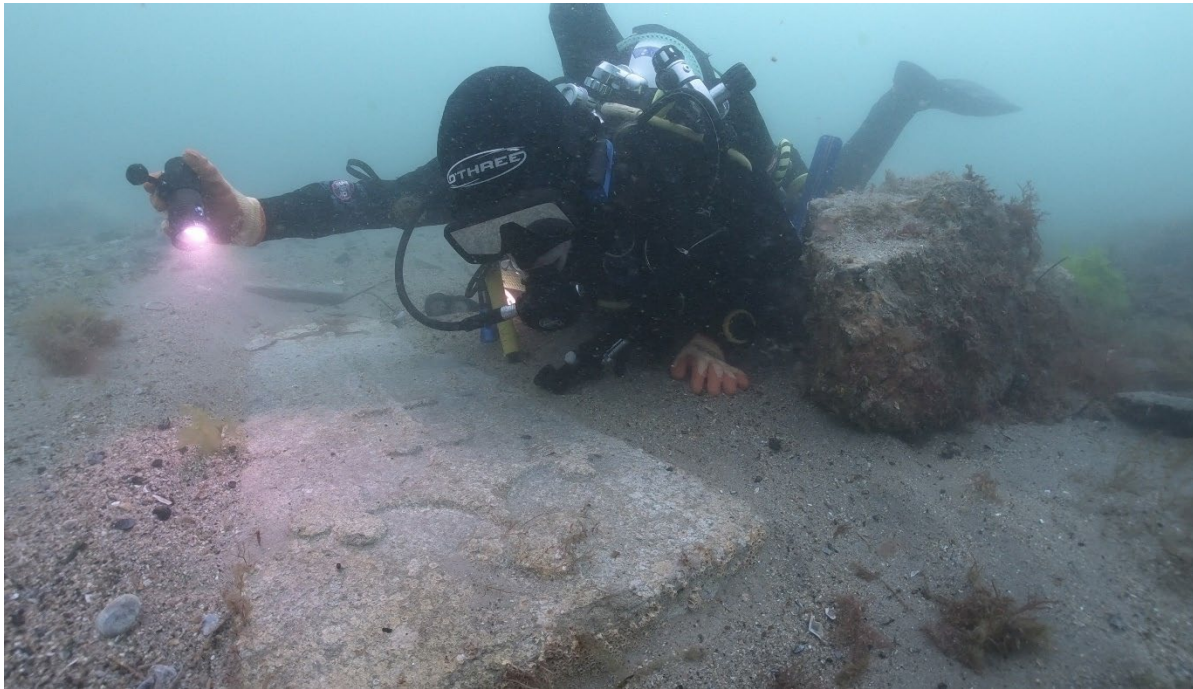




# The Mortar Wreck Conservation Statement & Management Plan.

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Prepared for Historic England  
November 2024

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## Executive Summary

The '*Mortar Wreck*' is a large, mid thirteenth century, cargo vessel wrecked in Studland Bay in the approaches to Poole Harbour, Dorset.

Although marked as a charted obstruction since 1982, the site was first identified as a site of significance in 2019 by archaeologists from Bournemouth University, who noted a large pile of quarried stones surrounded by clinker timbers and several mortars made from Purbeck stone. BU returned to the site in 2020 to conduct an undesignated site assessment. This revealed a large section of articulated hull under the stone mound, more mortars, and Purbeck Marble grave slabs. The surviving cargo points to the vessel being involved with the Purbeck stone trade, an industry which reached its peak in the 1250-1350s. Purbeck stone, in particular the marble, features heavily in medieval ecclesiastical architecture with prominent uses including Westminster Abbey and Salisbury Cathedral.

The site was designated in June 2022 under statutory Instruments: 2022/535, which affords protection of a 50m radius circle centred on 50°39.507N 001°55.555W (ETRS 89) under the Protection of Wrecks Act 1973.

Conservation statements and management plans for protected wreck sites are produced to enable local, regional, and national stakeholder involvement in the conservation management of designated historic shipwreck sites that balance conservation with economic and social needs. The principal aim of each plan is to identify a shared vision of how the values and features of a site can be conserved, maintained, and enhanced for current and future generations to enjoy.

## Contents

Executive Summary.....	ii
Contents.....	iii
1. Introduction .....	1
1.1. Project Background.....	1
1.2. Purpose .....	1
1.3. Aims and Objectives.....	3
1.4. Scope and Liaison.....	3
1.5. Authorship .....	3
1.6. Status .....	3
2. Understanding the Mortar Wreck .....	4
2.1. Historical Development of the Designated Site .....	4
2.2. Description of the Surviving Features.....	14
2.3. Ownership, Management and Current Use.....	16
2.4. Gaps in Existing Knowledge .....	17
3. Assessment of Significance .....	18
3.1. Basis for the Assessment of Significance .....	18
3.2. Statement of Significance .....	19
3.3. Gaps in Understanding Significance.....	21
3.4. Statutory and Other Designations .....	21
4. Issues and Vulnerability .....	22
4.1. Introduction .....	22
4.2. The Physical Condition of the Site and its Setting .....	22
4.3. Conservations and Presentation Philosophy .....	24
4.4. Visitor and other Occupancy Requirements.....	25
4.5. The Existence (or lack) of Appropriate Uses .....	25
4.6. Resources, Including Financial Constraints and Availability of Skills .....	26
4.7. Lack of Information or Understanding about aspects of the Site.....	26
5. Conservation Management Policies .....	27
5.1. Introduction .....	27
5.2. The Historic Environment is of Value to us All.....	27
5.3. Everyone Should be Able to Participate in the Sustaining the Historic Environment. ....	28
5.4. Understanding the Significance of Heritage Assets is the Starting Point for Effective Conservation .....	29

5.5.	Heritage Assets Should be Managed to Sustain their Heritage Values .....	29
5.6.	Decisions About Change Must be Reasonable, Transparent and Consistent.....	30
5.7.	Documenting and Learning from Decisions is Essential. ....	30
6.	Forward Plan .....	31
6.1.	Introduction .....	31
6.2.	Proposed Projects in Relation to the Mortar Wreck .....	31
7.	Implementation .....	32
7.1.	Consultation.....	32
7.2.	Adoption of Policies .....	32
7.3.	Authorship and Consultation .....	32
8.	Bibliography .....	33

# 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. They may merit legal protection if they contribute significantly to our understanding of our maritime past. The Protection of Wrecks Act 1973 allows the government to designate important wreck sites in territorial waters 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 2022 to 2023. Here, we seek to identify and protect England's most important heritage.
- 1.1.3. To guide an understanding of the special interest and cultural values of each site, Historic England's Conservation Principles for the sustainable management of the historic environment will provide the foundation for contextualising 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, 2017). In 2018, the conservation principles were put out for consultation and a draft policy was produced, which is yet to be adopted. On the advice of Historic England, this document has been written with the 2018 draft in mind.

## 1.2. Purpose

- 1.2.1. This document seeks to establish a 'Conservation Statement and Management Plan', hereby referred to as the plan, for the Mortar Wreck, an archaeological site designated under the Protection of Wrecks Act 1973, lying on the western side of the Swash Channel on the approaches to Poole Harbour. The restricted area extends in a 50m radius around 50°39.507N 001°55.555W (ETRS 89)
- 1.2.2. The Mortar Wreck is attributed to the National Heritage List for England number: 1474570.
- 1.2.3. The National Record of the Historic Environment (NRHE) number is: 1629663.
- 1.2.4. Historic England (HE) has published a set of conservation principles, policies and guidance for the sustainable management of the historic environment (English Heritage, 2008) this was updated in 2017 but has yet to be fully adopted (Historic England, 2017).
- 1.2.5. The Conservation Statement and Management Plan has been produced to enable local, regional, and national stakeholder involvement in identifying aspirations for the conservation management of the Mortar Wreck.

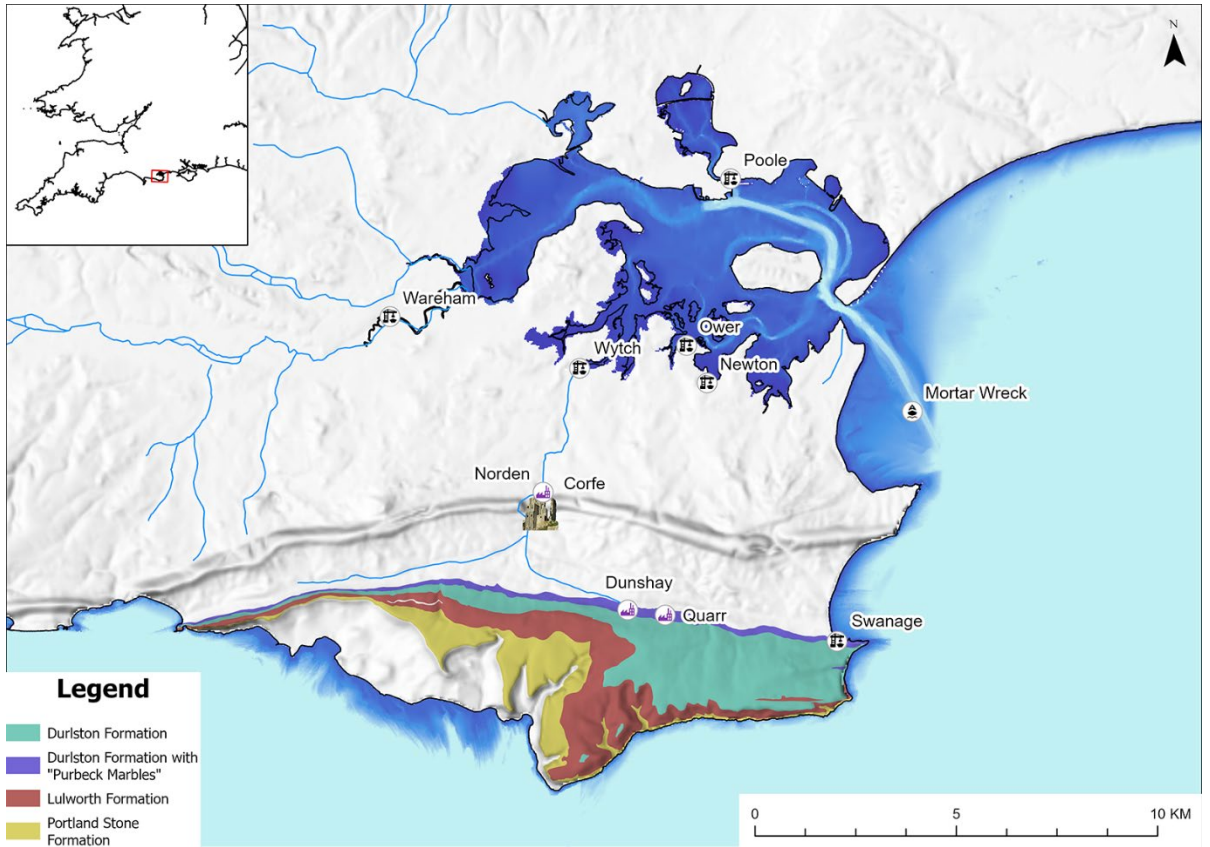


Figure 1. Location of the Mortar Wreck, other key sites related to the Purbeck stone industry and the limestone geology of the region.

