



Aggregate Levy Sustainability Fund
Marine Aggregates and the Historic Environment

BMAPA/EH Protocol
for reporting finds of archaeological interest

Awareness Programme

Final Report

**AGGREGATE LEVY SUSTAINABILITY FUND
MARINE AGGREGATES AND THE HISTORIC ENVIRONMENT**

**BMAPA/EH PROTOCOL FOR REPORTING FINDS OF
ARCHAEOLOGICAL INTEREST**

AWARENESS PROGRAMME

Final Report

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Attachments

CD

BMAPA EH Protocol Awareness Programme Final Report

AWARENESS PROGRAMME CD

Marine Aggregate Dredging and the Historic Environment (PDF)

Protocol for Reporting Finds of Archaeological Interest (PDF)

Site Champions Notes for Wharves (PDF)

Site Champions Notes for Vessels (PDF)

Site Visit Materials

- Site Visit Presentation (Microsoft PowerPoint Presentation)
- Time Line (Microsoft Word Document)
- Flow Charts (Microsoft Word Document)
- Preliminary Report Forms (Microsoft Word Document)
- How to Photograph Finds (Microsoft Word Document)
- NIAN Leaflet (PDF)
- Palaeolithic Artefact Recognition Sheet (PDF)
- Vertebrate Fossil Recognition Sheet (PDF)
- Mollusc, Insect and Plant Fossil Recognition Sheet (PDF)

DVD Handouts

- Time Line (Microsoft Word Document)
- Flow Charts and Record Forms (Microsoft Word Document)
- How to Photograph Finds (Microsoft Word Document)
- Frequently Asked Questions (Microsoft Word Document)
- NIAN Leaflet (PDF)
- Palaeolithic Artefact Recognition Sheet (PDF)
- Vertebrate Fossil Recognition Sheet (PDF)
- Mollusc, Insect and Plant Fossil Recognition Sheet (PDF)

Publicity Materials

- Leaflet (PDF)
- Poster (PDF)

Wharf Reports

- | | |
|------------------------|------------------------------|
| - Hanson_0008_a (PDF) | - UMD_0041_a (PDF) |
| - Hanson_0008_b (PDF) | - UMD_0042_a (PDF) |
| - Hanson_0008_c (PDF) | - UMD_0043_a (PDF) |
| - CEMEX_0015_a (PDF) | - UMD_0044_a (PDF) |
| - Hanson_00018_a (PDF) | - UMD_0045_a (PDF) |
| - Hanson_00019_a (PDF) | - UMD_0059_a (PDF) |
| - UMD_0021_a (PDF) | - UMD_0061_a (PDF) |
| - UMD_0022_a (PDF) | - UMD_0062_a (PDF) |
| - UMD_0026_a (PDF) | - CEMEX_0064_a (PDF) |
| - Hanson_0035_a (PDF) | - UMD_0065_a (PDF) |
| - CEMEX_0029_a (PDF) | - Supermarine Attacker (PDF) |

DVD

Protocol Awareness Programme DVD for wharves and vessels.

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1 INTRODUCTION

1.1 PROJECT BACKGROUND

1.1.1 Wessex Archaeology (WA) has been funded by English Heritage (EH) through the Aggregate Levy Sustainability Fund (ALSF) to carry out an Awareness Programme in relation to the *BMAPA/EH Protocol for Reporting Finds of Archaeological Interest*.

1.1.2 In April 2003, the British Marine Aggregates Producers Association (BMAPA) and EH jointly published *Marine Aggregate Dredging and the Historic Environment: Guidance Note*. The Guidance Note sets out the character and importance of the marine historic environment and describes best practice in dealing with archaeological matters in the course of planning marine aggregate dredging in English marine waters. It includes details of measures to mitigate the effect of marine aggregate dredging on the historic environment, including the implementation of protocols to report and deal with finds made in the course of dredging.

1.1.3 Protocols for reporting archaeological finds emerged as a mitigation option as it became apparent that watching-briefs by archaeologists, either on board dredging vessels or at wharves, were likely to prove ineffective due to the scale and character of the dredging process. Protocols are intended to provide a 'safety net' for reporting finds that occur once dredging is in progress, and are in addition to measures to avoid areas of archaeological sensitivity through desk-based assessment and field evaluation.

1.1.4 Such protocols have formed part of the mitigation strategy set out in several Environmental Statements for individual dredging licence applications. However, BMAPA recognised that it would be more consistent and effective to introduce a single, unifying protocol and in August 2005 BMAPA and EH introduced a protocol applicable to all BMAPA members, covering all wharves, vessels and License Areas.

1.1.5 The Protocol was prepared by WA in consultation with BMAPA, EH and other interested parties. BMAPA member companies have voluntarily committed to implementing the Protocol across all existing operations. It is hoped that non-BMAPA companies will also adopt the Protocol voluntarily.

1.1.6 BMAPA member companies include:

- Britannia Aggregates Ltd (Brett);
- DEME Building Materials Ltd;

- Hanson Aggregates Marine Ltd;
- Kendall Bros (Portsmouth) Ltd;
- Northwood (Fareham) Ltd;
- Norwest Sand & Ballast Ltd;
- CEMEX UK Marine;
- United Marine Aggregates Ltd;
- Volker Dredging Ltd (Brett).

1.1.7 The location of the wharves is demonstrated in Figure 1 and further details of the BMAPA companies, wharves and vessels are set out in Appendix I, II and III.

1.1.8 The Guidance Note, the Protocol and the Site Champion's Notes for Wharves and Vessels are included as PDFs on the CD accompanying this report.

1.2 THE PROTOCOL

1.2.1 The Protocol provides for finds being made by members of staff employed by aggregate dredging companies on the seabed, on board dredging vessels, and at wharves.

1.2.2 Under the Protocol, staff report to a local 'Site Champion' on the vessel or at the wharf and the Site Champion compiles a preliminary report. The Site Champion passes the report on to the 'Nominated Contact', a single identified person within each company.

1.2.3 The role of the Nominated Contact within each company is to inform EH of the find as soon as possible, and to pass on the reported details, preferably within two working days of receiving information from the Site Champion. The Nominated Contact is also required to advise other dredgers operating in the same area to keep a particular watch for finds and, if the seabed position of the find is reasonably certain, to implement a Temporary Exclusion Zone (TEZ) until archaeological advice has been obtained.

1.2.4 An Annex to the Protocol states that TEZs may only be revoked if it can be concluded that no important wreck or other feature is present. It also provides for TEZs to be formalised as a longer-term Archaeological Exclusion Zone (AEZ) if the presence of a wreck or feature is confirmed or if no conclusion can be drawn and the company does not wish to resolve the situation by further investigation.

1.2.5 EH's role is, on receiving the report, to advise the Nominated Contact of the actions to be taken. EH will also liaise with various agencies, institutions and individuals with responsibilities and interests in respect of the marine historic environment and finds from the sea, and pass details of the find on to the National Monuments Record (NMR) and appropriate local Historic Environment Record (HER).

- 1.2.6 The Annex to the Protocol also outlines a specific role for EH with regard to:
- drawing conclusions about whether or not an important wreck or feature is present;
 - approving Method Statements for additional archaeological investigations;
 - approving the design of AEZs or other forms of mitigation.
- 1.2.7 WA is currently carrying out aspects of EH's role as part of an Implementation Service commissioned and supported by BMAPA.

1.3 THE PROTOCOL IMPLEMENTATION SERVICE

- 1.3.1 The Implementation Service covers the elements of EH's role in the Protocol that are concerned with recording and passing on information about reported finds, and limited decision-making about reports that are clearly uncontentious. This may include reports of single, apparently isolated finds and reports that are not sufficiently well positioned to result in the implementation of a TEZ.
- 1.3.2 The Implementation Service does not cover decision-making where a higher level of curatorial involvement is clearly required. These elements of the Protocol are serviced directly by EH and may include:
- reports resulting in Temporary Exclusion Zones that are likely to warrant further investigation;
 - reports resulting in Temporary Exclusion Zones that are likely to be formalised as Archaeological Exclusion Zones;
 - reports of multiple finds from the same area;
 - reports indicating the presence of a wreck or other structural remains;
 - reports of peat.
- 1.3.3 At the core of the Implementation Service is a web-based reporting system. Nominated Contacts have secure access to web pages on which they can record details of finds made by Company Staff, and from which they can receive advice. The system enables summary information about reported finds to be sent to EH and BMAPA, and copied to the Receiver of Wreck, Local Government Archaeological Officers, Portable Antiquities Officers, and the Ministry of Defence, as relevant.
- 1.3.4 An annual report for the Implementation Service has been produced for BMAPA by WA (Wessex Archaeology 2006).

2 AIMS AND OBJECTIVES

2.1.1 The aim of the Protocol Awareness Programme is to raise awareness of the BMAPA/EH Protocol among aggregate industry staff, and to encourage its use.

2.1.2 The objectives of the Protocol Awareness Programme are as follows:

- To ensure, as far as possible, that all staff involved in the marine aggregate industry are aware of the existence of the Protocol, and of how it is to be applied.
- To improve industry staff's ability to distinguish material of potential archaeological interest, and to handle, record and store such material appropriately.
- To better understand the operational circumstances of marine aggregate dredging, with a view to informing the further development of the Protocol and its implementation.
- To acknowledge the contribution made by industry staff to our knowledge and understanding of the historic environment.
- To maintain dialogue with stakeholders (industry; regulators; curators; consultants; contractors) about the Protocol.

3 METHODOLOGY

3.1 APPROACH

3.1.1 The approach outlined in the Project Design for the Awareness Programme comprised:

- visits to aggregate wharves and vessels;
- workshops for Nominated Contacts and other company staff on the recognition of finds and their potential importance.

3.1.2 It was also envisaged that WA would carry out a small number of visits to benthic and geophysical survey companies which commonly undertake work for BMAPA companies. The purpose of such visits is to raise awareness of the Protocol and to encourage staff to report anomalies identified during geophysical interpretation and finds recovered while processing geotechnical and benthic samples for BMAPA companies.

3.2 SITE VISITS

3.2.1 Each of the BMAPA company wharves and vessels were contacted through the Nominated Contacts or Site Champions to arrange an appointment to visit the wharf or vessel, observe operations, and talk to aggregate company staff about the Protocol and its implementation.

- 3.2.2 At each wharf a suitable on-site venue such as a meeting room or mess was arranged. It was envisaged that visits to vessels would take place while the vessel was in port.
- 3.2.3 Visits made use of a combination of formal and informal techniques, including presentations, group discussions and one-to-one discussion as appropriate to circumstances and facilities.
- 3.2.4 Specific information was provided to aggregate company staff on:
- the nature of the marine historic environment;
 - identifying typical marine finds;
 - the responsibilities of staff under the Protocol;
 - handling and storing marine finds;
 - basic finds recording.
- 3.2.5 Materials were prepared to support the visits including:
- a Microsoft PowerPoint presentation for use with a laptop computer and digital projector;
 - a flip chart presentation for use during visits where the use of digital equipment was not possible;
 - a collection of typical marine finds suitable for handling;
 - handouts of useful literature including:
 - a basic time line outlining the key geological, archaeological and glacial periods and changes in sea level during the last 500,000 years;
 - flow charts summarising the reporting Protocol for discoveries on the seabed, on board vessels and at wharves;
 - copies of the preliminary report forms to be filled out by Site Champions following discoveries on the seabed, on board vessels and at wharves;
 - guidelines on photographing artefacts;
 - copies of artefact recognition sheets produced by the ALSF funded initiative the 'National Ice Age Network' (NIAN).
- 3.2.6 Advice was obtained from WA's Education Manager and various finds specialists within the company in the course of preparing the above materials.
- 3.2.7 Digital copies of the above materials are included on the CD accompanying this report.

