



**Queen Elizabeth Class Capital Dredge Project
Her Majesty's Naval Base Portsmouth**

**Archaeological Monitoring and Mitigation:
Written Scheme of Investigation**

Prepared for:

Boskalis Westminster Limited
Westminster House,
Crompton Way
Segensworth West
Fareham
PO15 5SS

On behalf of:

Defence Infrastructure Organisation

Prepared by:

Wessex Archaeology
Portway House
Old Sarum Park
Salisbury
Wiltshire
SP4 6EB

www.wessexarch.co.uk





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Victoria Lambert compiled the Written Scheme of Investigation and Kitty Foster prepared the illustrations. Caroline Budd managed the project for Wessex Archaeology and quality assurance was carried out by Euan McNeil and Caroline Budd.



Queen Elizabeth Class Capital Dredge Project Her Majesty's Naval Base, Portsmouth

Archaeological Monitoring and Mitigation: Written Scheme of Investigation

1 INTRODUCTION

1.1 Project Background

- 1.1.1 Wessex Archaeology was commissioned by Boskalis Westminster Limited (BWL), the dredging contractor, on behalf of the Defence Infrastructure Organisation (DIO) to prepare a Written Scheme of Investigation (WSI) for the Queen Elizabeth Class (QEC) Capital Dredge Project. The project comprises the capital dredging of areas within Her Majesty's Naval Base (HMNB) Portsmouth, Hampshire (**Figure 1**) in order to allow access for QEC aircraft carriers.
- 1.1.2 A draft Archaeological WSI was produced in 2013 by Royal HaskoningDHV (RHDHV, ref. 9W6446). The present WSI document comprises the updated WSI that will account for the mitigation appropriate to the full life cycle of the QEC Project with respect to the required dredging activities. The proposed mitigation measures in this WSI will be reassessed and will be enhanced by site and process specific Method Statements which will be produced and agreed for each measure and work stage implemented as appropriate.
- 1.1.3 This WSI covers the capital dredging works only. Works related to the refurbishment of the Middle Slip Jetty (MSJ) are covered in a separate WSI (Royal HaskoningDHV 2015a). A monitoring programme for the HMS *Boyne* will be agreed by Historic England and DIO in due course and do not fall under the remit of this WSI.
- 1.1.4 This WSI is accompanied by the following appendices:
- *Appendix 1: Actions on the dredging vessel - anomalies on the seabed or finds recovered from the seabed;*
 - *Appendix 2: Actions on the dredging vessel - anomalies on the seabed or finds recovered from the seabed;*
 - *Appendix 3: Actions for the Project Manager; and*
 - *Appendix 4: HMNB Portsmouth Approach Channel Dredging and Associated Works Project - Archaeological Written Scheme of Investigation - Supplementary Figures and Historic Environment Gazetteer*
- 1.1.5 Supplementary figures have been prepared by RHDHV (2015b) in support of this WSI and are included as an appendix to this document (**Appendix 4**).
- 1.1.6 The Marine Management Organisation (MMO) has issued a Marine Licence (No.: L/2014/00101) that includes conditions related to the implementation of measures to mitigate any potential negative impacts of the scheme on archaeology and cultural heritage. The MMO Consent Decision document (Report and EIA consent decision report



no.: MLA/2012/00474) states that the following conditions, specifically in relation to the dredging activities, should be undertaken in order to mitigate against potential impacts:

- *the format and content of a watching brief to be conducted in areas of identified archaeological potential;*
- *a protocol for reporting archaeological discoveries;*
- *an updated archaeological WSI to address any further survey programmes to be enacted before, during and after dredging;*
- *a geoarchaeological deposit model to be produced in agreement with Historic England incorporating all viable data generated; and*

1.1.7 Once prepared, each of these conditions should be agreed with Historic England (formerly English Heritage) three months prior to the start of the proposed capital dredge programme.

1.1.8 The report goes on to state that:

“There are a number of sites and features of archaeological and historic environment interest that may be affected by the proposed development. However, [Historic England] are satisfied that appropriate mitigation measures are to be put in place both during and post construction to minimise these impacts.”

1.1.9 It is in response to these conditions and the required programme of mitigation that this document has been prepared.

1.1.10 In addition, all activities should obey legal obligations in respect of archaeological material as it relates to the obligation to report 'wreck' under the Merchant Shipping Act 1995, and be aware of the requirements of the Protection of Military Remains Act 1986.

1.2 Development Description

1.2.1 Details of the QEC Capital Dredge Project are taken from the Environmental Statement (ES) (Royal HaskoningDHV 2012a) and BWL's *Project Execution Plan for Queen Elizabeth Class (QEC) Capital Dredge Project, Her Majesty's Naval Base (HMNB) Portsmouth* (2014). The main elements of the proposed improvement works covered by the Marine Licence include:

- *capital dredging (deepening and localised widening) of an existing approach channel to the Naval Base and the turning circle and berthing pocket at the Naval Base; and*
- *refurbishment of Middle Slip Jetty (MSJ).*

1.2.2 This WSI is concerned only with the capital dredging works. A separate WSI covers the works related to the refurbishment of the MSJ (Royal HaskoningDHV 2015a) and, as stated above, the post-dredge monitoring of the HMS *Boyne* also falls beyond the remit of this WSI.

1.2.3 The Project has been designed to allow access for two QEC Aircraft Carriers within HMNB Portsmouth, whereby capital dredging will be undertaken to modify the alignment, depth and localised widening of the existing approach channel (Portsmouth Approach) and inner harbour area of Portsmouth Harbour, as well as to create a turning area and deeper berth pocket to the frontage of Middle Slip, Victory and Sheer Jetties in order to accommodate the berthing of one QEC.



1.2.4 The proposed QEC Project that this WSI refers to only includes berthing capacity for one Aircraft Carrier, although it is likely that a second berth will be constructed in the future.

1.2.5 Further details are provided below for the proposed works specifically relevant to this WSI.

Capital dredging of the Approach Channel and Berthing Pocket

1.2.6 The proposed scheme involves deepening the main Harbour approach channel and Harbour entrance to 10.8m below Chart Datum (CD). As a result the inner harbour channel will be dredged to a depth of 11.0m below CD and the berthing pocket to 13.8m below CD. It is apparent that Hamilton Bank, a previously undredged area, will have a significant amount of material removed from its location. The total volume of dredged material arising from the proposed capital dredging activities will be approximately 3.2 million m³. Unless a beneficial use can be found for the material, the dredge material will be deposited at the Nab Tower licensed offshore disposal ground, located 15km to the south-east of the eastern shoreline of the Isle of Wight.

1.2.7 The method of dredging will be dependent on the existing sediment types. The vast majority of the dredging work will be undertaken using a Trailing Suction Hopper Dredger (TSHD), that targets gravel and sand sized sediments. The worst case scenario for the work will comprise the use of a back-hoe dredger and accompanying barge positioned alongside, which will be necessary for the removal of stiff clays.

1.2.8 Dredging will take place within five defined Zones A to E within the approach channel (**Appendix 4 Figure 4.1**). The following vessels are currently specified for use in each zone:

- *Crestway TSHD for Zones A, C, D and E;*
- *Shoalway TSHD for the Hamilton Bank part of Zone A;*
- *Manu Pekka BHD for Zone B, D and E; and*
- *Strekker grab dredger for the pre-dredge clearance campaign and to be on standby for obstruction removal during the dredging works.*

1.2.9 Computer systems and displays on each vessel, linked to a differential GPS system and radio tide gauge, give the dredge master continuous visual information on the exact position of the dredger and draghead. Grids will be installed across the draghead to prevent larger debris and Unexploded Ordnance (UXO) from entering the vessel.

1.2.10 Additional details of these vessels (or equivalent), including the size of the draghead grids, will be provided in a dredging specific, archaeological Method Statement (see **Section 5.4**) to be produced and agreed with Historic England and the MMO prior to the commencement of dredging.

Operational Phase

1.2.11 Maintenance Dredging will be undertaken periodically to ensure that the navigational channels are at the required depths for the QEC to manoeuvre.

1.3 Construction Programme

1.3.1 The dredging timetable and development programme will be as follows.

- *Dredging works* *2015 and 2016*



- *to mitigate the impact of dredging within the QEC Project area via appropriate and recognised strategies;*
- *to ensure mitigation via compensatory works in relation to the impact on palaeolandscapes within the QEC Project area;*
- *to establish the reporting, publication, conservation and archiving requirements for the archaeological works undertaken during dredging.*

1.6 Scope of Document

1.6.1 Previous archaeological work encompassing assessment of the areas for the QEC Project has included an archaeological desk-based assessment (DBA) (Wessex Archaeology 2003); assessment of geophysical survey data (Wessex Archaeology 2004a); assessment of archaeological potential (Wessex Archaeology 2004b and MAL 2006); an Environmental Impact Assessment for HMNB Portsmouth (Maritime Archaeology Ltd. 2007a); and a Scoping Report (Royal HaskoningDHV 2012b).

1.6.2 Further details of these assessments are presented in **Section 1.6** below.

1.6.3 This WSI provides details for the mitigation measures required in order to comply with the conditions of the MMO licence with relevance to archaeology and cultural heritage with regards to the capital dredging works. The WSI sets out the programme of work to be carried out and the methods by which it will be achieved, including reporting and archiving. The WSI sets out the mitigation strategy designed to offset the impact of the development upon potentially significant archaeological remains and deposits. Additional detail, where appropriate, will be provided via task specific Method Statements, as discussed above. These Method Statements will also include additional illustrative information relevant to the specific methods to be utilised and the archaeological/cultural heritage assets/resource/potential to which it applies.

1.6.4 This WSI has been prepared in accordance with the requirements of Portsmouth City Council, Historic England and the MMO, together with relevant standards and guidance issued by the Chartered Institute for Archaeologists (CIfA), with which Wessex Archaeology is a Registered Archaeological Organisation. Relevant CIfA documents are presented as necessary within each aspect of the WSI.

2 SUMMARY OF KNOWN AND POTENTIAL HISTORIC ASSETS

2.1.1 A full archaeological baseline is available in the HMNB Portsmouth Approach Channel and Harbour EIA (MAL 2007a) and also within Chapter 22 of HMNB Portsmouth Approach Channel Dredging and Associated Works ES, Volume II: Environmental Statement (Royal HaskoningDHV 2012a). The following section provides a summary of the archaeological baseline conditions within the proposed QEC Project area. Figures showing the archaeological assets are provided in the supplementary note (RHDHV 2015b) included in **Appendix 4**. The historic environment gazetteer produced to accompany the MAL EIA (2007a) is also included as part of this supplementary note.

2.1.2 Archaeological evidence may occur as primary context (*in situ*), discrete sites and artefact assemblages, or as secondary context (derived) archaeological material within deposits reworked by natural or human processes.

2.1.3 For the purposes of this WSI, the archaeological resource is considered to comprise:

- *submerged prehistoric archaeology;*



- *maritime archaeology; and*
- *aviation archaeology.*

2.1.4 Prehistoric archaeology includes both the study of prehistoric sites (anthropogenic features, artefacts and palaeoenvironmental evidence demonstrating aspects of past human activities) and the study of palaeolandscapes (palaeogeographic features and palaeoenvironmental evidence indicative of the prevailing landscape, climate, flora and fauna that may have influenced where, when and how these activities took place).

2.1.5 Maritime sites include both wrecks and/or material accidentally or deliberately lost overboard, such as fishing gear, abandoned anchors, cargo or ordnance lost in battle.

2.1.6 Aviation sites may include both the remains of crashed aircraft and/or material jettisoned from aircraft. The majority of aviation sites across the UK are associated with former military activities, predominantly World War II, although remains relating to non-military aircraft may also occur. The remains of all aircraft lost whilst in military service are afforded statutory protection under the Protection of Military Remains Act 1986.

Designated Archaeological Sites

2.1.7 There are no nationally designated marine sites, such as protected wrecks or aircraft, located in the proposed dredging area. However, previous assessments have identified several potential wreck sites within the area, these are discussed further below.

Submerged Prehistoric Archaeology

2.1.8 No palaeochannels were found on the surface of the seabed within the proposed dredging area. However, the potential for palaeolandscapes to be present in the QEC Project area has been confirmed through geotechnical borehole sample assessment, grab sampling, and geophysical survey. These survey techniques have indicated the presence of palaeochannels and associated infill deposits both within the Harbour and its approaches (**Appendix 4 Figure 4.2**). These palaeochannels were infilled and sealed as a result of a rise in the sea level around 10,000 years ago.

2.1.9 A total of 19 targeted diving areas where palaeochannels were thought to exist, and therefore be of potentially high archaeological potential, were identified during the DBA. As a result, 14 such targets were ground-truthed by diver inspection. None of the targets produced recognisable archaeology of any potential or value. Consequently, these anomalies were classified as being of **low or negligible archaeological sensitivity**.

2.1.10 This classification only refers to the surface of the seabed and not the buried deposits, which are considered to be of **high archaeological sensitivity**.

Known and Potential Maritime Historic Assets

2.1.11 No known wrecks were discovered within the proposed dredging area.

2.1.12 A number of sites lying directly within the dredge area were identified as potential wreck sites as a result of the review of geophysical data (**Appendix 4 Figure 4.3**). These included **MA13132**, **MA13175** and **MA13314**, together with **WA2027**, an additional wreck that was lifted in 1945 but was suspected to have left associated debris in the area.

2.1.13 Each of these sites was ground-truthed by diver inspection (MAL 2007b) and positively identified, as follows:

- **MA13132** – *a composite feature comprising two concreted iron pipes and sediment;*



- **MA13175** – a geomorphological feature consisting of recognisable change in height of seabed sediment;
- **MA13314** – a composite feature consisting of poles, steel wire and tarpaulin; and
- **WA2027** – diver inspection confirmed that no wreckage associated with this site was identified.

None of the sites were found to either to be of archaeological interest or wrecks and as a result they are all classed as being of **low archaeological sensitivity**.

- 2.1.14 The nationally significant site of HMS *Boyne* was identified during the DBA as being of **high archaeological sensitivity**. The buoy associated with the wreck site is positioned less than five metres from the expected top of the dredge slope, and approximately 10m beyond the base of the dredging area (**Appendix 4 Figure 4.4**). Due to its proximity to the dredging area, the area may experience wash, erosion or draw down caused by the dredging works.
- 2.1.15 Diver inspection was undertaken by MAL at several locations in the vicinity of HMS *Boyne* (2007b) and numerous artefacts believed to be associated with the ship were discovered, including:
- a 32 pounder cast iron cannon;
 - 32 pounder cast iron cannon balls;
 - copper sheeting, possibly modern;
 - bricks and worked stone;
 - boat/ship timbers including nails and treenails;
 - iron concretions; and
 - buried metal anomalies within a 100m radius of the cannon.
- 2.1.16 Although unconfirmed during the diver inspection, it is possible that the wreck site may still be buried beneath sediment, and together with its proximity to the dredging area the site of HMS *Boyne* is considered to be of **high archaeological sensitivity**.
- 2.1.17 As such, the potential for the survival of buried wrecks within the QEC Project Area is considered to be low in the ES document. However, it is noted that the possibility for uncharted wreck material and associated debris to exist within the QEC Project Area cannot be discounted. The strategic position of Portsmouth Harbour influenced the areas development into a principle military port and dockyard. Portsmouth is intrinsically and continually linked with the Royal Navy. This link is illustrated through the archive records and archaeological remains that exist for the area, including the earliest Royal Naval infrastructure dating from the medieval period and sea defences dating to the post-medieval.
- 2.1.18 This potential is signified by the record of 161 documented losses within the project area, according to the MAL EIA (2007a). Although these records are not currently linked to tangible remains on the seabed, they are testament of historic vessel losses in the area, the remains of which may currently lie uncharted within the project area.
- 2.1.19 The edges of two historic anchorages located in the approach to the harbour are also located within the proposed dredging area (**Appendix 4 Figure 4.3**). These historic anchorages are designated and the potential for isolated maritime finds to be encountered



as a result of the dredging activities is high. These areas are therefore considered to be of **high archaeological sensitivity**.

Known and Potential Aviation Assets

- 2.1.20 There are no known aircraft remains currently recorded within the QEC Project Area.
- 2.1.21 The potential for aircraft remains to exist should not be discounted. Records for documented aircraft losses indicate the potential for the remains to exist within the area. These records essentially relate to the recorded loss of an aircraft but have not been conclusively linked to tangible aircraft remains on the seabed. There are 27 documented aircraft losses recorded within the QEC Project area; all but one date to the Second World War. All aircraft lost in military service are protected under the Protection of Military Remains Act 1986.
- 2.1.22 Therefore, the possible discovery of aircraft within the dredging area is considered to be of **high archaeological sensitivity**.

Anomalies

- 2.1.23 The assessment of geophysical survey data undertaken by Wessex Archaeology (2004) and MAL (2007a) demonstrated the presence of a number of sidescan sonar and magnetic anomalies within the dredge footprint (**Appendix 4 Figure 4.5**). These anomalies were assessed for their archaeological potential by MAL and grouped according to their value as high, medium or low anomalies. A number of these anomalies were subsequently selected for ground-truthing through diver survey (MAL, 2007b). None of the anomalies subject to ground-truthing were found to be of archaeological interest. All the anomalies with targeted diving areas were consequently assessed as being of **low archaeological sensitivity**.

3 SUMMARY OF IMPACT ASSESSMENT AND RECOMMENDED MITIGATION

- 3.1.1 The QEC Project area is considered to be of high archaeological potential and as such there is high potential for the recovery of previously unknown archaeological material throughout the proposed dredging works. DBAs, geophysical surveys and geotechnical investigations can provide greater knowledge regarding the archaeological potential of an area. However, these surveys are not a failsafe for preventing further discovery of currently unknown material during proposed development works.
- 3.1.2 The capital dredging works will remove large quantities of sediment from both inside and outside Portsmouth Harbour. Due to the destructive nature of dredging, this process could cause significant negative direct impact to a range of sites that are at present unknown and unrecorded. It is possible that material from the prehistoric period could be encountered, associated with palaeogeographic features, and for maritime and aviation remains to be discovered from previously undredged areas, in particular Hamilton Bank (**Figure 1**) and also historic anchorages in the vicinity.
- 3.1.3 Areas that have been previously dredged under capital and maintenance dredging operations are considered to have diminished potential for heritage assets relating to maritime and aviation activities to be present.
- 3.1.4 Secondary impacts caused by changes in the hydrodynamic regime associated with the capital dredging or the promotion of 'draw down' of sediments into the channel exposing archaeological material as a result, may occur to the site of HMS *Boyne*, a second-rate ship of the Royal Navy.



- 3.1.5 A summary of the anticipated impacts on archaeological features, recommended mitigation (only for moderate adverse and major adverse significance) together with the direct residual impact is presented in Table 1 below. Further details regarding these impacts are available in the ES (Royal HaskoningDHV 2012a: Chapter 22) and the EIA (MAL 2007a).



Table 1: Summary of direct and secondary impacts on all archaeological receptors considered as part of the QEC Capital Dredge Project

Potential impacts during construction				
	Magnitude	Significance	Recommended Mitigation	Direct Residual Impact
Impacts on seabed anomalies (low sensitivity)				
Direct impact on anomalies within the project area caused by capital dredge activities	High	Moderate adverse	Archaeological Finds Reporting Protocol	Minor adverse
Secondary impact on anomalies located less than 50m from the dredging area caused by erosion, wash or draw down associated with capital dredging activities	Medium	Minor adverse	N/A	N/A
Impacts on known shipwrecks (low sensitivity)				
Direct impact on known ship wrecks	Low	Negligible	N/A	N/A
Secondary impact on known shipwrecks lying less than 100m from the dredging area due to hydrodynamic changes caused by capital dredge activities, shipwash or draw down	Low	Negligible	N/A	N/A
Impact on HMS <i>Boyne</i> (high sensitivity)				
Direct impact on the site	N/A	No direct adverse impact	N/A	N/A
Secondary impact on site due to possible changes in tidal regime that could lead to erosion of protective sediments covering artefacts or the vessel itself.	Low	Minor adverse	N/A	N/A
Impact on anchorages, maritime finds and aircraft (high sensitivity)				
Direct impact on archaeological sites or objects	Medium	Major adverse	Archaeological Finds Reporting Protocol	Moderate adverse

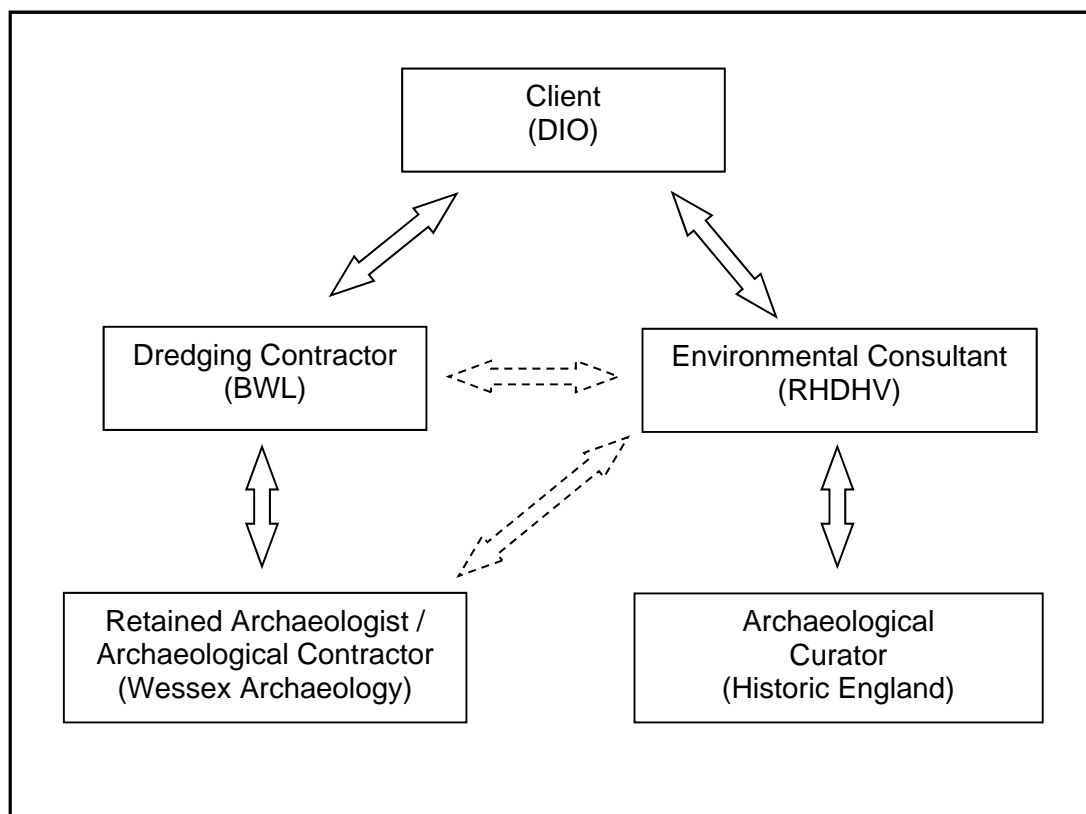


Secondary impact on archaeological sites or objects caused by changes in tidal regime that could lead to erosion of protective sediments.	Very low	Minor adverse	N/A	N/A
Impacts on palaeolandscapes (high sensitivity beneath seabed)				
Direct impacts on features below the seabed surface.	High	Major adverse	Archaeological Watching Brief – now monitoring of recovered finds will be undertaken instead in conjunction with a protocol	Moderate adverse
Secondary impacts on palaeochannels directly below the dredge level and directly adjacent to the dredge cut	Medium	Major adverse	Archaeological Watching Brief – now monitoring of recovered finds will be undertaken instead in conjunction with a protocol	Moderate adverse
Secondary impacts on palaeochannels located outside the dredge area but affected by changes to hydrodynamic regimes	Low	Minor adverse	N/A	N/A
Potential impacts during operation				
	Magnitude	Significance	Recommended Mitigation	Direct Residual Impact
Impacts on seabed anomalies (low sensitivity)				
Direct impacts on anomalies	Low	Negligible	N/A	N/A
Secondary impacts on anomalies	Low	Negligible	N/A	N/A



4 ROLES, RESPONSIBILITIES AND COMMUNICATION

4.1.1 The following diagram shows the lines of communication between DIO, BWL, RHDHV, Wessex Archaeology and Historic England, with regards to this archaeological WSI. Further details are provided below regarding the dynamics of the diagram and also the roles and responsibilities of those involved.



4.2 Client

4.2.1 The Defence Infrastructure Organisation (DIO) is the overall client for the QEC Capital Dredge Project. The DIO will directly engage with the Dredging Contractor and the Environmental Consultant as necessary.

4.3 Dredging Contractor

4.3.1 Boskalis Westminster Limited (BWL) is the Dredging Contractor and is responsible for obtaining the services of Wessex Archaeology.

4.3.2 The key responsibilities of the Dredging Contractor will include:

- *notifying the Retained Archaeologist when key areas (palaeochannels, historic anchorages, Hamilton Bank, area surrounding HMS Boyne see **Section 5.4**) are to be dredged so that Wessex Archaeology (the Archaeological Contractor) can ensure the vessel staff/UXO specialists are aware of any specific considerations;*
- *notifying Wessex Archaeology, prior to diving, in the event that an obstruction on the seabed is to be ground-truthed by divers. If the obstruction is identified as being of potential archaeological interest BWL will notify Wessex Archaeology within 24 hours (see **Section 5.4.19**);*



- *contacting Wessex Archaeology staff in the event of a discovery identified as being of potentially high archaeological interest. Wessex Archaeology will be notified as soon as possible after the discovery and within 24 hours of the discovery;*
- *suspending work in a particular location in the event that objects of potential archaeological interest are encountered. On receiving such a request, BWL will immediately inform the DIO Project Manager verbally and will redeploy its equipment to work in an alternative location. BWL will submit a Change Notification to the DIO Project Manager within 7 days; and*
- *notifying Wessex Archaeology when skips are removed to the lay-down area.*

4.3.3 All Construction Contractors engaged in the project whereby there is an archaeological element will:

- *familiarise themselves with the generic requirements of the WSI and make them available to their staff;*
- *obey legal obligations in respect of 'wreck' under the Merchant Shipping Act 1995;*
- *assist and afford access to archaeologists employed by the BWL;*
- *inform the Retained Archaeologist of any environmental constraint or matter relating to health, safety and welfare of which they are aware that is relevant to the archaeologists' activities; and*
- *implement the Protocol for Archaeological Discoveries via the dredge vessel's master and Project Manager.*

4.4 Environmental Consultant

4.4.1 Royal HaskoningDHV (RHDHV) is the Environmental Consultant for the project.

4.4.2 The key responsibilities of the Environmental Consultant will include:

- *advising the Dredging Contractor and DIO on the necessary interaction with third parties with archaeological interests, including the Archaeological Curator(s);*
- *ensuring that copies of any Method Statements are provided to the Archaeological Curator(s) for approval;*
- *monitoring the preparation and submission of Archaeological Reports as appropriate and making them available to the Archaeological Curator(s);*
- *will advise the Retained Archaeologist of their requirements or responsibilities under any Environmental Management Plan and the Construction Method Statement for the project; and*
- *notifying Historic England in advance of the commencement of the fieldwork and if material of archaeological interest is recovered.*

4.5 Archaeological Curator

4.5.1 The Historic England Maritime Team is the Archaeological Curator responsible for heritage matters offshore in areas that fall within the English Inshore Region (within the 12 nautical mile limit), and as best practice are consulted for heritage matters in the English Offshore Marine Planning Area (beyond the 12 nautical mile limit). The Maritime Team may consult Historic England's Regional Science Advisor for the South East of England with regard to activities undertaken as part of this WSI.



4.5.2 The relevant contacts at Historic England are:

- *Dr Chris Pater, Head of Marine Planning, Historic England, Eastgate Court, 195 – 205 High Street, Guildford, GU1 3EH; and*
- *Jane Corcoran, Historic England Regional Science Advisor, Historic England, Eastgate Court, 195– 205 High Street, Guildford, GU1 3EH.*

4.5.3 Contact with the Archaeological Curator will be administered by RHDHV.

4.5.4 Where Method Statements, reports or other deliverables are submitted by RHDHV to the Archaeological Curator(s), their agreement / acceptance will be assumed if no contrary response is received within 30 working days of submission.

4.6 Retained Archaeologist

4.6.1 The Retained Archaeologist, and in turn the Archaeological Contractor, is Wessex Archaeology, a suitably qualified and experienced archaeological company.

4.6.2 The key responsibilities of the Retained Archaeologist will include:

- *ensuring the effective implementation of the WSI and other contractual commitments in relation to archaeology;*
- *maintaining, reviewing and updating this WSI, as required;*
- *developing and reviewing the research framework within which the WSI is applied;*
- *advising BWL's Contractor(s) where elements warrant archaeological involvement;*
- *advising BWL's Contractor(s) in the course of evaluating scope of work specifications on their capacity to meet archaeological requirements;*
- *advising BWL on the implementation of generic archaeological requirements applicable to all dredging and maintenance activities;*
- *advising the Environmental Consultant on Method Statements for archaeological investigations;*
- *preparing detailed Method Statements for all archaeological activities;*
- *implementing and monitoring the Protocol for Archaeological Discoveries;*
- *preparing provisions for the management of the project archives in consultation with an appropriate Museum;*
- *advising DIO on final arrangements for analysis, archive deposition, publication and popular dissemination;*
- *providing initial advice to vessel staff/UXO specialists in the event of a discovery identified as being of potentially high archaeological significance;*
- *having the authority to require BWL to suspend work in a particular location in the event that objects of archaeological significance are encountered; and*
- *maintaining direct telephone and email contact with UXO specialists on board the vessel during dredging in order to monitor the functionality of the on board finds reporting protocol. In the event that no discoveries of archaeological significance are encountered weekly telephone calls will be maintained with Wessex Archaeology.*



5 SCHEME OF INVESTIGATIONS

5.1 Standards and Guidance

- 5.1.1 This WSI is based on recommendations made in the HMNB Portsmouth Approach Channel Dredging and Associated Works ES and also the consultation response from Historic England with regards to the licence application to the MMO.
- 5.1.2 The method statements and specifications in this document are based on archaeological best practice and guidance for offshore development. The principal sources are:
- *Joint Nautical Archaeology Policy Committee (JNAPC) Code for Practice for Seabed Development (2006);*
 - *Dredging and Port Construction: Interactions with Features of Archaeological or Heritage Interest, PIANC Guidance Document No. 124-2014 (PIANC 2014)*
 - *Marine Aggregate Industry's Protocol for Reporting Finds of Archaeological Interest (BMAPA and Historic England 2005).*

5.2 Overview

- 5.2.1 The format and content of this WSI will be prepared and agreed with the MMO at least two months prior to the start of the dredging programme. The proposed mitigation measures, content of the Method Statements and timetable for the implementation of works will be agreed with the DIO, Historic England and the MMO.
- 5.2.2 Prior to dredging commencing the final WSI will be produced and agreed with Historic England and the MMO, individual Method Statements for the implementation of the mitigation measures detailed below will follow as appropriate. The scope of each Method Statement will be informed by the results of any previous archaeological work undertaken as outlined in **Section 1.4** above. Approval by the Archaeological Curator(s) will be assumed if no contrary response is received within 30 working days of submission of individual Method Statements.

5.3 Geoarchaeological Model

- 5.3.1 The Marine Licence states that: The licence holder must produce a geoarchaeological deposit model to be submitted to the MMO within 6 months following the commencement of dredging activities.
- 5.3.2 In accordance with this condition, existing geoarchaeological data produced in support of the project will be compiled to produce a deposit model of the area subject to impact from channel dredging.
- 5.3.3 The existing data comprise:
- *geophysical survey data reviewed by Wessex Archaeology in 2004;*
 - *cores and grab samples collected by Lankelma Ltd and EMU Ltd (now Fugro EMU Ltd.) and reviewed by Marine Archaeology Ltd. in 2006;*
 - *geophysical survey data reviewed by MAL in 2006; and*
 - *geotechnical survey data (vibrocores and boreholes) collected in 2011-2012 by Fugro EMU Ltd.*
- 5.3.4 A geoarchaeological report will be produced in support of the deposit model that will include an assessment of core samples for further assessment and reporting. Further



recommendations may include palaeoenvironmental analysis and dating of samples if they are assessed as viable.

- 5.3.5 The deposit model will be compiled in accordance with the Method Statement to be produced and agreed with Historic England and the MMO.

Methodology

- 5.3.6 Outlined below are the methods employed by Wessex Archaeology for the archaeological use of geotechnical samples which includes: Planning (Stage 1), Geoarchaeological Recording (Stage 2) Subsampling and Assessment (Stage 3), Analysis (Stage 4) and Final Reporting (stage 5). This five stage approach, encompasses different levels of investigation appropriate to the results obtained, accompanied by formal reporting where appropriate of the results at the level achieved.

- 5.3.7 Each stage of this phased assessment of the cores is dependent on the results of the preceding stage. Stage 5 is a reporting phase which will take place at whatever stage in the process further archaeological assessment or analysis is not required.

Stage 1: Planning	Desk-based archaeological assessment of samples and logs generated by geotechnical contractors. This assessment will establish the presence and location of sediment units with likely archaeological, palaeo-environmental and/or dating potential, as a basis for deciding what Stage 2 archaeological recording is required. The Stage 1 report will state the scale of Stage 2 work proposed. Should no further works be required a brief Stage 1 report outlining the results of the assessment will be prepared.
Stage 2: Geoarchaeological Recording	The stratigraphy of each sample will be recorded, a basic sediment description for each of the units will be made and those units of particular archaeological/palaeo-environmental interest will be highlighted. The Stage 2 report will state the nature and scope of any Stage 3 analyses required to characterise and interpret the sediment units in order to build an outline Quaternary deposit model and thus identify areas of potential archaeological significance.
Stage 3: Subsampling and Assessment	Sub-sampling and assessment of any units of archaeological and/or palaeo-environmental interest. Sub-samples for the assessment of microfossil environmental indicators (e.g. pollen, diatoms, ostracods and/or foraminifera) will be taken. Assessment will comprise analysis (identification and quality of preservation) of a series of sub-samples to enable the value of the palaeo-environmental material surviving within the samples to be identified. Sub-samples will also be taken and retained at this stage in case radiocarbon dating is required. The Stage 3 report will set out the results of each laboratory assessment together with an outline of the archaeological implications of the combined results, and will indicate whether and Stage 4 work is warranted.



Stage 4: Analysis	Full analysis of micro and macro remains assessed during Stage 3. Typically, Stage 4 will be supported by radiocarbon dating of suitable sub-samples. Should Stage 3 assessment indicate that there is no further analytical work required on the microfossil assemblages, consideration will still be given for a programme of radiocarbon analyses to provide a chronological framework for the deposits encountered unless no suitable samples could be procured. The Stage 4 report will provide an account of the palaeo-environment(s) at each relevant coring location within a chronological framework (absolute or relative) and an outline of the archaeological implications of the analysis.
Final Reporting	<p>If the archaeological results are sufficiently significant, a final report will be compiled covering all aspects of the palaeo-topography and prehistory of the area affected by the development, incorporating the results of each stage.</p> <p>If the archaeological results are not significant then the relevant Stage Report(s) will constitute the final documents for the investigation.</p> <p>If required, the Final Report will include relevant data generated by the baseline assessment and geophysical (sub-bottom) review, in order to place the results of the sample recording and analysis within the context of the broad pattern of deposits within the area. The report will comprise as detailed a Quaternary deposit model for the area as possible, and address the implications of that model in terms of archaeological potential.</p>

5.3.8 Stages 1 and 2 have previously been undertaken (Wessex Archaeology 2004a and MAL 2007). Where additional material has been gathered for recent surveys this will also be subject to review. Given the time between surveys, further Stage 1 and 2 assessments need to be undertaken to discover which samples are available and viable for use for Stages 3 - 5 described above. If warranted, sampling and assessment will be undertaken.

5.3.9 Cores collected in 2011-2012 by Fugro Emu Ltd are held by DIO and will be made available for Stage 3 assessment in accordance with the terms of this WSI. It is currently anticipated that cores will be available from January 2016 onwards. Further detail on the methodology for undertaking sampling and assessment and compiling the deposit model, including a timetable for works, will be provided in the Method Statement to be produced in consultation with the Historic England Regional Science Advisor and agreed with Historic England and the MMO.

5.4 On Board Finds Reporting Protocol

5.4.1 The draft WSI (Royal HaskoningDHV 2013) refers to the request by Historic England for a watching brief to be implemented during the dredging works. Due to the nature of the dredgers' operational methods, it will not be practical or feasible to include an on board archaeological watching brief as almost all of the dredging will take place using a trailing suction hopper dredger (TSHD) with only small pockets of clay removed by back-hoe dredger and this is likely to be limited to the area within the Harbour itself.



- 5.4.2 Therefore, in order to fulfil the conditions of the Marine Licence and to ensure a viable method of archaeological mitigation, an On Board Finds Reporting Protocol (hereafter referred to as the 'Protocol') will be implemented throughout the duration of the channel dredge and across the full geographical extent of the project, with particular attention paid to areas of interest as defined by the ES and previous archaeological reports:
- *two areas designated as historic anchorages outside the Harbour;*
 - *palaeochannels;*
 - *the area surrounding HMS Boyne (buoy locator and surrounding area 100m spread to the east); and*
 - *Hamilton Bank.*
- 5.4.3 Details of these areas will be supplied to vessel staff via a task specific method statement, associated figures (**Appendix 4 Figure 4.6**) and as ArcGIS shapefiles. Operatives will also be briefed on the position, nature and extent of these areas as part of the protocol awareness training provided by Wessex Archaeology to the vessel crew(s), UXO and diving contractors, and other key staff in advance of dredging commencing.
- 5.4.4 In order to define an area surrounding HMS *Boyne* that incorporates the buoy locator and surrounding area, with a 100m spread to the east as defined in the ES, a 100m buffer (radius) has been placed around the location of the wreck, as shown on **Figure 4.6**.
- 5.4.5 The Protocol will be implemented as best practice in order to ensure that the dredging project is prepared for any unexpected discoveries of archaeological material – including shipwreck material, aircraft remains, submerged prehistoric material and other archaeological material.
- 5.4.6 The aim of the Protocol is to reduce any adverse effects of the proposed dredging on the historic environment by enabling people working on the vessels to report archaeological finds in a manner that is both convenient to their everyday work and effective with regard to curatorial requirements.
- 5.4.7 Archaeological finds made during the course of dredging activities are important because they can shed light on past human use of the landscape, sea and seabed. The information that such discoveries bring to light can help archaeologists better understand the human past and should, therefore be conserved to better protect these aspects of our history on behalf of future generations.
- 5.4.8 The Protocol will be implemented to ensure that these discoveries are reported and analysed. Whilst there is no industry standard Protocol for capital dredging schemes, the following methodology has been adapted from already approved Protocols for other industries, including the Marine Aggregate Industry's *Protocol for Reporting Finds of Archaeological Interest* (BMAPA and Historic England 2005).
- 5.4.9 The project specific strategy for delivering the Protocol will be developed and agreed with the MMO in advance of the start of the dredging programme via a task specific Method Statement.
- 5.4.10 The Protocol that follows has specifically been designed to deal with any discoveries made on the seabed in a proposed capital dredging area undertaken during the QEC Project. Flow charts of actions/communications and recording sheets associated with the Protocol can be found in **Appendices 1-3**.



Methodology

Pre-dredging

- 5.4.11 Wessex Archaeology, the Retained Archaeologist, will provide awareness training to the vessel crew(s), UXO and diving contractors, and other key staff in advance of dredging commencing. This detailed training on the identification of finds of archaeological potential will ensure that staff are aware of what constitutes an appropriate find and the Protocol in place for reporting such discoveries. This will allow a selective approach to be taken to the placing of each item collected by the draghead either into skips designated to collect items of archaeological or suspected archaeological interest or into the skip of material for discard. Where the origin or nature of an item is in question the precautionary principle will be employed and the item added to the archaeological skip.
- 5.4.12 Training given to the UXO and diving contractors will have a substantially greater level of detail than that provided for general staff under the terms of the Protocol and will include advice on their responsibilities with regard to the implementation of the WSI and Protocol as agreed by the MMO.
- 5.4.13 It is currently anticipated that training will comprise eight visits across two crews on each of the four vessels to include general crew, UXO divers and office staff. The timing of these visits will be based upon the dredging scheduled and staff/vessel changeovers including pre-dredge clearance operations. Provision will be made for Historic England to attend a training session to monitor the approach and provide additional information if required.
- 5.4.14 Periodic visits to the dredge plant by Wessex Archaeology will be planned to ensure proper adherence to the Protocol. The frequency and timing of these visits will be determined once the dredging programme is known.
- 5.4.15 Following confirmation, contact details of the relevant Wessex Archaeology staff will be circulated as soon as possible in advance of dredging commencing.

Archaeological Discoveries during Dredging Works

- 5.4.16 Notice will be given to Wessex Archaeology when the key areas listed above are to be dredged and access granted to all skips designated to contain material either of archaeological or suspected archaeological interest prior to the material being permanently discarded.
- 5.4.17 Prior to commencement all known areas of high and medium archaeological potential (**Appendix 4 Figure 4.6**) will be identified on the dredge plant computer dredge screens, so as to ensure complete awareness of these areas and the potential for archaeological and/or historical finds.
- 5.4.18 The TSHD has no grating facilities at the point where the material flows into the hopper well of the vessel and therefore there is no facility to easily or safely examine anything of interest that may be observed entering the hopper and the spoil will stay 'wet' until disposal at sea. There is however a grating across the draghead itself but due to the effects that the grating can have on productivity, particularly in clay, there is a limit as to the size of the grating that can be used, this means that only larger objects may become ensnared on this. The size of the grid on the draghead grating will be specified in the task specific Method Statement.
- 5.4.19 Debris caught in the draghead will be assessed for archaeological interest by on board operatives provided with training in the implementation of the Protocol. On board



operatives will comprise diving and Unexploded Ordnance (UXO) specialists that will be present at all times during dredging supported by other vessel staff, in the event that UXO is discovered.

- 5.4.20 In the event that an unexpected obstruction is encountered on the seabed the location will be dived by the standby dive team to ascertain whether it merits further investigation to determine historic or archaeological significance and consideration as a heritage asset. Obstructions with archaeological potential will be photographed and/or videoed for further assessment by a marine archaeologist. If divers identify a site of potential archaeological interest then a member of Wessex Archaeology's archaeological dive team will visit the site to undertake a significance assessment and to provide advice. Sites of potential archaeological importance will be reported to Historic England and the methodology for addressing these sites will be agreed prior to any further dredge activity at that location. Existing geophysical data from these locations will be reviewed to determine the extent of the site if possible and to correlate new discoveries with existing data assessment. Only in agreement with the MMO and Historic England will any action be taken to implement any potential lift and recovery operations following satisfactory completion of *in situ* inspection.
- 5.4.21 The draghead will be the target of an on board camera which will provide a time stamp for each item retrieved. Once removed from the draghead, any finds which are considered to be of major archaeological interest (see below) will be photographed and/or videoed on board and provided with a reference number from a continuous unique numbering system in line with the Protocol. Labels containing information regarding the object will be attached to each find, where possible. Locations for any major archaeological finds identified will be estimated from the approximate position of the dredger via the time stamped photography and following retrieval. Positions (or an approximate dredge area) will be obtained from the on board survey system. **Appendix 2** provides an example of a preliminary recording form for inputting details regarding each discovery. Wessex Archaeology will be notified of any items of major archaeological interest upon discovery via phone or internet connection in order to establish the nature of the find and advise accordingly. Material thought to be archaeological in origin but of a robust and either minor or intermediate find level will be added to the skip allocated for archaeological or suspected archaeological material. Major archaeological finds will be separated from those in the skip, provided with 'first aid' conservation on board and carefully stored in a suitable, safe and secure area on board until the dredger returns to the quay for unloading, whereby all the recovered will be transferred to the quay side for archaeological monitoring (see **Section 5.5**).
- 5.4.22 If there is any uncertainty as to whether or not debris caught in the draghead is of archaeological interest staff will operate a precautionary approach and assume interest.
- 5.4.23 In the event of discovery of any human remains within the dredged arisings, the dredger will relocate to a position not less than 30 metres from the location of discovery and a temporary exclusion implemented. Following discussions with the Coroner and Historic England, further action will be determined.

Reporting of Archaeological Discoveries

- 5.4.24 All finds of archaeological material will be reported by the vessel master to the Project Manager, who will inform Wessex Archaeology and the DIO. Staff will provide a basic record of all major finds to include a completed preliminary recording form (**Appendix 2**), photographs and/or video footage of the find and appropriate detail on the provenance of any finds from within the area dredged based on the dredging vessel GPS.



5.4.25 Following a discovery, Wessex Archaeology will provide initial advice on the appropriate measures to be implemented to include:

- *advice on 'first aid' conservation for finds whilst on board;*
- *the establishment of a Temporary Exclusion Zone (TEZ) for discoveries of high potential; and*
- *advice on further evaluation that may be required.*

5.4.26 Wessex Archaeology will then inform the MMO, Historic England (via RHDHV), the Local Authority Historic Environment Officer, the Receiver of Wreck (as relevant to the terms of the Merchant Shipping Act 1995) and other stakeholders as appropriate.

5.5 Quay Side Archaeological Monitoring

5.5.1 Once the dredger has returned to the quay, any major archaeological finds recovered will be stored safely for collection by Wessex Archaeology. The skip designated for items of archaeological interest will be delivered to the quay and transported to an agreed location to allow assessment by Wessex Archaeology. A secure quayside area for this activity will be established prior to commencement of dredging and all material from each vessel will be offloaded to this pre-agreed area.

5.5.2 Skips will be removed to a suitable lay down area on the quayside where the material can be spread out, cleaned and recorded during periodic visits by suitably trained staff from Wessex Archaeology prior to final disposal. Following confirmation of a drop off of material to shore, staff from Wessex Archaeology will attend the agreed laydown area (TBC prior to commencement of dredge programme) at a time agreed with the client representative. The on-site archaeologist will visually review the material collected by the draghead along with their corresponding preliminary reporting forms for major archaeological finds. Where reports have not been completed Wessex Archaeology staff will review the video footage against the items recovered in order to establish an approximate location of recovery for the item, the material will be examined and should material of archaeological interest be confirmed the material will be fully recorded on the lay down area.

5.5.3 The quay side archaeological monitoring would be undertaken by a single marine archaeologist, if supported by a member of the dredge team staff to avoid lone working, or a team of two marine archaeologists. The work would be undertaken intermittently and would be informed by the dredge vessel programme.

5.5.4 The quay side team would be supported by a named Senior Project Manager at Wessex Archaeology who would act as the main point of contact throughout the life of the project. The Senior Project Manager would maintain regular contact with the dredge team/vessel throughout the dredging works.

5.5.5 Wessex Archaeology will ensure that consistency of staff will be maintained throughout the life of the project and that, where handovers of key staff members are necessitated, comprehensive briefings to new staff are provided to ensure understanding of the project in advance of staff changeover.

5.6 Archaeological Finds Strategy

5.6.1 The archaeological finds strategy will be detailed within the task specific Method Statement which will be produced on the basis of the guidance document *Marine Aggregate Dredging and the Historic Environment* (BMAPA and Historic England 2003)



and the associated *Protocol for Reporting finds of Archaeological Interest* (BMAPA and Historic England 2005).

- 5.6.2 All artefacts identified from material recovered and stored in the quay side skip will be retained, processed and recorded in accordance with the ClfA's *Standard and guidance for the collection, documentation, conservation and research of archaeological material* (2014a).
- 5.6.3 Finds and other items of archaeological interest recovered offshore in the course of investigation are the property of The Crown Estate as the landowner, with the exception of all human remains, and 'wreck' for the purposes of the Merchant Shipping Act 1995.
- 5.6.4 Objects that require immediate conservation treatment to prevent deterioration will be treated according to guidelines laid down in *First Aid for Finds* (Watkinson 1987) and *First Aid for Underwater Finds* (Robinson 1998). A full record will be made of any treatment given.
- 5.6.5 Finds will be primarily 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).
- 5.6.6 All finds will be registered in an overarching project database. Any special requirements of each find will be noted in the database.
- 5.6.7 In the event that the finds require assessment by further finds specialists or if external advice is required, Wessex Archaeology will obtain appropriate provision.
- 5.6.8 Where items are confirmed to be of archaeological interest they will be transported to Wessex Archaeology's offices for further treatment. Where items are too large/heavy to allow removal the client representative will be consulted in order to establish either a suitable storage location on site or a means of lifting and transporting the material to Wessex Archaeology's offices.
- 5.6.9 In the event of the discovery of human remains where the remains have been intentionally buried, applications should be made to the Ministry of Justice for an exhumation licence. In all other cases, Wessex Archaeology will immediately inform the Coroner and the Police. If neither the Coroner nor the Police propose to investigate the remains, they may be dealt with as set out below.
- 5.6.10 Following discussions with the Coroner and Historic England, assessment of the area and subsequent need for and appropriateness of their excavation/removal, where necessary, will be determined once the area has been investigated by a member of Wessex Archaeology's archaeological dive team. All excavation and post-excavation processes will be in accordance with the standards set out in ClfA's *Technical Paper No. 7 Guidelines to the Standards for Recording Human Remains* (2004).

Minor Archaeological Find

- 5.6.11 Examples of minor archaeological finds include modern debris such as rebar or metal pipe.
- 5.6.12 A minor archaeological find recovered from the draghead will be identified by the on board operative (UXO specialist or other vessel staff) and consigned to the skip designated for items of minor or intermediate archaeological interest.



- 5.6.13 The find will be reviewed by the marine archaeologist once the skip is removed to the quayside and additional recording will be carried out if required. Details of the find will be entered in the finds database prior to disposal.
- 5.6.14 If a minor archaeological discovery is identified on the seabed by the standby divers in the course of operations, the discovery will be photographed and/or videoed *in situ*, the location of the find will be recorded from the vessel trackplot and a preliminary recording form filled out. Small finds may be brought to the surface, and provided with 'first aid' conservation treatment if required.
- 5.6.15 On receipt of a report the marine archaeologist will review the data provided and provide further advice as relevant.
- 5.6.16 Dredging will not recommence at the location of the discovery until the find has been removed or confirmation has been received from the marine archaeologist that dredging may continue.

Intermediate Archaeological Find

- 5.6.17 Examples of intermediate archaeological finds could include an anchor, mammoth tooth, isolated ships timbers or concretions.
- 5.6.18 An intermediate archaeological find recovered from the draghead will be identified by the on board operative (UXO specialist or other vessel staff). The find will be photographed and/or videoed by the on board operative, the location of the find will be recorded from the vessel trackplot and a preliminary recording form completed (**Appendix 2**).
- 5.6.19 The find will be provided with 'first aid' if appropriate and removed to the quay side lay down area via the skip designated for items of minor or intermediate archaeological interest. to await assessment by a marine archaeologist.
- 5.6.20 The find will be reviewed by the marine archaeologist, additional recording will be carried out and further advice sought from experts as required. Details of the find will be entered in the finds database and provision will be made for the removal of the find to Wessex Archaeology for further conservation and recording if required or to an alternative facility if appropriate.
- 5.6.21 If an intermediate archaeological discovery is identified on the seabed by the standby divers in the course of operations, the discovery will be photographed and/or videoed *in situ* by the divers, the location of the find will be recorded from the vessel trackplot and a preliminary recording form filled out.
- 5.6.22 On receipt of a report the marine archaeologist will review the data provided and provide further advice as relevant.
- 5.6.23 Dredging will not recommence at the location of the discovery until the find has been fully recorded or removed in accordance with the advice of the marine archaeologist.

Major Archaeological Finds

- 5.6.24 Examples of major archaeological finds could include a shipwreck, logboat, aircraft or human remains.
- 5.6.25 Following the discovery of a major archaeological find either on board or on the seabed all dredging will cease immediately within the area and a 100m TEZ will be implemented around the location of the find.



- 5.6.26 The marine archaeologist will be notified immediately for further advice. The marine archaeologist will in turn notify RHDHV who will inform Historic England of the discovery.
- 5.6.27 If the discovery is on the seabed then an archaeological diver from Wessex Archaeology will accompany the standby dive team to investigate the site and provide further advice within a rapid timeframe to be agreed.
- 5.6.28 If the discovery is on board then it will be assumed that the find is not isolated and further material may be present on the seabed. An archaeological diver will accompany the standby dive team to investigate the site and provide further advice within a rapid timeframe to be agreed.
- 5.6.29 If the discovery is an isolated find then the find will be provided with 'first aid' conservation and removed to the quay side lay down area for immediate attention by a marine archaeologist. Advice from Wessex Archaeology will be provided regarding the most suitable place to store the object prior to the arrival of a marine archaeologist at the site.
- 5.6.30 Following initial recording and review the marine archaeologist will provide further advice in accordance with the Protocol and WSI. Additional works will be carried out to ensure the appropriate recording and removal of archaeological material in accordance with specific methodology to be advised by the marine archaeologist and agreed with Historic England.
- 5.6.31 Dredging will not recommence within the area of the TEZ until confirmation has been received from Historic England that the TEZ can be removed.

6 ARRANGEMENTS FOR MONITORING AND REVIEWING THE WSI

- 6.1.1 At each stage of the project, Wessex Archaeology (the Retained Archaeologist) will advise BWL (the Dredging Contractor) as to the potential requirements of the specific archaeological investigations as outlined in this document. Appropriate Method Statements will be prepared as necessary, and these will be submitted to the Archaeological Curator(s) for approval. Approval by the Curator will be assumed if no contrary response is received within 30 working days of submission.
- 6.1.2 Method Statements will include provision for Wessex Archaeology (the Archaeological Contractor) to monitor the progress of the archaeological investigations, as appropriate to that element; be that through site visits or meetings with BWL.
- 6.1.3 Provision will be made for the WSI to be revised as appropriate should elements of the project change or particular archaeological issues come to light. Any revisions will be prepared by the Retained Archaeologist and submitted to the Environmental Consultant who will ensure they are submitted to and approved by the Archaeological Curator(s). Approval by the Archaeological Curator(s) will be assumed if no contrary response is received within 30 working days of submission.
- 6.1.4 The performance of the WSI will be monitored through the provision of a series of archaeological reports prepared to inform on the results of various activities undertaken under its auspices. These will include a Stage 3 assessment of geotechnical cores including recommendations for further stages of work, should it be warranted by the results; and a final report on the results of the implementation of the Protocol. These reports will be submitted to the Environmental Consultant (RHDHV) who will ensure their dissemination to the Archaeological Curator(s).



- 6.1.5 The responsibility for guaranteeing the implementation of the Protocol rests with BWL, who will ensure that its agents and contractors are contractually bound to implement the Protocol.
- 6.1.6 Based on **Section 8.2** below, BWL and Wessex Archaeology will agree the system for archaeological reporting as set out in each relevant Method Statement.
- 6.1.7 Wessex Archaeology will be notified in advance by BWL of work timetables and the commencement of any work on site that may impact on the archaeology and will be informed at this time of Wessex Archaeology's key staff.
- 6.1.8 During any site evaluation/investigation or dredging work that has the potential to impact on archaeology, all communication regarding site monitoring and reporting between Wessex Archaeology and the Archaeological Curator(s) will be via RHDHV, and BWL will be kept informed of all such contact.

7 ACTIVITIES SUBSEQUENT TO INVESTIGATIONS

7.1 Finds Assessment

- 7.1.1 Post-fieldwork assessment will address, where possible, the character and extent, date, integrity, state of preservation and relative quality of the archaeological features or remains of the recorded archaeology, and provide a costing for any further research, analysis, publication and archiving (including the costs of storing/ depositing the archive).
- 7.1.2 Decisions regarding the scope of post-fieldwork assessment will be made by agreement between DIO and the Archaeological Curator(s) following submission of investigation reports, based on the possible importance of the results in terms of their contribution to archaeological knowledge, understanding or methodological development.
- 7.1.3 An assessment of the potential of the archive for further analysis will be undertaken. The assessment phase may include (but is not limited to) the following elements:
- *the conservation of appropriate materials, including the X-raying of metalwork;*
 - *the spot-dating of all pottery from any investigation. This will be corroborated by the scanning of other categories of material;*
 - *an assessment statement will be prepared for each category of material, including reference to quantity, provenance, range and variety, condition and existence of other primary sources; and*
 - *a statement of potential for each material category and for the data set as a whole will be prepared, including specific questions that can be answered and the potential value of the data to local, regional and national investigation priorities.*
- 7.1.4 Any finds and environmental samples will be processed according to professional standards for finds analysis, environmental sampling and archive preparation, and in accordance with the Chartered Institute for Archaeologists' *Standard and Guidance for the collection, documentation, conservation and research of archaeological materials* (CIfA 2014), and other relevant documentation specified in *Model Clauses for Archaeological Written Schemes of Investigation* (The Crown Estate 2010), or any other appropriate guidance, as outlined throughout this WSI. Processing of any archaeological finds or recoveries shall be undertaken by the Archaeological Contractor immediately following receipt from the skip designated for items of minor or intermediate archaeological interest that has been removed from the vessel to the quay side.



- 7.1.5 Each category of recovered material shall be assessed by suitably experienced Archaeological Contractors or specialists, to a level commensurate with the aims and objectives of the fieldwork. This will normally comprise scanning and, where relevant, identification of potential for further analysis.
- 7.1.6 Decisions regarding the level of post-excavation work required will be taken following submission of investigation reports and consultation between DIO and Wessex Archaeology and following this through agreement by DIO, RHDHV and the Archaeological Curator(s).

7.2 Monitoring Fieldwork

- 7.2.1 Where warranted by, for example, the investigation of an important site, a discrete post-fieldwork assessment may be undertaken of the specific sites or investigations in advance of assessment of the investigations associated with the scheme as a whole. For example, monitoring of the site of HMS *Boyne* is required in accordance with Historic England's recommendations for the MMO's licence consent. Details regarding these monitoring works will be provided later in a separate monitoring plan.

8 REPORTING, PUBLICATION AND ARCHIVE

8.1 Post-fieldwork finds assessment

- 8.1.1 As a minimum, a single post-fieldwork assessment may be carried out in respect of the investigations associated with the project as a whole. Such an assessment may be carried out by expanding the overarching archaeological report to include proposals in respect of analysis, publication and archiving.
- 8.1.2 The Archaeological Contractor will also be required to produce an assessment report which will establish the value of the recorded archaeology and provide a costing for the post-excavation analysis, publication and archiving (including storing/ deposition of archive).
- 8.1.3 Each draft report will be submitted by BWL to DIO, who will in turn seek comment from the Environmental Consultant, and will satisfy the requirements as set out in this WSI and any subsequent Method Statements for the investigation. Each report will present the project information in sufficient detail to allow interpretation without recourse to the project archive.
- 8.1.4 BWL will forward a digital (pdf) copy of each report to DIO who will provide this to the Environmental Consultant, RHDHV, who in turn will forward it to the Archaeological Curator(s) for comment.
- 8.1.5 Assessment reports will be prepared by the Archaeological Contractor/s in line with the principles set out in the *Management of Research Projects in the Historic Environment* (Historic England 2006).

8.2 Post-dredge Reporting

- 8.2.1 The response to reported finds will be implemented through the measures set out in the Protocol (see **Section 5.4** above), including further survey or establishment of Archaeological Exclusion Zones if appropriate.
- 8.2.2 Within four to six weeks of completion of the dredging phase, Wessex Archaeology will prepare a fully illustrated final report that will detail the methods and include a discussion of the results of the Protocol. The report will be submitted to Historic England within six



months of the completion of dredging, via RHDHV, and two copies will be provided to DIO.

- 8.2.3 The final report will be in accordance with the standards set out in *Management of Research Projects in the Historic Environment* (Historic England 2006). This report will also present detailed proposals for further analysis, report production, publication and archiving, along with the strategies, estimated resources, and programme necessary to carry out such work. Any further post excavation analysis and conservation of artefacts will be discussed with Historic England and DIO and be subject to a separate agreement.
- 8.2.4 A geoarchaeological report will also be prepared by Wessex Archaeology alongside the final report. This report will detail the results of the deposit model and include the assessment of core samples. Recommendations will also be made within this report regarding for further assessment, in the form of palaeoenvironmental analysis and dating of samples if viable, and their subsequent reporting.
- 8.2.5 The publication of all the results of the fieldwork will be discussed with Historic England and the Client, and will be subject to a separate agreement.

8.3 Publication

- 8.3.1 In consultation with DIO, and the Environmental Consultant who will seek the approval of the Archaeological Curator(s), Wessex Archaeology will ensure that the results of archaeological discoveries made and investigations undertaken in connection with the project will be published in an integrated manner, where warranted by the results of the archaeological work.
- 8.3.2 Following completion of the capital dredging, a final report will be compiled by Wessex Archaeology that will establish the final arrangements for publication (see above).
- 8.3.3 A draft publication report shall be submitted to DIO, the MMO and the Archaeological Curator(s) by Wessex Archaeology, via RHDHV, for approval within 12 months of approval of the post-excavation assessment report.
- 8.3.4 Wessex Archaeology will submit bound copies and one unbound copy of the final report to RHDHV together with one disk copy. A copy of the published report will be submitted to DIO and the Archaeological Curator(s) by Wessex Archaeology.
- 8.3.5 The project record will be logged on OASIS – *Online Access to the Index of Archaeological Investigations* (<http://oasis.ac.uk/>). OASIS is an online archive managed by the Archaeological Data Service, the aim of which is to provide information about archaeological investigations and so to facilitate access to and dissemination of 'grey literature' that is produced in the course of archaeological fieldwork of all kinds.
- 8.3.6 On completion of the publication report, Wessex Archaeology will integrate report and assessment data into the project archive. The archive will be stored, at the Client's expense, in a secure location until instructions are received from the receiving Museum for its deposition.
- 8.3.7 Any further analysis of finds and/or environmental samples will constitute a separate item(s) of work, for which an updated project design will be prepared by Wessex Archaeology for approval by DIO and the Archaeological Curator(s).



