

Proposals for the Exemption of Certain Archaeological Activities from Marine Licensing



A proposal document submitted to DEFRA & Marine Management
Organisation 2015

Proposals for the Exemption of Certain Archaeological Activities From Marine Licensing

This proposal document has been compiled by the Nautical Archaeology Society (NAS) upon behalf of the Society and the organisations listed in Appendix III thereto and is submitted to DEFRA and the Marine Management Organisation (MMO) upon behalf of the Society and these organisations.

The invaluable assistance of Kevin Camidge (CISMAS), David Johnston (NAS), Peter Holt (SHIPS Project), Jason Lowther (Plymouth University), David Parham (Bournemouth University) and Daniel Pascoe (NAS) in the preparation of this document is gratefully acknowledged.

Corresponding author is Michael Williams, Honorary Secretary, NAS
(mwilliams126@btinternet.com)

Proposals for the Exemption of Certain Archaeological Activities From Marine Licensing

Introduction

The extension of marine licensing under the Marine & Coastal Access Act 2009 was designed to afford enhanced protection to both the natural and the historic marine environments. This has clearly been achieved. However, perhaps inevitably, with any large body of new legislation there have been revealed unintentional consequences, some of which have impacted adversely upon the historic environment. A prominent feature of nautical archaeology in the United Kingdom is that a very significant proportion of such archaeological monitoring, survey and investigation is carried out by avocational groups, largely and in some cases entirely funded from their own financial resources¹. Under the 2009 Act the new marine licensing system is predicated upon the principle that the 'user pays' and the MMO, which administers the marine licensing system, is under a statutory duty to recover its costs². In a commercial context one can appreciate the rationale that the taxpayer should not be expected to subsidise commercial organisations obtaining a marine licence in order to undertake a licensable activity from which they will derive a profit.

However this rationale breaks down when the context is that of volunteers undertaking at their own expense an activity which confers a public benefit. This is a voluntary activity which confers no financial benefit upon the individuals concerned, the motivation for which is that of unremunerated public service. The financial resources of such groups are normally derived from the taxed income of the individuals concerned, occasionally supplemented by grant aid or sponsorship. These resources are invariably extremely limited in proportion to the costs of the nautical archaeology operations involved and the imposition of the licence fees can therefore be a significant drain upon these resources and an effective financial deterrent to the continuation of those activities. The imposition of such licence fees has been seen as an unwarranted tax upon volunteering in the public interest. Perhaps just as damaging as the financial burden imposed has been the unfortunate impression, created by the imposition of such fees upon this voluntary activity, that government simply does not appreciate the efforts of such volunteers and holds their effort in little or no regard. Such has been the disillusion created that in February 2014 English Heritage (EH) faced the very real prospect that avocational teams licensed under the Protection of Wrecks Act 1973 would en masse return their licences issued by EH and cease their voluntary activities upon these sites, which are designated as being of national or international importance³. Such action would have effectively crippled the protection of some, if not most, of the most important cultural heritage assets in English waters. It is hoped that it forms common ground between the parties to this document and DEFRA and the MMO that the activities of such avocational volunteers are indeed valued by government and that these adverse consequences are

¹ See further Parham, D. & Williams, M. 'Public Involvement in Maritime Archaeology' Proceedings of 3rd International Congress on Underwater Archaeology Henderson, J. (ed.) pp.470-474 RGK: Bonn 2012

² The MMO is empowered to charge a fee for marine licence applications under s.67 Marine & Coastal Access Act 2009.

³ This course of action was discussed at the annual meeting of the Protected Wrecksites Licensees Association in Plymouth 1st February. Eventually it was resolved to await the outcome of this process of seeking additional exemptions for nautical archaeology before determining on such a course of action.

unintended. Confirmation of this by DEFRA in clear and unequivocal terms would go some way to mitigating the situation and would be a helpful initial intervention.

