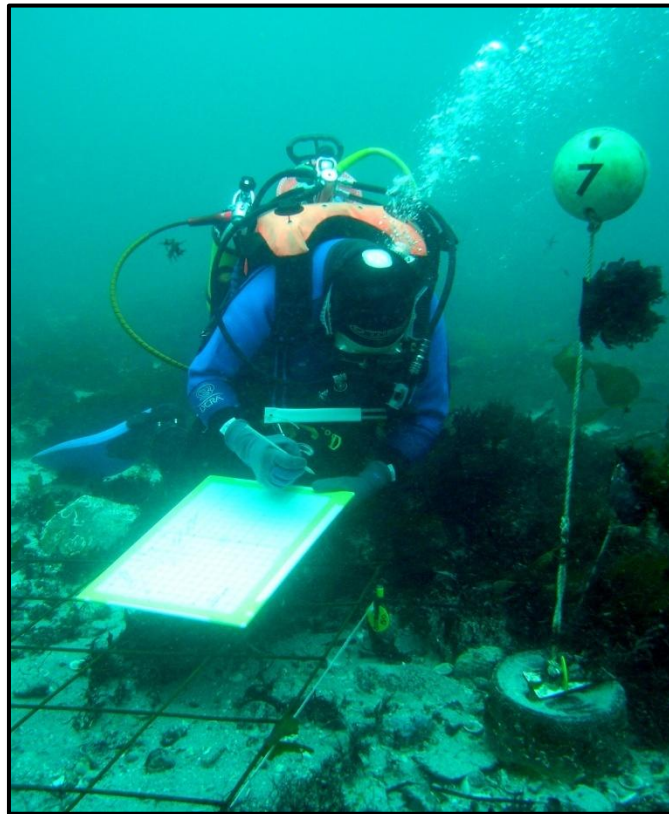


HMS Colossus Monitoring Survey



Project Report 2010

Kevin Camidge



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Reference	EH 5943
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I would also like to extend thanks and gratitude to 3H Consulting Ltd. for providing a copy of Site Recorder which was used to fix the positions of the survey base lines. David McBride was the charter boat operator for the fieldwork phase of the project. Sean Lewis assisted in a number of ways and I am indebted to him for his contribution.

The Team



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Project Name

Colossus Monitoring Survey

Summary Description

There are numerous small artefacts associated with the wreck of *Colossus* exposed on the seabed. The main aim of this project is to record these objects, to survey their current position and monitor their condition. This will allow a proper evaluation of what is present and what the current condition of the exposed objects is. Once this base-line survey of the objects has been made, the amount of object mobility, loss and deterioration can be determined in subsequent monitoring surveys.

A secondary aim of this project is to record the timbers on the western edge of the site which became exposed in August-September 2009. It is important to record these timbers once they become exposed as previous work on the site has demonstrated that they begin to deteriorate as soon as they are exposed. It has been found (Stabilisation Trials 2003-2005) that the main threat to the exposed timbers is from wood boring organisms (Teredo and Limnoria).

Background

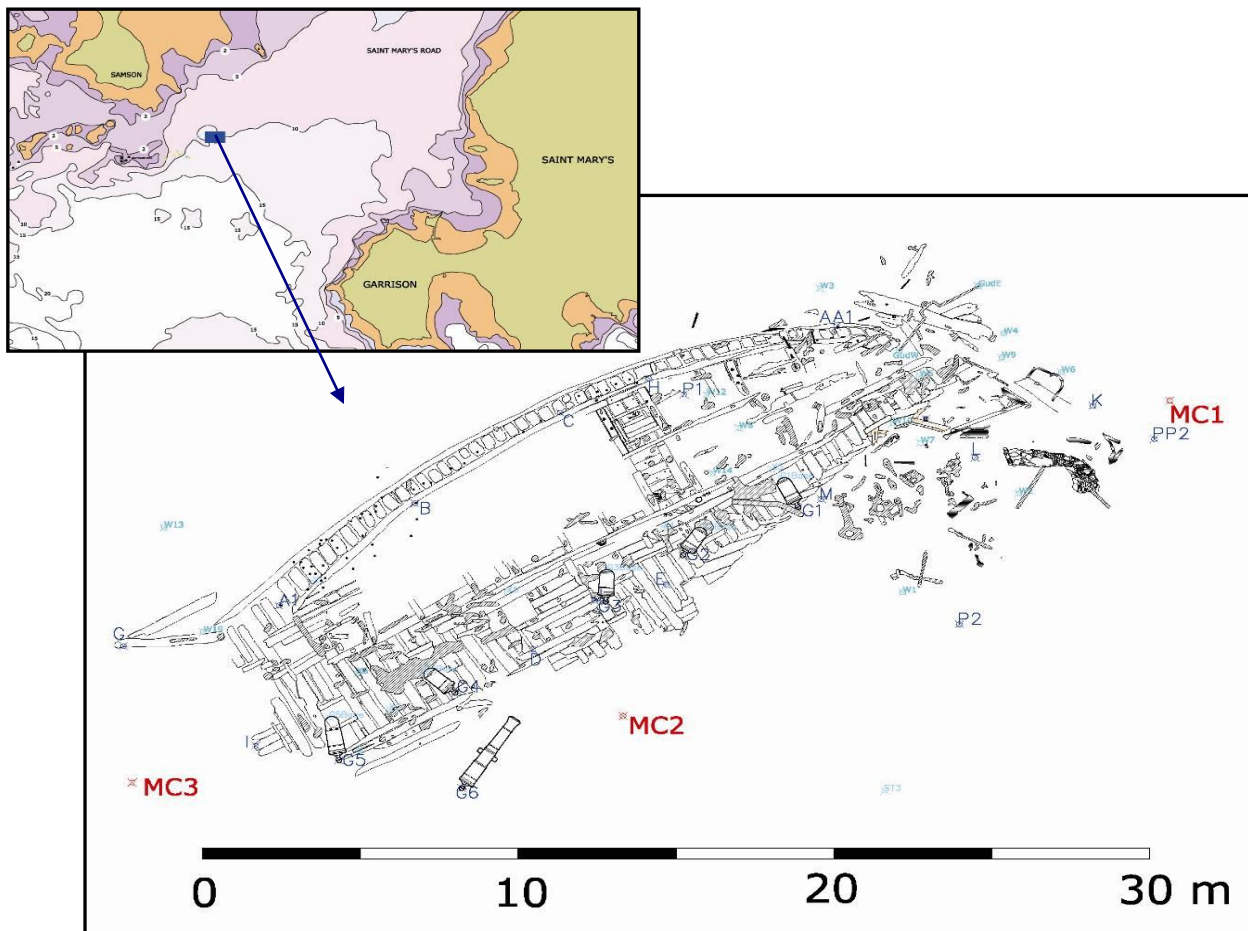


Fig 1 The stern of *Colossus* as drawn in 2003. The inset shows the location in St Mary's Roads, Scilly.

The Ship

HMS Colossus was a 74 gun warship built in 1787 at Gravesend and wrecked off Samson in the Scillies in 1798. These 74 gun ships were one of the most successful types of the period. They were typically about 51m (170 feet) in length and had a crew of over 600. During her relatively short working life (eleven years) *Colossus* saw action at Toulon, Groix, Cape St Vincent and Cadiz. She also took part in the capture of two enemy ships in 1793, *Le Vanneau*, a French 6-gun ship and *Vrai Patriot*. She had no less than nine different captains during her relatively short career. She had a complete refit, which took six months, in 1796.

In December 1798 *Colossus* was on her way home to England with wounded from the Battle of the Nile and with cargo including part of Sir William Hamilton's second collection of Greek pottery. She was sheltering from a gale in St Mary's Roads when the anchor cable parted and she was driven aground to the south of Samson. All but one member of the crew were taken off safely before *Colossus* turned onto her beam ends and proceeded to break up.

