

Appendix F Preliminary UXO Risk Assessment

This Preliminary UXO Risk Assessment has been carried out by Buro Happold in accordance with CIRIA C681. The purpose of the preliminary risk assessment is a qualitative screening exercise to assess the likelihood of finding UXO at the site. This can then be used to make an informed decision if further UXO specific risk management is required.

The assessment is based on data obtained from a desktop review of information, including site location, bombing records, historical uses, historical development and proposed development. A UXO impact map from cornwallfhs.com was also obtained for this assessment. (Attachment 3)

Item	Comments	Score
Site Setting	The Site is an elongate parcel of land covering approximately 0.85 ha, located in United Downs, near Redruth, TR16 5HU and is approximately centred at NGR SW 74487 41359. It is located on land to the south of the United Downs Industrial Estate and at the northern edge of the former United Mines landfill site. It is accessed from the service road of the former landfill site.	1
Site description and historical land usage	The site is located in a rural area of historical metalliferous mining. There has been evidence of mining at the site and surrounding area since the earliest available map, dated 1880. Mining had largely ceased by the early 1900s. The site and surrounding area remained largely unchanged until a Go-Kart / Stock Car track was developed about 200m west in the 1960s. The United Mines Landfill (which encompasses the site) and United Downs Industrial Park became operational in the 1990s. Site located approximately 2 miles from US Army Units based in Chancewater, 6.5 miles from RAF Portreath, 8 miles from Malpas Park (US 29th Infantry Division), 9 miles from RAF Perranporth.	4
Record of bombing	No evidence of bomb damage from historic mapping. Nearest record of bombing (from cornwallfhs.com) is about 4km southwest.	4
Level of post war development	Significant post-war development – i.e. about 80% of area has been subjected to landfilling.	-5
Level of proposed intrusive works	Details of development are not well defined. However, proposed structures will only cover small proportion of the Site (about 15%) and any structures are likely to be lightweight and designed to minimise the need for excavation / earthworks.	-6
Assessed Risk	The assessment found risk associated with UXO to be low, therefore no detailed UXO risk assessment is required.	-2
Recommendations	The assessment found risk associated with UXO to be moderate, therefore a detailed UXO risk assessment is required.	
Attachments	Table 8-1 - Potential aerial delivered UXO hazards Table 8-2 - Mitigation factors Table 8-3 - Final score summary Attachment 1 – Pre- WWII Historical Map Attachment 2 – Post – WWII Historical Maps	

Table 8-1 Scoring process for indicators of potential aerial delivered UXO hazards

Data Item	Increasing Potential for aerial delivered UXO Hazards			
	1	2	4	8
A - Site Setting	Rural	Small towns	Cities Large Towns	
B - Site description and historical land usage	Greenfield site only Agricultural land only	Residential only Within 10 mile radius of site of previous military use Within 5 mile radius of wartime ¹ for following: Railway marshalling yard Power station Gas works Port Industrial centre	Within 5 mile radius of site of previous military use Within 1 mile radius of wartime ¹ for following: Railway marshalling yard Power station Gas works Port Industrial centre On wartime ¹ flight paths	Within 1 mile radius of site of previous military use Former wartime ¹ : Railway marshalling yard Power station Gas works Port Industrial centre
C – Record of bombing	No history of WWII bombing	Within 10 mile radius of area of known WWII bombing	Within 5 mile radius of area of known WWII bombing	Area of known WWII bombing

¹Wartime refers to the site being in use at the time of WWI and WWII when its significance may have caused it to be the target of an enemy attack.

