

TYPICAL SECTION ACROSS THE SITE  
 TP 25.11.21

<u>Line &amp; Level</u>	<u>Condition Survey</u>	<u>Buried Services Survey</u>	<u>STC 25 Manhole Survey</u>	<u>Flow Monitoring</u>	<u>Topo</u>
Infotec	Infotec	Infotec	Infotec	Onsite	Infotec
Onsite	Onsite	Onsite	Onsite	Environmontel	Onsite
Plowman Craven	Enviromontel	Plowman Craven	M J Rees	McAllister Group	Plowman Craven
Enviromontel	M J Rees	M J Rees	Plowman Craven		MJ Rees
M J Rees	Plowman Craven	McAllister Group	McAllister Group		McAllister Group
McAllister Group	McAllister Group				

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#### Guidance notes

When selecting a contractor please ensure activities that require access into the Trunk Sewer network (Man Entry sewers 1200mm and above) Regulation 4 of the confined space regulations. All confined space entries must be completed by not entering the confined space unless access is absolutely necessary. **Note:** Completing the activity by not accessing the network will speed the process for your activity. If you are unable to complete the work from outside then you must minimise the risk as much as possible. By the following steps.

- Not entering (no risk) In line with regulation 4.
- A entry, winch entry (Access to landing or side entry to deploy equipment)
- B Entry, coming off line. may be required for long and multi stage side entries, secondary access. (Access to landing or side entry to deploy equipment)

#### Pre engagement

There may be a requirement to complete a pre engagement prior to submitting rams, This will provide an opportunity for the contractor to gather information to develop rams, Slide pack for the IAB review and complete the works as safe as possible. Once again this will speed up the process as we may be able to rely on previous information we currently hold.

#### Information and data

On completion, Operations will require a copy of the survey information for our technical records.

#### IAB

Low complexity – Local approval – RAMS approval

Medium / High Risk – IAB approval – Presentation required

#### Approved contractor matrix

Please select from the approved contractors list only. If you would like to choose a contractor that is not on this list the contractor must attend IAB presentation. Please contact the planning team for information.

#### Sub-Contractors

Sub-contractors can be used but the sub-contractors will be the responsibility of the main named contractors on the approved list.

#### Safety Cover

For man entries into the sewer, safety cover will be required. An example of this cost would be £2 – £2.5k for a safety team of 5 men. Depending on the type of entry and complexity of work the cost may be more.



# Guidance for working near our assets

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## 1 Introduction

Are you planning to pile within 15m of our pipes, position heavy loads, excavate, tunnel or undertake significant dewatering adjacent to or over our assets? Do you know these and other similar activities can actually cause damage to and subsequent failure of the assets, resulting in compromised levels of service to customers, flooding, damage to property, compromised safety of our operatives and third parties and even fatalities?

Where an asset cannot be diverted or relocated either temporarily or permanently to accommodate your works, we will require an impact assessment to be undertaken to ensure that the consequences of your works will have as low as reasonably practicable (ALARP) risk to our assets. Depending on your project, you may require additional approvals from us, such as [build over or close to public sewers](#) which outlines the requirements for building over or within 3m of our sewers. No development or structure should be built within 5m of water transmission (trunk) mains or 3m of water distribution mains.

This guidance is intended to provide preliminary advice to you if you wish to undertake work that may impact our assets. It is strongly recommended that the client for the works or their representatives contact [Thames Water's Developer Services](#) (Customer Led unit) for more specific discussions and guidance.

In general terms we will require that your proposed works:

- i) Do not interfere with the delivery of services to our customers both during and after the completion of activities.
- ii) Do not reduce the whole life value of our apparatus: That is, the apparatus will not suffer damage, loss of capacity, or be otherwise downgraded.

- iii) Do not inhibit or otherwise prevent maintenance and repair to our apparatus.

## 2 Works that can impact our assets and cause damage

The following are examples of works that can negatively impact our assets and result in damage. This is not an exhaustive list. If in doubt about the potential impact of your works, please contact us:

- Piling – driven or displacement piles (hammer, sheet) and bored or replacement piles (continuous flight auger, rotary etc.)
- Loading – cranes, piling rigs, self-propelled modular transporters (SPMT), abnormal loads (defined as vehicles with weight more than 44000kg or an axle load of more than 10000kg for a single non-driving axle and 11500 for single driving axle.
- Excavations, tunnelling, dewatering.
- Demolitions

## 3 What will be required of you

Whilst requirements for different works may differ, the following will be required as a minimum if your scheme is deemed to pose a risk to our assets:

- Engineering Impact Assessment by you and reviewed by us. See the [Assessment Criteria](#) included in this document which is provided for guidance.
- Pre and post work surveys (CCTV surveys, manhole surveys, trial holes, leakage surveys, line & level etc.) to confirm that the assets have not been compromised as a result of your works.
- Results of monitoring (vibration, ground movement, strain etc.) as appropriate during the course of your works.

### 3.1 Piling



*Continuous flight auger method of piling*

If your scheme involves any form of piling:

- You will need to request asset records from [Thames Water Property Searches](#) showing the types and number of apparatuses in and around your proposed site. The accuracy of the position or depth of any apparatus on asset record plans cannot be guaranteed.
- The outer surface of the apparatuses that may be affected must be defined at ground level before works commence.
- Driven piles shall be installed no closer than 15 metres from the pipe measured between the outside face of the pile and the outside face of the pipe.
- Bored or augered piles shall be at least three metres or 1.5 times the diameter of the pile, whichever is greater, from the pipe measured between the outside face of the pile and the outside face of the pipe.

- Piles adjacent to a pipe must be founded at a level not less than 1.5 m below the underside of it. Any frictional resistance of the pile above a line drawn upwards at 45 degrees from the underside of the pipe should be ignored when calculating the load carrying capacity of the pile.
- All boring operations must be controlled to ensure that the minimum of vibration is transmitted to the apparatus. A peak particle velocity (PPV) of 10mm/s is the maximum that should be recorded at the face of the apparatus.
- Requirements for other types of piles such as impact hammer or vibrating hammer need to be considered on an individual basis, dependant on the nature and condition of the pipe.
- Piles forced or otherwise jacked into place can cause abnormal loadings on pipes below and should be subject specific assessment.

