



## Express Preliminary UXO Risk Assessment

<b>Client</b>	Harrow Council
<b>Project</b>	Eaton Close, Harrow
<b>Site Address</b>	Eaton Close, Harrow, HA7 3BT
<b>Report Reference</b>	EP10689-00
<b>Date</b>	16/03/20
<b>Originator</b>	SB

### Assessment Objective

This preliminary risk assessment is a qualitative screening exercise to assess the likely potential of encountering unexploded ordnance (UXO) at the Eaton Close, Harrow 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 Ltd 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. It should be noted that the only way to entirely negate risk from UXO to a project would be to support the works proposed with appropriate UXO risk mitigation measures. It is rarely possible to state that there is absolutely 'no' risk from UXO to a project.



Risk Assessment Considerations	
<p>Site location and description/current use</p>	<p>The site is located in Stanmore, within the London Borough of Harrow.</p> <p>The site is primarily occupied by residential housing, gardens and the Eaton Close roadway. It is bordered in all directions by further residential housing and gardens, as well as extensions of the Eaton Close roadway to the north and east.</p> <p>The site is approximately centred on the OS grid reference: <b>TQ 16814 92713</b>.</p> 
<p>Are there any indicators of current/historical military activity on/close to the site?</p>	<p>In-house records do not indicate that the site footprint had any former military use. No features such as WWII defensive positions, encampments or firing ranges are recorded to have been located within or in the immediate vicinity of the site. In addition, no evidence of ordnance being stored, produced, or disposed of within the proposed site boundary could be found.</p> <p>The closest recorded Heavy Anti-Aircraft (HAA) battery was situated approximately 5.4km to the east of the site in the vicinity of open area land. The conditions in which unexploded anti-aircraft ordnance may have fallen unrecorded within the proposed site are analogous to that of aerially delivered Luftwaffe bombs. For a discussion on these conditions, see the relevant sections below.</p>
<p>What was the pre- and post-WWII history of the site?</p>	<p>According to pre-war OS mapping, dated 1935, the site consisted of open land. West of the site is the <i>Abercorn Arms Royal Hotel</i> and its associated grounds, the south of the site is bordered by a <i>School</i> and areas of open land, whilst the site is bordered to the north and east by yet more open ground.</p> <p>Post-war OS mapping dated 1962-1963 shows significant change to the site footprint. The site now consists of residential housing and gardens along Eaton Close, as well as a section of the roadway itself. The site is also surrounded in all directions by further residential housing and roadways.</p>
<p>Was the area subject to bombing during WWII?</p>	<p>The proposed site was situated in the Urban District of Harrow during WWII. Harrow sustained an overall low-moderate density of bombing according to Home Office statistics, with an average of 37 items of ordnance recorded per 1,000 acres. A total of 411 high explosive (HE) bombs, three parachute mines, 30 oil bombs, five phosphorous bombs, 13 V1 pilotless aircraft and four V2 long range rockets were recorded.</p> <p>London bomb census mapping and local bomb plot mapping do not record any bomb strikes either within, or in the direct vicinity of the site. However, one strike was recorded 100m east of the site, which appears to be part of a 'stick' of three bombs. Their exact location cannot be confirmed at this preliminary stage.</p>
<p>Is there any evidence of bomb damage on/close to the site?</p>	<p>Middlesex County Council (MCC) war damage mapping does not record any damage within the site or its vicinity. However, it should be noted that this source only documents serious damage, which additionally cannot be attributed to open land within this source.</p>

To what degree would the site have been subject to access?	Generally, the wartime access to large areas of open land is considered to have been infrequent. Although, due to the site being in close proximity to a school and the Abercorn Arms Royal Hotel, it is anticipated that the site may have been subject to some degree of monitor. Whilst infrequent access is considered to increase the likelihood that obvious indications of UXO, such as entry holes or cratering, this is not considered to significantly elevate the risk of contamination on site in this instance due to the lack of bombing recorded within, and in close proximity to, the site boundary.
To what degree has the site been developed post-WWII?	The site has seen significant development post-war, as the site boundary is now occupied by residential housing, gardens and a roadway.  The risk of encountering UXO is only considered mitigated at the locations of, and to the depths of, post-war excavations and foundations.
What is the nature and extent of the intrusive works proposed?	The exact nature and extent of intrusive works proposed was not available at the time of writing.

Summary and Conclusions

During WWII, the site was situated in the Urban District of Harrow, which sustained an overall low-moderate bombing campaign density according to Home Office statistics, with an average of 37 128 items recorded per 1,000 acres. London bomb census mapping and local bomb plot mapping do not record any bomb strikes either within, or in the direct vicinity of the site. However, one strike was recorded 100m east of the site, which appears to be part of a ‘stick’ of three bombs. Their exact location cannot be confirmed at this preliminary stage.

Pre-war OS mapping, dated 1935, indicates that the site consisted open land during the war period. The access to open areas of land is generally considered to be infrequent, resulting in an increased likelihood that obvious indications of UXO may have gone unnoticed.

At this preliminary stage, given the nature of the site during the war and the bombing in the vicinity, it is thought that further research is necessary in order to fully quantify the risk on site.

Recommendations

Given the findings of this preliminary report it is recommended that further research be undertaken in the form of a **Detailed UXO Risk Assessment**. At this stage, not enough information regarding the exact location of the bomb strikes is available to 1<sup>st</sup> Line Defence to make a good assessment of whether or not the area on and around the site was affected by bombing. The overall bombing density is low, so it is thought probable that the area did not sustained significant bombing. However, given the bombing recorded in close proximity to the site, it is recommended that more research is undertaken to find out more.

Prior to or in lieu of a Detailed Assessment, it is recommended that appropriate UXO Risk Mitigation Measures are provided for intrusive works proposed.

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