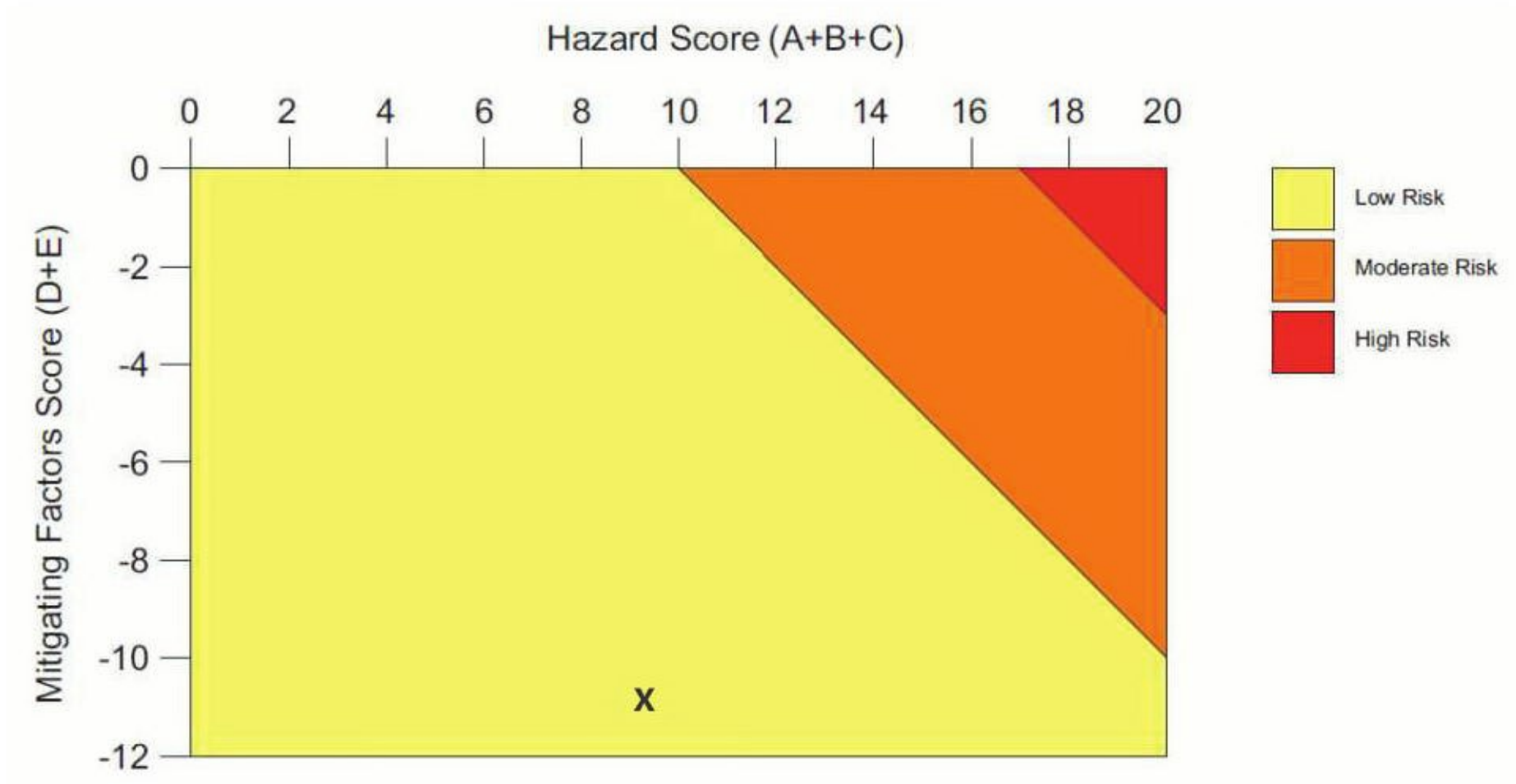
Table 8-2 Scoring process for considering mitigation factors

Data Item	Decreasing Potential for aerial delivered UXO Hazards				
	-6	-5	-3	-1	0
D - Level of post war development	Whole site redevelopment (100% of the site)	Significant post war development (>80% of the site)	Moderate level of post war development (<80% and ≥45% of the site)	Some post war development (<45% and ≥10% of the site)	Minimal post war development (<10% of the site)
E - Level of proposed intrusive works in areas not subject to post war development ¹	Very Small (<5%)	Small (<10%)	Some (<45% and ≥10%)	Moderate (<80% and ≥45%)	Significant (>80%)

¹Only if the level of post-war development is known and can be quantified in terms of site area and an approximation of depth should a mitigation factor be applied.

Table 8-3 Final score is based on the sum of rows A, B, C, D and E in Table 8-1 and Table 8-2

Final Hazard Score	Risk of encountering an Aerial dropped UXO	Implication
-9 - 9	Low Risk	No further UXO risk assessment likely to be required
10 - 17	Moderate Risk	Detailed UXO Risk Assessment required
17 - 20	High Risk	Detailed UXO Risk Assessment required.

