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BY E-MAIL

Our Ref: PBP/02/MCBjc

21st August 2017

Dear Paul

Trial Pitting and Soakaway Testing
Hollinberry Lane, Howbrook

Site Works

Four trial pits were excavated in order to reveal the nature of the near surface soils and to carry out soakaway testing. The tests were undertaken at the base of the pit at depths rational to the construction of soakaways. The soils exposed in the trial pits were logged on site in general accordance with BS5930: 2015. There was no groundwater strikes encountered in any of the trial pits or trenches.

Soakaway Tests

On reaching the elected soakaway test depth, the pit was trimmed and squared as much as practicable. Water was then introduced into the pit at a controlled rate to prevent collapse of the sides and the level monitored at time intervals relative to a reference bar at ground level. The results obtained from the soakaway tests are appended to this letter and are summarised below:

Table 1: Soakaway Test Results

Location	Soakage Area Dimensions (average) (m)	Test Depth (m)	Soil Description (base of pit)	Infiltration Rate (m/sec)	Drainage Characteristics
TP1	**2 x 0.9**	**0.72**	**Brown mottled grey gravelly clay**	**2.5×10^{-4} 2.1×10^{-4} 1.6×10^{-4}**	**Good**
TP2	**2.1 x 0.9**	**1.1**	**Brown mottled grey gravelly clay**	**2.4×10^{-4} 2.2×10^{-4} 1.8×10^{-4}**	**Good**
TP3	**2 x 1**	**0.84**	**Brown mottled grey gravelly clay**	**2.3×10^{-4} 2.4×10^{-4} 2.0×10^{-4}**	**Good**
TP4	**1.9 x 0.9**	**0.91**	**Brown mottled grey gravelly clay**	**2.2×10^{-4} 2.5×10^{-4} 2.1×10^{-4}**	**Good**

Soakaways Conclusion

The soakage rates obtained during the investigation were found to be good, thus soakaways could be utilised. However it should be appreciated that the site is underlain by sandstone bedrock, this rock type tends to weather to variably silty and clayey sand so some siltation is possible within the soakaway, thereby reducing the permeability over time. It is therefore recommended that this is taken into account in the soakaway design, however this hard strata is at a much further depth than the anticipated soakaway's and it may also be appreciated that the calculations given in BRE 365 take into account of such fouling.

References

 Building Research Establishment (BRE) Digest 365, *Soakaway Design*, September 1991.

 British Standards Institution (2015) BS5930: *Code of practice for site investigations,* B.S.I., London.

We trust the above information is sufficient for your purposes, but if you have any queries, please do not hesitate to contact us, at your convenience.

Yours sincerely
for ARP GEOTECHNICAL LTD

Mrs M C Beasley

Encs