### 3.2 Loading



*Crane positioned on riggers, transferring loading to the ground*

If your scheme involves the placing or siting of loads such as cranes/outrigger, piling rigs and other heavy equipment in the vicinity of our apparatuses:

- You will need to request asset records from [Thames Water Property Searches](#) showing the

types and number of apparatuses in and around your proposed site. You may need to physically identify the location and depth of the apparatuses. The accuracy of the position or depth of any apparatus on asset record plans cannot be guaranteed.

- The proposed load shall be superimposed to enable visualisation of the position in relation to our pipes and other apparatuses.
- The ALARP risk approach for this type of work is to position the loads so that they do not bear upon our apparatus. This might be achieved by keeping the load-bearing supports outside an area defined by drawing 45 degree lines upward and away from the pipe. For buildings, and in some circumstances crane outriggers, this may also be achieved by bridging or piling thereby carrying the loads on ground beneath or to the side of the apparatus. Where it is not possible to keep loads outside the zone of influence then other methods to calculate the impact will be required (e.g. Boussinesq pressures beneath loaded areas). A complete impact assessment covering the following calculations will be required:-
- Determine the longitudinal ground movement profile cause by the application of the proposed loads. From this, derive the worst case tensile stresses in the pipe and joint rotation
- Consider the crushing effects of the proposed loads on the pipes. Where loads may be higher than a basic HGV axle load (11.5 tonnes), an assessment should be made. This may follow the methods given in 'A guide to design loadings for buried rigid pipes by Young and O'Reilly, Transport & Road Research Laboratory, HMSO 1987.
- Calculate the increase in strain on brick sewers cause by the application of the proposed loads.

### 3.3 Abnormal Load Transport



*Abnormal load being transported on a road*

If your scheme involves the movement of very heavy loads or [abnormal loads](#) which are likely to traverse our apparatuses:

- You will need to request asset records from [Thames Water Property Searches](#) showing the types and number of apparatuses along the route of the load transport. The accuracy of the position or depth of any apparatus on asset record plans cannot be guaranteed.
- A scaled/dimensioned drawing showing all axles and the anticipated loads they will carry will need to be submitted.
- If the loads are to pass over our assets, a risk assessment would be required outlining the protective measures in place to reduce or alleviate the risk of damage.
- If the axle loads are greater than the maximum allowable HGV load (11.5 tonnes), an impact assessment is likely to be necessary.
- We would need a confirmation of the route and date of the load transport.

### 3.4 Excavation, Tunnelling, Dewatering etc.



*Deep excavation using heavy machinery*

If your scheme involves excavation, tunnelling, dewatering etc. near or over our apparatuses:

- You will need to request asset records from [Thames Water Property Searches](#) showing the types and number of apparatuses in the vicinity of your proposed excavation site.
- You will need to physically identify the location and depth of the assets. The accuracy of the position or depth of any apparatus on asset record plans cannot be guaranteed.
- Ground movement analysis shall be undertaken to determine the potential ground movement to occur and the resulting strains, joint rotations and joint pull-out. The analysis should include profiles of the pipe movements, strains and joint rotations within the zone of influence of the construction works.
- The impact assessment should include a clear and specific section and plan drawings showing the proposed excavation depth and the relative vertical and horizontal positions of our apparatus.
- For excavations over our assets including water tunnels and sewers subject to surcharge, you will need to establish the impacts of unloading of the

ground over the apparatus. Please consult with us at an early stage of your design process.

### 3.5 Demolition



*Demolition using explosives*

If your scheme involves demolition in the vicinity of our apparatuses:

- You will need to request asset records from [Thames Water Property Searches](#) showing the types and number of apparatuses in the vicinity of your proposed demolition site.
- You may need to physically identify the location and depth of the apparatuses. The accuracy of the position or depth of any apparatus on asset record plans cannot be guaranteed.
- All demolition operation must be controlled to ensure that the minimum of vibration is transmitted to the pipe. A peak particle velocity (PPV) of 10mm/s is the maximum that should be recorded at the face of the apparatus.
- Ground movement analysis shall be undertaken to determine the potential ground movement to occur and the resulting strains, joint rotations and joint pull-out. The analysis should include profiles of the pipe movements, strains and joint rotations within the zone of influence of the demolition works.



#### 4 Assessment Criteria Guidance

The criteria given below are suggested to facilitate the preparation of impact assessment documents in respect of our existing apparatuses. They are for guidance only and represent levels of change in strain and joint rotation below which the risk of significant damage may be considered negligible. It should be noted that it is the Designer’s responsibility to select appropriate values for specific assessments.

Values lower than those detailed in the tables below are likely to be acceptable to us. However, higher values would require justification that the risk of damage remains negligible. We do not guarantee that even lower values will not result in damage. If alternative criteria values are considered to be appropriate by Designers, it is suggested that we are consulted as early as possible in the assessment process.

**Table 1 - Assessment Criteria for Existing Thames Water Pipeline and Sewer Assets**

PIPE TYPE	Diameter (mm)	Allowable Increase in Strain (µε)		Rotation (deg.)
		Tension	Compression	
<b>Brick Sewer</b> (red / yellow / blue brick)	N/A	500	25% of the allowable stress	N/A
<b>Cast Iron</b> Lead-yarn joints	N/A	100	1200	0.1
<b>Ductile Iron</b> (Lead-yarn gasket joints)	N/A	500	700	0.5
<b>Ductile Iron</b> (Rubber gasket joints)	N/A	500	700	2.0
<b>Steel</b>	N/A	450	450	1.5
<b>Vitrified Clay</b>	<125	80	400	0.5
	>125	80	400	See Table 2
<b>Concrete (unreinforced)</b>	<225	20	400	0.5
	225 – 750	40	400	See Table 2
	>750	60	400	

**Table 2 - Maximum Rotation for Vitrified Clay and Concrete Pipes**

Diameter (mm)	Rotation (deg.)
< 375	2.0
375 – 750	1.0
750 – 1400	0.5
> 1400	0.3

## 5 Risk Assessment & Method Statement

Your impact assessment should include an assessment of the risks of your activity and a method statement outlining how the works will be carried safely with due regard to the general public and our apparatuses. It should also include proposals for monitoring vibrations, ground movements, strains etc. as appropriate to the activity and measures to be implemented in the event of damage or other emergency situation.