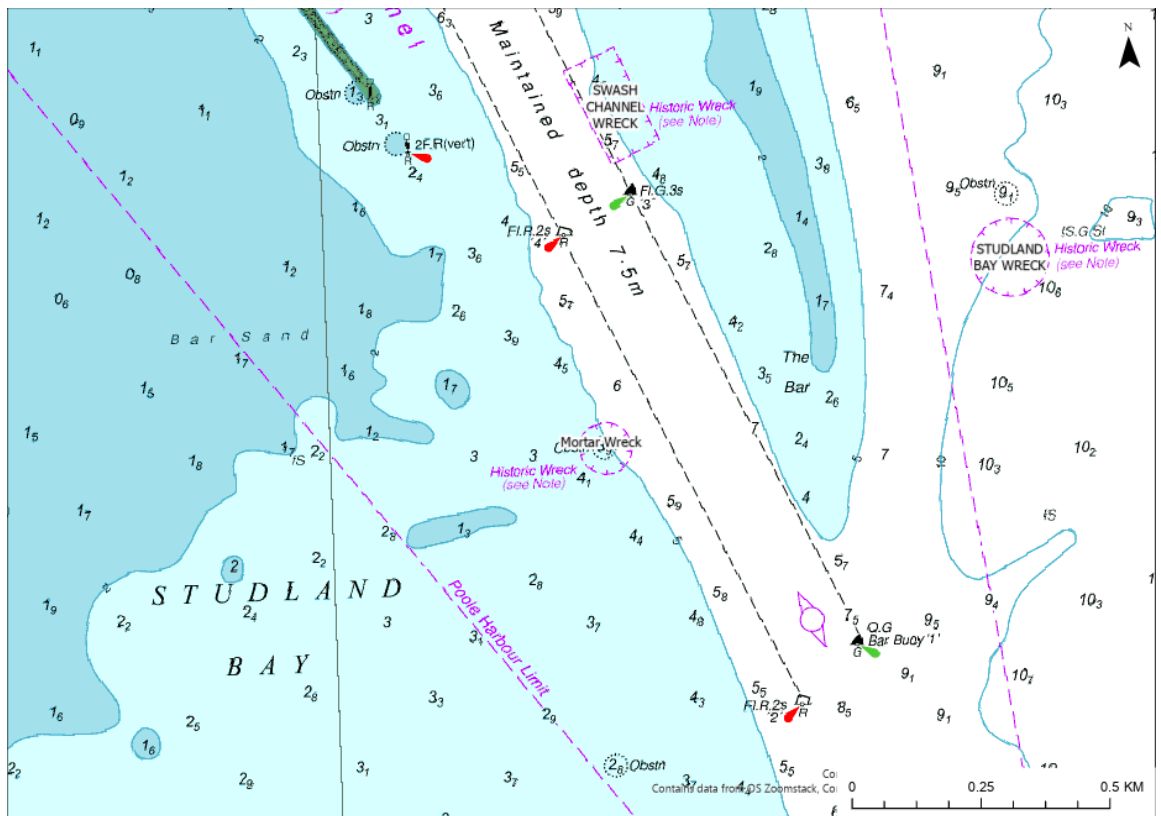


Figure 2. Location of the Mortar Wreck in relation to Chart 2611 © British Crown and OceanWise, 2020. All rights reserved. Licence No. EK001-20180802. Not to be used for Navigation

### 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 Mortar 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 Mortar Wreck.
- Assessing the significance of the Mortar Wreck.
- Identifying where the significance of the Mortar Wreck is vulnerable.
- Identifying policies for conserving the significance of the Mortar Wreck.
- Realising the public value of the conservation of the Mortar Wreck.
- Identifying Management Policies.

### 1.4. Scope and Liaison

1.4.1. This plan details how the objectives of Historic England's Corporate Plan 2023-26 will be delivered and provides an estimate of the resources needed. Assessing the significance of England's protected wreck sites is an acute priority identified within HE's corporate plan, while individual conservation statements and management plans assist with an improved understanding of the significance and character of priority areas in our heritage.

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

1.4.3. There are currently 57 historic wrecks in English waters protected under the Protection of Wrecks Act 1973. Access to these sites is managed under a licencing scheme and authorisation from the Secretary of State for the Department for Culture, Media and Sport.

1.4.4. In addition, Poole Harbour Commissioners (PHC) and Poole Museum will be invited to comment and contribute to the production of this plan.

### 1.5. Authorship

1.5.1. This document was prepared by Tom Cousins or Bournemouth University (BU), with contributions from Ian Friel, Ian Panter and Steve Pearce.

1.5.2. This document is based on the Historic England *Standard for Conservation Statements for Historic England sites* (ref: EHS 0003:2005) and draws on the Conservation Statement and Management Plans for *Rooswijk* (Dunkley, 2009), *Stirling Castle* (Dunkley, 2008), and other protected wrecks.

### 1.6. Status

1.6.1. This plan was adopted by Historic England in February 2025.

## 2. Understanding the Mortar Wreck

### 2.1. Historical Development of the Designated Site

- 2.1.1. The Mortar Wreck is a known obstruction on the chart on the western edge of the Swash Channel, located by divers in 1982 and described as “large quarried stones” measuring “approx 1.5x2ft, piled 3ft high & approx 6ft long” and added to the Hydrographic Office Wreck Index (UKHO 19600). The 1991 Royal Commission report for BP Exploration Operating Company (RCHME, 1991) described the site as a possible stone barge but no other information was given. The Channel Deepening Report by Wessex Archaeology (2004) noted that it may be a potential wreck, but it was not investigated. In 2019 both the HER (MWX2384) and NHRE (NRHE 832532) repeated the UKHO record as a “pile of quarried stones” but with no further information.
- 2.1.2. During a larger Bournemouth University scientific diving project, the skipper Trevor Small of Rocket Charters suggested that the dive team visit the site in August 2019. In addition to the previously known mound it was noted that there were several stone mortars, a joggled floor timber, a lower stempost and other artefacts, including a posnet and concretions containing a cattle bone, all pointing towards a medieval era wreck.
- 2.1.3. Bournemouth University returned to the site in 2020 to conduct an undesigned site assessment and a dendrochronological study with DendroArch. This survey revealed more worked Purbeck marble artefacts, including the remains of two grave slabs and a large section of articulated hull timbers.
- 2.1.4. The dendrochronological work conducted on the hull planks revealed that they were felled in Ireland between 1242 and 1265, although it should be noted that Irish timbers were commonly imported into England, so this may not be the vessel’s original provenance (Slattery, 2009). The study also showed a high t-value correlation with the timbers used to build Salisbury Cathedral, suggesting that the timbers may have been sourced from the same forest (Nayling & Tyers, 2020).
- 2.1.5. The site was inspected again in 2021, and the main mound was recorded via photogrammetry. Frame timbers were observed within the mound and some disarticulated timbers were observed to the south. A large copper alloy cauldron was also recovered.
- 2.1.6. The site was designated as a historic wreck in June 2022.
- 2.1.7. In 2022 four 2.5x1.5m sondages were excavated on the site with Sondage One to the north of the stem timber. Six mortars were uncovered in this sondage approximately 20cm below the surface. Suggesting that there may be more buried remains in this area.
- 2.1.8. The two other sondages located to the East, South and West of the mound did not find any archaeology suggesting that the wreck is contained within the area of the stone mound with potential for small finds to the north.

2.1.9. A distinct slope was observed on the edge of the in situ protection placed in 2020 with the half grave slab noted to have “slipped” down the slope by approximately 0.2m. A comparison between the 2021 and 2022 survey of the main mound has shown loss of sediment on the eastern side, causing the mound to slip, explaining the appearance of the framing timbers on this side (Figure 3).

