

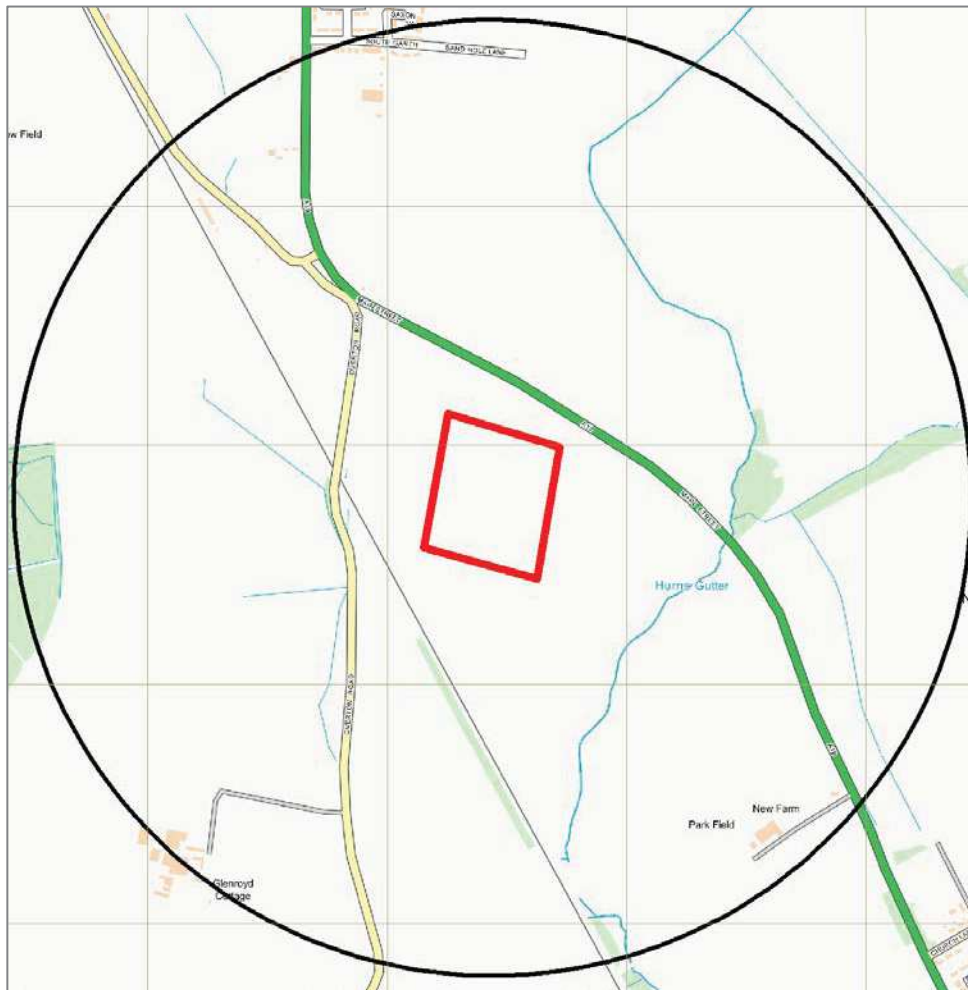
Appendix 10C

Unexploded Ordnance Reports

Note: These reports relate to the Overton and Monk Fryston substation sites only.

PRELIMINARY UNEXPLODED ORDNANCE (UXO) THREAT ASSESSMENT

Meeting the requirements of CIRIA C681 'Unexploded Ordnance (UXO) – A guide for the Construction Industry' Risk Management Framework



6 ALPHA PROJECT NUMBER	8973	ORIGINATOR	M. Stott
LANDMARK ORDER NUMBER	278803566_1	REVIEWED BY	L. Gregory (19 th May 2021)
CLIENT REFERENCE	100102545 SS03	RELEASED BY	L. Gregory (19 th May 2021)
STUDY SITE	York North 275kV, Shipton, North Yorkshire		
RECOMMENDATION	No further action is required to address the UXO risk at this Study Site		

STUDY SITE

The Study Site is described as “York North 275kV, Shipton, North Yorkshire”, and it is centred on National Grid Reference 455720, 457390.

THREAT POTENTIAL AND RECOMMENDATIONS

The potential for a UXO hazard to occur, and more specifically, the potential for unexploded WWI and WWII ordnance to exist at this site is assessed as being **UNLIKELY** (*Figure 2*).

In accordance with *CIRIA C681* Chapter 5 on managing UXO risks, *6 Alpha* concludes that **NO FURTHER ACTION** is required to address the UXO risk at this Study Site. Should you have any queries, please contact *Envirocheck*.

Telephone: +44 (0)844 844 9952

Email: customerservice@envirocheck.co.uk



REPORT SUMMARY

During WWII, the Study Site was situated within *Easingwold Rural District*, which recorded one High Explosive (HE) bomb strike per 100 hectares; a very low level of bombing.

Luftwaffe aerial reconnaissance photography associated with the Study Site did not identify any primary bombing targets on-site or within 1,000m of the Study Site boundary.

Neither *Air Raid Precaution* (ARP) records nor official bomb damage mapping were not available. Nonetheless, neither an analysis of post-war mapping nor further *6 Alpha* research identified any evidence of WWII bombing or bomb damage on-site or within 1,000m of the Study Site boundary.

