

London Gateway

Guidance on Implementing the Archaeological Protocol

ver. 26/05/11

1. PREAMBLE

- 1.1. This document provides guidance on how to respond to archaeological discoveries in the course of dredging for London Gateway Port Ltd (LGPL).
- 1.2. It explains the implementation of the Archaeological Protocol dated March 2009 that forms part of the Detailed Dredge Plan submitted as part of the application for the Tidal Works Approval (TWA 2)¹.
- 1.3. This document incorporates practical lessons from implementing the Archaeological Protocol. The Protocol is accompanied by the following guidelines and recording forms to assist in initial reporting:
 - *Procedural Note to the Dredging Protocol*², version 2011-03-21.
 - *Guidelines for Identifying Finds of Archaeological Interest and Handling Artefacts*, v. 220610
 - *Anomalies in Channel – Archaeological Recording Form*, v. 220610
 - *Items found Onboard – Archaeological Recording Form*, v. 220610
 - *Items found in Reclaim – Archaeological Recording Form*, v. 220610
- 1.4. This document also incorporates material from other documentation attached to the Detailed Dredge Plan, notably *Maritime Archaeology Methods and Procedures (MAM&P)*³.
- 1.5. For the absence of doubt, this document and the other notes, guidelines and forms are secondary to the Archaeological Protocol and other documents that form part of the Detailed Dredge Plan submitted as part of the application for TWA 2.
- 1.6. It should be noted that under the Merchant Shipping Act 1995 (MSA 1995) there is a statutory obligation on anyone who finds or takes possession of any wreck in UK waters to notify the Receiver of Wreck. Adherence to the protocol set out here will satisfy this legal obligation. Failure to adhere to the protocol may give rise to a criminal offence under the MSA 1995. 'Wreck' includes flotsam, jetsam, derelict and lagan found in or on the shores of the sea or any tidal water. It includes a ship, aircraft or hovercraft, parts of these, and their cargo or equipment, irrespective of age.
- 1.7. The Protection of Military Remains Act 1986 (PMRA 1986) applies to any aircraft which has crashed in military service. If a site comprises the remains of, or a substantial part of, an aircraft that has crashed in military service, the site is a 'protected place'. It is an offence to tamper with, damage, move, remove or unearth remains within a protected place unless authorised in accordance with a licence.

¹ The Archaeological Protocol is available via Business Collaborator, numbered LG-WSA-ENV-CEP-C7013-RPT-ARC-3015.

² LOR/DI JV Document Number: LG-LDI-PS1-C2501-RPT-MAR-2556.

³ Maritime Archaeology Methods and Procedures is available via Business Collaborator, numbered LG-WSA-ENV-CEP-C7013-RPT-ARC-3013.

- 1.8. Dredging for London Gateway is being carried out by Laing O'Rourke / Dredging International (LOR/DI)⁴. The dredging contract is monitored for LGPL by Cullen, Grummitt and Roe (CGR).
- 1.9. Archaeological advice is provided to LGPL by the Archaeological Liaison Officer (ALO), Gill Andrews. Marine archaeological services are provided by Wessex Archaeology (WA).
- 1.10. TWA 2 is regulated by the Port of London Authority (PLA). The archaeological curator for marine works is English Heritage (EH).
- 1.11. Numerous anomalies have been noted near Sea Reach 1. LGPL is providing for LOR/DI dredgers to have onboard an archaeologist who will carry out an archaeological watching brief during the initial dredging of zones 37 and 38 (which are in the vicinity of Sea Reach 1). The scope, extent and duration of the archaeological watching brief will be determined by LGPL in discussion with the ALO.

2. DEFINITIONS

- 2.1. For the purposes of this document, an 'anomaly' is any indirect evidence that may indicate the presence of archaeological material on the seabed. 'Anomalies' may comprise⁵:

- Localised bathymetric features that are inconsistent with the overall form of the seabed at that place;
- Geophysical anomalies such as features evident in sidescan or magnetometer data;
- Other information indicating the presence of material on the seabed, such as fouls or obstructions recorded by fishermen, either recently or in the past.

Obstructions encountered by LOR/DI in the course of dredging are addressed as 'strikes', below.

- 2.2. For the purposes of this document, a 'strike' is an event during dredging that indicates archaeological material on the seabed may have been impacted by dredging activity. A strike may comprise:

- Tangible impact apparent from dredging equipment on the seabed, such as a physical obstruction to the draghead or sudden interruption to the flow of dredged material;
- Material of archaeological interest being apparent in dredging equipment when it is observed onboard, such as material caught or trapped in the draghead⁶;

⁴ Clause 4.24 of the Conditions of Contract attached to the dredging contract includes provisions on items of archaeological interest found on site.

⁵ These bullets provide a factual definition of what an anomaly is, which does not change the scope of the Protocol. It should be noted, however, that the Protocol include 'other Anomalies' as per footnote 9, below.

⁶ The Protocol refers to 'debris found in the TSHD's draghead, dredge pump, hopper ...' (Protocol, March 2009, 3i, second bullet).

- A substantial quantity of material of archaeological interest (such as fragments of ship timbers) being apparent in dredged material in the hopper⁷ or at some other point on board.

3. SCOPE

3.1. This Protocol has been developed to deal with:

- Anomalies already notified to LOR/DI⁸;
- Discoveries of new anomalies by other parties working on behalf of LGPL that might indicate the presence of archaeological material⁹;
- Strikes that occur during the dredging works¹⁰;
- Other discoveries of archaeological material during dredging work, such as artefacts that are found on dredgers or in dredged material without a strike having been noted¹¹;
- The handling of artefacts and other types of find made as a result of strikes or other discoveries¹².

3.2. The Archaeological Protocol will be adhered to at all times unless varied by agreement between LGPL, the Port of London Authority (PLA) and English Heritage.