- 8.3.8 A summary of the intended timeframe for submission of all reports to the MMO, as necessary to comply with the conditions of the Marine Licence, is included in **Table 2** below.

Table 2: Summary of intended timeframe for submission of reports to the MMO

Report	Intended timeframe for submission	Estimated date of submission
Written Scheme of Investigation	Condition 5.2.6: Submitted to and approved by the MMO, in consultation with English Heritage, at least 2 months prior to the commencement of works.	Submitted September 2015
Dredging specific method statement	Prior to the commencement of dredging	November 2015
Geoarchaeological deposit model	Condition 5.2.6: Submitted to the MMO within 6 months following the commencement of dredging activities	June 2015
Final reporting for the geoarchaeological assessment	Submitted within 6 months of the completion of dredging activities	2017/8
Final report on the results of the implementation of the Protocol	Submitted within 6 months of the completion of dredging activities	2017/8
Post-fieldwork assessment report	Submitted within 6 months of the completion of dredging activities	2017/8
Publication report (if required)	Submitted within 12 months of approval of the post-excavation assessment report.	2018/9

8.4 Archiving

- 8.4.1 Project archives, including written, drawn, photographic and material elements (together with a summary of the contents of the archive) will be prepared and deposited by Wessex Archaeology in accordance with the requirements of the receiving Museum. Best practice will be adhered to in line with Archaeology Archives Forum, *Archaeological Archives: A guide to best practice in creation, compilation, transfer and curation* (2007) and ClfA's *Standard and Guidance for the creation, compilation, transfer and deposition of archaeological archives* (2014b).
- 8.4.2 Written, drawn and photographic archives will be compiled to a standard that allows for the publication of a summary report. Written archives will be on clean, stable materials, and will be suitable for photocopying. The materials used will be of the standard recommended in *Guidelines for the Preparation of Excavation Archives for Long-term Storage* (Walker 1990).
- 8.4.3 The timetable for depositing archives with the Museum after completion of the post-fieldwork programme will be agreed with DIO following completion of all archaeological work.



- 8.4.4 The relevant receiving institution will be notified of any archaeological investigation in advance of fieldwork. Any specific requirements relating to the preparation and deposition of project archives raised by archaeological contractors will be accommodated as appropriate. Wessex Archaeology, through RHDHV, will inform the Archaeological Curator(s) of arrangements for archiving.
- 8.4.5 The Archaeological Curator(s) will be notified of any archaeological investigation in advance of fieldwork and any specific requirements relating to the preparation and deposition of project archives will be accommodated as appropriate.
- 8.4.6 Where there is the likelihood of any archaeological fieldwork, Wessex Archaeology will contact an appropriate Museum to discuss the intended fieldwork and seek its agreement to accept the site archive for long-term storage and curation.
- 8.4.7 Wessex Archaeology will consult the Museum with regard to its policy on the selection, retention and disposal of excavated material, and to confirm the requirements in respect of the format, presentation and packaging of archive records and materials.
- 8.4.8 Wessex Archaeology will notify the receiving Museum in advance of any fieldwork, and a museum Accession Number will also be sought on each occasion.
- 8.4.9 The timetable for depositing archives with the Museum after completion of the post-fieldwork programme will be agreed between Wessex Archaeology and DIO following completion of the archaeological work.

8.5 Copyright

- 8.5.1 Full copyright of each report shall be retained by the originator under the Copyright, Designs and Patents Act 1988 with all rights reserved, excepting that BWL will be licensed to use each report in all matters directly relating to the project as described in the specification.

9 HEALTH AND SAFETY

- 9.1.1 BWL will ensure that the Retained Archaeologist is made aware of the relevant requirements of all Health and Safety Plans that are put in place for the project.
- 9.1.2 The Retained Archaeologist will ensure that any Method Statements prepared to meet the requirements of the WSI are compliant with the requirements of BWL's Health and Safety Plans for the project.
- 9.1.3 Health and Safety considerations will be of paramount importance in conducting all fieldwork. Safe working practices will override archaeological considerations at all times.
- 9.1.4 All work will be carried out in accordance with the Health and Safety at Work Act 1974, the Health and Safety Management Regulations 1992, the SCAUM (Standing Conference of Archaeological Unit Managers) health and safety manual, Health and Safety in Field Archaeology (2007), Construction, Design, and Management Regulations 2007, and all other relevant Health and Safety legislation, regulations and codes of practice in force at the time.
- 9.1.5 The Archaeological Contractor will prepare archaeological Risk Assessments in advance of any work, and will in turn supply BWL with copies of these documents before the commencement of any fieldwork. Risk Assessments will be read and acknowledged by all members of archaeological staff involved in the fieldwork.



- 9.1.6 Risk Assessments will incorporate an interface document between the Health and Safety system of the Archaeological Contractor and that of the construction/installation contractor/s.

10 REFERENCES

Archaeology Archives Forum 2007: *Archaeological Archives: A guide to best practice in creation, compilation, transfer and curation*.

BMAPA and Historic England 2003: *Marine Aggregate Dredging and the Historic Environment*. Available online at http://www.bmapa.org/documents/arch_guidance.pdf, accessed July 2015.

BMAPA and Historic England 2005: *Protocol for Reporting Finds of Archaeological Interest*. Available online at <http://www.bmapa.org/documents/fullreportingprotocol2005.pdf>, accessed July 2015.

Boskalis Westminster Limited 2014: Project Execution Plan for Queen Elizabeth Class (QEC) Capital Dredge Project, Her Majesty's Naval Base (HMNB) Portsmouth. Report reference: 826-10205.

Chartered Institute for Archaeologists 2004: *Guidelines to the Standards for Recording Human Remains*, IFA Paper No. 7.

Chartered Institute for Archaeologists 2014a: *Standard and guidance for the collection, documentation, conservation and research of archaeological materials*. Available online at http://www.archaeologists.net/sites/default/files/node-files/CIfAS&GFinds_1.pdf, accessed July 2015.

Chartered Institute for Archaeologists 2014b: *Standard and Guidance for the creation, compilation, transfer and deposition of archaeological archives*.

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Maritime Archaeology Ltd. 2007a: HMNB Portsmouth Approach Channel and Harbour EIA. Report reference: 1741.

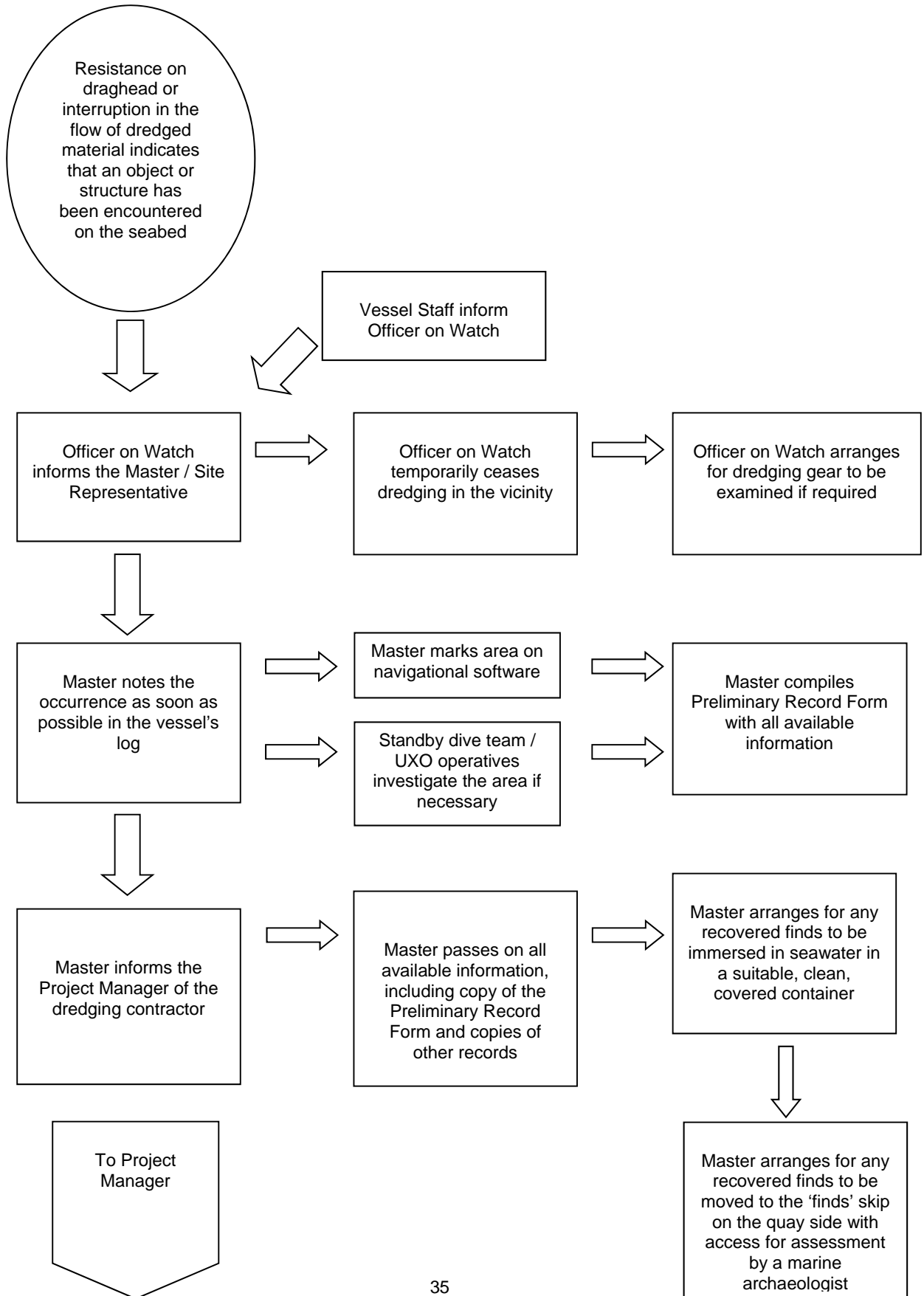
Maritime Archaeology Ltd. 2007b: HMNB Portsmouth Approach Channel Dredge: Field Activity and Site Inspection Report. Report reference: 1776.



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- Robinson, W. 1998: *First Aid for Underwater Finds*. London: Archetype Books.
- Royal HaskoningDHV 2012a: HMNB Portsmouth Approach Channel Dredging and Associated Works ES, Volume II: Environmental Statement. Report reference: 9W6446.
- Royal HaskoningDHV 2012b: HMNB Portsmouth Approach Channel Dredging and Associated Works Scoping Report.
- Royal HaskoningDHV 2013: HMNB Portsmouth Approach Channel Dredging and Associated Works: Archaeological Written Scheme of Investigation. Report reference: 9W6446.
- Royal HaskoningDHV 2015a: HMNB Portsmouth Approach Channel Dredging and Associated Works: Archaeological Written Scheme of Investigation for Middle Slip Jetty. Report reference: PB2131/R/303950/Lond.United Kingdom.
- Royal HaskoningDHV 2015b: HMNB Portsmouth Approach Channel Dredging and Associated Work Project - Archaeological Written Scheme of Investigation - Supplementary Figures and Historic Environment Gazetteer. Report reference: PB2131/R/304514/Lond.United Kingdom.
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- Walker, K. 1990: *Guidelines for the preparation of excavation archives for long-term storage*. UKIC Archaeology Section, London.
- Watkinson, D. 1987: *First Aid for Finds*, 2nd edition. Hertford/London: Rescue/UKIC Archaeology Section
- Wessex Archaeology 2003: Portsmouth Regeneration Project – Portsmouth Approach and Portsmouth Harbour: Archaeological Desk-Based Assessment. Unpublished report reference: 53668.02.
- Wessex Archaeology 2004a: Portsmouth Regeneration Project – Portsmouth Approach: Geophysical Survey Report. Unpublished report reference: 54424.02.
- Wessex Archaeology 2004b: Portsmouth Regeneration Project: Assessment of Archaeological Potential. Unpublished report reference: 55870.01.



APPENDIX 1: ACTIONS ON THE DREDGING VESSEL - ANOMALIES ON THE SEABED OR FINDS RECOVERED FROM THE SEABED



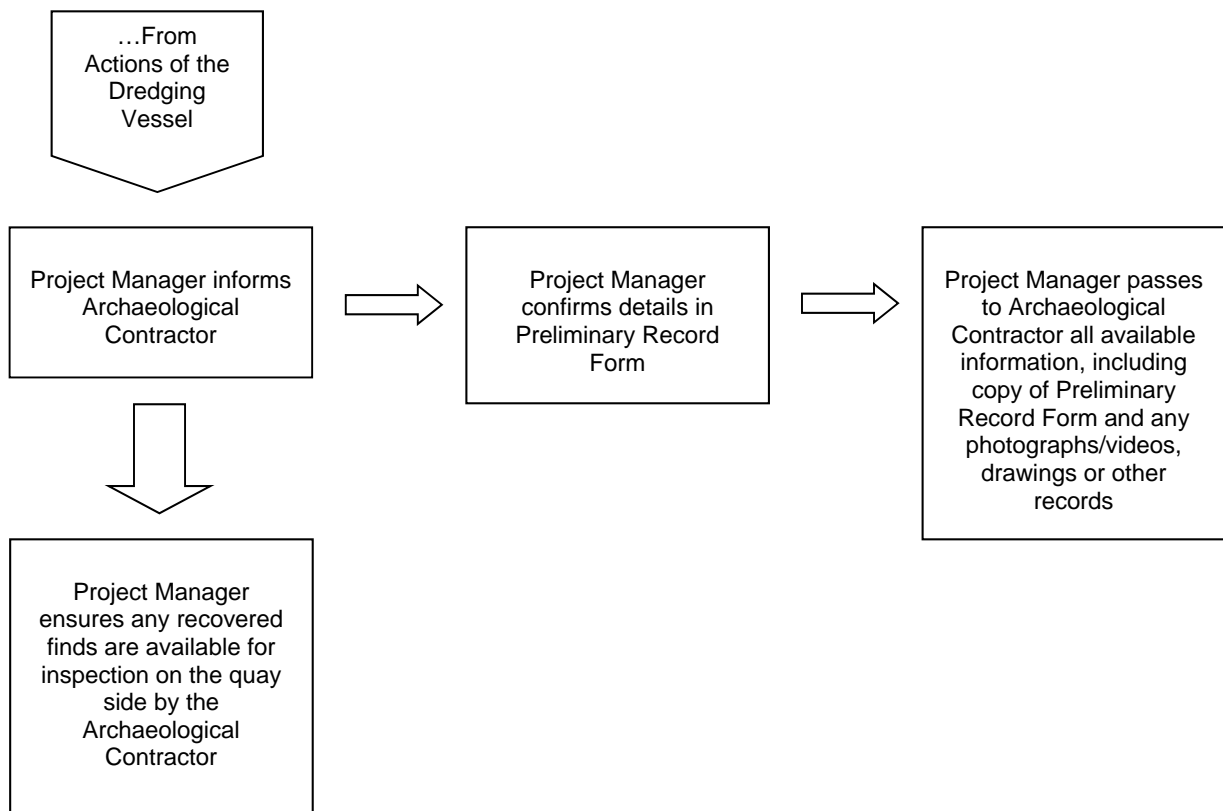


APPENDIX 2: PRELIMINARY RECORDING FORM

Date:	Name of Report Compiler:	Contact details:
Vessel Name:	Dredging Area:	Name of Master:
Name of Officer on Watch:	Name of Finder:	Time that anomaly was encountered / find discovered
Vessel position at time when the anomaly was encountered / find discovered:		
Eastings:	Northings:	Datum (if different from BNG):
Notes on position given: ie: How accurate is the position given above? Is the position the original position of the anomaly on the seabed or have operations moved the material some distance from its original location?		
Description of the anomaly / find:		
For Anomalies: Apparent extent of anomaly: m long x m wide x m above general level of seabed:		
For Anomalies: Extent of deviation and of route development:		
For Finds: Details of any photographs, drawings or other records made of the find:		
For Finds: Details of any treatment given to the find:		
Date and time at which Project Manager was informed:	General notes:	



APPENDIX 3: ACTIONS FOR THE PROJECT MANAGER





**APPENDIX 4: HMNB PORTSMOUTH APPROACH CHANNEL DREDGING AND ASSOCIATED
WORKS PROJECT - ARCHAEOLOGICAL WRITTEN SCHEME OF INVESTIGATION -
SUPPLEMENTARY FIGURES AND HISTORIC ENVIRONMENT GAZETTEER**

Note / Memo

**HaskoningDHV UK Ltd.
Industry, Energy and Mining**

To: Marine Management Organisation and Historic England
From: Victoria Cooper
Date: 02 September 2015
Copy: Gerrit Jan van den Bosch (Boskalis), Paul Simmonds (DIO), Jackie Lavender (RHDHV), Caroline Budd (Wessex Archaeology)
Our reference: PB2131/R/304514/Lond.UK
Classification: Open

Subject: HMNB Portsmouth Approach Channel Dredging and Associated Work Project - Archaeological Written Scheme of Investigation - Supplementary Figures and Historic Environment Gazetteer

This note is provided as a supplement to the document Queen Elizabeth Class Capital Dredge Project Her Majesty's Naval Base Portsmouth Archaeological Monitoring and Mitigation: Written Scheme of Investigation (Capital Dredge WSI). The Capital Dredge WSI was produced by Wessex Archaeology in August 2015 to set out the agreed mitigation for the dredging associated with HMNB Portsmouth Approach Channel Dredging and Associated Works project, comprising:

- Geoarchaeological assessment and production of a deposit model;
- On board finds reporting protocol; and
- Quayside archaeological monitoring.

Boskalis Westminster Limited (BWL) has been contracted by the Defence Infrastructure Organisation (DIO) to undertake capital dredging for the project.

Wessex Archaeology is providing archaeological services to BWL during capital dredging (and, as a result of this work, has produced the Capital Dredge WSI).

Royal HaskoningDHV (RHDHV) was responsible for producing the Environmental Statement for the project in 2012 and is subsequently providing environmental consenting support to DIO.

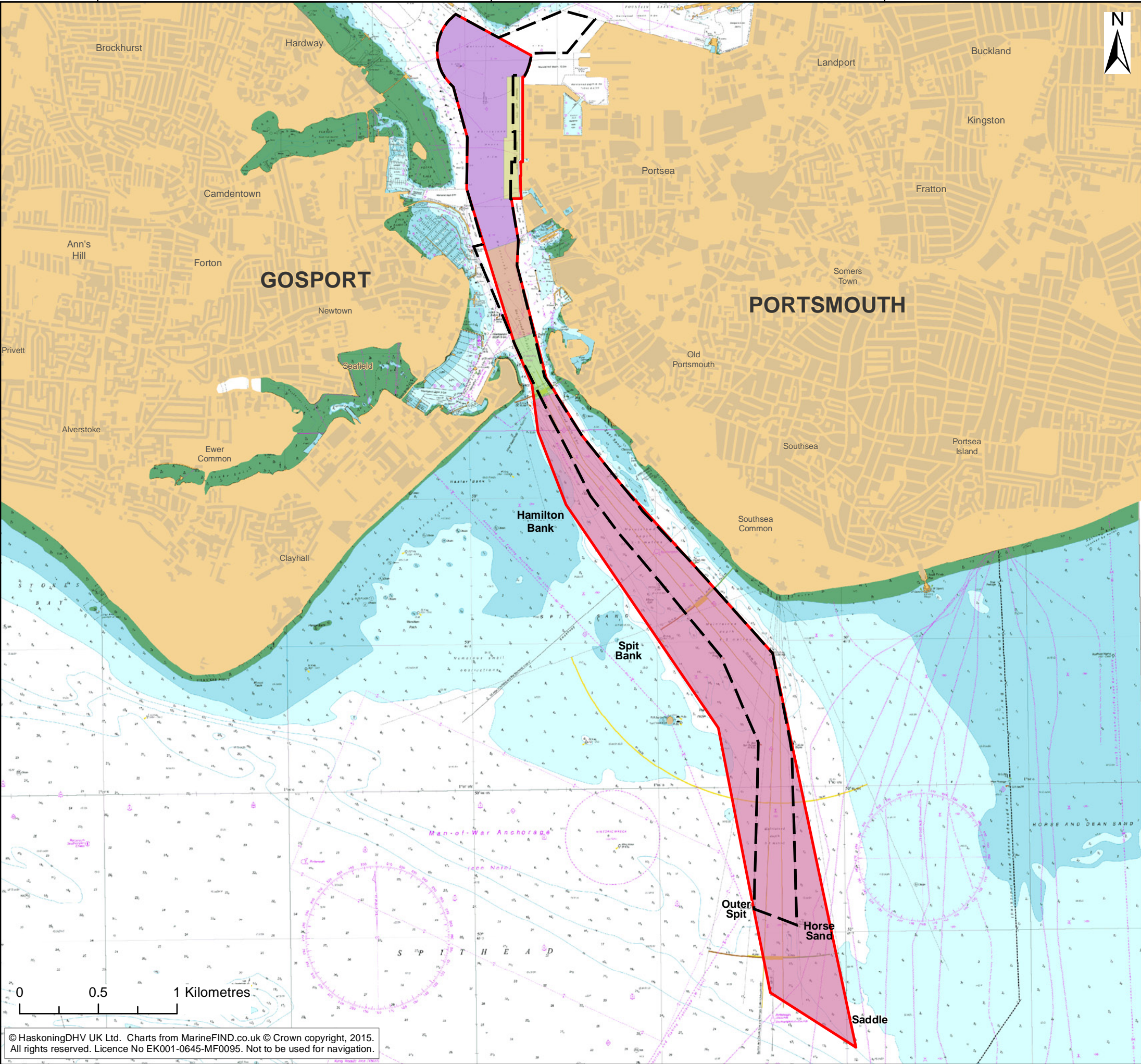
During a consultation meeting between DIO, Historic England and RHDHV on 11th August 2015, Historic England requested the provision of additional figures to illustrate the Capital Dredge WSI. The requested figures have been produced by RHDHV and are included as Appendix 4 to the Capital Dredge WSI. The supplementary figures are:

- Figure 4.1: HMNB Portsmouth Approach Channel
- Figure 4.2: Submerged Prehistoric Archaeology in Relation to Dredge Zones
- Figure 4.3: Known Maritime Archaeology in Relation to Dredge Zones
- Figure 4.4: Cross Section through part of Dredging Area and the Boyne Buoy
- Figure 4.5: Anomalies of Archaeological Potential in Relation to Dredge Zones
- Figure 4.6: Areas of Archaeological Interest in Relation to Dredge Zones

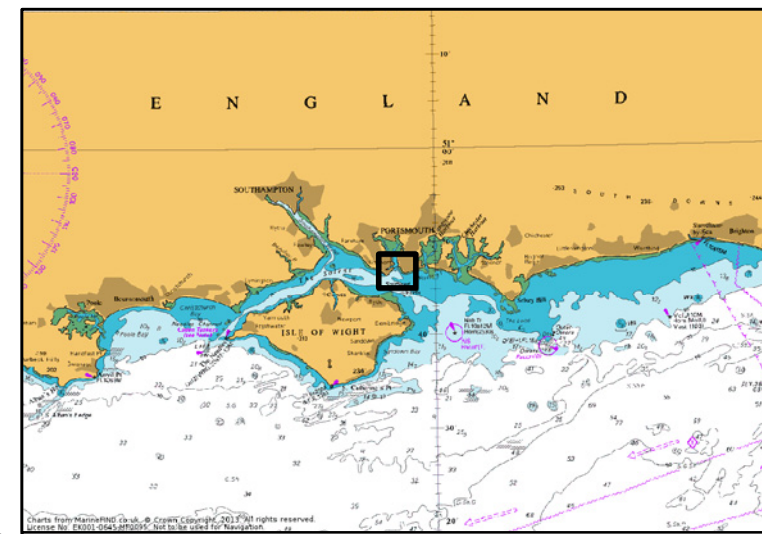
These figures are based upon information provided through a number of studies undertaken in support of the assessment of impacts to archaeology and the historic environment:

- Wessex Archaeology (2003). Portsmouth Regeneration Project: Portsmouth Approach and Portsmouth Harbour Archaeological Desk-Based Assessment. Ref: 53668.02;
- Wessex Archaeology (2004). Portsmouth Regeneration Project: Assessment of Archaeological Potential Portsmouth Approach. Ref: 55870.01;
- Maritime Archaeology Ltd. (2006). Assessment of Vibrocores and Grab Samples: HMNB Portsmouth Approach Channel and Harbour EIA. MA Ltd: 1764;
- Maritime Archaeology Ltd. (2007a). HMNB Portsmouth Approach Channel and Harbour EIA. MA Ltd: 1741;
- Maritime Archaeology Ltd. (2007b). HMNB Portsmouth Channel Proposed Dredge Field Activity and Site Inspection Report. MA Ltd: 1776; and
- Royal HaskoningDHV (2012) HMNB Portsmouth Approach Channel Dredging and Associated Works Environmental Statement (Chapter 22 - Archaeology and Historic Environment.

For further information, the historic environment gazetteer produced to accompany the Maritime Archaeology Ltd. EIA (2007a) is also included, as part of this supplementary note.



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Legend:

- Approach Channel Dredging Limit
- Existing Channel Limit

Dredging Zones

- Zone A
- Zone B
- Zone C
- Zone D
- Zone E

Client: Defence Infrastructure Organisation	Project: HMNB Portsmouth Approach Channel Written Scheme of Investigation
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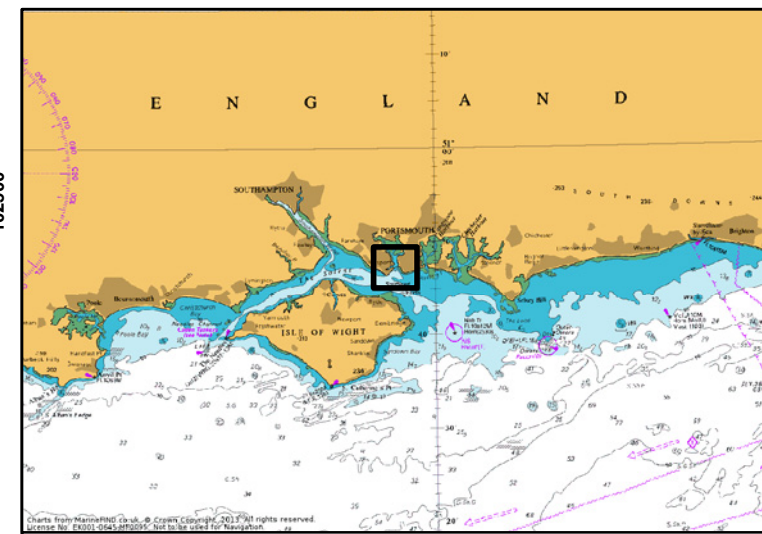
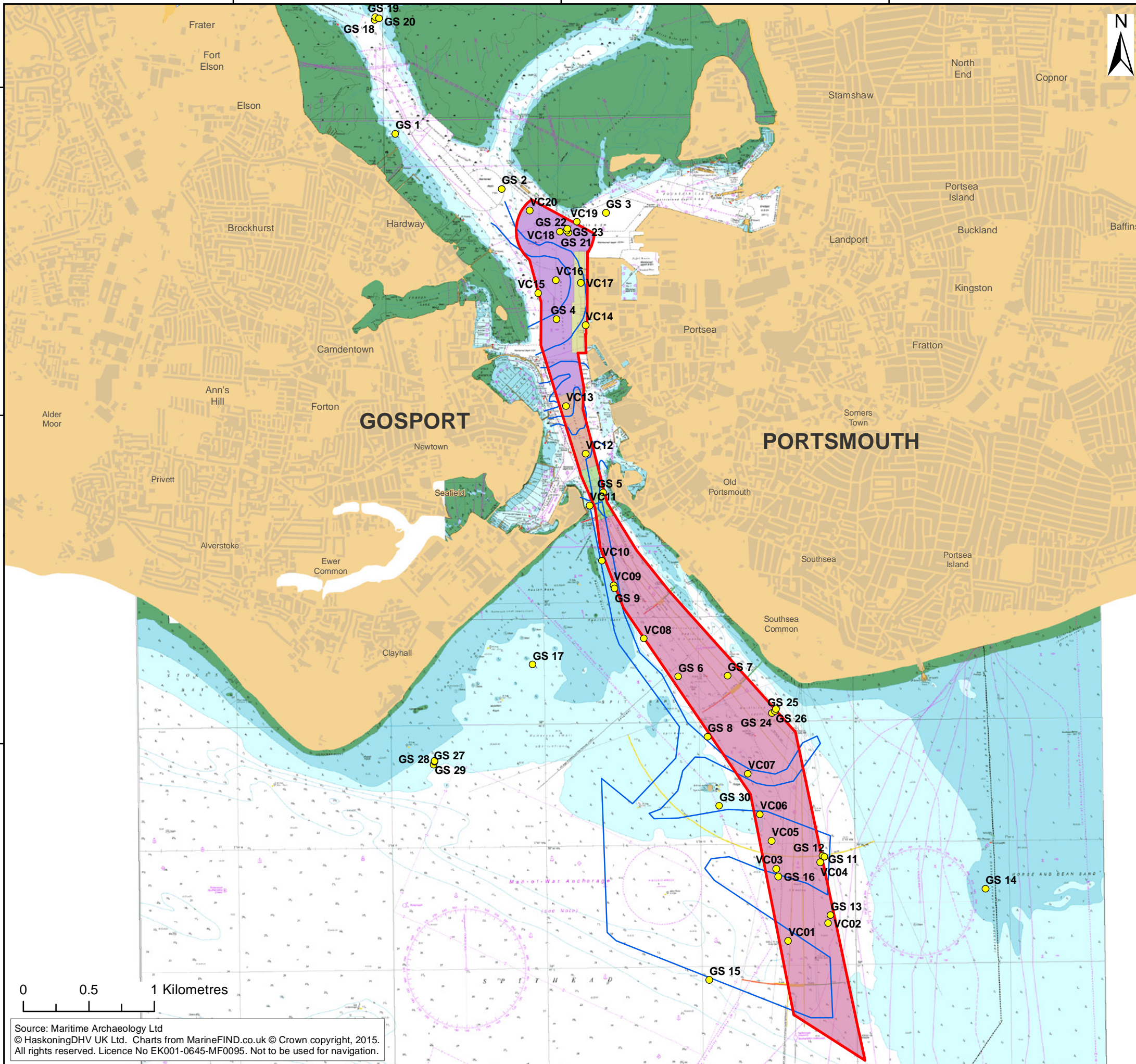
Title:
HMNB Portsmouth Approach Channel

Figure: 4.1 Drawing No: PB2131-100-001

Revision:	Date:	Drawn:	Checked:	Size:	Scale:
01	25/08/2015	LB	VC	A3	1:25,000

Co-ordinate system: British National Grid

ROYAL HASKONINGDHV
INDUSTRY, ENERGY & MINING
 2 ABBEY GARDENS
 GREAT COLLEGE STREET
 LONDON
 SW1P 3NL
 +44 (0)20 7222 2115
www.royalhaskoningdhv.com



Legend:

- Approach Channel Dredging Limit
- Dredging Zones**
- Zone A
- Zone B
- Zone C
- Zone D
- Zone E
- Palaeochannel (Maritime Archaeology Ltd.)
- Location of Grab Samples and Vibrocore Boreholes (Maritime Archaeology Ltd. 2006)

Client: Defence Infrastructure Organisation	Project: HMNB Portsmouth Approach Channel Written Scheme of Investigation
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Title:
Submerged Prehistoric Archaeology in Relation to Dredge Zones

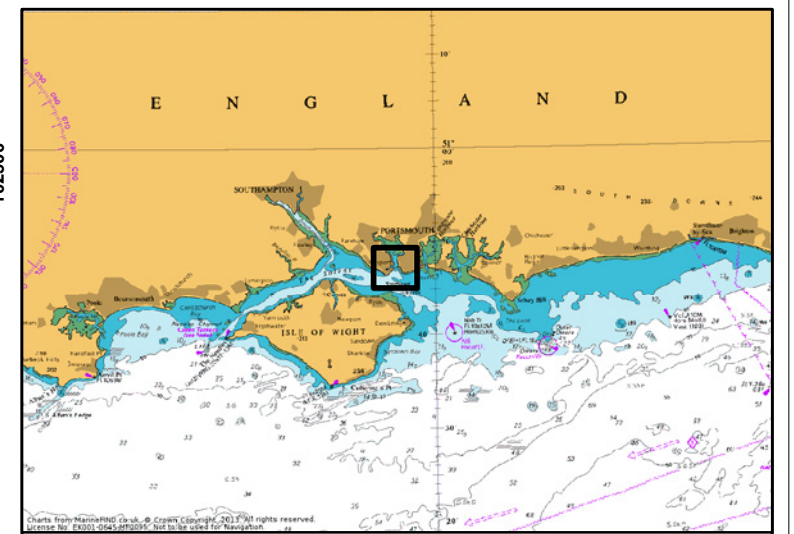
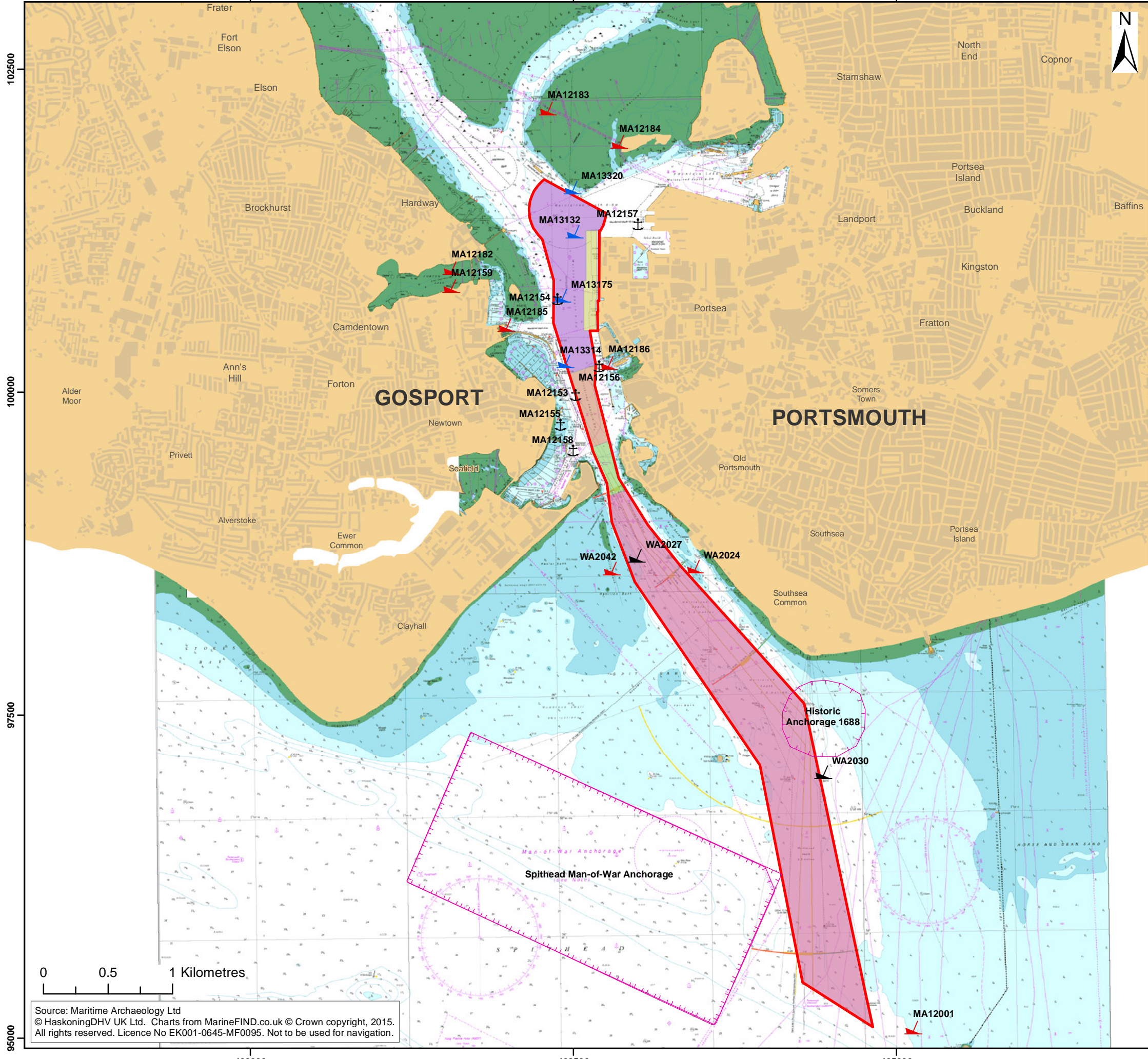
Figure: 4.2 Drawing No: PB2131-100-002

Revision:	Date:	Drawn:	Checked:	Size:	Scale:
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Co-ordinate system: British National Grid

Source: Maritime Archaeology Ltd
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 INDUSTRY, ENERGY & MINING
 2 ABBEY GARDENS
 GREAT COLLEGE STREET
 LONDON
 SW1P 3NL
 +44 (0)20 7222 2115
www.royalhaskoningdhv.com



Legend:

- Approach Channel Dredging Limit
- Dredging Zones**
- Zone A
- Zone B
- Zone C
- Zone D
- Zone E
- ↘ Known Locations of Recorded Wrecks and Obstructions (Maritime Archaeology Ltd 2007) selection
- ↘ Wrecks Identified in Geophysical Survey and Subject to Diver Investigation (Maritime Archaeology Ltd 2007)
- ⚓ Known Wrecks Subject to Diver Investigation
- ⚓ Historic Anchorages (Maritime Archaeology Ltd 2007)
- Historic Anchorage

Client: Defence Infrastructure Organisation	Project: HMNB Portsmouth Approach Channel Written Scheme of Investigation
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Title:
Known Maritime Archaeology in Relation to Dredge Zones

Figure: 4.3 Drawing No: PB2131-100-003

Revision:	Date:	Drawn:	Checked:	Size:	Scale:
01	25/08/2015	LB	VC	A3	1:30,000

Co-ordinate system: British National Grid

Source: Maritime Archaeology Ltd
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INDUSTRY, ENERGY & MINING
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GREAT COLLEGE STREET
LONDON
SW1P 3NL
+44 (0)20 7222 2115
www.royalhaskoningdhv.com

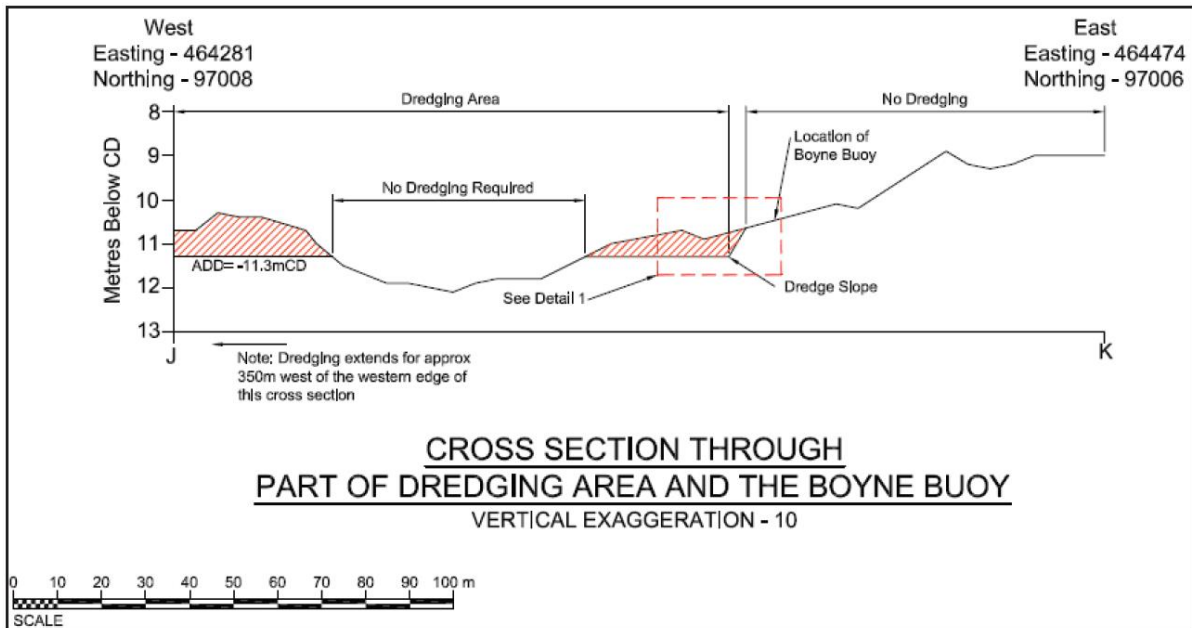
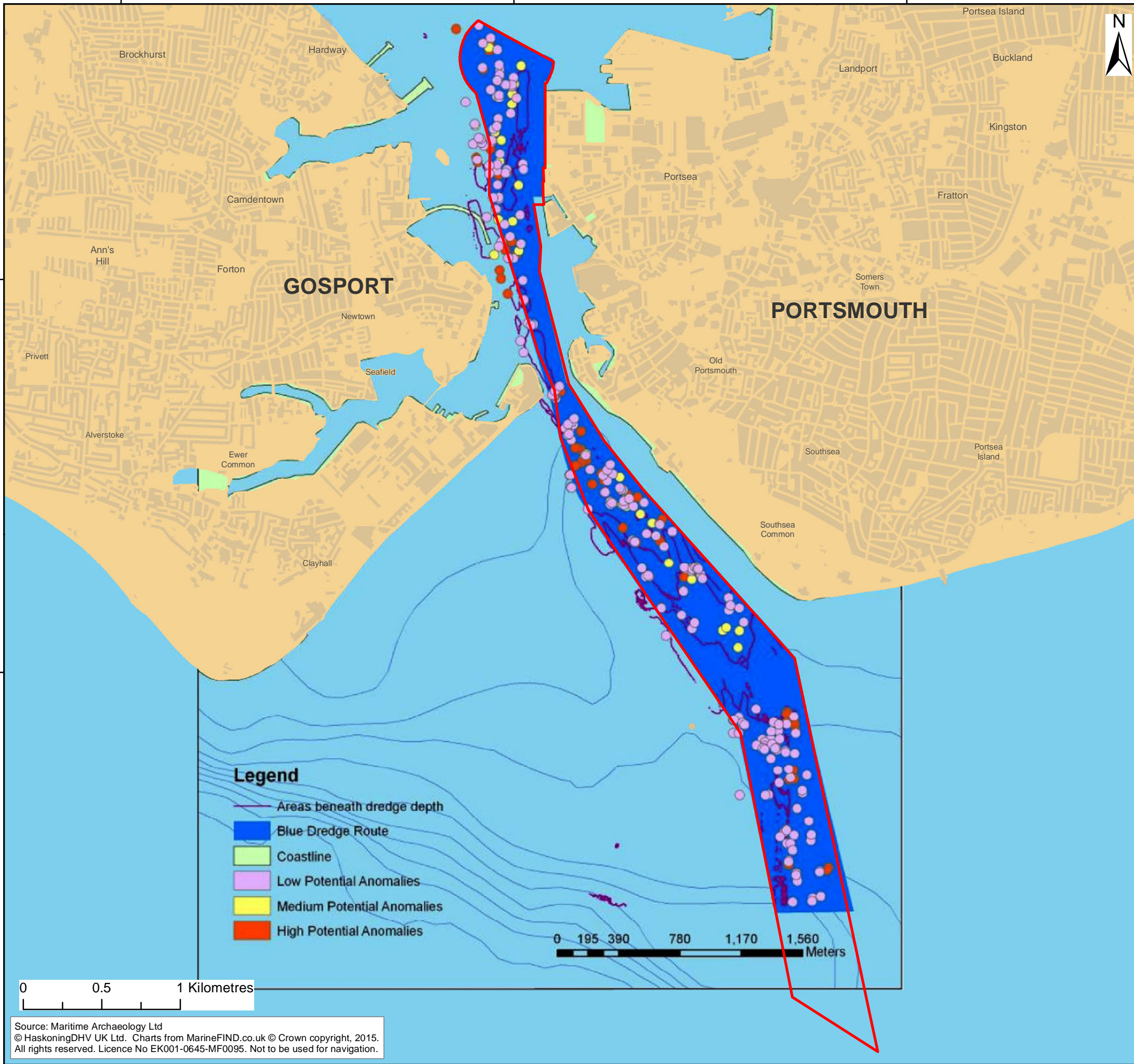


Figure 4.4: Cross Section through part of Dredging Area and the Boyne Buoy (Figure 22.5 from RHDHV, 2012)

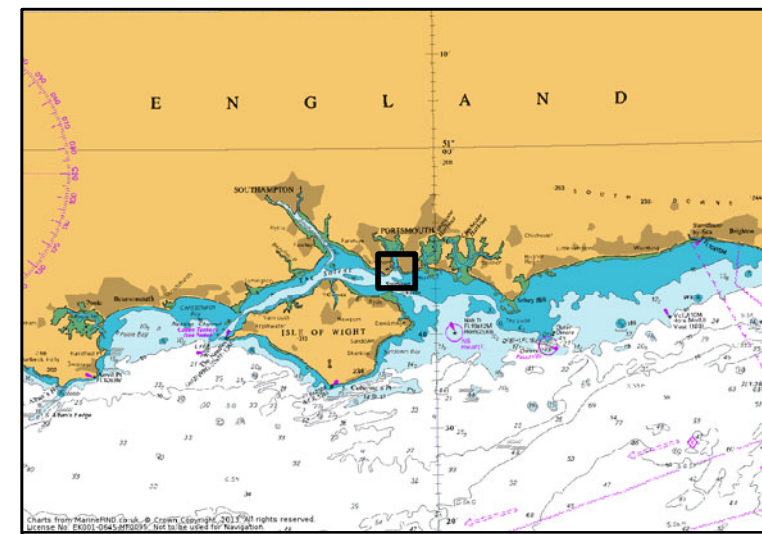


- Legend**
- Areas beneath dredge depth
 - Blue Dredge Route
 - Coastline
 - Low Potential Anomalies
 - Medium Potential Anomalies
 - High Potential Anomalies

0 0.5 1 Kilometres

0 195 390 780 1,170 1,560 Meters

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Legend:

- Approach Channel Dredging Limit

Client: Defence Infrastructure Organisation	Project: HMNB Portsmouth Approach Channel Written Scheme of Investigation
--	--

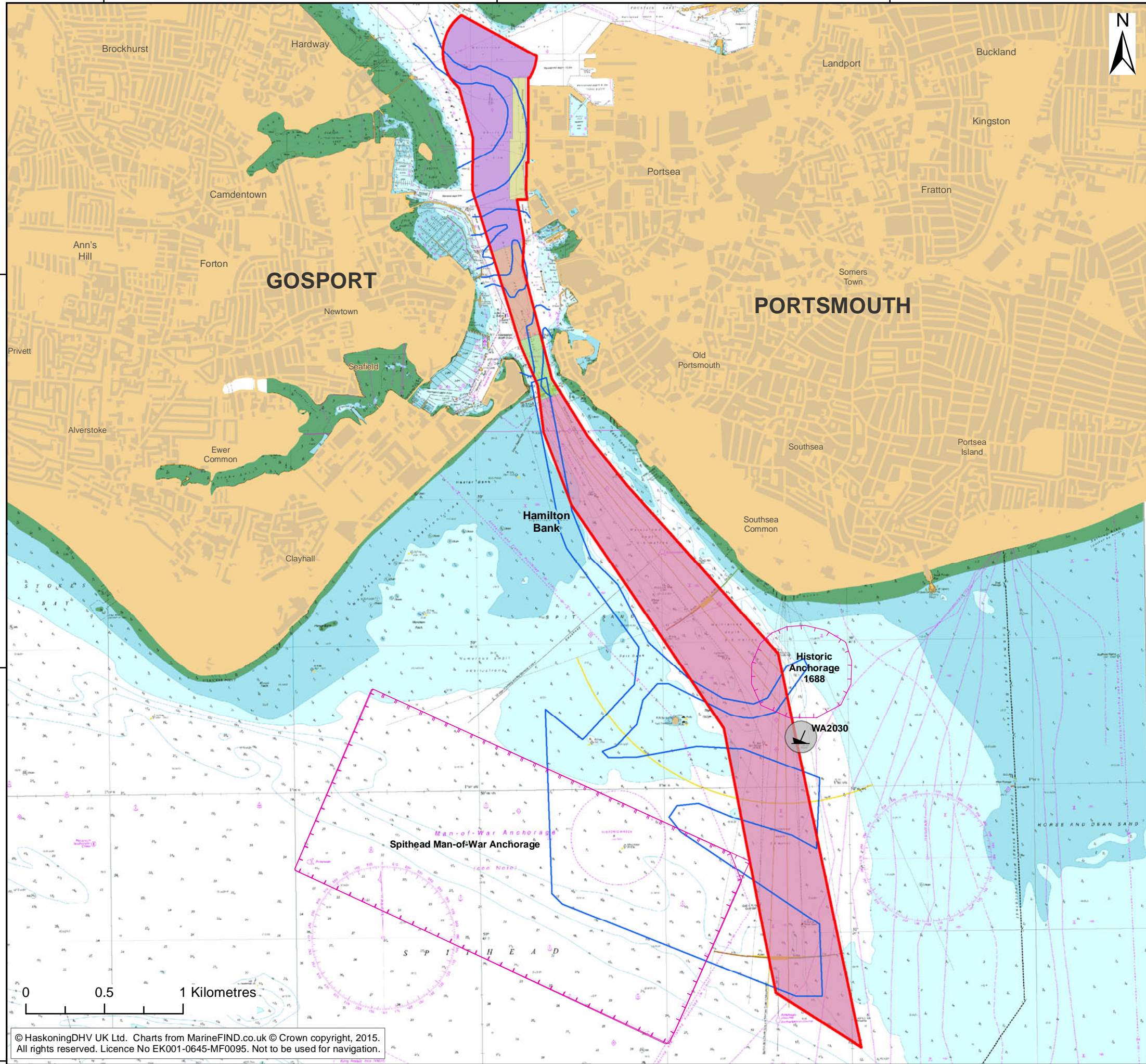
Title:
Location and Distribution of all High, Medium and Low Potential Anomalies (Figure 22.2 from RHDHV, 2012)

Figure: 4.5 Drawing No: PB2131-100-004

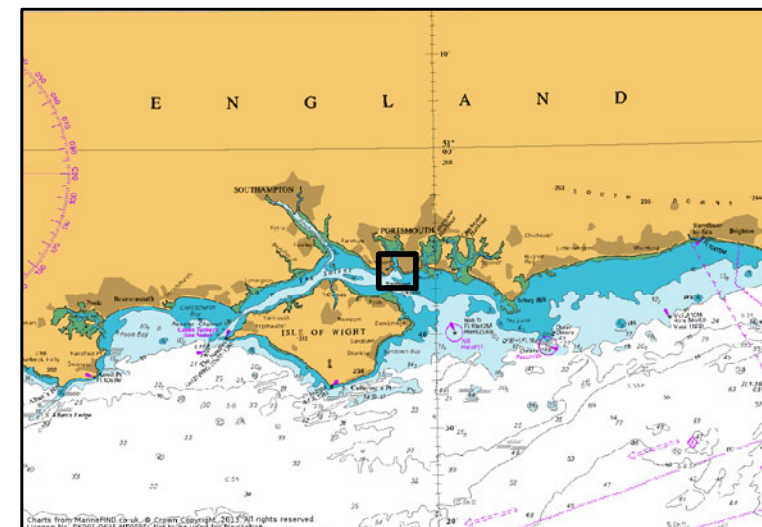
Revision:	Date:	Drawn:	Checked:	Size:	Scale:
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Co-ordinate system: British National Grid

ROYAL HASKONINGDHV
 INDUSTRY, ENERGY & MINING
 2 ABBEY GARDENS
 GREAT COLLEGE STREET
 LONDON
 SW1P 3NL
 +44 (0)20 7222 2115
 www.royalhaskoningdhv.com



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Legend:

- Approach Channel Dredging Limit
- Dredging Zones**
- Zone A
- Zone B
- Zone C
- Zone D
- Zone E
- Designated Historic Anchorage Area (outside of the Harbour)
- Palaeochannel (Maritime Archaeology Ltd.)
- HMS Boyne
- HMS Boyne 100m Buffer

Client: Defence Infrastructure Organisation

Project: HMNB Portsmouth Approach Channel Written Scheme of Investigation

Title: Areas of Archaeological Interest in Relation to Dredge Zones

Figure: 4.6 Drawing No: PB2131-100-005

Revision:	Date:	Drawn:	Checked:	Size:	Scale:
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ROYAL HASKONINGDHV
 INDUSTRY, ENERGY & MINING
 2 ABBEY GARDENS
 GREAT COLLEGE STREET
 LONDON
 SW1P 3NL
 +44 (0)20 7222 2115
 www.royalhaskoningdhv.com

Enhancing Society Together

HMNB Portsmouth
Approach Channel and Harbour EIA
Gazetteer



January 2007

MA Ltd: 1741

Maritime Archaeology Ltd.

