



West Bay Protected Wreck Site Conservation Statement & Management Plan.



The bronze gun present on the West Bay Wreck

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Executive Summary

The West Bay Protected Wreck Site is that of a small mound of iron bars covering an area measuring approximately 7.5m by 4m. Within the mound there is a bronze gun, iron gun and an iron anchor.

The wreck was discovered in 2004 by local divers on a drift dive and after a site assessment it was given a potential date of pre-1750, based primarily on the presence of a decorated bronze cannon on the site. The site was protected through emergency designation in December 2004, motivated mainly by the threat of salvage to the site.

This Conservation Statement and Management Plan has been produced to enable local, regional and national stakeholder involvement in Historic England's aspirations for the conservation management of the West Bay Wreck to balance conservation with economic and social needs. The principle aim of this plan is to identify a shared vision of how the values and features of the West Bay Wreck can be conserved, maintained and enhanced.

The following management policies have therefore been developed:

Management Policy 1: We seek to develop appropriate visitor access to the monument, including virtual access as a mechanism to develop the instrumental value of the site.

Management Policy 2: Through liaising with the local museums and local stakeholders, we will seek to provide interpretive material for the marine historic environment at appropriate locations.

Management Policy 3: Through web-based initiatives, we will seek to develop the virtual access to the site and support appropriate links to develop effective public understanding of the monument.

Management Policy 4: Mechanisms will be identified and developed to address the shared ownership of the site.

Management Policy 5: Key gaps in understanding the significance of the component parts of the site are now being identified, prioritised and addressed so that these significances can contribute to informing the future conservation management of the site.

Management Policy 6: We will seek to encourage the investigation and survey of the site. Only when this has been accomplished will the extent and nature of the site be apparent.

Management Policy 7: We will seek to commission a staged programme of assessment and research to reassess the significance of the West Bay Wreck

Management Policy 8: We will seek undertake a programme of environmental monitoring and targeted recording.

Management Policy 9: Disturbance of the seabed within the restricted area may be necessary to establish the extent of any buried archaeological material which may provide evidence of the site character and dating.

Management Policy 10: This CS&MP will be reviewed and updated on a regular basis to reflect the conditions and knowledge pertaining to the site.

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1. Introduction

1.1. Project Background

- 1.1.1. Wreck sites may contain the remains of vessels, their fittings, armaments, cargo and other associated objects or deposits, and may merit legal protection if they contribute significantly to our understanding of our maritime past. The Protection of Wrecks Act 1973 (PWA 1973) allows Government to designate, in territorial waters, an important wreck site so as to prevent uncontrolled disturbance.
- 1.1.2. Although the National Heritage Act 2002 enabled Historic England to assist in costs relating to works under the Act, the responsibilities of Historic England for the physical management of designated wreck sites must align with our strategic priorities as set out in the Corporate Plan 2017 to 2020. Here, we seek to identify and protect England's most important heritage.
- 1.1.3. In addition, the UK Government has adopted the Annex to the UNESCO Convention on the Protection of the Underwater Cultural Heritage 2001 as best practice for underwater archaeology. This annex contains detailed practical guidelines entitled "Rules concerning activities directed at underwater cultural heritage" (UNESCO, 2001).
- 1.1.4. In order to guide an understanding of the special interest and cultural values of each site, Historic England's Conservation Principles, Policies and Guidance for the sustainable management of the historic environment will provide the foundation to contextualise change. As such, Conservation is taken to be the process of managing change in ways that will best sustain the values of a place in its contexts, and which recognises opportunities to reveal and reinforce those values (Historic England 2008).

1.2. Purpose

- 1.2.1. This document seeks to set out a 'Conservation Statement and Management Plan (CS&MP) for the West Bay Protected Wreck Site, an archaeological site designated under the Protection of the Wrecks Act 1973, lying West of the Outer Pollock Reef, off West Bay, Dorset 50°42.244N, 002°46.708W (WGS84) (Appendix 1: Site Location).
- 1.2.2. The West Bay Protected Wreck Site is attributed the National Monuments Record (NMR) number 1437873 and National Heritage List for England Number 1000083.
- 1.2.3. Historic England has published a set of Conservation Principles, Policies and Guidance for the sustainable management of the Historic Environment (Historic England 2008). These principles are intended to support the quality of our decision making, with the objective of creating a management regime for all aspects of the historic environment that is clear and transparent in its purpose and sustainable in its application. As such, Conservation is taken to be the process of managing change in ways that will best sustain the values of a place in its context, and which recognises opportunities to reveal and reinforce those values (Historic England 2008).

1.2.4. The Conservation Statement and Management Plan has therefore been produced to enable local, regional and national stakeholder involvement in identifying aspirations for the conservation management of the West Bay Protected Wreck Site.

1.3. Aims and Objectives

1.3.1. The principle aims of this Conservation Statement and Management Plan is to identify a shared vision of how the values and features of the West Bay Wreck can be conserved, maintained and enhanced and balance conservation with economic and social needs.

1.3.2. This will be achieved through the following objectives

- Understanding the West Bay Protected Wreck Site
- Assessing the significance of the West Bay Protected Wreck Site
- Identifying where the significance of the West Bay Protected Wreck Site is vulnerable
- Identifying policies for conserving the significance of West Bay Protected Wreck Site
- Realising the public value of the conservation of the West Bay Protected Wreck Site
- Identifying Management Policies.

1.4. Scope and Liaison

1.4.1. Heritage 2020 sets out how heritage organisations will work together to benefit the historic environment. It is coordinated on behalf of the whole sector by the Historic Environment Forum. The Historic England Action Plan forms Historic England's contribution to Heritage 2020. This Action Plan details how the objectives of Historic England's Corporate Plan will be delivered and provides an estimate of the resource needed. Assessing the significance of England's Protected Wreck Sites is an acute priority identified within Historic England's Action Plan, while individual Conservation Statements & Management Plans assist with an improved understanding of the significance and character of these priority areas of our heritage.

1.4.2. Practical measures that can conserve, maintain and enhance the values and features of the West Bay Wreck identified as being at risk will be delivered through this Conservation Statement and Management Plan.

1.4.3. There are currently 53 historic wrecks in English waters protected under the PWA 1973, access to these sites is managed under a licensing scheme and authorisation from the Secretary of State for the DCMS.

1.5. Authorship

1.5.1. This document is prepared by Bournemouth University (BU), with contributions through stakeholder involvement. Full acknowledgments of those who contributed to, or were consulted on, its preparation will be presented on the final version.