## 6 Fees and Charges

A fee will be charged to cover our input in reviewing your impact assessment, monitoring your works and providing resource and/or operational assistance during your works. The fee will be determined after we establish the scope of your works and the expected input required. Please note that the fee could be less or more than initially advised as the final cost to you will be based on actual time spent.

## 7 Useful References

- Building over or close to a public sewer (available on Thames Water website).
- Build Regulations 2010, Drainage and Waste Disposal: H4 Building over sewers
- Thames Water Operational Asset Management Standard - Water Networks - Developments Affecting Water Assets.
- A guide to design loadings for buried rigid pipes by Young and O'Reilly, Transport & Road Research Laboratory, HMSO 1987.
- Construction Design & Management Regulations (CDM) 2007.
- Water Industry Act 1991 (Section 174).
- BS 7385-2:1993 - Evaluation and measurement for vibration in buildings. Guide to damage levels from groundborne vibration.

- BS 5228-2:2009 Code of practice for noise and vibration control on construction and open sites.
- The Road Vehicles (Authorised Weight) Regulations 1998.

## 8 Glossary of Terms

**ALARP** – As low as reasonably practicable

**Apparatus** – All structures and equipment that form part of our sewerage and clean water transmission and distribution networks (pipes, valves, washouts, manholes, pump stations etc.)

**Build over/close to public sewer** – Any structure that is intended to be built over or within 3m of our sewer.

Build over is not allowed in the case of clean water pipes, pumping/rising mains and strategic sewers.

**HGV** – Heavy goods vehicle

**Microstrain** – used to denote the change in length or deformation per unit length of an object when force is applied.

**Third party** – Anyone wishing to undertake works in the vicinity of our assets.

## 9 Attributions

Image of water pipe burst by [Ideal Group](#)

Image of CFA piling by [Rock & Alluvium Ltd](#)

Image of crane by [Trac Ltd](#)

Image of abnormal load transport by [Kings Haulage](#)

Image of deep excavation by [Crossrail](#)

Image of explosive demolition by [Keltbray](#)

## 10 Getting in touch with us

For enquiries regarding your works or any other questions relating to the potential impact of your works, please contact us on;



[Thameswater.co.uk/developerservices](https://thameswater.co.uk/developerservices)



[developer.services@thameswater.co.uk](mailto:developer.services@thameswater.co.uk)



0800 009 3921 (Monday – Friday 8.00am – 5.00pm)



Thames Water, Developer Services, Clearwater Court,  
Vastern Road, Reading, Berkshire RG1 8DB



# CCTV SURVEY REPORT

Amber Marsella Ltd  
 87 Riverview Road  
 Epsom  
 KT19 0JR  
 Office/Fax: 020 8395 5555  
 Email :[enquiries@amberplumbers.co.uk](mailto:enquiries@amberplumbers.co.uk)  
 Web: [www.amberplumbers.co.uk](http://www.amberplumbers.co.uk)

Customer Details	Site Details
Name: GM Developments Address: 223-229 Dawes Road, Fulham, SW6 7RD	Name: GM Developments Address: 19-37 Highgate Road, Kentish Town, NW5 1JY

<b>Report Date</b>	17.11.2021				
<b>Job Number</b>	29903				
<b>Job Date</b>	17.11.2021	<b>Start Time</b>	12.30	<b>Finish Time</b>	14.30
<b>Engineer Name/s</b>	Kevin Freeman				
<b>Job Instructed by</b>	GM Developments				
<b>Purpose of the Survey</b>	To check drain lines.				
<b>System Access</b>	Manhole				
<b>Exposure</b>	None				
<b>Pressure Test</b>	No				
<b>SURVEY 1</b>					
<i>(see attached plan)</i>					
	<b>Inspection Chamber</b>	<b>To</b>	<b>Inspection Chamber</b>		
<b>Inspection Chamber</b>	Manhole 1 To Gully				
<b>Direction/s Surveyed</b>	UPSTREAM				
<b>Chamber depth</b>	1450mm				
<b>Surface Area</b>	CONCRETE SLABS				
<b>Location of Services</b>	REAR COURTYARD				
<b>Overhead Cables</b> <i>If any</i>	NO				
<b>Weather conditions</b>	DRY				
<b>Type of Drain</b>	COMBINED				
<b>Material of Drain</b>	CLAY				
<b>Pipe Size</b>	110MM				

<b>Obstructions</b>	N/A			
<b>Jet/ Rod prior to survey</b>	NO			
<b>Reason for Jet/Rod</b>	N/A			
<b>Distance</b>	<b>Defect</b>	<b>FROM O'CLOCK</b>	<b>TO O'CLOCK</b>	<b>COMMENTS</b>
0.0M				START OF SURVEY
2.6M	NO DEFECTS			END OF SURVEY
<b>Distance Surveyed</b>	2.6M			
<b>Comments</b>	NONE			
<b>Recommendations</b>	NONE			
<b>Action Taken</b>	n/a			
<b>Photos Taken</b>	yes			
<b>SURVEY 2</b>				
<i>(see attached plan)</i>				
	<b>Inspection Chamber</b>	<b>To</b>	<b>Inspection Chamber</b>	
<b>Inspection Chamber</b>	Manhole 1 To RWDP1			
<b>Direction/s Surveyed</b>	UPSTREAM			
<b>Chamber depth</b>	1450mm			
<b>Surface Area</b>	CONCRETE SLABS			
<b>Location of Services</b>	REAR COURTYARD			
<b>Overhead Cables</b> <i>If any</i>	NO			
<b>Weather conditions</b>	DRY			
<b>Type of Drain</b>	COMBINED			
<b>Material of Drain</b>	CLAY			
<b>Pipe Size</b>	110MM			
<b>Obstructions</b>	N/A			
<b>Jet/ Rod prior to survey</b>	NO			
<b>Reason for Jet/Rod</b>	N/A			
<b>Distance</b>	<b>Defect</b>	<b>FROM O'CLOCK</b>	<b>TO O'CLOCK</b>	<b>COMMENTS</b>
0.0M				START OF SURVEY

