making sense of heritage

London Gateway Port

Assessment of Significant Archaeological Finds Made During Capital Dredging

Ref: 88632.04
March 2016

coastal&marine

London Gateway Port

Assessment of Significant Archaeological Finds made during Capital Dredging

Prepared for:
London Gateway Port Limited
The Manorway
Stanford-le-Hope
Essex
SS17 9PD

Prepared by:
Wessex Archaeology
Old Sarum Park
Salisbury
WILTSHIRE
SP4 6EB

www.wessexarch.co.uk

March 2016

Report Ref 88632.04

© Wessex Archaeology Ltd 2016, all rights reserved
Wessex Archaeology Ltd is a Registered Charity No. 287786 (England & Wales) and SC042630 (Scotland)

Quality Assurance

Project Code	88631-2	**Accession Code**	N/A	**Client Ref.**	N/A
Planning Application Ref.	N/A	**Ordnance Survey (OS) national grid reference (NGR)**	N/A		

Version	Status*	Prepared by	Checked and Approved By	Approver's Signature	Date
v01	I	*Graham Scott*			15/02/2016
File:	*LG_StrikesReport_Overview_20160226_Draft_v01* in \\mciserver\wessex\Projects\London Gateway\London Gateway 2015\88631_Reports\Draft				
v02	E	*Graham Scott*	*Toby Gane*		02/03/2016
File:	LG_StrikesReport_Overview_20160226_Draft_v01 in \\mciserver\wessex\Projects\London Gateway\London Gateway 2015\88631_Reports\Draft				

* I = Internal Draft; E = External Draft; F = Final

DATA LICENSES

This product has been derived in part from material obtained from the UK Hydrographic Office with the permission of the UK Hydrographic Office and Her Majesty's Stationery Office.

© Crown Copyright, 2016. Wessex Archaeology Ref. HA294/007/316-01.

The following notice applies:

NOT TO BE USED FOR NAVIGATION

WARNING: The UK Hydrographic Office has not verified the information within this product and does not accept liability for the accuracy of reproduction or any modifications made thereafter.

This product has been derived in part from material obtained from the UK Hydrographic Office with the permission of the Controller of Her Majesty's Stationery Office and UK Hydrographic Office (www.ukho.gov.uk).

NOT TO BE USED FOR NAVIGATION

Contains Ordnance Survey data © Crown copyright and database rights 2016

DISCLAIMER

THE MATERIAL CONTAINED IN THIS REPORT WAS DESIGNED AS AN INTEGRAL PART OF A REPORT TO AN INDIVIDUAL CLIENT AND WAS PREPARED SOLELY FOR THE BENEFIT OF THAT CLIENT. THE MATERIAL CONTAINED IN THIS REPORT DOES NOT NECESSARILY STAND ON ITS OWN AND IS NOT INTENDED TO NOR SHOULD IT BE RELIED UPON BY ANY THIRD PARTY. TO THE FULLEST EXTENT PERMITTED BY LAW WESSEX ARCHAEOLOGY WILL NOT BE LIABLE BY REASON OF BREACH OF CONTRACT NEGLIGENCE OR OTHERWISE FOR ANY LOSS OR DAMAGE (WHETHER DIRECT INDIRECT OR CONSEQUENTIAL) OCCASIONED TO ANY PERSON ACTING OR OMITTING TO ACT OR REFRAINING FROM ACTING IN RELIANCE UPON THE MATERIAL CONTAINED IN THIS REPORT ARISING FROM OR CONNECTED WITH ANY ERROR OR OMISSION IN THE MATERIAL CONTAINED IN THE REPORT. LOSS OR DAMAGE AS REFERRED TO ABOVE SHALL BE DEEMED TO INCLUDE, BUT IS NOT LIMITED TO, ANY LOSS OF PROFITS OR ANTICIPATED PROFITS DAMAGE TO REPUTATION OR GOODWILL LOSS OF BUSINESS OR ANTICIPATED BUSINESS DAMAGES COSTS EXPENSES INCURRED OR PAYABLE TO ANY THIRD PARTY (IN ALL CASES WHETHER DIRECT INDIRECT OR CONSEQUENTIAL) OR ANY OTHER DIRECT INDIRECT OR CONSEQUENTIAL LOSS OR DAMAGE.

