List of Amendments

AMENDMENT NO.	TITLE	ADOPTION DATE	COMMENCEMENT DATE
1	Planning Scheme Policy No. DC1 - Water Supply Infrastructure and Sewerage Infrastructure	9 August 2000	12 August 2000
2	Supplementary Table of Development Assessment, Planning Area No. 1 – Maroochydore, Precinct 3 – Sunshine Plaza	n/a	31 August 2001[1]
3	Round 1 Amendments	24 April 2002	7 May 2002
4	Development Contributions (DC) Policies	24 September 2003	3 December 2003
5	Retail and Commercial Centres Hierarchy	22 December 2004	21 January 2005
6	Development Contributions (DC) Policies – 'Unit Charge' and 'Fees and Charges' provisions	22 December 2004	9 February 2005
7	New Development Contributions (DC) Policies – DCA, DC2, DC3, DC4, DC5 and DC6	22 June 2005	1 July 2005
8	Planning Scheme Policy DC1 - Water Supply and Sewerage Infrastructure	27 July 2005	30 July 2005
9	Round 2 Amendments (Planning Scheme Policies)	28 September 2005	21 August 2006
10	Round 2 Amendments (Volumes 1 to 4), Short Term Amendments and Minor Amendments (Peregian South)	26 July 2006	21 August 2006
11	Development Contributions (DC) Policies – Indexation Amendments	22 November 2006	1 December 2006
12	Development Contribution (DC) Policies – DCA, DC1, DC2, DC3, DC4, DC5 and DC6	10 October 2007	1 November 2007
14	Planning Scheme Policies Nos. 5, 6, 7 and 9	24 October 2007	21 April 2008
15 & 16	Planning Scheme Policies 4, 5, 6, 12, 13 & 14	21 August 2008	30 September 2008
17	Development Contribution (DC) Policies – DCA, DC1, DC2, DC3, DC4, DC5 and DC6	19 June 2008	30 June 2008
13	Sippy Downs Towns Centre Master Plan New Planning Scheme Policy No. 11	4 December 2008	9 February 2009
21	Planning Scheme Policy 5 Operational Works – Water and Sewer component	29 October 2009	11 November 2009

[1] This notation refers to a preliminary approval overriding the planning scheme pursuant to a Court Order dated 6 February 2001. The preliminary approval took effect on 6 February 2001.

MAROOCHY PLAN 2000 – PLANNING SCHEME POLICIES AMENDMENTS
(Amendment No. 21)

INSTRUCTIONS FOR REPLACEMENT PAGES

Thank you for purchasing a copy of the latest amendments to Maroochy Plan 2000. Please follow the instructions provided below in order to correctly replace the amended sections of Maroochy Plan 2000. The amendments will replace sections from the Appendices.

INSTRUCTIONS

Appendices

Planning Scheme Policy No.5:

1. *Remove* existing Contents Page pages 19-20, *Insert* new Contents Page pages 19-20
2. *Remove* existing pages 29-40; *Insert* new pages 29-40f

Subscribers are reminded that the commencement date of the amendments is 11 November 2009.

If you have any queries or comments regarding the amendments, please contact Strategic Planning Branch on telephone number (07) 5441 8384.

MAROOCHY SHIRE COUNCIL PLANNING SCHEME POLICY NO. 5

Operational Works

Contents

3.1 Water Supply

Introduction

Council supports the Water Services Association of Australia (WSAA) National Codes initiative to develop national codes for water supply, sewerage and sewage pumping stations. Benefits of the national codes include the development of best practices, the encouragement of innovation and minimisation of capital costs through standardisation of components used in water supply and sewage collection systems.

The supplementary manuals have been developed to define the particular requirements of Council in relation to the WSAA National Codes. Only details that differ from that of the WSAA National Codes are provided. The other manuals are:

- Supplementary Manual to the Water Supply Code of Australia – WSA 03-2002;
- Supplementary Manual to the Sewerage Code of Australia – WSA 02-2002; and
- Supplementary Manual to the Sewage Pumping Station Code of Australia – WSA 04-2002 04-2005.

3.1.1 Relevant Code Requirements

This section relates to acceptable measures A1.1 (a), (b) and (c) and A1.2 for performance criterion P1 in Element 1 (Utilities) of the Code for Operational Works. It sets out standards and potential information requirements for the provision of a reticulated water supply system.

In applying the following standards, applicants should also have regard to requirements set out in section 7 (Integrated Water Management) of this policy.

3.1.2 Standards

3.1.2.1 Usage

This supplementary manual shall be read in conjunction with, and take precedence over, the WSAA Water Supply Code of Australia – WSA 03-2002 to define the technical requirements of Council and the 'Water Agency' [1] in relation to the planning, design and construction of water supply systems.

[1] The Water Agency for the purposes of this policy is the. owner and administrator of water and sewerage assets

"Level of Service Impact Assessment Specification" is the framework by which the Water Agency may require information to assess development applications, due diligence requests or other information that may impact upon the Water Agency's ability to achieve the desired standard of service (DSS) for customers as defined in the Water Agency's current water supply and sewerage growth management strategies. The specification sets out information requirements essential to assess the existing and future effects on the performance and capacity of water assets including the identification of infrastructure needs, costs, and timings associated with deviation from population assumptions/sequencing underpinning the Water Agency's current long term infrastructure planning.

Water Meters

All new unit type development whether single or multi-storey are to be provided with individual water meters. The cost of the installation of the water meters will be borne by the developer and the water meters will be supplied by Council. Primary water meters should be located within the immediate Title boundary.

Council may request that in multi-storey strata title unit developments of three (3) storeys or more, individual meters shall be connected with remote reading counters located at the ground floor level or for two storey unit developments, all individual meters shall be located at the ground level above ground.

3.1.2.2 Part 1: Planning and Design

a) Pt 1 –1.5.2 Water Agency

Add to WSAA requirement:
For development proposals, the Water Agency may request that a water supply network analysis be undertaken to determine (a), (b) and (c).

b) Pt 1 – 2.1 System Planning Process

Add to WSAA requirement:
The designer shall liaise with the Water Agency prior to commencement of the design.

c) Pt 1 – 2.2 Demands

Replace WSAA requirement with: Water demands shall be determined in accordance

with Council's Level of Service Impact Assessment Specification.

d) Pt 1 – 2.2.3 Peak Demands

Replace WSAA requirement with:
The designer shall liaise with the Water Agency to obtain the peak demand factors.

e) Pt 1 – 2.3 System Configuration (a) & (b)

Add to WSAA requirement:
Where deemed necessary by the Water Agency, existing asbestos cement water mains shall be replaced along the full frontage of any proposed development site or where affected by any development works.