Additional drivers to this process of seeking further marine licensing exemptions are the disparity of treatment within existing licensing exemptions between the natural and historic environment, such as in the case of provision of Marker Buoys for designated natural and cultural assets; the limitation of existing exemptions to only heritage assets designated under the Protection of Wrecks Act 1973, thereby excluding those assets protected under the Ancient Monuments and Archaeological Areas Act 1979 or the Protection of Military Remains Act 1986 and the requirement to be able to respond quickly to unforeseen situations where heritage assets are found to be under immediate threat, either from natural causes or human interference, without the impediment of delays imposed by the marine licensing process.

In its summary of responses to the consultation exercise on the raising of MMO Marine Licensing Fees published in March 2014⁴ DEFRA noted that some respondents made proposals for further exemptions from marine licensing, including, inter alia, archaeological diving activities. In response DEFRA stated that “*Defra and the MMO will consider additional exemptions from licensing where activities pose little or no risk to the environment or other marine users.*”⁵

In response to this stated willingness by DEFRA and the MMO to consider additional responses the parties to this document (see Appendix III), representing a wide spectrum of the United Kingdom’s (UK) nautical archaeology community, have compiled this document for consideration of DEFRA and the MMO⁶. It is the contention of these parties that the proposals for exemptions advanced in this document do indeed pose little or no risk to either the natural or the historic environment or to navigational safety. Additionally it should be noted that the proposals are entirely compatible with the provisions of the UNESCO Convention on the Protection of the Underwater Cultural Heritage 2001⁷. Consequently, following its current review of the UK’s position in respect of the Convention, should the government conclude that the UK should become a State party to that Convention, these proposed exemptions would not impact adversely upon the implementation of that conclusion.

The parties look forward to being afforded an opportunity to meet with both DEFRA and the MMO at the earliest opportunity to discuss the proposals herein.

⁴ Marine Licensing: revision of fees and charges Summary of Responses
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/292572/marine-licensing-consult-sum-resp.pdf para 41 at p.8.

⁵ Ibid. para 42 at p.9

⁶ It should be noted that English Heritage, as an Observer on the Joint Nautical Archaeology Policy Committee has had sight of this document. However this document should not be taken as a statement of English Heritage’s policy or necessarily as an endorsement by English Heritage of its proposals. It is further understood that English Heritage is preparing its own policy on further exemptions from marine licensing for nautical archaeology but this document does not form part of that English Heritage process, though it may compliment it.

⁷ <http://www.unesco.org/new/en/culture/themes/underwater-cultural-heritage/2001-convention/official-text/>

Definitions

In this document:

The term ‘2011 Order’ means the *Marine Licensing (Exempted Activities) Order 2011*.

The term ‘2013 Order’ means the *Marine Licensing (Exempted Activities) (Amendment) Order 2013*.

The term ‘archaeological project’ includes activities carried out in support of the investigation of sites of historic interest, the analysis of physical remains, the recovery from such sites of articles for preservation and further analysis and educational instruction but does not include the recovery of items for salvage for personal profit or benefit

The term ‘a European site’ means—

- (a) a European site within the meaning of regulation 8(1) of the Conservation of Habitats and Species Regulations 2010(c);
- (b) a European offshore marine site within the meaning of regulation 15 of the Offshore Marine Conservation (Natural Habitats, &c) Regulations 2007

The term the ‘Habitats Directive’ means Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora

The term ‘an MCZ’ means a marine conservation zone from time to time designated by an Order made under section 116 of the Act

The term ‘Ramsar site’ has the same meaning as in section 37A of the Wildlife and Countryside Act 1981

A. Exempted Activities during the course of an Archaeological Project

Temporary Markers for Archaeological Projects

(1) Article 4 applies—

- (a) to a deposit made for the purpose of placing a marker;
- (b) to a removal activity carried on for the purpose of meeting the condition in paragraph (3).

(2) Paragraph (1) is subject to the condition that notice of the intention to carry on the activity must be given to the licensing authority at least 14 days before the activity is carried on.

(3) Sub-paragraph (a) of paragraph (1) is subject to the condition that the marker and its appurtenances must be removed from the sea and, where applicable, the seabed within the period of 6 calendar months beginning with the day on which the deposit is made.