4. ANOMALIES NOTIFIED TO THE DREDGING CONTRACTOR

4.1. The co-ordinates of known Anomalies as provided by PLA and included in LOR/DI's Contract Document as Appendix F (and subsequent updates) have been incorporated into positioning equipment on board all dredgers so that at all times during the dredging LOR/DI is aware of areas of known Anomalies.

4.2. LOR/DI is ensuring that all employees crewing the dredgers are aware of the known Anomalies and the obligations under the Protocol.

4.3. Whilst carrying out the dredging works in the areas of known Anomalies, LOR/DI pays attention and will notify LGPL of any possible strikes in these locations¹³ under the procedure for strikes, below.

5. DISCOVERIES OF NEW ANOMALIES

5.1. Where new Anomalies are discovered by any party carrying out work on behalf of LGPL (such as bathymetric, geophysical or benthic monitoring, for example), LGPL should be informed as soon as possible¹⁴.

⁷ See footnote 6.

⁸ Protocol, March 2009, p.1 para. 5.

⁹ Protocol, March 2009, p.1 para. 4 'This protocol has been developed to deal with ... other Anomalies / strikes that may occur ...'

¹⁰ Protocol, March 2009, p.2. para. 3.

¹¹ Statutory obligation under MSA 1995; already being satisfied by LOR/DI.

¹² Maritime Archaeology Methods and Procedures, Appendix V: Finds Management.

¹³ Protocol, March 2009, page 2. para. 3.

- 5.2. Third parties carrying out work on behalf of LGPL should report new Anomalies to LGPL using:

Anomalies in the Channel: Archaeological Recording Form

- 5.3. LGPL will notify LOR/DI of the position of the Anomaly. LOR/DI will enter the position of the new anomaly into the positioning equipment on board all dredgers so that at all times during the dredging LOR/DI is aware of new Anomalies.
- 5.4. LOR/DI will ensure that all employees crewing the dredgers are aware of the new Anomalies and the obligations under the Protocol.
- 5.5. Whilst carrying out the dredging works in the areas of new Anomalies, LOR/DI will pay attention and notify LGPL of any strikes in these locations under the procedure for strikes, below¹⁵.
- 5.6. LGPL will notify the Archaeological Liaison Officer (ALO) and Wessex Archaeology (WA) by issuing details of the anomaly on Business Collaborator (BC).
- 5.7. WA will acknowledge receipt of the notification.
- 5.8. WA will provide preliminary advice to LGPL and the ALO about the character of the anomaly and the potential for archaeological material being present. WA will seek to identify the source of the anomaly and relate it to any previously known finds, wrecks or anomalies on the basis of the information provided by LGPL in the Archaeological Reporting Form. WA will raise any queries with LGPL and provide any additional initial advice that might be required.
- 5.9. On the basis of advice about the archaeological character and potential of the anomaly, LGPL – in discussion with the ALO – will decide whether any further actions are required. LGPL will inform WA of the decision as to the course of action.
- 5.10. WA will prepare a summary report on the anomaly, noting the course of action that has been decided, and submit it to LGPL. The summary report will be in a format suitable for distribution to LGPL and LOR/DI staff.
- 5.11. LGPL will issue the report to LOR/DI, to the PLA and to English Heritage.

6. STRIKES

6.1. Strikes attributable to non-archaeological causes

- 6.1.1. Strikes that are clearly demonstrated to be attributable to a non-archaeological cause should be reported by LOR/DI to LGPL but need not be considered further under the Protocol.

¹⁴ This clause is not specific to LOR/DI; it encompasses any third party working for LGPL who happens to come across an anomaly that might be relevant to LGPL's development of London Gateway. It includes, therefore, surveys being carried out by different contractors for a variety of purposes in connection with London Gateway. However, it should be noted, as per footnote 9 above, that the March 2009 Protocol included provision for 'other Anomalies'. This clause does not create an obligation on LOR/DI, or any other contractor, to actively search for anomalies.

¹⁵ Parallel with 4.3, based on provision in Protocol, page 2 para. 3.

- 6.1.2. LGPL will notify the ALO and WA of instances where a strike clearly attributed to a non-archaeological cause has occurred.

6.2. Strikes – immediate actions

- 6.2.1. Under the Protocol, strikes that indicate impacts to archaeological material on the seabed must be reported by LOR/DI to LGPL as soon as reasonably practicable and no later than 24 hrs after such occurrence¹⁶.
- 6.2.2. LOR/DI will enter the position of the strike into its dredgers' onboard positioning equipment.
- 6.2.3. LOR/DI will relocate its dredging operations and notify all dredging vessels accordingly to ensure no dredging is carried out in the area of the strike until LGPL has given notice that dredging may resume in the area of the strike.
- 6.2.4. LOR/DI may continue dredging operations in all other areas outside the area of the strike.
- 6.2.5. LOR/DI will, as soon as practicable and as appropriate, examine the draghead¹⁷ and other areas where arisings have been deposited in order to intercept any material of archaeological interest and assess the character of the strike.
- 6.2.6. LOR/DI will report the strike to LGPL using:
Anomalies in the Channel: Archaeological Recording Form
- 6.2.7. The completed form will be emailed by LOR/DI to the LGPL staff nominated by LGPL.
- 6.2.8. LOR/DI will promptly supply to LGPL such other information about the strike (e.g. dredging trackplots) as is reasonably requested by LGPL.
- 6.2.9. A detailed flowchart for this procedure has been set out in Appendix 1 of LOR/DI's *Procedural Note to the Dredging Protocol*.

