

Sewers offered for adoption to South West Water should be designed and constructed in accordance with 'Sewers for adoption 6th edition'. The amendments set out in this document are intended to give additional guidance where clarification is needed between the developers and sewerage undertakers, specific to the area managed by South West Water Ltd.

These amendments in conjunction with 'Sewers for adoption 6th edition' are intended to provide comprehensive information for the design, specification, agreement, construction, maintenance and inspection of the sewerage elements involved with adoptions. This does not remove the need for constructive discussions between all parties at appropriate stages or where project specification requirements need to be addressed.

South West Water has established a number of technical standards and approved listing / supplier agreements for the supply of products and services such as pumps, motors, valves and control panels in accordance with these standards. Although there is no obligation, developers may wish to use South West Water's standardisation and supply agreements. The framework for these is listed in the technical and sourcing strategy, technical standard SWW-TS-411.

Where required the appropriate technical and sourcing strategy variation form, SS1 –SS should be completed and returned to:

Engineering Technical Support
Peninsula House
Rydon Lane
Exeter
EX2 7HR

Contact us

For more information about the current agreements, technical standards or for an alternative format please contact the Developer Services Team:

Services Helpline: 0344 346 2020*
8am - 6pm Monday to Friday. Emergencies only at any other time.

Minicom users: 0800 169 9965
Email: DeveloperServices@southwestwater.co.uk

*03 numbers are charged at standard rates and will be included in any free minutes in a mobile or landline phone contract.

The following amendments are referenced to existing clauses in 'Sewers for adoption – 6th Edition'. These clauses either amend or replace the original clauses and shall take precedence in all cases

Table of contents

Part 2 Design

Part 2b – pumping stations

2.17.7	Storage
2.18.6	Layout of pumping station
2.18.7	Security fencing
2.20.4	Wet well
2.20.7	Wet well
2.22.0	Access into wet well and chambers

Part 3 M&E specification for small pumping stations

Part 3a – pumping specification

3.3.11	Wet well flushing / mixing / cleaning system
3.3.13	Lifting system
3.3.16.6	Chains

Part 3c – electrical specification

3.11.2	Kiosk construction
3.11.7	Telemetry outstation
3.13.4.1	Common control system

Part 4 M&E specification for micro pumping stations

Part 4a – pumping specification

4.3.12	Lifting system
4.3.15	Chains

Part 4c – electrical specification

4.11.2	Kiosk construction
4.11.6	Telemetry outstation

Part 6 Miscellaneous

Part 2b – pumping stations

Page	Clause number	Description
41	2.17.7 (add)	<p>Storage Additional storage shall be provided to ensure that sewage flooding does not occur during plant or power failure at the pumping station or further upstream. It shall be above the high level alarm and below the lowest connection inspection chamber soffit and equate to a 24 hour flow generated at 1DWF.</p> <p>Online tank sewers upstream are the preferred means of storage, but if off- line tanks or tank sewers are proposed these will need to be self-cleaning where possible and details will need to be submitted for approval. Storage capacity in the sewers and manholes may contribute to the storage provision and calculations should be provided.</p>
41	2.18.6 (add)	<p>Layout of pumping station</p> <p>Access roads and operational areas within the pumping station boundary shall be suitably constructed and surfaced to ensure access for vehicles and plant to facilitate maintenance operations as agreed with all appropriate agencies. Non-operational areas will normally be laid with shingle to minimise maintenance. Only in exceptional circumstances or if planning conditions require will soft landscaping be considered. It should be noted that the local Planning Authority may determine the requirements for site layout and location under the planning condition.</p>
41	2.18.7 (add)	<p>Security fencing</p> <p>South West Water will determine the need for fencing on a site specific basis, unless the planning application approval is subject to a condition relating to fencing. Where security fencing is required it shall comply with South West Water's technical standard for Permanent Security Fencing (SWW-TS-122).</p>
42	2.20.4	<p>Wet well</p> <p>The hazardous area zone classification for pumping stations shall be assessed and carried out in accordance with the relevant parts of BS EN 60079 and the requirements of South West Water's technical standard for Hazardous Area Classification Flammable Gas or Vapour Risks (SWW-TS-104). Wet wells shall generally be classified as zone two. The requirement of Dangerous Substances and Explosive Atmosphere Regulations (2002) and Statutory Instrument no.2776 (2002) shall be incorporated.</p>
42	2.20.7 (add)	<p>South West Water shall be consulted for the suitability of pump operation and the requirement for additional safety measures to be installed for maintenance purposes if the depth of the wet well exceeds six meters.</p> <ol style="list-style-type: none"> a. The wet well shall be designed to eliminate the need for man entry for maintenance as far as possible b. No valves are permitted in the wet well c. Ductile iron or other suitable material should be used for pipework within the wet well. Corrosion protection shall generally comply with the requirements specified in the Water Industry Mechanical Electrical Specification (WIMES) 4.01 – Paints and Polymeric Coatings for Corrosion Protection.

