



Geotechnical Survey Report

FSI Ref: 12727
Issue Date: March 2019

Risk Address: 90 South Terrace
Littlehampton
BN17 5LJ

Company: Eqbit Limited

Managing Director:
Finance Director:

Martin Rush MSc FGS
Louise Ayres BSc (Hons)

Geotechnical Compliance &
Logistics Supervisor:

Perry Martin MCIHT

Laboratory Supervisor:

Jade McLellan

Assistant Geologists:

George Baron BSc (Hons) FGS
Scott Parker BSc (Hons) FGS

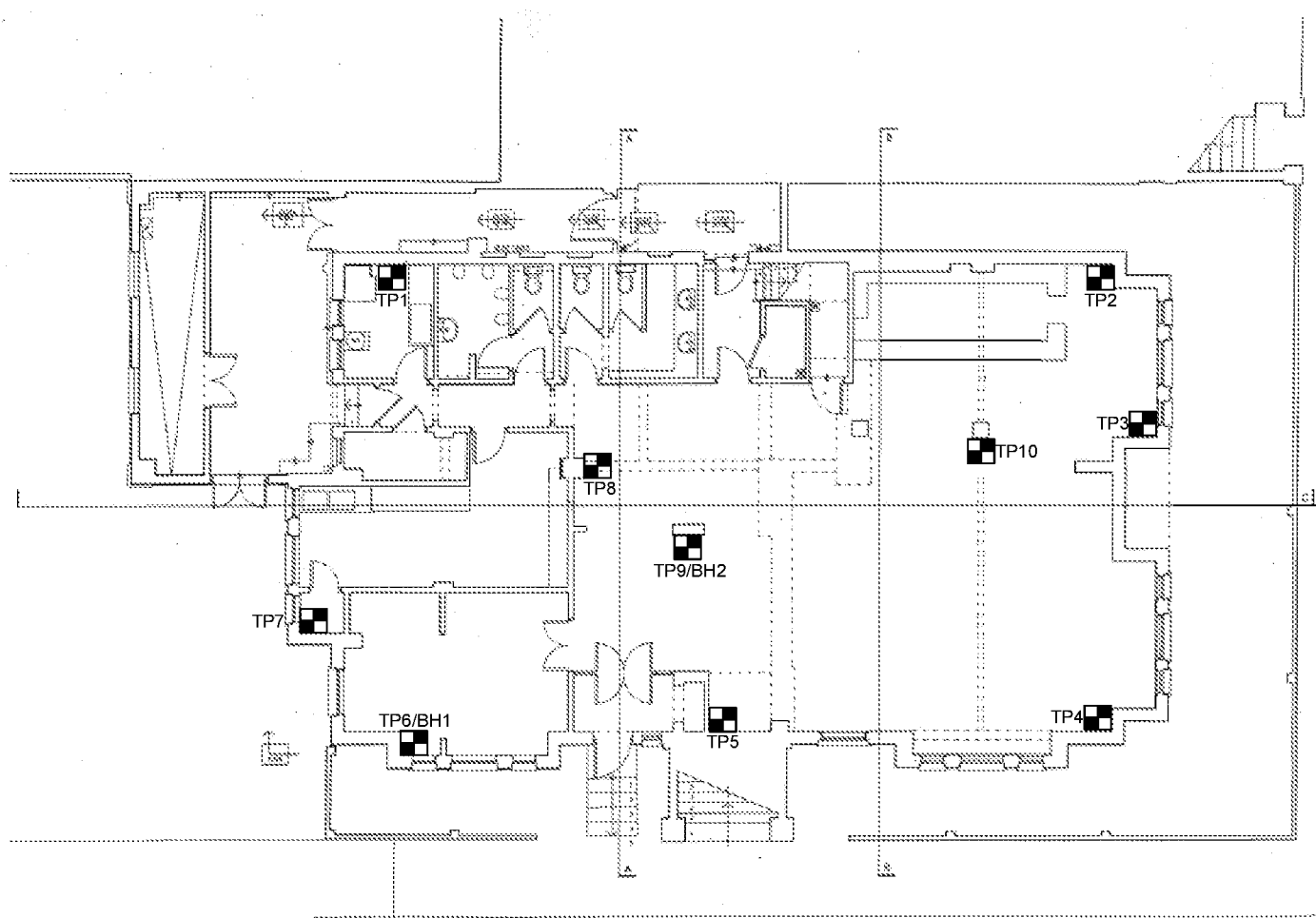
SITE PLAN

Property Address: 90 South Terrace, Littlehampton, BN17 5LJ

Client Claim Ref: N/A

Survey date: 21/02/2019

Operative: SE1



Lower ground floor plan

Scale:

NTS

Drawn by:

SP

Key:

 Trial Pit

 Borehole



 Manholes

 Rain Water Pipe

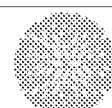
 Soil & Vent Pipe

 Surface Water Gully

 Foul Water Gully

 Shrub

 Tree (Conifer)



