8. ASCOT GOLF COURSE - PROPOSED PUMP STATION 63 RELOCATION

General Manager responsible:	General Manager City Environment, DDI 941-8608
Officer responsible:	Asset and Network Planning Unit Manager
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PURPOSE OF REPORT

1. To seek a Board recommendation that the Council approve to set apart an area of the Ascot Golf Course for public utility purposes to enable the construction of a replacement wastewater pump station.

EXECUTIVE SUMMARY

2. The existing Pump Station 63 (PS63) wastewater pump station is located in Hulverstone Drive, Burwood, which is a CERA Red Zone residential area. This large pump station lifts wastewater between two gravity wastewater pipelines, feeding into Pump Station 36 downstream and onward to the Christchurch Wastewater Treatment Plant at Bromley. Its catchment is the north-eastern area of Christchurch. PS63 suffered extensive damage in the February and June 2011 earthquakes, including significant differential settlement, and requires replacement.

3. Several options for the replacement of the damaged pump station have been considered. Locating a new station adjacent to the existing one would be susceptible to the same poor ground conditions. An area of Ascot Golf Course lies within the same catchment and would provide for a more resilient location for the asset. Of the two options within the golf course, the site closer to the corner of Beach and Frosts Road would minimise impacts on the golf course.

4. Council staff believe that setting aside an area as shown in **Attachment 1** for public utility purposes, and the construction of the intended wastewater pump station, would provide the most resilient wastewater system for the area and have minimal impact on park users and the course itself.

FINANCIAL IMPLICATIONS

5. Minor costs to survey the area to be set aside for public utilities and to register on the certificate of title would be in the order of $5,000, and charged back to the project.

Do the Recommendations of this Report Align with 2009-19 LTCCP budgets?

6. Not applicable.

LEGAL CONSIDERATIONS

7. The approximate 2,000 square metres of park land proposed to be set aside comprises part of Lot 1 Deposited Plan 10381: 11.0327 hectares (contained in Certificate of Title CB439/74), is vested under the Local Government Act 2002 in the Christchurch City Council, and is not currently held for a specific purpose.

8. Section 52 (4) of the Public Works Act 1981 permits the setting apart of Council owned land for a specific purpose. The Minister of Land Information must place a notice in the Gazette notifying the public that the Council has resolved to set aside the area of land for public utilities, following a request to do so from the Council's Chief Executive.

Have you considered the legal implications of the issue under consideration?

9. Yes, as above.

ALIGNMENT WITH LTCCP AND ACTIVITY MANAGEMENT PLANS

10. Not applicable.

Do the recommendations of this report support a level of service or project in the 2009-19 LTCCP?

11. Yes, page 70 of 2009/19 LTCCP and 11.0.1 of Activity Management Plan, wastewater collection is provided in a safe, convenient and efficient manner.

ALIGNMENT WITH STRATEGIES

Do the recommendations align with the Council's strategies?

12. Yes, in alignment with Wastewater Activity Management Plan.

CONSULTATION FULFILMENT

13. The Council is required to consult on the proposal to dispose of the area of park described above under section 138 of the Local Government Act 2002. The use of "dispose" here includes utilising an area of land held by the Council for a purpose other than a range of current uses including recreation.

14. Council staff placed a public notice in The Press (Wednesday 13 June 2012) outlining the proposal to set aside the area described above for public utility purposes. The consultation notice describes the intended pump station use of the site (**Attachment 6**). In addition, SCIRT have produced a leaflet in which they describe the pump station proposal in more detail and refer to the Council public notice. The SCIRT document (**Attachment 4**) was delivered to the neighbourhood and stakeholders. A small number of responses were received to the SCIRT document (**Attachment 5**) and none to the public notice. Most responses accepted the need to replace the infrastructure with a fairly equal split of those in favour of the proposed site and others not.

STAFF RECOMMENDATION

It is recommended that the Board recommend that the Council:

(a) Resolve to set apart approximately 2,000 m2 of the land currently known as Ascot Golf Course being part of Lot 1 Deposited Plan 10381: 11.0327 hectares (contained in Certificate of Title CB439/74) for public utility purposes under section 52 of the Public Works Act 1981. All areas being subject to survey.