1.5.2. This document is based on the Historic England Standard for Conservation Statements for Historic England sites and draws on the Conservation Statement and Management Plans for the *Rooswijk* (Dunkley, 2009), the *Stirling Castle* (Dunkley, 2008) and the *Invincible* (Pascoe & Cowan, 2016).

1.6. Status

- 1.6.1. This plan is in the draft/consultation phase and has yet to be adopted by Historic England.

2. Understanding the West Bay Protected Wreck Site

2.1. Historical Development of the Designated Site

- 2.1.1. The history and identity of the West Bay Protected Wreck Site is currently unknown, the vessel was carrying a cargo of iron bar, intermixed in with this is an iron gun and a bronze gun, suggesting that it is coastal vessel moving scrap metal. There are very extensive documentary sources for English maritime history from the 17th century onwards, and research into them would almost certainly produce a number of candidates for the West Bay Wreck. Printed sources like the Calendar of State Papers may give some idea of the material available, but there would also be many unpublished documents that would need to be studied.
- 2.1.2. An initial undesignated assessment of the site was undertaken by Wessex Archaeology (WA) under contract from Historic England (then as English Heritage), following its discovery in 2004 by local divers Richard Edmonds, Andy Schmidt and Mark Doxey. A potential date of pre-1750 was suggested based primarily on the presence of decorated bronze cannon on the site. The site was protected through emergency designation in 2005, motivated mainly by the threat of salvage to the site. An initial report was produced by Wessex Archaeology following the 2005 field investigations, followed by a final report produced for Historic England in April 2006 (Wessex Archaeology, 2006). The presence of a cast iron gun gives us a TPQ of c.1570.
- 2.1.3. A survey license was granted to Bournemouth University on the 28th April 2006, and following the production of a research proposal to undertake a monitoring project on the site which combines research with education, partial funding for the work was offered by Historic England on the 9th August 2006. Following the success of the 2006 field season, a project variation order was made to the project design in May 2007 to enable a further year of partially funding research to be undertaken by Bournemouth University.
- 2.1.4. The focus of BU's maritime work shifted to the Swash Channel Wreck post 2007 and the license was taken over by Paola Palma. Very little work occurred after this date until the licence was taken over by Dave Parham of BU in 2016.
- 2.1.5. The known information of the West Bay Wreck may be presented as a summary *Ship Biography* which draws together the main attributes of the site and provides a statement of the site's archaeological interest

Build	Unknown, likely a wooden sailing ship involved in coastal trade between the 17 th to 18 th centuries.
Use	Unknown, possibly a merchant ship carrying scrap metal
Loss	Unknown, the site lays in area of flat seabed at a depth of 12m approximately 60m west of the Pollock Reef which shoals up to 5m depth. May & Hansom (2003) suggest that the wave heights of up to 6.5m are common with a return period of 1 in 5 years and up to 9m in a 1 and 50 year period.

At the reefs highest point a second cannon was located suggesting that it may have struck the reef before sinking.

Survival No ship structure is thought to survive on the West Bay Protected Wreck Site. What survives is a mound of iron bars, an anchor, an iron gun and importantly a bronze Gun.

A second iron gun was located on the reef c.100m to the south east in 2008 and other guns have been reported by local divers in the vicinity.

Investigation The site was found in 2004 by local divers and reported to Historic England and the Dorset County Council. Wessex Archaeology conducted an Undesignated Site Assessment in 2005 (Wessex Archaeology, 2006). The site was subject to an emergency designation order on 17th July 2005.

Bournemouth University conducted a monitoring project on the site in 2006 and 2007 as part of a student training scheme. After 2007 the project was parked in order to concentrate on the Swash Channel Wreck.

A site inspection on 2016 revealed very little superficial change the site, the bronze gun had a covering of marine growth but otherwise seemed stable.

2.2. Description of Surviving Features

- 2.2.1. The site lies outside the harbour at West Bay at a depth of 10-12 metres in a fine sandy seabed environment, overlaying a gravel layer to the west of the Outer Pollock Reef.
- 2.2.2. The site consists of a large concreted mound of iron bars measuring approximately 7.5m by 4m. Within the mound there is a bronze gun, iron gun and an iron anchor. An additional iron gun was found approximately 100m to the south east of the site by local diver, Gordon Simpson; this gun was recorded at the time and has similar dimensions to the iron gun found on the site.
- 2.2.3. The main area of the site is formed by a single concreted mound consisting of a variety of iron bars of a flat elongated form mostly orientated east-west. The maximum length of the bars was 2m with a max width of 0.12m and thickness of 0.1m. It is thought that these represent a cargo of iron or ballast.
- 2.2.4. The anchor lies approximately 2m east of the mound and is heavily concreted; the arms appear to be curved, without knowing the size of the original vessel it is difficult to interpret.
- 2.2.5. The last 1.4m of the muzzle end of a heavily concreted iron gun was observed in the east of the mound. Wessex Archaeology recorded this gun as having a bore diameter of 45mm (1.7") and a face diameter of 200mm; it is likely that the bore is much larger (Wessex Archaeology, 2006).
- 2.2.6. The cascable end of a bronze gun can be seen in the east of the mound from the trunnions back. The gun is missing the button and the cascable is decorated at with pattern of petals radiating out from the centre.

- 2.2.7. The gun was observed to have a thin covering of marine growth by WA in 2005 by 2007 this growth had noticeably increased obscuring some of the decoration; however it does not appear to be actively corroding.

2.3. Ownership, Management and Current Use

- 2.3.1. As the site remains unidentified no owners can be established.
- 2.3.2. Wessex Archaeology conducted an initial site assessment in 2004 (Wessex Archaeology, 2005) followed by a full site assessment in 2005 (Wessex Archaeology, 2006). Between 2006 and 2007, Bournemouth University conducted a monitoring project of the site under Olivia Merritt. The site was revisited by BU in 2010 under the then licensee, Paola Palma. After this date no diving has occurred on the site until the licence was taken over by Dave Parham of BU in 2016. The 2016 monitoring visits revealed little superficial change in the site.
- 2.3.3. The site was designated as a Historic Wreck under the *Protection of Wrecks Act 1973* in the summer of 2005 under Statutory Instrument 2005/1974.
- 2.3.4. Physical access to the site is restricted to the licensed divers and to the knowledge of the authors no artefacts have been found or recovered on the site. The current licensee of the site is Dave Parham.

