

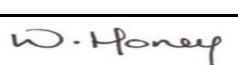
Unit 3 & 4,  
Heol Aur,  
Dafen Ind Estate,  
Dafen  
Llanelli,  
Carmarthenshire,  
SA14 8QN

Auger House,  
Cross Lane,  
Wallasey,  
Wirral,  
CH45 8RH

### Summary Of Claim Details

Policy Holder	Unknown
Risk Address	Unknown
SI Date	16/09/2019
Issue Date	16/09/2019
Report Date	03/10/2019
Auger Reference	97316.1.4.RSS
Insurance Company	Allianz Commercial
LA Claim Reference	SU1903345
LA Co. Reference	Crawford & Co

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	Checked	03/10/2019	Wayne Honey	
	Approved	03/10/2019	Paul Evans	





**LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX  
( BS 1377 : Part 2 : 1990 Method 5 )  
DESCRIPTIONS**



environmental  
claims mgmt  
subsidence  
drainage

GSTL Contract Number	<b>45813</b>	
Risk Address	<b>Unknown</b>	
Auger Reference	<b>97316.1.4.RSS</b>	

Test Operator	Checked	03/10/2019	Wayne Honey	
Luke Williams	Approved	03/10/2019	Paul Evans	





# LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX ( BS 1377 : Part 2 : 1990 Method 5 )



### GSTL Contract Number

45813

## Risk Address

Unknown

## Auger Reference

97316.1.4.RSS

### Remarks

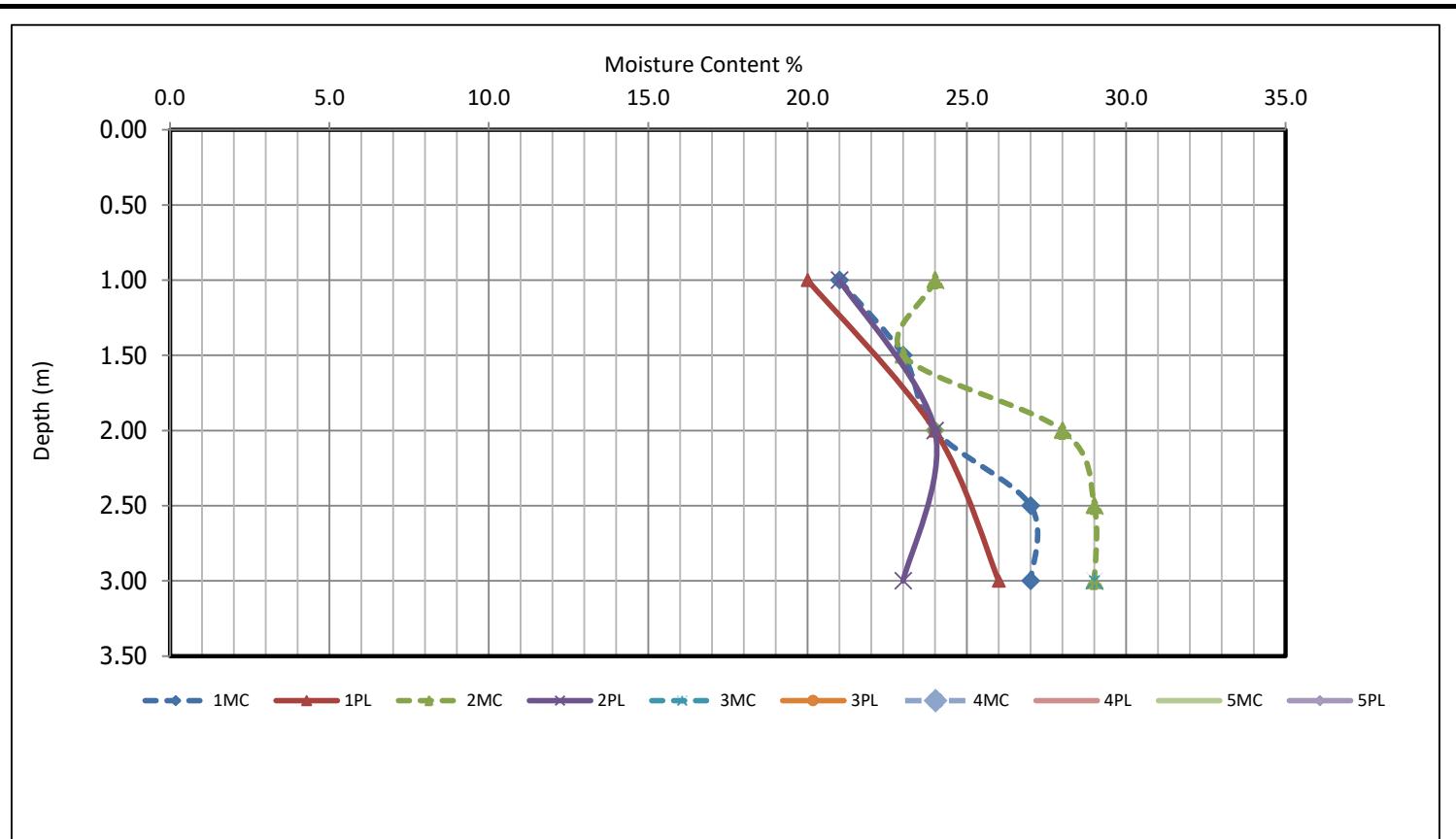
NP - (Non-Plastic), # - (Liquid Limit and Plastic Limit Wet Sieved)