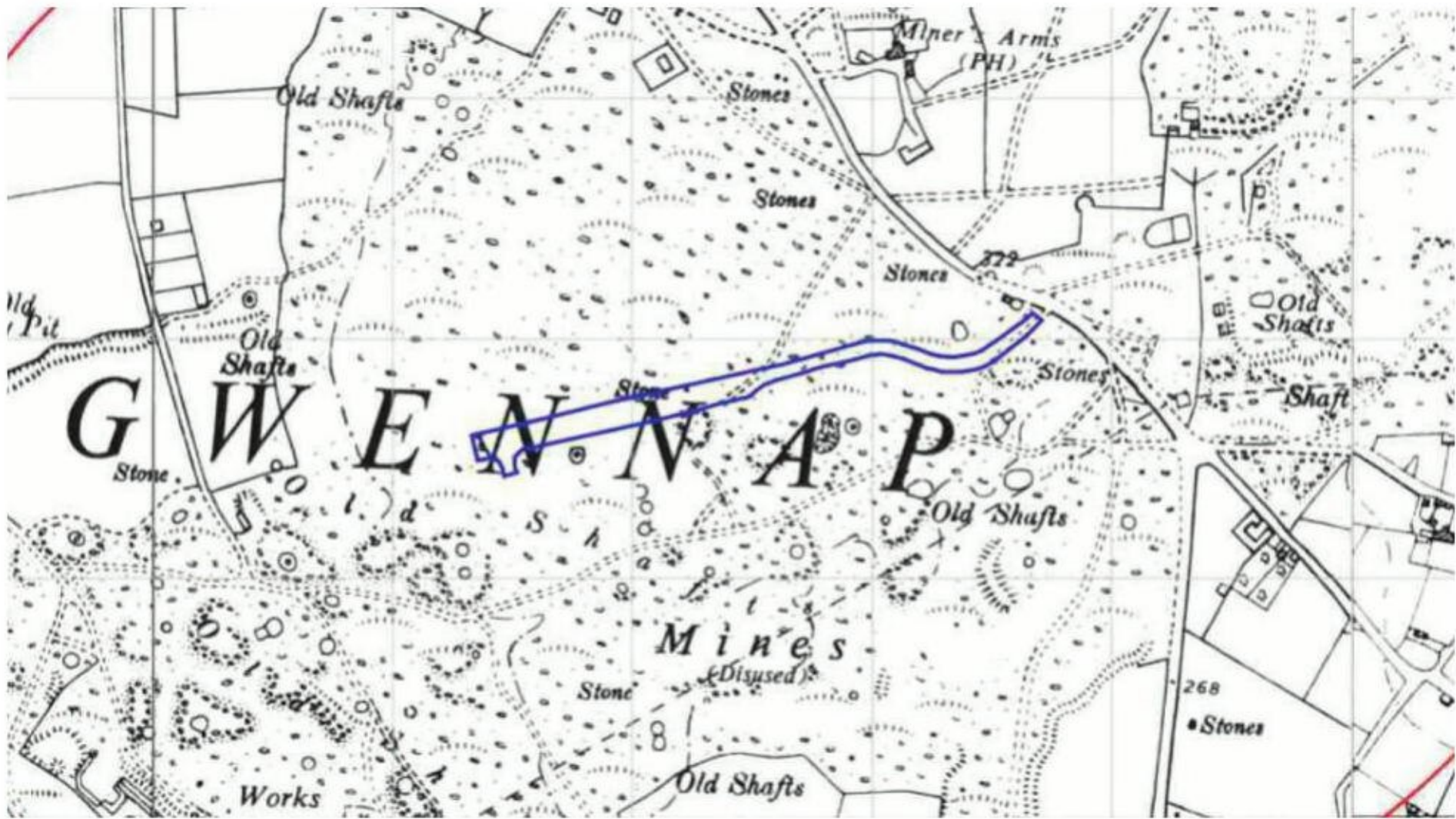


This risk assessment methodology is intended as a generic tool. A small number of sites with unusual site-specific conditions may require additional consideration of the hazard scoring.

