



RSPB Long Island Hampshire

RSPB

LIFE on the edge. LIFE19NAT/UK/964. Co-funded by the European Union

Unexploded Ordnance Safety Sign-Off Certificate (Reducing Risks to ALARP)

Meeting the requirements of the United Kingdom's
Construction Industry Research and Information Association's
Unexploded Ordnance Risk Management Framework:

"Unexploded Ordnance (UXO) – A Guide for the Construction Industry" (C681)
and in compliance with the Construction (Design and Management) Regulations 2015

6 Alpha Associates Ltd

Project No.: 10321

2nd October 2023





Disclaimer

This document is of UK origin and is copyright © 6 Alpha Associates Ltd. It contains proprietary information, which is disclosed for the purposes of assessment and evaluation only. The contents of this document shall not in whole or in part: (i) be used for any other purpose, (ii) be disclosed to any member of the recipient's organisation not having a need to know such information, nor to any third party individual, organisation or government, (iii) be stored in any retrieval system nor be reproduced or transmitted in any form by photocopying or any optical, electronic, mechanical or other means, without the prior written permission of the Managing Director, 6 Alpha Associates Limited, Quatro House, Frimley Road, Camberley, GU16 7ER, UK.

Document Control

Proposal Number	Version	Author(s)	Reviewed By	Recipient
10321	2.0	Rebecca Griffiths	Ben Wilkinson	RSPB



6 Alpha Associates Limited

Quatro House, Frimley Road
Camberley, Surrey
GU16 7ER

Tel: +44(0) 203 371 3900

Web: www.6alpha.com

Table of Contents

TABLE OF CONTENTS	II
1 TECHNICAL DETAILS	III
1.1 SITE POSITION	III
1.2 USING THIS CERTIFICATE – KEY PRINCIPLES & LIMITATIONS	III
1.3 UXO RISK MANAGEMENT – METHODOLOGY	III
1.4 RISK MITIGATION MEASURES IMPLEMENTED	III
2 CERTIFICATE SIGN OFF	V
2.1 CERTIFICATE NOTES	V
2.2 CERTIFICATE CLARIFICATIONS	V
3 FIGURES	VII

Figures and Appendices

Figure 1	Overall Site Boundary
Figure 2	Proposed Fence Line
Figure 3	Results of Implemented UXO RMMs
Appendix 1	Results of Implemented UXO RMMs



1 Technical Details

1.1 Site Position

The Client has described the Project as 'RSPB Long Island, Langstone Harbour Nature Reserve, Hampshire, (further referred to as the *Site*). The *Site* is approximately centred at NGR 470181, 104193 (see Fig.1).

1.2 Using this Certificate – Key Principles & Limitations

A summary of prospective unexploded ordnance (UXO) risks to Client proposed intrusive works was articulated in 6 Alpha's Detailed UXO Risk Assessment desktop study (Reference: 10321, released on 06th February 2023). Within that document, recommended UXO risk mitigation measures (RMM) were detailed. This certificate relies upon that document and other 6 Alpha documents, namely the "10321 Operational UXO Emergency Response Plan" released 23rd August 2023 and "10321 Risk Assessment and Method Statement (RAMS)" covering UXO RMM support to the *Project's* proposed intrusive works, released to the Client 28th August 2023, and confirms the latter has been subsequently executed on site.


This certificate is designed to sign-off UXO risks conforming to the legal and Health and Safety Executive (HSE) endorsed principle of As Low as Reasonably Practicable (ALARP). Accordingly, the RMM have not sought to reduce UXO risks to zero, as it is neither reasonably practical, cost effective nor strictly necessary to do so. Although small residual UXO risks may have remained, those risks are considered "*de minimis*" and their carriage is considered both reasonable and practicable.

By designing a bespoke risk mitigation strategy to manage the identified UXO risks and by executing that at the *Project*, specifically at the *Site*, in 6 Alpha's view the Client has met with this legal standard.

1.3 UXO Risk Management – Methodology

The aforementioned documents and subsequent correspondence recommended the following UXO RMM be applied to achieve ALARP status in terms of reducing the UXO risk to Client intrusive works:

- Operational UXO Emergency Response Plan (Op UXO ERP); to cover all operations.
- UXO Safety & Awareness Briefings (UXO S&A Briefing); to be delivered, as a minimum, to all workers involved with any intrusive operations.
- Explosive Ordnance Disposal Engineers (EODE) to mobilise to site to carry out a non-digital 'mag-flag-investigate' UXO RMM process involving a non-intrusive UXO survey to cover the entirety of the proposed intrusive works at the *Site*, during which, any bgl anomalies of concern that are detected i.e. potential UXO (pUXO), will be marked for further consideration. Subsequent action will then be:
 1. **Avoid:** if possible, the position of the intrusive works to be replotted to another location avoiding the pUXO and the survey process recommenced, or ...