(b) Council's Chief Executive be requested to sign a request to the Minister of Land Information to gazette that portion of the land described in (a) above for public utility purposes.

BACKGROUND (THE ISSUES)

15. The existing Pump Station 63 (PS63) wastewater pump station is located at 47 Hulverstone Drive, Burwood, adjacent to Chale Lane. The existing PS63 is a large pump station which lifts wastewater between two gravity wastewater pipelines, feeding into Pump Station 36 downstream and onward to the Christchurch Wastewater Treatment Plant at Bromley. Its catchment is the north-eastern area of Christchurch (including Belfast, Kainga, Brooklands, Spencerville, Burwood, Parklands, North Shore, Waimairi, and the proposed new Prestons subdivision).

16. PS63 suffered extensive damage in the February and June 2011 earthquakes, including significant differential settlement, and requires replacement. The existing station is located in a CERA Red Zone residential area. See **Attachment 2** for location.

17. Ascot Golf Course is a leased area of Queen Elizabeth II Park. It is not a reserve vested in the Council pursuant to the Reserves Act 1977, but is land vested in the Council pursuant to the Local Government Act 2002. The golf facility was badly damaged and is not currently operating. The future use of the land as a golf course will be considered as part of the Facilities Rebuild process.

18. The Northern and Coastal Wastewater Strategy document prepared by SCIRT concluded that PS63 should be replaced with a new pump station, but located away from the river and Red Zone. The new PS63 will be located 1.6 kilometres north of the existing station on Ascot Golf Course. The new station will discharge through a new 800 millimetre diameter pressure main into the existing gravity wastewater network downstream of the existing PS63 pump station location.

19. The pressure main alignment would head east through Ascot Golf Course, alongside the boundaries with Beach Road and Ascot Avenue, then heading south down Bower Avenue. The final route is being assessed at this time. The Council's Corporate Support staff would create the necessary easements under delegated authority from the Council to the Corporate Support Manager.

20. Four location options were considered for the PS63 replacement:

    (a) The existing site.

    (b) Cedarwood Reserve, adjacent to the existing site.

    (c) In the corner of Ascot Golf Course, adjacent to the junction of Frosts Road and Beach Road.

    (d) Within Ascot Golf Course, approximately 100 metres along Beach Road east of the proposed option 3 location.

21. These site options are shown in Attachment 2 and **Attachment 3**. The advantages and disadvantages of these site options are listed in the table below. The preferred option is Option 3, adjacent to the intersection of Frosts Road and Beach Road, within Ascot Golf Course. Geotechnical investigations have been carried out at this site, which have confirmed that it is suitable, and a concept design of the replacement PS63 has been completed by SCIRT. Whilst Option 4 offers a slightly better technical solution in terms of the mitigation of geotechnical conditions, being further from Travis Wetland, locating the station nearer the corner would minimise the need to shorten the golf course hole length.

Option	Location option	Advantages	Disadvantages
a	Existing PS63 site	• Minimal changes to existing sewer infrastructure. • No new land required.	• Not technically feasible to retain the existing pump station and build a new one on the same site. • Constructing a new pump station on the same site would require the old pump station to be demolished first, resulting in overflows for an extended period (10 to 12 months). • Area has proven to be vulnerable to land damage in earthquakes (settlement and lateral spreading); indicating that significant ground improvement would be required to consider construction. • Location adjacent to the river is vulnerable to flooding. • Much of the lower PS63 catchment has been zoned red by CERA, including this site. If retained in this location, PS63 would be remote from its catchment once the surrounding properties have been abandoned, linked to the remaining catchment by trunk gravity sewers through land prone to liquefaction and lateral spreading. • The existing damaged 1.5 kilometre long 900 millimetre diameter gravity sewer down Frosts Road and Anzac Drive into the existing PS63 would need to be replaced. A replacement gravity pipe through this area would be at risk of future seismic damage.