6.3. Strikes – subsequent actions

- 6.3.1. As soon as it has been informed of a strike indicating archaeological material on the seabed, LGPL will notify the Archaeological Liaison Officer (ALO) and Wessex Archaeology (WA) by issuing details of the strike on Business Collaborator (BC). The document issue will include a copy of the Archaeological Recording Form and any supplementary information (e.g. photographs).
- 6.3.2. WA will acknowledge receipt of the notification.
- 6.3.3. WA will provide preliminary advice to LGPL and the ALO about the character of the strike and the potential for further archaeological material being present. WA will seek to identify the source of the strike and relate it to any previously known finds, wrecks or anomalies on the basis of the description, photographs and positioning

¹⁶ Protocol, March 2009, page 2, para. 4i: 'Notification shall be as soon as practicable and not later than 24 hrs after such occurrence'.

¹⁷ The March 2009 Protocol referred to 'debris found in the TSHD's draghead, dredge pump, hopper ...' (Protocol, March 2009, 3i, second bullet).

information provided in the Archaeological Reporting Form. WA will raise any queries with LGPL and provide any additional initial advice that might be required.

- 6.3.4. On the basis of advice about the archaeological character and potential of the strike, LGPL – in discussion with the ALO – will decide whether dredging in the vicinity of the strike may resume or whether further investigation is required.
- 6.3.5. If LGPL decides that dredging may resume in the vicinity of the strike, LGPL will notify LOR/DI accordingly, and inform WA. WA will prepare a report on the strike, noting that dredging has resumed, and submit it to LGPL. LGPL will issue the report to LOR/DI, to the PLA and to English Heritage.
- 6.3.6. If the archaeological character and potential of the strike is such that further investigation is warranted before a decision can be made, LGPL – in discussion with the ALO – will set out the scope and timescale of such investigations in a Method Statement. The Method Statement will be issued to English Heritage for information.
- 6.3.7. Further investigations may include¹⁸:
- Archaeological review of desk-based information in conjunction with dredging trackplots and existing geophysical data;
 - Additional survey (e.g. bathymetric, geophysical, video) undertaken and interpreted with archaeological advice;
 - Archaeological diving investigation in accordance with London Gateway Port: Channel Clearance and Dredging – Maritime Archaeology Methods and Procedures (LG-WSA-ENV-CEP-C7013-RPT-ARC-3013).
- 6.3.8. The investigation will be carried out in accordance with the Method Statement, taking account of any comments received from English Heritage.
- 6.3.9. The results of the investigation will be reported to LGPL. LGPL will issue the report to English Heritage for information.
- 6.3.10. On the basis of the further investigations that have been reported, LGPL – in discussion with the ALO and taking into account any comments received from English Heritage – will decide what course of action should be taken. Actions may include:
- Removal or excavation of archaeological material in accordance with London Gateway Port: Channel Clearance and Dredging – Maritime Archaeology Methods and Procedures (LG-WSA-ENV-CEP-C7013-RPT-ARC-3013).
 - Removal of non-archaeological material by LOR/DI¹⁹.
 - And/or resumption of dredging in the vicinity of the strike.
- 6.3.11. LGPL will inform WA of the decision as to the course of action.
- 6.3.12. WA will prepare a summary report on the strike, noting the results of further investigation and the course of action that has been decided, and submit it to LGPL. The summary report will be in a format suitable for distribution to LGPL and LOR/DI

¹⁸ LGPL would normally be responsible for any such further investigations.

¹⁹ Protocol, March 2009, page 3, ii, third bullet.

staff. Preparation of summary reports will include obtaining specialist advice on artefacts internally within WA and externally from third parties.

- 6.3.13. LGPL will issue the summary report to LOR/DI, to the PLA and to English Heritage.
- 6.3.14. Where appropriate, the PLA will issue a Notice to Mariners.
- 6.3.15. Once the proposed action has been implemented and completed, LGPL will notify LOR/DI that dredging may resume in the area of the strike.

7. OTHER DISCOVERIES OF ARCHAEOLOGICAL MATERIAL DURING DREDGING²⁰

7.1. Circumstances of discovery and importance

7.1.1. Archaeological discoveries may be made in the following circumstances without a strike having been noted:

- In the dredging equipment (e.g. draghead), when inspected periodically (e.g. when the draghead is lifted), or at some other point on board²¹;
- On reclaimed material or in equipment associated with reclamation.

7.1.2. Finds that are not associated with a strike can be very important. For example, the repeated discovery of finds in an area over several weeks, months or even years might build up a pattern that indicates a hitherto unknown archaeological feature, which can be dealt with before a strike occurs.

7.1.3. Further, some 'stray' finds may be hugely significant in their own right because they are rare or provide an insight into the past that would not occur otherwise.

7.2. Immediate actions

7.2.1. Under the Protocol, archaeological discoveries should be reported by LOR/DI to LGPL as soon as possible and no later than 24 hrs after they have been noted²².

7.2.2. LOR/DI will report the discovery to LGPL using, as appropriate:

Items Found Onboard: Archaeological Recording Form

Items Found in Reclamation Areas: Archaeological Recording Form

7.2.3. LOR/DI will promptly supply to LGPL such other information about the discovery (e.g. dredging trackplots) as is reasonably requested by LGPL.

7.2.4. Detailed flowcharts (Marine; Reclamation) for these procedures have been set out in Appendix 2 of LOR/DI's *Procedural Note to the Dredging Protocol*.

²⁰ Statutory obligation under MSA 1995; already being satisfied by LOR/DI.

²¹ The March 2009 Protocol referred to 'debris found in the TSHD's draghead, dredge pump, hopper ...' (Protocol, March 2009, 3i, second bullet).

²² Protocol, March 2009, page 2, para. 4i: 'Notification shall be as soon as practicable and not later than 24 hrs after such occurrence'.

