

## Appendix E

### UXO Risk Assessment



## **Express Preliminary UXO Risk Assessment**

**Client** GEA Ltd.  
**Project** Haverstock Hill  
**Site Address** 5 – 17, Haverstock Hill, London, NW3 2BP  
**Report Reference** OPN2876  
**Date** 05/11/2015  
**Originator** WE

### **Assessment Objective**

This preliminary risk assessment is a qualitative screening exercise to assess the likely potential of encountering unexploded ordnance (UXO) at the Haverstock Hill site. The assessment involves the consideration of the basic factors that affect the potential for UXO to be present at a site as outlined in Stage One of the UXO risk management process.


### **Background**

This assessment uses the sources of information available in-house to 1<sup>st</sup> Line Defence Limited to enable the placement of a development site in context with events that may have led to the presence of German air-delivered or Allied military UXO. The report will identify any immediate necessity for risk mitigation or additional research in the form of a Detailed UXO Risk Assessment. It makes use of 1<sup>st</sup> Line Defence's extensive historical archives, library and unique geo-databases as well as internet resources, and is researched and compiled by UXO specialists and graduate researchers.

The assessment directly follows CIRIA C681 guidelines "Unexploded Ordnance, a Guide for the Construction Industry". The document will therefore assess the following factors:

- Basic Site Data
- Previous Military Use
- Indicators of potential aerial delivered UXO threat
- Consideration of any Mitigating Factors
- Extent of Proposed Intrusive Works
- Any requirement for Further Work

It should be noted that the vast majority of construction sites in the UK will have a low or negligible risk of encountering UXO and should be able to be screened out at this preliminary stage. The report is meant as a common sense 'first step' in the UXO risk management process. The content of the report and conclusions drawn are based on basic, preliminary research using the information available to 1<sup>st</sup> Line Defence at the time this report was produced.

Risk Assessment Considerations	
Site location and description/current use	<div> <p>The site is located in the urban district of Chalk Farm in the London Borough of Camden. The site is approximately 3.5 Miles from the City of London.</p> <p>The site is occupied by a six storey building of mixed commercial and residential units.</p> <p>The north-eastern boundary faces Haverstock Hill. The eastern boundary of the property is adjacent to Chalk Farm tube station. The southern boundary of the building faces Eton College Road and contains five commercial units and open ground borders the west boundary of the site.</p> <p>The site is centred on the approximate OS grid reference: <b>TQ 2810984425</b></p> </div> 
Are there any indicators of current/historical military activity on/close to the site?	1 <sup>st</sup> Line Defence could find no evidence in-house to suggest any current or historical military use on or close to the site of proposed works.
What was the pre- and post-WWII history of the site?	Historical mapping indicates that in 1916 the site was occupied by a row of terraced housing and their accompanying yards and gardens. Pre-WWII mapping indicates that significant development occurred to the northwest of the site, with the construction of the three blocks of flats that exist currently between Eton College Road and Haverstock Hill. However, due to the limitations in detail in this mapping it is unclear precisely as to what existed on the site pre-WWII. Following WWII the site was used for a number of commercial purposes and is recorded as both a garage and a depot. Further research would be needed, including the acquisition of more detailed historical mapping and local records, to learn more about the exact nature of the site during WWII.
Was the area subject to bombing during WWII?	<p>During WWII, the site lay on the boundary of the Metropolitan Boroughs of Hampstead and St Pancras, although the site was entirely within Hampstead.</p> <p>The Metropolitan Borough of Hampstead was subject to a moderate density bombing campaign, with 166 items recorded per thousand acres. A total of 321 High Explosive (HE) bombs, 6 parachute mines, 31 Oil bombs, 5 phosphorous bombs, 10 V1 (Doodlebug) Pilotless Aircraft and 3 V2 Long Range Rockets were recorded.</p> <p>The Metropolitan Borough of St Pancras was subject to a Moderate-High density bombing campaign, with a recorded average of 258.4 items per 1,000 acres. This included 641 high explosive (HE) bombs, 8 parachute mines, 14 oil bombs, 11 phosphorus bombs, 20 V1 pilotless aircrafts, and 2 V2 long range rocket bombs; totalling 696 items across 2,694 acres.</p> <p>The available London ARP bomb census mapping shows evidence of bomb strikes in close proximity to the site, although no strikes have been recorded within the site boundary. Of the recorded strikes proximate to the site, the most significant are the several bombs recorded to have fallen on the school directly to the north, across Haverstock Hill.</p> <p>In addition what is thought to be an unexploded parachute mine is recorded to have fallen within the locality of Eton Hall Flats, 100 metres to the northwest of the site. Furthermore there is evidence to suggest that Eton Place was also struck by an HE. There were several recorded HE strikes recorded to have fallen in the vicinity,</p>



