RJH Geo Drilling Limited

Company Registered Number: 3835513
VAT Registration Number: 722 1282 71

Business Address:
RJH Geo Drilling Ltd
35 Moulton Grove
Stockton On Tees
TS19 7RJ
Tel/ 07775877785
E-mail: rjh.geo.drilling@ntlworld.com

FAO :
IAN

FAO Mr H Chan
Byrom Clark Roberts
Consulting Engineers
Unit 2, Millwright
49 Byron Street
LEEDS
LS2 7NA

PLANNING
ACK'D
REPLIED
REC'D 22 DEC 2010
INIT REC'D | DATE
ECN ACTION

6 OCTOEBER 2009

Dear Sirs

PROPOSED NEW BUILDING
HARDY LANE SPORTS CENTRE
MANCHESTER

INTRODUCTION

At the request of Byrom Clark Roberts, Consulting Engineers of Leeds, a site investigation was carried out on land at Hardy lane sports centre Manchester.

SITE CONDITIONS

The site is has existing buildings. The site has a couple of mature trees on the site.

SITE WORKS

Five foundations/boreholes were drilled on the site. Their locations are shown on a sketch plan attached to this report. The boreholes were advanced to depths of between 2.70m to 3.30mm using a Premier Plant Track Mounted Drilling machine. During this operation standard penetration tests were carried out in overlying fill materials. Disturbed samples of all strata were recovered from the boreholes for laboratory examination.

STRATA

All boreholes encountered fill material. This extends to a depth of 2.70m to 3.30m below ground. The fill is variable with clay sands and brick rubble material and all being identified.

No Groundwater was entered the boreholes during drilling operations as shown on the logs.

SITE TESTING

Standard Penetration Tests

The standard penetration test consists of recording the number of blows of a 63.5kg hammer falling through a height of 760mm required to drive a 50mm open ended spoon 300mm into a material after an initial penetration of 150mm has been achieved. The number of blows recorded enables an assessment to be made of the degree of compactness of the material penetrated.

In the underlying made ground deposits 'N' values ranging from 4 to 16 indicate loose to med dense material. In the natural material 'N' values of 12 to 18 indicates med dense material.

LABORATORY TESTING

a) Moisture Contents

Samples of the material recovered from the boreholes were subjected to moisture content tests. The results are shown on the borehole records and indicate the moisture profile through the strata.

We trust our findings satisfy your requirements but if you have any queries please contact the undersigned. We enclose our account for this work invoiced as directed in your instructions.

Yours faithfully

[redacted]

R J Harker
R J H Geo Drilling Limited

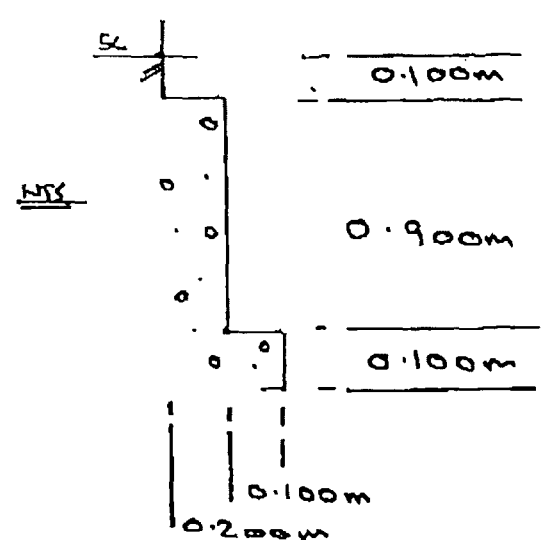
Encs

Logo
RJH Geo Drilling Ltd
35 Moulton Grove
TS19 7RJ
Telephone: 01642 864086
Fax: 01642 864086

BOREHOLE LOG

Project				BOREHOLE No
HARDY LANE SPORTS CENTRE MANCHESTER				BH1
Job No	Date	Ground Level (m)	Co-Ordinates ()	
1919	29-09-09			
Contractor				Sheet
RJH GEO-DRILLING LTD				1 of 1

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION		
						(1.05)	MADE GROUND: paving		
							MADE GROUND: med dense sand with some fine to medium sub angular gravels and rubble		
0.80-1.00	D	M(11%)				(1.45)			
1.00-1.20	D	M(12%)							
1.00	SPT	N=11							
1.20-1.40	D	M(20%)				1.50			
1.60-1.80	D	M(19%)					MADE GROUND: dark brown grey sandy clay with rubble		
1.80-2.00	D	M(20%)				(0.90)			
2.00	SPT	N=14							
2.20-2.40	D	M(19%)				2.40			
2.60-2.80	D	M(14%)					MADE GROUND: med dendo to dense dark brown sand with some fine to medium sub rounded sub angular gravel and sandstone fragments		
2.80-3.00	D	M(11%)				(0.90)			
3.00	SPT	40 for 300mm				3.30			



Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	To	Dry

All dimensions in metres Scale 1:50	Client BCR	Method/ Plant Used	Logged By rjh

AGS3 UK BH 1919 MANCHESTER.GPJ AGS3_ALL.GDT 9/10/08

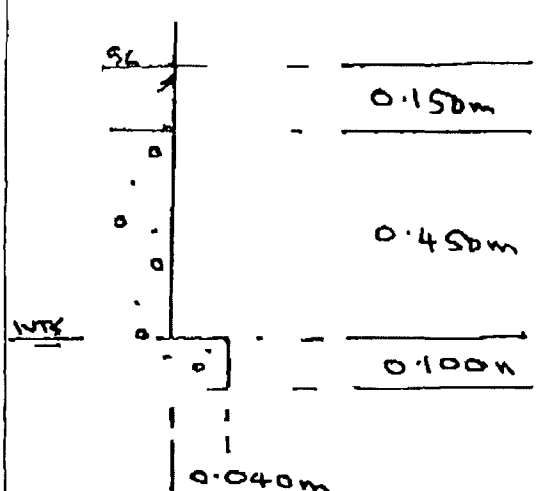
Logo

RJH Geo Drilling Ltd
35 Moulton Grove
TS19 7RJ
Telephone: 01642 864086
Fax: 01642 864086

BOREHOLE LOG

Project				BOREHOLE No
HARDY LANE SPORTS CENTRE MANCHESTER				BH2
Job No	Date	Ground Level (m)	Co-Ordinates 0	
1919	29-09-09			
Contractor				Sheet
RJH GEO-DRILLING LTD				1 of 1

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION		
						0.05	MADE GROUND: paving		
							MADE GROUND: med dense sand with some fine to medium sub angular gravels and rubble		
0.60-1.00	D	M(15%)				(1.55)			
1.00-1.20	D	M(15%)							
1.00	SPT	N=14							
1.40-1.60	D	M(15%)				1.60			
1.60-1.80	D	M(16%)					MADE GROUND: med dense dark brown grey sandy clay with rubble		
1.80-2.00	D	M(16%)							
2.00-2.20	D	M(17%)				(1.00)			
2.00	SPT	N=12							
2.40-2.60	D	M(17%)				2.60			
2.60-2.80	D	M(18%)					MADE GROUND: med dense to dense dark brown sand with some fine to medium sub rounded sub angular gravel ash and sandstone fragments		
2.80-3.00	D	M(9.3%)				(0.60)			
3.00	SPT	40 for 200mm				3.20			



Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	To	Dry

All dimensions in metres Scale 1:50	Client BCR	Method/ Plant Used	Logged By rjh

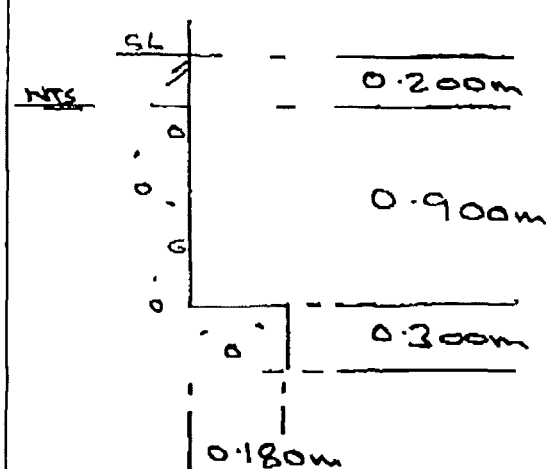
AGS1 UK BH 1919 MANCHESTER.GPJ AGS1 ALLGDT 9/10/09

Logo
RJH Geo Drilling Ltd
35 Moulton Grove
TS19 7RJ
Telephone: 01642 864086
Fax: 01642 864086

BOREHOLE LOG

Project				BOREHOLE No
HARDY LANE SPORTS CENTRE MANCHESTER				BH3
Job No	Date	Ground Level (m)	Co-Ordinates ()	
1919	29-09-09			
Contractor				Sheet
RJH GEO-DRILLING LTD				1 of 1

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
						0.05	MADE GROUND: paving		
							MADE GROUND: med dense sand with some fine to medium sub angular gravels		
0.80-1.00	D	M(14%)				(1.65)			
1.00-1.20	D	M(15%)							
1.00	SPT	N=12							
1.40-1.60	D	M(20%)				1.70			
1.70-2.00	D	M(20%)					MADE GROUND: dark brown grey sandy clay with rubble		
2.00	SPT	N=16				(0.90)			
2.20-2.40	D	M(18%)							
2.40-2.60	D	M(15%)				2.60			
2.60-3.00	D	M(13%)					MADE GROUND: med dense to dense dark brown sand with some fine to medium sub rounded sub angular gravel		
3.00	SPT	36 for 300mm				(0.70)			
						3.30			



Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	To	
											Dry

All dimensions in metres Scale 1:50	Client BCR	Method/ Plant Used	Logged By rjh

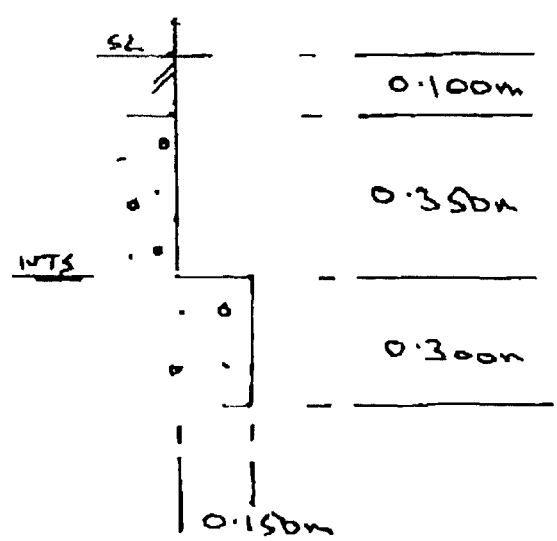
AGS3 UK BH 1919 MANCHESTER GPJ AGS3 ALL.GDT 9/10/09

Logo
RJH Geo Drilling Ltd
35 Moulton Grove
TS19 7RJ
Telephone: 01642 684086
Fax: 01642 684086

BOREHOLE LOG

Project				BOREHOLE No
HARDY LANE SPORTS CENTRE MANCHESTER				BH4
Job No	Date	Ground Level (m)	Co-Ordinates ()	
1919	29-09-09			
Contractor				Sheet
RJH GEO-DRILLING LTD				1 of 1

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION		
						0.05	MADE GROUND: paving		
						(1.45)	MADE GROUND: med dense sand with some fine to medium sub angular gravels and rubble		
1.00-1.30	D	M(10%)							
1.00	SPT	N=12							
1.30-1.50	D	M(16%)				1.50			
1.50-1.70	D	M(16%)					MADE GROUND: med dense dark brown grey sandy clay with rubble		
1.70-2.00	D	M(10%)				(0.90)			
2.00-2.20	D	M(14%)							
2.00	SPT	N=15							
2.20-2.50	D	M(15%)				2.40			
						2.70	MADE GROUND: med dense to dense dark brown sand with some fine to medium sub rounded sub angular gravel and sandstone fragments		
2.60-2.70	D	M(15%)							
2.70	SPT	no pene							



Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia mm	Water Dpt	From	To	Hours	From	To	
											Dry

All dimensions in metres Scale 1:50	Client BCR	Method/ Plant Used	Logged By rjh

AGS3 UKBH 1919 MANCHESTER.GPJ AGS3 ALL.GDT 9/10/09

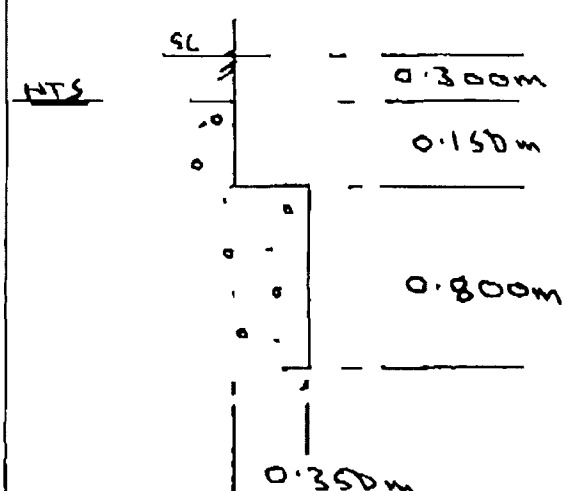
RJH Geo Drilling Ltd
35 Moulton Grove
TS19 7RJ
Telephone: 01642 864086
Fax: 01642 864086

Logo

BOREHOLE LOG

Project				BOREHOLE No
HARDY LANE SPORTS CENTRE MANCHESTER				BH5
Job No	Date	Ground Level (m)	Co-Ordinates ()	
1919	29-09-09			
Contractor				Sheet
RJH GEO-DRILLING LTD				1 of 1

