

Supplementary information to the WSAA Sewerage Code of Australia

**Melbourne retail water
agencies edition**

Version 2 WSA 02-2014-3.1

For Land Development

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Note: The clause and section numbers match those that are used in the Melbourne Retail Water Agencies version of the WSAA Sewer Reticulation Code (WSA 02-2014-3.1).

Generally, Barwon water adopts South East Water’s design limitations to the code.

Supporting documentation – Sewerage Code

Introduction

Barwon Water’s design and constructions requirements for sewer mains required for the provision of services to subdivisions and other land development works is the *Water Services Association of Australia Sewerage Code of Australia WSA 02-2014-3.1 Retail Water Agencies Edition Version 2* with the exceptions listed in this supplement.

General

This supplementary documentation describes Barwon Water’s specific requirements for sewerage works additional to those detailed in the *WSAA Sewerage Code of Australia 02-2014-3.1 – Melbourne Retail Water Agencies Edition – Version 2*.

The Supplementary section of the Sewerage Water Reticulation Code contains:

- Table of contents to the supplementary Documentation
- Description of Barwon Water requirements where required or different to the WSAA Code

Operation

The clause numbering of this supplementary document matches the WSAA Code.

Innovative solutions

WSAA Sewerage Code of Australia and this supporting documentation provide ‘deemed-to-comply’ solutions for the creation of all water agency sewerage assets. Alternative solutions, practices, equipment and methodologies will continue to evolve and offer opportunities to improve the creation of these assets. Barwon Water encourages use of any innovation that offers enhanced productivity and serviceability, but Barwon Water’s input should be sought before any new system is designed.

Responsibilities

Designers and constructors are responsible for their respective aspects of the design and construction process. It is the designer/constructor’s responsibility to justify any variation from the requirements set out in the Sewerage Code of Australia (including the attached Barwon Water conditions) and/or the Barwon Water Construction Drawings – plus any specific directions given by Barwon Water for a particular project. The designer/constructor is to obtain Barwon Water endorsement for any variation.

Amendment history

Update Number	Brief description	Effective date
3	1. Section 7.6.2 – Amended plastic MH depth limitation	February 2022
2	1. Section 6.3.4 – Removed “All property connection points shall be installed at a maximum depth to invert of less than 1.5m”	November 2021
1	<ol style="list-style-type: none"> 1. Section 5.2.4.3 Sewers located along rear boundaries – Added section with reasonable access requirements 2. Section 5.2.8 Easements 3. Adopt requirements of MRWA-S-112. – Changed reference 4. Section 5.6.3. – Removed minimum cover requirement (adopted MRWA standard) 5. Section 6.2.- Amended section to allow water seals to be used 6. Section 6.3. – Amended section to include water seals 7. Section 6.3.4 –Changed MRWA reference from S-111 to S112. 8. Section 6.3.4 –Added new cross-section requirement for TY2F and TY4 property connections. 9. Section 7.1 – Allowed used of both MCs and MHs for connecting to existing or new sewer mains >4m deep and for PCs 10. Section 8.2.2 – Added use of water seals 11. 9.4.4 Pipe Embedment– Removed sections Barwon Water allows use of Recycled Glass Sand. 12. Section 8.7 Emergency Relief Structures – Added requirement. 13. Section 21.4.6.2 – Modified vacuum test requirements. 	October 2021

Part 1: Planning and design

5. Detail design

5.2.4.3 Sewers located along rear boundaries

Dispensation requests will have to be submitted for any access requirements deviating from Clause 5.2.4 of the 2014 Sewage Code.

Some level of exemption may be granted, if connected lots without reasonable access meet all of the following guidelines and conditions:

- The sewer should be accessible from the side of the adjacent property and through the back of the adjoining rear property. Adjacent and adjoining rear property to provide reasonable access
- A maximum of 1 fence to be removed to access the sewer
- No maintenance structures are allowed in lots without reasonable access
- Lots with no access to be marked on the Plan of Subdivision.

5.2.8 Easements

Adopt requirements of MRWA-S-112 with the following exceptions.

Easements in Municipal or other Reserves to be as follows:

- 2.5 m for sewer pipes \leq DN 225 mm
- 6.0 m for sewer pipes $>$ DN 225 mm.

