APPENDIX C

BGS borehole logs

GEOLOGICAL SURVEY OF GREAT BRITAIN

RECORD OF SHAFT OR BORE FOR MINERALS

(*For Survey use only*)

6-inch Map Registered No. TQ 28 NE/7

Name of Shaft or Bore given by Geological Survey:

Name and Number given by owner: Hampstead Hill Gdns. Tube bore.

For whom made

Town or Village Hampstead County

Exact site Junction of Hampstead Hillgds. and Haverstock Hill { Attach a tracing from a map, or a sketch-map, if possible.

Purpose for which made

Nat. Grid Reference 2696 · 8596

1" N.S.Map No.	1" O.S.Map No.	Confidential or not
256		

Ground Level at shaft bore relative to O.D. 252 ft. If not ground level give O.D. of beginning of shaft bore

Made by Date of sinking 1900

Information from LCC Date received

Examined by

SPECIMEN NUMBERS AND ADDITIONAL NOTES

MS593

(*For Survey use only*) Geological Classification	DESCRIPTION OF STRATA	Thickness Ft.	Thickness In.	Depth Ft.	Depth In.
	Macadam.	1	–		
	clay	51		52	–

(5412) Wt.32837/PS.134 2m 10/64 G.W.B.Ltd. Gp.863

GEOLOGICAL SURVEY OF GREAT BRITAIN

RECORD OF SHAFT OR BORE FOR MINERALS

(For Survey use only)

6-inch Map Registered No. TQ28NE/38

Name of Shaft or Bore given by Geological Survey:

Name and Number given by owner: C16.

Nat. Grid Reference 2722.8520

For whom made

Town or Village Hampstead. County

Exact site Junction of Belsize Av. and Haverstock Hill. {Attach a tracing from a map, or a sketch-map, if possible.

1" N.S.Map No.	1" O.S.Map No.	Confidential or not
256		

Purpose for which made

Ground Level at shaft/bore relative to O.D. 234' If not ground level give O.D. of beginning of shaft/bore

Made by Date of sinking 1900.

Information from LCC. Date received

Examined by

SPECIMEN NUMBERS AND ADDITIONAL NOTES

(For Survey use only) Geological Classification	DESCRIPTION OF STRATA	Thickness Ft.	Thickness In.	Depth Ft.	Depth In.
MGR	Made Ground	4	–		1.22
LC	Clay	16	–	20	– 6.10
	For Hampstead Tube Rly.				

(5412) Wt.32837/PS.154 2m 10/64 G.W.B.Ltd. Gp.863

69, Upper Ground,
S.E.1.

The London Passenger Transport Board,
55, Broadway,
S.W.1.

April/May, 1941.

STRATA DETAILS OF TRIAL HOLE DRILLED BY MESSRS. R. RICHARDS & CO. FOR THE LONDON PASSENGER TRANSPORT BOARD, 55 BROADWAY, S.W.1.
Site - Belsize Park.

— Belsize Park Stn
not sited.

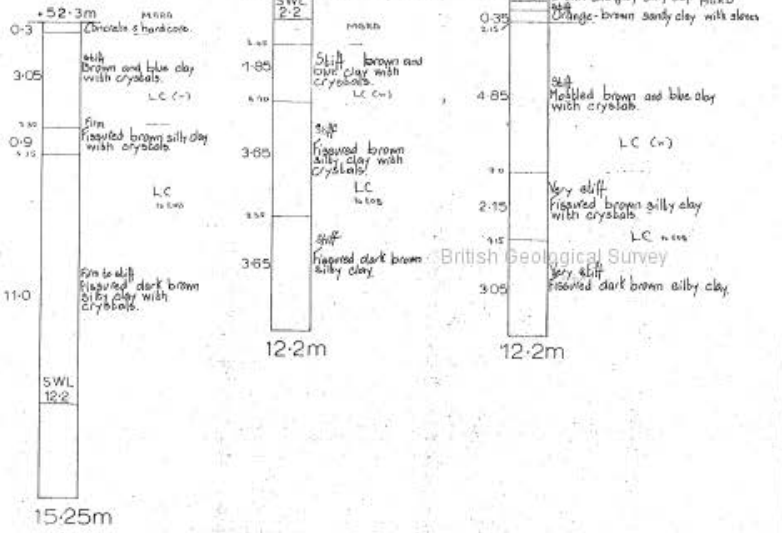
	Thickness. Ft.	In.	Depth. Ft.	In.
Ashes	0	6"	0	6"
Made up Ground	7	6	8	0
Mud with water	1	0	9	0
Made up Yellow Clay	3	6	12	6
Yellow Clay	12	6	25	0
Blue Clay	118	0	143	0

Size A2 16½" x 23⅜" — 420mm x 594mm

1 TQ128 NE/277 2754 · 8550

2 TQ128 NE/178 2755 · 8552

3 TQ128 NE/179 2756 · 8553



KEY PLAN

Scale 1:1250

div	job no.	drg. no.	rev.
G	3287 SW	01	

JOB DMES OFFICES & WORKSHOPS CRESSY ROAD CAMDEN

TITLE

TRIAL BORINGS 1-3

KEY PLAN & SECTIONS

scale VERTICAL 1:100

date 21.7.1971 | drawn | checked H.C.T.

GLC ILEA

Dept of Architecture and Civic Design

Architect Roger Lowdell

01-633 5000 Ext. 8381

NOTES

1. Newlyn Datum Levels
2. ⊕ Denotes Trial Boring
3. WS Denotes Water Strike
4. SWL Denotes Standing Water Level at the time of boring in July 1971

REVISIONS

no.	date

COPY

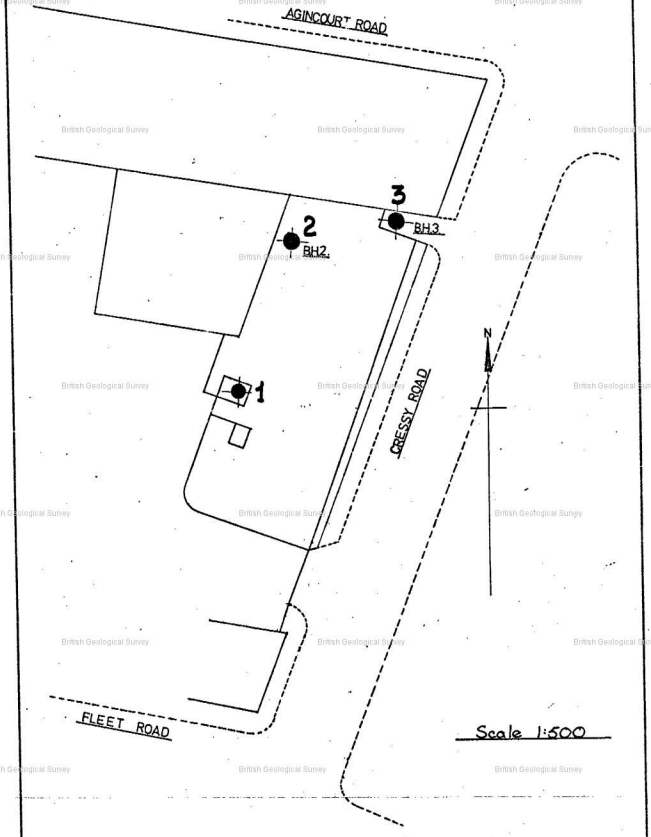
reference

div.	job no.	drg. no.	rev.
G	3287 SW	01	

Size A2 16½" x 23⅜" — 420mm x 594mm

DUPLICATE. TQ/28NE/77-74.

1" = 25ft. 607



Site plan showing the location of Boreholes

GROUND EXPLORATIONS Ltd. 69/76 Alpha Street, Slough, Bucks.	Drwn. by: WBH Ckd. by: BW	Report No. 5332
	Date June 1971	Figure No. 1

GROUND EXPLORATIONS LTD.

TQ1ANE/177

BOREHOLE NO. 1

2754.8550.

Contract Name: Cressy Road, Camden

Report No.: 5332/HW/MA

Client: Greater London Council, Department of Architecture

Address: and Civic Design, The County Hall, London, S.E.1.

Site Address: Cressy Road, Camden, London, N.W.3.

ORDER NO.: BC.85977

Standing Water Level: 12.2 m.

Water Struck: -

Ground Level: 52.295m. O.D.

Method of Boring: Shell and auger

Diameter: 0.15m.

Start: 7.6.71. Finish: 9.6.71.

Remarks

JARS metres		CORES metres		BULK metres
1530 0.75	1550 15.25	1531 1.05		
1532 2.3	1551 Water	1533 2.6		
1534 3.5		1535 4.1		
1536 4.7		1537 5.65		
1538 6.25		1539 7.15		
1540 7.75		1541 8.7		
1542 9.3		1543 10.2		
1544 10.8		1545 11.75		
1546 12.35		1547 13.25		
1548 13.85		1549 14.8		

Description	Thickness m	Depth m
Concrete and hardcore.	0.3	0.3
Stiff Brown and blue clay with crystals	3.05	3.35
Firm Fissured brown silty clay with crystals	0.9	4.25
Firm to stiff fissured dark brown silty clay with crystals.	11.0	15.25
TOTALS	15.25	15.25

Notes 1. Descriptions are in accordance with B.S. Code of Practice C.P. 2001 Clients are requested to compare with samples submitted.

2. Core samples are nominally 4 ins. diameter and 18 ins. long. Depths shown are to top of sample.

TQ 28 NE /77-79.

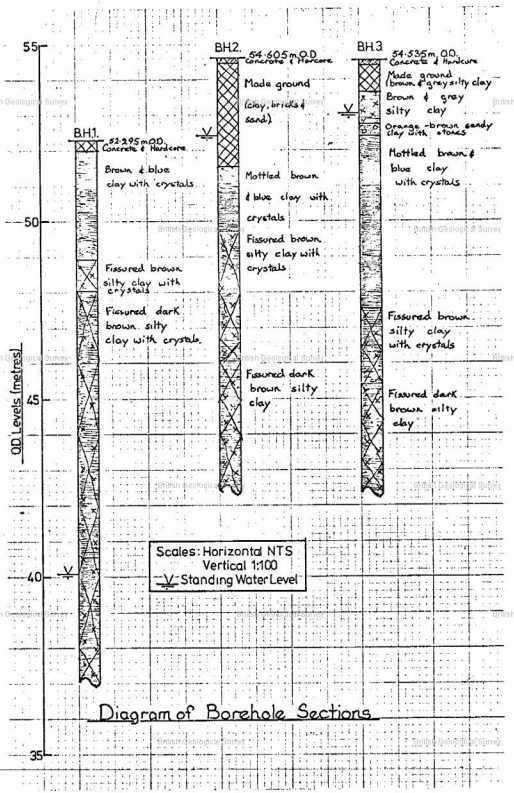


Diagram of Borehole Sections

GROUND EXPLORATIONS Ltd.	Drwn. by: WBH Ckd. by: BW	Report No. 5332
68/76 Alpha Street, Slough, Bucks.	Date July 1971	Figure No. 2

ROYAL FREE HOSPITAL 256 TQ 28/198 [redacted]

Owner ROYAL FREE HAMPSTEAD NHT	Licence No.
Occupier " "	IGS Ref. No.
Ground Level m OD	ft. OD
Level of Well Top 99.280 m OD	ft. OD
Rest Water Level 95.65 m bwt	ft. bwt
(Date 26/7/99) m OD	ft. OD

Construction

Depth bwt m	Dia. mm	Linings (below well top) From	To m	Dia. mm	Type
114	300	0	114	200	plain
177	200				

Abstraction Rates gph / gpd

Type of Pump

Chem./Bact. Anal. YES NO

Well Driller Soil Mechanics

If insufficient space has been allowed, continue in 'Notes' overleaf.

Nat. Grid Ref. TQ 2739 8538

Status OBH

Aquifer UPPER CHALK

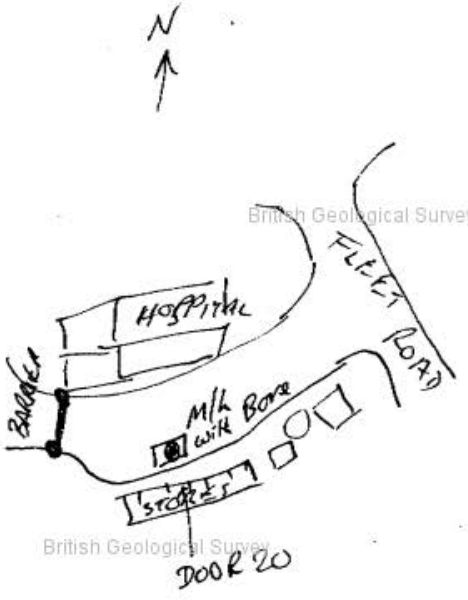
Summary of Geological Section	Thickness m	Depth m
LONDON CLAY	69	69
W& RB	21	90
Thanet Sands	11	101
UPPER CHALK	76	177

This record has already been entered, but contains some geological information.

*Not found as registered!

NGDC ACCESSION NUMBER 36394

Site Plan



Notes

Borehole originally drilled for abstraction. Due to extremely low yield converted to OBH.

EASTERN LS THAMES EA

256

TQ 28 NE

ROYAL FREE HOSPITAL

TQ28 / 198

Owner ROYAL FREE HAMPSTEAD NHS | Licence No.

Occupier | IGS Ref. No.

Nat. Grid Ref. TQ 2739 8538

Status OBH

Ground Level m OD ft. OD

Level of Well Top m OD ft. OD

Aquifer CHALK

Rest Water Level 95.65 m bwt ft. bwt

(Date 26/7/99) m OD ft. OD

Construction

Depth bwt mm	Dia. mm	Linings (below well top) From	To	Dia.	Type
114	300	0	114	200	plain
177	200				

Summary of Geological Section	Thickness	Depth

Abstraction Rates

gph

gpd

Type of Pump

Chem./Bact. Anal. YES NO

Well Driller [redacted] Soil Mechanics

If insufficient space has been allowed, continue in 'Notes' overleaf.

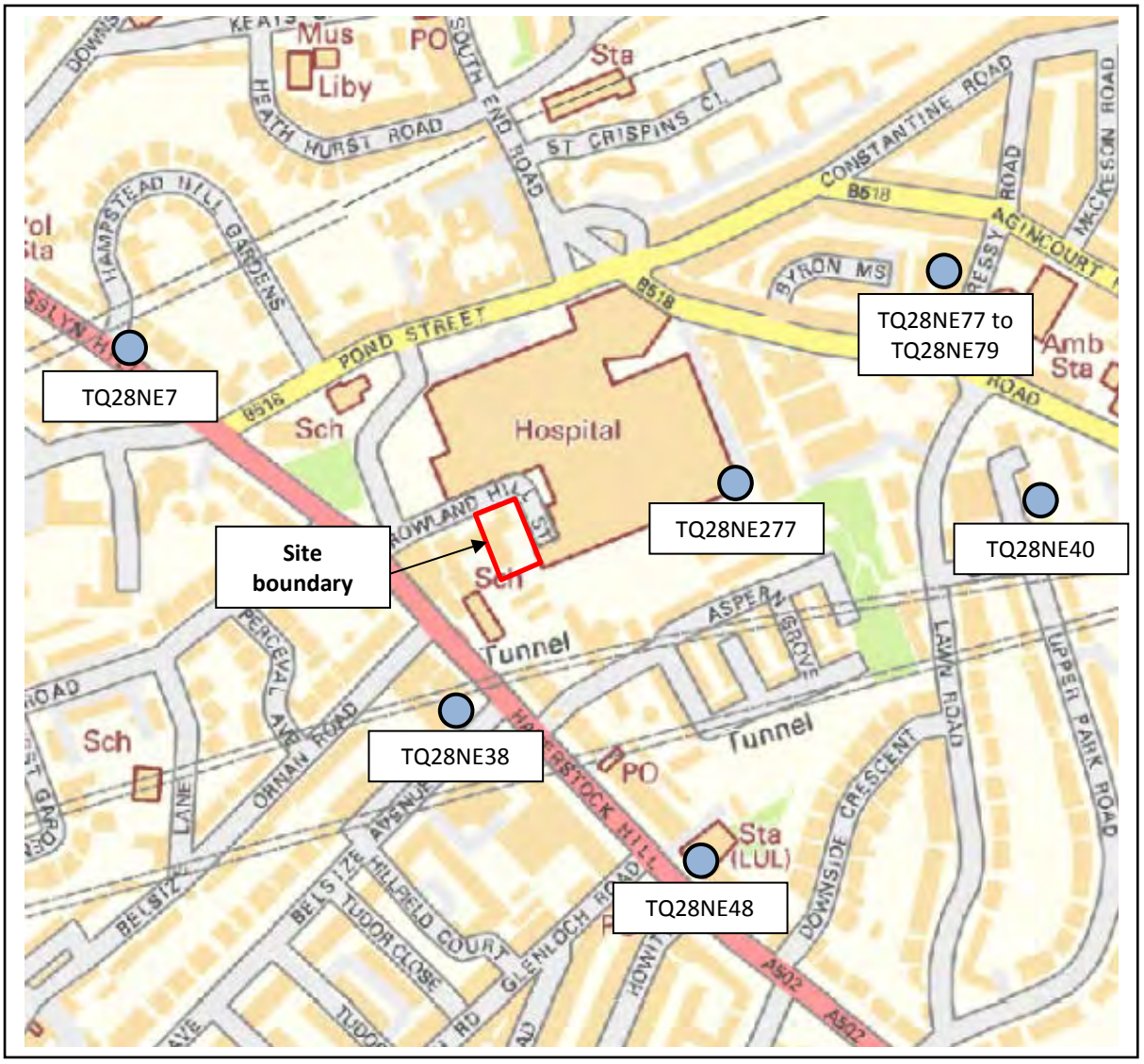


Figure taken from the BGS geoindex (www.bgs.ac.uk)

Not to scale

Client	Project	Job No
Pegasus Life Ltd	**Bartram's Convent, Hampstead**	**CG/08753**
CGL	Title **BGS borehole location plan**	

APPENDIX D

CPG4 flowcharts

Figure 1. Subterranean (ground water) flow screening chart

The Developer should consider each of the following questions in turn, answering either "yes", "unknown" or "no" in each instance.