Replacement of existing water mains will be required in commercial and industrial and high density residential precincts where existing mains fronting any proposed development are less than 150mm diameter. Mains shall be replaced along the full frontage of the proposed development site prior to the placement of any site sheds or construction materials over or adjacent to the water main.

f) Pt 1 – 2.4.2 Network Analysis

Add to WSAA requirement:
The Water Agency will undertake, at the designer's expense an assessment, and establish any adverse impacts, of the proposed developments on the existing system using the Water Agency's hydraulic model.

The designer shall provide details of the proposed system development and demands to allow completion of this assessment. Alternatively, the Water Agency may require the designer to carry out this assessment. Network analyses are to include all pipes in the network model and comply with Council's Level of Service Impact Assessment Specification.

g) Pt 1 – 2.4.3 Operating Pressures

Add to WSAA requirement:
The minimum desirable service pressure shall be 220kPa at the water meter. The maximum service pressure shall be 800kPA.

h) Pt 1 – 3.2.2 Minimum Pipe Sizes

Add to WSAA requirement:
Pipe sizes shall not be less than DN150mm diameter for high density residential, commercial, industrial and rural residential precincts.

i) Pt 1 – 3.2.4 Fire Flows

Replace WSAA requirement with:
Fire flows shall comply with the requirements specified in 'Guidelines for Planning and Design of Urban Water Supply Schemes' Chapter 21A, 1997, Dept of Natural Resources and Mines. The water supply scheme must be capable of supplying the following fire flow demands above maximum hour demand: Commercial and Industrial Precincts – 30 litres per second at 12 metres residual pressure. Residential Precincts – 15 litres per second at 12 metres residual pressure.

j) Pt 1 – 3.7.2 Minimum Pressure Class

Replace WSAA requirement with:
The minimum pipe and fitting pressure class for reticulation mains shall be Class
16.

k) Pt 1 – 4.1.1 Design Tolerances

Add to WSAA requirement:
Horizontal alignment shall be referenced to GDA mapping co-ordinates.

l) Pt 1 – 4.3 Location of Water Mains

Add to WSAA requirement:Reticulation water mains shall generally be located within the road reserve on a 1.5 metre alignment from the property boundary.

In general, water mains are not to be constructed on private property, however, in instances where this is unavoidable it will be necessary to provide an easement of minimum 3.0 metres width registered for the benefit of the Council on the title of the land. The main is to be constructed centrally within the easement. A wider easement may be necessary in some instances, as determined by the Water Agency, to ensure adequate access for maintenance purposes.

m) Pt 1 – 4.3.2 Water Mains in Road Reserves

Add to WSAA requirement:
Mains shall be located to provide a minimum 0.5 metres horizontal clearance from existing or proposed footpaths. Landscape planting within 1.0 metre of Council water infrastructure or within a water easement shall be low growing when mature and be suitable approved varieties.

Consideration shall be given at land reconfiguration stage to ensure road reserves are of adequate width to provide required clearances between all services and improvements.

n) Pt 1 – 4.4 Shared Trenching

Replace WSAA requirement:
Water mains shall not be co-located with other services.

o) Pt 1 – 4.5 Duplicate Mains

Add to WSAA requirement:
Water mains are to be provided on both sides of the road in the case of divided carriage ways, commercial, industrial and high density residential precincts.

p) Pt 1 – 4.7 Connection of New Mains to Existing Mains

Add to WSAA requirement:
All works on the existing reticulation system shall be considered 'live works' and will be constructed by the Water Agency at the contractors cost. These works shall be clearly delineated on the drawings and shown in sufficient detail such that the works can be readily constructed. The connection point to the existing system shall be located to minimise disruption of supply to customers and be subject to Water Agency approval.

q) Pt 1 – 4.8.3 Temporary Ends of Water Mains

Add to WSAA requirement:
Water mains shall be constructed across the full frontage of any property being developed.

r) Pt 1 – 4.9 Property Services

Replace WSAA Standard Drawings WAT – 1106, WAT – 1107 and WAT – 1109 with Council's Standard Drawings SCW 350, SCW 355 and SCW 360.

Add to WSAA requirement:
Ductile iron pre-tapped fittings and service pipework shall be installed by the developer at the time of lot reconfiguration in accordance with Council's Standard Drawing SCW 360. Conventional tapping bands may be utilized for pipe diameters where pre-tapped fittings are not available. Property service connections shall only be installed on reticulation mains with a diameter less than or equal to 300 mm. Property connections shall be installed in accordance with Council's standard drawings. Water service pipework shall be provided for the full length of access strips and access easements serving lots (25mm NB min).

Conduits shall be provided under all roads to carry water services to properties on the opposite side to the main. Conduits shall be as follows:

Neighbourhood and Hill Slope Residential Precincts – 1 x 100mm diameter conduit for every second lot;

Mixed Housing Precinct – 1 x 100mm diameter conduit for each lot.

Conduits shall be installed in accordance with Council's standard drawings and at an alternate position to power and/or telecommunication services.

Kerb markers shall be placed in accordance with Council's standard drawings. If, as may occur at corner properties, electrical pillar boxes are located on both side boundaries, the property service connection shall be placed at the RP boundary truncation point. Community title schemes shall be provided with a single service to the boundary of the property. All internal works will be privately owned and the responsibility of the body corporate.

Water meters shall be installed by the developer prior to survey plan release. The water agency will advise the type and supplier of the approved water meters. Meters shall be installed in accordance with Council's standard drawings SCW-350, SCW-355, SCW-360.

s) Pt 1 – 4.10.4 Clearance from Structures

Replace WSAA requirement with:
Other structures deemed satisfactory to be constructed over or adjacent to Council's water supply must be designed and constructed to protect the infrastructure from physical damage and to allow Council access when necessary.

t) Pt 1 – 5.4.2 Pipe Cover
Add to WSAA requirement:
Where site works either reduce the depth of cover below the minimum, or increase the depth of cover to invert above 1.5 metres, the water main shall be re-laid to maintain the required depth.
u) Pt 1 5.5.1 Geotechnical Considerations – General

Add to WSAA requirement:
Considerations to include the existence of acid sulphate soils (ASS) and possible acid sulphate soils (PASS). Refer to Vol. 4, 2.1.3 Code for Assessment and Management of Acid Sulfate Soils.

v) Pt 1 – 6.1.4 Installation

Replace WSAA Standard Drawings WAT– 1301, WAT – 1304 and WAT – 1309 with Council's Standard Drawings SCW 320, SCW 365 and SCW 330.

w) Pt 1 – 6.2.1.1 Stop Valves – General

Replace first paragraph of WSAA requirement:
When extending an existing water main, a stop valve may only be installed at the junction of the existing and new water mains if approved by the Water Agency.

x) Pt 1 – 6.2.3 Stop Valves for Reticulation Mains

Add to WSAA requirement:
Stop valves are required on each side of all mains crossing railway reserves, major roads and on mains traversing easements.

