COLPAI PROGRESS EVENT: **6 FEBRUARY 2019**

UNDISCLOSED GAS SERVICE TO BASTERFIELD SERVICE ROAD

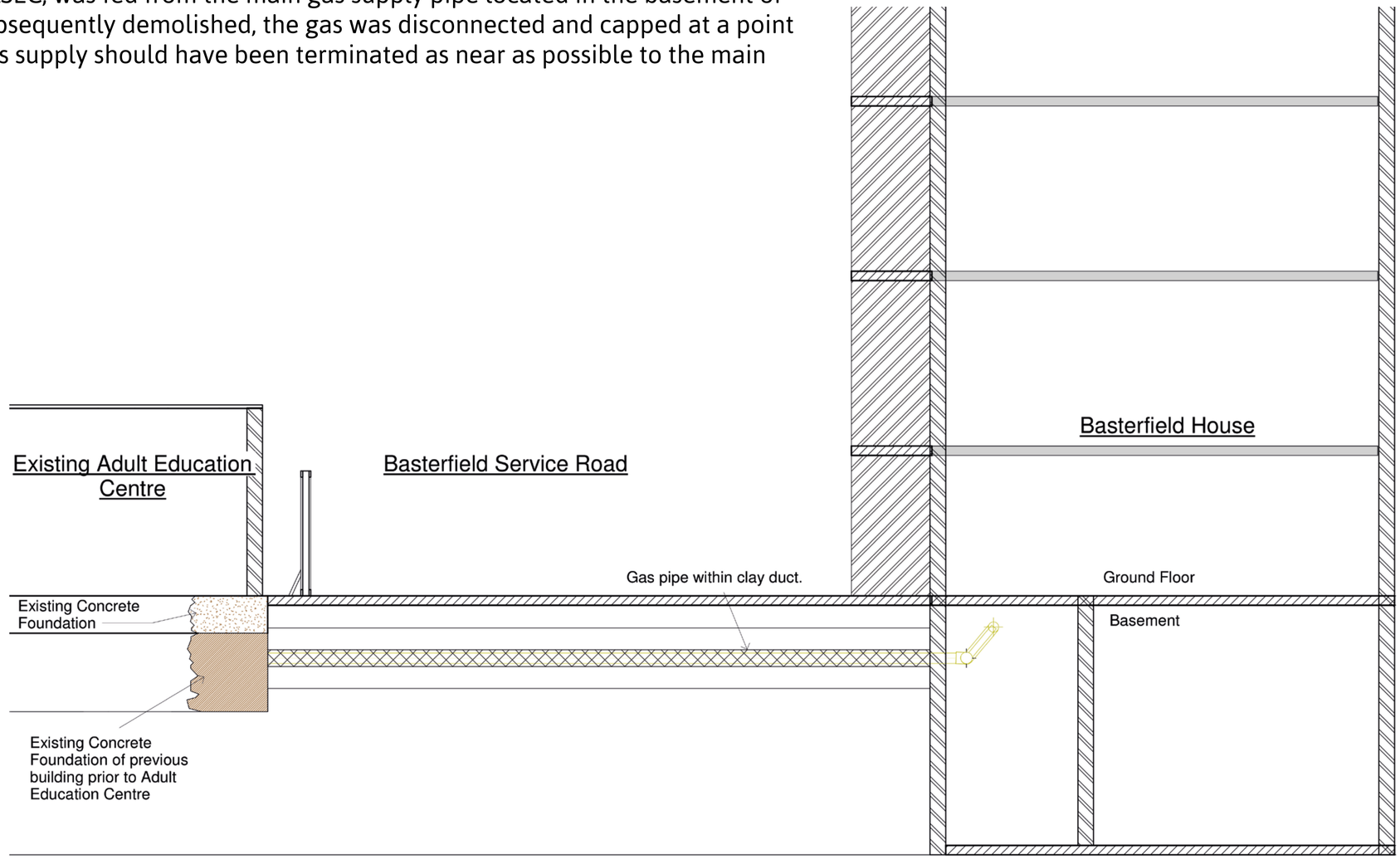
On Saturday 8 December 2019, a serious gas leak occurred at Basterfield House. The leak was inadvertently caused by the demolition works at the COLPAI site. The gas supply for the workshops (or similar buildings) that were previously located on the COLPAI site prior to the construction of COLSEC, was fed from the main gas supply pipe located in the basement of Basterfield House. When these workshops were subsequently demolished, the gas was disconnected and capped at a point near to where the workshops were located. The gas supply should have been terminated as near as possible to the main gas supply in the basement of Basterfield House.