HMNB Portsmouth Approach Channel and Harbour EIA

Report prepared on behalf of:

Royal Haskoning
Elizabeth House
Emperor Way
Exeter
EX1 3QS
United Kingdom

By:

Maritime Archaeology Ltd
Room W1/95
Southampton Oceanography Centre
Empress Dock
Southampton
SO14 3ZH
© Maritime Archaeology Ltd

Document Authorisation

Name	Position	Details	Signature/ Initial	Date
J. Jansen van Rensburg	Project Officer	Checked Draft copy	J.J v R	08 01 07
J. Satchell	Project Manager	Checked Final Copy	J.S	10 01 07
G. Momber	Director	Authorised final Copy	G.M	12 01 07

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1. Gazetteer of Terrestrial Sites

<i>MA UID</i>	<i>EASTING</i>	<i>NORTHING</i>	<i>TYPE</i>	<i>NAME</i>	<i>DESCRIPTION</i>	<i>DATE</i>	<i>REFERENCES</i>
MA11001	466370	100450	Find spot		Palaeolithic Tools of acheulian type	Lower Palaeolithic	NMR238651, NMR238656
MA11002	465500	99500	Find spot		Six Lower Palaeolithic handaxes	Palaeolithic	NMR1102788
MA11003	460710	98410	Find spot		Mousterian flint Implement	Mid Palaeolithic	NMR461988
MA11004	464500	101300	Find spot		A Neolithic flint axe	Neolithic	NMR238806
MA11005	461060	98830	Find spot		U flint borer	Prehistoric	NMR462016
MA11006	465720	98660	Find spot		Bronze axe	Bronze Age	NMR461943
MA11007	466060	100400	Find spot		Bronze Age hoard	Bronze Age	HCC56366
MA11008	463500	99500	Find spot		IA coins	Iron Age	NMR462025
MA11009	466230	98570	Find spot		In 1897 a black pottery vase	Roman	NMR461946
MA11010	463180	99450	Dock	CAMBER DOCK	Site of medieval dock	Medieval	NMR892740

MA UID	EASTING	NORTHING	TYPE	NAME	DESCRIPTION	DATE	REFERENCES
MA11011	461084	100681	Slipway	Landing Place	White's Shipyard	Post Medieval	HCC55067
MA11012	461852	100220	Town Defences	Town Defences	Moat & Rampart	Post Medieval	HCC55078
MA11013	463400	100800	Dock & Harbour	DOCKS 1 TO 6	Basin, ship building and repairing docks	Medieval	NMR238803
MA11014	462700	100900	Landing Stage	HM NAVAL BASE, THE JETTIES PHASE 1B		Post Medieval	NMR1390702
MA11015	462700	100400	Landing Stage	HMNB, SOUTH RAILWAY JETTY		Post Medieval	NMR1375607, NMR1390713
MA11016	461600	101100	Military Instal	Priddys Hard	Archaeological survey, building recording	Post Medieval	NMR238797
MA11017	461700	100600	Military Instal	Royal Clarence Yard	Archaeological survey, building recording	Post Medieval	NMR238800
MA11018	463900	100700	Dock & Harbour	Portsmouth Harbour	Archaeological survey, building recording	Post Medieval	NMR238803
MA11019	463200	100700	Military Instal	Gunwharf Quays	Archaeological survey, building recording	Post Medieval	NMR1337010, NMR1330370,
MA11020	462100	100600	Find spot	Burrow Bank	Roman ceramics	Roman	NMR238755

2. Gazetteer of Maritime Sites

<i>MA UID</i>	<i>Easting</i>	<i>Northing</i>	<i>Type</i>	<i>Name</i>	<i>Description</i>	<i>Date</i>	<i>References</i>	<i>Evidence</i>
MA12001	465129	95082	Dredger	Roway	British Dredger 1967	1967	HCC 57383	Known Location
MA12002	462712	94843	Fishermens Fastener	Obstruction	Unidentified seabed obstruction	Unknown	UKHO 66148	Known Location
MA12003	464400	94020	Wreck		Unidentified vessel	Unknown	NMR767405	Known Location
MA12004	460560	95570	Fishermens fastener		Unidentified seabed obstruction	Unknown	NMR766459	Known Location
MA12005	464490	94250	Fishermens fastener		Unidentified seabed obstruction	Unknown	NMR766456	Known Location
MA12006	460690	95850	Fishermens fastener		Unidentified seabed obstruction	Unknown	NMR766462	Known Location
MA12007	463280	95070	Cargo vessel	Barge	Wreck of a barge	Unknown	NMR1397455	Known Location
MA12008	460620	96440	Fishermens fastener		Unidentified seabed obstruction	Unknown	NMR1028183	Known Location
MA12009	465780	96780	Dock & Harbour installation		DOLPHIN	Unknown	NMR767436	Known Location
MA12010	462990	95060	Sailing vessel		Wreck of a yacht	Unknown	NMR1397757	Known Location
MA12011	461150	97320	Fishermens Fastener		Unidentified seabed obstruction	Unknown	NMR767440	Known Location
MA12012	461150	96410	Fishermens fastener		Unidentified seabed obstruction	Unknown	NMR766478	Known Location
MA12013	460080	95600	Fishermens fastener		Unidentified seabed obstruction	Unknown	NMR766460	Known Location

<i>MA UID</i>	<i>Easting</i>	<i>Northing</i>	<i>Type</i>	<i>Name</i>	<i>Description</i>	<i>Date</i>	<i>References</i>	<i>Evidence</i>
MA12014	466660	94000	Naval support vessel	CAMBRIAN	REMAINS OF BRITISH BOOM DEFENCE	1940	NMR805588	Known Location
MA12015	460500	95810	Fishermens fastener		Unidentified seabed obstruction	Unknown	NMR766461	Known Location
MA12016	461680	98440	Wreck	Dasher Wreck	ENGLISH CRAFT 1806	1806	NMR1234466, HCC55500	Documentary evidence
MA12017	462300	95760	Wreck	Golden Star Wreck	CRAFT 1705	1705	NMR1368683, HCC55505	Documentary evidence
MA12018	461680	98440	Wreck	Charming Molly Wreck	TENDER 1779	1779	NMR1324710, HCC55507	Documentary evidence
MA12019	462500	95060	Sailing vessel	Colonist Wreck	WEST INDIAMAN 1837	1837	NMR1047739, HCC55508	Documentary evidence
MA12020	462300	95760	Wreck	Purissima Wreck	SPANISH CRAFT 1800	1800	NMR1234213, HCC55510	Documentary evidence
MA12021	462300	95760	Warship	Newcastle Wreck	BRITISH 4TH RATE 1703	1703	NMR1033724, HCC55535	Documentary evidence
MA12022	462300	95760	Galley	Unnamed French Galley Wreck	FRENCH GALLEY 1545	1545	NMR895909, HCC55557	Documentary evidence
MA12023	462300	95760	Wreck	Unnamed Wreck	Post Medieval wreck	Post Medieval	HCC 55559	Documentary evidence
MA12024	463000	96000	Wreck	Friends Goodwill	Undated Shipwreck	Unknown	HCC 57347	Documentary evidence
MA12025	463000	96000	Wreck	St George	Undated Shipwreck	Unknown	HCC 57348	Documentary evidence
MA12026	463000	96000	Wreck	Unidentified Wreck	Unknown Shipwreck	Unknown	HCC 57349	Documentary evidence
MA12027	463000	96000	Wreck	Speedwell	Undated Shipwreck	Unknown	HCC 57350	Documentary evidence

<i>MA UID</i>	<i>Eastings</i>	<i>Northing</i>	<i>Type</i>	<i>Name</i>	<i>Description</i>	<i>Date</i>	<i>References</i>	<i>Evidence</i>
MA12028	463000	96000	Wreck	Fortuna	Undated Shipwreck	Unknown	HCC 57352	Documentary
MA12029	463000	96000	Wreck	Lively	Undated Shipwreck	Unknown	HCC 57354	Documentary evidence
MA12030	463000	96000	Wreck	Friendship	Undated Shipwreck	Unknown	HCC 57355	Documentary evidence
MA12031	463000	96000	Wreck	Mars	Undated Shipwreck	Unknown	HCC 57356	Documentary evidence
MA12032	462300	95760	Wreck	Lark	Post Medieval wreck	Post Medieval	HCC 57430	Documentary evidence
MA12033	463790	98830	Wreck	RICHARD AND ANN	BRITISH CRAFT 1758	1758	NMR1152752	Documentary evidence
MA12034	460630	97500	Wreck	THOMAS WILSON	BRITISH CRAFT 1796	1796	NMR898842	Documentary evidence
MA12035	463790	98830	Sailing vessel	FAREHAM TRADER	ENGLISH BARQUE 1852	1852	NMR898885	Documentary evidence
MA12036	463790	98830	Sailing vessel	DROVER	ENGLISH SMACK 1823	1823	NMR1240283	Documentary evidence
MA12037	463790	98830	Sailing vessel	SARAH ANN	BRITISH CRAFT 1807	1807	NMR898861	Documentary evidence
MA12038	462300	95760	Sailing vessel	ROTTERDAM	BRITISH BARGE 1883	1883	NMR898955	Documentary evidence
MA12039	462300	95760	Sailing vessel	EMILY KATE	BRITISH BARGE 1895	1895	NMR898978	Documentary evidence
MA12040	460630	97500	Sailing vessel	PETER	ENGLISH BARGE 1909	1809	NMR899010	Documentary evidence
MA12041	462300	95760	Sailing vessel	ANN	1825 wreck	1825	NMR1240368	Documentary evidence

MA12042	463790	98830	Sailing vessel	HERO	ENGLISH BRIG 1805	1805	NMR1234341	Documentary evidence
MA12043	463790	98830	Sailing vessel		1726 wreck	1726	NMR1355394	Documentary

<i>MA UID</i>	<i>Easting</i>	<i>Northing</i>	<i>Type</i>	<i>Name</i>	<i>Description</i>	<i>Date</i>	<i>References</i>	<i>Evidence</i>
MA12044	460630	97500	Sailing vessel	SHARK	BRITISH CARGO VESSEL 1763	1763	NMR1152313	Documentary evidence
MA12045	463790	98830	Sailing vessel	BRITANNIA	BRITISH TRANSPORT VESSEL 1765	1765	NMR898835	Documentary evidence
MA12046	463790	98830	Sailing vessel	MARY	BRITISH CRAFT 1796	1796	NMR898845	Documentary evidence
MA12047	463790	98830	Sailing vessel	FRIENDS	BRITISH CARGO VESSEL 1806	1806	NMR1234357	Documentary evidence
MA12048	460609	97390	Sailing vessel	ST MARTIN	ENGLISH PRIVATEER 1758	1758	NMR898810	Documentary evidence
MA12049	462300	95760	Sailing vessel	MARY ANN	BRITISH KETCH 1851	1851	NMR1156991	Documentary evidence
MA12050	463790	98830	Sailing vessel	LARK	CARGO VESSEL 1794	1794	NMR898825	Documentary evidence
MA12051	463790	98830	Warship	HMS LBV154	BRITISH LANDING CRAFT 1944	1944	NMR895824	Documentary evidence
MA12052	463790	98830	Wreck		FRENCH CRAFT 1636	1636	NMR1323588	Documentary evidence
MA12053	463790	98830	Sailing vessel	RISING SUN	BRITISH CRAFT 1801	1801	NMR1234492	Documentary evidence
MA12054	463790	98830	Sailing vessel	THAMES	BRITISH BRIG 1861	1861	NMR1240533	Documentary evidence
MA12055	463790	98830	Sailing vessel	SWIFT	BRITISH CUTTER 1897	1897	NMR898981	Documentary evidence
MA12056	463790	98830	Cargo vessel	ANNIE CLARKE	ENGLISH BARGE 1891	1891	NMR1153383	Documentary evidence
MA12057	463790	98830	Sailing vessel	GLORIANA	CRAFT, 1795	1795	NMR898838	Documentary evidence
MA12058	462300	95760	Sailing vessel	UNITY	WELSH CRAFT 1817	1817	NMR898873	Documentary

<i>MA UID</i>	<i>Easting</i>	<i>Northing</i>	<i>Type</i>	<i>Name</i>	<i>Description</i>	<i>Date</i>	<i>References</i>	<i>Evidence</i>
MA12059	463790	98830	Sailing vessel	PEARL	BRITISH YAWL 1898	1898	NMR1153661	Documentary evidence
MA12060	459600	98150	Sailing vessel	FRIENDS	BRITISH CRAFT 1830	1830	NMR1240384	Documentary evidence
MA12061	462300	95760	Sailing vessel	E B	ENGLISH KETCH 1915	1915	NMR899028	Documentary evidence
MA12062	461680	98440	Sailing vessel	CHARLES SHARP	CRAFT, 1776	1776	NMR898817	Documentary evidence
MA12063	463790	98830	Sailing vessel	THOMAS AND FRANCIS	English ketch 1703	1703	NMR1432138	Documentary evidence
MA12064	462300	95760	Sailing vessel	HOPE	wreck of British cargo vessel	1800	NMR1152871	Documentary evidence
MA12065	463790	98830	Wreck	MARYANN	AMERICAN CRAFT 1807	1807	NMR1152843	Documentary evidence
MA12066	463790	98830	Sailing vessel	WESTRA	BRITISH YACHT 1940	1940	NMR1244285	Documentary evidence
MA12067	462300	95760	Sailing vessel	LAURA	BRITISH WHERRY 1887	1887	NMR898958	Documentary evidence
MA12068	463790	98830	Sailing vessel	VALIANT	BRITISH BRIG 1811	1811	NMR1152902	Documentary evidence
MA12069	463790	98830	Sailing vessel	OAK	BRITISH TRANSPORT VESSEL 1809	1809	NMR1234643	Documentary evidence
MA12070	463790	98830	Sailing vessel	FOUR BROTHERS	ENGLISH KETCH 1877	1877	NMR1153341	Documentary evidence
MA12071	463790	98830	Warship	LCPL 52	BRITISH LANDING CRAFT 1944	1944	NMR895823	Documentary evidence
MA12072	463790	98830	Sailing vessel	BRITTON	BRITISH CRAFT 1795	1795	NMR898839	Documentary evidence
MA12073	463790	98830	Sailing vessel	GREYHOUND	BRITISH CRAFT 1796	1796	NMR898844	Documentary

<i>MA UID</i>	<i>Easting</i>	<i>Northing</i>	<i>Type</i>	<i>Name</i>	<i>Description</i>	<i>Date</i>	<i>References</i>	<i>Evidence</i>
MA12074	459600	98150	Sailing vessel	PITT	ENGLISH HOY 1803	1803	NMR1339397	Documentary evidence
MA12075	460630	97500	Sailing vessel	NIGHTINGALE	ENGLISH KETCH 1894	1894	NMR898970	Documentary evidence
MA12076	462300	95760	Sailing vessel	EASTERN MONARCH	ENGLISH CARGO VESSEL 1859	1859	NMR898892	Documentary evidence
MA12077	463790	98830	Sailing vessel		CRAFT, 1627	1627	NMR1152171	Documentary evidence
MA12078	463790	98830	Sailing vessel	QUEEN CHARLOTTE	ENGLISH CRAFT 1872	1872	NMR898911	Documentary evidence
MA12079	466100	97750	Wreck		VESSEL	Unknown	NMR767442	Documentary evidence
MA12080	462300	95760	Warship	HMS HILARY II	BRITISH DRIFTER 1916	1916	NMR895842	Documentary evidence
MA12081	463790	98830	Warship	HMS CHARDE	BRITISH DRIFTER 1940	1940	NMR1151909	Documentary evidence
MA12082	463790	98830	Sailing vessel	CAROLINE	ENGLISH CRAFT 1816	1816	NMR898870	Documentary evidence
MA12083	463790	98830	Sailing vessel	HELLEN	BRITISH CARFT 1811	1811	NMR1234809	Documentary evidence
MA12084	462300	95760	Cargo vessel	TRIO	CARGO VESSEL 1812	1812	NMR1162491	Documentary evidence
MA12085	463790	98830	Sailing vessel	THETIS	BRITISH CRAFT 1800	1800	NMR1152812	Documentary evidence
MA12086	462300	95760	Warship	HMS LUCKNOW	BRITISH TRAWLER 1917	1917	NMR1244181	Documentary evidence
MA12087	463790	98830	Cargo vessel	ST ANDREW	DUTCH CARGO 1633	1633	NMR1320976	Documentary evidence
MA12088	460770	95830	Fishermens fastener		Seabed obstruction	Unknown	NMR767423	Documentary

<i>MA UID</i>	<i>Easting</i>	<i>Northing</i>	<i>Type</i>	<i>Name</i>	<i>Description</i>	<i>Date</i>	<i>References</i>	<i>Evidence</i>
MA12089	463790	98830	Sailing vessel	PEARL	ENGLISH BARGE 1922	1922	NMR1155894	Documentary evidence
MA12090	463790	98830	Sailing vessel	TWO FRIENDS	BRITISH CRAFT 1800	1800	NMR898857	Documentary evidence
MA12091	463790	98830	Sailing vessel	LAIRD	BRITISH CRAFT 1801	1800	NMR1234469	Documentary evidence
MA12092	463790	98830	Sailing vessel	RICHARD	ENGLISH BARGE 1884	1884	NMR898956	Documentary evidence
MA12093	462300	95760	Sailing vessel	BELL	1809 wreck	1809	NMR1234793	Documentary evidence
MA12094	463790	98830	Sailing vessel	HORNETT	CRAFT, 1794	1794	NMR898826	Documentary evidence
MA12095	462300	95760	Sailing vessel	MARIA CAROLINA	TRANSPORT VESSEL 1795	1795	NMR898834	Documentary evidence
MA12096	463790	98830	Sailing vessel	EMANUEL	ENGLISH SCHOONER 1881	1881	NMR1155319	Documentary evidence
MA12097	462300	95760	Cargo vessel	WILLEM III	DUTCH CARGO steamship 1871	1871	NMR898902	Documentary evidence
MA12098	462300	95760	Sailing vessel	THISTLE	ENGLISH BARGE 1912	1912	NMR899019	Documentary evidence
MA12099	463790	98830	Sailing vessel	LARK	BRITISH CRAFT 1834	1834	NMR898882	Documentary evidence
MA12100	463790	98830	Sailing vessel	SMALL BRIDGE	BRITISH CARGO VESSEL 1807	1807	NMR1234520	Documentary evidence
MA12101	460620	97391	Sailing vessel	ALETTA	CRAFT, 1764	1764	NMR898815	Documentary evidence
MA12102	462300	95760	Sailing vessel		1798 wreck	1798	NMR1393475	Documentary evidence
MA12103	463790	98830	Sailing vessel	INDUSTRY	BRITISH CARGO	1800	NMR898850	Documentary

<i>MA UID</i>	<i>Easting</i>	<i>Northing</i>	<i>Type</i>	<i>Name</i>	<i>Description</i>	<i>Date</i>	<i>References</i>	<i>Evidence</i>
MA12104	463790	98830	Sailing vessel	SISTERS	BRITISH CRAFT 1795	1795	NMR898829	Documentary evidence
MA12105	462300	95760	Warship	HMS PRINCE FREDERICK	BRITISH STORESHIP 1799	1799	NMR895845	Documentary evidence
MA12106	464500	95490	Wreck		CRAFT		NMR767419	Documentary evidence
MA12107	463790	98830	Sailing vessel	CRUIZER	BRITISH CARGO VESSEL 1856	1856	NMR1240513	Documentary evidence
MA12108	463790	98830	Sailing vessel	IRIS	BRITISH CRAFT 1798	1798	NMR898848	Documentary evidence
MA12109	463790	98830	Sailing vessel	FRIENDS	BRITISH CRAFT 1800	1800	NMR1152792	Documentary evidence
MA12110	463790	98830	Sailing vessel	PRINCESS MARIA CAROLINA	CRAFT, 1795	1795	NMR898837	Documentary evidence
MA12111	463790	98830	Sailing vessel	MORNING STAR	BRITISH CRAFT 1758	1758	NMR1152232	Documentary evidence
MA12112	463790	98830	Cargo vessel		BRITISH CARGO VESSEL 1735	1735	NMR1368555	Documentary evidence
MA12113	461680	98440	Cargo vessel	HOPKINS	BRITISH CARGO VESSEL 1781	1781	NMR898820	Documentary evidence
MA12114	463790	98830	Sailing vessel	BETSEY	BRITISH CRAFT 1795	1795	NMR898832	Documentary evidence
MA12115	463790	98830	Warship	HMS LCPR895	BRITISH LANDING CRAFT 1944	1944	NMR1155792	Documentary evidence
MA12116	463790	98830	Sailing vessel	DIANA	BRITISH CRAFT 1805	1805	NMR1234338	Documentary evidence
MA12117	463750	96780	Dock & Harbour installation		Section of Harbour defence	Unknown	NMR767437	Documentary evidence
MA12118	463790	98830	Sailing vessel	MARTIN	ENGLISH CUTTER	1900	NMR898990	Documentary

<i>MA UID</i>	<i>Easting</i>	<i>Northing</i>	<i>Type</i>	<i>Name</i>	<i>Description</i>	<i>Date</i>	<i>References</i>	<i>Evidence</i>
MA12119	463790	98830	Sailing vessel	COMMERCE	BRITISH TRANSPORT VESSEL 1795	1795	NMR898836	Documentary evidence
MA12120	463790	98830	Cargo vessel	PROVIDENCE	BRITISH CARGO VESSEL 1813	1813	NMR898864	Documentary evidence
MA12121	463790	98830	Sailing vessel	ORNSAY	BRITISH YACHT 1940	1940	NMR1244261	Documentary evidence
MA12122	463790	98830	Sailing vessel	LANCER	BRITISH CUTTER, 1905	1905	NMR899003	Documentary evidence
MA12123	462300	95760	Sailing vessel	THREE SISTERS	ENGLISH KETCH 1903	1903	NMR898999	Documentary evidence
MA12124	459600	98150	Cargo vessel		1703 wreck	1703	NMR1366510	Documentary evidence
MA12125	462300	95760	Cargo vessel	KITTYHAWKE	CARGO VESSEL 1944	1944	NMR895843	Documentary evidence
MA12126	460630	97500	Sailing vessel	PRINCESS OF WALES	BRITISH CRAFT 1795	1795	NMR898831	Documentary evidence
MA12127	462300	95760	Sailing vessel	LARK	BRITISH BARGE 1887	1887	NMR898960	Documentary evidence
MA12128	463790	98830	Sailing vessel	ZULU	ENGLISH KETCH 1910	1910	NMR1155089	Documentary evidence
MA12129	463790	98830	Sailing vessel	PEARL	BRITISH CUTTER 1903	1903	NMR898997	Documentary evidence
MA12130	463790	98830	Sailing vessel	ANN	ENGLISH CRAFT 1814	1814	NMR898867	Documentary evidence
MA12131	463790	98830	Sailing vessel		FRENCH CRAFT 1636	1636	NMR1323592	Documentary evidence
MA12132	463790	98830	Cargo vessel	HERON	ENGLISH CRAFT steamship 1882	1882	NMR1153345	Documentary evidence
MA12133	463790	98830	Warship	NEPTUNE	BRITISH TROOP 1781	1781	NMR1152371	Documentary

<i>MA UID</i>	<i>Easting</i>	<i>Northing</i>	<i>Type</i>	<i>Name</i>	<i>Description</i>	<i>Date</i>	<i>References</i>	<i>Evidence</i>
MA12134	463790	98830	Sailing vessel	JUPITER	BRITISH CRAFT 1800	1800	NMR898859	Documentary evidence
MA12135	463790	98830	Sailing vessel	SWALLOW	BRITISH CUTTER 1898	1898	NMR1153654	Documentary evidence
MA12136	463790	98830	Sailing vessel	SATURNUS	CRAFT, 1809	1809	NMR1234771	Documentary evidence
MA12137	462300	95760	Sailing vessel		BRITISH YACHT 1894	1894	NMR898972	Documentary evidence
MA12138	463790	98830	Sailing vessel	FLY	BRITISH CRAFT 1824	1824	NMR1179611	Documentary evidence
MA12139	463790	98830	Cargo vessel	ELIZA	CARGO VESSEL 1823	1823	NMR1240301	Documentary evidence
MA12140	463790	98830	Cargo vessel		CARGO VESSEL 1599	1599	NMR1233950	Documentary evidence
MA12141	462300	95760	Cargo vessel	QUEEN CHARLOTTE	CARGO VESSEL 1813	1813	NMR898865	Documentary evidence
MA12142	462300	95760	Cargo vessel	JOHN WATSON	1703 wreck	1703	NMR1432273	Documentary evidence
MA12143	462300	95760	Sailing vessel	WILLIAM	1822 wreck	1822	NMR1405780	Documentary evidence
MA12144	463790	98830	Sailing vessel	LYON	1750 wreck	1750	NMR1438785	Documentary evidence
MA12145	462300	95760	Warship	HMS EDGAR	1711 wreck	1711	NMR895705	Documentary evidence
MA12146	463790	98830	Sailing vessel		1703 Wreck	1703	NMR1441655	Documentary evidence
MA12147	463790	98830	Sailing vessel		1703 Wreck	1703	NMR1441686	Documentary evidence
MA12148	460310	97990	Sailing vessel		1703 Wreck	1703	NMR1443833	Documentary

<i>MA UID</i>	<i>Easting</i>	<i>Northing</i>	<i>Type</i>	<i>Name</i>	<i>Description</i>	<i>Date</i>	<i>References</i>	<i>Evidence</i>
MA12149	462300	95760	Sailing vessel	Helmsley Wreck	Sailing vessel 1818	1818	NMR898876, HCC55586	Documentary evidence
MA12150	460630	97500	Sailing vessel		1703 Wreck	1703	NMR1442474	Documentary evidence
MA12151	463306	97128	Feature			Unknown	NMR767439	Documentary evidence
MA12152	464761	95107	Feature			Unknown	NMR767414	Documentary evidence
MA12153	462516	99979	Anchorage	HMS Victory mooring upto 1922	Former mooring location of HMS Victory	Modern	DOV Project	Known Location
MA12154	462378	100719	Anchorage	HMS Foundroyant mooring	Former mooring location of HMS Foundroyant	Post Medieval- Modern	DOV Project	Known Location
MA12155	462400	99750	Anchorage	HMS St Vincent mooring	Former mooring location of HMS St Vincent	Post Medieval- Modern	DOV Project	Known Location
MA12156	462700	100200	Anchorage	HMS Victory mooring in 1866	Former mooring location of HMS Victory	Post Medieval	DOV Project	Known Location
MA12157	463000	101300	Anchorage	HMS Excellent moorings	Former mooring location of HMS Excellent	Post Medieval- Modern	DOV Project	Known Location
MA12158	462500	99550	Anchorage	HMS Duke of Wellington mooring	Former mooring location of HMS Duke	Post Medieval- Modern	DOV Project	Known Location
MA12159	461555	100822	Hulk	Unknown	Remains of timber wreck	Post Medieval- Modern	Forton Lakes Project	Known Location
MA12160	461243	100915	Hulk	FV Lauren	Remains of timber wreck	Post Medieval- Modern	Forton Lakes Project	Known Location
MA12161	461150	100911	Warship	Minesweeper	Remains of WWII minesweeper	Modern	Forton Lakes Project	Known Location
MA12162	461143	100902	Hulk	unknown	Remains of timber and steel wreck	Modern	Forton Lakes Project	Known Location
MA12163	461107	100678	Hulk	unknown	Remains of timber wreck	Post Medieval	Forton Lakes	Known Location

<i>MA UID</i>	<i>Easting</i>	<i>Northing</i>	<i>Type</i>	<i>Name</i>	<i>Description</i>	<i>Date</i>	<i>References</i>	<i>Evidence</i>
MA12164	461145	100741	Barge	unknown	Remains of steel barge	Modern	Forton Lakes Project	Known Location
MA12165	461158	100747	Warship	unknown	Remains of gunboat	Modern	Forton Lakes Project	Known Location
MA12166	461181	100747	Barge	unknown	Remains of steel barge	Modern	Forton Lakes Project	Known Location
MA12167	461187	100761	Hulk	unknown	Remains of timber vessel	Post Medieval-Modern	Forton Lakes Project	Known Location
MA12168	461190	100749	Hulk	unknown	Remains of LCA	Modern	Forton Lakes Project	Known Location
MA12169	461193	100748	Hulk	Medina Ferry	Remains of Medina chain ferry	Modern	Forton Lakes Project	Known Location
MA12170	461108	100692	Hulk	Unknown	Remains of timber wreck	Post Medieval-Modern	Forton Lakes Project	Known Location
MA12171	461214	100767	Warship	unknown	Remains of LCA	Modern	Forton Lakes Project	Known Location
MA12172	461213	100770	Warship	Unknown	Remains of gunboat	Modern	Forton Lakes Project	Known Location
MA12173	461192	100768	Hulk	unknown	Remains of timber vessel	Post Medieval-Modern	Forton Lakes Project	Known Location
MA12174	461197	100769	Hulk	unknown	Remains of timber vessel	Post Medieval-Modern	Forton Lakes Project	Known Location
MA12175	461206	100773	Warship	unknown	Remains of LCA	Modern	Forton Lakes Project	Known Location
MA12176	461207	100776	Hulk	unknown	Remains of ships lifeboat	Modern	Forton Lakes Project	Known Location
MA12177	461226	100771	Hulk	Vadne	Remains of Gosport ferry Vadne	Modern	UKHO 66445, Forton Lakes	Known Location
MA12178	461237	100757	Warship	unknown	Remains of LCA	Modern	Forton Lakes	Known Location

<i>MA UID</i>	<i>Easting</i>	<i>Northing</i>	<i>Type</i>	<i>Name</i>	<i>Description</i>	<i>Date</i>	<i>References</i>	<i>Evidence</i>
MA12179	461237	100777	Hulk	unknown	Remains of vessel	Post Medieval-Modern	Forton Lakes Project	Known Location
MA12180	461242	100782	Hulk	unknown	Remains of vessel	Post Medieval-Modern	Forton Lakes Project	Known Location
MA12181	461138	101005	Hulk	unknown	Remains of small composite boat	Post Medieval-Modern	Forton Lakes Project	Known Location
MA12182	461558	100964	Sea defence	Groyne	Remains of groyne	Post Medieval-Modern	Forton Lakes Project	Known Location
MA12183	462301	102199	Dock & Harbour installation	Obstruction	Remains of Dolphin	Post Medieval-Modern	UKHO 66448	Known Location
MA12184	462854	101937	Dock & Harbour installation	Obstruction	Remains of Dolphin	Post Medieval-Modern	UKHO 66447	Known Location
MA12185	461982	100521	Dock & Harbour installation	Obstruction	Remains of four piles	Post Medieval-Modern	UKHO 66446	Known Location
MA12186	462772	100228	Dock & Harbour installation	Obstruction	Remains of pile	Post Medieval-Modern	UKHO 66244	Known Location
MA12187	462300	95760	Warship	Alexander Wreck	Post Medieval Fireship	1689	NMR1033737, HCC55477	Documentary evidence
MA12188	462300	95760	Wreck	Bailies Wreck	Post Medieval Wreck-1540-1797	Post medieval	HCC55483	Documentary evidence
MA12189	462300	95760	Sailing vessel	Blink Bonney Wreck	ENGLISH LUGGER 1909	1909	NMR1243902, HCC55485	Documentary evidence
MA12190	462230	101970	Warship	HMS A2	BRITISH SUBMARINE, 1920	1920	NMR1244283	Documentary evidence
MA12191	462230	101970	Sailing vessel	SUSAN	AMERICAN CRAFT, 1819	1819	NMR898878	Documentary evidence
MA12192	462230	101970	Warship	HMS DIAMOND	1827 wreck of British 5th Rate frigate	1827	NMR895784	Documentary evidence
MA12193	462230	101970	Warship	HMS IMPETUEUX	British 3 rd Rate	1794	NMR895821	Documentary

<i>MA UID</i>	<i>Eastings</i>	<i>Northing</i>	<i>Type</i>	<i>Name</i>	<i>Description</i>	<i>Date</i>	<i>References</i>	<i>Evidence</i>
MA12194	462230	101970	Sailing vessel		BRITISH YACHT, 1900	1900	NMR898989	Documentary evidence
MA12195	462230	101970	Sailing vessel	MALVINA	1799 wreck of English Brig	1799	NMR1234209	Documentary evidence
MA12196	462230	101970	Sailing vessel	PILGRIM	BRITISH CUTTER, 1908	1908	NMR899007	Documentary evidence
MA12197	462230	101970	Warship	EXETER	BRITISH THIRD RATE SHIP OF THE LINE,	1691	NMR876438	Documentary evidence
MA12198	462230	101970	Sailing vessel	MODESTE	FRENCH EAST INDIAMAN, 1748	1748	NMR1233981	Documentary evidence
MA12199	462230	101970	Sailing vessel	DILIGENCE	CRAFT, 1631	1631	NMR898803	Documentary evidence
MA12200	462230	101970	Sailing vessel		BRITISH YACHT, 1892	1892	NMR898968	Documentary evidence
MA12201	462230	101970	Sailing vessel	ANNABELLA	ENGLISH CRAFT, 1833	1833	NMR898880	Documentary evidence
MA12202	462230	101970	Sailing vessel		ENGLISH BARGE, 1652	1652	NMR1152091	Documentary evidence
MA12203	462230	101970	Cargo vessel	DESIRE	1818 wreck of British cargo vessel	1818	NMR1179644	Documentary evidence
MA12204	462230	101970	Warship	HARBOUR LAUNCH NO 278	BRITISH MOTOR LAUNCH, 1941	1941	NMR1244382	Documentary evidence
MA12205	462230	101970	Sailing vessel		CRAFT, 1636	1636	NMR1323618	Documentary evidence
MA12206	462230	101970	Sailing vessel	ROBERT AND SARAH	ENGLISH YAWL, 1895	1895	NMR898976	Documentary evidence
MA12207	462230	101970	Wreck		1726 wreck of English passenger vessel	1726	NMR1355392	Documentary evidence
MA12208	462230	101970	Sailing vessel		1796 wreck of sloop	1796	NMR1393183	Documentary

<i>MA UID</i>	<i>Easting</i>	<i>Northing</i>	<i>Type</i>	<i>Name</i>	<i>Description</i>	<i>Date</i>	<i>References</i>	<i>Evidence</i>
MA12209	462230	101970	Sailing vessel	ALICE	ENGLISH LUGGER, 1911	1911	NMR899016	Documentary evidence
MA12210	462230	101970	Wreck	DONEGAL	Wreck of probable 20th century date	Modern	NMR1440060	Documentary evidence
MA12211	462230	101970	Warship	SPY	1693 wreck of English fireship	1693	NMR1152142	Documentary evidence
MA12212	462080	102340	Cargo vessel	LA HOLYGOST OF SLUYS	1351 wreck of Flemish cargo vessel	1351	NMR895995	Documentary evidence

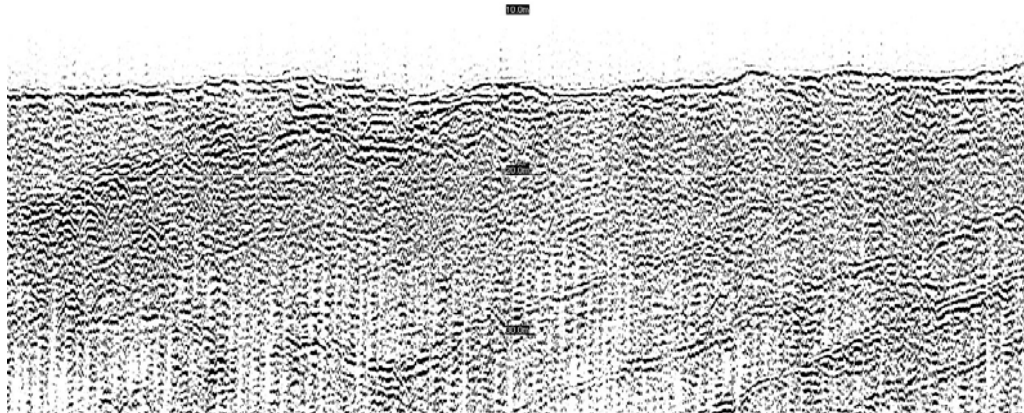
3. Gazetteer of Aircraft Sites

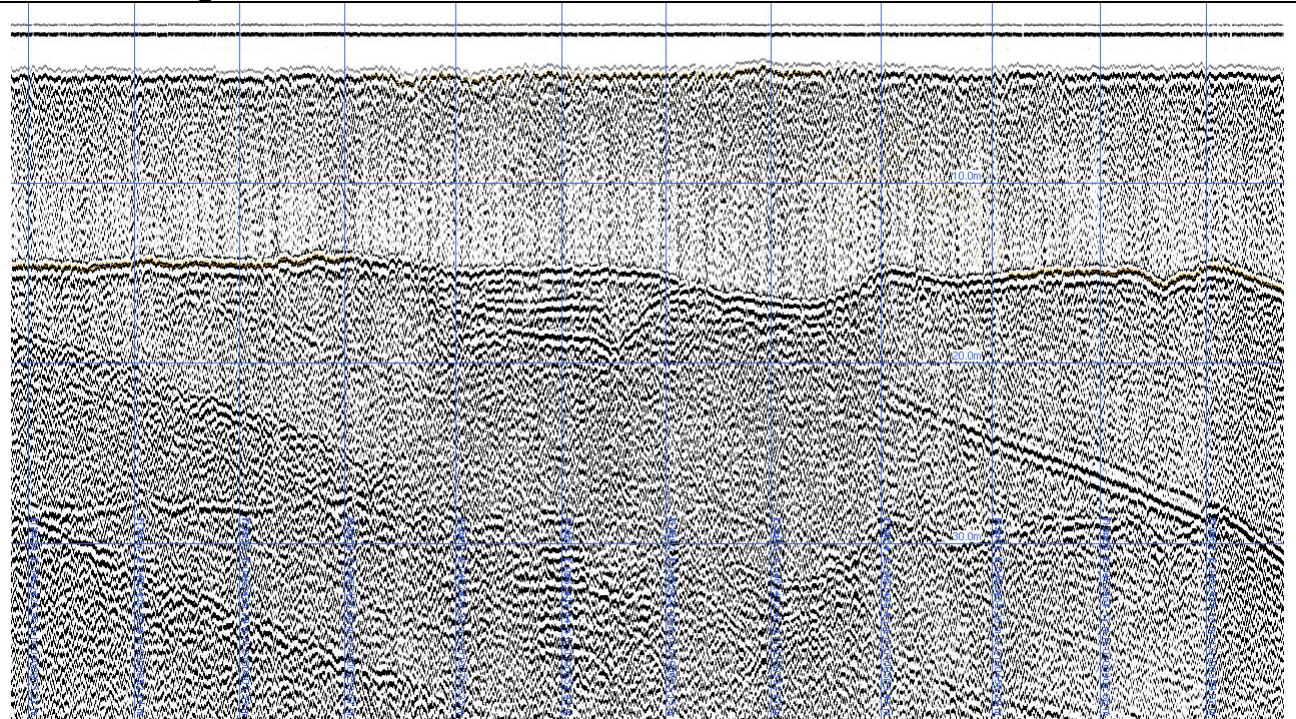
<i>MA UID</i>	<i>Easting</i>	<i>Northing</i>	<i>Type</i>	<i>Name</i>	<i>Description</i>	<i>Date</i>	<i>References</i>	<i>Evidence</i>
MA12213	462300	95760	Aircraft	Whitley	Crashsite of Whitley Mk V	1941	NMR1354635, HCC 55581	Documentary evidence
MA12214	463000	95000	Aircraft	Hurricane	Crashsite of Hurricane P3662	1940	HCC 57241	Documentary evidence
MA12215	463000	95000	Aircraft	Spitfire	Crashsite of Spitfire Mk II	1941	HCC 57242	Documentary evidence
MA12216	460000	97000	Aircraft	Ju 88	Crashsite of Junkers Ju88	1940	HCC 57243	Documentary evidence
MA12217	463000	95000	Aircraft	ME110	Crashsite of ME110	1940	HCC 57244	Documentary evidence
MA12218	463000	95000	Aircraft	ME109	Crashsite of ME109	1940	HCC 57246	Documentary evidence
MA12219	460500	94200	Aircraft	Ju 88	Crashsite of Junkers Ju88	1940	HCC 57247	Documentary evidence
MA12220	460000	97000	Aircraft	ME110	Crashsite of ME110	1940	HCC 57249	Documentary evidence
MA12221	460000	97000	Aircraft	ME110	Crashsite of ME110	1940	HCC 57250	Documentary evidence
MA12222	463000	95000	Aircraft	Wildcat	Crashsite of Grumman Wildcat	1941	HCC 57254	Documentary evidence
MA12223	463000	95000	Aircraft	Fulmer	Crashsite of Fairey Fulmer	1941	HCC 57255	Documentary evidence
MA12224	463000	95000	Aircraft	Spitfire	Crashsite of Spitfire Mk II	1941	HCC 57259	Documentary evidence
MA12225	460000	96000	Aircraft	Avro	Crashsite of Avro 504k	1920	HCC 57260	Documentary evidence
MA12226	460000	97000	Aircraft	Blackburn	Crashsite of Blackburn	1941	HCC 57268	Documentary evidence
MA12227	460000	97000	Aircraft	Blackburn	Crashsite of Blackburn	1939	HCC 57269	Documentary evidence

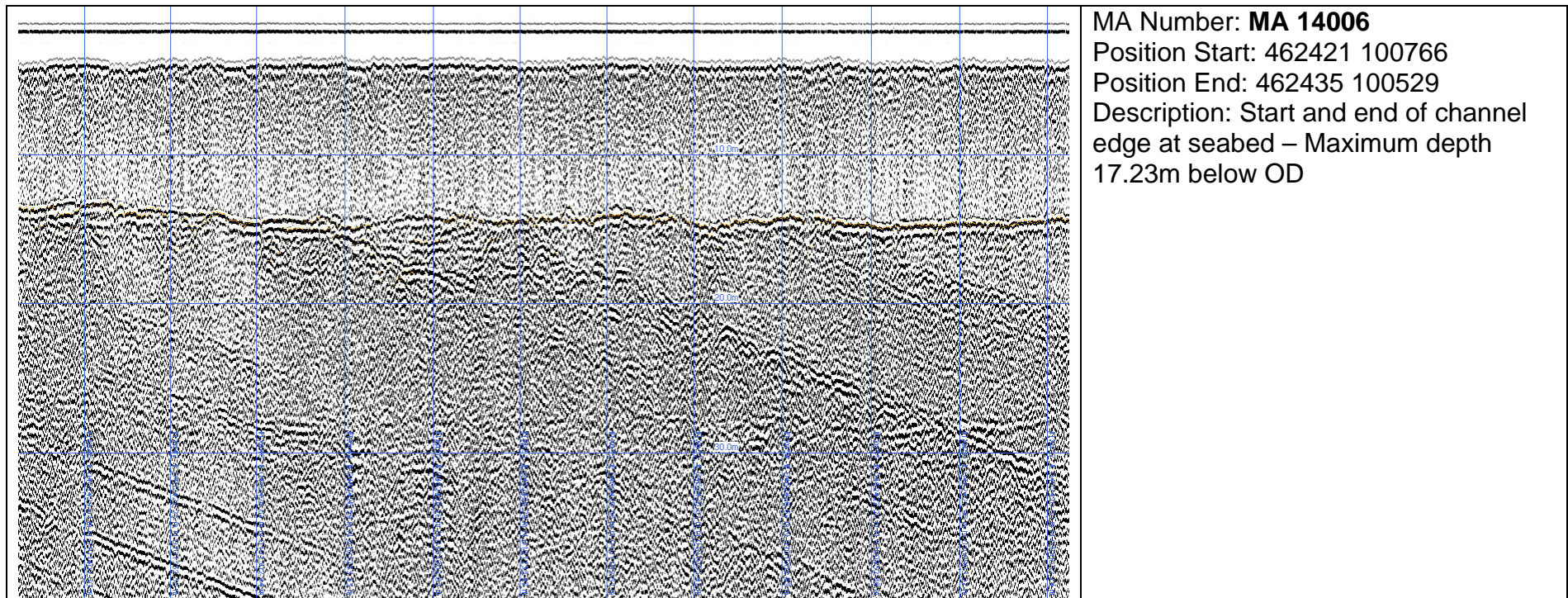
<i>MA UID</i>	<i>Easting</i>	<i>Northing</i>	<i>Type</i>	<i>Name</i>	<i>Description</i>	<i>Date</i>	<i>References</i>	<i>Evidence</i>
MA12228	460000	97000	Aircraft	Spitfire	Crashsite of Spitfire MKI	1940	HCC 57285	Documentary evidence
MA12229	461680	98440	Aircraft	FAIREY SWORDFISH MK	BRITISH RECONNAISSANCE	1945	NMR1356589	Documentary evidence
MA12230	459600	98150	Aircraft	SHARK MK II L2342	BRITISH SEAPLANE	1939	NMR1327253	Documentary evidence
MA12231	463790	98830	Aircraft	MESSERSCHMITT ME109E-1 (4082)	1940 wreck of a German Messerschmitt Me109	1940	NMR1401643	Documentary evidence
MA12232	462300	95760	Aircraft	MESSERSCHMITT ME110E-3 (2316)	1941 wreck of a German Messerschmitt Me110	1941	NMR1401887	Documentary evidence
MA12233	463790	98830	Aircraft	MESSERSCHMITT ME110D/03M+MK	1940 wreck of a German Messerschmitt Me110	1940	NMR1400105	Documentary evidence
MA12234	462300	95760	Aircraft	MESSERSCHMITT ME410B-4	1944 wreck of a German Messerschmitt Me410	1944	NMR1404900	Documentary evidence
MA12235	463790	98830	Aircraft	HURRICANE MK IIE BE687	BRITISH FIGHTER	1942	NMR1342788	Documentary evidence
MA12236	461680	98439	Aircraft	BEAUFORT MK I L4446	BRITISH TORPEDO BOMBER	1940	NMR1327684	Documentary evidence
MA12237	460200	94340	Aircraft		AIRCRAFT	1940	NMR895883	Documentary evidence
MA12238	462230	101970	Aircraft	JUNKERS JU88A-1 9K+FS	1940 wreck of a German Junkers Ju88 bomber	1940	NMR1400101	Documentary evidence
MA12239	462230	101970	Aircraft	MESSERSCHMITT ME110C-5 (2256)	1940 wreck of a German Messerschmitt Me110	1940	NMR1401814	Documentary evidence

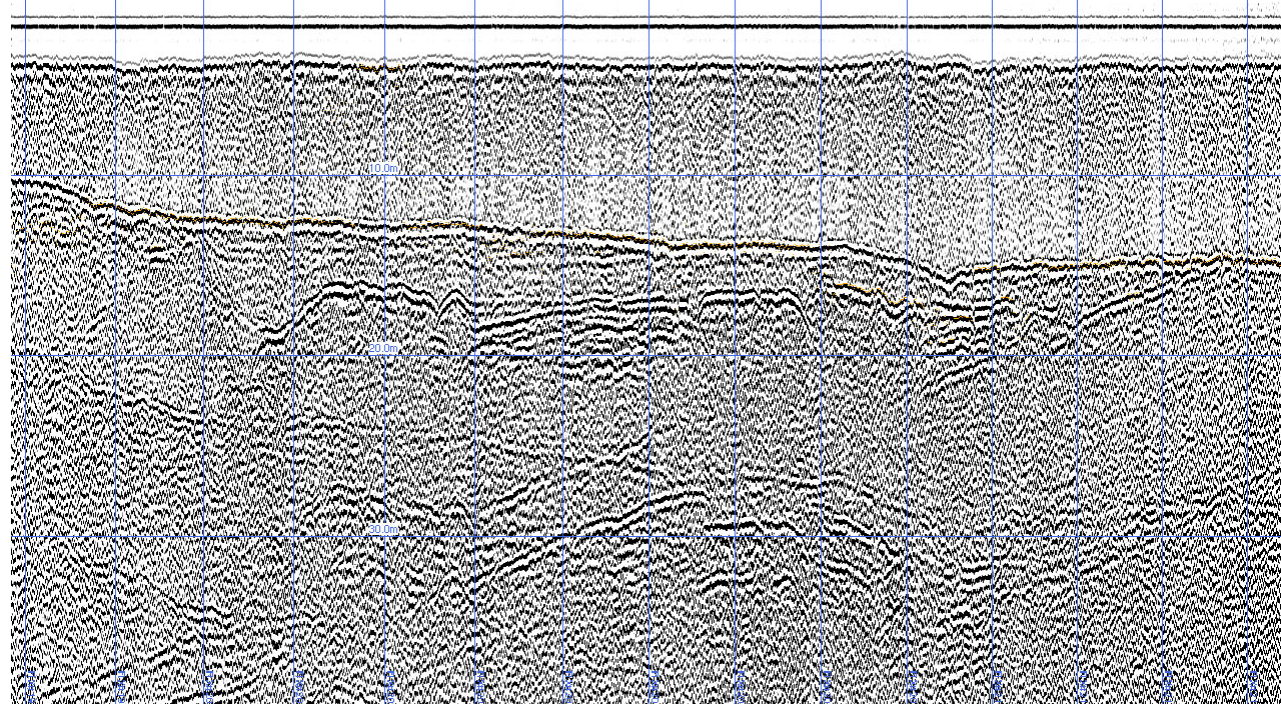
4. Gazetteer of Seismic Targets

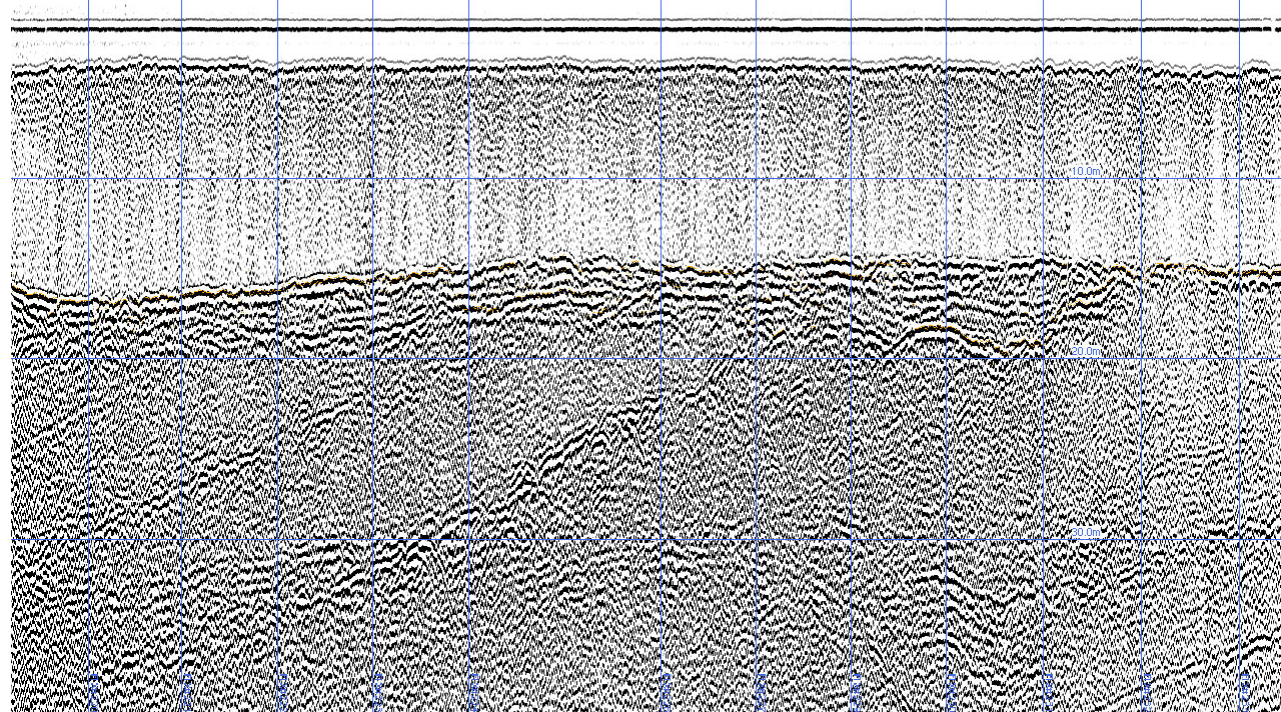
Seismic Image	Anomaly Information
	MA Number: MA 14001 Position Start: 462317 101309 Position End: 462326 101207 Description: Channel edges, at seabed – Maximum depth of channel 17.23m below OD
	MA Number: MA 14002 Position Start: 462321 100720 Position End: 462234 100483 Description: Start of channel edge 14.23m below OD – End of channel edge at seabed – Maximum depth of channel 19.73m below OD

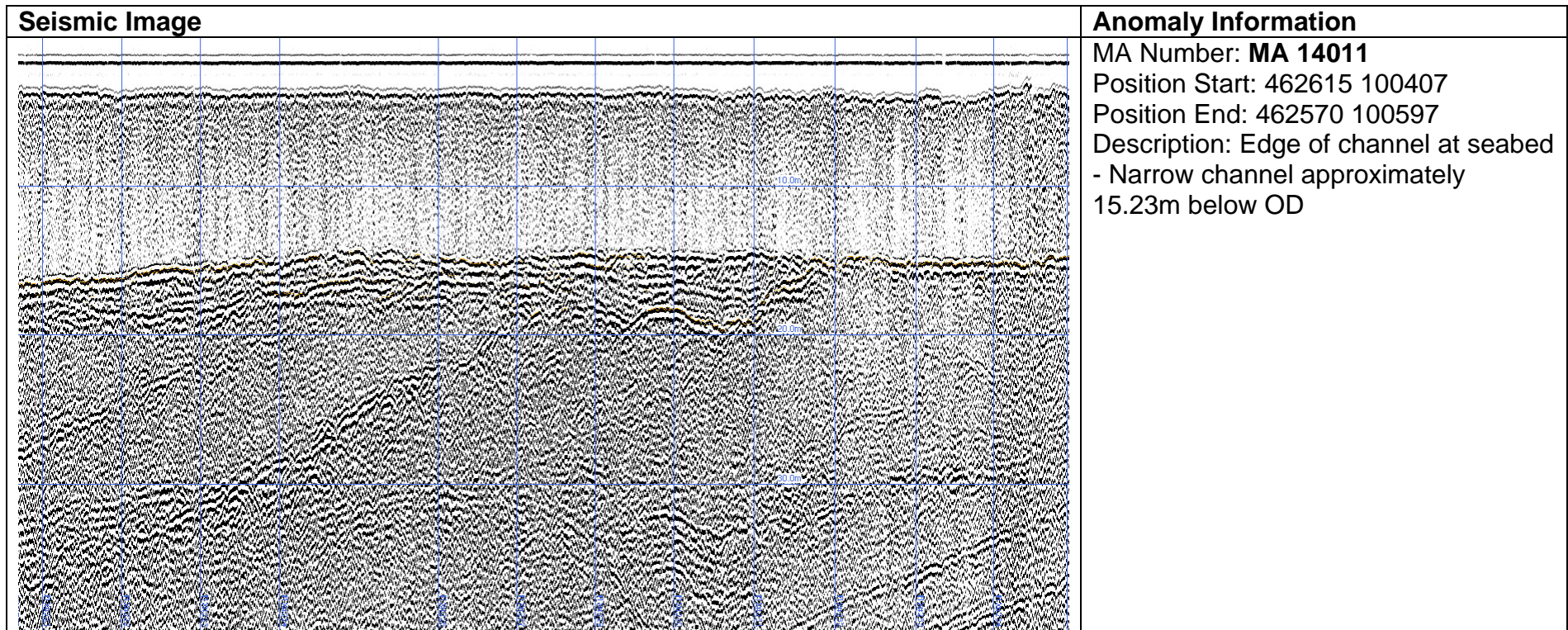
Seismic Image	Anomaly Information
	<p>MA Number: MA 14003 Position Start: 462367 100253 Position End: 462404 100043 Description: Start of channel edge is not clearly defined, potentially at 14.23m below OD – End of channel edge at 14.23m below OD –Maximum depth unclear.</p>
	<p>MA Number: MA 14004 Position Start: 462438 100061 Position End: 462463 99995 Description: Start of channel edge 14.23m below OD – End of channel edge at seabed – Maximum depth of channel 14.23m below OD</p>

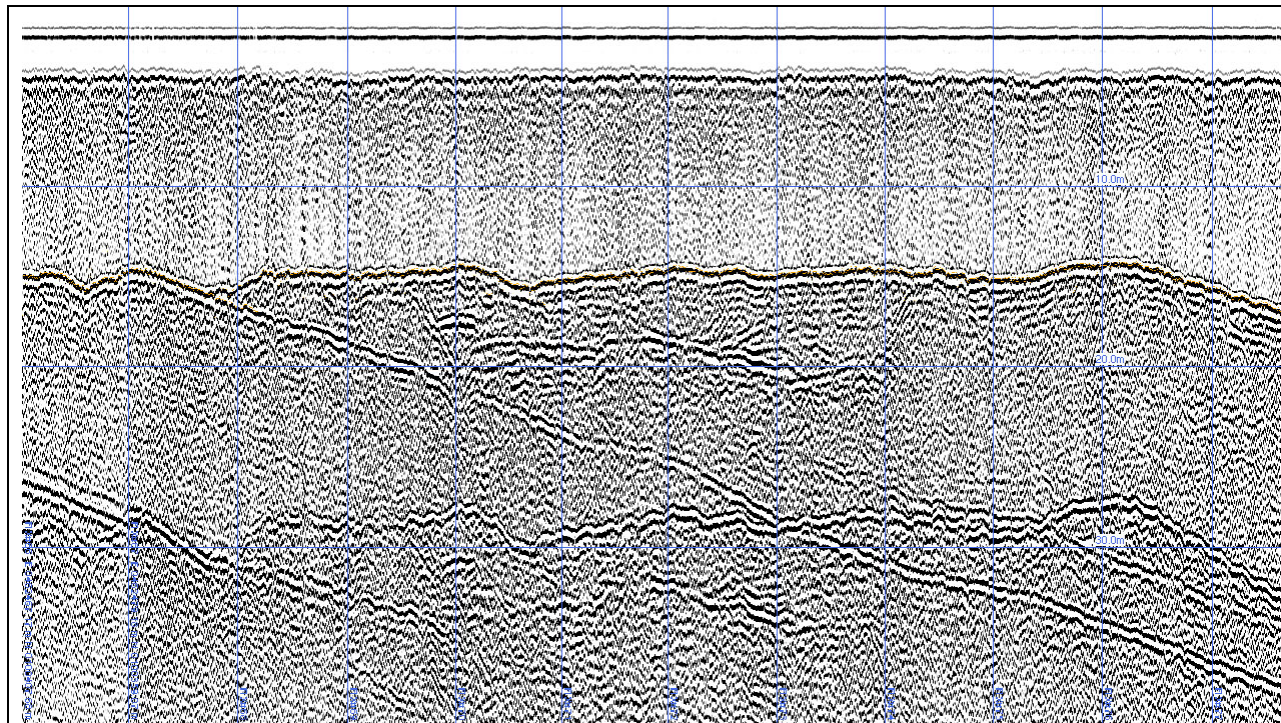
Seismic Image	Anomaly Information
	<p>MA Number: MA 14005 Position Start: 462421 101325 Position End: Description: Edge of channel starts 12.73m below OD</p>



Seismic Image	Anomaly Information
	<p>MA Number: MA 14007 Position Start: 462463 99995 Position End: Description: Edge of channel at seabed sloping down to a maximum depth 17.23m below OD</p>
 <p>The seismic image displays a series of horizontal lines representing geological layers. A prominent feature is a channel edge at the seabed, which slopes downwards from left to right, reaching a maximum depth of 18.23m below OD. The image is overlaid with a grid of blue lines.</p>	<p>MA Number: MA 14008 Position Start: 462702 99373 Position End: Description: Edge of channel at seabed – Maximum depth 18.23m below OD</p>

Seismic Image	Anomaly Information
	<p>MA Number: MA 14009 Position Start: 462469 100398 Position End: 432493 10063 Description: Edge of channel at seabed - Maximum depth 17.23m below OD</p>
	<p>MA Number: MA 14010 Position Start: 462799 99655 Position End: 462760 99791 Description: Edge of channel not well defined approximately 12.73m below OD – Maximum depth of channel 15.23m below OD</p>





MA Number: **MA 14012**
Position Start: 462576 101009
Position End: 462566 101252
Description: Edge of channel at seabed sloping steeply - Maximum depth of channel 19.23m below OD. This area comprises of a reflective surface which could be bedrock which has not been completely eroded and outcrops at the seabed.

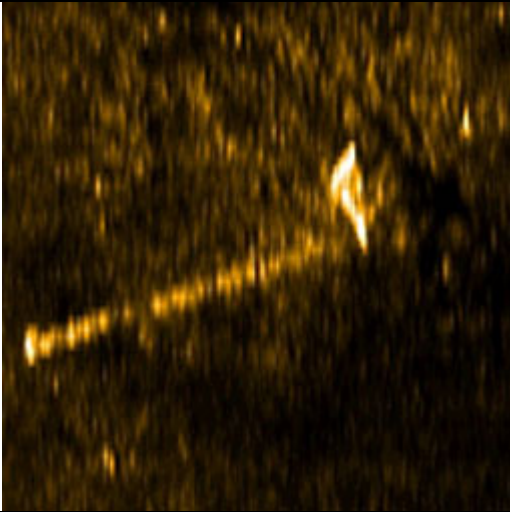

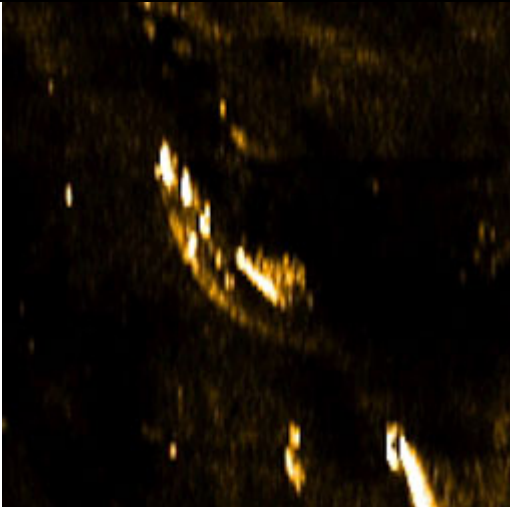
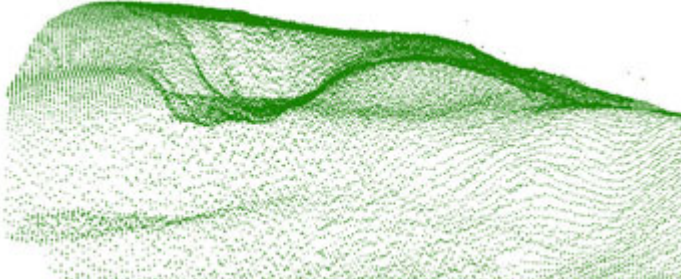
5. Grouping of geophysical anomalies

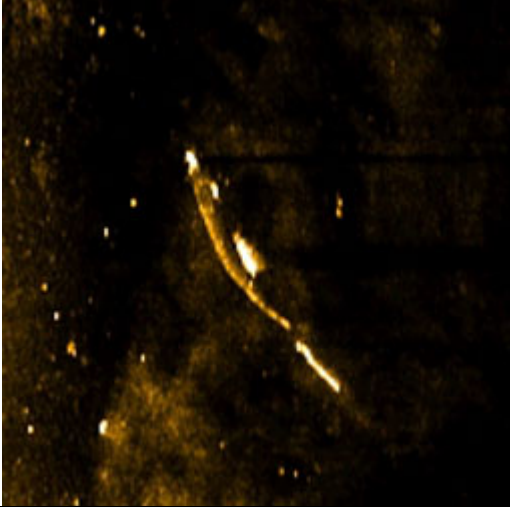

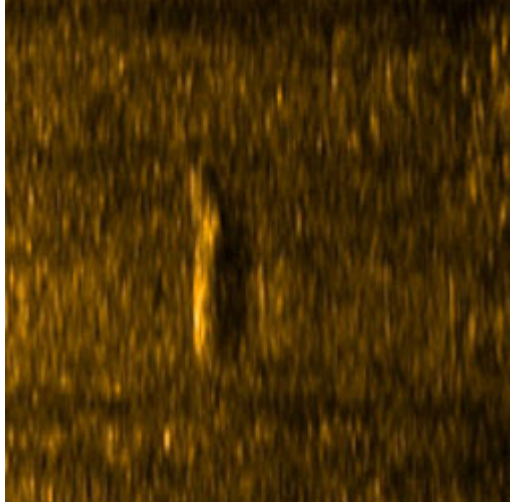

Grouping of anomalies was based on anomalies with similar characteristics which were broken down into various groups namely:

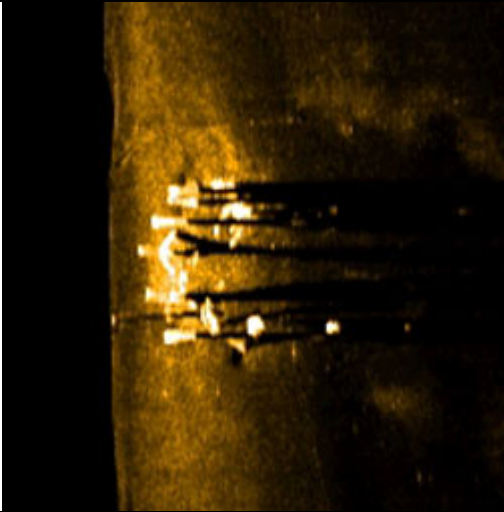
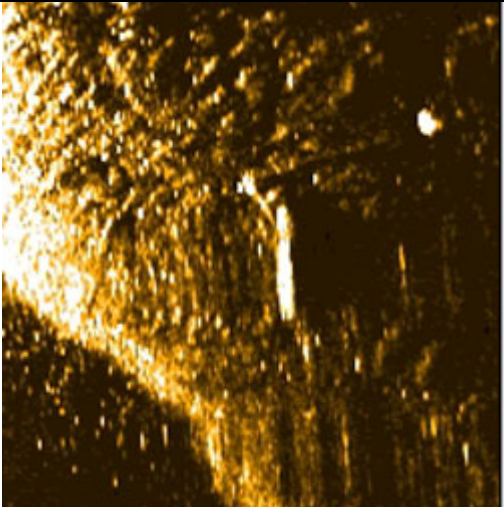
Grouping	Anomalies	Description
MA 18000	WA 3778, 3779, 3780, 3781, 3782, 3783, 3784, 3785, 3786, 3787, 3788, 3789	A series of linear features, dark and light reflectors which according to the swath are seabed anomalies
MA 18001	WA 3562, 3580	Dark reflectors potentially seabed features
MA 18002	WA 3770, 3771, 3772, 3773, 3774, 3775, 3776	A series of dark reflectors which are related to a seabed feature seen on the swath
MA 18003	WA 3763, 3764	A linear feature potentially rope or chain
MA 18004	WA 3799, 3800, 3801	A series of related geological anomalies
MA 18005	WA 3732, 3733	A seabed feature
MA 18006	WA 3396, 3397, 3398, 3400	A series of raised features and mound
MA 18007	WA 3253, 3517, 3534	Upstanding anomalies seen on swath
MA 18008	WA 3316, 3325, 3496, 3832	A large mound with associated features seen in swath
MA 18009	WA 3318, 3319, 3742, 3743, 3798	A series of seabed features
MA 18010	WA 3411, 3508	Seabed feature
MA 18011	WA 3505, 3805	Seabed feature
MA 18012	WA 3409, 3410, 3412, 3575, 3576, 3598, 3599	An area of irregular features potentially related to an anchor
MA 18013	WA 3598, 3599	Seabed feature
MA 18014	WA 3516, 3543, 3544	Seabed feature
MA 18015	WA 3545, 3560	Seabed feature
MA 18016	WA 3564, 3584, 3813, 3814	Linear feature
MA 18017	WA 3402, 3403, 3406, 3413, 3414, 3415, 3416, 3417, 3490	A series of bright reflectors

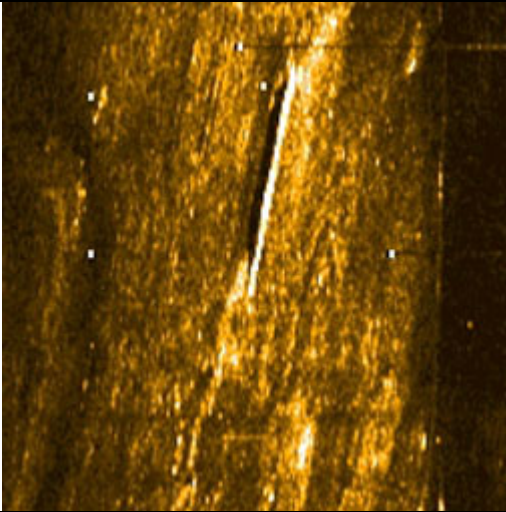
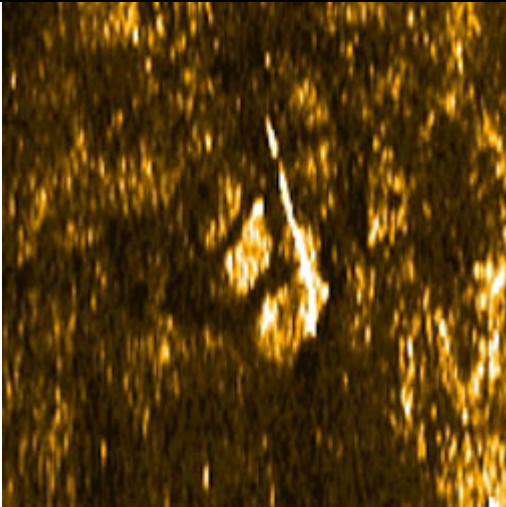
MA 18018	WA 3429, 3476	Seabed feature
MA 18019	WA 3578, 3579	Seabed feature
MA 18020	WA 3563, 3582	Associated with feature seen in the swath
MA 18021	MA 13171, 13212	Debris field
MA 18022	MA 13172, 13179, 13200, 13214	A series raised objects
MA 18023	MA 13167, 13220	Raised feature with magnetic signature
MA 18024	MA 13279, 13302	Geological feature
MA 18025	MA 13111, 13143	Related circular features
MA 18026	MA 13089, 13110	Related circular features
MA 18027	MA 13049, 13062, 13092	Raised feature with buried nearby related features
MA 18028	MA 13093, 13108, 13244	Seabed features with raised area
MA 18029	MA 13052, 13053, 13058	Anchor with related chain
MA 18030	MA 13096, 13106	Seabed feature
MA 18031	MA 13101, 13102	Linear object
MA 18032	MA 13024, 13025, 13027, 13151, 13285, 13285	Potentially an anchor or lost trawling gear with related chain
MA 18033	MA 13265, 13266	Potentially chain
MA 18034	MA 13034, 13221	Potentially chain
MA 18035	MA 13022, 13273, 13274	Potentially chain
MA 18036	MA 13269, 13271	Potentially chain
MA 18037	MA 13000, 13007, 13009, 13010, 13012, 13018, 13019	Potentially an anchor or trawling gear with associated chain