Valves shall be resilient seated, coated, o-ring stem sealed, anticlockwise closing class 16 and conforming to AS2638. The wedge shall be totally encapsulated in an approved synthetic rubber conforming to AS1646. The body shall be internally and externally coated with fusion bonded epoxy (FBE) or a thermoplastic polyamide such as Rilson Nylon 11. Valves shall be installed in accordance with SCW 320 and WAT 1207.

y) Pt 1 – 6.2.5 1 Stop Valves – Location and Arrangements – General

Add to WSAA requirement:
Stop valve locations shall be in accordance with Arrangement 1.

Zone valves shall be in accordance with Arrangement 3(b).

aa) Pt 1 – 6.3.2 Pressure Reducing Valves (PRVs)

Add to WSAA requirement:
PRVs shall be designed in accordance with Council's Standard Drawing SCW 330.

ab) Pt 1 - 6.4.1 Air Valves – Installation Design Criteria

Replace WSAA Standard Drawing WAT – 1302 with Council's Standard Drawings SCW 320 and SCW 325.

ac) Pt 1 – 6.7 Swabbing Points

Add to WSAA requirement:
Swabbing points will generally only be required on large diameter or lengthy transfer mains. The Water Agency will advise any requirements on a case by case basis.

ad) Pt 1 – 6.8 Hydrants

Add to WSAA requirement
Hydrants shall be installed as follows:
• Location – opposite common boundaries, generally installed at crests or sags and end of mains.

• Spacing – maximum 80 metres

• Orientation – spring hydrants shall be oriented with bolts parallel to the water main

• Hydrants comply with AS3952-1991 for DN80 spring hydrants and shall be fusion bonded epoxy (FBE) or thermoplastic polyamide (Rilsan Nylon 11) coated. All fasteners are to be 316 stainless steel.

ae) Pt 1 6.8.8 Hydrant Locations

Replace WSAA Standard Drawings WAT – 1300 with Council's Standard Drawing SCW 365.

Replace WSAA Standard Drawing WAT 1301 with Council's Standard Drawing SCW 320.

Replace WSAA Standard Drawing WAT 1302 with Council's Standard Drawings SCW 320, SCW 325.

af) Pt 1 7.2.2 (d) Composition of Design Drawings
Longitudinal sections are to be prepared for water mains 250mm diameter or larger.

Add to WSAA:
(e) Ensure all revision amendments are clouded.

3.1.2.3 Part 2 - Products and Materials

a) Pt 2 – 8.4 Product Standards and Specifications.

Add to WSAA requirement:
The following materials are approved for use in the construction of water reticulation and trunk main systems.

Diameter	Function	Material					
Material Description		Copper	PVC-O	PE	DICL	MSCL	PVC-M
WSAA Purchase Specification		AS3500	PS-210	PS-207	PS-234	PS-203	PS-209
DN-20 – DN50	Water Service	Approved	N/A	PE100B PN16	N/A	N/A	N/A
DN50 – DN100	Water Service	Approved	N/A	N/A	N/A	N/A	N/A
DN63	Water Main Cul de sac only	N/A	N/A	PE100B PN16	N/A	N/A	N/A
DN100 – DN150	Water Main	N/A	PN16 SN 10	N/A	PN35	N/A	PN16 SN 10
DN200 – DN300	Water Main	N/A	N/A	N/A	PN35	N/A	N/A
DN375 – DN750	Water Main	N/A	N/A	N/A	PN35	Note 1	N/A

DELETED

3.1.2.4 Part 3: Construction

a) Pt 3 – 10.2 Personnel Qualifications

Add to WSAA:
Pipe layers shall be accredited by the pipe manufacturer.

b) Pt 3 – 11.5.4 2 Traffic Management

Replace WSAA requirement with:

A traffic management plan shall be prepared for all projects.

c) Pt 3 – 15.1.4 Laying

Replace WSAA Standard Drawing WAT – 1101 with Council's Standard Drawing SCW 380.

d) Pt 3 – 15.2.3 Bending Pipe

Replace WSAA requirement with:
Cold bending of PE pipe to manufactures specifications is permitted. Cold bending of all other pipes is not permissible.

e) Pt 3 – 15.5 Thrust and Anchor Blocks and Restrained Joints

Delete WSAA Standard Drawing WAT– 1206.

Add Council's Standard Drawing SCW 310.

Add to WSAA:
Hydrant tees are to be restrained in accordance with socketed valve restraint standard. Refer WAT - 1207.

f) Pt3 – 15.6 Property Services and Water Meters

Replace WSAA Standard Drawings WAT– 1106 to WAT – 1109 inclusive with Council's Standard Drawings SCW 350, SCW 355 and SCW 360.

g) Pt3 – 15.11.1 Installation.

Replace WSAA Standard Drawings WAT-1301 to WAT – 1306 with Council's Standard Drawings SCW 320 and SCW 325.

h) Pt3 – 15.11.2 Valve Chambers for Large Diameter Mains

Replace WSAA Standard Drawings WAT – 1308 and WAT – 1309 with Council's Standard Drawing SCW 330.

i) Pt3 – 15.16 Location Markers

Replace WSAA Standard Drawing WAT – 1300 with Council's Standard Drawing SCW

365.

j) Pt 3 – 22 Connections to Existing Water Mains

Replace WSAA requirement with:
All works that may involve connection to or modifications of the existing water supply system shall be undertaken by the Water Agency at the applicant's expense. Water mains are considered to be live once accepted 'on maintenance' by the Water Agency.

No person, other than authorised Water Agency employees, shall operate any existing valve or draw water from any existing main without the authority of the Water Agency.

3.1.3 Specifications

All relevant details are applied under Water Services Association of Australia (WSAA) National Code.

3.1.4 Standard Drawings

WSAA Drawing Numbers		Remarks
All		The Water supply Code of Australia WSA 03 drawings detail a number of infrastructure options and arrangements. A number of these options are not compatible with current Council practice. The acceptance, modification or deletion of the WSAA drawings is set out below.
WAT-1100	Not adopted	Use SCW 385 – drawing under development
WAT-1101	Not adopted	Use SCW 380 – drawing under development
WAT-1102	Adopted	Valve to be directly off tee
WAT-1103	Adopted	Valve to be directly off tee
WAT-1104	Adopted	1.) 63 OD PE water mains in cul de sac heads only. 2.) 63 OD PE water mains to be looped using entire head of cul de sac.
WAT-1105	Adopted	
WAT-1106	Not adopted	Use SCW 350, MWD 355 and SCW 360.
WAT-1107	Not adopted	Use SCW 355
WAT-1108	Not adopted	Use SCW 360
WAT-1109	adopted	
WAT-1200	Adopted	
WAT 1201	Adopted	
WAT-1202	Adopted	
WAT-1203	Adopted	
WAT-1204	Adopted	
WAT-1205	Adopted	
WAT-1206	Not Adopted	
WAT-1207	Adopted	Hydrant tees are to be restrained in accordance with socketed valve restraints.
WAT-1208	Adopted	
WAT-1209	Adopted	
WSAA Drawing Numbers		**Remarks**
WAT-1210	Adopted	
WAT-1211	Adopted	
WAT-1212	Adopted	
WAT-1213	Adopted	
WAT-1214	Adopted	
WAT-1300	Not adopted	Use SCW 365
WAT-1301	Not adopted	Use SCW 320
WAT-1302	Not adopted	Use SCW 320 & SCW 325
WAT-1303	Not adopted	Use SCW 320 & SCW 325
AT-1304	Not adopted	Use SCW 320 & SCW 325
WAT-1305	Not adopted	Use SCW 320 & SCW 325
WAT-1306	Not adopted	Use SCW 320 & SCW 325
WAT-1307	Adopted	
WAT-1308	Not adopted	
WAT-1309	Not adopted	Use SCW 330
WAT-1310	Adopted	
WAT-1311	Adopted	
WAT-1312	Adopted	
WAT-1313	Adopted	
WAT-1400	Adopted	

