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Basement Impact Assessment – Revision C Version 4 – Volume 4 of 5

APPENDIX J

GroundSure GeoInsight

Address:

Date: Nov 16, 2012

Report Reference: FIND-23078

Your Reference: GL17050



Brought to you by FIND

Aerial Photograph of Study Site



Aerial photography supplied by Getmapping PLC.
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Site Name:
Grid Reference: 530931,182471
Size of Site: 0.05 ha

Overview of Findings

The GroundSure GeoInsight provides high quality geo-environmental information that allows geo-environmental professionals and their clients to make informed decisions and be forewarned of potential ground instability problems that may affect the ground investigation, foundation design and possibly remediation options that could lead to possible additional costs.

The report is based on the BGS 1:50,000 Digital Geological Map of Great Britain, BGS Geosure data; BRITPITS database; Shallow Mining data and Borehole Records, Coal Authority data including brine extraction areas, PBA non-coal mining and natural cavities database, Johnson Poole and Bloomer mining data and GroundSure's unique database including historical surface ground and underground workings.

For further details on each dataset, please refer to each individual section in the report as listed. Where the database has been searched a numerical result will be recorded. Where the database has not been searched '-' will be recorded.

Report Section	Number of records found within (X) m of the study site boundary
1. Geology	
1.1 Artificial Ground,	
1.1.1 Is there any Artificial Ground /Made Ground present beneath the study site?*	No
1.1.2 Are there any records relating to permeability of artificial ground within the study site* boundary?	No
1.2 Superficial Geology & Landslips	
1.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site?*	Yes
1.2.2 Are there any records relating to permeability of superficial geology within the study site* boundary?	Yes
1.2.3 Are there any records of landslip within 500m of the study site boundary?	No
1.2.4 Are there any records relating to permeability of landslips within the study site* boundary?	No
1.3 Bedrock, Solid Geology & Faults	
1.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.	
1.3.2 Are there any records relating to permeability of bedrock within the study site* boundary?	Yes
1.3.3 Are there any records of faults within 500m of the study site boundary?	No
1.3.4 Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?	The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level
1.3.5 Is the property in an area where Radon Protection Measures are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment?	No radon protective measures are necessary

* This includes an automatically generated 50m buffer zone around the site

Source:Scale 1:50,000 BGS Sheet No:256

2. Ground Workings	on-site	0-50	51-250	251-500	501-1000
2.1 Historical Surface Ground Working Features from Small Scale Mapping	0	0	1	-	-
2.2 Historical Underground Workings Features from Small Scale Mapping	0	0	11	2	14
2.3 Current Ground Workings	0	0	0	0	0

3. Mining, Extraction & Natural Cavities	on-site	0-50	51-250	251-500	501-1000
3.1 Historical Mining	0	0	0	0	0
3.2 Coal Mining	0	0	0	0	0
3.3 Johnson Poole and Bloomer Mining Area	1	0	1	2	2
3.4 Non-Coal Mining*	1	0	0	0	0
3.5 Non-Coal Mining Cavities	0	0	0	0	0
3.6 Natural Cavities	0	0	0	1	0
3.7 Brine Extraction	0	0	0	0	0
3.8 Gypsum Extraction	0	0	0	0	0
3.9 Tin Mining	0	0	0	0	0
3.10 Clay Mining	0	0	0	0	0

*This includes an automatically generated 50m buffer zone around the site

4. Natural Ground Subsidence	on-site*	0-50	51-250	251-500	501-1000
4.1 Shrink-Swell Clay	Moderate	-	-	-	-
4.2 Landslides	Very Low	-	-	-	-
4.3 Ground Dissolution of Soluble Rocks	Null	-	-	-	-
4.4 Compressible Deposits	Negligible	-	-	-	-
4.5 Collapsible Deposits	Very Low	-	-	-	-
4.6 Running Sand	Very Low	-	-	-	-

* This includes an automatically generated 50m buffer zone around the site

5. Borehole Records	on-site	0-50	51-250	251-500	501-1000
5.1 BGS Recorded Boreholes	0	4	66	-	-

6. Estimated Background Soil Chemistry	on-site	0-50	51-250	251-500	501-1000
6.1 Records of Background Soil Chemistry	2	0	0	-	-

1.1 Artificial Ground Map



Artificial Ground Legend



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Geological information represented on the mapping is derived from the BGS Digital Geological map of Great Britain at 1:50,000 scale.

1.1 Artificial Ground

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No:256

1.1.1 Artificial/Made Ground

Are there any records of Artificial/Made Ground within 500m of the study site boundary? Yes

ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	76.0	N	WGR-OPEN	WORKED GROUND (UNDIVIDED)	VOID
2	292.0	W	WGR-OPEN	WORKED GROUND (UNDIVIDED)	VOID

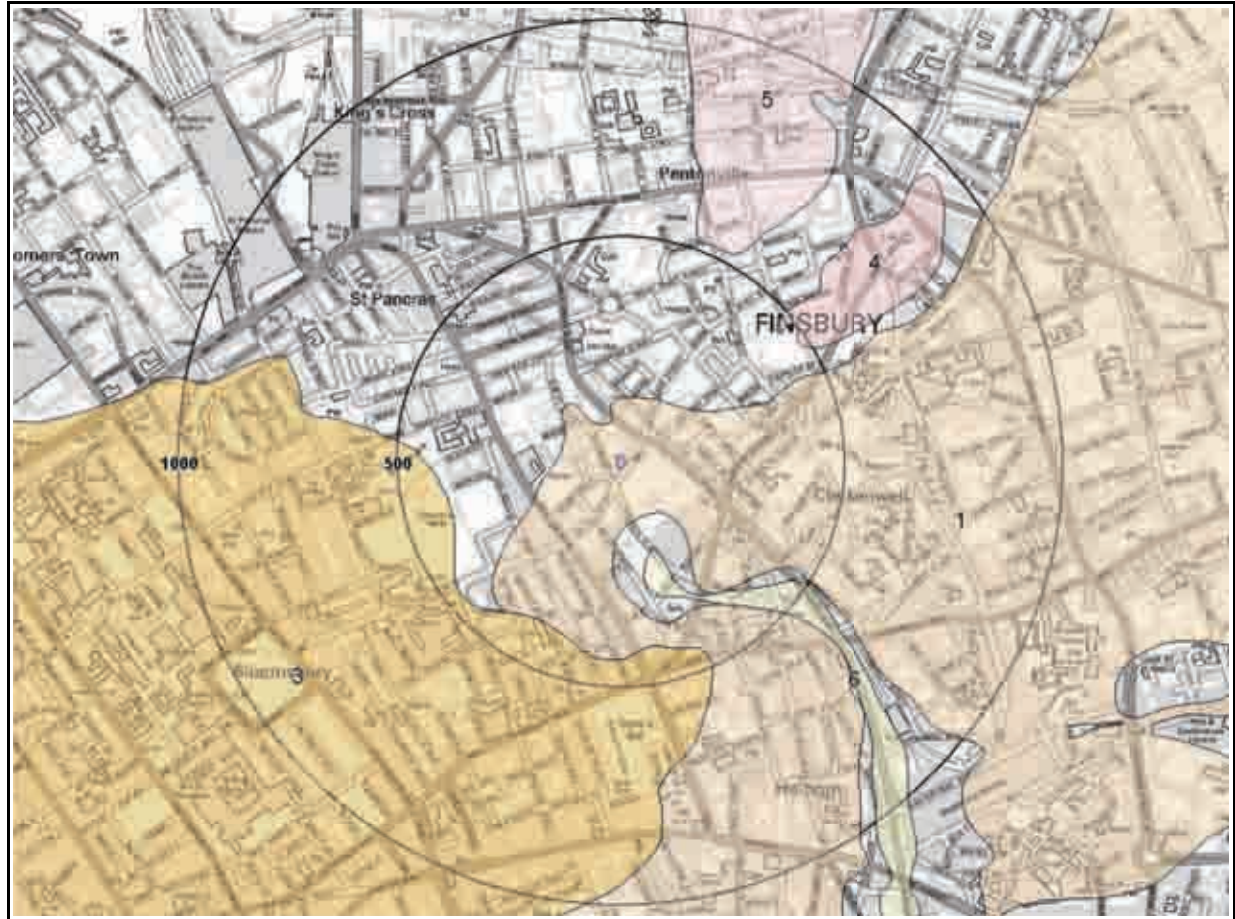
1.1.2 Permeability of Artificial Ground

Are there any records relating to permeability of artificial ground within the study site* boundary? No

Database searched and no data found.

* This includes an automatically generated 50m buffer zone around the site.

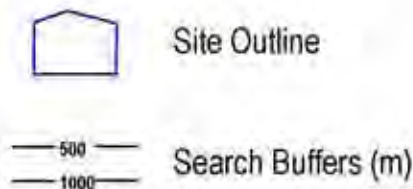
1.2 Superficial Deposits and Landslips Map



Superficial and Landslips Legend



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Geological information represented on the mapping is derived from the BGS Digital Geological map of Great Britain at 1:50,000 scale.

1.2 Superficial Deposits and Landslips

1.2.1 Superficial Deposits/Drift Geology

Are there any records of Superficial Deposits/Drift Geology within 500m of the study site boundary? Yes

ID	Distance (m)	Direction	Lex Code	Description	Rock Description
1	0.0	On Site	HAGR-SAGR	HACKNEY GRAVEL MEMBER	SAND AND GRAVEL
2	198.0	S	ALV-CSSG	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
3	392.0	SW	LHGR-SAGR	LYNCH HILL GRAVEL MEMBER	SAND AND GRAVEL
4	453.0	NE	FIGR-SAGR	FINSBURY GRAVEL MEMBER	SAND AND GRAVEL

1.2.2 Permeability of Superficial Ground

Are there any records relating to permeability of superficial ground within the study site* boundary? Yes

Distance (m)	Direction	Flow type	Maximum Permeability	Minimum Permeability
0.0	On Site	Intergranular	Very High	High

1.2.3 Landslip

Are there any records of Landslip within 500m of the study site boundary? No

Database searched and no data found.

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:50,000 scale.

This Geology shows the main components as discrete layers, these are: Artificial / Made Ground, Superficial / Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

1.2.4 Landslip Permeability

Are there any records relating to permeability of landslips within the study site* boundary? No

Database searched and no data found.

*This includes an automatically generated 50m buffer zone around the site.

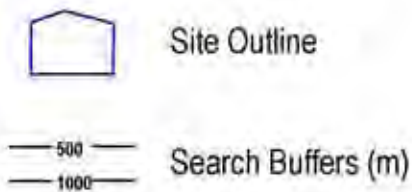
1.3 Bedrock and Faults Map



Bedrock & Faults Deposits Legend



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Geological information represented on the mapping is derived from the BGS Digital Geological map of Great Britain at 1:50,000 scale.

1.3 Bedrock, Solid Geology & Faults

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No:256

1.3.1 Bedrock/Solid Geology

Records of Bedrock/Solid Geology within 500m of the study site boundary:

ID	Distance (m)	Direction	LEX Code	Rock Description	Rock Age
1	0.0	On Site	LMBE-CLSS	Lambeth Group - Clay, Silt And Sand	Paleocene
2	0.0	On Site	LC-CLSS	London Clay Formation - Clay, Silt And Sand	Eocene

1.3.2 Permeability of Bedrock Ground

Are there any records relating to permeability of bedrock ground within the study site* boundary? Yes

Distance (m)	Direction	Flow type	Maximum Permeability	Minimum Permeability
0.0	On Site	Mixed	Moderate	Very Low
0.0	On Site	Mixed	Moderate	Very Low

1.3.3 Faults

Are there any records of Faults within 500m of the study site boundary? No

Database searched and no data found.

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:50,000 scale.

This Geology shows the main components as discrete layers, these are: Bedrock/ Solid Geology and linear features such as Faults. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

1.3.4 Radon Affected Areas

Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?

The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level

1.3.5 Radon Protection

Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment?

No radon protective measures are necessary

* This includes an automatically generated 50m buffer zone around the site.





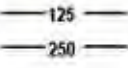
2. Ground Workings Map



Ground Workings Legend



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-  Site Outline
-  Historic Surface Ground Workings
-  Historic Underground Workings
-  Current Ground Workings
-  Search Buffers (m)
125
250

2. Ground Workings

2.1 Historical Surface Ground Working Features derived from Historical Mapping

This dataset is based on GroundSure's unique Historical Land Use Database derived from 1:10,560 and 1:10,000 scale historical mapping.

Are there any Historical Surface Ground Working Features within 250m of the study site boundary? Yes

The following Historical Surface Ground Working Features are provided by GroundSure:

ID	Distance (m)	Direction	NGR	Use	Date
1	162.0	W	530730,182472	Ponds	1938

2.2 Historical Underground Workings Features derived from Historical Mapping

This data is derived from the GroundSure unique Historical Land Use Database. It contains data derived from 1:10,000 and 1:10,560 historical Ordnance Survey Mapping and includes some natural topographical features (Shake Holes for example) as well as manmade features that may have implications for ground stability. Underground and mining features have been identified from surface features such as shafts. The distance that these extend underground is not shown.

Are there any Historical Underground Working Features within 1000m of the study site boundary? Yes

The following Historical Underground Working Features are provided by GroundSure:

ID	Distance (m)	Direction	NGR	Use	Date
2A	69.0	NE	531119,182412	Tunnel	1894
3A	77.0	NE	531123,182420	Tunnel	1873
4A	77.0	NE	531123,182420	Tunnel	1873
5B	90.0	NE	531023,182530	Tunnel	1894
6B	91.0	NE	531029,182529	Tunnel	1994
7B	91.0	NE	531029,182529	Tunnel	1966
8B	91.0	NE	531029,182529	Tunnel	1976
9B	91.0	NE	531029,182529	Tunnel	1971
10C	200.0	NW	530815,182705	Tunnel	1894
11C	201.0	N	530821,182712	Tunnel	1873
12C	201.0	N	530821,182712	Tunnel	1873
Not shown	325.0	NW	530695,182835	Tunnel	1873
Not shown	325.0	NW	530695,182835	Tunnel	1873
Not shown	687.0	NW	529982,183101	Tunnel	1894
Not shown	715.0	NW	530325,183147	Tunnel	1894
Not shown	723.0	NW	530388,183011	Tunnel	1873
Not shown	723.0	NW	530388,183011	Tunnel	1873
Not shown	784.0	NW	530177,183066	Tunnel	1873
Not shown	784.0	NW	530177,183066	Tunnel	1873
Not shown	808.0	NW	530326,183183	Tunnel	1873
Not shown	808.0	NW	530326,183183	Tunnel	1873

Not shown	859.0	NW	530174,183067	Tunnel	1894
Not shown	928.0	N	531259,183370	Tunnel	1994
Not shown	928.0	N	531259,183370	Tunnel	1966
Not shown	928.0	N	531259,183370	Tunnel	1971
Not shown	928.0	N	531259,183370	Tunnel	1976
Not shown	928.0	N	531259,183370	Tunnel	1957

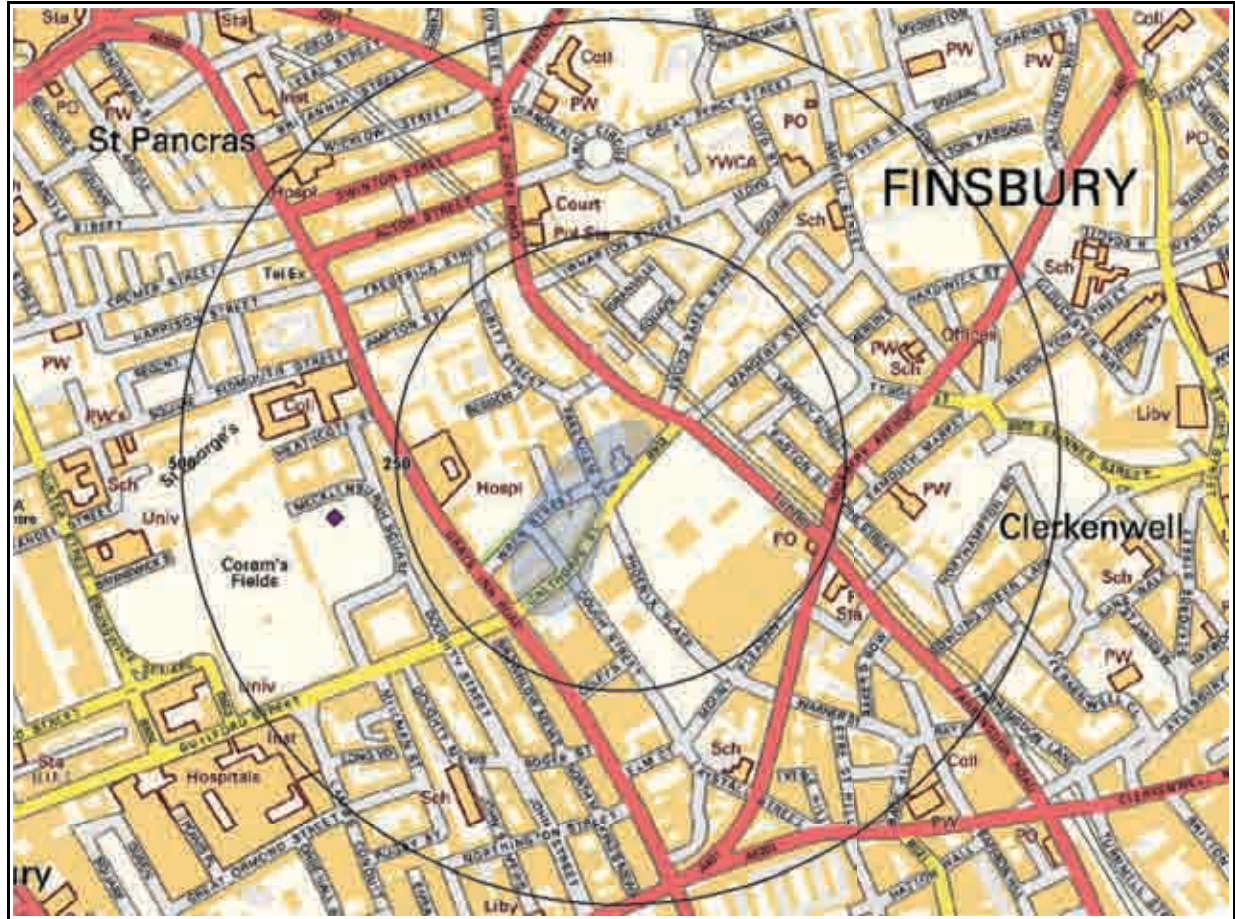
2.3 Current Ground Workings

This dataset is derived from the BGS BRITPITS database covering active; inactive mines; quarries; oil wells; gas wells and mineral wharves; and rail deposits throughout the British Isles.

