

Table of Contents

1	Purpose	2
2	Definitions	2
3	Statutory Requirements	2
4	Selection of Equipment	2
5	References.....	2
6	Preferred Pipe Material Schedule – Water.....	3
7	Preferred Pipe Material Schedule – Sewer.....	4
8	Preferred Electrical Equipment	5
9	Preferred Instrumentation	9
10	Preferred SCADA Equipment	11
11	Preferred Mechanical Equipment.....	14

Preferred Equipment Manufacturers List - Technical Specification Information



1 Purpose

The purpose of South Gippsland Water's (SGW) Preferred Equipment Manufacturers Specification is to provide a detailed list of equipment known to our service and reliability requirements in providing water and wastewater services.

Preferred supplier brands, makes and models of equipment are chosen based on the following criteria:

- Whole of Life Cost Considerations;
- Reliability and maintainability of Product;
- Product Support, Critical Spares and Availability;
- Operability of Product;
- Consistency of Product across SGW Facilities;
- Technology developments, innovations and efficiency.

2 Definitions

For the purpose of the information only, the following shall mean:

SGW: South Gippsland Water

3 Statutory Requirements

The equipment supplied and installed in SGW facilities shall comply to all relevant Australian Standards, Acts, Codes and Regulations relevant for the piece of equipment, its installation and function.

4 Selection of Equipment

The selection of products shall be made considering the whole of life costs, consistency with other installed assets and SGW guidance.

Purchases made by, or on behalf of SGW, will be made with reference to this list. Where products are not covered by this list, purchasers should make reference to other SGW purchasing documents for assistance selecting products. Alternatives to the products covered by this list can be selected if the purchaser can demonstrate:

- The purchase will provide the lowest whole of life cost;
- The product has suitable after sales support (both technical and availability of spares);
- Operators and maintenance have been consulted;
- Asset functionality and reliability is not compromised by the selection.

SGW will periodically review and update this document to ensure preferred suppliers and equipment are up to date and provide optimal asset management outcomes for the Corporation.

5 References

This document should be read in conjunction with all relevant SGW Standard Specifications and Tenders.

Preferred Equipment Manufacturers List - Technical Specification Information



6 Preferred Pipe Material Schedule – Water

Pipe Material Description	Application	Preferred Make	Series/Model	Comments
Ductile iron cement lined	Water	Pentair, Saint Gobain PAM (Vinidex), Von Roll (Promain), XinXing (Crevet)		
Mild steel cement lined	Water >300 only	Pentair		
Copper pipe	Water – Service pipes only			
Polyethylene (HDPE)	Water	George Fisher, Iplex, Pentair, Vinidex, PPI Corporation.	Blue Striped – Min PN16	Fittings should be Plasson type
PVC modified (M-PVC)	Water	Iplex, Pentair, Vinidex, Pipemakers, Micron Pipelines.		
Oriented Polyvinyl Chloride (O-PVC)	Water	Iplex, Pentair, Vinidex, Micron Pipelines.		
Reinforced concrete	Water			
Relined with polyethylene	Water	Infratec		

Preferred Equipment Manufacturers List - Technical Specification Information

7 Preferred Pipe Material Schedule – Sewer

Pipe Material Description	Application	Preferred Make	Series/Model	Comments
Reinforced concrete	Sewer			
Relined with Cured In Place Pipe (CIPP)	Sewer	Interflow, Kembla, Veolia		
Relined With Ribloc Unplasticised Polyvinyl Chloride	Sewer	Expanda		
Relined with Polyethylene	George Fisher, Iplex, Pentair, Vinidex, PPI Corporation	Relined with Polyethylene		
Ductile Iron Cement Lined	Sewer	Pentair, Saint Gobain PAM (Vinidex), Von Roll (Promain), XinXing (Crevet)		
Glass Reinforced Plastic	Sewer	Boru Sanayi A.S.(Promains), Hobas (Global Pipe)		
Polyethylene (HDPE)	Sewer	George Fisher, Iplex, Pentair, Vinidex, PPI Corporation		
PVC Modified (M-PVC)	Sewer	Iplex, Pentair, Vinidex, Pipemakers, Micron Pipelines		
PVC-Unplasticised (PVC-U)	Sewer Gravity only	Vinidex, Von Roll (Promain), Iplex,		
Oriented Polyvinyl Chloride (O-PVC)	Sewer	Iplex, Pentair, Vinidex, Micron Pipelines, Pentair		
Mild Steel Cement Lined	Sewer	Pentair		

