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Express Preliminary UXO Risk Assessment

Client	MEPK Architects Ltd.
Project	Tintagel Drive, Harrow
Site Address	Tintagel Drive, Harrow, HA7 4SR
Report Reference	EP10692-00
Date	25/03/20
Originator	CB

Assessment Objective

This preliminary risk assessment is a qualitative screening exercise to assess the likely potential of encountering unexploded ordnance (UXO) at the Tintagel Drive site in Harrow. 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

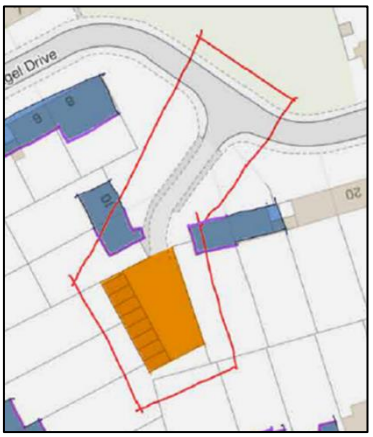
This assessment uses the sources of information available in-house to 1st Line Defence Ltd to enable the placement of a development site in context with events that may have led to the presence of German air-delivered or Allied military UXO. The report will identify any immediate necessity for risk mitigation 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.

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Risk Assessment Considerations	
Site location and description/current use	The site is located in Harrow, north-west London. Recent aerial photography indicates the site area to comprise an access road off Tintagel Drive, garage units, sections of residential properties and garden areas consisting of grassland and hard surfaced ground. Tintagel Drive is also encompassed by the northern area of the site boundary. The site is bound to the north by open grassland to the north of Tintagel Drive, to the east by residential properties situated on Tintagel Drive, to the south by residential properties situated on Pangbourne Drive and to the west by residential properties situated on Morecombe Gardens. The site is approximately centred on the OS grid reference: **TQ 17943 92479**. 
Are there any indicators of current/historical military activity on/close to the site?	A geo-dataset held in-house indicates the presence of two ammunition store houses thought to be associated with the Home Guard approximately 300m north of the site area in the vicinity of Glanleam Road. There is the potential that the site area may have been affected by the presence of such an installation; the site area was occupied by a golf course during WWII, which were often requisitioned for military training. Further research will be required in order to determine whether the site area was indeed utilised for military purposes during WWII.
What was the pre- and post-WWII history of the site?	Pre-WWII OS mapping from 1935 indicates the site area to be occupied entirely by open ground as part of a golf course. *Snaresbrook Drive* is situated approximately 80m north of the boundary. Post-WWII OS mapping from 1963-1964 indicates extensive residential development to have occurred within the site footprint and its immediate and wider surrounds. Garage units occupy the southern region of the site, whilst residential properties are present on the eastern and western borders. *Tintagel Drive* occupies part of the northern section also. Several residential properties have been erected in the site's surrounds, with several roadways also present.
Was the area subject to bombing during WWII?	During WWII, the site was situated within the Urban District of Harrow, which according to Home Office statistics sustained an overall low-moderate density bombing campaign. A district of 12,599 acres, Harrow was subject to 411 high explosive (HE) bombs, three parachute mines, 30 oil bombs, five phosphorous bombs, 13 V-1 pilotless aircraft and four V2 long-range rockets; a total of 466 incidents and an average of 37 items of ordnance recorded per 1,000 acres. Available London bomb census mapping does not record any incidents occurring directly within the site footprint. The closest recorded incident is plotted approximately 150m west of the site area. A local bomb plot map obtained from Headstone Manor and Museum also records no incidents within the site footprint; the closest recorded incident in this source is plotted approximately 150m east of the site area.

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Is there any evidence of bomb damage on/close to the site?	Due to the site's open nature during WWII, it has not been possible to accurately identify any evidence of damage occurring within the boundary. High-resolution aerial photography will be required in order to establish the site's wartime composition.
To what degree would the site have been subject to access?	The site area is anticipated to have experienced infrequent and irregular levels of access owing to its open composition.
To what degree has the site been developed post-WWII?	Post-war redevelopment has consisted of garage units, residential properties and hard surfaced ground within the site footprint. The risk of encountering UXO is only considered to be mitigated at the location of and down to the depths of any previous post-war intrusive works.
What is the nature and extent of the intrusive works proposed?	The nature and extent of works proposed is understood to involve the development of residential units on site.

Summary and Conclusions

During WWII, the site was situated within the Urban District of Harrow, which according to Home Office statistics sustained an overall low-moderate density bombing campaign. A district of 12,599 acres, Harrow was subject to an average of 37 items of ordnance recorded per 1,000 acres. Available London bomb census mapping and local bomb plot mapping do not record any incidents occurring directly within the site footprint. The closest recorded incidents are plotted approximately 150m west and east of the site area respectively.

OS mapping indicates the site area to have been occupied entirely by open ground as part of a golf course during WWII. Due to the site's open nature, it has not been possible to accurately identify any evidence of damage occurring within the boundary. It is also considered likely that the site experienced infrequent and irregular levels of access throughout WWII. This may increase the likelihood that obvious signs of UXO, such as entry holes or cratering, would have gone unnoticed and unrecorded.

Furthermore, there is the potential that the site area may have been affected by the presence of two ammunition store houses thought to be associated with the Home Guard approximately 300m north of the site area. Golf courses, which the site formed part of, were often requisitioned for military training. Further research will be required in order to determine whether the site area was indeed utilised for military purposes during WWII.

Recommendations

In accordance with CIRIA guidelines, it is recommended that a **Detailed UXO Risk Assessment** should be undertaken to confirm the wartime conditions present on site and whether it was utilised for military purposes. Further investigation would entail the analysis of data, such as WWII-era aerial photography, Middlesex County Council air raid precautions written records and any other archival sources. A Detailed UXO Risk Assessment would also outline work-specific UXO risk mitigation measures. If it is possible to determine that the site was not subject to any bombing incidents, and that it was not used in conjunction with any Home Guard or ordnance training, it may be possible to lower the perceived 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.

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