

SCHEDULE 9: SPECIAL PIPE WORKS AND FITTINGS TO PIPELINE						
ITEM NO.	REF	DESCRIPTION	UNIT	QUANT	RATE	AMOUNT
	SABS 1200 DB	<u>SECTION 4: SPECIAL PIPE WORK AND FITTINGS</u>				
		<u>EARTHWORKS</u>				
	8.3.2(a)	Excavate in all materials for pipe valve manholes. Backfill, compact, and dispose of surplus/unsuitable material for pipes:				
9.1		a) Air valve chambers	m ³	1600		
9.2		b) Scour valve chambers	m ³	1720		
9.3		c) Junction boxes and chambers	m ³	555		
9.4		d) Surface pipeline pedestals	m ³	1210		
		<u>Extra-over item 9.1 to 9.4 for:</u>				
9.5		a) Hard rock excavation	m ³	1275		
		<u>EXCAVATION ANCILLARIES</u>				
9.6	8.3.3.3	Compaction in roads reserves	m ³	967		
	SABS 1200L PSL 4.1	<u>STEEL PIPES and FITTINGS</u>				
		Fabrication, supply, transport and install and test the following pipe fittings. All items to be approved by Engineer prior to ordering.				
	PSL 4.1	<u>80mmØ DOUBLE ACTING AIR VALVE CHAMBER ON 700mmØ GRP PIPELINE. Class 20. (dwg - N/3110/W/11/026)</u>				
9.7		a) Item 2.1: 700mm dia. flange adaptor.	no	20		
9.8		b) Item 2.2: 700mm dia. flanged MS equal tee-piece	no	10		
9.9		c) Item 2.3: 700 x 400mm dia. flanged MS concentric reducer.	no	10		
9.10		d) Item 2.4: 400mm x 200mm dia. flanged MS concentric reducer.	no	10		
9.11		e) Item 2.5: 80mm Ø MS pipe with one side flanged and the other side a 200mm x 80mm Reducing Flange	no	10		
9.12		f) Item 2.6: 80mm dia. flanged RSV gate valve	no	10		
9.13		g) Item 2.7: 80mm dia. flanged MS pipe piece	no	10		
9.14		h) Item 2.8: 80mm dia. Double acting airvalve with anti shock mechanism, Flanged	no	10		
9.15		i) GMS Gooseneck vent pipe for all structures	no	10		
	PSL 4.1	<u>80mmØ DOUBLE ACTING AIR VALVE CHAMBER ON 700mmØ GRP PIPELINE. Class 16. (dwg - N/3110/W/11/026)</u>				
9.16		a) Item 1.1: 700mm dia. flange adaptor.	no	10		
9.17		b) Item 1.2: 700mm dia. flanged MS equal tee-piece	no	5		
9.18		c) Item 1.3: 700 x 400mm dia. flanged MS concentric reducer.	no	5		
TOTAL CARRIED FORWARD						

ITEM NO.	REF	DESCRIPTION	UNIT	QUANT	RATE	AMOUNT	
TOTAL BROUGHT FORWARD							
9.19	PSL 4.1	d) Item 1.4: 400mm x 200mm dia. flanged MS concentric	no	5			
9.20		e) Item 1.5: 80mm Ø MS pipe with one side flaged and the other side a 200mm x 80mm Reducing Flange	no	5			
9.21		f) Item 1.6:80mm dia. flanged RSV gate valve	no	5			
9.22		g) Item 1.7: 80mm dia. flanged MS pipe piece	no	5			
9.23		h) Item 1.8: 80mm dia. Double acting airvalve with anti shock mechanism, Flanged	no	5			
9.24		i) GMS Gooseneck vent pipe for all structures	no	5			
		<u>100mmØ DOUBLE ACTING AIR VALVE CHAMBER ON 700mmØ GRP PIPELINE. Class 16. (dwg - N/3110/W/11/026)</u>					
9.25		a) Item 3.1: 700mm dia. flange adaptor.	no	12			
9.26		b) Item 3.2: 700mm dia. flanged MS equal tee-piece	no	6			
9.27		c) Item 3.3: 700 x 400mm dia. flanged MS concentric reducer.	no	6			
9.28	PSL 4.1	d) Item 3.4: 400 x 200mm dia. flanged MS concentric reducer.	no	6			
9.29		e) Item 3.5: 100mm Ø MS pipe with one side flaged and the other side a 200mm x 100mm Reducing Flange	no	6			
9.30		f) Item 3.6: 100mm dia. flanged RSV gate valve	no	6			
9.31		g) Item 3.7: 100mm dia. flanged MS pipe piece	no	6			
9.32		h) Item 3.8: 100mm dia. Double acting airvalve with anti shock mechanism, Flanged	no	6			
9.33		i) GMS Gooseneck vent pipe for all structures	no	6			
		<u>150mmØ DOUBLE ACTING AIR VALVE CHAMBER ON 700mmØ GRP PIPELINE. Class 20. (dwg - N/3110/W/11/027)</u>					
9.34		a) Item 5.1: 700mm dia. flange adaptor.	no	6			
9.35		b) Item 5.2: 700mm dia. flanged MS equal tee-piece	no	3			
9.36		c) Item 5.3: 700 x 400mm dia. flanged MS concentric reducer.	no	3			
9.37	PSL 4.1	d) Item 5.4: 400 x 200mm dia. flanged MS concentric reducer.	no	3			
9.38		e) Item 5.5: 150mm dia.MS pipe with one side flaged and the other side a 200mm x 150mm Reducing Flange	no	3			
TOTAL CARRIED FORWARD							

