

APPROVED MATERIALS

AM-1 STORMWATER



QUEENSTOWN
LAKES DISTRICT
COUNCIL

Table 1: Stormwater

Materials that are not on the following table MUST be approved by Council – refer to – Chief Engineer

	Category / Material	Application	Standard	Product / Comment	Recommended Manufacturer	Recommended Supplier
A-M1.1	Stormwater Pipe	Primary mains: Larger than 225mm. Reticulation mains: 225mm-150mm Lateral / connection: 100mm and 150mm		<ul style="list-style-type: none"> ▪ Primary mains: larger than 225mm ▪ Reticulation mains: 225mm-150mm ▪ Lateral / connection: 100mm and 150mm 	IPLEX Pipelines New Zealand Ltd	Hynds Pipe Systems Ltd Humes Pipeline Systems
AM-1.1.1	Restrain Pipe	150mm to 225mm uPVC	SN 16	<ul style="list-style-type: none"> ▪ No dig renewals 	IPLEX Pipelines New Zealand Ltd	Hynds Pipe Systems Ltd Humes Pipeline Systems
AM-1.1.2	Reinforced Concrete Rubber Ring Jointed Pipes (RCRRJ)	All primary mains	AS/NZS 4058			Hynds Pipe Systems Ltd Humes Pipeline Systems Mico Pipelines
AM-1.1.2.1	Rubber Ring Joint			<ul style="list-style-type: none"> ▪ Humes Licence #2618 ▪ Hynds Licence #2586 		Hynds Pipe Systems Ltd Humes Pipeline Systems Mico Pipelines

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AM-1.1.2.2	Flush Jointed Pipes	Not generally accepted		<ul style="list-style-type: none"> Specific design and approval 		
AM-1.1.2.3	Skid Ring Joint	Not generally accepted		<ul style="list-style-type: none"> Specific design and approval 		
AM-1.1.2.4	Roller Compacted Pipes			<ul style="list-style-type: none"> Humes Licence #2618 		Humes Pipeline Systems Mico Pipelines
AM-1.1.3	Spiral-Welded Steel Pipe Internal Linings include Concrete Only	Structural mains	NZS 4442 OR AS 1579	<ul style="list-style-type: none"> Specific design and approval. Polyken YG111 external wrapping or Polyken synergy wrapping 	Steel Pipe New Zealand – Manufacturer capable of meeting the required standard	
AM-1.1.4	Ductile Iron Class K9 / K12	Structural mains	AS/NZS 2280 and amendments	<ul style="list-style-type: none"> Specific design and approval Light cement lined with Tyton joints. External protection with green sleeve Generally suspended pipes and high structural loadings 	Tubemakers of Australia – Manufacturer capable of meeting the required standard	Asmuss Water Systems
AM-1.1.4.1	Ductile Iron Pipe Light Cement Lined Tyton Excel PN20 and PN35	Structural mains	AS/NZS 2280 and amendments	<ul style="list-style-type: none"> Specific design and approval With Tyton joint elastomeric seals and socket / spigot joints (with blue polyethylene sleeve) Asmuss Water Systems Licence #SMK0883 	Asmuss Water Systems – Manufacturer capable of meeting the required standard	Asmuss Water Systems
AM-1.1.5	Polypropylene (PP) Twin-Wall Pipe	Specific design	AS/NZS 5065	<ul style="list-style-type: none"> Specific design and approval Rubber ring joint Waters & Farr-Stormboss 	Waters & Farr	Hynds Pipe Systems Ltd

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						Humes Pipeline Systems Mico Pipelines
AM-1.1.6	uPVC Pipes (solid wall) and Fittings for Gravity Applications (SN 16)	Reticulation mains and lateral / connections	AS/NZS 1254	<ul style="list-style-type: none"> Rubber ring jointed 	IPLEX pipelines New Zealand Ltd Marley New Zealand Limited RX Plastics Ltd	Keyplas RX Plastics Ltd Hynds Pipe Systems Ltd Humes Pipeline Systems Mico Pipelines
AM-1.1.7	uPVC Pipes (solid wall) and Fittings for Pressure Applications (SN 16)	Specific design	AS/NZS 1477	<ul style="list-style-type: none"> Specific design and approval 	IPLEX Pipelines New Zealand Ltd Marley New Zealand Limited RX Plastics Ltd	Keyplas Hynds Pipe Systems Ltd Humes Pipeline Systems Mico Pipelines
AM-1.1.8	Polyethylene Pipe (PE) for Pressure Applications PE100 SDR17 or PE80, SDR17 (minimum PN10)	Specific design situations	AS/NZS 4130, 4131	<ul style="list-style-type: none"> Specific design and approval Pipes will be butt welded in accordance with manufacturer's recommendations, and the standard coloured black with inner core colour white/grey 	Asmuss Water Systems IPLEX Pipelines New Zealand Ltd	Asmuss Water Systems Hynds Pipe Systems Ltd