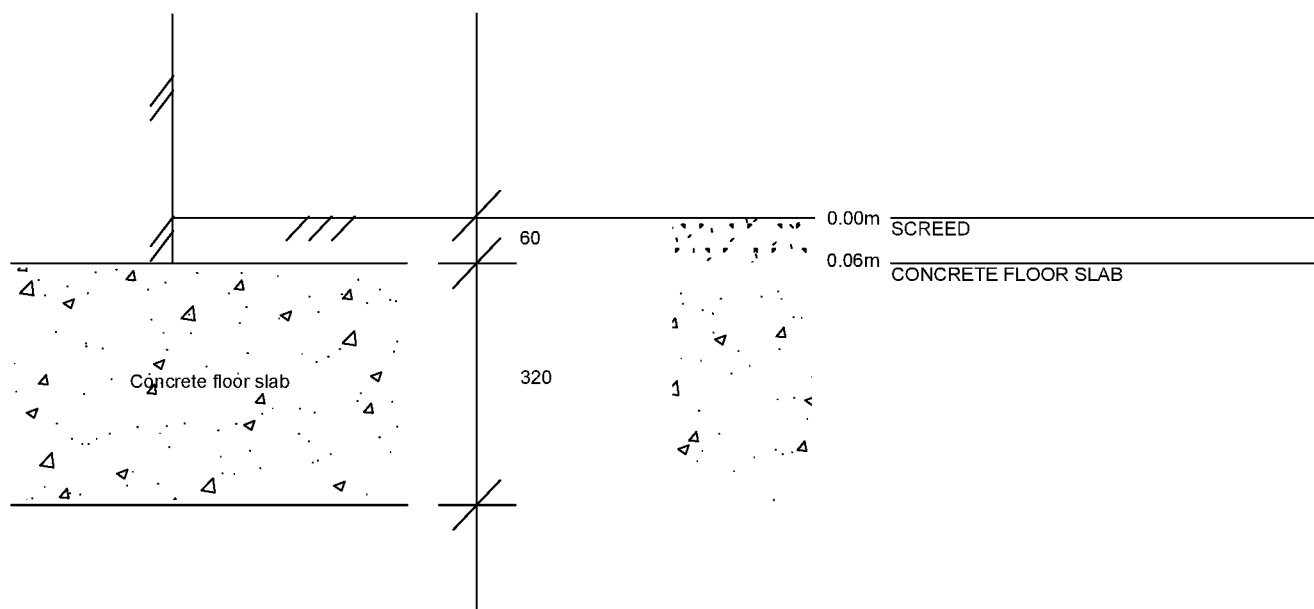
Tree (Deciduous)

TRIAL PIT 1

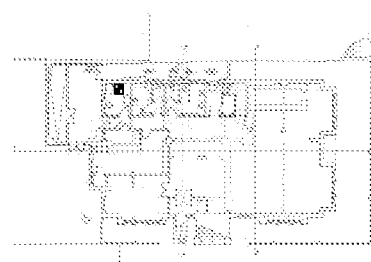
Property Address: 90 South Terrace, Littlehampton, BN17 5LJ

Client Claim Ref: N/A

Survey date: 21/02/2019

Operative: SE1


F.L. (0.38m)

Trial Pit Location:

Drawn by:

SP

Scale:

1:10

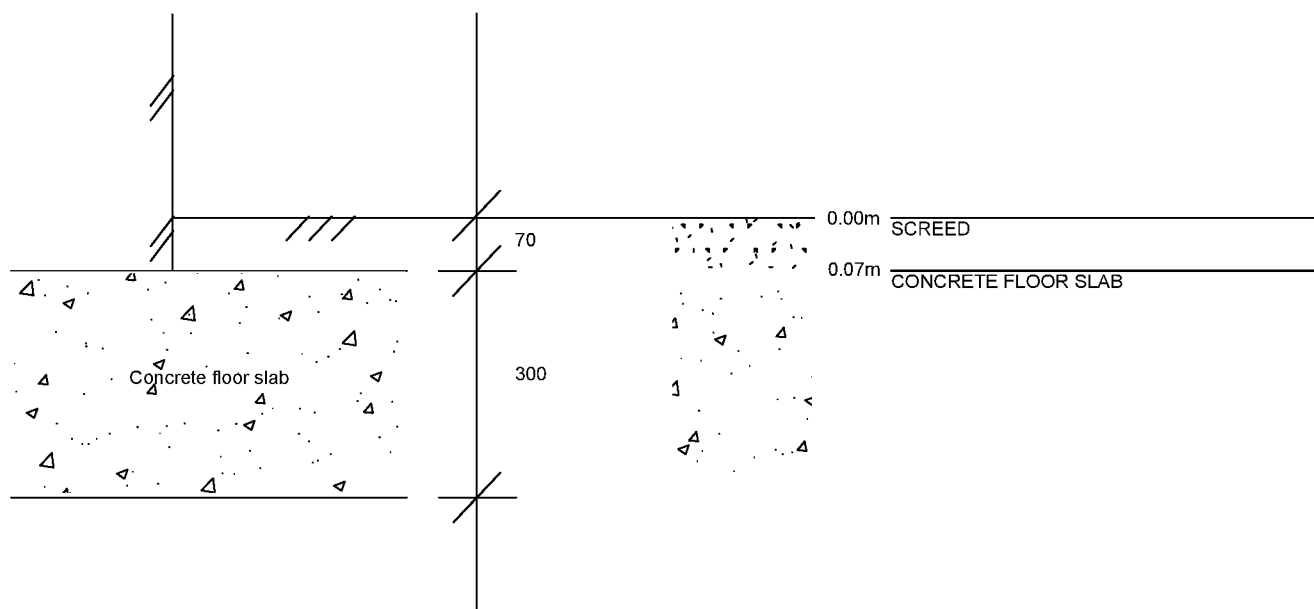
D= small disturbed sample, B= large bulk sample, U= undisturbed sample,
MP= mackintosh probe blow counts, V= shear vane reading (kPa)