London Gateway Port

Assessment of Significant Archaeological Finds made during Capital Dredging

Contents

Figures

Plates

London Gateway Port

Assessment of Significant Archaeological Finds made during Capital Dredging

Summary

Wessex Archaeology has been commissioned by London Gateway Port Ltd to provide archaeological services in respect of marine works in the course of developing the London Gateway Port and its associated infrastructure.

The purpose of this document is as follows:

- To describe the methodology used to locate and record finds made during capital dredging and associated clearance operations in 2010-14;
- To discuss the finds made and the results.

A reporting scheme for archaeological finds was in operation in Zones 1-50 and 102-109. Archaeologists also undertook on board watching briefs. From an archaeological perspective, dredging was undertaken in two phases, with finds reported on in two tranches. This report therefore follows two Strike and Track-plot Report compiled in November 2011 (ref. 72436.01) and September 2014 (ref. 88631.01). Interim geophysical survey and diving inspections were carried out between the phases.

A total of approximately 615 finds were recovered during LGP capital dredging and associated operations. Significantly more finds were made during Tranche 1 than in Tranche 2.

Finds were for the most part recovered from the drag heads of the trailing hopper suction dredgers used. However, the clearance of two obstructions resulted in the discovery of important archaeological sites: a 19th century paddle tug and a Ju88 German bomber.

In order of discovery, archaeologically significant finds from the First Tranche included:

- a German MG15 machine gun barrel, possibly associated with the previous recovery of an engine (7543) and indicative of the presence of an aircraft crash site;
- a very early Royal Navy 12 pounder carronade, a rare or possibly unique survival;
- a collection of Mauser C96 pistols, manufactured between 1900 and 1921;
- several groups of ship and boat timbers recovered from Zones 30-37, indicative of the presence pre-dredge of more than one wreck, possibly including a very rare medieval vessel;
- a German propeller hub, possibly associated with 7543 and the MG15;
- a collection of post-medieval lead sounding weights;
- landing gear probably from an P-38 American fighter aircraft, possibly associated with the discovery of an aircraft fuselage during pre-scheme trawling but not detected since; and

- the very rare or unique wreck of a rare German Ju88T reconnaissance aircraft, lost in 1943;

Second Tranche discoveries included:

- a group of boat or ship timbers recovered from Zones 34-40;
- a fitting from the anti-submarine boom that protected the inner estuary during the Second World War;
- part of the barrel of an iron Falcon of the third quarter of the 16th century, probably of English manufacture;
- part of the muzzle of an English iron saker of 1640-70, probably debris from a firing accident;
- a Second World War American parachute, possibly associated with the P-38;
- a group of boat or ship timbers recovered from Zones 36-40;
- a rare 19th century paddle tug wreck, probably that of the *Admiral*, lost in 1872 as a result of a collision; and
- a medieval cooking vessel found north of the channel during epibenthic trawling and potentially indicative of the presence of a rare medieval wreck.

London Gateway Port

Assessment of Significant Archaeological Finds made during Capital Dredging

Acknowledgements

This investigation was commissioned by DP World, London Gateway Port Limited. Wessex Archaeology is grateful for the assistance of Marcus Pearson and Chris Webb of LGPL, Kenneth Engelen of DEME and Gill Andrews, DP World's Archaeological Liaison Officer.

Particular thanks are due to ordnance expert Charles Trollope for advice on the ordnance finds.

Wessex Archaeology would also like to thank the following:

- Nicholas Hall and Jonathan Ferguson of the Royal Armouries, who provided advice on the identification and significance of ordnance and small arms finds;
- Andrea and Steve Vizard of Airframe Assemblies, who provided assistance with the identification of the P-38 oleo strut find;
- Richard Newell of Richard Newell Associates who reported the recovery of the medieval cooking pot base from an epibenthic trawl;
- the crew of the dredgers concerned, who reported many of the finds and assisted during on board watching briefs;
- the PLA survey and dive teams.