Are there any BGS Current Ground Workings within 1000m of the study site boundary? **No**

Database searched and no data found.

3. Mining, Extraction & Natural Cavities Map



Mining, Extraction & Natural Cavities Legend



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3. Mining, Extraction & Natural Cavities

3.1 Historical Mining

This dataset is derived from GroundSure unique Historical Land-use Database that are indicative of mining or extraction activities.

Are there any Historical Mining areas within 1000m of the study site boundary? **No**

Database searched and no data found.

3.2 Coal Mining

This dataset provides information as to whether the study site lies within a known coal mining affected area as defined by the coal authority.

Are there any Coal Mining areas within 1000m of the study site boundary? **No**

Database searched and no data found.

3.3 Johnson Poole and Bloomer

This dataset provides information as to whether the study site lies within an area where JPB hold information relating to mining.

Are there any JPB Mining areas within 1000m of the study site boundary? **Yes**

The following information provided by JPB is not represented on Mapping:

Whilst outside of an area where The Coal Authority have information on coal mining activities, Johnson Poole & Bloomer (JPB) have information such as mining plans and maps held within their archive of mining activities that have occurred within 1km of this property. Further details and a quote for services can be obtained by emailing this report to enquiries.gs@jpb.co.uk.

3.4 Non – Coal Mining

This dataset provides information as to whether the study site lies within an area which may have been subject to non-coal historic mining.

Are there any Non-Coal Mining areas within 1000m of the study site boundary? **Yes**

The following non-coal mining information is provided by the BGS:

ID	Distance (m)	Direction	Name	Commodity	Assessment of likelihood
1	0.0	On Site	Not available	Chalk	Highly Unlikely - Localised small scale mining may have occurred but restricted in extent.

3.5 Non – Coal Mining Cavities

This dataset provides information from the Peter Brett Associates (PBA) mining cavities database (compiled for the national study entitled “Review of mining instability in Great Britain, 1990” PBA has also continued adding to this database) on mineral extraction by mining.

Are there any Non-Coal Mining cavities within 1000m of the study site boundary? **No**

Database searched and no data found.

3.6 Natural Cavities

This dataset provides information based on Peter Brett Associates natural cavities database.

Are there any Natural Cavities within 1000m of the study site boundary? **Yes**

The following Natural Cavities information provided by Peter Brett Associates:

ID	Distance (m)	Direction	NGR	Superficial Deposits	Bedrock Deposits	Cavity Type and Number
2	328.0	W	TQ	Alluvium	London Clay Formation	Unknown x 1

3.7 Brine Extraction

This dataset provides information from the Brine Compensation Board which has been discontinued and is now covered by the Coal Authority.

Are there any Brine Extraction areas within 1000m of the study site boundary? **No**

Database searched and no data found.

3.8 Gypsum Extraction

This dataset provides information on Gypsum extraction from British Gypsum records.

Are there any Gypsum Extraction areas within 1000m of the study site boundary? **No**

Database searched and no data found.

3.9 Tin Mining

This dataset provides information on tin mining areas and is derived from tin mining records. This search is based upon postcode information to a sector level. More detailed information on potential Tin Mining may be found in Section 3.4 – Non-Coal Mining Hazards.

Are there any Tin Mining areas within 1000m of the study site boundary? **No**

Database searched and no data found.

3.10 Clay Mining

This dataset provides information on Kaolin and Ball Clay mining from relevant mining records.

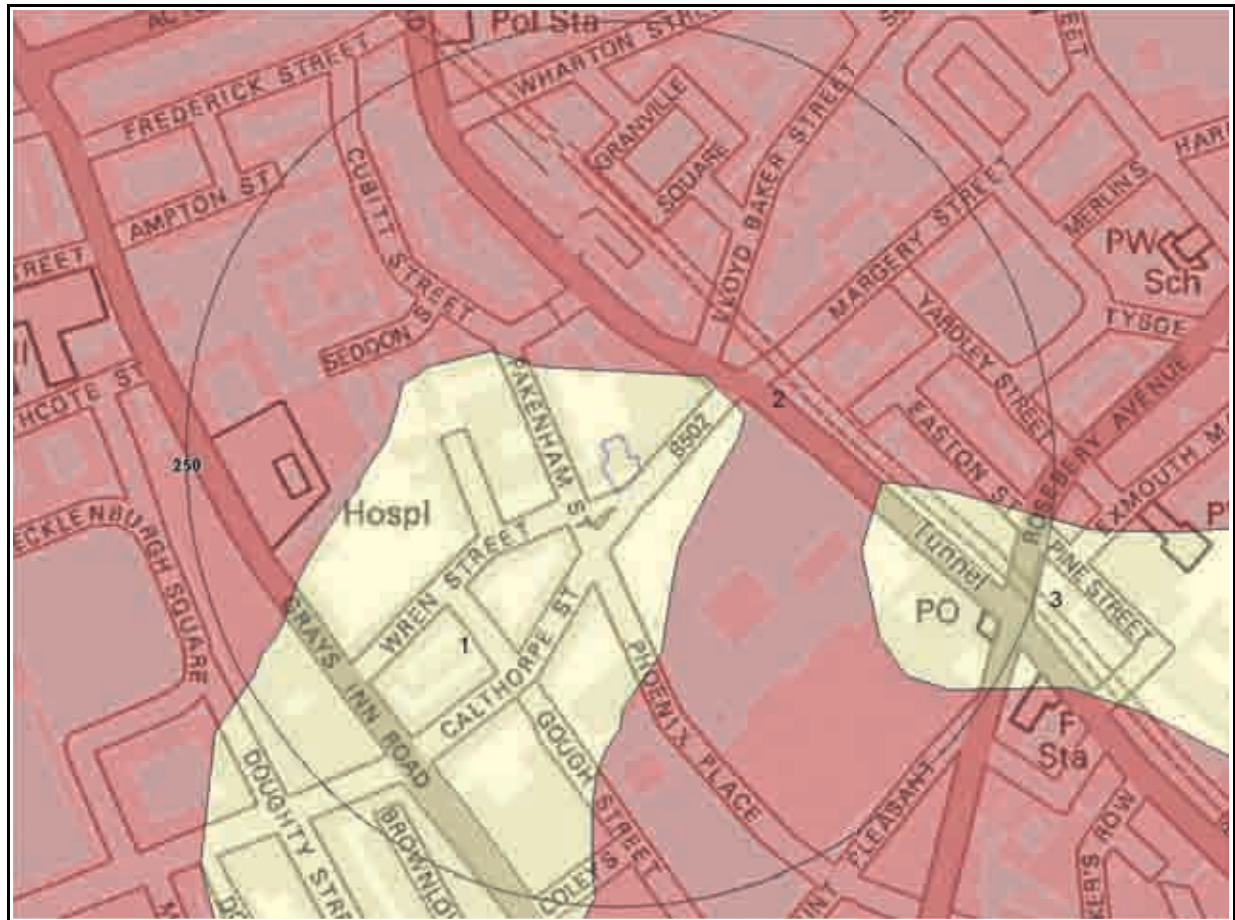
Are there any Clay Mining areas within 1000m of the study site boundary?

No

Database searched and no data found.

4. Natural Ground Subsidence

4.1 Shrink-Swell Clay Map



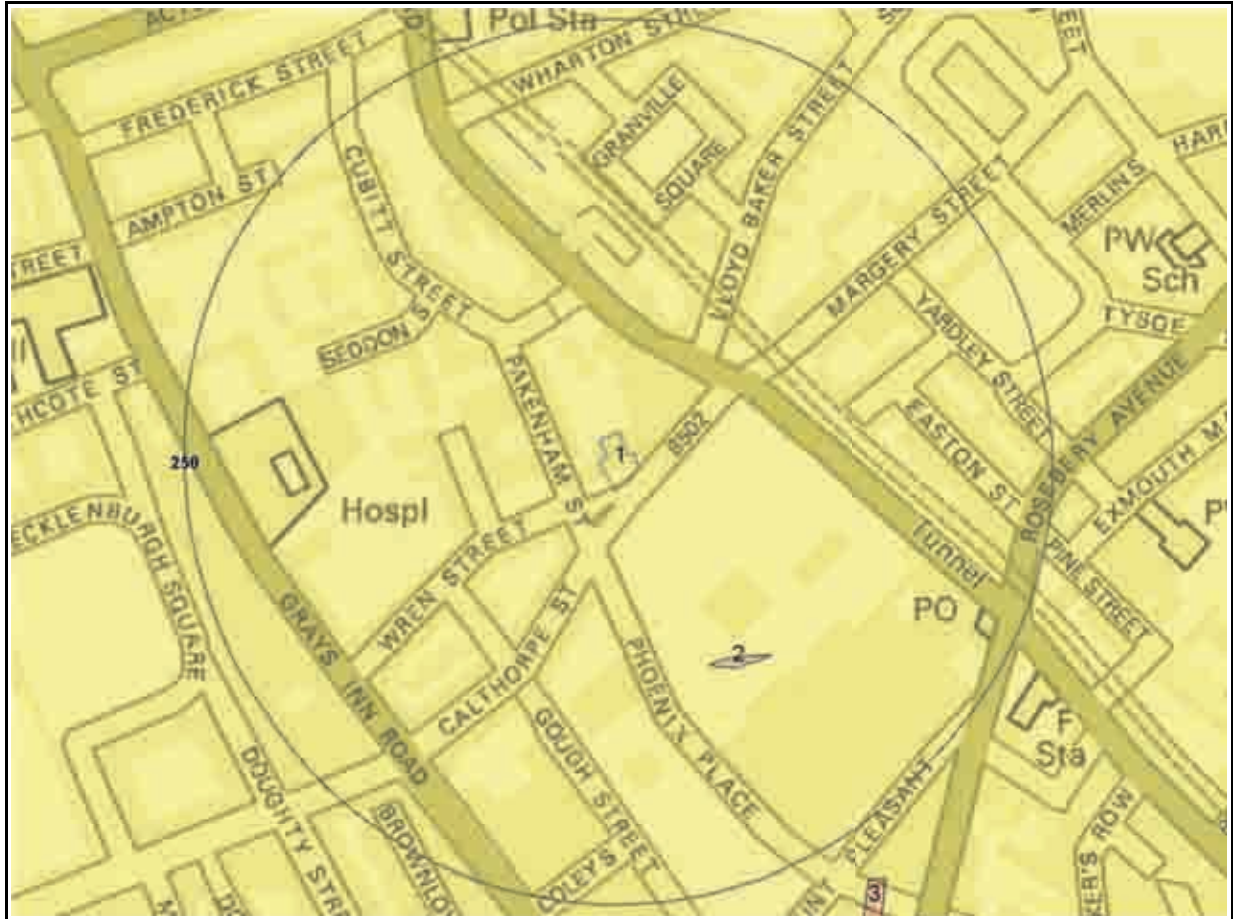
Shrink-Swell Clay Legend



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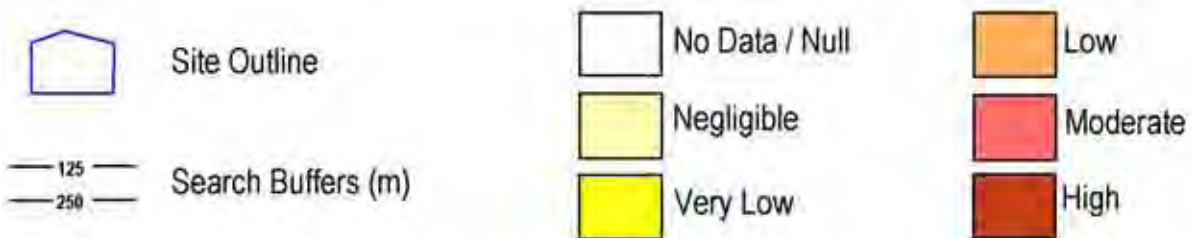
4.2 Landslides Map



Landslides Legend



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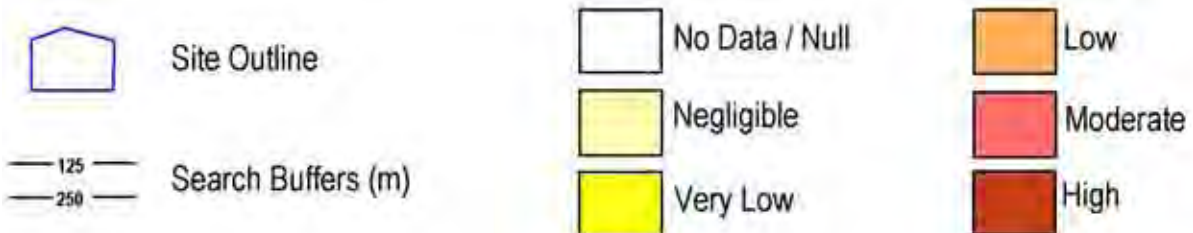
4.3 Ground Dissolution Soluble Rocks Map



Ground Dissolution Soluble Rocks Legend



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4.4 Compressible Deposits Map



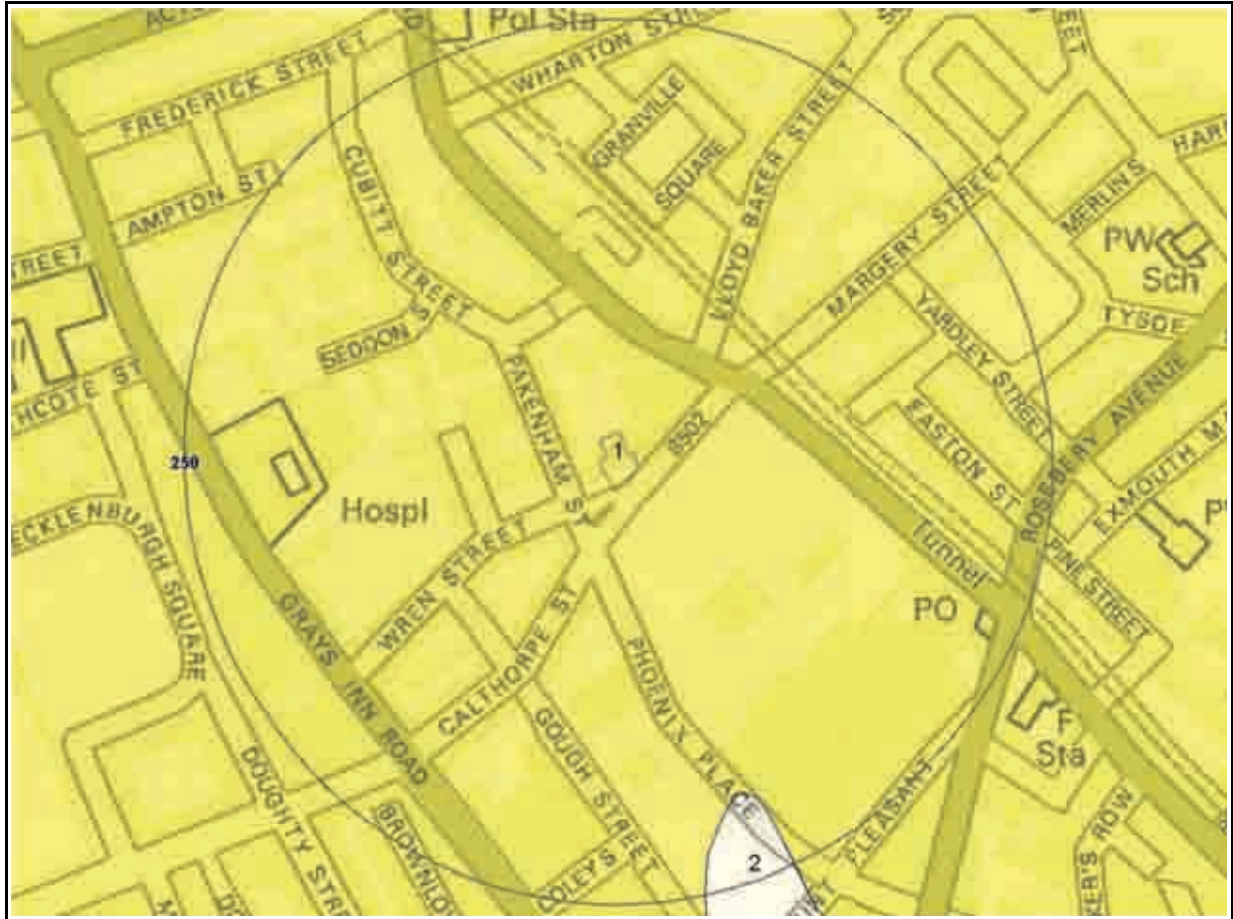
Compressible Deposits Legend



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4.5 Collapsible Deposits Map