Modified Plasticity Index (PI) <10	: Non Classified
Modified PI = 10 to <20	: Low volume change potential (LOW VCP)
Modified PI = 20 to <40	: Medium volume change potential (Med VCP)
Modified PI = 40 or greater	: High volume change potential (HIGH VCP)

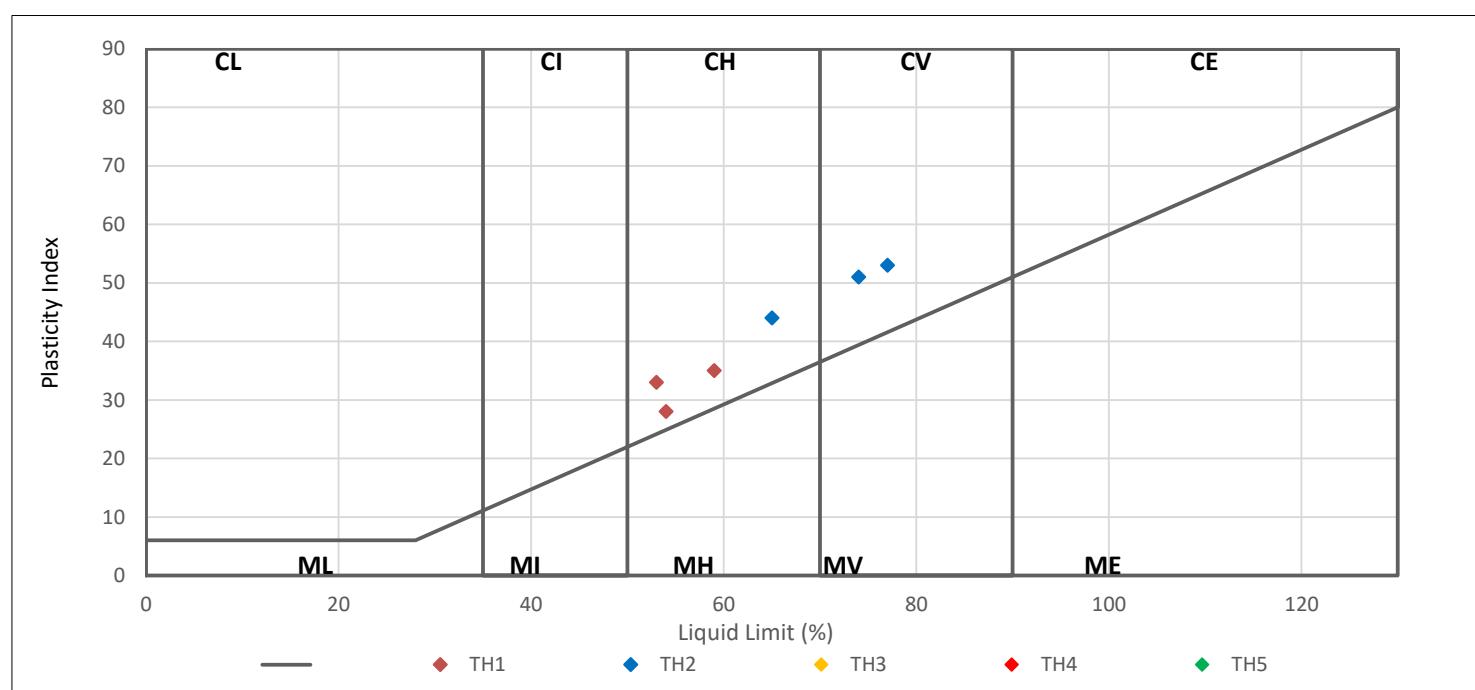
The Atterberg Limits May also be used to classify the volume change potential of fine soils using the National House building system, as given in the NHBC's Standards Chapter 4.2 (2003) "Building Near Trees"

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Luke Williams	Approved	03/10/2019	Paul Evans	P. Evans





PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION  
BS 5930:1999+A2:2010



Modified Plasticity Index (PI) <10

: Non Classified

Modified PI = 10 to <20

: Low volume change potential (LOW VCP)

Modified PI = 20 to <40

: Medium volume change potential (Med VCP)

Modified PI = 40 or greater

: High volume change potential (HIGH VCP)

