FORM 1 W
Design Certification List – Water Agreements

Job Description	
Location	
Developer / Owner	
Developer / Owner Contact Details	
Consultant	
Gippsland Water Drawing Numbers	

Notes:
1 Where the word *Code* is referred to in this document it shall be taken as meaning the relevant National Code and Gippsland Water's corresponding Addendum.
2 The relevant National Code is the *Water Reticulation Code of Australia* WSA 03-1999 Part 1 (Design) unless stated otherwise.

A General

A.1 Qualification of Consultants

Initial

A.1.1 Designers are suitably qualified to design works in accordance with the appropriate Australian Standards, Codes of Practice and Gippsland Water's Addendums and are on Gippsland Water's Accredited Consultants list. _____

A.2 Consultation during design

A.2.1 Property owners have been consulted _____

A.2.2 Councils and other authorities have been consulted _____

A.2.3 Other developments have been consulted _____

A.3 Economic considerations

A.3.1 Most cost-effective design has been selected _____

A.3.2 Alternatives have been discussed with Gippsland Water _____

A.4 Extent of works

A.4.1 All allotments in the development are serviced _____

A.4.2 Future system expansion has been allowed for in accordance with the *Code* (Clause 1.3.4) _____

A.4.3 Termination points conform with the *Code* (Clause 4.10) _____

B Environmental Considerations

B.1 Consideration of environment

B.1.1 Works have been designed with consideration for environmental issues in accordance with the *Code* (Clause 1.2.5) _____

B.1.3 Environmental requirements are listed on design plans _____

B.2 Vegetation

B.2.1 Measures implemented for protection of vegetation _____

B.2.2 Measures implemented for protection of habitat _____

B.2.3 Measures implemented for restoration of slopes _____

B.2.4 Permits for removal of vegetation have been obtained _____

B.2.5 Measures implemented for proximity of trees and tree roots _____

B.2.6 Revegetation program has been specified _____

C Design Requirements

C.1 General location

C.1.1 Water main has been located within road reserves and/or easements _____

C.1.2 Duplicate/rider water mains have been used in accordance with the *Code* (Clause 4.1.10) _____

C.1.3 Allowance has been made for width of easement in accordance with the *Code* (Clause 4.1.4) _____

C.1.4 Easements have been located on subdivision plan in accordance with offer _____

C.1.5 Additional easements are specified on subdivision plans _____

C.2 Obstructions

C.2.1 Allowance has been made for effect of surface obstructions on the alignment of main _____

C.2.2 Location of all underground services has been determined _____

C.2.3 Clearance from obstructions conforms with the *Code* (Clause 4.5) _____

C.2.4 Water main crossing under sewer has been designed in accordance with the *Code* (Clause 4.5.4.2) _____

C.2.5 **Approval has been obtained from Gippsland Water for common/shared trenching and is designed in accordance with the *Code* (Clause 4.1.9)** _____

C.3 Alignment

C.3.1 Water main alignment has been approved by council _____

C.3.2 Pipeline alignment in road reserves in new subdivisions conforms to the *Co-ordination of Streetworks Code of Practice* _____

C.3.3 Horizontal alignment is sufficiently detailed to enable accurate set-out of the works and checking by Gippsland Water _____

C.3.4 Horizontal deviations have been detailed on design plans _____

C.3.5 Title boundaries or setout lines have been established by licensed surveyor where applicable _____

C.3.6 Deviations of DICL pipes are in accordance with manufacturer's recommendations _____

C.3.7 Deviations of UPVC pipes are in accordance with manufacturer's recommendations _____

C.3.8 Deviations using bends are in accordance with the *Code* (Figure 4.6) _____

C.3.9 Deflection around curved alignment is in accordance with manufacturer's recommendations _____

C.4 Cover

C.4.1 Minimum cover is in accordance with the *Code* (Clause 4.3.7.1) _____

C.4.2 Gippsland Water has given written approval for covers in excess of 1.5 metres _____