A WWII-era bombing decoy was recorded approximately 695m to the north-north-east of the Study Site. Such sites were designed to mimic important industrial/urban areas and or military facilities such as airfields in order to draw *Luftwaffe* bombing away from their real intended target. Accurate record keeping surrounding such sites did not often survive the post-war period (where they were kept at all) and so the success of the decoy site in attracting *Luftwaffe* bombing and its precise extents could not be corroborated.

As there was no bombing or bomb damage recorded in the Study Site’s vicinity during WWII, there is no evidence to suggest that further investigation into UXO is warranted.

USING THIS REPORT

This Preliminary Assessment is designed to inform environmental and construction professionals of the potential threat of military related explosives and/or ordnance on, or in, the vicinity of the Study Site.

This assessment is designed to be employed as a site-screening tool to meet with the requirement of Phase One of the *CIRIA UXO Risk Management Framework*; there are two broad prospective outcomes; either the threat level requires a detailed threat & risk assessment; or no further action is required. In the former instance we can provide a report within 10 working days (or more quickly upon application).

Two figures accompany the report, the *Second World War* (WWII) High Explosive (HE) Bomb Density and the final Probability of UXO Encounter. The purpose of this approach is to demonstrate that whilst bomb density statistics give an indication for WWII bombing, they should not be relied upon exclusively to generate a holistic assessment.












For further information, please contact *Envirocheck*:

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Website: <http://www.envirocheck.co.uk>