Vital Statistics

Length (MGD)	172' 3" (52.5m)
Breadth	47' 9" (14.6m)
Tonnage	1703 tons
Draught (hold)	20' 9½" (6.3m)
Standard armament	28 x 32lb main gun deck 28 x 18lb upper gun deck 14 x 9lb quarter deck 4 x 9lb forecastle
Ballast	110 tons of iron ballast and 250 tons of shingle
Ordered	13 th December 1781
Laid down	October 1782
Launched	4 th April 1787

The Site

The wreck of HMS *Colossus* lies to the south of Samson in the Isles of Scilly. To date two main areas of wreckage have been identified, the bow and the stern. In 1975 part of the wreck (probably the bow) was designated under the Protection of Wrecks Act. This designation was revoked in 1984. The current site, the stern, was designated in 2001, and is located at Latitude 49° 55'.471N, Longitude 006° 20'.505W (260154.906E 5535593.077N UTM zone 30, WGS84).

Previous work

Salvage work took place on *Colossus* from the time of her loss until the early part of last century. Work included Braithwaite and Tonkin 1803-1806, the Dean Brothers in the 1830s and possibly Western Marine Salvage in the early part of last century.

Roland Morris, a marine salvager and proprietor of the Penzance Maritime Museum, began searching for the wreck of *Colossus* in 1967 using a small team of divers. In August 1974 they located material relating to *Colossus*. The site was designated in 1975 under the Protection of Wrecks Act 1973. A large quantity of pottery, remains of Hamilton's second collection, was recovered and deposited in the British Museum – where at least one of these reconstructed pots is now on public display. Once Morris' team had finished their work, the site was de-designated in 1984.

Areas of exposed timber and iron guns were discovered by local divers in 2001. This material was some distance to the east of the area worked by Morris and turned out to be part of the stern of *Colossus*. This was designated in July 2001. Late in 2001 the Archaeological Diving Unit (ADU) excavated at the stern of *Colossus* as well as around a piece of carved timber, which turned out to be one of the stern quarter-pieces of the vessel.

In 2002 a quarter-piece, part of the stern decoration of the vessel, was recovered from the site. This was conserved at the Mary Rose Trust, and has now been returned to Scilly for display on Tresco. Later that year a small excavation was undertaken on the site to establish the nature and extent of the structural remains.

In 2003, a two-year site stabilisation trial was commissioned by English Heritage, to determine the most effective method of slowing down the deterioration of the exposed timbers on the seabed.

In 2004 and 2005 the Cornwall and Isles of Scilly Maritime Archaeology Society (CISMAS) carried out a survey of the debris field surrounding the wreck of *Colossus*.

Between 2002 and 2007 the author carried out monitoring of the sediment levels on the site. This work has demonstrated that the sediment levels around the stern section of *Colossus* have continued to fall throughout this period.

In 2008, a small area at the stern of the wreck was protected with a geotextile covering of Terram 4000. The efficacy of this type of protection on this site was established in the stabilisation trials commissioned by English Heritage (2003-2005). Timber sample blocks were installed beneath the Terram mat and on the seabed. A small seabed sign was also installed to inform visiting divers of the function of the Terram protection. Before the Terram was installed, the area to be covered was

recorded in detail - along with a control area - so that the long term effects of the stabilisation could be determined.

In 2008 a diver trail was installed on the site and an underwater guide book produced, copies of which are held by the local dive charter boats for the use of visiting divers. This work was commissioned by English Heritage.

Sediment levels on and around the site have been monitored since 2003. Levels are recorded on every visit to the site, typically two or three times per year. This allows an objective measure of the continued exposure and deterioration of the timbers of the wreck.

Objectives

Ongoing monitoring of the sediment levels around the wreck has shown that the wreck continues to expose. Once the timber of the wreck is exposed on the seabed, it begins to deteriorate. Consequently, the exposed timber of the wreck has a relatively short life expectancy. Since 2003, the *Colossus* stern site has been the subject of regular visits by recreational divers. Three dive charter boats take visiting divers to the site under a visitor licence issued by DCMS. There are numerous small artefacts associated with the wreck exposed on the seabed; as the sediment levels fall more of these are exposed. Furthermore, ongoing monitoring of the wreck has shown that these objects move around the site and in some cases disappear altogether. To date, only the fabric of the wreck has been recorded in detail.

The main aim of this project was to record the objects exposed on the seabed, to survey their current position and monitor their condition. Once this base-line survey of the objects has been made, the amount of object mobility, loss and deterioration can be determined in subsequent monitoring surveys. This will be useful in monitoring the impact of *policy 1* of the site management plan (Dunkley, 2007) on the more vulnerable artefacts exposed on the seabed. These objects cannot be monitored until a proper record of their current position and condition is made. This is of particular relevance as a number of other diver access schemes are currently being instigated on other protected wreck sites.

A secondary aim of this project was to record the timbers on the western edge of the site which became exposed in August-September 2009. It is important to record these timbers once they become exposed as previous work on the site has demonstrated that they begin to deteriorate as soon as they are exposed. It has been found (Stabilisation Trials 2003-2005) that the main threat to the exposed timbers is from wood boring organisms (Teredo and Limnoria).

Recording

The fieldwork for this project was conducted by the Cornwall and Isles of Scilly Maritime Archaeology Society (CISMAS) under the direction of Kevin Camidge. CISMAS has already carried out work on *Colossus* including a two year survey of the debris field in 2004-5, facilitated by a grant from the Lottery Heritage Initiative. More recently, CISMAS undertook the recording phase of the Stabilisation and Recording Project commissioned by English Heritage and completed in 2007.

CISMAS members have also been involved in the detailed recording of the wreck of *Firebrand* (1707) in Scilly for the last four years. Although CISMAS is an organisation of volunteers, the survey standards achieved by its members is of a very high standard.

Monitoring the exposed artefacts

The objects exposed on the seabed were located, surveyed and recorded by CISMAS divers during six days of diving in July 2010. Ten separate search areas were defined around the wreck (fig 3 below) covering a total area of 608 square metres. Temporary control points were established at each end of each search area. These were positioned by direct measurement from existing site control points – in each case a minimum of four measurements were taken to fix the temporary control points. The control points were then used to hold a base-line, along which 2 x 1m planning frames were positioned. The planning frames were then used to direct the search for artefacts – each square being systematically searched. Once located, the position of each object was recorded as distance along baseline and offset from baseline. These measurements were then plotted on the site plan to provide the coordinates of the object. The time taken to achieve this varied with the amount of weed which had to be cleared and the number of objects to be recorded, but on average 16 square metres per hour were covered by each diver.

Ship structure	113
Loose timber	7
Copper clenched bolts	17
Copper sheathing nails	63
Copper sheathing	6
Iron ring bolts	7
Lead scupper pipes	4
Window glass	9
Rigging	10
Chain plate	1
Blocks	2
Sheaves (wood)	5
Sheave bearings (copper alloy)	2
Small arms	8
Flintlock muskets	5
Musket parts	3
Ammunition	2
Iron shot	2
Miscellaneous	32
Iron concretion	21
Sheet lead	7
Uncertain	4
Personal possessions	8
Tobacco pipe	1
Ceramic	2
Vessel glass	3
Furniture parts	1
Copper lid	1
TOTAL	173

Each object was given a unique, sequential number. The objects were photographed, measured, described and sketched in position on the seabed. In total 173 objects were recorded, and a summary of these objects is given in fig 2 (left). The full record of the objects is reproduced in appendix I. The position of each object was plotted onto the existing site plan (fig 4 and CDROM). The drawings and photographs of all the objects are stored on the CD ROM which accompanies this report.