ITEM NO.	REF	DESCRIPTION	UNIT	QUANT	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
9.39	PSL 4.1	f) Item 5.6: 150mm dia.flanged RSV gate valve	no	3		
9.40		g) Item 5.7: 150mm dia.MS pipe piece flanged	no	3		
9.41		h) Item 5.8: 150mm dia. Double acting airvalve with anti shock mechanism, Flanged	no	3		
9.42		i) GMS Gooseneck vent pipe for all structures	no	3		
		<u>150mmØ DOUBLE ACTING AIR VALVE CHAMBER ON 700mmØ GRP PIPELINE. Class 16. (dwg - N/3110/W/11/027)</u>				
9.43		a) Item 4.1: 700mm dia. flange adaptor.	no	6		
9.44		b) Item 4.2: 700mm dia. flanged MS equal tee-piece	no	3		
9.45		c) Item 4.3: 700 x 400mm dia. flanged MS concentric reducer.	no	3		
9.46		d) Item 4.4: 400 x 200mm dia. flanged MS concentric reducer.	no	3		
9.47		e) Item 4.5: 150mm dia.MS pipe with one side flaged and the other side a 200mm x 150mm Reducing Flange	no	3		
9.48		f) Item 4.6: 150mm dia.flanged RSV gate valve	no	3		
9.49		g) Item 4.7: 150mm dia.MS pipe piece flanged	no	3		
9.50		h) Item 4.8: 150mm dia. Double acting airvalve with anti shock mechanism, Flanged	no	3		
9.51		i) GMS Gooseneck vent pipe for all structures	no	3		
		<u>200mmØ DOUBLE ACTING AIR VALVE CHAMBER ON 700mmØ GRP PIPELINE. Class 16.(dwg - N/3110/W/11/027)</u>				
9.52	PSL 4.1	a) Item 6.1: 700mm dia. flange adaptor.	no	4		
9.53		b) Item 6.2: 700mm dia. flanged MS equal tee-piece	no	2		
9.54		c) Item 6.3: 700 x 400mm dia. flanged MS concentric reducer.	no	2		
9.55		d) Item 6.4: 400 x 200mm dia. flanged MS concentric reducer.	no	2		
9.56		e) Item 6.5: 200mm dia.MS pipe with one side flaged and the other side a 200mm x 150mm Reducing Flange	no	2		
9.57		f) Item 6.6: 200mm dia.flanged RSV gate valve	no	2		
9.58		g) Item 6.7: 200mm dia.MS pipe piece flanged	no	2		
9.59		h) Item 6.8: 200mm dia. Double acting with anti shock mechanism, Flanged	no	2		
9.60		i) GMS Gooseneck vent pipe for all structures	no	2		
TOTAL CARRIED FORWARD						