Surveys undertaken prior to works

Prior to commencing the demolition work on site, several surveys had been carried out including:

- Utilities survey report – non-intrusive report using ground penetrating radar (GPR) survey equipment
- Sonde survey – the use of a dual frequency signal transmitter used to trace drains, sewers and other non-conductive services
- Search and review of all available drawings and records
- Underground utilities survey – carried out by Greenhatch
- Utilities search report.

Unfortunately, none of the above surveys indicated the presence of a live section of gas supply pipe, which was encased in a concrete foundation, running from Basterfield House part way across the new development site.



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Existing utility drawings did not disclose the existing gas service and existing surveys did not disclose the gas pipe.

Ground Penetrating Radar (GPR)

Ground Penetrating Radar (GPR) can only detect pipes of 38mm diameter and above.

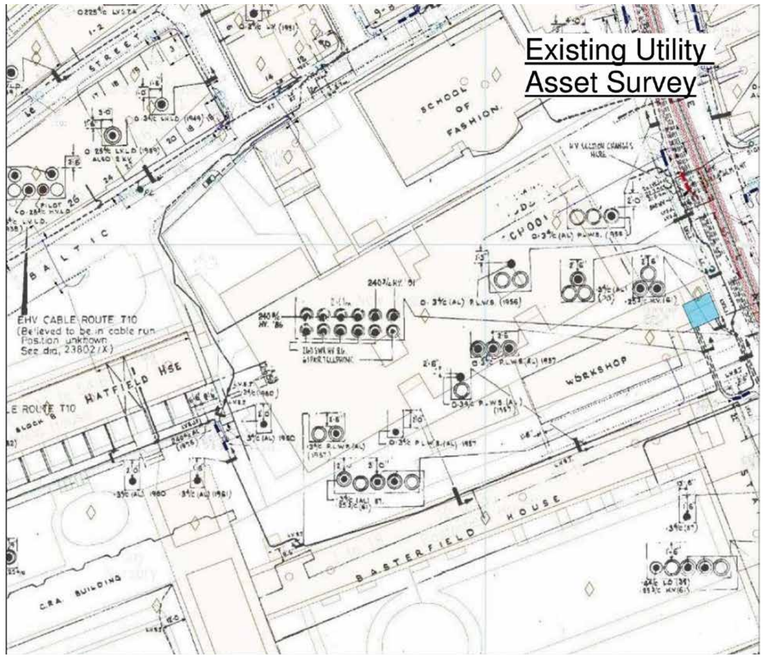
There are many variables that can have adverse effects on both Electromagnetic Locators and GPR technologies.

