LONDON GATEWAY CLEARANCE PROGRAMME

DIVING FIRST TRANCHE

FIELD REPORT
66892.5012

Dovenby North
Ref: 5012

1. INTRODUCTION

The wreck of the *Dovenby* is charted in two sections on the seabed, the southern section 5010 and the northern section 5012. Documentary and geophysical investigations of the wreck have suggested that the two sites (5010 and 5012) are two vessels. The southern site 5010 corresponds to the dimensions of the *Dovenby*, and therefore it is possible that the northern site (5012) is the wreckage of another unknown vessel.

Sidescan sonar data 2001: The site was located during a sidescan sonar survey in 2001; at that time it consisted of a wreck shaped upstanding anomaly. A large plume of coarse material is apparent to the east of the northern end of the target. The anomaly is 35 metres long and 15 metres wide, no length of shadow was recorded.

Sidescan sonar data 2002: the site was identified during a sidescan sonar and magnetometer survey, as the northern part of the Dovenby. The anomaly is 30 metres long and 50 metres wide and no length of shadow was recorded.
Multibeam data 2005: In 2005 a multibeam bathymetric survey was undertaken over the site of the Dovenby. Site 5012 is slightly diamond shaped with a large scour pit at the northern end. It is orientated north-north-west by south-south-east. The site consists of a section of wreckage 55 metres long, 17 metres wide and 3 metres upstanding at the highest point.

The northern most end of the site is located in the scour pit, it stands 5 metres tall and is 7 metres long by 3.5 metes wide. The scour pit, located to the north of the site is 3.5 metres deep, 50 metres plus wide and extends beyond the multibeam coverage.

The southern most point of the site is 6 metres long, 5 metres wide and upstanding by 2 metres at its tallest point. Approximately 17 metres from the southern end of the site there is a gap in the wreckage for approximately 10-14 metres. The western side of the vessel appears to be more continuous at this point.

Previous diving investigations: The PLA dived both sections of the Dovenby in 2005. The divers reported the wreck had been heavily reduced by explosives and cutting. The bow section appeared to be upright with a number of exposed ribs. The stern section was in an extensive and deep scour hole and was lying on its side. Large sections of the deck and side have been cut away. The diver located what was believed to be the vessels rudder and some chain.

2005 UWL dive description: Nigel Nayling, University of Wales, Lampeter (UWL), dived both sections of the Dovenby wreckage. Mr Nayling confirmed the presence of substantial upstanding metal frames, which he believes to be consistent with that of the Dovenby. The structure was reported to be substantially degraded through both intentional clearance and subsequent erosion.

2006 WA dive description: The site was dived again on 15th August 2006. Two WA divers were integrated into the PLA dive team. A Sonardyne SCOUT acoustic tracking system and the WA in house recording system were installed on the diving vessel.

Debris including distorted metal plate was encountered in the south-east part of the site and followed in a north-westerly direction. The plate was upstanding by c. 2 metres. This is most likely to be the hull of the vessel.

It was noted that the wreckage was more upstanding in the north of the site. Steel plates in the centre of the wreck were standing 1.5 metres proud of the seabed, while the hull plating in the north-east was found to stand up to 3 metres proud of the seabed.

2. DIVE OBJECTIVES

Confirm the extents of the site through diver tracking and measurement; record as many diagnostic features as possible in order to confirm whether the site is part of the *Dovenby* or not; achieve a basic record of the layout of the site by annotating multibeam and/or sidescan records; assess whether human remains are present on the seabed.

3. DIVE DETAILS

Date and time: 26th November 2007, 7.56
Duration in minutes: 32 minutes bottom time
Underwater visibility: <0.1m
General description of dive: Low water slack

Date and time: 27th November 2007, 8.17
Duration in minutes: 40 minutes bottom time
Underwater visibility: <0.1m
General description of dive: Low water slack
Total dive time: 72 minutes

4. EVIDENCE

During the first dive, the diver made bottom in the southern part of the site. In this area, some metal plate was encountered. It stood approximately 0.4 metres proud of the seabed, was approximately 2-3cm thick and between 1.5 and 2 metres in length. It had a curved shape along its length. The diver thought it might be a fragment of a cylindrical shaped object rather than part of the hull structure. He reported that there were some protrusions on the metal which may have been rivets though there was too much concretion to be certain.

Following this the diver was directed south-east towards the southern end of the site depicted on the multibeam. The diver encountered an area largely devoid of features until he came across an upstanding metal feature. It stood approximately 1 metre proud of the seabed. Further observations were impossible as the current had become unmanageable (spring tide) and the diver had to return to the shot.

The seabed consisted of medium-grained sand and slightly silty sand in places.

During the second dive, the diver examined the northern part vessel. The diver made bottom approximately 10 metres north-east of the northern end of the site and moved south-west into a deep scour. Moving further south, the diver came into contact with an isolated artefact. It was a small corroded iron/steel bar or tube, part buried, with an 'eye' at the exposed end attached to the side of the bar/tube. The diver then came across the metal structure of the vessel.

The northern end of the vessel consisted of a large section of corroded iron or steel plates (*c.* 2-3 metres upstanding) with possible rivets very deeply undercut by scour. No obvious stem or sternpost or form other than ship's plate was exposed. The structure appeared deformed and highly unstable (it moved to light touch), and was therefore not closely examined (Figure 1).