C.4.3 Cover has been allowed for future road and driveway construction _____

C.4.4 Design levels allow for installation of valves, fittings and anchors _____

C.4.5 Design levels take into account existing and proposed services _____

C.4.6 Level schedule has been produced where water main construction will precede road or drainage construction in accordance with the design requirements. Levels relate to AHD _____

D Selection of pipeline materials

D.1 Design head

D.1.1 Maximum supply head has been obtained from Gippsland Water _____

D.1.2 Design head has been calculated _____

D.1.3 Operating pressure (head) is contained within the maximum and minimum operating pressure limits stated in the *Code* (Clause 2.4) _____

D.2 Approved pipeline systems

D.2.1 Pipes and fittings have been selected in accordance with requirements

of the *Code* (Clause 3.7) _____

D.2.2 Gippsland Water has given written approval for non-approved products or materials _____

D.2.3 Pipes and fittings have been selected from the *Code* (Part 2 : Materials) _____

D.2.4 Corrosion protection measures have been investigated in accordance with the *Code* (Clause 4.11) and marked accordingly on the design plans if required _____

E Pipeline assemblies

E.1 Thrust restraints

E.1.1 Thrust restraints have been designed in accordance with the *Code* (Part 3 : Standard Drawings) _____

E.2 Valves

E.2.1 Valve design requirements have been met _____

E.2.2 Correct valve type has been selected _____

E.2.3 Location of valves has been selected in accordance with the *Code* (Clause 4.7.2.5) _____

E.3 Hydrants

E.3.1 Hydrants are not designed on mains less than 100mm in diameter _____

E.3.2 Hydrants have been located for water system operational requirements in accordance with the *Code* (Clause 4.7.3.6) _____

E.3.3 Hydrants have been used as terminal fittings where main will not be extended _____

E.3.4 Spacing of hydrants is in accordance with the *Code* (Clause 4.7.3.4) _____

E.3.5 Hydrants have been located clear of driveways _____

E.3.6 Hydrant symbols have been shown correctly on plan _____

E.3.7 Hydrants are adjacent to valves where possible _____

E.4 Terminal fittings

E.4.1 Washout bends have been designed at permanent end of mains 100mm diameter or larger in accordance with the *Code* (Clause 4.7.3.7) _____

E.4.2 Flushing assemblies have been designed at permanent end of mains less than 100mm diameter in accordance with the *Code* (Clause 4.6.3) _____

E.4.3 Washout assemblies have been designed at temporary end of mains 100mm diameter or larger in accordance with the *Code* (Clause 4.7.3.7) _____

E.4.4 Chlorination assemblies designed for 225 to 375mm diameter mains if

requested by Gippsland Water in accordance with the *Code* (Clause 4.6.4) _____

E.4.5 Location of swabs and direction of swabbing have been specified if requested by Gippsland Water in accordance with the *Code* (Clause 4.8.2) _____

E.5 Connections to existing water mains

E.5.1 Connections of all new mains to existing water mains are in accordance with the *Code* (Clause 4.9.1) _____

E.5.2 Method of connection to transfer mains has been approved by Gippsland Water and noted on design plans _____

E.6 Property service connections

E.6.1 All lots are fronted by a water main in accordance with relevant regulations _____

E.6.2 All lots are designed to have one property service connection each unless agreed to by Gippsland Water _____

E.6.3 Property service connections to be installed in accordance with the *Code* (Clause 4.9.2) _____

E.6.4 Property service connections to transfer mains are in accordance with the *Code* (Clause 4.9.2) _____

F Presentation of design

F.1 Design plan contents

F.1.1 Design plans have been prepared in accordance with the Gippsland Water document *Specification of Drawings Produced for Gippsland Water* _____

