Project   **Lake Lane, Barnham**

Project ref   **12188**

Date   **Sep-24**

GTA C&T LTD ©   **Tank -Flotation Calculation**

Tank ref:	Calc 1		
Tank Area at base (m2)	216.000		
Ground Level (m AOD)	9.200		
Top GW level(m AOD)	8.600		
Top of Tank Level (m AOD)	8.700		
Base of Tank level(m AOD)	8.200		
Depth of Tank (m)	0.500		
Depth of water table above tank (m)	0.000		
Depth of Tank within Water table (m)	0.400		
Depth of cover over tank (m)	0.500		
Displacement depth below water table(m)	0.400		
Volume for buoyancy (m³)	86.400		
Tank Buoyancy force (kN)	**847.6**		
Total depth over tank (m)	0.500		
Fill soil downward force (kN)	1695.60		
Downward anchor forces (kN)	**1695.60**		
Net Buoyancy Force	**848.02**		
Factor of safety	**2.0**		
	OK		

Obtain groundwater level from soil report

Indicates field to be completed

9.81kN/m³ for water. Positive figure denotes uplift force, negative figure denotes downward force

Note: If a negative figure is shown above for tank buoyancy then no ballast is required

Density of Dry soil = 1600 Kg/m3 = 15.7kn/m3 (Adjust if different backfill)

Negative figure denotes uplift force, positive figure denotes downward force

minimum acceptable value: 1.1