APPROVED MERICE

AM-2 WASTEWATER



Table 2: Wastewater

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
AM-2.1	Wastewater Pipe	Trunk mains: larger than 150mm. These to be specifically approved and specified by Council				
AM-2.1.1	Restrain Pipe	150mm to 225mm uPVC SN16	No dig renewals		IPLEX Pipelines New Zealand Ltd	Humes Pipeline Systems Hynds Pipe Systems Ltd
AM-2.1.2	Spiral-Welded Steel Pipe Internal Linings Include Concrete or Epoxy	Structural mains	NZS 4442 and AS 1579	 Specific design and approval Polyken YG111 external wrapping or speed steel with polyethylene coatings. Note internal coating must be resistant to hydrogen sulphide Manufacturer capable of meeting the required standard 	Steelpipe New Zealand	Mico Pipelines
AM-2.1.3	Ductile Iron Class K9 / K12	Structural mains	AS/NZS 2280 and amendments	 Specific design and approval Light cement lined with Tyton joints. External protection with greensleeve Generally suspended pipes and high structural loadings. Note internal coating must be resistant to hydrogen sulphide 	Tubemakers of Australia Asmuss Water Systems	Mico Pipelines Asmuss Water Systems

	Category / Material	Application	Standard	Product / Comment	Recommended Manufacturer	Recommended Supplier
				 Manufacturer capable of meeting the required standard Tubemakers of Australia Licence #2029 		
AM-2.1.4	Ductile Iron Pipe Light Cement-Lined Tyton Excel PN20 and PN35	Structural mains	AS/NZS 2280 and amendments	 Specific design and approval With Tyton elastomeric seals and socket / spigot joints (with blue polyethylene sleeving). Note: internal coating must be resistant to hydrogen sulphide. Manufacturer capable of meeting the required standard Asmuss Water Systems Licence #SMK0883 	Asmuss Water Systems	Mico Pipelines Asmuss Water Systems
AM-2.1.5	uPVC Pipes (solid wall) and Fittings for Gravity Applications SN8 SN12.5 or SN16 for Trenches	Reticulation mains and lateral connections	AS/NZS 1254	 Rubber ring jointed IPLEX Licence #1697 Marley Licence #2365 	IPLEX Pipelines New Zealand Ltd Marley New Zealand Limited RX Plastics Ltd	Humes Pipeline Systems Hynds Pipe Systems Ltd Mico Pipelines
AM-2.1.6	uPVC Pipes (solid wall) and Fittings for Pressure Applications SN16		AS/NZS 1477	 Specific design and approval 	IPLEX Pipelines New Zealand Ltd Marley New Zealand Limited RX Plastics Ltd	Keyplas Humes Pipeline Systems Hynds Pipe Systems Ltd Mico Pipelines

	Category / Material	Application	Standard	Product / Comment	Recommended Manufacturer	Recommended Supplier
AM-2.1.7	Polyethylene Pipe (PE) for pressure applications PE100 SDR17 (minimum PN12)		AS/NZS 4130 and 4131	 Specific design and approval Pipes should be jointed in accordance with manufacturer's recommendations and be a standard black colour with inner core colour brown Electrofusion coupling will be accepted where pipe line strings are to be connected, connection of fittings and repairs to pipelines 	IPLEX Pipelines New Zealand Ltd Marley New Zealand Limited RX Plastics Ltd Waters & Farr	Humes Pipeline Systems Hynds Pipe Systems Ltd Mico Pipelines Asmuss Water Systems
AM-2.1.8	Tracer Wire / Warning Tape					
AM-2.1.8.1	Tracer Wire	Trenchless installation rising mains		 A continuous 4.0mm² multi- strand (minimum of 4) polythene sleeved cable 		Humes Pipeline Systems Hynds Pipe Systems Ltd Mico Pipelines
AM-2.1.8.2	Warning / Detection Tape	Open cut installation		 Width – 100mm (min.) Thickness – 80mu Printing – TBC Printing Height – 80mm Tape Colour – TBC 	Polymark Packaging	Humes Pipeline Systems Hynds Pipe Systems Ltd Mico Pipelines
AM-2.1.9				•		