Preferred Equipment Manufacturers List - Technical Specification Information



8 Preferred Electrical Equipment

Function	Application	Preferred Make	Series/Model	Comments
Cabling	Control	Olex, Electra		
Cabling	Low Voltage	Olex, Prysmian (Pirelli), Electra	PVC/PVC, XLPE/PVC; Copper	
Cabling	Instrumentation	Olex, Electra	Dekoron, Instrolex	
Cabling	Variable Speed Drives	Olex, Teclec	Varolex	
Cabling	High Voltage	Olex	XLPE, Copper	
Cabling	Submersible Pump Motor Cable	Pump Vender Supply, Olex, Teclec		
Circuit Breakers	Moulded Case Circuit Breakers	Terasaki, Schneider		
Circuit Breakers	Air Circuit Breakers	Terasaki, ABB, Schneider		
Mechanical / Manual Transfer Switch	Main to generator Changeover	Terasaki, ABB, Schneider		Site specific sizing required
Automatic Transfer Switch Control	Main to generator Changeover	Socomec, NHP,	ATyS	Site specific sizing required
Installation	Cable Ladder	Unistrut, EZY Strut		
Installation	Conduit	Unistrut, APP		
Installation	Flexible Conduit	Unistrut, PBF		
Lighting	Intrinsically safe			Used in potentially explosive environments
Lighting – >200W	High Intensity Discharge	Sylvania, Pierlite, Phillips		
Lighting	Fluorescent	Pierlite, Sunny		

Preferred Equipment Manufacturers List - Technical Specification Information



Function	Application	Preferred Make	Series/Model	Comments
Lighting	LED	Pierlite, Sunny, Lumex		
Lighting	Emergency	Pierlite, CleverTronics,		
Lighting	Exit	Pierlite, CleverTronics,		
Miscellaneous	Operator Push Buttons	Schneider / Telemecanique, Sprecher & Schuh,		
Miscellaneous	Indicator Lamps	Schneider / Telemecanique, Specher & Schuh,		
Miscellaneous	Wire Ferrules	Grafoplast, Brady		
Miscellaneous	Cable Ferrules	Omega, Utilux		
Miscellaneous	Terminals	Weidmuller/Klippon, Legrand		
Miscellaneous	Junction Boxes	Clipsal, NHP, Omega		
Miscellaneous	Labels			As per Technical Specification
Cathodic Protection	Cathodic Protection	Australian Corrosion Consultants, CorrCon Pty Ltd		
Motors	Low Voltage	WEG, Siemens, Teco, ABB		High Efficiency
Motors	High Voltage	Siemens, Teco, ABB, WEG		High Efficiency
Variable Speed Drives and Soft Starters	Motor Speed Control	Allen Bradley Danfoss	Complete with Devicenet or Modbus interface	Confirm site specific for sizing
Power Factor Correction	Capacitors – L.V.	ABB		
Power Factor Correction	Capacitors – H.V.	ABB		
Power Factor Correction	Controller	ABB		