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				<ul style="list-style-type: none"> Electrofusion couplings are not generally accepted 	Marley New Zealand Limited RX Plastics Ltd Waters & Farr	Humes Pipeline Systems Mico Pipelines
AM-1.1.9	Corrugated Aluminium or Galvanised Steel Pipe	Not generally accepted for urban design use		<ul style="list-style-type: none"> Specific design and approval 	Manufacturers who can supply to the relevant standards	
AM-1.1.10	Perforated Drainage Pipes or Similar Pipe for Subsoil	Groundwater control		<ul style="list-style-type: none"> Specific design and approval Includes products such as Novaflow, Novacoil or similar 	Manufacturers who can supply to the relevant standards	
AM-1.1.11	Tracer Wire / Warning Tape					
AM-1.1.11.1	Tracer Wire	Trenchless Installation Rising Mains		<ul style="list-style-type: none"> A continuous 4.0mm² multi-strand (minimum of 4) polythene sleeved cable 		Humes Pipeline Systems Hynds Pipe Systems Ltd Mico Pipelines
AM-1.1.11.2	Warning / Detector Tape	Open Cut Installation		<ul style="list-style-type: none"> Width – 100mm (min.) Thickness – 80µm Printing – TBC Printing Height – 80mm Tape Colour – TBC 	Polymark Packaging	Humes Pipeline Systems Hynds Pipe Systems Ltd Mico Pipelines

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AM-1.1.12	Ductile Iron Fittings and Pipes	For water supply connections and sewerage pressure pipelines.	AS/NZS 2280:2014 ISO9001:2015	<ul style="list-style-type: none"> ▪ Product must be fit for purpose ▪ 	Derwent Industries Ltd	Hygrade, Hynds, Mico, Plumbing world, Pipe & Infrastructure, Water supply products
AM-1.1.13	PE/PP Pipe and Structures	For useStormwater and Wastewater pipe systems	AS/NZS 5065:2005	<ul style="list-style-type: none"> ▪ Product must be fit for purpose ▪ 	Frank PKS NZ Ltd	Frank PKS NZ Ltd
AM-1.1.14				<ul style="list-style-type: none"> ▪ 		
AM-1.2	Seal Rings		Comply with AS 1646.1	<ul style="list-style-type: none"> ▪ Elastomeric seals ▪ IPLEX Licence #SMK1174 	IPLEX Pipelines New Zealand Ltd	
AM-1.3	Fittings					
AM 1.3.1	Cast-Iron Socket and Flanges		AS/NZS 1830 and AS/NZS 2544 Table D and coated	<ul style="list-style-type: none"> ▪ Rated at PN16 or higher ▪ Epoxy coated 	Gillies Metaltech	HJ Asmuss & Company Limited
AM-1.3.2	Ductile Iron Pipe Flanged, Socket and Spigot Fittings		AS/NZS 2280 Table D or Raised Face and drilled to AS 4087, and coated to AS/NZS 4158 and amendments		Crevet Pipelines Surecast Metals Asmuss Water Systems Gillies Metaltech	Humes Pipeline Systems Hygrade Products Ltd Asmuss Water Systems

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AM-1.3.3	Stand-Alone Flanges		Table D coated AS/NZS 4158 and amendments	<ul style="list-style-type: none"> ▪ Ductile or cast-iron ▪ Steel and tube – unflanged adaptor – ductile iron 	<p>IPLEX Pipelines New Zealand Ltd</p> <p>Marley New Zealand Limited</p> <p>Asmuss Water Systems</p> <p>Steel Tube Holdings Limited</p>	<p>IPLEX Pipelines New Zealand Ltd</p> <p>Marley New Zealand Limited</p> <p>Asmuss Water Systems</p> <p>Steel Tube Holdings Limited</p>
AM-1.3.4	Bolts, Nuts and Washers to be Hot-Dipped Galvanised as an Alternative to 316-Grade Stainless Steel	Preferred product to AM-1.3.5	AS/NZS 1111 and 1112	<ul style="list-style-type: none"> ▪ ISO metric hexagon commercial bolts and screws and ISO metric hexagon nuts, including thin nuts, slotted nuts and castle nuts ▪ Hot-dipped galvanised bolts, nuts and washers need to be wrapped in denso tape ▪ This particularly applies for corrosive soil and marine conditions 	Manufacturers who can supply to the relevant standards	<p>Humes Pipeline Systems</p> <p>Hynds Pipe Systems Ltd</p> <p>Mico Pipelines</p> <p>Asmuss Water Systems</p>
AM-1.3.5	Stainless Steel Bolts, Nuts and Washers are the Preferred Acceptable Fastenings Provided that they are 316-Grade Stainless Steel with Factory		Complying with AS 1252 High-strength steel fastenings	<ul style="list-style-type: none"> ▪ Stainless steel bolts, nuts and washers need to be wrapped in denso tape ▪ This particularly applies for corrosive soil and marine conditions ▪ Thread binding may occur and the bolts should be cut off if needed to be un-wound 	Manufacturers who can supply to the relevant standards	