2.4. Gaps in Existing Knowledge

- 2.4.1. The existing knowledge of the West Bay Protected Wreck Site is very limited; there are no historic references and the site is not securely dated meaning that any candidates list produced would be overly broad. The only datable feature discovered so far on the site is the bronze gun, which due to its location cannot be fully recorded. It is highly likely that the gun was carried as cargo but it may have been part of the ship armaments.
- 2.4.2. The gun is thought to date to the 17th century based on the cascable decoration which matched a possible Dutch provenance. The type of decoration seen on the gun is not characteristic of British workmanship. The gun is comparable to a heavily decorated Dutch bronze Culverin gun dated to 1620, also found under a large quantity of iron on an unknown wreck off Terschelling (Colin Carpenter: Pers. Comm. 2007). The gun is also paralleled by ones produced by the Utrecht gun founders between 1550 and 1620 in particular guns produced by Henricus Meurs in the first quarter of the 17th century (Ruth Brown & Kay Smith: Pers. Comm. 2016). The gun has been also compared to a Portuguese Cannon Pierre made in Macao in 1627 (Blackmore, 1976, p. 141). Although the gun on the West Bay Wreck is considerably smaller than the Portuguese gun its features and style are thought to have been similar. Without fully revealing the gun the exact nature and dating cannot be established.
- 2.4.3. Two additional guns have also been reported in the vicinity of the wreck but not located during any diving surveys (Merritt, 2007). An iron gun of similar dimensions to the gun located on the site was located c.100m to the south east of the main site was recorded by Gordon Simpson whilst on a drift dive in 2008. This was recorded at the time and from the dimensions it appears

to be similar to the iron gun on the site (Appendix 2). The presence and location of the outlying guns needs to be established and compared to the guns on the site.

3. Assessment of Significance

3.1. Basis for Assessment of Significance

- 3.1.1. Significance means the sum of the cultural and natural heritage values of a place (English Heritage 2008). Cultural heritage value has many aspects, including the potential of a place to yield primary information about past human activity (evidential value, which includes archaeological value), the ways in which it can provide direct links to past people, events and aspects of life (historical value), the ways in which people respond to a place through sensory and intellectual experience of it (aesthetic value, which includes architectural value) and the meanings of a place for the people who identify with it, and communities for whom it is part of their collective memory (communal value).
- 3.1.2. In addition, the historic environment is a cultural and natural heritage resource shared by communities characterised not just by geographical location but also by common interests and values. As such, emphasis may be placed upon important consequential (technically, 'instrumental') benefits or potential, for example as an educational, recreational, or economic resource, which the historic environment provides. The seamless cultural and natural strands of the historic environment are a vital part of everyone's heritage, held in stewardship for the benefit of future generations.
- 3.1.3. The basis for assessing significance therefore enables consideration of the varying degrees of significance of different elements of the site. By identifying those elements which are vital to its significance and so must not be lost or compromised, we are able to identify elements which are of lesser value, and elements which have little value or detract from the significance of the site.

3.2. Statement of Significance

- 3.2.1. Wessex Archaeology recommended the site for emergency designation on the basis of the site being at risk of salvage due to the potential value of the bronze gun.
- 3.2.2. The following table seeks to summarise these values of the West Bay Wreck as a whole, by noting how those values relate to the surviving fabric and its constituent parts.

Evidential	Relating to the potential of the site to yield primary information about past human activity no material culture has been located on the site giving us very little primary evidence of past human activity. The bronze gun could provide some evidential significance of the site but with an uncertain date and purpose on board the vessel this will be limited. The iron bars may provide some information on the iron trade.
Historical	Relating to the ways in which the <i>site</i> can provide direct links to past people, events and aspects of life is very limited, the date of wrecking is

unknown, probably from the 1570-1750, but possibly as late as 1850. There is currently no documentary evidence relating to the site.

Aesthetic	Relating to the ways in which people respond to the <i>site</i> through sensory and intellectual experience of it, is very limited. Access to the site is restricted to the named dive team. The bronze gun has great aesthetic potential if raised from the site, conserved and put into a suitable display.
Communal	Relating to the meanings of the <i>site</i> for the people who identify with it, and whose collective memory it holds there is very little significance, beyond the original dive team who discovered the wreck, the Wessex Archaeology dive team and a small team from BU the site has not been officially visited as remains restricted.
Instrumental	Economic, educational, recreational and other benefits which exist as a consequence of the cultural or natural heritage values of the <i>site</i> are limited. The site is restricted and doesn't attract divers to the area and very little information on the site is available to the public.

3.3. Gaps in Understanding Significance

- 3.3.1. The site was deemed as significant solely due to the presence of the bronze gun on the site, no other artefactual evidence to secure a date or purpose of the vessel has been located, researched or analysed.
- 3.3.2. The understanding of the significance of the site beyond the bronze gun is severely hindered by the lack of any knowledge to the extent that there are no specific gaps in understanding the sites significance rather there is no understanding of the significance of the site other than the presence of a single high value commodity.

3.4. Statutory and Other Designations

- 3.4.1. Statutory Instrument 2005/1974 affords protection to a circular area of seabed (radius 50m) around position 50° 42.244'N 02° 46.708' W (WGS84) under the Protection of Wreck Act 1973.
- 3.4.2. The site lies within the Lyme Bay and Torbay Site of Community Importance which has been put forward as a Candidate Special Area of Conservation (cSAC), these designations are from the European Union and are currently in force however the status of the protected areas post-Brexit is currently unknown.
- 3.4.3. Due to the sites status as a cSAC any work conducted may need a Habitat regulations Assessment to assess whether the impacts will have a likely significant effect on the sites designated features, this will be a requirement of a MMO license.
- 3.4.4. Archaeological interventions that impact the seabed may require a licence issued by the Marine Management Organisation under the Marine and Coastal Access Act 2009 and a licence from the Crown Estate.
- 3.4.5. In addition, section 40 of the National Environment and Rural Communities act (2006) places a duty on all public bodies to have regard to biodiversity (Natural England, 2006).