Directly south-east of this the diver encountered thin corroded iron or steel plate with deformed edges. It appeared to be slightly curved, with one part near vertical and one part leaning to the east. It was deeply undercut by scour. At an approximate right angle to this and 'wedged' up under it was a round or rounded iron or steel bar or tube estimated *c.* 0.15 metres in section and *c.* 1 metre long exposed (the lower end was buried). Attached to the upper end of the bar was another slightly smaller section bar at right angles to it (forming a cross shape). It was not clear whether this was attached or passed through the plate (the other side was obscured by debris). The buried end stuck in very firm gravel which was not excavated due to the limited bottom time. It is possible that this feature is a small anchor or rudder post.

South of this the diver came across a large section of thin iron/steel plates leaning slightly west, *c.* 6 metres long and 3.5 metres upstanding. The lower edge was buried. A joint was noted between two overlapping plates running along the long axis (with a slight angle down towards north). One rivet was observed along this joint.

South-east of this the diver reported another large section of corroded iron/steel plate leaning east and highly unstable (and therefore not closely examined). Confused debris was found to the south-east and west of this feature; between and around all these large plates the diver noted a large quantity of metal debris.

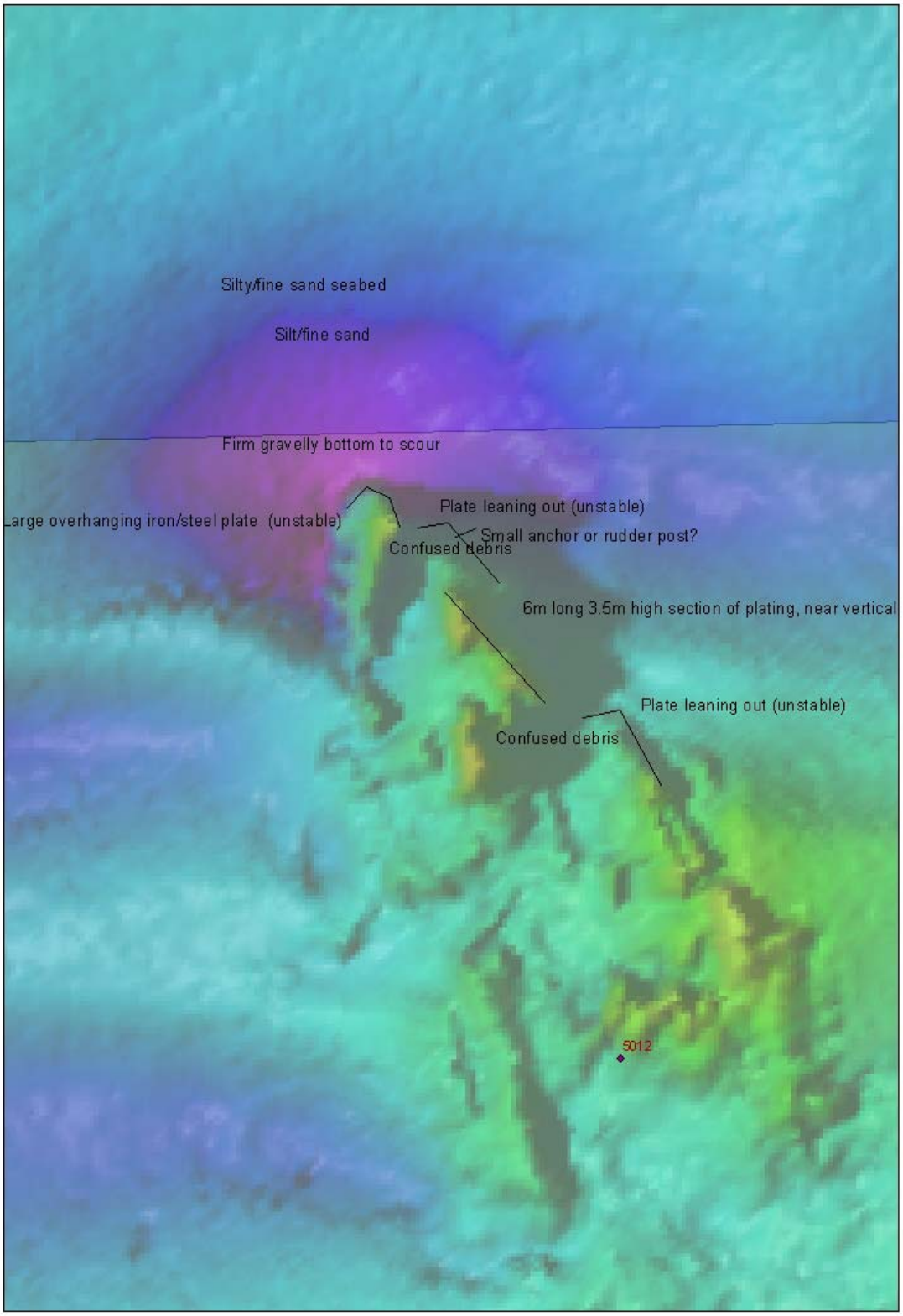
The seabed consisted of fine silty sand. It was scoured deeply at the northern end of the site down to a firm gravelly layer on/in which the wreck sits.