Fig 2

Summary of the objects located and recorded

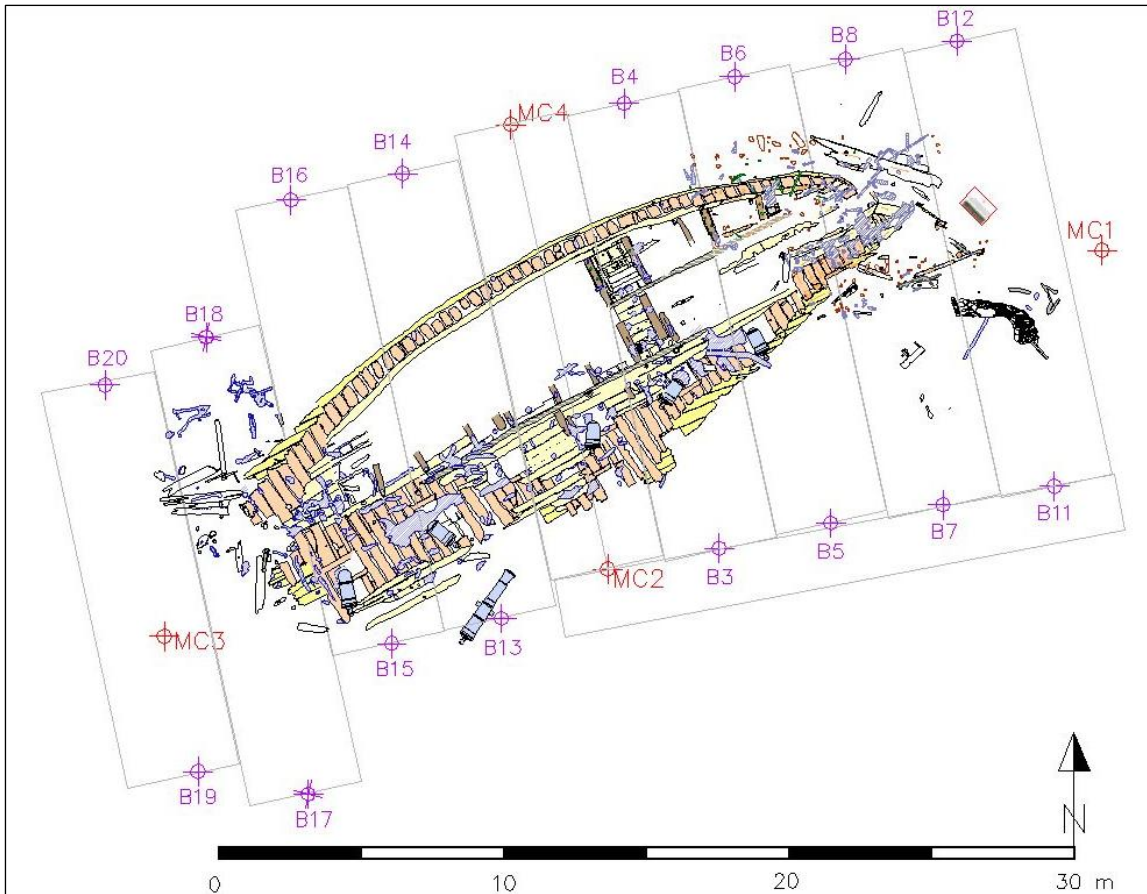


Fig 3 Showing the search areas (in grey) and the control points (in blue) used to undertake the recording of 'portable' objects exposed on the seabed.

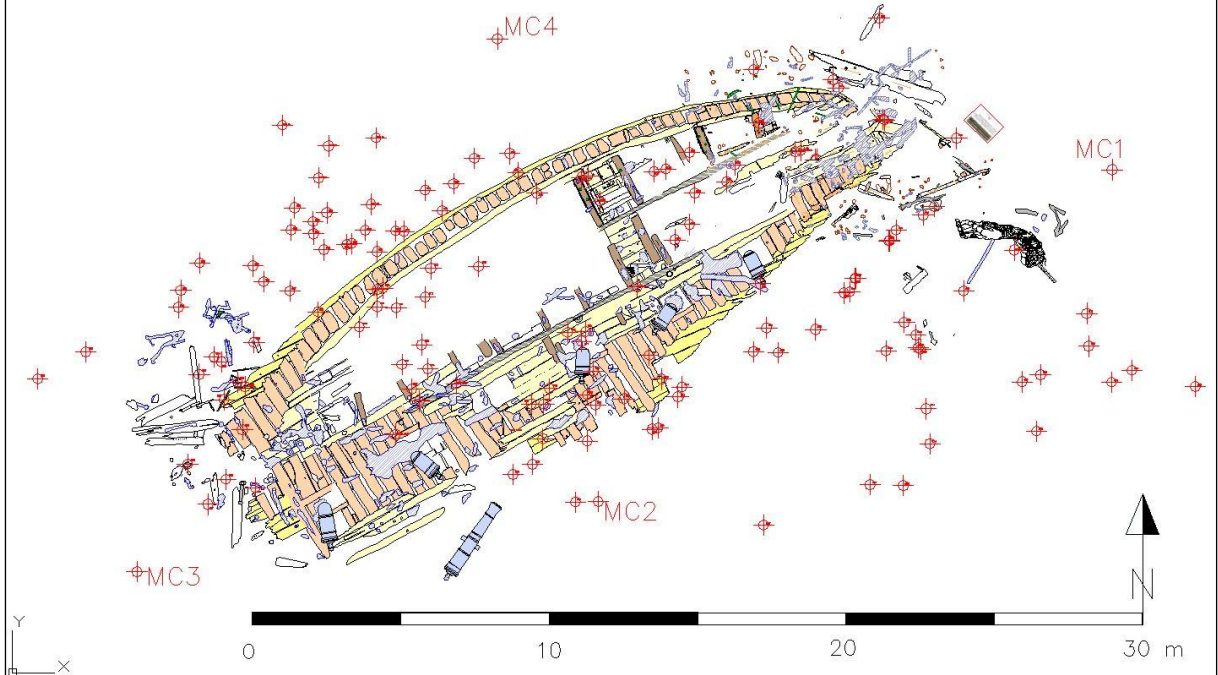
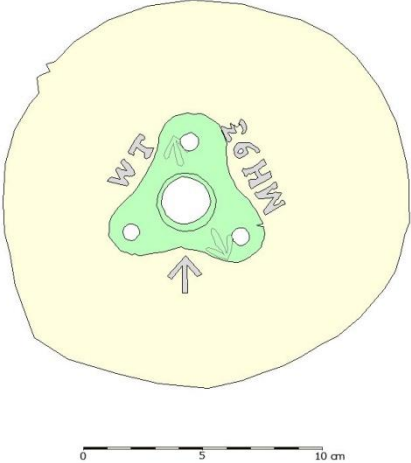
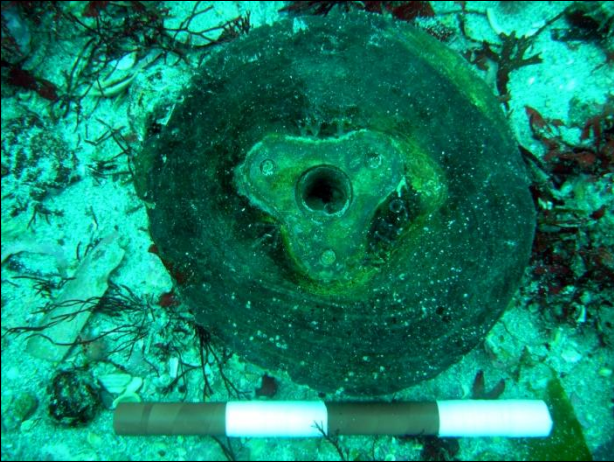


Fig 4 Showing the distribution of the exposed artefacts (in red) relative to the exposed timber and iron or the wreck

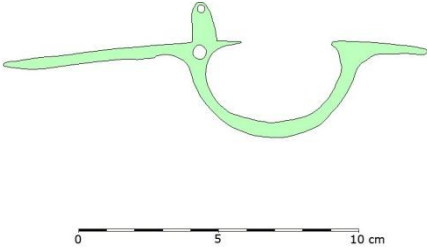
Example photographs and drawings of the objects. The complete collection can be found on the CD ROM which accompanies this report. A full record of every object is reproduced in appendix I of this report.

