Addendum to the Water Industry Technical Standards and National Codes of Practice

DOCUMENT W2

Sewerage Code

WSA 02-1999

Addendum

PART 4 - CONSTRUCTION

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## WSA 02-1999 – Sewerage Code of Australia
### Gippsland Water Addendum
#### PART 4 - CONSTRUCTION

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1. GENERAL
   1.1 Scope
   No addendum.

   Gippsland Water does not approve the use of PVC profile wall pipe (or Ultra Rib pipe).
   Gippsland Water does not approve the use of FRC pipe.

   1.2 Interpretation
   No addendum.

2. QUALITY
   2.1 Personnel Qualifications
   Construction contractor to be a Gippsland Water accredited pipelayer in accordance with
   the specified requirements of the Accredited Pipelayers List.

   2.2 Inspection and Test Plans
   No addendum.

   2.3 Acceptance Testing
   Gippsland Water no longer requires notice of any testing.
   The accredited design consultant, responsible for the works, must be notified to enable supervision.
   Test result sheets are available on the Gippsland Water website.
   All test sheets shall be forwarded to the accredited design consultant who will provide to
   Gippsland Water with the as constructed information / certification forms.

3. GENERAL CONSTRUCTION
   3.1 General
   No addendum.

   3.2 Order of Construction
   No addendum.

   3.3 Work in Existing Roadways
   No addendum.

4. MATERIALS
   4.1 General
   No addendum.

   4.2 On-site Stockpiles
   No addendum.

   4.3 Embedment Material
   Addendum only required to the following sub clauses.

   Clause 4.3.2 – Source of Materials
   Omit this clause.

   Clause 4.3.3.1 – Initial sample
   Omit this clause.
4.4 Trench Fill
No addendum.

4.5 Cement-Stabilised Trench Fill
No addendum.

4.6 Vitrified Clay Pipes and Fittings
Remove the words “see Water Agency table”.

4.7 PVC Sewer Pipes and Fittings
Remove the words “see Water Agency table”.

4.8 Ductile Iron Pipes and Fittings
Remove the words “see Water Agency table”.

4.9 Grey (cast) Iron Fittings
No addendum.

4.10 GRP Pipes and Fittings
Omit this clause.

4.11 PE Pipes and Fittings
Remove the words “see Water Agency table”.

4.12 Steel Pipes and Fittings
Remove the words “see Water Agency table”.

4.13 Elastomeric Seals
Remove the words “see Water Agency table”.

4.14 Solvent Cement and Priming Fluids
No addendum.

4.15 Polyethylene Sleeving
No addendum.

4.16 Concrete/Mortar/Render
Remove the words “see Water Agency table”.
All Concrete shall be special class concrete S32 in accordance with AS3600 as follows:
- Characteristic compressive strength 32 Mpa
- Maximum aggregate size 20mm
- Maximum slump 100mm
- Cement to be Portland Cement Type D sulphate resisting.

4.17 Reinforcement
No addendum.

4.18 Maintenance Hole (MH) Components
No addendum.

4.19 Maintenance Shafts(MS) Terminal Maintenance Shafts(TMS) and Inspection Shafts
No addendum.

4.20 Covers and Frames
Remove the words “see Water Agency table”.

4.21 Ladders
Remove the words “see Water Agency table”.
Refer also addendum Clause 9.8 of Part 2.

4.22 Step Irons
Remove the words “see Water Agency table”.
Refer also addendum Clause 9.7 of Part 2.

4.23 Vents
No addendum.

4.24 Geotextile Filter Fabric
Refer to standard drawing SEW-102 (note 3) for minimum lap.

4.25 Timber Piles
No addendum.

4.26 Metal-Banded Flexible Couplings
No addendum.

4.27 Joint Components
No addendum.

4.28 Vacuum Sewerage Components
No addendum.

4.29 Non-Return Valves
No addendum.

5. EXISTING SERVICES

5.1 Location of Services
No addendum.

5.2 Protection and Maintenance of Services
No addendum.

5.3 Repair of Services
Replace with:
If a service is damaged during construction notify Gippsland Water and arrange or perform repair to the satisfaction of the owner. Where possible obtain from the owner, a certificate stating that the repair has been carried out to their satisfaction.

6. EXCAVATION

6.1 Safety
No addendum.

6.2 Limits of Excavation
Remove the words “see Water Agency table”.

6.3 Excavation across Improved Surfaces
No addendum.

6.4 Explosives
No addendum.

6.5 Support of Excavations
No addendum.

6.6 Drainage and Dewatering
No addendum.

6.7 Over Excavation
No addendum.

6.8 Foundations and Foundation Stabilisation
No addendum.

6.9 Surplus Excavated Material
No addendum.

7. PIPE EMBEDMENT

7.1 General
No addendum.

7.2 Concrete Embedment and Encasement
No addendum.

7.3 Geotextile Surround and Pillow
Only use geotextile surround and pillow in unstable ground conditions.

8. PIPE LAYING AND JOINTING

8.1 General
No addendum.

8.2 Method
No addendum.

8.3 Junctions, Property Connection Sewers, Inspection Openings, Inverted Syphons, Water Seals and Vertical Risers
No addendum.