(4) But article 4 does not apply—

(a) to any such activity that causes, or is likely to cause, obstruction or danger to navigation; or

(b) to any such activity—

(i) that falls within sub-paragraph (a), (b) or (c) of paragraph (5); and

(ii) that is not directly connected with or necessary to the management of the site

or zone (as the case may be) referred to in that sub-paragraph.

(5) An activity falls within this paragraph if—

(a) it is a plan or project likely (either alone or in combination with other plans or projects) to have a significant effect on a European site;

(b) it is likely to have a significant effect on a Ramsar site; or

(c) it is capable of affecting (other than insignificantly)—

(i) the protected features of an MCZ; or

(ii) any ecological or geomorphological process on which the conservation of any protected feature of an MCZ is (wholly or in part) dependent.

(6) In paragraph (5)(a) and (b), “likely” has the same meaning as in the Habitats Directive.”.

NOTE

At present there is a 28 day exemption for temporary buoys under Article 26A 2011 Order (as amended by Article 13 2013 Order). Legal advice has been received to the effect that a buoy can simply be lifted and returned after 24 hours, thereby triggering a new 28 day period and / or simply moved to an adjacent location within the archaeological site, thereby also triggering a new 28 day period. In the absence of a provision prohibiting return to a location within a stated period such redeployment is legal. There appears to be nothing significant in a stipulated 28 day period. If a buoy is a navigational hazard then it is one from the first day. It does not become one suddenly on the 28th day. Consequently it would appear that the figure of 28 days has been randomly selected purely as a convenient administrative mechanism. The proposed period of 6 months recognises that the archaeological diving season tends to last for that period (typically April to the end of September). The provision for 14 days notice gives an opportunity to require inappropriately located buoys to be brought to the regulator’s attention, thereby removing or substantially mitigating any navigational hazard. This proposed exemption would also encompass temporary shot lines, as these are considered by the MMO “... in the same way as temporary markers” (email Brian Hawkins MMO to R. Yorke, Chair JNAPC, 24th January 2014). No significant hazard to the natural or historic environment is considered to arise from this proposal.

Survey and Recording Equipment for Use in Support of an Archaeological Operation

(1) Article 4 applies to the use of a vessel or floating container to deposit and recover any equipment used for surveying or recording in connection with any Archaeological Operation;

(2) But article 4 does not apply to any such deposit that causes, or is likely to cause, obstruction or danger to navigation

NOTE

No adverse environmental implications would arise from this proposed exemption but the safety of diver operations will be enhanced. Deposition and recovery by hand of survey and recording equipment by a diver does not require a marine licence (email Brian Hawkins MMO to R. Yorke, Chair JNAPC, 24th January 2014). Consequently such equipment can be taken to and from the seabed by a diver without the requirement for a marine licence. However the transportation of potentially heavy and unwieldy material imposes risks of entanglement and / or barotrauma due to loss of buoyancy control. The recommended safe diving practice is to lower and raise such material using a floating container or vessel. No

adverse environmental implications arise because such survey or recording equipment could in any event be deposited and recovered by hand by a diver and to reduce costs and time delays incurred by marine licence applications this method will invariably be selected by avocational groups in the absence of this proposed exemption. The equipment in question will therefore end up being deposited on the seabed and recovered therefrom. Granting this proposed exemption will make no difference to this deposition and recovery but will result in a much safer method of deposition and recovery being utilised in line with current recommended safe diving practices.

Deposits for the Purpose of Stabilising the Seabed to protect the Historic Environment

- (1) Article 4 applies to a deposit made for the purpose of stabilising the seabed for the purpose of protecting the historic environment.
- (2) Paragraph (1) is subject to the conditions that
 - (a) notice of the intention to carry on the activity must be given to the licensing authority at least 21 days before the activity is carried on
 - (b) the area to be covered by the deposition does not exceed 1,000 square metres in area
- (3) But article 4 does not apply—
 - (a) to any such activity that causes, or is likely to cause, obstruction or danger to navigation; or
 - (b) to any such activity—
 - (i) that falls within sub-paragraph (a), (b) or (c) of paragraph (5); and
 - (ii) that is not directly connected with or necessary to the management of the site or zone (as the case may be) referred to in that sub-paragraph.
- (5) An activity falls within this paragraph if—
 - (a) it is a plan or project likely (either alone or in combination with other plans or projects) to have a significant effect on a European site;
 - (b) it is likely to have a significant effect on a Ramsar site; or
 - (c) it is capable of affecting (other than insignificantly)—
 - (i) the protected features of an MCZ; or
 - (ii) any ecological or geomorphological process on which the conservation of any protected feature of an MCZ is (wholly or in part) dependent.
- (6) In paragraph (5)(a) and (b), “likely” has the same meaning as in the Habitats Directive.