523 Sheave

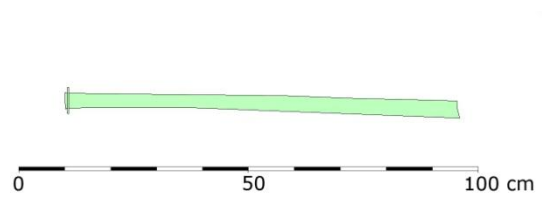
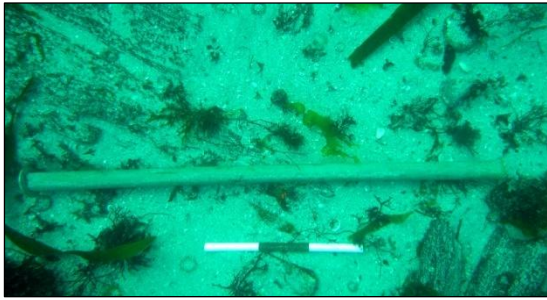


The markings on this block sheave survive very well – WT denotes the manufacturer, Walter Taylor, who made blocks for the Navy under contract in Southampton in the late 18th century. MH93 denotes the date of manufacture, March 1793 (Bingeman, 2010).

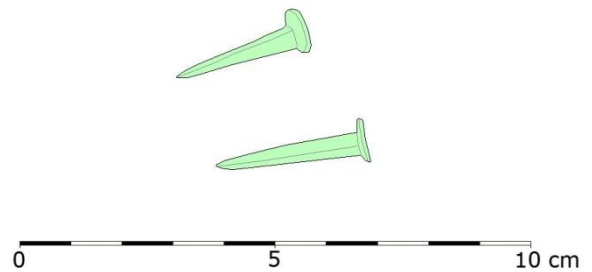
556 Musket trigger guard



629 Copper clenched bolt with rove



636 Copper sheathing nails



The condition of the artefacts was recorded using the NMR FISH/Inscription REP93 condition wordlist (see finds record appendix I). This was determined from the photographs and records made of the object during the diver survey. This will allow comparison when the object is recorded during future monitoring inspections on the site, which in practice will probably involve monitoring a group of selected objects during the routine inspection and sediment monitoring of the site.

Recording of the newly-exposed timber

Approximately 15 square metres of newly-exposed timber was noticed at the western edge of the wreck during routine site monitoring in September 2009 (fig 5). As part of this project the newly-exposed timbers at the western end of the site were recorded by a planning frame survey and the results added to the existing site plan. The planning frame survey was undertaken using 1 x 1m planning frames positioned along baselines. These baselines were fixed by reference to the existing control points on the site. The site drawings were made on A3 mylar sheets at a scale of 1:10 and were then scanned and imported to AutoCAD. As well as recording the newly-exposed timber, a 2m strip of the already-recorded timbers was drawn, allowing an assessment of the deterioration of the wreck since this part of the site was last drawn in 2002.

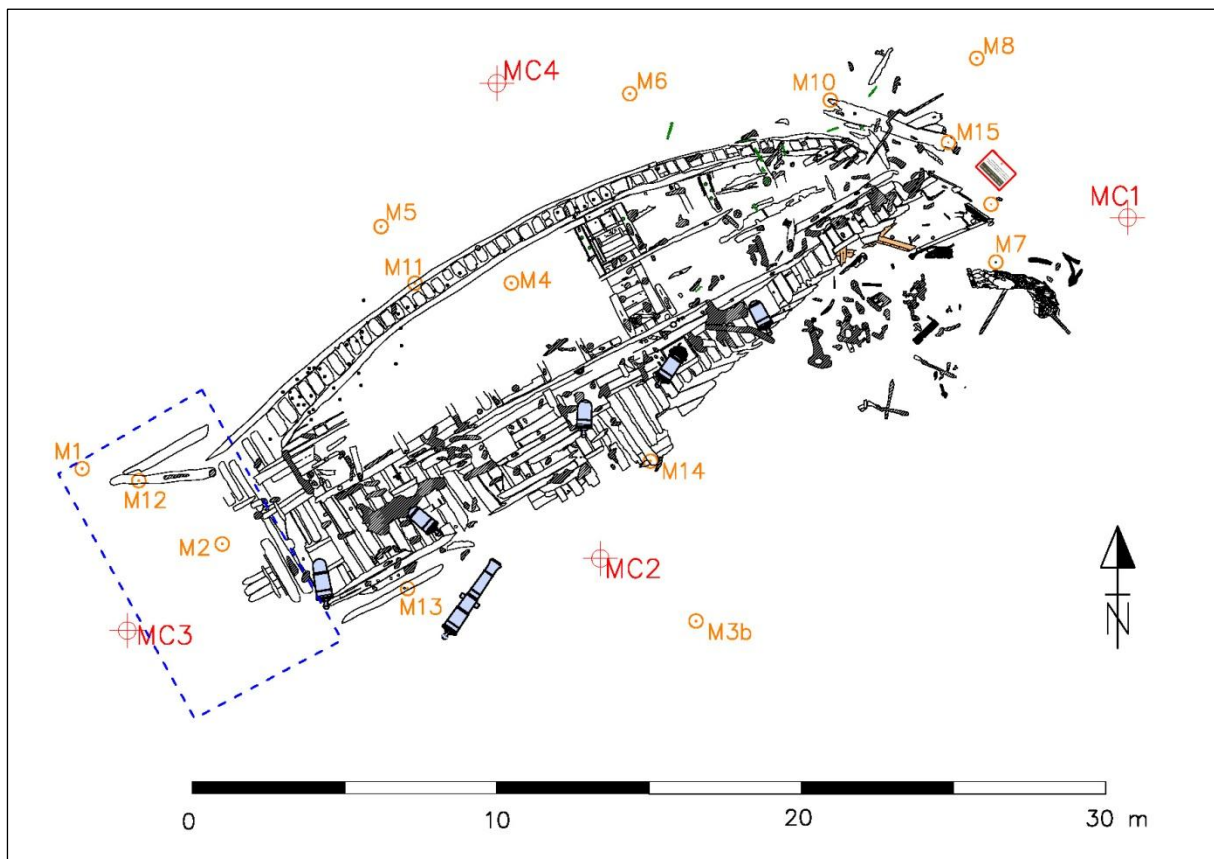


Fig 5 The approximate outline of the area of newly-exposed timber which was recorded as part of this project.

The recording of the newly-exposed timbers has demonstrated that previously buried timbers are now exposed on the seabed. This is due to the documented diminution of the sediment levels around the wreck (see below). As well as the newly exposed timbers, previously exposed timber has now decayed and areas previously recorded are now missing. Previously buried iron structures were also recorded, notably part of the main mast shroud chains. The extent of these changes can best be judged by comparing fig 5 – the plan existing in 2009 – with the site plan after the newly-exposed timber was recorded this year – fig 6 below.

Fig 6 Site Plan 2010



Monitoring of the sediment levels

Routine monitoring of the sediment levels around the wreck was undertaken on two separate occasions this year – on 24th July and 31st August. These results are shown along with previous readings in the form of bar charts - figs 7 and 8 below. These charts confirm the impression gained by regular divers on the site that the sediment levels have fallen considerably over the last 12 months. The recorded fall in levels since September 2009 is one of the most marked recorded to date.