5. INTERPRETATION

The site consists of the corroded and deformed metal wreckage of an iron or steel plated vessel.

During the first dive, the diver explored the southern part of the site. Apart from two upstanding metal features the area appears to be largely devoid of features. This is partly consistent with the multibeam evidence, where this area is depicted as being far less exposed than the northern part of the vessel. It is also possible that features have been covered by sediment since 2005. Major sediment movement on the site is demonstrated by large scour formations to the west, north and south of the vessel. It is not possible to establish whether the diver reached the southernmost tip of the site.

During the second dive, the diver examined the northern part of the site. The exposed structure is clearly the remains of a small to medium riveted or part riveted iron or steel vessel. The structure examined during the dive appears to be one of the ends of the vessel but which end cannot be determined. It is not clear whether the vessel sits upright or is on its side or capsized. The wreckage is deformed and incoherent in places suggesting either a very violent wrecking event or subsequent salvage or clearance.


Silty/fine sand seabed
Silt/fine sand
Firm gravelly bottom to scour
Large overhanging iron/steel plate (unstable)
Plate leaning out (unstable)
Small anchor or rudder post?
Confused debris
6m long 3.5m high section of plating, near vertical
Plate leaning out (unstable)
Confused debris
5012

LONDON GATEWAY CLEARANCE PROGRAMME

DIVING FIRST TRANCHE

FIELD REPORT
66892.5050

Mound over aircraft (?)
Ref: 5050

1. INTRODUCTION

Multibeam (sidescan sonar) evidence: The site consists of an elongated mound almost diamond in shape, orientated east-west. It is 30 (10) metres long, 9 (15) metres wide and 1.4 (1) metres upstanding. The mound has slight scouring to the east which is 40 metres long, 10 metres wide and 0.15 metres deep. On the eastern edge of the mound there is an area of sediment build-up, which is 10 metres long, 15 metres wide and 0.3 metres upstanding.

Previous diving investigation: The PLA dived the site in 2005. A small object was noted protruding from the riverbed, this was excavated and recovered to the surface. The PLA believe it to be a section of an aircraft. The dive report mentions no evidence of the mound which is prominent in the multibeam data. It is therefore difficult to determine if the object recovered by the PLA is associated with the mound.

Dive objectives: Establish presence of site; record perimeter of site; establish material of mound; dig test trench(es); check area beyond geophysical site boundaries for structural elements/artefacts; describe extent of survival/condition of features.

2. DIVE DETAILS

Date and time: 17th November 2007, 10.47am
Duration in minutes: 54 minutes
Underwater visibility: <0.25m
General description of dive: Low water slack

3. EVIDENCE

To the south of the shot the diver located a low mound-like feature of poorly sorted angular to sub-angular cobbles and boulders (estimated maximum dimension encountered 0.5m) of what appeared to be anthracite. The profile of the feature was not measured but found to be fairly shallow, with a general height above the seabed of no more than 0.5m. The edge varied from well to moderately defined. There was some indication of a shallow scour around the edges, on the north side a depression possibly >0.5m deep was recorded. In places probing around the edge of the feature (approximately 1m away from the exposed edge) indicated similar material buried to a depth of up to 0.3m, therefore this feature could be significantly larger than is exposed.

Cobbles sampled in two places (three samples were recovered: 24x10x7cm, 17x10x5cm, 11x11x4cm).

Some soft degraded (possibly plastic) woven material was felt in a couple of places on the edge of the feature. Partly buried under cobles and boulders, this material disintegrated when an attempt was made to sample it. At one point a small area of partially buried strands of what felt like monofilament net or line was encountered.

No other material was located within the mound, especially no metal or possible metal artefacts. The position of the feature appears to correspond with 5050. No indication was found that the feature is a buried aircraft or a wreck. The feature appears more likely to be dumped material.

Finds/Material: Coal cobbles, degraded woven material (plastic bags?).
Distribution of material: Mound of coal, woven material on the edge of the feature.

4. INTERPRETATION

The presence of the feature has been established. The feature is clearly defined and has been tracked for at least 10m E-W. The feature is a mound of coal. Woven material was found on the edge, possibly degraded plastic. Hence, even though the period cannot be exactly determined, it seems more likely that the feature is modern. It appears to be smaller than shown in the geophysical evidence, but probing demonstrated that part of the feature is buried. No evidence for the presence of an aircraft was observed, and the nature of the mound suggests that the presence of an aircraft is highly unlikely. It seems more likely that the possible aircraft part recovered by the PLA is not connected with the feature. At present, the feature seems to be a coal dump, probably from a vessel and possibly modern. Further diving will not provide more information.