5.5.5. Maximum ET for reticulation sewers

Use the table shown below to determine the grades for DN 300 mm branch sewers. Size DN 375 mm and DN 450 mm should be design specific and approved by Barwon Water.

Size: DN 300 mm

Grade	Minimum Lots	Maximum Lots
1 in 80	100	3,100
1 in 100	120	2,800
1 in 120	140	2,500
1 in 150	170	2,300
1 in 180	225	1,950
1 in 200	280	1,750
1 in 250	335	1,600
1 in 300	390	1,500
1 in 400	450	1,350

5.6.4.4 Partial Lot Service

Restriction to be placed on design drawings as well as on plan of subdivision.

6. Property connection

6.2 Limitations of connections to sewers

- For connections to sewers \geq DN 300 mm, gas check maintenance holes (double maintenance holes with intermediate water trap) or water seals are required.

6.3 Methods of the property connection

- For property connections to sewers \geq DN 300 mm involving 1 or 2 lots or $<1000\text{m}^2$, gas check manholes or water seals are not required. Use boundary traps and reflux valves.
- For property connections to existing sewers greater than 4 m deep, connections are to be into a manhole or maintenance chamber.

6.3.4 Typical layouts of sewers and general arrangements for property connection sewers

- Connection points to be terminated at 500 mm inside the property boundary in lieu of 300 mm where nominated on drawings MRWA-S-106 to MRWA-S-112.
- The design consultant to provide a cross section with all design submissions, a detailed cross-section of Type 4 property connections demonstrating that the arrangement will result in the HC point terminating at the easement line.

6.4 Number of Property Connection Points

- For cut-in on live sewers, only stainless steel junction clamps are allowed. Refer to standard MRWA-S-503 Figure 503-A.

7. Maintenance structures

7.1 Types of maintenance structures

Maintenance Chambers and Maintenance Holes are permitted for connections to existing and new sewers greater than 4 meters deep and for property connections arrangements listed in standard MRWA-S-104A Table 104A.

Backfill type (applicable to all types of maintenance structures): 3% stabilised sand.

7.3 Spacing of Maintenance Structures

- The maximum permitted spacing between maintenance holes (MH) is 150 m.
- For others, comply with the requirements of MRWA 2014 Table 7.1.

7.6.2 Types of MH construction

- Construction to be concrete cast in-situ or an approved plastic manhole.
- Plastic manholes depth is limited to 5 m.

7.6.3 Design parameters for MHs

Precast concrete manholes will be considered on a case specific basis and additional requirements may apply.

Precast concrete manholes are not approved for use in the following conditions:

- Trafficable areas, industrial areas, water surcharged ground
- At depths greater than 6m and/or on surcharged sewers
- Locations subject to surcharge.

7.9 Maintenance Structure Covers

- Trafficable areas – Solid top ductile iron Type D
- Non-Trafficable areas – Solid top ductile iron Type B
- Concrete infill covers are not permitted
- Gatic covers with locating pins or bolted down lids are not permitted
- Bolted down lids are subject to Barwon Water's approval in existing systems where there is a risk of sewer surcharge
- Rectangular lids are not permitted.

8. Ancillary structures

8.2.2 Water seals and gas check maintenance holes (MH)

For connections to sewers \geq DN 300 mm, gas check manholes (double manholes with intermediate water trap), or water seals, are required.

8.4 Ventilation

Refer to Barwon Water Drawings BW-SD-S042 R0 Sewer Vent Stack Design Details and BW-SD-S043-R0 Sewer Venting Stack Replacement.

Details are available on Barwon Water's website under the About Us/Information for suppliers and contractors/Products and standards page.

8.7 Emergency Relief Structures

Designer to confirm with Barwon Water if Emergency Relief Structures (ERS) is required.

Part 2: Construction

21. Acceptance Testing

21.4.6.2 MH testing frequency

Vacuum test 100% of all MHs for the initial test.

23. Connection to existing sewers

Refer to the Terms and Conditions for Developer Works available on Barwon Water's website - under the Properties and development/Land Development tab.

25. Work as constructed details

Refer to the survey manual located on Barwon Water's website - under the Properties and development/Land Development tab.

All as constructed records must be provided to Barwon Water within 10 working days of the completion of the works.