	Category / Material	Application	Standard		Product / Comment	Recommended Manufacturer	Recommended Supplier
AM-2.2	Seal Rings		Comply with AS 1646.1	•	Elastomeric seals for wastewater purposes	IPLEX Pipelines New Zealand Ltd (Licence #SMK1174)	Humes Pipeline Systems Hynds Pipe Systems Ltd Mico Pipelines
AM-2.3	Fittings						
AM-2.3.1	Cast-Iron Socket and Spigot Fittings		AS/NZS 1830 and AS/NZS 2544	•	Rated a PN16 or higher Epoxy coated	Gillies Metaltech	HJ Asmuss & Company Limited
	Cast-Iron Flanges		Table D and coated to AS/NZS				Mico Pipelines
	PN16		4158 and amendments				
AM-2.3.2	Ductile Iron Pipe Flanged, Socket and		AS/NZS 2280 to Table D or raised			Crevet Pipelines	Humes Pipeline Systems
	Spigot Fittings Flanges		face and drilled to AS 4087, and			Surecast Metals	Hygrade Products Ltd
	_		coated to AS/NZS			Asmuss Water	
	PN16		4158 and amendments			Systems	Mico Pipelines
						Gillies Metaltech	Asmuss Water Systems
						Asmuss Water	
						Systems	
AM-2.3.3	Stand-Alone Flanges		Table D coated to	•	PVC, ductile or cast iron	IPLEX Pipelines New	Mico Pipelines
	PN16		AS/NZS 4158 and amendments	•	Steel and tube – unflanged adaptor – ductile iron	Zealand Ltd	Asmuss Water Systems

	Category / Material	Application	Standard	Product / Comment	Recommended Manufacturer	Recommended Supplier
					Marley New Zealand Limited Steel and Tube Holdings Limited Asmuss Water Systems	
AM-2.3.4	Bolts, Nuts and Washers to be Hot- Dipped Galvanised as an Alternative to 316-Grade Stainless Steel		AS/NZS 1111 and 1112	 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	Humes Pipeline Systems Hynds Pipe Systems Ltd Mico Pipelines Asmuss Water Systems
AM-2.3.5	Stainless Steel Bolts, Nuts, Washers and Fastenings Provided they are 316-Grade Stainless Steel with Factory Applied Molybond Coating		Complying with AS 1252 – High Strength Steel Fastenings	 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	Humes Pipeline Systems Hynds Pipe Systems Ltd Mico Pipelines Asmuss Water Systems
AM-2.3.6	Gibaults		AS/NZS 4158 and amendments	 Use 316-Grade Stainless Steel Bolts Preference for Long Barrel 	Gillies Metaltech	Humes Pipeline Systems

	Category / Material	Application	Standard	Product / Comment	Recommended Manufacturer	Recommended Supplier
	 Cast Iron (coating as per standard) Gunmetal DR LG2 with ABS belly M16 316 stainless steel (with clips fusion coating as per standard) 		Coating to ASTM A276	 Use 316-Grade Stainless Steel Fasteners 	Viking Johnson – Maxifit (with Sheraplex coated bolts) Crevet Pipelines Milnes Pty Ltd Asmuss Water Systems	Hynds Pipe Systems Ltd Mico Pipelines Asmuss Water Systems
AM-2.3.7	PE Fittings			 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 Philmac Licence #1271 Pushlok Licence #1494 Plasson Licence #1494 and 1271 Alprene A16 Easygrip Licence #1157 "Plassim" MDPE fitting to AS/NZS 4129 – Licence #WMKA21062 "Magnum" MDPE fitting to AS/NZS 4129 – Licence #SMK02432 	IPLEX Pipelines New Zealand Ltd Marley New Zealand Limited Asmuss Plastic Systems Limited PPI Corporation (NZ) Limited Waters & Farr RX Plastics Ltd	Hygrade Products Ltd Humes Pipeline Systems RX Plastics Ltd Mico Pipelines
AM-2.3.8	uPVC Fittings		AS/NZS 1260	 RRJ fitting only to be used IPLEX Licence #SMK1174 Marley Licence #WMKA20224 	IPLEX Pipelines New Zealand Ltd	Keyplas Humes Pipeline Systems

	Category / Material	Application	Standard	F	Product / Comment	Recommended Manufacturer	Recommended Supplier
						Marley New Zealand Limited	Hynds Pipe Systems Ltd
							Mico Pipelines
AM-2.3.9	Rubber Sleeves	Reticulation pipes (non-pressure)	AS/NZS 4326	cent	ouplings used shall have a ral 316-grade stainless steel er band	Furnco Pty Ltd	Humes Pipeline Systems Hynds Pipe Systems Ltd
							Mico Pipelines
							Asmuss Water Systems
AM-2.3.10	Bolted Unrestraint Coupers	For jointing spigot ends of pipes, other than PE, in water and sewerage applications.	AS/NZS 4998:2009	Proc	duct must be fit for purpose	Derwent Industries Ltd	Hygrade, Hynds, Mico, Plumbing world, Pipe & Infrastructure, Water supply products
AM-2.3.11	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	Proc	duct must be fit for purpose	Derwent Industries Ltd	Hygrade, Hynds, Mico, Plumbing world, Pipe & Infrastructure, Water supply products
AM-2.4	Valves						