b	Within Cedarwood Reserve, adjacent to the existing PS63 site	• Minimal changes to existing sewer infrastructure. • No land purchase required; land is owned by Council.	• Area has proven to be vulnerable to land damage in earthquakes (settlement and lateral spreading); indicating that significant ground improvement would be required to consider construction. • Location adjacent to the river is vulnerable to flooding. • Much of the lower PS63 catchment has been zoned red by CERA, including this site. If retained in this location, PS63 would be remote from its catchment once the surrounding properties have been abandoned, linked to the remaining catchment by trunk gravity sewers through land prone to liquefaction and lateral spreading. • The existing damaged 1.5 kilometre long 900 millimetre diameter gravity sewer down Frosts Road and Anzac Drive into the existing PS63 would need to be replaced. A replacement gravity pipe through this area would be at risk of future seismic damage. • The site is in Recreation Reserve, so is for recreation purposes not utilities.
c	In the corner of Ascot Golf Course, at the intersection of Frosts Road and Beach Road	• Station located within an area that has suffered less seismic damage than existing site. • There is sufficient room for ground improvement works and to efficiently construct the pump station. • No land purchase required; land is owned by Council. • Pressure main with better resilience replaces existing gravity trunk sewers down Frosts Road and Anzac Drive. • Location is within existing gravity catchment, adjacent to the confluence of incoming gravity sewers and pressure pipes at the Frosts Road/Beach Road intersection, meaning less disruption to existing services. • Mature trees provide effective visual screening to new station.	• The site is in greenspace open land owned by the Christchurch City Council, so is for recreation purposes not utilities. • There are nearby residential neighbours. • Some trees would need to be removed to install gravity inlet pipes and construct pump station. • Station will impact on current golf course layout. • Close to Frosts Road, which suffered some lateral spreading and settlement.

d	Within Ascot Golf Course, 100m from the intersection of Frosts Road and Beach Road	• Station will be located within an area that has suffered less seismic damage than existing site. • There is sufficient room for ground improvement works and to efficiently construct the pump station. • No land purchase required; land is owned by Council. • Pressure main with better resilience replaces existing gravity trunk sewers down Frosts Road and Anzac Drive. • Location is within existing gravity catchment, adjacent to the confluence of incoming gravity sewers and pressure pipes at the Frosts Road / Beach Road intersection, meaning less disruption to existing services. • Mature trees provide effective visual screening to new station. • Located further away from Travis Wetland and area of ground settlement identified along Frosts Road. • Inlet sewers can be installed with no expected removal of tree screening along Beach Road boundary.	• The site is in greenspace open land owned by the Christchurch City Council, so is for recreation purposes not utilities. • There are nearby residential neighbours. • Some trees would need to be removed to construct pump station. • Station would have a greater impact on current golf course layout, although continuance of course lease is uncertain.

22. The pump station is likely to include two buildings – a pump building and a generator building. The scale of these buildings is set by their functions. Indicative locations of the buildings are shown on the plan at Attachment 1. Note that the final position and layout of the structures within the site is subject to confirmation during the detailed design phase. There will also be a number of chambers which will finish at ground level. These are shown in green on the plan included at Attachment 1.

23. The pump building will be approximately seven metres tall (with an annex building four metres high), approximately 120 square metres in footprint area, and extend approximately eight metres below ground. The below-ground structure will comprise wet well chambers containing the proposed three submersible (underwater) wastewater pumps. The above-ground structure will allow the pumps to be removed to be serviced, using a crane (gantry) within the building. The generator building will be approximately five metres tall and 50 square metres in footprint area. This building will be heavily insulated to ensure noise emissions meet City plan requirements.

24. Odour from the pump station will be treated using a bark biofilter, which will be an approximately 12 metre x 12 metre bed of bark, raised about one metre above the surrounding ground. The architectural design of the buildings and landscape design of the site will be carried out by Christchurch City Council architects and landscape architects, and will be sympathetic to the surroundings to provide visual screening of the facility for the neighbouring community. Construction is expected to take 10 to 12 months and would commence following Council approval.

25. Stronger Christchurch Infrastructure Recovery Team (SCIRT) have applied for a global resource consent for future pump station installations such as this one. Future pump station proposals will be designed to comply with the consent conditions. It is expected the construction of PS63 will be covered by this consent.