

MBA Consulting
Boscawen House
Chapel Hill
Truro
TR1 3BN

28th Sept 2017

Dear Mr Owen,

IOS SCHOOL– C61301

Ian Farmer Associates were asked to attend site to carry out a review of the foundations trenches. The site is located at Church Road, St Marys and may be located by grid ref SV 91052 10391.

The geological map for the area shows the site to be underlain by deposits of Alluvium & Head comprising silt and clays, overlying the Isles of Scilly Granite bedrock. Three exploratory holes were excavated for the purpose of examining the existing foundations present and determining the structure and composition of the underlying geology.

Exploratory hole TP1 and TP2 encountered weathered granite at shallow depths. The material was recovered as a brown and orange brown clayey sandy subangular medium GRAVEL of granite. Trail pit TP3 encountered an orange brown sandy CLAY to a depth of around 1.10 – 1.20m. Underlying the clay the strata became considerably more granular.

It is anticipated that an allowable bearing pressure of 150kPa is available within the more granular material at a depth of 0.80m (based on conventional strip foundations) at the locations of TP1 to TP2. Foundations in the area of exploratory hole will need to be deepened to around 1.20m onto the more granular horizon to achieve the desired 150kPa.

The site has been classified in accordance with BRE Special Digest 1, as natural ground without the presence of pyrite and laboratory testing undertaken accordingly. It is recommended that the guidelines given in Special Digest 1 be adopted. The results of chemical tests in the non-pyritic soils indicate a sulphate concentration in the soil of <10mg/l as a 2:1 water/soil extract, with pH values in the range of 7.3 to 7.4. It is recommended that for conventional shallow foundations the groundwater should be regarded as mobile.

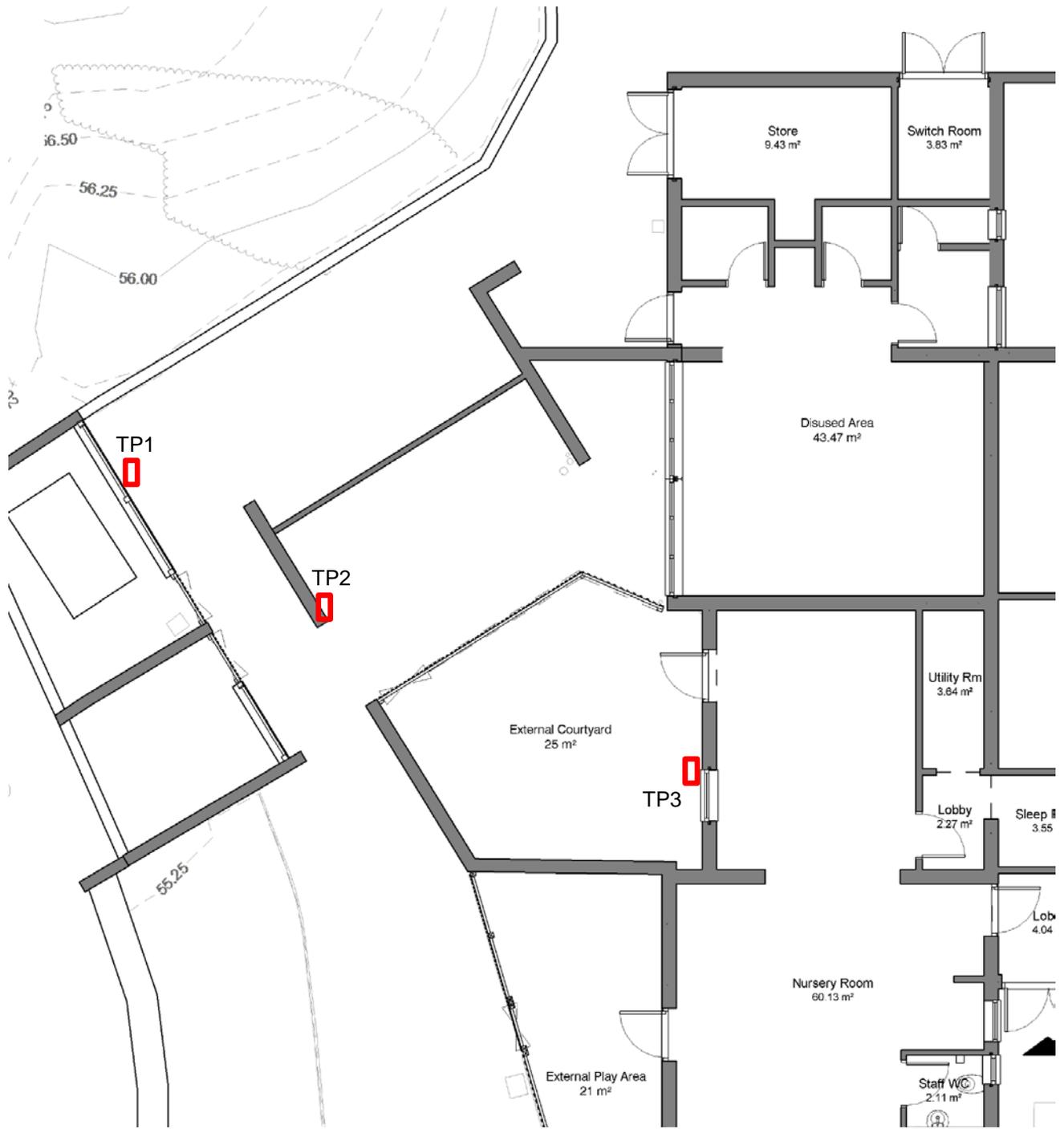
On the basis of the laboratory test results it is considered that a Design Sulphate Class for this material may be taken as DS-1. The site conditions would suggest that an ACEC class for the site of AC-1 would be appropriate.

