



Express Preliminary UXO Risk Assessment

Client	Darwin Group Ltd.
Project	Kendrick School
Site Address	East Street, Reading, RG1 5BN
Report Reference	EP8608-01
Date	24/05/19
Originator	JS

Assessment Objective

This preliminary risk assessment is a qualitative screening exercise to assess the likely potential of encountering unexploded ordnance (UXO) at the Kendrick School site in Reading. 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	
Site location and description/current use	The area of works is located in Reading, Berkshire. The proposed site boundary encompasses an area of land across the eastern perimeter of a structure operated by the Kendrick School, a facility situated across East Street. The planned site area is currently occupied by hard-standing recreational courts framed to the north and south by car parking facilities. Further recreational courts extend eastwards of the site. The site is approximately centred on the OS grid reference: SU 7196873018 
Are there any indicators of current/historical military activity on/close to the site?	It is understood that an early 17th century saltpetre works was situated within the vicinity of the site, although the exact location cannot be ascertained. Whilst saltpetre was an important requisite to gunpowder in earlier centuries, the likelihood of materiel of this nature igniting or initiating during works is considered low given the age, and therefore low potency, of any underlying saltpetre. There is therefore not considered to be any associated risk of ordnance contamination. Further to this, 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 at the site. In addition, no information of ordnance being stores, produced, or disposed of within the proposed site boundary could be found. The closest Heavy Anti-Aircraft (HAA) batteries was situated approximately 4.3km south-east of the site. The conditions in which unexploded anti-aircraft ordnance may have fallen unrecorded are analogous to that of aerial delivered German bombs - see the sections below for further information.
What was the pre- and post-WWII history of the site?	Early historical OS map editions produced across the 19th century indicate the site to have occupied a courtyard area towards the rear of properties across East Street, situated westwards of the site area. This remained the composition of the site area across map editions dated 1879, 1882 and 1883. It is not until a map edition dated 1899 in which the courtyard appears to have been developed into a large open yard area adjacent to a biscuit factory, situated across the northern perimeter of the site. Subsequent maps show this composition to remain relatively intact. It is not until a map edition dated 1931 in which the <i>Kendrick Girls' School</i> was developed across the site area with the biscuit factory generally running across the northern perimeter. It appears as though the site occupied an open area of land within the grounds of the school. Following the war, a map edition dated 1957 – 1958 indicates the composition of the site to have remained relatively unchanged to the pre-war composition, save for the development of a canteen across the western border of the site. It should be noted that residences across East Street were cleared, with only numbers 15 and 19 remaining. The reason for this clearance is not known. Later map editions, such as one covering a period between 1962 and 1971, shows tennis courts to have occupied the site area.





Was the area subject to bombing during WWII?	During WWII, the site was situated within the County Borough (C.B) of Reading. Home Office (HO) statistics suggest that Reading sustained an overall low density of bombing with just 5 bombs being noted as dropping during the war, all of which were high explosive (HE) bombs. It is understood that the attack on Reading was part of a reprisal raid for the Allied bombing of German cities as the town seldom possessed any significant military target and or major industrial feature. In fact, children were evacuated from London due in part to the relative safety of the town. As a result, the events and effects of the bombing raid were widely publicised and are understood to have affected an area between Friar Street and Minster Street, approximately 600m north-west of the site.
Is there any evidence of bomb damage on/close to the site?	There is evidence of structural clearance across East Street to the west of the site between pre- and post-WWII OS map editions. This can often be indicative of enemy action. However, it should be noted that between these map editions, a canteen structure was developed adjacent to the properties, thus they may have been removed to accommodate for this expansion of the school grounds. Furthermore, with the understanding that raids on Reading were widely publicised given the low density of bombing across the town, the lack of any anecdotal evidence suggesting a bomb fell on East Street lowers the possibility that this clearance indicates evidence of bomb damage.
To what degree would the site have been subject to access?	Given that the site was situated within the grounds of the Kendrick Girls' School, it is likely that the site would have been traversed by those enrolled at the facility. Given that Reading was a destination for evacuees from London, it is possible that the number enrolled at the school was increased. As a result, it is likely that observations levels across the site were increased during the war, thus items of ordnance or evidence of bombing would likely have been witnessed and recorded.
To what degree has the site been developed post-WWII?	Following the war, the site remained an open area of land within the grounds of an adjacent school. A canteen was erected across the western perimeter of the site by 1958 and the entirety of the site was developed into tennis courts as per an OS map edition covering a period between 1962 and 1971. This composition has remained largely unchanged to the present day.
What is the nature and extent of the intrusive works proposed?	The nature and extent of works proposed was not available at the time of writing.





Summary and Conclusions

During WWII, the site was situated within the County Borough (C.B) of Reading. Home Office (HO) statistics suggest that Reading sustained an overall low density of bombing with just 5 bombs being noted as dropping during the war, all of which were high explosive (HE) bombs. The events of these raids were widely publicised given the low density of bombing sustained by the town and are understood to have affected an area between Friar Street and Minster Street, approximately 600m north-west of the site. No evidence could be found to suggest the site, nor the immediate vicinity, ever sustained bomb damage.

Further to this, 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 at the site. Whilst it is understood that a saltpetre works once occupied the vicinity of the site, this works was operational in the early 17th century, thus the risk from this feature is considered low given the age of any underlying materiel.

Recommendations

Given the findings of this preliminary report, the risk from UXO is considered to be **minimal**. Whilst it would be possible to conduct a Detailed UXO Risk Assessment for this site, it is not anticipated that any further findings would significantly alter this assessed risk of encountering UXO within the site. It is therefore recommended that **no further action** is taken.

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