ITEM NO.	REF	DESCRIPTION	UNIT	QUANT	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
9.61	PSL 4.1	<u>200mm Ø PIP LINE SCOUR ASSEMBLY ON 750mm PIPELINE CLASS 16. (dwg - N/3110/W/11/025)</u>				
		a) Item SC 11.1: 750 x 200mm dia. flanged MS reducing tee-piece.	no	3		
9.62		b) Item SC 11.2: 750mm dia. flanged MS pipe piece, with position of puddle flange as indicated.	no	6		
9.63		c) Item SC 11.3: 750mm dia. flange adaptor.	no	6		
9.64		d) Item SC 11.4: 200mm dia. RSV Gate Valve	no	3		
9.65		e) Item SC 11.5: 200mm dia. flange adaptor.	no	3		
9.66		f) Item SC 11.6: 200mm dia. MS pipe piece, flanged one end, with other end suitable for flange adaptor. position of puddle flange as indicated	no	3		
9.67		g) Item SC 11.7: 200mm dia. flanged MS pipe piece. 1040mm Long	no	3		
9.68		h) Item SC 11.8: 200mm dia. MS puddle pipe piece, flanged one end and the other end plain ended. Position of puddle flange as indicated	no	3		
9.69		i) GMS Gooseneck vent pipe for all structures	no	3		
	PSL 4.1	<u>200mm Ø PIP LINE SCOUR ASSEMBLY ON 700mm PIPELINE Class 25 (dwg - N/3110/W/11/013)</u>				
9.70		a) Item SC 11.1: 700 x 200mm dia. flanged MS reducing tee-piece.	no	3		
9.71		b) Item SC 11.2: 700mm dia. flanged MS pipe piece, with position of puddle flange as indicated. 985mm	no	6		
9.72		c) Item SC 11.3: 700mm dia. flange adaptor.	no	6		
9.73		d) Item SC 11.4: 200mm dia. RSV Gate Valve.	no	3		
9.74		e) Item SC 11.5: 200mm dia. flange adaptor.	no	3		
9.75		f) Item SC 11.6: 200mm dia. MS pipe piece, flanged one end, with other end suitable for flange adaptor. position of puddle flange as indicated. 910mm	no	3		
9.76		g) Item SC 11.7: 200mm dia. flanged MS pipe piece. 1040mm Long	no	3		
9.77		h) Item SC 11.8: 200mm dia. MS puddle pipe piece, flanged one end and the other end plain ended. Position of puddle flange as indicated. 620mm	no	3		
9.78		i) GMS Gooseneck vent pipe for all structures	no	3		
	PSL 4.1	<u>50mmØ DOUBLE ACTING AIR VALVE CHAMBER ON 750mmØ STEEL PIPELINE. Class 10. (dwg - N/3110/RWW/11/005RA)</u>				
9.79		a) Item 1.1: 750mm dia. flange adaptor.	no	10		
9.80		b) Item 1.2: 750mm dia. flanged MS equal tee-piece	no	5		
TOTAL CARRIED FORWARD						

ITEM NO.	REF	DESCRIPTION	UNIT	QUANT	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
9.81		c) Item 1.3: 750 x 500mm dia. flanged MS concentric reducer.	no	5		
9.82		d) Item 1.4: 500mm x 200mm dia. flanged MS concentric reducer.	no	5		
9.83		e) Item 1.5: 50mm Ø MS pipe with one side flaged and the other side a 200mm x 50mm Reducing Flange	no	5		
9.84		f) Item 1.6:50mm dia. flanged RSV gate valve	no	5		
9.85		g) Item 1.7: 50 mm dia. flanged MS Female Threaded both ends	no	5		
9.86		g) Item 1.8: 50 mm dia. flanged MS Male Threaded both ends	no	5		
9.87		h) Item 1.9: 50mm dia. Double acting airvalve with anti shock mechanism, Flanged	no	5		
9.88		i) GMS Gooseneck vent pipe for all structures	no	5		
	PSL4.1	<u>Irrigation Canal Crossing (dwg - N/3110/M/10/001RA)</u>				
9.89		a) Pipe item number 1.6.1. : 700mm Ø Flange adaptor.	no	2		
9.90		b) Pipe item number 1.6.2. : 700mm Ø Flanged MS 45° bend.	no	4		
9.91		c) Pipe item number 1.6.3. : 700mm Ø Flanged MS pipe.3315mm long	no	2		
9.92		d) Pipe item number 1.6.4. : 700mm Ø Flanged MS pipe. 2780mm long	no	1		
9.93		e) Pipe item number 1.6.5. : 700mm Ø Flanged MS pipe. 6000mm long	no	1		
9.94		g) Pipe item number 1.6.6. : 700mmØ x 700mmØ Flanged MS tee-piece.	no	1		
9.95		h) Pipe item number 1.6.7. : 700 mm Ø MS blank flange with 150 mm Ø Flanged tee-stub	no	1		
9.96		i) Pipe item number 1.6.8. : 150 mm Ø Flanged RSV gate valve	no	1		
9.97		j) Pipe item number 1.6.9. : 150 mm Ø Double acting SS air valve	no	1		
		<u>Pump Station 1 Pump line stream crossings</u>				
	PSL 4.1	<u>Stream Crossings 1 (dwg - N/3110/W/11/014RA)</u>				
9.98		a) Pipe item number 1.1 : 700mm Ø GMS flange adaptor	no	2		
9.99		b) Pipe item number 1.2 : 700mmØ Flanged GMS pipe piece. 6000mm	no	8		
TOTAL CARRIED FORWARD						