Email: customerservice@envirocheck.co.uk

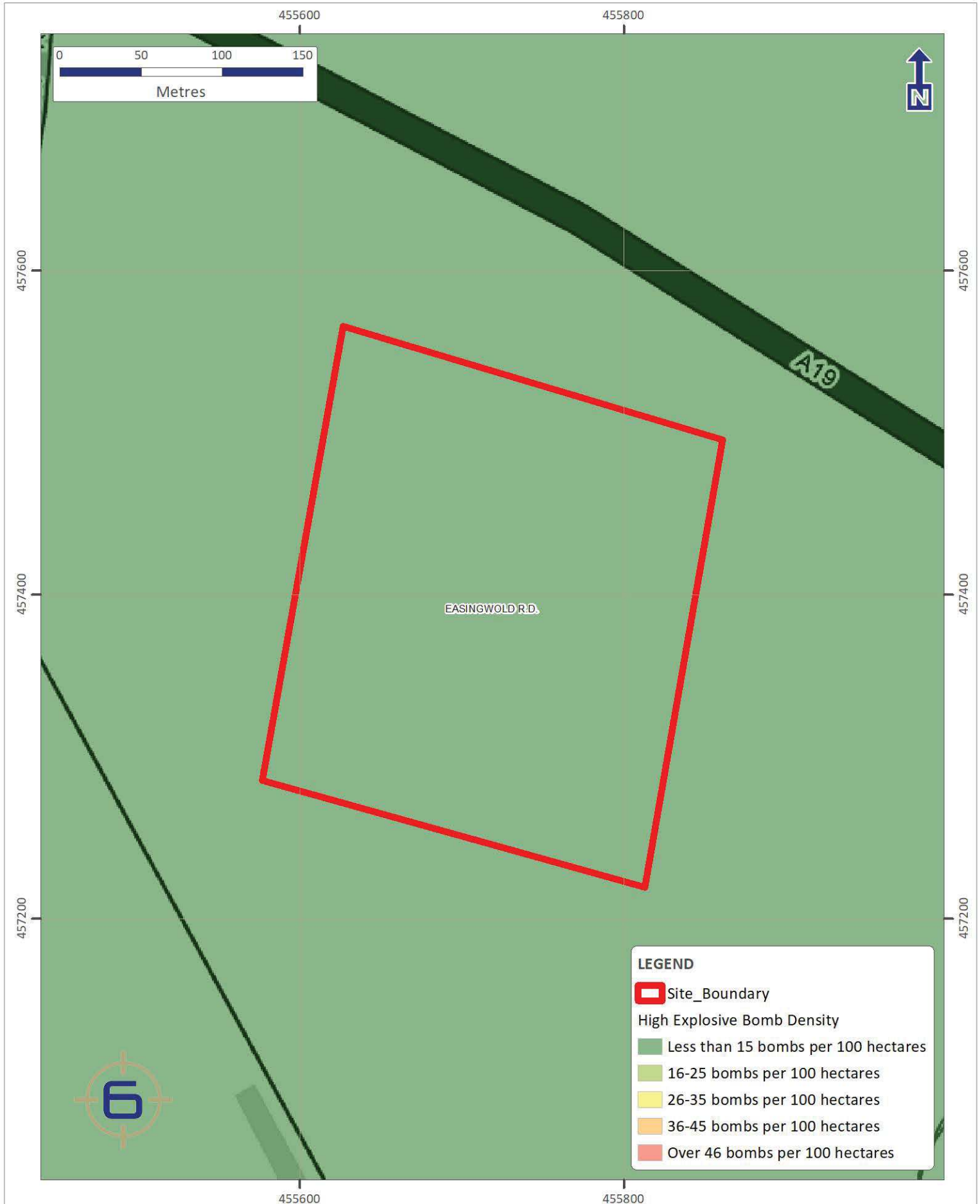
DATA FINDINGS

Threat Source (within 1,000m)	Detail	
	Identified	Comments
 Airfields/Military Facilities	✓	<i>XOIP Shipton</i> was potentially used as a grass airfield during WWI (1,100m north-west).
 Ordnance Manufacture/Storage	✗	None recorded within 1,000m.
 WWII Decoy Bombing Sites	✓	A decoy site was located 695m north-north-east.
 WWII Defensive Features	✗	None recorded within 1,000m.
 WWII <i>Luftwaffe</i> Designated Bombing Targets	✗	<i>Luftwaffe</i> aerial photography did not identify any primary bombing targets on-site or within 1,000m of the Study Site boundary.
 WWII Bomb Strikes Within Study Site Boundary	✗	ARP records were not available.
 WWII Bomb Strikes Near Study Site Boundary	✗	ARP records were not available.
 WWII Bomb Damage	✗	Official bomb damage mapping was not available.
 Abandoned Bomb Register	✗	The official abandoned bomb list did not identify any abandoned bombs located on-site or within 1,000m of the Study Site boundary.
 Potential Threat Sources	✗	Further research has not uncovered any potential UXO threat sources associated with the Study Site.
 WWII Bombing Density Per 100 Hectares	✓	The Study Site was located within <i>Easingwold Rural District</i> , which recorded one HE bomb strike per 100 hectares.