F.1.2 Design drawings provided in accordance with the *Code* (Clause 5.2) _____

F.1.3 Drawing scale is in accordance with the *Code* (Clause 5.3) _____

F.1.4 Content of drawings are in accordance with the *Code* (Clause 5.4) _____

F.1.5 All plans include relevant notes _____

G Drafting standards

G.1.1 Drafting standards are in accordance with the *Code* (Clause 5.5) _____

- Detail plans in accordance with the *Code* (Supplementary Clause 5.5.1) _____
- Longitudinal plans in accordance with the *Code* (Supplementary Clause 5.5.2) _____
- Standard drawing borders in accordance with the *Code* (Supp. Clause 5.5.3) _____
- Drawing legend in accordance with the *Code* (Supplementary Clause 5.5.4) _____

H Documentation to be submitted

H.1 Design drawings

H.1.1 Two hard copies of final design drawings A3 size only _____

H.2 Civil drawings

H.2.1 Road and drainage civil drawings for the development **only** if requested by Gippsland Water _____

H.3 Correspondence with council

H.3.1 Approval of offsets and fixing of road levels if requested by Gippsland Water _____

H.3.2 Name and position of contact officer if requested by Gippsland Water _____

H.4 Correspondence with other bodies

H.4.1 Vic Track if requested by Gippsland Water _____

H.4.2 Vic Roads if requested by Gippsland Water _____

H.4.3 Relevant Gas Company/Authority if requested by Gippsland Water _____

H.4.4 Telstra if requested by Gippsland Water _____

H.4.5 Optus Communications if requested by Gippsland Water _____

H.4.6 SP Ausnet if requested by Gippsland Water _____

H.4.7 Ports Authority if requested by Gippsland Water _____

H.4.8 Aboriginal Affairs Victoria if requested by Gippsland Water _____

H.4.9 Department of Human Services if requested by Gippsland Water _____

H.4.10 Ministry of Education if requested by Gippsland Water _____

H.4.11 Planning authorities if requested by Gippsland Water _____

H.4.12 Petrochemical pipeline companies if requested by Gippsland Water _____

H.4.13 Department of Sustainability & Environment if requested by Gippsland Water _____

H.4.14 National Trust if requested by Gippsland Water _____

H.4.15 Rural Water Corporation if requested by Gippsland Water _____

H.4.16 Community groups if requested by Gippsland Water _____

H.4.17 EPA if requested by Gippsland Water _____

H.4.18 MFB, CFA if requested by Gippsland Water _____

H.5 Design information

H.5.1 Approval for common trenching _____

H.5.2 Design computations for special structures and/or special pipelines, include but are not limited to:

- Soil loading _____

- ☐ Traffic loading _____
- ☐ Pipe stiffness _____
- ☐ Soil modulus _____
- ☐ Deflection calculations _____
- ☐ Deflection at 50 years _____
- ☐ Bending radius for UPVC pipe _____
- ☐ Head calculations _____

Consultant's Certification

As the Consultant's nominated representative responsible for the design of the Works detailed in Gippsland Water Drawing No(s) : _____

I certify that:

1 The design is in accordance with the National Code WSA 03-1999 *Water Reticulation Code of Australia* and the Gippsland Water document *Addendum to the Water Industry Technical Standards and Codes of Practice.*

2 The drawing specification is in accordance with all relevant Gippsland Water Specifications and relevant Australian Standards.
Each item listed on Form 1 Design Certification List has been either initialled or marked **NA** or **AT** by the Responsible Design Representative, where:

- Initialling is my certification that the activity is completed and that it satisfies the requirements of Gippsland Water.
- Activities marked as **NA** are not applicable to this design.
- Activities marked as **AT** have an authorised attachment included.

_____ _____

Name (Design Consultant)

Signature

_____/_____/_____

Date

Information Checklist

- ☐ Plan of subdivision
- ☐ Form 1 (this form)
- ☐ 2 sets of Design plans A3 size
- ☐ Estimate of construction costs