WAT-1401	Adopted	
WAT-1402	Adopted	
WAT-1403	Adopted	
WAT-1404	Adopted	
WAT-1405	Adopted	
WAT-1406	Adopted	
WAT-1407	Adopted	
WAT-1408	Adopted	
WAT-1409	Not adopted	
Public Utilities – Typical Service Corridors and Alignments		Remarks
SEQ-R-100		Public utilities in Verges, Service Corridors & Alignments
SEQ R-101		Public Utilities – Typical Service Conduit Sections

3.2 Sewerage

3.2.1 Relevant Code Requirements

This section relates to acceptable measures A1.1(a), (b) and (c) and A1.2 for performance criterion P1 in Element 1 (Utilities) of the Code for Operational Works. It sets out standards and potential information requirements for the provision of a reticulated sewerage system

In applying the following standards, applicants should also have regard to requirements set out in section 7 (Integrated Water Management) of this policy.

All on-site sewerage systems require relevant approval from Council. All applications are to comply with the Plumbing and Drainage Act (2002), Standard Plumbing and Drainage Regulation (2003), Australian New Zealand Standard-on-site domestic-wastewater management (AS/NZS 1547:2000), and Queensland Plumbing and Wastewater Code (Department of Infrastructure and Planning).

3.2.2 Standards

The key standards applied to water supply and sewerage reticulation is the Water Services Association of Australia (WSAA) National Codes. Council has applied supplementary details applicable to specific conditions outlined in the policy.

3.2.3 Design & Construction of Reticulated Sewerage

This policy shall be read in conjunction with, and take precedence over, the WSAA Sewerage Code of Australia – WSA 02-2002 to define the technical requirements of Council and the 'Water Agency' in relation to the planning, design and construction of reticulated sewerage systems.

Council generally does not support the construction of buildings over sewers.

3.2.3.1 Part 1: Planning and Design

a) Pt 1 – 1.4.2 Objectives of the Sewerage System

Add to WSAA requirement:

Sewerage system provisions to include:

• Extension of sewers to upstream property boundaries of development sites.
• Sewage pumping stations will not be approved where a reticulated gravity system could be provided.

b) Pt 1 – 2.3 – Planning Parameters

Replace WSAA loading rates with:
Average daily loading shall be determined by the product of the estimated EP draining to the point of design interest and the loading rate in L/EP/day. The equivalent population and loading rates shall be determined in accordance with the Maroochy Plan Planning Scheme Policy DC1, Tables 2(a) and Table 2(b).

c) Pt 1 – 3.2.2 – Traditional design Flow Estimation Method

Replace WSAA requirement with:

Design flows shall be determined in accordance with Council's Level of Service Impact Assessment Specification. .

d) Pt 1 – 4 – Detail Design

Add to WSAA requirement:
The minimum pipe size for sewer reticulation shall be 150mm diameter.

e) Pt 1 – 4.2.3 – Sewer Layout

Add to the WSAA requirement:

Where practicable all sewers are to be located as shown in the following table:

Table - Preferred Sewer Alignments

Location	Alignment
Roadway	On application
Footpath	On application – not usually favoured, except for commercial areas
Private Properties (side boundaries)	1.0 metre
Private Properties (rear and front boundaries)	1.5 metres

Alignment

Alignment

Sewers in lots with zero lot boundaries shall be located at the front of lots where possible.
Sewers in industrial precincts are to be located at the front of lots where possible. Sewers in commercial precincts should be located within the road reserve, where possible. Sewers are to be constructed to serve the entire area of each lot within the development site and are to be extended to the boundaries of the site to serve existing lots and potential development sites upstream.

Wherever possible, sewerage manholes shall be located on the high side of allotments.

In flat areas, sewers are to be designed to serve properties on both sides of the sewer.

Where sewers are located in road reserves, they shall be located on the opposite side to watermains, electricity and communications cables.

Sewers shall be constructed to serve the entire area of the allotment using a fall of 1:60 for the internal allotment drains allowing 300mm cover to top of pipe at head of drain.

Sewers shall be designed to follow the natural grade of the land.

f) Pt 1 – 4.2.5 – Easements

Add to WSAA requirement:
All sewers located within private property shall be contained within a minimum 3 metres wide easement. Sewers in excess of 3 metres deep shall be contained within a minimum 4 metre wide easement. Unless otherwise agreed with the Water Agency, sewers shall be located centrally in the easement.

g) Pt 1 – 4.3.4 – Public and Private Property

Add to WSAA requirement:
Maintenance structures on private property shall generally be 1.0 metre from side boundaries and 1.5 metres from front and rear boundaries and be a minimum of 0.5 metres clear of the property boundary.

Landscape planting within 1.5 metres of Council sewer infrastructure or within a sewer easement shall be low growing when mature and be suitable approved varieties.

h) Pt 1 – 4.3.5 – Changes in Direction Using a Maintenance Hole

Replace WSAA requirement with:

The maximum change in direction at a maintenance hole shall be 90 degrees unless otherwise approved by the Water Agency.

i) Pt 1 – 4.3.7 – Horizontal Curves in Sewers

Replace WSAA requirement with:

Horizontal curves in sewers are not permitted.

j) Pt 1 – 4.3.8 – End of Lines (NEW)

Replace WSAA requirement with:

Sewers are to be designed to terminate at a MH or TMH, except for branch lines less than 15 metres in length that serve no more than one lot.

k) Pt 1 – 4.4.4 – Clearance from Structures

Replace WSAA requirement with:
Buildings must provide at least 1.5 metres from the outermost projection of the structure to the nearest edge of any existing or proposed infrastructure.

Other structures deemed satisfactory to be constructed over or adjacent to Council's sewerage infrastructure must be designed and installed to protect the infrastructure from physical damage and to allow Council access when necessary.

Proposals to construct within 1.5 metres of infrastructure – 150mm diameter or less:

The Water Agency's consent is required to construct within 1.5 metres of water supply or sewerage infrastructure and will only be considered where it is demonstrated that clauses 1 or 2 below cannot be achieved:

1. The building or other structure is redesigned, or relocated to provide a minimum 1.5 metre horizontal clearance from the existing infrastructure to the outermost projection of the proposed structure.