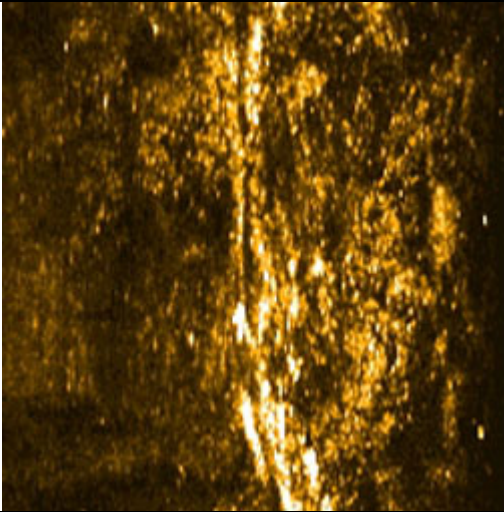
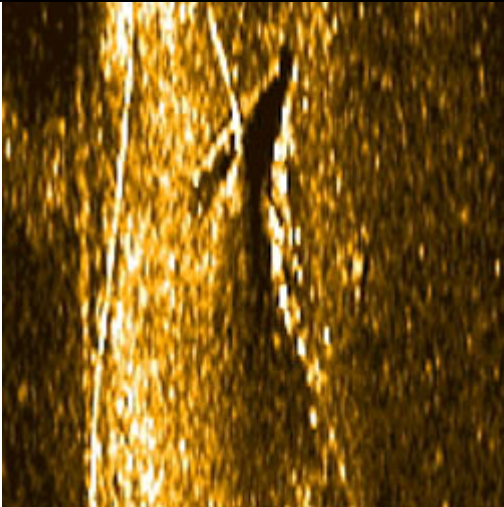
6. Gazetteer of Anomalies

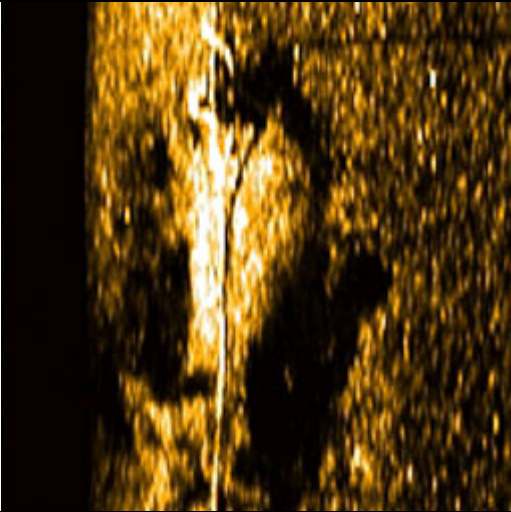
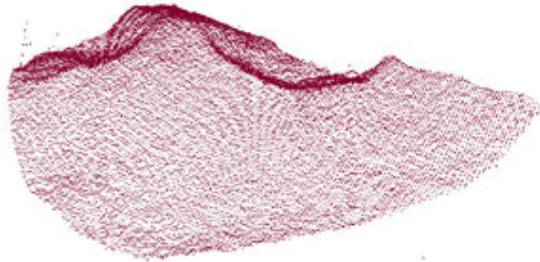
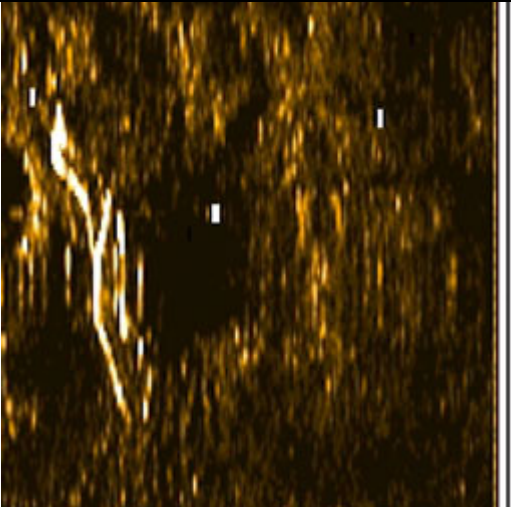
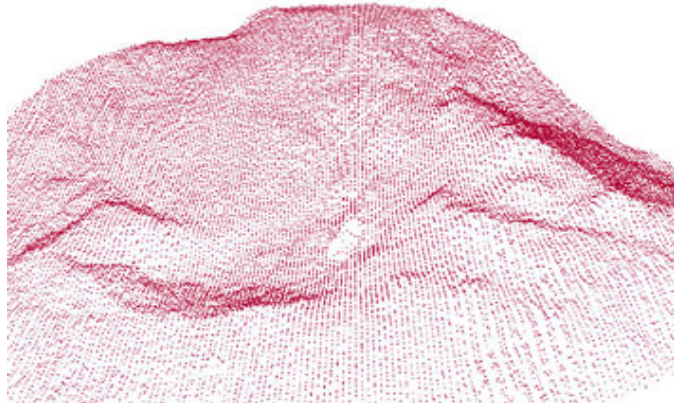
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13000 Grading: Low Position: 462040 101321 Size of anomaly: L 3.2m W 1.9m H 0.3m Target description: Elongated raised feature with an area sloping upward Magnetic strength: Associated References: Grouping: MA18037</p>
		<p>MA Ltd No: 13001 Grading: High Position: 462532 101530 Size of anomaly: L10.9m W3.1m H Target description: Raised elliptically shaped feature. Large depression with debris along one side. Magnetic strength: 30nT Associated References:</p>

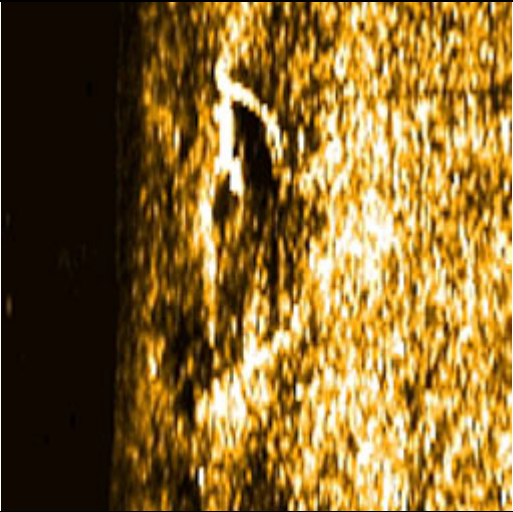
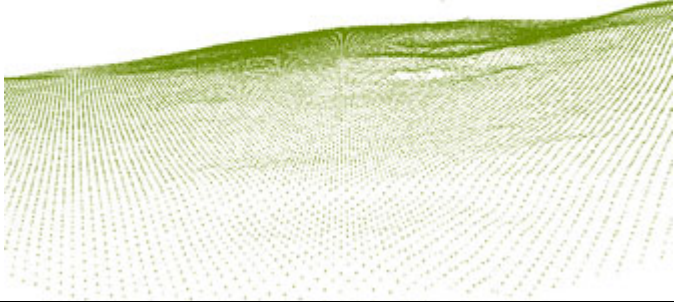
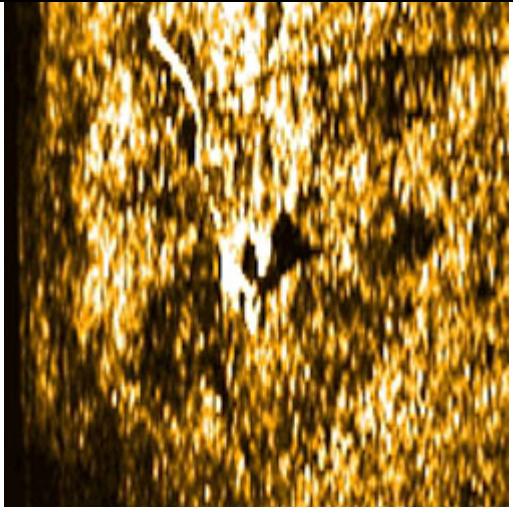

Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13002 Grading: High Position: 462495 101550 Size of anomaly: L18.8m W3.3m H Target description: Raised elliptically shaped feature Magnetic strength: 27nT Associated References:</p>
		<p>MA Ltd No: MA13003 Grading: High Position: 462135 101592 Size of anomaly: L5.7m W0.9m H Target description: Linear feature. Identifiable anthropogenic objects. Magnetic strength: 130nT Associated References:</p>

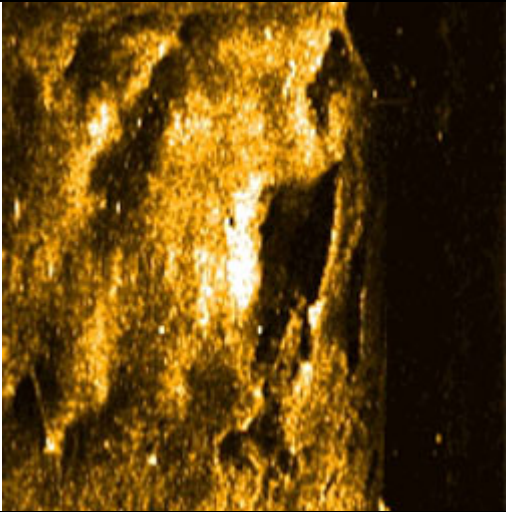
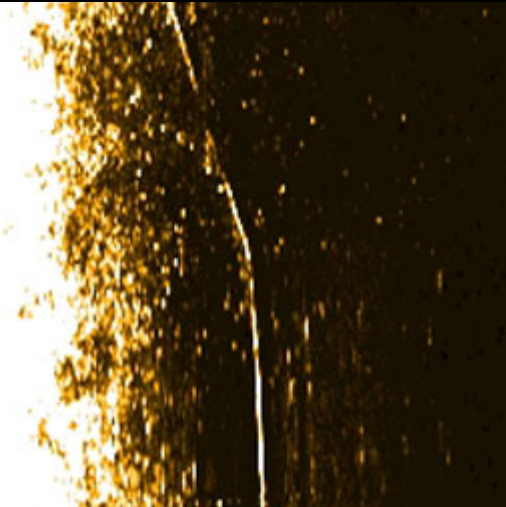
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13004 Grading: Medium Position: 462377 100154 Size of anomaly: L12.2m W H1.1m Target description: Raised feature. Unidentified anomaly. Magnetic strength: 933nT Associated References:</p>
		<p>MA Ltd No: MA13005 Grading: Low Position: 462561 101580 Size of anomaly: L9.0m W H Target description: Raised feature. Unidentified anomaly. Magnetic strength: Associated References:</p>

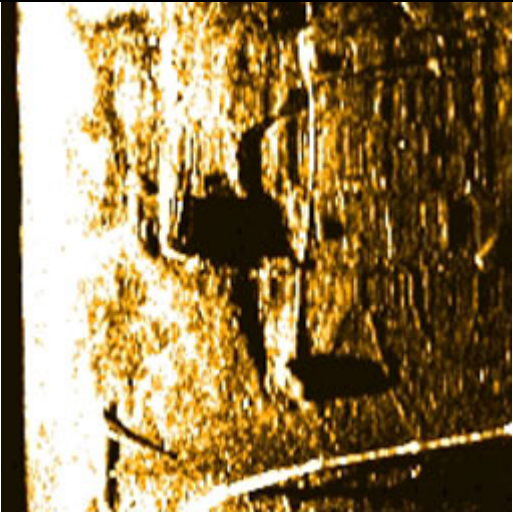


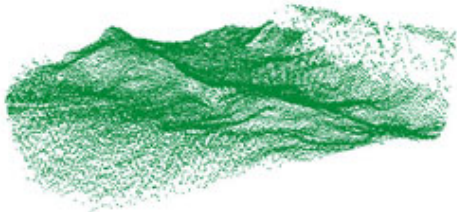
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13006 Grading: Low Position: 462306 101504 Size of anomaly: L29.5m W H Target description: Linear feature. Identifiable anthropogenic objects. Magnetic strength: 62nT Associated References: Modern chart data, Ground Tackle</p>
		<p>MA Ltd No: MA13007 Grading: Low Position: 462151 101233 Size of anomaly: L13.2m W0.6m H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: 130nT Associated References: Modern chart data, Lost chain from mooring buoy Grouping: MA18037</p>

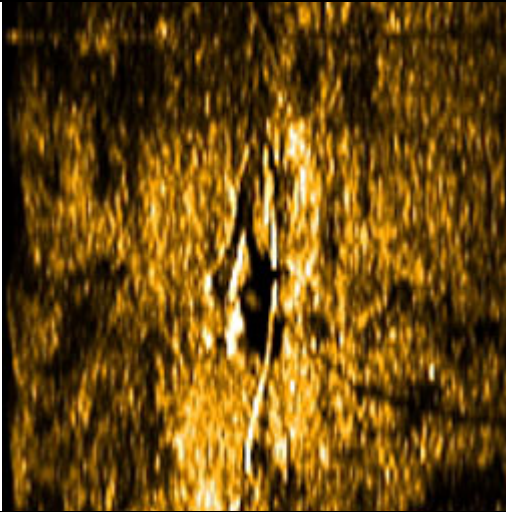
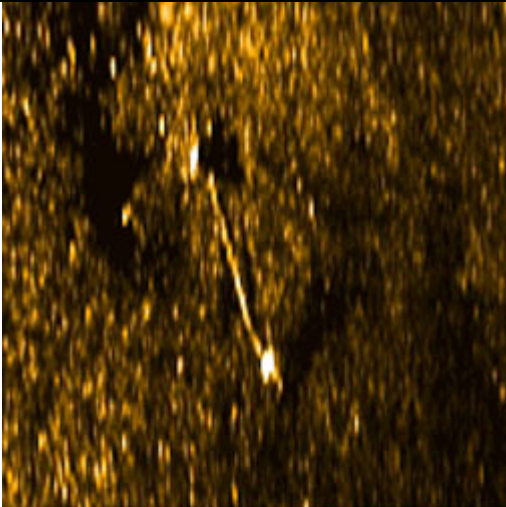
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13009 Grading: Low Position: 462150 101239 Size of anomaly: L15.3m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: 130nT Associated References: Modern chart data, Lost chain from mooring buoy Grouping: MA18037</p>
		<p>MA Ltd No: MA13010 Grading: Low Position: 462114 101179 Size of anomaly: L7.9m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: 130nT Associated References: Modern chart data, Mooring Grouping: MA18037</p>

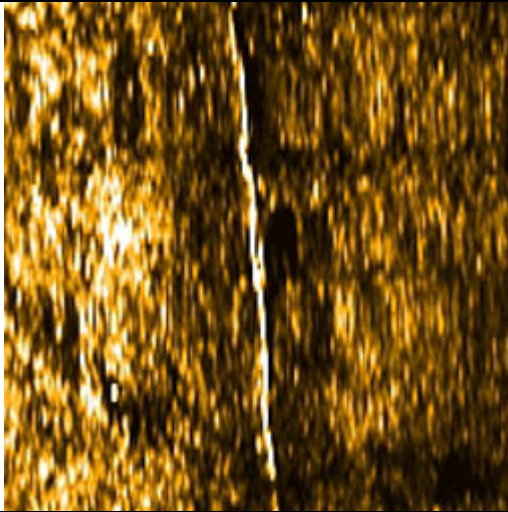
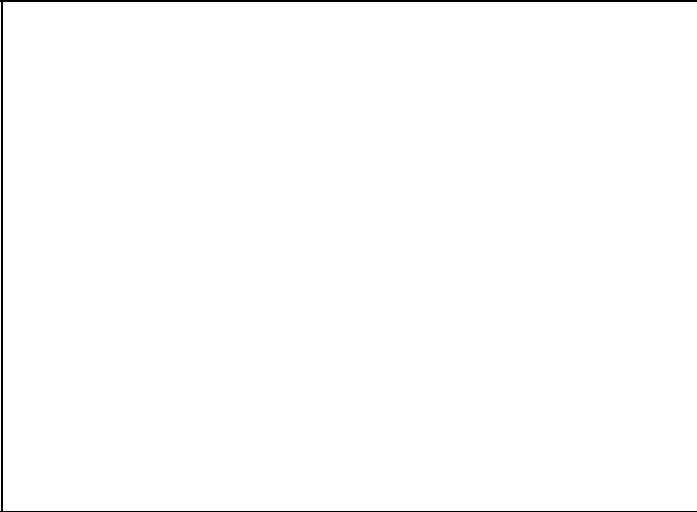
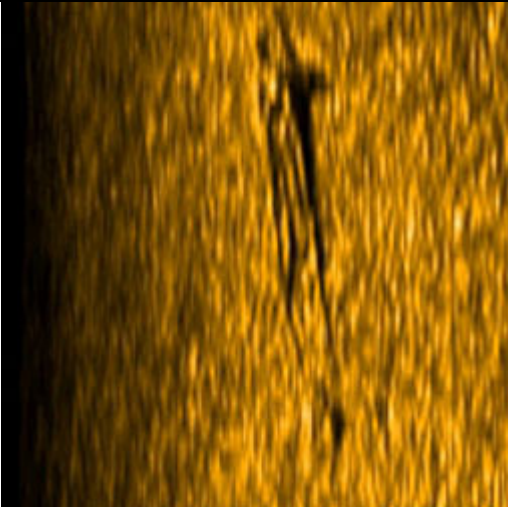
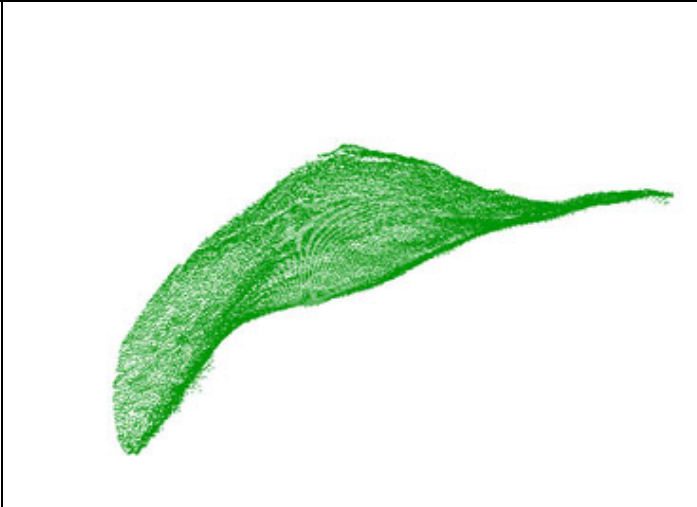
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13011 Grading: Low Position: 462180 101006 Size of anomaly: L17.0m W4.8m H1.0m Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: 10nT Associated References: Modern chart data, Associated with berthing</p>
		<p>MA Ltd No: MA13012 Grading: High Position: 462301 100638 Size of anomaly: L9.6m W2.0m H Target description: Unidentified anomaly. Raised feature with potentially higher raised area to one side. Magnetic strength: 84nT Associated References: Grouping: MA18037</p>

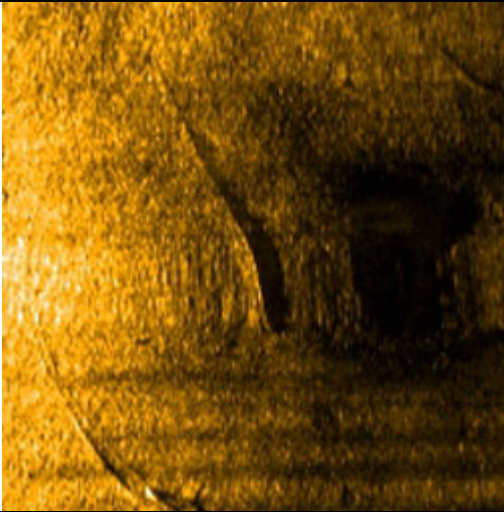
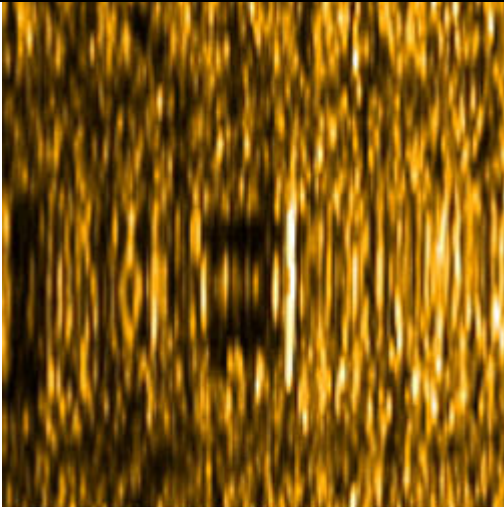
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13013 Grading: High Position: 462280 100613 Size of anomaly: L11.0m W4.5m H0.8m Target description: Unidentified anomaly. Circular shaped individual raised feature. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13014 Grading: Low Position: 462288 100587 Size of anomaly: L3.4m W1.9m H Target description: Circular feature. Unidentified anomaly Magnetic strength: Associated References:</p>

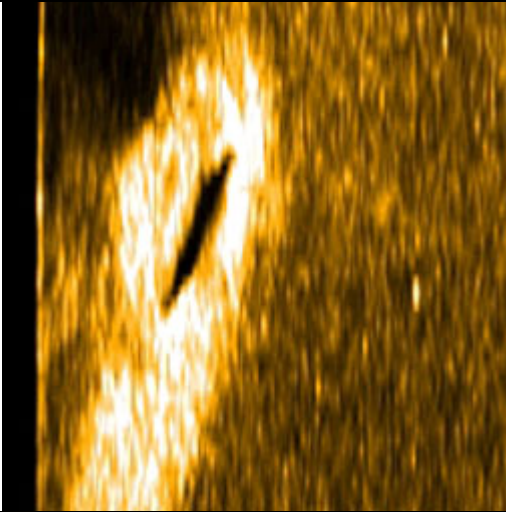
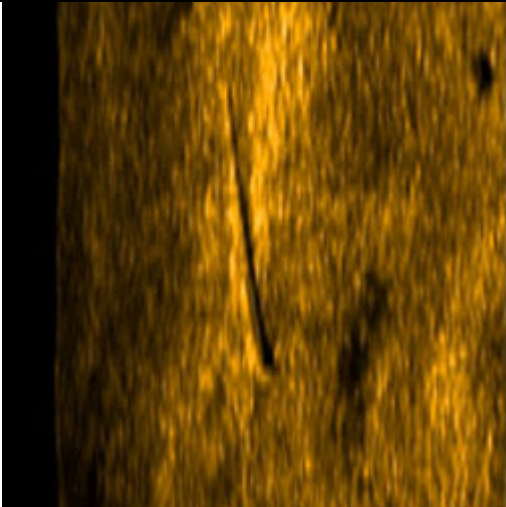
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13016 Grading: Low Position: 462529 99597 Size of anomaly: L22.9m W10.6m H1.4m Target description: Raised feature. Unidentified anomaly. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13018 Grading: Low Position: 462408 99912 Size of anomaly: L38.7m W H Target description: Linear feature. Identifiable anthropogenic objects. Magnetic strength: Associated References: Grouping: MA18037</p>

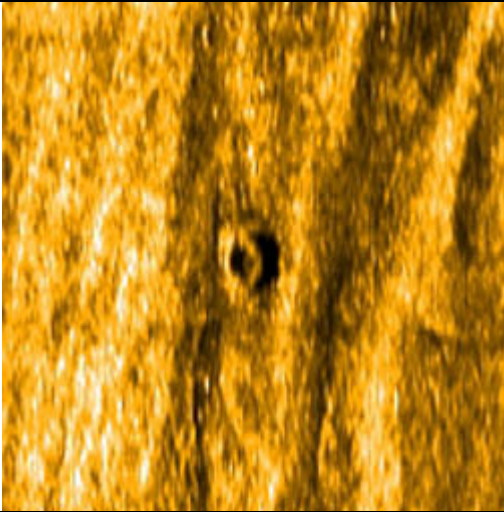
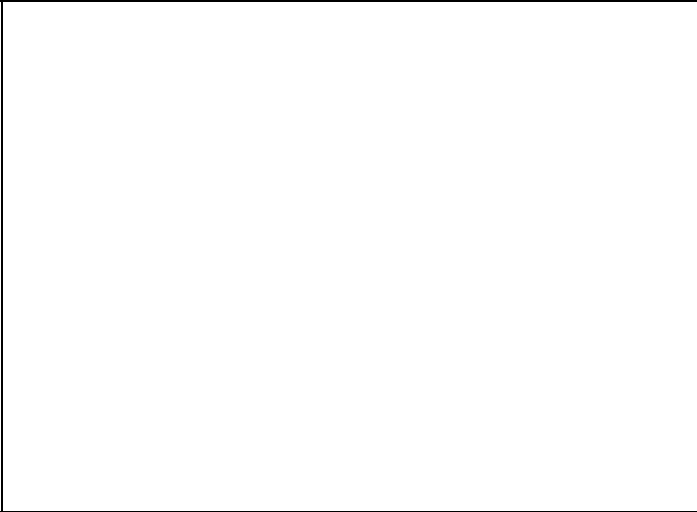

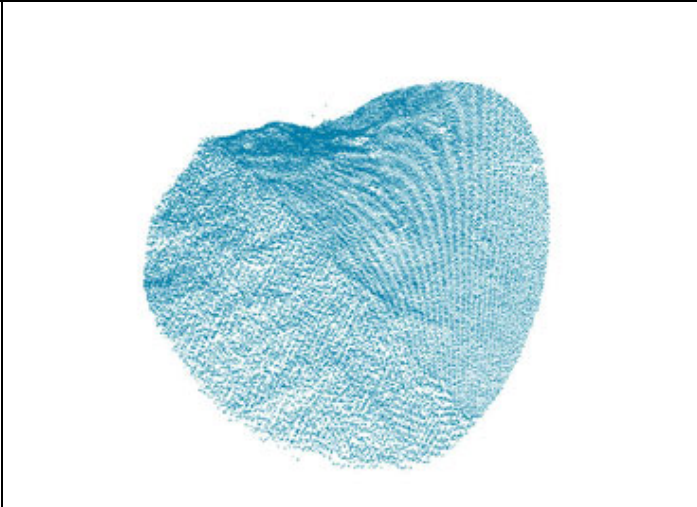
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13019 Grading: High Position: 462398 99969 Size of anomaly: L11m W H1.6m Target description: Unidentified anomaly. Large raised object with a Y shaped raised feature in the vicinity of a crescent buried feature. Magnetic strength: Associated References: Grouping: MA18037</p>
		<p>MA Ltd No: MA13020 Grading: High Position: 462421 100002 Size of anomaly: L11.2m W H0.6m Target description: Raised feature. Unidentified anomaly. Magnetic strength: Associated References:</p>

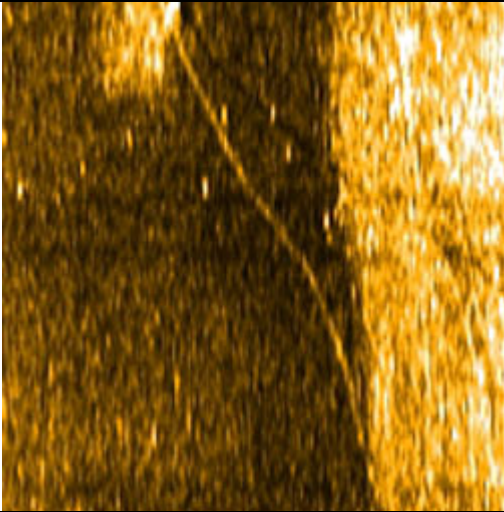
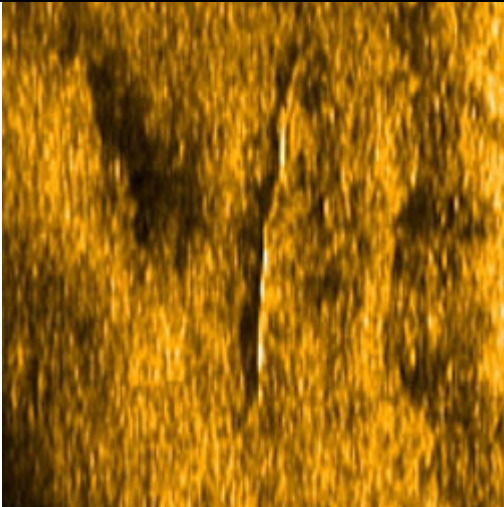
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13021 Grading: Low Position: 462269 100760 Size of anomaly: L12.5m W H Target description: Raised feature. Unidentified anomaly. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13022 Grading: Low Position: 462243 100862 Size of anomaly: L11.1m W H Target description: Linear feature. Identifiable anthropogenic objects. Magnetic strength: Associated References: Grouping: MA18035</p>

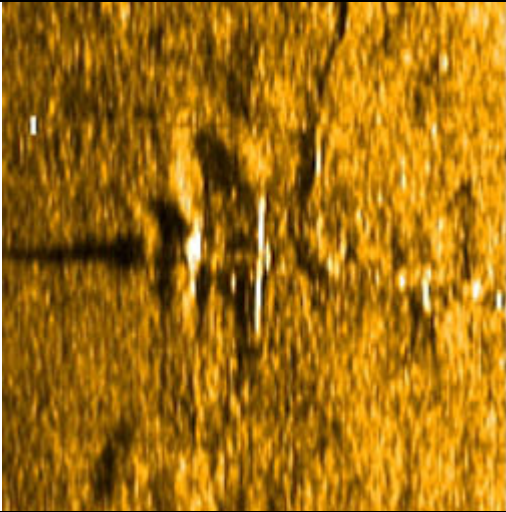
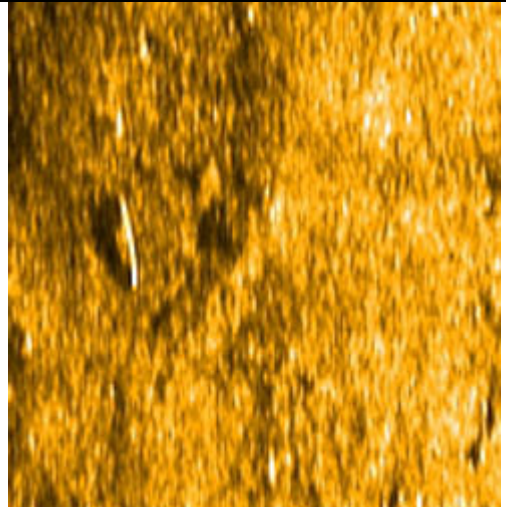
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13023 Grading: Low Position: 462254 100987 Size of anomaly: L18.7m W H Target description: Linear feature. Identifiable anthropogenic objects. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13024 Grading: Low Position: 462624 99507 Size of anomaly: L6.8m W0.9m H Target description: Linear sinuous feature lying low on the seabed, probable chain. Magnetic strength: Associated References: Grouping: MA18032</p>

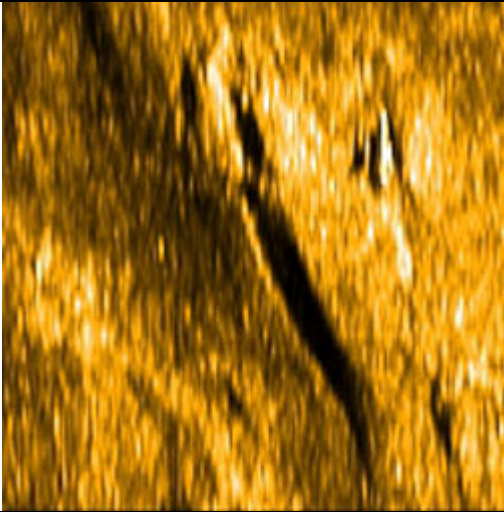
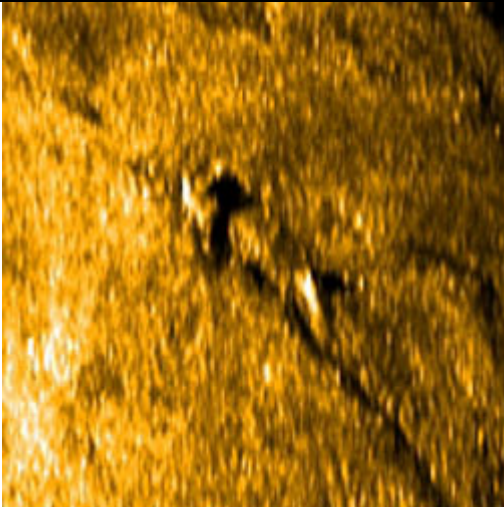
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13025 Grading: Low Position: 462638 99522 Size of anomaly: L21.9m W H Target description: Linear feature. Identifiable anthropogenic objects. Magnetic strength: Associated References: Grouping: MA18032</p>
		<p>MA Ltd No: MA13027 Grading: High Position: 462667 99466 Size of anomaly: L4.0m W H Target description: Linear feature. Identifiable anthropogenic objects. Magnetic strength: Associated References: Grouping: MA18032</p>

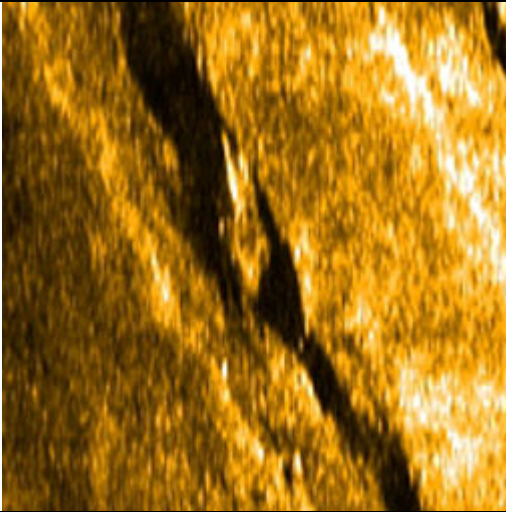
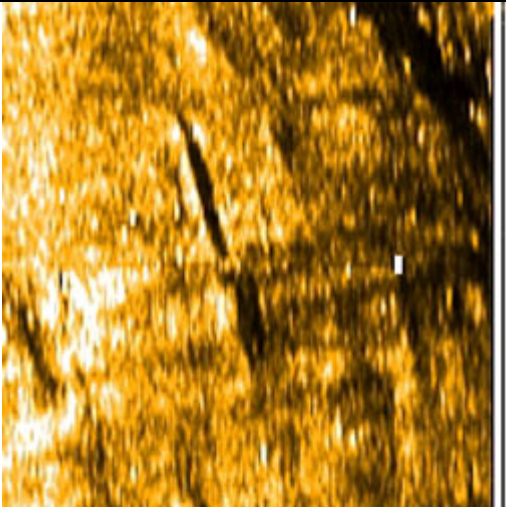
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13028 Grading: Low Position: 462565 99533 Size of anomaly: L3.9m W H Target description: Linear feature. Unidentified anomaly. Magnetic strength:24nT Associated References:</p>
		<p>MA Ltd No: MA13029 Grading: Low Position: 462545 99606 Size of anomaly: L8.2m W H Target description: Linear feature. Identifiable anthropogenic objects. Magnetic strength: Associated References:</p>

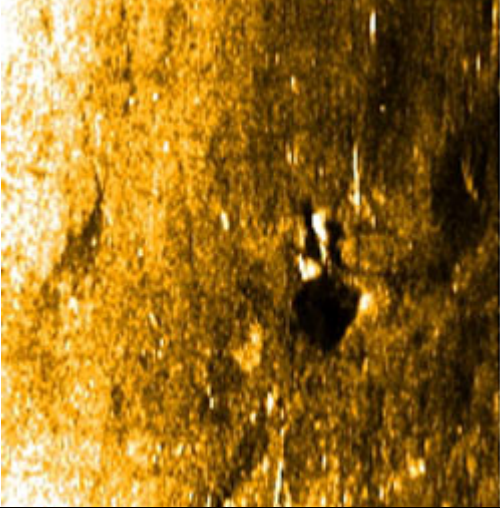

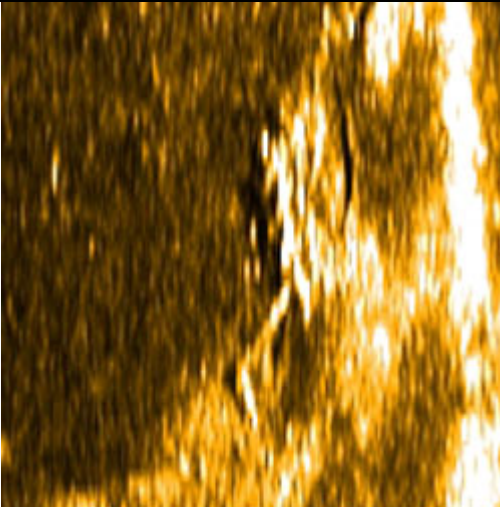
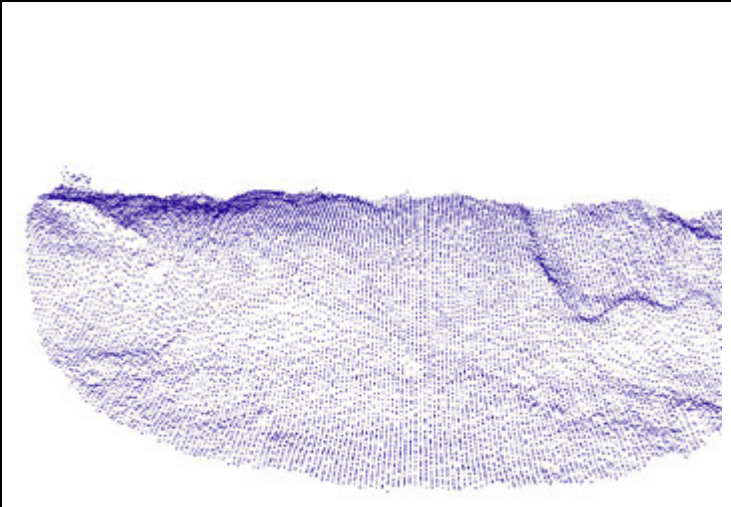
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13030 Grading: Low Position: 462525 99666 Size of anomaly: L3.2m W1.4m H Target description: Circular feature. Identifiable anthropogenic objects. Magnetic strength: 17nT Associated References:</p>
		<p>MA Ltd No: MA13031 Grading: High Position: 462412 100055 Size of anomaly: L18.7m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: 134nT Associated References:</p>

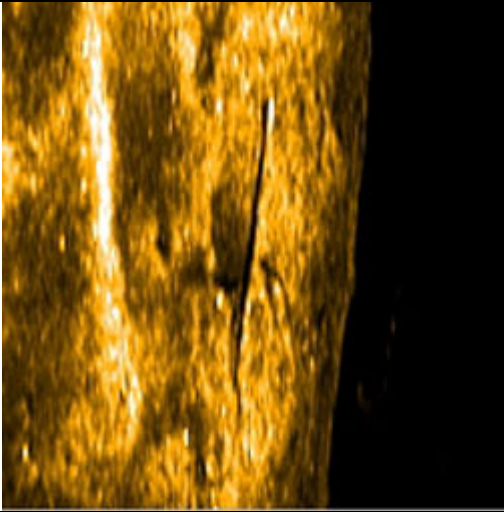
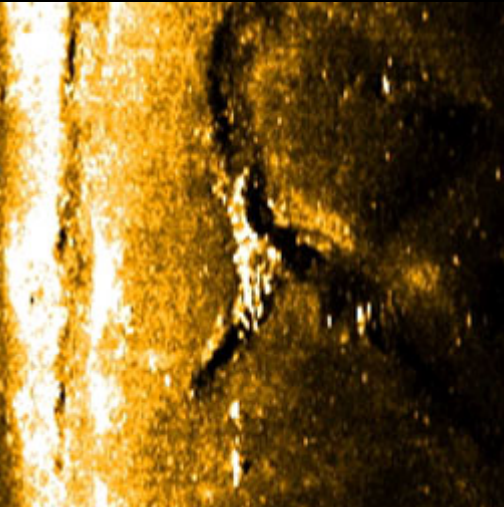
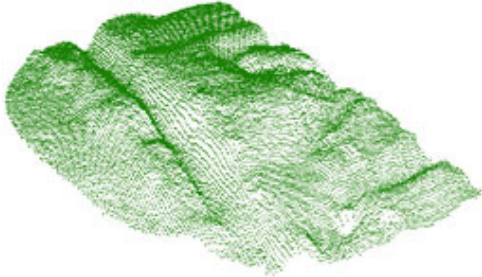
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13033 Grading: Low Position: 462330 100393 Size of anomaly: L19.6m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13034 Grading: Low Position: 462395 100442 Size of anomaly: L15.3m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: Associated References: Grouping: MA18034</p>

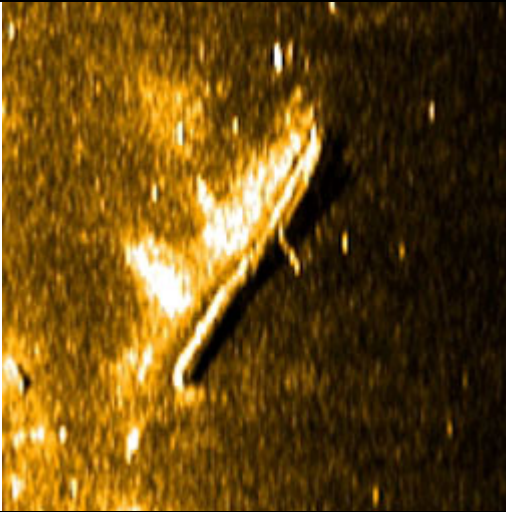
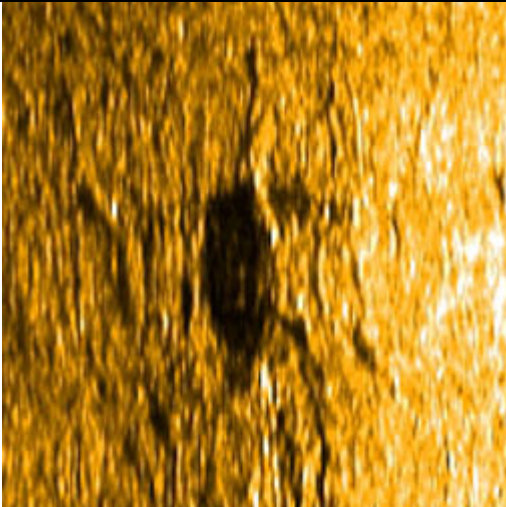
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13035 Grading: Low Position: 462365 100878 Size of anomaly: L7.2m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13036 Grading: Low Position: 462373 100956 Size of anomaly: L3.7m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: 13nT Associated References:</p>

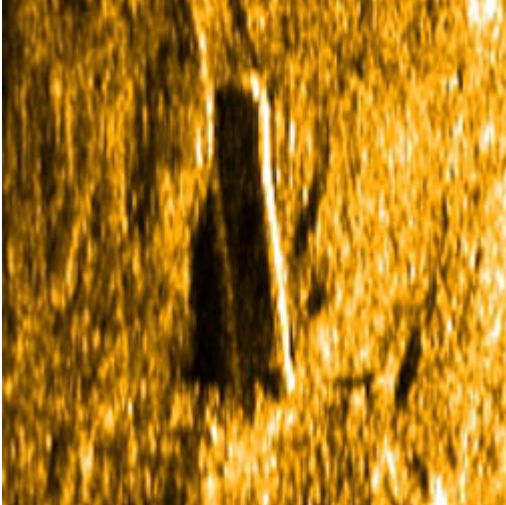

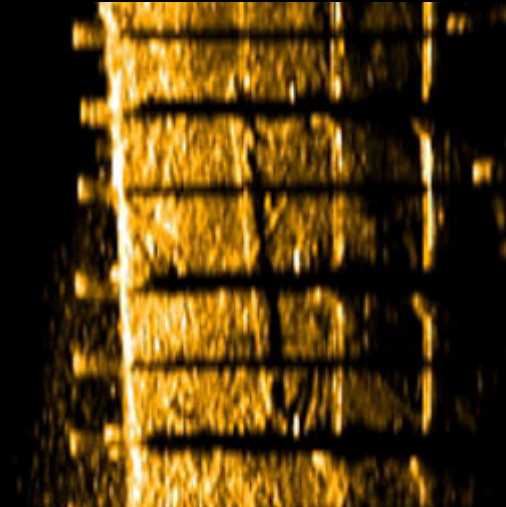
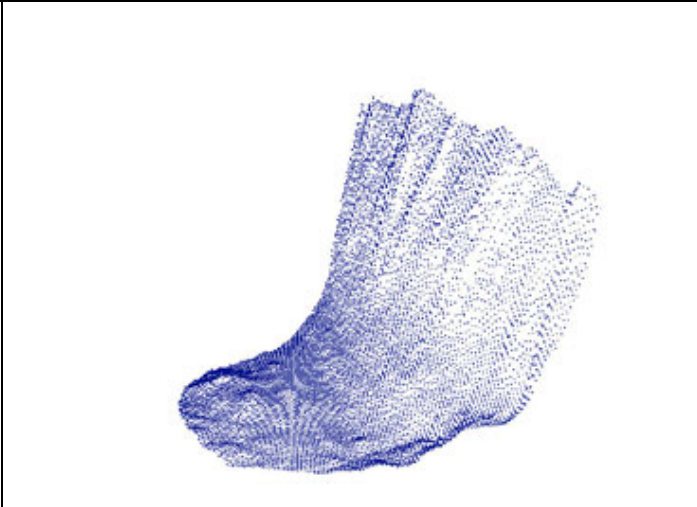
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13037 Grading: High Position: 462348 101505 Size of anomaly: L11.3m W1.5m H Target description: Linear feature. Unidentified anomaly. Magnetic strength: 193nT Associated References:</p>
		<p>MA Ltd No: MA13038 Grading: Low Position: 462306 101502 Size of anomaly: L6.0m W2.3m H Target description: Raised feature. Unidentified anomaly. Magnetic strength: 4nT Associated References:</p>

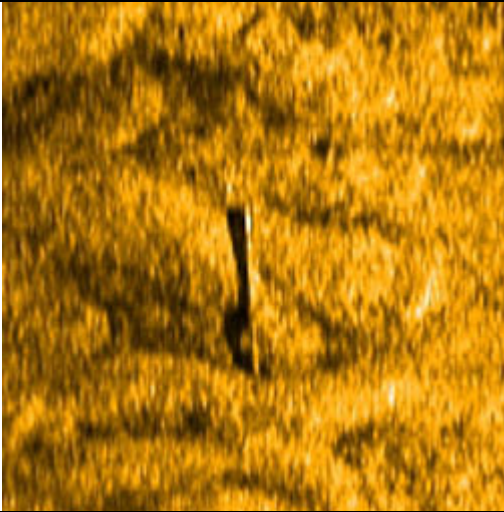
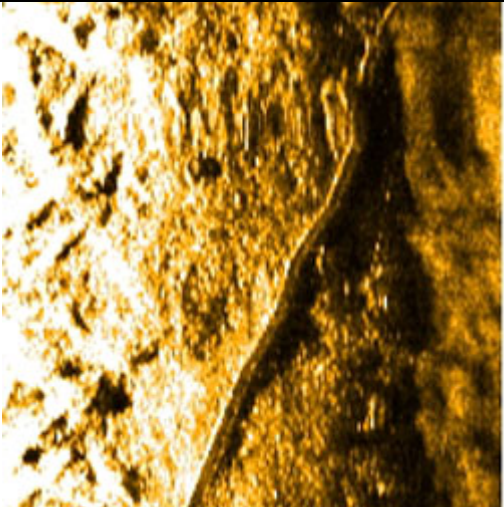
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13039 Grading: Low Position: 462355 101536 Size of anomaly: L6.9m W2.2m H Target description: Seabed feature. Geological/ geomorphological Magnetic strength: 4nT Associated References</p>
		<p>MA Ltd No: MA13040 Grading: Low Position: 462280 101615 Size of anomaly: L10.3m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: 10nT Associated References:</p>

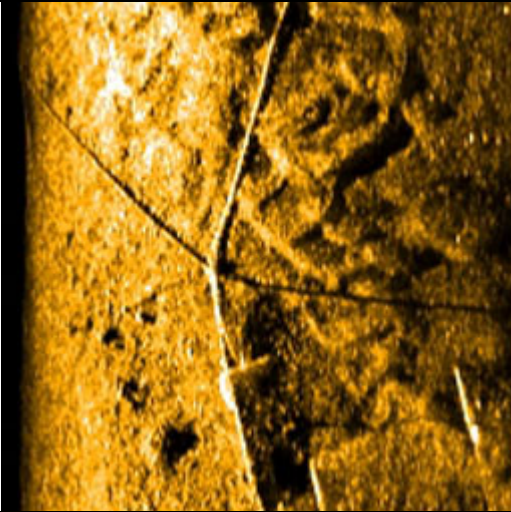
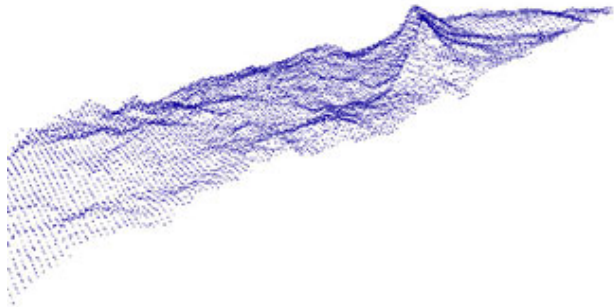
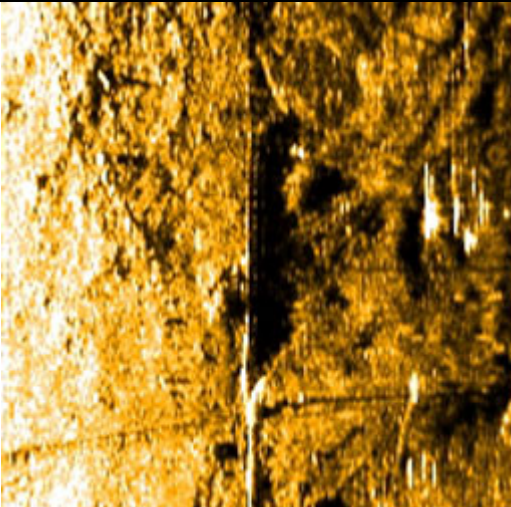
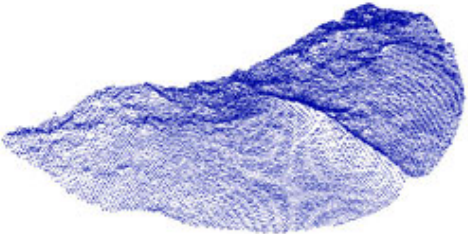
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13041 Grading: Low Position: 462790 101416 Size of anomaly: L10.4m W4.7m H Target description: Dark Reflector, probable depression with raised area Magnetic strength: Associated References</p>
		<p>MA Ltd No: MA13042 Grading: Medium Position: 462712 101229 Size of anomaly: L5.3m W1.7m H Target description: Debris comprising of linear feature Magnetic strength: Associated References:</p>

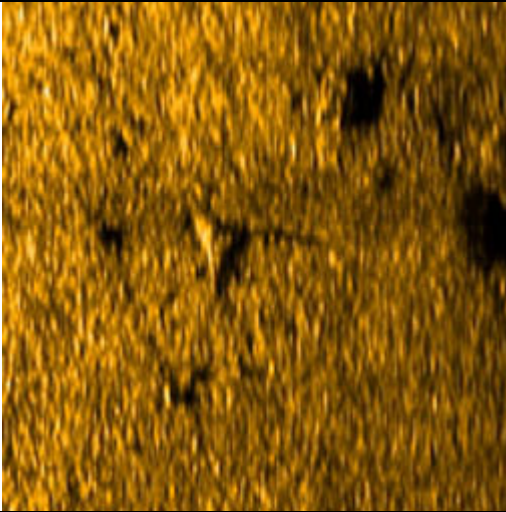
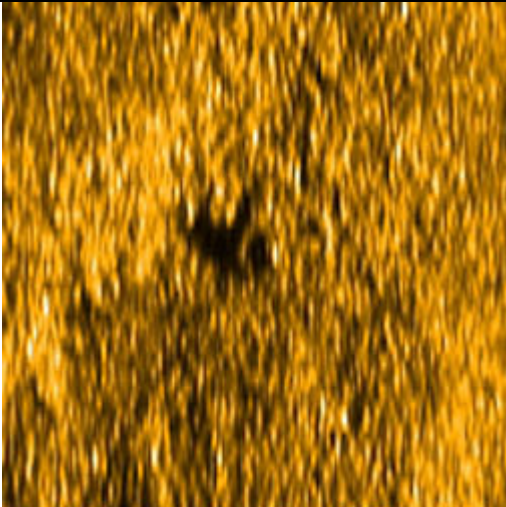
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13043 Grading: Low Position: 462705 101220 Size of anomaly: L12.8m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13044 Grading: Low Position: 462704 101291 Size of anomaly: L12.8m W3.9m H Target description: Raised feature. Unidentified anomaly. Magnetic strength: 12nT Associated References:</p>

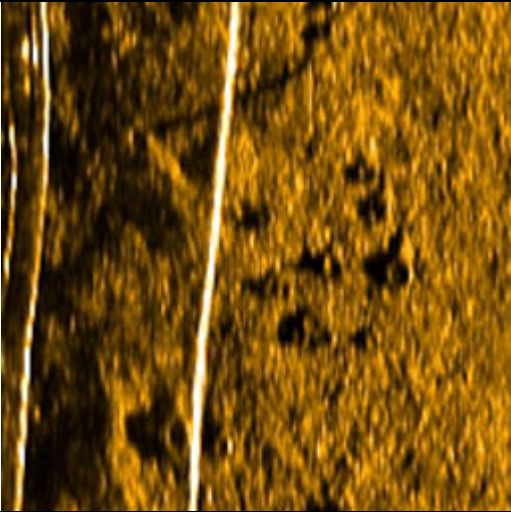
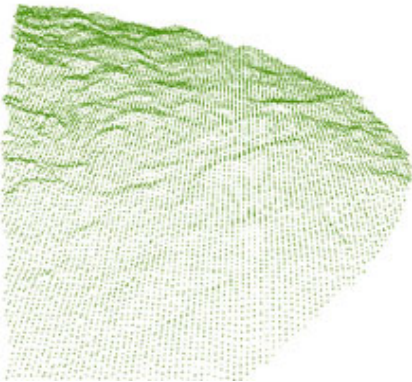
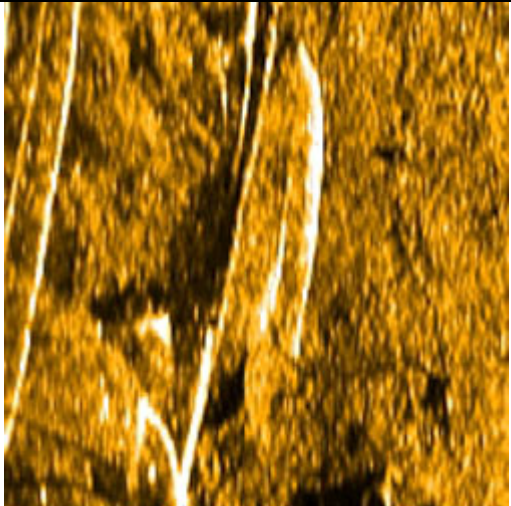

Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13045 Grading: Low Position: 462704 101251 Size of anomaly: L11.7m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13046 Grading: Medium Position: 462648 100617 Size of anomaly: L8.2m W H0.6m Target description: Raised feature. Unidentified anomaly. Magnetic strength: 68nT Associated References:</p>

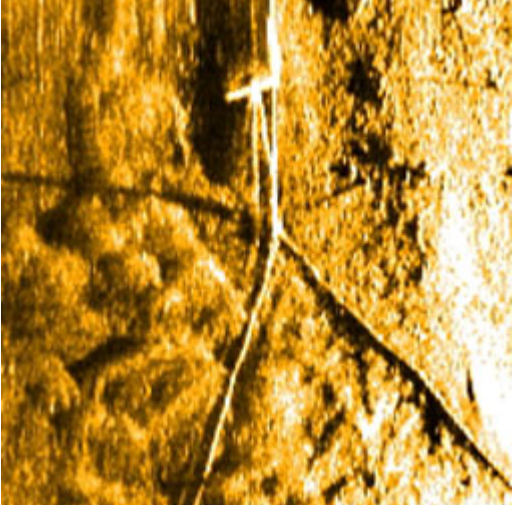
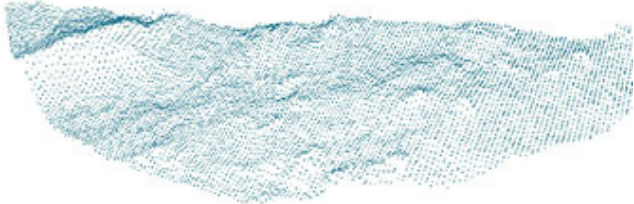
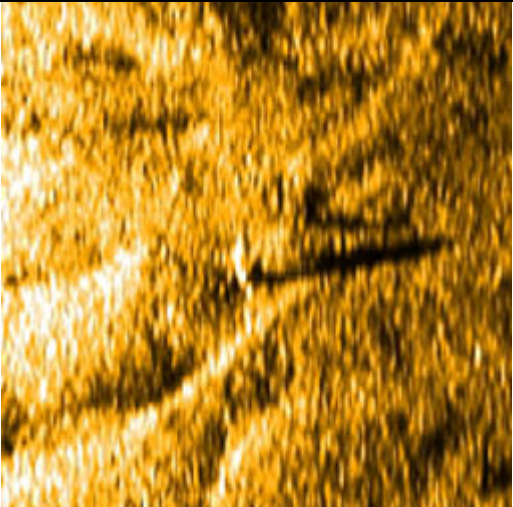
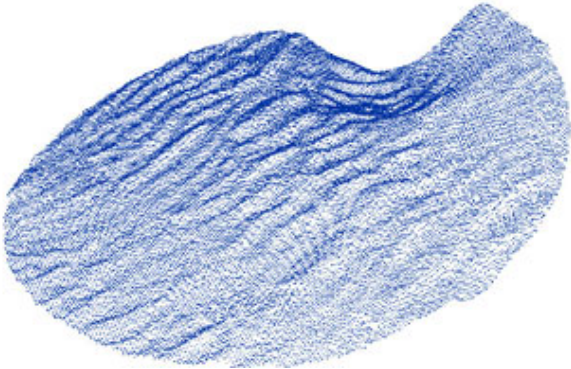
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13047 Grading: Low Position: 462646 100511 Size of anomaly: L12.4m W H0.7m. Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: 193nT Associated References:</p>
		<p>MA Ltd No: MA13048 Grading: Low Position: 462730 100278 Size of anomaly: L19.1m W H Target description: Buried linear feature. Identifiable anthropogenic object. Magnetic strength: Associated References:</p>

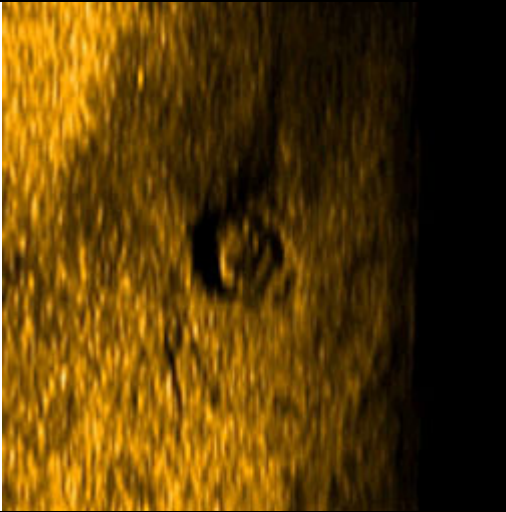
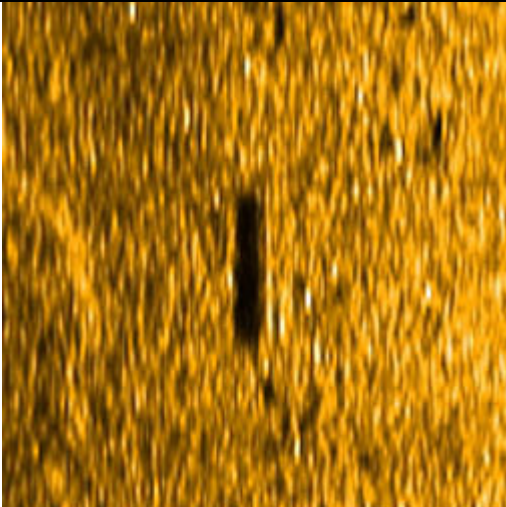
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13049 Grading: Low Position: 462705 100199 Size of anomaly: L7.4m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: 25nT Associated References: Grouping: MA18027</p>
		<p>MA Ltd No: MA13051 Grading: Low Position: 462790 100071 Size of anomaly: L40.7m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: Associated References:</p>

