TEST REQUIREMENTS

Construction Activity	Verification	n Requirement	Minimum Test	Specification	Minimum				
Construction Activity	Description	Test Required	Frequency	Requirement	No. of Tests				
L		SEWER MAIN CONS	TRUCTION		1				
Embedment	Compaction		WSA02-2014 19						
Trench Fill	Compaction		WSA02-2014 20.1						
	Air Pressure and Vacuum	Table S6.2, Operational Works Specification S6 "Sewerage Reticulation", WRC Development Manual							
Gravity Pipes	Deflection	WSA02-2014 20.1.4							
	CCTV Inspection		WSA02-2014 22.7						
Manholes	Vacuum or Hydrostatic	Clause S6.26, Operational Works Specification S6 "Sewerage Reticulation", WRC Development Manual							
L		SEWER PUMP STATION CO	DNSTRUCTION						
Embedment	Compaction	WSA04-2005 36.3							
Backfilling	Compaction	WSA04-2005 36.3							
Switchboards	Electrical Testing		WSA04-2005 36.9						
		WATER MAIN CONST	RUCTION						
Embedment	Compaction		WSA03-2011 16						
Trench Fill	Compaction		WSA03-2011 17.1						
Pipes	Pressure	Clause S5.28, Operationa	Works Specification S5 "Water Ret	ticulation", WRC Developmen	t Manual				
Disinfection	Bacteriological		WSA03-2011 20						
	Ś	STORMWATER DRAINAGE	CONSTRUCTION						
Excavation		Q111A/B/C or RDD AS 1289.5.4.1 o AS 1289.5.7.1	1/50m²	050/ 0000	1				
	Compaction -	Q110A or MDD AS 1289.5.1.1 o AS 1289.5.7.1	r 1/RDD	- 95% SRDD	n/a				

Construction Activity	Ver	Verification Requirement			Specification	Minimum
Construction Activity	Description	Test Required		Frequency	Requirement	No. of Tests
	STORM		AINAGE CONSTRUC	TION (cont'd)		
		Grading	Q103A or			
	Material Quality	Grading	AS 1289.3.6.1	1/material type	Table 19.2.6, MTRS04	n/a
	Material Quality	Linear	Q106 or	i/material type	Table 19.2.0, MT1004	n/a 2 n/a 2 n/a n/a
		Shrinkage	AS 1289.3.4.1			
Bedding/Haunch			Q111A/B/C or	Under trafficable area 1/side/50m		
	Compaction (Cohesive)	RDD	AS 1289.5.4.1	Elsewhere 1/side/100m	Table S4.1, Operational	n/a
(RCP, RCBC or similar)		MDD	Q110A or		Works Specification S4	
		MDD	Q132A	1/material type	"Stormwater Drainage",	n/a
		Density	Q132B or	Under trafficable area 1/side/50m	WRC Development Manual	
	Compaction (Cohesionless)	Index	AS 1289.5.6.1	Elsewhere 1/side/100m		2
		Min/Max	AS 1289.5.1.1 or	1/motorial turo	_	2/2
		Dry Density	AS 1289.5.5.1	1/material type		n/a
		Creadin a	Q103A or			-
Backfill (RCP, RCBC or similar)	Material Quality	Grading	AS 1289.3.6.1	1/material type	Table 19.2.3 MPTS04	n/a
	Material Quality	Linear	Q106 or		Table 19.2.3, MRTS04	n/a
		Shrinkage	AS 1289.3.4.1			
	Compaction (Design	RDD	Q111A/B/C or	Under trafficable area 1/300mm lift/50m	Table S4.1, Operational Works Specification S4	1 (between
	Trench Width < 4m)		AS 1289.5.4.1 or		"Stormwater Drainage",	structures)

		MDD	AS 1289.5.7.1 Q110A or AS 1289.5.1.1 o)r	Elsewhere 1/900mm lift/100m 1/material type	WRC Development Manual	n/a
			AS 1289.5.7.1		1/RDD		
Construction Activity	Verif	Verification Requirement			nimum Test	Specification Requirement	Minimum No. of
· · · · · · · · · · · · · · · · · · ·	Description	Tes	Test Required		requency		Tests
	ST	ORMWATER	DRAINAGE CONS	TRUCTIO	N (cont'd)		
	Compaction (Design Trench Width > 4m)		Q111A/B/C or		nder trafficable area /300mm lift/200m ² Elsewhere 1/900mm lift/400m ²		1 (between structures)
Backfill		RDD	AS 1289.5.4.1 or	1/30			
(RCP, RCBC or similar)			AS 1289.5.7.1	1/9			
(cont'd)		MDD	Q110A or	1/1	1/material type 1/RDD		n/a
			AS 1289.5.1.1 or	- 1/1			
			AS 1289.5.7.1				-
		Grading	Q103A or AS 1289.3.6.1	_	1/material type	100% < 50mm	n/a
	Material Quality	Dipatiaity	Q105 or	1/r		2 <u><</u> IP <u><</u> 12	
Backfill		Plasticity index	AS 1289.3.3.1	_			
(In-Place Structures			Q111A/B/C or		2/500mm lift		2
other than RCP, RCBC		RDD	AS 1289.5.4.1 or	2		Table S4.1, Operational	
or similar)	Composition		AS 1289.5.7.1			Works Specification S4	
	Compaction		Q110A or	1/1	1/material type	"Stormwater Drainage", WRC Development	
		MDD	AS 1289.5.1.1 or	1/1		Manual	n/a
			AS 1289.5.7.1		1/RDD		
Backfill (Stabilised Sand)	Material Quality	Table 19 Mi	nd shall comprise sand RS11.04 in an intimate n 1 part of either Type GF	nixture of 12	2 parts sand and	Table 19.2.5, MRTS04	n/a

