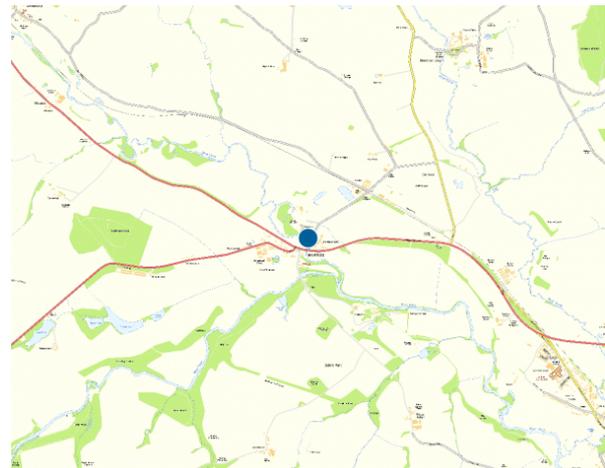


Preliminary Unexploded Ordnance Risk Assessment



Project: 15 BROMFIELD, LUDLOW, SY8 2JR
Prepared for: Bomb Risk Test
Ref: WhWihtAnqyAowa7

Report prepared by SafeLane Global and FIND Mapping Limited

Report reference: 503300

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Preliminary Unexploded Ordnance Threat Assessment

For:

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1 Has a potential unexploded ordnance (UXO) risk been identified at the site in question?

YES

Indicative British / Allied UXO Risk

LOW-MEDIUM

Indicative German UXO Risk

LOW

2 Does the site in question require further research to clarify the unexploded ordnance (UXO) risk to future ground works?

YES

3 SafeLane Global's recommendation:

A Stage 2 Detailed Unexploded Ordnance Desktop Threat Assessment of the site is carried out.

To request a quotation please call SafeLane Global on 01634 471 340

If you order the recommended Stage 2 Detailed Desktop Threat Assessment, you will be refunded the fee for this BombRisk Preliminary Threat Assessment.

About SafeLane Global Limited

Operational for over 30 years for 10,000+ clients, SafeLane Global supports the UK construction industry with its BombRisk service. This assesses the risk of encountering items of unexploded ordnance (UXO) during intrusive works.

SafeLane Global's specialist advice provides essential information for risk assessments, improving safety and enhancing reputations, helping contractors avoid costly delays.

SafeLane Global holds the following accreditations:

- **Occupational Health & Safety Management Systems (OHAS 18001:2007)**
- **Environmental Management Systems (ISO 14001:2004)**
- **Quality Management Systems (ISO 9001:2008).**

The risk of encountering UXO on most sites in the UK is low. However, where a site is at increased risk it is necessary to take measures to mitigate that risk. The factors affecting UXO risk assessment are based upon the history and previous usage of a site and its surroundings.

In 2009, the Construction Industry Research and Information Association (CIRIA) established a set of guidelines to assist industry professionals; SafeLane Global was a significant contributor to the guide, under former company name Dynasafe BACTEC.

CIRIA recommends a four-stage risk management process:

- **Preliminary risk assessment**
- **Detailed risk assessment**
- **Risk mitigation**
- **Implementation**

The preliminary risk assessment enables a non-UXO specialist to place a site in context and to identify whether a more detailed assessment is necessary. The assessment is based upon data obtained from desktop reviews of the site's history and its proximity to potential indicators of UXO contamination.

There are two principal groups of onshore UXO in the UK:

- **British / Allied army, air force and navy activities - domestic military activity**
- **Enemy bombing during WWI and WWII - aerial bombing and naval bombardment**

These two groups comprise many potential UXO risk contributing sources within the UK, the most significant of which are listed below. Georeferenced databases containing this information are used

by BombRisk.com to identify areas of potentially elevated UXO risk.

- **Historic army, navy and air-force facilities**
- **Explosives / ammunition factories**
- **Munitions storage depots**
- **Historic military training areas and firing ranges**
- **British army explosive ordnance clearance tasks / recces**
- **WWII heavy anti-aircraft batteries**
- **WWII anti-invasion defensive fortifications**
- **Miscellaneous WWII pipe mined locations**
- **WWII prisoner of war camps**
- **WWII German bombing density statistics**
- **WWII bombing decoy sites**
- **Press articles regarding UXO finds**
- **Locations of SafeLane Global UXO finds**
- **Locations of SafeLane Global desktop threat assessments**
- **Locations of SafeLane Global on-site support services**

About FIND Mapping Limited

Established in 2006, FIND Mapping Limited is a pioneering web mapping and spatial data technology company offering online mapping and consultancy services. FIND technology powers the generation of this report.

www.findmaps.co.uk provides detailed mapping and a wealth of data sets to hundreds of the UK's top property, environmental and design/build companies.