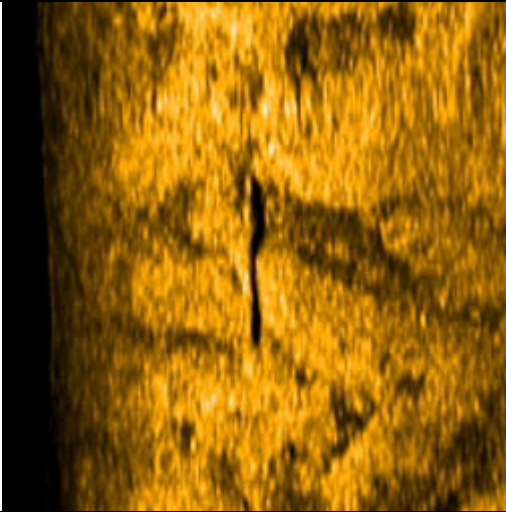
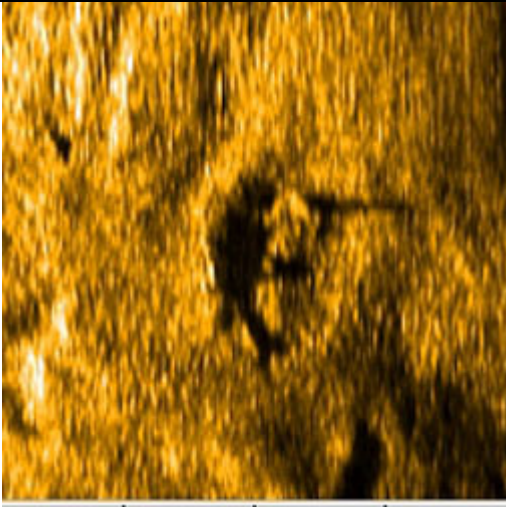
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13052 Grading: High Position: 462783 100030 Size of anomaly: L38m W H Target description: Raised rectangle. Unidentified anomaly. Magnetic strength: Associated References: Grouping: MA18029</p>
		<p>MA Ltd No: MA13053 Grading: Medium Position: 462789 99966 Size of anomaly: L13.8m W H Target description: Distinct humped raised linear feature with crossing linear. Magnetic strength: Associated References:</p>

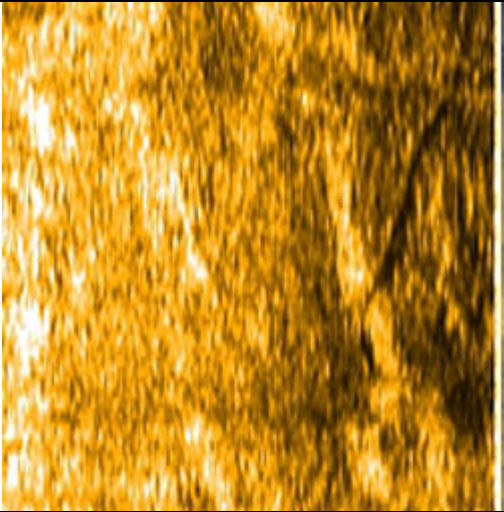
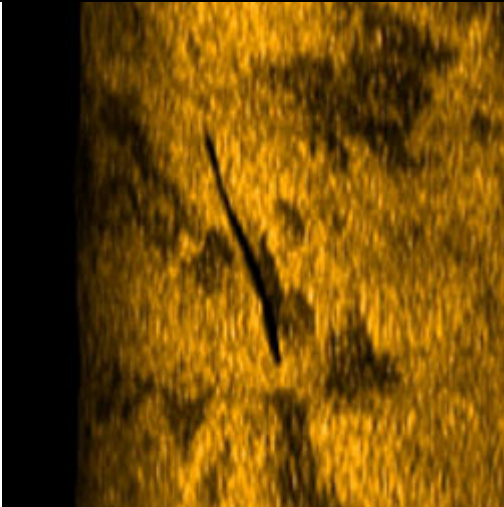
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13054 Grading: Low Position: 462806 99582 Size of anomaly: L3.3m W2.5m H0.2m Target description: Raised feature. Identifiable anthropogenic object. Magnetic strength: 115nT Associated References:</p>
		<p>MA Ltd No: MA13055 Grading: Low Position: 462857 99688 Size of anomaly: L1.8m W1.4m H Target description: Circular feature. Identifiable anthropogenic object. Magnetic strength: Associated References:</p>

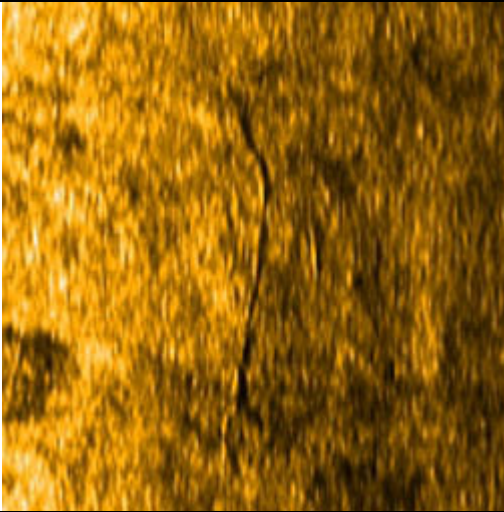
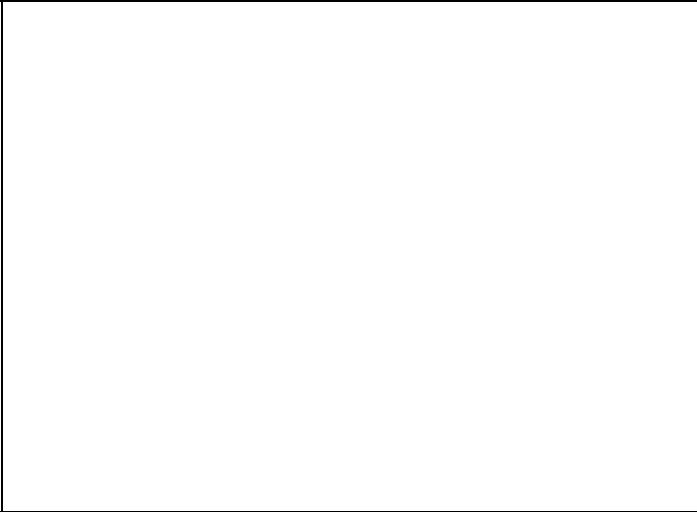
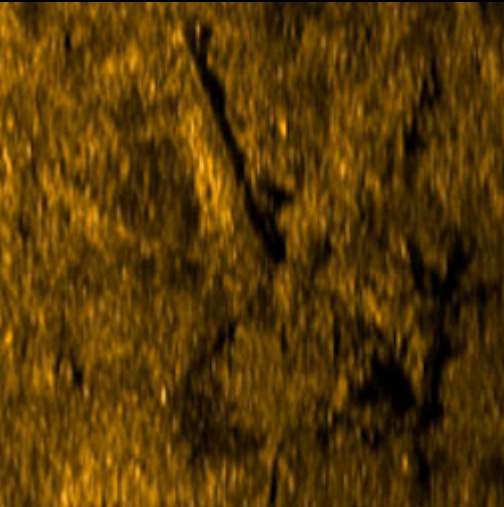

Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13056 Grading: Low Position: 462805 99912 Size of anomaly: L W H Target description: Debris field. Identifiable anthropogenic objects. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13057 Grading: High Position: 462802 99929 Size of anomaly: L13.1m W2.5m H Target description: Debris field. Identifiable anthropogenic objects. Magnetic strength: Associated References:</p>

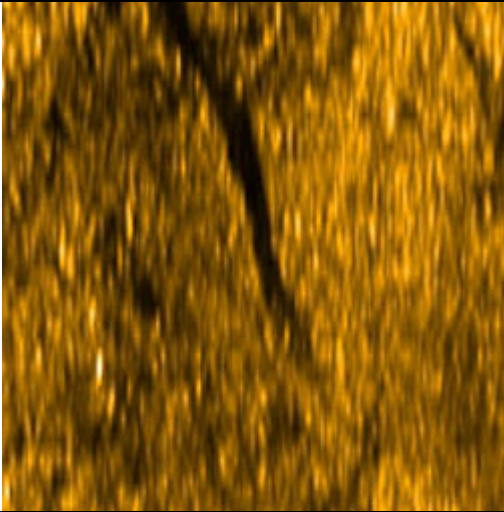
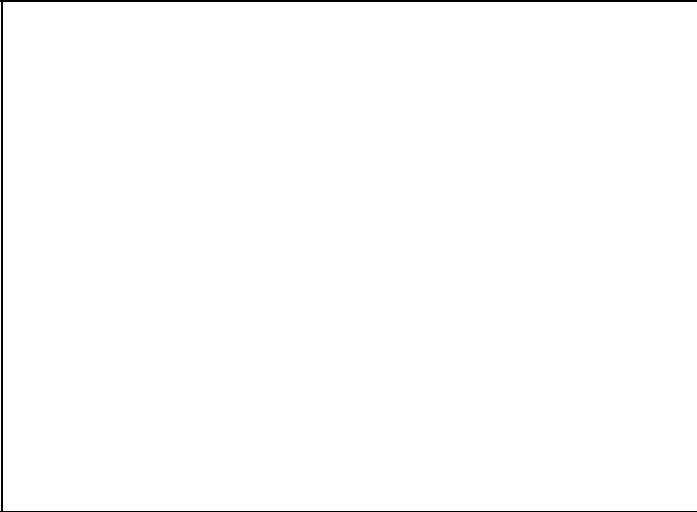
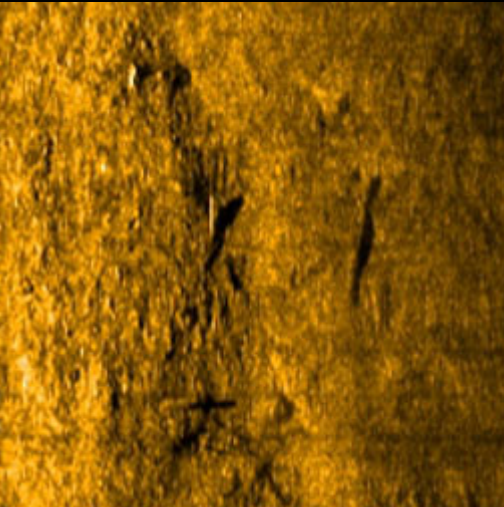
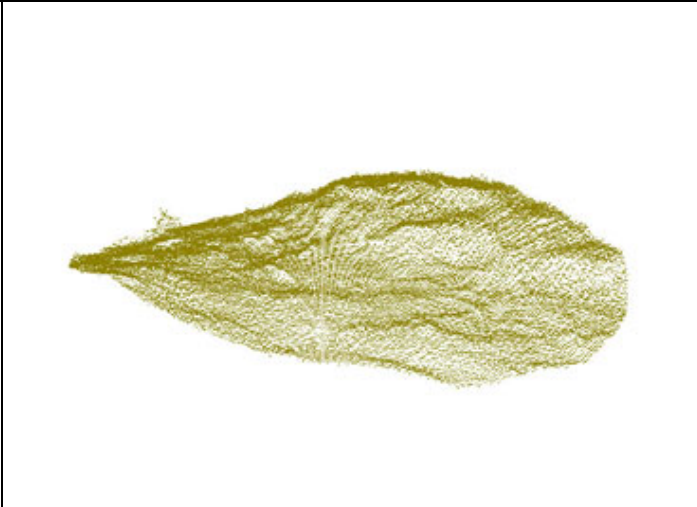
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13058 Grading: High Position: 462785 100025 Size of anomaly: L35.6m W H Target description: Buried linear feature with areas of raised features. Magnetic strength: Associated References: Grouping: MA18029</p>
		<p>MA Ltd No: MA13059 Grading: Medium Position: 462721 100073 Size of anomaly: L2m W H0.8m Target description: Depression with raised area of seabed. Magnetic strength: Associated References:</p>

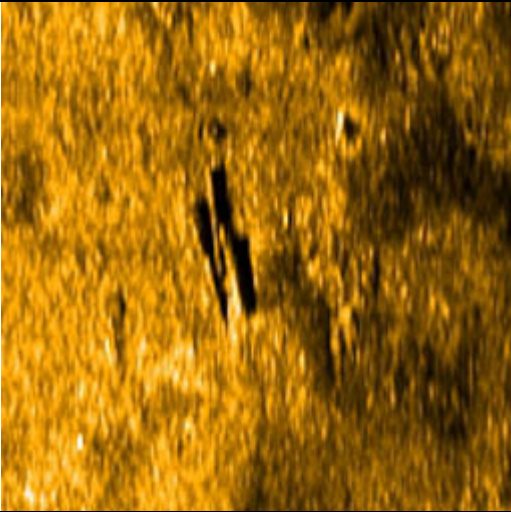
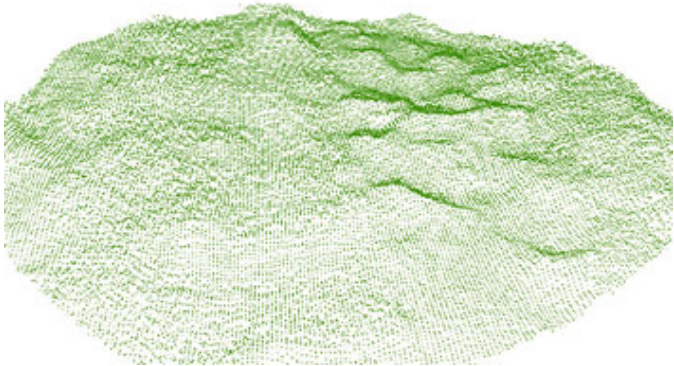
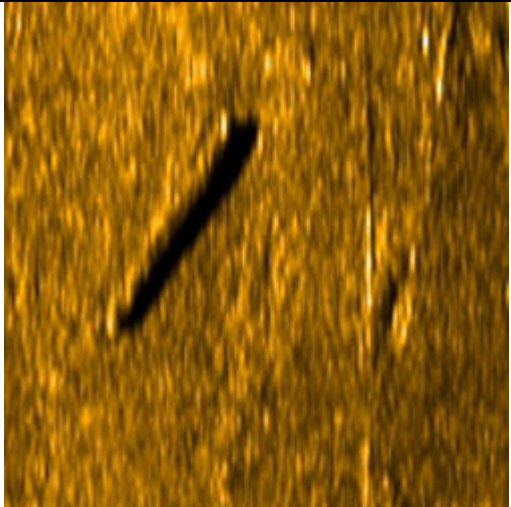

Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13060 Grading: Low Position: 462752 100111 Size of anomaly: L3.3m W3.2m H Target description: Buried circular feature. Unidentified anomaly. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13061 Grading: Low Position: 462752 100170 Size of anomaly: L4.0m W H Target description: Linear feature. Unidentified anomaly. Magnetic strength: Associated References:</p>

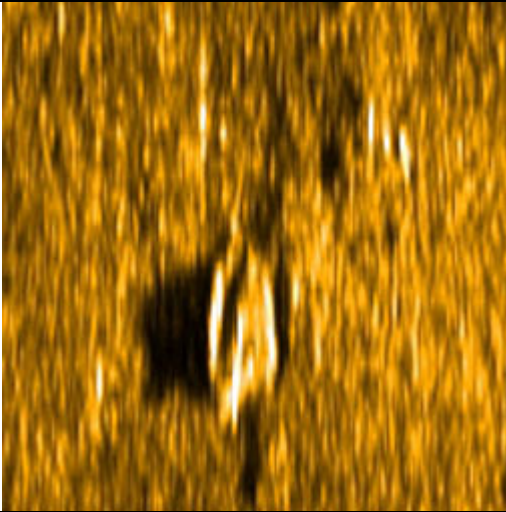
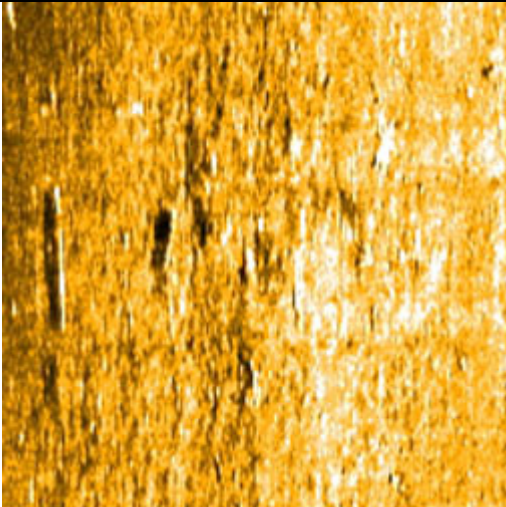
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13062 Grading: Low Position: 462709 100197 Size of anomaly: L6.6m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: 8nT Associated References: Grouping: MA18027</p>
		<p>MA Ltd No: MA13063 Grading: Low Position: 462681 100213 Size of anomaly: L6.6m W2.0m H0.3m Target description: Raised feature. Unidentified anomaly. Magnetic strength: 1nT Associated References: Modern chart data, cable</p>

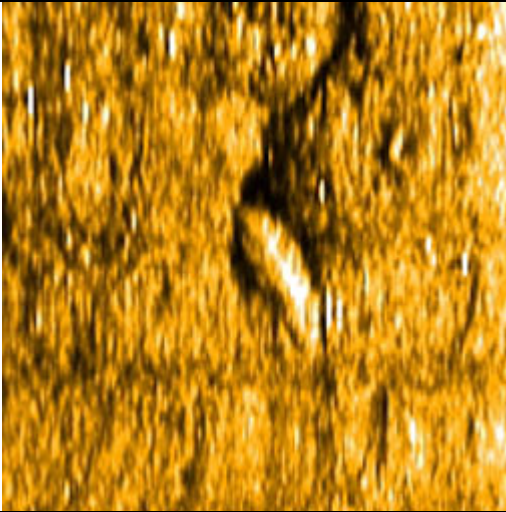
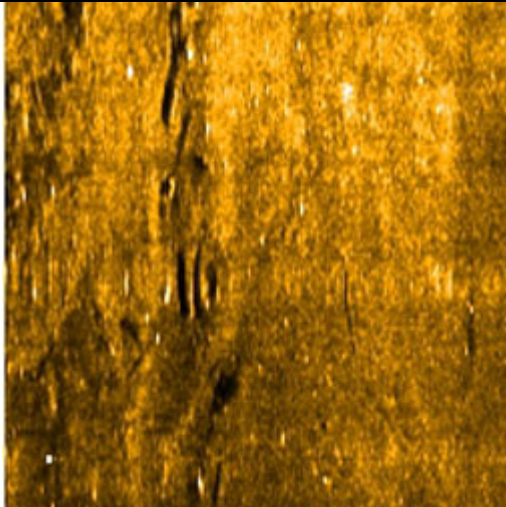
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13064 Grading: Low Position: 462662 100256 Size of anomaly: L13.3m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: 14nT Associated References:</p>
		<p>MA Ltd No: MA13065 Grading: Low Position: 462690 100277 Size of anomaly: L9.7m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: 1nT Associated References:</p>

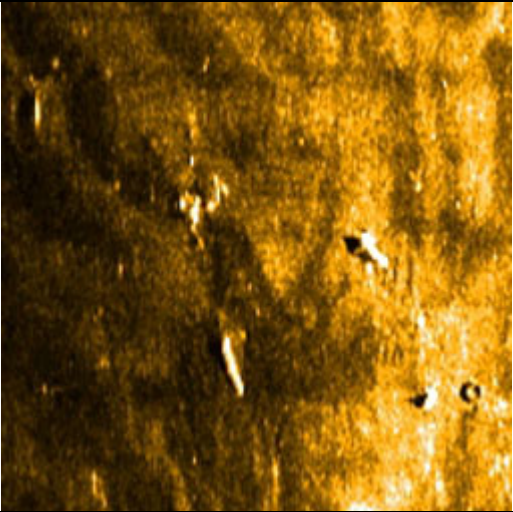

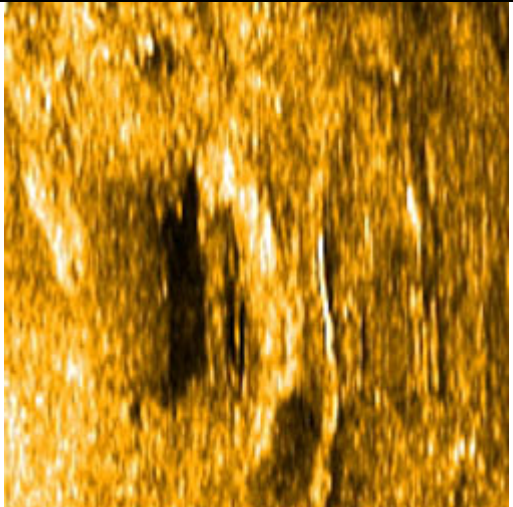

Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13066 Grading: Low Position: 462641 10414 Size of anomaly: L14.4m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13067 Grading: Low Position: 462606 100561 Size of anomaly: L17.4m W3m H Target description: Buried feature. Unidentified anomaly. Magnetic strength: Associated References:</p>

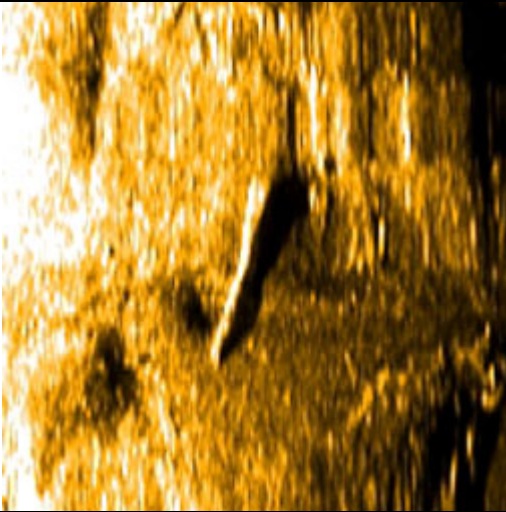
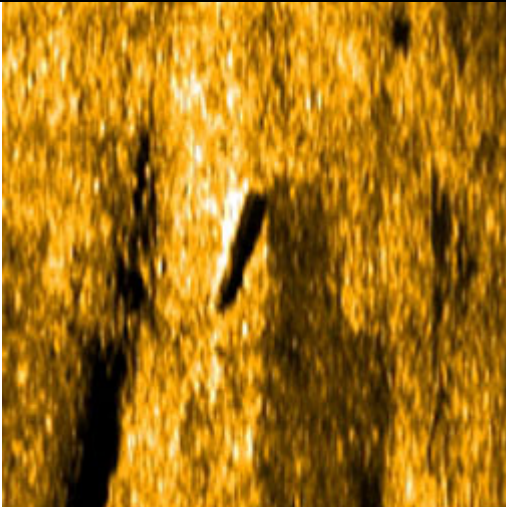
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13068 Grading: Low Position: 462609 100596 Size of anomaly: L8.0m W H Target description: Seabed feature. Identifiable anthropogenic object. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13069 Grading: Medium Position: 462598 100621 Size of anomaly: L31.6m W H Target description: Debris field. Areas of seabed relief with slightly raised features. Magnetic strength: 187nT Associated References:</p>

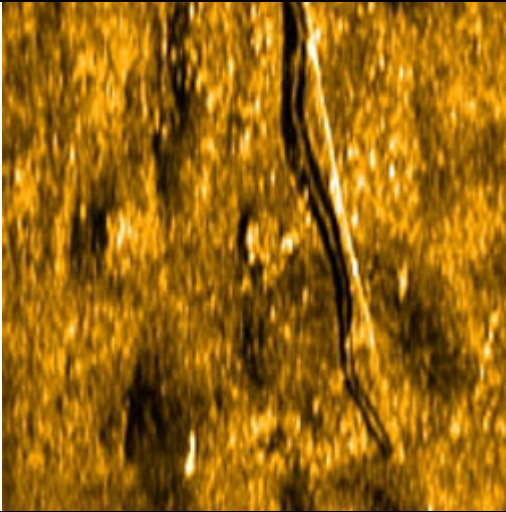
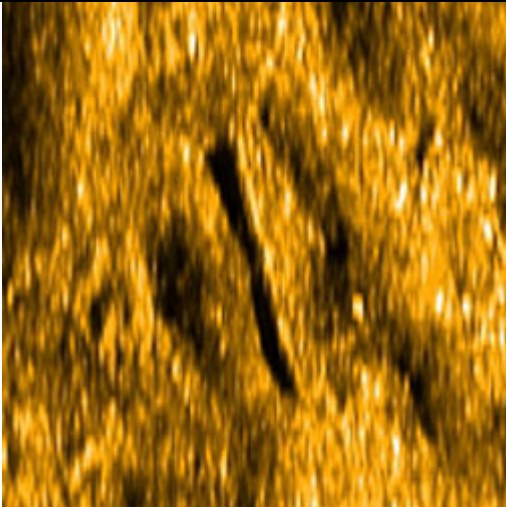
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13070 Grading: Medium Position: 462605 100783 Size of anomaly: L5.8m W H Target description: Debris field. Areas of seabed relief with slightly raised features. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13071 Grading: Low Position: 462610 100816 Size of anomaly: L7.1m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: 400nT Associated References:</p>

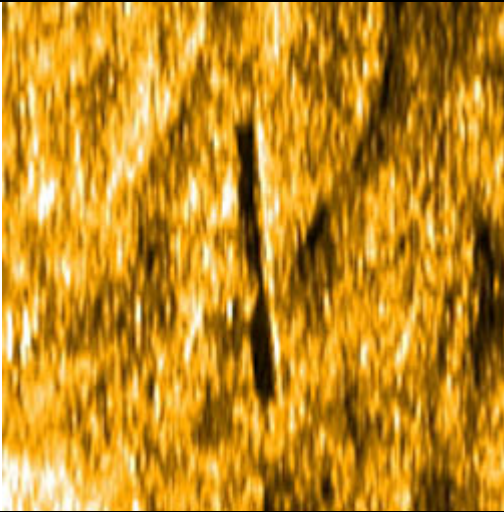
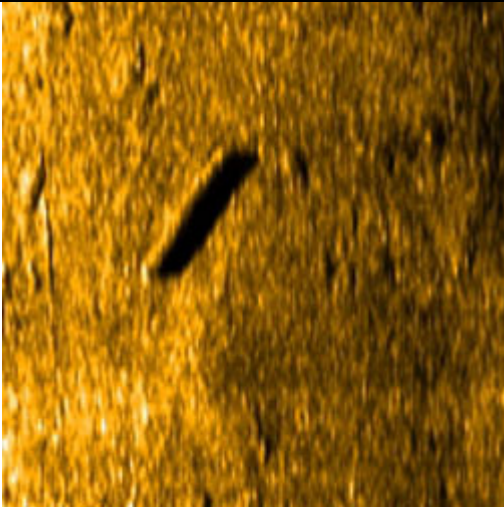
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13072 Grading: High Position: 462654 100992 Size of anomaly: L4.4m W1.4m H0.4m Target description: Raised feature. Unidentified anomaly. Magnetic strength: 2715nT Associated References:</p>
		<p>MA Ltd No: MA13073 Grading: Low Position: 462671 101131 Size of anomaly: L11.0m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: Associated References:</p>

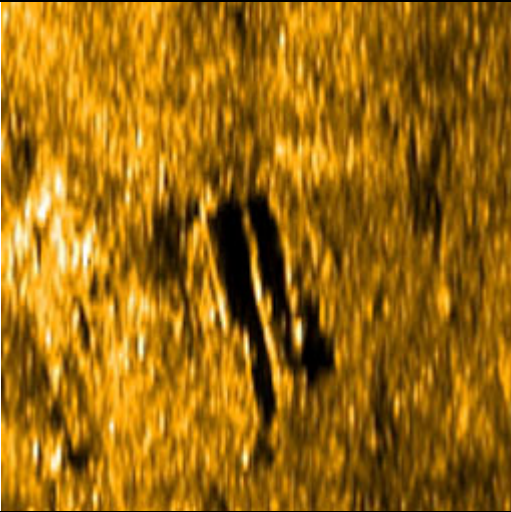
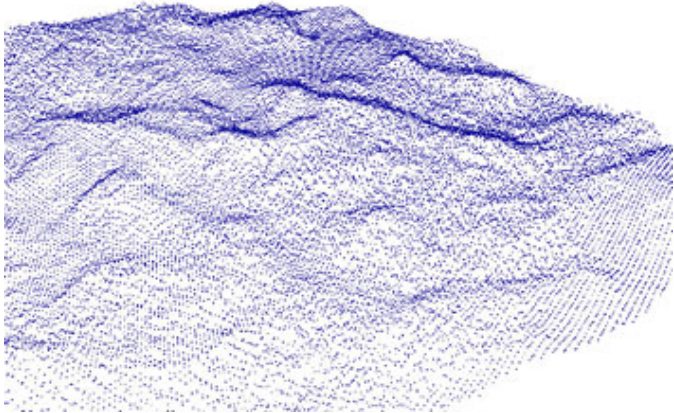
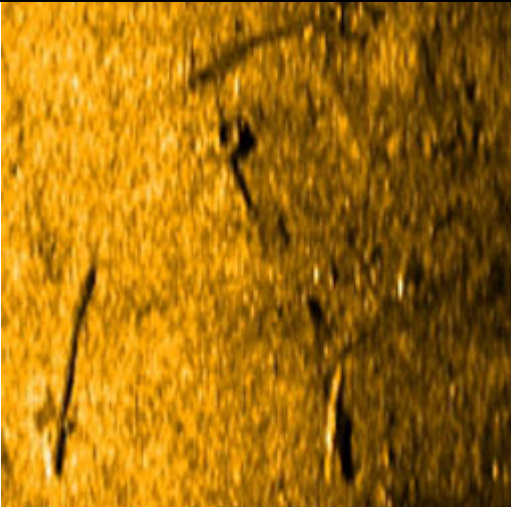
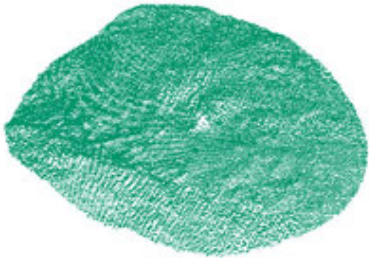
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13074 Grading: Low Position: 462663 101165 Size of anomaly: L7.5m W2.1m H Target description: Raised feature. Unidentified anomaly. Magnetic strength: 12nT Associated References:</p>
		<p>MA Ltd No: MA13075 Grading: Low Position: 462663 101197 Size of anomaly: L21.8m W H Target description: Raised feature. Unidentified anomaly. Magnetic strength: Associated References:</p>

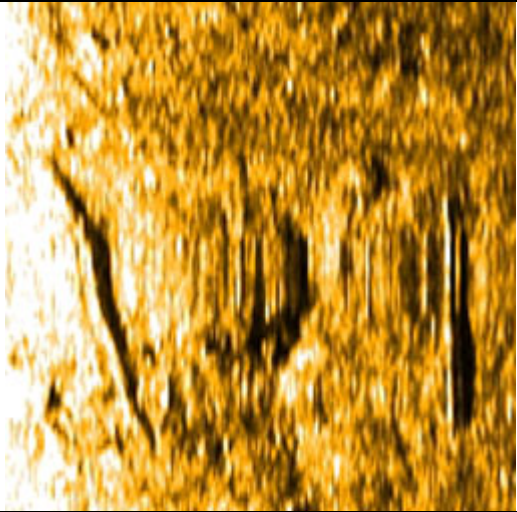

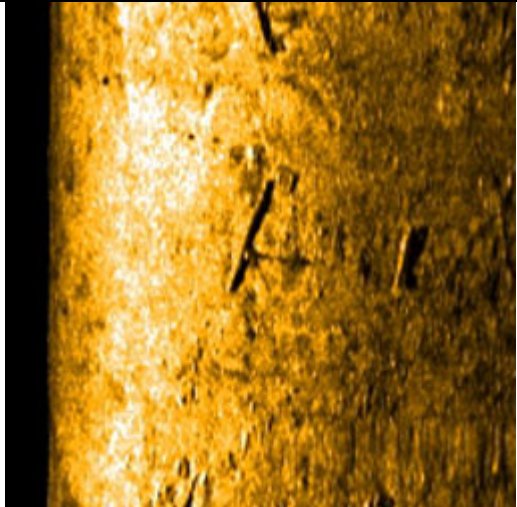
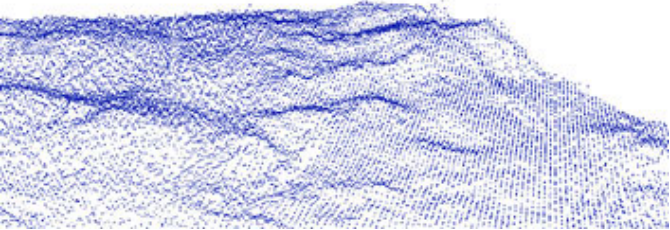
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13076 Grading: Medium Position: 462654 101252 Size of anomaly: L W H Target description: Debris field. Areas of seabed relief with slightly raised features. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13077 Grading: Low Position: 462594 101313 Size of anomaly: L9.6m W1.8m H Target description: Raised feature. Unidentified anomaly. Magnetic strength: Associated References:</p>

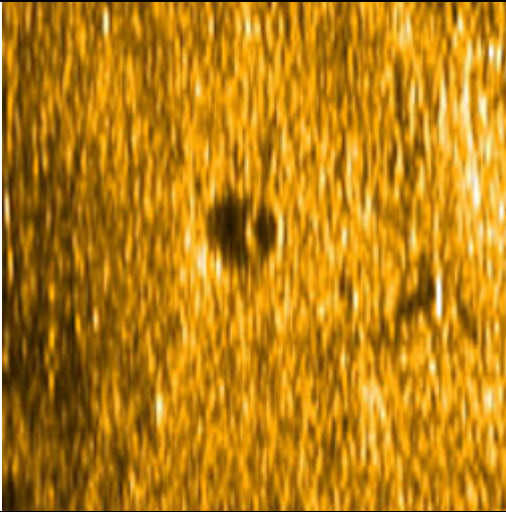
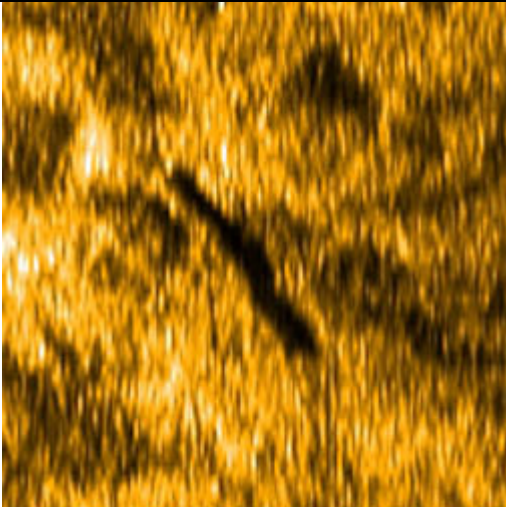
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13079 Grading: Low Position: 462600 101252 Size of anomaly: L8.6m W1.3m H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13080 Grading: Low Position: 462596 101024 Size of anomaly: L5.9m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: 386nT Associated References:</p>

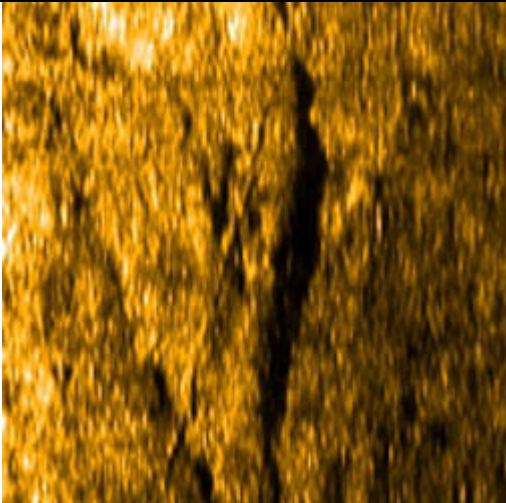
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13081 Grading: Low Position: 464556 100988 Size of anomaly: L16.3m W1.3m H Target description: Linear feature. Unidentified anomaly. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13082 Grading: Low Position: 462553 100921 Size of anomaly: L6.8m W0.8m H Target description: Linear feature. Unidentified anomaly. Magnetic strength: Associated References:</p>

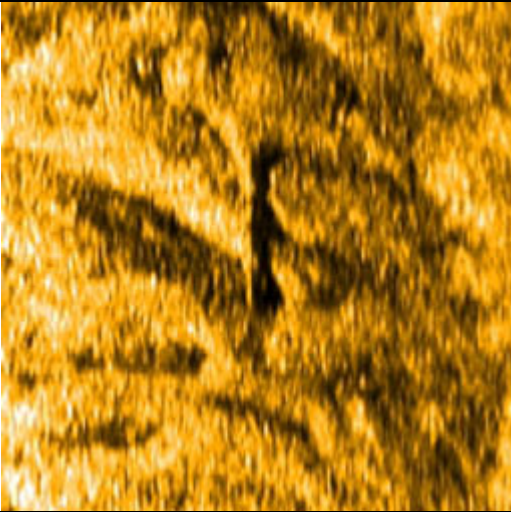
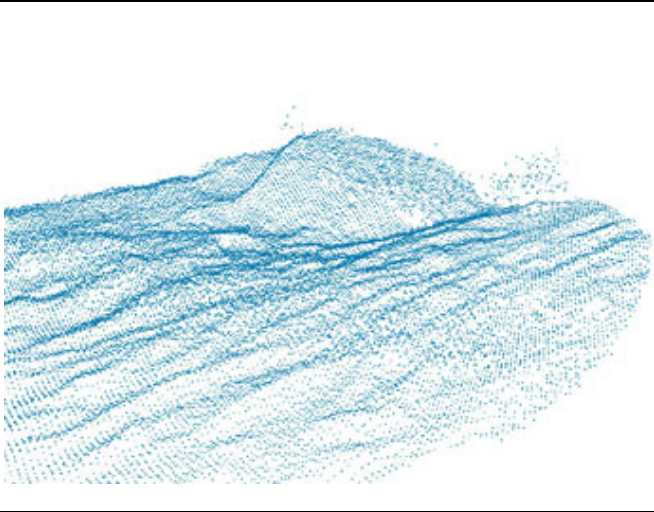
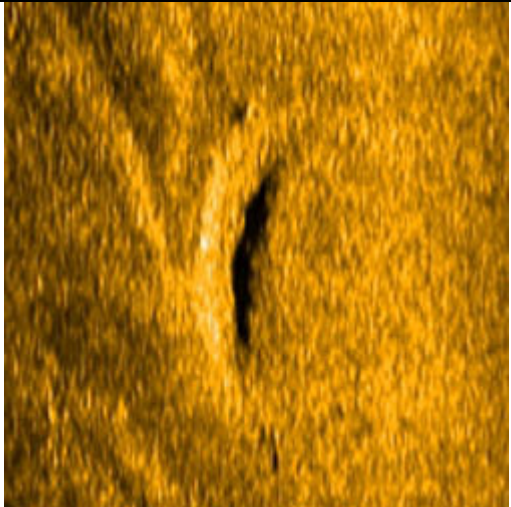

Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13083 Grading: Low Position: 462549 100890 Size of anomaly: L7.2m W1.0m H Target description: Linear feature. Unidentified anomaly. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13084 Grading: Low Position: 462608 100821 Size of anomaly: L8.0m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: Associated References:</p>

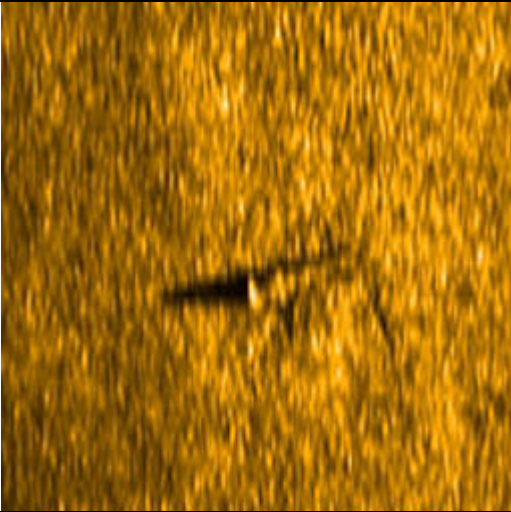

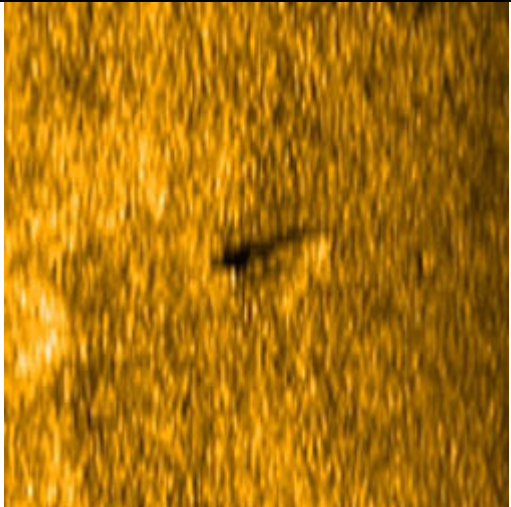

Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13085 Grading: Medium Position: 462603 100785 Size of anomaly: L6.4m W1.9m H Target description: Buried linear with areas of raised features. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13086 Grading: High Position: 462592 100639 Size of anomaly: L W H Target description: Debris field. Areas of seabed relief with high raised feature. Magnetic strength: 187nT Associated References:</p>

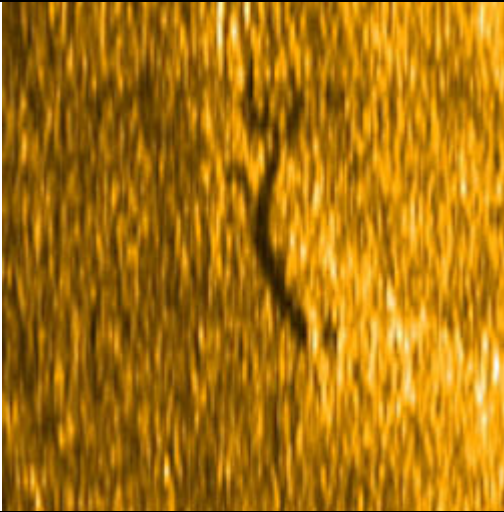
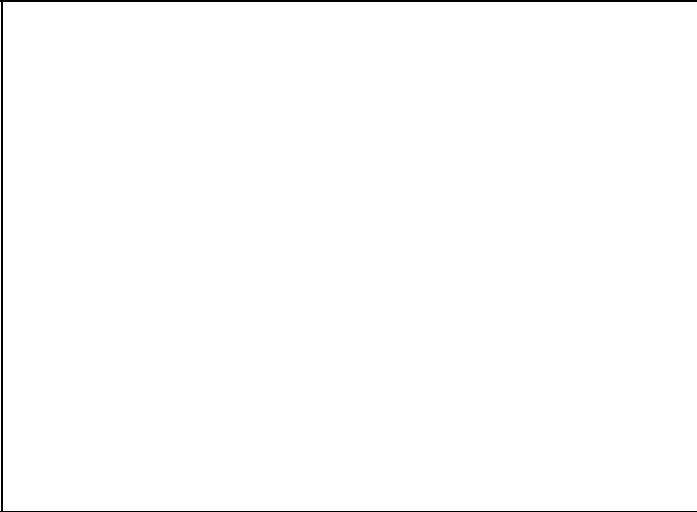
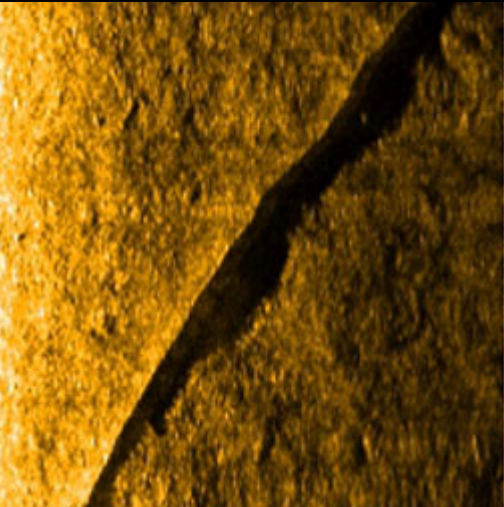
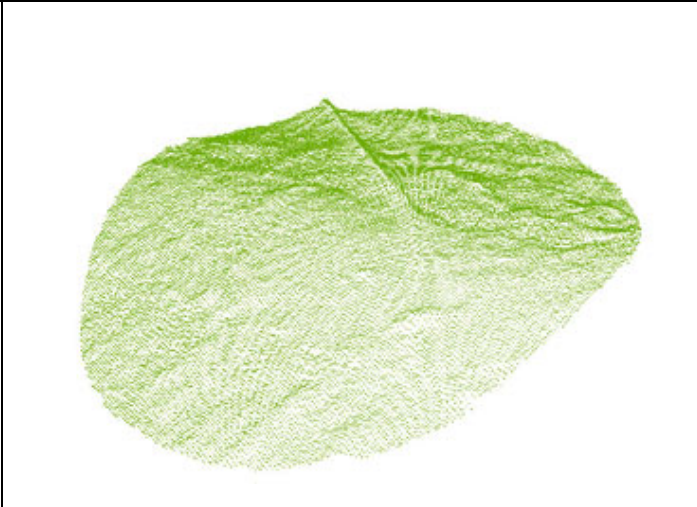
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13087 Grading: High Position: 462614 100604 Size of anomaly: L W H Target description: Debris field. Area of seabed relief with high raised features. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13088 Grading: High Position: 462616 100551 Size of anomaly: L25.6m W H Target description: Area of seabed relief with high raised features. Magnetic strength: Associated References:</p>

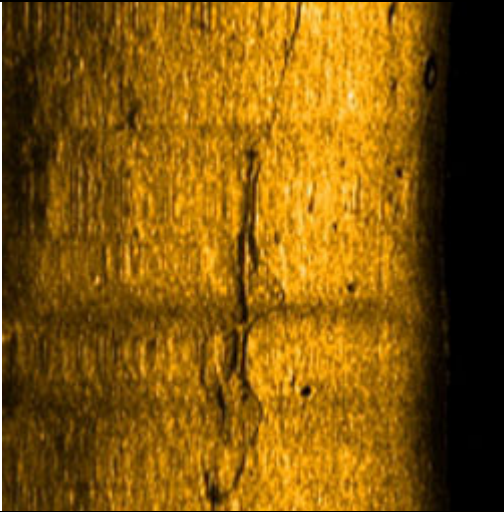
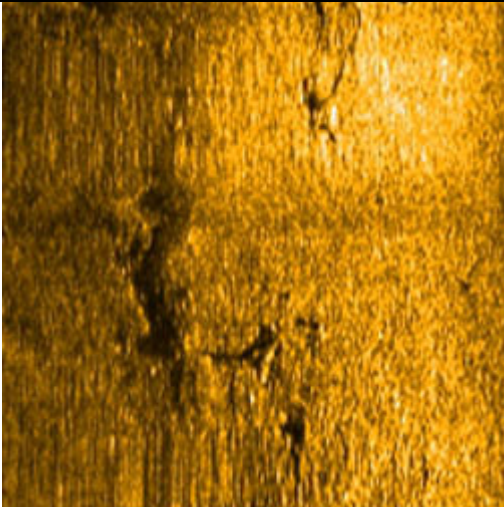
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13089 Grading: Low Position: 462620 100256 Size of anomaly: L2.0m W0.7m H Target description: Circular feature. Identifiable anthropogenic object. Magnetic strength: Associated References: Grouping: MA18026</p>
		<p>MA Ltd No: MA13090 Grading: Low Position: 462687 100282 Size of anomaly: L5.8m W H Target description: Raised feature. Unidentified anomaly. Magnetic strength: 2nT Associated References:</p>

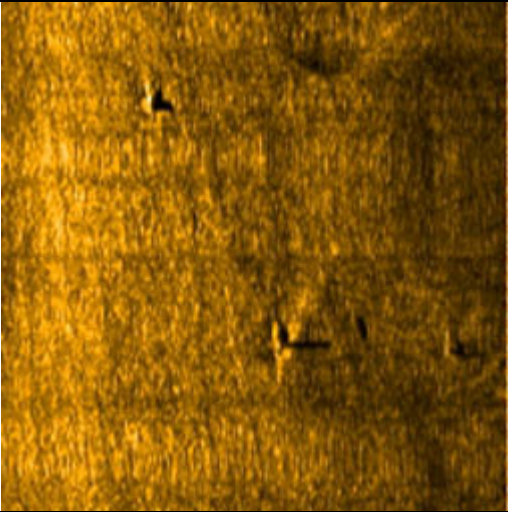

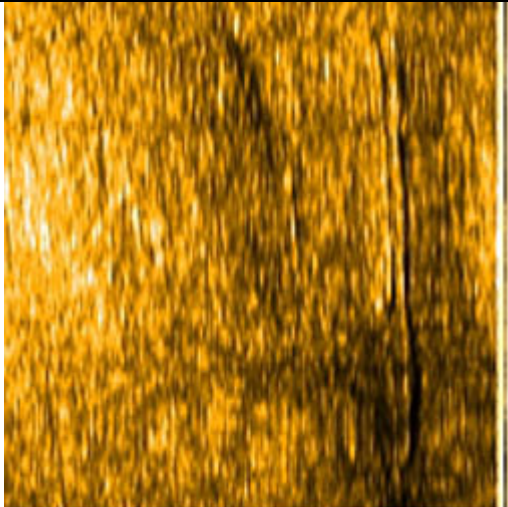

Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13091 Position: 462697 100245 Size of anomaly: L15.3m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: Associated References:</p>

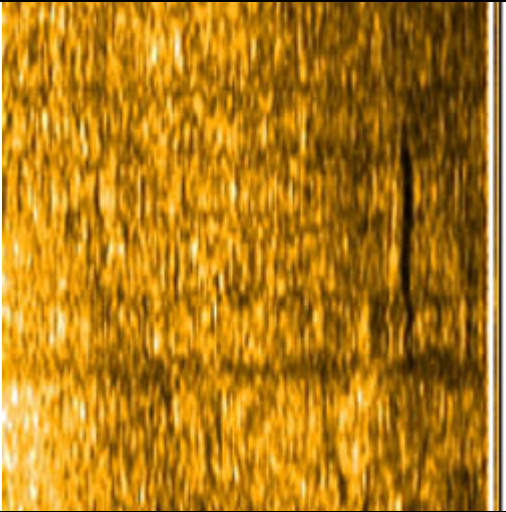
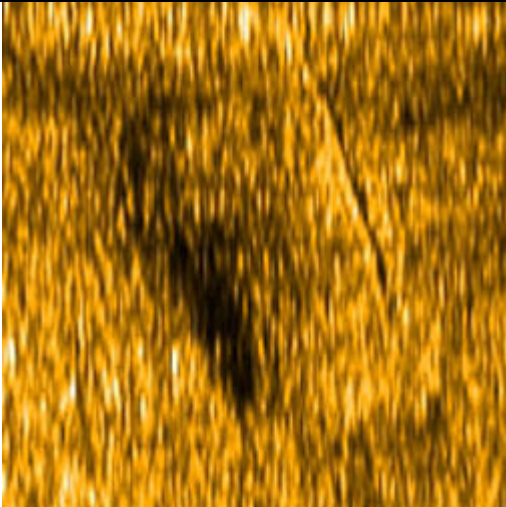
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13092 Grading: Medium Position: 462703 100202 Size of anomaly: L6.6m W H Target description: Distinctive raised area with potentially a buried feature nearby. Magnetic strength: 25nT Associated References: Grouping: MA18027</p>
		<p>MA Ltd No: MA13093 Grouping: Medium Position: 462672 100119 Size of anomaly: L9.6m W2.8m H Target description: Dark reflector, raised feature Magnetic strength: Associated References: Grouping: MA18028</p>

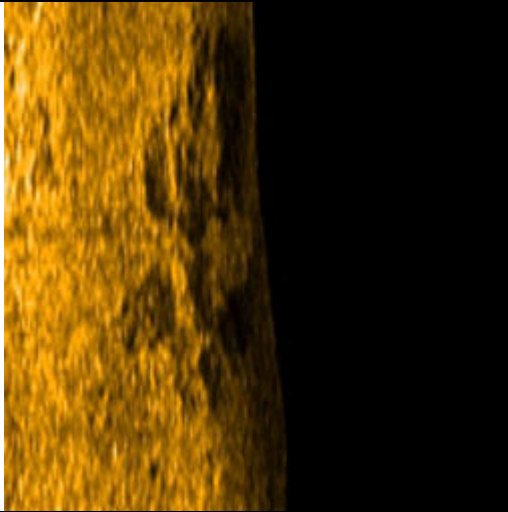
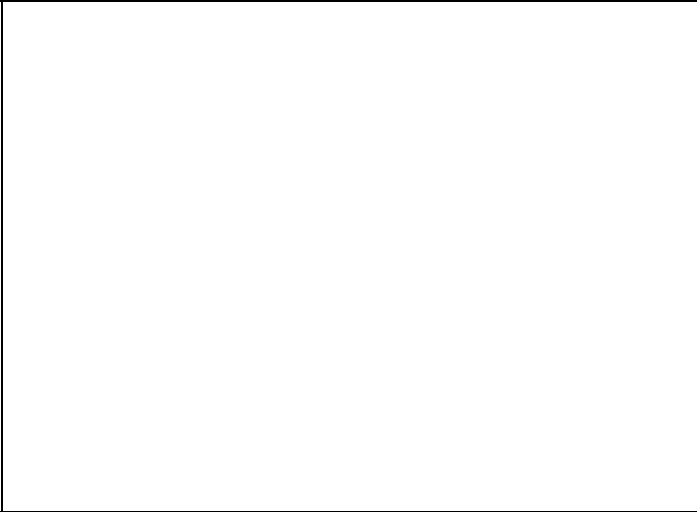
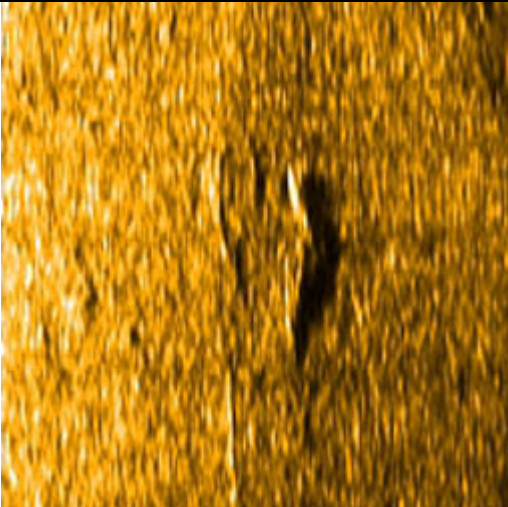
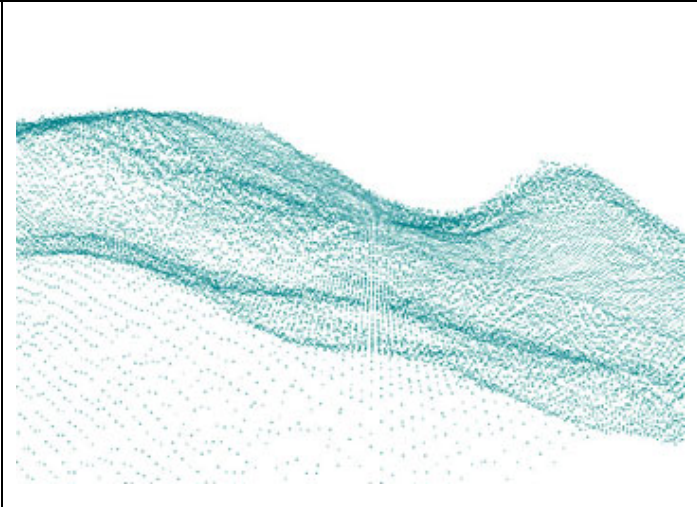
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13094 Grading: Medium Position: 462715 99950 Size of anomaly: L3.3m W H Target description: Potentially small area of debris or seabed relief. Magnetic strength: 55nT Associated References:</p>
		<p>MA Ltd No: MA13095 Grading: Low Position: 462726 99917 Size of anomaly: L2.8m W2.1m H Target description: Seabed feature. Unidentified anomaly. Magnetic strength: 84nT Associated References:</p>

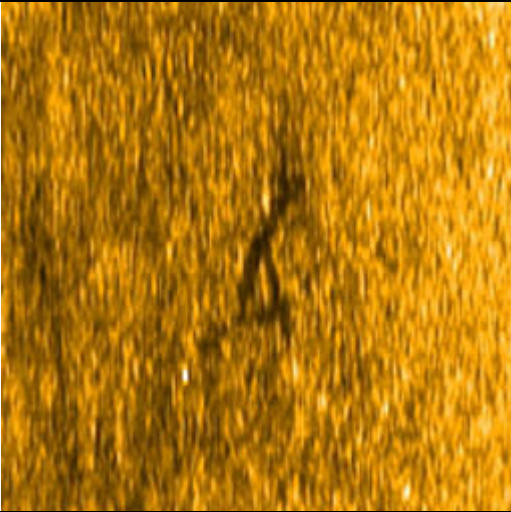
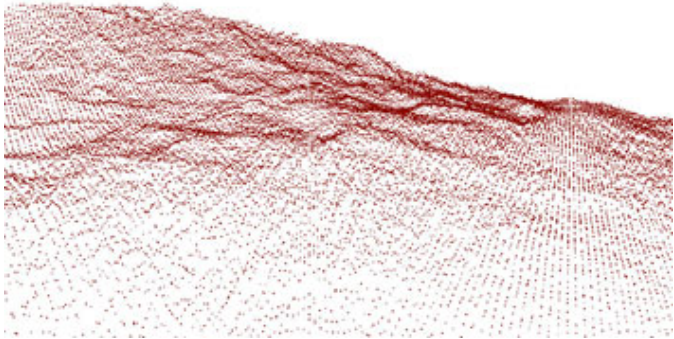
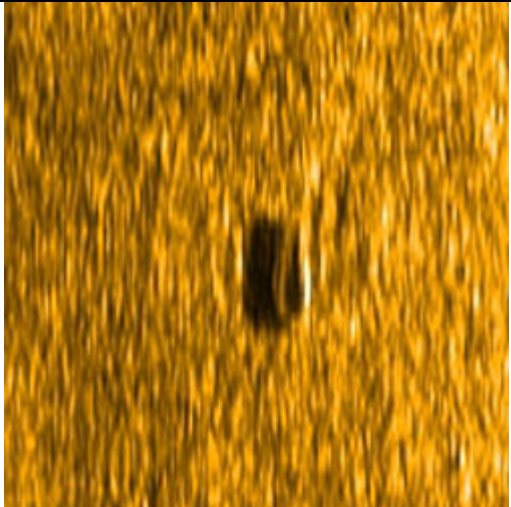

Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13096 Grading: Low Position: 462737 99827 Size of anomaly: L5.4m W H Target description: Linear feature. Unidentified anomaly. Magnetic strength: 4nT Associated References: Grouping: 18030</p>
		<p>MA Ltd No: MA13097 Grading: High Position: 462783 99825 Size of anomaly: L46.6 W H Target description: A distinctive linear feature that is partly buried. Magnetic strength: 15nT Associated References:</p>

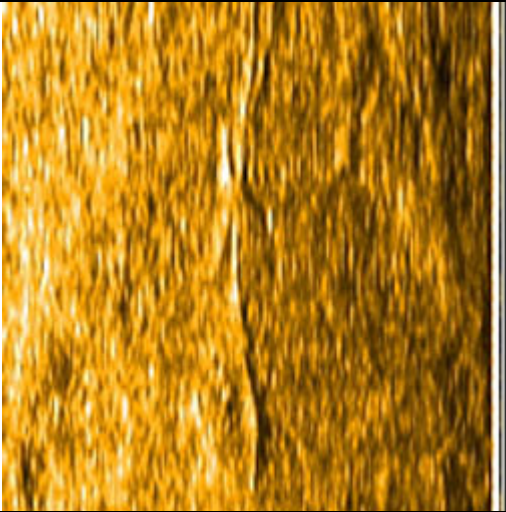
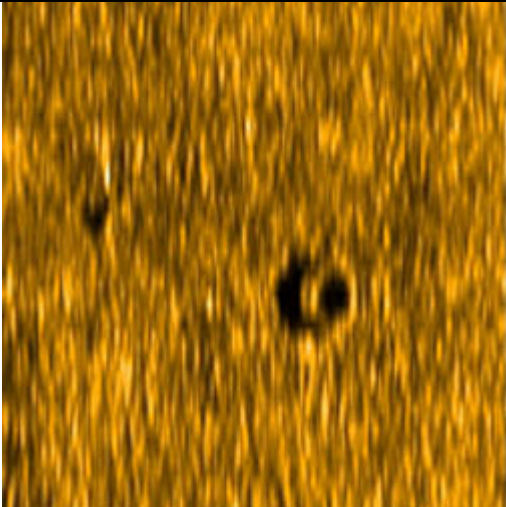
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13098 Grading: Low Position: 462801 99599 Size of anomaly: L38.2m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13099 Grading: Low Position: 462803 99568 Size of anomaly: L11.7m W2.2m H Target description: Raised feature. Unidentified anomaly. Magnetic strength: 142nT Associated References:</p>