4. Issues and Vulnerability

4.1. Introduction

- 4.1.1. This section summarises the main conservation and management issues that affect the significance of the West Bay Wreck and its component parts and elements.
- 4.1.2. Vulnerability may be assessed against environmental factors and human impacts on the site including the setting.
- 4.1.3. It is accepted that all wreck sites are vulnerable because of the nature of their environment, for a site to be considered at risk there must be a threat of damage, decay or loss of the monument. Current assessment indicates that sites are at a medium or high risk unless they are buried below bed level during successive tidal cycles. However a programme of positive management may mitigate the loss, deterioration or damage of the monument through natural processes.
- 4.1.4. Practical measures that affect site stability, preservation *in situ* and increased visitor access will be addressed in this document.
- 4.1.5. Issues relating to the values identified in the statement of significance are presented thematically rather than in order of severity or priority for remedial action. Relevant issues cover a wide range, including
 - The physical condition of the site and its setting
 - Conservation and presentation philosophy
 - Ownership and legal requirements
 - The existence of appropriate uses
 - Resources, including financial constraints and availability of skills
 - Lack of information or understanding about aspects of the site
 - Conflicts between types of significance

4.2. The Physical Condition of the Site and its Setting

- 4.2.1. The site lies to the west of the Outer Pollock Reef a rocky area of the seabed ranging from 5m to 15m depth and usually covered in kelp (Hinchcliffe & Hinchcliffe, 1999, p. 34).
- 4.2.2. Auger surveys completed in 2006 revealed a predominance of sand overlying shingle across the site. As demonstrated through the test pit results published in the Wessex Archaeology undesignated site report (2006), the site has a shallow covering of sand. The auger data collected showed a depth of no more than 0.30m.
- 4.2.3. BU conducted a series of *in situ* corrosion tests on a selection of the iron bars of varying thickness and location across the site to evaluate physical condition of the iron objects, the results of the corrosion tests suggest the presence of a very high level of deterioration in many of the bars, and in some cases complete deterioration.

- 4.2.4. Laurence North, from the Chemistry Department at Keele University suggested that a lack of a clear relationship between the metals and the comparatively high level of preservation of the anchor lying away from the concretion mound suggests the potential for an additional electromagnetic material in considerable quantities on the site which may be reacting with the iron bar and drawing corrosion away from other metals on the site. It cannot be confirmed that the entire mound of iron bar is suffering from a high level of deterioration, it is likely that the complete graphitisation of the majority of iron bar will rapidly lead to an increase in the rate of deterioration in the lesser reactive metals on the site including the bronze gun.
- 4.2.5. Observation on the bronze gun between 2005 and 2007 showed that the marine grown on the gun had “increased noticeably” with the decorations less noticeable every year (Merritt, 2007).
- 4.2.6. No geophysical survey work has been conducted to the site to see if there are any outlying archaeological features to the main wreck site. However additional guns have been reported close to the site (Merritt, 2007). A gun was located 100m south of the wreck site on a drift dive by local divers in 2008 which appears to match the gun on the site (Pers. Comm. Gordon Simpson).
- 4.2.7. 1m² Multibeam bathymetry has been conducted on Lyme Bay, covering the site and is publicly available through the Channel Coast Observatory¹. This shows the main site as laying in a relatively flat area of the seabed c.60m to the North West of a large reef which shoals up to c.5m below OD. The coordinates given for the gun located by Gordon Simpson in 2008 matches up with the highest point on this reef. If this gun is found to be associated with the site it could be suggested that the ship hit the reef at this point sinking nearby. A magnetometer survey may reveal a debris trail between the two areas (Appendix 3: Multibeam survey of Pollock Reef).
- 4.2.8. A site inspection was conducted by BU in 2016 which showed very little superficial change in the site however this was only from comparative observations rather than empirical evidence. The bronze gun appeared to be completely covered fouling organisms, no tests were undertaken to see if it was actively corroding.
- 4.2.9. During the 2016 season timber samples were placed on the site for four months as part of a wider study into the degradation of shipwrecks from biological agents, no wood borers were identified as being present on the site however the samples were heavily covered in marine fouling organisms, in particular barnacles and polychaetes.

4.3. Conservations and Presentation Philosophy

- 4.3.1. A photomosaic was created by Wessex Archaeology in 2005 from which a site plan was traced “the resultant drawing is likely to contain an unknown number of interpretation errors” (Wessex Archaeology, 2006, p. 29) Sections of the site were hand drawn by BU students in the 2006 and 2007 seasons however no detailed plan of the complete site has been produced.

¹ <http://www.channelcoast.org/>

Observations between the dives undertaken on the site in 2010 and again in 2016 have shown very little change in the visual aspects of the site, however no scientific tests were conducted so the stability of the site could not be established. No artefacts have been recovered from the site and no small finds have been observed underwater.

4.3.2. The only interpretive material available online is on the NHLE.

4.3.3. There is no physical interpretive material associated with the wreck. The nearest museum is in Bridport however they have no precedent for acquisition of maritime finds. The county museum at Dorchester have expressed interest in acquisition of the finds after research and conservation have taken place. If further work was to occur on the site interpretive material could be provided to local museums or stakeholders.

4.4. Visitor and other Occupancy Requirements

4.4.1. The site is currently restricted to divers accompanied by a site licensee and there are no plans to create a dive trail on the site. Any persons wishing to visit the site will be directed to the licensee and be encouraged to participate in the existing licensed survey initiative.

4.4.2. There are no current plans in place for a virtual trail on the site and it is recognised that interest in the site stimulated through electronic access will be limited by the lack of formal archaeological publication.

4.5. The Existence (or Lack) of Appropriate Uses

4.5.1. The site has not been investigated to any detail since 2007, when the license transferred to Paola Palma. A single day was spent in 2010 with a student group following that the site was not dived for over six years until an inspection by the new licensee Dave Parham in 2016 which observed very little superficial change in the site between 2010 and 2016.

4.5.2. Enforcement of the Protection of Wrecks Act 1973 is the responsibility of the appropriate County Constabulary as it is a criminal offence to any of the following in a designated area without a licence granted by the appropriate Secretary of State:

- Tamper with, damage or remove any part of a vessel lying wrecked on or in the seabed or any object formerly contained in such a vessel.
- Carry out diving or salvage operations directed to the exploration of any wreck or to removing objects from it or from the seabed, or uses equipment constructed or adapted for any purpose of diving or salvage operations. This is likely to include deployment of remotely operated vehicles.
- Deposit anything including anchors and fishing gear which, if it were to fall on the site, would obliterate, obstruct access to, or damage any part of the site.

4.5.3. It is also an offence to cause or permit any of the above activities to be carried out by others, without a license, in a restricted area.

4.5.4. Bronze guns are a rare commodity and have been subject to multiple heritage crimes in the past, increased public knowledge of the site will put the gun at risk (The Pipeline, 2015).