The report was compiled by Graham Scott with contributions by Paolo Croce in relation to the paddle tug and by Toby Gane in relation to the Ju 88T. Victoria Lambert and Tom Harrison assisted with archiving and recording respectively. Karen Nichols prepared the illustrations. Quality control and editing was carried out by Toby Gane, who also managed the project for Wessex Archaeology.

London Gateway Port

Assessment of Significant Archaeological Finds made during Capital Dredging

1 BACKGROUND

1.1.1 Wessex Archaeology (WA) has been commissioned by London Gateway Port Ltd to provide archaeological services in respect of marine works carried out between 2010 and 2014 during the development of the London Gateway Port (LGP) and its associated infrastructure.

1.1.2 Capital dredging occurred within a 400m wide transect between the new port and the outer reaches of the estuary, about 25km off Harwich, with the aim of increasing the width of the channel to a minimum of 300m. The dredging was also designed to increase the depth of the maintained channel from 10m to 14.5-16.5m LAT. The natural depth in the outer estuary meant that only limited sections had to be dredged. However, in the inner estuary an almost continuous strip of the existing Yantlet Channel was dredged.

1.1.3 The purpose of this document is to provide an overview of the archaeological finds made during post-consent capital dredging:

- to summarise the methodology used to locate and record finds made during capital dredging;
- to summarise the finds made;
- to describe and discuss the more significant finds; and
- to discuss the overall archaeological results of the capital dredging.

1.1.4 This report follows two Strike and Track-plot Reports compiled in November 2011 (ref. 72436.01) and September 2014 (ref. 88631.01) and incorporates the results of dendrochronological analysis carried out in June 2015 (Bale & Nayling 2015). Investigations of the two most archaeologically significant Strikes, 8024 and 8033, have been the subject of separate reporting.

2 METHODOLOGY

2.1.1 The recording and reporting of objects of archaeological interest (finds) made during the dredging was subject to the Protocol for Archaeological Discoveries (LORDI 2011), initiated in March 2009 and updated in March 2011. The protocol was in operation between Zone 1 and 50 and Zones 102 to 109 (**Figure 1**). These were zones assessed during pre-consent work as having higher archaeological potential.

2.1.2 As is normal in such operations, capital dredging was carried out continuously on a twenty four hour, seven days a week cycle using large trailing hopper suction dredgers of up to 30,000 cubic metres dredged material capacity. They are filled by sucking sediment from

the seabed up through a suction pipe lowered over the side whilst the vessel is moving slowly forward. Such vessels typically travel several kilometres along a 'dredge track' before the hopper is filled.

2.1.3 The end of the pipe in contact with the seabed is protected by a large rigid structure called a drag head. This incorporates a steel screen, which prevents large objects including unexploded bombs and shells from entering the pipe and hopper. The dredging strategy involved repeatedly removing thin spits of seabed sediment until the target depth was achieved. The pipe would be recovered only if it became obstructed by debris or the hopper was full.

2.1.4 During dredging it was impossible to observe finds either on the seabed or during recovery. Whilst there is a theoretical possibility that finds could have been observed on the surface of the dredged material in the hopper, in practice they were only discovered on board if they became stuck in the drag head screen and were then observed during routine post-recovery debris clearance.

2.1.5 The recovery method heavily influences the character and quantity of the finds recovered during this type of dredging. Large robust finds such as metal plates, cannon and large pieces of timber that cannot pass through the screen are either pushed aside by the drag head or are caught in the screen. Smaller finds will pass through the screen unless they are caught in larger objects or jammed into groups. Due to the huge hydraulic forces involved and mechanical damage caused by entrained objects and sediment, objects that are not robust are likely to be damaged or destroyed.

2.1.6 The Protocol provided for the reporting of finds by the dredger crew, achieved by means of a dedicated proforma reporting form which was completed by the finder and transmitted to WA by the dredging contractors at the earliest opportunity. Subsequent to the receipt of the proforma, WA prepared a protocol report for the find.

2.1.7 The Protocol also provided for a watching brief carried out by a single archaeologist who either visited the vessel from a shore base or was based on board. A watching brief was targeted at areas which the pre-consent studies had suggested were likely to be archaeologically productive.