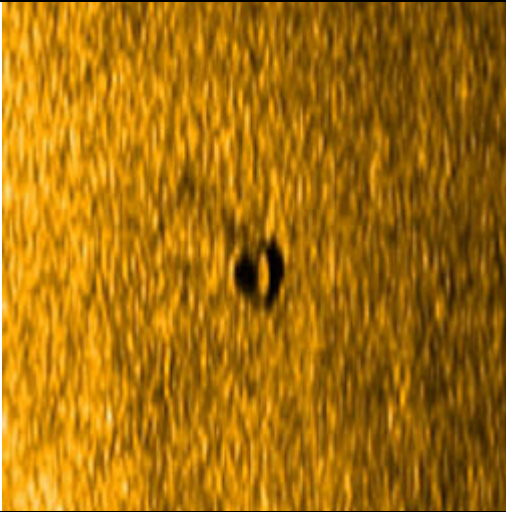
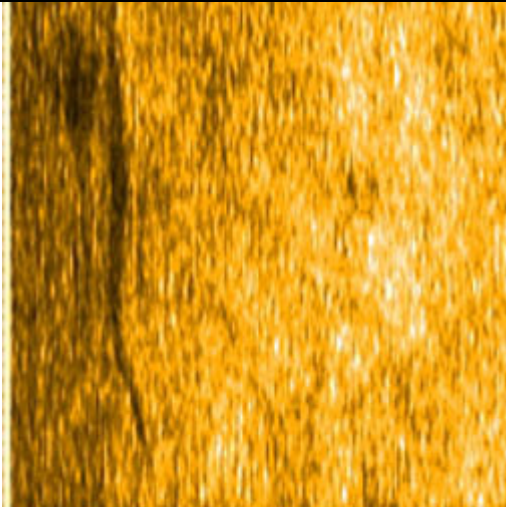
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13100 Grading: High Position: 462780 99422 Size of anomaly: L3m W H0.4m Target description: Series of raised features. Unidentified anomalies. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13101 Grading: Low Position: 462758 99443 Size of anomaly: L17.0m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: 1nT Associated References: Grouping: 18031</p>

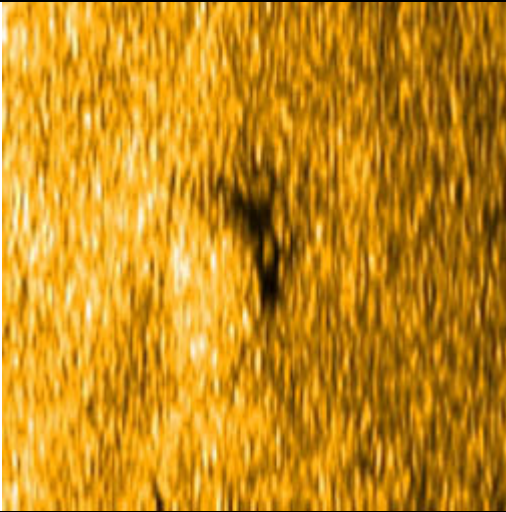
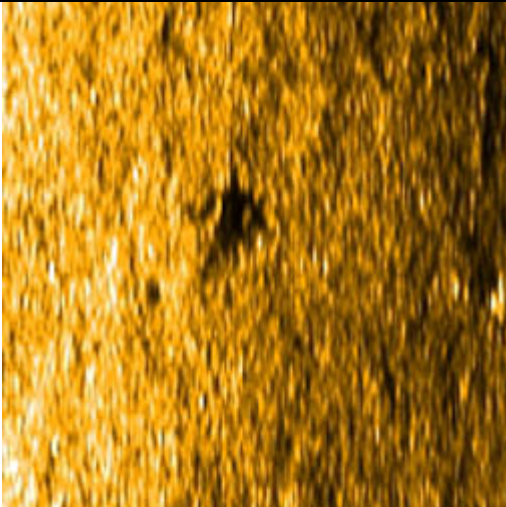
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13102 Grading: Low Position: 462756 99452 Size of anomaly: L9.6m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: Associated References: Grouping: 18031</p>
		<p>MA Ltd No: MA13103 Grading: Low Position: 462745 99477 Size of anomaly: L7.7m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: 19nT Associated References:</p>

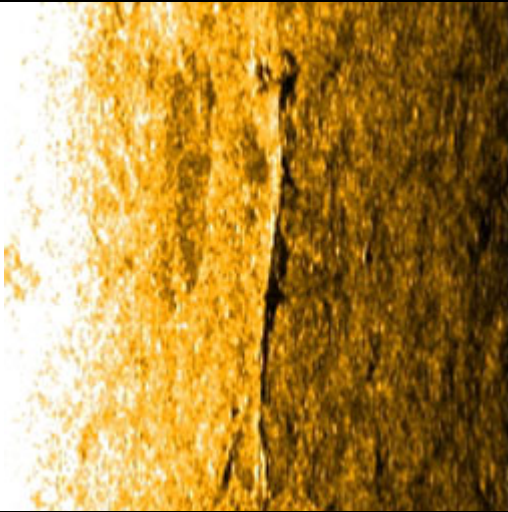
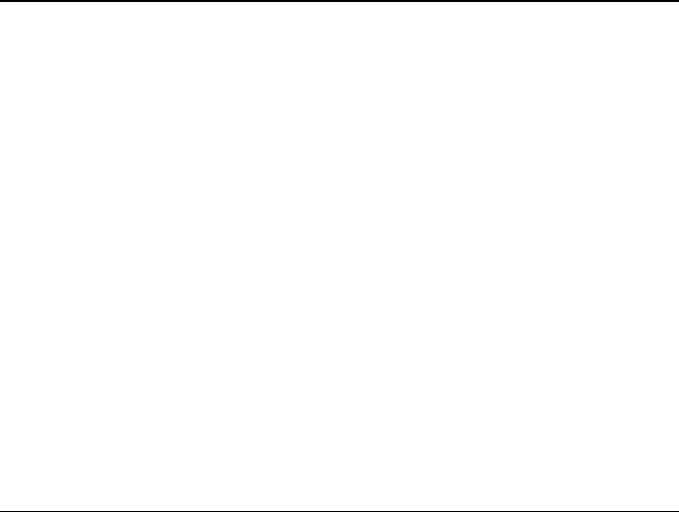
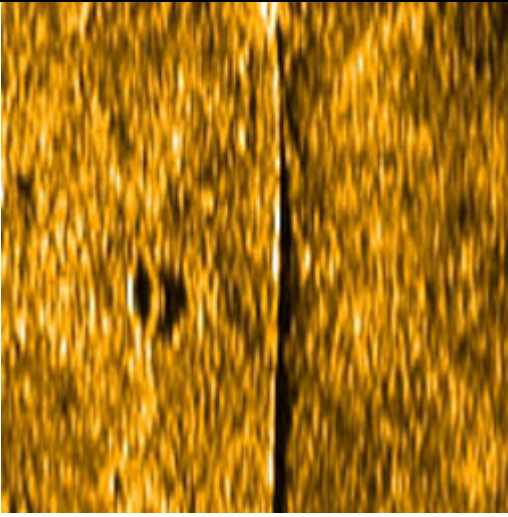
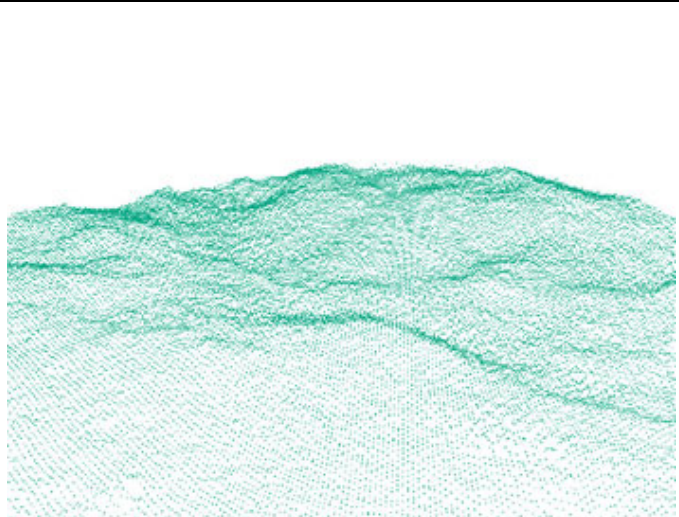
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13104 Grading: High Position: 462779 99596 Size of anomaly: L9.6m W H Target description: Geological Magnetic strength: Associated References: Palaeochannel outcropping</p>
		<p>MA Ltd No: MA13105 Grading: Medium Position: 462682 99791 Size of anomaly: L7.2m W H Target description: Depression with raised area of seabed. Magnetic strength: Associated References:</p>

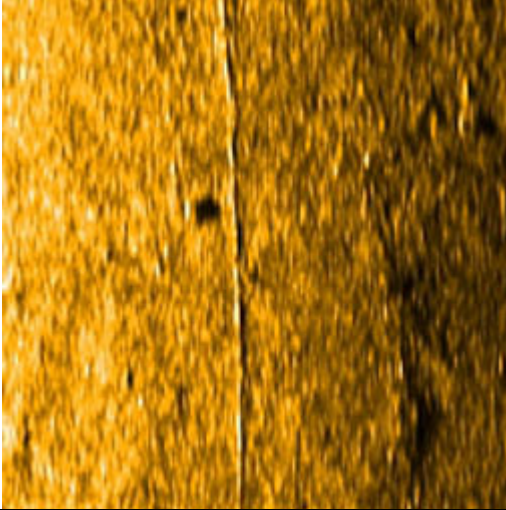
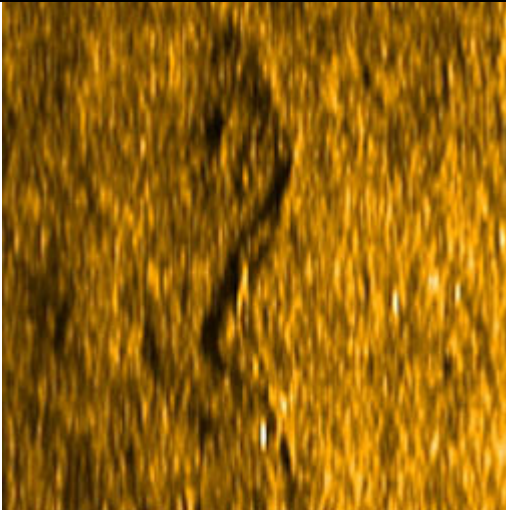
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13106 Grading: Low Position: 462744 99827 Size of anomaly: L5.8m W H Target description: Buried triangular feature. Area of varied seabed relief. Magnetic strength: 48nT Associated References: Grouping: 18030</p>
		<p>MA Ltd No: MA13107 Grading: Low Position: 462724 99885 Size of anomaly: L4.2m W1.1m H0.3m Target description: Raised feature. Unidentified anomaly. Magnetic strength: Associated References:</p>

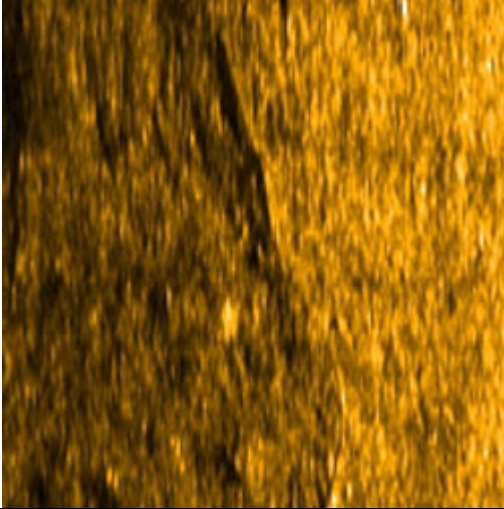
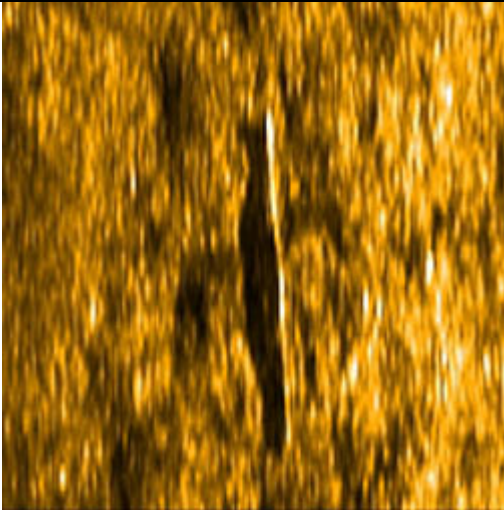
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13109 Grading: Low Position: 462589 100154 Size of anomaly: L18.8m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: 23nT Associated References: Grouping: 18028</p>
		<p>MA Ltd No: MA13110 Grading: Low Position: 462626 100260 Size of anomaly: L2.0m W1.4m H Target description: Circular feature. Identifiable anthropogenic object. Magnetic strength: Associated References: Grouping: 18026</p>

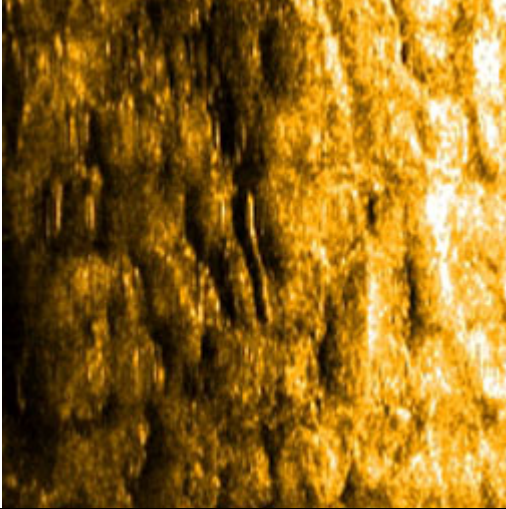
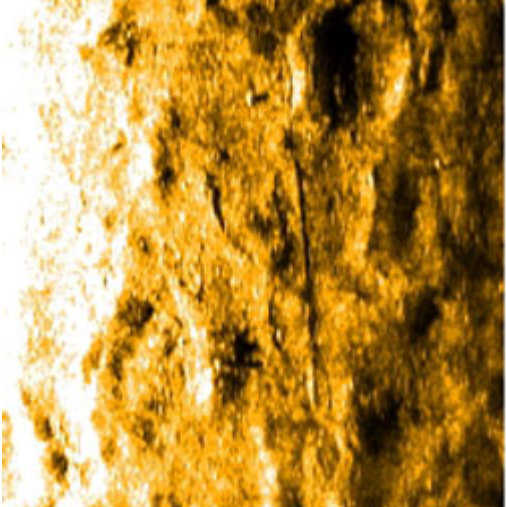
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13111 Grading: Low Position: 462578 100293 Size of anomaly: L1.8m W1.1m H Target description: Circular feature. Identifiable anthropogenic object. Magnetic strength: Associated References: Grouping: 18025</p>
		<p>MA Ltd No: MA13112 Grading: Low Position: 462620 100402 Size of anomaly: L17.4m W H Target description: Buried linear feature. Unidentified anomaly. Magnetic strength: Associated References:</p>

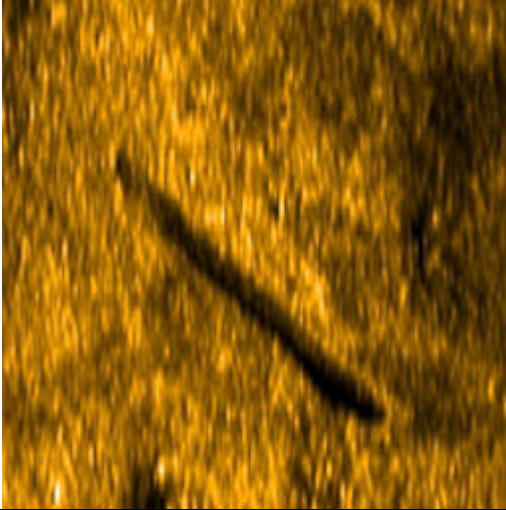
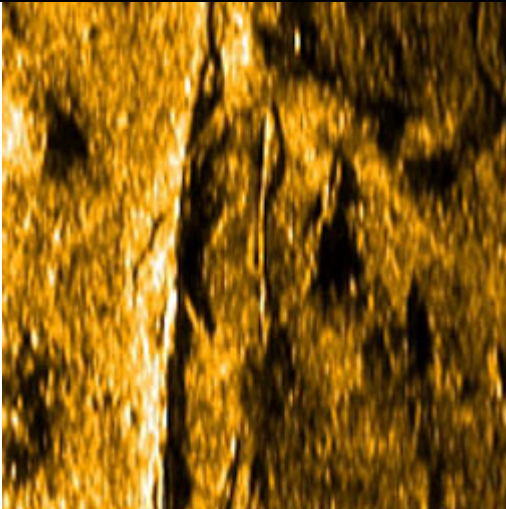
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13113 Grading: Low Position: 462542 100407 Size of anomaly: L4.0m W2.1m H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13114 Grading: Low Position: 462506 100529 Size of anomaly: L4.4.m W2.1m H Target description: Raised feature. Unidentified anomaly. Magnetic strength: Associated References</p>

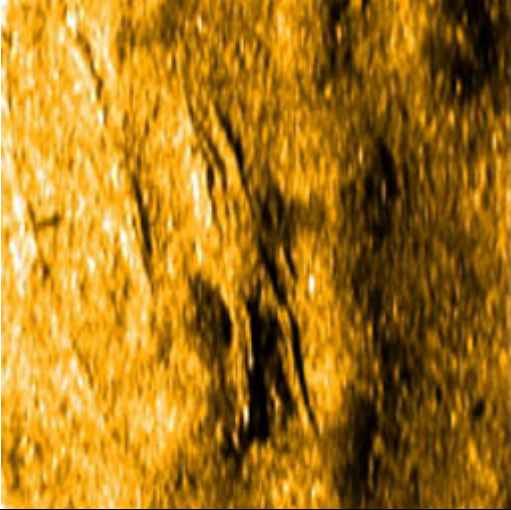
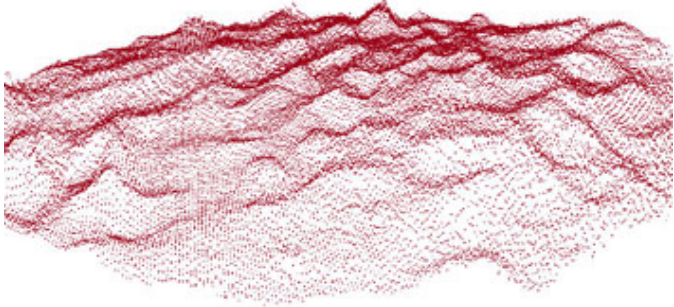
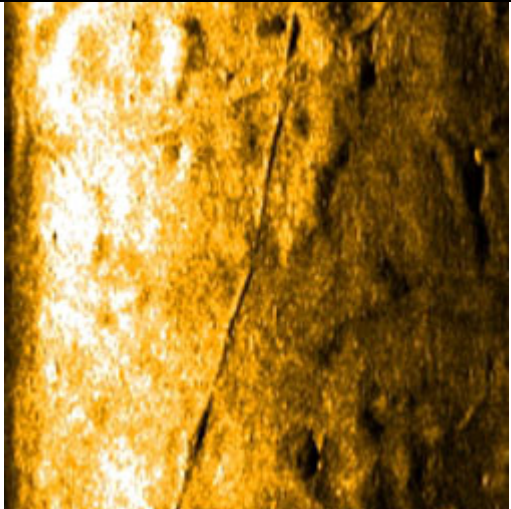
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13115 Grading: Low Position: 462495 100661 Size of anomaly: L32.1m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13116 Grading: Medium Position: 462495 100722 Size of anomaly: L12.6m W H Target description: Unidentified anomaly. Depression with raised area of seabed. Magnetic strength: 303nT Associated References:</p>

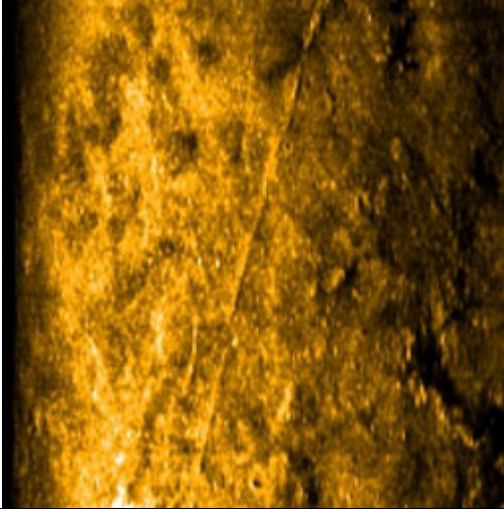
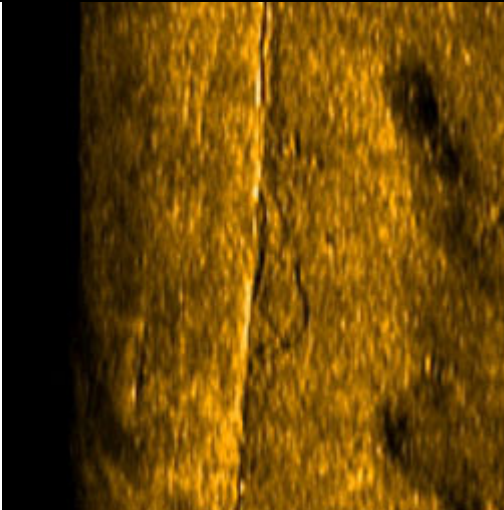
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13117 Grading: Low Position: 462496 100796 Size of anomaly: L19.6m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: 188nT Associated References:</p>
		<p>MA Ltd No: MA13118 Grading: Low Position: 462551 100829 Size of anomaly: L9.2m W H Target description: Raised feature-possible chain. Magnetic strength: Associated References:</p>

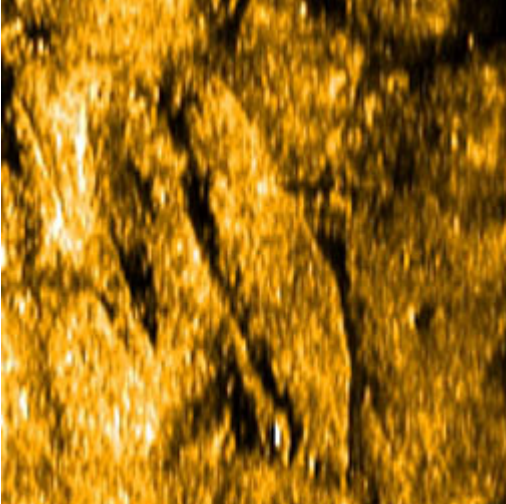
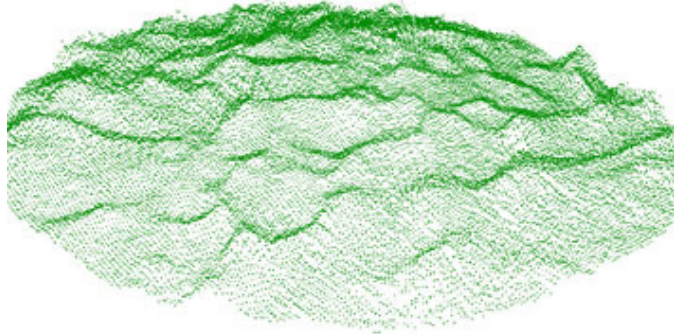
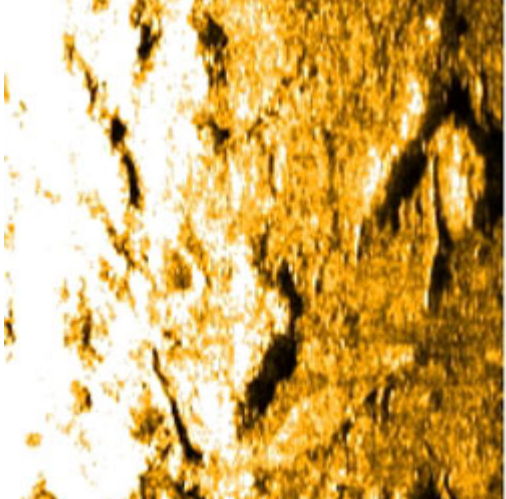
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13119 Grading: Low Position: 462552 10848 Size of anomaly: L20.8m W H Target description: Raised feature. Unidentified anomaly. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13120 Grading: Low Position: 462554 100886 Size of anomaly: L8.6m W H0.2m Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: Associated References:</p>

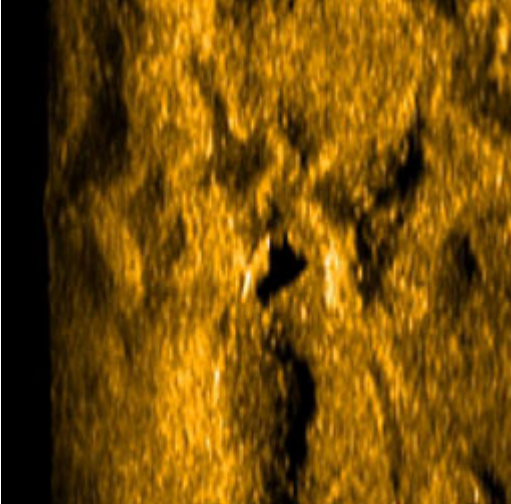

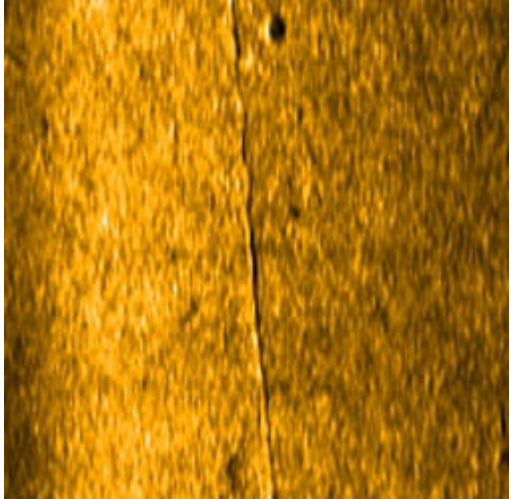

Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13121 Grading: Low Position: 462559 100920 Size of anomaly: L12.5m W H Target description: Linear feature. Identifiable anthropogenic object Magnetic strength: Associated References: Modern chart data, possibly part of cable</p>
		<p>MA Ltd No: MA13122 Grading: Medium Position: 462492 101179 Size of anomaly: L21.8m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: 213nT Associated References:</p>

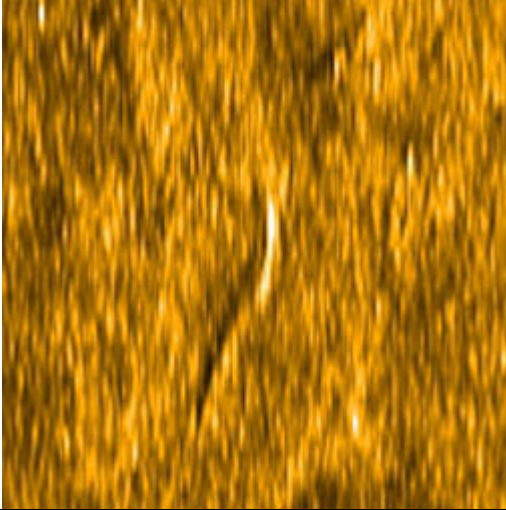
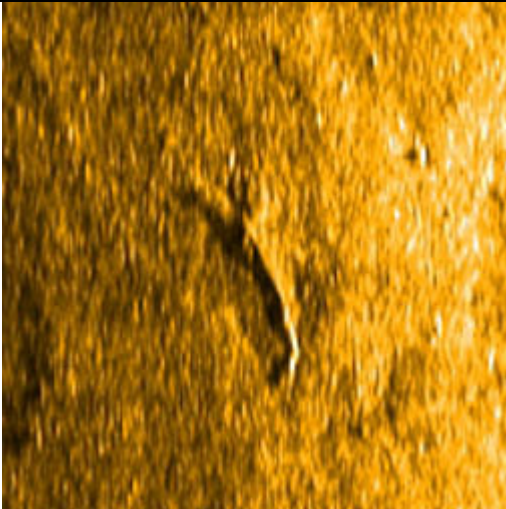
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13123 Grading: Low Position: 462544 101216 Size of anomaly: L10.3m W H0.4m Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13124 Grading: Low Position: 462490 101226 Size of anomaly: L19.1m W H Target description: Linear feature. Identifiable anthropogenic object Magnetic strength: 57nT Associated References:</p>

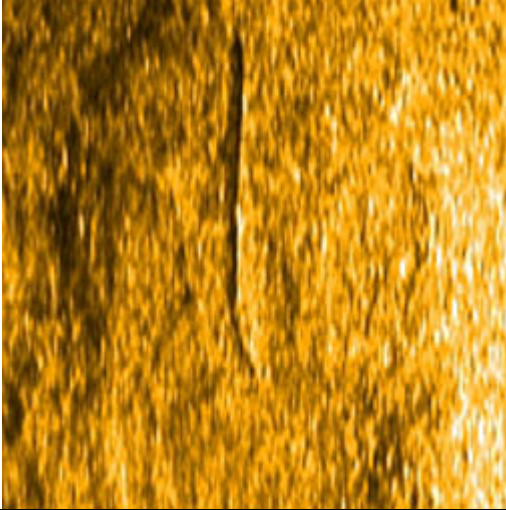
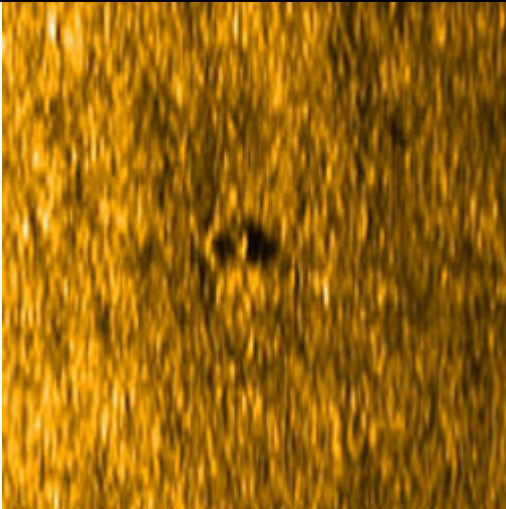
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13125 Grading: Medium Position: 462506 101242 Size of anomaly: L16.4m W H Target description: Area of varied seabed relief with potential raised feature. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13126 Grading: Low Position: 462502 101277 Size of anomaly: L38.1m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: Associated References:</p>

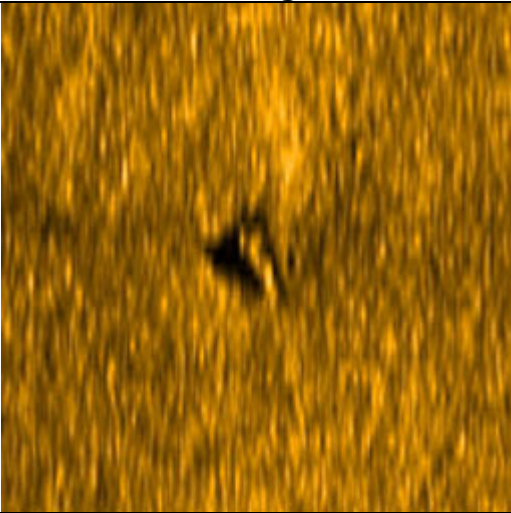

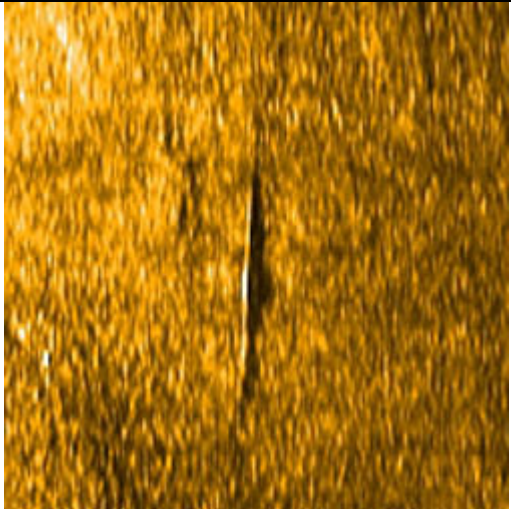
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13130 Grading: Low Position: 462501 101284 Size of anomaly: L37.4m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: 90nT Associated References:</p>
		<p>MA Ltd No: MA130131 Grading: Low Position: 462490 101237 Size of anomaly: L26.4m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: Associated References:</p>

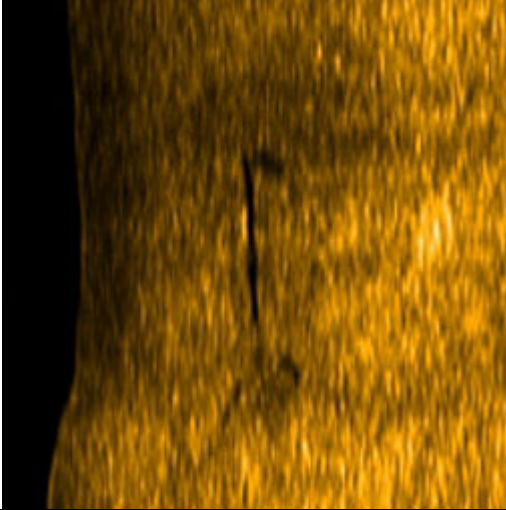

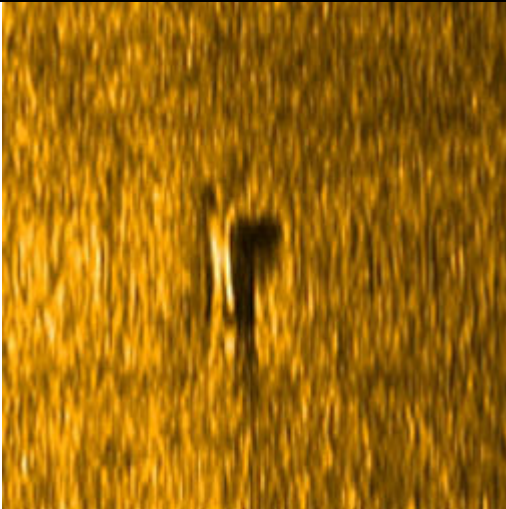
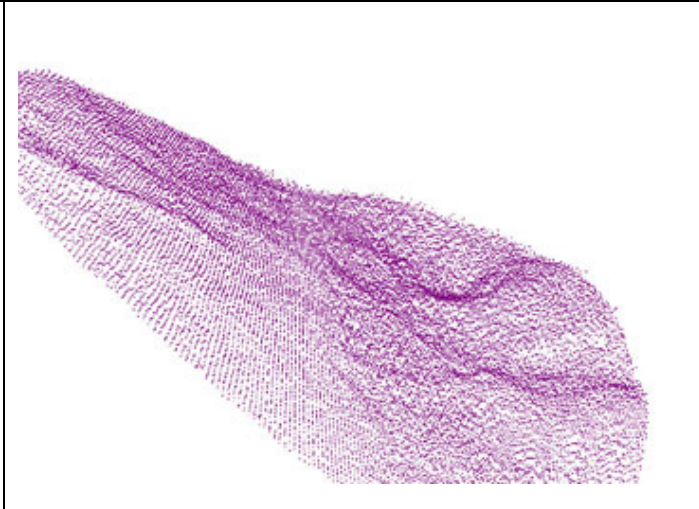
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA130132 Grading: Medium Position: 462509 101246 Size of anomaly: L16.8m W3.7m H Target description: Vessel shaped feature. Varied seabed relief masking buried feature. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13133 Grading: Low Position: 462521 101154 Size of anomaly: L11.0m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: 187nT Associated References:</p>

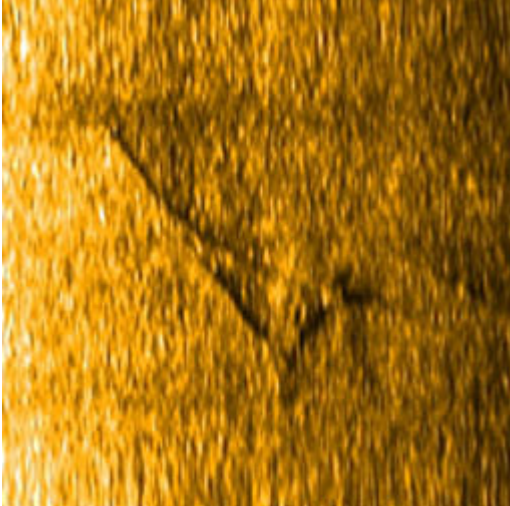

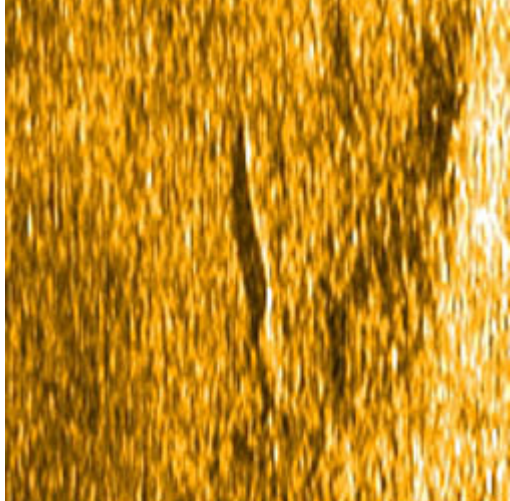
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA131134 Grading: Medium Position: 462490 101114 Size of anomaly: L2.9m W2.3m H Target description: Raised feature. Area of varied seabed relief. Magnetic strength: 192nT Associated References:</p>
		<p>MA Ltd No: MA13136 Grading: Low Position: 462494 100795 Size of anomaly: L24.2m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: 327nT Associated References:</p>

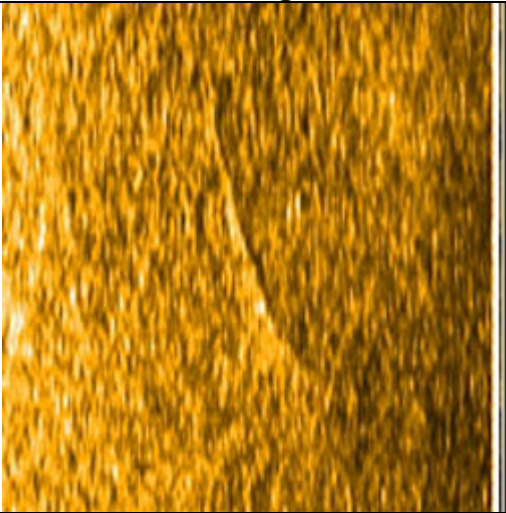
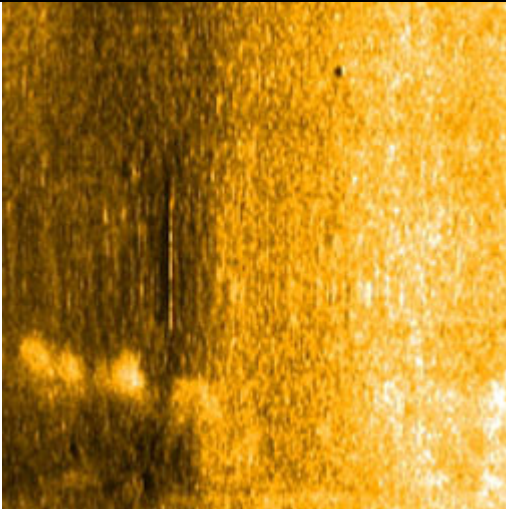
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13138 Grading: Low Position: 462458 100696 Size of anomaly: L5.1m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13139 Grading: Low Position: 462449 100676 Size of anomaly: L9.8m W H Target description: Raised feature. Unidentified anomaly. Magnetic strength: Associated References:</p>

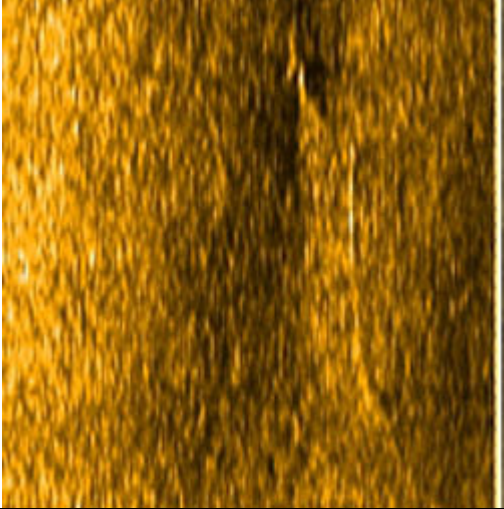
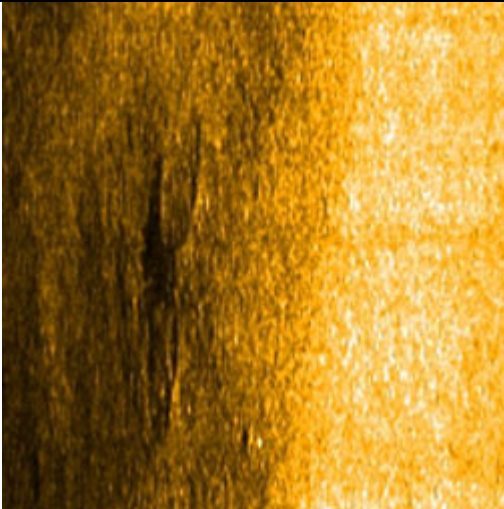
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13141 Grading: Low Position: 462450 100544 Size of anomaly: L12.8m W H Target description: Linear feature. Identified anthropogenic object. Magnetic strength: 8nT Associated References:</p>
		<p>MA Ltd No: MA13143 Grading: Low Position: 462575 100297 Size of anomaly: L1.5m W0.8m H Target description: Circular feature. Identifiable anthropogenic object. Magnetic strength: 15nT Associated References: Grouping: MA18025</p>

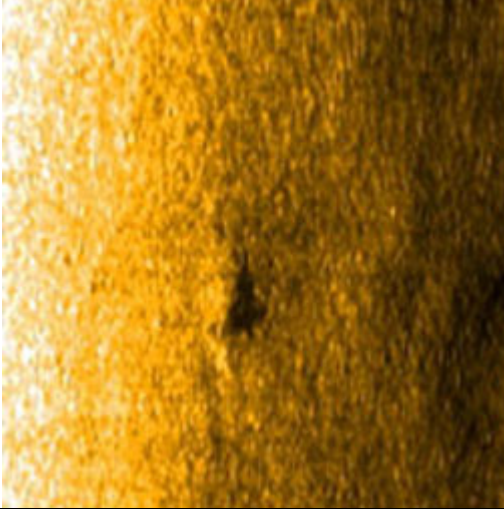
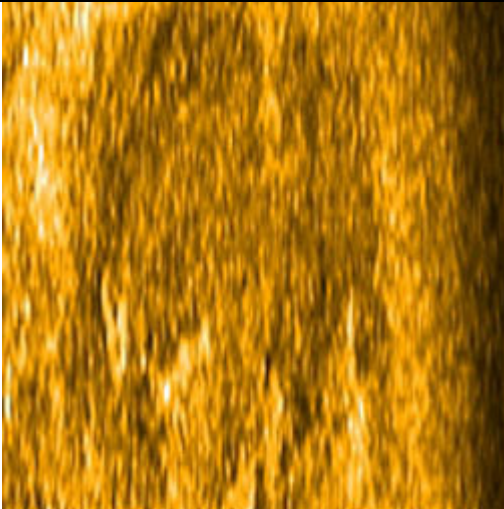
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13144 Grading: Low Position: 462544 100224 Size of anomaly: L1.8m W1.5m H Target description: Raised feature. Unidentified anomaly. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13145 Grading: Low Position: 462676 99919 Size of anomaly: L10.0m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: Associated References:</p>

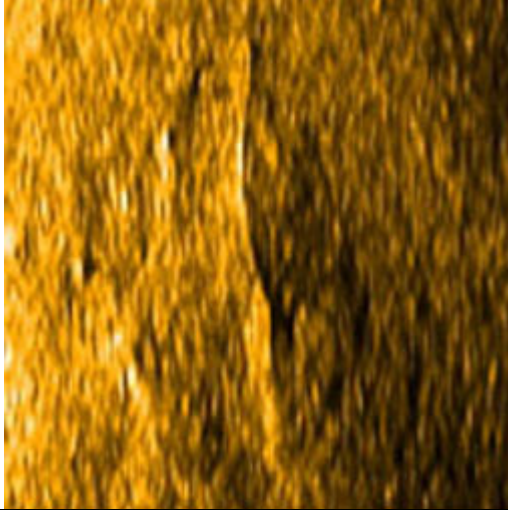

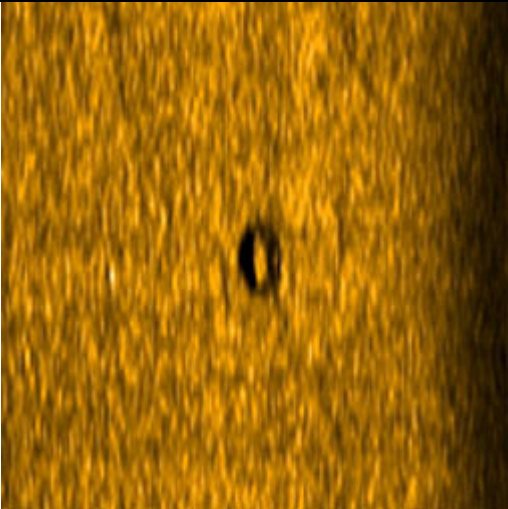
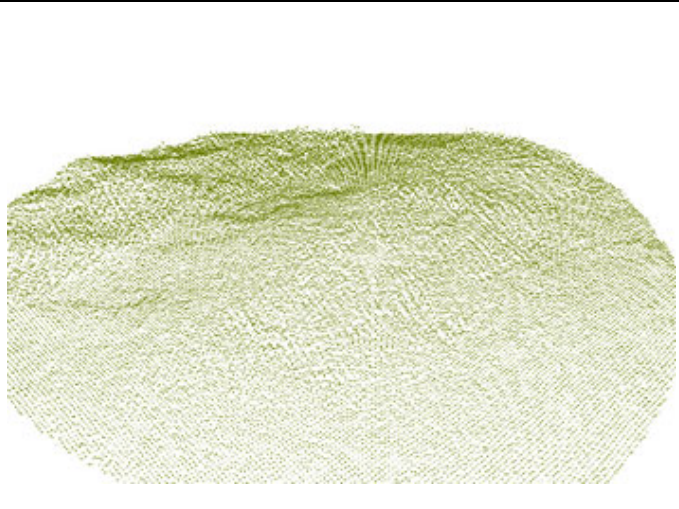
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13146 Grading: Low Position: 462751 99529 Size of anomaly: L5.9m W H Target description: Raised feature. Unidentified anomaly. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13147 Grading: Medium Position: 462786 99427 Size of anomaly: L3.8m W2.3m H Target description: Depression with raised area of seabed. Magnetic strength: Associated References:</p>

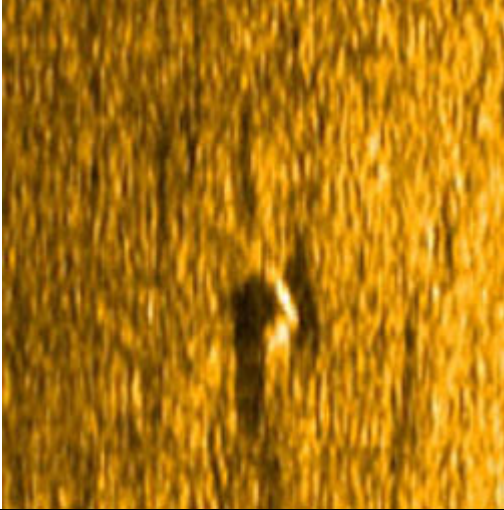
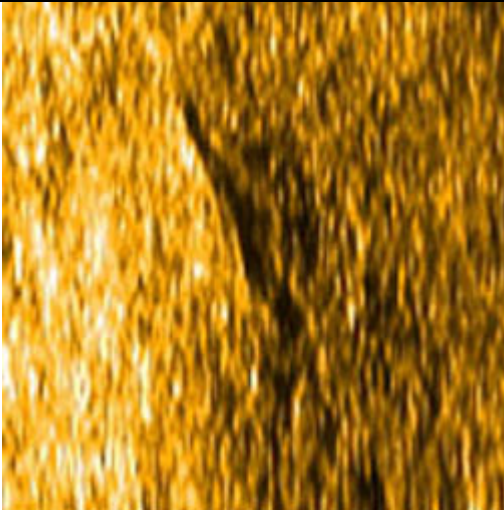
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13151 Grading: Medium Position: 462659 99506 Size of anomaly: L10.9m W3.4m H Target description: Triangular feature. Probably partially buried chain or rope. Magnetic strength: 11nT Associated References:</p>
		<p>MA Ltd No: MA13152 Grading: Low Position: 462697 99627 Size of anomaly: L12.1m W H Target description: Raised feature. Unidentified anomaly. Magnetic strength: 31nT Associated References:</p>

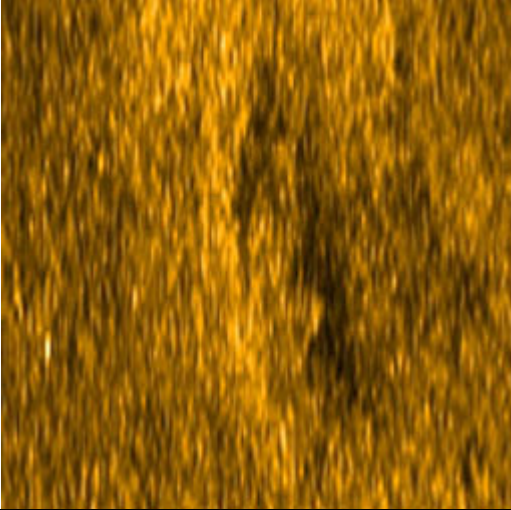
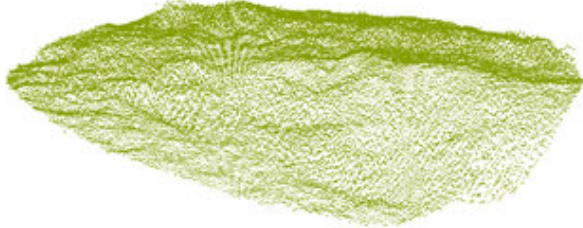
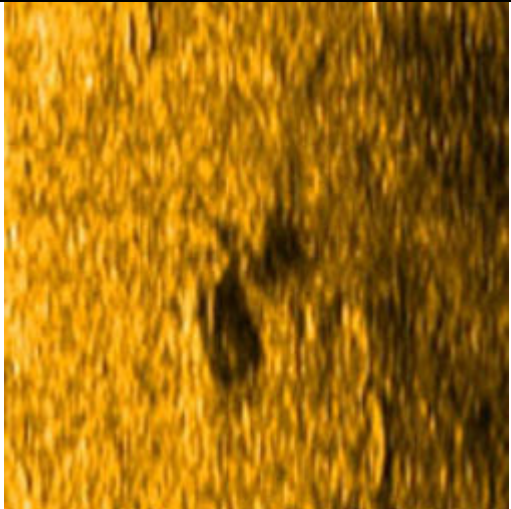
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13153 Grading: Low Position: 462593 99718 Size of anomaly: L12.7m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13154 Grading: Low Position: 462647 99815 Size of anomaly: L13.0m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: Associated References:</p>

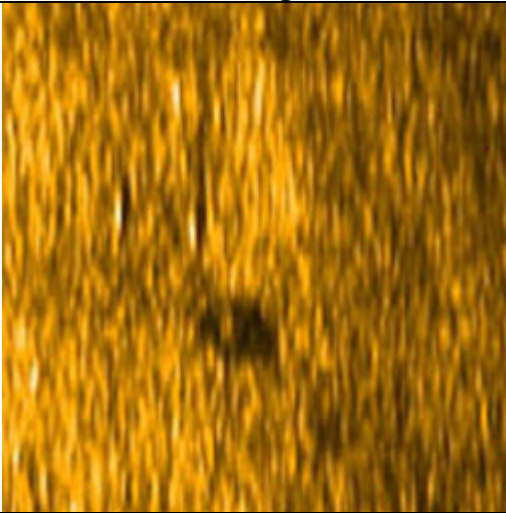
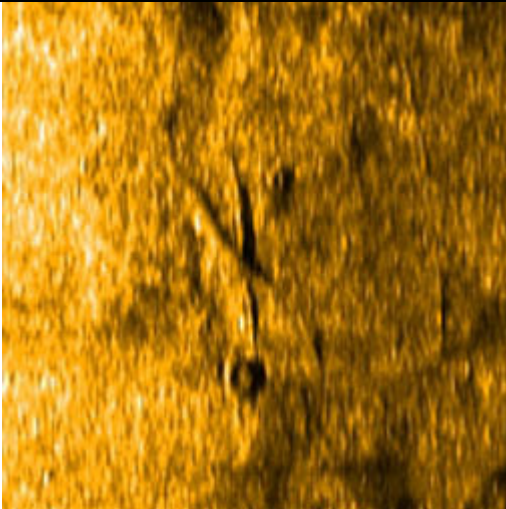
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13155 Grading: Low Position: 462559 99837 Size of anomaly: L11.2m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13156 Grading: Low Position: 462641 99850 Size of anomaly: L15.9m W0.6m H Target description: Seabed feature. Unidentified anomaly. Magnetic strength: Associated References:</p>

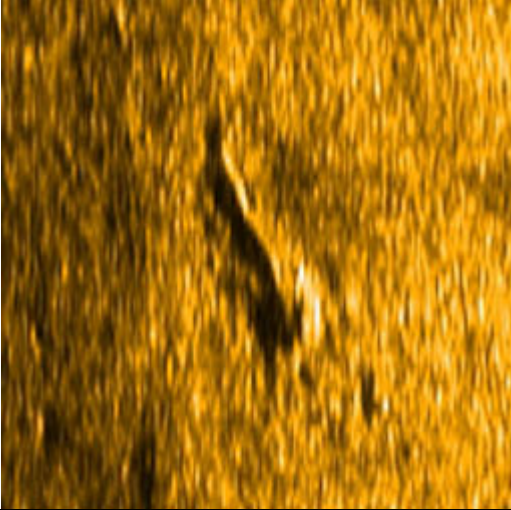
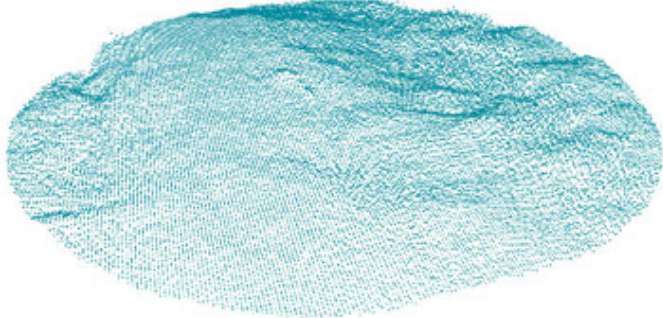
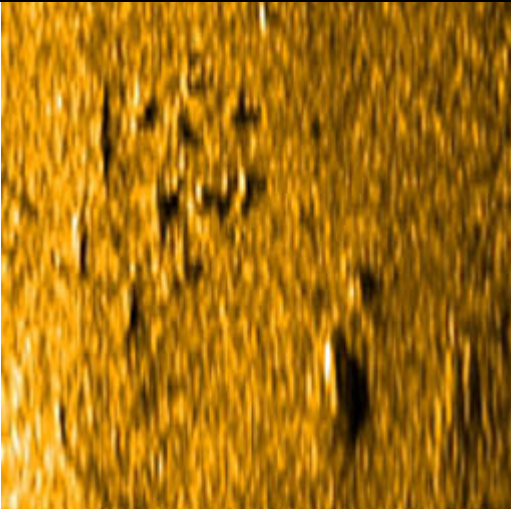
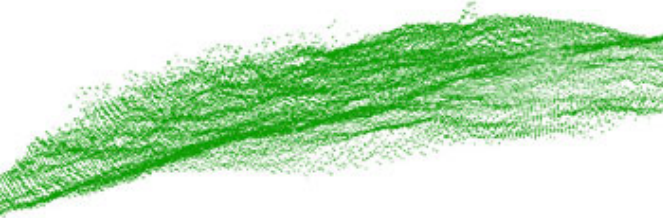
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13157 Grading: Low Position: 462569 99863 Size of anomaly: L5.8m W2.8m H0.5m Target description: Raised feature. Unidentified anomaly. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13159 Grading: High Position: 462586 100014 Size of anomaly: L11.4m W9.6m H Target description: Geological feature. Magnetic strength: Associated References: Potential palaeochannel outcropping</p>

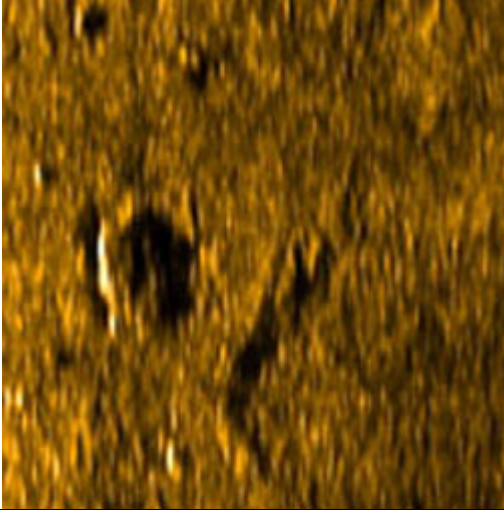

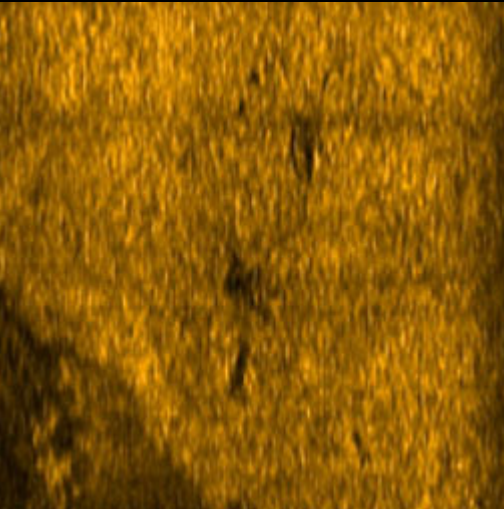
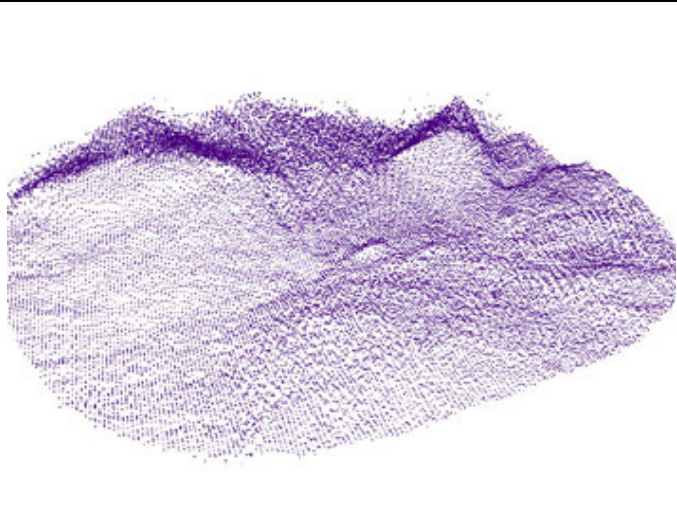
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13161 Grading: Low Position: 462501 100131 Size of anomaly: L10.5m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: 2nT Associated References:</p>
		<p>MA Ltd No: MA13162 Grading: Medium Position: 462535 100180 Size of anomaly: L2.0m W1.4m H Target description: Circular feature. Depression area with some raised relief. Magnetic strength: 15nT Associated References:</p>

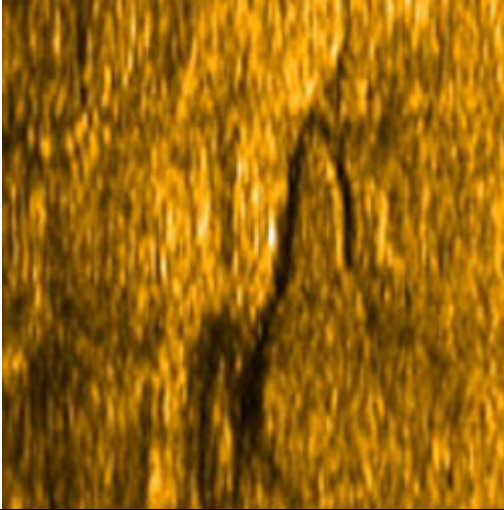

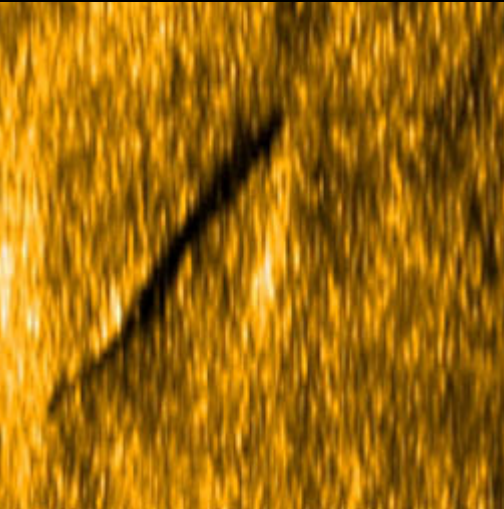

Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13163 Grading: Low Position: 462549 100224 Size of anomaly: L6.0m W1.9m H Target description: Seabed feature. Unidentified anomaly. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13165 Grading: Low Position: 462444 10347 Size of anomaly: L9.1m W1.3m H0.2m Target description: Raised feature. Unidentified anomaly. Magnetic strength: Associated References:</p>



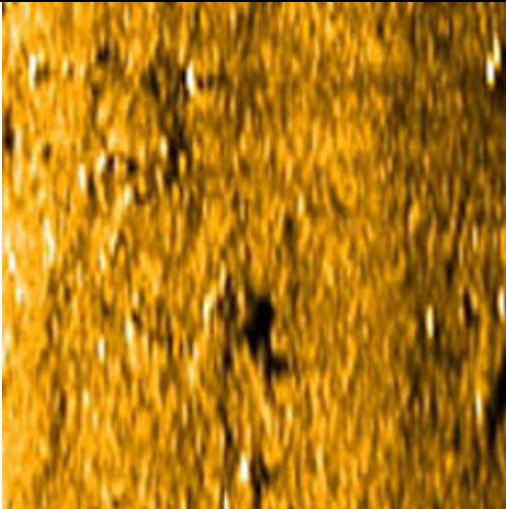

Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13166 Grading: Medium Position: 462495 100366 Size of anomaly: L11.1m W3.3m H Target description: Individual raised feature not discernable. Magnetic strength: 8nT Associated References:</p>
		<p>MA Ltd No: MA13167 Grading: Low Position: 462408 100512 Size of anomaly: L4.5m W1.8m H Target description: Raised feature. Unidentified anomaly. Magnetic strength: Associated References: Grouping: MA18023</p>