7.3. Subsequent actions

- 7.3.1. LGPL will notify the Archaeological Liaison Officer (ALO) and Wessex Archaeology (WA) by issuing details of the discovery on BC. The document issue will include a copy of the Archaeological Recording Form and any supplementary information (e.g. photographs).
- 7.3.2. WA will acknowledge receipt of the notification.
- 7.3.3. WA will provide preliminary advice to LGPL and the ALO about the character of the discovery and the potential for further archaeological material being present. WA will seek to identify the discovery and relate it to any previously known finds, wrecks or anomalies on the basis of the description, photographs and positioning information provided in the Archaeological Reporting Form. WA will raise any queries with LGPL and provide any additional initial advice that might be required.
- 7.3.4. On the basis of advice about the archaeological character and potential of the discovery, LGPL – in discussion with the ALO – will decide whether any further actions are required. LGPL will inform WA of the decision as to the course of action.
- 7.3.5. In some instances, the character of the material that has been reported may indicate that a ‘strike’ has occurred without having been apparent during dredging. If a discovery indicates that such a strike may have occurred, the subsequent actions will take account of the guidance for strikes set out in the preceding section.
- 7.3.6. WA will prepare a summary report on the discovery, noting the course of action that has been decided, and submit it to LGPL. The summary report will be in a format suitable for distribution to LGPL and LOR/DI staff. Preparation of summary reports will include obtaining specialist advice on artefacts internally within WA and externally from third parties.
- 7.3.7. LGPL will issue the summary report to LOR/DI, to the PLA and to English Heritage.

8. HANDLING ARTEFACTS AND OTHER FINDS²³

8.1. Introduction

- 8.1.1. Each find is part of the historic environment and so warrants appropriate treatment if uncovered by dredging.
- 8.1.2. General provision in respect of finds from London Gateway is set out in *London Gateway Port: Channel Clearance and Dredging – Maritime Archaeology Methods and Procedures* (LG-WSA-ENV-CEP-C7013-RPT-ARC-3013).
- 8.1.3. Initial guidance on finds of archaeological interest is provided in *Guidelines for Identifying Finds of Archaeological Interest and Handling Artefacts* (LG-WSA-ENV-CEP-7013-MST-ARC-4000).
- 8.1.4. WA will provide toolbox talks to LGP and LOR/DI staff, to include provision of training materials.
- 8.1.5. WA will provide stocks of suitable packaging, labelling and storage materials.

²³ Maritime Archaeology Methods and Procedures, Appendix V: Finds Management.

8.2. 'Special Finds'

8.2.1. Some categories of find are 'special' because they are subject to health and safety considerations or legal obligations additional to the dredging contract or consent.

- Ordnance, firearms, explosives etc. will be treated first according to LOR/DI's procedures for ordnance. Some ordnance may also be of archaeological importance and should be reported, but only after first satisfying procedures for ordnance.
- Human remains will be covered, protected and treated with respect. Human remains may need to be reported to the Coroner or police. Such reporting will be carried out by WA so it is essential that the discovery of human remains is reported promptly.
- Aircraft remains are automatically protected under the Protection of Military Remains Act 1986. Actions with respect to aircraft crash sites are subject to Crashed Military Aircraft of Historical Interest: Licensing of Excavations in the UK - Notes for Guidance of Recovery Groups (Revised June 2009). Liaison with the Joint Casualty and Compassionate Centre will be carried out by WA so it is essential that the discovery of aircraft remains is reported promptly.
- Wreck is subject to statutory requirements in respect of notification to the Receiver of Wreck and the determination of ownership. Notification of the Receiver of Wreck is incorporated into the procedures below.

8.2.2. Where additional measures are required for dealing with 'special' finds they will be included in advice from WA in consultation with the ALO.

8.3. Immediate Handling of Finds²⁴

8.3.1. Time is of the essence in dealing with waterlogged archaeological material. If organic items are allowed to dry out this can cause irreparable damage. Care in handling items is paramount.

8.3.2. In the event of artefact recovery the finds should be stored in the following manner:

- Any artefacts should be kept damp, or preferably totally submerged (in sea water), in ziplock bags which are then stored in ridged plastic boxes to prevent damage.
- Any sediments of interest will be collected and double bagged into zip-lock bags.
- Items should be kept wet, covered, and stored in a cool, dark area if possible.

8.3.3. If particularly delicate or significant items are recovered then advice will be sought from an archaeologist.

8.3.4. These steps are necessary because removal from a wet, dark and sediment-rich environment can quickly result in renewed degradation that may damage or wholly destroy the find and the information it can provide.

²⁴ Guidelines for Identifying Finds of Archaeological Interest and Handling Artefacts, v. 220610

8.4. Additional Recording and Transfer of Finds

- 8.4.1. Provision for the initial handling and storage of archaeological material, and its transfer to LGPL's Site Office, is set out in the detailed flowcharts appended to LOR/DI's *Procedural Note to the Dredging Protocol*.
- 8.4.2. LGPL will provide suitable facilities for the temporary storage of archaeological material at its Site Office.
- 8.4.3. WA will attend LGPL's Site Office to carry out supplementary recording and to transport finds to WA Salisbury for interim storage.
- 8.4.4. WA will hold items of wreck to the order of the Receiver of Wreck pending resolution of procedures under the Merchant Shipping Act 1995.

8.5. Finds Handling, Processing and Conservation²⁵

- 8.5.1. Finds will normally be held by WA. For extensive assemblages and large, unwieldy or otherwise sensitive finds, provision may be made – by prior agreement – for finds to be transferred to and held by an appropriate institution.
- 8.5.2. In the case of large, unwieldy or otherwise sensitive finds, special arrangements will be made for handling, storing, transporting etc. the find.
- 8.5.3. WA maintains facilities at its Salisbury base to hold passively a reasonable quantity of small and medium sized finds. This provision will be maintained for up to one year after recovery pending implementation of decisions on disposal/discard. WA may hold finds for more than one year after recovery if decisions and/or their implementation are delayed.
- 8.5.4. All retained finds will be registered in WA's Finds Management database and any special requirements noted. A monitoring and maintenance programme will be prepared and implemented.
- 8.5.5. All retained finds will be processed in accordance with the Institute of Field Archaeologists' *Standard and guidance for the collection, documentation, conservation and research of archaeological material* (2005). All finds will be recorded and labelled appropriately.
- 8.5.6. Objects that require immediate conservation treatment to prevent deterioration will be treated according to guidelines laid down in *First Aid for Underwater Finds* (Robinson 1998). WA will make a full record of any treatment given and these records will form part of the archive.
- 8.5.7. Finds handling and initial processing will normally be carried out by WA staff based in Salisbury. In the event that finds need to be assessed by WA staff onboard dredgers or at any local facility, or external advice is required onboard or at any local facility, WA will make appropriate provision.
- 8.5.8. All material held by WA will be subject to a Conservation Assessment within four weeks after recovery to gauge whether special measures are required while the material is being held. This Conservation Assessment will be carried out by WA and/or other appropriate specialists. In some cases it may be more appropriate to