LONDON GATEWAY CLEARANCE PROGRAMME

DIVING FIRST TRANCHE

FIELD REPORT
66892.5056

East Oaze Light Vessel
Ref: 5056

1. INTRODUCTION

Sidescan sonar data 2001:
The site consists of a large linear anomaly with spurs/ridges to the south-west and north-east. The dimensions of the anomaly are 20 metres long by 5 metres wide. No length of shadow was recorded.
Sidescan sonar data 2002:
The site was not located inside the 2002 survey area.
Multibeam data 2005:
The remains of the light vessel lie upright on the seabed on a south-west to north-east axis, with the bow to the south-west. The wreck appears generally intact with little scattered debris visible on the multibeam.
The wreck lies in a deep scour with the scour extending to the south-west beyond the multibeam area of coverage. The wreck is 40 metres long, 12 metres wide and 7.5 metres upstanding from the bottom of the scour pit. The stern area is the most intact area of the wreck. It is 8 metres long, 7 metres wide and 5 metres upstanding.
The forward area appears less intact with what may be the remains of the light derrick lying over the bow area. There appears to be the remains of a mooring block alongside the port side of the wreck near the stern. The block is 6.5 metres long by 2.5 metres wide and is 1.7 metres upstanding with the possible remains of a mooring line connecting it to the wreck itself.
The sides of the vessel appear intact along the stern half of the wreck. Forward of the stern itself there is a section that appears intact and is 7 metres in length, 6 metres wide and 1 metre in depth. The port side of the vessel is 1.5 metres higher than the starboard side. The remains of what may be a bulkhead can be seen in the midships section of the wreck.
The deepest point of the scour is by the stern of the vessel and is 23.8 metres in depth, 3 metres below the general depth of the surrounding seabed. The visible scour extends 160 metres in length to the south-west and the general area is 50 x 40 metres.
Sidescan sonar data 2007:
The East Oaze Light Vessel sits relatively intact upright on the seafloor orientated north-east to south-west. The highest part of the wreck is to the west and measures 5.6 metres higher than the surrounding seabed. The central portion of the wreck appears more broken up than either end and debris is obvious lying within 10 metres of the wreck. However, the data suggest a certain amount of fine-detail structure remains. The eastern section of the wreck appears relatively intact and exhibits a height of 2.0 metres.

A further feature is situated 3 metres to the south-east of the wreck and measures 1.1 x 0.7 x 0.5 metres. It is considered that this is a further mooring block and concurs with the position of the feature observed on the multibeam data.
The scour to the south-west of the wreck observed on the multibeam was also observed on the sidescan sonar.
Two linear features are observed extending from either end of the wreck. The linear features are likely to be the anchor chains attached from the vessel to mooring blocks. The western feature extends 213 metres terminating at a mooring block at 362569 E, 5707292 N (UTM). The mooring block measures 1.2 x 0.7 x 0.4 metres. This linear feature lies along the length of the scour.
The eastern feature extends 155 metres terminating at a mooring block at 362935 E, 5707416 N (UTM). The mooring block measures 1.2 x 0.6 x 0.6 metres.

Previous diving investigations:
The PLA dived the site in 2005. The report describes the wreck as orientated on a north-east to south-west axis, with the stern to the north-east. The vessel was of steel construction with a heavy covering of marine growth. It was also reported that there was fishing gear snagged on the vessel between the keel and the seabed. There was no reported damage to the hull and there were still sections of timber fendering in place. There was also evidence of rigging and other debris on the seabed beside the wreck. The report notes that there was zero visibility for the duration of the diving operation.

Dive objectives: Confirm the extents of the site through diver tracking in conjunction with multibeam bathymetry and sidescan sonar data; confirm the presence/absence of coherent structures and features, and of a small finds assemblage; undertake light cleaning, probing and spot sampling if applicable to confirm the nature of the material; achieve a basic record of the layout of the site by annotating multibeam and/or sidescan records; assess whether human remains are present on the seabed.

2. DIVE DETAILS

Date and time: ## November 2007, ####
Duration in minutes: ## minutes bottom time
Underwater visibility: <0.##m
General description of dive: ### water slack

Date and time: ## November 2007, ####
Duration in minutes: ## minutes bottom time
Underwater visibility: <0.##m
General description of dive: ### water slack

3. EVIDENCE

4. INTERPRETATION

LONDON GATEWAY CLEARANCE PROGRAMME

DIVING FIRST TRANCHE

FIELD REPORT
66892.5185/7609

Unknown
Ref: 5185/7609

1. INTRODUCTION

Site 5185 was first reported in 1968, when an 'Ancient Wreck' (PLA files) was cleared from the seabed. The identity of the wreck is not currently known. In 2001 a sidescan sonar anomaly was observed on the site. In the 2002 side scan survey data no anomaly was identified, however scour marks appeared to radiate from the location of the anomaly identified in 2001.
No features were observed during the 2006 and 2007 geophysical surveys.
Since 1968 WA have received no reports of salvage or clearance works carried out on the site.

Site 7609 was first reported in 2001 when it was located during the sidescan sonar survey. The identity of the site is not known. It is located approximately 100 metres to the east of site 5185 and is possibly associated with it. The site was located again in 2006 during the multibeam survey and in 2007 during the sidescan sonar survey of the same area.

Since 2001 WA have received no reports of salvage or clearance works carried out on the site.

The diving operations targeted site 7609.

2. GEOPHYSICAL SURVEY DESCRIPTION

Sidescan sonar evidence 2001: The site consists of a strong reflector with associated plume. The anomaly is 1 metre long and 7 metres wide.

