



Express Preliminary UXO Risk Assessment

Client	Harrow Council
Project	Pinewood Close, Harrow
Site Address	Pinewood Close, Harrow, HA5 4BW
Report Reference	EP10690-00
Date	20/03/20
Originator	SB

Assessment Objective

This preliminary risk assessment is a qualitative screening exercise to assess the likely potential of encountering unexploded ordnance (UXO) at the Pinewood 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 1st 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 1st 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 1st 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 Pinner, within the London Borough of Harrow.</p> <p>The site is primarily occupied by open hard surfaced ground in the form of roadways. It is bordered in all directions by further residential housing and gardens, as well as extensions of the Pinewood Close roadway to the south-east.</p> <p>The site is approximately centred on the OS grid reference: TQ 13652 91691</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 8.2km to the south-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. North of the site is a <i>Convent of our Lady of Lourdes</i> and its associated grounds. The site is bordered in all other directions by yet more open ground, with Oxhey Lane bordering to the east.</p> <p>Post-war OS mapping dated 1964-1966 shows significant change to the site footprint. The site now consists of residential housing and gardens along Pinewood Close, as well as a section of the roadway itself. The site is bordered to the north by <i>Convent of our Lady of Lourdes</i> and its associated grounds and is also surrounded in all other 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 V-1 pilotless aircraft and four V-2 long range rockets were recorded.</p> <p>London bomb census mapping and local bomb plot mapping do not record any bomb strikes on site. However, one strike was recorded 35m south-east of the site boundary.</p>
<p>Is there any evidence of bomb damage on/close to the site?</p>	<p>Given the site's undeveloped nature, there were no structures on site which damage could be attributed to. The acquisition of high-resolution aerial photography would be needed in order to fully determine the conditions on site and to identify any possible indications of bomb damage.</p>



To what degree would the site have been subject to access?	Generally, the wartime access to areas of open land is considered to have been infrequent. This decreases the likelihood that items of UXO would have been spotted, reported and dealt with.
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 items recorded per 1,000 acres. London bomb census mapping and local bomb plot mapping do not record any bomb strikes on site. However, one strike was recorded 35m south-east of the site boundary. Several other incidents are also noted in the immediate surrounding area of the site.

Pre-war OS mapping, dated 1935, indicates that the site consisted of open land during the war period. Given that there were no structures on site which damage could be attributed to, it is not known at this preliminary stage whether the site was damaged during the war. In addition, 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.

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 strike is available to 1st Line Defence to make a confident assessment of whether the site and its immediate surroundings were affected by bombing.

Further research will likely include the acquisition of high-resolution aerial photography and written records to fully quantify the risk on site.

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 1st Line Defence.