Or

2. Existing infrastructure is relocated, with the approval of the Water Agency, to provide a minimum 1.5 metres horizontal clearance from the outermost projection of the proposed building or other structure.

Where it is demonstrated that clauses 1 and 2 cannot be achieved, the Water Agency may consider giving consent to construct within 1.5 metres of the infrastructure subject to any or all of the following requirements:

• Submission of a structural footing design prepared and certified by a registered professional engineer, demonstrating that the building or other structure does not impose any load on the infrastructure.

• Any footings of the building or structure which are within the zone of influence of the infrastructure are to extend below Line B (refer Figure 1) either with piers or a continuous footing located a minimum horizontal distance of 1.0 metre clear of the pipe.

• Replacement of the existing pipe work with DICL or an approved PVC-U pipe material to ensure a future life in excess of 50 years.

• Design of the building or structure to permit its easy removal for access to the Water Agency's infrastructure if required.

• A pre and post construction video inspection of the affected sewerage infrastructure.

• Lodgement of a security bond, as determined by Council under bonding requirements, to cover potential damage to the infrastructure as a result of the proposed building works.

• Construction of a maintenance hole immediately upstream and/or downstream of the structure.

• Completion of a Deed of Indemnity, by the property owner/s, legally indemnifying Council against any future structural failure, repair or reinstatement works.

• Payment of the prescribed application fee.

Proposals to construct within 1.5 metres of infrastructure larger than 150mm diameter:

For infrastructure larger than 150mm diameter, building within 1.5 metres of infrastructure is not permitted. The infrastructure is to be relocated or the building designed to provide a minimum 1.5 metre horizontal clearance from the outermost projection of the structure to the nearest edge of the pipe.

Proposals to construct 1.5 metres or greater from infrastructure:

The foundations of any structure, located 1.5 metres or a greater horizontal distance from water supply or sewerage infrastructure, but within Zone B (refer Figure 1) are to extend below Line B either with piers or a continuous footing.

There are no requirements for structures outside the zone of influence.

The following structures do not require consent from the Water Agency, however the design considerations of this policy still apply:

• Any structure located 1.5 metres, or greater horizontal distance, from water supply or sewerage infrastructure
• Any demountable fence
• Masonry fences up to 1.8 metres high, located on boundaries and constructed parallel to the sewer with a minimum horizontal distance from the fence foundation of 1.0 metre clear of the pipe;
• Retaining walls less than 1.0m high
• A single demountable lightweight garden shed with wall lengths of less than 3.0 metres, with lightweight roof and concrete floor no greater than 100mm thick. The shed shall be easily removable from the concrete pad.

Other Considerations

Where masonry fences greater than 1.0 metre high cross a sewer the fence shall be self supporting for a minimum of 1.0 metre either side of the sewer main.

No excavation or filling shall be undertaken over or adjacent to water supply or sewerage infrastructure without the consent of the Water Agency.

Where consent is obtained, any affected maintenance holes or fittings shall be adjusted as required.

Council generally does not support the construction of buildings over sewers.

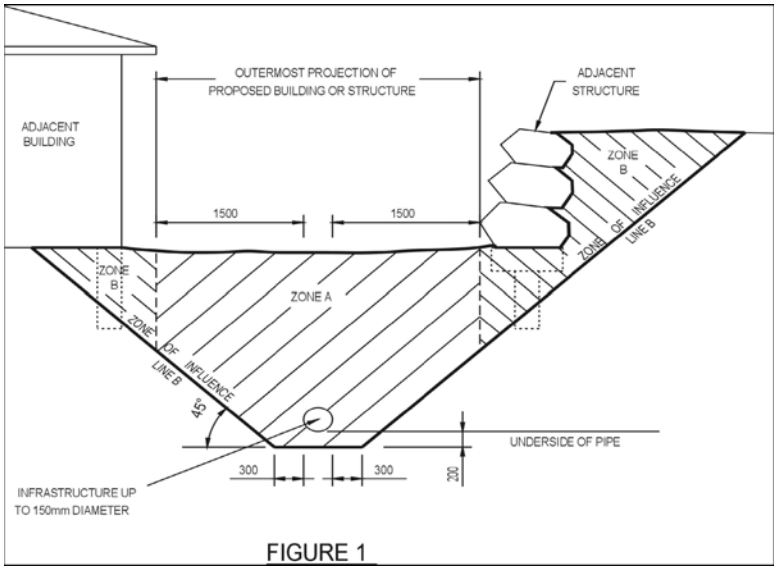

FIGURE 1

Ground surface levels must not be altered in a way causing ponding of water over any maintenance hole.

A sewer connection point must have:

• A clear area of at least 2.0m x 2.0m maintained around the sewer connection;
• A minimum horizontal clearance of 1.0m from any building;
• A minimum unobstructed vertical clearance of 2.4m.

Unrestricted access must be maintained to water supply and sewerage infrastructure at all times.

l) Pt 1 – 4.4.5 – Underground Structures and Services

Add to WSAA requirement:
Sewerage mains crossing stormwater culverts or pipes in excess of 225mm diameter are to be laid or replaced with PVC-U class 12 pipe for the full extent of the crossing plus 1.5 metres either side. Spigot ends of the class 12 pipe are to be chamfered to provide a smooth transition of flows.

A minimum horizontal separation of 1.0 metre shall be maintained between stormwater pipes greater than 225mm diameter, and any sewerage and water supply pipes.

Stormwater infiltration and filtration devices, and soakage trenches shall be located to provide a minimum 1.5 metres horizontal clearance to any sewerage infrastructure.

m) Pt 1 – 4.5.3 – Minimum Air Space for Ventilation

Replace WSAA requirement with:
Minimum air space in sewer mains shall be in accordance with Council's Level of Service Impact Assessment Specification.

n) Pt 1 – 4.5.7 – Minimum Grades for Self Cleansing

Replace WSAA table 4.6 with:

Minimum grades for reticulation sewers shall be as shown in the following table:

Diameter Minimum Grade

Diameter	Minimum Grade
150mm (up to 2 lots)	1 in 80
150mm (3 – 5 lots)	1 in 100
150mm general (6 or more lots)	1 in 150
225mm	See WSA02 Table 4.6
300mm	See WSA02 Table 4.6

Sewers shall not be upsized to take advantage of flatter grades.

o) Pt 1 – 4.5.8 – Minimum Grades for Slime Control

Add to WSAA requirement:
Unless otherwise agreed with the Water Agency, the minimum grade of sewerage mains of 300 mm diameter and greater shall ensure that a slime stripping velocity is achieved.

p) Pt 1 – 4.6.1 – Vertical Alignment of Sewers - General

Add to WSAA requirement:
Sewers shall not be in excess of 5.0 metres deep.