	especially following the railway lines to the south and southeast.
Is there any evidence of bomb damage on/close to the site?	<p>The site and surrounding buildings were recorded to have suffered blast damage. There was no damage recorded in regard to the neighbouring Chalk Farm Station. In addition there were numerous blast damaged buildings to the west. The nature of this damage would usually have been limited to shattered windows and damaged roofing, however the acquisition of WWII-era aerial photography would be necessary to confirm this.</p> <p>London County Council bomb damage mapping indicates that the school north of Haverstock Hill was labelled 'completely destroyed' as a result of several recorded HE bombs that fell on the area. There was also considerable damage recorded to the south eastern wing of Eton Place, the closest of the flats to the site.</p>
To what degree would the site have been subject to access?	<p>The site was located within an urban and largely residential area, it is therefore presumable that the area would have been subject to some level of regular access. However, as the precise nature and usage of the buildings within the site boundary is unclear it cannot be said with any degree of certainty what level of access the site would have been subject to.</p> <p>Furthermore Chalk Farm Tube Station is located adjacent to the site, that was apparently undamaged by bombing, it can be assumed that there would have been relatively high level of access to the surrounding area.</p>
To what degree has the site been developed post-WWII?	<p>Development of the site following WWII is unclear. Historical mapping suggests that the site was developed from <i>Garages</i> to a <i>Depot</i> c.1963. However poor quality mapping renders it difficult to ascertain at which point this depot was demolished and the currently residing structure built. Further research would be required, including the acquisition of more detailed historical mapping and WWII-era aerial photography, in order to learn more about the nature of the site and its subsequent redevelopment post-war.</p> <p>Significant change has occurred in the some of the surrounding area, with the redevelopment of some of the school buildings to the northeast, and the construction of a large residential apartment block to the southwest. Chalk Farm underground station appears to have remained relatively unchanged post-war.</p>
What is the nature and extent of the intrusive works proposed?	The exact scope and nature of intrusive works proposed on site were not made available to 1 <sup>st</sup> Line Defence at the time of writing of this report but are understood to include site investigation works.

### Summary and Conclusions

Preliminary research for this report has identified a minimal risk of encountering ordnance on the Haverstock site.

During WWII the site was located in the borough of Hampstead, bordering the borough of St Pancras. The borough of Hampstead was subject to moderate density bombing and the borough of St Pancras high density bombing during the course of WWII. Despite this, available records suggest that no ordnance fell directly on the site.

According to historical mapping, the site was entirely occupied by a Depot/Garage during WWII which appears to have survived the war intact and unchanged (according to available post-war mapping and aerial photography). Serious damage/clearance is noted to the north-east of the site, but this is considered to be too far away to increase the UXO risk to the site itself.

There is evidence to suggest numerous bomb strikes occurred in the surrounding area, although only the strike on the premises directly to the north of the site, across Haverstock Hill, appears to have caused minor damage to the



site. This damage was likely limited to shattered windows and damaged roofing.

Although it remains uncertain, the occupation of the site is likely to have remained constant before and after WWII, with the bottom floor used as garages and the upper floors residential property. It is considered likely therefore that checks would have been made post-raid for evidence of UXO and that any such evidence should have been noted and reported on or adjacent to the site.

1<sup>st</sup> Line Defence could find no evidence in-house to suggest any current or historical military use on or close to the site of proposed works.

### Recommendations

Given the findings of this report, it is not considered likely that carrying out additional research would result in a significant change to the assessed level of risk (minimal/low risk) based on the information currently available to 1<sup>st</sup> Line Defence. It is therefore recommended that **no further action** is taken for this site.

If the client has any anecdotal or empirical evidence of UXO risk on site, please contact 1<sup>st</sup> Line Defence.