



CUT/FILL REPORT - EARTHWORKS STAGE 3				
AREA (m ²)	CUT (m ³)	TOPSOIL STRIP (m ³)	FILL (m ³)	NET (m ³)
48,400	40,600	8,900 <CUT>	1,100	48,400 <CUT>

1. DEPTHS ARE SHOWN FROM EXISTING STRIPPED SURFACE TO SUBGRADE SURFACE. (SURFACE STRIP DEPTH 300mm).

310206525-STN-00-501-DR-CI-090303

Appendix C Groundwater Seepage Calculations



Infiltration Loading Calculations and Discharge Areas

Based on Massmann (2003)

Clogging	Water Depth in Cell, D_{cell}	Depth to Water Table, D_{wt}	Hydraulic Conductivity, K	Total Base Area for One Cell Excluding Side Slopes, A_{cell}	Hydraulic Gradient, i	Cell Size Correction Factor, CF_{size}	Infiltration Rate, f	Total Number of Cells	Total Length of Cell Bottom	Length of Cell Bottom	Width of Cell Bottom	Cell Side Slopes (3:1 typical)	Length of Cell Including Side Slope	Width of Cell Including Side Slope	Cell Dimension Correction Factor CF_{aspect}	Clogging Correction Factor, $CF_{fill/bio}$	Adjusted Infiltration Rate, f_{corr}	Loading Rate to One Cell
(m)	(m)	(m)	(m/d)	(m ²)	m/m	-	(m/d)	-	(m)	(m)	(m)	-	(m)	(m)	-	-	(m/d)	(m ³ /d)
	4	0.0	20	3,600	0.041	0.7	0.82	1	60	60	60	2	68	68	1.00	0.5	0.411	1,916



Stantec is a global leader in sustainable engineering, architecture, and environmental consulting. The diverse perspectives of our partners and interested parties drive us to think beyond what's previously been done on critical issues like climate change, digital transformation, and future-proofing our cities and infrastructure. We innovate at the intersection of community, creativity, and client relationships to advance communities everywhere, so that together we can redefine what's possible.

Stantec New Zealand
Level 10, Otago House, 477 Moray Place
Dunedin 9016
Mail to: PO Box 13052, Christchurch 8140
stantec.com