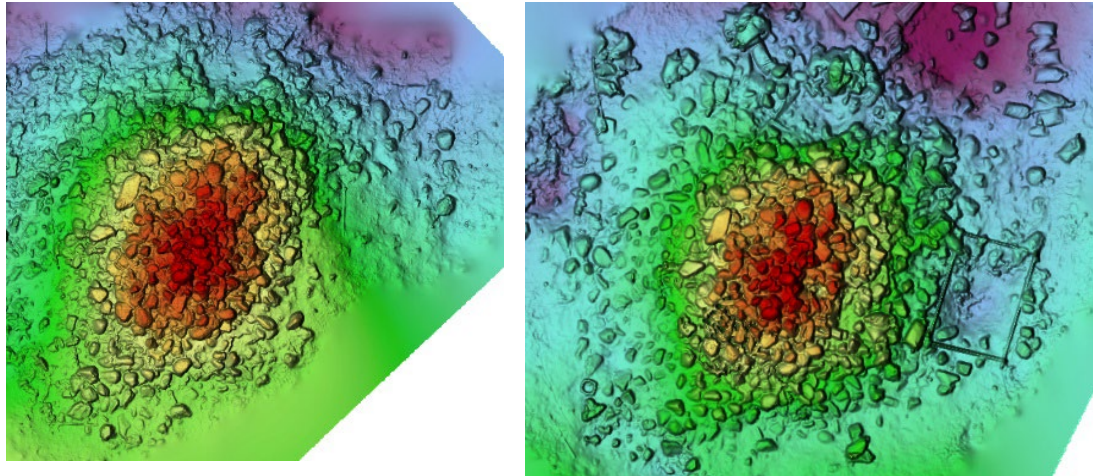


Figure 3. DEMs of the main mound 2021 (left) 2022 (right) showing more stones exposed in 2022

2.1.10. The stem post was left covered, but the in situ protection from the grave slabs was temporarily removed, revealing them to have become discoloured since 2020, likely due to the oxidation of pyrites in the marble (Figure 4).



Figure 4. Slabs in 2020 vs 2022 showing discolouration

2.1.11. More articulated hull timbers were observed in the main mound. Hull timbers were observed on the northern edge of the mound continuing both up and down from the three sampled timbers. These appear to be in good condition but they are being excavated by the local marine life exposing the timbers to risk of degradation (Figure 5).



Figure 5. Lobsters excavating the sediment on the hull planks

2.1.12. The exposed framing on the eastern edge of the mound shows significant degradation from gribble and shipworm (Figure 6).

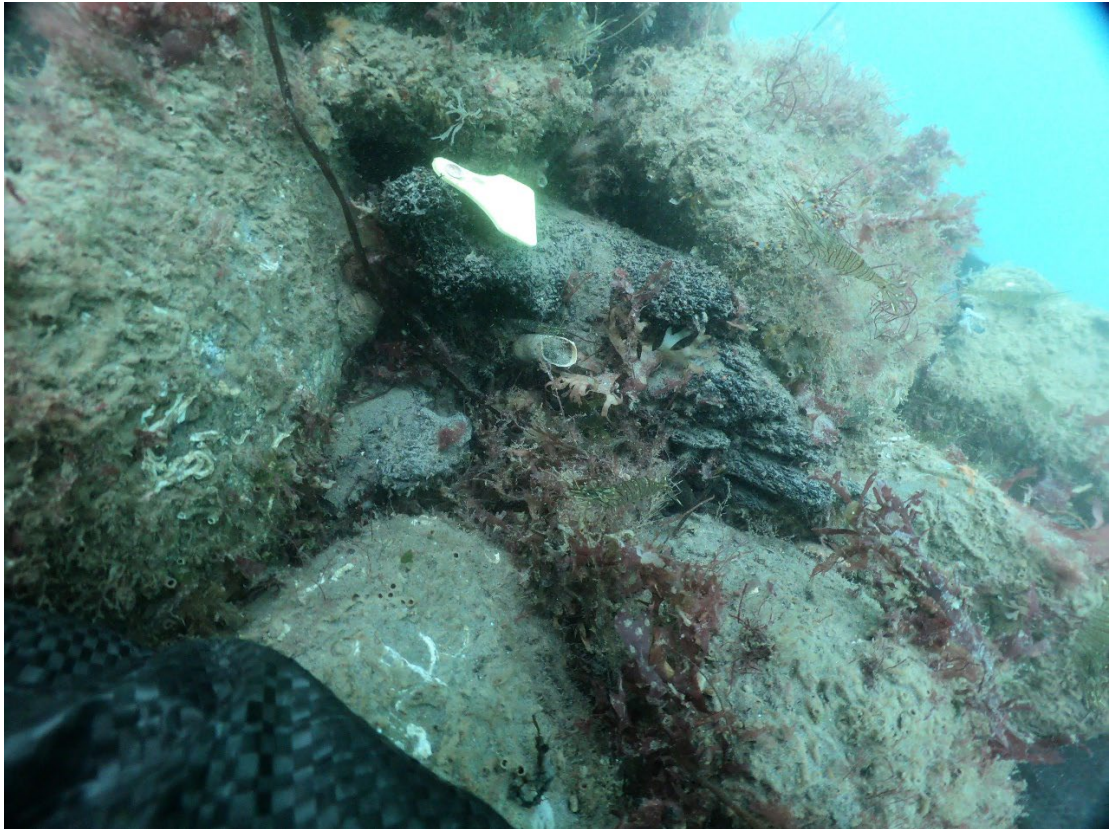


Figure 6. heavily eroded framing timber with large shipworm tunnels exposed

- 2.1.13. To quantify the amount of ship surviving, another series of investigations occurred in 2023. The stones were cleared at the north end of the mound to the eroded frame recorded in 2020 (MW\_15). this was then followed to the east and west to establish the extent of the timbers (Figure 7). S1 appears to be a chine with the hull changing angle, S2 has a natural end and two impressions of roves on the surface suggesting that this me may be part of scarf. S3-5 are the timbers that were sampled for dendrochronology in 2020 (MW\_10-12) and are currently under conservation. S1-6 appear to be in good condition however all the ironwork is gone meaning that the timbers are no longer attached to each other. Further down the structure the strakes are more degraded with only the ends visible and no continuation. The frame is heavily eroded with only and terminates on S9 and has significant gribble and shipworm damage (Figure 8). All timbers below S7 have shown significant woodborer damage (Figure 9).
- 2.1.14. No structural timbers such as the keel, keelson or the mast steps were observed in the trench. This would suggest that either they are lost, deeper in the mound or deeper in the sediment if they were no longer attached to the main hull due to the corrosion of the iron work. S10 is thicker than the other strakes which may suggest that it is one of these timbers but not enough was exposed to ascertain the timbers use.

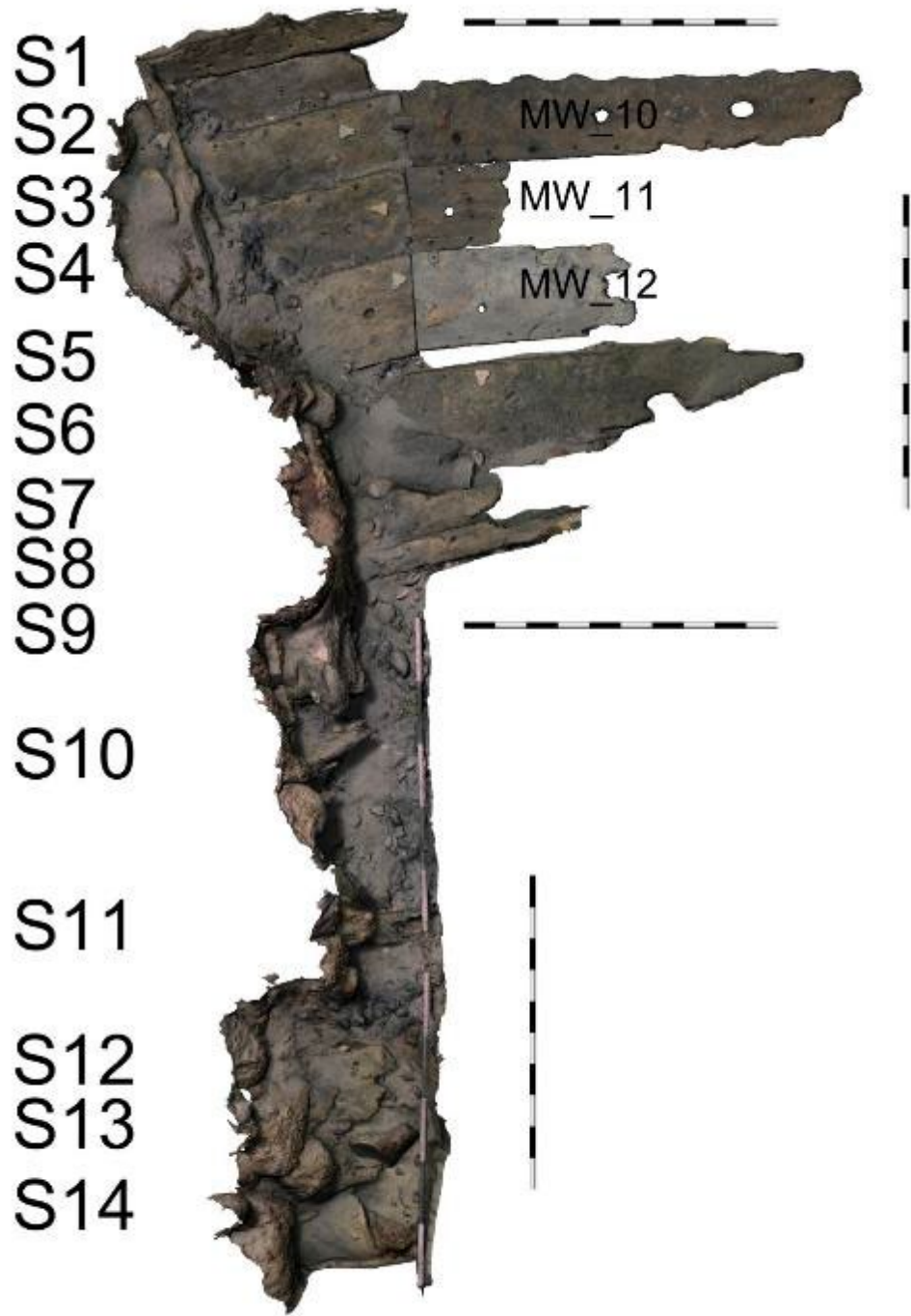


Figure 7. Bow section with sampled timbers (MW\_10-12) reinserted (scales are 1m)



Figure 8. Heavily eroded frame on S1 to 4



Figure 9. Frame and S10 showing significant wood borer damage.