Page	Clause number	Description
		<p>d. Where practicable the ultrasonic level sensor head should be suspended from a mounting plate affixed over an aperture in the wet well cover slab, so that it can be easily removed for adjustment or replacement, without the need for man-entry into the wet well. The mounting plate and its securing bolts shall be recessed into the cover slab to provide a trip-free level surface. Alternatively, where the design of the wet well requires the sensor head to be positioned in the opening in the cover slab it shall be affixed to a bracket in such a manner that it can be removed/adjusted with the safety grids/grills in place.</p> <p>e. Ducting for pump supply cables shall be fitted with a draw rope and large enough to accommodate a connecting plug fitted to the cable and shall be laid between an above-ground weatherproof IP67 rated supply box. This shall be situated at the perimeter of the wet well at a point adjacent to the appropriate set of guide rails to facilitate safe and easy removal/replacement of the pump. The ducting may be secured to the underside of the cover slab, or incorporated in a topping to the cover slab such that there is no trip hazard.</p>
44	2.22	<p>Access into wet well and chambers South West Water does not permit drilled chequer plate or open mesh flooring as a means of venting the wet well for safety and environmental reasons. Depending on the location a ventilations stack or vent may require the facility for the provision of a suitable odour control facility.</p>

Part 3 – pumping station pump specification

Page	Clause number	Description
57	3.3.11	<p>Wet well flushing / mixing / cleaning systems If the wet well is correctly sized, benched and the facilities in the ultrasonic controller for varying start levels and pump venging, wet well flushing / mixing / cleaning the system can be unnecessary. Details of the correct standards are detailed in South West Water’s technical standards.</p>
57	3.3.13	<p>Lifting system South West Water’s lifting system requires the provision of a davit and socket(s). The current preferred supplier is Didsbury, and any davit sockets installed shall be suitable to accept a standard Didsbury davit.</p>
58	3.3.16 3.3.16. 6 (add)	<p>Chains The chain material shall be a grade of stainless steel appropriate to the anticipated operational environment within the wet well and in accordance with the relevant parts of BS EN 10088.</p> <p>Note: the default choice of material for all ancillary metallic components (e.g. bolts, screws, nuts, washers and chains.) shall be stainless steel and in accordance with the relevant parts of BS EN 10088, Grade 1.4401, equivalent to 316.</p>

Part 3c – electrical specification

Page	Clause number	Description
63	3.11.2.1 (add)	<p>Kiosk Construction</p> <p>The kiosk shall be of adequate size to permit safe operation and maintenance of the enclosed equipment. Where a non 'walk-in' kiosk design is offered, this shall be designed and supplied with a suitable weather and windproof structure which can be quickly and easily affixed to the kiosk provide a dry and safe working environment for maintenance on the control panel. Where it is appropriate and agree with South West Water a 'walk-in' kiosk may be offered. In addition there shall be a hardened drained area extending 1.5m back from the face of the kiosk to avoid standing on a soft, wet surface when working on possible live panels. Adequate lighting shall be installed to illuminate the interiors of the panels and the working area. The kiosk and shelter shall be of sufficient height (min 2m) to avoid crouching while working. A separate compartment will be required in the kiosk to house the shelter and pump lifting davit. In sensitive areas, where a GRP kiosk is not visually acceptable to the local Planning Authority, a low maintenance building in materials to match the surrounding development will be considered.</p>
65	3.11.7 (add)	<p>Telemetry Outstation</p> <p>Telemetry shall be provided at all new pumping stations that are being offered for adoption. Generally if a pumping station is incorporated as part of a submission an estimate will be provided for the telemetry by South West Water in the initial response. The estimate will be valid for six months. To progress the installation of the telemetry or should an updated quotation be required contact South West Water. South West Water will provide and configure the approved telemetry outstation and will monitor for a minimum of three months prior to the start of the maintenance period.</p>
72	3.13.4.1c (add)	<p>Common Control System</p> <p>The ultrasonic level controller shall be in accordance with South West Water supply agreement and will be pre-programmed with South West Water's mode of operation, only requiring the setting of site specific parameters relating to level.</p>