2.1.8 The Protocol also provided for the reporting of any obstructions with possible archaeological potential, regardless of whether or not any archaeological material had been recovered. In practice provision was made for the reporting of any obstruction encountered in the path of the drag head that was sufficient to deflect its track or reduce the hydraulic pressure through the pipe, unless it was clearly of no archaeological interest. In practice very few obstructions were recorded. This probably reflects the size and power of the dredgers used, as only obstructions caused by large objects are likely to have registered on the bridge instrumentation sufficiently clearly to have been regarded as reportable obstructions.

2.1.9 From an archaeological perspective, dredging was carried out in two phases, very broadly corresponding to shallow and deeper dredging of the same areas. At the conclusion of the first 'shallow' phase the finds recovered and the drag head obstructions were assessed ('Tranche 1'). Significant finds and obstructions requiring further investigation were characterised as 'Strikes' and assigned 'Strike Numbers' in the following circumstances:

- a noticeable obstruction was encountered by the dredging vessel;
- the find was likely to be of high cultural importance;

- the find could have been associated with a known site; or
- the find could have led to the discovery of an unknown site.

2.1.10 Timed positions for the track of the drag head across the seabed (dredge track) for each load and the positions of obstructions were made available by the dredging contractors. These were calculated by reference to a bridge mounted GPS some distance from the draghead and are therefore approximate.

2.1.11 An 'interim geophysical survey' of relevant dredge tracks was then undertaken in order to try to locate and characterise the sites that had produced the Strikes (WA 2012). This concentrated on the dredge tracks that had produced the finds and obstructions. This was followed by diving inspections of a number of anomalies identified by this survey that were believed to have potential to be sites associated with the Strikes (WA 2012, various).

2.1.12 Monitoring of the second phase of dredging involved a watching brief limited to those areas which the initial phase of dredging and previous archaeological work suggested were most likely to be archaeologically productive. Significant finds and obstructions were also characterised as Strikes ('Tranche 2').

2.1.13 The dredge tracks were shapefiles generated from positions recorded at five minute intervals. Each track was therefore a series of straight lines drawn between the recorded points and could only be regarded as an approximate representation of the path of the drag head. This and the potential for lay back errors in the positioning of geophysical anomalies led to uncertainties concerning the actual proximity of the drag head to potential sites and resulted in a buffer of ten metres being applied to each track.

2.1.14 In addition to those Strikes made during dredging, an additional Strike (8034) was made during an epibenthic trawl survey. Track-plot data for the trawl was been used to isolate the likely recovery area, which lies outside the footprint of the dredging.

2.1.15 Two sites located as a result of interim geophysical and diving survey and during the second phase of dredging

2.1.16 No further fieldwork was undertaken after the second phase of dredging. It was decided that the Strikes made during that phase did not warrant further geophysical or diving investigation.

2.1.17 In June 2015 and following the completion of dredging, a total of forty seven timber finds recovered during the two phases of dredging were subject to dendrochronological analysis by Dr Roderick Bale and Professor Nigel Nayling of the University of Wales Trinity Saint David. The purpose of this was to obtain dating evidence for the wood, which would in turn provide an approximate date range for the vessel or other timber construction that they had originally been part of. The results are incorporated in the individual finds descriptions below.

3 SUMMARY OF DREDGING FINDS

3.1.1 A total of approximately 615 finds were recovered during LGP capital dredging and associated operations. Significantly more finds were made during Tranche 1 than in Tranche 2. A post-dredge master catalogue of finds held by WA and LGP is attached to this report as **Appendix 2**.

4 SELECTED TRANCHE 1 FINDS

4.1 Strike 8006: German MG15 Machine Gun

4.1.1 The barrel assembly of a machine-gun was recovered by the dredger *Uilenspiegel* on the 19th January 2011 from Zones 30 to 34.

4.1.2 The bore of the gun was 7.92mm and it has been identified as a German MG15. This gun was carried as defensive armament by a very wide variety of German bombers and reconnaissance aircraft during the Second World War.