2.1.15. Strakes likely the other end of S2-6 were observed to the south of the mound but no frames (Figure 10)

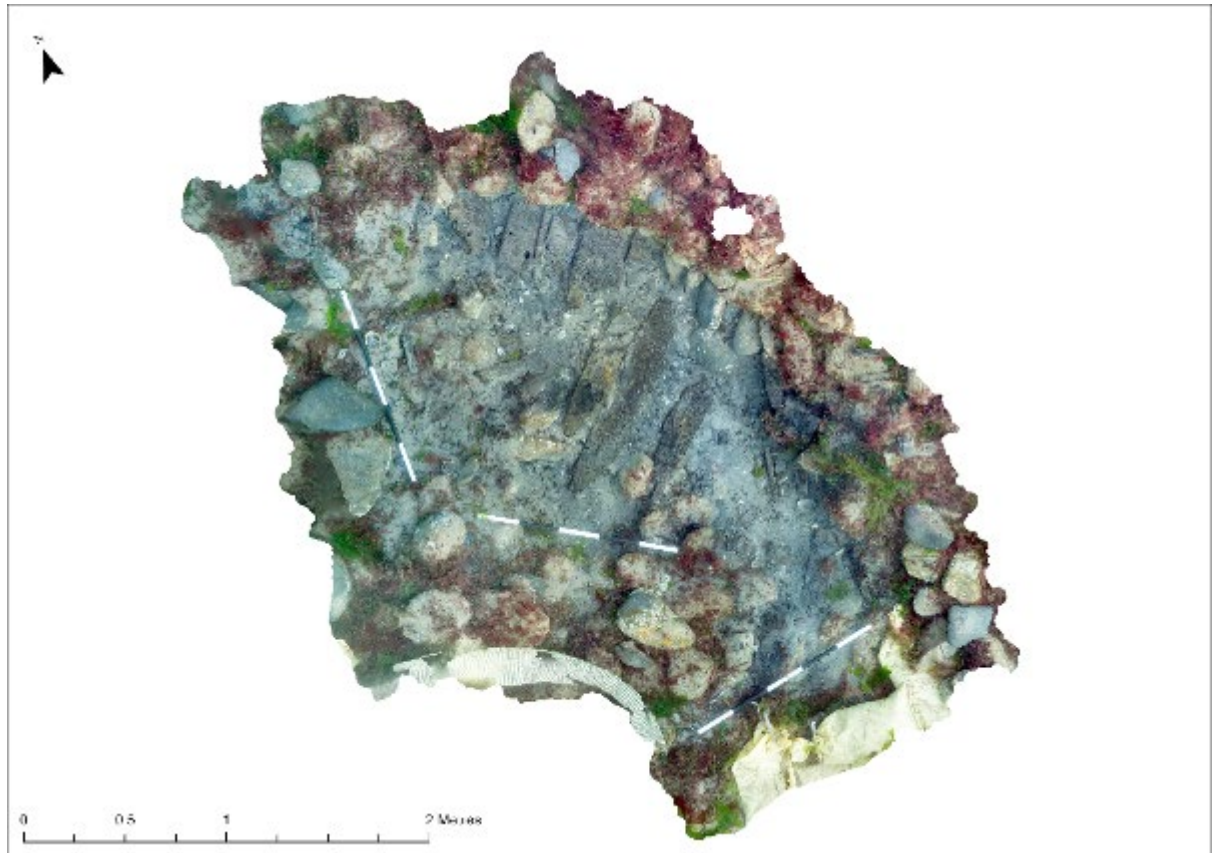


Figure 10. Orthomosaic of the Stern

2.1.16. In 2024 the grave slabs were recovered. The recovery MW20 highlighted the lack of polishing with centreline and tool marks visible, the recovery also highlighted that it was not perfectly symmetrical (Figure 11). The recovery also revealed that MW21 and MW22 (Figure 12) were part of the same slab with evidence of iron staining and marine growth on the underside. This suggest that this slab was suspended for a time during the wrecking process with an iron object on top when it was complete. This slab also presented evidence on the surviving original surface of being polished.