Consideration should be given to both the temporary and permanent works, along with the proposed surrounding landscaping and drainage associated with a proposed basement development.

Question 1a: Is the site located directly above an aquifer?

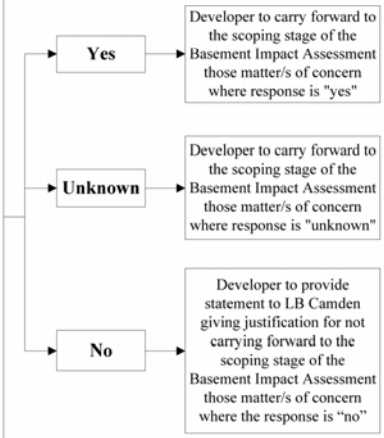
Question 1b: Will the proposed basement extend beneath the water table surface?

Question 2: Is the site within 100m of a watercourse, well (used/disused) or potential spring line?
Question 3: Is the site within the catchment of the pond chains on Hampstead Heath?

Question 4: Will the proposed basement development result in a change in the proportion of hard surfaced / paved areas?

Question 5: As part of the site drainage, will more surface water (e.g. rainfall and run-off) than at present be discharged to the ground (e.g. via soakaways and/or SUDS)?

Question 6: Is the lowest point of the proposed excavation (allowing for any drainage and foundation space under the basement floor) close to, or lower than, the mean water level in any local pond (not just the pond chains on Hampstead Heath) or spring line.



Notes / sources of information

Question 1: In LB Camden, all areas where the London Clay does not outcrop at the surface are considered to be an aquifer. This includes the River Terrace Deposits, the Claygate Member and the Bagshot Formation. The location of the geological strata can be established from British Geological Survey maps (e.g. 1:50,000 and 1:10,000 scale). Note that the boundaries are indicative and should be considered to be accurate to ±50m at best.
Additionally, the Environment Agency (EA) "Aquifer Designation Maps" can be used to identify aquifers. These can be found on the "Groundwater maps" available on the EA website (www.environment-agency.gov.uk) follow "At home & leisure" > "What's in Your Backyard" > "Interactive Maps" > "Groundwater". Knowledge of the thickness of the geological strata present and the level of the groundwater table is required. This may be known from existing information (for example nearby site investigations), however, it may not be known in the early stages of a project. Determination of the water table level may form part of the site investigation phase of a BIA.
Question 2: Watercourses, wells or spring lines may be identified from the following sources:

- Local knowledge and/or site walkovers
- Ordnance Survey maps (e.g. 1:25,000 or 1:10,000 scale). If features are marked (they are not always) the following symbols may be present: W; Spr; water is indicated by blue colouration. (check the key on the map being used)
- British Geological Survey maps (e.g. 1:10,000 scale, current and earlier editions). Current maps will show indicative geological strata boundaries which are where springs may form at the ground surface; of relevance are the boundary between the Bagshot Formation with the Claygate Member and the Claygate Member with the London Clay. Note that the boundaries are indicative should be considered to be accurate to ±50m. Earlier geological maps (e.g. the 1920's 1:10560 scale) maps show the location of some wells.
- Aerial photographs
- "Lost Rivers of London" by Nicolas Barton, 1962. Shows the alignment of rivers in London and their tributaries.
- The British Geological Survey (BGS) GeoIndex includes "Water Well" records. See www.bgs.ac.uk and follow "Online data" > "GeoIndex" > "Onshore GeoIndex".
- The location of older wells can be found in well inventory/catalogue publications such as "Records of London Wells" by G. Barrow and L. J. Wills (1913) and "The Water Supply of the County of London from Underground Sources" by S Buchan (1938).
- The Environment Agency (EA) "Source Protection Zone Maps" can be used to identify aquifers. These can be found on the "Groundwater maps" available on the EA website (www.environment-agency.gov.uk) follow "At home & leisure" > "What's in Your Backyard" > "Interactive Maps" > "Groundwater".
- The EA hold records of licensed groundwater abstraction boreholes. LB Camden is within the North East Area of the Thames Region. Details can be found on the EA website.
- LB Camden Environmental Health department may hold records of groundwater wells in the Borough.

Where a groundwater well or borehole is identified, it will be necessary to determine if it is extending into the Lower Aquifer (Chalk) or the Upper Aquifer (River Terrace Deposits, Bagshot Formation, Claygate Member etc). It is water wells extending into the Upper Aquifer which are of concern with regard to basement development.
Question 3: Figure 14 in the attached study, (prepared using data supplied by the City of London Corporation's hydrology consultant, Haycocks Associates) shows the catchment areas of the pond chains on Hampstead Heath.
Question 4: This will be specific to the proposed development and will be a result of the proposed landscaping of areas above and surrounding a proposed basement.
Question 5: This will be specific to the proposed development and will be a result of the chosen drainage scheme adopted for the property.
Question 6: The lowest point will be specific to the proposed development. Knowledge of local ponds may be taken from

- Local knowledge and/or site walkovers
- Ordnance Survey maps (e.g. 1:25,000 or 1:10,000 scale). If features are marked (they are not always) the following symbols may be present: W; Spr; water is indicated by blue colouration. (check the key on the map being used)
- Aerial photographs

Figure 2. Slope stability screening flowchart

The Developer should consider each of the following questions in turn, answering either "yes", "unknown" or "no" in each instance.

Consideration should be given to both the temporary and permanent works, along with the proposed surrounding landscaping and drainage associated with a proposed basement development.

Question 1: Does the existing site include slopes, natural or manmade, greater than 7°? (approximately 1 in 8)

Question 2: Will the proposed re-profiling of landscaping at site change slopes at the property boundary to more than 7°? (approximately 1 in 8)

Question 3: Does the development neighbour land, including railway cuttings and the like, with a slope greater than 7°? (approximately 1 in 8)

Question 4: Is the site within a wider hillside setting in which the general slope is greater than 7°? (approximately 1 in 8)

Question 5: Is the London Clay the shallowest strata at the site?

Question 6: Will any tree/s be felled as part of the proposed development and/or are any works proposed within any tree protection zones where trees are to be retained? (Note that consent is required from LB Camden to undertake work to any tree/s protected by a Tree Protection Order or to tree/s in a Conservation Area if the tree is over certain dimensions).

Question 7: Is there a history of seasonal shrink-swell subsidence in the local area, and/or evidence of such effects at the site?

Question 8: Is the site within 100m of a watercourse or a potential spring line?

Question 9: Is the site within an area of previously worked ground?

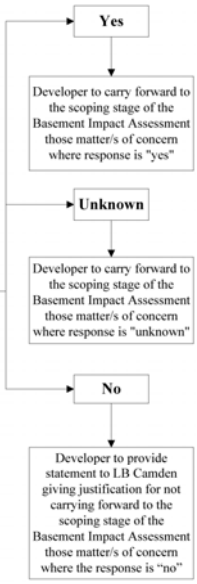
Question 10: Is the site within an aquifer? If so, will the proposed basement extend beneath the water table such that dewatering may be required during construction?

Question 11: Is the site within 50m of the Hampstead Heath ponds?

Question 12: Is the site within 5m of a highway or pedestrian right of way?

Question 13: Will the proposed basement significantly increase the differential depth of foundations relative to neighbouring properties?

Question 14: Is the site over (or within the exclusion zone of) any tunnels, e.g. railway lines?



Notes / sources of information

Question 1, 3 & 4: The current surface slope can be determined by a site topographical survey. Slopes may be estimated from 1:25,000 OS maps, however in many urban areas such maps will not show sufficient detail to determine surface slopes on a property-by-property scale, just overall trends. With regard to slopes associated with infrastructure, e.g. cuttings, it should be ensured that any works do not impact on critical infrastructure.

Question 2: This will be specific to the proposed development and will be a result of the proposed landscaping of areas above and surrounding a proposed basement.

Question 5: The plan footprint of the outcropping geological strata can be established from British Geological Survey maps (e.g. 1:50,000 and 1:10,000 scale). Note that the boundaries are indicative and should be considered to be accurate to ±50m at best.

Question 6: this is a project specific determination, subject to relevant Tree Preservation Orders etc.

Question 7: this can be assessed from local knowledge and on-site observations of indicative features, such as cracking. Insurance firms may also give guidance, based on post code. Soil maps can be used to identify high-risk soil types. Relevant guidance is presented in BRE Digest 298 "Low-rise building foundations: the influence of trees in clay soils" (1999); BRE Digest 240 "Low-rise buildings on shrinkable clay soils: part 1" (1993); and BRE Digest 251 "Assessment of damage in low-rise buildings" (1995).

Question 8: Watercourses or spring lines may be identified from the following sources:

- Local knowledge and/or site walkovers
- Ordnance Survey maps (e.g. 1:25,000 or 1:10,000 scale). If features are marked (they are not always) the following symbol may be present "Spr"; water is indicated by blue colouration. (check the key on the map being used)
- Geological maps will show indicative geological strata boundaries which are where springs may form at the ground surface; of relevance are the boundary between the Bagshot Formation with the Claygate Member and the Claygate Member with the London Clay. Note that the boundaries are indicative should be considered to be accurate to ±50m at best. British Geological Survey maps (e.g. 1:10,000 scale, current and earlier editions).
- Aerial photographs
- "Lost Rivers of London" by Nicolas Barton, 1962. Shows the alignment of rivers in London and their tributaries.

Question 9: Worked ground includes, for example, old pits, brickyards, cuttings etc. Information can be gained from local knowledge and/or site walkovers, and from historical Ordnance Survey maps (at 1:25,000 or 1:10,000 scale, or better) and British Geological Survey maps (at 1:10,000 scale, current and earlier editions). Earlier geological maps (e.g. the 1:10560 scale series from the 1920s) include annotated descriptions such as "old pits", "formerly dug", "brickyard" etc.

Question 10: In LB Camden, all areas where the London Clay does not outcrop at the surface are considered to be an aquifer. This includes the River Terrace Deposits, the Claygate Member and the Bagshot Formation. The general footprint of the geological strata can be assessed from British Geological Survey maps (e.g. 1:50,000 and 1:10,000 scale). Note that the boundaries are indicative and should be considered to be accurate to ±50m at best.

The Environment Agency (EA) Aquifer Designation Maps can be used to identify aquifers. These are available from the EA website (www.environment-agency.gov.uk), by clicking on 'At home & leisure' > 'What's in Your Backyard' > 'Interactive Maps' > 'Groundwater'.

Details are required of the thickness of the geological strata present and the level or depth of the groundwater table. This may be known from existing information (for example nearby site investigations); however, it may not be known in the early stages of a project. Determination of the water table level may form part of the site investigation phase of a BIA and may require specialist advice to answer. Depth of proposed development is project specific.

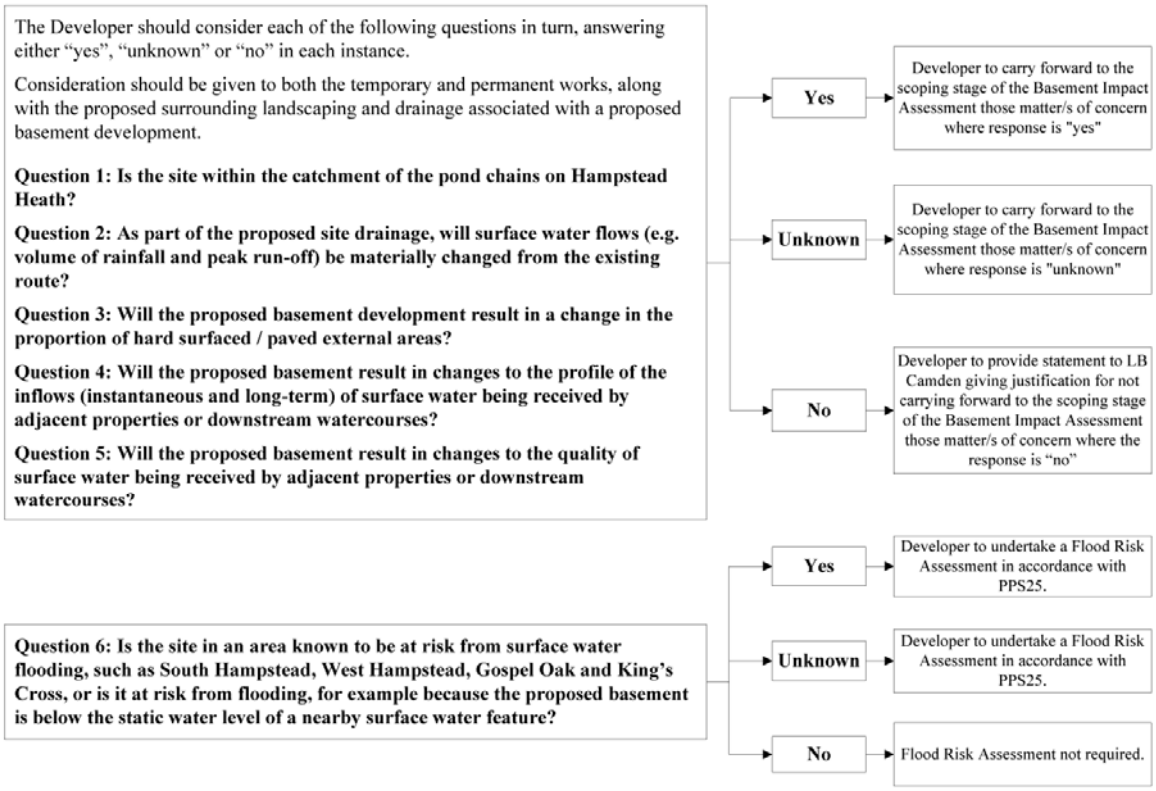
Question 11: From local knowledge and/or site walkovers, and from Ordnance Survey maps (e.g. 1:25,000 or 1:10,000 scale). In relation to the stability and integrity of the pond structures and dams, the guidance of a Panel Engineer should be sought. (Details of Panel Engineers can be found on the Environment Agency website: http://www.environment-agency.gov.uk/business/sectors/64253.aspx). Duty of care needs to be undertaken during any site works in the vicinity of the ponds.

Question 12: From local knowledge and/or site walkovers, and from Ordnance Survey maps (e.g. 1:25,000 or 1:10,000 scale). Any works should not impact on critical infrastructure.

Question 13: From local knowledge and/or site walkovers. May find some details on neighbouring properties from searches of LB Council databases, e.g. planning applications and/or building control records.

Question 14: From local knowledge and/or site walkovers, from Ordnance Survey maps (e.g. 1:25,000 or 1:10,000 scale) and directly from those responsible for tunnels (e.g. TfL or Network Rail). Any works should not impact on critical infrastructure.

Figure 3. Surface flow and flooding screening flowchart



Notes / sources of information

Question 1: Figure 14 in the attached study (prepared using data supplied by the City of London Corporation's hydrology consultant, Haycocks Associates) shows the catchment areas of the pond chains on Hampstead Heath

Question 2: This will be specific to the proposed development and will be a result of the proposed landscaping of areas above and surrounding a proposed basement. The developer should provide documentation of discussion with Thames Water to confirm that the sewers have capacity to receive any increased wastewater flows.

Question 3: This will be specific to the proposed development and will be a result of the chosen drainage scheme adopted for the property

Question 4: This will be specific to the proposed development and will be a result of the proposed landscaping and chosen drainage scheme adopted for the property. SUDS will be required to compensate any increases in peak flow.

Question 5: This will be specific to the proposed development and will be a result of the proposed landscaping and chosen drainage scheme adopted for the property. SUDS will be required to compensate any increases in peak flow.

Question 6: The principles outlined in PPS25 should be followed to ensure that flood risk is not increased.