1.06M	Debris on bend			END OF SURVEY
<b>Distance Surveyed</b>	1.06M			
<b>Comments</b>	NONE			
<b>Recommendations</b>	<b>NONE</b>			
<b>Action Taken</b>	n/a			
<b>Photos Taken</b>	yes			
<b>SURVEY 3</b>				
<i>(see attached plan)</i>				
	<b>Inspection Chamber</b>	<b>To</b>	<b>Inspection Chamber</b>	
<b>Inspection Chamber</b>	Manhole 1 To Gully 2			
<b>Direction/s Surveyed</b>	UPSTREAM			
<b>Chamber depth</b>	1450mm			
<b>Surface Area</b>	CONCRETE SLABS			
<b>Location of Services</b>	REAR COURTYARD			
<b>Overhead Cables</b> <i>If any</i>	NO			
<b>Weather conditions</b>	DRY			
<b>Type of Drain</b>	COMBINED			
<b>Material of Drain</b>	CLAY			
<b>Pipe Size</b>	110MM			
<b>Obstructions</b>	N/A			
<b>Jet/ Rod prior to survey</b>	NO			
<b>Reason for Jet/Rod</b>	N/A			
<b>Distance</b>	<b>Defect</b>	<b>FROM O'CLOCK</b>	<b>TO O'CLOCK</b>	<b>COMMENTS</b>
0.0M				START OF SURVEY
3.9M	NO DEFECTS			END OF SURVEY
<b>Distance Surveyed</b>	3.9M			
<b>Comments</b>	NONE			
<b>Recommendations</b>	<b>NONE</b>			

<b>Action Taken</b>	n/a
<b>Photos Taken</b>	yes

<b>SURVEY 4</b> <i>(see attached plan)</i>				
		<b>Inspection Chamber</b>	<b>To</b>	<b>Inspection Chamber</b>
<b>Inspection Chamber</b>	Manhole 1 To Suspected Manhole 2 (Buried MH in Kiitchen)			
<b>Direction/s Surveyed</b>	DOWNSTREAM			
<b>Chamber depth</b>	Buried MNH in kitchen – Unable to get the depth			
<b>Surface Area</b>	CONCRETE SLABS			
<b>Location of Services</b>	REAR COURTYARD			
<b>Overhead Cables</b> <i>If any</i>	NO			
<b>Weather conditions</b>	DRY			
<b>Type of Drain</b>	COMBINED			
<b>Material of Drain</b>	CLAY			
<b>Pipe Size</b>	110MM			
<b>Obstructions</b>	N/A			
<b>Jet/ Rod prior to survey</b>	NO			
<b>Reason for Jet/Rod</b>	N/A			
<b>Distance</b>	<b>Defect</b>	<b>FROM O'CLOCK</b>	<b>TO O'CLOCK</b>	<b>COMMENTS</b>
0.0M				START OF SURVEY
5.7M	Debris build up	7	5	
7.45	Hit mass silt build up	12	12	
8.51M	Survey abandoned	12	12	End of Survey
<b>Distance Surveyed</b>	8.51m			
<b>Comments</b>	When surveying from MN1 to suspected MH2 we found mass blockage. We found buried MH in the kitchen.			
<b>Recommendations</b>	<b>To lift the buried MH in kitchen and clear blockage.</b>			
<b>Action Taken</b>	None			
<b>Photos Taken</b>	yes			

<b>SURVEY 5</b>				
<i>(see attached plan)</i>		<b>Inspection Chamber</b>	<b>To</b>	<b>Inspection Chamber</b>
<b>Inspection Chamber</b>	Manhole 3 To Buried MH in kitchen			
<b>Direction/s Surveyed</b>	UPSTREAM			
<b>Chamber depth</b>	1000mm			
<b>Surface Area</b>	TARMACK			
<b>Location of Services</b>	FRONT CAR PARK			
<b>Overhead Cables</b> <i>If any</i>	NO			
<b>Weather conditions</b>	DRY			
<b>Type of Drain</b>	COMBINED			
<b>Material of Drain</b>	CLAY			
<b>Pipe Size</b>	110MM			
<b>Obstructions</b>	N/A			
<b>Jet/ Rod prior to survey</b>	YES			
<b>Reason for Jet/Rod</b>	To clear blockage from MNH 1 TO MNH 3 through buried manhole in kitchen.			
<b>Distance</b>	<b>Defect</b>	<b>FROM O'CLOCK</b>	<b>TO O'CLOCK</b>	<b>COMMENTS</b>
0.0M				START OF SURVEY
9.58M	NO DEFECTS			Reached buried MN2 in kitchen
9.58M				End of survey
<b>Distance Surveyed</b>	9.58M			
<b>Comments</b>	Attempted to complete full survey from MNH3 TO MNH1 by HPWJ. This was unsuccessful and we will need to lift the buried MNH2 in kitchen.			
<b>Recommendations</b>	<b>To lift buried MNH2 and burns cover in kitchen and undertake full survey and HPWJ.</b>			
<b>Action Taken</b>	None			
<b>Photos Taken</b>	yes			
<b>SURVEY 6</b>				
<i>(see attached plan)</i>		<b>Inspection Chamber</b>	<b>To</b>	<b>Inspection Chamber</b>
<b>Inspection Chamber</b>	Manhole 3 To Interceptor MNH			
<b>Direction/s Surveyed</b>	DOWNSTREAM			
<b>Chamber depth</b>	MNH 3 -1000mm – Interceptor – 2000mm			