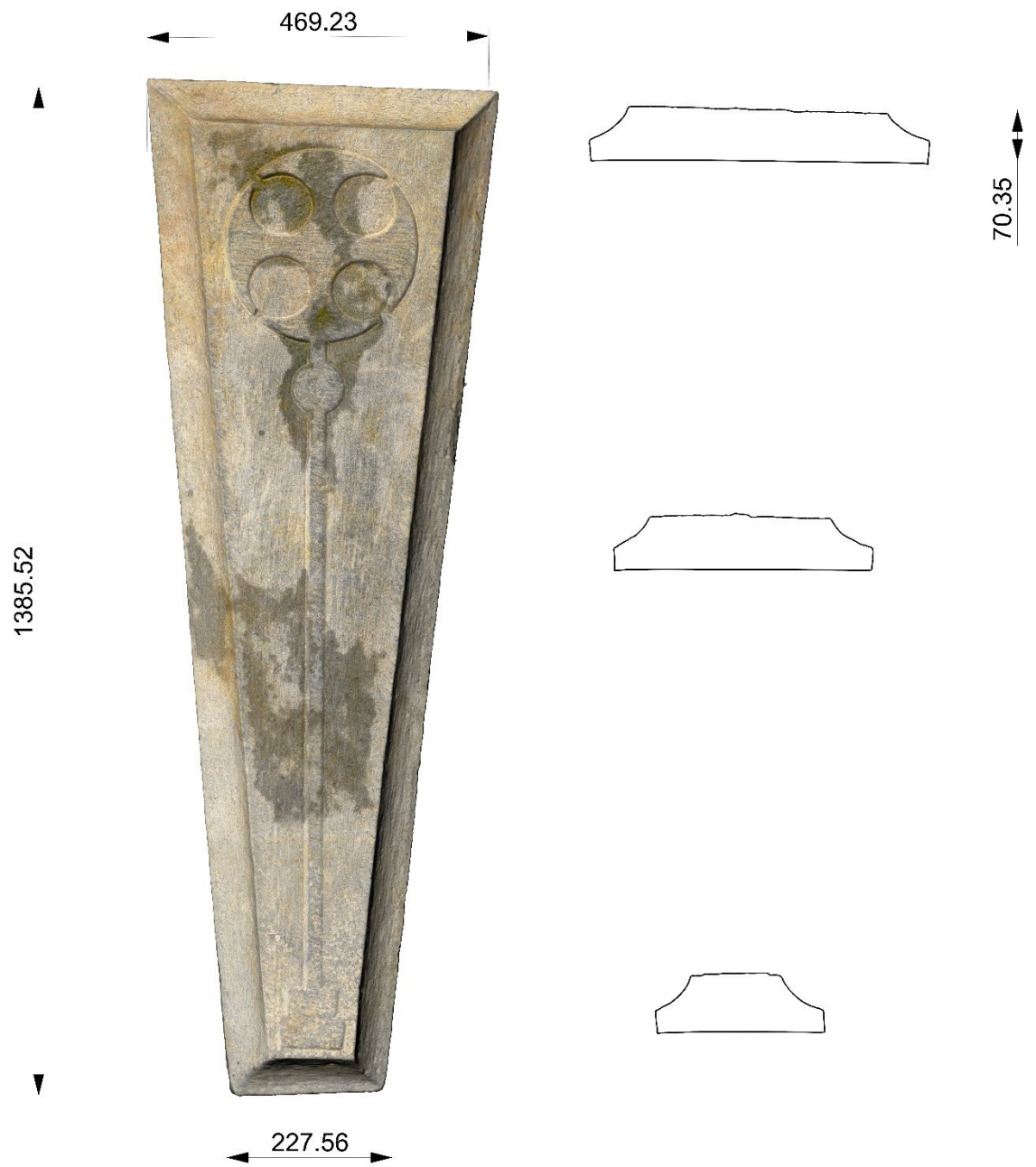


Figure 11 MW20

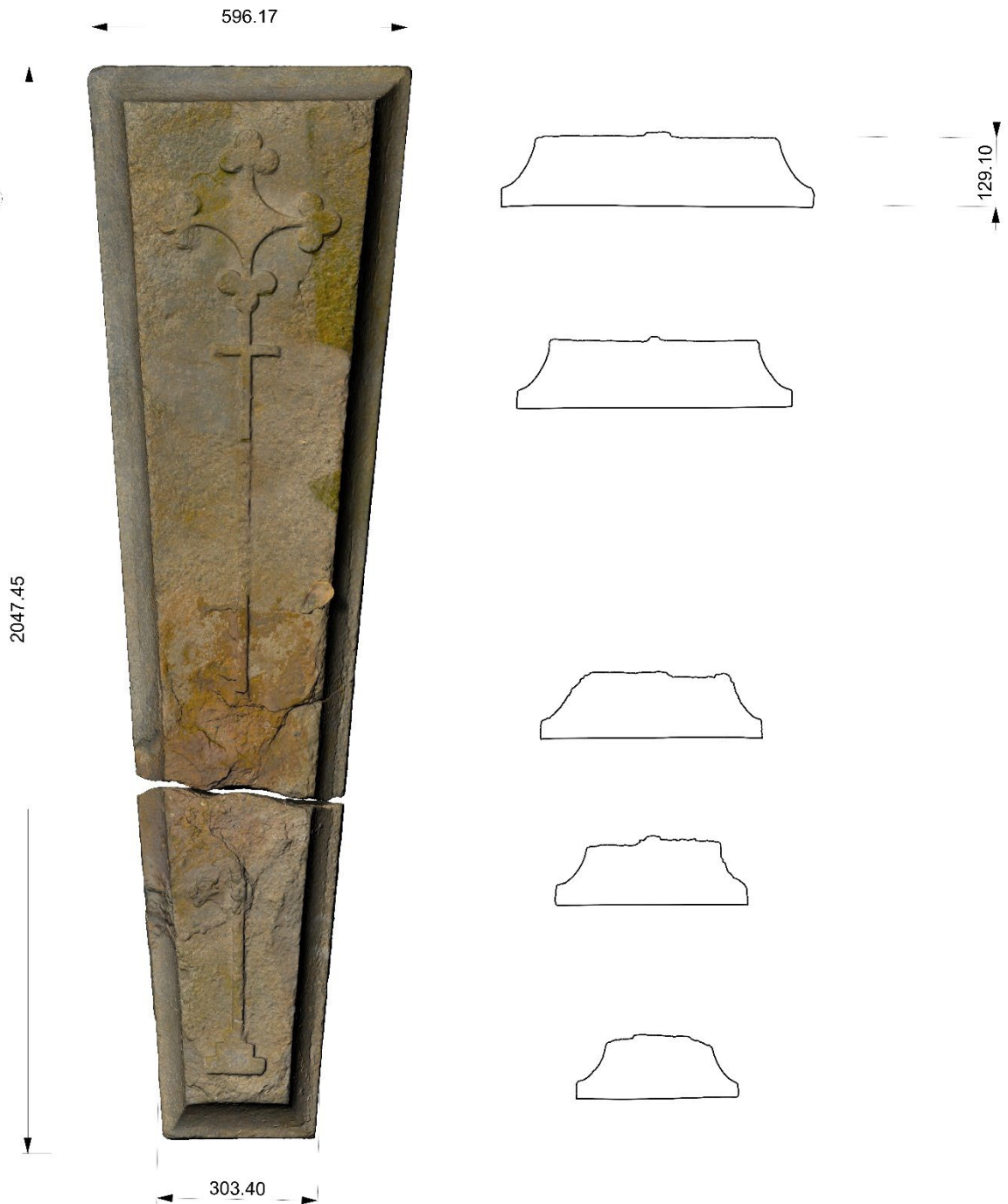


Figure 12 MW21 & 22

2.1.17. The known information of the Mortar 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**

The ship was a clinker vessel, likely a keel-based ship, believed to have evolved from the Norse tradition. The presence of a large deep stempost rules out Hulk and Cog construction and suggests a large vessel. Preliminary reconstructions place the vessel to be at least 20m long with a 6m beam.

<b>Use</b>	The ship was a cargo vessel likely trading between various ports in the British Isles and the continent, capable of carrying heavy goods. The surviving cargo consists of a large number of unworked stones and worked Purbeck Marble objects such as grave slabs and mortars. It should be noted that there is a survival bias in the cargo, and it may have been carrying other regional goods such as salt, which would not survive in the archaeological record.
<b>Loss</b>	The ship was lost on the west side of the Swash Channel in the approaches to Poole Harbour. Given the surviving cargo on board, it is likely that the vessel was outbound from Poole Harbour. Dendrochronology of the hull timbers gives us a felling date of between 1242 and 1256. Green timber was preferred for clinker shipbuilding (Crumlin-Pederson & Olsen, 2002), and the unexposed timbers on the seabed appear to show little wear suggesting that the ship had a short working life.
<b>Survival</b>	The wreck lies at a depth of 5-8m. the site is centred on a large mound of unworked stones c.7m in diameter. Within this mound is a large section of articulated clinker hull, including external planking and frames.  Two large disarticulated structural elements survive, the stempost and the floor timber.  The area between the stempost and the mound contains worked Purbeck Marble artefacts.  Exploratory excavations around the mound have not revealed any obvious continuing structure, but in 2021 some out-laying timbers were noted to the south of the mound.
<b>Investigation</b>	The site was first noted in 1982, where it was added as an obstruction to the charts and marked as a potential wreck. The site was first investigated archaeologically in 2019 by BU, followed with an undesignated assessment in 2020. BU has continued to work and monitor the site on an annual basis, including investigations and in situ protection works.

## 2.2. Description of the Surviving Features



Figure 13. Simplified Site Plan

2.2.1. The site lies on the western side of the Swash Channel in the approaches to Poole Harbour at a depth of 5-8m in a fine sandy seabed (Figure 11).

- 2.2.2. The site consists of a large mound of unworked stone approximately seven metres in diameter and one metre high on a fine sandy seabed. Beneath this mound is a large section of articulated hull consisting of at least 20 strakes and frames. The mound has a volume of c.15m<sup>3</sup> suggesting a total mass of approximately 30 tonnes. This stone is currently thought to have come from the cliffs at Durlston, south of Swanage; however, further study is needed to confirm its identity.
- 2.2.3. It is predicted that a six by three metres of hull survives within the mound, mainly consisting of the hull planks and frames, it is unclear if other timbers such as the keelson survive. The planks to the west of the mound appear to be in good condition whereas to the east they are more degraded.
- 2.2.4. To the north of the mound lies a 3.4m long disarticulated floor timber (MW1), (Figure 12) which is well preserved along the east arm with bark edge surviving on the timber, suggesting that the timber was only recently exposed in 2019. It is a grown timber with little conversion, which is made clear by its crooked appearance in plan view, and rounded sections. There are eight joggles of varying widths and depths, and it has a rising angle of around 15°. Trapezoidal limber holes are present on either side of the timber's centre line where it would have crossed the keel. The right arm is significantly more degraded, although it is currently the least exposed part of the timber, suggesting that the sediment dynamics of the site have changed over time and that an area where there was previously scouring is now building sediment. The centre of the timber is concreted to the seabed, it is not known how deep this concretion goes or if it is attached to any other archaeological object. A dendrochronological assessment conducted in 2022 suggested that this timber has a high potential to provide a tighter date and location for the ships construction (Nayling & Tyers, 2020)



Figure 14. Floor timber

- 2.2.5. The stem post (MW2) lies to the north of the mound, starboard side up. It is relatively thin at c.130mm and has a length of 4.5m. It features a rebate for the garboard plank at its lower end measuring 515 x 170mm. Only one nail hole was noted in this area. Several small concretions on the upper edge of the starboard face denote where the hood ends would have been secured to the stem post. No obvious scarfing could be seen on the timber to clearly identify how it attached to the keel. The other feature of note on the timber is a square hole just below where the hood ends would have attached: Holes like this are seen in many 13<sup>th</sup> century ships such as the medieval timbers from Dublin where the circular holes placed just above the

waterline were interpreted as painter or for rigging (McGrail, 1993). Stem holes have also been noted on coastal traders in Denmark and the Baltic (Bill, 1998).



Figure 15. Stempost

- 2.2.6. Between the stempost and the mound is an assemblage of worked marble goods including the grave slabs and mortars.

### 2.3. Ownership, Management and Current Use

- 2.3.1. As an unidentified wreck, the ownership of the vessel cannot be established. The records for maritime activity around the British Isles in the 13th century are scattered and very incomplete. This means that it would probably be very difficult to put a name to the Mortar Wreck, or even to find explicit evidence of the loss of a cargo of stone off the Dorset coast in the time in which the ship was in use.
- 2.3.2. The site was discovered during a BU funded project in 2019. BU has funded most of the work on the site to date. This includes an undesignated wreck assessment conducted in 2020 (Cousins, 2020), inspections in 2021 and exploratory investigations in 2022 and 2023 (Cousins, 2022).
- 2.3.3. Historic England Scientific Dating commissioned a dendrochronology report as part of the undesignated site assessment (Nayling & Tyers, 2020). Additionally, Historic England provided funding for boat hire for two out of the six diving days to support the dendrochronological work.
- 2.3.4. The site was designated as a Historic Wreck under the Protection of Wrecks Act 1973 in the summer of 2022 under Statutory Instrument 2022/535.
- 2.3.5. Physical access to the site is restricted to divers under the supervision of the Site Licensee(s) under the Protection of Wrecks Act 1973 and permission from PHC to dive within the port boundaries. Since 2019, monitoring has been conducted by BU with geophysics taken by PHC as part of the routine monitoring of the shipping channel.

- 2.3.6. The Protection of Wrecks Act 1973 License has been held by Tom Cousins since the designation, who has been directing archaeological work on the site since its discovery in 2019.
- 2.3.7. The finds recovered from the site are held by the licensee (Tom Cousins) on indemnity to the Receiver of Wreck whilst investigations into legal ownership are undertaken. As a 13<sup>th</sup> century vessel, it is extremely unlikely that an owner can be traced. It is agreed in writing that the finds and archive will be accessioned by Poole Museum after recording and research has been conducted, where they will form part of the new maritime galleries.

## **2.4. Gaps in Existing Knowledge**

- 2.4.1. During the creation of this document, the site and its context are being actively researched. As this process continues, some gaps in our knowledge of the site are closed, but other questions arise; therefore, the gaps in our knowledge of the Mortar Wreck should be considered slightly more fluid.
- 2.4.2. The records of maritime activity around the British Isles in the 13<sup>th</sup> century are scattered and incomplete. This means that it would probably be very difficult to put a name to the Mortar Wreck, or even to find explicit evidence of the loss of a cargo of stone off the Dorset coast in the time in which the ship was in use.
- 2.4.3. However, sufficient information about ships, seafaring, and trade survives from this period to enable us to reconstruct significant aspects of the maritime world in which the Mortar Wreck vessel was built, sailed, and sank. Extant documentary and iconographic sources also make it possible to suggest how the ship may have been constructed, equipped, and operated.
- 2.4.4. The exact nature of the articulated hull section of the wreck is unknown, frames have been observed on the eastern side of the mound with a large section of articulated hull planking visible on the north and east of the stone mound. Details such as frame spacing, and the number of surviving strakes is unknown and would require the stones to be removed to fully understand the nature of the vessel.
- 2.4.5. The site appears to be confined to the mound and the worked cargo to the north; however, it is assumed that the heaviest cargo would be stacked around midships with more goods at the bow and stern of the vessel to balance the load. Further investigations to the south should be conducted to establish the nature of the site in this area.
- 2.4.6. Preliminary reconstructions of the vessel from known surviving elements suggest that the keel and mast step may survive under the highest point of the mound. If so, details of the ship's rig could be established.
- 2.4.7. The dendrochronology samples from 2020 showed that the timber was of Irish origin, and Dublin was used as a royal shipyard in the 13<sup>th</sup> century (McGrail, 1993). However, oak planks were a common import into England, with boards suitable for shipbuilding being exported from Waterford and Youghal (Slattery, 2009). Archaeologically, this is demonstrated by the high t-Value match with timbers used in the construction of Salisbury Cathedral (Nayling &

Tyers, 2020) and other historic records (Salzman, 1967, p. 245). Further dendrochronological work on the framing timbers and any other structural elements recovered may reveal a build location as these are thought to be more locally sourced to the shipyard.