	Category / Material	Application	Standard		Product / Comment	Recommended Manufacturer	Recommended Supplier
AM-2.4.1	Valves ≥50mm Resilient Seated Anti-Clockwise Closing Rated at PN16 External and Internal Protective Coating Flanges to be Raised Face and Drilled as Per Standard	Pump station and rising mains	AS/NZS 2638.2 NZS/BS 5163 Class 1 AS/NZS 4158 and amendments AS 4087	• • •	Teflon gland packing or 2 or more O ring seals and dust cover In-line valves should be the same diameter as the reticulation main AVK Australia Pty Ltd Licence #SAI2420 and 2573 Asmuss Water Systems Licence #PRD/R61/0412/2 Crevet Pipelines Licence #1327 Hawle 4060E2 and 4500E2AS series Licence #SMK20123	AVK Australia Pty Ltd Gillies Metaltech Asmuss Water Systems Crevet Pipelines Hawle	Humes Pipeline Systems Hynds Pipe Systems Ltd Mico Pipelines Asmuss Water Systems
AM-2.4.2	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
AM-2.5	Manholes						
AM-2.5.1	1050mm to 2500mm ID with Precast Base			•	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-2.5.2	Hyseal Type 1050 to 2500mm ID					Humes Pipeline Systems	Humes Pipeline Systems

	Category / Material	Application	Standard	Product / Comment	Recommended Manufacturer	Recommended Supplier
					Hynds Pipe Systems Ltd	Hynds Pipe Systems Ltd
AM-2.5.3	Concrete Lid (flat top) with 600mm Openings					Humes Pipeline Systems Hynds Pipe Systems Ltd Mico Pipelines
AM-2.5.4	Manhole Sealant, Flexible Jointing Compound			BM100 or SM9020		Humes Pipeline Systems Hynds Pipe Systems Ltd Mico Pipelines
AM-2.5.5	Access Steps – 316- Grade Stainless Steel Access Steps			 Stainless manholes steps – 16mm Ø 	Costavic	Humes Pipeline Systems Hynds Pipe Systems Ltd Mico Pipelines
AM-2.5.6	Plastic Encapsulated Stainless Steel Access Steps		AS/NZS 1657 AS 4198		Nextep Miyama NZ Ltd Licence #JP-JQA- QM6570	

	Category / Material	Application	Standard	Product / Comment	Recommended Manufacturer	Recommended Supplier
AM-2.5.7	Cast-Iron Covers and Frames: 600mm nominal diameter minimum		BS EN 124 vehicle loading or AS 3996 80kN load rating	 Includes "non-rock" 	Humes Pipeline Systems Hynds Pipe Systems Ltd Hygrade Products Ltd Pipe & Infrastructure Ltd Mico Pipelines	
AM-2.5.8	Ductile Iron Covers and Frames: 600mm Nominal Diameter Minimum		AS 3996 210kN (Class D) load rating	 Includes "non-rock" Webforge NZ – Code DCC6DIPAC Gatic – Code GM300S6D4 St Gobain – Korum Hygrade – 600mm Maestro 	Gatic Pty Ltd Saint Gobain PAM Webforge NZ	Humes Pipeline Systems Hynds Pipe Systems Ltd Pipe & Infrastructure Ltd Mico Pipelines
AM-2.5.9	Manhole Connectors					
AM-2.5.10	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	 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) 	ROMOLD GmbH, ROMOLD technologies Ltd	Australasia Moulding Ltd, Frank PKS, Harrison Bloy Plumbing, Edward Gibbon – Reece