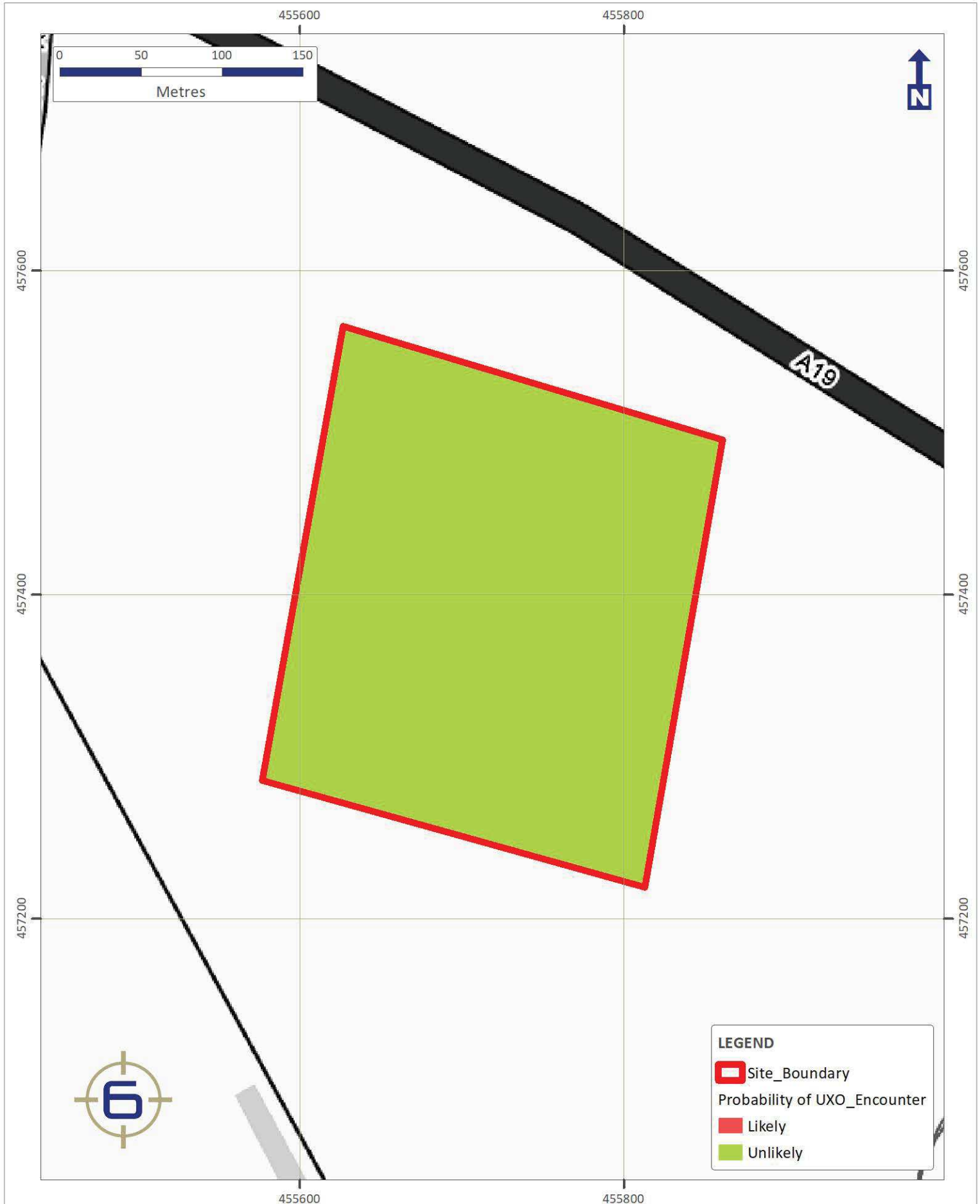
IMPORTANT NOTES

1. The term 'Preliminary UXO Threat Assessment' has been used to describe this report, to fall in line with the *CIRIA* C681 guidelines. Whilst the term 'Risk' can be justifiably used at this stage, the reader should note that the 'Consequence' function of 'Risk' is not considered. Should it be required, this would be addressed in the 'Detailed UXO Threat & Risk Assessment' (Stages 2 and 3).
2. This report is accurate and up to date at the time of writing.
3. The assessment levels have been generated from historical data and third-party sources. Where possible *6 Alpha* have sought to verify the accuracy of such data, but cannot be held accountable for inherent errors that may be in third party data sets (e.g. *National Archives* or library sources).
4. *6 Alpha* have exercised all reasonable care, skill and due diligence in producing this service.
5. Whilst every effort has been used to identify all potential UXO/explosive threats, there were a number of private facilities, which may not have released privately recorded information concerning UXO/explosive threats into the public domain. It is therefore possible that some of the aforementioned sites may not be included within the database.




WWII High Explosive Bomb Density



Probability of UXO Encounter



LEGEND

-  Site_Boundary
- Probability of UXO_Encounter
-  Likely
-  Unlikely

Pre-Desk Study Assessment

Site:	York North Substation, Shipton, North Yorkshire
Client:	Mott MacDonald
Contact:	Louise Gelder
Date:	23 rd April 2021
Pre-WWI Military Activity on or Affecting the Site	None identified.
WWI Military Activity on or Affecting the Site	None identified.
WWI Strategic Targets (within 5km of Site)	The following strategic targets were located in the vicinity of the Site: <ul style="list-style-type: none"> ■ Transport infrastructure and public utilities.
WWI Bombing	None identified on the Site.
Interwar Military Activity on or Affecting the Site	None identified.
WWII Military Activity on or Affecting the Site	None identified.
WWII Strategic Targets (within 5km of Site)	The following strategic targets were located in the vicinity of the Site: <ul style="list-style-type: none"> ■ Transport infrastructure and public utilities. ■ Royal Air Force (RAF) Shipton and RAF Clifton. ■ Military camps and training areas.
WWII Bombing Decoys (within 5km of Site)	3No. The nearest was located approximately 2.3km southwest of the Site.
WWII Bombing	During WWII the Site was located in the Rural District (RD) of Easingwold, which officially recorded 234No. High Explosive (HE) bombs with a bombing density of 3.1 bombs per 405 hectares (ha). No readily available records have been found to indicate that the Site was bombed.
Post-WWII Military Activity on or Affecting the Site	None identified.
Recommendation	A detailed desk study, whilst always prudent, is not considered essential in this instance.

This summary is based on a cursory review of readily available records. Caution is advised if you plan to action work based on this summary.

It should be noted that where a potentially significant source of UXO hazard has been identified on the Site, the requirement for a detailed desk study and risk assessment has been confirmed and no further research will be undertaken at this stage. It is possible that further in-depth research as part of a detailed UXO desk study and risk assessment may identify other potential sources of UXO hazard on the Site.

UNEXPLODED BOMB RISK MAP



SITE LOCATION

Map Centre: 455709,457411



LEGEND

- High:** Areas indicated as having a bombing density of 50 bombs per 1000acre or higher.
- Moderate:** Areas indicated as having a bombing density of 15 to 49 bombs per 1000acre.
- Low:** Areas indicated as having 15 bombs per 1000acre or less.

- military
- industry
- UXO find
- transport
- dock
- Luftwaffe targets
- utilities
- Bombing decoy
- other

How to use your Unexploded Bomb (UXB) risk map?

The map indicates the potential for Unexploded Bombs (UXB) to be present as a result of World War Two (WWII) bombing.

You can incorporate the map into your preliminary risk assessment* for potential Unexploded Ordnance (UXO) for a site. Using this map, you can make an informed decision as to whether more in-depth detailed risk assessment* is necessary.

What do I do if my site is in a moderate or high risk area?

Generally, we recommend that a detailed UXO desk study and risk assessment is undertaken for sites in a moderate or high UXB risk area.

Similarly, if your site is near to a designated Luftwaffe target or bombing decoy then additional detailed research is recommended.

More often than not, this further detailed research will conclude that the potential for a significant UXO hazard to be present on your site is actually low.

Never plan site work or undertake a risk assessment using these maps alone. More detail is required, particularly where there may be a source of UXO from other military operations which are not reflected on these maps.

If my site is in a low risk area, do I need to do anything?

If both the map and other research confirms that there is a low potential for UXO to be present on your site then, subject to your own comfort and risk tolerance, works can proceed with no special precautions.

A low risk really means that there is no greater probability of encountering UXO than anywhere else in the UK.

