



WESTERN WATER NEIGHBOURHOOD SEWER PUMP STATION DESIGN STANDARDS

1. The design and construction of Neighbourhood sewerage pump stations and rising mains shall be in accordance with this document, the Water industry Technical Standards Sewage Pump Station Design Manual and the following construction standards:
 - Water industry Technical Standards Sewage rising Main Constuction General Specification 95-101.1 Agreement Works
 - Water industry Technical Standards Sewage Pumping Station construction – Mechanical and electrical 95-102.1 Agreement Works
 - Water industry Technical Standards Sewage Pumping Station Construction – Civil General Specification 95-103.1 Agreement Works
2. Pump well and civil works shall be designed for a 60 year life.
3. Special written approval shall be obtained from Western Water for packaged precast pump wells. Such approval will only be granted for temporary and or minor pump stations.
4. Pumps and electrical control systems shall be designed for a life of 25 years.
5. 100% back up pump required.
6. Pump well and inflowing sewer to provide a storage volume equal to the greater of:
 - 2 hours emergency storage at peak dry weather flow or
 - 4 hours average dry weather flow
7. Provide an Emergency Relief Structure i.e. a properly designed spill path down stream of the emergency storage for overflow in the event of an extended pump failure that complies with the EPA requirements including a curtained outlet to prevent floating solids from discharging.
8. The internal surface of the pump station shall be painted with epoxy paint unless otherwise approved in writing by Western Water.

Western Water may agree to omit the epoxy coating in temporary pump stations.



9. The pump guide rails and chains shall be stainless steel.
10. Internal pipe work shall be epoxy lined ductile iron or approved equivalent. Western Water may consider ABS pipe work in some installations, however UPVC pipe work within the pump station is no permissible.
11. The pumps must be compatible with other Western Water sewage pump station sites unless otherwise approved in writing by Western Water.
12. The control cabinet has a space of approx 600 mm x 500mm for a future S.C.A.D.A. unit.
13. The control wiring is set up to allow easy connection to S.C.A.D.A.
14. Provide an Edac autodialler model 464/16 with 2 hour battery backup and a land line with the following alarms set to call Western Water’s emergency contact number verified by Western Water along with a identification name for the pump station:
 - Alarm 1 Pump failure
 - Alarm 2 Phase Power failure
 - Alarm 3 Back up battery failure
 - Alarm 4 High level alarm
 - Alarm 5 Overflow alarm
 - Alarm 6 Fail to pump alarm¹
 - Alarm 7 ERS overflow level

Western Water may consider a mobile telephone service in remote locations.

The current emergency numbers are:

Township	Emergency Number *
Riddells Creek, Woodend, Gisborne.	Gisborne Depot Oncall Ph 0418 507 059
Sunbury, Diggers Rest, Romsey and Lancefield.	Sunbury Depot Oncall Ph 0408 391 545
Melton, Bacchus Marsh and Rockbank	Melton Depot Oncall Ph 0412 844 281

*** confirm with Western Water before each installation**

¹ Based on the time between starts.



15. Provide a flow meter and data logger on the rising main unless otherwise agreed with Western Water
Western Water may agree to omit the flow meter in some small pump stations.
16. Provide a lockable weatherproof external connection to the switchboard for connection of a portable generator to Western Water's satisfaction.
17. Confirm with Western Water on the type of pumps / pedestals required to be compatible with other sites ie to allow interchange of standby pumps.
18. Provide a camlock fitting on the delivery pipe work to allow a portable high suction pump to be used in the event of extended power failure etc.
19. Provide a valved scour point and eduction pit at all low points of the rising main to the satisfaction of Western Water and a valved scour pipe from the rising main into the pump well.
20. Do not provide a ladder in the well for OH&S reasons ie to avoid the temptation to go down without the full confined space entry kit and staff etc.
21. Provide a safety net or properly designed hinged mesh cover within the pump station to the satisfaction of Western Water to prevent staff falling into the well when the access covers are open for inspection.
22. Provide aluminium covers, with a padlock-locking device; Western Water will provide a Western Water padlock for the pump station upon commissioning of the pump station.
23. Do not provide venting unless specifically requested to do so by Western Water to cater for an abnormal situation exists such as unique or heavy trade waste.
24. Provide a 20mm metered town water supply with an inverted anti vandal hose bib in a separate below ground meter pit for wash down purposes with two spare tap keys left in the electrical control cabinet.
25. Refer to Western Water for selection of level sensors, ie brands of hydrostatic pressure level sensors preferred and control system rather than level switches etc.



26. The high level pump operation signal shall be able to be manually overridden at the switchboard control panel mains power switch to enable isolation of the pumps during routine maintenance of the pump station (ie to prevent accidental start up of the pumps by accidentally tripping the level controls).
27. The electrical control cabinet shall be powder coated mist green colour made from 3mm thick marine grade aluminium or approved equivalent.
28. The electrical control cabinet shall have separate doors for the power company meter with a suitable power company lock. The main control cabinet shall be fitted with a standard CL001 key.
29. Consult with Western Water to determine if a fail safe inlet to the pump station is required to by pass the Knife gate valve comprising a manhole immediately upstream of the pump station wet well and a spill pipe into the pump well.

This standard is subject to constant review and will change.

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