TRIAL PIT 2

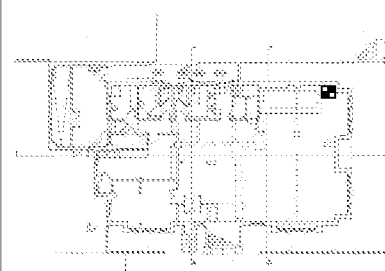
Property Address: 90 South Terrace, Littlehampton, BN17 5LJ

Client Claim Ref: N/A

Survey date: 21/02/2019

Operative: SE1


F.L. (0.37m)

Trial Pit Location:

Drawn by:

SP

Scale:

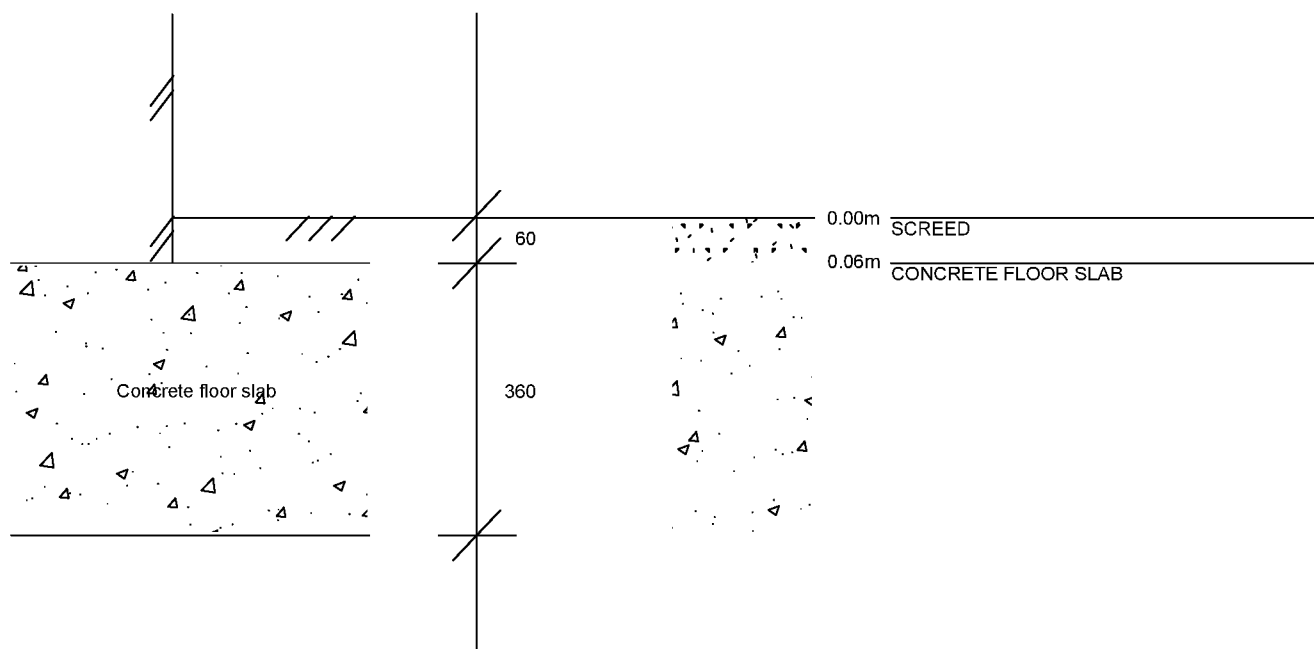
1:10

D= small disturbed sample, B= large bulk sample, U= undisturbed sample,
MP= mackintosh probe blow counts, V= shear vane reading (kPa)

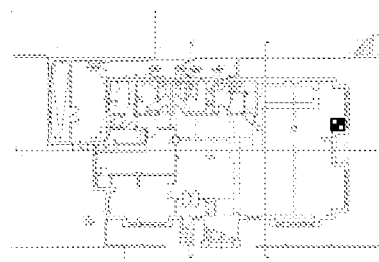
TRIAL PIT 3
Property Address: 90 South Terrace, Littlehampton, BN17 5LJ

Client Claim Ref: N/A

Survey date: 21/02/2019

Operative: SE1


F.L. (0.42m)

Trial Pit Location:

Drawn by:

SP

Scale:

1:10

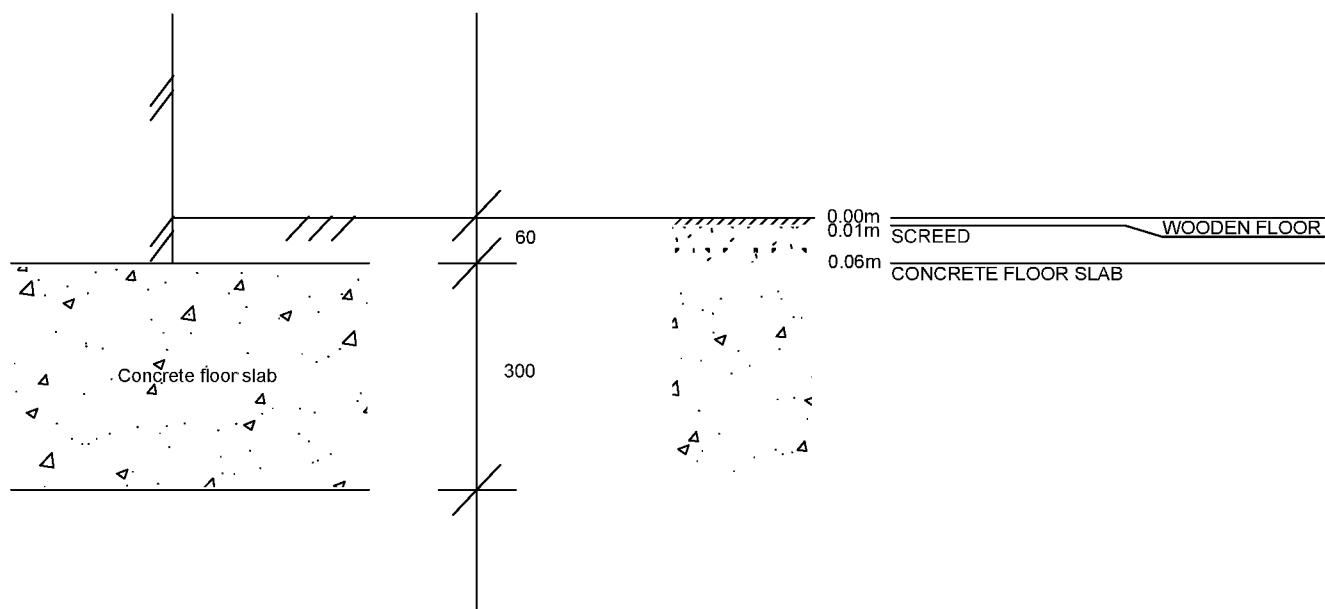
D= small disturbed sample, B= large bulk sample, U= undisturbed sample,
MP= mackintosh probe blow counts, V= shear vane reading (kPa)

TRIAL PIT 4

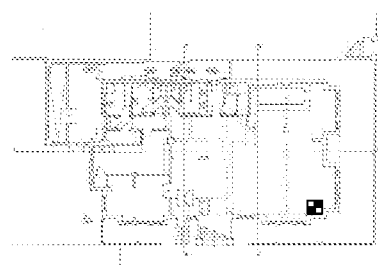
Property Address: 90 South Terrace, Littlehampton, BN17 5LJ

Client Claim Ref: N/A

Survey date: 21/02/2019

Operative: SE1


F.L. (0.36m)

Trial Pit Location:

Drawn by:

SP

Scale:

1:10

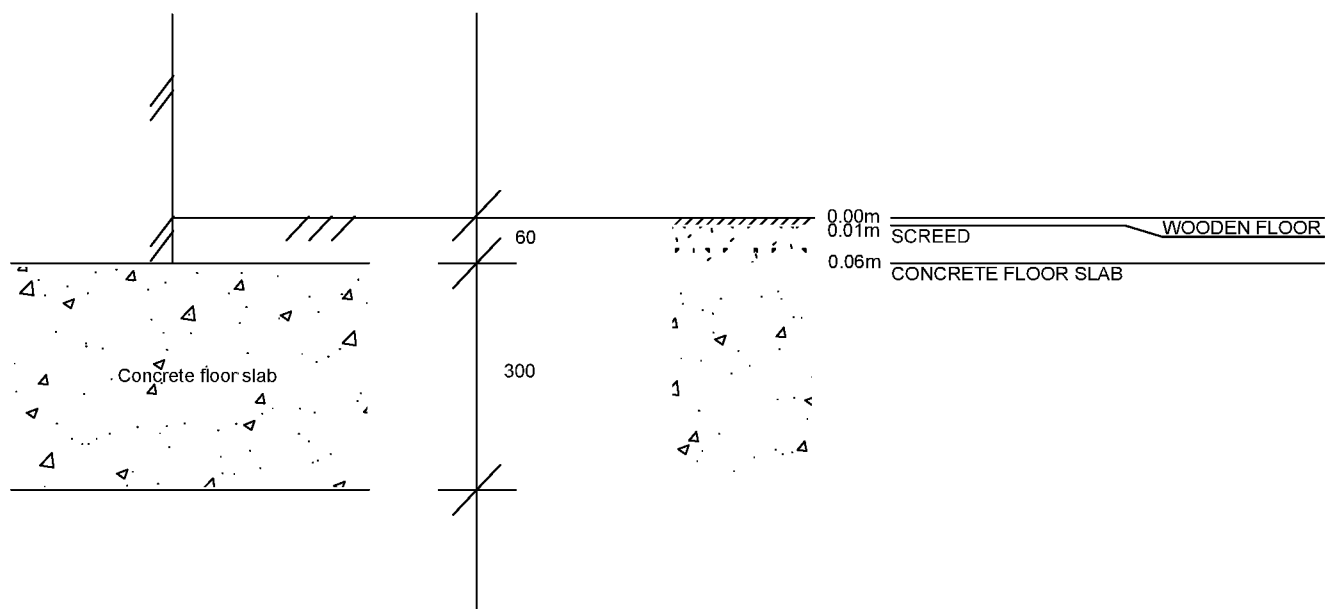
D= small disturbed sample, B= large bulk sample, U= undisturbed sample,
MP= mackintosh probe blow counts, V= shear vane reading (kPa)

TRIAL PIT 5

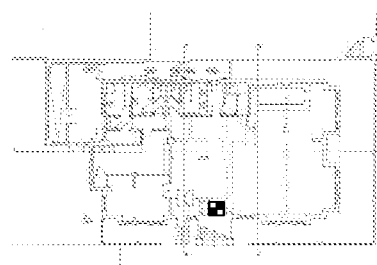
Property Address: 90 South Terrace, Littlehampton, BN17 5LJ

Client Claim Ref: N/A

Survey date: 21/02/2019

Operative: SE1


F.L. (0.36m)

Trial Pit Location:

Drawn by:

SP

Scale:

1:10

D= small disturbed sample, B= large bulk sample, U= undisturbed sample,
MP= mackintosh probe blow counts, V= shear vane reading (kPa)

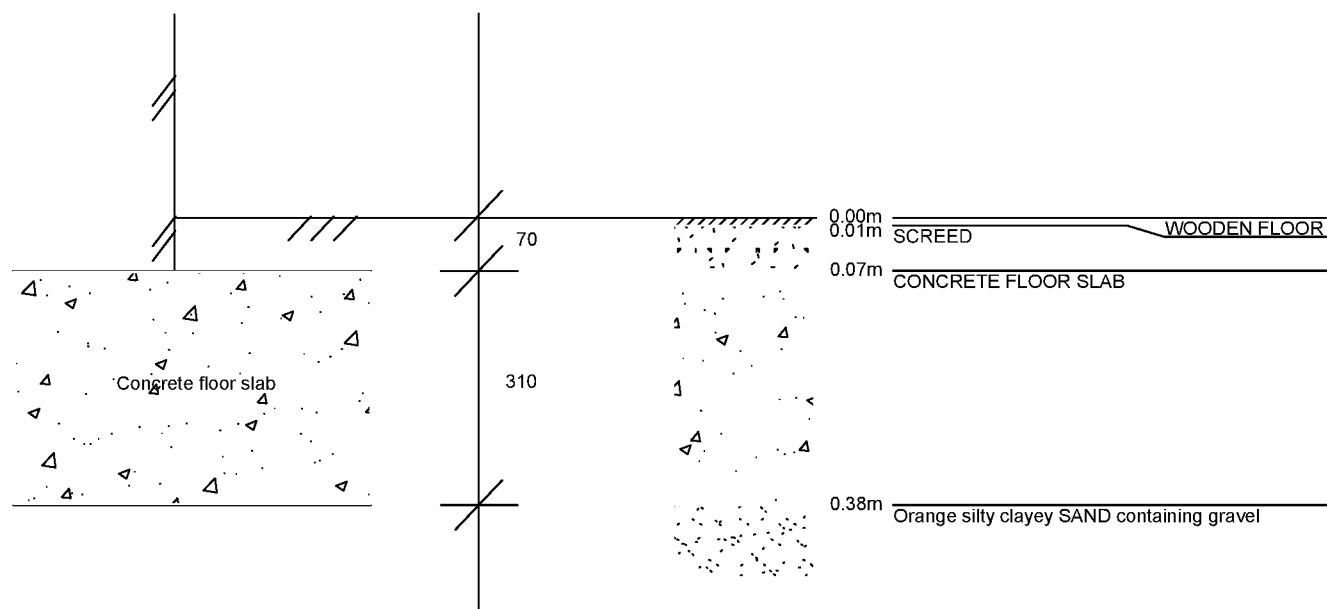
TRIAL PIT 6

Property Address: 90 South Terrace, Littlehampton, BN17 5LJ

Client Claim Ref: N/A

Survey date: 21/02/2018

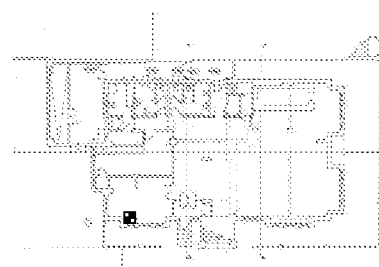
Operative: SE1



D1 @ F.L. (0.38m)
MP=10-10-11-12/75mm
Founding strata: Orange silty clayey SAND containing gravel

D= small disturbed sample, B= large bulk sample, U= undisturbed sample,
MP= mackintosh probe blow counts, V= shear vane reading (kPa)

Trial Pit Location:



Drawn by:

SP

Scale:

1:10

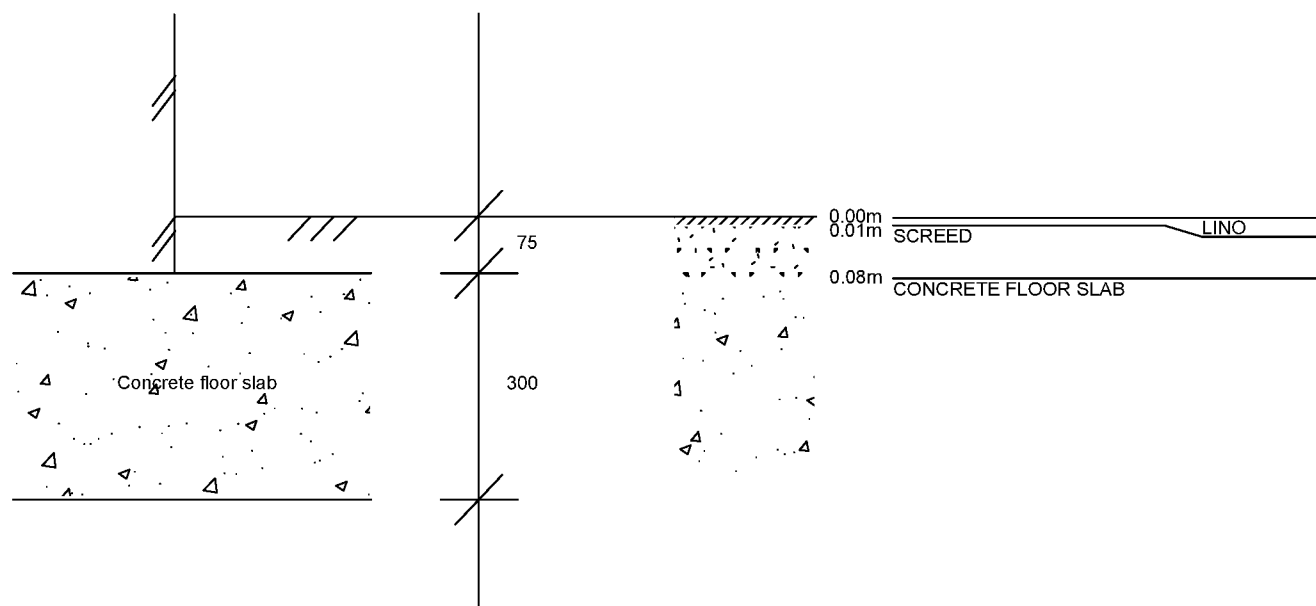
		Fastrack Site Investigations Ltd Unit 9, Tyndales Farm Southend Road Maldon CM9 6TQ		Borehole Log		Borehole No. BH1 Sheet 1 of 1	
Project Name: 90 South Terrace			Project No. 12727		Site Date: 21/02/2019		Hole Type BH
Location:		Littlehampton, BN17 5LJ					Scale 1:10
Client:		Eqbit					Logged By SE1
Water Strikes	Sample and In Situ Testing			Depth (m)	Legend	Stratum Description	
	Depth (m)	Type	Results				
				0.01		WOODEN FLOOR	
				0.07		SCREED CONCRETE FLOOR SLAB <i>Foundation top - 0.07m (Concrete floor slab with a thickness of 310mm)</i>	
			MP = 10/75mm	0.38		Orange silty clayey SAND containing gravel <i>Foundation level - 0.38m</i>	
			MP = 10/75mm				
			MP = 11/75mm				
			MP = 12/75mm				
			MP = 28/75mm	1.00		End of Borehole at 1.000m	
			MP = 29/75mm				
			MP = 31/75mm				
			MP = 31/75mm				
Key: D - Disturbed Sample V - Insitu Vane Test MP - Mackintosh Probe Test							
Remarks: Borehole closed at 1.00m. Borehole noted to be dry on completion. No roots found.							

TRIAL PIT 7

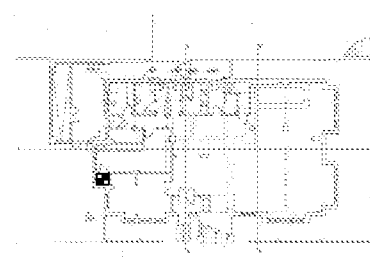
Property Address: 90 South Terrace, Littlehampton, BN17 5LJ

Client Claim Ref: N/A

Survey date: 21/02/2019

Operative: SE1


F.L. (0.375m)

Trial Pit Location:

Drawn by:

SP

Scale:

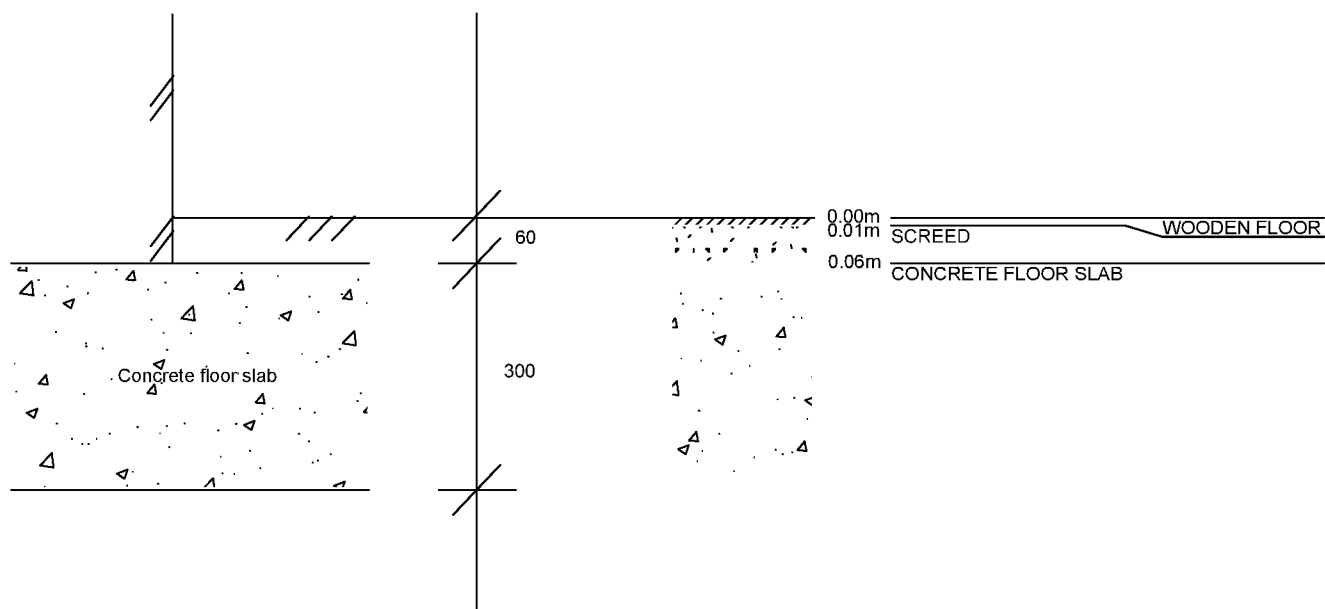
1:10

D= small disturbed sample, B= large bulk sample, U= undisturbed sample,
MP= mackintosh probe blow counts, V= shear vane reading (kPa)