3.3 WORKSHOPS

3.3.1 Three workshops were organised focusing on finds recognition, handling, recording and storage and addressing particular issues raised during visits to wharves and vessels. Particular emphasis was placed on the questions commonly raised by aggregate company staff. The workshops demonstrated the importance of finds reported from industry, and the contribution such reports are making to our understanding of the past. The workshops also provided an opportunity for discussion and the exchange of experience and views.

3.3.2 The workshops were targeted primarily at Nominated Contacts, Site Champions and other industry staff. However, provision was also made for other interested parties to attend and, where possible, to make presentations. Such other parties included:

- EH staff;
- Local Government Archaeological Officers (LGAO);
- Portable Antiquities Scheme (PAS) Finds Liaison Officers (FLOs);
- the Receiver of Wreck;
- staff from other relevant ALSF projects;
- the ALSF Marine Science Co-ordinator;
- staff from the Department for Communities and Local Government (DCLG);
- staff from the Centre for Environment, Fisheries and Aquaculture Science (CEFAS);
- staff from Natural England.

3.3.3 It was envisaged that the workshops would be held regionally to cover the spread of aggregate wharves and to focus on issues specific to a particular region:

- Workshop 1: the South West (covering active dredge areas for the South West and Isle of Wight regions and wharves on the South and West coasts);
- Workshop 2: the North (covering active dredge areas for the North West and Humber regions and wharves on the North West and North East coasts);
- Workshop 3: the South East (covering active dredge areas for the East Coast, Owers, Hastings and Thames regions and wharves on the South and East coasts).

3.4 COLLABORATION AND OUTREACH

- 3.4.1 During the course of the project WA collaborated with other organisations involved with reporting archaeological material including the Receiver of Wreck, NIAN and the PAS.
- 3.4.2 Through seminars and meetings, email correspondence and telephone conversations, together with the attendance of representatives at the Awareness Programme workshops, WA ensured that the implementation of the Protocol is informed by the experience of these other organisations and that it is consistent with them.
- 3.4.3 Where possible WA also attended outreach events organised by other organisations in order to publicise the Protocol more widely amongst the general public and other archaeology professionals.

4 RESULTS

4.1 SITE VISITS

Site Visits to Wharves

- 4.1.1 Site visits were carried out to 30 wharves during the course of the project. These are summarised in the table overleaf. The locations of the site visits are illustrated in Figure 2.
- 4.1.2 At some wharves it was possible to speak to staff from several sites at one venue. For example, a visit to Purfleet Aggregates Ltd on 21/02/2006 also incorporated staff from Hanson's wharves at Frindsbury and Dagenham.
- 4.1.3 At other wharves it was necessary to talk to staff in two or more groups to allow the wharf to keep operating during a visit. For example, at the UMA wharf at Greenwich (Figure 3) the 24 members of staff were split into two groups enabling processing to continue while presentations were made.
- 4.1.4 Visits to wharves operated by non-BMAPA members were made where they were part of a joint venture operation with a BMAPA company.
- 4.1.5 Early on in the programme of visits it was discovered that the operational circumstances aboard sand dredgers and at sand-only wharves meant that it was highly unlikely that any artefacts would be encountered.
- 4.1.6 A vessel dredging for sand alone will process the aggregate at sea and all aggregate larger than sand, including any archaeological artefacts, will be redeposited straight over the side of the vessel. It is possible that anomalies on the seabed or artefacts trapped in machinery will be identified at sea but the aggregate offloaded at wharves should not contain artefacts of archaeological interest.

Company	Wharf	Location	Visit Date	No of Personnel
Britannia	Brett Aggregates Ltd	Ipswich	26/04/06	3
	Brett Aggregates Ltd	Northfleet	27/09/06	4
	Brett Aggregates Ltd	Cliffe	27/09/06	7
Hanson	Clubbs Marine Aggregates	Gravesend	11/07/06	6
	Hanson Aggregates South	Dagenham	21/02/06	5
	Hanson Aggregates South	Bridgwater	16/02/06	2
	Hanson Aggregates South	Frindsbury	21/02/06	5
	Hanson Aggregates/CEMEX	Ipswich	26/04/06	1
	Humber Sand & Gravel Ltd	Hull	05/05/06	2
	Lafarge Aggregates Ltd	Greenhithe	21/06/06	1
	Purfleet Aggregates Ltd	West Thurrock	21/02/06	5
	Tarmac Northern Ltd	Wallsend on Tyne	03/05/06	6
	Tarmac Northern Ltd	Middlesbrough	03/05/06	3
CEMEX	Brett Hall Aggregates	Dover	15/08/06	4
	CEMEX UK Materials	Southampton	09/05/06	6
	CEMEX UK Materials	Portslade	22/06/06	6
	CEMEX UK Materials	Poole	17/05/06	3
	CEMEX UK Materials	Jarrow	04/05/06	4
	CEMEX UK Materials	Teeside	04/05/06	3
	CEMEX UK Materials	Northfleet	20/06/06	9
	CEMEX UK Materials	Charlton	27/09/06	4
	Lafarge Aggregates	Gateshead	04/05/06	3
UMA	Bristol Channel Aggregates Ltd	Avonmouth	23/05/06	2
	Solent Aggregates Ltd	Southampton	17/05/06	4
	Solent Aggregates Ltd	Portslade,	25/05/06	4
	Solent Aggregates Ltd	Newhaven	25/05/06	3
	Solent Aggregates Ltd	Havant	16/05/06	6
	United Marine Aggregates Ltd	Erith	20/06/06	5
	United Marine Aggregates Ltd	Ridham	21/06/06	3
	United Marine Aggregates Ltd	Greenwich	30/05/06	24
			Total Personnel	143

4.1.7 A visit was undertaken to Hanson's sand-only wharf at Dunball in Bridgwater, Somerset, to speak to staff and observe operations. This visit confirmed that artefacts are unlikely to be found at sand-only wharves.

4.1.8 It was decided that, while visits to sand-only wharves must still be regarded as valuable, particularly as staff may move locations or the function of the wharf may change, visits to wharves where the sale of pre-processed sand was the primary function were of low priority. Consequently, visits were not carried out to the following wharves:

- Hanson Aggregates South, Appledore, Devon (sand-only wharf supplied by Hanson);
- Hanson Aggregates, Garston Merseyside (sand-only wharf supplied by UMA);
- Tarmac Ltd, Heysham, Lancashire (sand-only wharf supplied by UMA);
- Tarmac Ltd, Barrow-in-Furness, Cumbria (sand-only wharf supplied by UMA);

- Mersey Sand Suppliers, Liverpool (sand-only wharf supplied by Norwest).
- 4.1.9 However, visits to sand-only wharves were carried out where the visit could be combined with a visit to a higher priority site in the same area:
- Tarmac Northern Ltd, Wallsend on Tyne (sand-only wharf supplied by Hanson);
 - Tarmac Northern Ltd, Middlesborough (sand-only wharf supplied by Hanson);
 - Hanson Aggregates/CEMEX, Ipswich (redistribution centre, sand supplied by Hanson).
- 4.1.10 Ultimately, only a small number of higher priority wharves were not visited during the course of the Awareness programme. Efforts were made to contact all Site Champions and/or wharf managers but at some wharves it did not prove possible to arrange a suitable time to carry out a visit:
- Lafarge Aggregates, West Thurrock, Essex (non BMAPA wharf supplied by Britannia Aggregates Ltd);
 - Northwood (Fareham) Ltd, Marchwood, Hampshire (wharf manager unable to agree to a suitable time for visit);
 - Northwood (Fareham) Ltd, Fareham, Hampshire (wharf manager unable to agree to a suitable time for visit);
 - Isle of Wight Aggregates Ltd, East Cowes, Isle of Wight (joint venture between UMA and CEMEX - new plant under construction);
 - Isle of Wight Aggregates Ltd, West Cowes, Isle of Wight (joint venture between UMA and CEMEX - new plant under construction).
- 4.1.11 Visits were not carried out to Kendall Bros Ltd as staff from both wharves attended the regional workshop for the South West and the Nominated Contact felt that an additional visit would be of no further value.
- 4.1.12 Copies of a DVD based remote training package were sent to the wharves we were unable to visit (see section 5 below).

Site Visits to Vessels

- 4.1.13 Visits were made to three vessels during the course of the project. These are summarised in the table overleaf.
- 4.1.14 It was envisaged that visits to vessels would take place while they were in port. However, in the early stages of the Awareness Programme it became apparent that this would not be a viable option.

Company	Vessel	Location	Visit Date	No of Personnel
Hanson	Arco Arun	Tarmac Northern Ltd Cochranes Wharf Middlesbrough	03/05/06	2
	Arco Avon	Hanson Aggregates Marine Ltd Burnley Wharf Southampton	15/03/06	3
	Arco Dart	Hanson Aggregates South Dunball Wharf Bridgwater	16/02/06	8
			Total Personnel	13

- 4.1.15 It was discovered that while vessels are offloading all members of staff are engaged in activities crucial to the operation of the vessel and cannot, therefore, attend a presentation. Moreover, as the vessels operate to a very tight time schedule it would not prove economically viable to the dredging companies to delay the vessel so that a formal presentation could take place.
- 4.1.16 A visit to the Arco Arun, while it was offloading at Cochrane's wharf in Middlesborough (Figure 4), clarified these difficulties. During the visit it only proved possible to speak informally to the captain and first mate on the bridge while they oversaw the offloading process. Other members of the crew passed through the bridge during their work but were unable to stay for any length of time.
- 4.1.17 It was agreed, therefore, that visits to vessels would be dependent on a vessel being kept in port for repairs or bad weather, for example. A visit to the Arco Dart was carried out when the weather was too bad for the vessel to carry out dredging activities and a visit to the Arco Avon took place while it was being repaired in Southampton.
- 4.1.18 The problem was compounded by the operation of two separate crew rotas on each vessel. Consequently, each vessel would require two visits on different occasions.
- 4.1.19 Unfortunately no other opportunities to visit the vessels presented themselves during the course of the Awareness Programme. For this reason it was decided to produce a remote training package that could be accessed by vessel crews at their own convenience (see section 5 below).

Site Visits to Survey Companies

- 4.1.20 The following companies were approached between March and May 2006 with regard to organising a visit as part of the Awareness Programme:
- ABP Marine Environmental Research Ltd, Southampton;
 - Andrews Survey, Great Yarmouth;

- Aquatech, Gloucester;
- EGS Survey, Borden, Hampshire;
- Emu Survey, Southampton;
- Gardline Environmental Ltd, Great Yarmouth;
- Marine Ecological Surveys Ltd, Bath;
- Titan Environmental Surveys Ltd, Ogmores by Sea, Mid. Glamorgan;
- Utec Ltd, Lowestoft.

4.1.21 It soon became clear that, as most survey staff would be out of the office throughout the summer, visits to most companies could not take place until September or October at the earliest.

4.1.22 Ultimately, visits were made to four survey companies during the course of the project. These are summarised in the table below.

Company	Location	Visit Date	No of Personnel
ABP Marine Environmental Research Ltd	Suite B, Waterside House, Town Quay, Southampton, SO14 2AQ	31/05/06	c. 20
Andrews Survey	Salmon Road, Great Yarmouth, Norfolk, NR30 3QS	03/10/06	11
Gardline Environmental Ltd	Endeavour House, Admiralty Road, Great Yarmouth, Norfolk, NR30 3NG	03/10/06	4
Marine Ecological Surveys	24a Monmouth Place, Bath, BA1 2AY	17/10/06	8
		Total Personnel	43

4.1.23 Aquatech, EGS Survey and Emu declined to take part as they felt that the Protocol was not particularly relevant to their work. No response was received from Titan or Utec.

4.2 WORKSHOPS

Workshop 1: The South West

4.2.1 The first regional workshop was held on 20th April 2006 at Sarum College in Salisbury, Wiltshire and focused on the active dredge areas for the South West and Isle of Wight regions and wharves on the South and West coasts.