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	Applied Molybond Coating					
AM-1.3.6	PE Fittings			<ul style="list-style-type: none"> ▪ Agru Butt welding and Electro fusion fittings ▪ Viking Johnson Aqua fast, Aqua grip and Ultra grip mechanical fittings for Polyethylene Pipe ▪ Hawle System 2000 mechanical fittings for Polyethylene Pipe ▪ DureFuse Licence #9603049 ▪ Philmac Licence #1271 ▪ Pushlok Licence #1494 ▪ Plasson Licence #1494 and 1271 ▪ Alprene A16 Easygrip Licence #1157 ▪ GF – Compression Fittings Licence #1157 ▪ “Plassim” MDPE Fitting to AS/NZS 4129 – Licence #WMKA21062 ▪ “Magnum” MDPE Fitting to AS/NZS 4129 – Licence #SMK02432 	<p>IPLEX Pipelines New Zealand Ltd</p> <p>Marley New Zealand Limited</p> <p>Asmuss Plastic Systems Limited</p> <p>PPI Corporation (NZ) Limited</p> <p>Waters and Farr</p> <p>RX Plastics Ltd</p>	<p>Hygrade Products Ltd</p> <p>Humes Pipeline Systems</p> <p>RX Plastics Ltd</p> <p>Mico Pipelines</p>
AM-1.3.7	uPVC Fittings		AS/NZS 1260	<ul style="list-style-type: none"> ▪ RRJ fitting only to be used ▪ IPLEX Licence #SMK1174 ▪ Marley Licence #WMKA20224 	<p>IPLEX Pipelines New Zealand Ltd</p> <p>Marley New Zealand Limited</p>	<p>Keyplas</p> <p>Hynds Pipe Systems Ltd</p> <p>Humes Pipeline Systems</p> <p>Mico Pipelines</p>

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AM-1.3.8	Rubber Sleeves	Reticulation Pipes (non-pressure)	AS/NZS 4326	<ul style="list-style-type: none"> All couplings shall have a central 316-grade stainless steel sheer band 	Furnco Pty Ltd	
AM-1.3.9	Bolted Unrestraint Coupers	For jointing spigot ends of pipes, other than PE, in water and sewerage applications.	AS/NZS 4998:2009	<ul style="list-style-type: none"> Product must be fit for purpose 	Derwent Industries Ltd	Hygrade, Hynds, Mico, Plumbing world, Pipe & Infrastructure, Water supply products
AM-1.3.10	Repair and Offtake Stainless Steel Clamps	For repairing cracks, seal for decommissioned service connections, holes, splits and pinholes in rigid water and sewerage pipes.	AS 4181-2013	<ul style="list-style-type: none"> Product must be fit for purpose 	Derwent Industries Ltd	Hygrade, Hynds, Mico, Plumbing world, Pipe & Infrastructure, Water supply products
AM-1.4	Manholes					
AM-1.4.1	1050mm to 2500mm ID with Precast Base			<ul style="list-style-type: none"> Polyethylene manholes require specific design and approval by the Chief Engineer 	Humes Pipeline Systems Hynds Pipe Systems Ltd	Humes Pipeline Systems Hynds Pipe Systems Ltd Mico Pipelines
AM-1.4.2	Concrete Lid (flat top) with 600m Openings					Humes Pipeline Systems Hynds Pipe Systems Ltd