Part 4a micro pumping stations pump specification

Page	Clause number	Description
87	4.3.12	<p>Lifting system</p> <p>South West Water's lifting system requires the provision of a davit and socket(s). The current preferred supplier is Didsbury, and any davit sockets installed shall be suitable to accept a standard Didsbury davit.</p>
87	4.3.15 4.3.16.6 (add)	<p>Chains</p> <p>The chain material shall be a grade of stainless steel appropriate to the anticipated operational environment within the wet well and in accordance with the relevant parts of BS EN 10088.</p> <p>Note: the default choice of material for all ancillary metallic components (e.g. bolts, screws, nuts, washers and chains.) shall be stainless steel and in accordance with the relevant parts of BS EN 10088, Grade 1.4401, equivalent to 316.</p>

Part 4c electrical specification

Page	Clause number	Description
93	4.11.2	<p>Kiosk Construction</p> <p>The kiosk shall be of adequate size to permit safe operation and maintenance of the enclosed equipment. Where a non 'walk-in' kiosk design is offered, this shall be designed and supplied with a suitable weather and windproof structure which can be quickly and easily affixed to the kiosk provide a dry and safe working environment for maintenance on the control panel. Where it is appropriate and agree with South West Water a 'walk-in' kiosk may be offered. In addition there shall be a hardened drained area extending 1.5m back from the face of the kiosk to avoid standing on a soft, wet surface when working on possible live panels. Adequate lighting shall be installed to illuminate the interiors of the panels and the working area. The kiosk and shelter shall be of sufficient height (min 2m) to avoid crouching while working. A separate compartment will be required in the kiosk to house the shelter and pump lifting davit. In sensitive areas, where a GRP kiosk is not visually acceptable to the local Planning Authority, a low maintenance building in materials to match the surrounding development will be considered.</p>
93	4.11.6 (add)	<p>Telemetry Outstation</p> <p>Telemetry shall be provided at all new pumping stations that are being offered for adoption. Generally if a pumping station is incorporated as part of a submission an estimate will be provided for the telemetry by South West Water in the initial response. The estimate will be valid for six months. To progress the installation of the telemetry or should an updated quotation be required contact South West Water. South West Water will provide and configure the approved telemetry outstation and will monitor for a minimum of three months prior to the start of the maintenance period.</p>
101	4.13.4.1 (add)	<p>Common Control System</p> <p>The ultrasonic level controller shall be in accordance with South West Water supply agreement and will be pre-programmed with South West Water's mode of operation, only requiring the setting of site specific parameters relating to level.</p>

Miscellaneous

1	Pump supply cables shall be fitted with IP67 rated plugs and sockets and shall connect via ducts affixed below or in the wet well cover slab to matching sockets in a weatherproof supply box at the perimeter of the wet well. These sockets shall be hardwired back to the pump control panel. The preferred make is Icore, however similarly approved makes such as Marechal or Legrande may be offered for consideration on a site specific basis.
2	Where required site floodlighting shall comply with the relevant sections of South West Water's technical standard Guidance for Designers (SWW-TS-550).
3	Isolation of the wet well from the incoming flows shall be achieved by an on-seating penstock fitted to the outlet from the last manhole before discharging to the wet well. The upstream gravity sewers shall be designed so that all flows from the development pass through this manhole, which shall be situated within the pumping station boundary. The discharge from this manhole shall constitute the only inflow to the wet well.
4	Where reasonably practicable, a potable water supply shall be provided within the compound for washing down the wet well and pumps removed for repair. No direct connection off the mains supply to a mobile jetting unit is permitted under the Water Supply (Water Quality) Regulations 2000 and the Water Supply (Water Quality) Amendment, Regulations 2001. Therefore either a pressure wash water set, or a suitable mains fed storage tank shall be provided to supply a mobile pressure washer and installed in accordance with these regulations.

Index to South West Water's amendments & requirements for sewers for adoption 6th edition

Access into wet well & chambers	Clause
Chains (small pumping stations)	2.22
Chains (micro pumping stations)	3.3.16.6
Common control system	4.3.15
Kiosk construction (small pumping station)	3.13.4.1
Kiosk construction (micro pumping station)	3.11.2
Layout of pumping station	4.11.2
Lifting system (small pumping station)	2.18.6
Lifting system (micro pumping station)	3.3.13
Security fencing	4.3.12
Telemetry outstation (small pumping station)	2.18.7
Telemetry outstation (micro pumping station)	3.11.7
Wet well (hazardous area zone)	4.11.6
Wet well (depth, design)	2.20.4
Wet well flushing / mixing / cleaning systems	2.20.7
Miscellaneous	Page 6