the tank, visually soften and integrate the tank with the amenity of the reserve.
Ground conditions unsuitable near river Well drilling caused damage to nearby properties, lateral spread – could further threaten properties (Residents Group)	The preliminary geotechnical assessment indicates that construction within 50 metres of the stream is feasible. From an engineering perspective, proximity to the stream does not preclude a site from possible use. The engineering design and construction methodology will take this into account.

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Alternative locations need to be considered: Suggestions: • Away from residential properties • Closer to library • On current playground site and to include tennis volley and basketball hoop - 8 submitters including Jeffreys Residents Group • Alternative location near Jeffreys Road (2nd choice Jeffreys Residents Group, also raised by several others). • Closer to southern and western boundaries • Near entrance from Thorneycroft Street. • Offsite e.g. Red Zone	Benefits noted for sporting and recreational amenity. At this stage the playground is not due for renewal. The preferred option was chosen for the following key reasons Low capital costs. • It had the least impact on the existing pump station site (low risk to the existing structures) and the existing facilities on the reserve (rugby field, tennis court, play-ground). • All planning rules are complied with at this site. • There are no other services at the site that may need relocating The tank needs to be located close to the existing pump station and infrastructure for cost, security and operational reasons. However, we are considering the advantages and disadvantages of other location options within the reserve as a result of concerns raised in the submissions.
Existing tank is fine. Four wells will overburden water supply and encourage waste	The wells are already existing and are consented. They are very deep wells, over 100 metres. The water allocation is controlled by the Environment Canterbury consents. Jeffreys Pump Station feeds into the North West Zone water supply network. The suction tank is necessary as it enables better operation flow control of the 4 new deep wells; peak load buffer; firefighting demand and tanks also help remove sand. Post-earthquake, the priority was to carry out urgent repairs; damaged wells replacement works in many pump stations and connections (temporary and permanent) to water supply network. Most of the works have been completed. We are now working through projects which have temporary connection; ensuring proper design is carried out for water security and community requirements.
Effects on existing trees and landscaping	Some minor tree pruning is envisaged, and possibly the relocation or replacement of a juvenile tree. There is no major effect on existing trees. Any new planting will be the responsibility of the contractor to establish for 12months. After this time the planting will be handed back to the CCC Parks Maintenance contractor for ongoing maintenance.
Process, information and viability concerns Consultation period too short? Signs not up for long enough? Should have reported more options in the leaflet e.g. burying the tank. Poor representation of the visual impacts – misleading , out of context Rate payer concerns – process and design fit for purpose – reasons for change?	The consultation was kept open until the day after the public holiday and all feedback received within a week of the closing date was accepted. The Council needs to replace the water tank and a balance was being sought from CCC Three Waters Unit between keeping the project moving and having meaningful input to its location and design. The intention of the meeting with adjacent residents was to introduce and explain the new proposal. In addition to the meeting invitation all residents were provided with a leaflet explaining the proposal including that the new site. Corflute signs and leaflet holders were put at the proposed site and in the reserve with enlarged visual representations which were concept designs only. On request, the site was marked with the dimensions of the proposed tank. All feedback is being considered and responded to by the project team

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	The preliminary cost estimate provided in the consultation documents was for the tank and related cost only. The construction of the bores has been completed. The bores are temporarily connected and permanent connection using the proposed tank is required. The aquifer test (pumping and discharging water into the stream) enables ECan to decide how much water could be allocated to the Council site. The tests were used to determine the performance of the aquifer. See above for response to location and other process issues
Construction concerns Concern about how long it will take based on earthquake repair process	The present tank was damaged by the 2011 earthquake and has not been used since. Temporary connections are in place. To enable the pump station to fully utilise the the capacity of the 4 new deep wells, it is important the damaged tank is replaced as soon as possible. The next stage will include detailed geotechnical investigation as part of Detailed Design. The construction methodology will not have a direct impact on existing properties' structural integrity. The potential main effects from construction will be noise and dust. However, mitigation will be put in place e.g. specific working hours, etc. to reduce potential effects. An independent dilapidation study will be carried out on nearby residence both pre and post construction to determine whether any damage has been caused as a result of construction activities.