Junctions in excess of 3.0 metres in depth shall by 'Sugden' type.

q) Pt 1 – 4.6.2 – Long Section Design Plan

Replace first paragraph of WSAA requirement with:

Vertical alignments of sewers shall be shown on the longitudinal section of the design drawings.

r) Pt 1 – 4.6.3 – Minimum Cover Over Sewers

Add to WSAA requirement:
Additional sewer depth may be required in lots and footpaths where future access driveways could be constructed. In exceptional circumstances, a minimum 0.6 metres pipe cover may be approved in road reserves subject to construction in DICL or PVC-U Class 18 pipe from maintenance hole to maintenance hole.

s) Pt 1 – 4.6.4 – Lot Servicing Requirements

Add to WSAA requirement:
Where development is proposed on allotments currently serviced by combined house drainage systems, the applicant will be responsible to upgrade the system to current sewerage standards. This responsibility may extend to any affected adjacent properties.

The use of private sewage pump stations is not acceptable for any proposed development within Council's sewerage headworks planning areas.

t) Pt 1 – 4.6.5.4 –Depth of Connection Point
Replace part (b) and (d) of WSAA requirement with:

Sewer connections shall not be in excess of 1.5 metres deep. Replace WSAA Standard Drawing SEW– 1109 with Council's Standard Drawings SCW 125 and SCW 130.

u) Pt 1 – 4.6.7 – Vertical Curves

Replace WSAA requirement with:
Vertical curves are not permitted.

v) Pt 1 – 4.6.8 – Compound Curves

Replace WSAA requirement with:
Compound curves are not permitted.

w) PT 1 – 5.2 – Limitations of Connection to Sewers

WSAA Standard Drawings SEW – 1409 to SEW – 1411 inclusive are not adopted by Council.

x) Pt 1 – 5.3.1 – Methods of Property

Connection – General

Replace WSAA requirement with:
House drainage connections shall comply with Council's Standard Drawings and approved WSAA Standard Drawing.

Replace WSAA Standard Drawing SEW– 1107 with Council's Standard Drawings SCW 125 and SCW 130.

y) Pt 1 – 5.6 – Location of Connection Points

Add to WSAA requirement:
Connection points shall be located clear of driveways and a minimum of 1.0 metre inside the property boundary and otherwise in compliance with WSA02 Section 5.6.

For battleaxe allotments, where the sewer house connection lies within the access strip, sanitary house drainage is to be extended from the provided inspection opening along the access strip, at a minimum grade of 1 in 60, to a point 1.0 metre inside the main body of the lot prior to construction of the driveway.

z) Pt 1 – 5.7 – Y – Property Connections
Replace WSAA requirement with: Property connections shall be in accordance with Council's Standard Drawing SCW 125.

aa) Pt 1 – 5.8 – Length of Property Connection Sewers

Replace WSAA requirement with:
The maximum length of a house connection, measured from the reticulation sewer to the boundary of the property to be served, shall be 5.0 metres

ab) Pt 1 – 6.1 - Types of Maintenance Structures
WSAA Standard Drawings SEW – 1307 and SEW – 1315 are not adopted by Council

1 – 6.3.2

Replace WSAA requirement with:
For reticulation sewers, the maximum distance between any two consecutive maintenance structures shall be 90 metres, subject to the provisions of Clause 6.3.1. Plastic maintenance structures shall not be used at junctions of mains.

ac) Pt 1 – 6.5 - Special Considerations for Connection of New Sewers to Existing Sewers
WSAA standard Drawing SEW – 1502 is not adopted by Council.
Where pressure sewers discharge to a gravity system, the receiving structure shall be a plastic maintenance hole or approved alternative. Connection to the Council sewer system shall be by gravity only to a maintenance hole with an approved H2S gas inhibiting product. The two maintenance holes immediately downstream and one immediately upstream also be treated with an approved H2S gas inhibiting product.

ad) Pt 1 – 6.6.2 – Types of MH Construction

WSAA Standard Drawing SEW – 1307 is not adopted by Council.

ae) Pt 1 – 6.6.8 – Ladders, Step Irons and Landings

Replace WSAA requirement with:
Fixed internal access arrangements are not required in maintenance holes servicing sewers. Stainless steel safety bars and landings shall be provided in maintenance holes servicing sewers of 400mm diameter and greater.

af) Pt 1 – 6.6.9 – MH Covers

Add to WSAA requirement:
Bolt down metal access covers (water tight type) shall be specified on MH's located:

On all MH covers below the 1: 100 ARI flood level;
On all MH covers on sewers of 450mm diameter or greater;
On all MH covers within roadways;
On all MH covers designated by the Water Agency.

ag) Pt 1 – 7.2 – Boundary Traps

Replace WSAA requirement with:
Boundary traps are not required.

ah) Pt 1 – 7.3 – Gas Check MHs

Replace WSAA requirement with:
Gas check MHs are not required.

ai) Pt 1 – 7.9.2 Design Parameters for Emergency relief Structures (ERS).

Replace WSAA Standard Drawing SEW – 1412 with Council's Standard Drawing SCW 135.

aj) Pt 1 – 8 – Structural Design

Add to WSAA requirement:
Concrete encasement of sewerage mains is not permitted.

ak) (Part 1, Section 9.2.1) General

Add to WSAA requirement:
Design Drawings are to include:

Signed checking certification from an RPEQ.

al) (Part 1, Section 9.2.3) Sewers (Plans)

Add to WSAA requirement:

Design Drawings are to include:
- Clouding of all revision amendments;
- Clearly defined stage boundaries;
- Kerb and channel location;
- Proposed sewerage easements drawn;
- Where removal of trees is contemplated this shall be shown on plans;
- Size and location of other services located within 1.5 metres of sewerage infrastructure. Dimensioned clearances of services to the sewer main to be included;
- Finished surface level contours at intervals not greater than 0.5m;
- Existing surface spot levels at corners of proposed allotments;
- Finished surface spot levels at corners of proposed allotments;
- Sewer line and maintenance hole numbers;
- Details of allotments with zero or reduced building setback alignments.

am) (Part 1, Section 9.2.4) Structures

Add to WSAA requirement:
Design Drawings are to include:

Structures are to be referenced to GDA mapping co-ordinates.

an) (Part 1, Section 9.2.5) Longitudinal Sections

Add to WSAA requirement:

Ensure all revision amendments are clouded;
- Cut and fill notated;
- Natural surface and proposed finished surface levels;
- Bedding and sewer foundation details;
- Pipe size, class and material;
- Existing and proposed services crossing the sewer main. Size, material and levels of these services to be included;
- Levels and references to AHD;
- Chainages and invert levels of all proposed house connections;
- Sewer line and maintenance hole numbers;
- Pipe bedding type;
- Depths to pipe invert
- Depth and location of other services including stormwater.

ao) (Part 1, Section 9.2.6) Title Block Notation and Standard Notes

Add to WSAA requirement:
- Estate name (if known)
- Council Development Application number (if available)
- Drawing number and revision number.