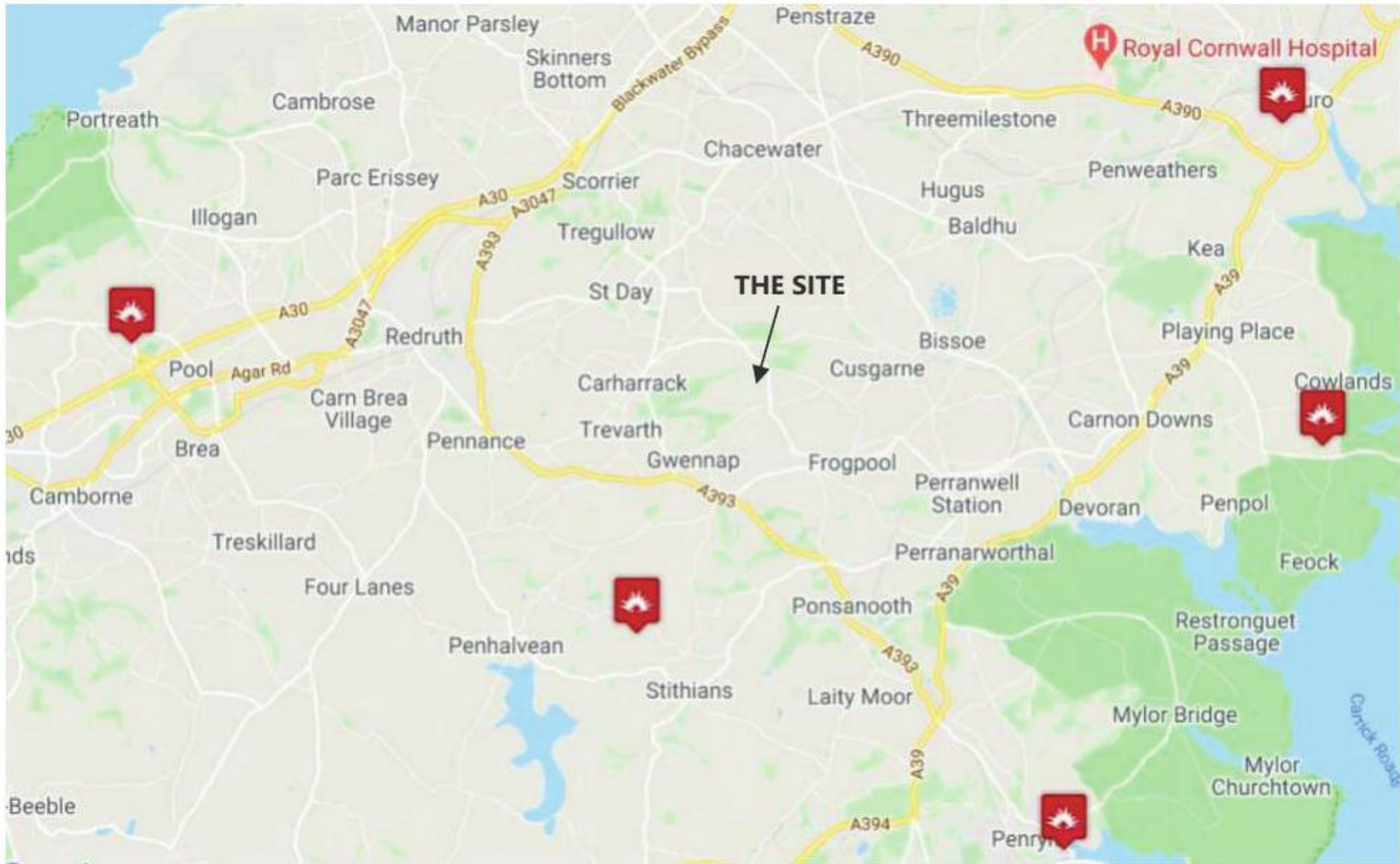
Attachment 1. Pre-WWII Historical Map, 1906 - 1908



Attachment 2. Post-WWII Historical Map, 1958



Attachment 3. cornwallfhs.com/cornwallswarhistory/maps/bombings/



Nina Sopp
Buro Happold Limited
17 Newman Street
London
W1T 1PD
UK

T: +44 (0)207 927 9700
F: +44 (0)870 787 4145