APPENDIX E

CGL borehole logs

BOREHOLE LOG

Project				BOREHOLE No
Bartram's Convent, Hampstead				**BH1**
Job No	Date	Ground Level (m)	Co-Ordinates (m)	
CG/08753	04-04-14 07-04-14	73.83	E 527,515.0 N 185,342.0	
Client				Sheet
Pegasus Life Ltd				1 of 3

SAMPLES & TESTS			Water	STRATA				Instrument /Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION	
0.20-0.50 0.30	B1 ES24			72.93		(0.90) 0.90	Paving slab over dark brown sandy very clayey fine to coarse subrounded to subangular gravel of brick. Sand is fine to coarse. Occasional cobble of brick. [MADE GROUND]	
1.00	D2			72.33		(0.60) 1.50	Soft to firm dark orange brown slightly silty CLAY with occasional fine to coarse subangular to angular gravel of flint. [HEAD DEPOSITS]	
1.50		N6					Firm, becoming stiff, dark orange brown slightly silty CLAY. Occasional selenite crystals noted. [WEATHERED LONDON CLAY FORMATION] 1.50 - 3.00 Occasional partings of light orange fine to medium sand noted.	
2.00 2.25 2.50-3.00	ES25 D4 U100	14 blows						
3.25 3.50	D6	N9						
4.25 4.50-5.10 4.50	D8 U100	18 blows 82						
5.70 6.00	D10	N15				(9.30)		
7.00 7.50-7.95	D12 U100	30 blows						
8.10 8.10 8.50	D14 D15	93						
9.00		N20						
10.00	D17							

Boring Progress and Water Observations

Date	Comment	Strike Depth	Casing Depth	Casing Dia. mm	Standing Depth

General Remarks

1. ES = environmental sample, D = small disturbed sample, B = bulk sample, SPT 'N' = Standard Penetration Test 'N' value.

2. No groundwater encountered.

3. Installation details; 0.0-1.2mbgl: plain pipe with bentonite backfill, 1.2-20.0mbgl: slotted pipe with gravel backfill, 20.0-21.0mbgl: bentonite backfill, 21.0-30.45mbgl: arisings backfill. Gas tap, bung and flush cover installed.

Method/ Plant Used	Field Crew	Logged By	Checked By
Pilcon 1 Ton	GWD	JJM	RJB

BOREHOLE LOG

Project				BOREHOLE No
Bartram's Convent, Hampstead				**BH1**
Job No	Date	Ground Level (m)	Co-Ordinates (m)	
CG/08753	04-04-14 07-04-14	73.83	E 527,515.0 N 185,342.0	
Client				Sheet
Pegasus Life Ltd				2 of 3

SAMPLES & TESTS			Water	STRATA				Instrument /Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION	
10.50-10.95	U100	32 blows		63.03		10.80		
11.00	D19						Stiff to very stiff closely fissured dark grey brown silty CLAY. Frequent fine selenite crystals noted. [LONDON CLAY FORMATION]	
11.50	D20							
12.00		N18						
13.00	D22							
13.50-13.95	U100	26 blows						
14.00	D24							
14.00		97						
14.50	D25							
15.00		N18						
16.00	D27							
16.50-16.95	U100	31 blows						
17.00	D29							
17.50	D30							
18.00		N28						
19.00	D32						19.00 Occasional coarse selenite crystals.	
19.50-19.95	U100	30 blows						
20.00	D34						20.00 Becoming very stiff.	
20.00		100						
20.50	D35					(19.65)		

Boring Progress and Water Observations

Date	Comment	Strike Depth	Casing Depth	Casing Dia. mm	Standing Depth

General Remarks

1. ES = environmental sample, D = small disturbed sample, B = bulk sample, SPT 'N' = Standard Penetration Test 'N' value.

2. No groundwater encountered.

3. Installation details; 0.0-1.2mbgl: plain pipe with bentonite backfill, 1.2-20.0mbgl: slotted pipe with gravel backfill, 20.0-21.0mbgl: bentonite backfill, 21.0-30.45mbgl: arisings backfill. Gas tap, bung and flush cover installed.

Method/ Plant Used	Field Crew	Logged By	Checked By
Pilcon 1 Ton	GWD	JJM	RJB

BOREHOLE LOG

Project				BOREHOLE No
Bartram's Convent, Hampstead				**BH1**
Job No	Date	Ground Level (m)	Co-Ordinates (m)	
CG/08753	04-04-14 07-04-14	73.83	E 527,515.0 N 185,342.0	
Client				Sheet
Pegasus Life Ltd				3 of 3

SAMPLES & TESTS			Water	STRATA				Instrument /Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION	
21.00		N32					Stiff to very stiff closely fissured dark grey brown silty CLAY. Frequent fine selenite crystals noted. [LONDON CLAY FORMATION] *(continued)*	
22.00	D37							
22.50-22.95	U100	57 blows						
23.00	D39							
23.50	D40							
24.00		N41						
25.00	D42							
25.50-25.95	U100	52 blows						
26.00	D44							
26.50	D45							
27.00		N43						
28.00	D47							
28.50-28.95	U100	52 blows						
29.00	D49							
29.50-30.45	D50							
30.00		N43		43.38		30.45	*(Borehole terminated at 30.45m)*	

Boring Progress and Water Observations

Date	Comment	Strike Depth	Casing Depth	Casing Dia. mm	Standing Depth

General Remarks

1. ES = environmental sample, D = small disturbed sample, B = bulk sample, SPT 'N' = Standard Penetration Test 'N' value.

2. No groundwater encountered.

3. Installation details; 0.0-1.2mbgl: plain pipe with bentonite backfill, 1.2-20.0mbgl: slotted pipe with gravel backfill, 20.0-21.0mbgl: bentonite backfill, 21.0-30.45mbgl: arisings backfill. Gas tap, bung and flush cover installed.

Method/ Plant Used	Field Crew	Logged By	Checked By
Pilcon 1 Ton	GWD	JJM	RJB

BOREHOLE LOG

Project				BOREHOLE No
Bartram's Convent, Hampstead				**BH2**
Job No	Date	Ground Level (m)	Co-Ordinates (m)	
CG/08753	08-04-14	72.68	E 527,233.0 N 185,344.0	
Client				Sheet
Pegasus Life Ltd				1 of 2

SAMPLES & TESTS			Water	STRATA				Instrument /Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION	
0.30-0.50	B1						Dark brown clayey very gravelly fine to coarse sand. Gravel is fine to coarse subrounded to subangular of brick. Occasional cobble of brick. [MADE GROUND]	
0.30	ES26							
0.75	D2					(1.50)		
1.20		N12		71.18		1.50		
							Firm dark orange brown silty CLAY. Occasional fine selenite crystals. [WEATHERED LONDON CLAY FORMATION]	
2.00	D4						1.50 - 2.50 Occasional partings of light orange sand noted.	
2.20-2.65	U100	15 blows						
2.30	ES28							
2.70	D6							
3.00	D7							
3.50		N11						
4.25	D9							
4.50-4.95	U100	20 blows						
5.50	D12							
6.00		N12				(9.70)		
6.45	D11							
7.00	D14							
7.50-7.95	U100	26 blows						
8.00	D16							
8.00		79						
8.50	D17							
9.00		N21						
10.00	D19							

Boring Progress and Water Observations

Date	Comment	Strike Depth	Casing Depth	Casing Dia. mm	Standing Depth

General Remarks

1. ES = environmental sample, D = small disturbed sample, B = bulk sample, SPT 'N' = Standard Penetration Test 'N' value.

2. No groundwater encountered.

3. Installation details; 0.0-1.0mbgl: plain pipe with bentonite backfill, 1.0-5.0mbgl: slotted pipe with gravel backfill, 5.0-6.0mbgl: bentonite backfill, 6.0-15.45mbgl: arisings backfill. Gas tap, bung and flush cover installed.

Method/ Plant Used	Field Crew	Logged By	Checked By
Pilcon 1 Ton	GWD	JJM	RJB

BOREHOLE LOG

Project				BOREHOLE No
Bartram's Convent, Hampstead				**BH2**
Job No	Date	Ground Level (m)	Co-Ordinates (m)	
CG/08753	08-04-14	72.68	E 527,233.0 N 185,344.0	
Client				Sheet
Pegasus Life Ltd				2 of 2

SAMPLES & TESTS			Water	STRATA				Instrument /Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION	
10.50-10.95	U100	32 blows					Firm dark orange brown silty CLAY. Occasional fine selenite crystals. [WEATHERED LONDON CLAY FORMATION] *(continued)*	
11.00	D21			61.48		11.20		
11.00		107					Stiff closely fissured dark grey brown silty clay. Frequent fine selenite crystals. [LONDON CLAY FORMATION]	
11.50	D22							
12.00		N20						
13.00	D24					(4.25)		
13.50-13.95	U100	36 blows						
14.00	D26							
14.50	D27							
15.00		N22		57.23		15.45		
							(Borehole terminated at 15.45m)	

Boring Progress and Water Observations

Date	Comment	Strike Depth	Casing Depth	Casing Dia. mm	Standing Depth

General Remarks

1. ES = environmental sample, D = small disturbed sample, B = bulk sample, SPT 'N' = Standard Penetration Test 'N' value.

2. No groundwater encountered.

3. Installation details; 0.0-1.0mbgl: plain pipe with bentonite backfill, 1.0-5.0mbgl: slotted pipe with gravel backfill, 5.0-6.0mbgl: bentonite backfill, 6.0-15.45mbgl: arisings backfill. Gas tap, bung and flush cover installed.

Method/ Plant Used	Field Crew	Logged By	Checked By
Pilcon 1 Ton	GWD	JJM	RJB

BOREHOLE LOG

Project				BOREHOLE No
Bartram's Convent, Hampstead				BH3
Job No	Date	Ground Level (m)	Co-Ordinates (m)	
CG/08753	02-04-14	73.35	E 527,244.0 N 158,293.0	
Client				Sheet
Pegasus Life Ltd				1 of 2

SAMPLES & TESTS			Water	STRATA				Instrument /Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION	
0.30-0.50	B1					(0.80)	Grass over slightly sandy slightly gravelly clay with occasional rootlets. Sand is fine to medium. Gravel is fine to coarse sub rounded to angular of brick, dolomite, siltstone and flint with occasional metallic objects.	
0.30	ES27			72.55		0.80	[MADE GROUND]	
1.00	D2						Soft dark orange brown occasionally green grey slightly silty CLAY with occasional fine to coarse subangular to angular gravel of flint. [HEAD DEPOSITS]	
1.50		N8						
2.10	ES29					(2.60)		
2.25	D4							
2.50-2.95	U100	16 blows						
3.00	D6							
3.25	D7			69.95		3.40		
3.50		N14					Firm closely fissured dark orange brown CLAY with frequent fine selenite crystals [WEATHERED LONDON CLAY FORMATION]	
4.25	D9						4.25 Occasional medium to coarse angular claystone gravel.	
4.50-4.95	U100	26 blows						
5.00	D11							
5.50	D12							
6.00		N15						
						(6.40)		
7.00	D14							
7.50-7.95	U100	28 blows						
8.00	D16						8.00 Becoming dark brown.	
8.50	D17							
9.00		N22					9.00 Becoming stiff.	
				63.55		9.80		
10.00	D19						Stiff closely fissured dark grey brown CLAY with frequent fine selenite crystals. [LONDON CLAY FORMATION]	

Boring Progress and Water Observations

Date	Comment	Strike Depth	Casing Depth	Casing Dia. mm	Standing Depth

General Remarks

1. ES = environmental sample, D = small disturbed sample, B = bulk sample, SPT 'N' = Standard Penetration Test 'N' value.

2. No groundwater encountered.

3. Installation details; 0.0-1.0mbgl: plain pipe with bentonite backfill, 1.0-5.0mbgl: slotted pipe with gravel backfill, 5.0-6.0mbgl: bentonite backfill, 6.0-20.45mbgl: arisings backfill. Gas tap, bung and flush cover installed.

Method/ Plant Used	Field Crew	Logged By	Checked By
Pilcon 1 Ton	GWD	GJK	RJB

BOREHOLE LOG

Project				BOREHOLE No
Bartram's Convent, Hampstead				**BH3**
Job No	Date	Ground Level (m)	Co-Ordinates (m)	
CG/08753	02-04-14	73.35	E 527,244.0 N 158,293.0	
Client				Sheet
Pegasus Life Ltd				2 of 2

SAMPLES & TESTS			Water	STRATA				Instrument /Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION	
10.50-10.95	U100	27 blows					Stiff closely fissured dark grey brown CLAY with frequent fine selenite crystals. [LONDON CLAY FORMATION] *(continued)*	
11.00	D21							
11.50	D22							
12.00		N27						
13.00	D24							
13.50-13.95	U100	30 blows						
14.50	D26							
15.00		N25				(10.65)		
16.00	D28							
16.50-16.95	U100	36 blows						
17.50	D30							
18.00		N27						
19.00	D32							
19.50-19.95	U100	36 blows						
20.00	D34							
				52.90		20.45	*(Borehole terminated at 20.45m)*	

Boring Progress and Water Observations

Date	Comment	Strike Depth	Casing Depth	Casing Dia. mm	Standing Depth

General Remarks

1. ES = environmental sample, D = small disturbed sample, B = bulk sample, SPT 'N' = Standard Penetration Test 'N' value.

2. No groundwater encountered.

3. Installation details; 0.0-1.0mbgl: plain pipe with bentonite backfill, 1.0-5.0mbgl: slotted pipe with gravel backfill, 5.0-6.0mbgl: bentonite backfill, 6.0-20.45mbgl: arisings backfill. Gas tap, bung and flush cover installed.

Method/ Plant Used	Field Crew	Logged By	Checked By
Pilcon 1 Ton	GWD	GJK	RJB

BOREHOLE LOG

Project				BOREHOLE No
Bartram's Convent, Hampstead				**BH4**
Job No	Date	Ground Level (m)	Co-Ordinates (m)	
CG/08753	31-03-14	72.48	E 527,245.0 N 158,317.0	
Client				Sheet
Pegasus Life Ltd				1 of 2

SAMPLES & TESTS			Water	STRATA				Instrument /Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION	
0.00-0.45	B1						Dark red brown and black slightly clayey sand and gravel. Sand is fine to coarse. Gravel is fine to coarse, subangular to angular, brick, tarmac and siltstone. Occasional cobbles of brick. [MADE GROUND]	
0.30	ES2			72.03		0.45		
0.50	D2						Soft to firm green grey slightly silty CLAY with occasional fine to coarse subangular to angular gravel of flint. [HEAD DEPOSITS]	
1.00-14.00	D3			71.58		0.90		
1.50		N16					Firm to stiff dark orange brown slightly silty CLAY. [WEATHERED LONDON CLAY FORMATION]	
2.30-2.50	D5		1				2.35 Thin band of weak mudstone.	
2.50-3.00	U100	11 blows No recovery.						
2.60	ES28							
3.00-3.45	U100	13 blows 53						
3.00								
3.50	D8							
4.00	D9							
4.50		N21					4.50 Becoming stiff.	
5.50	D11					(9.10)		
6.00-6.45	U100	21 blows						
7.00	D13							
7.50		N22						
8.00		58						
8.50	D15							
9.00-9.45	U100	25 blows						
9.50	D17							
10.00	D18			62.48		10.00	Stiff dark grey brown silty CLAY. Frequent fine selenite crystals noted. [LONDON CLAY FORMATION]	

Boring Progress and Water Observations

Date	Comment	Strike Depth	Casing Depth	Casing Dia. mm	Standing Depth
	Seepage	2.35			

General Remarks

1. ES = environmental sample, D = small disturbed sample, B = bulk sample, SPT 'N' = Standard Penetration Test 'N' value.

2. Groundwater seepage noted from the claystone band (2.35mbgl) and band of silty sand (18.7-18.9mbgl).

3. Installation details; 0.0-1.2mbgl: plain pipe with bentonite backfill, 1.2-20.0mbgl: slotted pipe with gravel backfill. Gas tap, bung and flush cover installed.

Method/ Plant Used	Field Crew	Logged By	Checked By
Pilcon 1 Ton	GWD	JJM	RJB

BOREHOLE LOG

Project				BOREHOLE No
Bartram's Convent, Hampstead				**BH4**
Job No	Date	Ground Level (m)	Co-Ordinates (m)	
CG/08753	31-03-14	72.48	E 527,245.0 N 158,317.0	
Client				Sheet
Pegasus Life Ltd				2 of 2

SAMPLES & TESTS			Water	STRATA				Instrument /Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION	
10.50		N26					Stiff dark grey brown silty CLAY. Frequent fine selenite crystals noted. [LONDON CLAY FORMATION] *(continued)*	
11.00		93						
11.50	D20							
12.00-12.45	U100	32 blows						
12.50	D22							
12.50		103						
13.00	D23							
13.00		91						
13.50		N21						
14.50	D25							
15.00-15.45	U100	40 blows				(10.45)		
15.50	D27							
15.50		110						
16.00	D28							
16.50		N6						
17.00		103						
17.50	D30							
18.00-18.45	U100	38 blows	2				18.70 - 18.90 Grey silty sand (driller description).	
19.00	D32							
19.00-19.45	D33							
19.50		N27						
20.00	D35			52.03		20.45		
							(Borehole terminated at 20.45m)	

Boring Progress and Water Observations

Date	Comment	Strike Depth	Casing Depth	Casing Dia. mm	Standing Depth
	Seepage	18.70			

General Remarks

1. ES = environmental sample, D = small disturbed sample, B = bulk sample, SPT 'N' = Standard Penetration Test 'N' value.