²⁵ Maritime Archaeology Methods and Procedures, Appendix V: Finds Management.

carry out all or part of the Conservation Assessment at an earlier stage - onboard immediately following recovery, or at LGPL's Site Office for example.

- 8.5.9. WA will implement recommendations arising from the Conservation Assessment for the duration that finds are held by WA.
- 8.5.10. Where no special measures are recommended, finds will be conserved, bagged and boxed in accordance with guidelines set out in the United Kingdom's Institute for Conservation's *Conservation Guidelines No 2* (UKIC 1984).

8.6. Subsequent Administration of Finds

- 8.6.1. WA will prepare quarterly reports on implementation of the Archaeological Protocol, according to a schedule agreed with the Archaeological Liaison Officer. Reports will include summary records.
- 8.6.2. Each quarterly report will be submitted to the PLA, English Heritage, the Receiver of Wreck and Southend Museum.
- 8.6.3. Where necessary, WA will prepare droits relating to wreck for submission to the Receiver of Wreck in accordance with the Merchant Shipping Act 1995.
- 8.6.4. WA will prepare MIDAS-compliant data for submission to the NMR and to the HERs of Essex and Kent.

8.7. Post-excavation Assessment and Disposal/Discard

- 8.7.1. Where finds (including structure) and samples have been recovered, post-excavation assessment will be initiated within one year of recovery, in order that it can inform decisions by the Receiver of Wreck. The assessment of finds will address the disposal/discard of finds and any further cleaning, stabilisation or other conservation measures required prior to deposition. (MAM&P para 1.19 et seq.)
- 8.7.2. It is anticipated that finds of archaeological interest arising from dredging will form part of the project archive and will be deposited with Southend Museum.
- 8.7.3. Finds that prove not to be of archaeological interest, or which fall within categories agreed with Southend Museum as being suitable for discard, will be discarded by WA. Where appropriate, WA may apply the agreed discard policy to the relevant finds at an earlier stage, for example when attending LGPL or LOR/DI premises to pick up finds for transport to WA Salisbury. A record of all items discarded will be maintained as part of the project archive.
- 8.7.4. Deposition and disposal of wreck is subject to satisfaction of the requirements of the Merchant Shipping Act 1995.

Wessex Archaeology
May 2011

London Gateway

Protocol for Reporting Finds of Archaeological Interest



DP WORLD



Handout 1: London Gateway Protocol for Reporting Finds of Archaeological Interest

Protocol

The London Gateway Port development will provide the UK with a new deep water container port on the main artery running into the capital, the River Thames. To ensure that the largest ships in the world have access to the new port, the channel will be deepened by up to three metres in a 300 metre wide stretch running from the new port out into the estuary past Shoeburyness.

As the main route into London, the Thames has seen a high density of maritime traffic for centuries and is an area of high potential for shipwrecks and other archaeological discoveries. In order to mitigate the impacts this large scale dredging operation would have on the archaeological heritage of the Thames, DP World and Wessex Archaeology have developed a Protocol for Reporting Finds of Archaeological Interest.

The aim of the Protocol for Reporting Finds of Archaeological Interest is to provide a system for reporting and investigating archaeological finds uncovered during dredging operations. The Protocol meets the legal requirements under the Merchant Shipping Act 1995, among other statutory obligations.

Process

Under the Protocol, staff who make a discovery report it to their superintendent onboard the vessel or foreman on site. The superintendent/foreman then passes this report to the Environment Team.

Once a find is reported through the secure web-based reporting system, Wessex Archaeology's Protocol team are automatically alerted to the presence of a new find. Staff investigate every find with the help of specialists from around the country and compile detailed reports. The reports are then sent to the discoverer and all relevant authorities.

Awareness

Dredging International have already undertaken toolbox talks for all of their vessels that have worked at LGP. Wessex Archaeology are conducting a further Awareness Programme to support the Protocol which includes visits to vessels and companies to give 'toolbox talks' regarding finds of archaeological interest.

This pack contains advice and guidance in support of the Protocol for Reporting Archaeological Discoveries.

It includes:

- Handout 1 – Introduction
- Handout 2 – What are 'finds'?
- Handout 3 – Photographing finds
- Handout 4 – Conservation & Storage
- Handout 5 – Prehistoric Finds
- Handout 6 – Metalwork & Concretions
- Handout 7 – Munitions & Ordnance

If any of these are missing, or you would like further copies, please contact Wessex Archaeology.

For further information please contact:
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Handout 2: What are finds and strikes? And why should they be reported?

Finds

A 'find' is an object with archaeological potential; this means that it has been impacted by people and may be able to tell us about their past lives. A find can include objects on the seafloor as well as those brought to the surface. We include eco-artefacts as finds; these are remains of animals and plants, such as mammoth and peat, which help us to understand the past human landscape.