ap) (Part 1, Section 9.3) Drafting Standards

Diameter	Function	Material								
Material Description		PVC-U	VC	GRP	CONCRETE PVC lined	ABS	PP	PE (note 6)	PVC-0	DICL **(Note 6, 8)**
WSAA Purchase Specification (note 9)		PS-230	PS-231	PS-232	-	PS-238	-	PS-207	PS-210	PS-234
Applicable Notes		1, 2,3,4	1,4	1,4,5	1,4	1,4,5	1,4	1,5	1,4,6,7	1, 4,6,7
DN 100	House connection	SN6	CS 34	N/A	N/A	N/A	N/A	N/A	N/A	N/A
DN 150	House connection	SN8	CS 34	N/A	N/A	SN 8	N/A	SN 8	PN 16	PN 35
DN 150	Sewer	SN8	CS 34	N/A	N/A	SN 8	N/A	SN 8	PN 16	PN 35
DN 225	Sewer	SN8	MCN 160	N/A	N/A	SN 8	N/A	SN 8	PN 16	PN 35
DN 300	Sewer	Min Class 12	MCN 120	SN 10000	N/A	SN 8	SN 10	SN 8	PN 16	PN 35
DN 375 – DN450	Sewer	N/A	MCN 95	SN 10000	N/A	SN 8	SN 10	SN 8	N/A	PN 35
DN 525	Sewer	N/A	MCN 95	SN 10000	N/A	SN 8	SN 10	SN 8	N/A	PN 35
DN 600	Sewer	N/A	MCN 95	SN 10000	CLASS 3	SN 8	SN 10	SN 8	N/A	PN 35

Notes:
1. Pipe classes specified are minima only. The designer shall confirm pipe class suitability by structural analysis.
2. Class SN 8 is acceptable for sewers up to max. 3.0m depth. Sewers in excess of 3.0m deep to be constructed from PVC-U class 12 series 1 pipework.
3. Pipe to be solid wall type, maximum 3.0m lengths.
4. Rubber ring seal only.
5. Suitable for specific uses only, as approved by the Water Agency.
6. Allowable in sewerage pressure pipeline systems.
7. Sewerage pressure pipeline fittings shall be fusion bonded polymer encapsulated ductile iron cement lined.
8. DICL pipes shall be protected against chemical attack by an approved method such as Calcium aluminate cement mortar lining
9. WSSA Product Purchase Specifications are available to down load at www.wsaa.asn.au

Add to WSAA requirement:
Drawings are to be prepared in accordance with this Policy.

3.2.3.2 Part 2 Products and Materials

a) Pt 2 – 10.4.1 Product Standards
Add to WSAA requirement:

The following materials are approved for use in the construction of sewerage systems.

3.2.3.3 Part 3: Construction

a) Pt 3 – 12.2 Personnel Qualifications

Add to WSAA:
Pipe layers shall be accredited by the pipe manufacturer.

b) Pt 3 – 13.5.4.2 – Traffic Management

Replace WSAA requirement with:
A traffic management plan shall be prepared for all projects.

c) Pt 3 – 17.1.4 Laying

WSAA Standard Drawing SEW – 1103 is not adopted by Council.

d) Pt 3 – 17.7 Property Connection Sewers

Replace WSAA Standard Drawing SEW 1109 with Council's Standard Drawings SCW 125 and SCW 130.

e) Pt 3 – 17.8 – Dead Ends

Replace WSAA Standard Drawing SEW – 1109 with Council's Standard Drawings SCW 125 and SCW 130.

f) Pt 3 – 17.9 – Marking of Property Connection Sewers and Dead Ends

Replace WSAA Standard Drawings with Council's Standard Drawings SCW 130 and SCW 125.

g) Pt 3 –17.12 – Bored Pipes Under Roads, Driveways and Elsewhere

h) Pt 3 -18.1 – Maintenance Holes (MHs) - General

WSAA Standard Drawing SEW 1307 is not adopted by Council.

WSAA Standard Drawing SEW – 1400 is not adopted by Council.

i) Pt 3 - 19.1 – Maintenance Shafts (MS and TMS) and Inspection Openings (IO) – General.
Replace WSAA referenced standard drawings with SCW 160, SCW 125, SCW 130, SEW - 1314, SEW - 1316 and SEW – 1317.

j) Pt 3 - 19.2 – Sealing Caps

Replace WSAA Standard Drawing SEW – 1106 with Council's Standard Drawing SCW 125 and SCW130.

k) Pt 3 – 19.3 - Covers

Replace WSAA Standard Drawings SEW – 1106 and SEW – 1109 with Council's Standard Drawings SCW 125 and SCW 130.

l) Pt 3 – 20.6 – Concrete Embedment and Encasement

WSAA Standard Drawing SEW – 1400 is not adopted by Council.

m) Pt 3 – 22.4 – Air Pressure and Vacuum Testing of Sewers

Add to WSAA requirement:
Vacuum testing shall be undertaken on all sewers and maintenance holes.

n) Pt 3 – 22.6 – Deflection (Ovality) Testing of Flexible Sewers

Add to WSAA requirement:
Deflection testing shall be undertaken on all flexible sewers.

o) Pt 3 – 22.6.3 – Flexible Sewers

Replace with 22.6.4

p) Pt 3 – 22.7 – CCTV Inspection

Add to WSAA requirement:
CCTV inspection shall be undertaken on all sewers prior to 'on' and 'off' maintenance inspections.

q) Pt 3 – 24 – Connection to Existing Sewers

Replace WSAA requirement with:
All works that may involve connection to or modification of the existing sewerage system are known as 'live sewer works'.

Typical works include:
- new connections to existing maintenance holes, and sewers;
- connection of a new maintenance hole over an existing sewer or dead end;
- extension or relaying existing sewers;
- replacement of sewers;
- raising or lowering of existing maintenance holes;
- other works on existing sewers and maintenance holes.

'Live sewer works' shall be clearly identified on the drawings. All 'live sewer works' shall be undertaken by the Water Agency at the applicant's expense. Sewer mains are considered to be live once accepted 'on maintenance' by the Water Agency.

p) Pt 3 – 27 – Excavation or Filling over Existing Sewers
Where Water Agency approval is granted to alter the existing ground surface level over an existing sewer:

• house connections on the sewer are to be altered to the minimum depth capable of draining the entire property;
• maintenance holes affected by the works are to be altered as required.

3.2.3.4 Specifications

All relevant details are applied under Water Services Association of Australia (WSAA) National Code.