8.4 Dead Ends
No addendum.

8.5 Marking of Property Connection Sewers and Dead Ends
Identification/marker tape system shall be used to mark dead ends and property connections as shown on Standard Drawing SEW-304 and the relevant addendum.

8.6 Trench Stops
No addendum.
8.7 **Bulkheads**  
No addendum.

8.8 **Corrosion Protection of Ductile and Cast Iron**  
No addendum.

8.9 **Detectable Tape**  
Replace with:  
Detectable tape shall be used on all pipelines and property connection sewers where the length of the property connection exceeds 5 metres.

8.10 **Bored Pipes Under Roads, Driveways and Elsewhere**  
Replace paragraph 2 with:  
For road crossings and bore lengths greater than 10.0m use an encasement pipe of sufficient strength to withstand all expected loading conditions. The design drawings indicate where encasing pipes are required.

8.11 **Aqueducts**  
No addendum.

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9. **MAINTENANCE HOLES (MHs)**

9.1 **General**  
No addendum.

9.2 **Precast Concrete MH Systems**  
Add note:  
Grade S32 as per Part 1 Clause 2.9.3.6.

9.3 **Post-formed Benching and Channels**  
No addendum.

9.4 **MH Covers**  
No addendum.

9.5 **Connections to MHs**  
No addendum.

9.6 **MH Drops**  
No addendum.

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10. **MAINTENANCE SHAFTS (MSs) AND INSPECTION SHAFTS**

10.1 **General**  
No addendum.

10.2 **Sealing Caps**  
Delete:  
“seal shaft in accordance with manufacturers instructions” and add “use screw caps only”.

10.3 **Seating Access Covers and Surrounds**

As per SEW-209, SEW-210, SEW-211, SEW-212 covers are to be in accordance with AS 3996
- Class “B” loadings for parks and easements (non trafficable area)
- Class “D” loadings for road reserves (trafficable area)

Alternative light duty cover arrangements (eg. concrete I.S. cover) are only to be used on customer property connection inspection openings located in a non trafficable location. Customer property connection openings located in trafficable locations (such as driveways) must be constructed to Class “D” requirements.

Gippsland Water requires TMS and MS covers to be manufactured from ductile iron, cast iron or steel, which ever is suitable to its application class, in accordance with AS 3996 (typical of “gatic” or “gatic cast body concrete fill” arrangement).

10.4 **Connections to MSs and TMSs**

No addendum.

11. **VACUUM COLLECTION CHAMBERS AND STATIONS**

11.1 **General**

No addendum.

11.2 **Commissioning**

No addendum.

12. **TOLERANCES ON AS-CONSTRUCTED WORK**

12.1 **Horizontal Tolerances**

No addendum.

12.2 **Vertical Tolerances**

No addendum.

12.3 **Tolerances on finished surface structures and fittings**

No addendum.

12.4 **Cast In-Situ Concrete Structures and Slabs**

No addendum.

13. **FILLING**

13.1 **General**

No addendum.

13.2 **Compaction and Density Testing**

Where Gippsland Water requires density testing the Contractor shall submit the test result to Gippsland Water prior to practical completion of the job. Gippsland Water reserves the right to undertake additional testing of backfill material. Where compaction testing fails the Contractor will be required to:

1. Reimburse Gippsland Water for the costs of such testing and
2. Achieve proper compaction.

14. **RESTORATION**

No addendum.
15. CONNECTION TO EXISTING SEWERS

Any connections to existing sewers shall be in accordance with Gippsland Water's Confined Spaces Entry and Occupational Health and Safety requirements.

Ten working days notice shall be given to the responsible Gippsland Water Officer prior to any works on existing sewers.

For accredited contractors undertaking a live sewer connection for Developer Works (Owner Cost Works) (including confined space entry) use Form 3 and place a mark in the box “Sewer”:

FORM 3 - Application to Work on or Near Gippsland Water Assets

For accredited contractors undertaking a sewer point cut-in for Property Connections (eg. a new connection branch for a minor development or single residence) (including confined space entry) use Form 3A:

FORM 3A - Application to Carry Out Works on Gippsland Water Sewer (Sewer Cut-in)

16. CLOSED CIRCUIT COLOUR TV (CCCTV) INSPECTION

Gippsland Water will advise of the need for CCCTV inspections. If problems are identified as a result of Contractor error, then the Contractor shall wear the costs incurred for the camera. If no problems are found then GW will pay the costs incurred for the camera.

17. WORK-AS-CONSTRUCTED DETAILS

Refer Clause 5.3.2 of Part 1 for the requirements on recording of as-constructed information.

18. REFERENCED DOCUMENTS

18.1 Standard Drawings
No addendum.

18.2 Referenced Standards and Codes
Under AS3706 – add “Geotextiles – Methods of Test” as the title of the Australian Standard.

18.3 WSAA Documents
No addendum.
APPENDICES

INSPECTION AND TEST PLAN GRAVITY SEWERS

No addendum to Appendix A – Inspection and Test Plan, Gravity Sewers.

Gippsland Water will be reviewing the former Certification Check Lists used under W.I.T.S. and will prepare similar check lists for the following:

1. Design Certification Check List
2. Pre-Construction Certification Check List
3. Construction Certification Check List
4. End of Defects Liability Period Certification Check List

Check lists will be required to be submitted to Gippsland Water for all jobs.