



Supplement to
Gravity Sewerage Code of Australia
WSA 02–2014-3.1
Melbourne Retail Water Agencies Edition
Version 2.0

Issued: 11 December 2018

Reviewed: -

COR/18/34706

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Gippsland Water Supplement WSA 02–2014-3.1

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	Name	Date
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Reviewed by	Land Development, Asset Management, Asset Planning, Asset Delivery, Field Services.	
Approved by	Nazrul Islam	14 November 2018
Authorised by	Nicholas Moss	11 December 2018

Document History

Version	Date	Author	Description of Update / Change
1	11/12/18	Gavin Milne	Initial issue
2	25/11/19	Lindsay Nation/SPEC	Property connection types updated
3			

Purpose

This Gippsland Water Supplement (this Supplement) is to the Gravity Sewerage Code of Australia WSA 02–2014-3.1 Melbourne Retail Water Agencies (MRWA) Edition Version 2.0 (the Code), including the MRWA Standard Drawings. It specifies requirements for the planning, design and construction of reticulation, branch and trunk sewers (up to and including DN 1200) and service pipes installed by Gippsland Water or installed by landowners and developers to be gifted to Gippsland Water upon completion.

1. Requirements

This Supplement adopts the requirements of the following references together with Gippsland Water's amendments to the Code and to the MRWA standard drawings. The amendments are specified in Sections 4 and 5 of this Supplement.

2. References

Where internal documents are referenced, information is available from Gippsland Water. Gippsland Water maintains a reference document for internal use (COR/16/53735) to provide the source of information where the Code refers to Water Agency requirements.

1. Gravity Sewerage Code of Australia, WSA 02–2014-3.1, Melbourne Retail Water Agencies Edition, Version 2.0.
2. MRWA Standard Drawings Series [100](#), [200](#), [300](#) and [400](#)
3. Gippsland Water Preferred Electrical Equipment List (COR/14/81638)
4. Approvals processes for installation of vendor furnished or developer installed systems (<https://www.gippswater.com.au/developers/information>)
5. Gippsland Water Wastewater Systems Design Criteria (COR/10/27706)
6. Gippsland Water Electrical Design Process (COR/14/61117)
7. [Gippsland Water Drafting Specifications](#)
8. [Gippsland Water Acceptance Deflection Test Results \(COR/04/12582\)](#)
9. [Gippsland Water Sewer Pipeline Vacuum Test \(COR/04/12581\)](#)
10. [Gippsland Water Sewer Pipeline Pressure Test \(COR/04/12580\)](#)
11. [Gippsland Water Acceptance Vacuum Test Results \(COR/04/12583\)](#)
12. [MRWA Backfill Specification 04-03.1-2006](#) (COR/15/15017)
13. Water and Wastewater Property Servicing Policy (COR/09/4492)
14. Policy for Water and Wastewater Easements (COR/02/22771)
15. Linear Assets Decommissioning Procedure (COR/13/63980)
16. [Colour Standard for Pipe, Pipe Wrappings, Detectable Pipe Marker Tape and Valve Surrounds](#) (COR/15/34922)
17. [Gippsland Water typical drawings water and sewer reticulation extensions](#) (refer Drafting Specification)
18. Application for product authorisation for use in Gippsland Water's water and sewer network (COR/18/50269)
19. Crossing of Major Assets Guidelines (COR/15/47634)

3. Amendments to WSA 02-2014-3.1, MRWA Edition Version 2.0

References in brackets in the tables apply to the reference list above.

Table 1. Amendments to Part 0: Glossary of Terms, Abbreviations and References

Term	Definition
Branch Sewer	Sewer pipes nominally DN 225 to DN 450 that collect sewage from reticulation sewers and convey sewage to trunk sewers