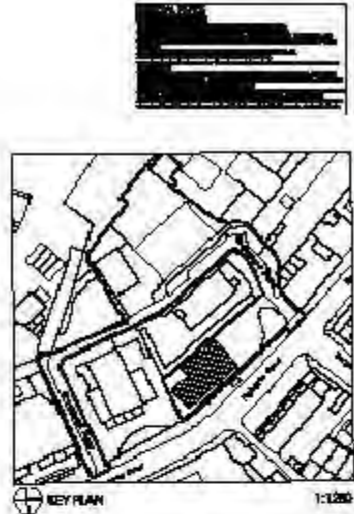
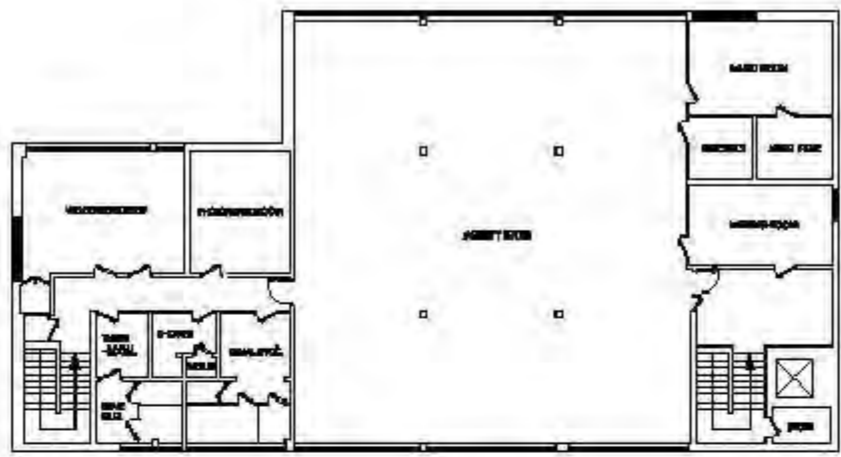


<b>Surface Area</b>	TARMACK			
<b>Location of Services</b>	FRONT CAR PARK			
<b>Overhead Cables</b> <i>If any</i>	NO			
<b>Weather conditions</b>	DRY			
<b>Type of Drain</b>	COMBINED			
<b>Material of Drain</b>	CLAY			
<b>Pipe Size</b>	110MM			
<b>Obstructions</b>	N/A			
<b>Jet/ Rod prior to survey</b>	NO			
<b>Reason for Jet/Rod</b>	N/A			
<b>Distance</b>	<b>Defect</b>	<b>FROM O'CLOCK</b>	<b>TO O'CLOCK</b>	<b>COMMENTS</b>
0.0M				START OF SURVEY
22.80M	NO DEFECTS			UNABLE TO PUSH CAMERA ANY FURTHER. 1M AWAY FROM INTERCEPTOR.
<b>Distance Surveyed</b>	22.80M			
<b>Comments</b>	We were unable to push the camera any further but can confirm that we had reached the interceptor MNH.			
<b>Recommendations</b>	<b>NONE</b>			
<b>Action Taken</b>	n/a			
<b>Photos Taken</b>	yes			
<b>SURVEY 7</b>				
<i>(see attached plan)</i>				
	<b>Inspection Chamber</b>	<b>To</b>	<b>Inspection Chamber</b>	
<b>Inspection Chamber</b>	Manhole 5 Through Manhole 4 To Manhole 3			
<b>Direction/s Surveyed</b>	DOWNSTREAM			
<b>Chamber depth</b>	MNH 5 - 800mm – MNH 4 – 820mm – MNH 3 – 1000mm			
<b>Surface Area</b>	TARMACK			
<b>Location of Services</b>	FRONT CAR PARK			
<b>Overhead Cables</b> <i>If any</i>	NO			
<b>Weather conditions</b>	DRY			