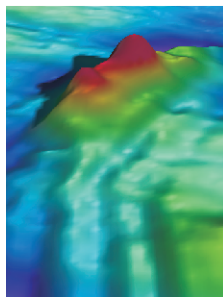


Strikes

A strike is when the dredging or clearance operations result in an impact on an unknown object or structure, and could include the recovery of finds, although not always. The strike could be the result of something natural or modern, but it could equally indicate something archaeological in nature, and therefore the precise time and location of the impact should be recorded and reported under the protocol, along with any recovered finds. Further work will be undertaken to try to identify the source of the strike.

Anomalies

Anomalies are a little different from finds in that they are not automatically recognised as archaeological. Instead, anomalies are visual or digital differences that need to be further investigated. Anomalies should always be considered as possibly important archaeological sites until it has been determined otherwise.



Importance

Archaeological finds are important because they can shed light on past human use of the landscape, sea and seabed. The information that discoveries provide can help to understand the human past and protect it for future generations, and share it with the public.



Example

The discovery of this glass bottle on a wreck site in the Thames allowed archaeologists to date the wreck site to the 17th century and prove that it was a wreck of high importance. Prior to the finding of this bottle, archaeologists were unsure how old the wreck was or what its identity was. They have been since able to link this site with another in the Thames and show that they are both likely to be part of the same shipwreck. The site is almost certain to be the wreck of the *London*, a warship which was part of the squadron which brought King Charles II back to England upon the restoration of the monarchy and which was later torn apart in a massive gunpowder explosion while at anchor in the Thames.





Handout 3: Photographing finds

What is the photograph for?

Photographs of new discoveries are very important. They provide a lot of information about each object and can be sent to specialists around the country.

Tips

Make sure there is a scale in the photo. A scale sheet for small finds is provided. If you do not have the scale sheet provided you can use a ruler or known object, such as a coin or biro, to help show the size of the find.



To avoid light spots in the photo make sure any excess water is wiped off.

Make sure the photo is sharp.

Do not include too many objects in one shot.

Take photographs at different angles; the more photographs and views, the easier it is to interpret the artefact.

Take additional close-up pictures of markings or features that you think are unusual.

For larger objects use a scale such as the one below marked clearly in 10cm intervals.



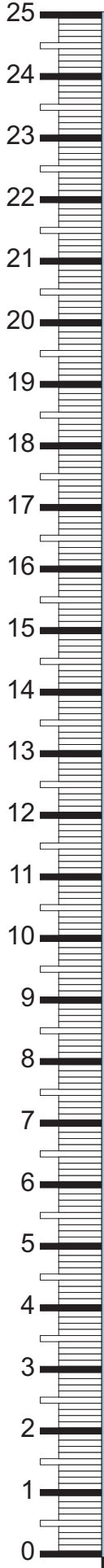
Checklist

Can someone tell from the photos:

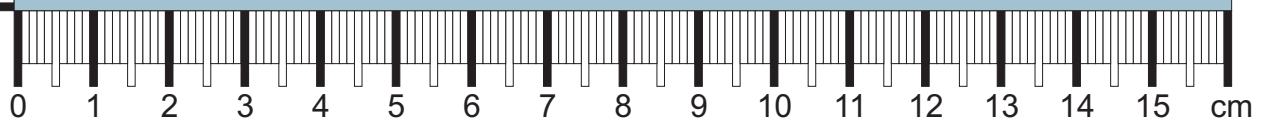
- What size the object is.
- What shape it is.
- What type of object it is.
- What it is made of.
- Whether it has any unusual markings.



cm



London Gateway Protocol
Scale correct if printed 100% at A4





Handout 4: Conservation and Storage

Marine finds are very fragile and can dry out quickly. Don't be fooled; even seemingly robust objects such as cannonballs can quickly degrade if they are not treated correctly.

What do I do with a wet find?

1 – Place the find into a plastic container and completely cover with seawater. If the find is large, cover as much as possible with seawater and wrap the rest in wet fabric or polythene.

2 – Use the tags in the Recording Box to label the find with the location, time and date of discovery. If proving difficult, label the container or wrapping and store in a cold dark area. Finds should be labelled as per following example:

Example: **LORDI 1234**
F123 Zone 31
Discovered by R. Steel 21/9/10 12.00



The detrimental effects of rapid drying on iron shot

3 – Check the condition of the find regularly. Change the seawater when necessary and note any cracks or flaking. Ensure transfer to land is arranged at the earliest opportunity.

What do I do with a dry find?

If a find is completely dry and showing signs of deterioration do not place it back into water. Ensure the find is labelled and stored in a dark, cool place.

Three rules

- Wet – Keep the object wet by covering with water in an appropriately sized container.
- Cool – The hotter something is the more likely it will corrode so place the artefact somewhere cool.
- Dark – Place the artefact away from direct contact with light.

Things to avoid

- Supermarket bags – they contain harmful chemicals
- Drying – when wet finds dry quickly they crack and disintegrate
- Tissue paper – tissue will degrade in water
- Bubblewrap – textured wrapping can leave impressions on soft finds
- Placing different finds together – some types of material can be affected by contact with others
- Metal containers – metal can cause problems such as corrosion
- Glue – Some glues are harmful; if a find breaks don't fix it





Handout 5: Prehistoric finds

Some of the first things that spring to mind when you think of underwater archaeology are shipwrecks and aircraft wrecks. Whilst shipwrecks are important, there is a huge range of other interesting and significant artefacts that can be found under the sea.

Some of the most important finds from the seabed are stone tools. Stone tools are the oldest known technology used by man. These implements were first used in Africa 2.5 million years ago and until metal was discovered, stone was the primary resource for making tools.

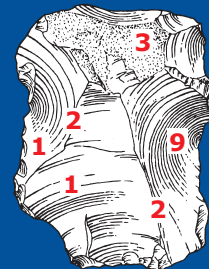
Whilst a large majority of tools are made from flint, in places where this was not available other stones were used instead.

It is not only the tools which are of interest to archaeologists, flint-knapping produces piles of waste flakes. Archaeologists examine the flakes to see what sort of tools were being made.