	Category / Material	Application	Standard	Product / Comment	Recommended Manufacturer	Recommended Supplier
				provided without written approval by the Chief Engineer		
AM-2.5.9.1	PVC			 Proprietary units only 	IPLEX Pipelines New Zealand Ltd	Humes Pipeline Systems
					Solo Plastics Ltd	Hynds Pipe Systems Ltd
						Mico Pipelines
AM-2.5.9.2	PE			PE 80PE 100	Manufacturers who can supply to the relevant standards	Humes Pipeline Systems
						Hynds Pipe Systems Ltd
						Mico Pipelines
						Asmuss Water Systems
AM-2.5.10	Ероху	Sealing joints and step irons		 2-part epoxy (e.g. Humebond, Hybond) 		Humes Pipeline Systems Ltd
						Hynds Pipe Systems Ltd
						Mico Pipelines
AM-2.5.11	Concrete	Lid surround	NZS 3104	• 17.5MPa		
AM-2.5.12	Reinforcing Steel	Lid surround	AS/NZS 4671	 D10 Grade 300 	Pacific Steel Group	

	Category / Material	Application	Standard	Product / Comment	Recommended Manufacturer	Recommended Supplier
AM-2.5.13	Entry Safety Grill	Entry Safety	≥75mm square mesh Hot dipped galvanised if made of steel or of 316-grade stainless steel allows installation without heavily modifying existing manhole Capable of locking and securing to manhole Test load ≥400kg Can 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 the product Does not introduce any	 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 installations Humes 48502 – 520mm Nominal Safety Grille Humes 48504 – 600mm Nominal Safety Grille 	Hygrade Products Ltd Humes Pipeline Systems	Hynds Pipe Systems Ltd Humes Pipeline Systems

	Category / Material	Application	Standard	Product / Comment	Recommended Manufacturer	Recommended Supplier
			additional Health and Safety Issues			
AM-2.6	Rodding Eyes					
AM-2.6.1	Reinforced Concrete Pipe	To create chamber	NZS 3107 – soon to be replaced with AS/NZS 4058	 600mm Ø cut to 600mm length 		Humes Pipeline Systems Hynds Pipe Systems Ltd Mico Pipelines
AM-2.6.2	Cast-Iron Cover and Frames 545mm Nominal Diameter Minimum		BS EN 124 vehicle loading or AS 3996 80kN load rating			Humes Pipeline Systems Hynds Pipe Systems Ltd Hygrade Products Ltd Pipe & Infrastructure Ltd Mico Pipelines
AM-2.6.3	Ductile Iron Cover and Frames 545mm Nominal Diameter Minimum		AS 3996 210kN (Class D) load rating	 Hygrade 500 HD Hytec Cover and Frame Humes HD Non Rock Cover and Frame 		Humes Pipeline Systems Hynds Pipe Systems Ltd Hygrade Products Ltd

	Category / Material	Application	Standard	Product / Comment	Recommended Manufacturer	Recommended Supplier
						Pipe & Infrastructure Ltd Mico Pipelines
AM-2.6.4	uPVC Fittings and Bends		AS/NZS 1260	 45 degree swept bend Solvent welded threaded mall fitting Threaded cap 	IPLEX Pipelines New Zealand Ltd (Licence #SMK1174) Marley New Zealand Limited (Licence #WMKA20224)	Keyplas Humes Pipeline Systems Hynds Pipe Systems Ltd Mico Pipelines
AM-2.6.5	Concrete	Lid surround	NZS 3104	• 17.5MPa	Manufacturers who can supply to the relevant standards	
AM-2.6.6	Reinforcing Steel	Lid surround	AS/NZS 4671	D10 Grade 300	Pacific Steel Group	
AM-2.7	Pump Stations			 Fibreglass packaged pump stations by specific design and approval only 		
AM-2.7.1	Wet Well			 FRP pump stations are subject to specific design and approval 		
AM-2.7.1.1	Centrifugally Spun Flushed Jointed Concrete Pipes – Class 2 (X)	Pump stations		 Minimum 1800mm Ø Altex – Carboline product range: Carboguard 504 as the primer to new or used concrete surfaces followed by 2 x coats of Carboguard 690 		Humes Pipeline Systems Hynds Pipe Systems Ltd