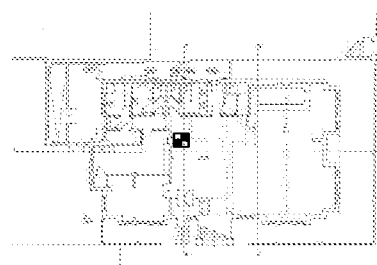
Property Address: 90 South Terrace, Littlehampton, BN17 5LJ

Client Claim Ref: N/A

Survey date: 21/02/2019

Operative: SE1


F.L. (0.36m)

Trial Pit Location:

Drawn by:

SP

Scale:

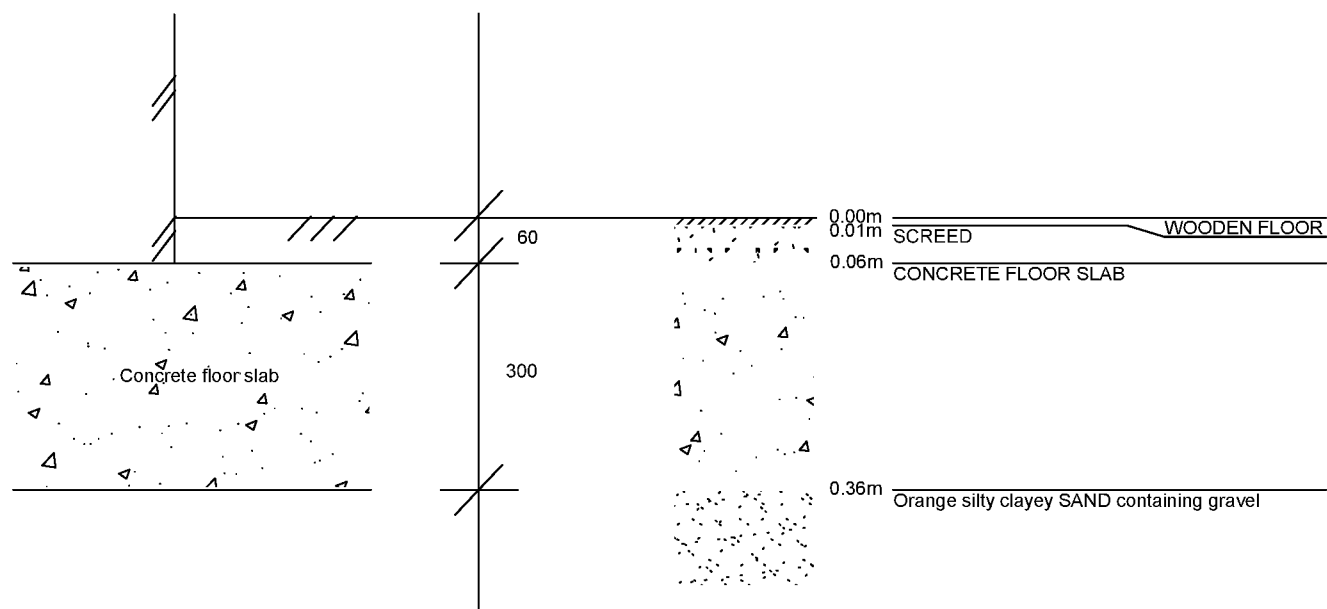
1:10

D= small disturbed sample, B= large bulk sample, U= undisturbed sample,
MP= mackintosh probe blow counts, V= shear vane reading (kPa)

TRIAL PIT 9
Property Address: 90 South Terrace, Littlehampton, BN17 5LJ

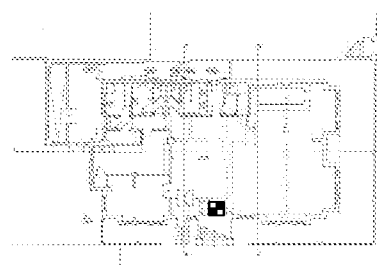
Client Claim Ref: N/A

Survey date: 21/02/2019

Operative: SE1


F.L. (0.36m)
MP=11/11/12/13/75mm
Founding Strata: Orange silty clayey SAND containing gravel

D= small disturbed sample, B= large bulk sample, U= undisturbed sample,
MP= mackintosh probe blow counts, V= shear vane reading (kPa)

Trial Pit Location:

Drawn by:

SP

Scale:

1:10

		Fastrack Site Investigations Ltd Unit 9, Tyndales Farm Southend Road Maldon CM9 6TQ		Borehole Log		Borehole No. BH2 Sheet 1 of 1	
Project Name: 90 South Terrace			Project No. 12727		Site Date: 21/02/2019		Hole Type BH
Location:		Littlehampton, BN17 5LJ					Scale 1:10
Client:		Eqbit					Logged By SE1

Water Strikes	Sample and In Situ Testing			Depth (m)	Legend	Stratum Description	
	Depth (m)	Type	Results				
				0.01		WOODEN FLOOR	
				0.06		SCREED	
						CONCRETE FLOOR SLAB	
						Foundation top - 0.06m (Concrete floor slab with a thickness of 300mm)	
				0.36		Orange silty clayey SAND containing gravel	
						Foundation level - 0.36m	
			MP = 11/75mm				
			MP = 11/75mm				
			MP = 12/75mm				
			MP = 13/75mm				
				1.00		End of Borehole at 1.000m	
			MP = 27/75mm				
			MP = 27/75mm				
			MP = 29/75mm				
			MP = 31/75mm				