4.6. Resources, Including Financial Constraints and Availability of Skills

- 4.6.1. No archaeological material is known to have been recovered from the site, if any work was to occur on the site a suitable museum should be found that is willing to accession any recovered artefacts and any work conducted on the site should be completed to an agreed project design. The local museum at Bridport has no precedent for acquisition of maritime finds however the county museum has indicated that they may be willing to acquire any finds subject to seeing a method statement, conservation analysis, publication strategy and with the approval of the Receiver of Wreck (Pers. Comm. Emily Hicks 2016)
- 4.6.2. In accordance with the Diving at Work Regulations 1997, archaeological interventions underwater commissioned by Historic England can only be undertaken by a registered Diving Contractor, and then only by such a Contractor with appropriate archaeological experience.

4.7. Lack of Information or Understanding about aspects of the Site

- 4.7.1. *Taking to the Water* (Historic England's Initial Policy for the management of Maritime Archaeology) (Roberts & Trow, 2002) addresses the backlog from excavations and surveys on protected wreck sites. It was recognised that many of the survey and excavation licences issued over the past 25 years required the academic reporting of the field work results and as the majority of the work was completed a-vocationally the finances for the analysis and dissemination were lacking. No work has been published on the West Bay Wreck.
- 4.7.2. As noted above there is very little information known about the West Bay Protected Wreck Site which therefore hinders the understanding of the site.
- 4.7.3. Due to the nature of the site the only information ascertained from the site is from the partial recording of the bronze gun.
- 4.7.4. It is the intention of this Conservation Management Plan to provide a mechanism to reconcile the lack of information/understanding about the site to assist in its management for all.

5. Conservation Management Policies

5.1. Introduction

- 5.1.1. This section of the CS&MP builds on sections 3 (Assessment of Significance) and 4 (Issues and Vulnerability) to develop conservation policies which retain or reveal the sites significance providing a framework for decision making in the future management and development of the site or reveal the sites significance meeting statutory requirements and complying with Historic England's standards and guidance.
- 5.1.2. It is intended that the policies will create a framework for managing change on the West Bay Wreck that is clear in purpose, and transparent and sustainable in its application. The aim is to achieve implementation through the principles of shared ownership and partnership balancing the protection of the site with economic and social needs.

- 5.1.3. Policies are also compatible with and reflect Historic England’s Conservation Principles for the Sustainable Management of the Historic Environment (Historic England, 2008).

5.2. The West Bay Wreck is a shared resource

- 5.2.1. The site forms a unique record of past human activity which reflects the aspirations, ingenuity and investment of resources of previous generations. It may also be an economic asset as a generator of tourism or inward economic investment.
- 5.2.2. The West Bay Wreck is therefore a social asset as a resource for learning and enjoyment. It should be used and enjoyed without compromising the ability of future generations to do the same.
- 5.2.3. In addition, the conflict between the desire for access to the site and the restrictions imposed by conservation needs and legislative limitations will be reconciled through visitor management.
- 5.2.4. Learning is central to sustaining the historic environment. It raises people’s awareness and understanding of their heritage, including the varied ways in which its values are perceived by different generations and communities. It encourages informed and active participation in caring for the historic environment.
- 5.2.5. Education at all stages should help to raise awareness and understanding of the site’s values, including the varied ways in which these values are perceived by different generations and communities
- 5.2.6. *Management Policy 1: We seek to develop appropriate visitor access to the monument, including virtual access as a mechanism to develop the instrumental value of the site.*
- 5.2.7. *Management Policy 2: Through liaising with the local museums and local stakeholders, we will seek to provide interpretive material for the marine historic environment at appropriate locations.*

5.3. Everyone should be able to participate in the sustaining the West Bay Wreck

- 5.3.1. Local, regional, national and international stakeholders have the opportunity to contribute to the understanding and sustaining of the West Bay Wreck. Judgments about the values and decisions about the future of the West Bay Wreck will be made in ways that are accessible, inclusive and informed
- 5.3.2. Participants should use their knowledge, skill and experience to help other understand the value of the site. They will play a crucial role in communicating and sustaining the established values of the site encouraging other to understand, value and care for the site and helping others articulate the values they attach to the West Bay Wreck
- 5.3.3. Specialist skills and knowledge relating to the site should be maintained, developed and passed on. Written agreements with project partners should be developed to formulate a future strategy for continuing work on the site.

- 5.3.4. A detailed photogrammetric model of the wreck site could be produced and combined with the information gleaned from the site archive and any subsequent investigation allowing virtual access to the site as it stands combined with access to the current site archive.
- 5.3.5. *Management Policy 3: Through web-based initiatives, we will seek to develop the virtual access to the site and support appropriate links to develop effective public understanding of the monument.*
- 5.3.6. *Management Policy 4: Mechanisms will be identified and developed to address the shared ownership of the site.*

5.4. Understanding the Significance of the West Bay Wreck is vital

- 5.4.1. The significance of the West Bay Wreck embraces all the cultural and natural heritage values that are associated with it. To identify and appreciate these values, it is essential first to understand the structure and ecology of the site, how and why that has changed over time, and its present character.
- 5.4.2. Judgements about values are necessarily specific to the time they are made. As understanding develops, and as people's perceptions evolve and places change, so assessments of significance will alter, and tend to grow more complex.
- 5.4.3. The purpose of understanding and articulating the significance of the West Bay Wreck is to inform decisions about its future.
- 5.4.4. We acknowledge that there are considerable gaps in our understanding of the sites significance as set out in Section 4.7, Very little is known about the site and it was deemed significant solely on the presence of the bronze gun on the site.
- 5.4.5. A formal programme of staged assessment and research is required to contribute to a fuller understanding of the site in its entirety. Such work should conform to the Management of Research Projects in the Historic Environment (Historic England, 2015) and is likely to comprise of the following stages:
- A geophysical survey of the surrounding area to establish an accurate location for the offsite guns and extent of the site.
 - Condition assessment and pre-disturbance survey of the wreck mound and any anomalies located in the geophysical survey.
 - Assessment of academic value and potential of the site.
 - Determination of further work to fulfil this academic potential.
 - Preparation of a research archive.
 - Historical research for potential candidates.
 - Report text for publication
 - Publication