	Category / Material	Application	Standard	Product / Comment	Recommended Manufacturer	Recommended Supplier
AM-2.7.1.2	Guide Rails	Pump stations		 Schedule 10, 316-grade stainless steel pipe Any joints to be an internal pressed fit stainless steel sleeve 		
AM-2.7.1.3	Guide Rail Brackets	Pump stations		Flygt 316-grade stainless steel		
AM-2.7.1.4	Cable Brackets	Pump stations		 316-grade stainless steel 		
AM-2.7.2	Pump Valve Chamber					
AM-2.7.2.1	Chamber Walls	Pump stations		200mm concrete block		
AM-2.7.2.2	Chamber Floor	Pump stations		Cast in-situ concrete – 17.5MPa		
AM-2.7.2.3	Chamber Top Slab	Pump stations		 Concrete may be precast – 17.5MPa 		
AM-2.7.2.4	Flanges	Pump stations		 Gaskets shall be 3mm full face neoprene 		
AM-2.7.2.5	Access Lids	Pump stations		 6mm aluminium chequer plate Stainless steel 316-grade frame and fittings Specific design that considers odour and water infiltration 		
AM-2.7.2.6	Valves ≥50mm Resilient Seated Anti-Clockwise Closing Rated at PN16	Pump stations	AS/NZS 2638.2 NZS/BS 5163 Class 1	 Teflon gland packing or 2 or more O ring seals and dust cover In-line values should be the same diameter as the reticulation main 	AVK Australia Pty Ltd Gillies Metaltech	Humes Pipeline Systems Hynds Pipe Systems Ltd

	Category / Material	Application	Standard	Product / Comment	Recommended Manufacturer	Recommended Supplier
	External and Internal Protective Coating Flanges to be raised face and drilled as		AS/NZS 4158 and amendments AS 4087	 Resilient seated anti-clockwise closing Rated at PN16 External and internal protective 	Asmuss Water Systems Crevet Pipelines	Mico Pipelines Asmuss Water
	Per Standard			 coating Flanges to be raised face and drilled as per standard Valves to have hand wheels AVK Australia Licence #SAI2420 and 2573 Crevet Pipelines Licence #1327 Hawle 4060E2 and 4500E2AS series Licence #SMK20123 	Hawle	Systems
AM-2.7.2.7	Ductile Iron Non- Return Valves PN16	Pump stations	AS 4974	 Ball type Other types require specific approval 		Humes Pipeline Systems Hynds Pipe Systems Ltd Mico Pipelines
AM-2.7.2.8	Ductile Iron Fittings PN16	Pump stations	AS 2280 AS/NZS 4158	 All ductile valves, fittings and pipes should be coated in accordance with AS/NZS 4158 		Humes Pipeline Systems Hynds Pipe Systems Ltd Mico Pipelines
AM-2.7.2.9	Entry Safety Grill			 Specific Design and approval 		
AM-2.7.3	Pumps	Pump stations		 Flygt Submersible wastewater pumps 	ITT Flygt Ltd	

	Category / Material	Application	Standard	Product / Comment	Recommended Manufacturer	Recommended Supplier
AM-2.7.4	Pump Discharge Pipes	Pump stations	AS 2280	 Ductile iron pipes and fittings AS 2280:1999 Schedule 10, 316-grade stainless steel 		Humes Pipeline Systems Hynds Pipe Systems Ltd Mico Pipelines
AM-2.7.5	Rising Main PE100 or PE80 Polyethylene Pipe Minimum PN12	Pump stations	AS/NZS 4130	Welded or flanged joints		RX Plastics Ltd Humes Pipeline Systems Hynds Pipe Systems Ltd Mico Pipelines
AM-2.7.6	Bolts, Nuts and Washers	Pump stations		 All to be 316-grade stainless steel and coated before installation to prevent "binding" 		Humes Pipeline Systems Hynds Pipe Systems Ltd Mico Pipelines
AM-2.7.7	Tracer Wire	Rising main		 A continuous 4.0mm² multi- strand (minimum of 4) polyethylene sleeved cable 		Humes Pipeline Systems Hynds Pipe Systems Ltd Mico Pipelines

	Category / Material	Application	Standard	Product / Comment	Recommended Manufacturer	Recommended Supplier
AM-2.7.8	Ductile Iron Fittings and Pipes	For water supply connections and sewerage pressure pipelines.	AS/NZS 2280:2014 ISO9001:2015	 Product must be fit for purpose 	Derwent Industries Ltd	Hygrade, Hynds, Mico, Plumbing world, Pipe & Infrastructure, Water supply products
AM-2.7.10	PE/PP Pipe and Structures	For useStormwater and Wastewater pipe systems	AS/NZS 5065:2005	 Product must be fit for purpose 	Frank PKS NZ Ltd	Frank PKS NZ Ltd
AM-2.7.11	Submersible Pumps	For water and wastewater pumping	Sira Certification - ISO9001:2015	 Product must be fit for purpose 	Sulzer Australia PTY Ltd	Sulzer Australia PTY LTD, Pump and Valve Specialties Ltd, Wallace Murray Electrical Ltd