2. Groundwater seepage noted from the claystone band (2.35mbgl) and band of silty sand (18.7-18.9mbgl).

3. Installation details; 0.0-1.2mbgl: plain pipe with bentonite backfill, 1.2-20.0mbgl: slotted pipe with gravel backfill. Gas tap, bung and flush cover installed.

Method/ Plant Used	Field Crew	Logged By	Checked By
Pilcon 1 Ton	GWD	JJM	RJB

BOREHOLE LOG

Project				BOREHOLE No
Bartram's Convent, Hampstead				**BH5**
Job No	Date	Ground Level (m)	Co-Ordinates (m)	
CG/08753	03-04-14	73.77	E 527,229.0 N 185,299.0	
Client				Sheet
Pegasus Life Ltd				1 of 3

SAMPLES & TESTS			Water	STRATA				Instrument /Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION	
0.30-0.50	B1					(1.00)	Grass over firm dark orange brown slightly sandy slightly gravelly clay. Sand is fine. Gravel is fine to medium and occasionally coarse sub angular to angular of brick, concrete and flint. Occasional cobbles of brick and concrete.	
0.30	ES23/01			72.77		1.00	[MADE GROUND]	
1.00	D2						Soft to firm dark orange brown slightly sandy slightly gravelly silty CLAY. Sand is fine. Gravel is fine to medium subangular to subrounded to flint and mudstone with occasional fine selenite crystals. Occasionally mottled green grey.	
1.50		N7				(2.20)	[HEAD DEPOSITS]	
2.25	D4							
2.25	ES23/02							
2.50-2.95	U100	12 blows						
3.00	D6			70.57		3.20		
3.25	D7						Firm to stiff closely fissured dark orange brown CLAY with frequent fine selenite crystals.	
3.50		N13					[WEATHERED LONDON CLAY FORMATION]	
4.25	D9							
4.50-4.95	U100	21 blows						
5.00	D11		▼1					
5.40-5.70	D12						5.40 - 5.70 Weak claystone band.	
6.00		N15				(6.60)		
7.00	D14							
7.50-7.95	U100	19 blows						
8.00	D16							
8.50	D17							
9.00		N21					9.00 Becoming stiff.	
				63.97		9.80		
10.00	D19						Stiff closely fissured dark grey brown silty CLAY with frequent fine selenite crystals. [LONDON CLAY FORMATION]	

Boring Progress and Water Observations

Date	Comment	Strike Depth	Casing Depth	Casing Dia. mm	Standing Depth
	Seepage	5.40			

General Remarks

1. ES = environmental sample, D = small disturbed sample, B = bulk sample, SPT 'N' = Standard Penetration Test 'N' value.

2. Groundwater seepage noted from the claystone bands (5.4-5.7mbgl, 17.3-17.5mbgl and 27.2-27.4mbgl).

3. Installation details; 0.0-1.2mbgl: plain pipe with bentonite backfill, 1.2-20.0mbgl: slotted pipe with gravel backfill, 20.0-21.0: bentonite backfill, 21.0-30.45mbgl: arisings backfill. Gas tap, bung and flush cover installed.

Method/ Plant Used	Field Crew	Logged By	Checked By
Pilcon 1 Ton	GWD	GJK	RJB

BOREHOLE LOG

Project				BOREHOLE No
Bartram's Convent, Hampstead				**BH5**
Job No	Date	Ground Level (m)	Co-Ordinates (m)	
CG/08753	03-04-14	73.77	E 527,229.0 N 185,299.0	
Client				Sheet
Pegasus Life Ltd				2 of 3

SAMPLES & TESTS			Water	STRATA				Instrument /Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION	
10.50-10.95	U100	28 blows					Stiff closely fissured dark grey brown silty CLAY with frequent fine selenite crystals. [LONDON CLAY FORMATION] *(continued)*	
11.00	D21							
11.50	D22							
12.00		N22						
13.00	D24							
13.50-13.95	U100	32 blows						
14.00	D26							
14.50-15.45	D27							
15.00		N26						
16.00-16.95	D29							
16.50-17.00	U100	27 blows						
17.30-17.50	D31		2				17.30 - 17.50 Claystone band.	
18.00		N33						
19.00	D33							
19.50-19.95	U100	33 blows						
20.00	D35					(20.65)		
20.50	D36							

Boring Progress and Water Observations

Date	Comment	Strike Depth	Casing Depth	Casing Dia. mm	Standing Depth
	Seepage	17.30			

General Remarks

1. ES = environmental sample, D = small disturbed sample, B = bulk sample, SPT 'N' = Standard Penetration Test 'N' value.

2. Groundwater seepage noted from the claystone bands (5.4-5.7mbgl, 17.3-17.5mbgl and 27.2-27.4mbgl).

3. Installation details; 0.0-1.2mbgl: plain pipe with bentonite backfill, 1.2-20.0mbgl: slotted pipe with gravel backfill, 20.0-21.0: bentonite backfill, 21.0-30.45mbgl: arisings backfill. Gas tap, bung and flush cover installed.

Method/ Plant Used	Field Crew	Logged By	Checked By
Pilcon 1 Ton	GWD	GJK	RJB

BOREHOLE LOG

Project				BOREHOLE No
Bartram's Convent, Hampstead				**BH5**
Job No	Date	Ground Level (m)	Co-Ordinates (m)	
CG/08753	03-04-14	73.77	E 527,229.0 N 185,299.0	
Client				Sheet
Pegasus Life Ltd				3 of 3

SAMPLES & TESTS			Water	STRATA				Instrument /Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION	
21.00		N31					Stiff closely fissured dark grey brown silty CLAY with frequent fine selenite crystals. [LONDON CLAY FORMATION] *(continued)*	
22.00	D38							
22.50-22.95	U100	30 blows						
23.00	D40							
23.50	D41							
24.00		N36					24.00 Becoming very stiff.	
25.00	D43							
25.50-25.95	U100	34 blows						
26.00	D45							
26.50	D46							
27.00		N43	3				27.20 - 27.40 Claystone band.	
28.00	D48							
28.50-28.95	U100	40 blows						
29.00	D50							
29.50	D41							
30.00		N40		43.32		30.45	*(Borehole terminated at 30.45m)*	

Boring Progress and Water Observations

Date	Comment	Strike Depth	Casing Depth	Casing Dia. mm	Standing Depth
	Seepage	27.20			

General Remarks

1. ES = environmental sample, D = small disturbed sample, B = bulk sample, SPT 'N' = Standard Penetration Test 'N' value.

2. Groundwater seepage noted from the claystone bands (5.4-5.7mbgl, 17.3-17.5mbgl and 27.2-27.4mbgl).

3. Installation details; 0.0-1.2mbgl: plain pipe with bentonite backfill, 1.2-20.0mbgl: slotted pipe with gravel backfill, 20.0-21.0: bentonite backfill, 21.0-30.45mbgl: arisings backfill. Gas tap, bung and flush cover installed.

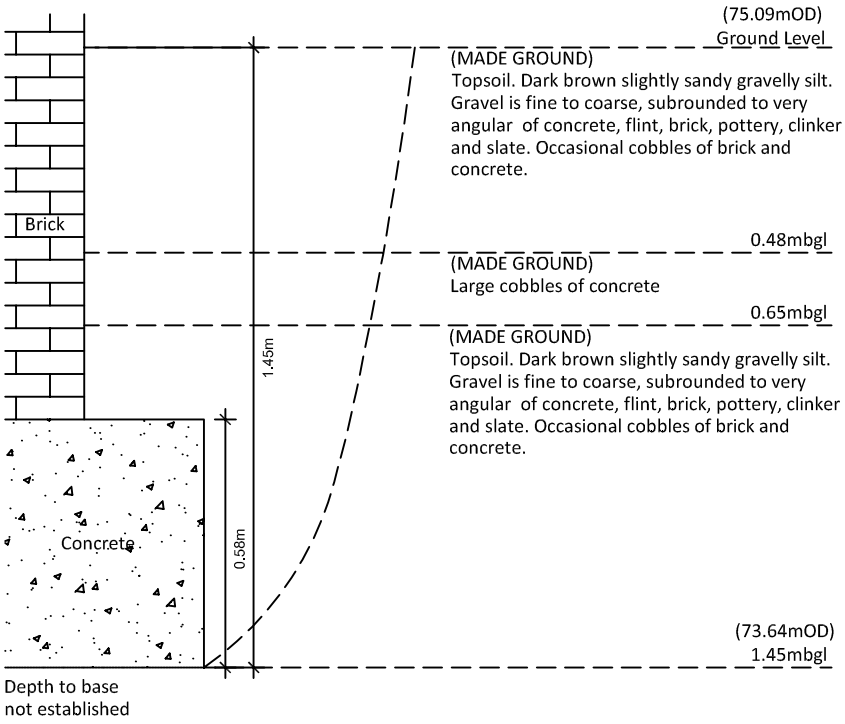
Method/ Plant Used	Field Crew	Logged By	Checked By
Pilcon 1 Ton	GWD	GJK	RJB

APPENDIX F

CGL foundation inspection

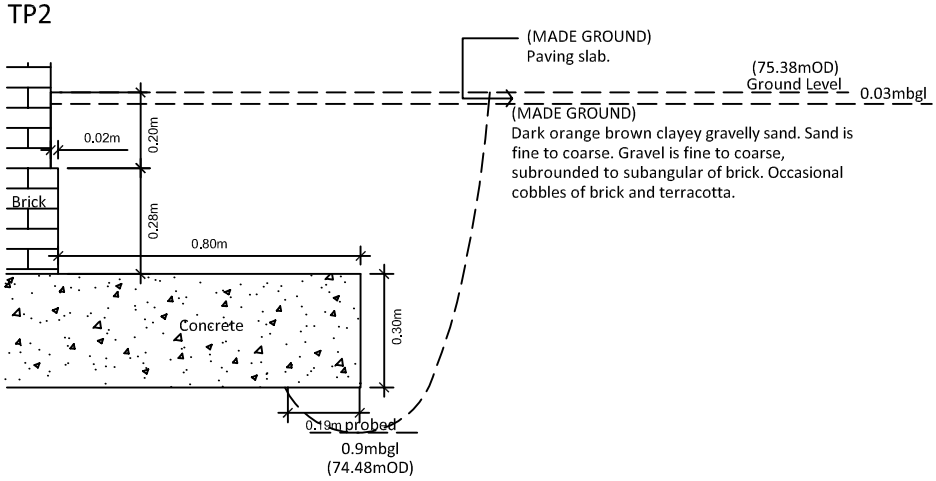
details and logs

TP1



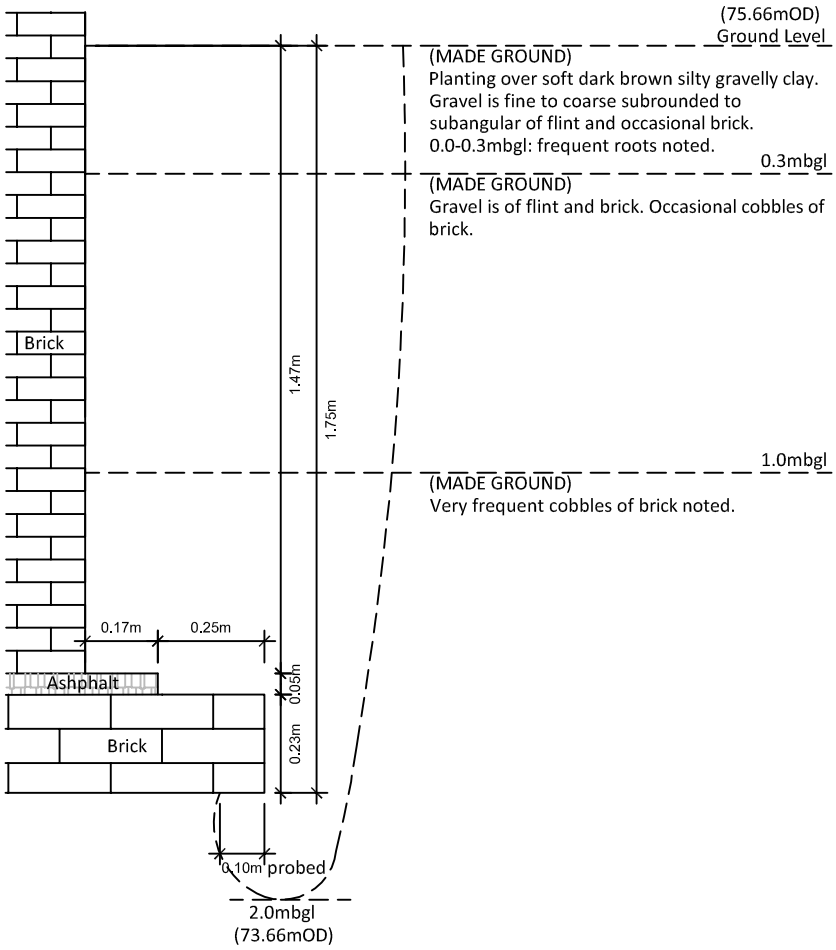
Client	Project	Job No
Pegasus Life Ltd	**Bartram's Convent, Hampstead**	**CG/08753**
CGL	Title: **Foundation Inspection Pit TP1**	

TP2



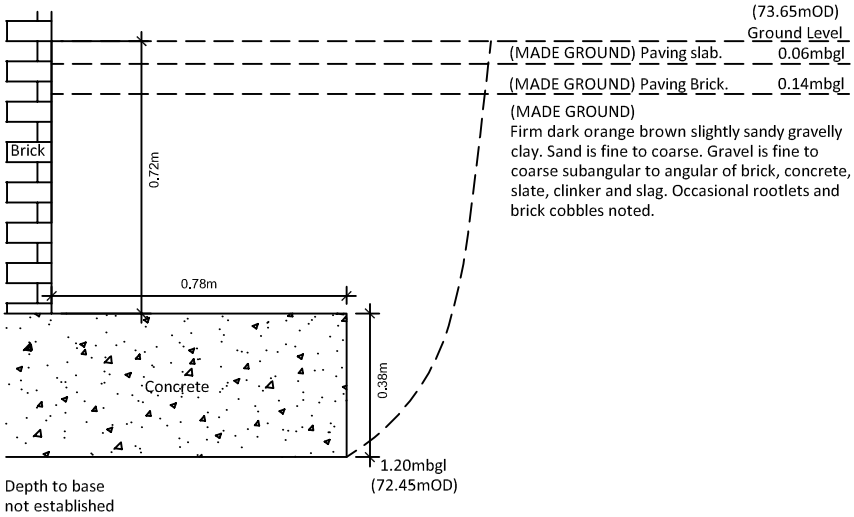
Client	Project	Job No
Pegasus Life Ltd	**Bartram's Convent, Hampstead**	**CG/08753**
CGL	Title: **Foundation Inspection Pit TP2**	

TP3



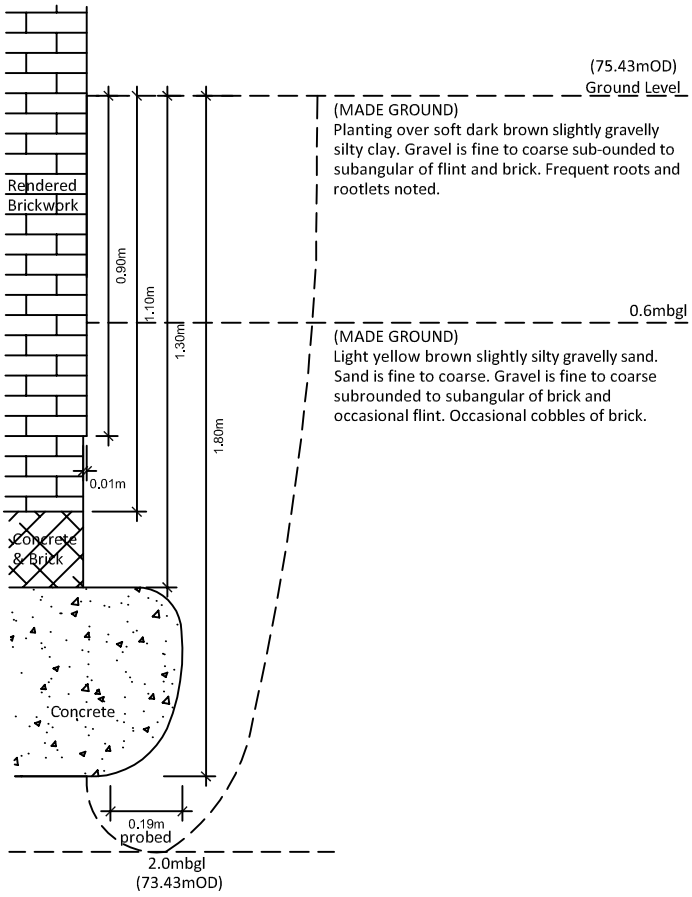
Client	Project	Job No
Pegasus Life Ltd	**Bartram's Convent, Hampstead**	**CG/08753**
CGL	Title: **Foundation Inspection Pit TP3**	