Sidescan sonar evidence 2002: The original analysis of the 2002 survey data did not identify the 2001 anomaly. Further analysis of the 2002 data in 2006 revealed two parallel dark linear reflectors. The southern feature is 9 metres north of the 2001 side scan position. The southern feature is 13 metres long and 0.8 metres wide. The northern feature is 16.5 metres long and 0.8 metres wide. The features are 12 metres apart.

Sidescan sonar evidence 2007: The 2007 data indicates a faint anomalous reflector measuring 18.2 x 3.8 metres, orientated north-east by south-west, within an area of sandwaves. The feature exhibits no height. Two faint linear reflectors are observed to the north of this feature situated 8 metres and 13 metres from the bigger feature respectively. Both linear reflectors are around 20 metres long.

Multibeam evidence 2006: Two linear parallel features were identified. The southern linear feature is 14 metres long, 4.5 metres wide and 0.15 metres upstanding. The northern linear feature is located 5 metes to the north and is 15 metres long, 3 metes wide and 0.2 metres upstanding. It is possible that the northern feature in the multibeam data corresponds to the southern feature in the 2002 sidescan data. The 2006 multibeam data clearly illustrates the edge of the channel, this coincides with the northern feature identified in the 2002 sidescan data thus suggesting the 2002 feature was part of the channel edge and therefore natural in origin.

3. DIVE OBJECTIVES

Establish the type of site; confirm the extents of the site through diver tracking and measurement; establish the presence/absence of coherent structures and features, undertake light cleaning, probing and spot sampling (if applicable) to confirm the nature of the material; achieve a basic record of the layout of the site by annotating multibeam and/or sidescan records.

4. DIVE DETAILS

Date and time: 24th November 2007, 18.45
Duration in minutes: 29 minutes bottom time
Underwater visibility: <0.1m
General description of dive: Low water slack

5. EVIDENCE

The diver made bottom *c.* 7 metres south of the target and headed towards the target. When no evidence of a feature was encountered, the diver started to conduct systematic semicircular searches of the area north of the shot line at 5, 10 and 15 metres intervals.

No archaeological features or artefacts were observed. A very small loose fragment of worked soft wood (*c.* 5x1.5x0.3cm) was found lying on top of the silty seabed; it was clearly only recently waterlogged.

Systematic probing was conducted along with the search. The diver reported the seabed to be soft or very soft silt over a gravelly surface. According to the probe, the depth of the silt varied from 0.1 to 0.4 metres. No significant slope or height variation was detected; accordingly, the diver's pneumo consistently indicated a depth of 10 metres. However, the variable depth of silt probably indicates very slight waves of silt over a flat gravel surface, or slight gravel ridges under a level surface of silt.

6. INTERPRETATION

Systematic semicircular searches combined with probing suggest that the linear features seen in the multibeam data are very probably natural in origin.

LONDON GATEWAY CLEARANCE PROGRAMME

DIVING FIRST TRANCHE

FIELD REPORT
66892.5230

Unknown (Brick Barge)
Ref: 5230

1. INTRODUCTION

The UKHO have officially charted the remains of site 5230 as a possible brick barge, based on letters received from the PLA in 1922.

Sidescan sonar data 2001: Site 5230 was situated within the 2001 sidescan sonar survey area, but it was not identified during the survey.

Sidescan sonar data 2002: At the original location of 5230 nothing was identified in the sidescan sonar data. However, an anomaly was identified 100 metres to the east. The site consists of a dark reflector which is irregular in shape. The feature is 7 metres long, 4 metres wide and 0.9 metres upstanding.

Multibeam data 2006: At the original location of 5230 nothing was identified in the multibeam data. However, an anomaly was identified 100 metres to the east. The main mound is 15 metres long, 9 metres wide and 1.2 upstanding. On the northern side of the mound a small feature is located 3 metres away, which is 5 metres long, 3 metres wide and 0.25 metres upstanding. On the western side of the mound is a large scour 37 metres long (orientated east-west), 23 metres wide and 0.4 metres deep. An object is located in the scour which is 6 metres long, 2 metres wide and 0.25 metres upstanding.

A number of other anomalies are located in direct vicinity of site 5230. The diving investigations concentrated on the revised position of anomaly 5230.

Previous diving investigations: The PLA dived the site in February 2005. The initial inspection reported the site contained piles of bricks (some neatly stacked), wood and concreted metal. The divers recovered a sample of bricks, two metal bars (one straight and the other L shaped) and a section of concreted half inch chain. The bricks appear to have letters 'D' and the number '8' stamped into the surface of a shallow-frog.

Nigel Nayling of UWL dived the site on behalf of the PLA in July 2005. Mr Nayling's inspection confirmed the PLA's site description. He also recovered a sample of the bricks. He suggested the observed features were consistent with the presence of a relatively modern barge carrying bricks as indicated by the Admiralty records.
Two ceramic bricks were analysed by WA. They are both in good condition and of the characteristic 'dirty yellow' fabric of the London stock brick. They are both of the same form, with dimensions of *c.* 235 x 105 x 70mm, and a rudimentary frog stamped with the letters DK(?)B. These are likely to derive from one of the Kent clayfields, and

could have been barged around the coast to the London docks. The stamps suggest that the bricks could be of post-1850 date, but cannot be linked to a known place of manufacture.