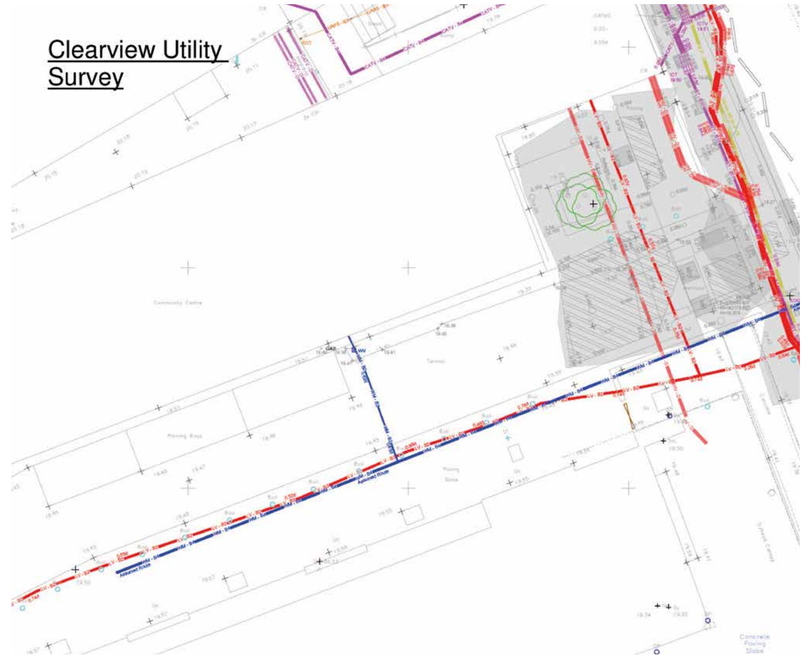
Accuracy can be affected by:

1. With GPR, dense saturated soils / clays abosrb signals
2. With electromagnetic locators, metalic content below ground affects electro magnetic signal
3. Reinforced concrete
4. Uneven ground conditions
5. Cross induction / electro induction interference.

Strategy adapated moving forward:

1. Perimeter of site re-surveyed
2. Basement of adjacent buildings surveyed and services tracked
3. Slip trenches dug to perimeter of site
4. Any anomalies to be identified, excavated and exposed.





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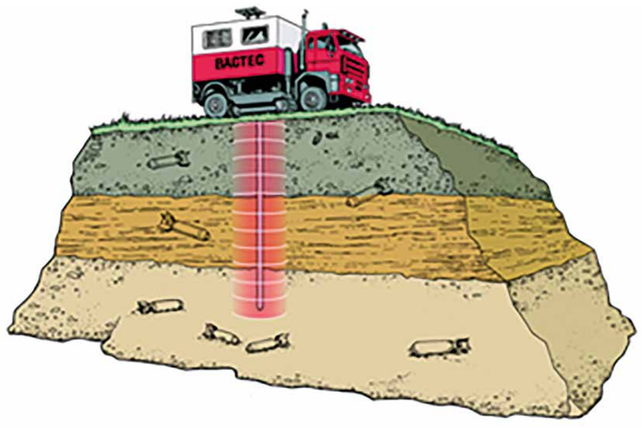
COLPAI PROGRESS EVENT: **6 FEBRUARY 2019**

UNEXPLODED ORDNANCE (UXO) PROBING

Ahead of piling commencing on-site, ISG has instructed SafeLane Global to conduct non-intrusive and intrusive surveys of the site to locate any unexploded ordnance (UXO).

What is an Intrusive UXO Survey?

Intrusive surveys are undertaken when clearance is required for structures that penetrate into the ground beyond depths that can be cleared by surface non-intrusive surveys. Intrusive surveys are normally undertaken using magnetometers, which are either pushed into the ground using hydraulic rams (BXP) or lowered into non-ferrous tubes inserted into boreholes (TFG) formed using a rotary drill or other hole forming method. The figure below illustrates the BXP method.



Ahead of the intrusive surveys, non-instrusive surveys will take place. This could include visual surveys or using Ground Penetrating Radar (GPR).

How does it work?

BXP and TFG methods produce the same type of information, however the “look ahead” capability of the BXP method enables the magnetometer to be pushed continuously into the ground in one operation. A single TFG test would require stage drilling and testing to ensure that the borehole was not directly above an item of UXO.

The intrusive technique can be used to provide specific clearance of geotechnical and geo-environmental boreholes, individual piles and pile groups, or can be deployed in a matrix pattern for general area clearance.

SafeLane Global’s proprietary bespoke software system (used on CoLPAI project) is specifically configured for UXO detection. The software can quickly and effectively record the vertical depth of a magnetic anomaly, its horizontal distance from the probe and theoretical modelled mass.