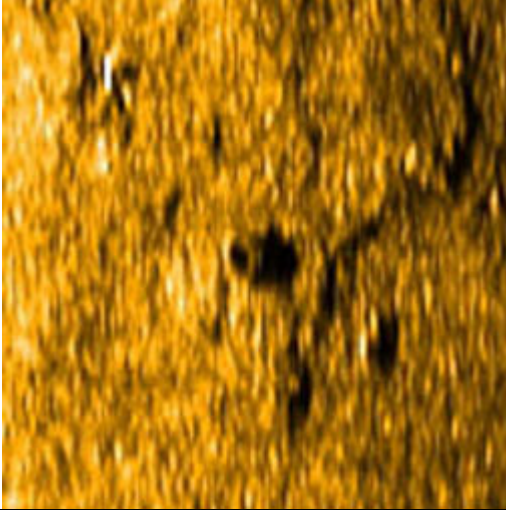
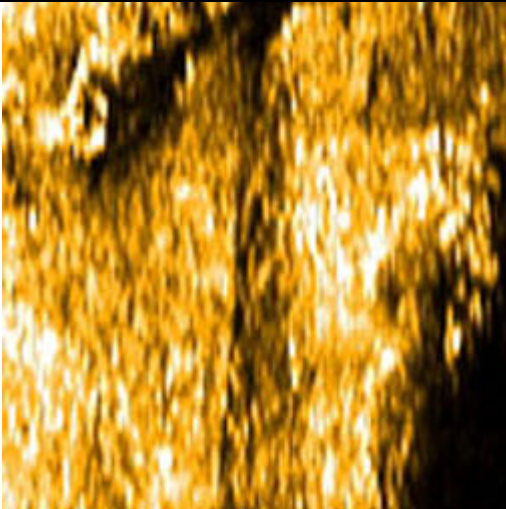
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13168 Grading: Low Position: 462407 100523 Size of anomaly: L1.4m W1.7m H Target description: Circular feature. Identifiable anthropogenic object. Magnetic strength: 13nT Associated References:</p>
		<p>MA Ltd No: MA13169 Grading: Low Position: 462399 100601 Size of anomaly: L8.6m W H Target description: Raised feature. Unidentified anomaly. Magnetic strength: Associated References:</p>

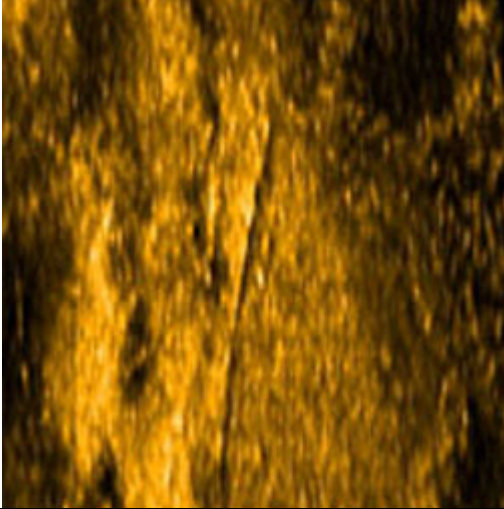
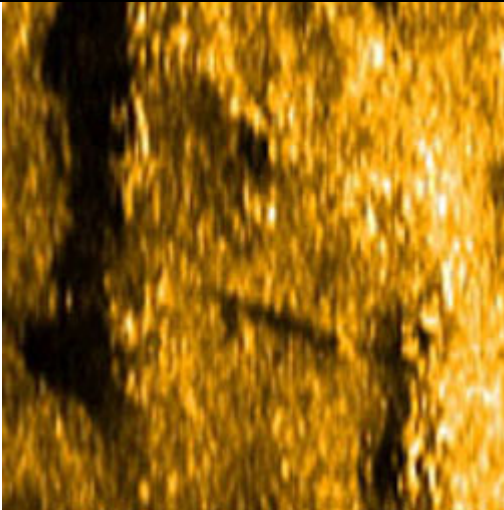
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13170 Grading: Medium Position: 462456 100675 Size of anomaly: L6.0m W0.9m H Target description: Raised buried feature with linear features in the area. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13171 Grading: High Position: 462496 100664 Size of anomaly: L12.2m W8m H Target description: Debris field. Area of raised objects not discernable. Magnetic strength: 32nT Associated References: Grading: MA18021</p>

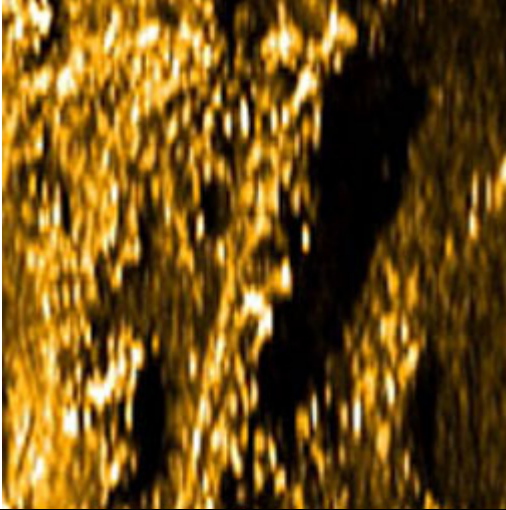
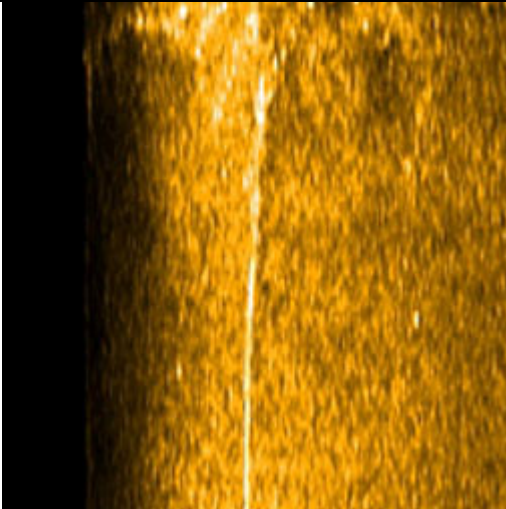
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13172 Grading: Low Position: 462396 100688 Size of anomaly: L4.4m W2.3m H Target description: Raised feature. Unidentified anomaly. Magnetic strength: 40nT Associated References: Grouping: MA18022</p>
		<p>MA Ltd No: MA13173 Grading: High Position: 462450 100183 Size of anomaly: L11.6m W H Target description: Debris field. Area of raised objects within varied seabed. Magnetic strength: Associated References:</p>

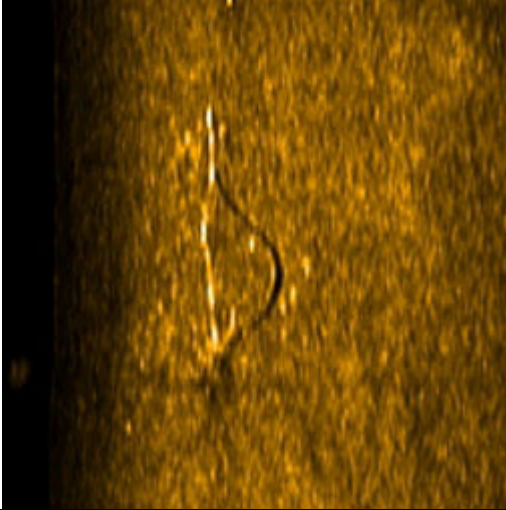
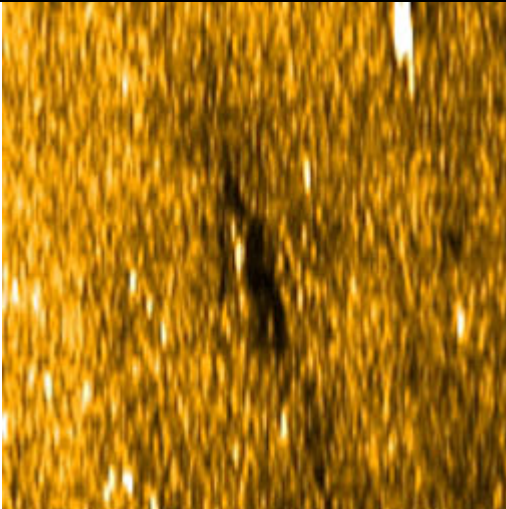
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13174 Grading: Low Position: 462459 100738 Size of anomaly: L9.9m W H Target description: Raised feature. Unidentified anomaly. Magnetic strength: 46nT Associated References:</p>
		<p>MA Ltd No: MA13175 Grading: Medium Position: 462413 100748 Size of anomaly: L7.8m W2.1m H Target description: Vessel shaped feature. Raised buried feature. Magnetic strength: 13nT Associated References:</p>

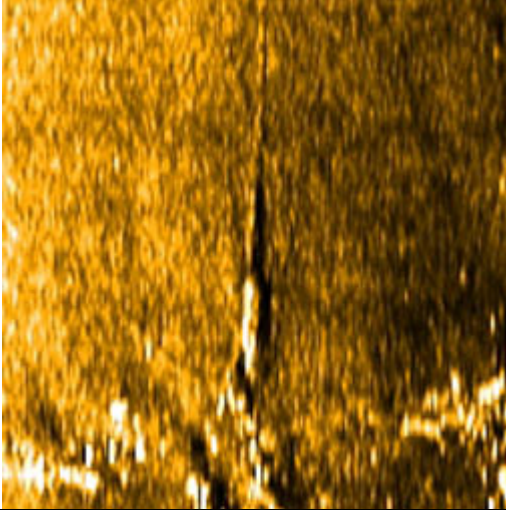
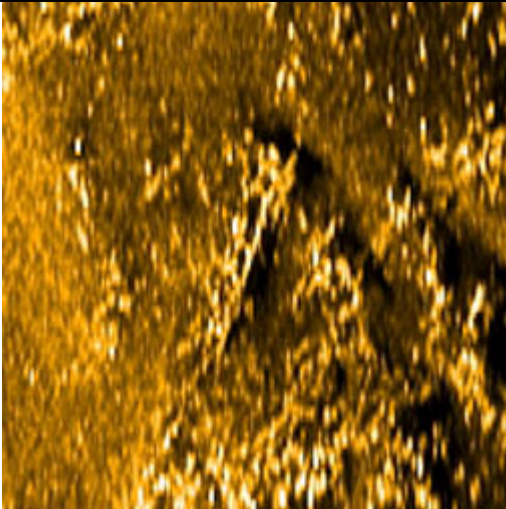
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13177 Grading: Medium Position: 462383 100937 Size of anomaly: L28.2 W H Target description: Raised triangular feature. Identifiable anthropogenic object. Magnetic strength: 62nT Associated References:</p>
		<p>MA Ltd No: MA13178 Grading: Low Position: 462403 101021 Size of anomaly: L2.4m W1.4m H Target description: Circular feature. Unidentified anomaly. Magnetic strength: 103nT Associated References:</p>

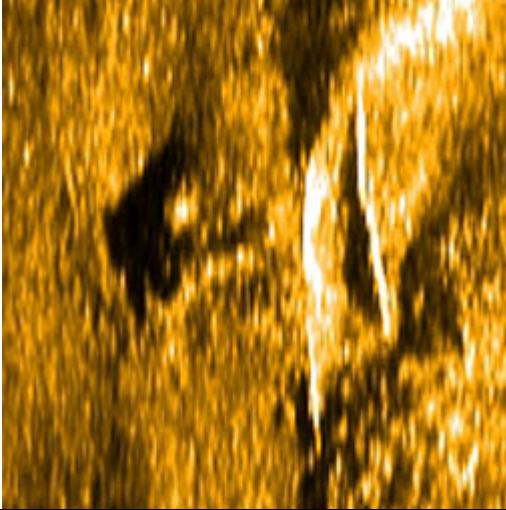
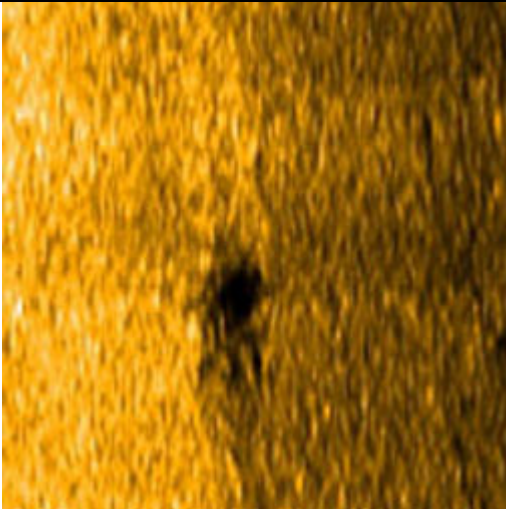
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13179 Grading: Low Position: 462397 100974 Size of anomaly: L1.7m W1.3m H Target description: Circular feature. Identifiable anthropogenic object. Magnetic strength: 69nT Associated References: Grouping: MA18022</p>
		<p>MA Ltd No: MA13182 Grading: Low Position: 462394 101163 Size of anomaly: L16.0m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: Associated References:</p>

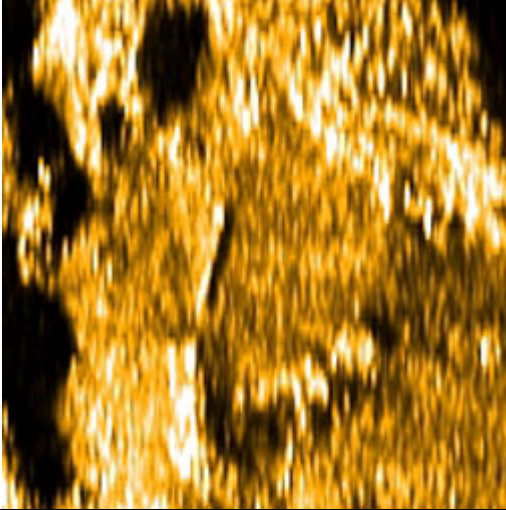
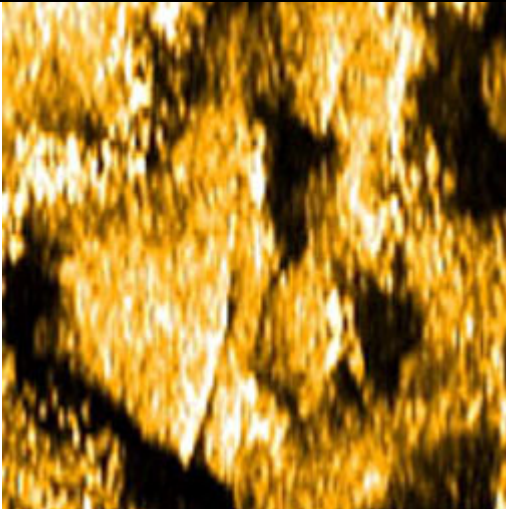
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13183 Grading: Low Position: 462412 101169 Size of anomaly: L14.3m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13185 Grading: Low Position: 462450 101238 Size of anomaly: L4.7m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: 73nT Associated References:</p>

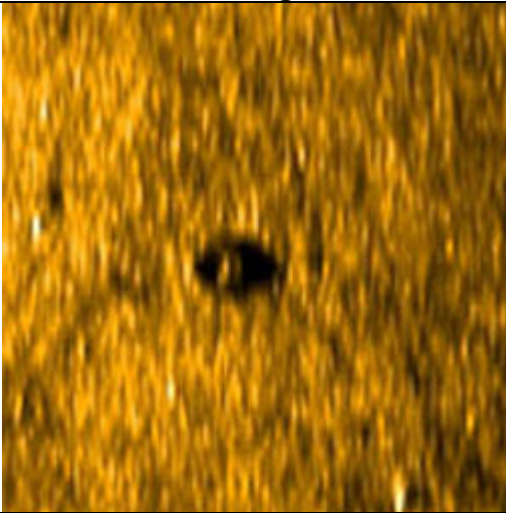
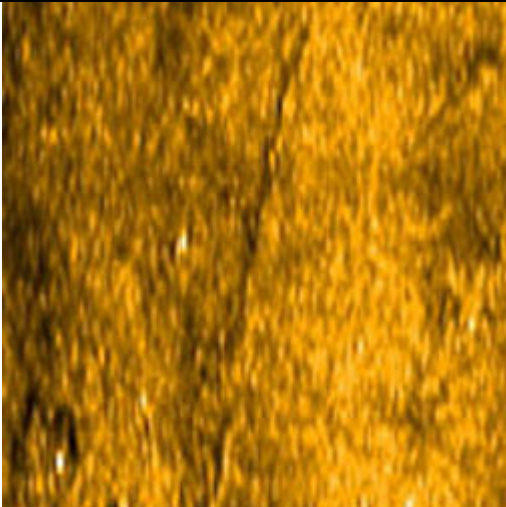
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13186 Grading: Low Position: 462399 101260 Size of anomaly: L17.8m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: 48nT Associated References:</p>
		<p>MA Ltd No: MA13187 Grading: Low Position: 462414 101296 Size of anomaly: L16.8m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: Associated References:</p>

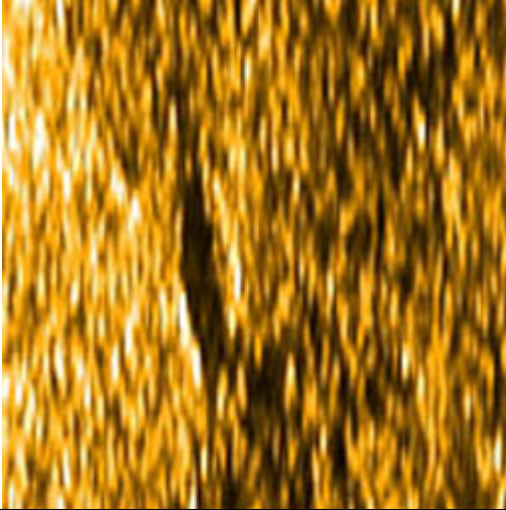
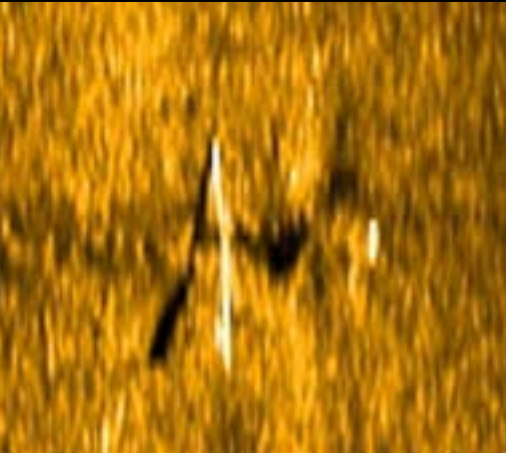
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13188 Grading: Low Position: 462413 101336 Size of anomaly: L9.8m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: 66nT Associated References:</p>
		<p>MA Ltd No: MA13189 Grading: Low Position: 462409 101363 Size of anomaly: L4.2m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: 78nT Associated References:</p>

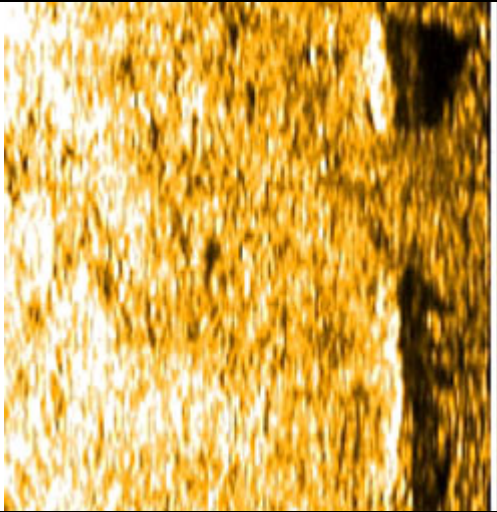
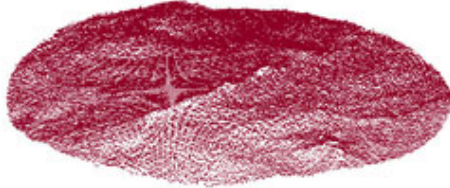
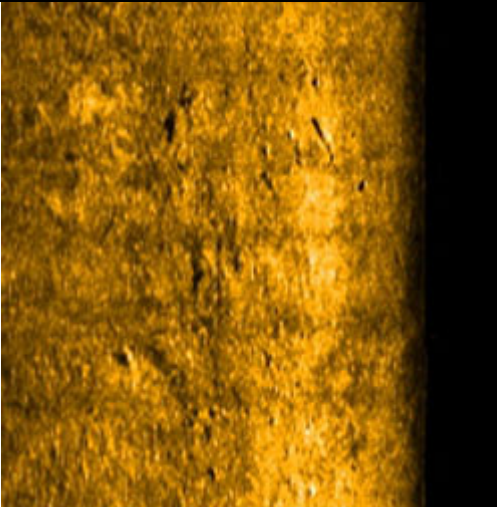

Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13191 Grading: Low Position: 462411 101301 Size of anomaly: L15.8m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: 44nT Associated References:</p>
		<p>MA Ltd No: MA13192 Grading: Low Position: 462396 101265 Size of anomaly: L12.7m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: 39nT Associated References:</p>

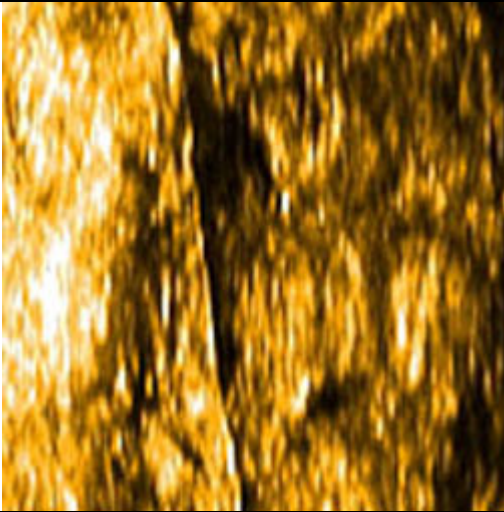
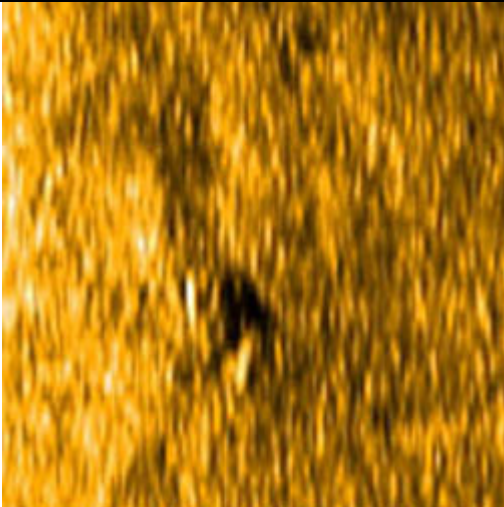
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13193 Grading: Low Position: 462354 101206 Size of anomaly: L 6m W H Target description: Linear feature and depression Magnetic strength: 56nT Associated References:</p>
		<p>MA Ltd No: MA13194 Grading: Low Position: 462567 99868 Size of anomaly: L8.1m W2.3m H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: Associated References:</p>

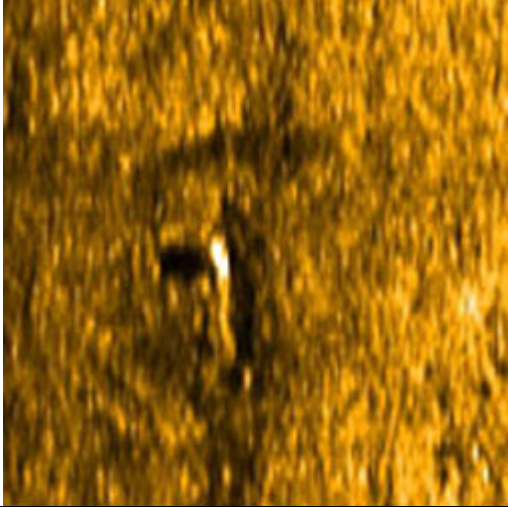

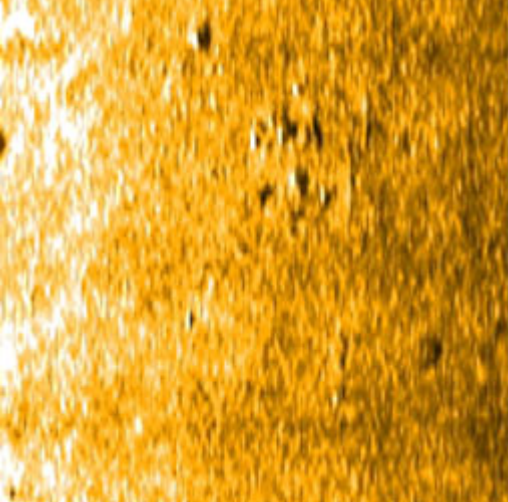
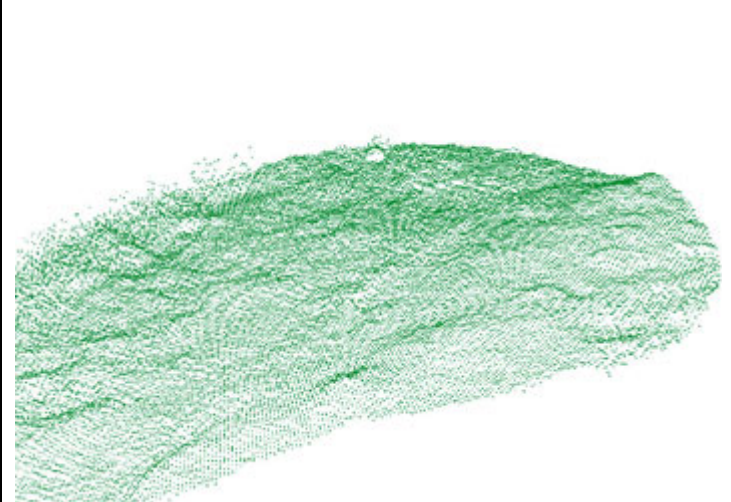
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13195 Grading: Low Position: 462409 101157 Size of anomaly: L3.5m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13196 Grading: Low Position: 462409 101173 Size of anomaly: L10.0m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: 29nT Associated References:</p>

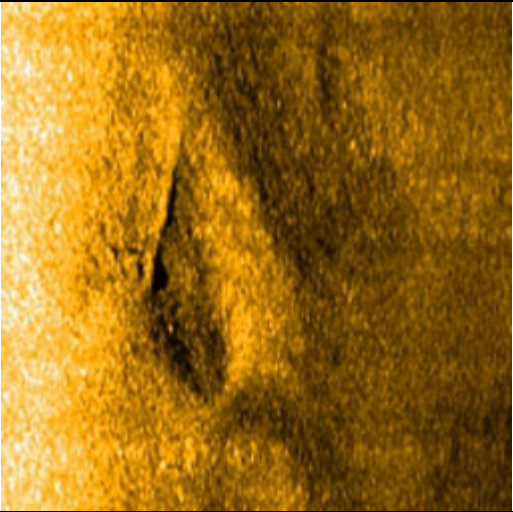

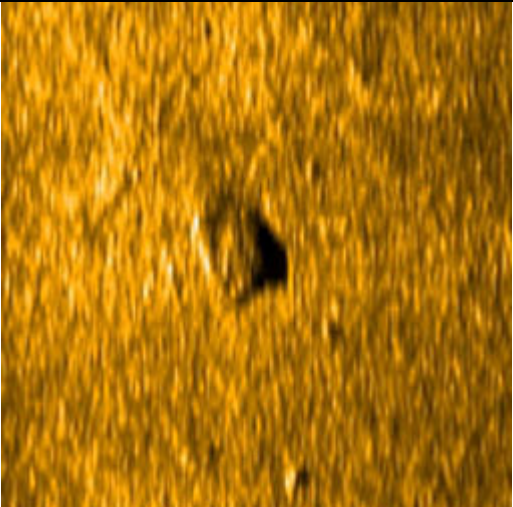
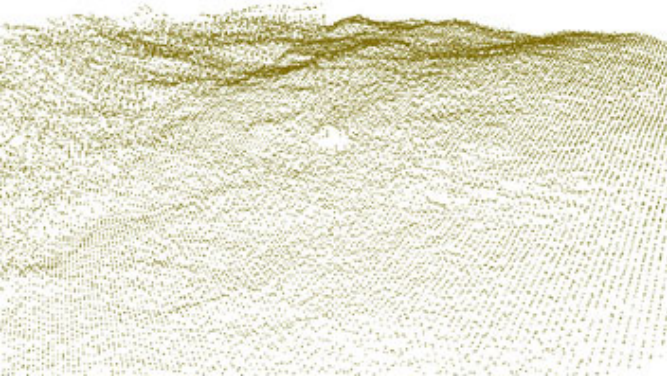
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13200 Grading: Low Position: 462394 100973 Size of anomaly: L1.6m W1.2m H Target description: Circular feature. Identifiable anthropogenic object. Magnetic strength: 67nT Associated References: Grouping: MA18022</p>
		<p>MA Ltd No: MA13203 Grading: Low Position: 462356 100872 Size of anomaly: L15.8m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: Associated References:</p>

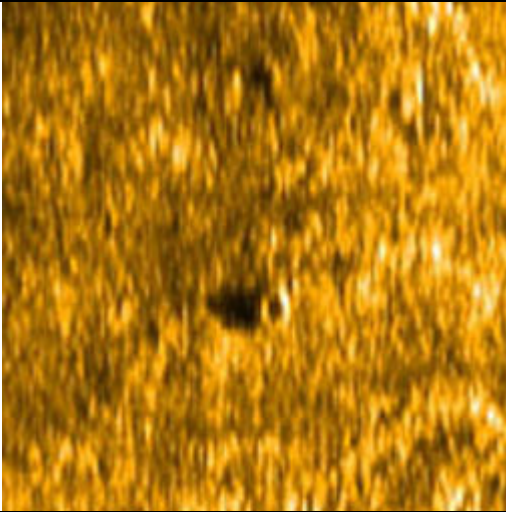
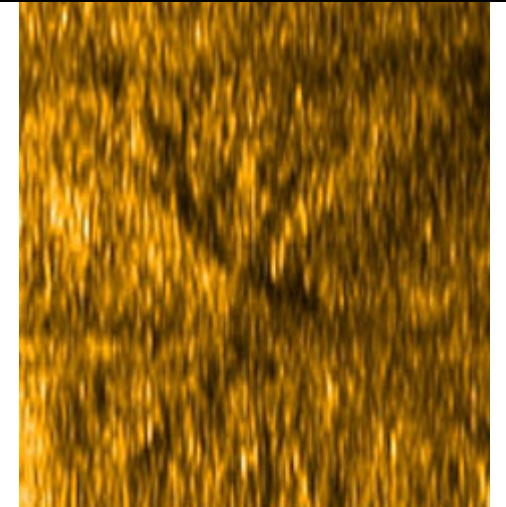
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13204 Grading: Low Position: 462597 99802 Size of anomaly: L6.2m W H Target description: Linear feature. Unidentified anomaly. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13205 Grading: Low Position: 462361 100884 Size of anomaly: L4.6m W H Target description: Linear feature Magnetic strength: Associated References:</p>

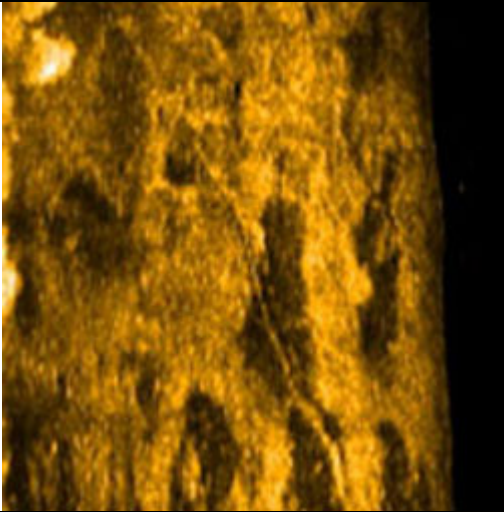
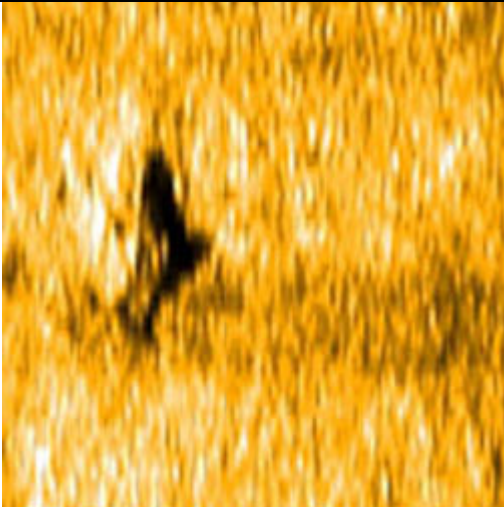
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13206 Grading: Medium Position: 462423 100885 Size of anomaly: L19m W H Target description: Seabed feature. Buried linear feature. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13208 Grading: High Position: 462354 100831 Size of anomaly: L W H Target description: Debris field. Area of raised features. Magnetic strength: 31nT Associated References:</p>

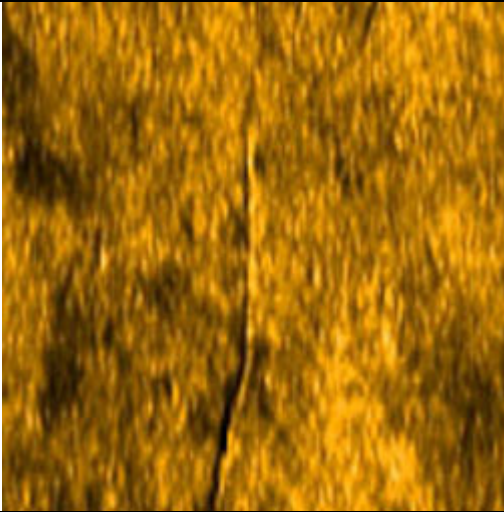
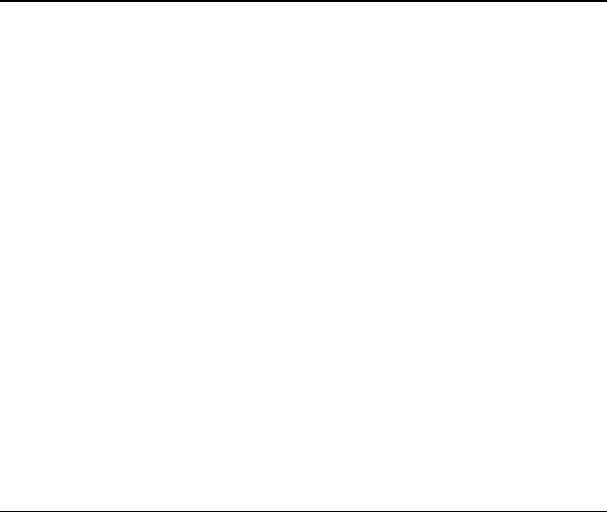
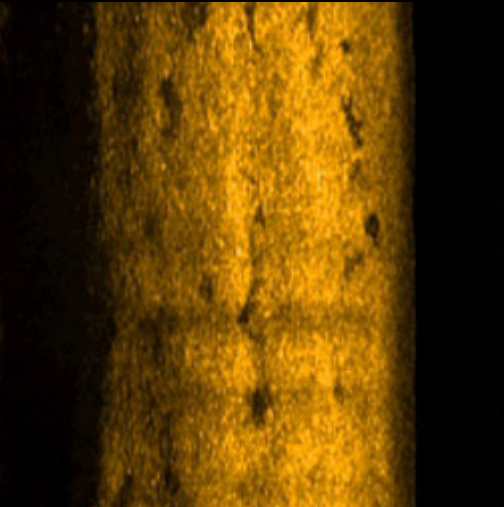
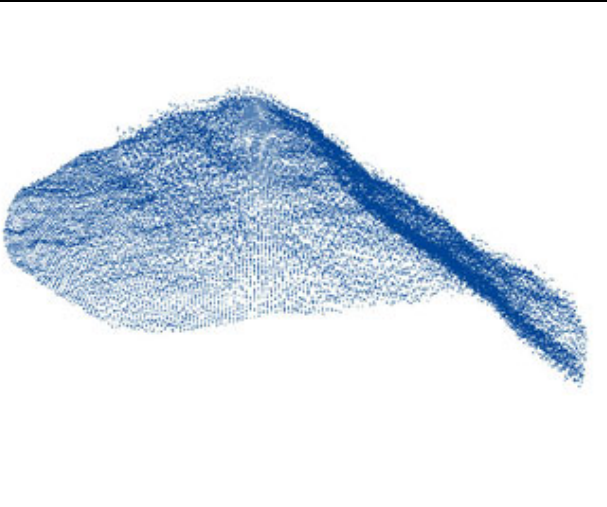
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13209 Grading: Low Position: 462415 100798 Size of anomaly: L19.1m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: 35nT Associated References:</p>
		<p>MA Ltd No: MA13210 Grading: Low Position: 462398 100729 Size of anomaly: L2.2m W1.3m H Target description: Circular feature. Unidentified anomaly. Magnetic strength: Associated References:</p>

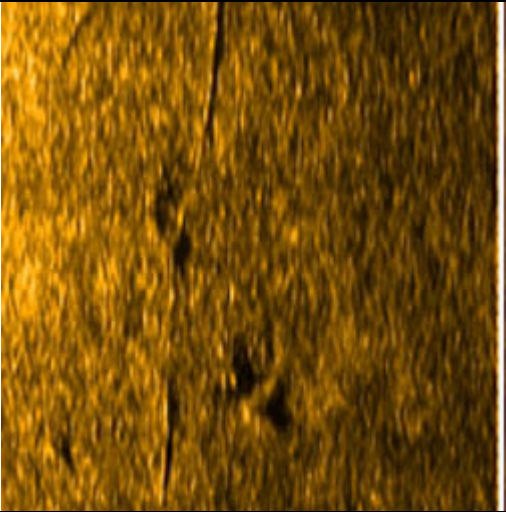
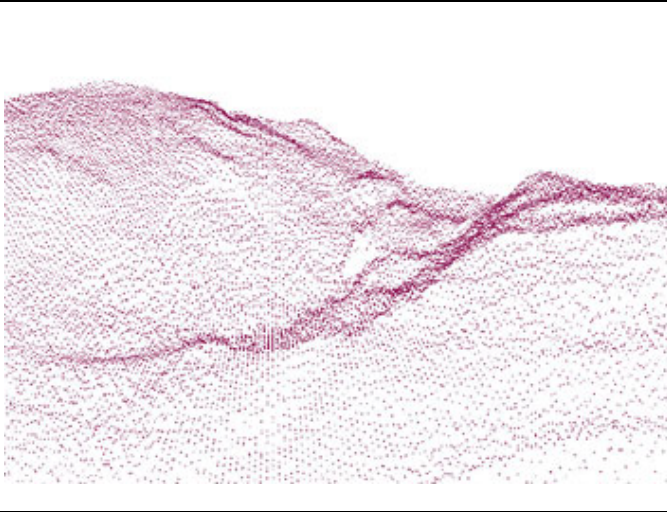
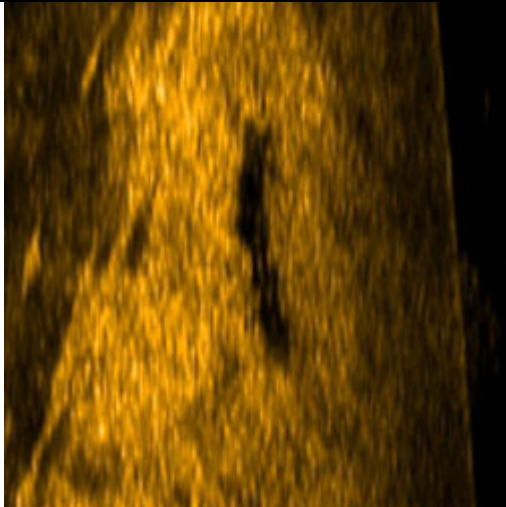

Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13211 Grading: Low Position: 462347 100722 Size of anomaly: L5.8m W1.2m H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13212 Grading: High Position: 462404 100665 Size of anomaly: L W H Target description: Debris field. Area of raised features. Magnetic strength: 100nT Associated References: Grouping: MA18021</p>

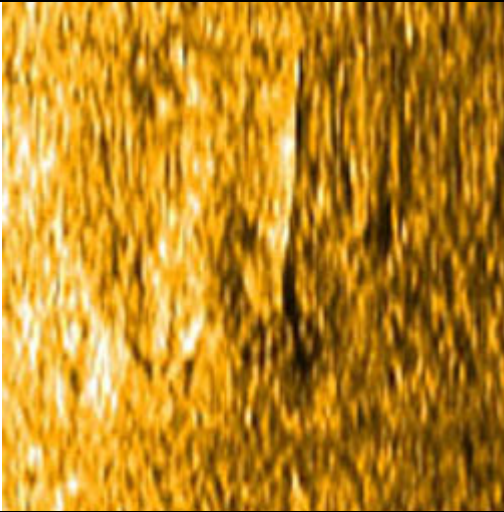
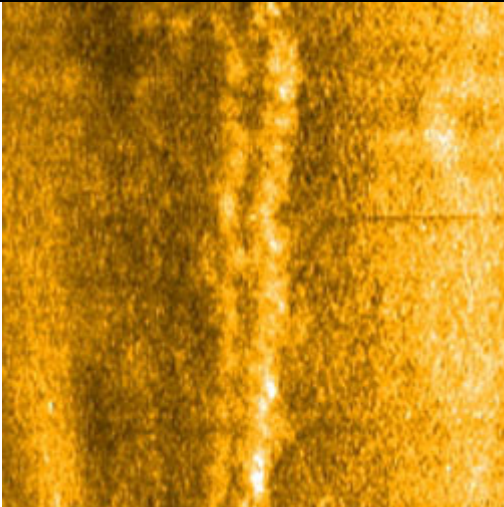
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13213 Grading: Medium Position: 462620 99659 Size of anomaly: L20.5m W6.9m H Target description: Raised feature. Depression with linear feature. Magnetic strength: 25nT Associated References:</p>
		<p>MA Ltd No: MA13214 Grading: Medium Position: 462394 100689 Size of anomaly: L2.9m W1.9m H Target description: Raised feature. Unidentified anomaly. Magnetic strength: Associated References: Grouping: MA18022</p>

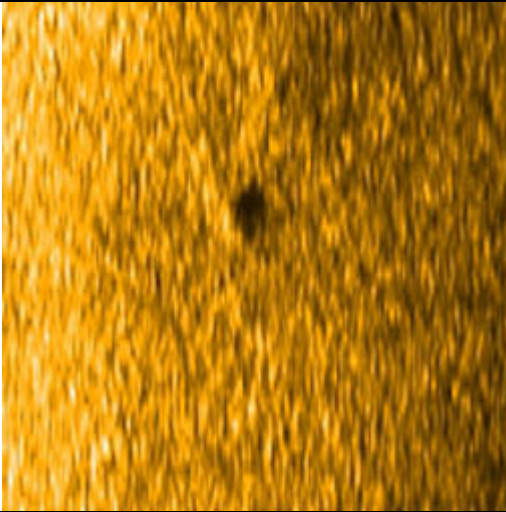
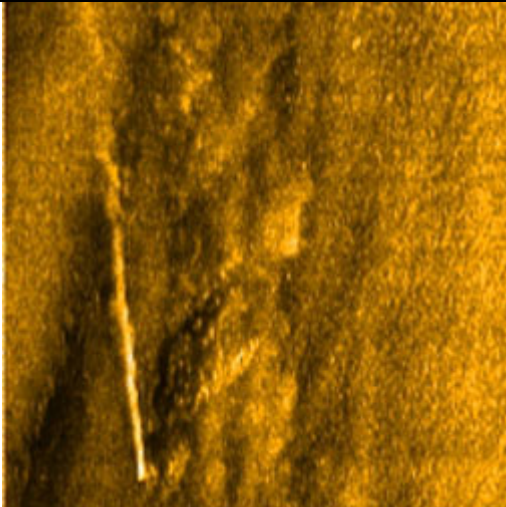
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13215 Grading: Low Position: 462346 100672 Size of anomaly: L1.6m W0.8m H Target description: Circular feature. Identifiable anthropogenic object. Magnetic strength: 22nT Associated References:</p>
		<p>MA Ltd No: MA13218 Grading: High Position: 462436 100517 Size of anomaly: L12.6m W11.4m H Target description: Geological anomaly Magnetic strength: Associated References: Potential geological feature associated with palaeochannel outcropping</p>

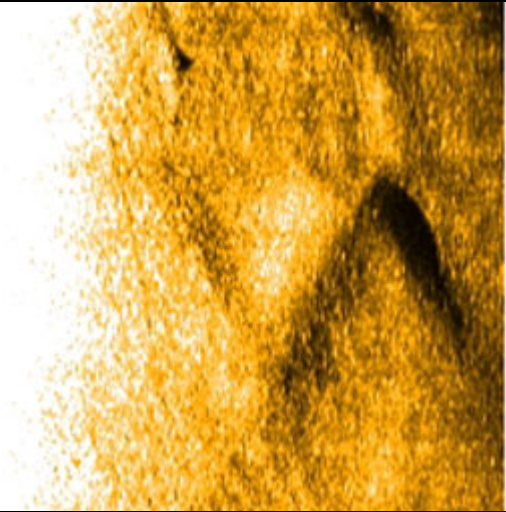
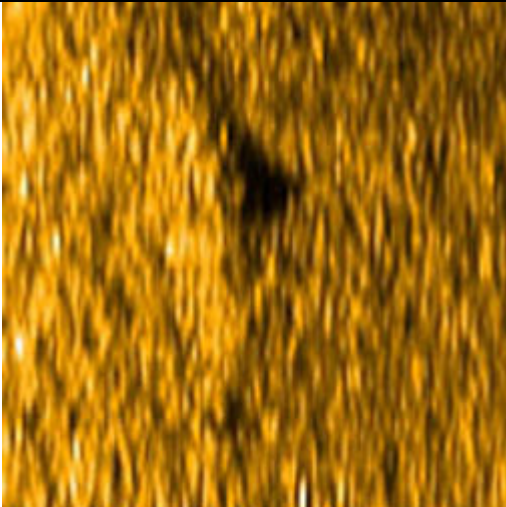
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13219 Grading: Low Position: 462372 100520 Size of anomaly: L39.2m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13220 Grading: High Position: 462407 100512 Size of anomaly: L3.6m W0.9m H0.5m Target description: Raised feature. Unidentified anomaly. Magnetic strength: 63nT Associated References: Grouping: MA18023</p>

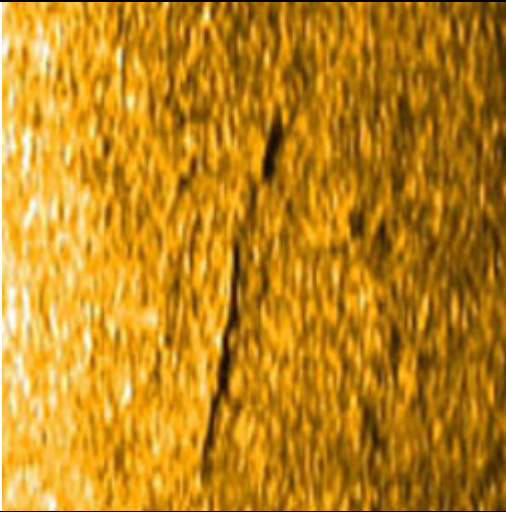
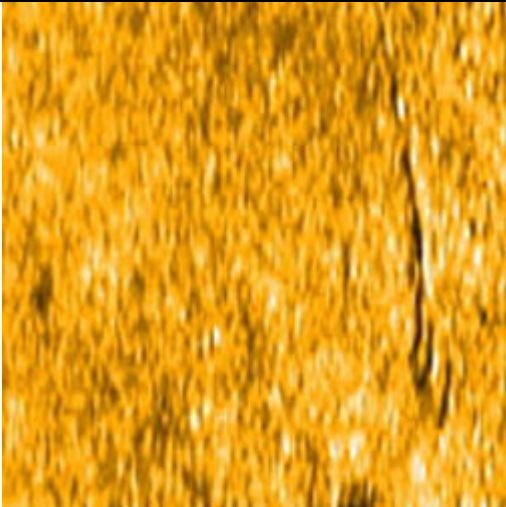
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13221 Grading: Low Position: 462389 100447 Size of anomaly: L13.5m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: Associated References: Grouping: Low</p>
		<p>MA Ltd No: MA13223 Grading: Medium Position: 462405 100378 Size of anomaly: L W H Target description: Raised buried feature with potential raised feature around it. Magnetic strength: Associated References:</p>

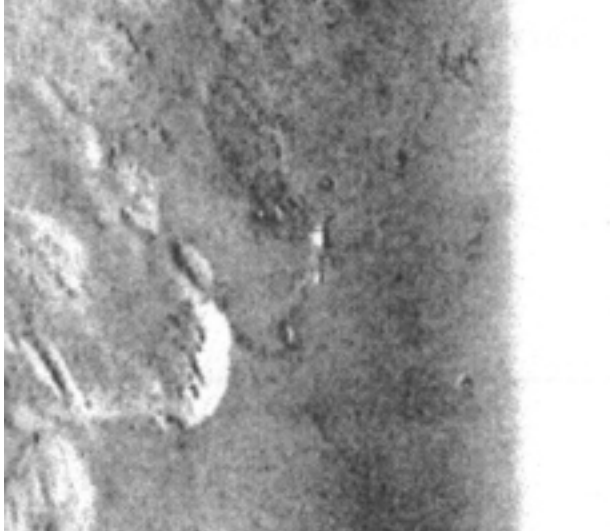

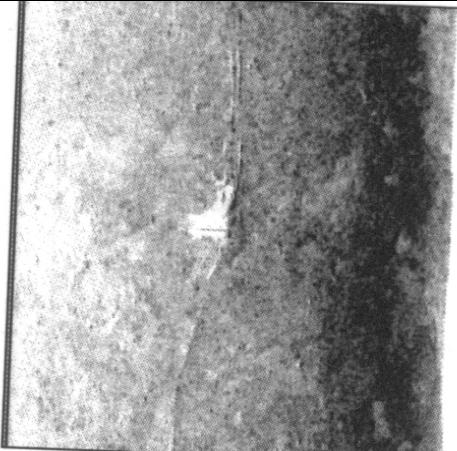
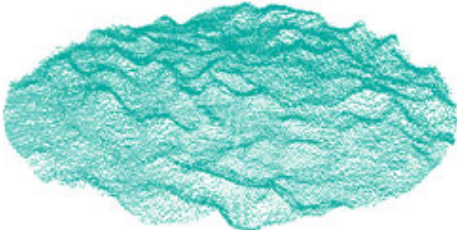
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13225 Grading: High Position: 462518 100155 Size of anomaly: L27.7m W12.4m H Target description: Debris field. Area of depressions and raised features. Magnetic strength: 16nT Associated References:</p>
		<p>MA Ltd No: MA13226 Grading: Low Position: 462466 100134 Size of anomaly: L6.4m W H Target description: Linear feature. Potentially geological. Magnetic strength: Associated References:</p>

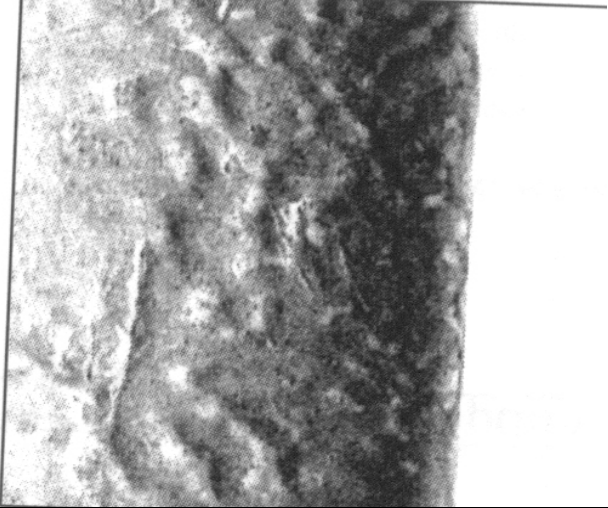

Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13227 Grading: Low Position: 462560 99991 Size of anomaly: L9.2m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: 21nT Associated References:</p>
		<p>MA Ltd No: MA13228 Grading: Low Position: 462497 99931 Size of anomaly: L35.1m W7.7m H Target description: Linear feature. Potentially geological/geomorphological. Magnetic strength: Associated References:</p>

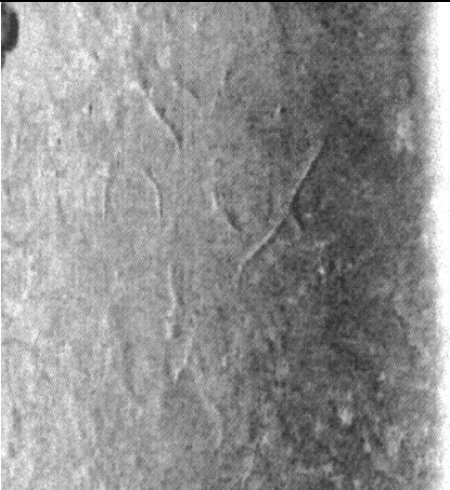


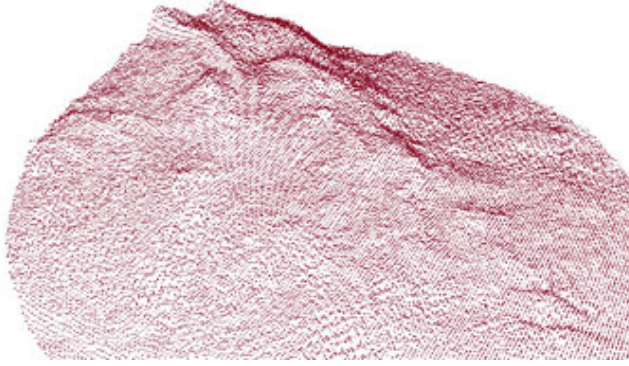
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13229 Grading: Low Position: 462583 99793 Size of anomaly: L1.4m W1.0m H Target description: Raised feature, light reflector Magnetic strength: 4nT Associated References:</p>
		<p>MA Ltd No: MA13230 Grading: Low Position: 462533 99760 Size of anomaly: L23.2m W H Target description: Light reflector, probable buoy Magnetic strength: 7nT Associated References:</p>


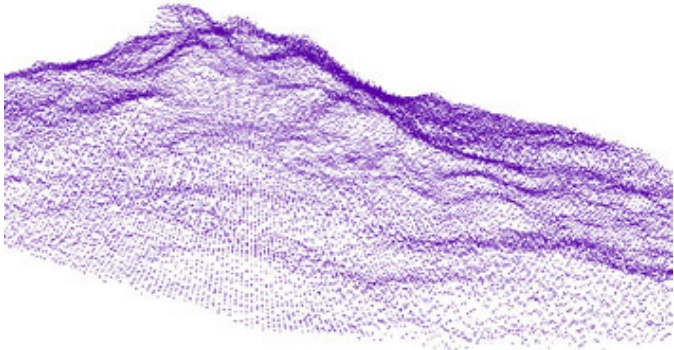
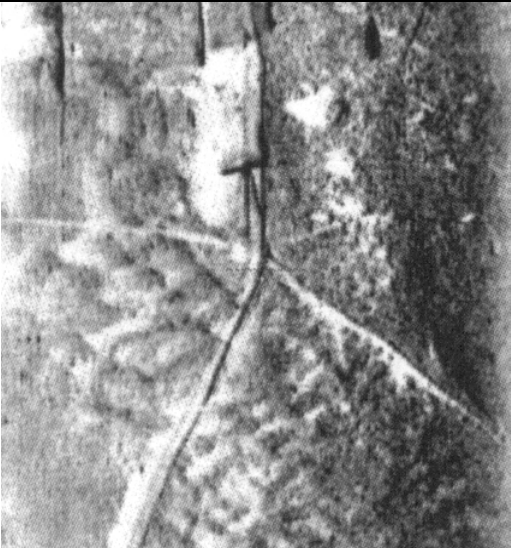
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13232 Grading: Low Position: 462626 99709 Size of anomaly: L18.3m W10.9m H Target description: Raised feature, light reflector Magnetic strength: 4nT Associated References:</p>
		<p>MA Ltd No: MA13234 Grading: Low Position: 462613 99706 Size of anomaly: L5.6m W2.6m H Target description: Raised feature. Unidentified anomaly. Magnetic strength: 2nT Associated References:</p>

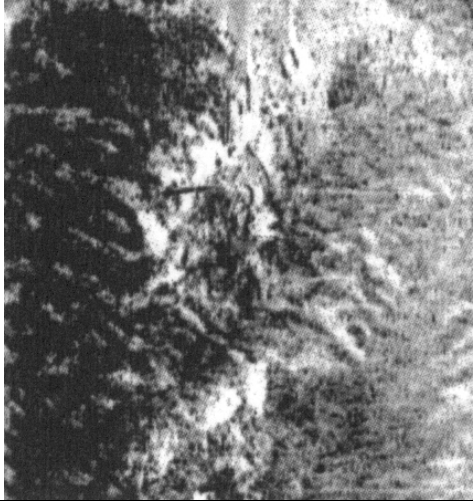
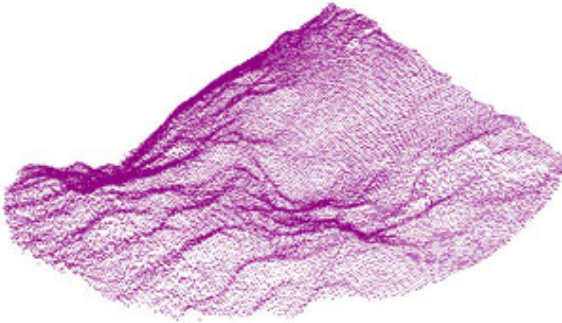
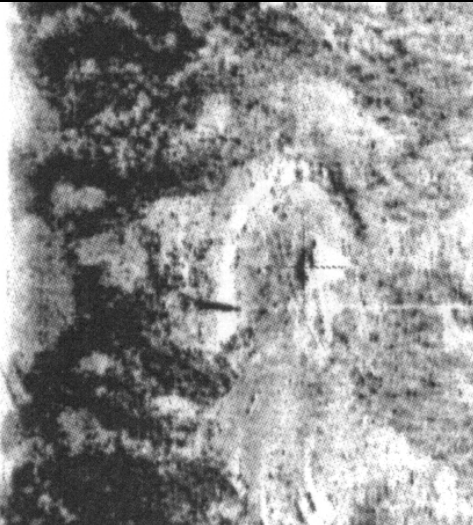
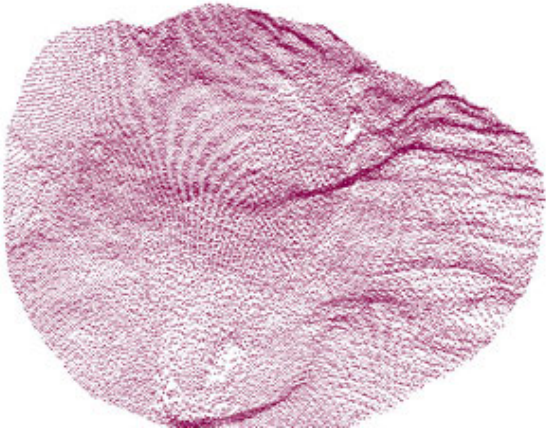
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13238 Grading: Low Position: 462478 100270 Size of anomaly: L11.6m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: 5nT Associated References:</p>
		<p>MA Ltd No: MA13239 Grading: Low Position: 462423 100237 Size of anomaly: L10.0m W H Target description: Linear feature. Identifiable anthropogenic object. Magnetic strength: Associated References:</p>

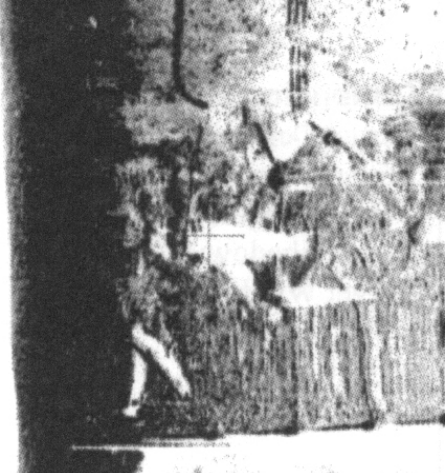


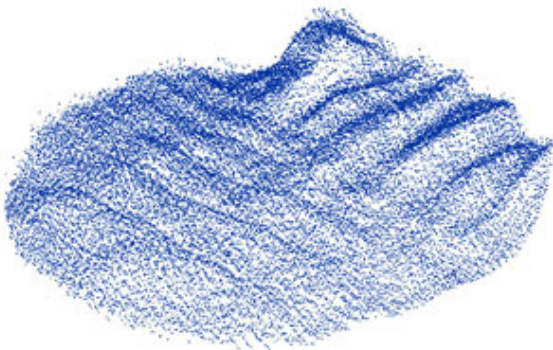
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13240 Grading: Medium Position: 462549 101357 Size of anomaly: L W H Target description: Debris field. Depressions and raised features. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13241 Grading: Medium Position: 462507 101243 Size of anomaly: L10.11m W2.37m H0.35m Target description: Raised features. Unidentified anomaly. Magnetic strength: Associated References:</p>