2. DIVE OBJECTIVES

Confirm the extents of the site through diver tracking and measurement; establish the presence/absence of coherent structures and features, specifically hull structure; establish the presence/absence of a small finds assemblage other than bricks; undertake light cleaning, probing and spot sampling (if applicable) to confirm the nature of the material; achieve a basic record of the layout of the site by annotating multibeam and/or sidescan records; identify the feature located in the scour; confirm or deny a 1922 date for the site.

3. DIVE DETAILS

Date and time: 25th November 2007, 19.34
Duration in minutes: 21 minutes bottom time
Underwater visibility: <0.1m
General description of dive: Low water slack

Date and time: 26th November 2007, 13.30
Duration in minutes: 28 minutes bottom time
Underwater visibility: <0.15m
General description of dive: High water slack
Total dive time: 49 minutes

4. EVIDENCE

During the first dive, the diver found a small mound that seemed to be predominantly made up of bricks and fragments of bricks, generally heavily covered and buried in mud and silt. The diver estimated the mound to be approximately 0.5 metres high and continuing to the north. He recovered one whole yellowish brick (23x10.5x6.5cm, frogged on one side) and a half yellowish brick (15x11x6.5cm, frogged on one side with faint traces of a stamp) from this mound and moved east. The diver encountered a scatter of river pebbles and a long concretion approximately 1.5 metres long and lying north-south. There also appeared to be other hard features (probably concretions) in this area well buried and too large to move or sample. The diver recovered a fragment of sawn wood (27x2.5x2cm) with traces of five iron nails which was buried in the river bed.

Moving east, the diver noted that there was not a very well defined edge to the mound, but the concentration of material became less. Apart from isolated brick no features were evident as he went further east, and the seabed began to rise slightly and comprised very flat soft clay, completely clear of mud and silt.

During the second dive, the diver made bottom approximately 10m south-west of the site. In this area the diver came across an isolated timber on the seabed (plank-

shaped, c. 0.8x0.2x0.03m). A flat concretion was attached to the middle of the timber. The timber was broken at one end.

Approaching the site, the diver noted a distinct incline of the seabed. The diver reported a large concretion buried in the seabed, approximately 1m of which was exposed (possibly the same concretion encountered during the first dive). In close vicinity of the concretion the diver came across the first brick, in a distance of c. 7m of the centre of the anomaly, quickly followed by more bricks. The brick scatter became denser as the diver approached the top of the mound, and it appeared that the mound is built of bricks, or at least covered by bricks. On top of the mound (overall height probably around 1 metre) small pieces of wood were encountered in between the bricks. The pieces of wood were strongly abraded and predominantly oval in shape. The samples recovered vary in size from 0.24 to 0.12 metres length. Together with the wood samples a small, roughly triangular concretion (5.5x3.5x2cm) and a small piece of possible slag (7x6x2cm) were recovered.

The orientation of the mound is roughly east-west. Probing on top of the mound showed that the features (predominantly brick, some wood and concretion) are either exposed on the surface or covered by 0.20 to 0.30 metres max. of fine silty sand. One concretion could be worked free, it was an elongated, flat object (*c.* 65x10x2cm in size) which seemed to become slightly narrower towards one end. It was too heavy to be recovered.

Turning west, the diver reported a large, upstanding, wall-like concretion protruding from the seabed. Its height is at least 1 metre, it is *c.* 0.1 metre thick and several metres long. It runs approximately west-south-west to east-north-east. It has more concreted features attached to its sides. The feature could be moved in its upper, upstanding part but seemed to be firmly attached at the bottom. It was not possible to establish the full length of the feature because the current picked up rapidly and the diver had to be recovered.

5. INTERPRETATION

The site appears to consist of a mound of brick together with pieces of wood and large metal remains.

It is thought that the upstanding metal feature is identical with the central feature in the multibeam image. It does not seem to be the isolated feature depicted in the north-western part of the multibeam, because no gap was noted between the mound and the feature. In fact, the upstanding metal feature seemed to be at the crest of the mound. According to the PLA report of 2005 several piles of brick are present on the site. Due to limited bottom time, the western end of the site including the isolated feature at the edge of the main anomaly, the scour and a possible feature at the western end of the scour were not covered during the investigation.

The documented features indicate the presence of a vessel with major metal construction parts and minor wooden features, carrying a cargo of bricks. The upstanding central feature on top of the mound might be a bulkhead protruding from the seabed.

Major parts of the site seem to be buried below the seabed.

The finds recovered include bricks, abraded pieces of wood, a concretion and possibly slag. The bricks seem to be identical to those recovered during earlier dives (in terms of size, colour and frogged shape).

LONDON GATEWAY CLEARANCE PROGRAMME

DIVING FIRST TRANCHE

FIELD REPORT
66892.7345

Unknown
Ref: 7345

1. INTRODUCTION

Sidescan sonar evidence: The site consists of an area of disturbed seabed which is less reflective than the surrounding seabed. This area contains several dark reflectors with no clear shadow. The largest reflector is 13 metres long by 2.5 metres wide.

Multibeam evidence: The site consists of a single feature, which is irregular in shape. The feature is orientated east-west and is 12 metres long, 11 metres wide and 0.6 metres upstanding on the western side, which is the steeper side of the feature. On the eastern side it is only 0.2 metres upstanding.