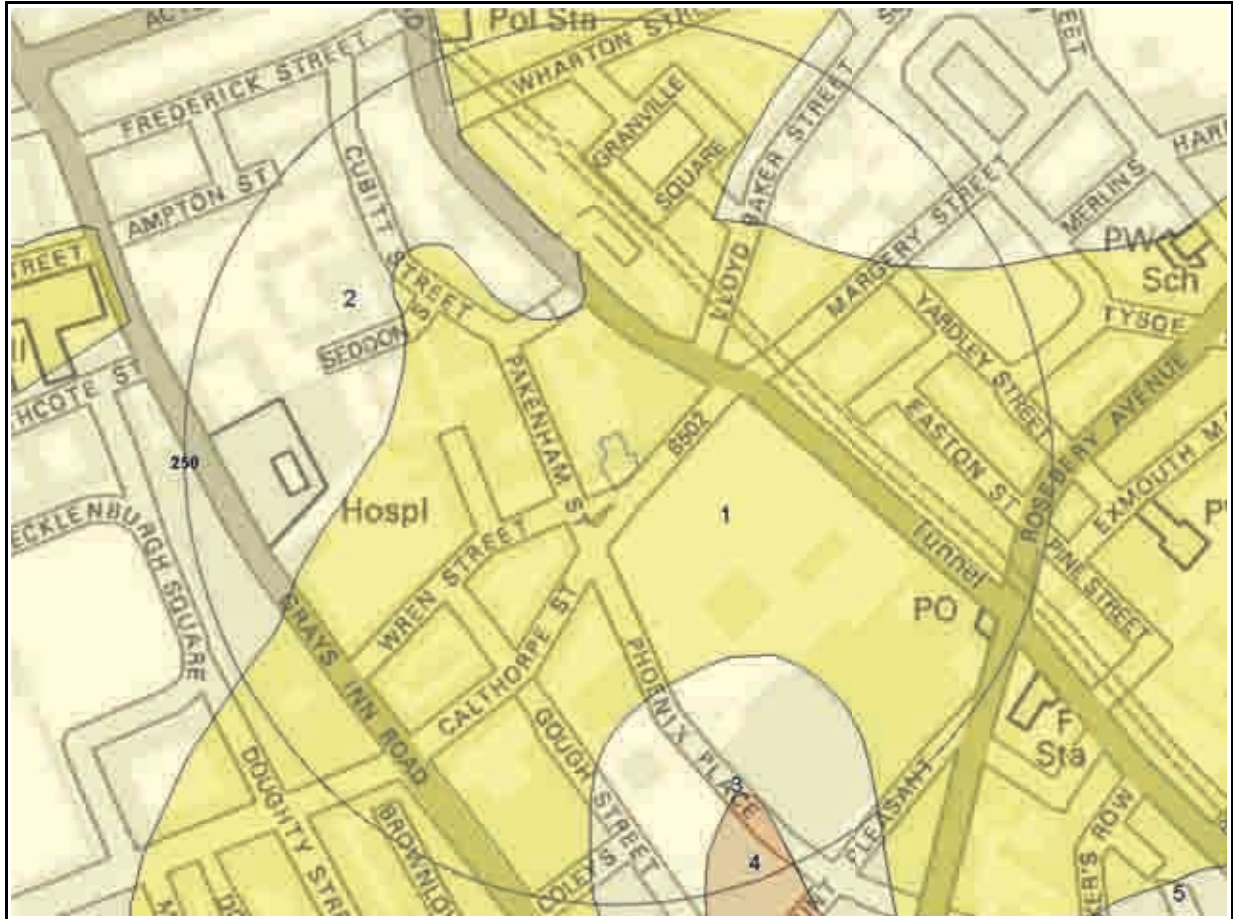
Collapsible Deposits Legend



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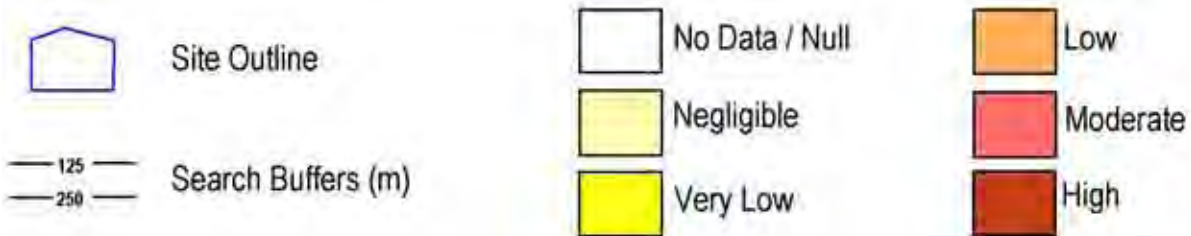
4.6 Running Sand Map



Running Sand Legend



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4. Natural Ground Subsidence

The National Ground Subsidence rating is obtained through the 6 natural ground stability hazard datasets, which are supplied by the British Geological Survey (BGS).

The following GeoSure data represented on the mapping is derived from the BGS Digital Geological map of Great Britain at 1:50,000 scale.

What is the maximum hazard rating of natural subsidence within the study site* boundary? Moderate

4.1 Shrink – Swell Clays

The following Shrink Swell information provided by the British Geological Survey:

ID	Distance (m) *	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	Ground conditions predominantly non-plastic. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely likely due to potential problems with shrink-swell clays.
2	38.0	N	Moderate	Ground conditions predominantly high plasticity. Do not plant or remove trees or shrubs near to buildings without expert advice about their effect and management. For new build, consideration should be given to advice published by the National House Building Council (NHBC) and the Building Research Establishment (BRE). There is a probable increase in construction cost to reduce potential shrink-swell problems. For existing property, there is a probable increase in insurance risk during droughts or where vegetation with high moisture demands is present.

4.2 Landslides

The following Landslides information provided by the British Geological Survey:

ID	Distance (m)*	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.

4.3 Ground Dissolution of Soluble Rocks

The following Soluble Rocks information provided by the British Geological Survey:

Distance (m)*	Direction	Hazard Rating	Details
0.0	On site	Null-Negligible	Soluble rocks are not present in the search area. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

*This includes an automatically generated 50m buffer zone around the study site boundary.

4.4 Compressible Deposits

The following Compressible Ground information provided by the British Geological Survey:

ID	Distance (m)*	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	No indicators for compressible deposits identified. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.

4.5 Collapsible Deposits

The following Collapsible Rocks information is provided by the British Geological Survey:

ID	Distance (m)*	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

4.6 Running Sands

The following Running Sands information is provided by the British Geological Survey:

ID	Distance (m)*	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Very low potential for running sand problems if water table rises or if sandy strata are exposed to water. No special actions required, to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.


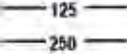

5. Borehole Records Map



Borehole Records Legend



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-  Site Outline
-  Search Buffers (m)
-  Borehole Locations

5. Borehole Records

The systematic analysis of data extracted from the BGS Borehole Records database provides the following information.

Records of boreholes within 250m of the study site boundary:

70

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length (m)	Borehole Name
1	28.0	SE	530960,18 2440	TQ38SW4885	-1.0	MOUNT PLEASANT REDEVELOPMENT FARRINGDON ROAD LONDON 106
2	35.0	SE	530960,18 2430	TQ38SW4902	-1.0	MOUNT PLEASANT REDEVELOPMENT FARRINGDON ROAD LONDON TP314
3	46.0	E	530990,18 2460	TQ38SW3091	8.22	MOUNT PLEASANT SORTING OFFICE
4	50.0	S	530930,18 2400	TQ38SW4908	-1.0	MOUNT PLEASANT REDEVELOPMENT FARRINGDON ROAD LONDON WS318
5	51.0	E	530990,18 2490	TQ38SW1198	8.23	MOUNT PLEASANT POST OFFICE BH2
6	56.0	E	531000,18 2470	TQ38SW4901	-1.0	MOUNT PLEASANT REDEVELOPMENT FARRINGDON ROAD LONDON TP313
7	58.0	E	531000,18 2480	TQ38SW4884	-1.0	MOUNT PLEASANT REDEVELOPMENT FARRINGDON ROAD LONDON 105
8	68.0	E	531010,18 2480	TQ38SW3090	10.51	MOUNT PLEASANT SORTING OFFICE
9	73.0	E	531010,18 2500	TQ38SW1197	10.52	MOUNT PLEASANT POST OFFICE BH1
10	80.0	E	531020,18 2440	TQ38SW4905	-1.0	MOUNT PLEASANT REDEVELOPMENT FARRINGDON ROAD LONDON WS312/312B
11	80.0	SE	530970,18 2380	TQ38SW4903	-1.0	MOUNT PLEASANT REDEVELOPMENT FARRINGDON ROAD LONDON TP316
12	85.0	N	530920,18 2570	TQ38SW335	6.2	KINGS CROSS RD C46 FINSBURY
13	91.0	SE	531000,18 2390	TQ38SW4887	-1.0	MOUNT PLEASANT REDEVELOPMENT FARRINGDON ROAD LONDON 108
14	101.0	S	530920,18 2350	TQ38SW4891	-1.0	MOUNT PLEASANT REDEVELOPMENT FARRINGDON ROAD LONDON TP301
15	105.0	E	531040,18 2510	TQ38SW1266	13.0	ATTNEAVE STREET WC1 1
16	108.0	SE	530990,18 2360	TQ38SW4907	-1.0	MOUNT PLEASANT REDEVELOPMENT FARRINGDON ROAD LONDON WS317
17	110.0	S	530930,18 2340	TQ38SW1093	11.43	GPO MOUNT PLEASANT GARAGE C
18	111.0	E	531050,18 2500	TQ38SW1267	13.0	ATTNEAVE STREET WC1 2
19	115.0	SE	531050,18 2420	TQ38SW4906	-1.0	MOUNT PLEASANT REDEVELOPMENT FARRINGDON ROAD LONDON WS315
20	119.0	E	531060,18 2490	TQ38SW334	11.02	FARRINGDON ROAD FINSBURY C45
21	123.0	S	530960,18 2330	TQ38SW4888	-1.0	MOUNT PLEASANT REDEVELOPMENT FARRINGDON ROAD LONDON 109
22	127.0	S	530890,18 2330	TQ38SW4880	-1.0	MOUNT PLEASANT REDEVELOPMENT FARRINGDON ROAD LONDON 101
23	128.0	E	531070,18 2440	TQ38SW4886	-1.0	MOUNT PLEASANT REDEVELOPMENT FARRINGDON ROAD LONDON 107
24	135.0	SW	530840,18 2350	TQ38SW2488 /A	25.0	GOUGH ST/WREN ST 1
25	135.0	SW	530830,18 2360	TQ38SW2489	2.0	GOUGH ST/WREN ST TP 1
26	141.0	S	530950,18 2310	TQ38SW4893	-1.0	MOUNT PLEASANT REDEVELOPMENT FARRINGDON ROAD LONDON TP303
27	141.0	NW	530820,18 2580	TQ38SW1073	35.0	CALTHORPE STREET (PHASE 2A) BH3
28	146.0	S	530890,18 2310	TQ38SW1091	11.12	GPO MOUNT PLEASANT GARAGE A
29	151.0	S	530950,18 2300	TQ38SW1094	10.07	GPO MOUNT PLEASANT GARAGE D
30	152.0	SE	530990,18 2310	TQ38SW3370	46.32	MOUNT PLEASANT

31	155.0	E	531090,18 2520	TQ38SW1265	27.0	ATTNEAVE STREET WC1 B
32B	159.0	E	531090,18 2530	TQ38SW1268	27.0	ATTNEAVE STREET WC1 3
33	161.0	S	530950,18 2290	TQ38SW4881	-1.0	MOUNT PLEASANT REDEVELOPMENT FARRINGDON ROAD LONDON 102
34	161.0	S	530910,18 2290	TQ38SW4892	-1.0	MOUNT PLEASANT REDEVELOPMENT FARRINGDON ROAD LONDON TP302
35A	162.0	NW	530780,18 2560	TQ38SW1075	35.0	CALTHORPE STREET (PHASE 2A) BH5
36A	162.0	NW	530780,18 2560	TQ38SW2066 /F	1.75	NEW CALTHORPE DEVELOPMENT TP.1
37B	168.0	E	531100,18 2530	TQ38SW1264	27.0	ATTNEAVE STREET WC1 A
38	178.0	SW	530810,18 2320	TQ38SW2488 /B	25.0	GOUGH ST/WREN ST 2
39	178.0	SW	530800,18 2330	TQ38SW2490	2.0	GOUGH ST/WREN ST TP 2
40	184.0	SW	530860,18 2280	TQ38SW822	24.38	GRAYS INN ROAD BH4 HOLBORN
41	187.0	S	530980,18 2270	TQ38SW4895	-1.0	MOUNT PLEASANT REDEVELOPMENT FARRINGDON ROAD LONDON TP305
42	190.0	S	530940,18 2260	TQ38SW4894	-1.0	MOUNT PLEASANT REDEVELOPMENT FARRINGDON ROAD LONDON TP304
43	190.0	W	530740,18 2540	TQ38SW2066 /E	1.8	NEW CALTHORPE DEVELOPMENT TP.1
44	193.0	SW	530810,18 2300	TQ38SW258	25.9	POST OFFICE TUBE ST PANCRAS
45	194.0	S	530890,18 2260	TQ38SW819	24.38	GRAYS INN ROAD BH1 HOLBORN
46	195.0	SE	531120,18 2380	TQ38SW512	46.33	COLD BATH FIELDS FINSBURY
47	198.0	NW	530790,18 2630	TQ38SW1072	35.0	CALTHORPE STREET (PHASE 2A) BH2
48	200.0	S	530940,18 2250	TQ38SW1092	12.34	GPO MOUNT PLEASANT GARAGE B
49	201.0	SE	531020,18 2270	TQ38SW2092	27.43	THE P.O. PROPOSED DEVELOPMENT 15
50	203.0	W	530730,18 2550	TQ38SW3089	138.98	NUMBER NOT USED
51	205.0	NE	531110,18 2590	TQ38SW1554	9.14	MARGERY ST WC1 A
52	208.0	NW	530750,18 2600	TQ38SW2066	6.0	NEW CALTHORPE DEVELOPMENT
53	210.0	S	530920,18 2240	TQ38SW821	19.08	GRAYS INN ROAD BH3 HOLBORN
54	212.0	S	530960,18 2240	TQ38SW4896	-1.0	MOUNT PLEASANT REDEVELOPMENT FARRINGDON ROAD LONDON TP306
55	220.0	NW	530720,18 2570	TQ38SW3088	85.03	258 GRAYS INN ROAD
56	220.0	NW	530730,18 2590	TQ38SW2066 /D	8.5	NEW CALTHORPE DEVELOPMENT TP.1
57	221.0	S	530950,18 2230	TQ38SW4882	-1.0	MOUNT PLEASANT REDEVELOPMENT FARRINGDON ROAD LONDON 103
58	226.0	SE	531100,18 2300	TQ38SW533	16.76	MOUNT PLEASANT HOLBORN & FINSBURY
59	226.0	NW	530760,18 2640	TQ38SW2066 /C	6.88	NEW CALTHORPE DEVELOPMENT TP.5
60	231.0	S	531000,18 2230	TQ38SW4897	-1.0	MOUNT PLEASANT REDEVELOPMENT FARRINGDON ROAD LONDON TP307
61	232.0	SE	531140,18 2340	TQ38SW4889	-1.0	MOUNT PLEASANT REDEVELOPMENT FARRINGDON ROAD LONDON 110
62	233.0	NE	531130,18 2610	TQ38SW1555	9.14	MARGERY ST WC1 B
63	235.0	S	530980,18 2220	TQ38SW1098	11.58	GPO MOUNT PLEASANT GARAGE H
64	238.0	W	530700,18 2570	TQ38SW500	96.32	CUBITTS GRAYS INN ROAD ST PANCRAS
65	241.0	NW	530740,18 2640	TQ38SW1074	35.0	CALTHORPE STREET (PHASE 2A) BH4
66	242.0	S	530960,18 2210	TQ38SW4898	-1.0	MOUNT PLEASANT REDEVELOPMENT FARRINGDON ROAD LONDON TP308
67	245.0	S	530980,18 2210	TQ38SW3456	11.58	NUMBER NOT USED
68	245.0	S	530880,18 2210	TQ38SW820	24.38	GRAYS INN ROAD BH2 HOLBORN
69C	246.0	SW	530820,18 2230	TQ38SW4258	24.5	123-129 GRAYS INN ROAD 1

Additional online information is available for the following boreholes listed above:

- #3: http://scans.bgs.ac.uk/sobi_scans/boreholes/1067265
- #5: http://scans.bgs.ac.uk/sobi_scans/boreholes/1064984
- #8: http://scans.bgs.ac.uk/sobi_scans/boreholes/1067264
- #9: http://scans.bgs.ac.uk/sobi_scans/boreholes/1064983
- #12: http://scans.bgs.ac.uk/sobi_scans/boreholes/1063687
- #15: http://scans.bgs.ac.uk/sobi_scans/boreholes/1065133
- #17: http://scans.bgs.ac.uk/sobi_scans/boreholes/1064839
- #18: http://scans.bgs.ac.uk/sobi_scans/boreholes/1065134
- #20: http://scans.bgs.ac.uk/sobi_scans/boreholes/1063686
- #24: http://scans.bgs.ac.uk/sobi_scans/boreholes/1066661
- #25: http://scans.bgs.ac.uk/sobi_scans/boreholes/1066663
- #27: http://scans.bgs.ac.uk/sobi_scans/boreholes/1064813
- #28: http://scans.bgs.ac.uk/sobi_scans/boreholes/1064837
- #29: http://scans.bgs.ac.uk/sobi_scans/boreholes/1064840
- #30: http://scans.bgs.ac.uk/sobi_scans/boreholes/1067544
- #31: http://scans.bgs.ac.uk/sobi_scans/boreholes/1065132
- #32B: http://scans.bgs.ac.uk/sobi_scans/boreholes/1065135
- #35A: http://scans.bgs.ac.uk/sobi_scans/boreholes/1064815
- #36A: http://scans.bgs.ac.uk/sobi_scans/boreholes/1066181
- #37B: http://scans.bgs.ac.uk/sobi_scans/boreholes/1065131
- #38: http://scans.bgs.ac.uk/sobi_scans/boreholes/1066662
- #39: http://scans.bgs.ac.uk/sobi_scans/boreholes/1066664
- #40: http://scans.bgs.ac.uk/sobi_scans/boreholes/1064490
- #43: http://scans.bgs.ac.uk/sobi_scans/boreholes/1066180
- #44: http://scans.bgs.ac.uk/sobi_scans/boreholes/1063601
- #45: http://scans.bgs.ac.uk/sobi_scans/boreholes/1064487
- #46: http://scans.bgs.ac.uk/sobi_scans/boreholes/1063895
- #47: http://scans.bgs.ac.uk/sobi_scans/boreholes/1064812
- #48: http://scans.bgs.ac.uk/sobi_scans/boreholes/1064838
- #49: http://scans.bgs.ac.uk/sobi_scans/boreholes/1066261
- #50: http://scans.bgs.ac.uk/sobi_scans/boreholes/1067263
- #51: http://scans.bgs.ac.uk/sobi_scans/boreholes/1065456
- #52: http://scans.bgs.ac.uk/sobi_scans/boreholes/1066182
- #53: http://scans.bgs.ac.uk/sobi_scans/boreholes/1064489
- #55: http://scans.bgs.ac.uk/sobi_scans/boreholes/1067262
- #56: http://scans.bgs.ac.uk/sobi_scans/boreholes/1066179
- #58: http://scans.bgs.ac.uk/sobi_scans/boreholes/1063929
- #59: http://scans.bgs.ac.uk/sobi_scans/boreholes/1066178
- #62: http://scans.bgs.ac.uk/sobi_scans/boreholes/1065457
- #63: http://scans.bgs.ac.uk/sobi_scans/boreholes/1064844
- #64: http://scans.bgs.ac.uk/sobi_scans/boreholes/1063883
- #65: http://scans.bgs.ac.uk/sobi_scans/boreholes/1064814
- #67: http://scans.bgs.ac.uk/sobi_scans/boreholes/1067630
- #68: http://scans.bgs.ac.uk/sobi_scans/boreholes/1064488
- #69C: http://scans.bgs.ac.uk/sobi_scans/boreholes/15623134
- #70C: http://scans.bgs.ac.uk/sobi_scans/boreholes/15623135

6. Estimated Background Soil Chemistry

Records of background estimated soil chemistry within 250m of the study site boundary:

2

For further information on how this data is calculated and limitations upon its use, please see the GroundSure GeoInsight User Guide, available on request.