TP3a



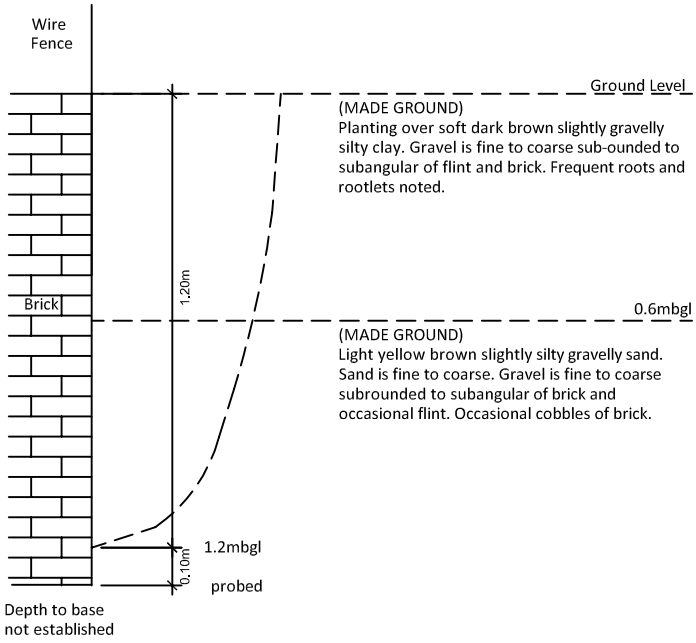
Client	Project	Job No
Pegasus Life Ltd	**Bartram's Convent, Hampstead**	**CG/08753**
CGL	Title: **Foundation Inspection Pit TP3a**	

TP4
Side A (south-west side)



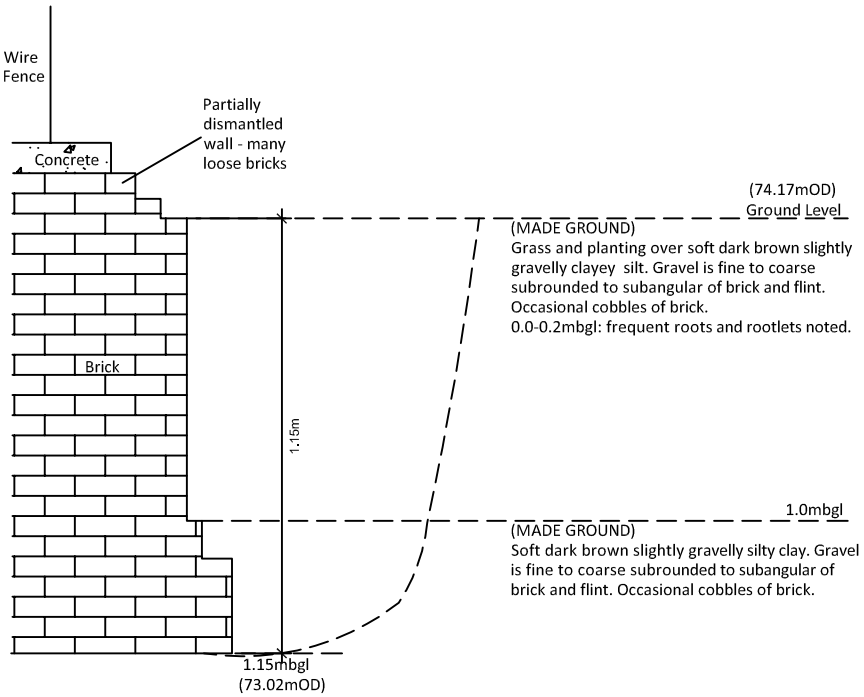
Client	Project	Job No
Pegasus Life Ltd	**Bartram's Convent, Hampstead**	**CG/08753**
CGL	Title: **Foundation Inspection Pit TP4 Side A**	

TP4
Side B (south-east side)



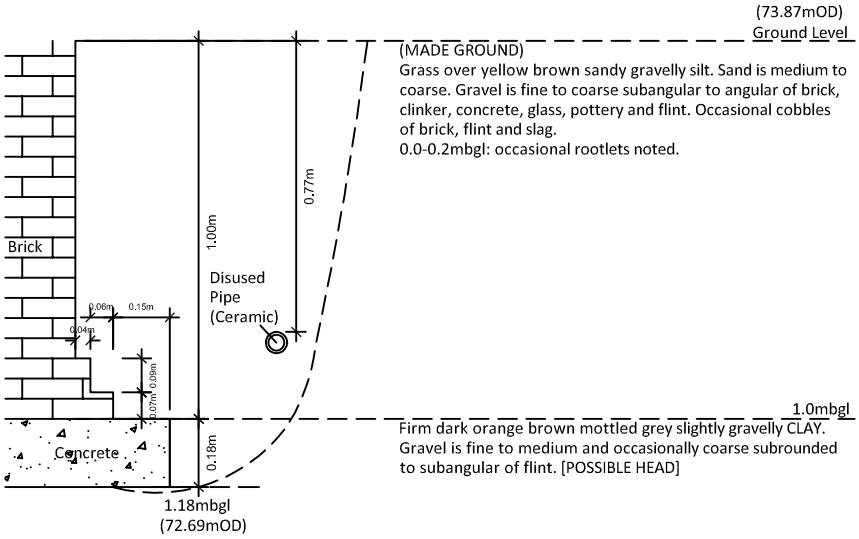
Client	Project	Job No
Pegasus Life Ltd	**Bartram's Convent, Hampstead**	**CG/08753**
CGL	Title: **Foundation Inspection Pit TP4 Side B**	

TP5a



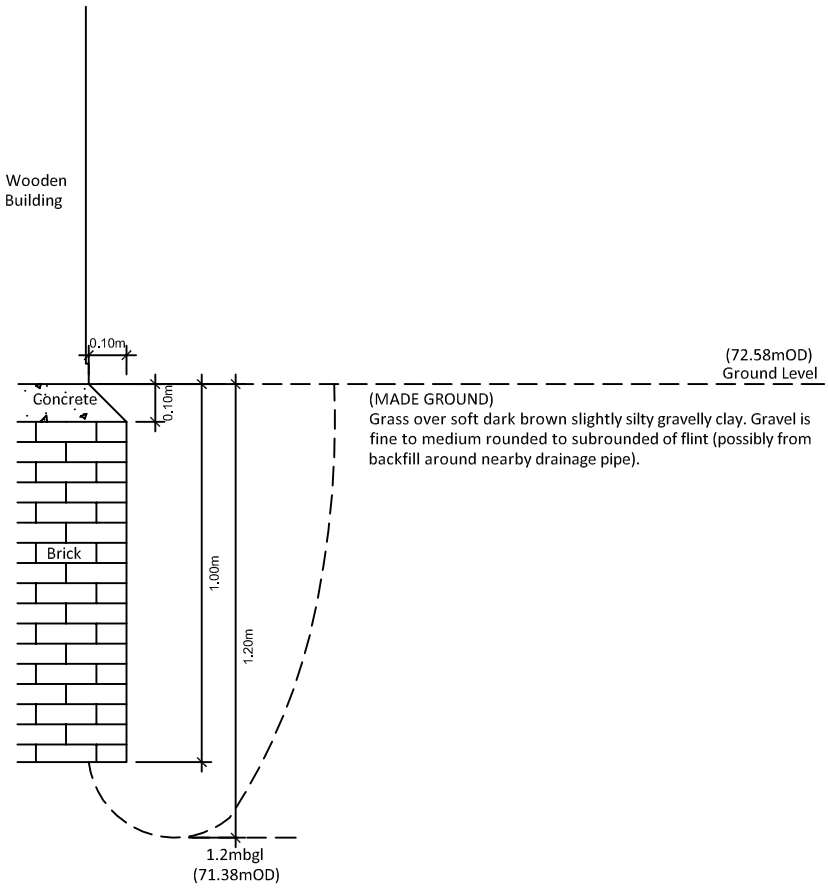
Client	Project	Job No
Pegasus Life Ltd	**Bartram's Convent, Hampstead**	**CG/08753**
CGL	Title: **Foundation Inspection Pit TP5a**	

TP5b

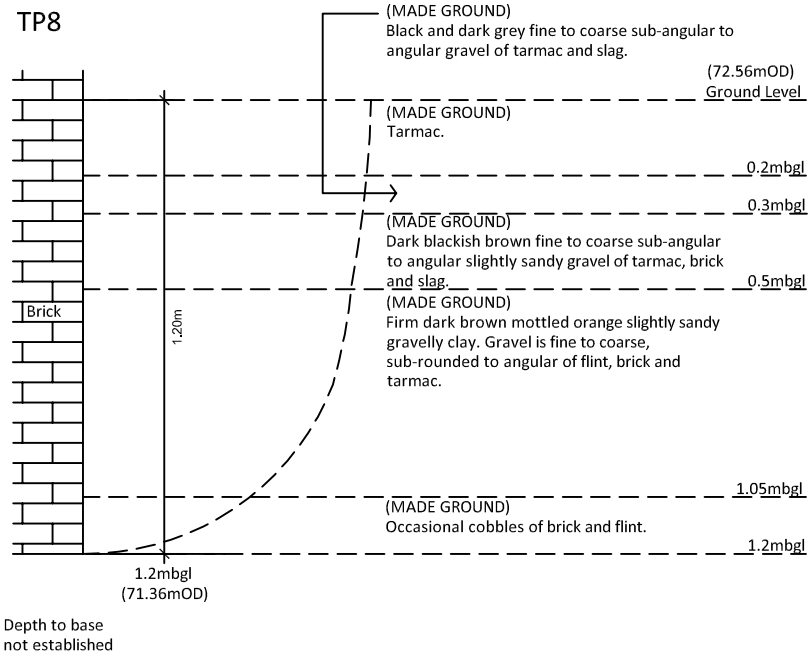


Client	Project	Job No
Pegasus Life Ltd	**Bartram's Convent, Hampstead**	**CG/08753**
CGL	Title: **Foundation Inspection Pit TP5b**	

TP7

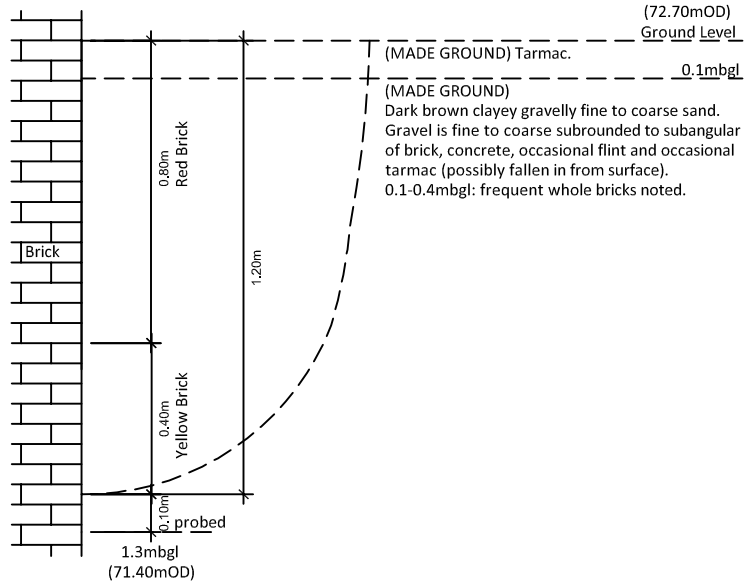


Client	Project	Job No
Pegasus Life Ltd	**Bartram's Convent, Hampstead**	**CG/08753**
CGL	Title: **Foundation Inspection Pit TP7**	



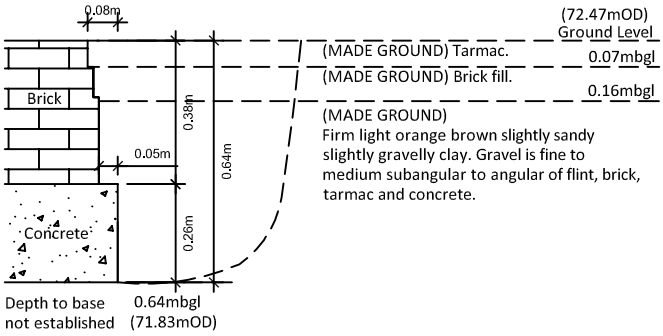
Client	Project	Job No
Pegasus Life Ltd	**Bartram's Convent, Hampstead**	**CG/08753**
CGL	Title: **Foundation Inspection Pit TP8**	

TP9



Client	Project	Job No
Pegasus Life Ltd	**Bartram's Convent, Hampstead**	**CG/08753**
CGL	Title: **Foundation Inspection Pit TP9**	

TP10



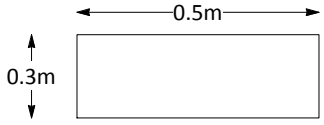
Client	Project	Job No
Pegasus Life Ltd	**Bartram's Convent, Hampstead**	**CG/08753**
CGL	Title: **Foundation Inspection Pit TP10**	

TRIAL PIT LOG

Project				TRIAL PIT No
Bartram's Convent, Hampstead				**TP1**
Job No	Date	Ground Level (m)	Co-Ordinates (m)	
CG/08753	31-03-14	75.09	E 527,205.0 N 185,341.0	
Client				Sheet
Pegasus Life Ltd				1 of 1

SAMPLES & TESTS			Water	STRATA			
Depth	Type No	Test Result (N/kPa/ppm)		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION
0.30	ES1						Dark brown slightly sandy gravelly silt. Gravel is fine to coarse, subrounded to angular of concrete, flint, brick, pottery, clinker and slate. Occasional cobbles of brick and concrete. [MADE GROUND]
							0.48 - 0.65 Large cobble of concrete.
						(1.45)	
				73.64		1.45	
							(Pit terminated at 1.45m)

Plan



Stability:

General Remarks

1. ES = environmental sample
2. No groundwater encountered.
3. Pit backfilled with arisings

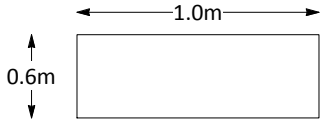
Method/ Plant Used	Field Crew	Logged By	Checked By
Hand excavated	GWD	GJK	RJB

TRIAL PIT LOG

Project				TRIAL PIT No
Bartram's Convent, Hampstead				**TP2**
Job No	Date	Ground Level (m)	Co-Ordinates (m)	
CG/08753	31-03-14	75.38	E 572,198.0 N 185,328.0	
Client				Sheet
Pegasus Life Ltd				1 of 1

SAMPLES & TESTS			Water	STRATA			
Depth	Type No	Test Result (N/kPa/ppm)		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION
0.30	ES50			74.48		(0.90) 0.90	Paving slab over dark orange brown clayey gravelly sand. Sand is fine to coarse. Gravel is fine to coarse subrounded to subangular of brick. Occasional cobbles of brick and terracotta. [MADE GROUND]
							(Pit terminated at 0.9m)

Plan



Stability:

General Remarks

1. ES = environmental sample
2. No groundwater encountered.
3. Pit backfilled with arisings

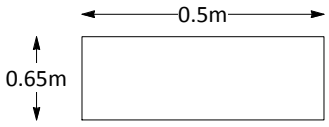
Method/ Plant Used	Field Crew	Logged By	Checked By
Hand excavated	GWD	JJM	RJB

TRIAL PIT LOG

Project				TRIAL PIT No
Bartram's Convent, Hampstead				**TP3**
Job No	Date	Ground Level (m)	Co-Ordinates (m)	
CG/08753	08-04-14	75.66	E 527,203.0 N 185,309.0	
Client				Sheet
Pegasus Life Ltd				1 of 1

SAMPLES & TESTS			Water	STRATA			
Depth	Type No	Test Result (N/kPa/ppm)		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION
							Planting over soft dark brown silty gravelly clay. Gravel is fine to coarse subrounded to subangular of flint and occasional brick. [MADE GROUND] 0.00 - 0.20 Frequent rootlets noted.
0.20	ES11						
0.30	ES21/01						0.30 Gravel is of flint and brick with occasional cobbles of brick.
0.50	ES12						
1.00	ES21/02					(2.00)	1.00 Very frequent cobbles of brick.
				73.66		2.00	*(Pit terminated at 2m)*

Plan



Stability:

General Remarks

1. ES = environmental sample
2. No groundwater encountered.
3. Pit backfilled with arisings

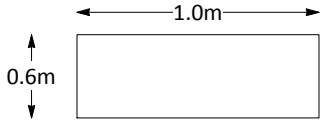
Method/ Plant Used	Field Crew	Logged By	Checked By
Hand excavated	GWD	GJK	RJB