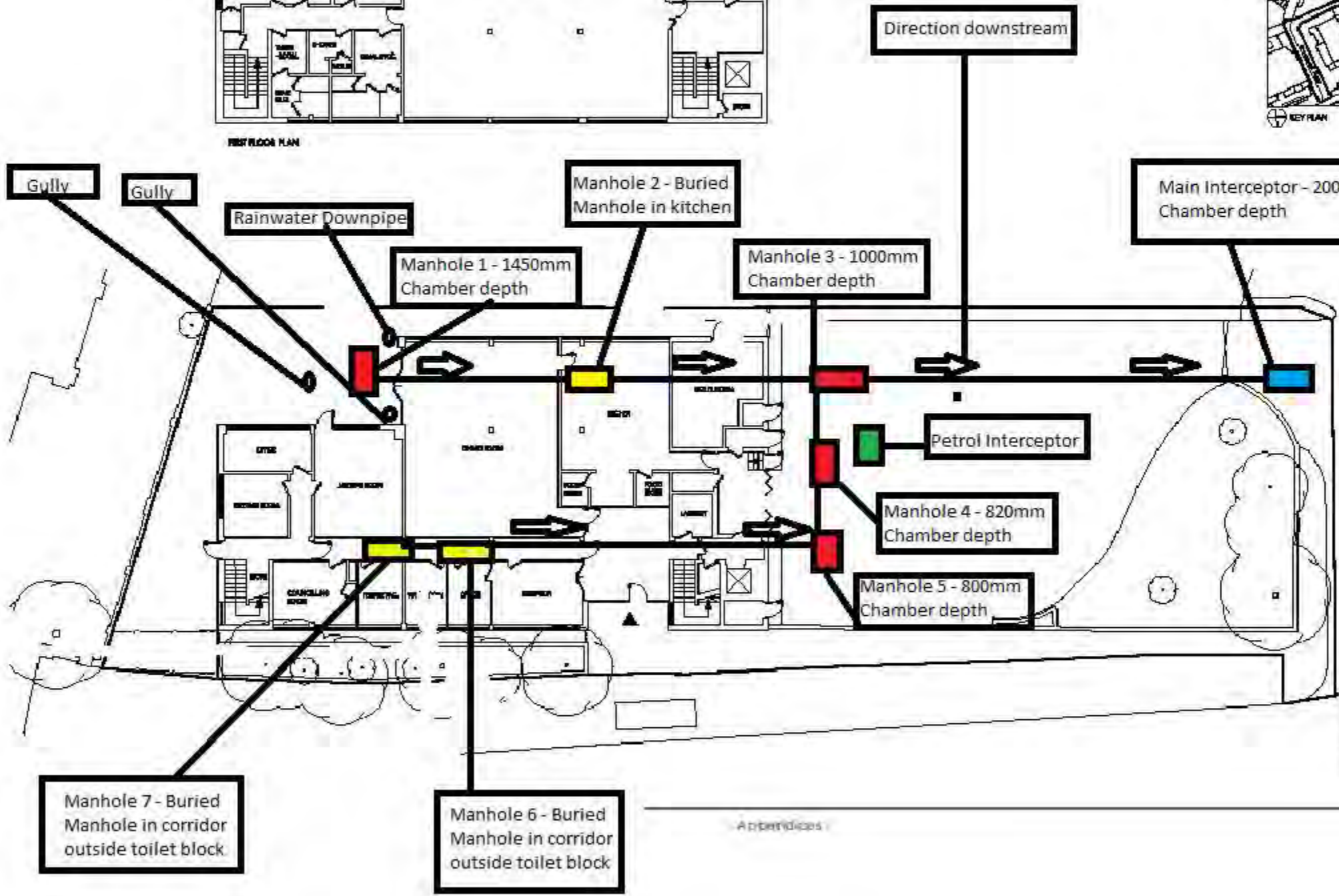
<b>Type of Drain</b>	COMBINED			
<b>Material of Drain</b>	CLAY			
<b>Pipe Size</b>	110MM			
<b>Obstructions</b>	N/A			
<b>Jet/ Rod prior to survey</b>	YES			
<b>Reason for Jet/Rod</b>	BLOCKED PIPEWORK			
<b>Distance</b>	<b>Defect</b>	<b>FROM O'CLOCK</b>	<b>TO O'CLOCK</b>	<b>COMMENTS</b>
0.0M				START OF SURVEY
2.95M	Holding water	7	5	
3.6	MNH 4	12	12	
5.5M	Broken pipework entering MNH3			
5.6	MNH3	12	12	
5.6				END OF SURVEY
<b>Distance Surveyed</b>	5.6M			
<b>Comments</b>	Shoe is broken on entrance of MNH3. Causing blockages in pipework.			
<b>Recommendations</b>	<b>To break out MNH3 and replace side branch.</b>			
<b>Action Taken</b>	None			
<b>Photos Taken</b>	yes			
<b>SURVEY 8</b>				
<i>(see attached plan)</i>				
	<b>Inspection Chamber</b>	<b>To</b>	<b>Inspection Chamber</b>	
<b>Inspection Chamber</b>	Manhole 5 To Buried MNHs in corridor in front of toilets.			
<b>Direction/s Surveyed</b>	UPSTREAM			
<b>Chamber depth</b>	MNH 5 - 800mm – MNH 6 & 7 -Buried MNH unable to get the depth.			
<b>Surface Area</b>	TARMACK			
<b>Location of Services</b>	FRONT CAR PARK			
<b>Overhead Cables</b> <i>If any</i>	NO			
<b>Weather conditions</b>	DRY			
<b>Type of Drain</b>	COMBINED			

<b>Material of Drain</b>	CLAY			
<b>Pipe Size</b>	110MM			
<b>Obstructions</b>	N/A			
<b>Jet/ Rod prior to survey</b>	NO			
<b>Reason for Jet/Rod</b>	N/A			
<b>Distance</b>	<b>Defect</b>	<b>FROM O'CLOCK</b>	<b>TO O'CLOCK</b>	<b>COMMENTS</b>
0.0M				START OF SURVEY
19.30M	Buried MNH 6			
22.30M	Buried MNH 7			
23.65M	Abandoned Survey			Unable to push the camera any further.
23.65M				END OF SURVEY
<b>Distance Surveyed</b>	23.65M			
<b>Comments</b>	2 X Buried manholes, suspected to be in corridor outside toilet block.			
<b>Recommendations</b>	<b>To expose 2 x manholes.</b>			
<b>Action Taken</b>	n/a			
<b>Photos Taken</b>	yes			





- Accesible Manholes
- Petrol Interceptor
- Main Interceptor
- Buried Manholes



0 1 2 3 4

<small>         100% APPROVED AND          VALID FOR 12 MONTHS          FROM DATE OF ISSUE          UNLESS OTHERWISE STATED          ON DRAWING       </small>	
<b>El Condon</b>	
Overhead Floor	
Building Name Highgate Hill	
PLAN-0002	
Date: 10/11/20	Page: 7

As per drawings

PCRO Architects

**GM DEVELOPMENTS**

19-37 Highgate Road  
 Kentish Town, NW5 1JY  
 Tel: 020 8879 9987



**Amber Group**  
**Amber Marsella Ltd**  
 15 West Street  
 Epsom, Surrey KT18 7RL  
 United Kingdom  
 Tel: 02083955555  
 E-mail: enquiries@theamber-group.co.uk

**J29903****Job is Completed****JOB DETAILS**

SCHEDULED	JOB LEAD	CREW
17/11/2021 12:30	Kevin Freeman	Mark Marsella

**VEHICLE BEING USED:** No Vehicle**SIGNED IN AT SITE?:** No**RISK ASSESSMENT COMPLETE:** No**BILLING DETAIL:****PURCHASE ORDER NUMBER:****JOB REQUESTED BY?:****JOB DESCRIPTION**

Scheduled between 8am and 10am.

Job Description: Mark and Kevin to attend for drainage issues - SURVEY

Engineers report:

Engineers to attend the site to undertake the quoted works as outlined above for CCTV survey of the drainage system.

To access the site and make ourselves known to tenants.

To walk the site and set up plant CCTV equipment after making the site safe.

To start the survey in the rear courtyard area.

To find blocked manholes on site which were h/wj and cleared by rods.

To find buried manholes on site which we could not access due to people working in them and all the buried manholes were internal.

Manhole 1 to manhole 3 not a full survey was carried out due to people working in the kitchen were manhole 2 is.

From Manhole 5, we could not access manholes 6 and 7 which we presume the buried manholes are in the hallway outside the toilet areas under the lino.