ITEM NO.	REF	DESCRIPTION	UNIT	QUANT	RATE	AMOUNT	
TOTAL BROUGHT FORWARD							
9.100	PSL 4.1	<u>Stream Crossings 2 (dwg - N/3110/W/11/015RA)</u> a) Pipe item number 2.1 : 700mm Ø GMS Flange adaptor	no	2			
9.101		b) Pipe item number 2.2 : 700mmØ Flanged GMS pipe piece.	no	5			
	PSL 4.1	<u>Stream Crossings 3 (dwg - N/3110/W/11/016RA)</u> a) Pipe item number 3.1 : 700mm Ø GMS Flange adaptor	no	2			
9.102		b) Pipe item number 3.2 : 700mmØ Flanged GMS pipe piece.	no	5			
9.103	PSL 4.1	<u>Stream Crossings 4 (dwg - N/3110/W/11/017RA)</u> a) Pipe item number 4.1 : 700mm Ø GMS Flange adaptor	no	2			
9.104		b) Pipe item number 4.2 : 700mmØ Flanged GMS pipe piece.	no	5			
9.105	PSL 4.1	<u>HORIZONTAL AND VERTICAL BENDS</u> <u>Fabrication, supply, transport and install and test the following pipe fittings. All items to be approved by Engineer prior to ordering.</u>					
		<u>750ND Flanged Long radius steel bends FBE and Drilled SABS 1123, Table 1600/3.</u> a) From 3 degrees to 6 degrees	no	11			
9.106	PSL 4.1	b) From 6 degrees to 9 degrees	no	15			
9.107		c) From 9 degrees to 12 degrees	no	8			
9.108		d) From 12 degrees to 15 degrees	no	6			
9.109		e) From 15 degrees to 18 degrees	no	8			
9.110		f) From 18 degrees to 21 degrees	no	8			
9.111		g) From 21 degrees to 24 degrees	no	2			
9.112		h) From 24 degrees to 27 degrees	no	1			
9.113		i) From 27 degrees to 30 degrees	no	1			
9.114		PSL 4.1	<u>700ND Flanged Long radius GRP bends FBE and Drilled SABS 1123, Table 2500/3.</u> a) From 3 degrees to 6 degrees	no	26		
9.115			b) From 6 degrees to 9 degrees	no	18		
9.116	c) From 9 degrees to 12 degrees		no	10			
9.117	d) From 12 degrees to 15 degrees		no	10			
9.118	e) From 15 degrees to 18 degrees		no	10			
9.119	f) From 18 degrees to 21 degrees		no	5			
9.120							
TOTAL CARRIED FORWARD							

ITEM NO.	REF	DESCRIPTION	UNIT	QUANT	RATE	AMOUNT
TOTAL BROUGHT FORWARD						
9.121		g) From 21 degrees to 24 degrees	no	5		
9.122		h) From 24 degrees to 27 degrees	no	5		
9.123		i) From 27 degrees to 30 degrees	no	5		
9.124		j) From 30 degrees to 33 degrees	no	5		
	PSL 4.1	<u>Fabrication, supply, transport and install and test the following MS Flange adaptors. Drilled SABS 1123, table 2500/3</u>				
9.125		a) For 750mm pipe fittings	no	120		
9.126		b) For 700mm pipe fittings	no	198		
	SABS 1200 HA	<u>STRUCTURAL STEELWORK</u>				
9.127	PSHA4.9	Pipe bridge structure over irrigation canal complete (DWG	no	1		
9.128	PSHA4.10	Pipe holding brackets to bridge structure complete (DWG N3110RWW/11/0025RA)	no	6		
TOTAL SCHEDULE 9 CARRIED FORWARD TO SUMMARY						