TRIAL PIT LOG

Project				TRIAL PIT No
Bartram's Convent, Hampstead				**TP3a**
Job No	Date	Ground Level (m)	Co-Ordinates (m)	
CG/08753	31-03-14	73.65	E 527,212.0 N 185,317.0	
Client				Sheet
Pegasus Life Ltd				1 of 1

SAMPLES & TESTS			Water	STRATA			
Depth	Type No	Test Result (N/kPa/ppm)		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION
0.30	ES53			72.45		(1.20) 1.20	Paving slab and brickwork over firm dark orange brown slightly sandy very gravelly clay. Sand is fine to coarse. Gravel is fine to coarse subangular to angular of brick, concrete, slate, clinker and slag. Occasional cobbles of brick and rootlets noted. [MADE GROUND]
							(Pit terminated at 1.2m)

Plan



Stability:

General Remarks

1. ES = environmental sample
2. No groundwater encountered.
3. Pit backfilled with arisings

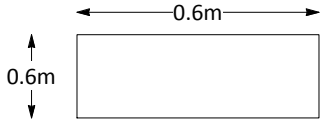
Method/ Plant Used	Field Crew	Logged By	Checked By
Hand excavated	GWD	GJK	RJB

TRIAL PIT LOG

Project				TRIAL PIT No
Bartram's Convent, Hampstead				**TP4**
Job No	Date	Ground Level (m)	Co-Ordinates (m)	
CG/08753	07-04-14	75.43	E 527,211.0 N 185,296.0	
Client				Sheet
Pegasus Life Ltd				1 of 1

SAMPLES & TESTS			Water	STRATA			
Depth	Type No	Test Result (N/kPa/ppm)		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION
0.30	ES13					(0.60)	Planting over soft dark brown slightly gravelly silty clay. Gravel is fine to coarse, subrounded to subangular of flint and brick. Frequent roots and rootlets noted. [MADE GROUND]
0.30	ES20/01						
				74.83		0.60	
0.60	ES20/02						Light yellow brown slightly silty gravelly fine to coarse sand. Gravel is fine to coarse subrounded to subangular of brick and occasional flint. Occasional cobbles of brick. [MADE GROUND]
1.00	ES14					(1.40)	
1.70	ES20/03						
				73.43		2.00	
2.00	ES20/04						*(Pit terminated at 2m)*

Plan



Stability:

General Remarks

1. ES = environmental sample
2. No groundwater encountered.
3. Pit backfilled with arisings

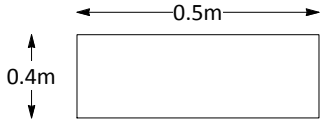
Method/ Plant Used	Field Crew	Logged By	Checked By
Hand excavated	GWD	GJK	RJB

TRIAL PIT LOG

Project				TRIAL PIT No
Bartram's Convent, Hampstead				**TP5a**
Job No	Date	Ground Level (m)	Co-Ordinates (m)	
CG/08753	01-04-14	74.17	E 527,228.0 N 185,292.0	
Client				Sheet
Pegasus Life Ltd				1 of 1

SAMPLES & TESTS			Water	STRATA			
Depth	Type No	Test Result (N/kPa/ppm)		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION
0.20	ES10					(1.15)	Grass and planting over soft dark brown slightly gravelly clayey silt. Gravel is fine to coarse subrounded to subangular of brick and flint. Occaisonal cobbles of brick. [MADE GROUND] 0.00 - 0.20 Frequent roots and rootlets.
							1.00 Becoming silty clay.
				73.02		1.15	*(Pit terminated at 1.15m)*

Plan



Stability:

General Remarks

1. ES = environmental sample
2. No groundwater encountered.
3. Pit backfilled with arisings

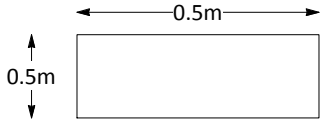
Method/ Plant Used	Field Crew	Logged By	Checked By
Hand excavated	GWD	JJM	RJB

TRIAL PIT LOG

Project				TRIAL PIT No
Bartram's Convent, Hampstead				**TP5b**
Job No	Date	Ground Level (m)	Co-Ordinates (m)	
CG/08753	31-03-14	73.87	E 527,232.0 N 185,289.0	
Client				Sheet
Pegasus Life Ltd				1 of 1

SAMPLES & TESTS			Water	STRATA			
Depth	Type No	Test Result (N/kPa/ppm)		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION
0.20	ES51					(1.00)	Grass over sandy gravelly silt. Sand is medium to coarse. Gravel is fine to coarse subangular to angular of brick, flint, pottery, glass, slag and claystone. Occasional cobbles of brick, flint and slag. [MADE GROUND]
				72.87		1.00	
						(0.18)	Firm dark orange brown mottled grey slightly gravelly clay. Gravel is fine to medium subrounded to subangular of flint. [MADE GROUND]
				72.69		1.18	
							(Pit terminated at 1.18m)

Plan



Stability:

General Remarks

1. ES = environmental sample
2. No groundwater encountered.
3. Pit backfilled with arisings

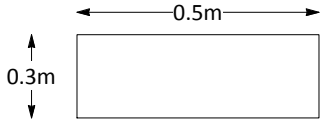
Method/ Plant Used	Field Crew	Logged By	Checked By
Hand excavated	GWD	GJK	RJB

TRIAL PIT LOG

Project				TRIAL PIT No
Bartram's Convent, Hampstead				**TP7**
Job No	Date	Ground Level (m)	Co-Ordinates (m)	
CG/08753	31-03-14	72.58	E 527,255.0 N 185,292.0	
Client				Sheet
Pegasus Life Ltd				1 of 1

SAMPLES & TESTS			Water	STRATA			
Depth	Type No	Test Result (N/kPa/ppm)		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION
0.40	ES54			71.38		(1.20) 1.20	Grass over soft dark brown slightly silty gravelly clay. Gravel is fine to medium, rounded to subrounded of flint (possibly from backfill around nearby drainage pipe) [MADE GROUND]
							(Pit terminated at 1.2m)

Plan



Stability:

General Remarks

1. ES = environmental sample
2. No groundwater encountered.
3. Pit backfilled with arisings

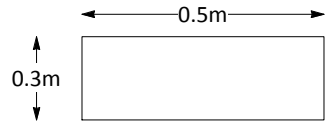
Method/ Plant Used	Field Crew	Logged By	Checked By
Hand excavated	GWD	JJM	RJB

TRIAL PIT LOG

Project				TRIAL PIT No
Bartram's Convent, Hampstead				**TP8**
Job No	Date	Ground Level (m)	Co-Ordinates (m)	
CG/08753	07-04-14	72.56	E 527,245.0 N 185,332.0	
Client				Sheet
Pegasus Life Ltd				1 of 1

SAMPLES & TESTS			Water	STRATA			
Depth	Type No	Test Result (N/kPa/ppm)		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION
						(0.50)	Tarmac over dark black brown slightly sandy fine to coarse subangular to angular gravel of tarmac, brick and slag. Occasional cobbles of brick. [MADE GROUND]
				72.06		0.50	
						(0.55)	Dark brown mottled orange slightly sandy very clayey fine to coarse subrounded to subangular gravel of flint, brick and tarmac. [MADE GROUND]
				71.51		1.05	
						(0.15)	Dark brown slightly sandy clayey fine to coarse subrounded to angular gravel of flint and brick. Occasional cobbels of flint. [MADE GROUND]
				71.36		1.20	1.05 Occasional cobbles of brick and flint.
							(Pit terminated at 1.2m)

Plan



Stability:

General Remarks

1. ES = environmental sample
2. No groundwater encountered.
3. Pit backfilled with arisings

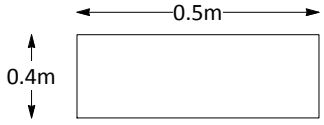
Method/ Plant Used	Field Crew	Logged By	Checked By
Hand excavated	GWD	GJK	RJB

TRIAL PIT LOG

Project				TRIAL PIT No
Bartram's Convent, Hampstead				**TP9**
Job No	Date	Ground Level (m)	Co-Ordinates (m)	
CG/08753	01-04-14	72.70	E 527,239.0 N 185,344.0	
Client				Sheet
Pegasus Life Ltd				1 of 1

SAMPLES & TESTS			Water	STRATA			
Depth	Type No	Test Result (N/kPa/ppm)		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION
0.60	ES15			71.40		(1.30) 1.30	Tarmac over dark brown clayey gravelly fine to coarse sand. Gravel is fine to coarse subrounded to subangular of brick, concrete, flint and occasional tarmac (possibly fallen in from surface). [MADE GROUND] 0.10 - 0.40 Frequent whole bricks noted.
							(Pit terminated at 1.3m)

Plan



Stability:

General Remarks

1. ES = environmental sample
2. No groundwater encountered.
3. Pit backfilled with arisings

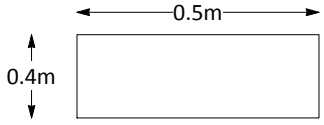
Method/ Plant Used	Field Crew	Logged By	Checked By
Hand excavated	GWD	JJM	RJB

TRIAL PIT LOG

Project				TRIAL PIT No
Bartram's Convent, Hampstead				**TP10**
Job No	Date	Ground Level (m)	Co-Ordinates (m)	
CG/08753	01-04-14	72.47	E 527,234.0 N 185,324.0	
Client				Sheet
Pegasus Life Ltd				1 of 1

SAMPLES & TESTS			Water	STRATA			
Depth	Type No	Test Result (N/kPa/ppm)		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION
0.20	ES51			71.83		(0.64) 0.64	Tarmac and brick fill over firm light orange brown slightly sandy slightly gravelly clay. Gravel is fine to coarse subangular to angular of flint, brick, tarmac and concrete. [MADE GROUND]
							(Pit terminated at 0.64m)

Plan



Stability:

General Remarks

1. ES = environmental sample
2. No groundwater encountered.
3. Pit backfilled with arisings

Method/ Plant Used	Field Crew	Logged By	Checked By
Hand excavated	GWD	GJK	RJB

APPENDIX G

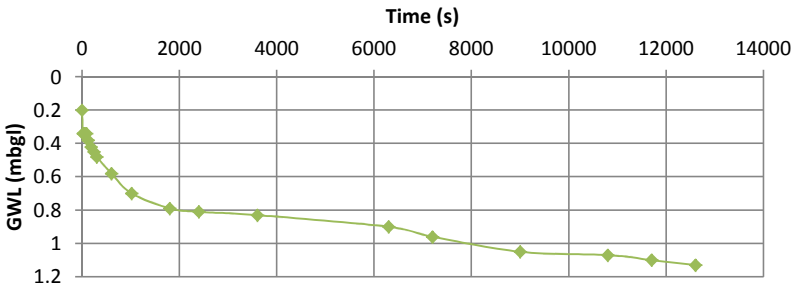
Ground gas and groundwater monitoring

record and falling head test record.

Falling Head Test - BH3

Bartram's Convent, Hampstead
CG/08753
17/04/2014

Time (mins)	Time(s)	Depth (m)	H (m)	H/Ho
0	0	0.2	4.76	1
0.25	15	0.34	4.62	0.970588235
0.5	30	0.34	4.62	0.970588235
0.75	45	0.34	4.62	0.970588235
1	60	0.34	4.62	0.970588235
1.5	90	0.34	4.62	0.970588235
2	120	0.38	4.58	0.962184874
3	180	0.42	4.54	0.953781513
4	240	0.45	4.51	0.947478992
5	300	0.48	4.48	0.941176471
10	600	0.58	4.38	0.920168067
17	1020	0.7	4.26	0.894957983
30	1800	0.79	4.17	0.87605042
40	2400	0.81	4.15	0.871848739
60	3600	0.83	4.13	0.867647059
105	6300	0.9	4.06	0.852941176
120	7200	0.96	4	0.840336134
150	9000	1.05	3.91	0.821428571
180	10800	1.07	3.89	0.817226891
195	11700	1.1	3.86	0.81092437
210	12600	1.13	3.83	0.804621849



General Approach (After Horvslev 1951)

Initial GW depth	0.2	mbgl
Well depth	4.96	mbgl
Well pipe diameter	50	mm
F	0.1375	intake Factor - Fig 6 BS5930
D	0.05	m - Diameter of standpipe
H1	4.76	m
H2	3.83	m
t1	0	s
t2	12600	s
A	0.001963495	m2

$$k = \frac{A}{F(t_2 - t_1)} \ln \frac{H_1}{H_2}$$

k = **2.46367E-07** **m/s**

GAS MONITORING RECORD SHEET

JOB DETAILS			
Site:	Bartram's Convent	Job No:	CG/08753
Date:	16/04/2014	Engineer:	JJM
Time:	0700	Client	Pegasus Life Ltd

METEOROLOGICAL & SITE INFORMATION

State of ground:	Dry	X	Moist		Wet				
Wind:	Calm		Light	X	Moderate		Strong		
Cloud cover:	None	X	Slight		Cloudy		Overcast		
Precipitation:	None	X	Slight		Moderate		Heavy		
Barometric pressure (mb):	1020-1021		Local pressure system*:		Rising		Air temperature (°C):		6.6-16.0

Well No.	Time (s)	Flow (l/hr)	dA (PA)	O_2 (% vol. in air)	CO_2 (% vol. in air)	CH_4 (% vol. in air)	PID (ppm)	Depth to GW (mbgl)	Comments
BH1	0	0.0	0.0	18.9	0.1	0.1	4.1	DRY	
	15	0.0	0.0	19.5	0.4	0.1			Base of well at 20.2mbgl
	30	0.0	0.0	19.4	0.5	0.1			
	45	0.0	0.0	19.3	0.5	0.1			
	60	0.0	0.0	19.3	0.5	0.1			
	90	0.0	0.0	19.2	0.5	0.1			
	120	0.0	0.0	19.2	0.5	0.1			
	150	0.0	0.0	19.2	0.5	0.1			
	180			19.2	0.5	0.1			
	240								
	300								
BH2	0	0.0	0.0	19.6	0.1	0.1	7.3	1.45	
	15	0.0	0.0	19.6	0.1	0.1			Base of well at 5.01mbgl
	30	0.0	0.0	19.5	0.1	0.1			
	45	0.0	0.0	19.4	0.2	0.1			
	60	0.0	0.0	19.4	0.2	0.1			
	90	0.0	0.0	19.4	0.2	0.1			
	120	0.0	0.0	19.4	0.2	0.1			
	150	0.0	0.0	19.4	0.2	0.1			
	180			19.4	0.2	0.1			
	240								
	300								
BH3	0	0.0	0.0	19.1	0.2	0.1	4.0	DRY	
	15	0.0	0.0	17.8	1.7	0.1			Base of well at 4.96mbgl
	30	0.0	0.0	17.4	1.8	0.1			
	45	0.0	0.0	17.3	1.8	0.1			
	60	0.0	0.0	17.3	1.8	0.1			
	90	0.0	0.0	17.3	1.8	0.1			
	120	0.0	0.0	17.3	1.8	0.1			
	150	0.0	0.0	17.3	1.8	0.1			
	180			17.3	1.8	0.1			
	240								
	300								
BH4	0	0.0	0.0	18.5	3.4	0.1	1.2	19.64	Base of well at
	15	0.0	0.0	18.5	1.9	0.1			20.02mbgl
	30	0.0	0.0	18.5	1.9	0.1			
	45	0.0	0.0	18.4	1.9	0.1			
	60	0.0	0.0	18.4	1.9	0.1			
	90	0.0	0.0	18.4	1.9	0.1			
	120	0.0	0.0	18.4	1.9	0.1			
	150			18.4	1.9	0.1			
	180			18.4	1.9	0.1			
	240								
	300								
BH5	0	0.0	0.0	18.3	1.7	0.1	1.0	17.56	Base of well at
	15	0.0	0.0	17.8	1.2	0.1			20.32mbgl
	30	0.0	0.0	17.7	1.2	0.1			
	45	0.0	0.0	17.7	1.2	0.1			
	60	0.0	0.0	17.7	1.2	0.1			
	90	0.0	0.0	17.7	1.2	0.1			
	120	0.0	0.0	17.7	1.2	0.1			
	150			17.7	1.2	0.1			
	180								
	240								
	300								

Notes:

The measurement of hydrogen sulphide and hydrocarbon free product is undertaken on a site specific basis, if deemed necessary.
** With reference to the Met Office rolling weather archive for* Northolt *weather station.*

GAS MONITORING RECORD SHEET

JOB DETAILS			
Site:	Bartram's Convent	Job No:	CG/08753
Date:	16/04/2014	Engineer:	JJM
Time:	0700	Client	Pegasus Life Ltd

METEOROLOGICAL & SITE INFORMATION

State of ground:	Dry	X	Moist		Wet				
Wind:	Calm		Light	X	Moderate		Strong		
Cloud cover:	None	X	Slight		Cloudy		Overcast		
Precipitation:	None	X	Slight		Moderate		Heavy		
Barometric pressure (mb):	1020-1021		Local pressure system*:		Rising		Air temperature (°C):	6.6-16.0	