If you are unsure whether other sources of UXO may be present, you can ask for one of our **pre-desk study assessments (PDSA)**

If I have any questions, who do I contact?

tel: **+44 (0) 1993 886682**

email: **uxo@zetica.com**

web: **www.zeticauxo.com**

The information in this UXB risk map is derived from a number of sources and should be used in conjunction with the accompanying notes on our website: (<https://zeticauxo.com/downloads-and-resources/risk-maps/>)

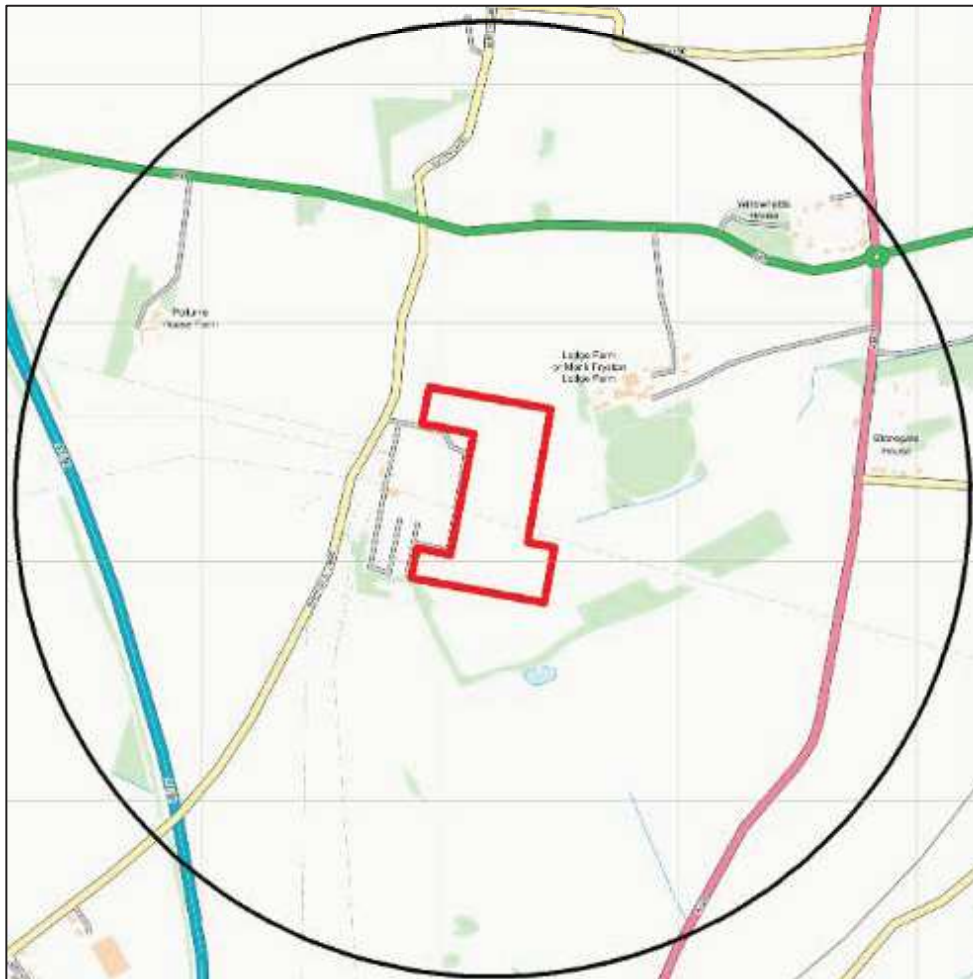
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It is important to note that this map is not a UXO risk assessment and should not be reported as such when reproduced.

*Preliminary and detailed UXO risk assessments are advocated as good practice by industry guidance such as CIRIA C681 'Unexploded Ordnance (UXO), a guide for the construction industry'.

PRELIMINARY UNEXPLODED ORDNANCE (UXO) THREAT ASSESSMENT

Meeting the requirements of CIRIA C681 'Unexploded Ordnance (UXO) – A guide for the Construction Industry' Risk Management Framework



6 ALPHA PROJECT NUMBER	8972	ORIGINATOR	D. Barrett
LANDMARK ORDER NUMBER	278802908_1	REVIEWED BY	L. Gregory (18 th May 2021)
CLIENT REFERENCE	100102545 SS03	RELEASED BY	L. Gregory (19 th May 2021)
STUDY SITE	Site at, Monk Fryston 400KV, North Yorkshire		
RECOMMENDATION	No further action is required to address the UXO risk at this Study Site		

STUDY SITE

The Study Site is described as “Site at, Monk Fryston 400KV, North Yorkshire”, and it is centred on National Grid Reference 448610, 429130.

THREAT POTENTIAL AND RECOMMENDATIONS

The potential for a UXO hazard to occur, and more specifically, the potential for unexploded WWI and WWII ordnance to exist at this site is assessed as being **UNLIKELY** (*Figure 2*).

In accordance with *CIRIA C681 Chapter 5 on managing UXO risks, 6 Alpha* concludes that **NO FURTHER ACTION** is required to address the UXO risk at this Study Site. Should you have any queries, please contact *Envirocheck*.

Telephone: +44 (0)844 844 9952

Email: customerservice@envirocheck.co.uk



REPORT SUMMARY

During WWII, the Study Site was situated within *Osgoldscross Rural District*, which recorded less than one High Explosive (HE) bomb strike per 100 hectares; a very low level of bombing.

Luftwaffe aerial reconnaissance photography associated with the Study Site did not identify any primary bombing targets on-site, or within 1,000m of the Study Site boundary.

Neither *Air Raid Precaution* (ARP) records nor official bomb damage were available. Nonetheless further research of historical records identified incendiary bombs (IBs) impacting at *Lumby* (approximately 810m north) during WWI. Nonetheless, neither further research of historical records nor an analysis of post-war mapping identified any bomb strikes or potential bomb damage on-site or in the immediate vicinity.