Previous diving investigation: The PLA dived the site in 2006. A 10 metres circular search using a stray line centred on the multibeam site location was conducted. Initially the diver reported finding a hard flat sandy bottom, but then he encountered "soft" (the diver reported that he could easily probe the waves with his hand) sandwaves to the north of the position. At the base of one of the sandwaves, which were about 0.6 metres from crest to trough, he found a small piece of wood protruding from the sand. After probing into the sandwave with his hands the diver recovered a section of planking which was brought to the surface for inspection and photographing. The section appeared to be part of a small vessel with planking roughly 4 - 4.5 inches wide by 0.75 inches thick. The entire section is approximately 3.5 feet long by 2.0 feet wide. The planking and ribs are held together with copper nails. The ribs are roughly 4 inches apart and 1 inch by 1 inch in section.

2. DIVE OBJECTIVES

Confirm the extents of the site through diver tracking and measurement; establish the presence/absence of coherent structures and features, i.e. other possible vessel remains, and the presence/absence of a finds assemblage; undertake light cleaning, probing and spot sampling (if applicable) to confirm the nature of the material; achieve a basic record of the layout of the site by annotating multibeam and/or sidescan records.

3. DIVE DETAILS

Date and time: 19th November 2007, 19.55
Duration in minutes: 40 minutes bottom time
Underwater visibility: <0.25m

General description of dive: High water slack

Date and time: 20th November 2007, 08.09
Duration in minutes: 28 minutes bottom time
Underwater visibility: <0.25m
General description of dive: High water slack

Date and time: 22nd November 2007, 23.02
Duration in minutes: 18 minutes bottom time
Underwater visibility: <0.25m
General description of dive: High water slack

86 minutes bottom time altogether.

4. EVIDENCE

The seabed is flat and consists of soft fine sand and silt. Poorly sorted subangular medium to coarse gravel or shelly seabed material was noted in places, as well as some flint. Very low and poorly defined sandridges (max. 0.2 metres high) are protruding from the seabed (running approximately north-south). A small exposed area of peat-like organic material was noted in one place.

The sandy/silty seabed was probed in three places. No resistance to penetration to maximum depth of probe was observed. Slightly firmer layers were felt, however the maximum depth of the probe was reached.

A piece of wood was found loose, not buried, on the sandy surface (max. dimensions 23x24x6cm) c. 15 metres north of the site. The piece is very roughly rectangular, highly eroded and smoothed, and pitted with what appear to be the holes left by wood boring organisms. Its surface is very soft and it is very dark in colour. The type of wood is unclear. No fastenings or tool marks are visible. It is unclear whether it is anthropogenic in nature. The surrounding area was searched, no further artefacts or features were located.

A number of part-buried plastic bags were found, together with a modern period bottle and an isolated red brick which was clearly modern and unabraided.

Some slag was encountered in what appeared to be a ‘gravelly’ patch on the seabed.

Two singular pieces of coal and a small concretion that seems to be a concreted bolt were also discovered. The bolt is only partly exposed in the concretion and not readily dateable, although the amount of concretion suggests it has been submerged for some time.

Three slag samples, both coal pieces, the piece of wood and the concretion were recovered from the site.

No feature of 0.6 metres height was encountered during the dives. However, the area has not been searched completely and more bottom time would be required in order to comprehensively cover the site. Whereas a thorough search has been completed

to the west (c. 10m) and the north (c. 15m where the wood was found), the eastern and the southern part of the site have not been investigated yet, including the eastern part of the geophysical anomaly itself.

5. INTERPRETATION

At this stage, the results are inconclusive, because the area of the site has not been fully covered. At least 30 minutes more bottom time is considered necessary to comprehensively assess the character of the site.

LONDON GATEWAY CLEARANCE PROGRAMME

DIVING FIRST TRANCHE

FIELD REPORT
66892.7404

Unknown (60 metres feature)
Ref: 7404

1. INTRODUCTION

Sidescan sonar evidence: The site consists of a large rectangular disturbed area of seabed located within a sandwave field with associated artefacts. The anomaly is 20 metres long and 60 metres wide, no length of shadow was recorded.

Multibeam evidence: The survey area consists of prominent sandwaves orientated in a north-south direction. To the east of the sidescan position (by 4 metres) is a very large sandwave. It is 55 metres long, 13 metres wide and 1.8 metres upstanding.

Previous diving investigation: The PLA dived the site in 2006. A 10 metres circular search using a stray line centred on the multibeam site location was conducted. 'The diver reported finding an undulating sandy bottom with sandwaves up to 1.7 metres from trough to crest. The sandwaves were soft and the diver could easily probe the surface. Several sandwaves were probed but no evidence of any structure was found. Four small items were recovered to the surface all of which were found lying on the seabed. The diver completed a further circular search to the east of the first area and reported finding similar bed conditions and no sign of any artefacts. The items recovered are two pieces of worked wood, one piece of bone and a lump of coal.

Dive objectives: Establish the nature and character of the sidescan sonar anomaly and identify any further finds in the area and the association of the finds to the anomaly. i.e. identify the type of the site; confirm the extents of the site through diver tracking; establish the presence/absence of coherent structures and features, and of further small finds; undertake light cleaning, probing and spot sampling (if applicable) to confirm the nature of the material; and achieve a basic record of the layout of the site by annotating multibeam and/or sidescan sonar records.