One of the most noticeable exposures noticed this year was in the central part of the site. Previously the timber in this area was almost entirely buried; new timber is now exposed over much of this area. Consideration should be given to the recording of this timber before it suffers decay – previous work (Camidge, 2005a) has shown that this newly exposed timber will be severely damaged and eroded within 18 months of exposure by wood boring organisms.

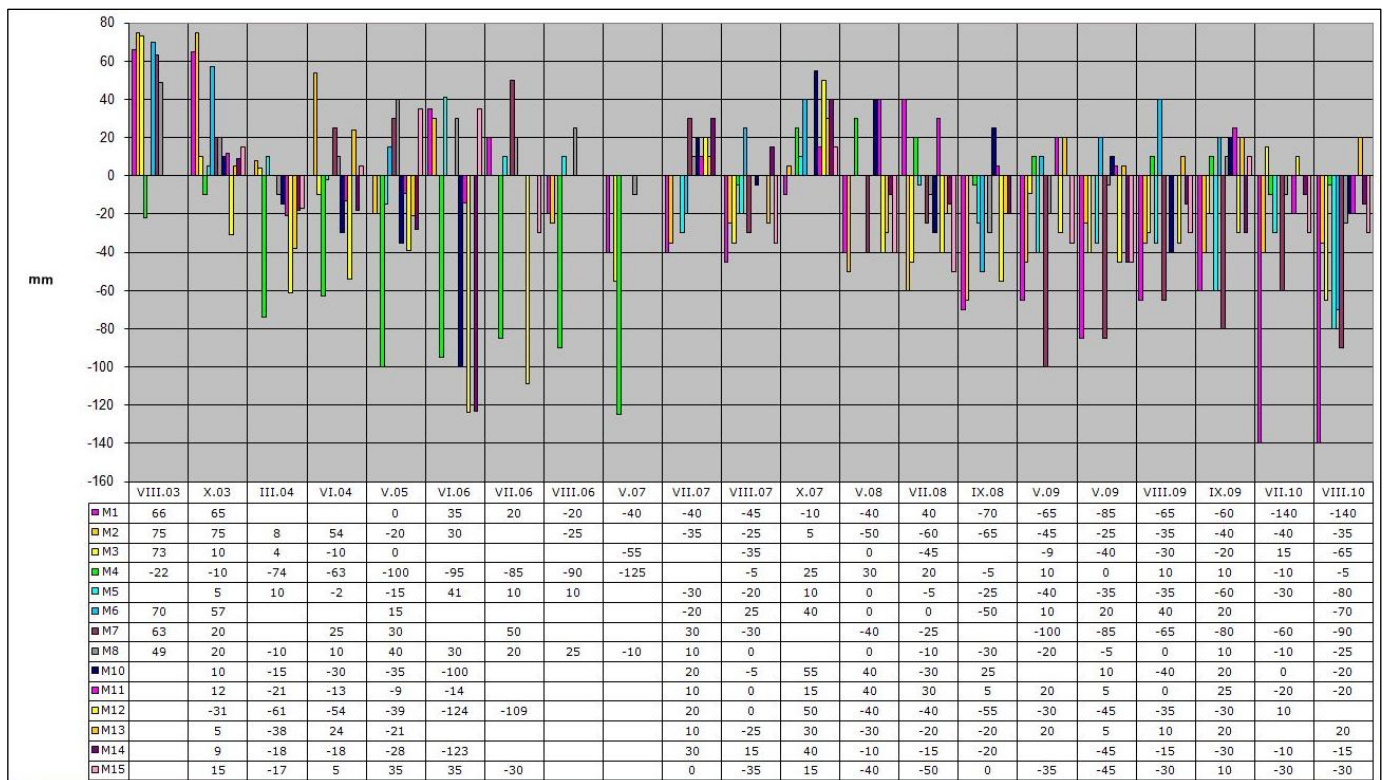


Fig 7 Bar chart of sediment level changes relative to May 2003 for M1 to M8; August 2003 for M10 to M15. Values shown are in millimetres; positive values denote a rise in seabed level (relative to 2003) while negative values denote a fall in seabed levels (relative to 2003).

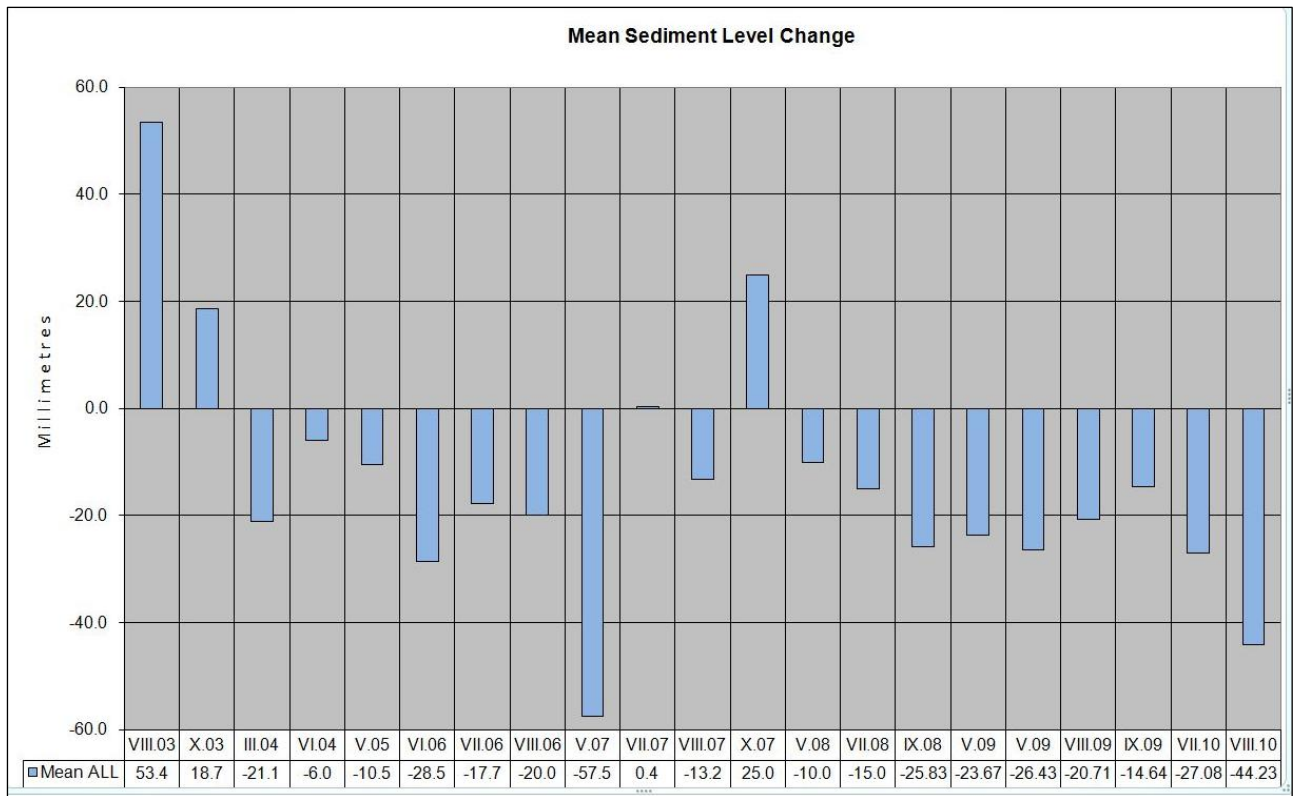


Fig 8 Bar chart showing the mean overall change in seabed sediment level (relative to the level in 2003) for all monitor points. All values are in millimetres. Zero represents the seabed level in 2003; negative values denote a mean fall in sediment levels, positive values a mean rise in sediment levels

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The DVD ROM

Contents of the DVD ROM	
Content	Format
Finds photographs	JPEG, stored in folders by find number
General Photographs	JPEG
Finds drawings	PNG
2010 Site plan	PDF
Finds distribution plan	PDF
Condition list (REP93)	PDF
Report (this report)	PDF

Appendix I – Finds Record

The following table gives the metadata for the finds record reproduced below. This table is a subset of the full finds record – which is reproduced in full on the accompanying DVD ROM.