- 5.4.6. *Management Policy 5: Key gaps in understanding the significance of the component parts of the site are now being identified, prioritised and addressed so that these significances can contribute to informing the future conservation management of the site.*
- 5.4.7. *Management Policy 6: We will seek to encourage the investigation and survey of the site. Only when this has been accomplished will the extent and nature of the site be apparent.*
- 5.4.8. *Management Policy 7: We will seek to commission a staged programme of assessment and research to reassess the significance of the West Bay Wreck*

5.5. The West Bay Wreck should be managed to sustain their values

- 5.5.1. Changes to the West Bay Wreck underwater are inevitable, whether caused by natural processes, through use, or by responses to social, economic and technological advances. Such changes will be managed in ways that will best sustain the significance of a place in its setting, while recognising opportunities to reveal or reinforce its values for present and future generations.
- 5.5.2. Conservation is the process of managing change to a significant place in its setting in ways that will best sustain its heritage values, while recognising opportunities to reveal or reinforce those values for present and future generations.
- 5.5.3. The significance of the site is based solely on the presence of the bronze gun which in its current condition cannot be fully recorded or have its significance completely assessed. Irreversible intervention on the West Bay Wreck may be justified if it increases understanding of the past, reveals or reinforces particular heritage values of a place, or is necessary to sustain those values for present and future generations, so long as any resulting harm is decisively outweighed by the benefits.
- 5.5.4. New work should aspire to a quality of design and execution which may be valued both now and in the future. This neither implies nor precludes working in traditional or new ways, but should respect the significance of a place in its setting.
- 5.5.5. We acknowledge there are significant gaps in our understanding of the sites environmental setting as set out in section 4.7 and more information is needed on the degradation of the structure and if the different metals present on the site are affecting each other. Tests conducted by BU in 2006 & 2007 should be repeated to establish if there are any changes in the condition of the metal.
- 5.5.6. *Management Policy 8: We will seek to undertake a programme of environmental monitoring and targeted recording.*
- 5.5.7. *Management Policy 9: Disturbance of the seabed within the restricted area may be necessary to establish the extent of any buried archaeological material which may provide evidence of the site character and dating.*
- 5.5.8. *Management Policy 10: This CS&MP will be reviewed and updated on a regular basis to reflect the conditions and knowledge pertaining to the site.*

6. Forward Plan

6.1. Introduction

- 6.1.1. In order to commence the implementation of the proposed Management Policies outlined in Section 5, Historic England is seeking to support projects that will increase our understanding of the value and setting of the West Bay Protected Wreck Site.
- 6.1.2. The 2006 site assessment by Wessex Archaeology (2006) produced a series of recommendations to assist with the conservation management of the site; some of these were completed during the time when the licence was held by Olivia Merritt (then of BU) between 2006 and 2007 and have been addressed in this management plan.

6.2. Proposed Projects in relation to the West Bay Wreck

Geophysical Survey around the Wreck (Policies: 2, 5, 6, 7 & 8)

- 6.2.1. No dedicated geophysical work has been conducted on the site; however a bathymetric survey was conducted on behalf the Channel Coast observatory between May 2008 and May 2009 which included the wreck site with a 1m resolution. This shows the site lying adjacent to a reef which shoals up to a depth of c.5m where a cannon was reported to have been found.
- 6.2.2. Magnetometry should be a priority to locate the iron guns reported of site, this could be accompanied by high definition side scan sonar. Targets identified should be ground-truthed by divers which may involve impacts to the seabed.

Enhancement of the site plan (Policies: 1, 2, 3, 4, 5, 6, 7, 8 & 9)

- 6.2.3. The original WA site plan was drawn from their photomosaic; BU started a hand drawn plan of the site in 2006 however this was not completed as BU's resources were diverted to the Swash Channel Wreck project.
- 6.2.4. A series of survey points could be set up over the site and recorded relative to each other using 3D-trilaterations. This could then form the basis for any survey work conducted on the site. A photogrammetry survey could be conducted as described in Yamafune et al. (2016) and combined with measurements and records of key features to produce an accurate and informative site plan, which could be developed into a digital trail of the site.
- 6.2.5. The survey points could also perform a dual purpose as sediment monitoring rods.

Recovery of diagnostic artefacts (Policies: 2, 3, 5, 6, 7, 9 & 10)

- 6.2.6. No small finds have been observed on the site, it would be highly beneficial for the interpretation of the site if any diagnostic artefacts were recovered from the site; this would likely need intrusive investigations to occur to search within the concreted mound.
- 6.2.7. The most valuable diagnostic artefact would be the bronze gun, if this was cleared of concretion and recovered it may give us a better idea of the nature and significance of the site. If this gun was raised the site would need to be reassessed for its significance and status as a designated site.

- 6.2.8. Bridport museum have expressed an interest in the finds but do not have a precedent for this, the county museum have said they may be willing to accession any finds subject to appropriate project designs in place and loan them to Bridport.
- 6.2.9. The most diagnostic and highest value artefact on the site is the bronze gun, if the appropriate funding can be found and a display organised recovery of the gun should be considered this will remove the threat of illegal salvage as seen on other sites (The Pipeline, 2015). If this occurs the significance of the site would need to be re-assessed and this document updated.

Sampling and analysis of the metal bars (Policies: 2, 3, 5, 6, 7, 8 & 9)

- 6.2.10. The metal bars represent the main cargo of the vessel and should be sampled. Dating of post-medieval iron is fraught with difficulties but the form and weight of the ingots may provide us with a baseline for comparative studies with other iron ingots found on wreck sites.

Further documentary research (Policies: 2, 3, &5)

- 6.2.11. Extensive documentary sources for English maritime history from the 17th century onwards exist, and research into them would almost certainly produce a number of candidates for the wreck. These should be analysed by an experienced professional historian familiar with the manuscript material and the maritime background.

A programme of regular and consistent monitoring (Policies: 1, 5, 7 & 8)

- 6.2.12. The site should be dived at least annually to note any major changes to the site over time. This could be set up in combination with a visitor management scheme
- 6.2.13. Sediment rods could be set up at key points around the site to monitor any fluctuations in the seabed and the active corrosion test conducted on the iron in 2006 & 2007 by BU should be repeated every 5 years.
- 6.2.14. To wholly assess the site and its significance intrusive investigation would have to be conducted in particular on the bronze gun which is currently half obscured by the concreted mound. Site security would be a risk once the gun is uncovered and therefore full recovery is recommended, after which the site would need to be reassessed.
- 6.2.15. Once all of this work has been completed it should be combined into a digital site archive in the form a digital dive trail.

