



SURFACE WATER DRAINAGE

new rainwater goods are to discharge into a new open crate soakaway, min. 5000mm from buildings crate size 2000x1000x1200mm deep cased in a 225mm granular fill and filter fabric wrapping layer. The crates are to be positioned below the drain invert capped with polythene and 75mm concrete, prior to back filling.

FOUL DRAINAGE

TRIAL HOLE ONE TIMINGS (sec)	TRIAL HOLE TWO TIMINGS (Sec)
412 seconds	395 seconds
596 seconds	574 seconds
714 seconds	709 seconds

6 trial hole timings are added and divided by 6 to give an average time for the site (3400/6 = 566.66). This is divided by 150 to give the time it takes for the water to drop. This is the percolation value (VP). This figure was 566.66/150 = 3.77 The area of the drainage field required is calculated by the following formula.

AT (Area) = P (Population) x VP x 0.20 (Sewage treatment plant)
 This equates as following: 8 x 3.77 x 0.20 = 6.032m² Therefore the drainage area required = 6.032m²

The drainage field should be constructed in an area of 6.032m² and in a closed loop system as per Part H design criteria. I would advise a 2no 600mm wide trench with a 2m gap between each trench which should run the full length of the lower area in a closed loop system; along with two interconnecting trenches this will allow for even distribution. I believe the area is approx. 22 linear meters and therefore the pipework should be slotted 110mm sewer pipe with 350mm of 20-40mm primary shingle below and 50mm over the top. A geotextile membrane should then be placed over the stone before backfilling with soil.

The total maximum discharge per day using British Water Flows and Loads would be 0.9m³ (900L) which is less than the 2m³ permit limit for discharge to ground.

FOR CONSTRUCTION

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		Date	March 2024	Drawn	CPR		Scale	1:100 @ A3
		Job Number	1524	Prefix	PA		Drawing Number	06
						For MAYTREE INVESTMENT PROPERTIES LTD		