Although WWI bomb strikes were recorded in the wider area, as there was no bombing or bomb damage recorded in the Study Site’s vicinity during WWII, there is no evidence to suggest that further investigation into UXO is warranted.

USING THIS REPORT

This Preliminary Assessment is designed to inform environmental and construction professionals of the potential threat of military related explosives and/or ordnance on, or in, the vicinity of the Study Site.

This assessment is designed to be employed as a site-screening tool to meet with the requirement of Phase One of the *CIRIA UXO Risk Management Framework*; there are two broad prospective outcomes; either the threat level requires a detailed threat & risk assessment; or no further action is required. In the former instance we can provide a report within 10 working days (or more quickly upon application).

Two figures accompany the report, the *Second World War* (WWII) High Explosive (HE) Bomb Density and the final Probability of UXO Encounter. The purpose of this approach is to demonstrate that whilst bomb density statistics give an indication for WWII bombing, they should not be relied upon exclusively to generate a holistic assessment.












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Website: <http://www.envirocheck.co.uk>

Email: customerservice@envirocheck.co.uk

DATA FINDINGS

Threat Source (within 1,000m)	Detail	
	Identified	Comments
 Airfields/Military Facilities	✗	None recorded within 1,000m.
 Ordnance Manufacture/Storage	✗	None recorded within 1,000m.
 WWII Decoy Bombing Sites	✗	None recorded within 1,000m.
 WWII Defensive Features	✗	None recorded within 1,000m.
 WWII <i>Luftwaffe</i> Designated Bombing Targets	✗	<i>Luftwaffe</i> aerial photography did not identify any primary bombing targets on-site or within 1,000m of the Study Site boundary.
 WWII Bomb Strikes (Study Site Boundary)	✗	ARP records were not available.
 WWI/WWII Bomb Strikes (Wider Area)	✓	Further research identified WWI-era IBs impacting approximately 810m north.
 WWII Bomb Damage	✗	Official bomb damage mapping was not available.
 Abandoned Bomb Register	✗	The official abandoned bomb list did not identify any abandoned bombs on-site or within 1,000m of the Study Site boundary.
 Potential Threat Sources	✗	Further research has not uncovered any potential UXO threat sources associated with the Study Site.
 WWII Bombing Density Per 100 Hectares	✓	The Study Site was located within <i>Osgoldscross Rural District</i> , which recorded less than one HE bomb strike per 100 hectares.