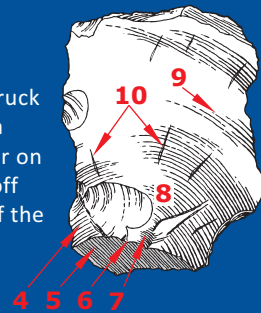
See below for some examples of handaxes, arrowheads and flakes.

How to recognise stone tools and flakes

Stone tools and flakes have recognisable features and shapes that indicate they were made by humans. The **negative flake scars** and **bulb of percussion** are some of the easiest to find.



The **bulb of percussion** is a curved raised lump left behind when a flake is struck off. The **negative scar** is a concave cone-shaped scar on the flake where it came off the core - the opposite of the bulb of percussion.



- | | |
|-------------------------------|------------------------------|
| 1 Negative Flake Scars | 6 Point of Percussion |
| 2 Ridges | 7 Cone of Percussion |
| 3 Cortex | 8 Bulb of Percussion |
| 4 Bulb Scar | 9 Conical Ripples |
| 5 Butt | 10 Fissures |

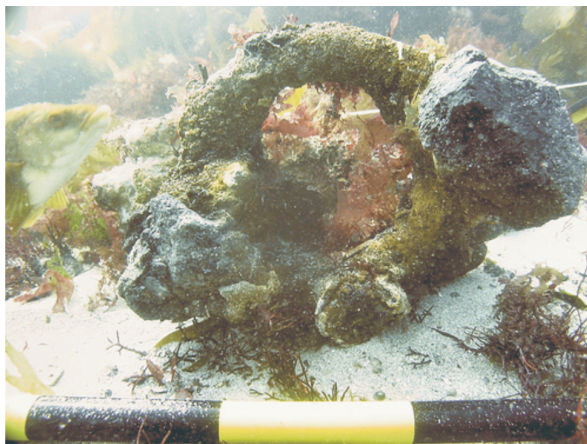




Handout 6: Metalwork and Concretions

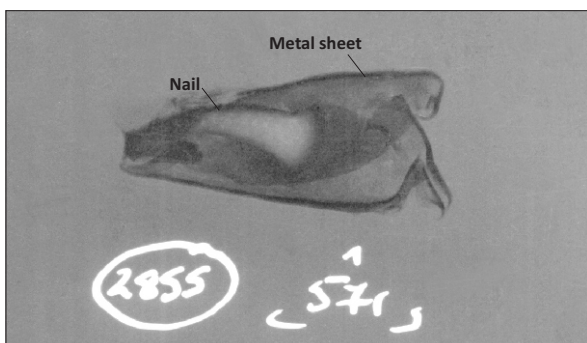
What is a concretion?

Concretions are dense clumps of hard material that develop on the surface of iron or other ferrous metals as they corrode. A concretion can form one clump around an object or become large sections on iron shipwrecks. Within a concretion the object gradually corrodes away, sometimes leaving only a hollow space. It is easy to see if a concretion has been freshly pulled off an iron object as it has a bright orange rust colour.



Why are concretions important?

Concretions can easily hide the shape of an object, making them impossible to identify. However you should not assume that concretions are unimportant; x-rays can sometimes reveal what lies underneath the concretion, or injecting filler can make a mould of the hollow shape.



Recording

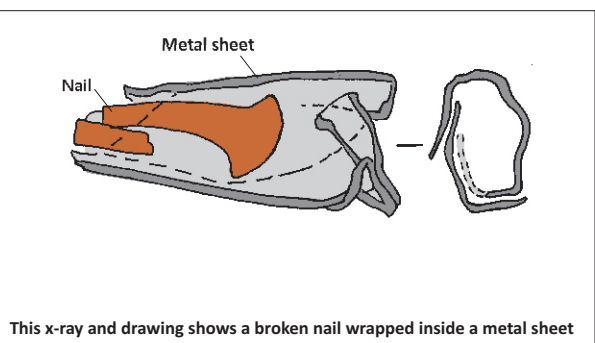
As with other types of artefacts, the more information we have the better. When recording concretions useful information includes length, width and diameter.

Keep your eyes peeled

Some people miss concretions as they can look like rocks from the seafloor. If you find something you're not sure about, report it.



A concretion can look like a rock



This x-ray and drawing shows a broken nail wrapped inside a metal sheet



Handout 7: Munitions and Ordnance

Always follow Company Guidelines on the **SAFE TREATMENT OF MUNITIONS** when they are discovered

Despite long periods spent underwater munitions can still be extremely dangerous and should always be treated with caution. The appropriate response when dealing with munitions is to report them to the Explosives Ordnance Disposal staff in line with UXO procedure.

How common are munitions?

Up to 10% of the bombs that fell on and around the UK during WWII failed to function and so far only a fraction of these have been recovered. In addition to these 'blind' munitions, ordnance from both world wars was dumped at sea and munition on board sunken vessels are rarely salvaged.



Dummy shell



Reporting munitions

Always follow safe working procedures when dealing with munitions. Before reporting munitions under the archaeological finds procedure they must be made safe and identified as Free From Explosives (FFE) by the Explosive Ordnance Disposal (EOD) Staff. This must be confirmed by the issue of a 'Free From Explosives' certificate. Once the items have been confirmed as safe and suitable for handling they should be reported as normal through the protocol. If you have any queries regarding the reporting of munitions please contact your superintendent or foreman.