NOTE

When archaeological material is buried within the seabed to a sufficient depth, i.e. below mobile sediments, it is protected from abrasion due to seabed currents. If buried deeply enough it is also protected from attack by biological activity and if anaerobic conditions exist from corrosion. In effect it reaches a state of equilibrium within the seabed environment and quite high levels of preservation can be achieved, sometimes lasting centuries. This is the basis of what is termed ‘in situ preservation’. Conversely if material becomes exposed due to seabed movement it can lead to its rapid deterioration or even total loss through biological attack, abrasion and displacement due to tidal action. Unfortunately sites can be vulnerable to unpredictable and rapid movements of the seabed, frequently, but not exclusively, over the winter period. This process has been documented on a number of archaeological sites and the monitoring of the stability of seabed levels is a standard archaeological activity. Examples of significant seabed shifts in archaeological sites are provided in Appendix I and

Appendix II. These are documented occurrences and do not constitute a definitive list, which would be too numerous to catalogue in its entirety and would simply be repetitive. Various pilot studies have been conducted in order to assess the effectiveness of depositing objects (such as sand bags) or materials within an archaeological site with some success⁸. However such deposition is demanding of archaeological resources, particularly the very limited financial resources of avocational teams who have to fund such depositions from their own taxed income. The imposition of marine licence fees acts as an additional financial deterrent to what is the conferring of a voluntary public benefit. This exemption has no adverse implications for the historic environment since the deposition activity is protective. In terms of the natural environment it is submitted that the implications are minimal since:

- (i) the area occupied by archaeological sites is de minimis in the context of the natural environment*
- (ii) in any event the deposition will only be undertaken when there is already significant seabed erosion which will be or have been equally destructive of the natural environment that existed previously in that location as it will or has been of the historic environment*
- (iii) the exemption is restricted to 1,000 square metres and will not be applicable to sites of natural environment sensitivity*

B. Exemptions applicable to Designated or Scheduled Sites or Protected Places or Controlled Sites

Markers for a Restricted Area designated under the Protection of Wrecks Act 1973 or a Scheduled Monument under the Ancient Monuments & Archaeological Areas Act 1979 or a Protected Place or Controlled Site under the Protection of Military Remains Act 1986

Article 4 applies to

- (1) a deposit for the purpose of installing a marker for the purposes of indicating the existence and extent of:
 - (a) an area designated as a restricted area within the meaning of section 1 of the Protection of Wrecks Act 1973(b)
 - (b) a scheduled monument within the meaning of section 1 of the Ancient Monuments and Archaeological Areas Act 1979
 - (c) a protected place or a controlled site within the meaning of section 1 of the Protection of Military Remains Act 1986
- (2) to a removal activity for the purpose of removing a marker referred to in sub-paragraphs (a), (b) or (c) of Paragraph (1);

⁸ Bergstrand, T, Bjordal, C, Bohm, C, Christensson, E, Gregory, D, Nystrom, I, Peacock, E, Turner-Walker, G, Richards, V & MacLeod, I 2005, '*Reburial as a method of preserving archaeological remains. A presentation of the Marstrand project*', Proceedings of the 9th ICOM group on wet organic archaeological materials conference, Bremerhaven. Camidge, K 2005, '*HMS Colossus Stabilisation Trial*', Report for English Heritage available at www.cismas.org.uk. Camidge, K 2008, '*HMS Colossus Stabilisation & Recording*', Report for English Heritage available at www.cismas.org.uk. Camidge, K 2009, '*HMS Colossus, an Experimental Site Stabilization*', Conservation and Management of Archaeological Sites, vol 11, no. 2, pp. 161-188. Gregory, D 1998, '*Re-burial of timbers in the marine environment as a means of their long-term storage: experimental studies in Lynæs Sands, Denmark*', IJNA, vol 27, no. 4, pp. 343-358.