Preferred Equipment Manufacturers List - Technical Specification Information



Function	Application	Preferred Make	Series/Model	Comments
Socket Outlets	Lighting Outlets	Clipsal, NHP	IP56 Series	
Socket Outlets	Welding Outlets	Clipsal, NHP	IP56 Series	
Socket Outlets	General Purpose Outlets	Clipsal, NHP	IP56 Series	
Socket Outlets	UPS Supplied	Clipsal – Red		
Switch Board Equipment	Fuse/ Switch Units	Holec, MERLIN GERIN, Terasaki	Switch Board Equipment	
Switch Board Equipment	Motor Starter Circuit Breakers	NHP / Sprecher & Schuh		
Switch Board Equipment	Thermal Motor Protection – L.V.	NHP / Sprecher & Schuh		
Switch Board Equipment	Electronic Motor Protection – L.V.	NHP / Sprecher & Schuh		
Switch Board Equipment	Electronic Motor Protection – H.V.	NHP / Sprecher & Schuh		
Switch Board Equipment	Motor Starting Contactors	NHP / Sprecher & Schuh		
Switch Board Equipment	Current Transformers	Crompton, NHP		
Switch Board Equipment	Surge Protection Relay	ABB, Critec		
Switch Board Equipment	Earth Leakage Protection	ABB, Schnieder, Terasaki		
Switch Board Equipment	Power Meters	Crompton NHP		
Switch Board Equipment	Relays – 240 V a.c.	Finder, Omron		With LED
Switch Board Equipment	Relays – 24 V d.c.	Finder, Omron		
Switch Board Equipment	Relays – 24 V a.c.	Finder, Omron		With LED
Switch Board Equipment	Voltmeters / Ammeter	Crompton, NHP		

Preferred Equipment Manufacturers List - Technical Specification Information



Function	Application	Preferred Make	Series/Model	Comments
Switchboards	Lighting and Power Distribution Boards	NHP, ABB		These are manufacturers only; a brand of switchboard does not exist.
Switchboards	Process Power Distribution Boards	NHP, ABB		These are manufacturers only; a brand of switchboard does not exist
Switches	Limit	Omron, NHP		
Switches	Photoelectric, Process Control	Omron, NHP		
Switches	Proximity	Omron, NHP		
Switches	Selector	Sprecher & Schuh, Telemecanique		
Switches	Float	MJK, Flygt, Omega		
Transformers	Power	Wilson, ITC		
Transformers	Control	Meanwell, Omron, PowerBox		
Soft Starters		Danfoss, NHP		

Preferred Equipment Manufacturers List - Technical Specification Information

9 Preferred Instrumentation

Function	Application	Preferred Make	Series/Model	Comments
Analysers	Ammonia	Hach		
Analysers	Chlorine	Wallace & Tiernan, Hach		Depolox 3 Plus
Analysers	Conductivity	Hach, Prominent, Evoqua, Gli International		
Analysers	Oxygen - Dissolved	Royce, Hach , Krohne		
Analysers	pH & ORP	ABB, AIC , Burkert, Hach		
Analysers	Turbidity	Krohne, Hach		
Analysers	Fluoride Monitor	Orion, Prominent		
Automatic samplers		Isco		
Control Valve	Liquids	Tyco, Metso, Metaval, EBRO, Bellimo, Acrodyne		
Actuated Valve	Liquids	Rotork & Auma, Bellimo, Acrodyne		
Flowmeter	Magnetic	Endress and Hauser, MJK	E&H Promag W MJK	Modbus Communications Card
Flowmeter	Gas	Ross Brown Elster		
Flowmeter	Orifice Plate	ABB, Endress and Hauser, Wika		
Flowmeter	Turbine	ABB, Endress and Hauser, Elster, Sensus		
Flowmeter	Vortex	ABB, Endress and Hauser, Elster		
Flow	Switch	SICK, IFM Effector		
Flow	Rotameter	Kytola		

Preferred Equipment Manufacturers List - Technical Specification Information



Function	Application	Preferred Make	Series/Model	Comments
Level	Differential Pressure	Rosemount, ABB, Vega		
Level	Ultrasonic or Radar	Vega, Siemens	PRO Value	
Level	Switch	IFM		
Level	Hydrostatic	Vega		
Pressure	Differential Transmitter	Rosemount, ABB		
Pressure	Gauges	Ashcroft, Budenberg, Wika		
Pressure	Repeater			
Pressure	Switch	Telemecanique		
Temperature	Indicator	Omron		
Temperature	RTD Element	Thermon		
Temperature	Switch	Thermon		
Temperature	Thermocouple Element	Thermon		
Temperature	Thermocouple Extension Cables	Thermon		
Temperature	Transmitter (field)	MJK, Hach		
Temperature	Transmitter (rack)	ABB, MJK		
Time	Counter / Totaliser	Omron		
Control Systems	PLC/PCS	Allen Bradley – Rockwell PLC,	Control Logix range	With HMI(viewing purposes=10 inch, control purposes = 15 inch screen)