- 
2. **Investigate:** each pUXO anomaly to prove / disprove it as being UXO, with assistance from an excavator as necessary i.e. if deeper than 0.3 – 0.5m bgl or the ground conditions make hand excavation / investigation impracticable, or Client works are to extend deeper than hand excavation investigation.
 3. **Alternative:** Should it be assessed or proven that either non-intrusive UXO survey &/or pUXO target investigation will be or is ineffective in reducing the UXO risk ALARP e.g. due to high levels and density of ferrous materials bgl &/or excessive quantity of pUXO anomalies, dense vegetation, depth of investigation etc; and there is no scope to reposition intrusive works, then attendance may be required to monitor the works as they proceed so as to identify any suspicious items that may be UXO related.

1.4 Risk Mitigation Measures Implemented


EODE's were employed at the *Site* to provide workers and the project management team with UXO S&A Briefings on an as required basis in advance of the intrusive works, provide an Op UXO ERP as well as to survey the area defined by the Client (see Fig.2) in the mag-flag-investigate survey role.

A breakdown of UXO RMM implemented on site is included below:

- ⑤ UXO RMM was implemented over 1-day, namely Friday 08th September 2023.
- ⑤ The entire area was subjected to the non-digital 'mag-flag-investigate' UXO RMM process by the EODE.
- ⑤ A total of 4No. potential UXO anomalies were investigated during the applied UXO RMM, 2No. of which were described as '*...vertical poles cut-off at ground level and extending to more than 500mm bgl which would require mechanical excavation to remove...*' and 2No. were described as '*...a wheel...*' and '*...scrap...*' (and see . All were therefore categorised as non-UXO, free from explosives and safe to move.
- ⑤ The table at Appx.1 provides detail and results of UXO RMM carried out.

All geophysical survey anomalies were classified and/or investigated as the work proceeded in the manner prescribed. All were subsequently discredited as being UXO or associated with UXO or removed from Site.

2 Certificate Sign off



6 Alpha Recommendations	The UXO RMM works were safely conducted as planned and as described by employing an EODE and implementing UXO RMM as described. All UXO risks have been mitigated and reduced to ALARP as prescribed.		
	All future investigative and/or construction/civil engineering works that may be undertaken at this site <u>which is not covered</u> by this certificate should be the subject of similar risk treatment. In such circumstances, 6 Alpha would be pleased to advise on those measures considered necessary to reduce prospective UXO risks to ALARP.		
6 Alpha Associates	Name and Position	Signature	Date
Authorised Signatory	Ben Wilkinson Director of Land Operations		11 th September 2023


2.1 Certificate Notes

1. Change in Methodology; if there is any doubt concerning either the methodology associated with the risk management process, or the clarity, scope or extent of this UXO risk sign-off certificate, then 6 Alpha Associates Ltd. are to be immediately informed.
2. Validity; certificates are not valid unless they are counter signed by a 6 Alpha Associates Ltd Director, or his approved signatory.

2.2 Certificate Clarifications

For clarification, certain terms employed in this certificate have been briefly defined. These definitions are necessarily abridged and are only for the purposes of clarifying the terms employed in this Sign-Off Certificate:

-  ALARP – as low as reasonably practicable; a legal definition which requires the reduction of workplace risks in accordance with the legally endorsed de minimis threshold, in order to deliver reasonable and practicable levels of workplace health and safety;
-  De Minimis – a residual risk level which is deemed to have been either sufficiently ameliorated to be carried, and/or is considered prohibitively expensive and/or delivers insufficient risk management benefit, to further reduce it;

- 
- ⦿ Geophysical Survey Anomaly – an item that has been identified remotely by geophysical survey techniques;
 - ⦿ Target – a geophysical anomaly with properties that might be reasonably associate it with those items of UXO that are in the threat spectrum for this site. Targets are to be the subject of investigation for the purposes of UXO verification;
 - ⦿ Unexploded Ordnance (UXO) - military ordnance containing high explosives which may remain in situ because they have been emplaced (dumped or transported) or have been otherwise used in military war fighting and/or training activities and have failed to function as designed.

If any other terms in this certificate require clarification, please contact 6 Alpha Associates Ltd. directly.



