

BACKFILL - SAND AND COARSE GRAINED SOILS

Minimum & Maximum Cover of Enviroculvert (in metres)

Pipe Size	SN rating	Min. Trench Width	Multi Barrel Min Spacing From outside edge of pipe	Minimum Cover			Maximum Cover
				Traffic Load - AS5100.2 SM1600 Load *See note 4	Construction Equipment - Cat 793F Wheel Load *See note 6	Railway Load - AS4799-2000 Table A1 (Average Intensity Railway Load) *See note 3	
225	8	0.8	0.20	0.5	1.3	0.7	8.0
300	8	0.9	0.20	0.5	1.3	0.7	8.0
375	8	1.0	0.20	0.5	1.4	0.7	8.0
450	8	1.3	0.20	0.5	1.4	0.7	8.0
525	8	1.5	0.30	0.5	1.4	0.7	8.0
600	8	1.6	0.30	0.5	1.4	0.7	8.0
750	8	2.3	0.30	0.5	1.4	0.7	7.0
900	8	2.7	0.30	0.5	1.4	0.7	7.0
1050	8	4.2	0.35	0.5	1.4	0.7	7.0
1200	8	4.3	0.35	0.5	1.4	0.7	7.0
1500	8	6.1	0.35	0.5	1.4	0.7	7.0
1600	8	6.1	0.40	0.5	1.4	0.7	7.0
1800	4	6.5	0.45	0.6	1.7	1.3	6.0
2000	4	6.5	0.50	0.7	1.8	1.4	6.0

Minimum covers in accordance to AS2566.1-1998

Not subject to vehicular loading	0.3 m
Subject to vehicular loading -	
not in roadways	0.45 m
in sealed roadways	0.60 m
under unsealed roadways	0.75 m
Subject to construction equipment loading	0.75 m

Conditions to the above:

- Based on a native soil (surrounding sand and coarse-grained backfill) having a compaction of 90% MMDD, consisting of coarse-grained soil with more than 12% fines.
- Backfill material shall be sand and coarse-grained soil with less than 12% fines, achieving a minimum compaction of 90% MMDD.
- Minimum cover for rail installations has been specified from top of pipe to top of sub-ballast.
- SM1600 loading incorporates W80, A160, M1600, and S1600 traffic design loads detailed in AS5100.2-2004:
 - A160 traffic loads have an axle load of 160kN
 - M1600 traffic loads have an axle load of 120kN
 - S1600 traffic loads have an axle load of 80kN
- Railway loads have been designed for a single axle weight of 240kN
- Construction Cat 793F loads have been designed for a single axle weight of 2500kN, with maximum vehicle weight of 390 tonnes
- Minimum covers presented in the table are only suited to EnviroCulvert, EnviroGravity, EnviroSewer, and Enviropipes Stormwater Pipe and have been calculated through detailed design and require advanced installation methods to be achieved.