4.2.2 The programme for the workshop included:

- Introduction (**Antony Firth, WA**);
- Implementation Service and Awareness Programme (**Euan McNeill, Victoria Cooper, WA**);
- The BMAPA/EH Protocol and the Marine Aggregates Industry (**Mark Russell, BMAPA**);
- The National Ice Age Network and the Identification of Flint Artefacts (**Jenni Chambers, NIAN**);

- Flint Knapping Demonstration (**Mike Trevarthen, WA**);
 - Cetacean Remains, their Treatment and Significance (**Richard Sabin, Natural History Museum**);
 - The Receiver of Wreck, Role and Responsibility (**Alison Kentuck, Deputy Receiver of Wreck**);
 - Offshore Aviation Remains, their Treatment and Significance (**Jens Auer, WA**).
- 4.2.3 Time was scheduled for questions after each presentation and more general discussions before coffee breaks and lunch.
- 4.2.4 In total, 74 invites were sent to Nominated Contacts, Site Champions and other industry staff, LGAOs, FLOs and other interested parties. Responses were received from 68 invitees and 25 were able to attend the workshop (including nine speakers). Details of the invitees and attendees are listed in Appendix IV.
- 4.2.5 The workshop offered an excellent introductory seminar for the Awareness Programme and allowed dialogue between archaeology professionals and wharf staff from the dredging industry to take place.
- 4.2.6 Discussion focused on a number of specific issues including:
- the value of cetacean remains (whales, dolphins, porpoises);
 - the clarification of the extent and range of finds which need to be reported to the Receiver of Wreck;
 - the value of reported finds where a specific location cannot be pinpointed;
 - the value of archaeological remains from the seabed in contrast to sites on land.
- 4.2.7 As a direct result of these discussions WA added slides on cetacean remains to the site visit presentation to draw attention to the value of the remains of whales and dolphins found during marine aggregate dredging. Also, further discussions were undertaken with the Receiver of Wreck to examine the potential for incorporating reports to the Receiver within the Implementation Service.

Workshop 2: The North

- 4.2.8 The second regional workshop was held on 6th July 2006 at the EH Offices in York and focused on the active dredge areas for the North West and Humber regions and wharves on the North West and North East coasts.
- 4.2.9 The programme for the workshop included:
- Introduction: Implementation Service and Awareness Programme (**Euan McNeill, Victoria Cooper, WA**);

- The BMAPA/EH Protocol and the Marine Aggregates Industry (**Robert Langman, Hanson**);
 - Submerged Prehistoric Landscapes (**Stuart Leather, WA**);
 - The National Ice Age Network and the Identification of Flint Artefacts (**Jenni Chambers, NIAN**);
 - Flint Knapping Demonstration (**Jenni Chambers, NIAN**);
 - Conservation of Marine Finds (**Ian Panter, York Archaeological Trust**);
 - The Boats and Ships of the Humber Region (**Victoria Cooper, WA**).
- 4.2.10 Time was provided for questions and discussion after each presentation. A more general discussion was scheduled at the end of the day.
- 4.2.11 In total, 100 invites were sent to Nominated Contacts, Site Champions and other industry staff, LGAOs, FLOs and other interested parties. Responses were received from 64 invitees although only 14 were able to attend the workshop (including six speakers). Details of the invitees and attendees are listed in Appendix V.
- 4.2.12 Despite the low attendance at this workshop discussion was still valuable, bringing wharf staff and archaeology professionals together to discuss issues relating archaeology on the seabed. In particular, discussion focused upon:
- the requirement to report all metal artefacts despite the high number of metal finds, most of which are likely to be modern in date, procured through metals detectors at wharves;
 - the need for defining responsibilities with regard to the necessary and costly conservation of marine finds.
- 4.2.13 These issues, along with others raised throughout the course of the project, are currently being resolved through discussion with the marine aggregates industry.

Workshop 3: The South East

- 4.2.14 The third regional workshop was held on 6th October 2006 at the EH Offices in London and focused on the active dredge areas for the East Coast, Owers, Hastings and Thames regions and wharves on the South and East coasts.
- 4.2.15 The programme for the workshop included:
- Introduction: Implementation Service and Awareness Programme (**Euan McNeill, Victoria Cooper, WA**);
 - The BMAPA/EH Protocol and the Marine Aggregates Industry (**Andrew Bellamy, UMA**);
 - Submerged Prehistoric Landscapes (**Antony Firth, WA**);

- Identifying the Remains of Ice Age Mammals (**Andy Curren, NHM**);
- Maritime Archaeology of the Thames and its Estuary (**Gustav Milne, University College London**);
- Crashed Military Aircraft (**Vince Holyoak, EH**);
- The Receiver of Wreck, Role and Responsibility (**Alison Kentuck, Deputy Receiver of Wreck**);
- Portable Antiquities Scheme (**Michael Lewis, Deputy Head Portable Antiquities Scheme**).

4.2.16 Time was scheduled for questions after each presentation and more general discussions before coffee breaks and at the end of the day.

4.2.17 108 invites were sent to Nominated Contacts, Site Champions and other industry staff, LGAOs, FLOs and other interested parties. Responses were received from 66 invitees and 28 were able to attend the workshop (including eight speakers). Details of the invitees and attendees are listed in Appendix VI.

4.2.18 Discussion focused on a number of specific issues including:

- the requirement to report all metal artefacts despite the high number of metal finds, most of which are likely to be modern in date, procured through metals detectors at wharves;
- the clarification of the extent and range of finds which need to be reported to the Receiver of Wreck and the incorporation of reports within the Implementation Service;
- the issue of what happens to finds after they have been reported including the need for defining responsibilities with regard to the necessary and costly conservation of marine finds;
- the role of PAS FLOs in providing advice to wharves on a local level and for forging contacts between wharves and local museums with a view to placing artefacts in a publicly accessible environment;
- the desirability for a printed newsletter providing regular updates of the finds being reported through the Implementation Service. Web pages are not always appropriate as computer access is limited.

4.2.19 These issues, along with others raised throughout the course of the project, are currently being resolved through discussion with the marine aggregates industry, the Receiver of Wreck, the PAS and EH.

5 METHODOLOGICAL VARIATIONS

5.1.1 In addition to the visits to survey companies listed above it was also decided that visits to the Centre for Environment Fisheries and Aquaculture Science

(CEFAS) and the British Geological Survey (BGS) may be of value as both organisations work closely with the marine aggregates industry.

- 5.1.2 CEFAS and the BGS were contacted in September to enquire as to where or not WA would be able to visit them to talk to staff about the project. No response was received from either organisation.
- 5.1.3 At the outset of the project it was envisaged that training for vessel crews would mirror the site visits carried out at wharves. However, for reasons outlined above (see section 4.1.15), it soon became clear that this would not be the most appropriate methodological approach and that a remote training package would be more effective for reaching vessel crews.
- 5.1.4 Two approaches were discussed, the production of a CD and the production of a DVD supported by appropriate literature.
- 5.1.5 The CD was expected to contain copies of all the digital media produced for the site visits edited for use as a remote training package. The main disadvantage of this approach was access to computers for vessel crews. On most vessels the only computer on board ship is based on the bridge and may not be suitable for individuals or groups attempting to view digital media for training purposes. It was decided, therefore, to focus upon the production of a DVD with accompanying handouts.
- 5.1.6 Most vessels have a DVD player on board for use by the crew situated in the mess or other staff area. This would facilitate individual or group viewing at a time to suit the crews. The paper literature would be available to read at any time.
- 5.1.7 A script was composed based upon the presentation carried out during site visits and images were selected to illustrate the text. During site visits many points could be emphasised using the collection of marine finds which could be handled by company staff. This collection, however, could not be reproduced to accompany each DVD and additional images needed to be located to illustrate important points.
- 5.1.8 The DVD was produced by using a digital video camera to film Victoria Cooper, Project Officer for the Awareness Programme, reading the prepared script. The film was downloaded and edited using the Apple software 'iMovie' and the images were slotted into the film at appropriate points.
- 5.1.9 Handouts to accompany the DVD were also produced. These were primarily the same as those provided for wharf staff during visits (see section 3.2.5 above). However, a list of FAQs and responses was also produced, based on the questions commonly asked during site visits, including:
- Who are BMAPA?
 - Who are EH?
 - Who are WA?
 - Do we have to report all discoveries?

- Who owns the artefacts? Can we keep what we find?
- How much is a salvage award?
- What happens once a discovery has been reported?
- Where can I find further information?

5.1.10 Digital copies of the handouts are included on the CD accompanying this report.

5.1.11 The DVD remote training package was sent to each BMAPA company vessel via the Nominated Contacts. Copies were also sent to the wharves at which it was not possible to arrange a suitable visit (listed in section 4.1.10 above).

5.1.12 A copy of the DVD accompanies this report.

6 COLLABORATION AND OUTREACH

6.1.1 During the course of the Awareness Programme WA took part in a number of seminars, meetings and outreach events to introduce the Protocol to a wider audience and to illustrate the importance of the artefacts reported through the Protocol. These included:

- EH Outreach Seminar (Savile Row, London 14/02/06);
- PAS AGM (British Museum, London 16/03/06);
- EH ALSF Seminar (Savile Row, London, 12/05/06);
- Stourhead Archaeology Extravaganza (Nautical Archaeology Society, Stourhead, Wiltshire, 03/06/06-04/06/06);
- Maritime Archaeology and Wildlife Weekend (Hampshire and Wight Trust for Maritime Archaeology, Hurst Castle, Hampshire, 19/08/06-20/08/06) (Figure 5);
- Marine ALSF Conference (University of Southampton, 08/09/2006);

6.1.2 WA produced promotional literature to distribute to interested parties, including a poster and leaflet, included on the CD accompanying this report. WA also submitted an article to Dredging and Port Construction magazine which has an international readership throughout all sectors of the industry. This article was published in the November issue of the magazine and helped to raise awareness of the Protocol amongst non BMAPA companies while demonstrating the importance of the contribution made by industry staff to our knowledge and understanding of the historic environment.

7 EVALUATION

7.1 PROJECT AIM

7.1.1 The aim of the Protocol Awareness Programme was to raise awareness of the BMAPA/EH Protocol among aggregate industry staff, and to encourage its use.

7.1.2 The success of the project in meeting this aim has been evidenced by the response of industry staff as demonstrated by the number of artefacts reported through the Implementation Service.

7.1.3 During the first year of operating the Implementation Service WA has received the following reports:

Date	Report ID	Description	No. of Finds
October 2005	Hanson_0008	Cannonball, whale bone and block wheel	3
	CEMEX_0015	Two pieces of metal and a bone	3
November 2005	Hanson_0018	Mammoth bones and teeth and a piece of deer bone	10
December 2005	-	-	-
January 2006	Hanson_0019	Bomb	1
	UMD_0021	Mammoth humerus	1
	UMD_0022	Rowlock, fishing weight and ornamental object	3
February 2006	UMD_0026	Boat hook	1
March 2006	Hanson_0035	Mammoth tusk	1
April 2006	-	-	-
May 2006	CEMEX_0039	Eroding peat layer with animal bone, wood and struck flint	Multiple (20+)
	UMD_0041	Fragment of bone, possible deer metatarsus	1
	UMD_0042	Fragments of bone, possible pelvis of a horse, scapula, rib and long bone from horse, cattle or deer	4
	UMD_0043	Fragment of tooth, possible woolly mammoth	1
	UMD_0044	Fragments of bone, possible pelvis and long bone from horse, cattle or deer	2
	UMD_0045	Half of a upper molar of a woolly mammoth	1
June 2006	-	-	-
July 2006	UMD_0059	Aircraft remains	3
	UMD_0061	Aircraft remains	Multiple (20+)

August 2006	UMD_0062	Aircraft brake pedal and lamp	2
	CEMEX_0064	Cannonball	1
September 2006	UMD_0065	Fishing net weights	2
Total No. of Finds			80+

7.1.4 The locations of these discoveries are illustrated in Figure 5.

7.1.5 Details of each discovery have been sent to:

- Virginia Dellino-Musgrave, EH Maritime Team;
- Mark Russell, BMAPA;
- Mike Cowling, The Crown Estate;
- David Hilton, NMR.