Well No.	Time (s)	Flow (l/hr)	dA (PA)	O_2 (% vol. in air)	CO_2 (% vol. in air)	CH_4 (% vol. in air)	PID (ppm)	Depth to GW (mbgl)	Comments
EBH1 (front)	0	0.0	0.0	19.1	0.5	0.1	4.1	DRY	Base of well at 1.5mbgl
	15	0.0	0.0	19.9	0.1	0.1			
	30	0.0	0.0	19.9	0.1	0.1			
	45	0.0	0.0	19.9	0.1	0.1			
	60	0.0	0.0	19.9	0.1	0.1			
	90	0.0	0.0	19.8	0.1	0.1			
	120	0.0	0.0	19.8	0.1	0.1			
	150			19.8	0.1	0.1			
	180								
	240								
	300								
EBH2 (rear)	0	0.0	0.0	18.9	1.3	0.1	0.7	1.04	Base of well at 2.62mbgl
	15	0.0	0.0	18.2	3.4	0.1			
	30	0.0	0.0	18.1	3.6	0.1			
	45	0.0	0.0	18.1	3.6	0.1			
	60	0.0	0.0	18.0	3.6	0.1			
	90	0.0	0.0	18.0	3.6	0.1			
	120	0.0	0.0	18.0	3.6	0.1			
	150			18.0	3.6	0.1			
	180								
	240								
	300								

Notes:

The measurement of hydrogen sulphide and hydrocarbon free product is undertaken on a site specific basis, if deemed necessary.
** With reference to the Met Office rolling weather archive for* Northolt *weather station.*

GROUNDWATER MONITORING RECORD SHEET

JOB DETAILS			
Site:	Bartram's Convent	Job No:	CG/08753
Date:	16/04/2014	Engineer:	JJM
Time:	0700	Client	Pegasus Life Ltd
Weather:			

MONITORING & SAMPLING DETAILS								
Well / Borehole reference:	BH2	BH5						
Monitoring details								
Ground elevation (+mOD)								
Groundwater depth (mbgl)	1.45	17.56						
Groundwater elevation (+mOD)								
Depth to base of well (mbgl)	5.01	20.32						
Diameter of well (m)	0.05	0.05						
Condition of well	Good	Good						
Top of response zone (mbgl)								
Base of response zone (mbgl)								
Free product thickness (m)								
Hydrocarbon sheen noted (Y/N)	N	N						
Purging details								
Purge method	Bailer	Bailer						
Purged volume (litres)	21	12						
Recharge (good / poor)	Good	Poor						
Sampling details								
Sampling method	Bailer	Bailer						
Volume of water sample taken (litres)								
Volume of free product sample taken (litres)								
Colour / odours noted*	Light brown	Light brown						
In-situ measurements								
pH	7.6	6.9						
Temperature (^{o}C)	8.7	15.6						
Dissolved oxygen (mg/l)	1020	1870						
Redox potential (mV)								
Electrical conductivity (µS/cm)	2100	3740						
Total dissolved solids (ppt)	1.05	1.84						

* Respiratory protective equipment to be worn if odours are noted during initial monitoring & on sites which are potentially contaminated

NOTES

1. BH5 sampled from purged water

APPENDIX H

Chemical testing results

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e:

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Watford,
Herts,
WD18 8YS

t: 01923 225404
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e: reception@i2analytical.com

Analytical Report Number : 14-52948

Project / Site name:	Bartrams Convent	**Samples received on:**	02/04/2014
Your job number:	CG-08753	**Samples instructed on:**	03/04/2014
Your order number:	CG-08753-GJK01	**Analysis completed by:**	14/04/2014
Report Issue Number:	1	**Report issued on:**	14/04/2014
Samples Analysed:	7 soil samples		

Signed:

Dr Claire Stone
Quality Manager
For & on behalf of i2 Analytical Ltd.

Signed:

Rexona Rahman
Customer Services Manager
For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting
leachates - 2 weeks from reporting
waters - 2 weeks from reporting
asbestos - 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.

James Morrice
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Analytical Report Number : 14-53313

Project / Site name:	Bartrams Convent	**Samples received on:**	10/04/2014
Your job number:	CG-08753	**Samples instructed on:**	11/04/2014
Your order number:	CG-08753-GJK01	**Analysis completed by:**	24/04/2014
Report Issue Number:	1	**Report issued on:**	24/04/2014
Samples Analysed:	3 soil samples		

Signed:

Dr Claire Stone
Quality Manager
For & on behalf of i2 Analytical Ltd.

Signed:

Rexona Rahman
Customer Services Manager
For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting
leachates - 2 weeks from reporting
waters - 2 weeks from reporting
asbestos - 6 months from reporting

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Analytical Report Number: 14-53313

Project / Site name: Bartrams Convent
Your Order No: CG-08753-GJK01

Lab Sample Number				331469	331470	331471		
Sample Reference				BH1	BH4	BH5		
Sample Number				ES25	ES28	23/02		
Depth (m)				2.00	2.60	2.25		
Date Sampled				07/04/2014	10/04/2014	09/04/2014		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1		
Moisture Content	%	N/A	NONE	20	20	19		
Total mass of sample received	kg	0.001	NONE	1.2	1.1	1.2		
General Inorganics								
pH	pH Units	N/A	MCERTS	6.8	6.7	6.9		
Total Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1		
Total Sulphate as SO_4	mg/kg	100	ISO 17025	410	16000	1800		
Organic Matter	%	0.1	MCERTS	0.2	0.2	0.1		
Total Phenols								
Total Phenols (monohydric)	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0		
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05		
Acenaphthylene	mg/kg	0.2	MCERTS	< 0.20	< 0.20	< 0.20		
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10		
Fluorene	mg/kg	0.2	MCERTS	< 0.20	< 0.20	< 0.20		
Phenanthrene	mg/kg	0.2	MCERTS	< 0.20	1.2	< 0.20		
Anthracene	mg/kg	0.1	MCERTS	< 0.10	0.33	< 0.10		
Fluoranthene	mg/kg	0.2	MCERTS	< 0.20	1.7	< 0.20		
Pyrene	mg/kg	0.2	MCERTS	< 0.20	1.4	< 0.20		
Benzo(a)anthracene	mg/kg	0.2	MCERTS	< 0.20	0.59	< 0.20		
Chrysene	mg/kg	0.05	MCERTS	< 0.05	0.69	< 0.05		
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	0.47	< 0.10		
Benzo(k)fluoranthene	mg/kg	0.2	MCERTS	< 0.20	0.23	< 0.20		
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10	0.35	< 0.10		
Indeno(1,2,3-cd)pyrene	mg/kg	0.2	MCERTS	< 0.20	< 0.20	< 0.20		
Dibenz(a,h)anthracene	mg/kg	0.2	MCERTS	< 0.20	< 0.20	< 0.20		
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05		
Coronene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05		
Total PAH								
Total WAC-17 PAHs	mg/kg	1.6	NONE	< 1.6	7.0	< 1.6		
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	12	23	9.7		
Barium (aqua regia extractable)	mg/kg	1	MCERTS	76	87	70		
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.0	1.1	1.0		
Boron (water soluble)	mg/kg	0.2	MCERTS	2.2	1.7	2.2		
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	0.2	< 0.2		
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2		
Chromium (III)	mg/kg	1	NONE	52	55	55		
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	52	55	55		
Copper (aqua regia extractable)	mg/kg	1	MCERTS	28	34	28		
Lead (aqua regia extractable)	mg/kg	2	MCERTS	19	15	15		
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3		
Nickel (aqua regia extractable)	mg/kg	2	MCERTS	49	46	44		
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	72	87	73		
Zinc (aqua regia extractable)	mg/kg	2	MCERTS	81	76	83		

Analytical Report Number: 14-53313

Project / Site name: Bartrams Convent
Your Order No: CG-08753-GJK01

Lab Sample Number				331469	331470	331471		
Sample Reference				BH1	BH4	BH5		
Sample Number				ES25	ES28	23/02		
Depth (m)				2.00	2.60	2.25		
Date Sampled				07/04/2014	10/04/2014	09/04/2014		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics								
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1		
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1		
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1		
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0		
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0		
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0		
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10	< 10		

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1		
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1		
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1		
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0		
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	< 10	< 10		
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	< 10	< 10		
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10	< 10		

Analytical Report Number : 14-53313

Project / Site name: Bartrams Convent

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and topsoil/loam soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 2 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
331469	BH1	ES25	2.00	Brown clay.
331470	BH4	ES28	2.60	Brown clay.
331471	BH5	23/02	2.25	Brown clay.

Analytical Report Number : 14-53313

Project / Site name: Bartrams Convent

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Hexavalent chromium in soil (Lower Level)	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	D	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
pH in soil	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L005-PL	W	MCERTS
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Stones not passing through a 10 mm sieve is determined gravimetrically and reported as a percentage of the dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	ISO 17025
TPHCWG (Soil)	Determination of pentane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	W	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Analytical Report Number: 14-52948

Project / Site name: Bartrams Convent

Your Order No: CG-08753-GJK01

Lab Sample Number				329214	329215	329216	329217	329218
Sample Reference				TP4	TP9	TP2	TP10	TP5B
Sample Number				ES13	ES15	ES50	ES51	ES52
Depth (m)				0.30	0.60	0.30	0.20	0.35
Date Sampled				01/04/2014	01/04/2014	31/03/2014	31/03/2014	31/03/2014
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	16	14	11	19	15
Total mass of sample received	kg	0.001	NONE	1.1	1.2	1.6	1.4	1.1
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
General Inorganics								
pH	pH Units	N/A	MCERTS	7.5	7.9	8.3	8.8	8.6
Total Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1	< 1	< 1
Total Sulphate as SO_4	mg/kg	100	ISO 17025	1300	1900	950	780	1500
Organic Matter	%	0.1	MCERTS	5.1	2.1	0.1	0.2	1.5
Total Phenols								
Total Phenols (monohydric)	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	0.05	0.09	0.23	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.2	MCERTS	< 0.20	0.31	0.36	< 0.20	< 0.20
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	1.3	1.9	< 0.10	< 0.10
Fluorene	mg/kg	0.2	MCERTS	< 0.20	0.93	2.4	< 0.20	< 0.20
Phenanthrene	mg/kg	0.2	MCERTS	0.84	14	22	1.5	0.63
Anthracene	mg/kg	0.1	MCERTS	0.15	3.8	9.2	0.37	0.11
Fluoranthene	mg/kg	0.2	MCERTS	1.7	22	47	4.7	1.7
Pyrene	mg/kg	0.2	MCERTS	1.5	17	43	4.4	1.5
Benzo(a)anthracene	mg/kg	0.2	MCERTS	0.78	8.0	23	2.8	0.87
Chrysene	mg/kg	0.05	MCERTS	0.77	7.3	19	2.4	0.81
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	0.56	5.4	19	2.3	0.84
Benzo(k)fluoranthene	mg/kg	0.2	MCERTS	0.55	4.2	11	1.3	0.56
Benzo(a)pyrene	mg/kg	0.1	MCERTS	0.53	5.4	18	1.5	0.73
Indeno(1,2,3-cd)pyrene	mg/kg	0.2	MCERTS	< 0.20	1.8	7.0	0.83	0.34
Dibenz(a,h)anthracene	mg/kg	0.2	MCERTS	< 0.20	0.49	2.2	< 0.20	< 0.20
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	2.3	8.4	0.92	0.38
Coronene	mg/kg	0.05	NONE	< 0.05	< 0.05	1.2	< 0.05	< 0.05
Total PAH								
Total WAC-17 PAHs	mg/kg	1.6	NONE	7.4	94	240	23	8.6
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	17	27	13	10	21
Barium (aqua regia extractable)	mg/kg	1	MCERTS	200	240	330	100	180
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.5	0.5	0.8	0.5	0.4
Boron (water soluble)	mg/kg	0.2	MCERTS	3.1	2.1	1.0	2.2	1.8
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.3	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.2	MCERTS	-	-	-	< 1.2	-
Chromium (III)	mg/kg	1	NONE	-	-	-	38	-
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	35	30	21	38	24
Copper (aqua regia extractable)	mg/kg	1	MCERTS	69	74	30	44	64
Lead (aqua regia extractable)	mg/kg	2	MCERTS	500	1100	83	110	1400
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	0.7	< 0.3	< 0.3	0.5
Nickel (aqua regia extractable)	mg/kg	2	MCERTS	28	20	21	27	17
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	60	65	34	68	58
Zinc (aqua regia extractable)	mg/kg	2	MCERTS	350	330	62	96	230

Analytical Report Number: 14-52948

Project / Site name: Bartrams Convent
Your Order No: CG-08753-GJK01

Lab Sample Number				329214	329215	329216	329217	329218
Sample Reference				TP4	TP9	TP2	TP10	TP5B
Sample Number				ES13	ES15	ES50	ES51	ES52
Depth (m)				0.30	0.60	0.30	0.20	0.35
Date Sampled				01/04/2014	01/04/2014	31/03/2014	31/03/2014	31/03/2014
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics								
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0	12	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	< 8.0	23	< 8.0	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10	35	< 10	< 10
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	11	24	3.9	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	85	250	20	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	110	370	66	< 10
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	200	640	90	< 10

Analytical Report Number: 14-52948

Project / Site name: Bartrams Convent

Your Order No: CG-08753-GJK01

Lab Sample Number				329219	329220			
Sample Reference				TP3A	TP7			
Sample Number				ES53	ES54			
Depth (m)				0.30	0.40			
Date Sampled				31/03/2014	31/03/2014			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1			
Moisture Content	%	N/A	NONE	22	14			
Total mass of sample received	kg	0.001	NONE	1.5	1.0			
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected			
General Inorganics								
pH	pH Units	N/A	MCERTS	8.3	8.0			
Total Cyanide	mg/kg	1	MCERTS	< 1	< 1			
Total Sulphate as SO_4	mg/kg	100	ISO 17025	860	370			
Organic Matter	%	0.1	MCERTS	0.2	1.5			
Total Phenols								
Total Phenols (monohydric)	mg/kg	2	MCERTS	< 2.0	< 2.0			
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			
Acenaphthylene	mg/kg	0.2	MCERTS	< 0.20	< 0.20			
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Fluorene	mg/kg	0.2	MCERTS	< 0.20	< 0.20			
Phenanthrene	mg/kg	0.2	MCERTS	< 0.20	< 0.20			
Anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Fluoranthene	mg/kg	0.2	MCERTS	< 0.20	< 0.20			
Pyrene	mg/kg	0.2	MCERTS	< 0.20	< 0.20			
Benzo(a)anthracene	mg/kg	0.2	MCERTS	< 0.20	< 0.20			
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Benzo(k)fluoranthene	mg/kg	0.2	MCERTS	< 0.20	< 0.20			
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Indeno(1,2,3-cd)pyrene	mg/kg	0.2	MCERTS	< 0.20	< 0.20			
Dibenz(a,h)anthracene	mg/kg	0.2	MCERTS	< 0.20	< 0.20			
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			
Coronene	mg/kg	0.05	NONE	< 0.05	< 0.05			
Total PAH								
Total WAC-17 PAHs	mg/kg	1.6	NONE	< 1.6	< 1.6			
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	13	11			
Barium (aqua regia extractable)	mg/kg	1	MCERTS	120	110			
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.7	0.3			
Boron (water soluble)	mg/kg	0.2	MCERTS	0.6	2.5			
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2			
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	-			
Chromium (III)	mg/kg	1	NONE	40	-			
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	40	26			
Copper (aqua regia extractable)	mg/kg	1	MCERTS	42	64			
Lead (aqua regia extractable)	mg/kg	2	MCERTS	320	260			
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3			
Nickel (aqua regia extractable)	mg/kg	2	MCERTS	50	15			
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0			
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	110	51			
Zinc (aqua regia extractable)	mg/kg	2	MCERTS	110	94			

Analytical Report Number: 14-52948

Project / Site name: Bartrams Convent
Your Order No: CG-08753-GJK01

Lab Sample Number				329219	329220			
Sample Reference				TP3A	TP7			
Sample Number				ES53	ES54			
Depth (m)				0.30	0.40			
Date Sampled				31/03/2014	31/03/2014			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics								
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0			
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0			
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0			
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0			
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0			
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0			

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1	< 0.1			
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1			
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1			
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0			
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0			
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0			
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	< 8.0			
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10			

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1	< 0.1			
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1			
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1			
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0			
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0			
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	< 10			
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	< 10			
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10			

Analytical Report Number : 14-52948

Project / Site name: Bartrams Convent

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and topsoil/loam soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 2 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
329214	TP4	ES13	0.30	Brown sandy topsoil with rubble.
329215	TP9	ES15	0.60	Brown sandy topsoil with rubble.
329216	TP2	ES50	0.30	Light brown sandy clay with gravel.
329217	TP10	ES51	0.20	Light brown clay and sand with rubble and brick.
329218	TP5B	ES52	0.35	Brown topsoil and clay with gravel and vegetation.
329219	TP3A	ES53	0.30	Light brown clay and sand with gravel.
329220	TP7	ES54	0.40	Brown topsoil and clay with gravel and vegetation.