7. Implementation

7.1. Consultation

- 7.1.1. This document will be internally reviewed by Historic England.
- 7.1.2. The Conservation and Management Plan for the West Bay Wreck shall be circulated for a four-week stakeholder consultation to refine how the values and features of the West Bay Wreck can be conserved, maintained and enhanced. Responses to the consultation will be considered and the Plan revised as appropriate.

7.2. Adoption of Policies

- 7.2.1. Following consultation, the Plan was adopted.
- 7.2.2. A programme that identifies a realistic timescale for implementing the Plan, taking into account those areas which need immediate action, those which can be implemented in the medium or long term, and those which are ongoing will be devised.
- 7.2.3. Responsibilities for management of the site lies with Historic England (led by the Designation Department), all stakeholder will work toward implantation of this plan. In addition, provision will be made for periodic review and updating the Plan.

7.3. Authorship and Consultation

- 7.3.1. This Conservation Statement & Management Plan for the West Bay Wreck has been prepared by:

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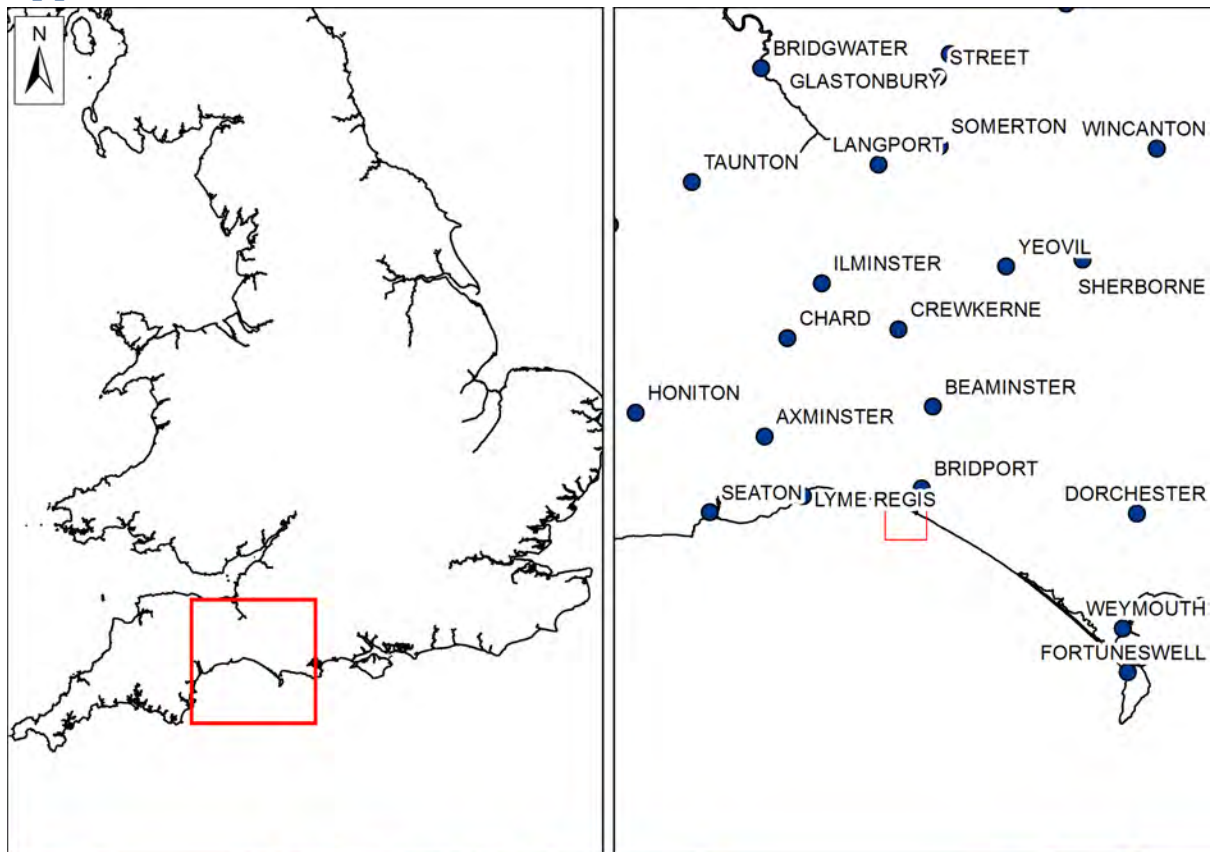
- Heritage Organisations
 - Dorset County Archaeologist
 - LUNAR Society
 - Poole Bay Archaeological Research Group
 - Poole Museum
 - The Shipwreck Project (Weymouth)
- Port Authorities
 - West Bay Harbour Master
- Recreational Diving Organisations
- Environmental Groups
 - IFCA
 - Dorset Wildlife Trust
- Other Bodies
 - Crown Estates
 - Natural England