7.1.6 Details of discoveries regarded as wreck under the Merchant Shipping Act 1995 have been forwarded to the Receiver of Wreck:

- Hanson_0008;
- CEMEX_0015;
- UMD_0022;
- UMD_0026;
- UMD_0059;
- UMD_0061;
- UMD_0062;
- CEMEX_0064;
- UMD_0065.

7.1.7 Details of discoveries that may relate to military wrecks or aircraft have been forwarded to the Ministry of Defence:

- Pre-protocol: Supermarine Attacker;
- UMD_0059
- UMD_0061
- UMD_0062

7.1.8 Data has also been sent to the appropriate PAS Finds Liaison Officers and to the Local Government Archaeology Officers and SMR/HER in the county off which the discovery was made.

7.1.9 The increasing number of reports demonstrated in the above table may be attributed directly to the success of the Awareness Programme. In addition, a number of finds were also recovered prior to the Protocol and brought to the attention of WA staff. These include:

- fishing net weight (CEMEX, July 1999);
- mammoth tooth, tusk, vertebra, scapula and red deer antler (UMA, August 2002);
- giant deer jaw (UMA, April 2003);
- gun and holster (UMA, April 2004);
- mammoth tooth (UMA, December 2004);
- cannonball and two iron pins (UMA, February 2005);
- explosive harpoons (Hanson, May/October 2005);
- Cannonball (Hanson, November 2005);
- Aircraft remains, identified as a Supermarine Attacker (Hanson, Arco Dart, February 2006);
- Wooden practice shell (UMA, April 2006);
- chrynoidea fossils (CEMEX, Billingham, May 2006);
- pewter plate (Hanson, Wallsend on Tune May 2006);
- possible cannonball (UMA, Newhaven, May 2006);
- mammoth tooth (UMA, Erith, June 2006);
- anchor (UMA, Erith, June 2006);
- building stone (UMA, Erith, June 2006);
- fishing net weight (UMA, Ridham, June 2006);
- fragment of timber with copper nail (Britannia, Northfleet, September 2006);
- unidentified, bowl shaped iron artefact (Britannia, Northfleet, September 2006);
- selection of animal remains including mammoth teeth and tusks (Britannia, Northfleet, September 2006);

7.1.10 Photographs of a selection of these finds are included in Figure 7.

7.1.11 These finds were not reported through the Implementation Service because they were found before the Protocol had been implemented and, in most cases, key details such as location of discovery had not been recorded. Most had been kept at the wharves for a substantial length of time. Details of the above finds have been kept in the Implementation Service archive.

7.1.12 During the first year of the Protocol reports were submitted by only three of the nine BMAPA companies, UMA, Hanson and CEMEX.

7.1.13 It is possible that this is a direct reflection of the number of site visits carried out. Section 4.1 above shows how visits were mainly concentrated at wharves belonging to these three companies, along with Britannia Aggregates Ltd., although representatives from the other companies did attend workshops.

7.1.14 It is also possible that this is a true indication of the discovery of finds during marine aggregate dredging and that the other six companies have not yet identified anything of archaeological interest. UMA, Hanson and CEMEX are the three largest of the BMAPA companies with the greatest number of wharves and vessels processing the greatest volume of aggregate.

7.2 PROJECT OBJECTIVES

7.2.1 The first objective of the Awareness Programme was:

- To ensure, as far as possible, that all staff involved in the marine aggregate industry are aware of the existence of the Protocol, and of how it is to be applied.

7.2.2 With the publication of the Protocol posters and copies of the Protocol were sent to each Nominated Contact to forward to the Site Champions. During site visits both the posters and the Protocol text have been seen at wharves and on board vessels suggesting that all staff employed at wharves and on vessels have been made aware of the existence of the Protocol.

7.2.3 The difficulties with visiting vessels resulted in a variation in methodology with the production of a DVD based remote training package. Thus, through a combination of site visits and workshops and through the DVD WA has ensured that all staff have had access to information about the Protocol and how it is to be applied.

7.2.4 The second objective of the Awareness Programme was:

- To improve industry staff's ability to distinguish material of potential archaeological interest, and to handle, record and store such material appropriately.

7.2.5 Through the site visits, workshops and DVD industry staff have been provided with information on:

- the nature of the marine historic environment (sea level change and submerged prehistoric landscapes, shipwrecks and crashed aircraft);
- identifying archaeologically important finds (categorised by material type: stone; animal remains; ceramics; metal; wood; environmental remains);
- handling and storage (first aid for marine finds and longer term conservation advice);
- recording (photographing finds, preliminary report finds, recording key information such as location of discovery).

- 7.2.6 An improvement in industry staff's ability to distinguish material of potential archaeological interest is demonstrated by the increased number of reports received through the Implementation Service. These reports also demonstrate the increasing quality of information recorded using the preliminary report forms, such as improved location information, and the increasing quality of photographs uploaded to the website. It is also clear that finds are being kept submerged in water as a basic first aid measure until further conservation advice can be sought.
- 7.2.7 The third objective of the Awareness Programme was:
- To better understand the operational circumstances of marine aggregate dredging, with a view to informing the further development of the Protocol and its implementation.
- 7.2.8 During the course of the Awareness Programme a number of operational circumstances were observed which have led to discussions concerning the application of the Protocol. For example, before the commencement of site visits WA was unaware that the aggregate supplied to sand-only wharves was sorted at sea and that the recovery of artefacts would be unlikely. A further issue involves the discovery of iron and steel artefacts, including concreted finds.
- 7.2.9 The use of a magnet and metal detectors at most wharves means that a substantial number of potentially interesting metal artefacts are discovered in most loads. According to the terms of the Protocol each of these objects would need to be reported through the Implementation Service and reported to the Receiver of Wreck. The high number of objects recovered, however, makes this difficult to achieve.
- 7.2.10 Wharves have been advised to report any clearly recognisable, engraved or unusual artefacts and all concreted metal objects, as this indicates that they have been submerged for some time. In addition, staff have been requested to report all aluminium finds as these are most likely to be related to a crashed aircraft. It has been suggested that all other material could be periodically examined by an archaeologist to identify any further artefacts of archaeological interest.
- 7.2.11 With regard to the Receiver of Wreck it has been decided to incorporate the legal requirement to report wreck material within the Implementation Service. A function has been created within the web-based reporting system to automatically generate a report which can be sent to the Receiver.
- 7.2.12 Other specific issues raised during the Awareness Programme include:
- health and safety issues relating to the recovery of ordnance;
 - the use of a crusher at most wharves to reduce material over a certain size and the likely loss of a number of artefacts during this process;

- the application of the Protocol at wharves where processing is contracted out to non BMAPA companies.
- 7.2.13 Such issues are currently being discussed with a view to informing the further development of the Protocol and its implementation.
- 7.2.14 The fourth objective of the Awareness Programme was:
- To acknowledge the contribution made by industry staff to our knowledge and understanding of the historic environment.
- 7.2.15 The importance of the finds reported as part of the Protocol has been acknowledge and stressed through the site visits and workshops, through the project webpages and through the production of wharf reports to provide feedback on each individual discovery directly to the wharves and vessels.
- 7.2.16 An RSS feed built into the Implementation Service secure site and WA's public site means that WA staff can upload reports directly to the project webpages ensuring that new reports are added frequently and the page is kept up to date. The current 'BMAPA/EH Protocol Archaeological Discoveries' webpage can be viewed at:
- <http://www.wessexarch.co.uk/projects/marine/bmapa/discoveries.php>
- 7.2.17 The reports sent to wharves are descriptive in character and aim to give staff a context for the finds they report with regard to both the use and function of the artefact and its importance for our knowledge and understanding of the historic environment. Copies of the wharf reports are included on the CD accompanying the report.
- 7.2.18 The importance of the contribution made by industry staff was further acknowledged through the publication of an article about the Protocol in Dredging and Port Construction Magazine.
- 7.2.19 The final objective of the Awareness Programme was:
- To maintain dialogue with stakeholders (industry; regulators; curators; consultants; contractors) about the Protocol.
- 7.2.20 Dialogue with stakeholders has been maintained through WA's attendance at a number of meetings, seminars and outreach events, outlined in section 6 above, and through the attendance of representatives from the following organisations at the Awareness Programme workshops:
- BMAPA (and the BMAPA companies);
 - ALGAO;
 - PAS;
 - The Crown Estates;

- EH;
- NIAN;
- The Receiver of Wreck.

7.2.21 WA also attended industry meetings, such as the East Channel Aggregates group information day on 22nd August in London.

7.2.22 The project was also subject to progress monitoring by EH and the ALSF steering group.

7.3 CONCLUSION

7.3.1 The above discussion demonstrates how the Awareness Programme has met the aims and objectives set out in the Project Design. Through direct contact with industry staff and through the remote training package WA has been able to impart an understanding of submerged archaeology that has not only encouraged the application of the Protocol but that has also provided the dredging industry with an appreciation of the contribution it can make to our knowledge and understanding of the marine historic environment. Through the Implementation Service this increased awareness has correspondingly added to the baseline information on submerged archaeology accessible in the NMR and HERs. This is of benefit to both the public in general and to the marine aggregate industry in enabling companies and curators to be quickly alerted to the presence of archaeological sites that can be better protected as a result.

8 FURTHER WORK

8.1.1 BMAPA has indicated that they would like to see the Awareness Programme extended beyond the lifetime of the current project to maintain the knowledge base in the industry, to keep personnel enthused and cognisant of the historic environment, and to maintain the quality of the reports received by the Implementation Service. If ALSF funding is unavailable for such work then the marine aggregates industry may seek to maintain EH involvement through alternative arrangements.

8.1.2 Some wharf staff have requested regular updates of the finds being reported through the Implementation Service to maintain interest and to facilitate a deeper understanding of what is and is not considered archaeologically important. The web pages currently produced are insufficient for this purpose as staff do not have computer access at the wharves and a printed newsletter appears to be the preferred option.

8.1.3 The extension of the Protocol to cover all work done for BMAPA members by survey or geotechnical companies has also been discussed with BMAPA. A small number of survey companies have been visited during the course of the Awareness Programme but if the Protocol is extended it may be advantageous to create an appropriate training package specifically designed for those operating in the survey and geotechnical industries.

- 8.1.4 There is also potential to extend the Awareness Programme to wharves in Wales, through collaboration with Cadw, and to wharves on the continent supplied by BMAPA companies. WA has received reports from outside the UK through the Implementation Service, in particular from Hanson's SBV Flushing wharf in Holland, and a direct or remote training package for these wharves may also be of benefit. There is potential to develop further the DVD produced for vessels as part of the Awareness Programme to provide a comprehensive remote training resource for wharves, vessels and other company staff.
- 8.1.5 Perhaps most important is the precedent that the publication and implementation of this Protocol has set for other marine developers. The marine aggregates industry is only one of the many industries which are active within the marine environment and for which similar protocols could be established.
- 8.1.6 Finally, the Awareness Programme revealed a number of issues which will require further investigation and resolution:

Metal Finds and Concretion

- 8.1.7 The high numbers of metal finds and concreted artefacts recovered at wharves with magnets and/or metal detectors has brought into question the viability of reporting every discovery through the Implementation Service.
- 8.1.8 At present, wharves and vessels have been advised to report all items produced from metals other than iron and steel and to report all ferrous artefacts that are either unusual or readily identifiable as part of a ships equipment.
- 8.1.9 Alternative approaches have been discussed including stockpiling metal artefacts for regular examination by an archaeologist and stockpiling concretions for x-ray.
- 8.1.10 It is clear, however, that the precise nature of the recovery of metallic items at wharves needs to be investigated and clear guidance produced.