The presence of an old potential leaking oil line was discussed onsite however none of the trial pits showed any visual or olfactory signs of gross contamination.

The site is shown to be located 160m to the SE of a landfill site. The landfill is shown to be active and has accepted commercial waste since 1965. The risk from landfill gas migration is considered to be low given the mandatory inclusion of radon barriers, the material the landfill has accepted and the local geology indicate gas generation and migration to be unlikely. However in the absence of any gas monitoring information it is recommended that consideration is given to upgrading the barrier system to a dual purpose Amber 1 membrane. Confirmation on the acceptance of this membrane should be sought from the local building control officer.

Yours Sincerely

Michael Austin



Date Drawn:
28-09-2017

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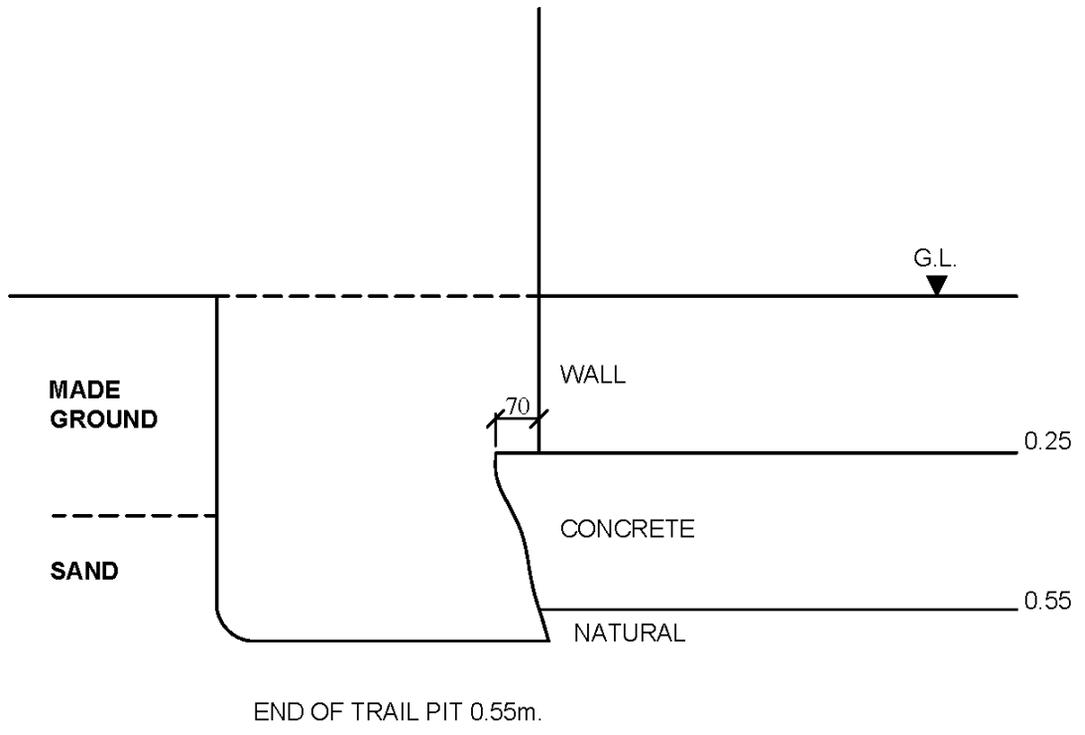
Title: Exploratory Hole Location Plan

