

Appendix G Preliminary UXO Desk Study Assessment



Preliminary UXO Risk Assessment

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Client	Earth Science Partnership
Project	Caerau Park, Afan Valley
Site Address	Cymmer, Rhondda Valley, Wales, SA13 3EW
Report Reference	PA15453-00
Date	30/03/22
Originator	LG

Assessment Objective

This preliminary risk assessment is a qualitative screening exercise to assess the likely potential of encountering unexploded ordnance (UXO) at the Caerau Park, Afan Valley 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.

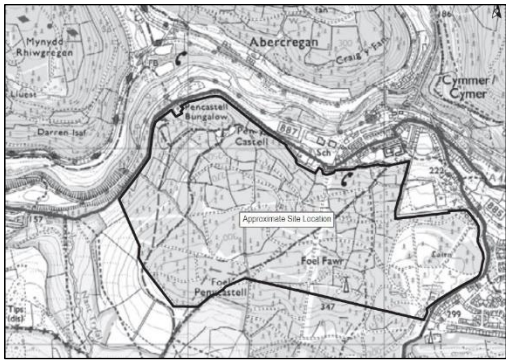
The assessment directly follows CIRIA C681 guidelines "Unexploded Ordnance, a Guide for the Construction Industry". The document will therefore assess the following factors:

- 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	
Site location and description/current use	The site is located between the villages of Cymmer and Caerau, in south Wales approximately 10km north-east of Port Talbot. The site is bound to the north by Brytwn Road and the village of Cymmer, to the east by A4063, to the south by adjacent areas of undeveloped ground and unnamed roadways/tracks, to the west by Brytwn Road and adjacent areas undeveloped ground. Recent aerial photography dated September 2021 indicates that the site predominantly comprises large areas of vegetated and wooded ground, interspersed with several roadways/tracks, one of which is marked as 'Afan Adventure Resort'. Some limited development can be seen, in the form of a telecommunications mast and associated buildings in the southern area, as well as an unidentified fenced off structure in the south-eastern extent of the site. The site is approximately centred on the OS grid reference: SS 85575 95702. 
Are there any indicators of current/historical military activity on/close to the site?	1st Line Defence could find no evidence in-house to 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 or in the immediate vicinity of the site. In addition, no information of ordnance being stored, produced, or disposed of within the proposed site boundary could be found. The closest recorded Heavy Anti-Aircraft (HAA) battery was situated approximately 5.5km to the west of the site in the vicinity of Margam Park. 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.
What was the pre- and post-WWII history of the site?	Pre-WWII OS mapping dated 1914 indicates that the site comprised a large area of undeveloped land with some limited areas of development in the north-western area, marked as <i>Pen-y-Castell</i>. Several tunnels are depicted beneath the site, marked as <i>British Trackway</i> and <i>Cymmer Tunnel</i>. <i>Glyncymmer Colliery</i> and <i>Cymmer Village</i> can be seen to the north of the site. Post-WWII OS mapping dated 1953 indicates that no major changes have taken place on site. The tunnel formerly referred to as 'British Trackway' is now marked as <i>Ancient Trackway</i>, and the Glyncymmer Colliery formerly to the north of the site has since been cleared.
Was the area subject to bombing during WWII?	The site was situated within the Urban District of Glyncorrwg and the Urban District of Maesteg during WWII. Glyncorrwg was subject to an overall very low density bombing campaign, culminating in a total of 3 HE bomb incidents across 13,925 acres, and an average of 0.2 items of ordnance per 1,000 acres. Maesteg is not reported to have been subject to any bombing.





	No bombing incidents were recorded on or in a close proximity to the site within the consulted written records held in-house. The closest recorded bombing incident was recorded approximately 700m south of the site, in the vicinity of Caerau. Several additional bomb incidents were recorded in the wider surrounding area.
Is there any evidence of bomb damage on/close to the site?	Given the lack of wartime development on-site, it has not been possible to compare changes between pre- and post-WWII OS mapping that may be indicative of bomb damage, such as damage or clearance of structures. Although the clearance of structures associated with the Glyncymmer Colliery is not anticipated to have been related to bomb damage, as the site was closed in 1930. ¹
To what degree would the site have been subject to access?	It is unknown how often the site would have been accessed during the war, given that the site was predominantly occupied by areas of open land, it was likely subject to only limited levels of access.
To what degree has the site been developed post-WWII?	Post-war OS mapping and aerial imagery suggests that the site and surrounding environs have been subject to very limited development in the post-war era.
What is the nature and extent of the intrusive works proposed?	Information provided by the client indicates that the nature and extent of works proposed is understood to include the construction of a new leisure development.

Summary and Conclusions

The site was situated within the within the Urban District of Glyncorwg and the Urban District of Maesteg. Glyncorwg was subject to an overall very low density bombing campaign, consisting of 3 HE bombs, culminating in a total of 3 incidents across 13,925 acres, and an average of 0.2 items of ordnance per 1,000 acres. Maesteg is not reported to have been subject to any bombing. No bombing incidents were recorded on or in a close proximity to the site within the consulted written records held in-house. The closest recorded bombing incident was recorded approximately 700m south of the site, in the vicinity of Caerau.

It is unknown how often the site would have been accessed during the war. Given that the site was predominantly occupied by areas of open land, it was likely subject to only limited levels of access. However, since there was no information to suggest German bombing incidents or Allied activity directly affected the site area, the risk from items of UXO is not anticipated to be elevated above the background level for this area of the country.

Recommendations

Given the findings of this preliminary report, the risk from UXO is not considered to be elevated higher than the 'background risk' of UXO within this area of the UK. Whilst it would be possible to conduct a Detailed UXO Risk Assessment, it is not anticipated that any further findings would significantly alter the risk of encountering unexploded ordnance 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.

¹ <https://www.mindat.org/loc-384266.html>





It should be noted that although the risk from unexploded ordnance on this site has been assessed as low/minimal, this does not mean there is 'no' risk of encountering UXO. This preliminary report has been undertaken with due diligence, and all reasonable care has been taken to access and analyse relevant historical information. By necessity, when dealing with historical evidence, and when making assessments of UXO risk, various assumptions have to be made which we have discussed and justified within this report. Our reports take a common-sense and practical approach to the assessment of UXO risk, and we strive to be reasonable and pragmatic in our conclusions. As referenced, it would be possible to undertake further research into this site, but based on the evidence to hand, this is not deemed strictly necessary, and no reasonably justifiable requirement for proactive on-site mitigation has been identified.

It should however be stressed that if any suspect items are encountered during the proposed works, 1st Line Defence should be contacted for advice/assistance, and to re-assess the risk as necessary. Furthermore, we would recommend that ground personnel are always made aware of the potential for encountering UXO, what to look out for and what to do in the unlikely event that a suspect item is encountered, and that a UXO Risk Management Plan is put together for the proposed works. We would be happy to provide a template and guidance for this – contact us on 01992 245020. Should the scope of works change or additional works be proposed, 1st Line Defence should be contacted to re-evaluate the risk.