3.2.3.5 Standard Drawings

Table – standard Drawings

wsAA Drawing umbers		Remarks The Sewerage Code of Australia WSA Standard Drawings detail various infrastructure options and arrangements. A number of these options are not compatible with current MSC practice. The acceptance, modification or deletion of the WSA drawings is set out below.
SEW-1100	Not Adopted	Drawing under development
SEW-1101	Adopted	
SEW-1102	Not Adopted	
SEW-1103	Not Adopted	
SEW-1104	Not Adopted	Use SCW 125
SEW-1105	Not Adopted	Use SCW 160 - Drawing under development
SEW-1106	Not Adopted	Use SCW 125, SCW 130
SEW-1107	Not Adopted	Use SCW 125, SCW 130
SEW-1108	Not Adopted	Use SCW 125
SEW-1109	Not Adopted	Use SCW 125 and SCW130
SEW-1200	Adopted	
SEW-1201	Adopted	
SEW-1202	Adopted	
SEW-1203	Adopted	
SEW-1204	Adopted	
SEW-1205	Adopted	
SEW-1206	Adopted	
SEW-1207	Adopted	
SEW-1208	Adopted	
SEW-1300	Adopted	
SEW-1301	Adopted	
SEW-1302	Adopted	
SEW-1303	Adopted	
SEW-1304	Adopted	
SEW-1305	Adopted	
SEW-1306	Adopted	
SEW-1307	Not Adopted	
SEW-1308	Adopted	
SEW-1309	Adopted	
SEW-1310	Adopted	
SEW-1311	Adopted	
SEW-1312	Adopted	
SEW-1313	Adopted	
SEW-1314	Adopted	
SEW-1315	Not Adopted	
SEW-1316	Adopted	
SEW-1317	Adopted	
SEW-1400	Not Adopted	

SEW-1401	Adopted	
SEW-1402	Adopted	
SEW-1403	Adopted	
SEW-1404	Adopted	
SEW-1405	Adopted	
SEW-1406	Adopted with Modification	Excluding Option 2
SEW-1407	Adopted	
SEW-1408	Adopted	
SEW-1409	Not Adopted	
SEW-1410	Not Adopted	
SEW-1411	Not Adopted	
SEW-1412	Not Adopted	Use SCW 135
SEW-1500	Adopted	
SEW-150 1	Adopted	
SEW-1502	Not Adopted	

3.2.4 Design & Construction of Sewerage Pumping Stations

Usage

This supplementary manual shall be read in conjunction with, and take precedence over, the WSAA Sewerage Pumping Station Code of Australia – WSA 04-2005 to define the technical requirements of Council and the 'Water Agency' in relation to the planning, design and construction of reticulated sewerage systems.

This code shall be read in conjunction with Council's Standard Specification "Supply and Installation of Electrical Equipment for Pumping Stations". Where discrepancies exist the Council specification shall have precedence.

Refer to Tables of Standard Drawings for relevant adopted drawings.

Part 1: Planning and Design

a) Pt 1 – 5.2.6 Landscaping

Add to WSAA requirements:
Landscaping works require an Operational Works approval

b) Pt 1 – 5.3.2 Inlet MH design

Replace WSAA requirement with:
House overflow monitoring/telemetry equipment not required

c) Pt 1 – 5.4.2 Sizing

Replace WSAA requirement with:
The wet-well diameter shall be a minimum of 2.4m

d) Pt 1 – 6.6.5 Junction Boxes

Junction Boxes are not permitted

e) Pt 1 – 6.8.1 Pump Starters and Variable Speed Drives

Autotransformers are not permitted

f) Pt 1 – 7.3.1 Power and Control Cubicle

Aluminium/zinc coated steel sheet not permitted

g) Pt 1 – 7.3.2.4 Degree of Protection

The switching mechanism component shall be rated at a degree of protection of IP42.

h) Pt 1 – 8.3.1 Pumping Control

Interlock control is not required.

i) Pt 1 – 8.3.5 Pump Starts and Interlocks

Interlock control is not required.

j) Pt 1 – 10.11.2 Discharge Manholes

Add to WSAA:
Where pressure sewers discharge to gravity system, the receiving structure shall be a plastic maintenance hole or approved alternative. Connection to the Council sewer system shall be by gravity only to a maintenance hole with an approved H2S gas inhibiting product.

The two maintenance holes immediately downstream and one immediately upstream shall also be treated with an approved H2S gas inhibiting product.

k) Pt 3 – 21.4.6 (a) Mains Requirements

Item (a) is not required.

l) Pt 3 – 21.4.8.1 Underground Cable Installation

Method (b) is the required method.

m) Pt 3 – 21.7.2 Control circuit wiring

Replace WSAA conductor requirement with:
Use flexible PVC coated tinned 30/0.65 copper conductors of minimum size 1.5mm^2 with 250 V grade insulation.

Extra low voltage devices are coloured orange.

n) Pt 3 – 21.8.2 Conduits

Hot dip galvanised saddles are not permitted.

o) Pt 3 – 36.4.2.2 Low pressure air testing

Replace WSAA requirement with:
Vacuum testing is required for gravity sewers

3.2.5 Standard Drawings

Table of Standard Drawings		Remarks
SPS-1100	Adopted	
SPS-1101	Not Adopted	Use SCW 501 & 506
SPS-1102	Not Adopted	Use SCW 501 & 506
SPS-1103	Not Adopted	Use SCW 503 & 512
SPS-1104	Adopted	
SPS-1200	Not Adopted	Use SCW 501 & 506
SPS-1201	Not Adopted	Use SCW 501 & 506
SPS-1202	Not Adopted	Use SCW 501 & 506
SPS-1203	Not Adopted	Use SCW 501 & 506
SPS-1204	Not Adopted	Use SCW 501 & 506
SPS-1205	Adopted	
SPS-1300	Not Adopted	Use SCW 503, 508 & 509
SPS-1301	Not Adopted	Use SCW502
SPS-1302	Not Adopted	Use SCW 502, 503, 507, 508 & 509
SPS-1303	Not Adopted	
SPS-1304	Not Adopted	Use SCW 503, 508 & 509
SPS-1305	Not Adopted	Use SCW 503, 512 & 515
SPS-1306	Not Adopted	Use SCW 502, 503, 505, 508 & 514
SPS-1307	Not Adopted	Use SCW 502 & 507
SPS-1308	Not Adopted	Use SCW 516 & 519
SPS-1309	Not Adopted	Use SCW 502 & 507
SPS-1310	Adopted	
SPS-1400	Adopted	
SPS-1401	Adopted	
SPS-1402	Adopted	
SPS-1403	Adopted	
SPS-1404	Not Adopted	Use SCW 135
SPS-1405	Adopted	
SPS-1500	Adopted	
SPS-1501	Adopted	
SPS-1502	Adopted	
SPS-1503	Adopted	
SPS-1504	Adopted	
SPS-1505	Not Adopted	Use SCW 505 & 511
SPS-1506	Adopted	
SPS-1507	Adopted	
SPS-1508	Adopted	
SPS-1600	Adopted	
SPS-1601	Adopted	
SPS-1602	Adopted	
SPS-1603	Adopted	
SPS-1604	Adopted	
SPS-1605	Adopted	
SPS-1606	Adopted	