(3) Paragraph (1) is subject to the condition that notice of the intention to carry on the activity must be given to the licensing authority at least 14 days before the deposition or recovery activity is carried on.

NOTE

Heritage assets may be protected by application of the Protection of Wrecks Act 1973, the Ancient Monuments and Archaeological Areas Act 1979 and the Protection of Military Remains Act 1986. There is already a comparable exemption for European Marine Sites and MCZ's under Article 26 2011 Order. This draft provision merely secures parity of treatment for the historic environment with that for the natural environment.

Diver Trails within a Restricted Area designated under the Protection of Wrecks Act 1973 or within a Monument scheduled under Section 1 of the Ancient Monuments & Archaeological Areas Act 1979 or within a Protected Place as defined under Section 1 of the Protection of Military Remains Act 1986

Article 4 applies to a deposit or removal activity carried on for the purpose of placing, securing or removing signage or other identifying markers relating to

- (a) a wreck within an area designated as a restricted area within the meaning of section 1 of the Protection of Wrecks Act 1973
- (b) a scheduled monument within the meaning of section 1 of the Ancient Monuments and Archaeological Areas Act 1979
- (c) a wreck comprising a protected place within the meaning of section 1 of the Protection of Military Remains Act 1986

NOTE

Heritage assets may be protected by the application of the Protection of Wrecks Act 1973, the Ancient Monuments and Archaeological Areas Act 1979 or the Protection of Wrecks Act 1986. There already exists an exemption for depositions relating to the creation of diver trails for wrecks designated under the Protection of Wrecks act 1973. However no similar exemption applies for creating Diver trails in relation to heritage comprising Monuments scheduled under the 1979 Act or Protected Places designated under the 1986 Act. This seems a curious omission given that such Monuments or Protected Places may be of considerable historic interest and worthy of public education and outreach facilitation. It should be noted that Controlled Sites under the 1986 Act are omitted from this proposed exemption. This is because it is MOD policy not to grant diving access to Controlled Sites except in exceptional circumstances.

Authorised Removal of an Object using a floating container or vessel from a Restricted Area designated under the Protection of Wrecks Act 1973 or from a Monument scheduled under the Ancient Monuments & Archaeological Areas Act 1979 or from a Protected Place or Controlled Site as defined under the Protection of Military Remains Act 1986

Article 4 applies to a removal activity carried on using a floating container or vessel for the purpose of an authorised archaeological operation within

- (a) an area designated as a restricted area within the meaning of section 1 of the Protection of Wrecks Act 1973

- (b) a scheduled monument within the meaning of section 1 of the Ancient Monuments and Archaeological Areas Act 1979
- (c) a wreck comprising a protected place or a controlled site within the meaning of section 1 of the Protection of Military Remains Act 1986