If the item is found to be an item of Explosive Ordnance, the SafeLane Global’s Site Manager will carry out a Risk/Hazard Assessment for that item, this will include evacuation distances (evacuation of the general public will be carried out by the Emergency Services). Findings will be communicated to ISG, SafeLane Global’s Head Office and any other party that is within the perceived danger area. The Senior Operations Manager or nominated subordinate will act as liaison to the Emergency Services (999) and assist ISG throughout the incident.

Case study: Anomaly location at the Beckton Gas Works, bomb found

On 20 December 2010, it was reported that a World War II bomb exploded at Beckton sewage works.

Bomb disposal experts carried out a controlled explosion at Beckton sewage works over the weekend after Thames Water surveyors discovered an unusual magnetic force underground.

It turned out to be an unexploded 250kg German bomb.

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COLPAI PROGRESS EVENT: **6 FEBRUARY 2019**

WHAT ARE WE UP TO?

Image of a piling rig on a piling mat

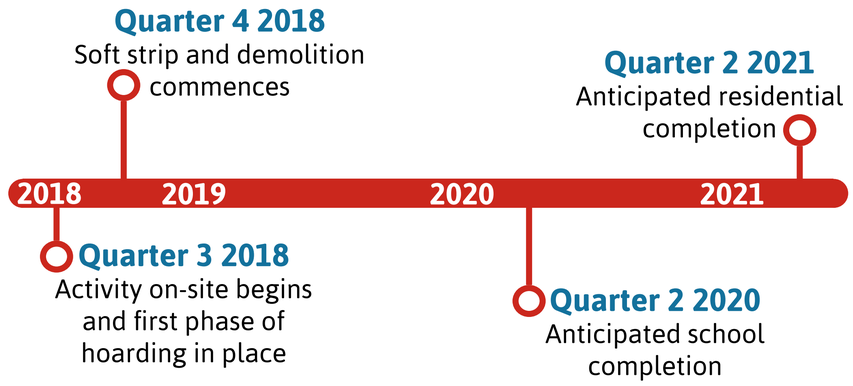
Photo of the existing site

Works are well underway on-site and we are commencing the ground works for the new buildings.

Three month look ahead

- We are continuing to break out the existing slab
- We will be commencing crushing operations. All usable rubble created during the demolition phase will be crushed into a piling mat. Therefore, minimising waste created on-site
- The piling mat will then be layed, which creates a sturdy base for the piling rig to move around the site
- Probing will commence ahead of piling. 324 piles of various sizes will be bored for the new buildings on-site.

KEY DATES



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ARCHAEOLOGY ON COLPAI PROJECT

Prior to works commencing on-site, archaeologists have undertaken two site surveys to ensure no objects of archaeological interest are lost or damaged as part of the works.

Watching briefs will continue to be undertaken throughout the groundworks.

Watching briefs are an ongoing process designed to ensure archaeological remains are identified, investigated and recorded before any construction work commences. An archaeologist is employed to monitor excavations, foundations, service trenches, landscaping and any other intrusive work.

This technique is usually required on sites that have demonstrated some archaeological potential through previous investigation, background research etc., but not enough to warrant either strip, map and sample, or detailed excavation.

Watching briefs are carried out by a qualified archaeologist, to monitor all invasive groundwork until it is complete or the potential for discovering remains has been exhausted.

The watching brief supervisors are experienced commercial archaeologists. They are skilled in monitoring construction work and recording archaeological and built heritage evidence, using appropriate techniques. The experienced supervisors will work closely with the groundwork contractor to ensure that site progress is maintained and records produced.

Image of archaeologists undertaking a watching brief

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THE SCHEME

The City of London Corporation is redeveloping the former Richard Cloudesley School site and the associated City of London land, on Golden Lane. The COLPAI project will deliver a new school, City of London Primary Academy Islington (CoLPAI) with space for 420 pupils and 38 nursery spaces to meet the increasing demand for primary school places. The scheme will also provide 66 much-needed social rent homes.

View of scheme looking towards Golden Lane

View of building from Golden Lane

Sketch of school entrance from Baltic Street West

www.colpai-project.co.uk

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