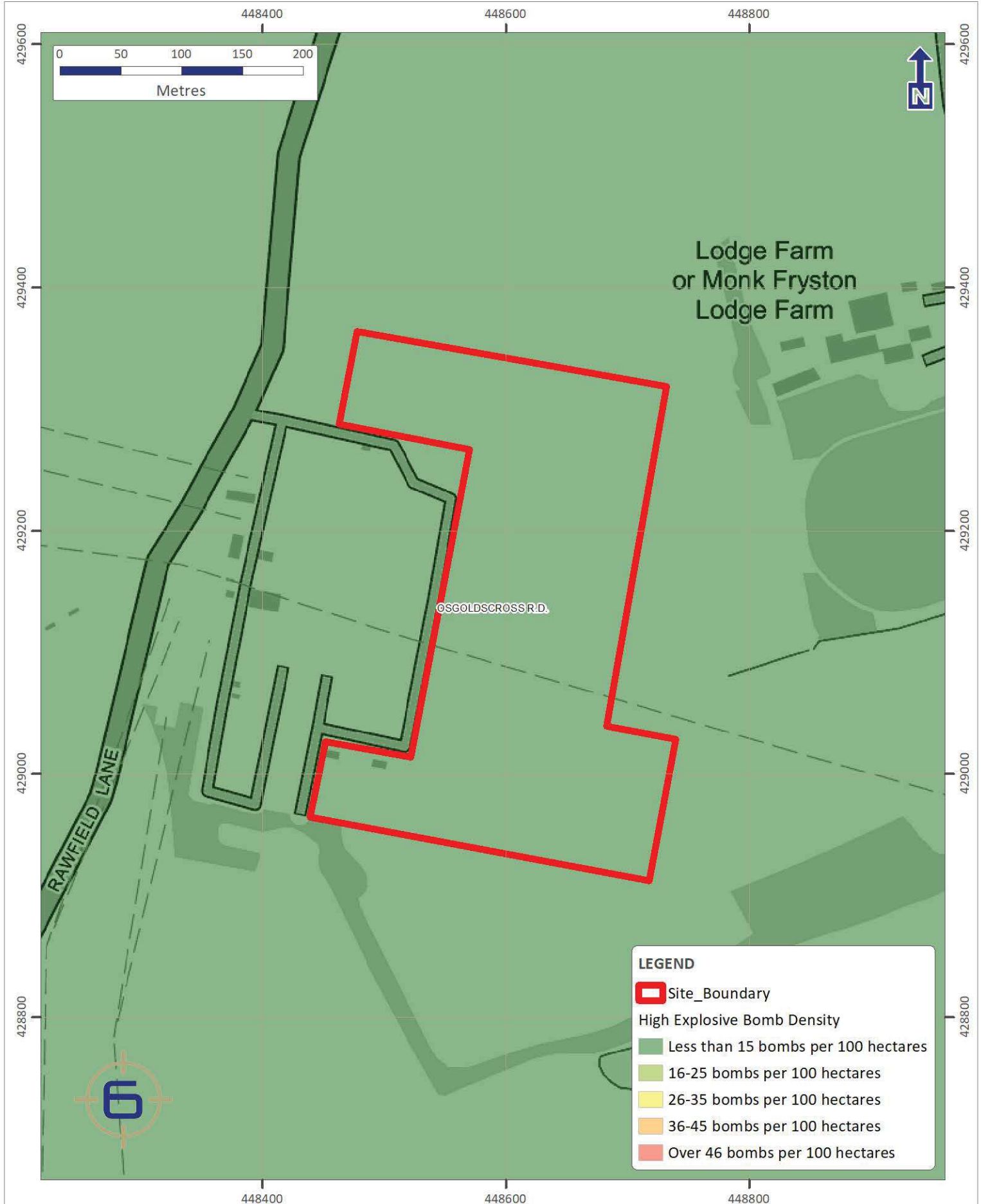
IMPORTANT NOTES

1. The term 'Preliminary UXO Threat Assessment' has been used to describe this report, to fall in line with the *CIRIA* C681 guidelines. Whilst the term 'Risk' can be justifiably used at this stage, the reader should note that the 'Consequence' function of 'Risk' is not considered. Should it be required, this would be addressed in the 'Detailed UXO Threat & Risk Assessment' (Stages 2 and 3).
2. This report is accurate and up to date at the time of writing.
3. The assessment levels have been generated from historical data and third-party sources. Where possible *6 Alpha* have sought to verify the accuracy of such data, but cannot be held accountable for inherent errors that may be in third party data sets (e.g. *National Archives* or library sources).
4. *6 Alpha* have exercised all reasonable care, skill and due diligence in producing this service.
5. Whilst every effort has been used to identify all potential UXO/explosive threats, there were a number of private facilities, which may not have released privately recorded information concerning UXO/explosive threats into the public domain. It is therefore possible that some of the aforementioned sites may not be included within the database.