Analytical Report Number : 14-52948

Project / Site name: Bartrams Convent

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Hexavalent chromium in soil (Lower Level)	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	D	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
pH in soil	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L005-PL	W	MCERTS
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Stones not passing through a 10 mm sieve is determined gravimetrically and reported as a percentage of the dry weight. Sample	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	ISO 17025
TPHCWG (Soil)	Determination of pentane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	W	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

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Analytical Report Number : 14-53836

Replaces Analytical Report Number : 14-53836, issue no. 1

Project / Site name:	Bartrams Convent	**Samples received on:**	28/04/2014
Your job number:	CG-08753	**Samples instructed on:**	28/04/2014
Your order number:	CG/08753/JJM07	**Analysis completed by:**	07/05/2014
Report Issue Number:	2	**Report issued on:**	07/05/2014
Samples Analysed:	13 soil samples		

Signed:

Dr Claire Stone
Quality Manager
For & on behalf of i2 Analytical Ltd.

Signed:

Rexona Rahman
Customer Services Manager
For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting
leachates - 2 weeks from reporting
waters - 2 weeks from reporting
asbestos - 6 months from reporting

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Analytical Report Number: 14-53836

Project / Site name: Bartrams Convent
Your Order No: CG/08753/JJM07

Lab Sample Number				334889	334890	334891	334892	334893
Sample Reference				BH1	BH1	BH1	BH1	BH2
Sample Number				5	23	33	48	5
Depth (m)				2.50	13.50	19.50	28.50	2.20
Date Sampled				04/04/2014	04/04/2014	04/04/2014	07/04/2014	08/04/2014
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	18	20	17	19	22
Total mass of sample received	kg	0.001	NONE	0.61	0.66	0.61	0.67	0.71
General Inorganics								
pH	pH Units	N/A	MCERTS	7.2	7.3	8.0	8.9	8.0
Total Sulphate as SO_4	mg/kg	100	ISO 17025	830	1800	1300	1300	960
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	MCERTS	0.67	2.3	2.3	1.6	0.73
Water Soluble Sulphate as SO_4 (2:1)	mg/kg	2.5	MCERTS	670	2300	2300	1600	730
Water Soluble Sulphate (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.34	1.1	1.2	0.79	0.37
Total Sulphur	mg/kg	100	NONE	350	5200	7500	6700	330

Analytical Report Number: 14-53836

Project / Site name: Bartrams Convent

Your Order No: CG/08753/JJM07

Lab Sample Number				334894	334895	334896	334897	334898
Sample Reference				BH2	BH2	BH5	BH5	BH5
Sample Number				15	25	5	10	20
Depth (m)				7.50	13.50	2.50	4.50	10.50
Date Sampled				08/04/2014	08/04/2014	03/04/2014	03/04/2014	03/04/2014
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	20	19	18	19	18
Total mass of sample received	kg	0.001	NONE	0.69	0.61	0.77	0.74	0.70
General Inorganics								
pH	pH Units	N/A	MCERTS	7.5	8.0	7.8	7.6	8.0
Total Sulphate as SO_4	mg/kg	100	ISO 17025	12000	2000	2400	9200	1700
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	MCERTS	5.9	2.6	2.0	5.6	2.6
Water Soluble Sulphate as SO_4 (2:1)	mg/kg	2.5	MCERTS	5900	2600	2000	5600	2600
Water Soluble Sulphate (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	2.9	1.3	1.0	2.8	1.3
Total Sulphur	mg/kg	100	NONE	4800	5700	860	3200	5200

Analytical Report Number: 14-53836

Project / Site name: Bartrams Convent

Your Order No: CG/08753/JJM07

Lab Sample Number				334899	334900	334901		
Sample Reference				BH5	BH5	BH5		
Sample Number				30	39	49		
Depth (m)				16.50	22.50	28.50		
Date Sampled				03/04/2014	03/04/2014	03/04/2014		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1		
Moisture Content	%	N/A	NONE	17	17	20		
Total mass of sample received	kg	0.001	NONE	0.85	0.82	0.71		
General Inorganics								
pH	pH Units	N/A	MCERTS	8.8	8.8	8.9		
Total Sulphate as SO_4	mg/kg	100	ISO 17025	770	1000	920		
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	MCERTS	1.2	1.2	1.7		
Water Soluble Sulphate as SO_4 (2:1)	mg/kg	2.5	MCERTS	1200	1200	1700		
Water Soluble Sulphate (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.59	0.60	0.87		
Total Sulphur	mg/kg	100	NONE	3600	3900	8500		

Analytical Report Number : 14-53836

Project / Site name: Bartrams Convent

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and topsoil/loam soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 2 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
334889	BH1	5	2.50	Light brown clay.
334890	BH1	23	13.50	Brown clay.
334891	BH1	33	19.50	Brown clay.
334892	BH1	48	28.50	Brown clay.
334893	BH2	5	2.20	Light brown clay.
334894	BH2	15	7.50	Light brown clay.
334895	BH2	25	13.50	Brown clay.
334896	BH5	5	2.50	Light brown clay.
334897	BH5	10	4.50	Light brown clay.
334898	BH5	20	10.50	Brown clay.
334899	BH5	30	16.50	Brown clay.
334900	BH5	39	22.50	Brown clay.
334901	BH5	49	28.50	Brown clay.

Analytical Report Number : 14-53836

Project / Site name: Bartrams Convent

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
pH in soil	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L005-PL	W	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Stones not passing through a 10 mm sieve is determined gravimetrically and reported as a percentage of the dry weight. Sample	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by extraction with water followed by ICP-OES. Results reported corrected for extraction ratio (soil equivalent) as g/l and mg/kg; and upon the 2:1	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	MCERTS
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	ISO 17025
Total Sulphur in soil	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, and MEWAM 2006 Methods for the Determination of Metals in Soil	L038-PL	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

APPENDIX I

Geotechnical testing results

RESULTS OF TRIAXIAL COMPRESSION TESTS

Contract: Bartram's Convent, Hampstead
Report no: T14/1298

BH No	Depth of Sample m	Description of Sample	INDEX PROPERTIES				TRIAXIAL COMPRESSION						
			Liquid Limit %	Plastic Limit %	Plasticity Index %	Soil Classification	Code	Lateral Pressure kPa	Compression Strength kPa	Cohesion kPa	Angle of Friction (degrees)	Bulk Density kg/m^3	Water Content (% dry wt)
1	2.50-2.95	Brown clay	78	27	51	CV	100US	50	165	85	0	2015	32.7
	13.50-13.95	Dark grey-brown clay	80	26	54	CV	100US	270	270	135	0	2150	26.9
	19.50-19.95	Dark grey-brown clay	80	27	53	CV	100US	390	295	150	0	2100	28.8
	28.50-28.95	Dark grey-brown clay	76	29	47	CV	100US	570	370	185	0	2110	27.5
2	2.20-2.65	Brown clay	80	25	55	CV	100US	44	110	55	0	2000	34.2
	7.50-7.95	Brown clay with occasional selenite crystals	82	28	54	CV	100US	150	200	100	0	2070	30.5
	13.50-13.95	Dark grey-brown clay	76	25	51	CV	100US	270	320	160	0	2140	26.7

TRIAXIAL COMPRESSION TEST CODE: **38-38mm dia specimen 100-100mm dia specimen**
U-Undrained CD-Consolidated Drained CU-Consolidated Undrained P-Pore water pressure measurement M-Multistage S- Single stage F-Functional R-Remoulded LV-Laboratory Vane Test

Albury S. I. Ltd Miltons Yard Petworth Road Witley Surrey GU8 5LH

RESULTS OF TRIAXIAL COMPRESSION TESTS

Contract: Bartram's Convent, Hampstead
Report no: T14/1298

BH No	Depth of Sample m	Description of Sample	INDEX PROPERTIES				TRIAXIAL COMPRESSION						
			Liquid Limit %	Plastic Limit %	Plasticity Index %	Soil Classification	Code	Lateral Pressure kPa	Compression Strength kPa	Cohesion kPa	Angle of Friction (degrees)	Bulk Density kg/m^3	Water Content (% dry wt)
3	4.50-4.95	Brown clay with occasional selenite crystals	83	31	52	CV	100US	90	160	80	0	2040	32.8
	16.50-16.95	Dark grey-brown clay	72	26	46	CV	100US	330	300	150	0	2165	26.4
4	3.00-3.45	Brown clay with occasional selenite crystals	80	27	53	CV	100US	60	130	65	0	2030	33.4
	9.00-9.45	Dark brown clay with occasional selenite crystals	80	28	52	CV	100US	180	255	130	0	2030	29.6
	15.00-15.45	Dark brown clay	82	27	55	CV	100US	300	270	135	0	2095	30.1
5	2.50-2.95	Brown clay	76	28	48	CV	100US	50	125	65	0	2030	31.0
	4.50-4.95	Brown clay with occasional grey veining	78	28	50	CH/CV	100US	90	190	95	0	2095	30.9

TRIAXIAL COMPRESSION TEST CODE: **38-38mm dia specimen 100-100mm dia specimen**
U-Undrained CD-Consolidated Drained CU-Consolidated Undrained P-Pore water pressure measurement M-Multistage S- Single stage F-Functional R-Remoulded LV-Laboratory Vane Test

Albury S. I. Ltd Miltons Yard Petworth Road Witley Surrey GU8 5LH

RESULTS OF TRIAXIAL COMPRESSION TESTS

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BH No	Depth of Sample m	Description of Sample	INDEX PROPERTIES				TRIAXIAL COMPRESSION						
			Liquid Limit %	Plastic Limit %	Plasticity Index %	Soil Classification	Code	Lateral Pressure kPa	Compression Strength kPa	Cohesion kPa	Angle of Friction (degrees)	Bulk Density kg/m^3	Water Content (% dry wt)
5	10.50-10.95	Dark grey-brown clay	82	28	54	CV	100US	210	245	125	0	2105	28.6
	16.50-16.95	Dark grey-brown clay	68	25	43	CH	100US	330	375	190	0	2165	26.1
	22.50-22.95	Dark grey-brown clay	69	26	43	CH	100US	450	340	170	0	2135	26.5
	28.50-28.95	Dark grey-brown clay	74	29	45	CV	100US	570	315	160	0	2125	27.9

TRIAXIAL COMPRESSION TEST CODE: **38-38mm dia specimen 100-100mm dia specimen**
U-Undrained CD-Consolidated Drained CU-Consolidated Undrained P-Pore water pressure measurement M-Multistage S- Single stage F-Functional R-Remoulded LV-Laboratory Vane Test

Albury S. I. Ltd Miltons Yard Petworth Road Witley Surrey GU8 5LH

APPENDIX J

Structural load information

This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.

Do not scale from this drawing.

LEGEND

- EXISTING STRUCTURE
- NEW LOAD BEARING BLOCKWORK
- NEW LOAD BEARING BRICKWORK
- NEW REINFORCED CONCRETE
- NEW PRECAST CONCRETE
- NEW MASS CONCRETE
- PADSTONES
- LOAD BEARING STUDWORK
- NON LOAD BEARING PARTY WALLS
- LOAD BEARING STRUCTURE BELOW
- EXISTING STRUCTURE TO BE REMOVED
- NEW STEEL BEAMS
- NEW LINTELS OVER OPENINGS

PILES
PILES ASSUMED TO BE 450Ø 18m LONG, TO REACH A CAPACITY OF 500kN TBC BY SITE INVESTIGATION

CONTIGUOUS PILES
PILES ASSUMED TO BE 450Ø 4m LONG BELOW BASEMENT FORMATION LEVEL & TOP PROPPED DURING CONSTRUCTION

PILECAPS
PILECAPS TO EXTEND 600mm BELOW SLAB PILECAP SIZES ARE RELATED TO DIAMETER OF PILE ALLOW MIN 2300 WIDTH FOR 2No. PILES 800 WIDTH FOR 1No. PILE

BASEMENT DRAINAGE
GRADE OF BASEMENT WATERPROOFING TO BE AGREED & SUITABLE STRATEGY IMPLEMENTED (DRAINED CAVITY / WATER RESISTING CONCRETE ETC) TBC BY CLIENT / ARCHITECT, DESIGN BY SPECIALIST

FIRE RESISTANCE
ASSUMED TO BE 60MINS TBC BY ARCHITECT / FIRE CONSULTANT

RETAINING WALLS
RETAINING WALLS ASSUMED TO BE PROPPED DURING CONSTRUCTION & IN PERMANENT CASE, THICKNESS TO BE 250

TEMPORARY WORKS
-THE CONTRACTOR IS ENTIRELY RESPOSIBLE FOR MAINTAINING THE STABILITY OF ALL EXISTING BUILDINGS AND STRUCTURES, WITHIN AND ADJACENT TO THE WORKS AND OF ALL THE WORKS FROM THE DATE OF POSSESSION OF THE SITE UNTIL PRACTICAL COMPLETION OF THE WORKS
-THE CONTRACTOR SHALL DESIGN, INSTALL AND MAINTAIN ALL NECESSARY TEMPORARY WORKS AND SHALL SUBMIT PROPOSALS FOR THE TEMPORARY SUPPORTS AND SEQUENCE OF CONSTRUCTION FOR THE WORKS, TO THE STRUCTURAL ENGINEER AND CONTRACT ADMINISTRATOR AT LEAST 10 WORKING DAYS PRIOR TO STARTING ON SITE. THESE PROPOSALS

BELOW GROUND OBSTRUCTIONS
A LARGE AMOUNT OF EXISTING BELOW GROUND DRAINAGE EXISTS WITHIN THE SITE BOUNDARY, REFER TO EWP SITE CONSTRAINTS DRAWING, EXACT LOCATION PURPOSE & OWNERSHIP TBC

NOT FOR CONSTRUCTION

rev	date	by	chk	description
P3	00.05.14	MJS	MO	Issued for Information & Comment
P2	25.04.14	MJS	MO	Issued for Information & Comment
P1	03.04.14	MJS	MO	Issued for Information & Comment

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tel: 020 8544 0033, fax: 020 8544 0066, info@elliottwood.co.uk

project
Bartrams Convent, Rowland Hill Street, Hampstead, London, NW3 2AB

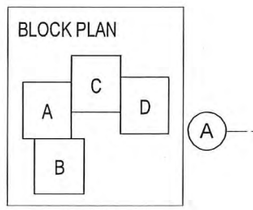
drawing title
Proposed Basement Plan

scale (s)	date	drawn
1:000@A1; 1:200@A3	April 2014	MJS

drawing status
Preliminary

job no	level	originator & drg no.	revision
213839	B02	S/80	P3

BLOCK PLAN



1 2 3 4 5 6
A B C D E F G
SITE BOUNDARY
250mm THK R.C. WALL
500 SQ RC COLUMN
300mm THK RC SLAB + LAYER OF HEAVE PROTECTION UNDER
SSL 68.250
SSL 68.800
SSL 70.300
67.850
68250
D: 525kN/m L: 100 kN/m
D: 400kN/m L: 75kN/m
D: 525kN/m ; L: 100kN/m
D: 400kN/m ; L: 75kN/m
D: 200kN/m ; L: 75kN/m
D: 150kN/m L: 50kN/m
D: 175kN/m L: 50kN/m
(LG) 71.250
COLUMNS IN BLOCK C TO BE POSITIONED TO SUIT CAR PARK
450Ø CONTIGUOUS PILED WALL TO FORM EXCAVATION IN TEMPORARY CASE & SUPPORT RETAINING WALL IN PERMANENT POSITION
VIEW 1 S@10
VIEW 2 S@1
VIEW 3 S@12
GROUND LEVEL APPROX. 73.00
EXTENT OF BELSIZE DEEP SHELTER APPROX. 37m BELOW GROUND LEVEL
8 [S/300]
7 [S/300]
6 [S/300]

EW MARKUP
CONFIRMED LEVELS
& LINE LOADS
8.8.14

Selina Adams

From: a.rice@elliottwood.co.uk
Sent: 03 September 2014 10:36
To: James Morrice
Cc: Adam Branson; Andy O'Dea
Subject: Bartrams Convent - Further Info

Follow Up Flag: Follow up
Due By: 03 September 2014 11:30
Flag Status: Flagged

James,

As discussed yesterday – please allow line loads adjacent to sports hall at lower ground floor level (along grid 2 and grid A): 350kN/m dead; 60kN/m live.

As agreed we are pushing back the date for issue of the completed report to next week. In order for us to minimise the impact of this on the rest of the team and the planning submissions if we can get any information from you as soon as possible, even if only in draft or work in progress form this will be extremely useful. Bearing in mind we were originally going to have the completed report today is it possible to issue us something (anything at all) today or tomorrow??

Many thanks.

Andrew Rice
Senior Engineer
MEng (Hons)
A.Rice@elliottwood.co.uk

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