2. DIVE DETAILS

Date and time: 19th November 2007, 12.38 pm
Duration in minutes: 86 minutes bottom time
Underwater visibility: <0.25m
General description of dive: Low water slack

3. EVIDENCE

The diver made bottom *c.* 8 metres east of the middle of the site and began east-west corridor searches to the north, followed by east-west searches to the south. The diver covered a length of *c.* 47 metres north to south, and a width of *c.* 40-50 metres east to west.

The diver identified a system of sandwaves running north-south across the seabed, as depicted in the multibeam. The seabed was made up of coarse to medium grained sand which was compact in the troughs between sand waves but quite loose when it made up the sandwaves themselves. Upon encountering a sandwave, the diver probed it with a 1 metre long probe. The sandwaves were probed near the base and at the point which the diver assumed to be the crest of the sandwave. The probe did not meet with any resistance which would have indicated the presence of a solid surface.

The approximate average height of the sandwaves was 0.5 metres. The diver did not encounter any sandwave upstanding to the level which 7404 was depicted on the 2006 multibeam. Based on the tracking and the vessel position relative to the georeferenced multibeam image, it can be said with confidence that the diver's extensive east-west corridor searches would have covered the location where 7404 is depicted.

No further small finds were encountered.

4. INTERPRETATION

It would appear that the configuration of the system of sandwaves has changed since the 2006 multibeam survey and that the prominent sandwave depicted in the location of site 7404 in the 2006 multibeam data has changed. No evidence was found for the presence of archaeological features in the area, neither covered by a sandwave nor exposed on the seabed. However, the possibility remains that a vessel is buried underneath the seabed as possibly indicated by the sidescan sonar data and the presence of the finds recovered in 2006.

LONDON GATEWAY CLEARANCE PROGRAMME

DIVING FIRST TRANCHE

FIELD REPORT
66892.7563

Complex Anomaly Cluster
Ref: 7563

1. INTRODUCTION

Sidescan sonar data 2001: The coverage of the 2001 sidescan sonar survey included the position of site 7563, however the site was not identified in the data.

Sidescan sonar data 2002: site 7563 was identified in the data. The site consists of an anomaly covering a large area of seabed with a defined linear feature to the south-west. The anomaly is 50 metres long and 30 metres wide, no length of shadow was recorded.

Multibeam data 2005: The site consists of an elliptical structure covered by mobile bed forms with an upstanding feature at the western end. The main structure is 18 metres long, 13 metres wide and 0.8 metres upstanding. The feature at the western end is 5.8 metres long, 4 metres wide and 0.8 metres upstanding.

Previous diving investigations: The PLA dived the site in 2006. A 10 metres circular search using a stray line centred on the multibeam site location was conducted. The diver reported finding a very hard gently undulating sandy bottom. The boat was then moved approximately 30 metres to the east and a second diver carried out a search. Nothing was found on either of the two sites dived.

2. DIVE OBJECTIVES

Confirm the presence and position of the site; establish the site type; define the full extents of the site, including possible buried sections through diver tracking in combination with multibeam bathymetry and sidescan sonar survey data; undertake light cleaning, probing and spot sampling (if applicable) to confirm the nature of the material; and achieve a basic record of the layout of the site by annotating multibeam and/or sidescan records.

3. DIVE DETAILS

Date and time: 28 November 2007, 14:57
Duration in minutes: 28 minutes bottom time
Underwater visibility: <0.2m
Maximum depth:19m
General description of dive: High water slack

Only a short period of slack water that allowed diving operations to take place occurred. As a result bottom time was limited and therefore the dive objectives could not be fully achieved. Specifically, the vicinity of the anomaly was not fully searched and no excavation was undertaken. A second dive was planned but was not carried out due to adverse weather conditions.

4. EVIDENCE

The diver undertook a tracked search of the anomaly position.

The seabed in the area searched consisted of soft silty sand with some gravel. The seabed surface was either flat and featureless or consisted of very shallow undulations. Probing using a 1m probe encountered soft resistance at 0.5m where a layer of gravel was encountered.

To the south-west of the anomaly position the diver observed a thin and predominantly gravely layer over silty sand. Probing this area encountered no resistance below the surface gravel.

A modern green glass bottle bearing moulded lettering ‘R McN & Co Ltd’ on the base was observed and recovered. A small piece of slag was also found and recovered. Various conglomerations of hard material were located and identified by touch by the diver as possible concretions and therefore recovered. However, examination on the surface revealed them to be hard worm casts.

5. INTERPRETATION

Diver tracking has confirmed that the diver searched the anomaly position. No feature matching the description of the anomaly was located. The possibility that the anomaly is an archaeological feature that was buried at the time of inspection cannot be discounted. However, the complete absence of evidence of a wreck or other structure within the search area means that the most likely explanation is that the anomaly is a natural seabed feature.

The presence of the bottle and the slag material can probably be explained as the disposal of waste material from a vessel during the modern period. Although slag might be expected to be disposed of intentionally and in fairly large quantities, no evidence for a substantial dump of such material was encountered.