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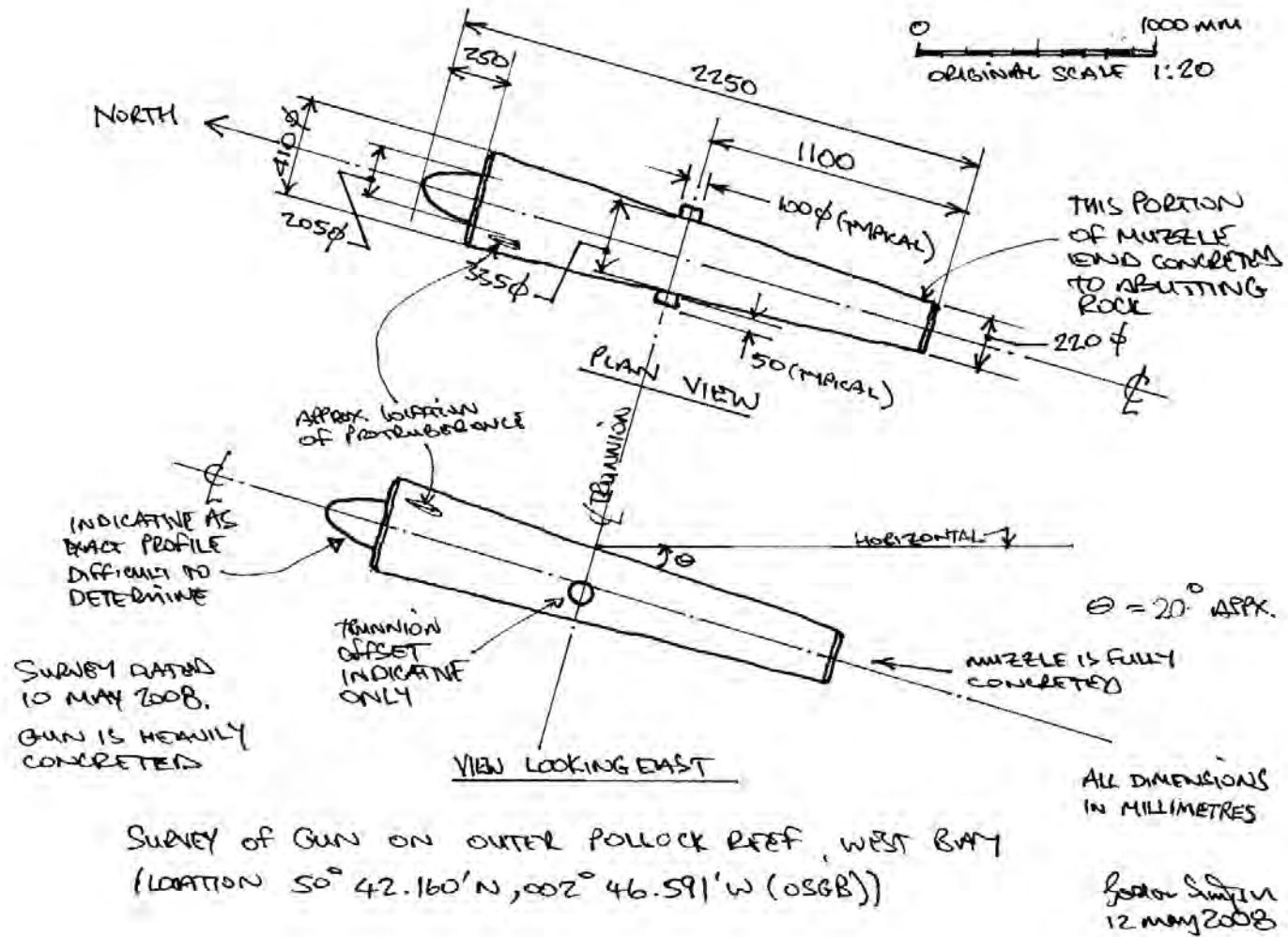
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Appendix 1: Site Location



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Appendix 2: Details of gun discovered in 2008 courtesy of Gordon Simpson



Appendix 3: Multibeam Survey of Pollock Reef

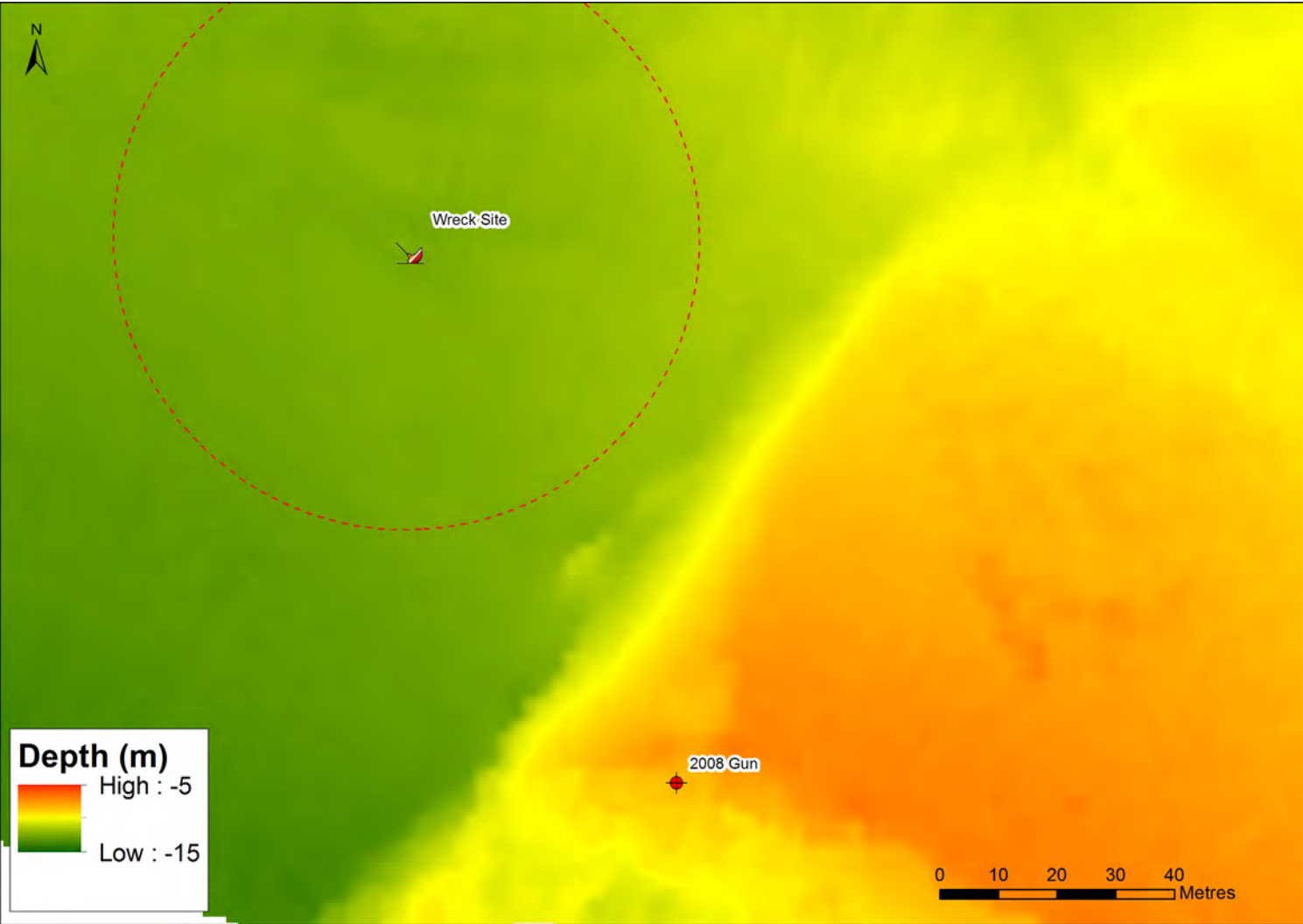


Image courtesy of Channel Coastal Observatory