Estimated Geometric Mean Soil Concentrations (mg/kg)							
Distance (m)*	Direction	Sample Type	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Nickel (Ni)	Lead (Pb)
0.0	On Site	London	No data	No data	No data	No data	No data
0.0	On Site	London	No data	No data	No data	No data	No data

*As this data is based upon underlying 1:50,000 scale geological information, a 50m buffer has been added to the search radius.

7. Contacts

FIND

Telephone: 0845 521 1410
support@findmaps.co.uk
The Top Floor, 222 Borough High Street
London, SE1 1JX



British Geological Survey Enquiries

Kingsley Dunham Centre
Keyworth, Nottingham NG12 5GG
Tel: 0115 936 3143. Fax: 0115 936 3276.
Email: enquiries@bgs.ac.uk
Web: www.bgs.ac.uk
BGS Geological Hazards Reports and general geological enquiries



British Gypsum

British Gypsum Ltd, East Leake, Loughborough, Leicestershire,
LE12 6HX
Tel: www.british-gypsum.com



The Coal Authority

200 Lichfield Lane, Mansfield, Notts NG18 4RG
Tel: 0845 762 6848
DX 716176 Mansfield 5 www.coal.gov.uk



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Midlands DY5 3LH
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Ordnance Survey

Romsey Road, Southampton SO16 4GU
Tel: 08456 050505



Getmapping PLC

Virginia Villas, High Street, Hartley Witney,
Hampshire RG27 8NW
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Acknowledgements

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This report has been prepared in accordance with the GroundSure Ltd standard Terms and Conditions of business for work of this nature.

Standard Terms and Conditions

1 Definitions

In these conditions unless the context otherwise requires:

"**Beneficiary**" means the Client or the customer of the Client for whom the Client has procured the Services.

"**Commercial**" means any building which is not Residential.

"**Commission**" means an order for Consultancy Services submitted by a Client.

"**Consultancy Services**" mean consultancy services provided by GroundSure including, without limitation, carrying out interpretation of third party and in-house environmental data, provision of environmental consultancy advice, undertaking environmental audits and assessments, Site investigation, Site monitoring and related items.

"**Contract**" means the contract between GroundSure and the Client for the performance of the Services which arises upon GroundSure's acceptance of an Order or Commission and which shall incorporate these conditions, the relevant GroundSure User Guide, proposal by GroundSure and the content of any subsequent report, and any agreed amendments in accordance with clause 11.

"**Client**" means the party that submits an Order or Commission.

"**Data Provider**" means any third party providing Third Party Content to GroundSure.

"**Data Report**" means reports comprising factual data with no professional interpretation in respect of the level of likely risk and/or liability available from GroundSure.

"**GroundSure**" means GroundSure Limited, a company registered in England and Wales under number 03421028 and whose registered office is at Greater London House, Hampstead Road, London NW1 7EJ.

"**GroundSure Materials**" means all materials prepared by GroundSure as a result of the provision of the Services, including but not limited to Data Reports, Mapping and Risk Screening Reports.

"**Intellectual Property**" means any patent, copyright, design rights, service marks, moral rights, data protection rights, know-how, trade mark or any other intellectual property rights.

"**Mapping**" an historical map or a combination of historical maps of various ages, time periods and scales available from GroundSure.

"**Order**" means an order form submitted by the Client requiring Services from GroundSure in respect of a specified Site.

"**Order Website**" means online platform via which Orders may be placed.

"**Report**" means a Risk Screening Report or Data Report for commercial or residential property available from GroundSure relating to the Site prepared in accordance with the specifications set out in the relevant User Guide.

"**Residential**" means any building used as or suitable for use as an individual dwelling.

"**Risk Screening Report**" means one of GroundSure's risk screening reports, comprising factual data with interpretation in respect of the level of likely risk and/or liability, excluding "**Consultancy Services**".

"**Services**" means the provision of any Report, Mapping or Consultancy Services which GroundSure has agreed to carry out for the Client/Beneficiary on these terms and conditions in respect of the Site.

"**Site**" means the landsite in respect of which GroundSure provides the Services.

"**Third Party Content**" means any data, database or other information contained in a Report or Mapping which is provided to GroundSure by a Data Provider.

"**User Guide**" means the relevant current version of the user guide, available upon request from GroundSure.

2 Scope of Services

2.1 GroundSure agrees to carry out the Services in accordance with the Contract and to the extent set out therein.

2.2 GroundSure shall exercise all the reasonable skill, care and diligence to be expected of experienced environmental consultants in the performance of the Services.

2.3 The Client acknowledges that it has not relied on any statement or representation made by or on behalf of GroundSure which is not set out and expressly agreed in the Contract.

2.4 Terms and conditions appearing on a Client's order form, printed stationery or other communication, including invoices, to GroundSure, its employees, servants, agents or other representatives or any terms implied by custom, practice or course of dealing shall be of no effect and these terms and conditions shall prevail over all others.

2.5 If a Client/Beneficiary requests insurance in conjunction with or as a result of the Services, GroundSure shall use reasonable endeavours to procure such insurance, but makes no warranty that such insurance shall be available from insurers or offered on reasonable terms. GroundSure does not endorse or recommend any particular insurance product, policy or insurer. Any insurance purchased shall be subject solely to the terms of the policy issued by insurers and GroundSure will have no liability therefor. The Client/Beneficiary should take independent advice to ensure that the insurance policy requested and/or offered is suitable for its requirements.

2.6 GroundSure's quotations/proposals are valid for a period of 30 days only. GroundSure reserves the right to withdraw any quotation at any time before GroundSure accepts an Order or Commission. GroundSure's acceptance of an Order or Commission shall be effective only where such acceptance is in writing and signed by GroundSure's authorised representative or where accepted via GroundSure's Order Website.

3 The Client's obligations

3.1 The Client shall ensure the Beneficiary complies with and is bound by the terms and conditions set out in the Contract and shall provide that GroundSure may in its own right enforce such terms and conditions against the Beneficiary pursuant to the Contracts (Rights of Third parties) Act 1999. The Client shall be liable for all breaches of the Contract by the Beneficiary as if they were breaches by the Client. The Client shall be solely responsible for ensuring that the Report/Mapping ordered is appropriate and suitable for the Beneficiary's needs.

3.2 The Client shall (or shall procure that the Beneficiary shall) supply to GroundSure as soon as practicable and without charge all information necessary and accurate relevant data including any specific and/or unusual environmental information relating to the Site known to the Client/Beneficiary which may pertain to the Services and shall give such assistance as GroundSure shall reasonably require in the performance of the Services (including, without limitation, access to a Site, facilities and equipment as agreed in the Contract).

3.3 Where Client/Beneficiary approval or decision is required, such approval or decision shall be given or procured in reasonable time as not to delay or disrupt the performance of any other part of the Services.

3.4 The Client shall not and shall not knowingly permit the Beneficiary to, save as expressly permitted by these terms and conditions, re-sell, alter, add to, amend or use out of context the content of any Report, Mapping or, in respect of any Services, information given by GroundSure. For the avoidance of doubt, the Client and Beneficiary may make the Report, Mapping or GroundSure's findings available to a third party who is considering acquiring the whole or part of the Site, or providing funding in relation to the Site, but such third party cannot rely on the same unless expressly permitted under clause 4.

3.5 The Client is responsible for maintaining the confidentiality of its user name and password if using GroundSure's internet ordering service and accepts responsibility for all activity that occurs under such account and password.

4 Reliance

4.1 Upon full payment of all relevant fees and subject to the provisions of these terms and conditions, the Client and Beneficiary are granted an irrevocable royalty-free licence to access the information contained in a Report, Mapping or in a report prepared by GroundSure in respect of or arising out of Consultancy Services. The Services may only be used for the benefit of the Client and those persons listed in clauses 4.2 and 4.3.

4.2 In relation to Data Reports, Mapping and Risk Screening Reports, the Client shall be entitled to make Reports available to (i) the Beneficiary, (ii) the Beneficiary's professional advisers, (iii) any person providing funding to the Beneficiary in relation to the Site (whether directly or as part of a lending syndicate), (iv) the first purchaser or first tenant of the Site (v) the professional advisers and lenders of the first purchaser or tenant of the Site. Accordingly GroundSure shall have the same duties and obligations to those persons in respect of the Services as it has to the Client and those persons shall have the benefit of any of the Client's rights under the Contract as if those persons were parties to the Contract. For the avoidance of doubt, the limitations of GroundSure's liability as set out in clauses 7 and 11.6 shall apply.

4.3 In relation to Consultancy Services, reliance shall be limited to the Client, Beneficiary and named parties on the Report.

4.4 Save as set out in clauses 4.2 and 4.3 and unless otherwise agreed in writing with GroundSure, any other party considering the information supplied by GroundSure as part of the Services, including (but not limited to) insurance underwriters, does so at their own risk and GroundSure has no legal obligations to such party unless otherwise agreed in writing.

4.5 The Client shall not and shall not knowingly permit any person (including the Beneficiary) who is provided with a copy of any Report, (except as permitted herein or by separate agreement with GroundSure) to: (a) remove, suppress or modify any trade mark, copyright or other proprietary marking from the Report or Mapping; (b) create any product which is derived directly or indirectly from the data contained in the Report or Mapping; (c) combine the Report or Mapping with, or incorporate the Report or Mapping into any other information data or service; or (d) re-format or otherwise change (whether by modification, addition or enhancement) data or images contained in the Report or Mapping.

4.6 Notwithstanding clause 4.5, if the Client acts in a professional capacity, it may make reasonable use of a Report and/or findings made as a result of Consultancy Services to advise Beneficiaries. However, GroundSure shall have no liability in respect of any opinion or report given to such Beneficiaries by the Client or a third party.

5 Fees and Disbursements

5.1 GroundSure shall charge the Client fees at the rate and frequency specified in the Contract together, in the case of Consultancy Services, with all proper disbursements incurred by GroundSure in performing the Services. For the avoidance of doubt, the fees payable for the Services are as set out in GroundSure's written proposal, Order Website or Order acknowledgement form. The Client shall in addition pay all value added tax or other tax payable on such fees and disbursements in relation to the provision of the Services.

5.2 Unless GroundSure requires prepayment, the Client shall promptly pay all fees disbursements and other monies due to GroundSure in full without deduction, counterclaim or set off together with such value added tax or other tax as may be required within 30 days from the date of GroundSure's invoice or such other period as may be agreed in writing between GroundSure and the Client ("**Payment Date**"). GroundSure reserves the right to charge interest which shall accrue on a daily basis from 30 days after the date of Payment Date until the date of payment (whether before or after judgment) at the rate of five per cent per annum above the Bank of England base rate from time to time.

5.3 In the event that the Client disputes the amount payable in respect of GroundSure's invoice it shall notify GroundSure no later than 28 days after the date thereof that it is in dispute. In default of such notification the Client shall be deemed to have agreed the amount thereof. As soon as reasonably practicable following receipt of a notification in respect of any disputed invoice, a member of the management team at GroundSure shall contact the Client and the parties shall use all reasonable endeavours to resolve the dispute.

6 Intellectual Property and Confidentiality

6.1 Subject to the provisions of clause 4.1, the Client and the Beneficiary hereby acknowledge that all Intellectual Property in the Services and Content are and shall remain owned by either GroundSure or the Data Providers and nothing in these terms purports to transfer or assign any rights to the Client or the Beneficiary in respect of the Intellectual Property.

6.2 The Client shall acknowledge the ownership of the **Third Party Content** where such **Third Party Content** is incorporated or used in the Client's own documents, reports, systems or services whether or not these are supplied to a third party.

6.3 Data Providers may enforce any breach of clauses 6.1 and 6.2 against the Client or Beneficiary.

6.4 The Client acknowledges that the proprietary rights subsisting in copyright, database rights and any other intellectual property rights in respect of any data and information contained in any Report are and shall remain (subject to clause 11.1) the property of GroundSure and/or any third party that has supplied data or information used to create a Report, and that these conditions do not purport to grant, assign or transfer any such rights in respect thereof to a Client and/or a Beneficiary.

6.5 The Client shall (and shall procure that any recipients of the Report as permitted under clause 4.2 shall):

- (i) not remove, suppress or modify any trademark, copyright or other proprietary marking belonging to GroundSure or any third party from the Services;

- (ii) use the information obtained as part of the Services in respect of the subject Site only, and shall not store or reuse any information obtained as part of the Services provided in respect of adjacent or nearby sites;
 - (iii) not create any product or report which is derived directly or indirectly from the data contained in the Services (save that those acting in a professional capacity to the Beneficiary may provide advice based upon the Services);
 - (iv) not combine the Services with or incorporate such Services into any other information data or service; and
 - (v) not reformat or otherwise change (whether by modification, addition or enhancement), data contained in the Services (save that those acting in a professional capacity to the Beneficiary shall not be in breach of this clause 6.5(v) where such reformatting is in the normal course of providing advice based upon the Services), in each case of parts (iii) to (v) inclusive, whether or not such product or report is produced for commercial profit or not.
- 6.6 The Client and/or Beneficiary shall and shall procure that any party to whom the Services are made available shall notify GroundSure of any request or requirement to disclose, publish or disseminate any information contained in the Services in accordance with the Freedom of Information Act 2000, the Environmental Information Regulations 2004 or any associated legislation or regulations in force from time to time.
- 6.8 Save as otherwise set out in these terms and conditions, any information provided by one party ("**Disclosing Party**") to the other party ("**Receiving Party**") shall be treated as confidential and only used for the purposes of these terms and conditions, except in so far as the Receiving Party is authorised by the Disclosing Party to provide such information in whole or in part to a third party.

7 Liability

THE CLIENT'S ATTENTION IS DRAWN TO THIS PROVISION

- 7.1 Subject to the provisions of this clause 7, GroundSure shall be liable to the Beneficiary only in relation to any direct losses or damages caused by any negligent act or omission of GroundSure in preparing the GroundSure Materials and provided that the Beneficiary has used all reasonable endeavours to mitigate any such losses.
- 7.2 GroundSure shall not be liable for any other losses or damages incurred by the Beneficiary, including but not limited to:
- (i) loss of profit, revenue, business or goodwill, losses relating to business interruption, loss of anticipated savings, loss of or corruption to data or for any special, indirect or consequential loss or damage which arise out of or in connection with the GroundSure Materials or otherwise in relation to a Contract;
 - (ii) any losses or damages that arise as a result of the use of all or part of the GroundSure Materials in breach of these terms and conditions or contrary to the terms of the relevant User Guide;
 - (iii) any losses or damages that arise as a result of any error, omission or inaccuracy in any part of the GroundSure Materials where such part is based on any Third Party Content or any reasonable interpretation of Third Party Content. The Client accepts, and shall procure that any other Beneficiary shall accept, that it has no claim or recourse to any Data Provider in relation to Third Party Content; and/or
 - (iv) any loss or damage to a Client's computer, software, modem, telephone or other property caused by a delay or loss of use of GroundSure's internet ordering service.
- 7.3 GroundSure's total liability in contract, tort (including negligence or breach of statutory duty), misrepresentation, restitution or otherwise, arising in connection with the GroundSure Materials or otherwise in relation to the Contract shall be limited to £10 million in total (i) for any one claim or (ii) for a series of connected claims brought by one or more parties.
- 7.4 For the duration of the liability periods set out in clauses 7.5 and 7.6 below, GroundSure shall maintain professional indemnity insurance in respect of its liability under these terms and conditions provided such insurance is readily available at commercially viable rates. GroundSure shall produce evidence of such insurance if reasonably requested by the Client. A level of cover greater than GroundSure's current level of cover may be available upon request and agreement with the Client.
- 7.5 Any claim under the Contract in relation to Data Reports, Mapping and Risk Screening Reports, must be brought within six years from the date when the Beneficiary became aware that it may have a claim and in no event may a claim be brought twelve years or more after completion of such a Contract. For the avoidance of doubt, any claim in respect of which proceedings are notified to GroundSure in writing prior to the expiry of the time periods referred to in this clause 7.5 shall survive the expiry of those time periods provided the claim is actually commenced within six months of notification.
- 7.6 Any claim under the Contract in relation to Consultancy Services, must be brought within six years from the date the Consultancy Services were completed.
- 7.7 he Client accepts and shall procure that any other Beneficiary shall accept that it has no claim or recourse to any Data Provider or to GroundSure in respect of the acts or omissions of any Data Provider and/or any Third Party Content provided by a Data Provider.
- 7.8 Nothing in these terms and conditions:
- (i) excludes or limits the liability of GroundSure for death or personal injury caused by GroundSure's negligence, or for fraudulent misrepresentation; or
 - (ii) shall affect the statutory rights of a consumer under the applicable legislation.