NOTE

The removal of an object from within a Restricted Area designated under the Protection of Wrecks Act 1973 or a Scheduled Monument under the Ancient Monuments & Archaeological Areas Act 1979 or a Protected Place or Controlled Site under the Protection of Military Remains Act 1986 may only lawfully be undertaken by prior authorisation under these enactments. Such authorisation is normally preceded by the submission and approval of a Project Design. Thus no adverse implications for the historic environment would arise from this exemption, given that such removal will have already been authorised under these enactments. Since heritage assets, principally wrecks, occupy only an extremely small area of seabed the removal of an object from such an archaeological site has de minimus effect upon the natural environment. In any event such authorised removal may be undertaken by hand by a diver or alternatively an object can be hauled to the surface by hand using a rope from a vessel and in neither case will a marine licence be needed (email Brian Hawkins MMO to R. Yorke, Chair JNAPC, 24th January 2014). However both methods raise significant issues of safety. By inflating a STAB jacket and / or a drysuit to achieve excessive positive buoyancy a diver can generate typically up to 60kgs of buoyancy. Doubtless, to save resources in terms of the time and money involved in an application for a marine licence, there will be a very real incentive to adopt this methodology for recovery, especially for licensed avocational teams. However both practices are very unsafe. If a diver uses such excess positive buoyancy to raise an object by hand then if the grip on the object is lost the diver will be accelerated to the surface, probably in an uncontrolled manner. Past incidents have resulted in severe barotrauma and explosive decompression illness, with life changing injuries including paralysis. Some incidents have led to diver fatalities. The hauling to the surface of objects on a rope by hand is also intrinsically unsafe since the grip on a wet rope is easily lost and once 'running' the rope is almost impossible to stop if the object is heavy enough. This danger is accentuated when using an unstable platform such as a boat. For these reasons both practices are considered unsafe and contrary to recommended safe diving practices, which it is the policy of public agencies and national diving organisations to promote. However the present requirement for a marine licence, with its associated costs and time delays, has set up an unfortunate dichotomy of policy. It is accepted without question that this is entirely inadvertent but nevertheless it is also very real. This exemption would remove this policy contradiction and the substantial resource incentive to adopt unsafe diving practices. As stated above it has no impact upon heritage protection since such removals require prior authorisation under the 1973, 1979 or 1986 Acts. Additionally the proposed exemption would be entirely compatible with the UNESCO Convention on the Protection of Underwater Cultural Heritage as the removal would be authorised by a State party under these enactments. The matter is therefore one of consistency of policy in respect of health and safety rather than a matter of environmental or heritage protection.

Authorised Dredging within a Restricted Area designated under the Protection of Wrecks Act 1973 or within a Monument scheduled under the Ancient Monuments &

Archaeological Areas Act 1979 or within a Protected Place or Controlled Site as defined under the Protection of Military Remains Act 1986

(1) Article 4 applies to a dredging activity carried on for the purpose of an archaeological project authorised under the Protection of Wrecks Act 1973 or the Ancient Monuments & Archaeological Areas Act 1979 or the Protection of Military Remains Act 1986

(2) Paragraph (1) is subject to conditions 1 to 3.

(3) Condition 1 is that notice of the intention to carry on the dredging activity must be given to the licensing authority at least 14 days before the dredging activity is carried on.

(4) Condition 2 is that at the site where the dredging activity is to be carried on no more than 1500 cubic metres of material are to be dredged as a result of—

(a) that dredging activity; and

(b) any other dredging activities carried on for the purpose referred to in paragraph (1) in the year before that dredging activity is commenced.

(5) But article 4 does not apply—

(a) to any such dredging activity where the volume of material dredged exceeds 500 cubic metres;

(b) to any such dredging activity that causes, or is likely to cause, obstruction or danger to navigation;

(c) to any such dredging activity which has or is likely to have the effect, in relation to any body of water, of—

(i) preventing the achievement of any of the environmental objectives listed in the relevant river basin management plan as applicable in relation to that body of water; or

(ii) causing environmental damage; or

(d) to any such dredging activity—

(i) that falls within sub-paragraph (a), (b) or (c) of paragraph (6); and

(ii) that is not directly connected with or necessary to the management of the site or zone (as the case may be) referred to in that sub-paragraph.

(6) A dredging activity falls within this paragraph if—

(a) it is a plan or project likely (either alone or in combination with other plans or projects) to have a significant effect on a European site;

(b) it is likely to have a significant effect on a Ramsar site; or

(c) it is capable of affecting (other than insignificantly)—

(i) the protected features of an MCZ; or

(ii) any ecological or geomorphological process on which the conservation of any protected feature of an MCZ is (wholly or in part) dependent.

(8) In paragraph (5)—

“body of water” means a body of groundwater or body of surface water within the meanings given by Article 2 of the Water Framework Directive;

“environmental damage” means damage of a kind falling within regulation 4(1)(b) of the Environmental Damage (Prevention and Remediation) Regulations 2009);

“river basin management plan” means a river basin management plan within the meaning of, and which is prepared pursuant to any enactment giving effect to, Article 13 of the Water Framework Directive, and “the relevant river basin management plan”, in relation to a body of water, means the river basin management plan applicable in relation to that body of water.