Preferred Equipment Manufacturers List - Technical Specification Information



10 Preferred SCADA Equipment

Function	Application	Preferred Make	Series/Model	Comments
Control Systems	SCADA HMI Software	CitectSCADA Version 7.2		
Control Systems	SCADA Server	Virtual Server or Dell PowerEdge Running Windows Server 2008 R2 64 bit		Virtual for CMF, physical for BCC
Control Systems	SCADA Server (Satellite)	Server Grade Desktop Running Windows 7 SOE. RSLinx as required.		Installed
Control Systems	SCADA Workstation	Standard PC or Laptop running Windows 7 SOE. Citect Client or Web Client as required		PC for Office applications, laptop for field staff and operators.
Control Systems	Sinewave Inverter	Meanwell, Upsonic, Powerware		
Control Systems	UPS Module	Delta	MCR600	
Control Systems	SCADAPhone Modem	Maestro	M240 Jetstream	
Control Systems	Ethernet Serial Terminal Server	Moxa	NPort 5610	
Control Systems	Ethernet Switch	Moxa	EDS-408A	
Control Systems	Local HMI Control Screens	Allen Bradley Brodersen	Ethernet Protocol Faytech 10"	Colour touch screen
Telemetry	Outdoor Cabinet	B&R Enclosures, NHP	D808030	
Telemetry	19" Server Rack	Ausrack		Glass door
Telemetry	BA-12 RTU Backplane	Kingfisher	PS-11-0 Power Supply Module CP-21-II Processor Module MC-11-II Multi-Communications Module	

Preferred Equipment Manufacturers List - Technical Specification Information



Function	Application	Preferred Make	Series/Model	Comments
Telemetry	BA4 RTU Backplane	Kingfisher	PC-1-PS1 Processor Module AI-10-1 I/O Module DI-10-1 I/O Module IO-4-1 I/O Module	
Telemetry	Base Station Radio	Trio Datacom	EB450	
Telemetry	Data Link Radio	Trio Datacom	ER450	
Telemetry	Outstation Radio	Trio Datacom	MR450	
Telemetry	Band Pass Duplexer	Trio Datacom		
Telemetry	Stream Router	Trio Datacom		
Telemetry	240VAC-48VDC Rectifier	Delta Electronics		
Telemetry	240VAC-12VDC Rectifier	Powerbox, Amtrax		
Telemetry	DC UPS Power Supply	Eaton	PB256	
Telemetry	240VAC-12VDC Charger	RFI		
Telemetry	VRLA, 12VDC Cabinet Battery Backup	Panasonic or Full River		
Telemetry	23-30Watt Enclosure Heater	Rittal, NHP		
Telemetry	15-50Watt Thermostat	Rittal, NHP		
Telemetry	Lightning Surge Protector	Critec, Erico	IS-B50LN	
Telemetry	RF Cable	Andrew	LDF-450	
Telemetry	Directional Antenna	RFI	Yagi	

Preferred Equipment Manufacturers List - Technical Specification Information



Function	Application	Preferred Make	Series/Model	Comments
Telemetry	Omni-Directional Antenna	RFI	Col8	
Telemetry	Solar Panel	BP		
Telemetry	Solar Regulator	Plasmatronics		