See CCTV survey report.

Please note that there are various gullies in the carpark which we assume run into the petrol interceptor. Regrettably we were unable to survey these lines due to obstructions in the car park and blocked petrol interceptor.

If these lines are required to be surveyed then we will need the obstructions moved and the petrol interceptor cleared out by a tanker.

The tanker will need to suck out and empty the petrol interceptor and a CCTV survey can be completed.

**WORK DETAILS**

NAME	DESCRIPTION	QTY
<b>Pictures of job</b>	Take pictures of the job at the start and completion of work	

**ATTACHMENTS****Amber Marsella Ltd**

Tel: 02083955555 Fax: 02083932709 E-mail: enquiries@theamber-group.co.uk

NAME	DESCRIPTION	QTY
<a href="#">IMGNov 17 2021 13:10:57.jpeg</a> <i>main interceptor</i>	<a href="#">IMGNov 17 2021 12:58:46.jpeg</a> <i>location of petrol interceptor</i>	<a href="#">IMGNov 17 2021 14:06:42.jpeg</a> <i>blocked manhole 5</i>
<a href="#">IMGNov 17 2021 12:58:25.jpeg</a> <i>Petrol interceptor</i>	<a href="#">IMGNov 17 2021 12:59:51.jpeg</a>	<a href="#">IMGNov 17 2021 13:00:13.jpeg</a>
<a href="#">IMGNov 17 2021 12:59:56.jpeg</a>	<a href="#">IMGNov 17 2021 12:59:55.jpeg</a>	<a href="#">IMGNov 17 2021 13:00:24.jpeg</a>
<a href="#">IMGNov 17 2021 13:02:08.jpeg</a>	<a href="#">IMGNov 17 2021 13:10:58.jpeg</a>	<a href="#">IMGNov 17 2021 13:02:11.jpeg</a>
<a href="#">IMGNov 17 2021 13:02:10.jpeg</a>	<a href="#">IMGNov 17 2021 13:12:30.jpeg</a>	<a href="#">IMGNov 17 2021 13:12:36.jpeg</a>
<a href="#">IMGNov 17 2021 13:12:39.jpeg</a>	<a href="#">IMGNov 17 2021 13:14:01.jpeg</a>	<a href="#">IMGNov 17 2021 13:14:29.jpeg</a>
<a href="#">IMGNov 17 2021 13:14:26.jpeg</a>	<a href="#">IMGNov 17 2021 13:14:24.jpeg</a>	<a href="#">IMGNov 17 2021 13:14:31.jpeg</a>
<a href="#">IMGNov 17 2021 14:05:07.jpeg</a>	<a href="#">IMGNov 17 2021 14:05:19.jpeg</a>	<a href="#">IMGNov 17 2021 14:05:16.jpeg</a>
<a href="#">IMGNov 17 2021 14:12:16.jpeg</a>	<a href="#">IMGNov 17 2021 14:12:31.jpeg</a>	<a href="#">IMGNov 17 2021 14:12:39.jpeg</a>
<a href="#">IMGNov 17 2021 14:12:42.jpeg</a>	<a href="#">IMGNov 17 2021 13:00:23.jpeg</a>	<a href="#">IMGNov 17 2021 12:59:53.jpeg</a>
<a href="#">IMGNov 17 2021 14:05:13.jpeg</a>	<a href="#">IMGNov 17 2021 14:05:48.jpeg</a>	<a href="#">IMGNov 17 2021 13:27:22.jpeg</a>
<a href="#">IMGNov 17 2021 14:12:13.jpeg</a>	<a href="#">IMGNov 17 2021 13:10:52.jpeg</a>	<a href="#">VIDNov 17 2021 13:00:55.MOV</a>

#### 1. Terms of Conditions

For the purpose of these terms and conditions, the following words shall have the following meanings: -

- a. Amber Marsella Ltd shall mean The Amber Group, incorporating Amber Plumbers, Amber Builders, Amber Drainage and Amber Electrics.
- b. "You" shall mean you: the customer (the person or organisation for whom we agree to carry out works and/or supply or materials).
- c. "Our operative" shall be the person we send to you to carry the works out.

#### 2. Minimum charge

The minimum charge is one hour, thereafter work is also charged in hour increments. All diagnostic work is chargeable. The total charge to you will be the time spent by our operative carrying out the work. It will include all reasonable time spent in obtaining materials. Parts and materials supplied by us will be charged at the trade price plus 20 % handling charge. The quoted price will include materials, labour, waste disposal and any plant hire (if applicable). Parking will be charged at cost plus VAT.

#### 3. Collecting material and parts for a job

We try to minimise collection of materials by carrying everyday stock items. If we do need to collect materials we will always try to keep the time to a minimum.

Where we state a timescale on delivery of parts, we can't be held liable if the arrival of parts are delayed due to us relying on third party suppliers in most cases.

#### 4. Fixed Price work

Estimates will include labour and materials. The price will be fixed but manifest errors shall be exempted. Quotes may need to be revised if you change the scope of the work, if there is an increase in the price of materials, or if further works are required in order to do the work. Please note parking is not included, and will be charged at cost plus VAT if parking spaces or permits are not supplied by the customer. If it becomes impossible for us to do the work for the previously quoted fixed price a further estimate for the proposed works will be provided.