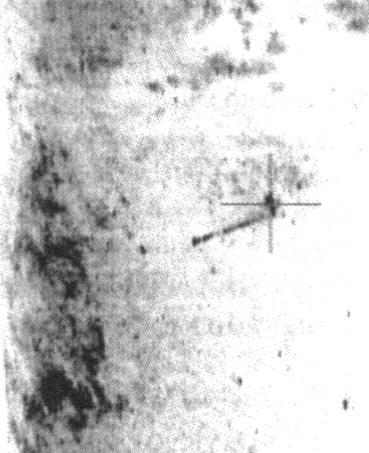

Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13242 Grading: Medium Position: 462498 100751 Size of anomaly: L W H Target description: Mooring/ chain Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13243 Grading: Low Position: 462800 99504 Size of anomaly: L11.23m W4.89m H Target description: Possible feature. Unidentified anomaly. Magnetic strength: 85nT Associated References:</p>

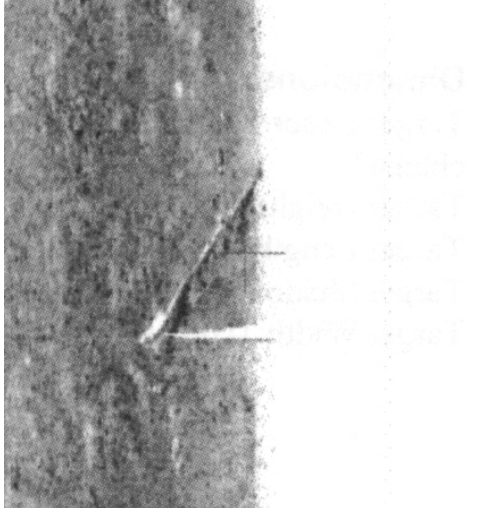


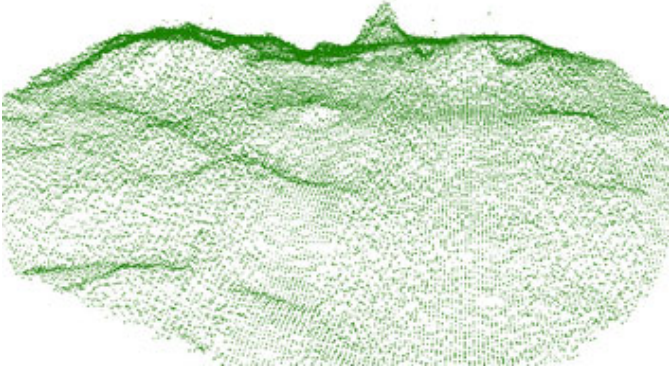
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13245 Grading: Low Position: 462578 100500 Size of anomaly: L W H Target description: Raised lines. Unidentified anomaly. Magnetic strength: 485nT Associated References:</p>
		<p>MA Ltd No: MA13246 Grading: High Position: 462615 100534 Size of anomaly: L W H Target description: Debris field. Area of raised features and varied seabed relief. Magnetic strength: Associated References:</p>

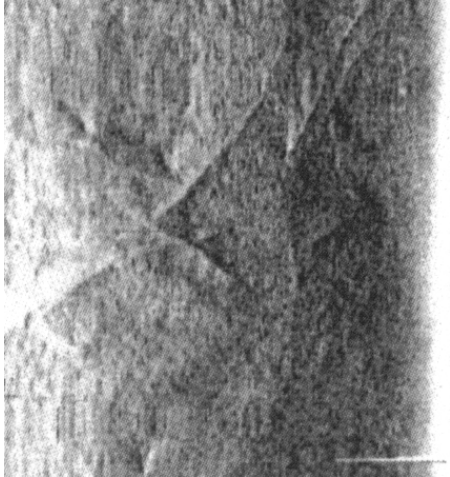

Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13247 Grading: High Position: 462615 100534 Size of anomaly: L4.74m W2.42m H0.69m Target description: Debris field. Area of raised features and varied seabed relief. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13253 Grading: Low Position: 462784 100025 Size of anomaly: L W H Target description: Mooring/ chains Magnetic strength: Associated References Grouping: MA18029</p>

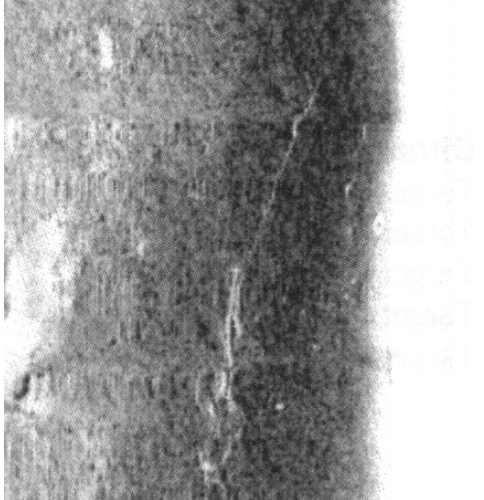
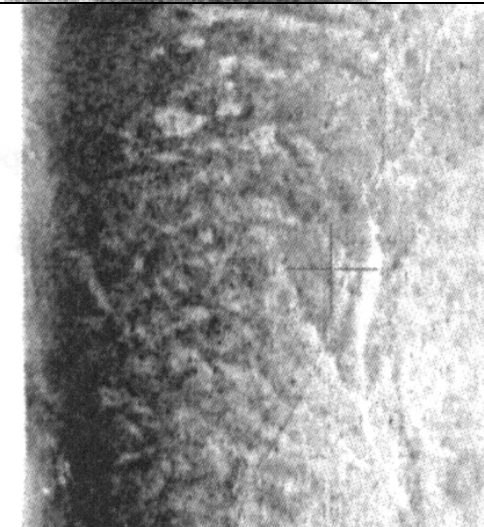
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13254 Grading: High Position: 462263 100776 Size of anomaly: L W H Target description: Debris field. Depressions with raised features. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13255 Grading: High Position: 462272 100744 Size of anomaly: L4.17m W1.75m H0.46m Target description: Depressions with distinguishable raised features. Magnetic strength: Associated References:</p>

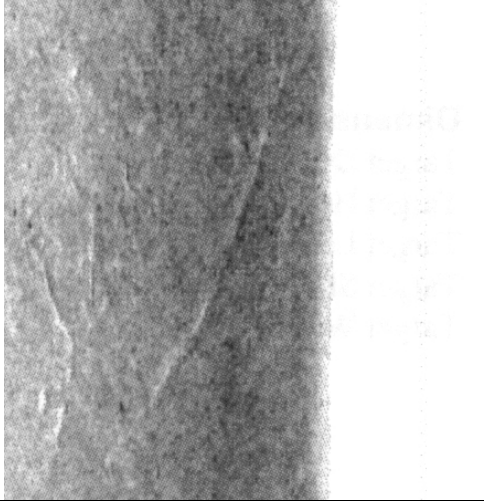

Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13256 Grading: Low Position: 462394 99981 Size of anomaly: L W H Target description: Debris field. Identifiable anthropogenic material. Magnetic strength: 221nT Associated References:</p>
		<p>MA Ltd No: MA13257 Grading: Low Position: 462407 100207 Size of anomaly: L W H Target description: Debris field. Identifiable anthropogenic objects. Magnetic strength: Associated References:</p>

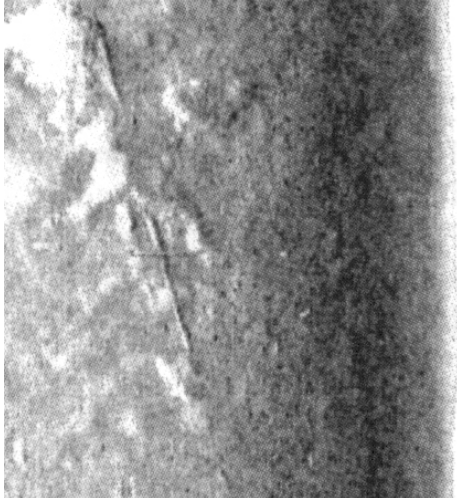
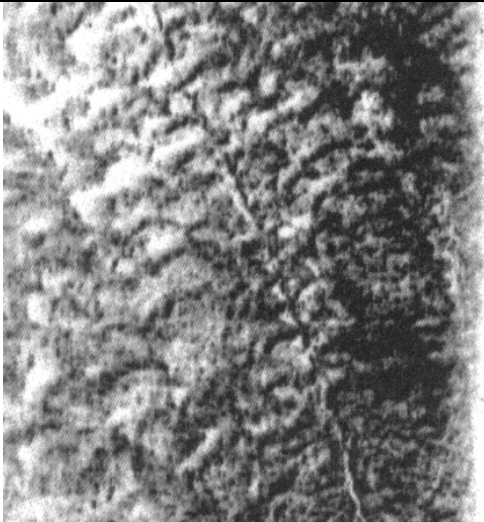
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13258 Grading: Low Position: 462041 101321 Size of anomaly: L W H Target description: Mooring Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13259 Grading: Low Position: 462654 100709 Size of anomaly: L25.27m W H Target description: chain Magnetic strength: Associated References</p>



Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13260 Grading: Medium Position: 462665 101046 Size of anomaly: L16.72m W H Target description: Debris field. A linear buried raised feature. Magnetic strength: 3nT Associated References:</p>
		<p>MA Ltd No: MA13261 Grading: High Position: 462660 101271 Size of anomaly: L8.63m W5.22m H Target description: Debris field. Varied seabed relief with an apparent raised feature. Magnetic strength: 12nT Associated References:</p>

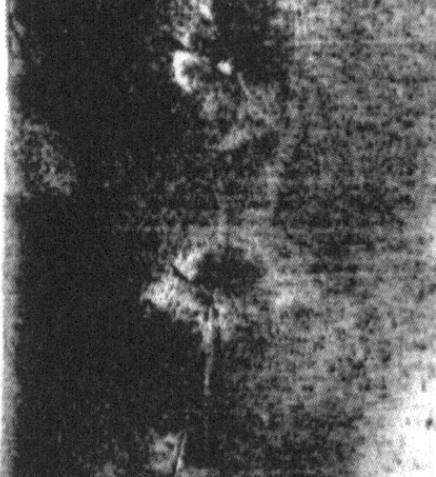
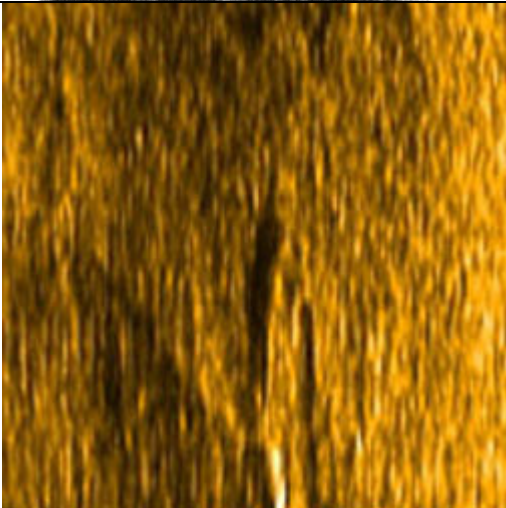
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13264 Grading: Low Position: 462773 99295 Size of anomaly: L W H Target description: Chains Magnetic strength: 27nT Associated References:</p>
		<p>MA Ltd No: MA13265 Grading: Low Position: 462868 99292 Size of anomaly: L W H Target description: Chains/ ropes Magnetic strength: 27nT Associated References: Grouping: MA 18033</p>

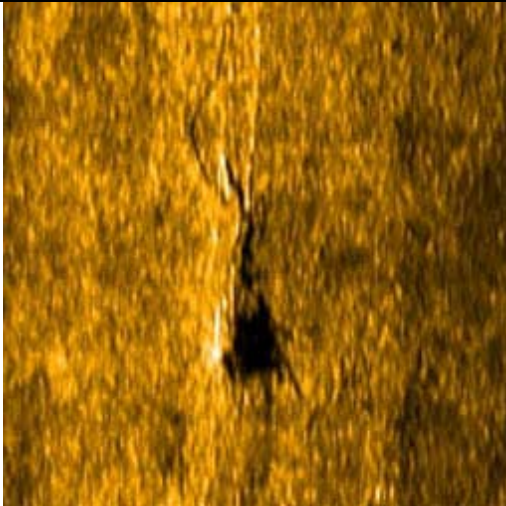
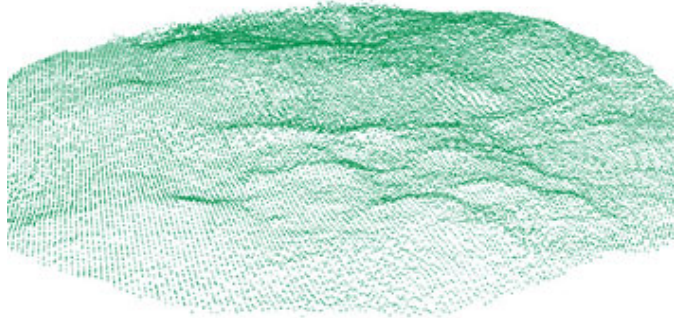
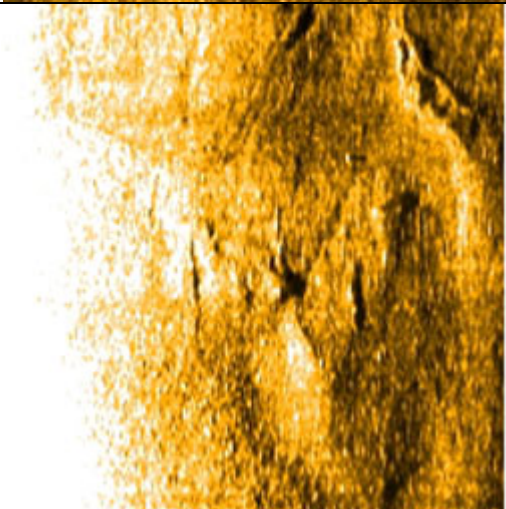
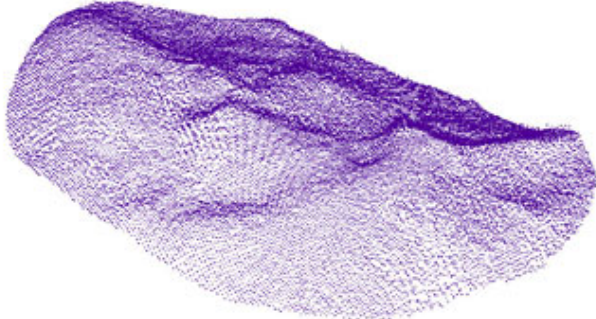
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13266 Grading: Low Position: 462867 99291 Size of anomaly: L41.30m W H Target description: Chains/ ropes Magnetic strength: 27nT Associated References: Grouping: MA 18033</p>
		<p>MA Ltd No: MA13267 Grading: Low Position: 462700 100224 Size of anomaly: L W H Target description: Chain Magnetic strength: 1nT Associated References:</p>

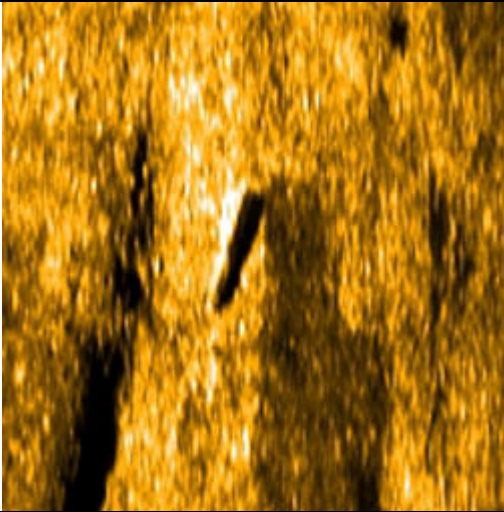
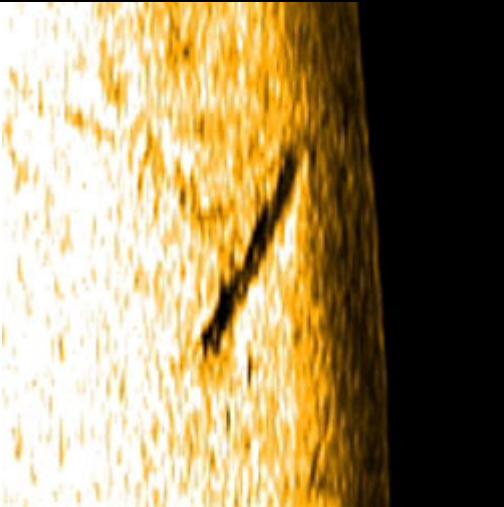
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13268 Grading: Low Position: 462561 100586 Size of anomaly: L W H Target description: Chain/ ropes Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13269 Grading: Low Position: 462312 100851 Size of anomaly: L W H Target description: Chain Magnetic strength: Associated References: Grouping: MA 18036</p>

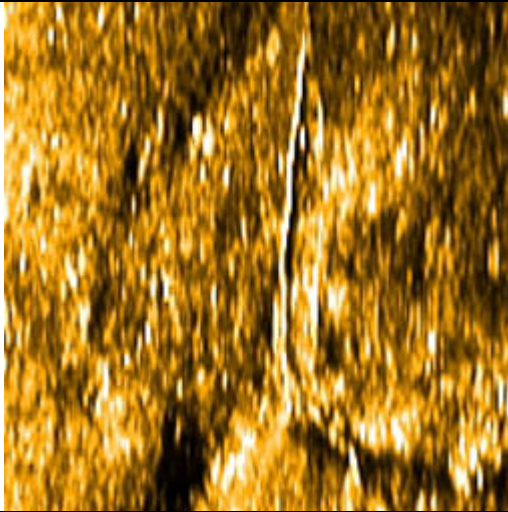
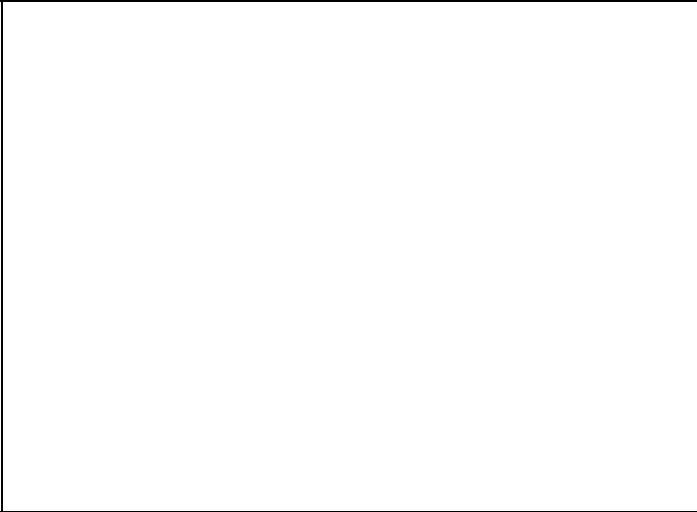
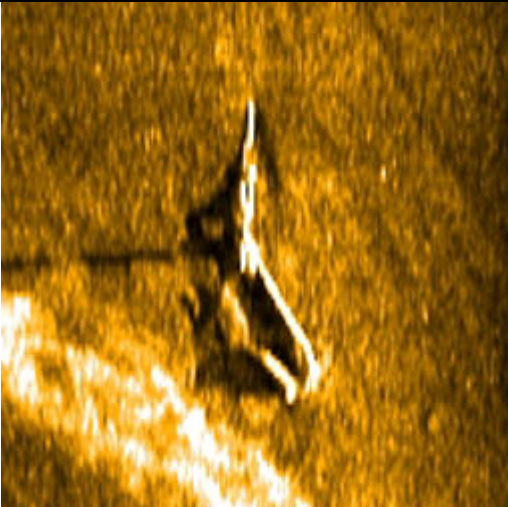

Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13270 Grading: Low Position: 462561 100732 Size of anomaly: L47.39m W H Target description: Chain/ ropes Magnetic strength: 97nT Associated References:</p>
		<p>MA Ltd No: MA13271 Grading: Low Position: 462298 100869 Size of anomaly: L W H Target description: Chain Magnetic strength: Associated References: Grouping: MA 18036</p>

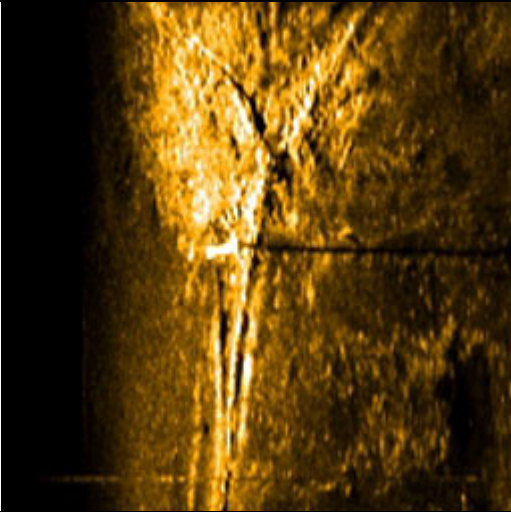
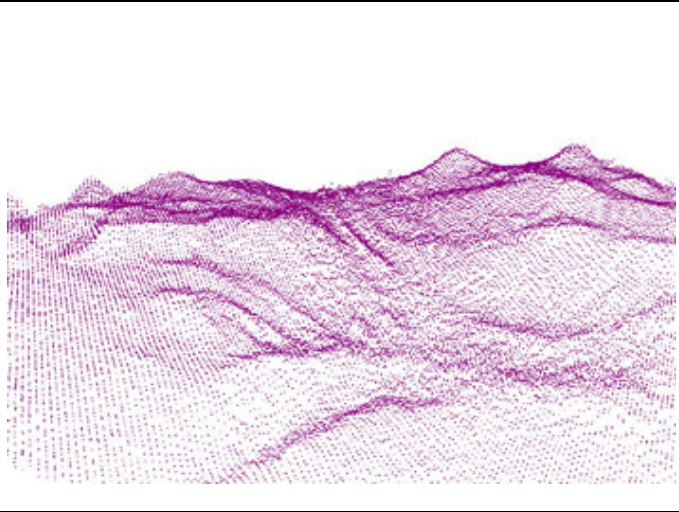
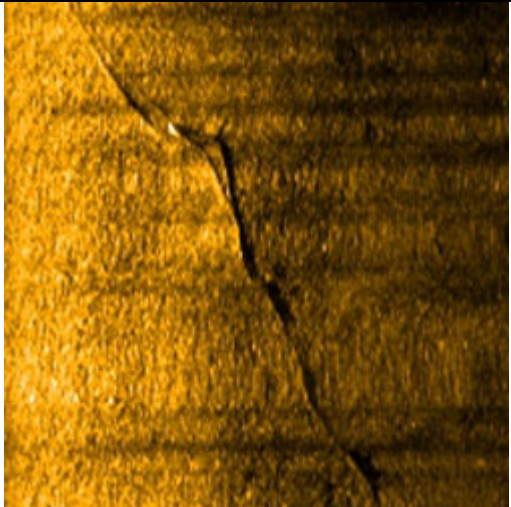

Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13272 Grading: Low Position: 462393 100290 Size of anomaly: L W H Target description: Debris field Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13273 Grading: Low Position: 462220 100893 Size of anomaly: L W H Target description: Moorings Magnetic strength: 23nT Associated References: Grouping: MA 18035</p>

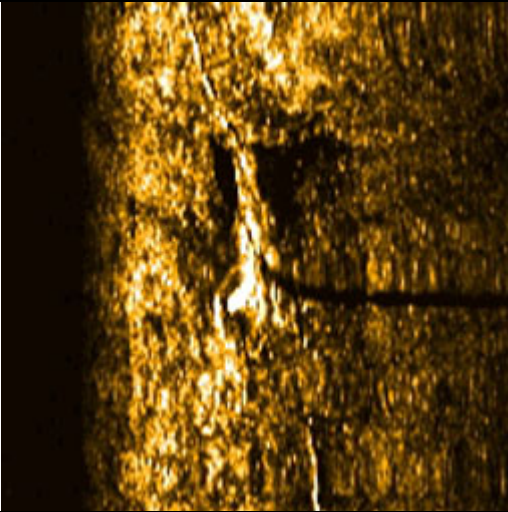
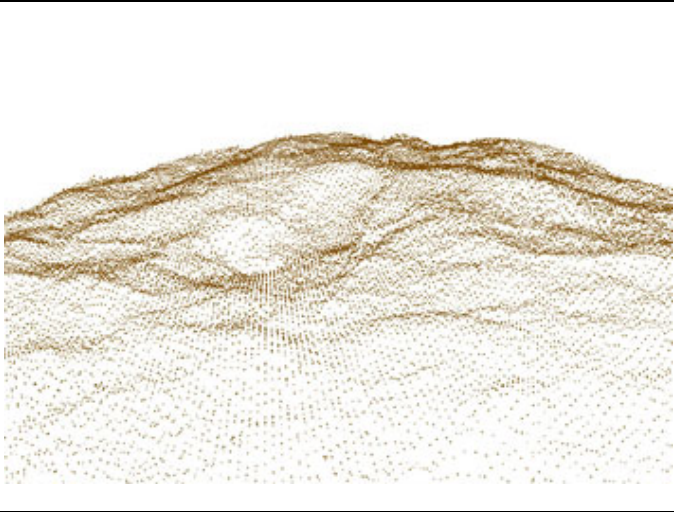
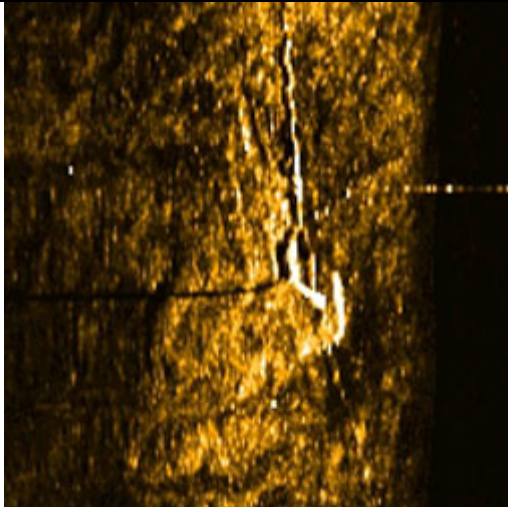

Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13274 Grading: Low Position: 462235 100868 Size of anomaly: L W H Target description: Moorings Magnetic strength: 37nT Associated References: Grouping: MA 18035</p>
		<p>MA Ltd No: MA13275 Grading: Low Position: 462634 99883 Size of anomaly: L12.0m W5.0m H Target description: Triangular feature. Unidentified anomaly Magnetic strength: Associated References:</p>

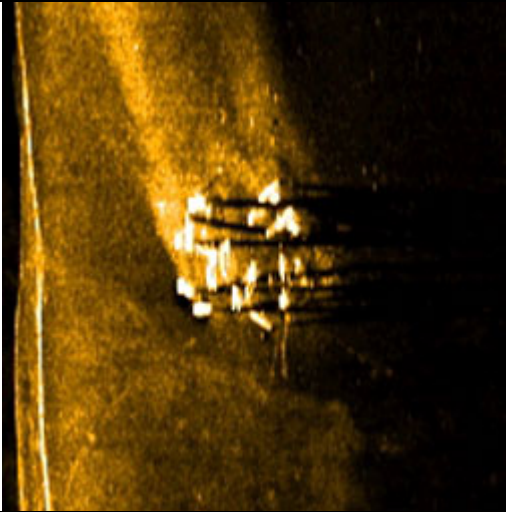
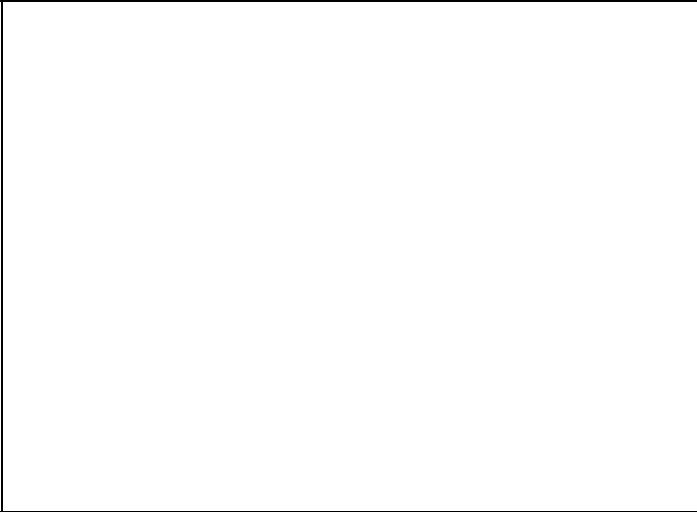
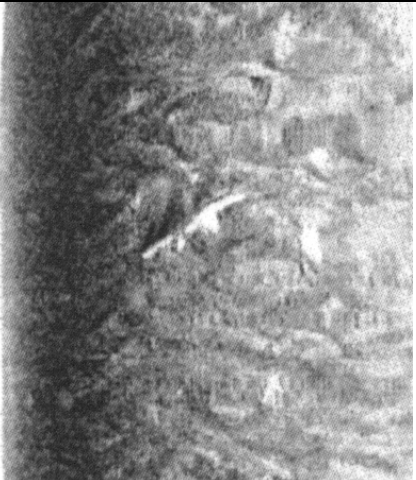
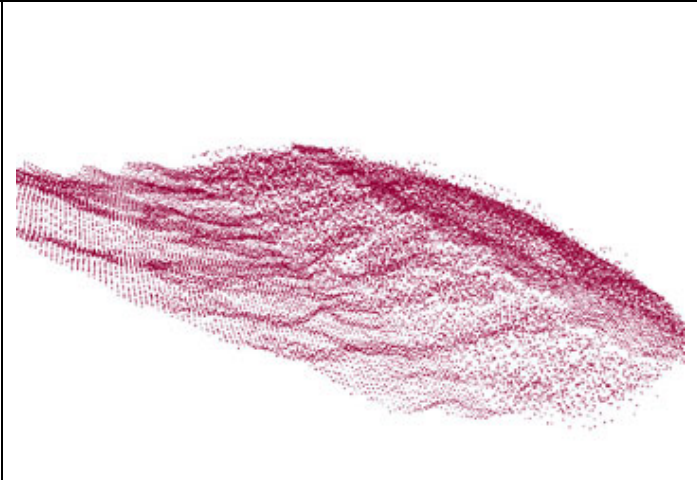
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13276 Grading: High Position: 462494 100752 Size of anomaly: L8.0m W2.9m H Target description: Raised feature. Unidentified anomaly. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13278 Grading: Low Position: 462654 99890 Size of anomaly: L9.6m W6.2m H Target description: Raised feature. Unidentified anomaly. Magnetic strength: Associated References:</p>


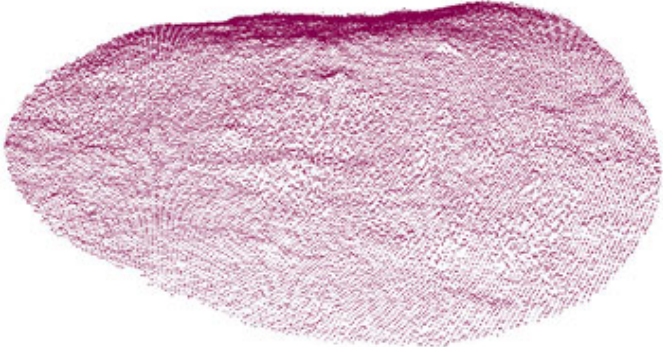


Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13280 Grading: Low Position: 462638 100462 Size of anomaly: L5.3m W H Target description: Raised feature. Unidentified anomaly. Magnetic strength: 82nT Associated References:</p>
		<p>MA Ltd No: MA13281 Grading: Low Position: 472729 100185 Size of anomaly: L6.1m W H Target description: Seabed feature. Unidentified anomaly. Magnetic strength: Associated References:</p>

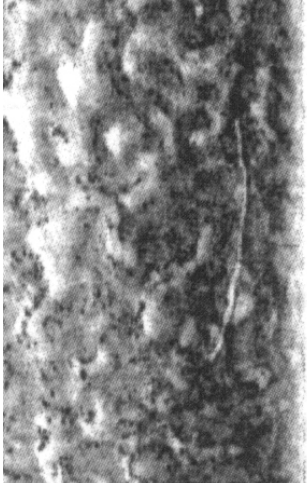

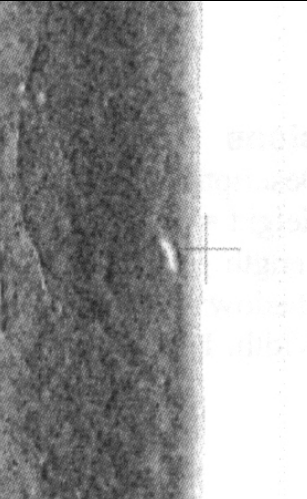
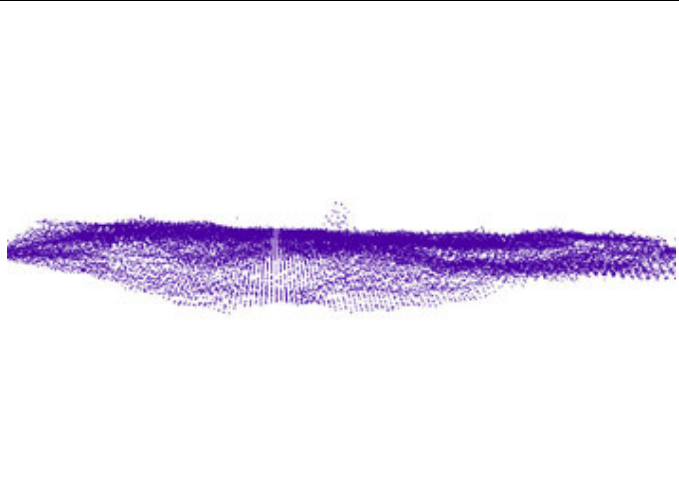
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13282 Grading: Low Position: 462795 101436 Size of anomaly: L16.0m W H Target description: Linear feature. Unidentified anomaly. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13283 Grading: High Position: 462347 101455 Size of anomaly: L9.6m W2.3m H Target description: Raised feature with depressions and varied seabed. Magnetic strength: 90nT Associated References:</p>


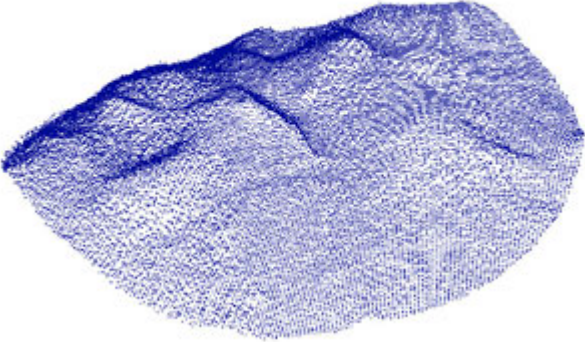
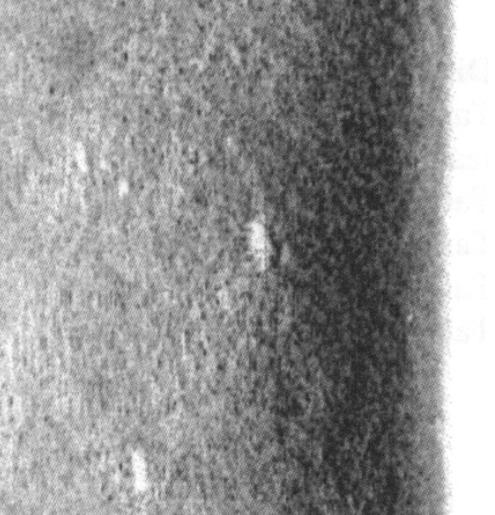
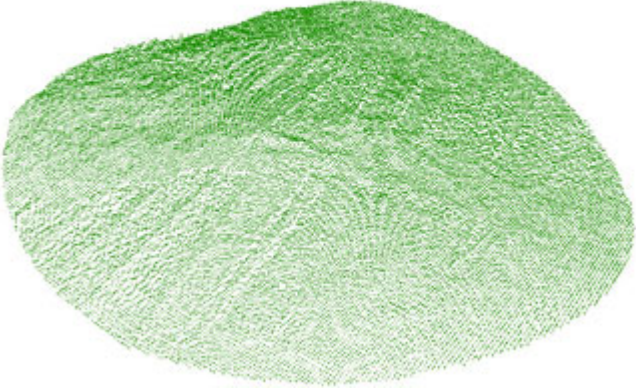
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13284 Grading: High Position: 462308 101335 Size of anomaly: L23.3m W H Target description: Raised linear feature. Magnetic strength: 2nT Associated References:</p>
		<p>MA Ltd No: MA13285 Grading: Low Position: 462662 99503 Size of anomaly: L41.5m W H Target description: Linear feature. Unidentified anomaly. Magnetic strength: Associated References: Grouping: Low</p>





Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13286 Grading: Medium Position: 462258 100978 Size of anomaly: L13.3m W8.0m H2.0m Target description: Depression and a raised feature. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13287 Grading: Low Position: 462292 100894 Size of anomaly: L22.6m W H Target description: Raised feature. Unidentified anomaly. Magnetic strength: 5nT Associated References:</p>

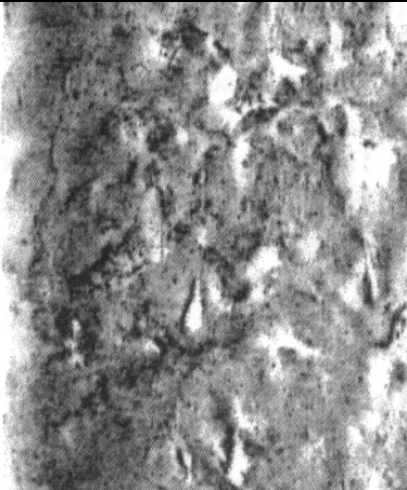
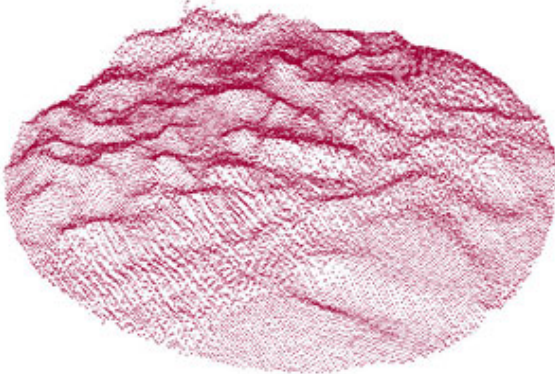
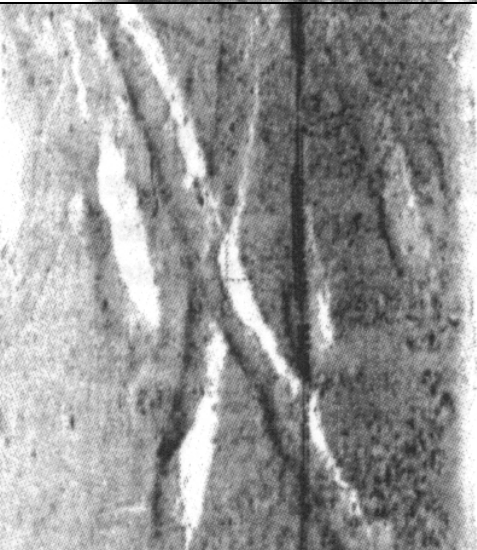
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13288 Grading: High Position: 462364 100177 Size of anomaly: L W H0.9m Target description: Raised feature. Unidentified anomaly. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13290 Grading: High Position: 462464 99906 Size of anomaly: L11.39m W0.89m H0.23m Target description: A linear depression and raised linear area running parallel. Magnetic strength: 94nT Associated References:</p>

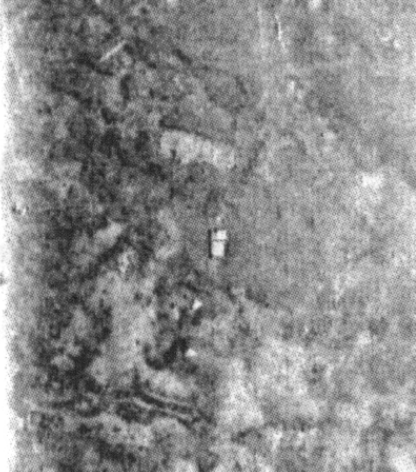

Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13291 Grading: High Position: 462489 100238 Size of anomaly: L15.36m W H Target description: Debris field. Several raised features. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13292 Grading: Low Position: 462482 101054 Size of anomaly: L W H Target description: Mooring/ anchor Magnetic strength: 184nT Associated References:</p>

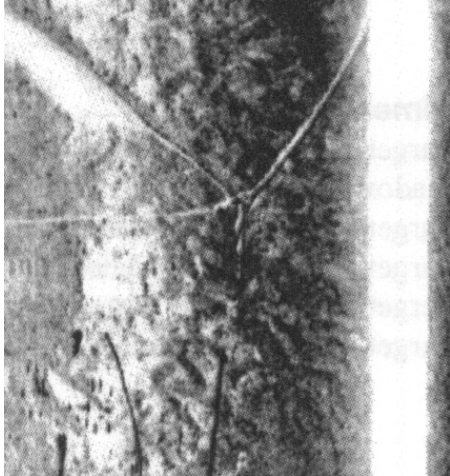

Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13293 Grading: Low Position: 462539 101015 Size of anomaly: L24.55m W H Target description: Chain/ rope Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13294 Grading: Medium Position: 462532 100598 Size of anomaly: L3.66m W1.38m H0.59m Target description: Distinct raised feature. Unidentified anomaly. Magnetic strength: Associated References:</p>



Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13295 Grading: Medium Position: 462650 99883 Size of anomaly: L W H Target description: Debris field. Raised sinuous feature potentially chain. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13296 Grading: Medium Position: 462650 99883 Size of anomaly: L4.01m W2.07m H0.30m Target description: Debris field. Raised sinuous feature potentially chain. Magnetic strength: Associated References:</p>

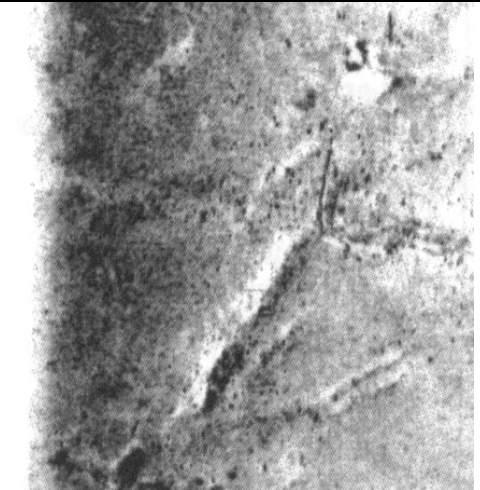

Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13297 Grading: Low Position: 462564 100697 Size of anomaly: L W H Target description: Raised features. Identifiable anthropogenic objects. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13298 Grading: High Position: 462559 100986 Size of anomaly: L17.12m W1.48m H Target description: Raised sinuous linear feature, potentially chain. Magnetic strength: Associated References:</p>


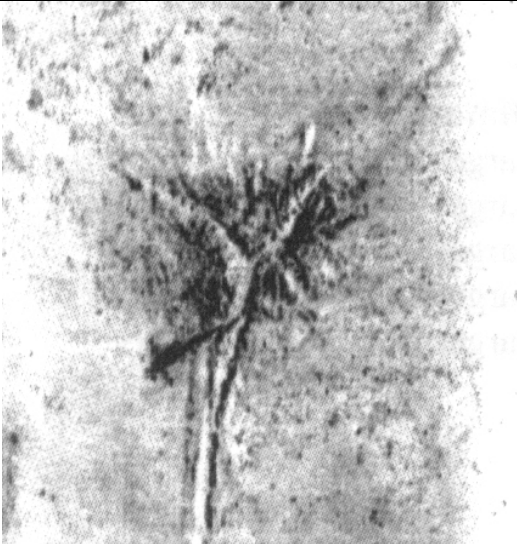
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13299 Grading: High Position: 462605 101246 Size of anomaly: L W H Target description: Debris field. Varied seabed relief. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13300 Grading: Low Position: 462656 100779 Size of anomaly: L48.94m W4.96m H0.65m Target description: Scarring on seabed geological. Magnetic strength: 2nT Associated References:</p>

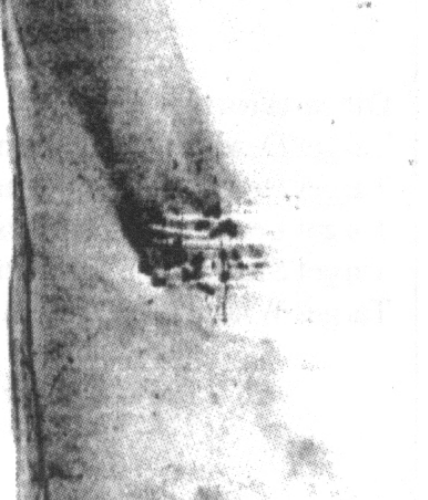


Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13301 Grading: Low Position: 462600 100664 Size of anomaly: L2.0m W1.67m H Target description: Raised target light reflector Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13302 Grading: Low Position: 462638 100470 Size of anomaly: L30.38m W3.45m H0.59m Target description: Deep scars, geological. Magnetic strength: Associated References: Grouping: MA18024</p>


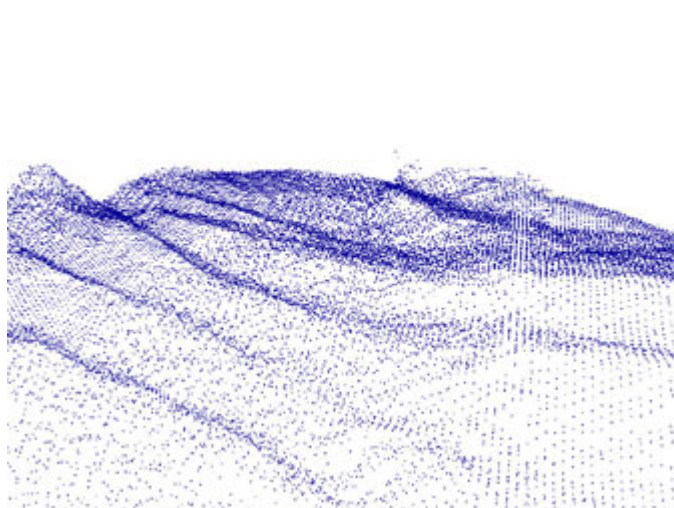

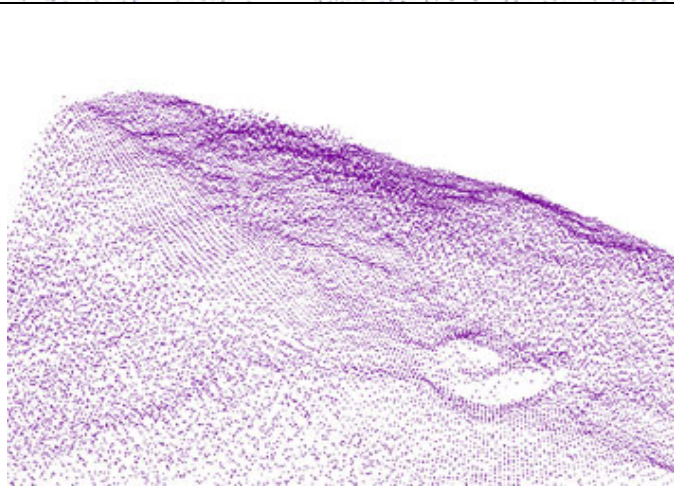
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13303 Grading: Low Position: 462815 99880 Size of anomaly: L W H Target description: Chains/ mooring Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13304 Grading: Low Position: 462655 99534 Size of anomaly: L16.99m W3.16m H0.43m Target description: Several raised features. Unidentified anomalies. Magnetic strength: Associated References:</p>


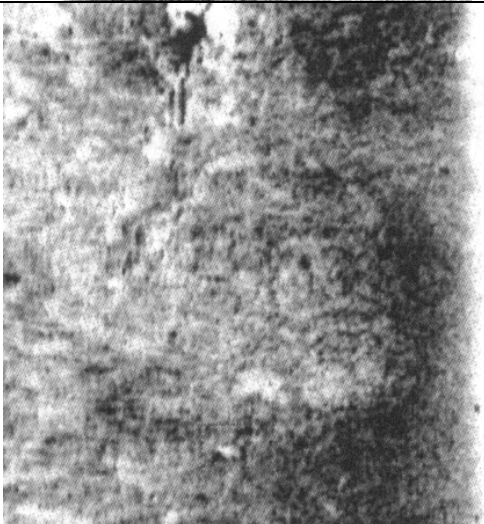
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13305 Grading: Low Position: 462398 101462 Size of anomaly: L W H Target description: Varied relief. Unidentified anomaly. Magnetic strength: 28nT Associated References:</p>
		<p>MA Ltd No: MA13306 Grading: Low Position: 462629 99886 Size of anomaly: L5.09m W4.21m H Target description: Mooring Magnetic strength: 13nT Associated References:</p>

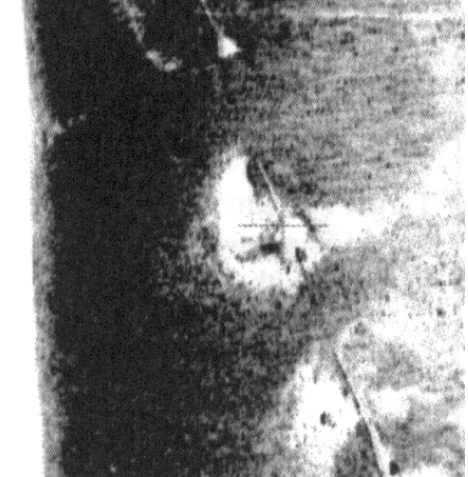
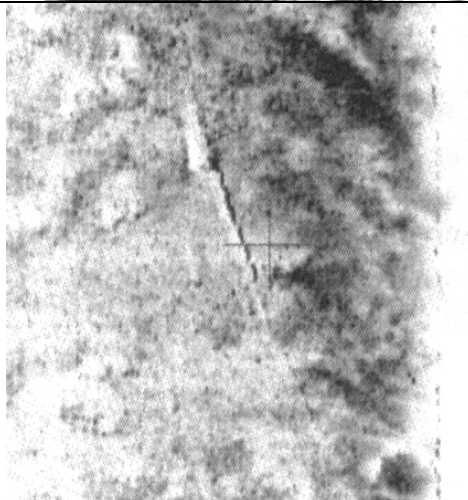
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13307 Grading: Low Position: 462798 101456 Size of anomaly: L22.69m W3.53m H0.50m Target description: Scar geological. Magnetic strength: 68nT Associated References:</p>
		<p>MA Ltd No: MA13308 Grading: Low Position: 462601 99539 Size of anomaly: L W H Target description: Rippled seabed, geological Magnetic strength: Associated References:</p>



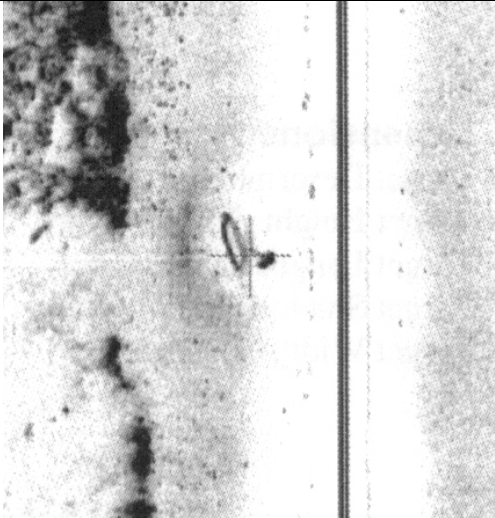
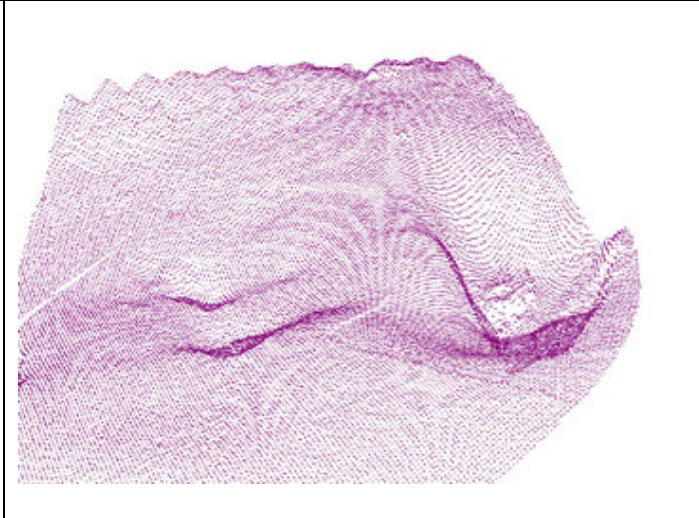
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13309 Grading: Low Position: 462312 100605 Size of anomaly: L3.97m W1.96m H0.39m Target description: Raised feature. Unidentified anomaly. Magnetic strength: 68nT Associated References:</p>
		<p>MA Ltd No: MA13310 Grading: Low Position: 462304 101346 Size of anomaly: L W H Target description: Chains/ mooring Magnetic strength: 2nT Associated References:</p>

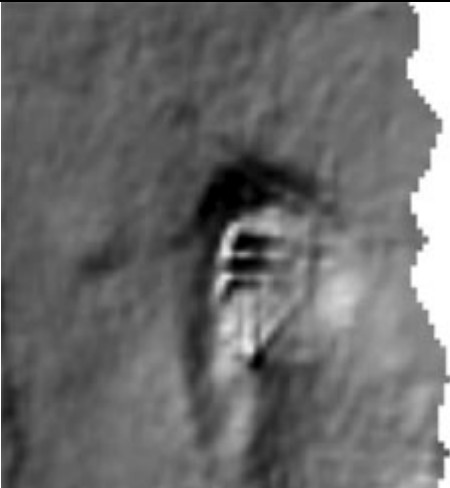
Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13311 Grading: High Position: 462362 100196 Size of anomaly: L8.99m W8.73m H Target description: Raised features within surrounding depression. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13312 Grading: Low Position: 462064 101278 Size of anomaly: L W H Target description: Mooring Magnetic strength: 40nT Associated References:</p>

Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13313 Grading: Medium Position: 462345 101475 Size of anomaly: L7.38m W2.45m H Target description: Debris field. Raised features with seabed scarring. Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13314 Grading: High Position: 462439 100239 Size of anomaly: L6.68m W3.88m H0.60m Target description: Wreck Magnetic strength: Associated References:</p>

Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13315 Grading: Low Position: 462673 99491 Size of anomaly: L W H Target description: Chains/ rope Magnetic strength: Associated References: Grouping: MA18022</p>
		<p>MA Ltd No: MA13316 Grading: Low Position: 462279 100900 Size of anomaly: L W H Target description: Mooring Magnetic strength: Associated References:</p>

Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13317 Grading: Low Position: 462197 100981 Size of anomaly: L W H Target description: Moorings Magnetic strength: 89nT Associated References:</p>
		<p>MA Ltd No: MA13318 Grading: Low Position: 462196 101128 Size of anomaly: L W H Target description: Chain Magnetic strength: Associated References:</p>

Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13319 Grading: Low Position: 462147 101105 Size of anomaly: L W H Target description: Chain Magnetic strength: Associated References:</p>
		<p>MA Ltd No: MA13320 Grading: High Position: 462494 101587 Size of anomaly: L4.87m W1.51m H0.26m Target description: Raised area within a large depression. Magnetic strength: 14nT Associated References:</p>

Side Scan Sonar Image	SWATH Image	Anomaly Information
		<p>MA Ltd No: MA13321 Grading: High Position: 464430 97022 Size of anomaly: L W H Target description: Depression with raised structure. Magnetic strength: Associated References:</p>

7. Magnetic Anomalies

MA Ltd Number	Eastings	Northings	Magnetic Strength (nT)	Archaeological Potential
MA 13322	463447	98471	22	High
MA 13323	463588	98100	21	High
MA 13324	463001	98694	24	High
MA 13325	462894	98813	76	High
MA 13326	462931	99030	56	High
MA 13327	462948	99168	55	High
MA 13328	462848	99240	58	High
MA 13329	462777	99317	60	Low
MA 13330	462760	99322	38	Low
MA 13331	462749	99346	21	Low
MA 13332	462632	99657	25	Low
MA 13333	462521	99689	51	Low
MA 13334	462540	99704	41	Low
MA 13335	462530	99778	26	Low
MA 13336	462468	99892	94	Low
MA 13337	462484	99941	48	Low
MA 13338	462558	99978	21	Low
MA 13339	462406	100077	134	Low
MA 13340	462394	100499	63	Low
MA 13341	462482	100528	45	Low
MA 13342	462393	100534	55	Low
MA 13343	462520	100545	59	Low
MA 13344	462303	100572	46	Low
MA 13345	462330	100607	68	Low
MA 13346	462334	100608	78	Low
MA 13347	462327	100644	84	Low
MA 13348	462421	100648	40	Low

MA 13349	462360	100675	51	Low
MA 13350	462365	100680	35	Low
MA 13351	462416	100681	32	Low
MA 13352	462468	100682	55	Low
MA 13353	462459	100686	45	Low
MA 13354	462575	100700	147	Low
MA 13355	462400	100711	37	Low
MA 13356	462351	100713	52	Low
MA 13357	462411	100720	53	Low
MA 13358	462515	100724	303	Medium
MA 13359	462467	100730	95	Low
MA 13360	462472	100739	143	Low
MA 13361	462551	100743	97	Low
MA 13362	462515	100756	234	Medium
MA 13363	462411	100771	60	Low
MA 13364	462420	100782	22	Low
MA 13365	462515	100793	188	Low
MA 13366	462515	100799	147	Low
MA 13367	462519	100800	327	Medium
MA 13368	462555	100808	96	Low
MA 13369	462425	100812	35	Low
MA 13370	462410	100817	22	Low
MA 13371	462365	100823	31	Low
MA 13372	462313	100831	29	Low
MA 13373	462322	100842	114	Low
MA 13374	462356	100860	64	Low
MA 13375	462345	100861	64	Low
MA 13376	462399	100878	75	Low
MA 13377	462350	100897	75	Low
MA 13378	462351	100902	62	Low
MA 13379	462400	100907	44	Low

MA 13380	462303	100908	25	Low
MA 13381	462370	100916	35	Low
MA 13382	462375	100916	27	Low
MA 13383	462400	100948	23	Low
MA 13384	462355	100953	34	Low
MA 13385	462245	100958	81	Low
MA 13386	462359	100962	49	Low
MA 13387	462360	100972	81	Low
MA 13388	462410	100987	54	Low
MA 13389	462415	101015	39	Low
MA 13390	462356	101031	69	Low
MA 13391	462341	101036	78	Low
MA 13392	462365	101039	36	Low
MA 13393	462454	101040	115	Low
MA 13394	462472	101055	184	Low
MA 13395	462364	101067	53	Low
MA 13396	462472	101111	192	Low
MA 13397	462420	101154	31	Low
MA 13398	462509	101172	187	Low
MA 13399	462519	101174	213	Medium
MA 13400	462472	101182	136	Low
MA 13401	462410	101186	29	Low
MA 13402	462364	101188	44	Low
MA 13403	462514	101189	128	Low
MA 13404	462365	101189	73	Low
MA 13405	462359	101192	54	Low
MA 13406	462499	101213	112	Low
MA 13407	462369	101219	26	Low
MA 13408	462519	101226	313	Medium
MA 13409	462467	101226	57	Low
MA 13410	462471	101226	133	Low

MA 13411	462471	101238	92	Low
MA 13412	462534	101245	109	Low
MA 13413	462519	101248	220	Low
MA 13414	462459	101253	73	Low
MA 13415	462504	101262	191	Low
MA 13416	462386	101267	39	Low
MA 13417	462411	101275	48	Low
MA 13418	462519	101288	273	Medium
MA 13419	462515	101295	90	Low
MA 13420	462514	101312	179	Low
MA 13421	462534	101326	110	Low
MA 13422	462405	101328	229	Medium
MA 13423	462422	101361	78	Low
MA 13424	462561	101362	34	Low
MA 13425	462559	101363	117	Low
MA 13426	462385	101367	27	Low
MA 13427	462514	101373	76	Low
MA 13428	462511	101379	96	Low
MA 13429	462538	101384	25	Low
MA 13430	462550	101388	23	Low
MA 13431	462541	101394	141	Low
MA 13432	462490	101411	45	Low
MA 13433	462406	101442	188	Low
MA 13434	462403	101449	69	Low
MA 13435	462411	101449	58	Low
MA 13436	462418	101451	87	Low
MA 13437	462399	101451	47	Low
MA 13438	462224	101452	53	Low
MA 13439	462448	101453	23	Low
MA 13440	462384	101454	185	Low
MA 13441	462389	101457	89	Low

MA 13442	462387	101458	26	Low
MA 13443	462369	101461	259	Medium
MA 13444	462380	101461	32	Low
MA 13445	462403	101471	40	Low
MA 13446	462361	101472	90	Low
MA 13447	462412	101473	39	Low
MA 13448	462404	101475	23	Low
MA 13449	462387	101478	199	Medium
MA 13450	462382	101479	173	Low
MA 13451	462337	101487	145	Low
MA 13452	462426	101488	21	Low
MA 13453	462364	101492	193	Low
MA 13454	462334	101506	62	Low
MA 13455	462327	101513	52	Low
MA 13456	462339	101526	34	Low
MA 13457	462303	101526	233	Medium
MA 13458	462314	101527	38	Low
MA 13459	462365	101528	23	Low
MA 13460	462337	101540	87	Low
MA 13461	462349	101552	43	Low
MA 13462	462148	101574	130	Low
MA 13463	462154	101586	40	Low
MA 13464	462113	101587	20	Low
MA 13465	462281	101637	125	Low