The Receiver of Wreck

- 8.1.11 The high number of metal and concreted finds is additionally complicated by the legal requirement to report all items of wreck to the Receiver of Wreck under the Merchant Shipping Act 1995. Each piece of metal may prove to originate from a wreck and, as such, should be reported. In practice, however, neither the wharf staff nor the Receiver of Wreck are in a position to deal with such large numbers of finds.
- 8.1.12 The Protocol anticipated that the obligation to report wreck would be met by Nominated Contacts who would submit a droit form to the Receiver of Wreck in addition to making a report via the Implementation Service.
- 8.1.13 However, following discussions with the Receiver of Wreck, WA has incorporated reports to the Receiver within the Implementation Service. This

will enable professional archaeologists to offer appropriate advice on which finds need to be reported and thus reduce the paperwork that needs to be completed by wharf staff and the Receiver.

- 8.1.14 The applicability of this process is still being assessed and further discussion will need to take place to resolve the issue.

Finds Storage and Conservation

- 8.1.15 There is currently no clear guidance on what should happen to finds once they have been reported or who should be responsible for longer term conservation and storage.
- 8.1.16 The role of PAS FLOs in providing advice on what to do with finds in the long term was discussed at Workshop 3 in London. FLOs are generally based within the local museums service and are thus well placed to put dredging companies in touch with institutions that may be able to help them with conservation or placing artefacts.
- 8.1.17 Issues of ownership and responsibility need to be resolved and clear guidance needs to be produced so that the artefacts may be used effectively rather than allowing them to disintegrate. For example, there is high potential for artefacts to be used as part of local outreach programmes in schools or museums. The public benefits of such programmes should be discussed with the dredging companies and avenues of funding for conservation investigated.

9 REFERENCES

- Wessex Archaeology, 2003, *Marine Aggregate Dredging and the Historic Environment: Guidance Note*, British Marine Aggregates Producers Association and English Heritage.
- Wessex Archaeology, 2005, *Protocol for Reporting Finds of Archaeological Interest*, British Marine Aggregates Producers Association and English Heritage.
- Wessex Archaeology, 2006, *Protocol for reporting finds of archaeological interest. Annual Report to BMAPA 2005-2006*, British Marine Aggregates Producers Association and English Heritage.

APPENDIX I: BMAPA COMPANY NOMINATED CONTACTS

BMAPA Company	Nominated Contact	Position
Britannia Aggregates Ltd	Richard Fifield	Marine Resources Manager
DEME Building Materials Ltd	Frank Rimell	Resident Manager
Hanson Aggregates Marine Ltd	Robert Langman	Resources Manager
Kendall Bros (Portsmouth) Ltd	Richard Kendall	
Northwood (Fareham) Ltd (Lafarge Aggregates Ltd)	Brian White (Malcolm Whittle)	General Manager
Norwest Sand & Ballast Ltd	Nick Brown	General Manager
CEMEX UK Marine	Graham Singleton	Marine Resource Manager
United Marine Aggregates Ltd	Andrew Bellamy	Resources Manager
Volker Dredging Ltd	Richard Fifield	Marine Resources Manager

APPENDIX II: BMAPA COMPANY WHARVES

A: WHARVES IN ENGLAND

Company	Wharf	Site Champion
Britannia Aggregates Ltd	Brett Aggregates Ltd Cliffe Wharf North Sea Terminal Salt Lane Cliffe Rochester Kent ME3 7SX	Mark Wraight (Regional Manager)
	Brett Aggregates Ltd Robin's Wharf Grove Road Northfleet Kent DA11 9AX	Ashley Wilkinson
	Brett Aggregates Ltd Upper End West Bank Terminal Wherstead Road Ipswich Port Ipswich Suffolk IP2 8LY	Oliver Brown (Regional Manager)
	Lafarge Aggregates Thurrock Marine Terminals Oliver Close West Thurrock Grays Essex RM20 3EE	Bill Hunt
DEME Building Materials Ltd	N/A	
Hanson Aggregates Marine Ltd	Clubbs Marine Aggregates Mark Lane (off Norfolk Road) Denton Gravesend Kent DA12 2QB	Shaun Jury
	Hanson Aggregates South Bidna Wharf Northam Appledore Devon EX39 1LZ	Paul Owsianka
	Hanson Aggregates South Dunball Wharf Dunball Bridgwater	Terry Squires

Company	Wharf	Site Champion
	Somerset TA6 4EJ	
	Hanson Aggregates South Euro Wharf Royal Eagle Close Medway City Estate Frindsbury, Nr Rochester ME2 4EN	Mike Smith
	Hanson Aggregates South Ferry Road (off Chequers Lane) Dagenham Dock Dagenham Essex RM9 6QD	Site Champion TBC
	Hanson Aggregates/CEMEX The Old Power Station Cliffe Quay Ipswich Suffolk IP3 0BL	Alex Smiles
	Humber Sand & Gravel Ltd West Quay Alexandra Dock Hedon Road Hull HU9 1TA	Mark Hughes
	Lafarge Aggregates Ltd Johnsons Wharf Crossways Boulevard Greenhithe Kent DA9 9AD	Stuart King
	Purfleet Aggregates Ltd London Rd West Thurrock Grays Essex RM20 3NL	John Balne
	Tarmac Northern Ltd Cochranes Wharf Cargo Fleet Lane Middlesbrough TS3 6AU	Kevin Muir (Production Manager)
	Tarmac Northern Ltd Howdon Jetty Willington Quay Wallsend on Tyne Tyne & Wear NE28 6UR	Kevin Muir (Production Manager)

Company	Wharf	Site Champion
Kendall Bros (Portsmouth) Ltd	Kendall Bros Ltd Kendalls Wharf Eastern Road Portsmouth Hampshire PO3 5LY	Peter Kendall
	Kendall Bros Ltd New Wharf Brighton Rd Shoreham West Sussex BN43 6R	Les Hinton
Northwood (Fareham) Ltd	Northwood (Fareham) Ltd Area 6, Marchwood Industrial Estate Oceanic Way Marchwood Southampton Hampshire SO40 4PB	Nick Eastwood (Production Manager)
	Northwood (Fareham) Ltd Riverside House Upper Wharf Fareham Hampshire PO16 0LY	Nick Eastwood (Production Manager)
Norwest Sand & Ballast Ltd	Mersey Sand Suppliers East Bramley-Moore Dock Liverpool L3 0AR	Nick Brown
CEMEX UK Marine	Brett Hall Aggregates Train Ferry Dock Western Dock Dover Kent CT17 9TF	Bob Jones
	CEMEX UK Materials Ltd Angerstein Wharf Horn Lane (off Bugsby Way) New Charlton SE10 0RT	David Whitby
	CEMEX UK Materials Ltd Billingham Reach Industrial Estate Haverton Hill Rd Billingham Teeside TS23 1PX	Paul Clarke (Wharf Manager)
	CEMEX UK Materials Ltd Ferry Wharf Portslade East Sussex BN41 1WA	Steve Wright

Company	Wharf	Site Champion
	CEMEX UK Materials Ltd Leamouth Wharf Belvedere Road Southampton SO14 5RF	Peter Sheehy
	CEMEX UK Materials Ltd Mercantile Wharf Curlew Road Jarrow South Tyneside NE32 3DX	Paul McIlvenny (Wharf Manager)
	CEMEX UK Materials Ltd Northfleet Wharf Botany Marshes Lower Road Northfleet Kent DA1 9BB	Mark Gilliard
	CEMEX UK Materials Ltd Wessex Wharf Hamworthy Poole Dorset BH15 4AB	Steve Smith
	Lafarge Aggregates Gateshead Wharf Southshore Road East Gateshead Industrial Estate Gateshead Tyne and Wear NE8 3AE	Ken Chandler (Wharf Manager)
United Marine Aggregates Ltd	Bristol Channel Aggregates Ltd Junction Cut Avonmouth Old Dock Avonmouth Bristol BS11 9DH	Richard Hastings (Regional Manager)
	Hanson Garston Merseyside	
	Isle of Wight Aggregates Ltd Kingston Wharf Kingston Road East Cowes Isle of Wight PO32 6JS	Brian Tucker
	Isle of Wight Aggregates Ltd Medina Wharf Arctic Road West Cowes Isle of Wight PO31 7PG	Brian Tucker

Company	Wharf	Site Champion
	Solent Aggregates Ltd Basin Road South Portslade Brighton East Sussex BN41 1WF	Bob Heppenstall
	Solent Aggregates Ltd Bedhampton Quay Harts Farm Way Havant Hampshire PO9 1JN	Arthur Farmiloe
	Solent Aggregates Ltd Burnley Wharf Marine Parade Northam Southampton SO14 5JF	Barry Bowman
	Solent Aggregates Ltd North Quay Newhaven East Sussex BN9 0AB	Bob Heppenstall
	Tarmac Ltd North Quay Heysham Morecambe Lancashire LA3 2XF	
	Tarmac Ltd Ramsden Dock Rd Barrow-In-Furness Cumbria LA14 2TW	
	United Marine Aggregates Ltd Church Manorway Erith Kent DA8 1DE	Rick Bodle
	United Marine Aggregates Ltd Murphys Wharf Lombard Wall Charlton London SE7 7SH	Gary Langton
	United Marine Aggregates Ltd Ridham Dock Ridham Dock Road Kelmsley	Jo O'Brien

Company	Wharf	Site Champion
	Sittingbourne Kent ME9 8SR	
Volker Dredging Ltd	N/A	

B: WHARVES OUTSIDE ENGLAND

Company	Wharf	Site Champion
Britannia Aggregates Ltd	N/A	
DEME Building Materials Ltd	DEME Building Materials Flushing Holland	
	DEME Building Materials Hamburg Germany	
Hanson Aggregates Marine Ltd	Hanson Belgium (Antwerp) Hanson Aggregates Belgium N.V. Sint-Jansweg 1 Haven 1554 Kallo Antwerpen Belgium	Bart Van Rijbergen
	Hanson Belgium (Ostend) Hanson Aggregates Belgium N.V. Godetiastraat (no number) Oostende West-Vlaanderen Belgium	Bart Van Rijbergen
	Hanson Belgium (Bruges) Hanson Aggregates Belgium N.V. Lodewijk Coiseaukaai 160 Brugge (Haven) West-Vlaanderen Belgium	Bart Van Rijbergen
	Hanson Belgium (Zeebrugge) Hanson Aggregates Belgium N.V. Lanceloot Blondeellaan 17 Zeebrugge West-Vlaanderen Belgium	Bart Van Rijbergen
	Hanson France (Calais) 9 Rue Salvador Allende 59180 Cappelle La Grande France	

Company	Wharf	Site Champion
	Hanson France (Dunkerque) Lemaire Freres & Fils Centre Tertiaire Les Trois Ponts 30 Rue L'Hermitte B.P. 2/100 59376 Dunkerque Cedex France	
	Hanson Premix Felnex Sand Wharf East Bank Rd Newport NP19 4PP	Marc Thomas
	Hanson South Wales Roath Dock Road Roath Dock Cardiff Docks Cardiff CF10 4ED	Marc Thomas
	Hanson The Netherlands (Amsterdam) Aziëhavenweg 11 Amsterdam The Netherlands	John Van De Aar
	SBV Flushing BV Sorteerb企业 voor Grint en Zand 6 Wester Weg 4382 NM Vlissingen Holland	Henk Strijdonk
Kendall Bros (Portsmouth) Ltd	N/A	
Northwood (Fareham) Ltd	N/A	
Norwest Sand & Ballast Ltd	N/A	
CEMEX UK Marine	N/A	
United Marine Aggregates Ltd	South Wales Sand & Gravel Old Dock Yard Commercial Row Pembroke Dock Pembroke Dyfed SA72 6JU	
	South Wales Sand & Gravel Riverside Wharf Briton Ferry Neath West Glamorgan SA11 2HZ	

Company	Wharf	Site Champion
	South Wales Sand & Gravel Roath Dock Road Roath Dock Cardiff CF10 4ED	
	South Wales Sand & Gravel Swansea Wharf Langdon Road Prince of Wales Docks Swansea West Glamorgan SA1 8QY	
	South Wales Sand & Gravel East Bank Road Felnex Industrial Estate Newport South Wales NP9 0PP	
	Tarmac Ltd Port Penrhyn Penrhyn Wharf Bangor Gwynedd LL57 4HN	
Volker Dredging Ltd	N/A	