- 2.4.8. A clinker knee washed up on Studland beach in 2002. This is now held by BU and will be recorded and potentially sampled for dendrochronology to assess if it is part of the site.
- 2.4.9. Although the point of origin for the surviving cargo is thought to have come from the Purbeck quarries, how the stone was transported from the quarry to the ship is unknown. The current theory is that the worked goods were carved at the quarry to reduce as much weight as possible before being exported from Ower Quay via Corfe Castle (Lankester & Blair, 2020). However, there is no archaeological evidence for Ower being used in any significance since the Iron Age, it is possible that the stone was barged down the Wytch River, where significant medieval archaeological infrastructure has been noted but was originally interpreted to be part of salt industry (Cox & Hearne, 1991). More work needs to be done to establish if this is the case. The rubble mound of the site appears to cliff stone likely picked up of the beach at Durlston, this would suggest that some of the stone may have been moved by sea rather than overland.

### **3. Assessment of Significance**

#### **3.1. Basis for the Assessment of Significance**

- 3.1.1. Significance is the sum of the cultural and natural heritage values of a place (English Heritage, 2008)
- 3.1.2. 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).
- 3.1.3. 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 on 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.
- 3.1.4. Therefore, the basis for assessing significance enables consideration of the varying degrees of significance of different elements of the site. By identifying those elements that are vital to its significance and so must not be lost or compromised, we are able to identify elements that are of lesser value, and those that have little value or detract from the significance of the site.

## 3.2. Statement of Significance

- 3.2.1. The Mortar Wreck has an important place in international maritime history and archaeology as one of the few 13<sup>th</sup> century wrecks, complete with cargo, surviving in the archaeological record.
- 3.2.2. This period marks a time of relative wealth, peace, and prosperity with rapidly expanding populations throughout Western Europe likely due to the Medieval Climate Optimum (Mann, 2002). This period was marked by large-scale building projects such as Westminster Abbey, Salisbury Cathedral, and Notre Dame in Paris. In addition, several monastic buildings and churches were established or expanded, often with stone buildings. Studies of the wreck may inform us about the shipping and transport of the medieval era particularly in the trade of Purbeck stone, which was used in nearly every English church of any size built between 1170 and 1350 (Knoop & Jones, 1938, p.24).
- 3.2.3. Locally, the towns of Poole and Corfe both came to prominence during this period, both gaining a market and fair around 1250.
- 3.2.4. Several remains of vessels with a similar construction and date have been found across Europe; however, most of these appear as fragments or have been reused for other purposes. The closest parallel in terms of date and construction is the Magor Pill Wreck, which carried a cargo of iron, found on the Welsh side of the Bristol Channel. However, this vessel is far smaller than the predicted size of the Mortar Wreck with a cargo capacity of only 3.75 tonnes (Nayling, 1998, p. xiii), as opposed to the Mortar Wreck where c.30 tonnes of cargo still survives on the site.
- 3.2.5. The following table summarises these values as a whole, by noting how those values relate to the surviving fabric and its constituent parts.

<b>Evidential</b>	Relating to the potential of the Mortar Wreck to yield primary information about past human activity.
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The Mortar Wreck has high evidential significance not only because it informs us about the type of ship, construction style and timber used in the 13<sup>th</sup> century but also the trade networks and lives of the people who sailed them. It is likely that more artefacts and ecofacts survive on the site, particularly within the stone mound.

The stone mound has the potential to inform us of the trade in rubblestone. Stone was sold by the shipload in the 13<sup>th</sup> century (Salzman, 1967, p. 133) and Purbeck rubblestone is known to have been used in over 260 sites across the Thames Basin (Potter, 2004, p. 84). As the site represents the only complete shipload of stone known from the period it may be possible to infer the real quantities of stone being imported and used in contemporary building projects such as the Tower of London.

Purbeck mortars are a common find in medieval contexts with over 200 examples known across the British Isles and from the Low countries though to Denmark. A recent study concluded that over 50% of mortars

recovered from archaeological sites in England are made from Purbeck stone (Jervis, 2022). However the vast majority of these are fragmentary, whereas the wreck represents a single shipload of mortars fresh from production. The mortars across the site have shown a great variety in materials and forms and could be used to make a typology to inform other archaeological sites.

Dating cross slabs is notoriously difficult few having inscriptions to a particular person or period. Developmental sequencing is the most common tool, but this can only provide relative dating and without a means of relating it to actual people or events, the sequences float free. The two styles of slab on the wreck were not thought to have been produced contemporaneously making the discovery more significant in the dating of other slabs (Cousins, et al., 2022).

### **Historical**

Relating to the ways in which the Mortar Wreck can provide direct links to past people, events and aspects of life.

Although it is unlikely that historical records relating to the ship will be found, the site can inform us about the trade connections across Europe in the 13<sup>th</sup> century.

The site also provides an unparalleled glimpse into history of the medieval ports in Poole Harbour and the trade that passed through.

### **Aesthetic**

Relating to the ways in which people respond to the Mortar Wreck through sensory and intellectual experience.

The wreck's significance lies in the worked Purbeck marble artefacts, such as the grave slabs which, have aesthetic, historical and evidential value. The aesthetic value of the site will be increased through the museum displays allowing for the widest public engagement with the wreck. The site and its cargo can also be tied to some of the greatest medieval monuments in the country such as the royal tombs of the Plantagenets and the decorative work across most of England's cathedrals.

The two slabs are of differing styles, which before the discovery of the wreck were not thought to be contemporary (Cousins, et al., 2022). The site has provided the only independent and scientific dating method for slabs that rarely appear in their original context or feature inscriptions.

### **Communal**

Relating to the meanings of the Mortar Wreck for the people who identify with it, and whose collective memory it holds.

The site is related to one of the major local industries that continues to this day, albeit on a much smaller scale. Within the local community there is an active guild of Purbeck Marblers dating back to the medieval period.

The use of Purbeck Marble in Church monuments is well documented with several studies being produced by the members of the Church Monuments Society of which the evidence from the wreck is beginning to play a pivotal role.

Poole Museum has agreed to be the long-term curators of the site and have already included the site in plans for the updated maritime galleries at the museum.

**Instrumental** Economic, educational, recreational, and other benefits which exist because of the cultural or natural heritage values.

The Mortar Wreck may be identified in its value as exhibit for Poole Museum, and its involvement with future outreach and educational activities.

The site will be instrumental in the training of the next generation of maritime archaeologists. It is planned to be used as part of the training of archaeological students at BU.

### 3.3. Gaps in Understanding Significance

- 3.3.1. The assessment of significance of the site as a whole has not been acutely hindered by any of the gaps in our knowledge identified in Section 2.4 above. However, certain key gaps in our understanding of the significance of the component parts of the site may need to be filled so that these significances can contribute to informing its future conservation management.
- 3.3.2. The identification of pre-18th-century shipwrecks can be problematic unless the vessel in question belonged to a navy or was involved in some well-documented incident: the naming of the wrecks of the Mary Rose (lost 1545) and HMS Gloucester (1682) are cases in point.
- 3.3.3. The volume of surviving written evidence from the Middle Ages is not as great as that available for the 16th and 17th centuries, and thus there are fewer medieval references to shipwrecks. For this reason, it will probably be very difficult to find the original name of the Mortar Wreck, or any other identifiable 13th-century information about this specific ship, unless by chance some rare and compelling record still exist. Vessels of the period certainly had names, but most went unrecorded.
- 3.3.4. However, the aggregate amount of information on shipping and sea trade in 13th-century English sources should make it possible to build up a picture of the maritime world in which the Mortar Wreck operated, and to help provide a historical context for the ship and its contents.

### 3.4. Statutory and Other Designations

- 3.4.1. Statutory Instruments: 2022/535 affords protection of a 50m radius circle centred on 50°39.507N 001°55.555W (ETRS 89) under the Protection of Wrecks Act 1973.
- 3.4.2. 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. HE currently holds an overarching seabed licence from the Crown Estates that covers all the designated sites.

- 3.4.3. The site lies within the port limits of the Port of Poole, and any seabed operations, including diving, within this region require a permit from PHC.
- 3.4.4. In addition, the Environment Act 2021 places a duty on Historic England to consider what they can do to conserve and enhance biodiversity in England.

## **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 Mortar Wreck and its components.
- 4.1.2. Vulnerability may be assessed against environmental factors and human impacts on the site, including the setting.
- 4.1.3. 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 are 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:
- Physical condition of the site and its setting
  - Conservation and presentation philosophy
  - Ownership and legal requirements
  - Existence of appropriate uses
  - Resources, including financial constraints and the 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 on the western edge of the Swash Channel on a flat, featureless, sandy seabed leading into Studland Bay. Work between 2020 and 2022 has shown that the site is scouring to the east, leading to a slight collapse of the mound and exposure of the articulated structure.
- 4.2.2. The exposed timbers and worked marble goods have been buried under a layer of sandbags to protect them in situ. This has been a standard procedure to create a layer of sediment over the wrecks in an attempt to create an anaerobic environment. However, it is not known how effective these methods are in long term (i.e. over 10 years) without regular monitoring and repairs to the protection. Some studies have been done on timber that still show bacterial

and fungal attack on timbers after 36 months (Bjordal & Nilsson, 2008). Most studies on in situ protection have only considered timbers using sacrificial samples and not whole sites of mixed materials and uneven surfaces.