Preferred Equipment Manufacturers List - Technical Specification Information

11 Preferred Mechanical Equipment

Function	Application	Preferred Make	Series/Model	Comments
Gas detectors	Gas detection	BW, Draeger, Wallace and Tiernan		
Generators	Backup power	Cummins, F.G Wilson		
Filter Shells	Filtration	GEBEL Aquasafe		
Cable Mechanism, Fall Arrest	Safety	Hi-Safe Industries		
Paddles, Impellers	Mixing, aeration	Fabline/Aquatec Max		
Heater, Cooler	Air conditioning	Daikin,		
Blower	Compressed air	PDA Blowers (AUST), Roots Dresser		
Concrete pits	Concrete structures	Rockla, Humes		
Gear Box	Gear drives	Hanson, SEW Eurodrive, Bonfiglioli		
ontoons	Equipment flotation	Silverlock		
Trolley	Trolley	Roval		
Safety Shower	Safety Shower	Qsafe SPS		
Spill Kit	Water	Seton		
Tube Fittings	Metric nylon tube	Swagelock		
Tube Fittings	Metric stainless steel tube	Swagelock		
Tube Fittings	Metric tube fittings	Swagelock		
Weight	Counters	Ultrahawke, Wedderburn		
Weight	Scales and weighbridge	Ultrahawke, Wedderburn		

Preferred Equipment Manufacturers List - Technical Specification Information



Function	Application	Preferred Make	Series/Model	Comments
Pumps	Chemical dosing	Grundfos, Alldos Prominent Fluid Cont, Pulsafeeder, Wallace & Tiernan		
Pumps	Water	ITT Flygt, Forrers, Gorman-Rupp, Mono- pumps, Thompson Kelly & Lewis , KSB AJAX, Orbit		
Pumps	Sewerage	ITT Flygt, Hidrostal, Grundfos, Gorman- Rupp		
Pump	Compressor	Comp Air, Ingersoll- Rand, Roots Dresser, Atlas Copco, Champion, Boge		
Air Receiver	Water	Air Vess, Down Engineering, EURO- TEC, Kaeser Kat Engineering, Martison Engineering Peerless Atco		
Valves	Air	AMIAD, CSA	D-052	
Valve	Butterfly	Challenger, Pentair, Tyco		
Valves	Diaphragm, Gate	Tyco Water , Metaval, Shearseal, Tubeline, SMC Pneumatics (AUST), Vinidex, Wallace & Tiernan, Challenger		
Valves	Check	AVK, EBRO Armaturen, Johnvalves, Keystone Tyco Flow Challenger		
Valves	Pressure Relief	Bermad, DOROT, M.E. Mack Valves Pty, Roma Caolrex		
Controller	Injector	AQ2 Limited , Prominent Fluid Cont		

Preferred Equipment Manufacturers List - Technical Specification Information



Function	Application	Preferred Make	Series/Model	Comments
Clarifier	Collection Troughs	Gebel Auquasafe	670 High	
Pump station	Munchers	JWC Environmental, Mono, ITT Flygt		
Pump Station	Residential Pump Station	Aquatec Pressure Sewer Pump Stations	Simplex/ Duplex/ Triplex	Sized to Suit property
Aerators	Aeration	Aquatec-Maxcon	7888A-002	
Pipework	Water	Iplex Pipelines, Tyco Water , Vinindex		
Crane	Pump Station safety lifting davit	SALA Safety equipment		
UV Treatment	Disinfection	Trojan, Wedeco		
Gates, Actuators	Water	Fan Tech Pty Ltd, Keystone Tyco Flow, Rotork, Rubicon Systems		
Mixer, Feeder, Loader	Dosing	Bran & Luebbe, Landia, Prominent Fluid Cont, Sulzer, Tomal Feeder		
Rotor	Wastewater	OTV Kruger		
Anchor point	Root Access/Floor Restraint	Sayfa		
Safety Harness	Fall restraint.	Fallright international		
Personnel Davit	Safety equipment	Sala safety equipment		

This document is to be reviewed in **December 2018** or earlier as required.
 This document must not be released to external parties without approval by the Managing Director.

DOCUMENT APPROVAL		
Senior Manager Approval:	Mark Lynch	Date: 19/12/2016
Managing Director Signature:		