FIND's consultancy services provide bespoke internet mapping solutions to a range of businesses enabling them to manage their spatial data more effectively.

While working closely with a wide range of reputable data providers including Ordnance Survey and the Environment Agency, FIND works independently of these organisations. A similar arm's-length relationship is maintained in terms of software and hardware providers. This enables the team at FIND to offer truly independent advice.

SafeLane Global Limited and FIND have compiled a geo-referenced database of potential sources of UXO risk within the UK. From this information a range of risk zones have been defined.

The weighting of these zones is based upon the influence of all relevant factors. A WWII-era RAF airfield, for example, has a far greater zone of influence than a single WWII-era anti-aircraft battery, as it would have covered a larger area, housed a much greater quantity / variety of munitions, seen more domestic troop training activities and would have been a more likely target for enemy bombers.

An online Preliminary Automated UXO Threat Assessment will determine an indicative level of UXO risk relating to a site. Note that these risk levels could be subject to change following the completion of any Detailed Desktop Threat Assessment for the same site.

The assessment will list all factors contributing to this weighting and will also give appropriate recommendations for further action, if considered necessary.

SafeLane Global Limited's UXO Source Database

Within 10km of the site the following potential sources of explosive ordnance have been recorded:

Source	Number within 10km
WWII Defence Related Positions & Pillboxes	14
Historic Army Camps	1
Prisoner of War Camps	1
Army Explosive Ordnance Clearance Tasks/Recces	2
Sites Related to the Manufacture of Explosives and Explosive Ordnance	1
Military Airfield Facilities	None recorded
Bombing Decoy Sites	None recorded
Abandoned Bombs	None recorded
Press Articles Regarding UXO Finds	None recorded
Military Training Areas and Firing Ranges	None recorded
Heavy Anti-Aircraft Batteries	None recorded
Pipe Mined WWII Airfields	None recorded
Miscellaneous WWII Pipe Mined Locations	None recorded
SafeLane Global Unexploded Ordnance Finds	None recorded
SafeLane Global Desk-top Threat Assessments	None recorded
SafeLane Global On-Site Support Services	None recorded

Of these sources, the following are deemed the most significant:

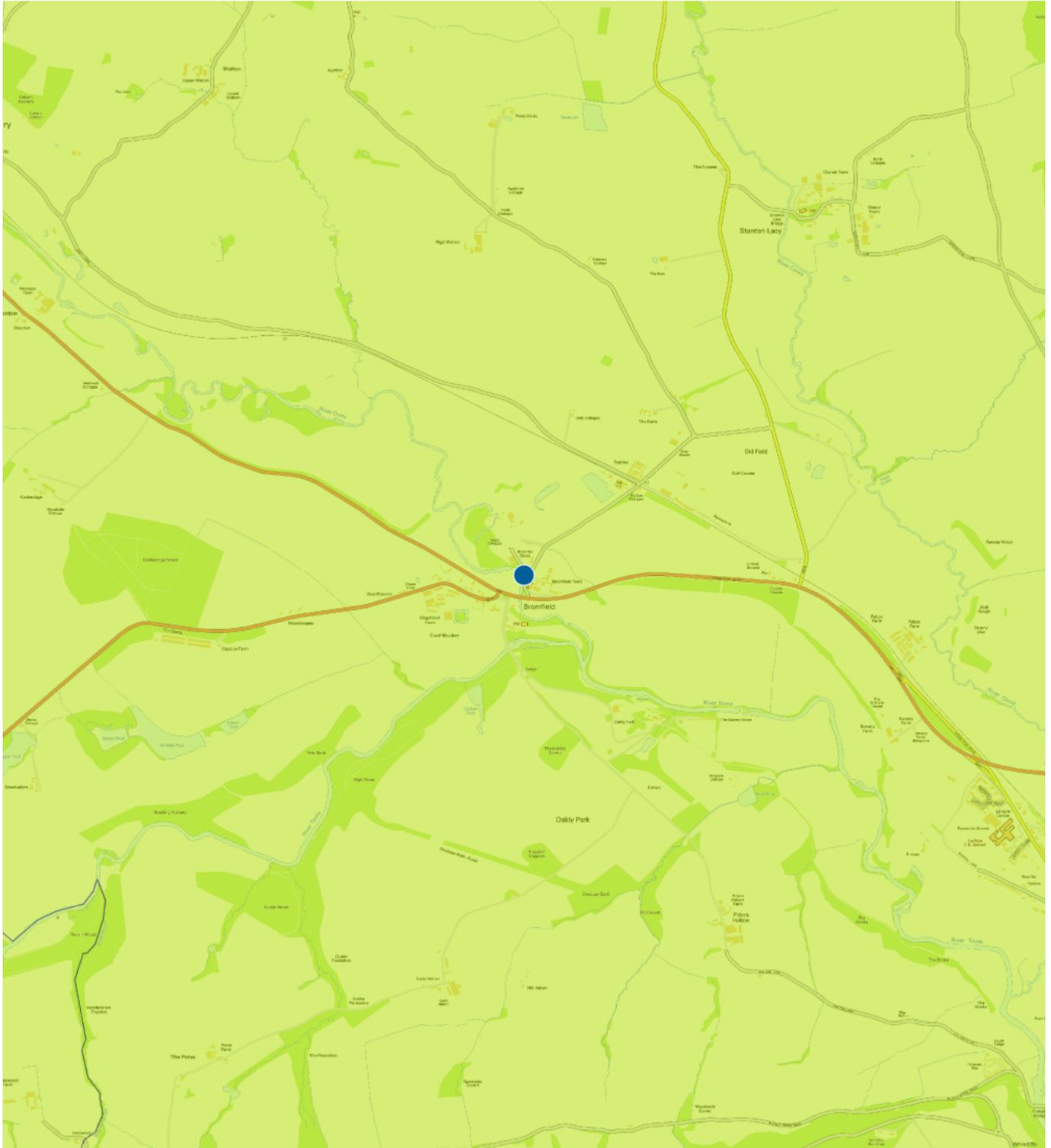
Sites Related to the Manufacture of Explosives and Explosive Ordnance

Facility Name	Approximate distance (km) from site
Ludlow, Great War 1918, unfinished, wood Chemical works - acetate of lime for acetone (Precise location unknown)	2.7

During both WWI and WWII many factories were established (or existing sites converted) to produce explosives and/or fill ordnance with explosive and chemical constituents. These ranged from small engineering works to large national filling factories (WWI) and royal ordnance factories (WWII). The site of the proposed works lies in the vicinity of one of these facilities.

For a factory producing casings, for example, the associated risk is negligible. However, on sites handling or producing explosive and chemical weapons the risk of soil contamination can be high.

Disposal areas (often on site boundaries) can pose considerable risk. The history of the facility should be more fully researched.

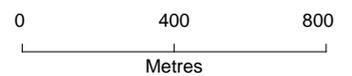


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- NEGLIGIBLE
- LOW
- MEDIUM
- HIGH

1:20000



Risk Levels and Recommendation

Indicative British / Allied UXO Risk

LOW-MEDIUM

There are potential sources of British / Allied UXO recorded in SafeLane Global's historical database in the general area surrounding the site. It is recommended that further research is undertaken to determine more about these potential sources and how they may have affected the site. If there is any empirical evidence of actual or potential contamination, SafeLane Global should be contacted for advice. Otherwise, the risk on site from UXO is considered to be Low-Medium.

Indicative German UXO Risk

LOW

Historical records indicate that the area was subjected to a low level of bombing density. If there is empirical evidence of unexploded bomb risk (i.e. anecdotal evidence) then please contact SafeLane Global for further advice.

This preliminary assessment has identified a low risk from German unexploded bombs at this site.

Conclusion

This preliminary assessment has resulted in an overall Low-Medium risk from UXO. SafeLane Global would recommend that a Detailed UXO Threat Assessment Desk Top Study is undertaken for this site. Detailed assessments are conducted offline by SafeLane Global's researchers and use information such as historical mapping, WWII-era aerial photography, written air-raid precaution records and where necessary local archive research to fully qualify the risk on site. Land use, changes to building layout during WWII and post war redevelopment will also have an impact on any remaining level of risk from UXO. It is often possible to zone sites into different risk categories. The lead time for a detailed assessment will vary between 3-10 working days dependent upon the complexity of the site and the additional site specific information required.

For a quotation, or more information, please contact SafeLane Global's research team on 01634 471 340, or at research@safelaneglobal.com

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