8 GroundSure right to suspend or terminate

- 8.1 In the event that GroundSure reasonably believes that the Client or Beneficiary as applicable has not provided the information or assistance required to enable the proper performance of the Services, GroundSure shall be entitled on fourteen days written notice to suspend all further performance of the Services until such time as any such deficiency has been made good.
- 8.2 GroundSure may additionally terminate the Contract immediately on written notice in the event that:
- (i) the Client shall fail to pay any sum due to GroundSure within 28 days of the Payment Date; or
 - (ii) the Client (being an individual) has a bankruptcy order made against him or (being a company) shall enter into liquidation whether compulsory or voluntary or have an Administration Order made against it or if a Receiver shall be appointed over the whole or any part of its property assets or undertaking or if the Client is struck off the Register of Companies or dissolved; or
 - (iii) the Client being a company is unable to pay its debts within the meaning of Section 123 of the Insolvency Act 1986 or being an individual appears unable to pay his debts within the meaning of Section 268 of the Insolvency Act 1986 or if the Client shall enter into a composition or arrangement with the Client's creditors or shall suffer distress or execution to be levied on his goods; or
 - (iv) the Client or the Beneficiary breaches any material term of the Contract (including, but not limited to, the obligations in clause 4) incapable of remedy or if remediable, is not remedied within 14 days of notice of the breach.

9 Client's Right to Terminate and Suspend

- 9.1 Subject to clause 10.2, the Client may at any time after commencement of the Services by notice in writing to GroundSure require GroundSure to terminate or suspend immediately performance of all or any of the Services.
- 9.2 The Client waives all and any right of cancellation it may have under the Consumer Protection (Distance Selling) Regulations 2000 (as amended) in respect of the Order of a Report/Mapping. This does not affect the Beneficiary's statutory rights.

10 Consequences of Withdrawal, Termination or Suspension

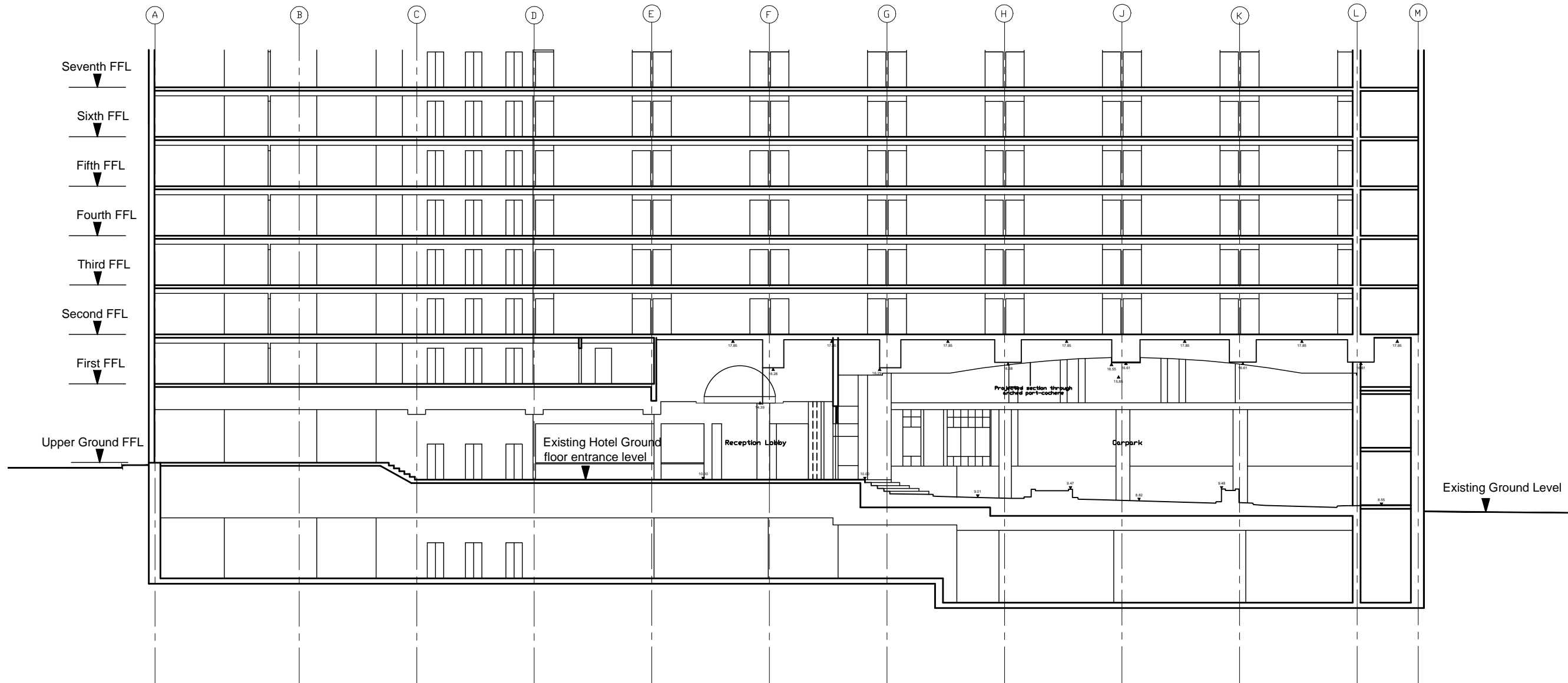
- 10.1 Upon termination or any suspension of the Services, GroundSure shall take steps to bring to an end the Services in an orderly manner, vacate any Site with all reasonable speed and shall deliver to the Client/Beneficiary any property of the Client/ Beneficiary in GroundSure's possession or control.
- 10.2 In the event of termination/suspension of the Contract under clauses 8 or 9, the Client shall pay to GroundSure all and any fees payable in respect of the performance of the Services up to the date of termination/suspension. In respect of any Consultancy Services provided, the Client shall also pay GroundSure any additional costs incurred in relation to the termination/suspension of the Contract.

11 General

- 11.1 The mapping contained in the Services is protected by Crown copyright and must not be used for any purpose outside the context of the Services or as specifically provided in these terms.
- 11.2 GroundSure reserves the right to amend these terms and conditions. No variation to these terms shall be valid unless signed by an authorised representative of GroundSure.
- 11.3 No failure on the part of GroundSure to exercise and no delay in exercising, any right, power or provision under these terms and conditions shall operate as a waiver thereof.
- 11.4 Save as expressly provided in clauses 4.2, 4.3, 6.3 and 11.5, no person other than the persons set out therein shall have any right under the Contract (Rights of Third Parties) Act 1999 to enforce any terms of the Contract.
- 11.5 The Secretary of State for Communities and Local Government acting through Ordnance Survey may enforce breach of clause 6.1 of these terms and conditions against the Client in accordance with the provisions of the Contracts (Rights of Third Parties) Act 1999.
- 11.6 GroundSure shall not be liable to the Client if the provision of the Services is delayed or prevented by one or more of the following circumstances:
- (i) the Client or Beneficiary's failure to provide facilities, access or information;
 - (ii) fire, storm, flood, tempest or epidemic;
 - (iii) Acts of God or the public enemy;
 - (iv) riot, civil commotion or war;
 - (v) strikes, labour disputes or industrial action;
 - (vi) acts or regulations of any governmental or other agency;
 - (vii) suspension or delay of services at public registries by Data Providers; or
 - (viii) changes in law.
- 11.7 Any notice provided shall be in writing and shall be deemed to be properly given if delivered by hand or sent by first class post, facsimile or by email to the address, facsimile number or email address of the relevant party as may have been notified by each party to the other for such purpose or in the absence of such notification the last known address.
- 11.8 Such notice shall be deemed to have been received on the day of delivery if delivered by hand, facsimile or email and on the second working day after the day of posting if sent by first class post.
- 11.9 The Contract constitutes the entire contract between the parties and shall supersede all previous arrangements between the parties.
- 11.10 Each of the provisions of the Contract is severable and distinct from the others and if one or more provisions is or should become invalid, illegal or unenforceable, the validity and enforceability of the remaining provisions shall not in any way be tainted or impaired.
- 11.11 These terms and conditions shall be governed by and construed in accordance with English law and any proceedings arising out of or connected with these terms and conditions shall be subject to the exclusive jurisdiction of the English courts.
- 11.12 If the Client or Beneficiary has a complaint about the Services, notice can be given in any format eg writing, phone, email to the Compliance Officer at GroundSure who will respond in a timely manner.

© GroundSure Limited January 2012

APPENDIX K



Rev Date Details By Authorised

Michael Gallagher Architects

Important note
 All dimensions in millimetres. Where dimensions are not given, drawings must not be scaled and the matter referred back to Michael Gallagher Architects.
 All dimensions and conditions are to be checked on site by the contractor prior to preparing drawings or commencing any work. The contractor is responsible for checking that there is no conflict between site dimensions and drawn dimensions.
 In the event of any detail or dimensional conflict between Michael Gallagher Architects drawings, the matter must be referred back to Michael Gallagher Architects for clarification.

Michael Gallagher Architects
 4 Alkroft Road
 London NW5 4NE
 Tel: +44 (0)20 7267 8183
 Mob: +44 (0)7922 287 940
 Email: michaelgallagherarchitects@btconnect.com
 Web: www.michaelgallagherarchitects.com

Client
 FIROKA LTD

Project
 Holiday Inn
 1 Kings Cross Road
 London WC1

Title
 Section A as Existing

Date	Drawn	Checked	Authorised
Oct 2013	MG	MG	MG

Scale
 1:250 @ A3

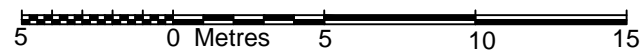
Issue status

FOR PLANNING

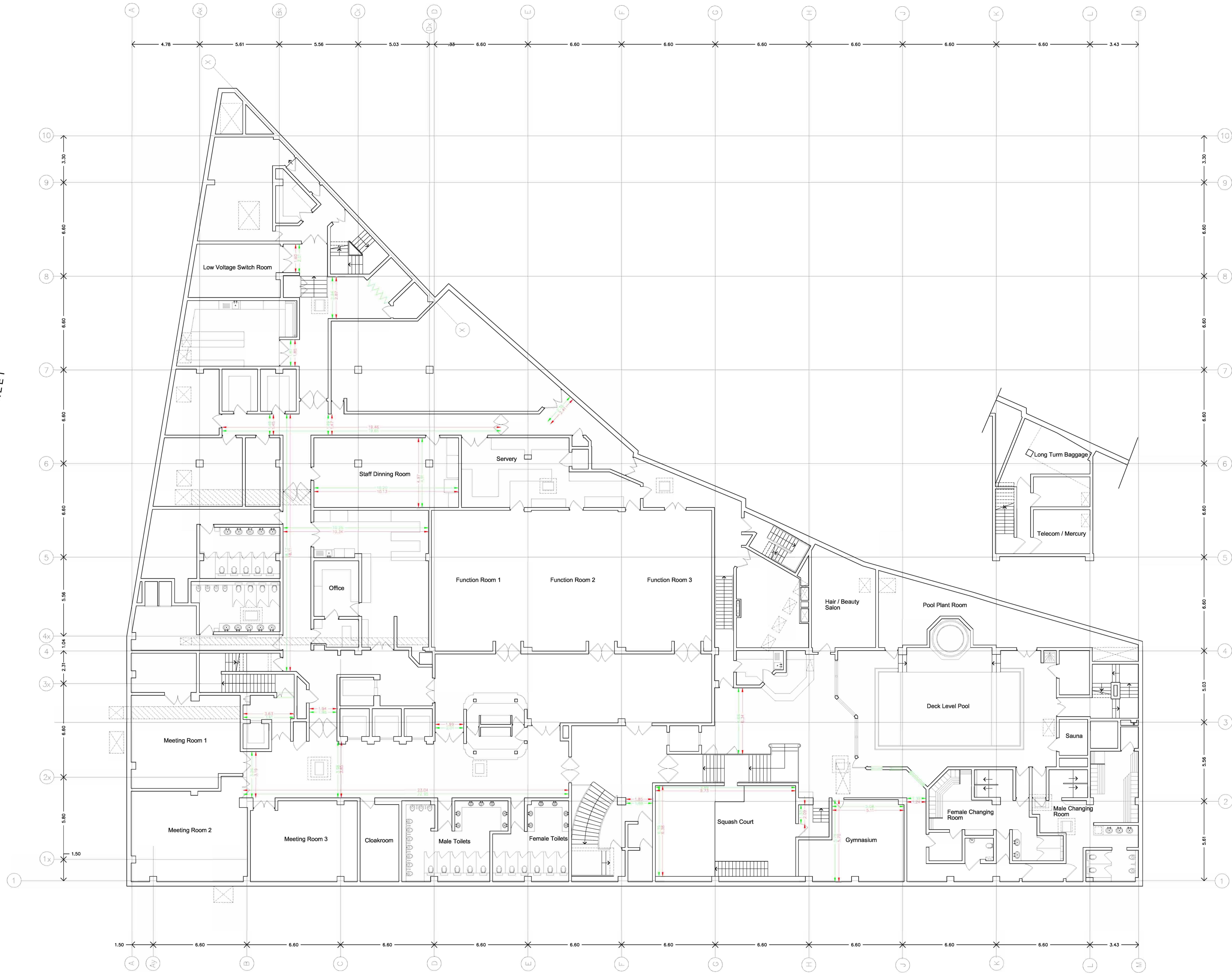
Drawing number	Rev
21013/GA-04	-

Client Drawing number

Section A as existing
 Scale 1:250



CALTHORPE STREET



KINGS CROSS ROAD

Key:
1. Red Dim Example - Measurement taken on site
1. Red Dim Example - Measurement taken from plan

Notes:
1. DRAWING COMPILED FROM DIMENSIONS AND DETAIL SHOWN ON 'SERFERT' DRAWING NO. 5456/102, REVISION N (JUNE 1990).

Basement Floor Plan:
Holiday Inn
1 Kings Cross Road
London

Client:
Firoka

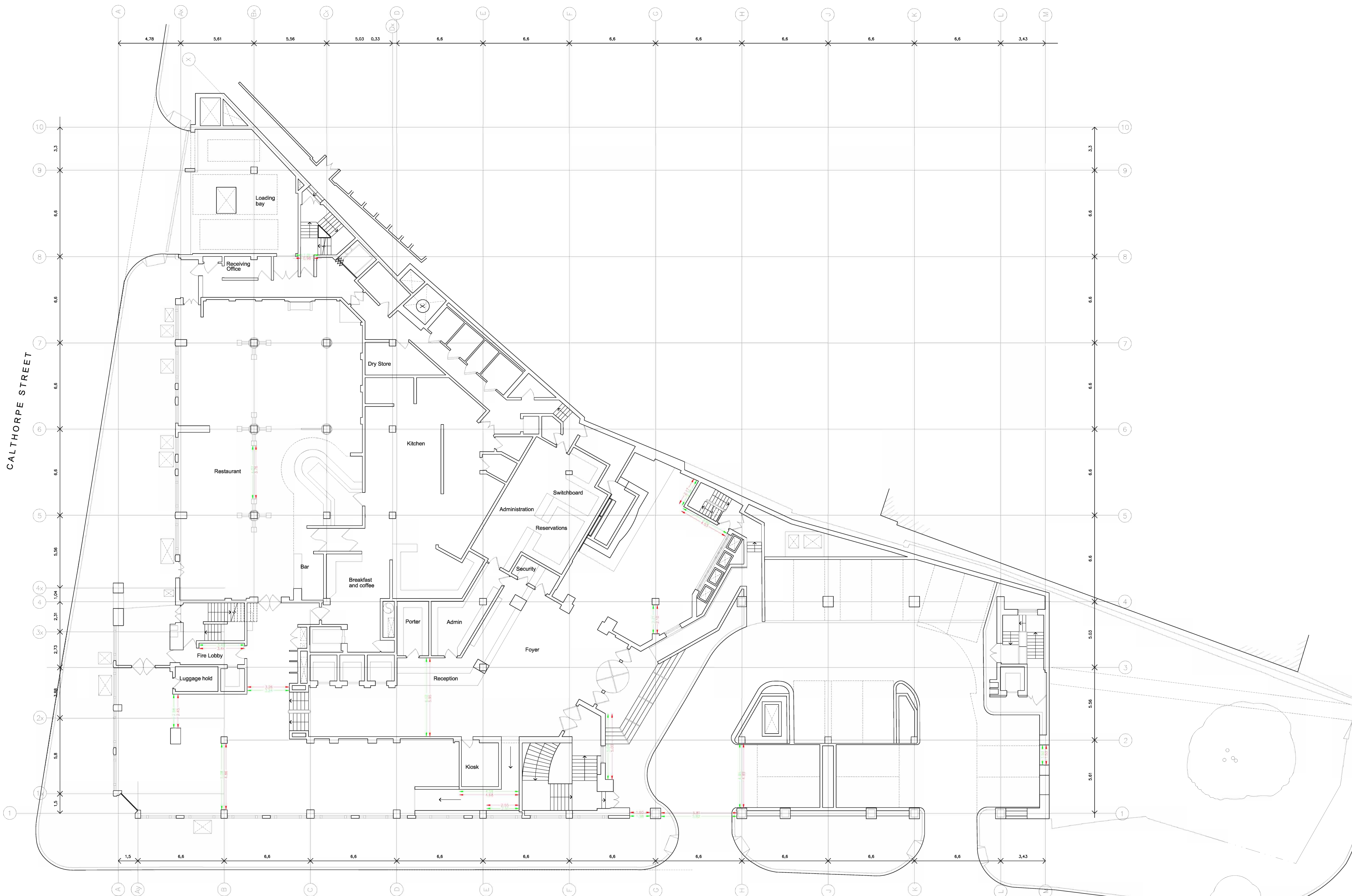
Job Number: 13080	Sheet Number: 1	Revision: -
Scale: 1 : 100	Date: May 2008	Drawn By: MB

MILTON KEYNES SURVEYS LTD.
Land & Building Surveys • 3D Laser Scanning • CAD Bureau

Datum House
41 Burners Lane South
Kite Farm
Milton Keynes
MK11 3FA

Tel : 01908 565561
Fax : 01908 261030
E-mail : mail@mksurveys.co.uk

MKS
Web : www.mksurveys.co.uk



CALTHORPE STREET

KINGS CROSS ROAD

Key:
 1. Red Dim Example - Measurement taken on site
 1. Red Dim Example - Measurement taken from plan

Notes:
 1. DRAWING COMPILED FROM DIMENSIONS AND DETAIL SHOWN ON 'SEFERT' DRAWING No. 5456/102, REVISION N (JUNE 1990).