APPENDIX III: BMAPA COMPANY VESSELS

Company	Vessels
Britannia Aggregates Ltd	Britannia Beaver
DEME Building Materials Ltd	Charlemagne
Hanson Aggregates Marine Ltd	Arco Adur
	Arco Arun
	Arco Avon
	Arco Axe
	Arco Beck
	Arco Dart
	Arco Dee
	Arco Dijk
	Arco Humber
Kendall Bros (Portsmouth) Ltd	MV Donald Redford
	MV Norstone
Northwood (Fareham) Ltd	MV Donald Redford
	MV Norstone
Norwest Sand & Ballast Ltd	Sand Swan
CEMEX UK Marine	Sand Falcon
	Sand Fulmer
	Sand Harrier
	Sand Heron
	Sand Serin
	Sand Weaver
	Welsh Piper
United Marine Aggregates Ltd	City of Cardiff
	City of Chichester
	City London
	City of Westminster
Volker Dredging Ltd	Britannia Beaver

APPENDIX IV: WORKSHOP 1 INVITEES AND ATTENDEES

Company	Name	Position/Location	Response Received	Attended Workshop
Nominated Contacts				
1	Hanson	Robert Langman	Resources Manager	✓
2	CEMEX	Graham Singleton	Marine Resource Manager	✓
3	UMA	Andrew Bellamy	Resources Manager	✓
4	Northwood	Brian White	General Manager	✓
5	Kendalls	Richard Kendall		✓
6	Lafarge	Malcolm Whittle		✓
7	Volker	Bert Groenewoud		✓
Site Champions and Industry Staff: Wharves				
8	Hanson	Paul Owsianka	Site Champion, Appledore	✓
9	Hanson	Terry Squires	Site Champion, Bridgwater	✓
10	UMA	Brian Tucker	Site Champion, West/East Cowes	✓
11	CEMEX	Keith Wills	Regional Operations Manager	✓
12	CEMEX	Jason Keen	Area Operations Manager	✓
13	CEMEX	Steve Smith	Site Champion, Poole	✓
14	CEMEX	Peter Sheehy	Site Champion, Southampton	✓
15	UMA	Site Champion/Wharf Manager, Avonmouth		✓
16	UMA	Site Champion/Wharf Manager, Portslade		✓
17	UMA	Site Champion/Wharf Manager, Havant		✓
18	UMA	Site Champion/Wharf Manager, Southampton		✓
19	Northwood	Site Champion/Wharf Manager, Fareham		✓
20	Northwood	Site Champion/Wharf Manager, Marchwood		✓
21	Northwood	Nick Eastwood	Production Manager	✓
22	Kendalls	Peter Kendall	Site Champion/Wharf Manager, Portsmouth	✓
23	Kendalls	Paul Stevens	Shovel Driver, Portsmouth	✓
24	Kendalls	Les Hinton	Site Champion/Wharf Manager, Shoreham	✓
Site Champions: Vessels				
25	Hanson	Ray Marshall; Alan Hunton	Vessel Master, Arco Dart	✓
26	Hanson	Keith Stevens; Mick Forster	Vessel Master, Arco Dee	✓
27	CEMEX	Site Champion/Vessel Master, Welsh Piper		✓
28	CEMEX	Site Champion/Vessel Master		✓
29	UMA	Site Champion/Vessel Master, City of Cardiff		✓
30	UMA	Site Champion/Vessel Master, City of Chichester		✓
31	Northwood/ Kendalls	Site Champion/Vessel Master, MV Donald Redford		
32	Northwood/ Kendalls	Site Champion/Vessel Master, MV Norstone		
Local Government Archaeology Officers				
33	ALGAO	Frances Griffith	County Archaeologist, Devon	✓
34	ALGAO	Stephen Reed	Archaeologist, Devon County Council	✓
35	ALGAO	Robert Croft	County Archaeologist, Somerset	✓
36	ALGAO	Steve Wallis	Senior Archaeologist, Dorset County Council	✓
37	ALGAO	Roy Canham	County Archaeologist, Wiltshire	✓
38	ALGAO	David Hopkins	Principal Archaeologist, Hampshire County Council	✓

39	ALGAO	Ruth Waller	County Archaeologist, Isle of Wight	✓	
40	ALGAO	Mark Taylor	Archaeological Officer, West Sussex County Council	✓	✓
Finds Liaison Officers					
41	PAS	Danielle Wootton	Finds Liaison Officer, Exeter	✓	
42	PAS	Ciorstaidh Trevarthen	Finds Liaison Officer, Taunton	✓	✓
43	PAS	Katie Hinds	Finds Liaison Officer, Salisbury	✓	✓
44	PAS	Robert Webley	Finds Liaison Officer, Winchester	✓	✓
45	PAS	Frank Basford	Finds Liaison Officer, Newport		
46	PAS	Liz Wilson	Finds Liaison Officer, Lewes	✓	
Other					
47	The Crown Estates	Mike Cowling	Science and Research Manager	✓	
48	ALSF	Richard Newell	Marine ALSF Science co-ordinator	✓	
49	OPDM	Roger Orpin	Minerals and Waste Planning Division Contract Manager	✓	
50	OPDM	Brian Marker	Head of Minerals Planning Policy Branch	✓	
51	CEFAS	Sian Boyd	Benthic Ecologist		
52	Natural England	Victoria Copley	Marine Operations Adviser	✓	
53	EH	Helen Keeley	Project Officer	✓	
54	EH	Virginia Dellino-Musgrave	Maritime Archaeologist	✓	
55	EH	Peter Murphy	Regional Advisor	✓	✓
56	EH	Gareth Watkins	Historic Environment Projects Officer	✓	
57	EH	Mark Dunkley	Maritime Archaeologist	✓	
58	EH	Ian Oxley	Head of Maritime Archaeology	✓	
59	EH	Kath Buxton	ALSF Programme Manager	✓	
60	EH	Zoe Hazell	Environmental Studies Team	✓	✓
61	NIAN	Alistair Brown	Project Officer	✓	✓
Speakers					
62	WA	Antony Firth	Head of Coastal and Marine Archaeology	✓	✓
63	WA	Euan McNeil	Project Manager	✓	✓
64	WA	Victoria Cooper	Archaeologist (Coastal and Marine)	✓	✓
65	BMAPA	Mark Russell	Development Manager	✓	✓
66	NIAN	Jenni Chambers	Project Officer	✓	✓
67	WA	Mike Trevarthen	Project Officer	✓	✓
68	NHM	Andy Carrant	Curator	✓	
69	NHM	Richard Sabin	Curator	✓	✓
70	Receiver of Wreck	Sophia Exelby	Receiver of Wreck	✓	
71	Receiver of Wreck	Alison Kentuck	Deputy Receiver of Wreck	✓	✓
72	EH	Jeremy Lake	Military Characterisation		
73	EH	John Schofield	Head of Military Characterisation		
74	WA	Jens Auer	Archaeologist (Coastal and Marine)	✓	✓

APPENDIX V: WORKSHOP 2 INVITEES AND ATTENDEES

Company	Name	Position/Location	Response Received	Attended Workshop	
Nominated Contacts					
1	Hanson	Robert Langman	Resources Manager	✓	✓
2	CEMEX	Graham Singleton	Marine Resource Manager	✓	
3	Lafarge	Malcolm Whittle		✓	
4	Norwest	Nick Brown		✓	
Site Champions and Industry Staff: Wharves					
5	Hanson	Mark Hughes	Site Champion, Hull	✓	✓
6	Hanson	Stewart Laws	Wharf Staff, Hull	✓	✓
7	Hanson	Paul Wilson	Wharf Staff, Hull	✓	✓
8	Hanson	Kevin Muir	Production Manager, Tees/Tyne		
9	Hanson	Site Champion, Tees			
10	Hanson	Site Champion, Tyne			
11	Lafarge	Ken Chandler	Wharf Manager, Gateshead		
12	Lafarge	Site Champion, Gateshead			
13	CEMEX	Paul McIlvenny	Wharf Manager, Jarrow		
14	CEMEX	Site Champion, Jarrow			
15	CEMEX	Paul Clarke	Wharf Manager, Billingham	✓	
16	CEMEX	Site Champion, Billingham		✓	
17	Norwest	Site Champion, Mersey		✓	
18	UMA	Site Champion/Wharf Manager, Barrow			
19	UMA	Site Champion/Wharf Manager, Garston			
20	UMA	Site Champion/Wharf Manager, Heysham			
Site Champions: Vessels					
21	Hanson	Masters of vessels operating in the North			
22	Hanson	Masters of vessels operating in the North			
Local Government Archaeology Officers					
23	ALGAO	Richard Newman	County Archaeologist, Cumbria	✓	
24	ALGAO	David Mason	County Archaeologist, Durham		
25	ALGAO	Dave Evans	Archaeology Manager, Humber Archaeology Partnership	✓	
26	ALGAO	Ruth Atkinson	Humber Archaeology Partnership	✓	
27	ALGAO	Peter Iles	County Archaeologist, Lancashire		
28	ALGAO	Beryl Lott	County Archaeologist, Lincolnshire	✓	
29	ALGAO	Louise Jennings	Lincolnshire County Council	✓	✓
30	ALGAO	Sarah Jane Farr	Merseyside Archaeological Officer Merseyside Archaeological Service		
31	ALGAO	David Heslop	County Archaeologist, Tyne & Wear		
32	ALGAO	Hugh Winfield	Archaeologist, North East Lincolnshire Council	✓	
33	ALGAO	Kevin Leahy	Principal Keeper, North Lincolnshire Museum		
34	ALGAO	Neil Campling	County Archaeologist, North Yorkshire	✓	
35	ALGAO	Robin Daniels	Archaeology Officer, Tees Archaeology	✓	✓
36	ALGAO	John Oxley	City of York Archaeologist	✓	
Finds Liaison Officers					
37	PAS	Nick Herepath	Finds Liaison Officer, Liverpool	✓	
38	PAS	Dot Bruns	Finds Liaison Officer, Preston	✓	
39	PAS	Adam Daubney	Finds Liaison Officer, Lincoln	✓	

40	PAS	David Evans	Finds Liaison Officer, York	✓	
41	PAS	Simon Holmes	Finds Liaison Officer, York	✓	✓
42	PAS	Robert Collins	Finds Liaison Officer, Newcastle	✓	
43	PAS	Lisa Staves	Finds Liaison Officer, Scunthorpe	✓	
Other					
44	Natural England	Ian Reach	Marine Operations Advisor	✓	
45	The Crown Estates	Mike Cowling	Science and Research Manager	✓	
46	ALSF	Richard Newell	Marine ALSF Science co-ordinator	✓	
47	CEFAS	Sian Boyd	Benthic Ecologist		
48	BMAPA	Mark Russell	Development Manager	✓	
49	EH	Helen Keeley	Project Officer	✓	
50	EH	Virginia Dellino-Musgrave	Maritime Archaeologist	✓	
51	EH	Sarah Cole	ALSF Advisor North East	✓	
52	EH	Gareth Watkins	Historic Environment Projects Officer		
53	EH	Mark Dunkley	Maritime Archaeologist		
54	EH	Ian Oxley	Head of Maritime Archaeology	✓	
55	EH	Kath Buxton	ALSF Programme Manager	✓	
56	EH	Zoe Hazell	Environmental Studies Team	✓	
57	NPA	Lisa Keys	Access to Archaeology Project Officer, Lake District National Park Authority	✓	
58	EH	Jane Sidell	Regional Advisor	✓	
59	EH	Jacqui Huntley	Regional Advisor	✓	✓
60	EH	Vanessa Straker	Regional Advisor	✓	
61	EH	Jim Williams	Regional Advisor	✓	
62	EH	Peter De Figueiredo	Regional Advisor	✓	
63	EH	Tim Allen	Regional Advisor		
64	EH	Ann Bond	Regional Advisor		
65	EH	Lucy Bourne	Regional Advisor	✓	
66	EH	Alan Byrne	Regional Advisor	✓	
67	EH	Steve Brindle	Regional Advisor		
68	EH	Clare Campbell	Regional Advisor	✓	
69	EH	Jenny Chesher	Regional Advisor		
70	EH	Andrew Davison	Regional Advisor	✓	✓
71	EH	Andrew Derrick	Regional Advisor		
72	EH	Rory O Donnell	Regional Advisor	✓	
73	EH	Keith Emerick	Regional Advisor		
74	EH	Francis Kelly	Regional Advisor		
75	EH	Timothy Jones	Regional Advisor	✓	
76	EH	Isla MacNeal	Regional Advisor		
77	EH	Roger Mascal	Regional Advisor		
78	EH	Keith Miller	Regional Advisor		
79	EH	David Morgan	Regional Advisor		
80	EH	John Neale	Regional Advisor	✓	
81	EH	Debbie Priddy	Regional Advisor	✓	
82	EH	Martin Roberts	Regional Advisor	✓	
83	EH	Angela Simco	Regional Advisor		
84	EH	Phillip Walker	Regional Advisor	✓	
85	EH	Katharine Fletcher	Regional Advisor		
86	EH	Judith Nelson	Regional Advisor		
87	EH	Ross Simmonds	Regional Advisor		
88	EH	Robert Perrin	Regional Advisor	✓	
89	EH	Amanda Smith	Regional Advisor		
90	EH	Steve Williams	Regional Advisor	✓	