(9)) In paragraph (6)(a) and (b), “likely” has the same meaning as in the Habitats Directive.

(10) In paragraph (8), “the Water Framework Directive” means Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for Community action in the field of water policy”.

NOTE

Intrusive archaeological activity such as excavation (dredging) within a Restricted Area designated under the Protection of Wrecks Act 1973 or on a Monument scheduled under the Ancient Monuments & Archaeological Areas Act 1979 or within a Protected Place or Controlled Site designated under the Protection of Military Remains Act 1986 may only lawfully be undertaken by prior authorisation under these enactments. Such authorisation is invariably preceded by the submission and approval of a Project Design. Thus no adverse implications for the historic environment would arise from this exemption, given that such excavation will have already been authorised under these enactments. Additionally the proposed exemption would be entirely compatible with the UNESCO Convention on the Protection of Underwater Cultural Heritage as the removal would be authorised by a State party under these enactments. Since heritage assets, principally wrecks, occupy only an extremely small area of seabed excavation (dredging) within the parameters of an archaeological site has de minimus effect upon the natural environment.

Appendix I

Documented Examples of Seabed Movement exposing Underwater Cultural Heritage (UCH) to Risk

These examples provide an illustration of seabed movements, sometimes rapid and sometimes over a more prolonged period of time, which expose UCH, thereby occasioning degradation and even imperilling its continued existence.

The Daisy

The Daisy is the wreck of a steam coaster of 934 gross tons. Built in 1872 she was driven ashore by stress of weather on Freathy Beach, Whitsand Bay, Cornwall on 27th February 1903. The vessel broke up and became a total loss.

This wreck site provides a good example of the potential scale of rapid changes of seabed on a wreck site after a prolonged period of coverage by the seabed apparently lasting over 100 years. In March 2014 the Shipywrecks and History in Plymouth Sound (SHIPS) Project was informed by the local community at Freathy in Whitsand Bay Cornwall that a wreck had just appeared on the beach. SHIPS project personnel attended the site 3 days later by which time the wreck had started to rebury itself and a few days after that it was covered completely. This 900 grt wreck now lies completely buried in the sand. Until a storm in late February 2014 uncovered it briefly none of the locals were aware that the wreck was there, so the wreck must have covered for living memory. The presence of wood on its deck also indicated that the vessel must have been covered by the seabed since or very soon after its loss, thereby facilitating a high level of preservation. However any small relatively mobile artefacts present will probably have been lost during this extremely rapid uncovering and recovering.



See further http://www.promare.co.uk/ships/Wrecks/Wk_Daisy.html

Glen Strathallan

The Glen Strathallan is the wreck of a 690 ton steam trawler built in 1928. Following miscellaneous use as a private steam yacht, anti-submarine vessel and Merchant Navy training vessel she was deliberately sunk as a diver training facility in 1970. The site is located 200 metres from the Shagstone Rock in Plymouth Sound.

The two photos below of the Glen Strathallan's boiler illustrate the changes to the wreck site occasioned by changes in the seabed level over a period of approximately two decades.



This photograph from the 1990s shows the boiler partially buried. At this time the site was completely covered in kelp which is why it was rarely dived at that time.



This photograph illustrates the boiler in 2014. The boiler is completely exposed, as are machinery parts lying in front of it. Additionally all the kelp seen in the previous photograph has completely disappeared with 500mm of sediment removed and a resultant drop in the level of the seabed. The rate of seabed erosion is now (2014) so great that the site plan has to be constantly updated as it keeps changing so quickly. Again any smaller, mobile artefacts will have been displaced by this erosion process acting on the seabed.

See further http://www.promare.co.uk/ships/Wrecks/Wk_GlenStrathallan.html

Ramscliff Wreck

Monitoring by divers on the site in July 2014 showed that an overburden of approx. 200mm of sand had been dumped in an area from Ramscliff down to Bovisand Bay in Plymouth Sound by the action of the February 2014 storms, thereby raising the seabed. The photo below taken in July 2014 illustrates a well buried kelp holdfast attached to the original seabed, now buried under a featureless sandy seabed.