- 4.2.3. When the slabs were reassessed in 2022, it was noted that despite being buried, they are actively degrading. This is due to the stone containing pyrites, which is a typical problem for Purbeck Marble in damp environments (Historic England, 2020). At least one Purbeck Marble artefact, MW\_28 (Figure 14), had shown to significantly disintegrated, despite being buried, with the loss of the calcite binding leaving only the fossilised viviparous shells.



Figure 16. MW\_28 Circular piece of Purbeck Marble, not the rust staining in the lower left. This was first observed complete in 2020 and reburied, when uncovered in 2022 it was noted that it was actively degrading.

- 4.2.4. The frames within the mound and planking on the eastern side are actively decaying with evidence of large shipworm tunnels and gribble damage (Figure 9), suggesting either a current or historical infestation. These have been sandbagged to the best of the team's ability but due to the rubble, complete coverage cannot be achieved.
- 4.2.5. Many large voids can be observed within the rubble mound, which is home to a variety of mobile fauna including conger eels, lobsters and urchins, all which can create an aerobic environment that will affect the preservation of the archaeology in situ. The only way to assess and protect the surviving hull timbers and learn more about the ship is to remove the mound of stone and either protect the hull with sandbags or recover and conserve the timbers.
- 4.2.6. Apart from the stone mound, only a relatively small assemblage has been seen on the site, including two grave slabs and at least 20 mortars. The domestic finds are represented by two copper alloy cooking vessels and two potential pot stands. It is likely that more small finds exist within the mound and are buried in the surrounding seabed.

- 4.2.7. The position of the wreck on the earliest charts show that it was on the Bar Sand a highly dynamic sandbank, on the western edge of the Swash Channel in less than four metres of water. It is likely that the wreck would have come in and out of the sand at multiple occasions over the last 750 years, explaining the marine fouling and erosion on the buried archaeological material.
- 4.2.8. In the 1920s, the Training Bank, a large stone barrier designed to scour out the Swash Channel was completed. This moved the channel close to its current position and stabilised Bar Sand, stabilising the seabed around the wreck.
- 4.2.9. In the early 1990s, the channel was dredged to a depth of 6.5m CD. Timbers were recovered at this time along with an iron gun, but they are thought to have been associated with the Swash Channel Wreck or a later vessel. The channel was deepened in 2004 to 7.5m below CD, which has shown a net sediment loss of c.1m across the site explaining the size differences between the mound as described in 1982 to today.

### **4.3. Conservations and Presentation Philosophy**

- 4.3.1. As the site lies adjacent to the main channel and within the Port Limits, PHC have agreed to conduct bi-annual bathymetric surveys across the site in line with the work already being conducted on the Swash Channel and Studland Bay Wrecks (PHC, 2016). These data sets are provided to BU for analysis and are presented in the annual licensee's report.
- 4.3.2. It is in agreement that any artefacts recovered from the site will be donated to Poole Museum, which has agreed to take full ownership of the archive after the conservation and research has been completed.
- 4.3.3. Poole Museum are currently (as of 2023) undergoing refurbishment, which includes the creation of a dedicated maritime gallery with plans to permanently display finds from the wreck.
- 4.3.4. 3d models of the site and artefacts created by BU are freely available for viewing and downloading through BU's Sketchfab channel (<https://skfb.ly/oxCMp>). These models form a basis for monitoring the site and can be combined with other survey techniques such as bathymetric multibeam to obtain a better picture of any site changes.
- 4.3.5. There is currently no interpretive signage associated with the wreck. There is some limited interpretation available online on the Historic England and Bournemouth University websites.
- 4.3.6. The wreck has been featured on several news articles and shows when designated and has also been the subject of an episode of Time Team (<https://www.youtube.com/watch?v=G6Ytbc1cBOM&t>)
- 4.3.7. A journal article on the initial discovery and interpretation of the wreck was published in Antiquity in August 2024 (Cousins, 2024).

#### **4.4. Visitor and other Occupancy Requirements**

- 4.4.1. There are no plans to develop a visitor scheme on the site, with its location close to a main shipping channel and within the limits of Poole Harbour, where recreational diving is not permitted. This makes the site unsuitable for a physical dive trail.
- 4.4.2. The site will be subject to bi-annual inspections by the licensee team and PHC via diver survey and multibeam bathymetry.
- 4.4.3. The site licence has been held by Bournemouth University maritime archaeologist Tom Cousins since the designation of the wreck.
- 4.4.4. Given the lack of physical access to the site, it is recommended that the online presence is enhanced with particular attention paid to the mass of digital data held by BU. This could be archived with the ADS or other suitable repository at the completion of each project stage.
- 4.4.5. The site is overlooked by a popular section of the Southwest Coast Path on land owned by the National Trust. The potential for an interpretive panel with details on the maritime archaeology of Poole Bay should be discussed with the National Trust.

#### **4.5. The Existence (or lack) of Appropriate Uses**

- 4.5.1. Regular, consistent, and reliable information relating to the condition of the Mortar Wreck will be necessary to monitor the existence (or lack) of appropriate uses of the site.
- 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 do 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.
  - It is also an offence to cause or permit any of the above activities to be carried out by others, without a licence, in a restricted area.
- 4.5.3. No unlicensed activity has been reported on the wreck. Recreational diving is prohibited within Harbour Limits, and all other diving activities are controlled via permits from PHC. Any un-authorized activity over the site should be reported to PHC and the relevant authorities.

#### **4.6. Resources, Including Financial Constraints and Availability of Skills**

- 4.6.1. There is no doubt that the archaeological material, including some hull structure, indicates the evidential value of the Mortar Wreck and that interaction with the material relates to both its aesthetic and historical value. This is further increased by temporary displays about the wreck housed by Bournemouth University and Poole Museum. In addition, various outreach events and significant media coverage on the wreck has occurred throughout the project. There are plans for permanent exhibition in Poole Museum.
- 4.6.2. The site archive is held by BU who will deposit it in Poole Museum at the end of the research and conservation phase of the project.
- 4.6.3. As part of their dredging recording protocols PHC (2016) have agreed to conduct bi-annual bathymetric survey of the Mortar Wreck, Studland Bay Wreck and Swash Channel Wreck along with funding for an annual site inspection by the BU dive team. The Mortar Wreck will be monitored as part of this study. The educational value of the site could be increased by involving students and volunteers with an interest in maritime archaeology in the monitoring of the site.
- 4.6.4. The exposed areas of the site have been protected with a layer of sandbags. Plans are in place to raise and conserve finds that are at risk or are diagnostic.
- 4.6.5. 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.
- 4.6.6. The cost of excavation, recovery, and conservation can be high and likely exceed the professional and funding capacity of Historic England. Work so far on the site has been largely funded through local donations via the BU fundraising team with further contribution from Historic England and MAST. BU is in the unique position of having access to the MAST conservation facilities in Poole allowing for the recovery and conservation of material of all sizes in house.
- 4.6.7. Additional sources of funding will be sought in relation to specific projects relating to the wreck.

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

- 4.7.1. The discovery and initial survey work on the Mortar Wreck was published in *Antiquity* (Cousins, 2024).
- 4.7.2. The section of the articulated hull remains is currently buried under c.15m<sup>3</sup> of limestone rubble representing the cargo, which would need to be removed to fully understand the structure of the surviving wreck. The exposed timbers should be recorded in situ then recovered with sandbags, a decision can then be made about recovery and conservation on a case-by-case basis.

- 4.7.3. Although an identity for the wreck is unlikely to be found, historic research reconstructing the maritime world of the Mortar Wreck should be conducted.
- 4.7.4. It is the intention of this Conservation Statement and Management Plan to provide a mechanism to reconcile the lack of information/understanding about the sites to assist in their management for all.

## 5. Conservation Management Policies

### 5.1. Introduction

- 5.1.1. This section of the plan builds on sections 2.4.1 (assessment of significance) and 4 (Issues and vulnerability) to develop conservation policies that retain or reveal the significance of the site, providing a framework for decision making in the future management and development of the site or revealing the significance of the site, meeting statutory requirements and complying with HE's standards and guidance.
- 5.1.2. It is intended that the policies will create a framework for managing change on the Mortar 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.

### 5.2. The Historic Environment is of Value to us All

- 5.2.1. The Mortar Wreck forms a unique record of past human activity that 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 Mortar Wreck is therefore a social asset as a resource for learning and enjoyment. It should be enjoyed without compromising the ability of future generations to do the same.
- 5.2.3. Learning and education at all stages is central to sustaining the historic environment. It raises people's awareness and understanding of their heritage, including the varied ways in which these values are perceived by different generations and communities. It encourages informed and active participation in caring for the historic environment.
- 5.2.4. The site also has issues with being adjacent to a maintained channel that needs to be regularly dredged to keep the Port of Poole running efficiently. This increases the risk to the site and the likelihood of any disarticulated timbers drifting into the main channel and affecting navigation and/or dredging operations. However, it has a positive impact on the resources available to survey and protect the site with bi-annual bathymetry and sediment replenishment being made available.
- 5.2.5. **Management Policy 1:** We will seek to increase interpretive material related to the site. Principally in the form of virtual access, including public facing and academic articles as a mechanism to develop the value of the site.

5.2.6. **Management Policy 2:** Through liaising with Poole Museum and other stakeholders, we will seek to provide interpretive material for the marine historic environment at appropriate locations.

5.2.7. **Management Policy 3:** We will encourage the reporting and recording of any timbers found on the beaches of Studland or Poole.

### 5.3. **Everyone Should be Able to Participate in the Sustaining the Historic Environment.**

5.3.1. Local, regional, national, and international stakeholders can contribute to the understanding and sustaining of the Mortar Wreck. Judgments about the values and decisions about the future of the Mortar Wreck will be made in ways that are accessible, inclusive, and informed.

5.3.2. Participants should use their knowledge, skills and experience to help others understand the value of the site. They will play a crucial role in communicating and sustaining the established values of the site, encouraging others to understand, value, and care for the site, and help others articulate the values they attach to the Mortar 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. Education at all stages should help awareness and understanding of such values, including the varied ways in which these values are perceived by different generations and communities. It should also help people develop, maintain, and pass on their knowledge and skills. The annual site inspection will be a part of the training resources made available to students and volunteers with an interest in maritime archaeology.