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION		
						0.05	MADE GROUND: paving		
						0.30	MADE GROUND: ash		
						(1.00)	MADE GROUND: med dense sand with some fine to medium sub angular gravels		
1.00-1.30	D	M(11%)							
1.00	SPT	N=12				1.30			
1.30-1.50	D	M(17%)				1.50	MADE GROUND: dark brown grey sandy clay with rubble		
1.50-1.80	D	M(15%)				(0.60)	MADE GROUND: dark brown sand with some fine to mediumsub rounded sub angular gravel		
1.80-2.00	D	M(10%)							
2.00	SPT	40				2.10			
2.10-2.20	D	M(10%) 200mm				2.20	MADE GROUND: brick		

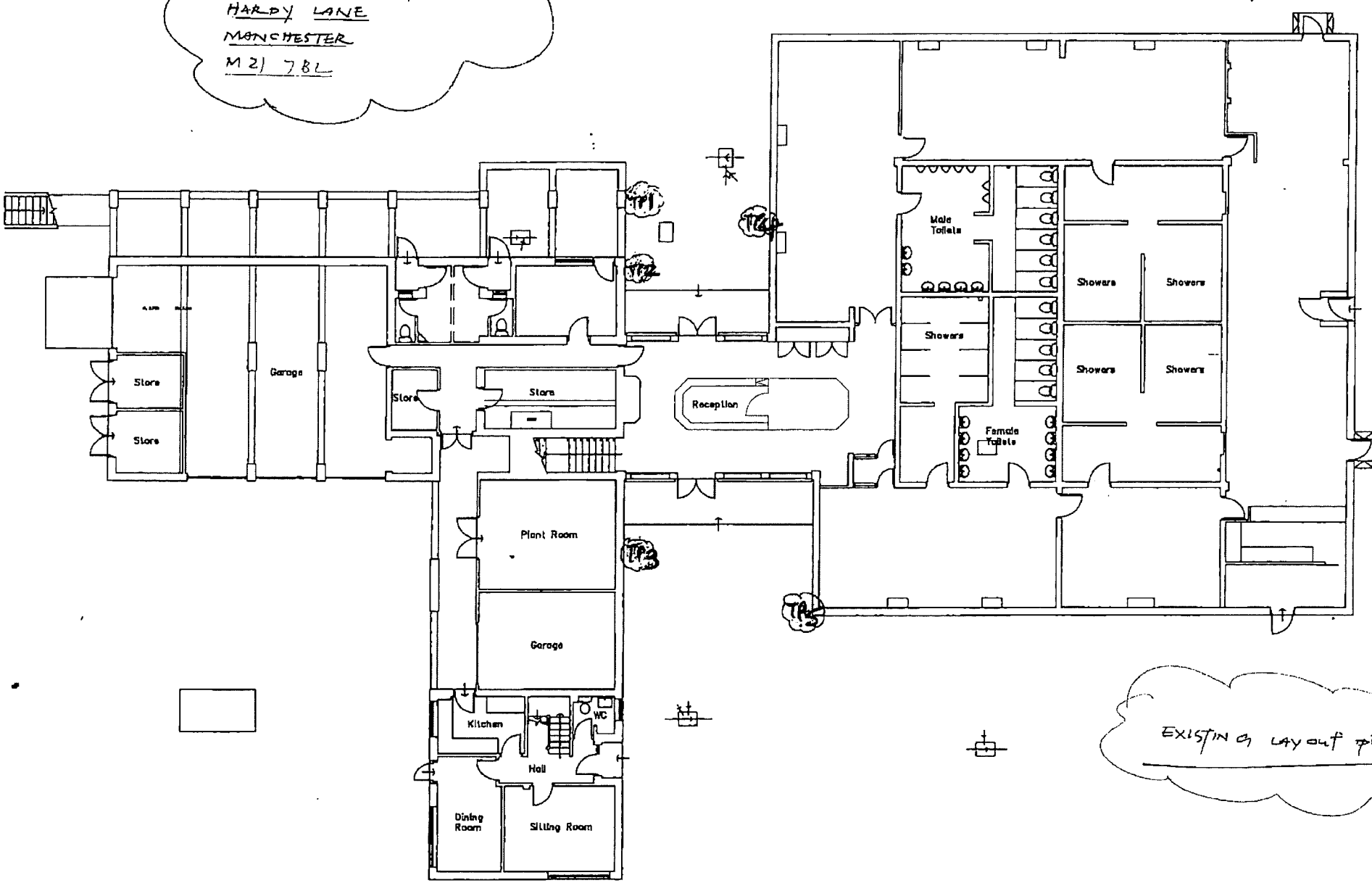


Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	To	
											Dry

All dimensions in metres Scale 1:50	Client BCR	Method/ Plant Used	Logged By rjh

AGS3 UK BH 1919 MANCHESTER.GPJ AGS3_ALL.GDT 9/10/09

SITE ADDRESS:
HARD LANE SPORTS CENTRE
HARDY LANE
MANCHESTER
M21 7BL



EXISTING LAYOUT PLAN