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						Mico Pipelines
AM-1.4.3	Manhole Sealant, Flexible Jointing Compound			<ul style="list-style-type: none"> BM100 or SM9020 		Humes Pipeline Systems Hynds Pipe Systems Ltd Mico Pipelines
AM-1.4.4	Access Steps Hot-dipped Galvanised Steel Access Step or 316-Grade Stainless Steel			<ul style="list-style-type: none"> Galvanised manhole steps – 20mm² Stainless manhole steps – 16mm² Avon Industries Part #AA25003 / Part #AA25004 	Costavic Avon Industries	Humes Pipeline Systems Hynds Pipe Systems Ltd Mico Pipelines
AM-1.4.5	Plastic Encapsulated Stainless Steel Access Step		AS/NZS 1657, AS 4198	<ul style="list-style-type: none"> Nextep License #JP-JQA-QM6570 	Nextep Miyama NZ Ltd	
AM-1.4.6	Cast-Iron Covers and Frames: 600mm Nominal Diameter Minimum		BS EN 124 vehicle loading or AS 3996 80kN load rating	<ul style="list-style-type: none"> Includes “non-rock” 		Humes Pipeline Systems Hynds Pipe Systems Ltd Hygrade Products Ltd

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						Pipe & Infrastructure Ltd Mico Pipelines
AM-1.4.7	Ductile Iron Covers and Frames: 600mm Nominal Diameter Minimum		AS 3996 210kN (Class D) load rating	<ul style="list-style-type: none"> ▪ Includes “non-rock” ▪ Webforge NZ – Code DCC6DIPAC ▪ Gatic – Code GM300S6D3 ▪ St Gobain – Korum ▪ Hygrade – 600mm Maestro 	Gatic Pty Ltd Saint Gobain PAM Webforge NZ	Humes Pipeline Systems Hynds Pipe Systems Ltd Hygrade Products Ltd Pipe & Infrastructure Ltd Mico Pipelines
AM-1.4.8	Epoxy Mortar	Covering exposed steel in cut pipes		<ul style="list-style-type: none"> ▪ Two-part epoxy (e.g. Humebond, Hybond) 	Manufacturers who can supply to the relevant standards	Humes Pipeline Systems Hynds Pipe Systems Ltd Mico Pipelines
AM-1.4.9	Concrete	Lid Surround	NZS 3104	<ul style="list-style-type: none"> ▪ 17.5MPa 	Manufacturers who can supply to the relevant standards	

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AM-1.4.10	Romold Manhole Chamber	For Wastewater & Stormwater Drainage, Land Development, Industrial and Infrastructure.	The certificates have been issued in Austria for ROMOLD products complying to EN 13598-2	<ul style="list-style-type: none"> • This product is approved for green field subdivision only. • All other applications on a case by case basis as approved by the Chief Engineer. • No changes to product specification(s) provided without written approval by the Chief Engineer 	ROMOLD GmbH, ROMOLD technologies Ltd	Australasia Moulding Ltd, Frank PKS, Harrison Bloy Plumbing, Edward Gibbon – Reece
AM-1.4.9.1	Reinforcing Steel	Lid surround	AS/NZS 4671	<ul style="list-style-type: none"> ▪ D10 Grade 300 	Pacific Steel Group	
AM-1.4.10	Entry Safety Grill	Entry Safety	<p>≤75mm square mesh. Hot dipped Galvanised if made of steel or 316-grade stainless steel. Allows installation without heavily modifying existing manhole. Capable of locking and securing to manhole. Test load ≥400kg. Can</p>	<ul style="list-style-type: none"> ▪ Caliber Safety Grill 02104076 Grill MH TCC Galvanised 500mm. ▪ Caliber Safety Grill 02104078 Grill MH TCC Maestro Galvanised 600mm. ▪ Caliber Safety Grill 02104079 Grill MH TCC Maestro Stainless Steel 600mm. ▪ All other products are subject to specific approval or trial installation. ▪ Humes 48502 - 520mm Nominal Safety Grille. ▪ Humes 48504 - 600mm Nominal Safety Grille. 	<p>Hygrade Products Ltd</p> <p>Humes Pipeline Systems</p>	<p>Hynds Pipe Systems Ltd</p> <p>Humes Pipeline Systems</p>

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			<p>be removed easily by one person ≤5min. Connected by chain or similar to ensure grill does not fall into MH (must be able to support the weight of the grill). Manufacturers name, applicable information on product. Does not introduce any additional Health and Safety issues</p>			
AM-1.5	Rodding Eyes					
AM-1.5.1	Reinforced Concrete Pipe	To create chamber	NZS 3107 – soon to be replaced with AS/NZS4058	<ul style="list-style-type: none"> 600mm Ø cut to 600mm length. 		<p>Humes Pipeline Systems</p> <p>Hynds Pipe Systems Ltd</p> <p>Mico Pipelines</p>
AM-1.5.2	Cast-Iron Cover and Frames 545mm Nominal		BS EN 124 vehicle loading or AS 3996			Humes Pipeline Systems