Table 2. Amendments to Part 1: Planning and Design

Section	Amendment
1.2.5	The concept plan shall include a Basis of Design Report that provides: <ol style="list-style-type: none"> options considered for meeting requirements of the WSAA Code MRWA edition and Gippsland Water; justifications for necessary exceptions to requirements of the WSAA Code MRWA edition and this Supplement; where a development is part of a longer-term multi-stage development, how the proposed infrastructure will meet the requirements of the full development and Gippsland Water's Infrastructure Servicing Plan.
4.1	Additional requirement: Gippsland Water approves products that have been approved by the Melbourne Retail Water Agencies (MRWA). Where an MRWA approved product has different limitations of use between City West Water, South East Water and Yarra Valley Water, the limitations of use for that product shall be as defined by Gippsland Water. Gippsland Water will not consider products for approval where they have not been appraised by WSAA and have not been approved by MRWA, excepting where Gippsland Water considers the product is critical for consideration of use. For City West Water, South East Water and Yarra Valley Water approved products and materials refer to the MRWA Portal www.mrwa.com.au/Pages/Products.aspx .
4.2	Gippsland Water's Colour Standard for Pipe, Pipe Wrappings, Detectable Pipe Marker Tape and Valve Surrounds (16), shall take precedence where a colour requirement differs.
5.2.8	Easement requirements shall comply with Gippsland Water's Water Supply and Sewerage Easements Policy, available on Gippsland Water's web site.
5.2.9	Decommissioning of sewers shall be undertaken in accordance with Gippsland Water's Linear Assets Decommissioning Procedure (15).
5.3.7	Changes in direction using an MS or MC shall not be used except where approved by Gippsland Water
Table 5.4	Additional requirement: New assets crossing or running aligned to Gippsland Water major Assets shall be in accordance with Crossing of Major Assets Guidelines (19).
Table 5.6	If the lot size for a Residential development is less than 350m ² on average then use Table 5.6. If above then use Table 3 shown below.

Section	Amendment
5.6.7	Vertical curves in sewers shall not be used except where approved by Gippsland Water
5.6.8	Compound curves shall not be used except where approved by Gippsland Water
6.2	Change \geq DN 525 to \geq DN 300
7.6.6	External drop structures shall not be used
7.6.7	MHs of 900 mm internal diameter shall not be used except where approved by Gippsland Water. The minimum internal diameter of MHs shall be 1050mm. Where larger diameter MHs are required, only internal diameters 1200, 1500, 1800, 2100 and 2400 shall be used.
7.8.5	Temporary ends constructed shall only be used for connection of further 'development stages'. If at the end of the defects period, the following development stage has not been approved, the temporary end shall be removed and a TMS constructed. A reticulation sewer shall have a permanent end at a development boundary even though in the future the sewer will cross the development boundary.
7.9.1	Replace (e) with the following: (e) Public play grounds, (f) School grounds
8.2	Water Seals and Boundary Traps are only to be installed as directed by Gippsland Water
10.2.1	The layout and formatting of design drawings and specifications shall comply with Gippsland Water's Drafting Specifications (7).
10.5	For subdivisions with less than 10 m of new pipeline installation, as-constructed drawings can be presented as "Field Notes". As constructed drawings and Field Notes shall contain information specified in Gippsland Water's Drafting Specifications (7).
12.6	Disused and redundant sewer mains shall be decommissioned as per the WSAA code MRWA edition and Gippsland Water's Linear Assets Decommissioning Policy (16).
16.2	Bends in sewers shall not be used except where approved by Gippsland Water. Curved sewers shall be constructed in accordance with the WSAA code MRWA edition
16.12	Bored sewers under roads shall be constructed in accordance with WSAA Code MRWA edition and the road owner's requirements.
16.17.6	As per WSAA code MRWA edition, Field Extrusion welding is not permitted. Welds completed in the workshop are to be reviewed by Gippsland Water.
20	Backfill shall be undertaken in accordance with MRWA Backfill Specification No. 04-03.1, 2006 (12).
21.4	Air Pressure and Vacuum Testing results shall be recorded in compliance with Gippsland Water's Pressure Testing standards (8, 9, 10, 11).

Table 3 - MAXIMUM AND MINIMUM ET FOR GRAVITY SEWERS FOR RESIDENTIAL DEVELOPMENT LOT SIZE > 350M²

PERMISSIBLE LOADS ON RESIDENTIAL SEWERS			
SEWER DIA. DN(mm)	GRADE	MAX. PERMISSIBLE No. OF RESIDENTIAL CONNECTIONS (Note 1)	MIN. PERMISSIBLE No. OF RESIDENTIAL CONNECTIONS (Note 1)
150	1:80	140	1
	1:100	120	1
	1:120	110	5
	1:150	100	10
	1:200	85	30
225	1:150	330	10
	1:200	280	20
	1:250	260	30
	1:300	230	70
300	1:300	450	35
	1:350	430	40
	1:400	390	120

Notes:

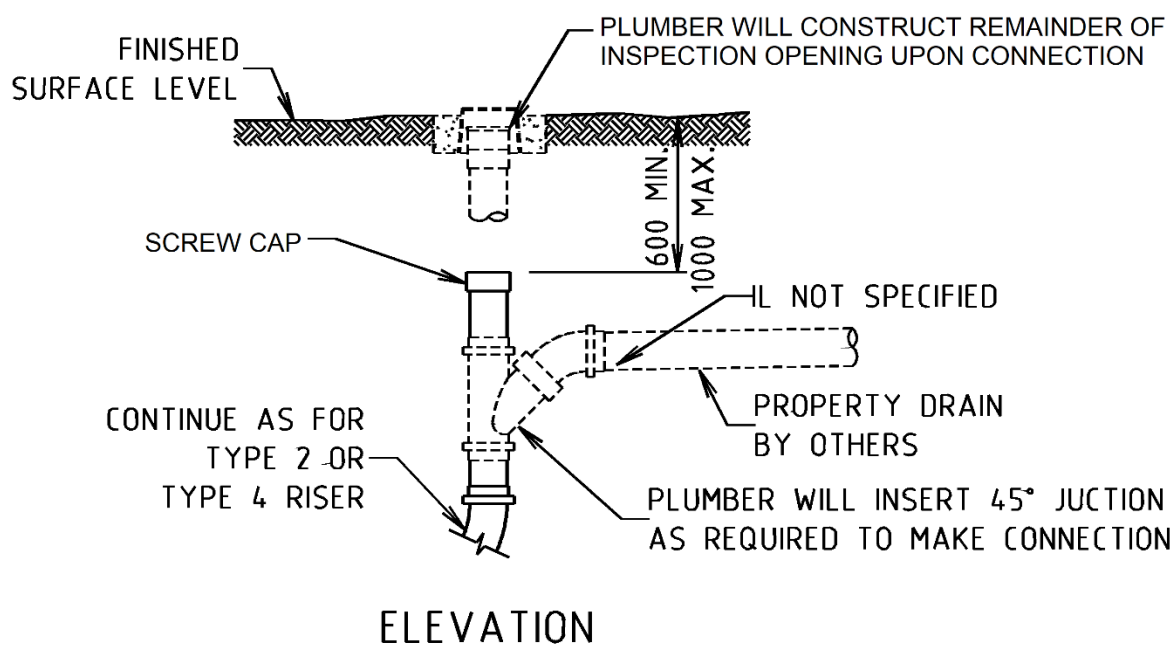
1. Maximum & minimum number of connections taken at upstream maintenance structure of a sewer.

4. Amendments to MRWA Standard Drawings

Table 4. Amendments to Standard Drawings

Drawing	Amendment
103	Table 103-A 1. Remove PVC Solvent cement jointed pipes, these are not acceptable. 2. PVC is not accepted in industrial/commercial areas (VC preferred)
104A	1. Property connections are not to run parallel to a property boundary in road reserve, a main extension is required where this would otherwise occur. 2. Gippsland Water will only be accepting Figure 104-B: Stainless steel clamp.
104B	Bends and curved in sewers are allowed in exceptional circumstances subject to approval by Gippsland Water
108	Only TYPE 1, TYPE S and GW TYPE 4A property connections are to terminate at the edge of easements.
208	All trenchless construction for road crossings are to be as per Code & road owner's requirements.
209	Drawing is adopted but all 600mm clearances to be 1000mm
303	"Jump Up" (Type 2) property connections are not accepted by Gippsland Water. Replace "Jump Up" (Type 2) property connection with GW Type 2A property connection as shown in Figure 1 below.
304	Offset "Jump Up" (Type 4) property connections are not accepted by Gippsland Water. Replace Offset "Jump Up" (Type 4) property connection with Figure 1 shown below.

Figure 1 – GW TYPE 2A AND GW TYPE 4A PROPERTY CONNECTIONS



GW TYPE 2A & GW TYPE 4A CONNECTION

5. Service connections

Property connection sewers to existing in-service sewer mains are to be performed by contractors approved by Gippsland Water within the limitations of their approval.

Applications for connection are at www.gippswater.com.au/developers/property-connections/connections. (new sewer point cut-in)

Mains to be transferred to Gippsland Water as gifted assets shall have all property connection sewers installed during construction of the mains.

6. Approved consultants and contractors

Planning, design and construction of sewer mains are to be carried out by consultants and contractors approved by Gippsland Water within the limitations of their approval.

For sewer mains installed by developers, refer to the Gippsland Water Accredited Design Consultants list and the Gippsland Water Accredited Pipe-layers list. (www.gippswater.com.au/GWServices/LandDevelopment.aspx).

For sewer mains installations managed by Gippsland Water, refer to GWS417 Panel of Technical Service Providers.

7. Approval Processes

For sewer mains installed by developers, refer to <https://www.gippswater.com.au/developers/information> for approval documents and forms.



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For sewer mains installations managed by Gippsland Water, refer to the Project Management Procedures Manual.

8. Superseded Documents

The following documents are superseded by this code and are archived:

1. Gravity Sewerage Code of Australia WSA–02-1999
2. Gravity Sewerage Code of Australia WSA–02-1999 Addendum
3. Gravity Sewerage Code of Australia WSA–02-2002