Data Field	Data type	Notes and NMR Thesaurus
ID No	Numeric	Unique identifier. Note that some numbers in the sequence were not used – in which case the record is marked NOT USED
O class	Text	Object class in <mda archaeological objects> or <Test thesaurus fixtures and fittings – Ship fittings> where relevant entries exist
O type	Text	Object type in <mda archaeological objects> or <Test thesaurus fixtures and fittings – Ship fittings> where relevant entries exist
O name	Text	Object name - Preferred term in <mda archaeological objects> or <test thesaurus fixtures and fittings – ship fittings> where relevant entries exist
Material	Text	<NMR Main building materials> where relevant entries exist. NB Copper alloy has been added
Nos	Numeric	Where multiple and numerous identical objects exist (eg five musket balls) this field shows how many there are.
Description	Text	Description of the object
Condition	Text	<REP93 condition>
DIM	Text	Dimensions in mm
Position	Text	Gives the position of the centre of the object as UTM zone 30 WGS84. (the positions are in metres)

ID No	O Class	O Type	O Name	Material	Nos	Description	Condition	Dim (mm)	Position
500						NOT USED			
501			Object	Iron	1	Iron concretion, partly hollow.	Poor	150x120x70	260150.88 5535579.31
502	Armour and weapons	Ammunition	Grape Shot	Iron	1	Iron concretion containing a number of iron grape? shot.	Fair	300x250x10	260149.42 5535580.58
503	Ship structure		Timber	Wood	2	Two pieces of wood with hole, mobile on the seabed.	Poor	40x10x50	260149.80 5535582.22
504	Unassigned		Object	Iron	1	Iron concretion - Flat bottom with hole	Poor	230x150x10	260149.39 5535582.62
505	Unassigned		Object	Iron	1	Heavily concreted iron.	Poor	430x220x10	260149.99 5535583.14
506	Ship structure	Fastenings	Clenched Bolt	Copper	1	Copper fastening bolt. One end worn, the other flattened by hammering	Fair	320x20 dia	260148.95 5535590.40
507	Ship structure	Fastenings	Nail	Copper	2	Copper sheathing nails	Good	34x11	260147.47 5535590.90
508	Ship fittings	Rigging fittings	Sheave bearing	Copper alloy	1	Sheave bush (COAK) from the centre of a wooden sheave	Fair	50x11	260148.66 5535591.06
509	Unassigned		Object	Iron	1	Unidentified iron concretion	Poor	100x100	260151.55 5535582.58
510	Unassigned	Fastenings	Object	Iron	1	Piece of Iron bar, moderately concreted	Very bad	400x150	260151.48 5535583.72
511	Unassigned		Object	Copper	1	Curved copper vessel or possibly cladding , riveted along one edge	Fair	230x130 - external dia 230 - internal dia 190	260151.08 5535584.73
512	Unassigned		Fe Concretion	Iron	1	piece of iron rod	Very bad	180x40	260150.61 5535585.03
513	Unassigned		Fe Concretion	Iron	1	Piece of iron concretion with hole running through it	Poor	300x150x	260153.46 5535581.77

ID No	O Class	O Type	O Name	Material	Nos	Description	Condition	Dim (mm)	Position
514	Ship structure		Object	Wood	1	piece of wood	Very bad	200x50	260153.66 5535581.81
515	Ship structure		Object	Wood	1	piece of wood	Very bad	200x150	260151.27 5535582.93
516	Unassigned		Sheet lead	Lead	1	Lead sheet	Poor	250x150x3	260152.52 5535582.79
517	Ship structure	Fastenings	Clenched Bolt	Copper	1	Copper bolt, clenched at one end	Fair	350x20 Ø	260151.30 5535590.30
518	Ship structure	Fastenings	Clenched Bolt	Composite	1	Copper nail with wood attached	Fair	320x20	260149.58 5535589.72
519	Ship structure	Hull	Metal hull sheathing	Copper	1	copper plate with 2 square nail holes in it	Poor	50x50x1	260151.22 5535585.06
520	Ship fittings	Rigging fittings	Double sheave and pin	Wood	1	Two wood block sheaves, side-by-side with wooden axle pin	Good	165mm dia - 160 pin length - 30 pin dia	260152.95 5535586.56
521	Armour and weapons	Musket	Flintlock musket	Iron	1	Musket barrel and pan?	Poor	120x580	260151.08 5535590.26
522	Ship structure	Hull	Metal hull sheathing	Copper	1	Copper sheathing with square sectioned nail holes	Fair	200 x 180 x 1	260156.72 5535583.16
523	Ship fittings	Rigging fittings	Sheave	Wood	1	Sheave with copper alloy bearing (3 lobe type). Marked WT, MH93 with broad arrow. WT=Walter Taylor. MH93=March 1793	Good	160 dia, 18 thick	260154.73 5535588.66
524	Ship structure	Fastenings	Nail	Copper	1	Copper sheathing nail, round head with square sectioned shank	Good	40 x 4	260154.23 5535588.15
525	Architecture	Architectural fragment	Window glass	Glass	1	Fragment of flat window glass	Fair	110x100x3	260154.96 5535589.72
526	Ship structure	Fastenings	Clenched Bolt	Copper	1	Copper bolt, clenched at one end	Fair	350 x 20 Ø	260193.92 5535590.14
527	Ship fittings	Rigging fittings	Sheave	Wood	1	Sheave with circular copper alloy bearing with four fastening holes	Poor	180 dia x 20 thick	260153.52 5535590.45
528	Ship structure		Plank	Wood	1	Plank with three surviving nail holes	Poor	70x40x1000	260154.22 5535591.09

ID No	O Class	O Type	O Name	Material	Nos	Description	Condition	Dim (mm)	Position
529	Unassigned		Unidentified	Composite	1	Wood and Iron concretion	Very bad	500x250x150	260156.87 5535584.38
530	Unassigned		Architrave	Wood	1	Fragment of eroded timber moulding	Poor	115x35x18	260157.71 5535584.35
531	Ship fittings	Unassigned	Ring bolt	Iron	1	Corroded iron ring with part of the iron bolt still attached.	Poor	230x30	260153.37 5535584.26
532	Ship fittings	Unassigned	Ring bolt	Iron	1	Heavily concreted iron - ring bolt?.	Very bad	30x160x10	260151.71 5535589.45
533	Ship fittings		Scupper pipe	Lead	1	Length of curved lead pipe - probably scupper	Fair	760x350x40	260154.34 5535582.85
534	Ship fittings	Unassigned	Ring bolt	Iron	1	Iron ring and long bolt	Poor	40x120x10	260154.47 5535583.19
535	Ship structure	Hull	Metal hull sheathing	Copper	1	Piece of copper sheet with three worn circular holes	Poor	220x100	260161.12 5535595.62
536	Ship structure	Fastenings	Nail	Copper	1	Copper sheathing nail, round head with square sectioned shank	Fair	40x10	260161.30 5535592.18
537	Architecture	Architectural fragment	Window glass	Glass	1	Fragment of window glass	Fair	80x70 - 5mm thick	260161.26 5535592.21
538	Architecture	Architectural fragment	Window glass	Glass	1	Fragment of window glass	Fair	130x40 - 5mm thick	260159.93 5535586.36
539	Ship fittings		Scupper pipe?	Lead	1	Fragment of lead pipe	Poor	270x160x 150deep	260158.97 5535590.85
540	Ship structure	Hull	Metal hull sheathing	Copper	1	Copper hull sheathing with eroded nail holes	Fair	520x160x2	260156.89 5535593.88
541	Ship structure	Hull	Metal hull sheathing	Copper	1	Eroded and bent copper hull sheathing with nail holes	Poor	150x100	260163.98 5535586.47
542	Ship structure	Fastenings	Clenched Bolt	Copper	1	Very eroded copper bolt, one end rounded and the other pointed	Poor	160x20	260158.29 5535591.12
543	Ship structure	Fastenings	Clenched Bolt	Copper	1	Copper bolt, clenched at one end	Fair	410x30	260157.07 5535592.08
544	Container	Food serving container	Plate	Ceramic	1	Fragment of white glazed pottery, plate rim?	Fair	80x40x4	260162.61 5535588.98
545	Unassigned		Sheet lead	Lead	1	Piece of lead sheet	Poor	200x120x3	266162.98 5535589.27