SITE AT, MONK FRYSTON 400KV, NORTH YORKSHIRE

WWII High Explosive Bomb Density

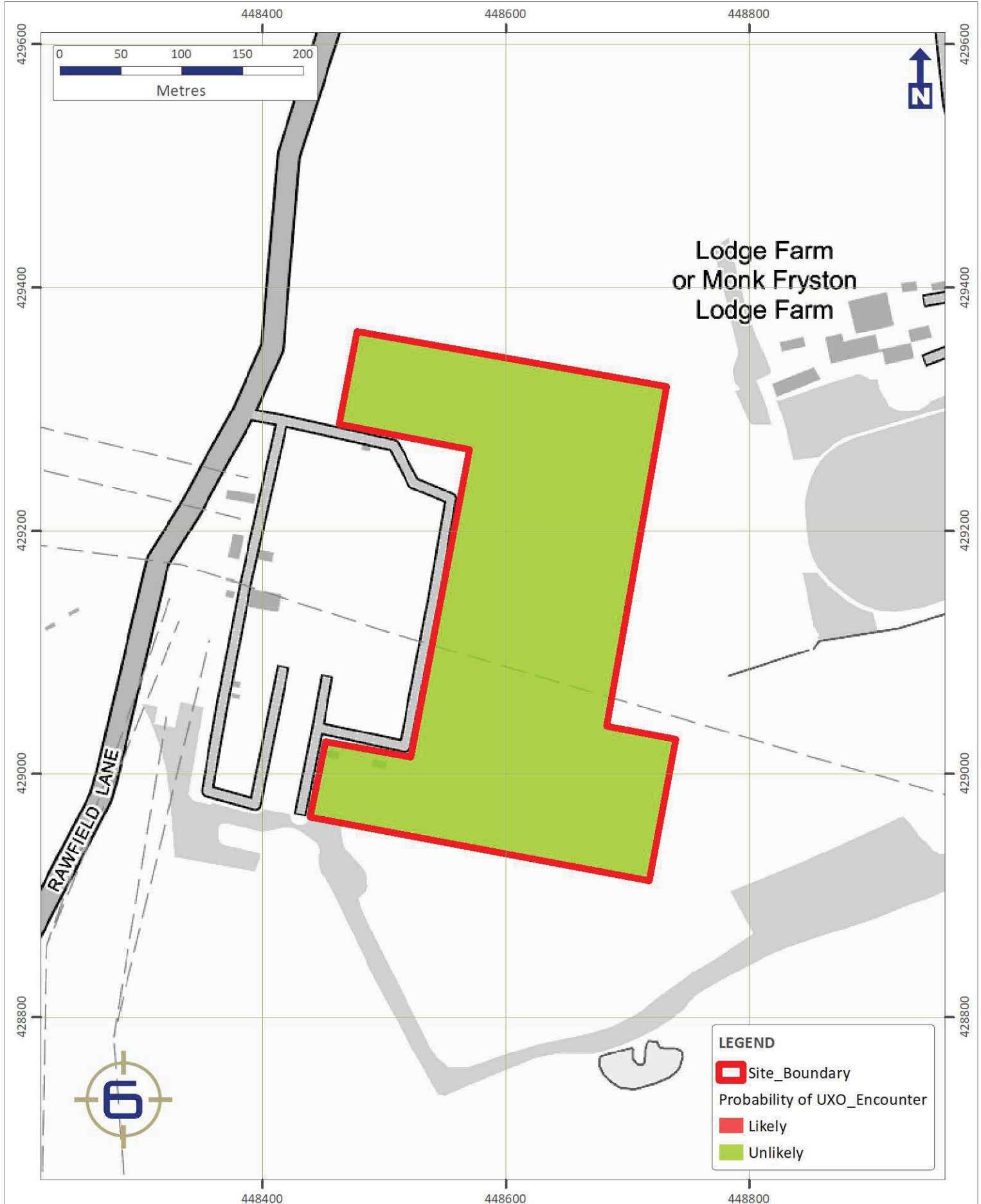


PROJECT NO. 8972	FIGURE 1	DRAWN CC	CHECKED LG	DATE 18 May 2021	Contains Ordnance Survey data © Crown copyright and database right 2017	Produced by and Copyright to 6 Alpha Associates Ltd. Users noting any errors please notify 6 Alpha.	
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SITE AT, MONK FRYSTON 400KV, NORTH YORKSHIRE

Probability of UXO Encounter



LEGEND

-  Site_Boundary
- Probability of UXO_Encounter
-  Likely
-  Unlikely

Pre-Desk Study Assessment

Site:	Monk Fryston Substation, North Yorkshire
Client:	Mott MacDonald
Contact:	Louise Gelder
Date:	23 rd April 2021
Pre-WWI Military Activity on or Affecting the Site	None identified.
WWI Military Activity on or Affecting the Site	None identified.
WWI Strategic Targets (within 5km of Site)	The following strategic targets were located in the vicinity of the Site: <ul style="list-style-type: none"> ■ Transport infrastructure and public utilities. ■ Royal Flying Corps (RFC) Sherburn-in-Elmet.
WWI Bombing	None identified on the Site.
Interwar Military Activity on or Affecting the Site	None identified.
WWII Military Activity on or Affecting the Site	None identified.
WWII Strategic Targets (within 5km of Site)	The following strategic targets were located in the vicinity of the Site: <ul style="list-style-type: none"> ■ Transport infrastructure and public utilities. ■ Royal Air Force (RAF) Sherburn-in-Elmet. ■ Anti-Aircraft (AA) and anti-invasion defences.
WWII Bombing Decoys (within 5km of Site)	None.
WWII Bombing	During WWII the Site was located in the Rural District (RD) of Osgoldcross, which officially recorded 25No. High Explosive (HE) bombs with a bombing density of 0.7 bombs per 405 hectares (ha). No readily available records have been found to indicate that the Site was bombed.
Post-WWII Military Activity on or Affecting the Site	None identified.
Recommendation	A detailed desk study, whilst always prudent, is not considered essential in this instance.

This summary is based on a cursory review of readily available records. Caution is advised if you plan to action work based on this summary.

It should be noted that where a potentially significant source of UXO hazard has been identified on the Site, the requirement for a detailed desk study and risk assessment has been confirmed and no further research will be undertaken at this stage. It is possible that further in-depth research as part of a detailed UXO desk study and risk assessment may identify other potential sources of UXO hazard on the Site.

UNEXPLODED BOMB RISK MAP



SITE LOCATION

Map Centre: 448539,429075



LEGEND

- High:** Areas indicated as having a bombing density of 50 bombs per 1000acre or higher.
- Moderate:** Areas indicated as having a bombing density of 15 to 49 bombs per 1000acre.
- Low:** Areas indicated as having 15 bombs per 1000acre or less.

- military
- industry
- UXO find
- transport
- dock
- Luftwaffe targets
- utilities
- Bombing decoy
- other

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You can incorporate the map into your preliminary risk assessment* for potential Unexploded Ordnance (UXO) for a site. Using this map, you can make an informed decision as to whether more in-depth detailed risk assessment* is necessary.

What do I do if my site is in a moderate or high risk area?

Generally, we recommend that a detailed UXO desk study and risk assessment is undertaken for sites in a moderate or high UXB risk area.

Similarly, if your site is near to a designated Luftwaffe target or bombing decoy then additional detailed research is recommended.

More often than not, this further detailed research will conclude that the potential for a significant UXO hazard to be present on your site is actually low.

Never plan site work or undertake a risk assessment using these maps alone. More detail is required, particularly where there may be a source of UXO from other military operations which are not reflected on these maps.

If my site is in a low risk area, do I need to do anything?

If both the map and other research confirms that there is a low potential for UXO to be present on your site then, subject to your own comfort and risk tolerance, works can proceed with no special precautions.

A low risk really means that there is no greater probability of encountering UXO than anywhere else in the UK.

If you are unsure whether other sources of UXO may be present, you can ask for one of our **pre-desk study assessments (PDSA)**

If I have any questions, who do I contact?

tel: **+44 (0) 1993 886682**

email: **uxo@zetica.com**

web: **www.zeticauxo.com**

The information in this UXB risk map is derived from a number of sources and should be used in conjunction with the accompanying notes on our website: (<https://zeticauxo.com/downloads-and-resources/risk-maps/>)

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*Preliminary and detailed UXO risk assessments are advocated as good practice by industry guidance such as CIRIA C681 'Unexploded Ordnance (UXO), a guide for the construction industry'.