Appendix D
Standard Conditions for
Water Supply Above RL50

WATER SUPPLY

1. The water supply system shall be designed in accordance with Water Resources Commission Guidelines and amendments, Council's Development Manual, Council's Standard Drawings, and to the requirements of the Council's Water Supply and Sewerage Engineer. Similarly, adherence to Acts, Regulations, relevant standards and Council's ByLaws is required.

RESERVOIRS

2. The reservoir is to be reinforced concrete cast insitu with a concrete roof, as per Whitsunday Regional Council, Standard Drawings and notes, fully secured and to the full satisfaction of Council's Water and Sewerage Engineer.
3. The land on which the reservoir is constructed and sufficient surrounding land, 4 meters minimum, shall be dedicated to Council at no cost to Council.
4. A 240v power supply shall be provided to the reservoir site.
5. A suitable sealed access and turning area shall be constructed and dedicated to Council at no cost to Council, in accordance with Council's Development Manual.
6. The access road to the reservoir is not to be utilised as a common access. Land in which the access road is situated is to be dedicated to Council at no cost to Council.
7. The gradient of the access road is not to exceed 20%.
8. Storm water layout with details of overflow / scour / underdrainage flow path is to be identified.
9. Security fence details are to be provided.

PUMP STATION BUILDING

10. The reservoir is to be reinforced concrete cast insitu with a concrete roof, as per Whitsunday Regional Council, Standard Drawings and notes, fully secured and to the full satisfaction of Council's Water and Sewerage Engineer.
11. The land on which the pump station is constructed and sufficient surrounding land, 3 meters minimum, shall be dedicated to Council at no cost to Council.
12. The finished floor level of the pump station should be self draining and no less than 200mm above the surrounding finished ground level.
13. Should be situated at a suitable RL AHD so that the return gravity system does not exceed to maximum head recommended by the Water Resources Commission Guidelines.
14. Provision is to be made within the building, opening to external, for a suitable sized room to house the disinfection equipment and storage tank. The room shall be independent of all mechanical and electrical equipment.
15. Pump control room is to be fitted with sufficient ventilation to allow air flow within the room.
16. A suitable sealed access and hard standing area shall be provides and constructed as per Council's Development Manual.
17. Security fence details are to be provided.
18. Building to be sized to house the following but not limited to:
    a. Duty / Stand-by pump arrangement.
    b. Electromagnetic type flow metering. (ie. Kent or combined Instruments).
    c. Control cabinet and switching equipment as per council's standard specifications.

d. Telemetry connected and commissioned to be fully compatible with Councils existing telemetry control system.
e. Low pressure safety cut out switch on the suction side of the pumping system, shall be installed in a manner so that it can be isolated from the main and release the pressure to text the suitability without having to close down the water supply to the pumps.
f. Room to house the disinfection equipment.

PUMPS

19. For calculating the duty head of the pump please note that the BWL of the Cannonvale reservoir is at RL 72.
20. Duty / Stand-by pump arrangement is to be provided. They must be able to run in parallel if required.
21. Pumps must be fitted with mechanical seals.
22. Reflux valves shall be on the discharge side of the pump.
23. Valving is to be provided so each pump can be isolated and removed if necessary should the case arise.
24. Vacuum and pressure gauges are to be fitted.
25. Pumps and system should be protected against water hammer.
26. All pumping equipment is to be new.

POWER TO THE SITE

27. All power used up until the project is placed on maintenance shall be the developer's responsibility. At On Maintenance the developer shall have the Ergon account transfer to Council.

PIPEWORK

28. All appropriately sized pipe work into / out of the pump station and pipe work associated with the pump connections shall be DLCL and fully flanged.
29. A dedicated rising main, appropriated sized, of K9 DICL shall link the pump station to the reservoir.
30. All gravity mains, appropriately sized, may be uPVC Class 16.
31. Water mains are to be installed on the topside of the road, in natural ground, where possible.
32. Horizontal separation of the rising main and the gravity main shall be maintained at 300mm.
33. Any under-boring of main roads shall utilise 6mm steel for the sleeve as a minimum or as their approval.
34. Long section of the main on the suction side of the pumps shall be submitted, to ensure air locks can not affect the performance of the pumps.

DISINFECTION

35. Disinfection facilities (sodium hypochlorite) to be provided should include but not limited to:
    a. Adequate sized room to house all equipment to comply with WHS regulations.

b. Adequate sized storage tank complete with an approved measuring device
c. Pumping equipment with adequate pumping capacity to maintain a chlorine residual in the reticulation system to the satisfaction of Council.
d. Bunding details, pump out pit (300 x 300 x 200mm deep) and the method of sealing all of the concrete works and walls are to be provided
e. The retractable injection quell shall be installed external to the building and suitably protected from damage.
f. The injection point is to be installed on the discharge side of the pumps.
g. Provide an approved safety shower / eye wash basin in a secured area, external to the building.
h. Provide a 20mm hose tap in a secured area.

CONSULTATION

36. It is essential that the applicant's water supply consultant discuss in full the system with Council's Water and Sewerage Engineer prior to and during the design phase.
37. An Elpro approved installation contractor is to be used for the telemetry system.