


Unit weight of soil cover	16.00 kN/cu.m
Depth of soil cover (1st lift, D)	0.60 m
Rig type	CAT D6D LGP
Total rig weight	205.00 kN
Track length (L)	3.25 metres
Track width (W)	0.91 metres

Slope angle, alpha	11.31 degrees
Soil cover friction angle	27.00 degrees
Interface friction angle	24.00 degrees
Interface adhesion	0.00 kN/sq.m
Unit tension (geosynthetic)	0.00 kN/m

**Factor of safety** **1.43**

**Forces**

N(1)	=	16.21 kN	$N_1 = \frac{W_1}{\cos \beta - \tan \phi_m \sin \beta - (\sin \beta + \tan \phi_n \cos \beta) \tan \phi_m}$
N(2)	=	143.16 kN	$N_2 = \frac{W_2 + 0.5P - (\delta_n \rho_2 + \tau_G - 0.5S)(\sin \alpha - \cos \alpha \tan \phi_m)}{\cos \alpha + \tan \delta_n \sin \alpha + (\sin \alpha - \tan \delta_n \cos \alpha) \tan \phi_m}$
N(3)	=	11.89 kN	$N_3 = \frac{W_3}{\cos \theta + \tan \phi_n \sin \theta + (\sin \theta - \tan \phi_m \cos \theta) \tan \phi_m}$
N(4)	=	7.39 kN	$N_4 = N_1 (\sin \beta + \tan \phi_m \cos \beta)$
N(5)CB	=	2.13 kN	$N_{5CB} = N_4 + N_2 (\tan \delta_m \cos \alpha - \sin \alpha) + (\theta_m A_2 + T_\alpha - 0.5S) \cos \alpha$
N(5)AB	=	2.13 kN	$N_{5AB} = N_3 (\sin \theta - \tan \phi_m \cos \theta)$

	Site	Parrys Quarry Landfill	
	Project	STABILITY ASSESSMENT	
	Date	Nov-18	Appendix
	STABILITY ASSESSMENT FOR PLANT OPERATIONS ON LANDFILL CAP		SRA3-5