5.3.5. Any local society or organisations wishing to host talks on the wreck is encouraged to contact the archaeological team.

5.3.6. In additions, BU will hold open days and displays on the wreck to promote the historic environment.

5.3.7. 'Virtual access' to the site could be created from photogrammetry along with an updated site archive and the latest survey data. This could include elements of the site archive to create a virtual trail allowing public access to the research and information gained from investigations into the site.

5.3.8. **Management Policy 4:** We will seek to encourage the investigation and continued survey of the site to establish the full extent and nature of the ship and its cargo.

5.3.9. **Management Policy 5:** Mechanisms will be identified and developed to address the shared ownership of the site.

5.3.10. **Management Policy 6:** During the annual inspection and where projects are commissioned on the site, we will seek to encourage the use of the site as a training resource where appropriate.

## 5.4. Understanding the Significance of Heritage Assets is the Starting Point for Effective Conservation

- 5.4.1. The significance of the Mortar Wreck embraces all the cultural and natural heritage values 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 it changes over time, and its present character.
- 5.4.2. Judgments about the value of the site are specific to the time in which they are made. As the understanding of the site develops and people's perceptions change alongside any physical changes, the values, priorities, and significance of the site and its features will evolve and tend to become more complex.
- 5.4.3. The purpose of understanding and articulating the significance of the site is to inform decisions about its future.
- 5.4.4. Some key gaps in our understanding of the vessel could only be addressed via excavation of key parts of the wreck site. This will have to be judged on a case by case basis. Research occurring on and around the site should be encouraged to establish if there is any unknown archaeological potential.
- 5.4.5. **Management Policy 7:** We will seek to commission a programme of assessment and research to contribute towards a fuller understanding of the site.
- 5.4.6. **Management Policy 8:** We will seek to undertake a historic study to reconstruct the maritime world of the Mortar Wreck.

## 5.5. Heritage Assets Should be Managed to Sustain their Heritage Values

- 5.5.1. Changes to the site are inevitable and all wreck sites are vulnerable simply because of the nature of their environment. Action undertaken to understand natural changes will be proportionate to the identified risks and sustainable in the long term.
- 5.5.2. Intervention that caused limited harm to the value of the wreck will be justified if it increases our understanding of the past, reveals or reinforces heritage values, or is necessary to sustain those values for future generations, so long as any harm is outweighed by the benefits.
- 5.5.3. New work should aspire to a quality of design and execution, related to its setting, which may be valued both now and in the future. This neither implies nor precludes working in traditional or new ways but demands respect for the significance of a place in its settings.
- 5.5.4. Sediment levels across the site have been continually monitored and the site is annually inspected every year. Historic research into the general sediment trends of the region shows that these levels are generally declining.
- 5.5.5. As part of the PHC's licence for the annual monitoring of the shipping channels, high-resolution bathymetry will be taken biannually as well as pre and post dredging in the main channels to monitor if it has any effects on the site and its settings (PHC, 2016).

- 5.5.6. **Management Policy 9:** We will continue the programme of environmental monitoring of the site through diver inspections and high-resolution bathymetry. The in situ protection will be renewed as appropriate.
- 5.5.7. **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.

## 5.6. Decisions About Change Must be Reasonable, Transparent and Consistent

- 5.6.1. Decisions about change in the historic environment demand the application of expertise, experience and judgement in a consistent and transparent process that is as accessible as possible. They must consider the views of those who have an interest in the assets affected and/or the changes being proposed.
- 5.6.2. The range and depth of understanding, assessment, and public engagement should be sufficient to inform and justify the decision to be made, but efficient and proportionate in the use of resources. Where heritage assets have been designated in the public interest and, subject to additional controls, proportionality should govern the exercise of those controls.
- 5.6.3. Potential conflict between sustaining heritage significance and delivering other important public benefits should be avoided or minimised by looking at other ways of delivering those benefits. If conflict cannot be avoided, the weight given to heritage interests in making the decision should be proportionate to the significance of the heritage asset and the impact of the proposed change on that significance.
- 5.6.4. The seabed is a constantly changing environment. In situ protection should only be seen as a temporary option that slows down the rate of degradation and is a big risk that may “condemn waterlogged deposits to possible gradual unseen destruction merely as a more convenient alternative to excavation. All preservation in situ entails a potential risk of failure” (Historic England, 2010, p. 3).
- 5.6.5. The UK government has adopted the principles set out in the annex to the UNESCO Convention on Underwater Cultural Heritage as best practice in the management of underwater cultural heritage. This states that in situ protection of underwater cultural heritage should be considered as the first option. It also states that “If excavation or recovery is necessary for the purpose of scientific studies or for the ultimate protection of the underwater cultural heritage” it should occur using appropriate methods (UNESCO, 2001).
- 5.6.6. **Management Policy 11:** If site monitoring indicates that the in-situ preservation methods are not preventing the decay and loss of significant archaeological remains, then a programme of staged archaeological work should be considered subject to the submission of a suitable project design.

## 5.7. Documenting and Learning from Decisions is Essential.

- 5.7.1. Records of the justification for conservation decisions (including assessments of significance and of the impact of proposals upon that significance), and the actions that follow them, are

crucial to maintain a cumulative account of what has happened to a heritage asset and to understand how and why its significance may have been altered. These records should be as physically accessible, and intelligible to non-expert audiences as possible.

- 5.7.2. Managers of heritage assets and responsible public bodies should monitor and regularly evaluate the effects of change resulting from decisions and policies and use the results to inform future decisions and policies.
- 5.7.3. If all or part of a heritage asset is lost, whether because of a decision or an inevitable natural process, its potential to yield information and further our understanding of the past should be realised. This requires investigation, recording, and analysis, followed by archiving and dissemination of the results, all in proportion to the asset's significance. The results of the investigation and the advancement in understanding of the asset's significance should be made publicly available through relevant archives or records in a reasonable period to help inform future changes affecting similar assets. An asset's form before an episode of change should also be captured by proportionate record-making. In many cases, this will be through photogrammetry.
- 5.7.4. From experience in relation to the Swash Channel Wreck and other wreck sites, the more time spent monitoring a site, the more information is lost, particularly the surfaces of the timbers.

## **6. Forward Plan**

### **6.1. Introduction**

- 6.1.1. To start the implementation of the proposed management policies outlined in Section 4.7.1, Historic England is seeking to support projects that will increase our understanding of the values and setting of the Mortar Wreck. These projects are outlined in section 6.2.

### **6.2. Proposed Projects in Relation to the Mortar Wreck**

#### *Virtual Access to the site (Policy 1)*

- 6.2.1. Due to the wreck's location and status, physical public access to the site is not appropriate. Therefore, a suitable public facing website with a virtual trail should be created

#### *Continued Monitoring of the site and field investigation (Policies: 3, 5, 6, 8, 10)*

- 6.2.2. BU and PHC will continue to monitor the site with bathymetric surveys and diver surveys. Any newly exposed archaeological material will be recorded and then be recovered or conserved in situ on a case-by-case basis. A series of staged investigation will be conducted to investigate the wreck, which includes student training opportunities.

#### *The Maritime World of the Mortar Wreck (Policy 7)*

- 6.2.3. The records of maritime activity around the British Isles in the 13th century are scattered and incomplete. This means that it would probably be very difficult to put a name to the Mortar Wreck, or even to find explicit evidence of the loss of a cargo of stone off the Dorset coast in the time in which the ship was in use.

- 6.2.4. There is likely enough information about ships, seafaring and trade surviving from this period to enable us to reconstruct significant aspects of the maritime world in which the Mortar Wreck vessel was built, sailed and sank. Extant documentary and iconographic sources also make it possible to suggest how the ship may have been constructed, equipped and operated.
- 6.2.5. This project is currently underway with funding from the Society of Antiquities of London.

#### *Further Dendrochronological work*

- 6.2.6. The 2020 Dendrochronology study (Nayling & Tyers, 2020) has shown great potential for further dendrochronological work with some timbers exhibiting large amounts of sapwood and bark edge. If any timbers are deemed suitable for analysis, they will be recorded in detail and sampled. In addition, the wooden knee of a clinker vessel recovered from the beach in 2001 should be analysed to see if it potentially matches the wreck. This is currently held in passive conservation with Bournemouth University.

## **7. Implementation**

### **7.1. Consultation**

- 7.1.1. This document has been internally reviewed by Historic England.
- 7.1.2. The Plan for the Mortar Wreck was circulated for a four-week stakeholder consultation to refine how the values and features of the Mortar Wreck can be conserved, maintained, and enhanced. Responses to the consultation were considered and the Plan was revised as appropriate.

### **7.2. Adoption of Policies**

- 7.2.1. Following consultation, the Plan was adopted in 2025
- 7.2.2. A programme that identifies a realistic timescale for implementing the Plan, considering those areas that need immediate action, those that can be implemented in the medium or long term, and those that are ongoing will be devised.
- 7.2.3. Responsibilities for management of the site lies with Historic England (led by the National Listing and Maritime Team), and all stakeholders will work toward implementing of this plan. In addition, provision will be made for periodic review and updating of the Plan.

### **7.3. Authorship and Consultation**

- 7.3.1. This Conservation Statement & Management Plan for the Mortar Wreck Site was prepared as follows:

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7.3.2. In addition, Ian Friel, Steve Pearce, and Ian Panter have consulted on specific aspect of the plan.

7.3.3. The following individuals and organisations have been invited to comment on this draft plan:

- Heritage Organisations
  - Dorset County Archaeologist
  - Poole Museum
  - National Trust
- Port Authorities
  - Poole Harbour Commissioners
- Environmental Groups
  - IFCA
  - Dorset Wildlife Trust
- Other Bodies
  - Crown Estates
  - Natural England
  - Receiver of Wreck
  - Marine Management Organisation

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