Ground Floor Plan:
Holiday Inn
1 Kings Cross Road
London

Client:
Firoka

Job Number: 13080	Sheet Number: 2	Revision: -
Scale: 1 : 100	Date: May 2008	Drawn By: MB

MILTON KEYNES SURVEYS LTD.
 Land & Building Surveys • 3D Laser Scanning • CAD Bureau

Datum House
 41 Burners Lane South
 Kite Farm
 Milton Keynes
 MK11 3FA

Tel : 01908 565561
 Fax : 01908 261030
 E-mail : mail@mksurveys.co.uk

MKS
 Web : www.mksurveys.co.uk

APPENDIX L



CH2M
Create
Consulting
Engineers
Ltd
109-112 Temple
Chambers
London
EC4Y 0HP
Tel: 020 7461 1000
www.ch2m.com

Mo Altamash
Create Consulting Engineers Ltd
109-112 Temple Chambers, 3-7 Temple Avenue
London, EC4Y 0HP

17 March 2016

Dear Sirs,

POR SAFEGUARDING

51 Calthorpe Street, London WC1X 0HH

We acknowledge receipt of your email which confirmed the request for information of the Royal Mail (Post Office Railway) Tunnels in the vicinity of your site of interest.

We have reviewed the location of your site and based on the existing records available to CH2M it shows that the POR tunnel runs parallel your site, as indicated on the enclosed sketch which is based on the link to the building address you supplied at an approximate depth of 16.0m below ground level.

We will require that you provide us with details of proposed works at this site for our review before any works to ensure no detrimental effects on the tunnels. We may require a ground movement assessment/tunnel impact assessment, a line and level survey, tunnel condition surveys, and consideration of possible monitoring, depending on the impact of the works on the tunnel.

We are also enclosing the "Guide Lines" for working near Royal Mail Tunnel. If you need any further information please contact the undersigned on 020 3479 8086 or Mr P. Wright on 020 3479 8660.

Yours Faithfully,

Alberto Jaen-Toribio

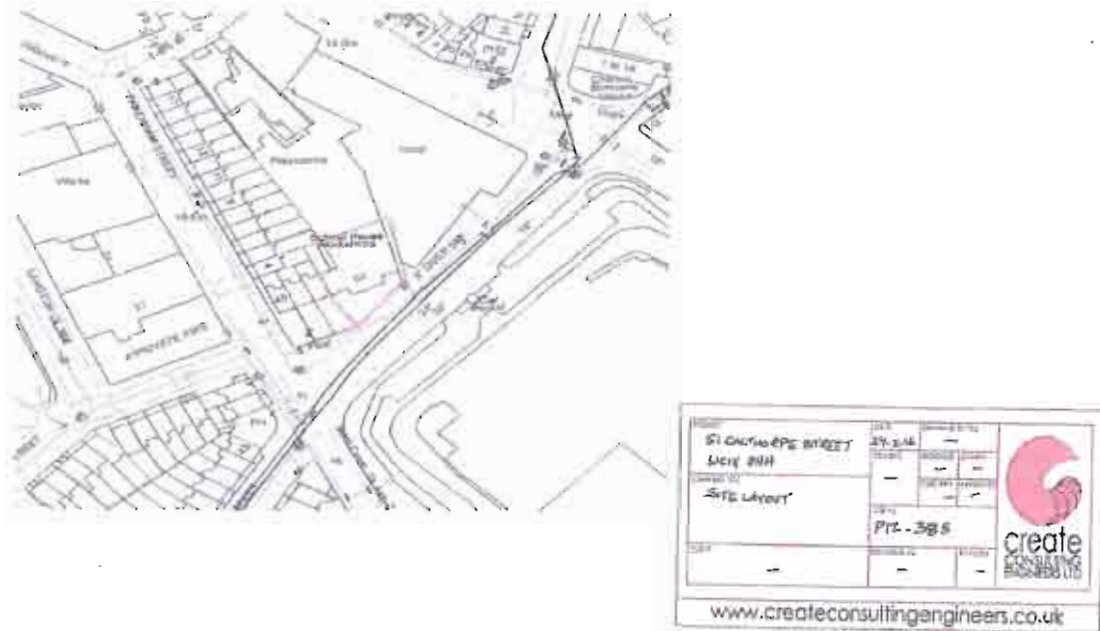


Figure 1: Site Layout (information provided by Create Consulting Engineers)



Figure 2: Boundary Line, 51 Calthorpe Street (information provided by Create Consulting Engineers)

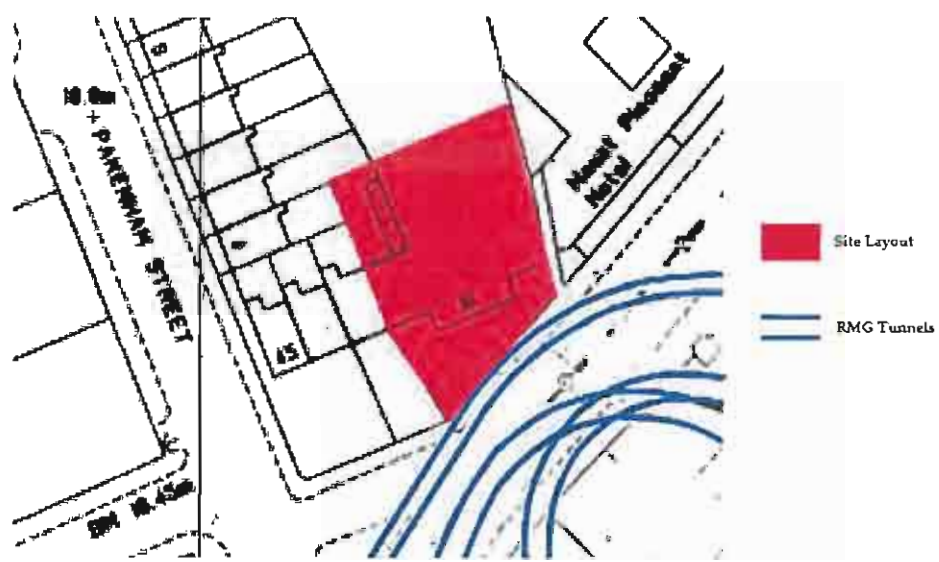


Figure 3: Site Layout of 51 Calthorpe Street showing the location of the RMG Tunnels

ROYAL MAIL GROUP LIMITED: MAIL RAIL TUNNELS

SAFEGUARDING GUIDELINES

27 June 2014

- 1) Where a Mail Rail tunnel is within the vicinity of the site of building works (no more than 50 metres in plan), it is to be treated as the property of an adjacent owner and these guidelines for safeguarding the tunnel are to be applied.
- 2) No works may be carried out within 50 metres of the tunnel until acceptance of the works is obtained from Royal Mail Group Limited (“Royal Mail”).
- 3) Halcrow Group Limited (“Halcrow”) acts as agent for Royal Mail in relation to all technical and engineering matters relating to Mail Rail.
- 4) Works should not be detrimental to the structure of the Mail Rail tunnel. If damage occurs to the structure due to the works, the developer (or its contractor carrying out the works) will be liable to make good such damage and for all losses associated with the damage and any repair.
- 5) The following are technical guidelines for reducing the risk of damage to the Mail Rail tunnel from piling and/or other construction works:
 - a. The minimum recommended horizontal clearance to the tunnel is 2 metres for bored piles and/or other construction and 10 metres for driven piles.
 - b. The minimum recommended vertical clearance between the crown of the tunnel and toe of the pile or foundation is 4 metres for bored piles and other construction and 10 metres for driven piles.
 - c. Joint condition surveys of the tunnel in the vicinity of the works are to be carried out before and after any works.
 - d. The works and/or new structures are not generally to cause a variation of more than 10% in the loading on the tunnel, as compared with the existing loading. In no case should the tunnel deformation be excessive or should the stresses in the tunnel lining exceed permissible tensile and compressive stresses (in each case by reference to London Underground’s engineering standards at the time of the works). Calculations demonstrating the load variations, anticipated deformations, and/or stresses are to be submitted to Halcrow for review and approval.
 - e. Piling and other construction works are not to cause vibration on the tunnel in excess of 20mm/sec. A method statement and an outline on the checks for position and verticality of piles are to be submitted to Halcrow for review and approval.
 - f. Where bored piles are proposed to be within 5 metres of the tunnel (measured horizontally), or if either party believes that there is a risk to the tunnel, the following additional provisions will apply:
 - a position survey of the tunnel will be required, to check its position relative to the surface details;
 - a contractor’s method statement must be submitted at least one month before the works to

- demonstrate that the tunnel is adequately safeguarded;
 - all excavation and concreting for such piles are to be carried out within a 15 hour period.
- g. Where any works adjacent to the tunnel may cause deformations, monitoring within the tunnel will be required during the works, for a suitable period (usually 3 months) before the works to establish any background trends, and for a period after the works until movement has effectively ceased.
- 6) Where works are proposed at ground level which will affect existing access to and egress from the tunnel (for people, conduits or ventilation) such access and egress must be maintained during the period of works and reinstated in no less convenient form (practically and legally) at the end of such works.
- 7) The following conditions will apply in relation to liaison with Halcrow and review of the works:
- a. Royal Mail and Halcrow require a minimum of two weeks' notice to arrange site visits or other access to the tunnel.
 - b. All of the Mail Rail tunnel information must be treated as strictly confidential and disclosed only to those who need to know it.
 - c. The developer and/or its agents will be required to pay for any of the above items of work which are required, including the expenses of Halcrow and of any other consultants employed by Royal Mail.

APPENDIX M



London Underground
Infrastructure Protection

3rd Floor
Albany House
55 Broadway
London SW1H 0BD

www.tfl.gov.uk/tube

Your ref:

Our ref: 20403-SI-11-301115

Mo Altamash
Create Consulting Engineers
Mo.Altamash@createconsultingengineers.co.uk

30 November 2015

Dear Mo,

51 Calthorpe Street London WC1X 0HH

Thank you for your communication of 26th November 2015.

I can confirm that London Underground assets will not be affected by works in this area.

The site above is located near the Post Office Railway tunnels. Therefore I advise that you also consult:

Kathryn Sullivan
DTZ
125 Old Broad Street
London
EC2N 1AR
Tel: 020 3296 3365
Email: RMG.mailrail@DTZ.com

If I can be of further assistance, please contact me.

Yours sincerely

Shahina Inayathusein
Information Manager
Email: locationenquiries@tube.tfl.gov.uk
Direct line: 020 7918 0016

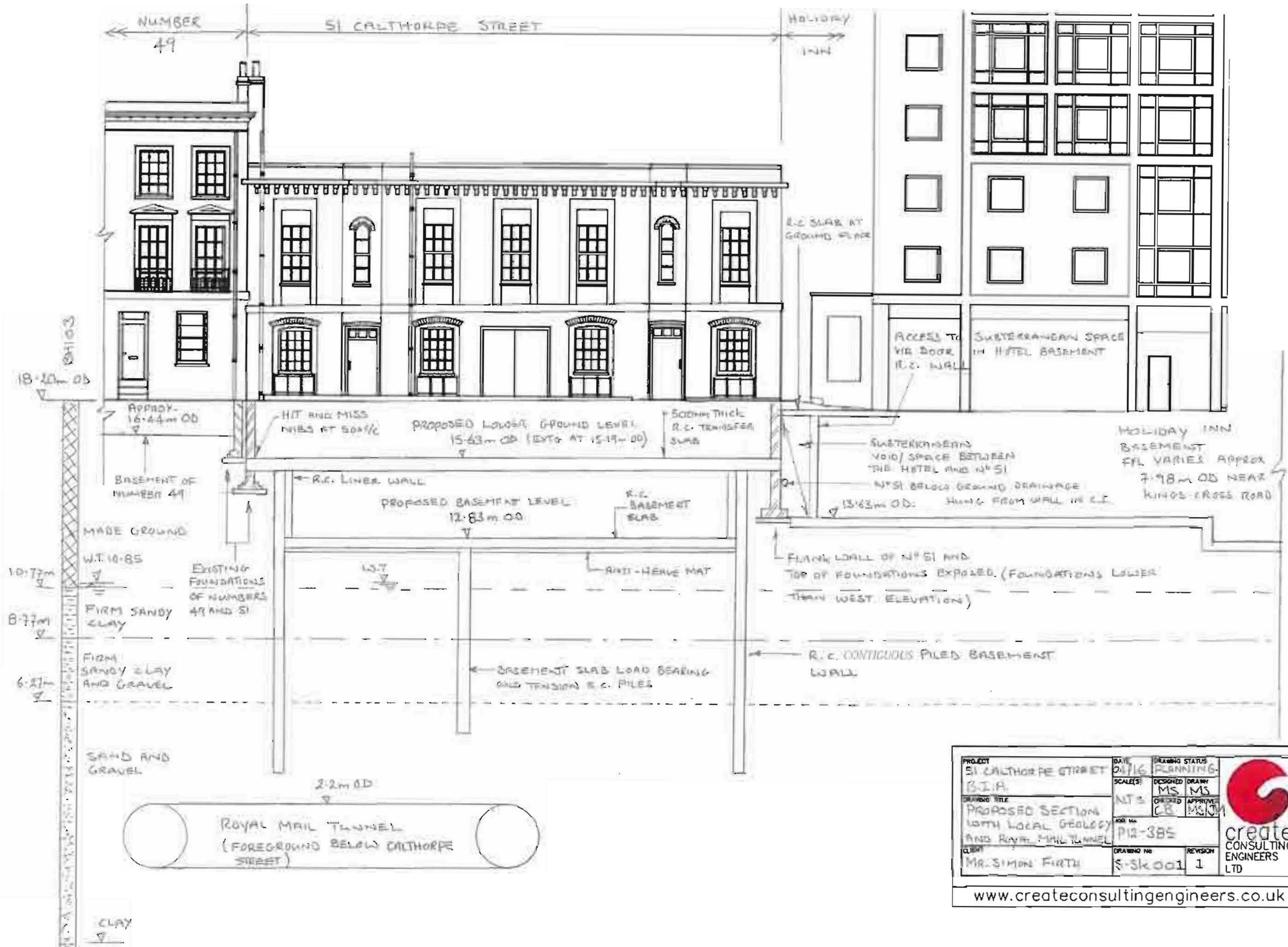
London Underground Limited
trading as London Underground
whose registered office is
55 Broadway
London SW1H 0BD


Registered in England and Wales
Company number 1900907

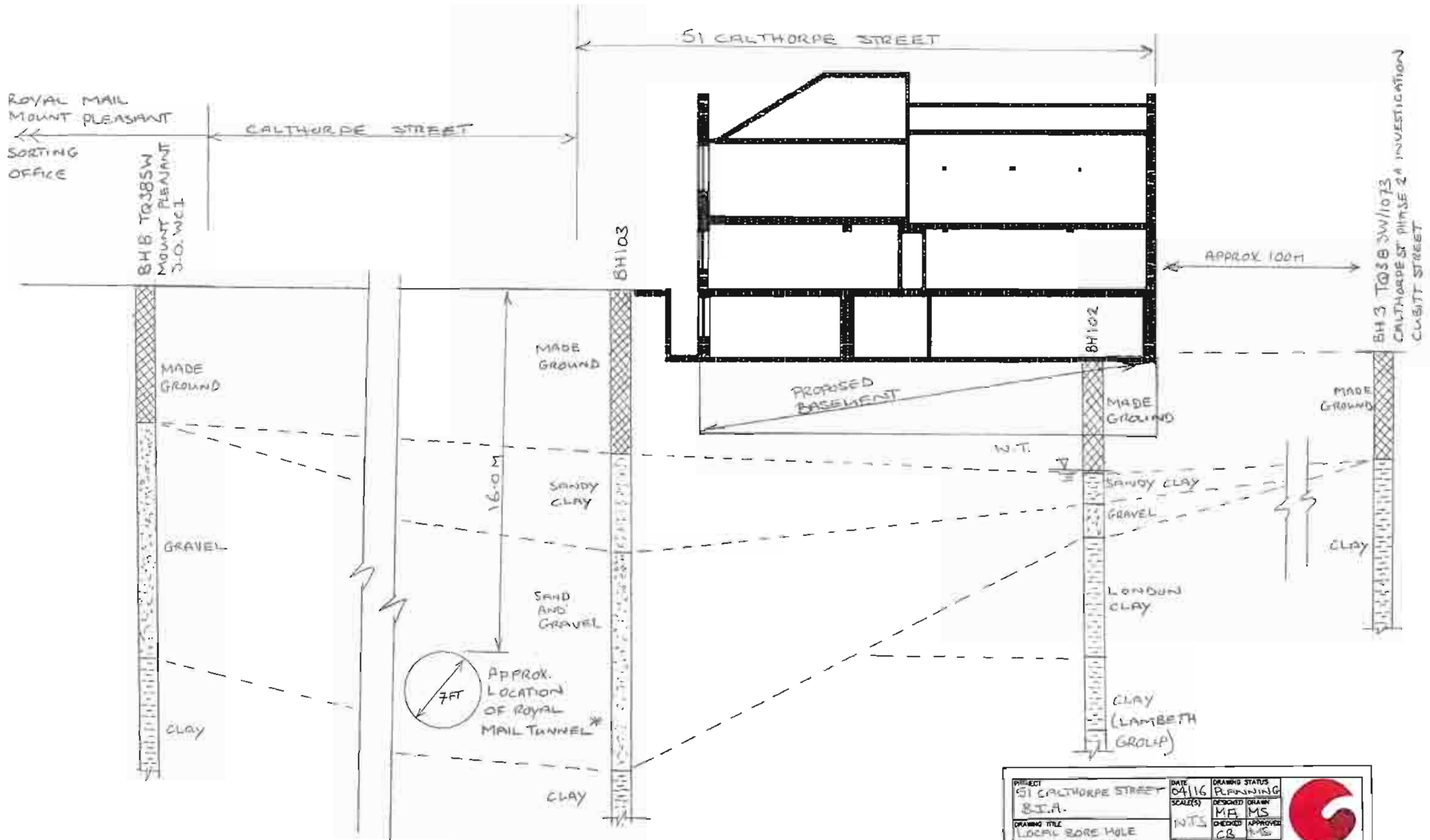
VAT number 238 7244 46

London Underground Limited is
a company controlled by a local
authority within the meaning of
Part V Local Government and
Housing Act 1989. The controlling
authority is Transport for London.