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	Diameter Minimum		80kN load rating			Hynds Pipe Systems Ltd Hygrade Products Ltd Pipe & Infrastructure Ltd Mico Pipelines
AM-1.5.3	Ductile Iron Cover and Frames 545mm Nominal Diameter Minimum		AS 3996 210kN (Class D) load rating	<ul style="list-style-type: none"> ▪ Hygrade 500 HD Hytec cover and frame ▪ Humes HD non rock cover and frame 	Humes Pipeline Systems Hygrade Products Ltd	Humes Pipeline Systems Hynds Pipe Systems Ltd Hygrade Products Ltd Pipe & Infrastructure Ltd Mico Pipelines
AM-1.5.4	uPVC Fitting and Bends		AS/NZS 1260	<ul style="list-style-type: none"> ▪ 45 degree swept bend ▪ Solvent welded threaded mall fitting ▪ Threaded cap 	IPLEX Pipelines New Zealand Ltd (Licence #SMK1174) Marley New Zealand Limited	Keyplas Humes Pipeline Systems Hynds Pipe Systems Ltd

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					(Licence #WMKA20224)	Mico Pipelines
AM-1.5.5	Concrete	Lid surround	NZS 3104	<ul style="list-style-type: none"> 17.5MPa 	Manufacturers who can supply to the relevant standards	
AM-1.5.6	Reinforcing Steel	Lid surround	AS/NZS 4671	<ul style="list-style-type: none"> D10 Grade 300 	Pacific Steel Group	
AM-1.6	Inlet/Outlet					
AM-1.6.1	Scruffy Dome			<ul style="list-style-type: none"> Specific design and approval 		<p>Humes Pipeline Systems</p> <p>Hynds Pipe Systems Ltd</p>
AM-1.6.2	Precast Concrete Wingwalls					<p>Humes Pipeline Systems</p> <p>Hynds Pipe Systems Ltd</p>
AM-1.7	Sumps	Precast concrete Components Sump flat top Sump top (back entry) Rectangular sump barrel		<ul style="list-style-type: none"> 675mm x 450mm x 1650mm 675mm x 580mm x 1650mm 675mm x 450mm x 1200mm "Ike" type 	Specific approval required for circular sumps	<p>Hynds Pipe Systems Ltd</p> <p>Humes Pipeline Systems</p>
AM-1.7.1	Sump for ROW			<ul style="list-style-type: none"> 450mm x 450mm x 950mm 		
AM-1.7.2	Frames and Grates			<ul style="list-style-type: none"> 675mm x 450mm cast-iron grate and frame 		Hynds Pipe Systems Ltd

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				<ul style="list-style-type: none"> ▪ 300mm Ø cast-iron grate to suit socket of 225mm Ø culvert pipe ▪ 300mm Ø cast-iron grate to suit socket of 225mm Ø culvert pipe ▪ 610mm x 310mm galvanised web grate and frame ▪ 610mm x 310mm galvanised web grate and frame 		<p>Humes Pipeline Systems</p> <p>Hygrade Products Ltd</p> <p>Pipe & Infrastructure Ltd</p>
AM-1.7.3	High-Capacity Sumps	Where carriageway longitudinal gradient exceeds 12%		<ul style="list-style-type: none"> ▪ Super pits, mega pits, max pits ▪ 610mm x 310mm galvanised web grate and frame 		<p>Humes Pipeline Systems</p> <p>Hynds Pipe Systems Ltd</p> <p>Hygrade Products Ltd</p>
AM-1.8	Storage					
AM-1.8.1	Geocellular Stormwater Storage System	For surface water infiltration or storage.	14/5099 by BBA PB-180071 by Selle Consultant	<ul style="list-style-type: none"> ▪ Product must be fit for purpose 	ACO Group Ltd	ACO Limited New Zealand.
AM-1.9	Pumps					
Am-1.9.1	Submersible Pumps	For water and wastewater pumping	Sira Certification - ISO9001:2015	<ul style="list-style-type: none"> ▪ Product must be fit for purpose 	Sulzer Australia PTY Ltd	Sulzer Australia PTY LTD, Pump and Valve Specialties Ltd, Wallace Murray Electrical Ltd

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AM-1.10	Valves			▪		
AM-1.10.1	Resilient Seated Gated Valves for Waterworks purposes	for isolating water supply and sewerage pressure pipelines	AS/NZS 2638.2:2011	▪ Product must be fit for purpose	Derwent Industries Ltd	Hygrade, Hynds, Mico, Plumbing world, Pipe & Infrastructure, Water supply products