Bedding/Haunch/Backfill/Overlay (Buried Metal Corrugated Structures)	Material Quality	recomr	mendations. Evidence of	ance with the manufacturer's these recommendations and all be incorporated with the ality records.	As per manufacturer's recommendations.	
	Installation	recomr	allation shall be in accord nendations. Evidence of bsequent compliance sh Contractor's qu	As per manufacturer's recommendations.	5	
Construction Activity	Verifica	tion Requi	rement	Minimum Test	Specification	Minimum No. of
construction Activity	Descriptio	n	Test Required	Frequency	Requirement	Tests
	STO	ORMWATE	R DRAINAGE CON	ISTRUCTION (cont'd)		
Stormwater Drainage System	CCTV Inspection Append			endix A, Operational Works Specification S4 "Stormwater Drainage", WRC Development Manual JCTION		
Ground Surface Treatment	Compation	RDD	Q111A/B/C or AS 1289.5.4.1 or AS 1289.5.7.1	1/2500m²	>0.3m below pavement subgrade - 95% SRDD	3
Ground Surface Treatment	Compaction	MDD	Q110A or AS 1289.5.1.1 or AS 1289.5.7.1	1/RDD	<0.3m below pavement subgrade - 97% SRDD	n/a
Embankment (Road)	RDD		Q111A/B/C or AS 1289.5.4.1 or AS 1289.5.7.1	1/200mm lift/2500m² or 1/500m³	>0.3m below pavement subgrade - 95% SRDD	3
	Compaction	MDD	Q110A or AS 1289.5.1.1 or AS 1289.5.7.1	1/RDD	<0.3m below pavement subgrade - 97% SRDD	n/a
Embankment (Concentrated Operations –	Compaction	RDD	Q111A/B/C or AS 1289.5.4.1 or	1/200mm lift/500m ² or	>0.3m below pavement subgrade - 95% SRDD	3

Gullies etc)		AS 1289.5.7.1	1/100m ³		
		Q110A or		<0.3m below pavement subgrade - 97% SRDD	
	MDD	AS 1289.5.1.1 or	1/RDD	Subgrade - 97 % SRDD	n/a
		AS 1289.5.7.1			

Construction Activity	Verification Requirement			Minimum Test	Specification	Minimum No. of
	Description	Tes	t Required	Frequency	Requirement	Tests
		ROAD	CONSTRUCTION (c	ont'd)		
	Material Quality	CBR	Q113C (soaked)	Representative each material and 1 test per 500m carriageway or part thereof	97% MDD 100% OMC	n/a
Subgrade (General)			Q111A/B/C or	1/1000m²		
		RDD	AS 1289.5.4.1 or			3
	Compaction		AS 1289.5.7.1		97% SRDD	L
	Compaction		Q110A or			
		MDD	AS 1289.5.1.1 or	1/RDD		n/a
			AS 1289.5.7.1			
			Q111A/B/C or			
		RDD	AS 1289.5.4.1 or	1/100m ²		1
Subgrade	Compaction		AS 1289.5.7.1		97% SRDD	
(Turnouts and Entrances)	Compaction		Q110A or	1/RDD		
		MDD	AS 1289.5.1.1 or			n/a
			AS 1289.5.7.1			
Pavement Layers	Material Quality	supplier ar	nd the results of the manu	a Quality Assured material facturer's testing to assure orated with the Contractor's rds	MRTS05 Section 7.2 "Type 2 Unbound Material"	
(General)			Q111A/B/C or	1/500m ²	4000/ 0000	4
	Compaction	RDD	Q112 or	2/500m ²	100% SRDD	8

	AS 1289.5.4.1	1/500m² (2/500m² if using AS1289.5.8.1)	4 (8)
	Q110A or	4/ /	
MDD	AS 1289.5.1.1 or	1/material type/5000m ² as required	n/a
	AS 1289.5.4.2	as required	

Construction Activity	Veri	fication Requ	irement	Minimum Test Frequency	Specification	Minimum
Construction Activity	Description	Те	st Required		Requirement	No. of Tests
		RO	AD CONSTRUCTION	l (cont'd)		1
			Q111A/B/C or	1/100m ²		1 n/a 1 sample
			Q112 or	2/100m ²		
Pavement Layers	Compaction	RDD	AS 1289.5.4.1	1/100m² (2/100m² if using AS1289.5.8.1)	100% SRDD	
(Turnouts and Entrances)			Q110A or	1/matarial tr/na		
		MDD	AS 1289.5.1.1 or	1/material type		n/a
			AS 1289.5.4.2	as required		
			AS 1012.1			
	Compressive		AS 1012.3.1	1 sample of 2 cylinders	Table S7.1, "Concrete	1 sample
Structural Concrete	Compressive Strength	AS 1012.8.1	for each 15m ³ or part thereof placed in an essentially	Classes", WRC	per casting	
	Oliengin		AS 1012.9	continuous manner	Development Manual	day
			AS 1012.12.1			