ID No	O Class	O Type	O Name	Material	Nos	Description	Condition	Dim (mm)	Position
546	Unassigned		Object	Composite	1	Wood with part of lead object attached	Very bad	380x180	260159.01 5535590.85
547	Container		Vessel	Glass	1	Fragment of glass base with part of circular body	Fair	50x70 - 3mm thick	260158.49 5535591.16
548	Unassigned		Sheet lead	Lead	1	Fragment of lead sheet	Poor	120x150	260158.98 5535585.13
549	Ship fittings	Unassigned	Ring bolt	Iron	1	Fragment of an iron ring bolt	Poor	70x50	260160.14 5535586.40
550	Unassigned		Object	Iron	1	Fragment of iron tube or pipe	Very bad	40x50	260157.33 5535585.18
551	Armour and weapons	Musket	Ramrod feral	Copper alloy	1	Musket ramrod feral	Fair	41x12	260157.11 5535586.67
552	Architecture	Architectural fragment	Window glass	Glass	1	Fragment of window glass	Fair	58x17x4thick	260155.98 5535590.11
553	Ship fittings	Unassigned	Ring bolt	Iron	1	Iron ring, part of a ring bolt	Poor	230x60	260156.25 5535590.68
554	Container		Vessel	Glass	1	Fragment of vessel glass	Fair	38x35x2thivk	260162.71 5535582.45
555	Unassigned		Sheet lead	Lead	1	Lead sheathing with nail holes along one edge	Poor	200x70x2	260161.36 5535584.41
556	Armour and weapons	Musket	Musket	Copper alloy	1	Musket trigger guard	Good	155x50	260162.53 5535584.46
557	Unassigned		Object	Copper	1	curved copper strip	Fair	155x12x1	260162.44 5535584.51
558	Architecture	Architectural fragment	Window glass	Glass	1	Fragment of window glass	Fair	61x42x54	260161.97 5535585.36
559	Architecture	Architectural fragment	Window glass	Glass	1	Fragment of window glass	Fair	80x40	260145.81 5535589.82
560	Ship fittings	Unassigned	Ring bolt	Iron	1	Iron ring bolt	Poor	80 w 20cm dia	260146.76 5535590.04
561	Ship structure	Fastenings	Nail	Copper	1	Round headed copper nail with square sectioned shank - sheathing nail	Good	40 long - head 9 dia	260148.77 5535580.23
562	Unassigned		Object	Wood	1	Timber fragment	Poor	550x110	260146.86 5535583.29
563	Container		Lid?	Copper	1	Domed, circular copper lid?	Fair	40	260145.99 5535587.19

ID No	O Class	O Type	O Name	Material	Nos	Description	Condition	Dim (mm)	Position
564	Ship fittings	Rigging fittings	Double block	Wood	1	Two wood sheaves and the remains of timber block. Sheaves have circular copper alloy bearings	Fair	180 dia	260147.61 5535587.25
565	Ship structure	Fastenings	Nail	Copper	1	Copper sheathing nail	Good	40	260146.39 5535589.13
566	Unassigned		Object	Iron	1	Iron Concretion	Poor	350x230	260145.61 5535582.71
567	Unassigned		Object	Iron	1	Hollow iron concretion - possibly tube or pipe	Very bad	280x50	260145.36 5535583.12
568	Unassigned		Object	Iron	1	Iron Concretion	Poor	130x140	260145.89 5535583.80
569	Unassigned		Object	Iron	1	Iron Concretion	Very bad	290x140	260145.02 5535583.80
570	Unassigned		Object	Iron	1	Iron Concretion	Poor	270x230	260145.68 5535584.61
571	Dress and personal accessories	Pipe (smoking)	Tobacco pipe	Ceramic	1	Fragment of clay pipe stem	Fair	30x5dia	260144.83 5535585.86
572	Unassigned		Object	Iron	1	Iron Concretion	Poor	320x180	260145.81 5535586.21
573	Ship structure	Fastenings	Clenched Bolt	Copper	1	Very eroded copper bolt, clenched at one and the other end pointed	Poor	190x30	260144.19 5535585.90
574	Ship structure	Fastenings	Clenched Bolt	Copper	1	Copper bolt with one end clenched and the other end chisel tapered	Good	310x20	260144.38 5535586.52
575	Ship structure	Fastenings	Nail	Copper	1	Copper sheathing nail, round head with square sectioned shank	Fair	40	260144.19 5535586.47
576	Ship structure	Fastenings	Nail	Copper	1	Copper sheathing nail, round head with square sectioned shank	Good	40	260144.18 5535587.75
577	Unassigned		Sheet lead	Lead	1	Sheet lead, two nail holes	Poor	110x68x2	260165.95 5535583.36
578	Unassigned		Sheet lead	Lead	1	Lead sheathing with nail holes along the edges	Fair	210x30x2	260165.69 5535587.81

ID No	O Class	O Type	O Name	Material	Nos	Description	Condition	Dim (mm)	Position
579	Ship structure	Fastenings	Clenched Bolt	Copper	1	Copper bolt, clenched at one end	Fair	450x20	260163.74 5535591.57
580	Architecture	Architectural fragment	Window glass	Glass	1	Fragment of window glass, pale green	Fair	130x35x5	260160.33 5535586.85
581	Architecture	Architectural fragment	Window glass	Glass	1	Fragment of window glass, pale green	Fair	110x70x5	260161.47 5535588.12
582	Ship fittings	Rigging fittings	Sheave	Composite	1	Wooden sheave with attached iron concretion	Poor	280x75	260162.37 5535584.94
583	Armour and weapons	Firearm	Butt Plate	Copper alloy	1	Musket butt plate	Good	125x15x5	260160.32 5535586.84
584	Container	Food serving container	Plate	Ceramic	1	White glazed pottery fragment - part of a plate	Fair	36x20x10	260161.46 5525588.12
585	Architecture	Architectural fragment	Window glass	Glass	1	Very pale green frag of window glass	Fair	142x80x5	260161.70 5535588.48
586	Ship fittings	Rigging fittings	Sheave	Wood	1	Sheave	Fair	160 dia	260159.75 5535593.27
587	Ship structure	Fastenings	Clenched Bolt	Copper	1	Clenched bolt	Fair	910x35 dia	260159.56 5535593.54
588	Armour and weapons	Ammunition	Shot	Iron	1	Concreted solid round shot	Poor	90dia	260144.79 5535581.59
589	Ship structure	Fastenings	Clenched Bolt	Copper	1	Copper bolt, slightly bent into an 'S' shape. Clenched at one end	Fair	320x20	260143.58 5535585.21
590	Ship structure	Fastenings	Clenched Bolt	Composite	1	Clenched bolt with attached timber.	Fair	430x40x20	260142.20 5535585.72
591	Ship structure	Fastenings	Nail	Copper	1	Round headed copper nail with square sectioned shank - sheathing nail	Good	40	260143.33 5535588.03
592	Ship structure	Fastenings	Nail	Copper	1	Round headed copper nail with square sectioned shank - sheathing nail	Good	40	260143.16 5535587.99
593	Ship structure	Fastenings	Nail	Copper	1	Round headed copper nail with square sectioned shank - sheathing nail	Good	40	260142.38 5535587.81