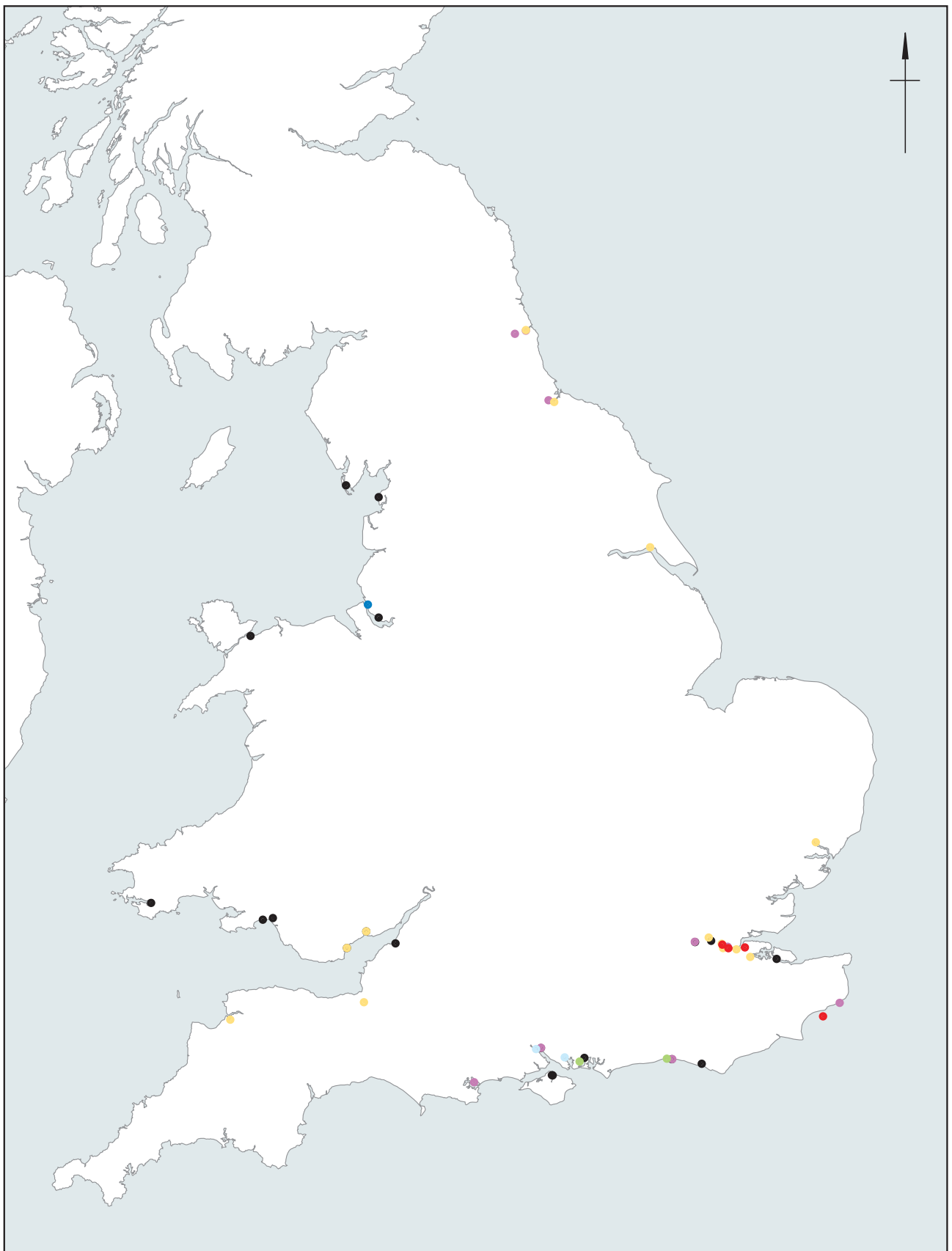
Speakers					
91	Receiver of Wreck	Sophia Exelby	Receiver of Wreck	✓	
92	Receiver of Wreck	Alison Kentuck	Deputy Receiver of Wreck	✓	
93	University of York	Geoff Bailey	Lecturer	✓	
94	York Archaeology	Ian Panter	Conservator	✓	✓
95	Royal Armouries	Leeds		✓	
96	Hull Maritime Museum	Arthur Credland	Keeper of Maritime History	✓	
97	WA	Victoria Cooper	Archaeologist (Coastal and Marine)	✓	✓
98	WA	Euan McNeill	Project Manager	✓	✓
99	WA	Stuart Leather	Project Manager	✓	✓
100	NIAN	Jenni Chambers	Project Officer	✓	✓


APPENDIX VI: WORKSHOP 3 INVITEES AND ATTENDEES

	Company	Name	Position/Location	Response Received	Attended Workshop
Nominated Contacts					
1	Hanson	Robert Langman	Resources Manager	✓	
2	CEMEX	Graham Singleton	Marine Resource Manager	✓	✓
3	CEMEX	Joe Holcroft		✓	
4	UMA	Andrew Bellamy	Resources Manager	✓	✓
5	Britannia/ Volker	Richard Fifield	Marine Resources Manager	✓	✓
6	Northwood	Brian White	General Manager	✓	
7	Kendalls	Richard Kendall		✓	
8	Norwest	Nick Brown			
9	Lafarge	Malcolm Whittle		✓	
10	DEME	Frank Rimell	Resident Manager		
Site Champions and Industry Staff: Wharves					
11	Hanson	Shaun Jury	Site Champion/Wharf Manager, Denton		
12	Hanson		Site Champion/Wharf Manager, Dagenham		
13	Hanson	Stuart King	Site Champion/Wharf Manager, Greenhithe		
14	Hanson/ CEMEX	Alex Smiles	Site Champion, Ipswich Old Power Station	✓	
15	Brett/ Britannia	John Houston	Production Manager, Ipswich West Bank		
16	Hanson		Site Champion/Wharf Manager, Purfleet		
17	Hanson	Mike Smith	Site Champion/Wharf Manager, Frindsbury	✓	
18	CEMEX	David Whitby	Site Champion/Wharf Manager, Charlton	✓	
19	CEMEX	Bob Jones	Wharf Manager, Dover	✓	
20	CEMEX		Site Champion, Dover	✓	
21	CEMEX	Mark Gilliard	Wharf Manager, Northfleet	✓	
22	CEMEX	Adam Johnson	Site Champion, Northfleet	✓	
23	CEMEX	Steve Wright	Site Champion/Wharf Manager, Portslade	✓	
24	UMD	Bob Heppenstall	Production Manager, Portslade	✓	
25	UMD	Arthur Farmiloe	Wharf Manager, Havant	✓	✓
26	UMD	Darren Taylor	Site Champion, Havant	✓	
27	UMD	Barry Bowman	Site Champion/Wharf Manager, Southampton	✓	
28	UMD		Site Champion/Wharf Manager, Newhaven		
29	UMD	Rick Bodle	Site Champion/Wharf Manager, Erith	✓	
30	UMD	Gary Langton	Wharf Manager, Charlton	✓	
31	UMD	Paul Tallents	Site Champion, Charlton	✓	✓
32	UMD	Jo O'Brien	Wharf Manager, Ridham	✓	
33	UMD		Site Champion, Ridham	✓	
34	Britannia	Mark Wraight	Production Manager	✓	✓
35	Britannia	Ashley Wilkinson	Site Champion, Northfleet	✓	✓
36	Britannia	Alan Hunt	Site Champion, Northfleet	✓	✓
37	Britannia	Oliver Brown	Site Champion, Ipswich		
38	Britannia	Bill Hunt	Site Champion, West Thurrock		
39	Britannia	Tony Paine	Site Champion, Cliffe	✓	✓
40	Britannia	John Osmond	Site Champion, Cliffe	✓	✓
Site Champions and Industry Staff: Vessels					
41	Hanson		Site Champion/Vessel Master, Arco Adur		
42	Hanson		Site Champion/Vessel Master, Arco Arun		

43	Hanson	Site Champion/Vessel Master, Arco Avon			
44	Hanson	Site Champion/Vessel Master, Arco Axe			
45	Hanson	Site Champion/Vessel Master, Arco Beck			
46	Hanson	Mick Forster	Site Champion/Vessel Master, Arco Dart	✓	✓
47	Hanson	Site Champion/Vessel Master, Arco Dee			
48	Hanson	Graham Price	Site Champion, Arco Dijk	✓	✓
49	Hanson	Site Champion/Vessel Master, Arco Humber			
50	CEMEX	Site Champion/Vessel Master, Sand Falcon			
51	CEMEX	Site Champion/Vessel Master, Sand Fulmar			
52	CEMEX	Site Champion/Vessel Master, Sand Harrier			
53	CEMEX	Site Champion/Vessel Master, Sand Heron			
54	CEMEX	Site Champion/Vessel Master, Sand Serin			
55	CEMEX	Site Champion/Vessel Master, Sand Weaver			
56	CEMEX	Site Champion/Vessel Master, Welsh Piper			
57	UMD	Site Champion/Vessel Master, City of Cardiff			
58	UMD	Site Champion/Vessel Master, City of Chichester			
59	UMD	Site Champion/Vessel Master, City of London			
60	UMD	Site Champion/Vessel Master, City of Westminster			
61	Britannia/ Volker	Site Champion/Vessel Master, Britannia Beaver			
62	Kendalls/ Northwood	Site Champion/Vessel Master, MV Donald Redford			
63	Kendalls/ Northwood	Site Champion/Vessel Master, MV Norstone			
64	DEME	Site Champion/Vessel Master, Charlemagne			
Local Government Archaeology Officers					
65	ALGAO	Andrew Woodcock	County Archaeologist, East Sussex		
66	ALGAO	Owen Bedwin	County Archaeologist, Essex	✓	
67	ALGAO	John Williams	County Archaeologist, Kent		
68	ALGAO	Kathryn Stubbs	Senior Planning and Archaeology Officer, Corporation of London	✓	✓
69	ALGAO	Rob Whytehead	Head of Greater London Archaeology Advisory Service	✓	✓
70	ALGAO	Brian Ayers	County Archaeologist, Norfolk	✓	
71	ALGAO	Keith Wade	County Archaeologist, Suffolk	✓	✓
Finds Liaison Officers					
72	PAS	Liz Andrews- Wilson	Finds Liaison Officer, Lewes	✓	✓
73	PAS	Lisa Staves	Finds Liaison Officer, Scunthorpe		
74	PAS	Dot Bruns	Finds Liaison Officer, Preston		
75	PAS	Caroline McDonald	Finds Liaison Officer, Colchester		
76	PAS	Andrew Richardson	Finds Liaison Officer, Maidstone	✓	✓
77	PAS	Faye Simpson	Finds Liaison Officer, London	✓	
78	PAS	Erica Darch	Finds Liaison Officer, Gressenhall		
79	PAS	Nellie Bales	Finds Liaison Officer, Gressenhall	✓	
80	PAS	Faye Minter	Finds Liaison Officer, Bury St Edmunds	✓	
Other					
81	EH	Virginia Dellino- Musgrave	Maritime Archaeologist	✓	✓
82	EH	Helen Keeley	Project Officer	✓	
83	EH	Kath Buxton	ALSF Programme Manager	✓	✓
84	EH	Jane Sidell	Regional Science Advisor		
85	EH	Jim Williams	Regional Science Advisor	✓	
86	EH	Vanessa Straker	Regional Science Advisor	✓	