Site: IOS School

Job No: C61301

Figure Number: A1.1





TP1

Date Drawn: 28-09-2017	Scale: NTS	Title: TP Logs and Photographs TP1	
		Site: IOS School	
		Job No: C61301	
		Figure Number: Plates	



TP 1

Date Drawn:
28-09-2017

Scale: NTS

Title: TP Logs and Photographs

Site: IOS School

Job No: C61301

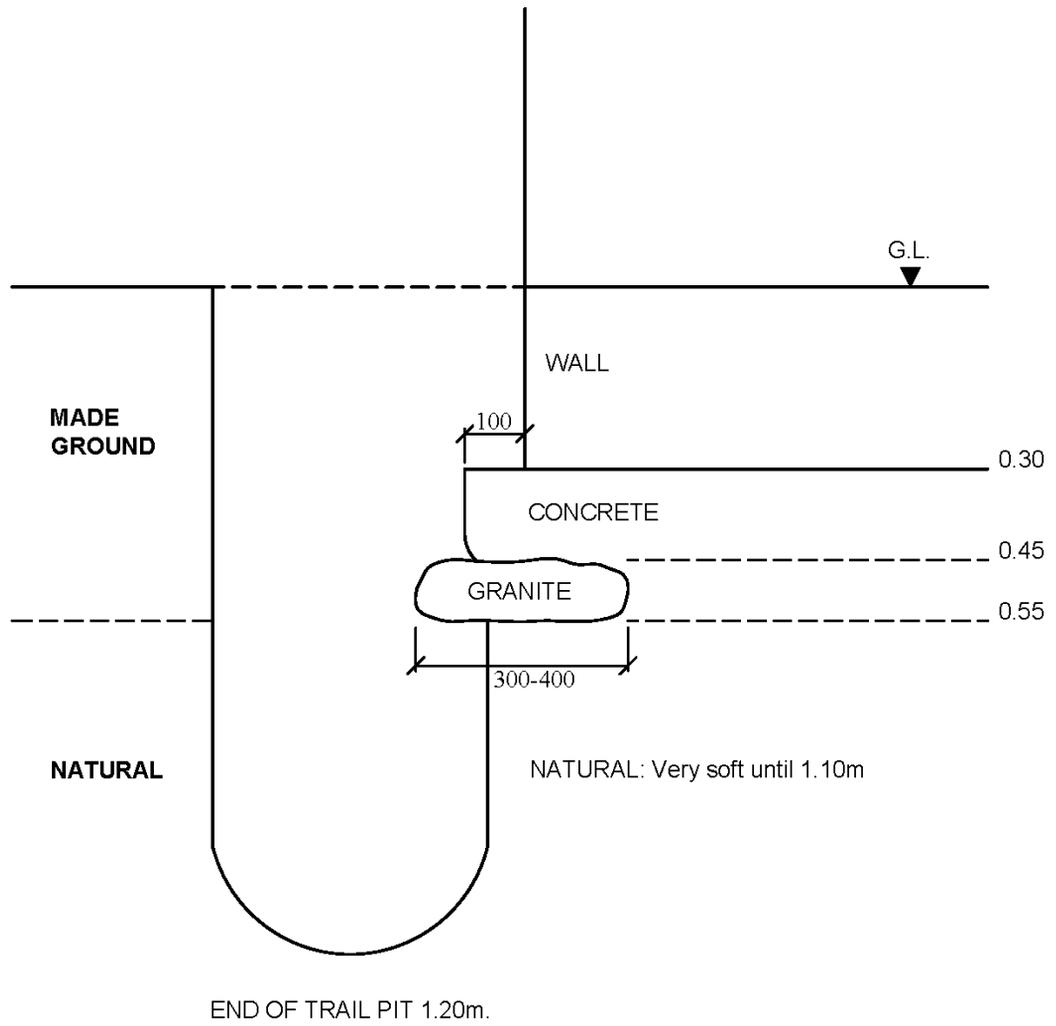
Figure Number: Plates





TP 2

Date Drawn: 28-09-2017	Scale: NTS	Title: TP Logs and Photographs	
		Site: IOS School	
		Job No: C61301	
		Figure Number: Plates	



TP 3

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		Site: IOS School	
		Job No: C61301	
		Figure Number: Plates	



TP 3

Date Drawn:
28-09-2017

Scale: NTS

Title: TP Logs and Photographs

Site: IOS School

Job No: C61301

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