ID No	O Class	O Type	O Name	Material	Nos	Description	Condition	Dim (mm)	Position
594	Ship structure	Fastenings	Nail	Copper	2	Round headed copper nail with square sectioned shank - sheathing nail	Fair	40	260142.04 5535583.35
595	Ship structure	Fastenings	Nail	Copper	3	Round headed copper nail with square sectioned shank - sheathing nail	Good	40	260142.02 5535588.76
596	Ship structure	Fastenings	Nail	Copper	2	Round headed copper nail with square sectioned shank - sheathing nail	Good	40	260142.49 5535589.07
597	Ship structure	Fastenings	Nail	Copper	1	Round headed copper nail with square sectioned shank - sheathing nail	Fair	40	260141.40 5535589.23
598	Ship structure	Fastenings	Nail	Copper	1	Round headed copper nail with square sectioned shank - sheathing nail	Good	40	260142.54 5535591.31
599	Ship structure	Fastenings	Nail	Copper	1	Round headed copper nail with square sectioned shank - sheathing nail	Good	40	260142.21 5535590.24
600	Ship structure	Fastenings	Nail	Copper	1	Round headed copper nail with square sectioned shank - sheathing nail	Good	40	260140.99 5535592.01
601	Ship fittings		Scupper pipe	Lead	1	Lead pipe with flange at each end	Fair	260x50x70	260140.08 55335579.79
602	Ship structure	Fastenings	Nail	Copper	11	Copper nails	Fair	40	260143.79 5535588.47
603	Unassigned		Object	Iron	1	Iron Concretion	Poor	370x110	260144.81 5535588.81
604	Ship structure	Fastenings	Nail	Copper	2	Copper nails	Good	40	260145.09 5535588.43
605	Ship structure	Fastenings	Nail	Copper	4	Copper nails	Good	40	260143.98 5535589.34

ID No	O Class	O Type	O Name	Material	Nos	Description	Condition	Dim (mm)	Position
606	Ship structure	Fastenings	Nail	Copper	1	Copper nail	Fair	40	260144.16 5535591.16
607	Unassigned		Object	Iron	1	Iron Concretion	Uncertain	110x80	260138.48 5535579.23
608	Unassigned		Object	Iron	1	Iron Concretion	Very bad	260x210x60	260137.79 5535580.58
609	Ship structure	Fastenings	Nail	Copper	3	Copper nails	Good	40	260137.79 5535580.58
610	Ship structure	Fastenings	Nail	Copper	4	Copper nails	Fair	40	260139.08 5535580.07
611	Ship structure	Fastenings	Nail	Copper	1	Copper nail	Good	40	260137.48 5535585.87
612	Unassigned		Object	Composite	1	Iron concretion with copper alloy incorporated	Poor	160x14	260137.56 5535586.44
613	Armour and weapons	Musket	Flintlock musket	Composite	1	Flintlock musket - heavily concreted. Wood, iron and copper alloy	Fair	840x130	260171.79 5535583.20
614	Ship structure		Timber	Wood	1	Plank showing signs of moderate to heavy gribble attack.	Poor	2400x260x100	260168.19 5535584.56
615	Ship fittings	Unassigned	Ring bolt	Iron	1	Heavily concreted iron ring and attachment	Poor	400x350x30	260169.65 5535583.75
616	Armour and weapons	Musket	Flintlock musket	Iron	1	Flintlock musket - heavily concreted. Wood, iron and copper alloy	Poor	1370x150x80	260168.97 5535583.35
617	Unassigned		Sheet lead	Lead	1	Bent lead sheet with some nail holes	Fair	550x350	260141.24 5535586.43
618	Ship structure	Fastenings	Nail	Copper	6	Copper sheathing nails	Good	40	260140.36 5535586.74
619	Ship fittings	Rigging fittings	Sheave bearing	Copper alloy	1	Two halves of a copper alloy bearing from a block sheave. One half circular the other four lobed	Good	87x80x12	260139.99 5535587.27
620	Ship structure	Fastenings	Nail	Copper	4	Copper sheathing nails - round head with square sectioned shank	Fair	40	260141.28 5535588.49

ID No	O Class	O Type	O Name	Material	Nos	Description	Condition	Dim (mm)	Position
621	Armour and weapons	Musket	Flintlock musket	Composite	1	Flintlock musket - heavily concreted. Wood, iron and copper alloy	Poor	1220x100	260168.13 5535585.67
622	Armour and weapons	Musket	Flintlock musket	Composite	1	Flintlock musket (top up) - heavily concreted. Wood, iron and copper alloy	Poor	1124x80	260166.57 5535583.60
623	Furnishings and furniture	Furniture fitting	Handle	Copper alloy	1	Crescent shaped round sectioned handle - probably from a small item of furniture or sea chest	Fair	80x40	260166.44 5535581.70
624	Unassigned		Object	Copper alloy	1	Concave disc with square hole - possibly a rove?	Fair	250dia	260162.84 5535521.27
625	Unassigned		Sheet lead	Lead	1	Crumpled lead sheet	Poor	70x40 x3	260161.94 5535579.87
626	Container		Vessel	Glass	1	Small fragment of vessel glass - very pale blue/green	Fair	40x25	260160.81 5535579.89
627	Ship fittings		Scupper pipe	Lead	1	Part of lead scupper pipe - flanged at one end (D shaped flange)	Fair	500x80x80	260134.35 5535584.37
628	Ship fittings	Rigging fittings	Chain plate	Iron	1	Iron Chain plate - aperture for deadeyes visible - probably from main chains	Poor	1100x280x180	260132.73 5535583.46
629	Ship structure	Fastenings	Clenched Bolt	Copper	1	Clenched copper bolt, clenched at both ends - one end has a copper alloy rove still in place	Good	850x70x40	260139.02 5535582.76
630	Ship structure	Fastenings	Clenched Bolt	Composite	1	Copper clenched bolt with wood attached	Fair	360 long w 23x24x10 wood lump	260139.73 5535583.20
631	Ship structure	Fastenings	Clenched Bolt	Copper	1	Copper clench bolt - heavily eroded to a needle point at one end	Poor	580	260139.48 5535583.35
632	Ship structure	Fastenings	Clenched Bolt	Copper	1	Copper clench bolt	Good	340	260139.54 5535581.74

ID No	O Class	O Type	O Name	Material	Nos	Description	Condition	Dim (mm)	Position
633	Ship structure	Fastenings	Clenched Bolt	Copper	1	Copper clench bolt	Fair	670	260138.93 5535584.04
634	Ship fittings	Rigging fittings	Sheave	Composite	1	Sheave with three lobbed copper alloy bearing	Fair	190 dia, 30 wide	260138.68 5535584.20
635	Ship structure	Fastenings	Nail	Copper	3	Copper nails	Good	40	260140.03 5535584.70
636	Ship structure	Fastenings	Nail	Copper	2	Copper nails	Good	40	260138.20 5535587.37
637	Ship structure	Hull	Metal hull sheathing	Composite	1	Copper sheathing, timber and iron concretion	Poor	170 x 100 x 70	260157.27 5535578.53