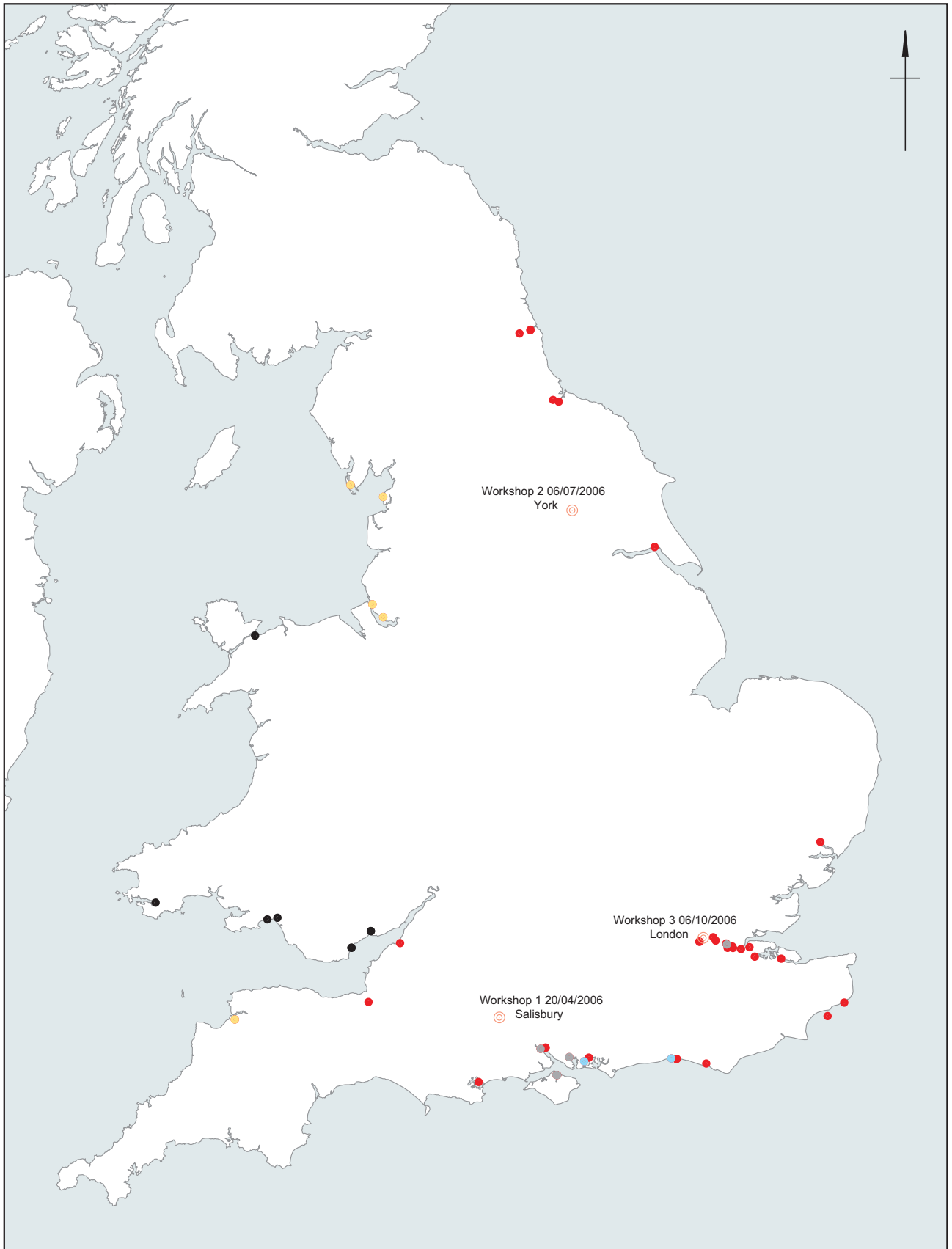
87	BMAPA	Mark Russell	Development Manager	✓	
88	DCLG	Brian Marker	Head of Minerals Planning Policy Branch (Retired)		
89	Natural England	Ian Reach	Marine Operations Advisor	✓	
90	PAS	Roger Bland	Head of PAS	✓	
91	ALSF	Richard Newell	Marine ALSF Science co-ordinator	✓	
92	The Crown Estates	Mike Cowling	Science and Research Manager	✓	✓
93	CEFAS	Sian Boyd	Benthic Ecologist		
94	NIAN	Danielle Schreve	Project Manager		
95	NIAN	Barbara Silva	Project Officer	✓	
96	Receiver of Wreck	Sophia Excelby		✓	
97	WA	Russell Gant	Systems Developer	✓	✓
Speakers					
98	UCL	Ole Grøn	Honorary Visiting Professor	✓	
99	NHM	Andy Carrant	Curator of Ice Age Mammals	✓	
100	UCL	Gustav Milne	Senior Lecturer	✓	✓
101	EH	John Schofield	Head of Military Programmes	✓	
102	BAAC	Mark Evans	Chairman, British Aviation Archaeology Council	✓	
103	EH	Vince Holyoak	Senior Policy Officer	✓	✓
104	Receiver of Wreck	Alison Kentuck	Deputy Receiver of Wreck	✓	✓
105	PAS	Michael Lewis	Deputy Head of Scheme	✓	✓
106	WA	Victoria Cooper	Archaeologist (Coastal and Marine)	✓	✓
107	WA	Antony Firth	Head of Coastal and Marine	✓	✓
108	WA	Euan McNeill	Project Manager	✓	✓




<ul style="list-style-type: none"> ● Britannia Aggregates Ltd ● Hanson Aggregates Marine Ltd ● Kendall Bros (Portsmouth) Ltd ● Northwood (Fareham) Ltd ● Norwest Sand & Ballast Ltd ● CEMEX UK Marine ● United Marine Aggregates Ltd 				
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	Scale:	1:3500,000	Illustrator:	KMN
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Location of BMAPA company wharves.

Figure 1



<ul style="list-style-type: none"> ● Wharves at which site visits took place ● Wharves not visited ● Wales not under the remit ● No suitable time arranged ● Sand only ● Staff attended workshop instead 				Digital Map Data © (2004) XYZ Digital Map Company. This material is for client report only © Wessex Archaeology. No unauthorised reproduction.		
	Date:	12/10/06	Revision Number:	0		
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Location of sites visits and workshops.

Figure 2







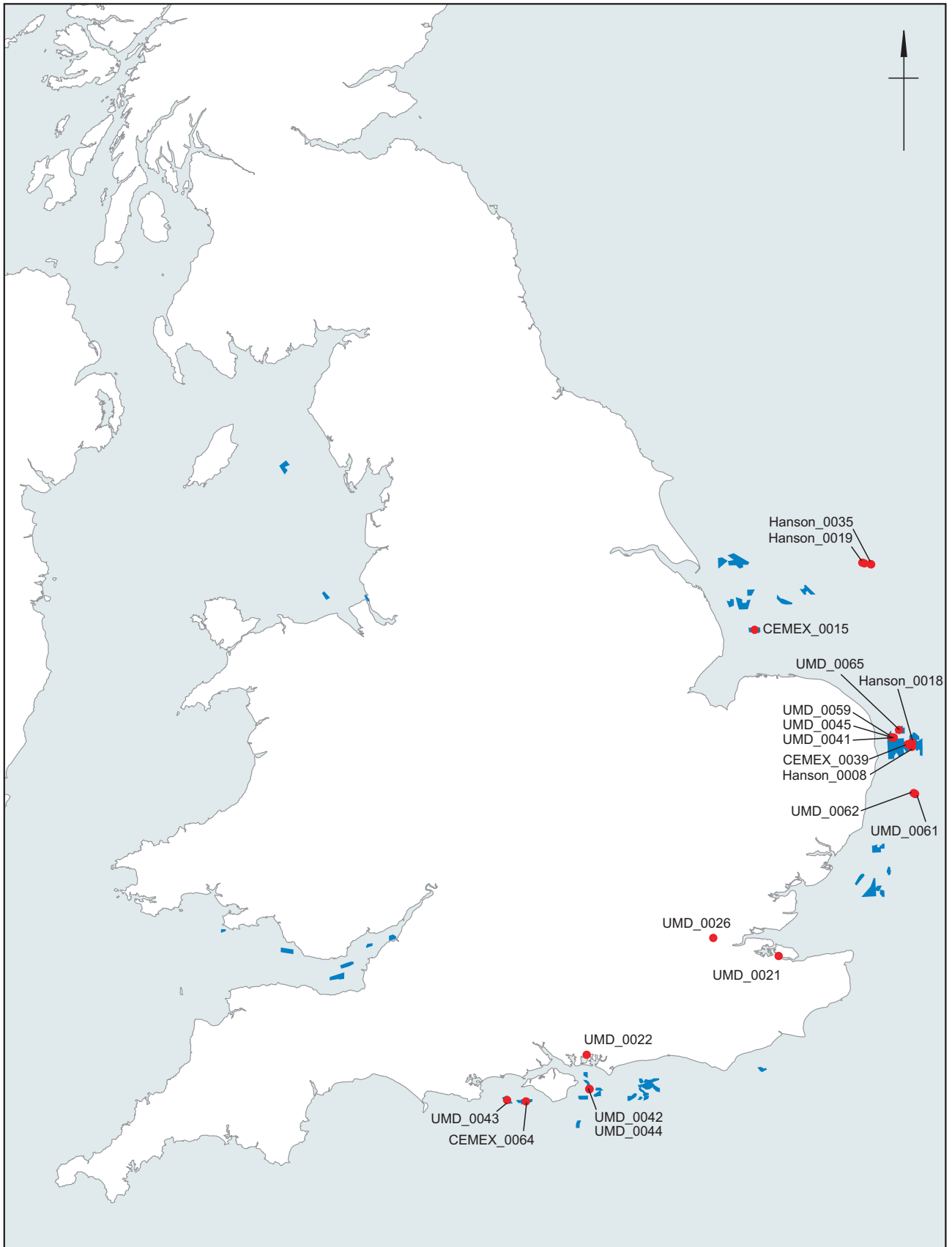
Date: 01/10/06


Illustrator: KMN

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The Maritime Archaeology and Wildlife Weekend, Hurst Castle.

Figure 5



<ul style="list-style-type: none"> ● Discovery location ▢ Licence area 			
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Location of discoveries reported between October 2005 and September 2006.

Figure 6



Plate 1: Block wheel from Hanson's SBV Flushing wharf in Holland October 2005.



Plate 2: Brake pedal from a North American Aviation Company United Marine Aggregates Ltd at Greenwich August 2006.



Plate 4: Part from a Supermarine Attacker from the Hanson vessel Arco Dart February 2006 a.



Plate 5: Part from a Supermarine the Hanson vessel Arco Dart Fe



Plate 7: Possible Cannonball from Solent Aggregates Ltd in Newhaven May 2006.



Plate 8: Possible Fishing Net Weights from United Marine Aggregates Ltd at Ridham Dock August



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