When the site was dived in 1997 no sand overburden was present and a seabed of deep gullies was exposed. The bottoms of these deep gullies were full of wreck artefacts but later in 1997 the sand rapidly filled these gullies in. Clearly the seabed in this area is prone to rapid large scale changes of seabed level which puts exposed artefacts at risk.

http://www.promare.co.uk/ships/Wrecks/Wk_Ramscliff.html

HMS Invincible (1758)

The Invincible was a French 74 gun ship built at Rochefort in 1744 and captured by the British Navy in 1747. She then served as a British warship until wrecked in the Solent in 1758. The wreck is designated under the Protection of Wrecks Act 1973 and extensive excavation of the wreck has taken place since 1978. The photograph below taken in 2013 illustrates that the seabed is level with the side of the structure illustrated.



The photograph below taken in 2014 illustrates the same piece of structure with a slight scour (depression in the seabed) developing along the side of the structure.



By June 2014 this scour had developed into a one metre drop in seabed level beneath the structure. This has exposed the underside of the structure to biological degradation by wood boring organisms and tidal erosion. Simultaneously any smaller artefacts formerly contained within seabed sediments will have been displaced when the seabed sediments were removed. This seabed erosion appears to be a continuing process.



HMS Colossus (1798)

HMS Colossus was a 74 gun warship built in 1787 at Gravesend and wrecked off Samson in the Scillies in 1798. To date, two main areas of wreckage have been identified - the bow and the stern. In 1975 part of the wreck (probably the bow) was designated under the Protection

of Wrecks Act. This designation was revoked in 1984. The current site, the stern, was designated in 2001, and is located at Latitude 49° 55'.471N, Longitude 006° 20'.505W (260154.906E 5535593.077N UTM zone 30, WGS84).

A project monitoring sediment levels on the site has been undertaken by CISMAS upon behalf of English Heritage. The *SEDIMENT LEVEL MONITORING 2014 Project Report*⁹ stated that:

“Monitoring of the sediment levels on the site this year has shown that the levels have fallen to the second lowest level ever recorded on the site. This may be due to the severe storms experienced in the early part of this year. Whatever the cause, the continued diminution of sediment cover on the site will put archaeological material at risk on the site – as clearly demonstrated by the newly exposed material recorded in July this year.

*The sediment monitoring points installed on the site in 2003 were being compromised by the falling sediment levels and loss of timbers to which they were attached. For this reason, all fourteen points were replaced with more robust, 1m long stainless steel rods. This will facilitate sediment level monitoring for some years to come.”*¹⁰

Conclusion

The natural processes documented above demonstrate that even long established archaeological sites can be subject to unpredictable and sometimes rapid changes in seabed levels which pose a considerable threat to the archaeological integrity of a site. It is perhaps fortunate that in the case of the HMS Invincible (1758) and that of HMS Colossus (1798) they are both sites designated under the Protection of Wrecks Act 1973. Consequently the two sites have licensed archaeological teams who dive the sites regularly. This means that the rapid and dramatic changes in seabed levels which have occurred on these sites have been well recorded. Significant changes in seabed levels have also been recorded on another wreck site designated under the 1973 Act, that of HMS Hazardous (1706) Mr. David Johnson, licensee of the HMS Hazardous (1706) site, has kindly undertaken a detailed analysis of the substantial changes of seabed levels that have afflicted the site of HMS Hazardous over a total period of 12 years and this analysis is contained within Appendix II to this document. It is hoped that it can now form common ground between the parties to this document and DEFRA and the MMO that unpredictable and substantial changes to seabed levels occur, sometimes within an extremely short timescale and that such changes pose a significant risk to UCH which requires prompt mitigation.

⁹ English Heritage Reference EH6935

¹⁰ Ibid. at p.41

Appendix II

Please see accompanying pdf entitled 'Appendix II'.

Appendix III

List of organisations submitting this proposal document

Bournemouth University

British Sub Aqua Club

IfA

Joint Nautical Archaeology Policy Committee

MAST

Nautical Archaeology Society

PADI

Protected Wrecksites Licensees Association

SHIPS Project

Sub Aqua Association

Wessex Archaeology