APPENDIX N



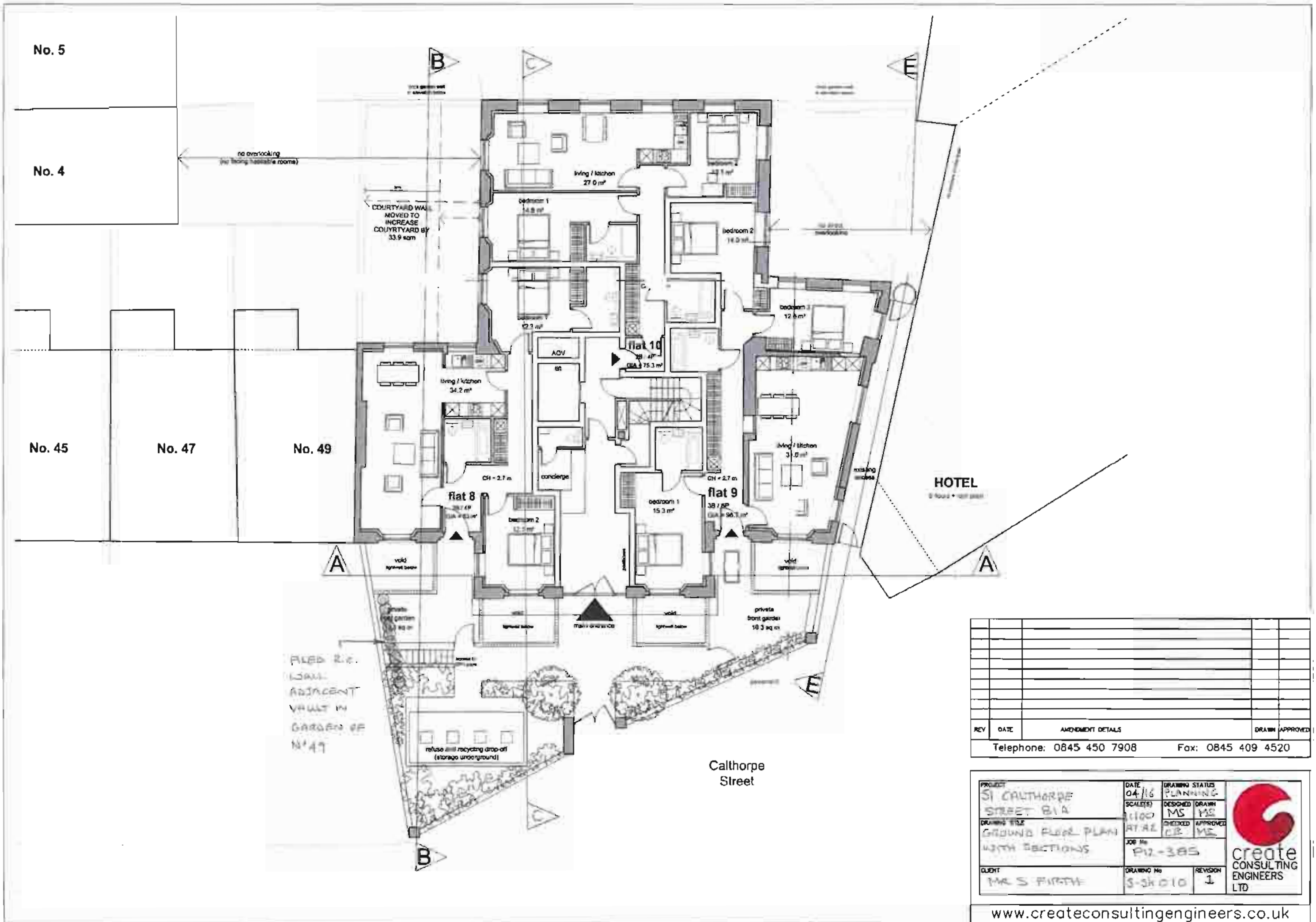
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DESIGNED BY MS	SCALE(S)	DESIGNED DRAWN MS MS	
DRAWING TITLE PROPOSED SECTION WITH LOCAL GEOLOGY AND ROYAL MAIL TUNNEL	NTS	CHECKED APPROVED CB MS/CM	
CLIENT MR SIMON FIRTH	DRAWING NO S-skool	REVISION 1	



* ACTUAL POSITION UNDER CALTHORPE STREET VARIES


PROJECT 51 CALTHORPE STREET B.I.A.	DATE 04/16	DRAWING STATUS PLANNING	 create CONSULTING ENGINEERS LTD	
DRAWING TITLE LOCAL BORE HOLE SUMMARY, LOCAL GEOLOGY / GROUND CONDITIONS	SCALE(S) N.T.S.	DESIGNED MA		DRAWN MS
CLIENT MR. SIMON FIRTH	JOB No PI2-385	CHECKED CB		APPROVED MS
	DRAWING No S-sk-002	REVISION 1		

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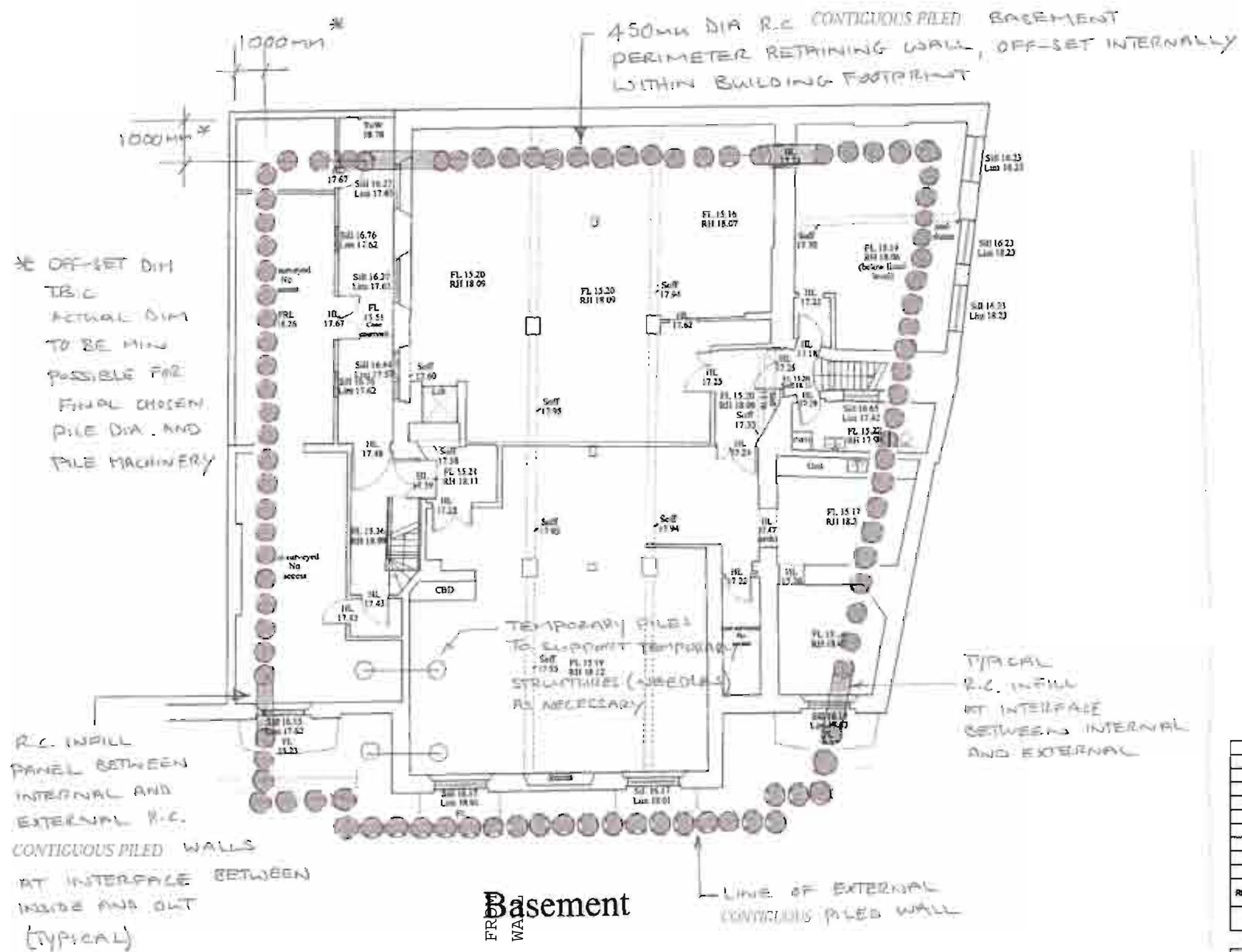


REV	DATE	AMENDMENT DETAILS	DRAWN	APPROVED

Telephone: 0845 450 7908 Fax: 0845 409 4520

PROJECT 51 CALTHORPE STREET B1A	DATE 04/16	DRAWING STATUS PLANNING	 create CONSULTING ENGINEERS LTD
DRAWING TITLE GROUND FLOOR PLAN WITH SECTIONS	SCALE(S) 1:100	DESIGNED MS	
CLIENT MR S FIRTH	AT:AZ	CHECKED CB	
DRAWING No S-3010	JOB No P12-385	APPROVED MS	


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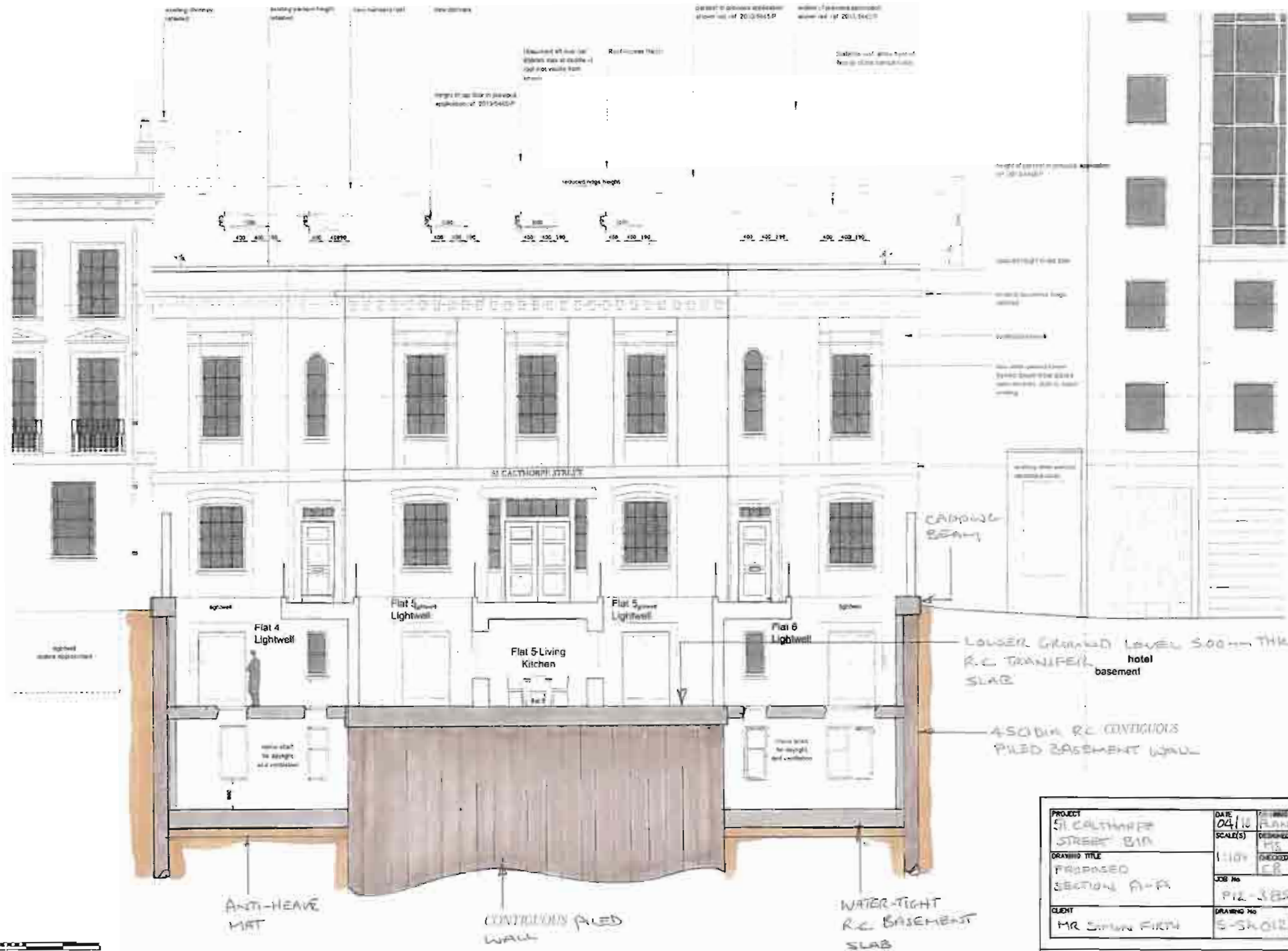
Basement
 1500 mm MIN FRM
 No. 49 PARTY WALL


REV	DATE	AMENDMENT DETAILS	DRAWN	APPROVED

Telephone: 0845 450 7908 Fax: 0845 409 4520

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DRAWING TITLE BASEMENT SECANT PILED RET. WALL	SCALE(S) N1:3	DESIGNED MS	DRAWN MS	
CLIENT MR. S FIRTH	JOB No 192-33C	CHECKED CB	APPROVED MP	
	DRAWING No S-56011	REVISION 1		

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PROJECT 51 CALYNOPI STREET B1A	DATE 04/10	DESIGNED MS	PLANNING STATUS PLANNING C.	 create CONSULTING ENGINEERS LTD
DRAWING TITLE PROPOSED SECTION A-A	SCALE(S) 1:100	CHECKED CR	APPROVED MS	
CLIENT MR SIMON FULTON	JOB No PIZ-385	DRAWING No S-SK012	REVISION 1	

To: [unclear] Project
4/24/2013

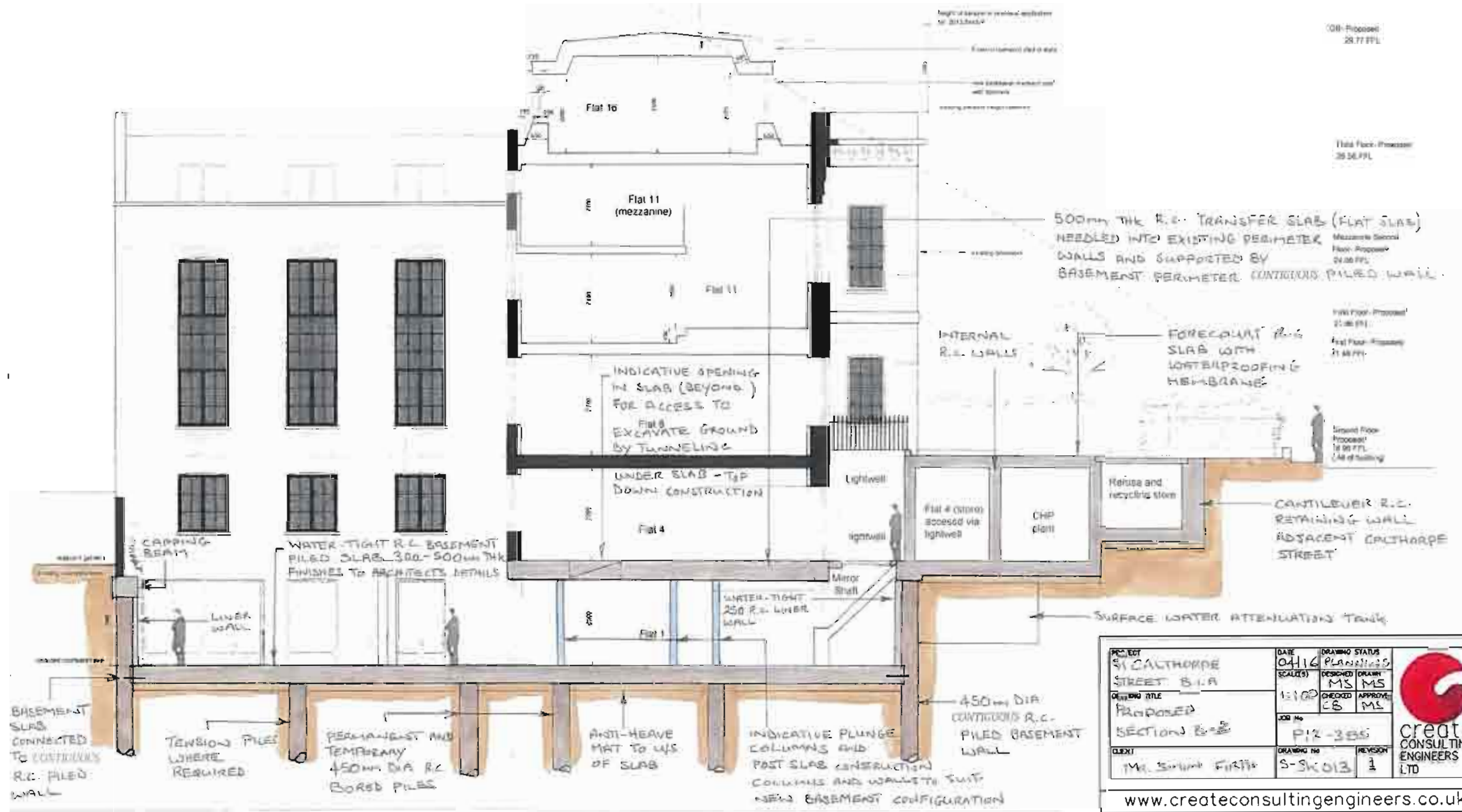
OH-Proposed
28.77 FFL

Total Floor-Proposed
29.56 FFL

Fifth Floor-Proposed
27.00 FFL

First Floor-Proposed
21.48 FFL

Ground Floor-Proposed
14.95 FFL
(4.4 of existing)



500mm THK R.C. TRANSFER SLAB (FLAT SLAB) NEEDED INTO EXISTING PERIMETER WALLS AND SUPPORTED BY BASEMENT PERIMETER CONTINUOUS PILED WALL.