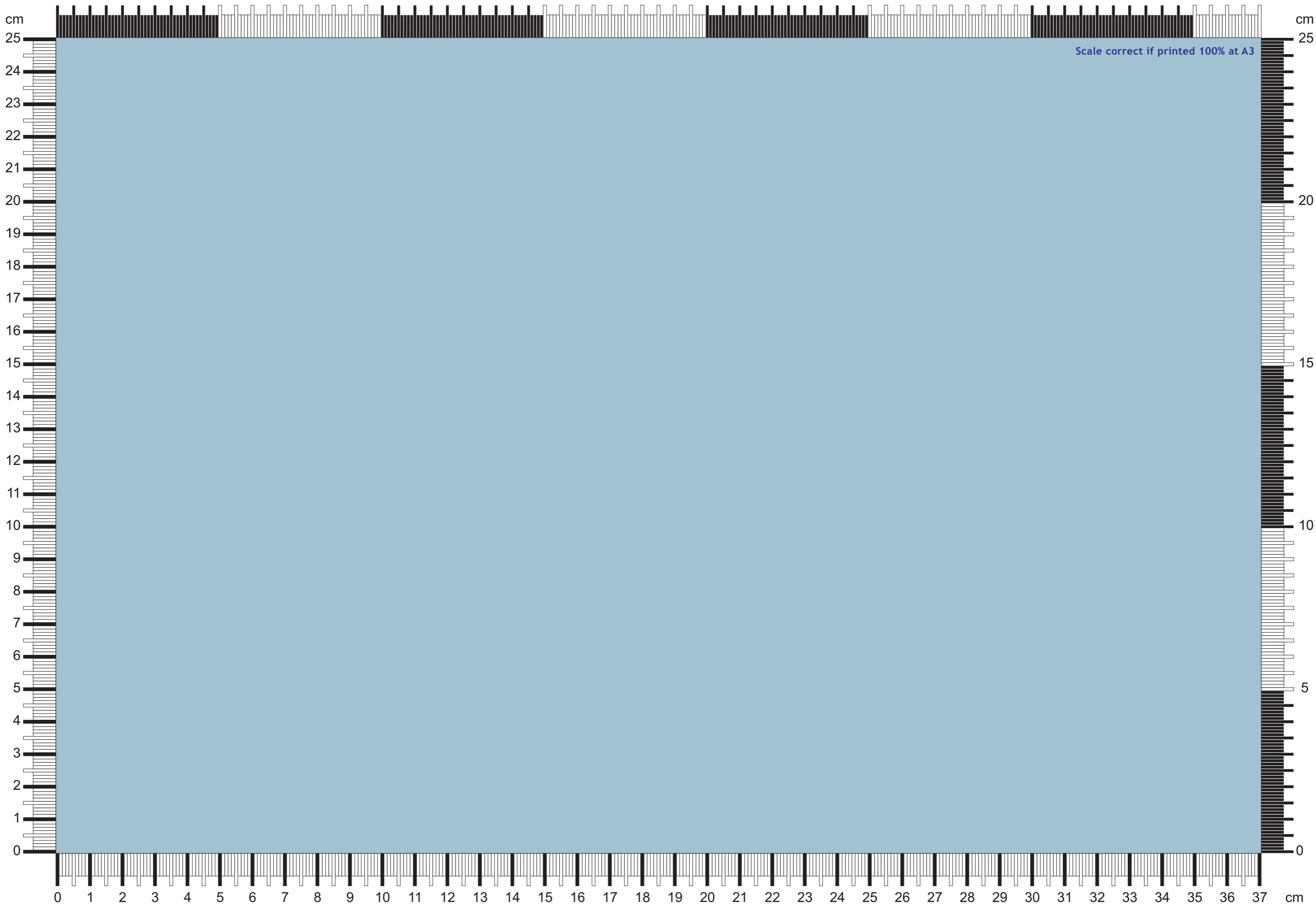
Cannon



Mauser



Cannon





What will you find?

What is discovered helps to find out about the past.

It helps to protect important sites.

It shows the richness of our marine historic environment.

Leather & organics



Pottery and glass



Tools & cargos



Ship timbers & fittings



Ordnance & weapons

that are free from explosives



Bones, tusks & teeth



If you find something that you think might be of archaeological or historical interest, please report and deliver it to the site offices if it is safe to do so. If in any doubt please contact the Explosives Ordnance Disposal Staff or the Environment Team before touching the item.

We remind you it is not permitted to remove any item from the site and all archaeological items must be reported.

Prepared by

Wessex Archaeology 



TOOLBOX TALK

ARCHAEOLOGY and CULTURAL HERITAGE

WHAT?

As part of the measures to protect the environment during the development at LGP, conditions have been placed on construction activities that aim to protect Archaeology and Cultural Heritage. These measures include a 'Protocol' for reporting finds of archaeological interest. A protocol is simply a procedure - in this case a system of reporting archaeology up the management chain.



Carronade (short cannon)

WHY?

Archaeology and cultural heritage are important for understanding how past societies lived, worked and interacted. For example, recent archaeological discoveries have pushed back the boundaries of human existence in the British isles as far back as 900,000 years ago. Of relevance to LGP is the rich maritime history of the Thames. For many thousands of years the river has been an important artery for trade and communication, and later as the main artery to London. This covers prehistory right through to the modern period.

Finds from LGPs dredging activities have already made a significant contribution to our understanding of the past use of the Thames. What you report could contribute to this understanding as well!



Wooden barrel

DO:

- ✓ Report anything you suspect is archaeology or cultural heritage (i.e. it is older than 1960).
- ✓ Report the find to your supervisor or line manager.
- ✓ Make sure the details are recorded (exact location, date, time, activity etc.) as per the supplied recording forms.
- ✓ Keep the item protected in a suitable container (if small enough) in a cool, dark place.
- ✓ If the item came from seawater, keep it immersed in seawater in the container.
- ✓ If the item is dry, keep it dry and protected.
- ✓ Handle all finds with care.
- ✓ Label finds with appropriate information.

DON'T:

- ✗ DON'T wait to report the finds.
- ✗ DON'T remove any concretion, sediment or dirt
- ✗ DON'T leave the finds where they could be damaged or deteriorate.
- ✗ DON'T allow wet finds to dry out.



X-ray of Mauser C96 Pistol

Prepared by