3 FIGURES

1. Site Boundary
2. Area Subjected to Survey

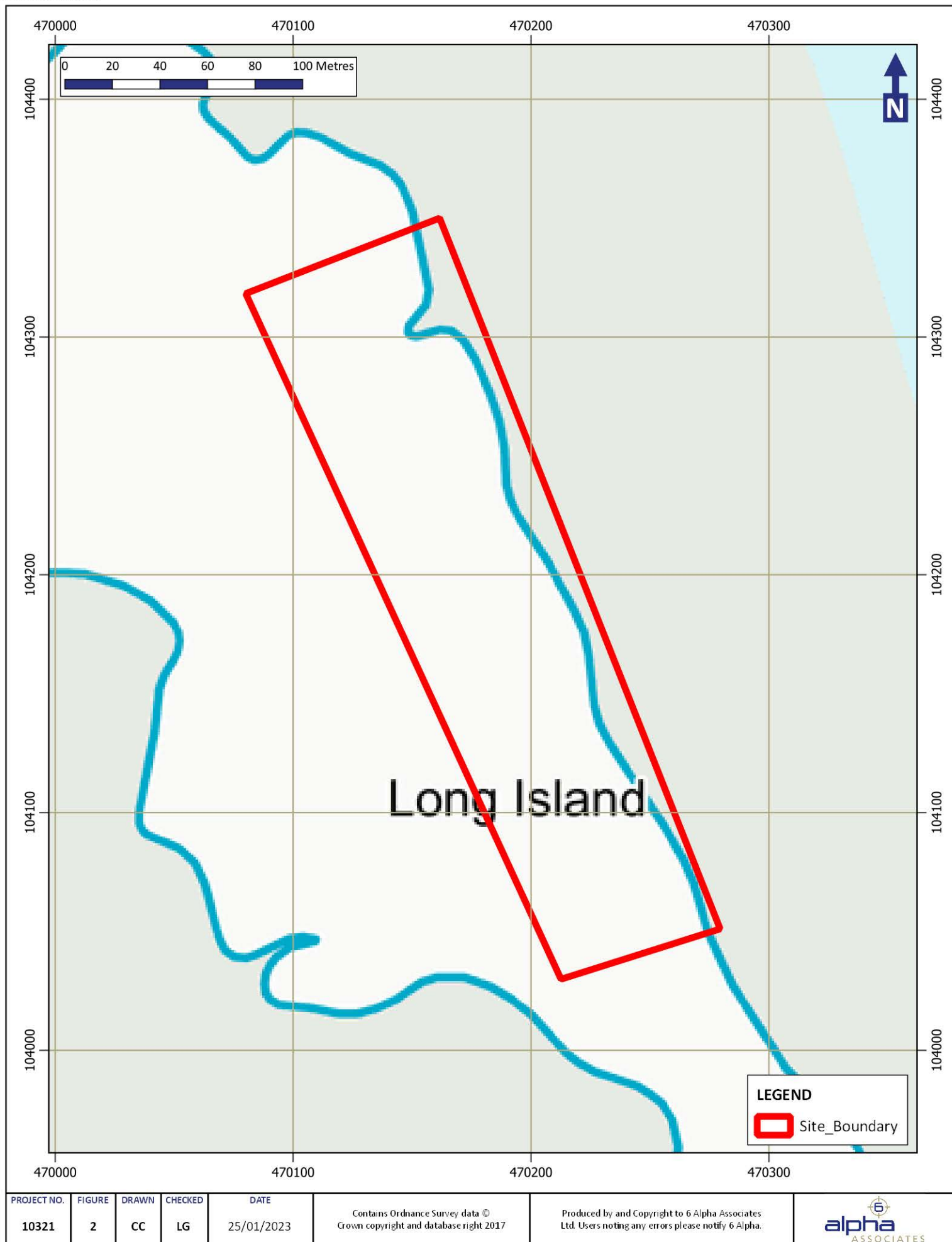


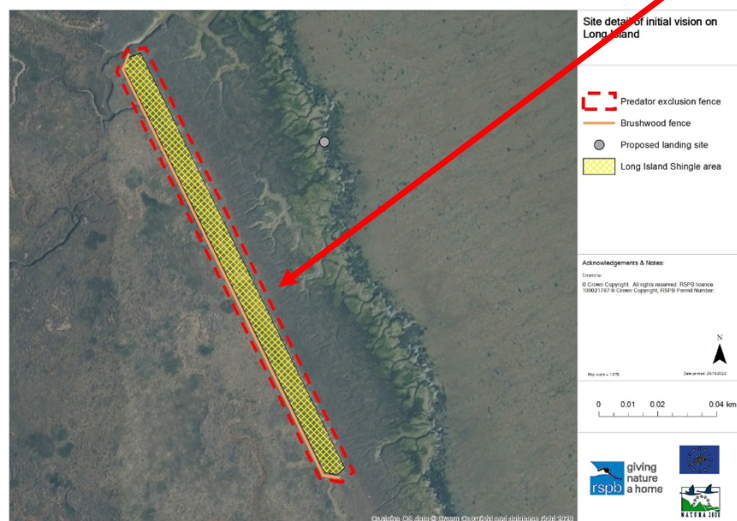
LONG ISLAND, LANGSTONE HARBOUR NATURE RESERVE, HAMPSHIRE

Site Boundary



British National Grid







4 Appendices

1. UXO RMM Details and Results

DATE	DAYS	DAYS/EOD ENGRS	DAYS PLANT or CPT & OPERATOR	REMARKS
08/09/2023	1	1	X	0730 CB arrive at dock, 0800 picked up by David Whelan, 0820 arrive at long island, 0835 start non-intrusive survey, 1115 non-intrusive complete, 1130 start tl, 1230 ti complete, 1315 depart long island, 1400 depart site.