The Atterberg Limits May also be used to classify the volume change potential of fine soils using the National House building system, as given in the NHBC's Standards Chapter 4.2 (2003) "Building Near Trees"

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Luke Williams	Approved	03/10/2019	Paul Evans	





**SUMMARY OF SOIL CLASSIFICATION TESTS,**  
**Information Paper IP 4/93 February 1993 (CI/SfB p1),**  
**Information Paper Digest 412 ci/sFb (A3s) February 1996**

BRE  
BRE



environmental +  
claims mgmt +  
subsidence +  
drainage +

GSTL Contract Number

**45813**

Risk Address

**Unknown**

Auger Reference

**97316.1.4.RSS**

Remarks

D - Disturbed (Recompacted 2.5kg Rammer), U - Undisturbed Sample

TH Trial Hole	Depth (m)	Filter Paper Location	Filter Paper	Sample Prep Method	Test Duration (Days)	Water Content (%)	Soil Suction Pk (kPa)	Average Soil Suction Pk (kPa)	Cumulative Heave Potential (mm) from bottom of the hole
TH1	1.00	Top	I	D	5	26.6	1540	2280	38
TH1	1.00	Middle	II	D	5	21.0	3420		
TH1	1.00	Bottom	III	D	5	25.2	1870		
TH1	1.50	Top	I	D	5	22.8	2650		
TH1	1.50	Middle	II	D	5	20.6	3610		
TH1	1.50	Bottom	III	D	5	20.9	3460		
TH1	2.00	Top	I	D	5	20.8	3520	3470	21
TH1	2.00	Middle	II	D	5	20.4	3720		
TH1	2.00	Bottom	III	D	5	21.5	3170		
TH1	2.50	Top	I	D	5	22.1	2920	2580	6
TH1	2.50	Middle	II	D	5	24.5	2080		
TH1	2.50	Bottom	III	D	5	22.6	2740		
TH1	3.00	Top	I	D	5	27.1	1430		
TH1	3.00	Middle	II	D	5	27.5	1350	1380	6
TH1	3.00	Bottom	III	D	5	27.4	1360		

Heave potential is calculated from the bottom of the hole and heaves above the bottom of the hole are reported as a cumulative value.

The values reported for heave above only apply to the strata the suction and plasticity have been performed on. The shallowest depth reported is assumed to be a strata thickness to GL and Heave is calculated based on that layer thickness, if the next sample is in 0.5m increments the heave is calculated based on the layer thickness of 0.5m and depths 1m from the sample above will include heave over 1m.

Consideration should be made for other stratas where values are not reported and when working out the heave potential over the entire trial hole.

Test Operator	Checked	03/10/2019	Wayne Honey	
Luke Williams	Approved	03/10/2019	Paul Evans	



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**Information Paper IP 4/93 February 1993 (CI/SfB p1),**  
**Information Paper Digest 412 ci/sFb (A3s) February 1996**

BRE  
BRE



GSTL Contract Number

**45813**

Risk Address

**Unknown**

Auger Reference

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Remarks

D - Disturbed (Recompacted 2.5kg Rammer), U - Undisturbed Sample

TH Trial Hole	Depth (m)	Filter Paper Location	Filter Paper	Sample Prep Method	Test Duration (Days)	Water Content (%)	Soil Suction Pk (kPa)	Average Soil Suction Pk (kPa)	Cumulative Heave Potential (mm) from bottom of the hole
TH2	1.00	Top	I	D	5	25.8	1730	1630	57
TH2	1.00	Middle	II	D	5	24.9	1960		
TH2	1.00	Bottom	III	D	5	28.3	1200		
TH2	1.50	Top	I	D	5	21.2	3340		
TH2	1.50	Middle	II	D	5	23.9	2250		
TH2	1.50	Bottom	III	D	5	21.6	3160		
TH2	2.00	Top	I	D	5	27.4	1360	2920	20
TH2	2.00	Middle	II	D	5	32.1	700		
TH2	2.00	Bottom	III	D	5	30.4	890		
TH2	2.50	Top	I	D	5	32.3	677		
TH2	2.50	Middle	II	D	5	27.4	1370	984	29
TH2	2.50	Bottom	III	D	5	31.6	745		
TH2	3.00	Top	I	D	5	25.1	1910		
TH2	3.00	Middle	II	D	5	24.6	2040		
TH2	3.00	Bottom	III	D	5	27.0	1450		18

Heave potential is calculated from the bottom of the hole and heaves above the bottom of the hole are reported as a cumulative value.

The values reported for heave above only apply to the strata the suction and plasticity have been performed on. The shallowest depth reported is assumed to be a strata thickness to GL and Heave is calculated based on that layer thickness, if the next sample is in 0.5m increments the heave is calculated based on the layer thickness of 0.5m and depths 1m from the sample above will include heave over 1m.

Consideration should be made for other stratas where values are not reported and when working out the heave potential over the entire trial hole.

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