*5. Parking*

*Parking costs will be charged whereby no parking spaces or permits are supplied by the customer. Charges will apply at cost plus VAT.*

*6. Payment*

*A. Invoices for work under £10,000.00 in value are payable on completion of the works.*

*b. The customer agrees to pay the invoice without deduction or set-off*

*c. Amber Marsella Ltd will charge Value Added Tax at the prevailing rate where applicable on all invoices. Registration number: GB 122 5763 28*  
*d. Notwithstanding remedies available under current UK/EU legislation relating to the late payment of invoices, unsettled account will, at the absolute discretion of Amber Marsella Ltd accrue interest at the rate of 8% above the lending base rate of Lloyds Bank, and to apply debt recovery fees at the rates recommended by (Late payment of Commercial debt/interest Act 1998) until the outstanding debt is settled in full.*

*e. Payments can be made by BACS to: Account name: Amber Marsella Ltd Account number: 34853760 Sort Code: 30-99-66. We accept cheque payment and cheques need to be made payable to Amber Marsella Ltd and card payments can be processed over the phone when you contact the office on 020 8395 5555.*

*f. Amber Marsella Ltd reserves the right to pass on all costs incurred in the collection of overdue accounts.*

*g. Amber Marsella Ltd reserves the right to cancel the remainder of any contract if payment becomes overdue.*

*h. Deposit: All contracted work over £5000.00 in value requires a 40 % non-refundable deposit prior to the commencement of any contracted works.*

*i. Payment must be received within 30 days of date of job completion date (unless discussed otherwise)*

*7. Estimates*

*All estimates are valid for 90 days from the date of the estimate you receive (unless discussed otherwise). If you decline the estimate there will be no charges payable by you.*

*8. Time Keeping +-+-*

*While Amber Marsella Ltd and its operatives will make every effort to attend each job at the time and date agreed with you this should be seen as a guide only. Amber Marsella Ltd cannot be held liable for delays beyond their control including acts of God or delays caused by actions carried out by third parties.*

*9. Your Responsibility*

*You personally will be deemed to be our customer unless it is made clear to us who the customer is and we have confirmation that you have the right to instruct us on their behalf. The customer must allow us the necessary access to carry out the work. It is the responsibility of the customer to protect items of furniture, furnishings, fixtures and fittings. We will make reasonable efforts not to cause any damage. It is suggested that the customer removes items that are considered to be of value. If it remains within the working area, it is the responsibility of the customer to protect such items. wallpaper and paint can sometimes be damaged. It is the responsibility of the customer to take any protective actions felt necessary. The customer is to obtain all necessary permission from any landlord or local authority prior to starting the work. An electricity supply (220/240v) is often needed. The customer is to provide this supply and also a suitable standard outlet reasonably near to the work. The supply will be of no cost to us. Once our work is complete, any repairing of flooring or tiled surfaces or any general carpentry or decorating work that may be required as a result of our work being carried out, will need to be arranged by you and paid for by the property owner/tenant*

*10. Cancellations*

*If you instruct us to do works or buy materials and then cancel, we reserve the right to charge you for the cost of any time and materials incurred by us. Charges will be those of our normal terms and conditions. If you need to cancel a job, we will require 24 hours' advance notice of your cancellation; jobs which have not been cancelled with less than 24 hours' notice will be deemed to be an aborted call-out, and will be charged in hourly increments at our discretion, with a minimum charge of £50 plus VAT.*

*11. Guarantee*

*We have a twelve month guarantee period of our labour and the duration of the manufacturer's guarantee for all parts or equipment supplied by us. If you are not satisfied with our work, you must contact us, in writing, within 12 months of completing the works and let us come and inspect the works and carry out the necessary remedial works at our expense. You agree that if you do not contact us within 12 months we shall have no liability. You agree to let our insurers inspect any works carried out by us.*

*12. Items we cannot cover*

*We are unable to guarantee our work, parts and equipment supplied to you, if they are misused, treated negligently or if our work is repaired, modified, or tampered with by anyone other than us. Where we carry out works for you using your materials we can take no responsibility for the quality, fitness for purpose or otherwise of these materials so we cannot accept responsibility for them. If damage to plaster and brickwork is caused it is the customer's responsibility to make good. We cannot except responsibility for any damage caused to wallpaper, paintwork, tiles, carpet, furniture etc. Any silicone work does not carry any guarantee.*

*13. Our Advice We cannot guarantee work where you order us to carry out work against the advice of our representative. This advice will be given to you either orally, or in writing. Our guarantee is also void if we indicate that further works need to be carried out.*

*14. We cannot guarantee*

*We cannot guarantee further damage or defects caused by work that is not fully guaranteed or where recommended further work has not been carried out. We cannot guarantee work on existing installations that are either inferior or over 10 years old nor can we guarantee the effectiveness or otherwise of our work in these cases. We will only be liable for rectifying our own work and shall not be held responsible for any ensuing damage or claims resulting from this or other work overlooked or subsequently requested and undertaken at that time. We shall not be held liable for any delay or consequences of any delay in performing our obligations if such a delay is due to any cause beyond our reasonable control and we shall be entitled to reasonable time extensions. We shall be entitled to recover the costs or damages from any person or contractor whose negligence or faulty workmanship makes us liable to pay for those damages or rectification of work.*

*15. Gas*

*You will be solely liable for any hazardous situation in respect to the GASSAFE gas regulations or any Gas Warning Notice issued. Our representatives operate under their own GASSAFE registration and are therefore solely liable for any gas work and its subsequent liability.*

*16. Reserve or Decline*

*We reserve the right to refuse or decline to undertake any work. We reserve the right, at our absolute discretion, to choose who will represent us.*

*17. Title to Goods*

*Goods supplied and delivered by us to you, or your premises shall remain our property until paid for by you in full. Whilst goods remain our property (we continue to have title over them) we have the absolute authority to retake, sell or otherwise dispose of all or any part of these goods. At any time and without notice we shall also be entitled to enter any premises in which our goods, or any part of them, are installed, stored or kept or it is reasonably believed to be so. We shall be entitled to seek a court injunction to prevent you from selling, transferring or otherwise disposing of such goods. However, the risk in the goods will pass to you on delivery to you. You must insure them at replacement value and if asked, you must produce evidence that they are properly insured.*

*18. Terms and Conditions*

*These terms and conditions may not be released, discharged, supplemented, interpreted, varied or modified in any manner except by an instrument in writing signed by our duly authorised representative and you. Our terms and conditions shall prevail over any terms and conditions used by you or contained, set out or referred to in any documentation sent to us by you. By entering into a contract with us you agree irrevocably to waive the application of any of these terms and conditions. These terms and conditions and all contracts awarded between us and you shall be governed and construed in accordance with English Law and shall be subject to the exclusive jurisdiction of the English Law.*





Geotechnical &  
Environmental  
Associates

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