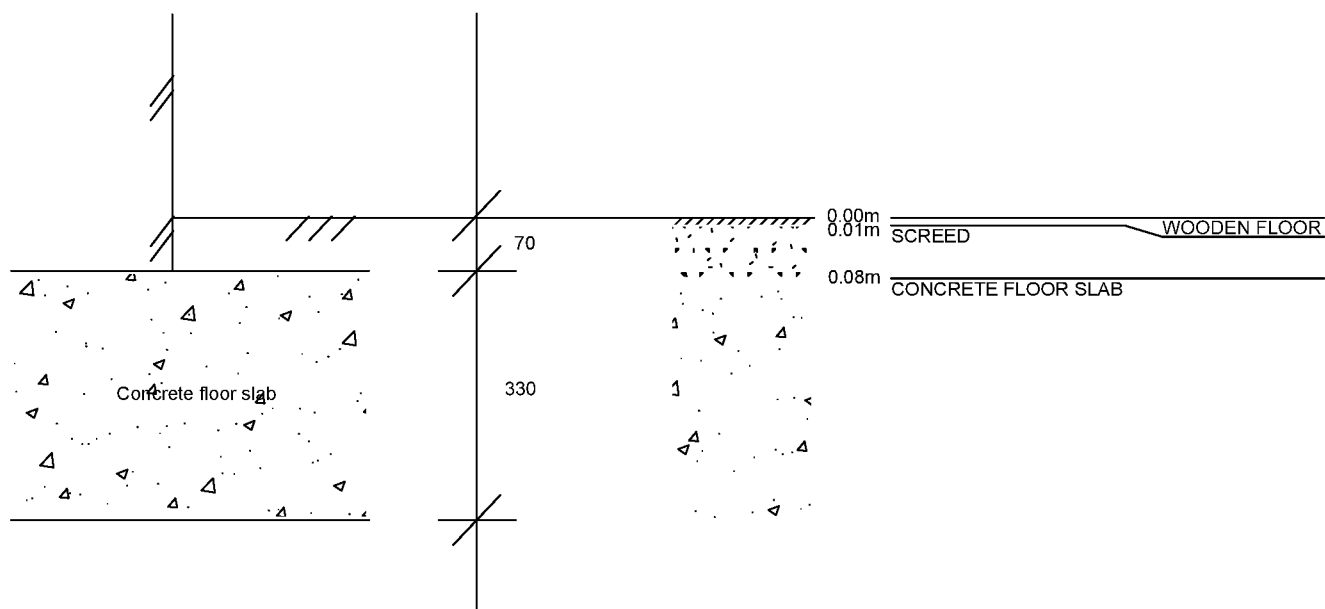
Key: D - Disturbed Sample V - Insitu Vane Test MP - Mackintosh Probe Test		
Remarks: Borehole closed at 1.00m. Borehole noted to be dry on completion. No roots found.		

Property Address: 90 South Terrace, Littlehampton, BN17 5LJ

Client Claim Ref: N/A

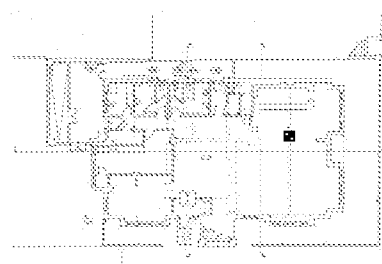
Survey date:21/02/2019

Operative: SE1



F.L. (0.40m)

Trial Pit Location:



Drawn by:

SP

Scale:

1:10

D= small disturbed sample, B= large bulk sample, U= undisturbed sample, MP= mackintosh probe blow counts, V= shear vane reading (kPa)

Bearing Capacity Assessment

For preliminary design purposes, BS8004 gives presumed bearing values which are the pressures which would normally result in an adequate factor of safety against shear failure for particular soil types, but without consideration of settlement.

These values are as follows:

Category	Types of rocks and soils	Presumed bearing value
Non-cohesive soils	Very dense gravel or sand and gravel	>600 kN/m ²
	Medium dense to dense gravel, or sand and gravel	<200 to 600 kN/m ²
	Loose gravel, or loose sand and gravel	<200 kN/m ²
	Compact sand	>300 kN/m ²
	Medium dense sand	100 to 300 kN/m ²
	Loose sand	<100 kN/m ² <i>depends on degree of looseness</i>
Cohesive soils	Very stiff bolder clays & hard clays	300 to 600 kN/m ²
	Stiff clays	150 to 300 kN/m ²
	Firm clay	75 to 150 kN/m ²
	Soft clays and silts	< 75 kN/m ²
	Very soft clay	Not applicable
Peat		Not applicable
Made ground		Not applicable

Within the boreholes at 0.36m/0.38m-1.00m depth, the ground was found to be Silty Clayey SAND containing Gravel with a Mackintosh probe reading of 10-31 blows for 75mm travel, indicating the material at 0.36m/0.38m to 1.00m to be loose to medium dense with a bearing capacity of <100-600kN/m².

For calculation of the bearing capacities available at 0.36m/0.38m to 1.00m, we have used the lowest Mackintosh probe reading at each depth. Based on Hansen (1968) and Tomlinson (2001), which assumes groundwater will not impact upon the foundations (i.e. groundwater will not be present within the width of the foundation below the foundation) the bearing capacities for each depth are shown below. The calculated bearing capacities allow for settlements up to 25mm.

Depth	0.36m/0.38m	1.00m
Mackintosh probe	10 blows for 75mm travel	27 blows for 75mm travel
Bearing capacity	35kN/m ²	145kN/m ²