FORECOURT R.C. SLAB WITH WATERPROOFING MEMBRANE

INDICATIVE OPENING IN SLAB (BEYOND) FOR ACCESS TO EXCAVATE GROUND BY TUNNELING

UNDER SLAB - TOP DOWN CONSTRUCTION

WATER-TIGHT R.C. BASEMENT PILED SLAB 300-500mm THK FINISHES TO ARCHITECTS DETAILS

WATER-TIGHT 250 R.C. LINER WALL

CANTILEVER R.C. RETAINING WALL ADJACENT CALTHORPE STREET

SURFACE WATER ATTENUATION TANK

BASEMENT SLAB CONNECTED TO CONTIGUOUS R.C. PILED WALL

TENSION PILES WHERE REQUIRED

PERMANENT AND TEMPORARY 450mm DIA R.C. BORED PILES

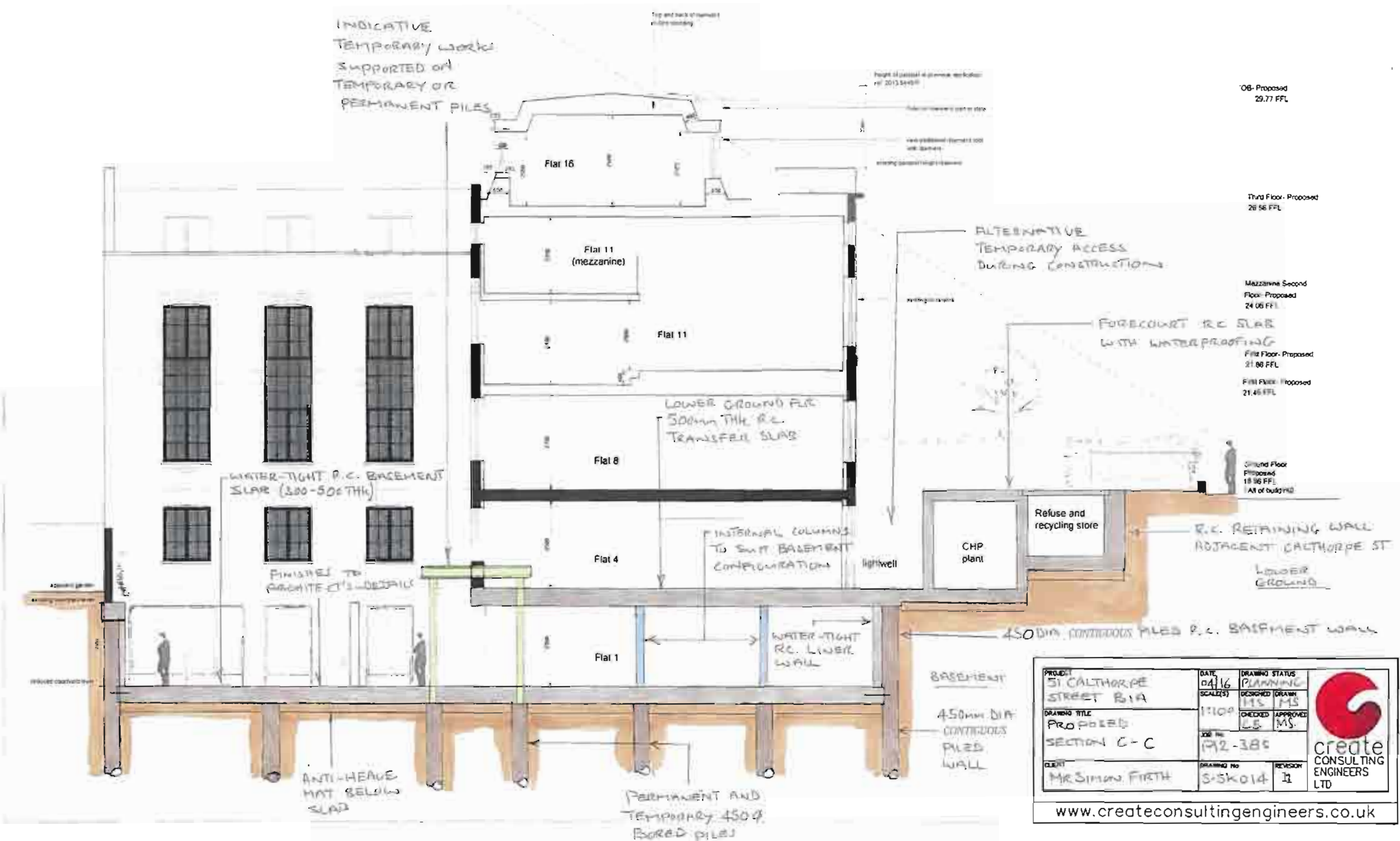
ANTI-HEAVE MAT TO UPS OF SLAB


INDICATIVE PLUNGE COLUMNS AND POST SLAB CONSTRUCTION COLUMNS AND WALLS TO SUIT NEW BASEMENT CONFIGURATION

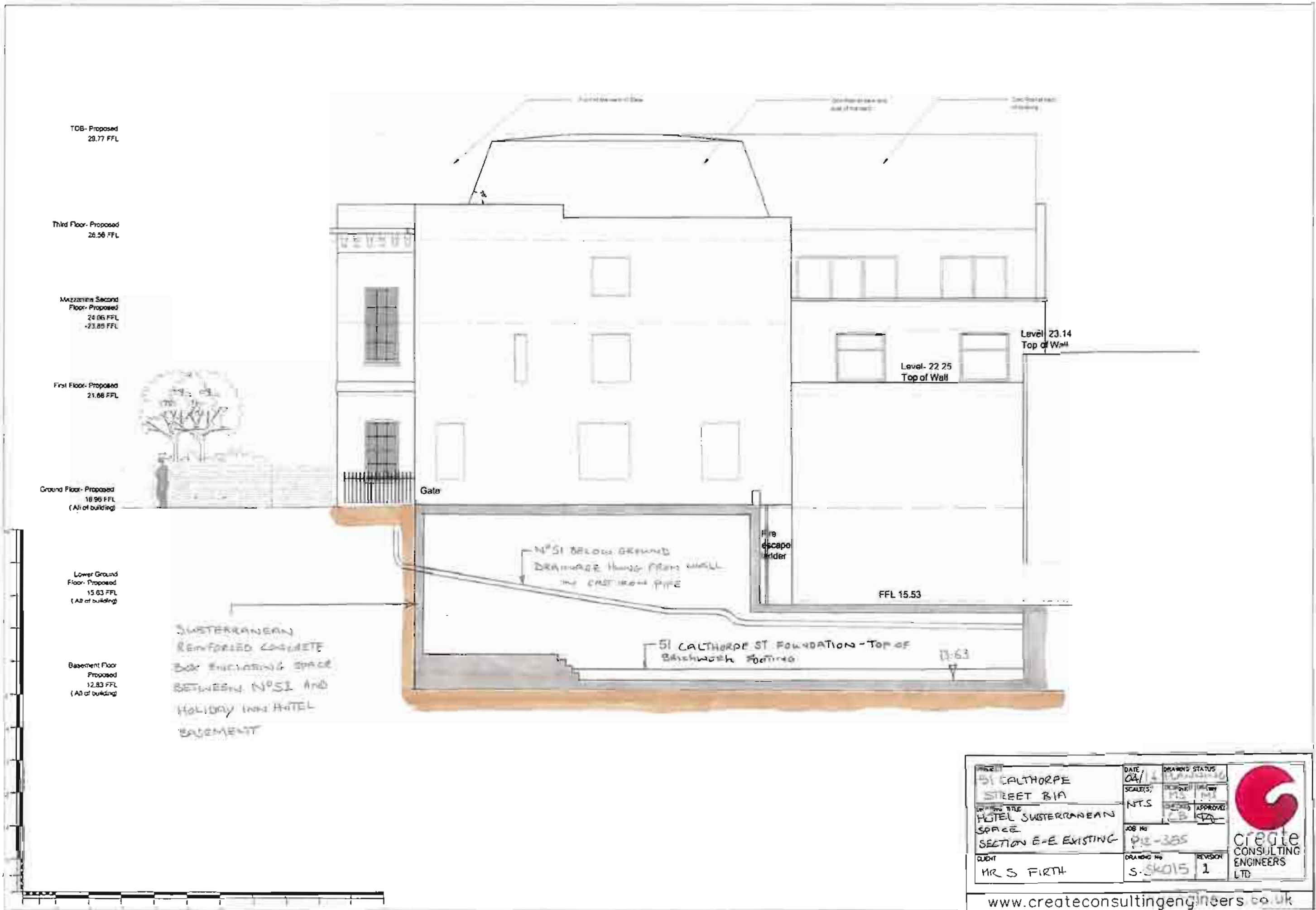
450mm DIA CONTIGUOUS R.C. PILED BASEMENT WALL



PROJECT 51 CALTHORPE STREET, B.L.A	DATE 04/16	DRAWING STATUS PLANNING 5	
	SCALE(S) 1:100	DESIGNED MS MS	
DRAWING TITLE PROPOSED SECTION B-B	CHECKED CS	APPROVED MS	create CONSULTING ENGINEERS LTD
	JOB NO P12-355	REVISION 1	
CLIENT Mr. Simon Firth	DRAWING NO S-SK013	REVISION 1	

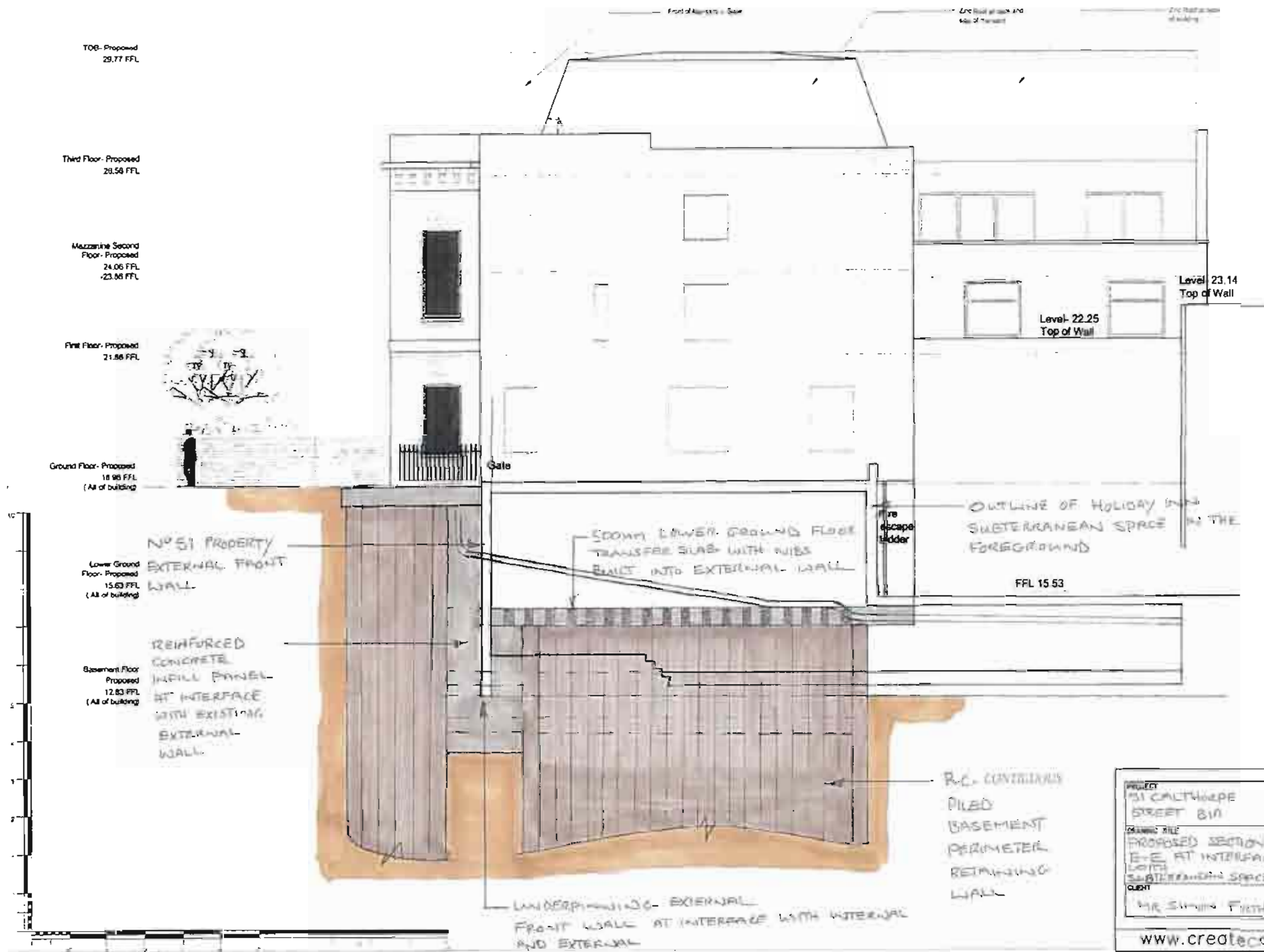
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PROJECT 51 CALTHORPE STREET BIA	DATE 04/16	DRAWING STATUS PLANNING	
	SCALE(S)	DESIGNED (DRAWN) MS (MS)	
DRAWING TITLE PROPOSED SECTION C-C	1:100	CHECKED (APPROVED) LS (MS)	create CONSULTING ENGINEERS LTD
	JOB NO. 172-380	REVISION 1	
CLIENT MRS SIMON FIRTH	DRAWING NO. S-SK014		



PROJECT 51 CALTHORPE STREET BIA	DATE 04/12	DRAWING STATUS PLANNING	 create CONSULTING ENGINEERS LTD
CLIENT TITLE HOTEL SUBTERRANEAN SPACE SECTION E-E EXISTING	SCALE(S) NTS	CHECKED MS DRAWN CB APPROVED 	
CLIENT MR S FIRTH	JOB NO P12-385	DRAWING NO S. SK015	REVISION 1



PROJECT	DATE	DRAWING STATUS		 create CONSULTING ENGINEERS
NO 51 CALTHORPE STREET B11	24/16	DESIGNED	DRAWN	
DRAWING TITLE	SCALE(S)	MS	MS	
PROPOSED SECTION E-E AT INTERFACE LOWER SUBTERRANEAN SPACE	NOT	FORWARDED	APPROVE	
CLIENT	JOB No	REVISION		
MR SIMON FISH	D12-385	DRAWING No	3-3016	3

APPENDIX O



Create Consulting Engineers Limited,
109-112 Temple Chambers, 3-7 Temple Avenue, London EC4Y 0HP
Tel: 0207 822 2300
Email: www.createconsultingengineers.co.uk

Photo 1: View of subterranean space between Holiday Inn and 51 Calthorpe Street at basement level



Photo taken with back to rear of Calthorpe Street. Brick wall (left of photo) is the external basement face of 51 Calthorpe Street). Note the suspended sewer on left is assumed to serve the front lightwell(s) of 51. Concrete wall (right) is the external basement wall of the Holiday Inn. The suspended sewer on the right drains emergency escape passageway between the 2 properties at ground level.

Photo 2: View of rear of the subterranean space between Holiday Inn and 51 Calthorpe Street.



View beneath the rear lightwell between 51 Calthorpe Street and the Holiday Inn



**Create Consulting Engineers Limited,
109-112 Temple Chambers, 3-7 Temple Avenue, London EC4Y 0HP
Tel: 0207 822 2300
Email: www.createconsultingengineers.co.uk**

Photo 3: Wall of 51 Calthorpe basement



View looking towards Calthorpe Street from within
subterranean space