4.1.3 The relevant dredging track-plot intersected eight recorded anomalies, all of which were categorised as 'Uncertain' (**Figure 2**). It has not been possible to determine whether the Strike came from any of these anomalies:

4.1.4 CMS Site 7543 lies approximately 10m south of the trackplot buffer. The PLA recovered a Jumo 211 engine, together with part of a gearbox or tachometer drive and a gearwheel from that site in 2006. These were interpreted as part of the dispersed remains of a German Second World War military aircraft (Firth *et al*. 2012: 61). Jumo 211 engines were produced in very large numbers and powered a wide variety of Luftwaffe aircraft types. However, the engine was mainly used in bombers and therefore it is most likely that the engine came from a twin engine Heinkel III, a twin engine Junkers 88 or one of the single engined Junkers 87 'Stuka' dive bombers used to attack shipping in the Thames Estuary in 1940.

4.1.5 It is highly unlikely that a German Second World War machine gun would have been deposited on the seabed of the Inner Estuary other than as a result of an aircraft crash. Although it is possible that it derives from an undiscovered crash site, the proximity to the track plot suggests that it probably comes from 7543 or from a wider debris field associated with it.

4.1.6 Assuming that is the case, then the aircraft will have been one that carried a combination of Jumo 211 and MG 15. The H1-10 variants of the Heinkel 111 did so, as did the A1, A4 and A5 versions of the Junkers 88 and the B-D, G and R variants of the Junkers 87. Although there are a number of recorded losses of relevant models of all three aircraft types within the Inner Estuary, this aircraft has not been identified.

4.2 Strike 8007: Carronade

4.2.1 A short smooth bore muzzle loading gun was recovered by the *Uilenspiegel* on 19th February 2011 during dredging of Zones 26 to 36 (**Figure 3**).

4.2.2 The gun is a 'carronade' and is 0.66m (25.98") long as measured in the normal way for a carronade and has a single reinforce. The muzzle is not cupped but the mouth of the bore is worn, concreted and irregular and cannot be accurately measured. It is very approximately 105mm (4.13") across, which indicates that it is no bigger than a 12 pounder. It has centre line trunnions, a cascabel loop and the broken stub of a square block on the button to take a missing tiller spike. The gun was sighted by means of two sights on the base ring and muzzle.

4.2.3 There is an incised 'Broad Arrow' on the top of the reinforce between the trunnions, which indicates that it was a British naval gun. In addition there is an incised '33' on the upper chase, which is probably the number of the gun. Just forward of the base ring is an incised weight, which although damaged by a partial loss of the metal surface appears to be '5-3-6', which is in the British style and indicates a weight of 650 pounds. The surface of the right trunnion is also damaged, but there is '177' on the lower register (there is damage to the

right of this, so a fourth number may be missing), with a possible '2' above it. The surface of the left trunnion is much worn but there may be an '8' and further numbers to the right of it.

4.2.4 Carronades with centre line trunnions appear in designs used by the Royal Navy between 1779 and 1782-3 (Caruana 1997: 184-5). Thereafter the Navy adopted a 'carronade loop' which did not require trunnions. Unless this gun is an unusual exception or an equally unusual civilian gun adopted for naval service, it would therefore appear to have been manufactured between 1779 and 1782. If the number '177' is part of a date, this would suggest that the gun was cast in 1779. On that basis the length of the gun and the approximate bore measurement suggests that it is probably a 12 pounder.

4.2.5 The design of the gun appears to be similar to early carronades cast by the Carron Company that are now at Woolwich and Dover Castle (Caruana 1997: Figs 46 & 47). It may therefore be that the gun is one of the first carronade used by the Royal Navy, which would make it a rare and important piece of ordnance.

4.2.6 Although similar short guns had been used before, carronades were first manufactured in 1778 by the Carron Company and entered naval service in 1779. They were shorter, thinner walled and about a quarter of the weight of conventional cannons of the same calibre. Given that weight was the most significant factor in limiting the armament carried by a ship of any given size, this was an important advantage, as was the saving in the amount of iron needed. They also greatly increased the firepower of ship's boats, which effectively became small gunboats when fitted with a carronade in the bow. Their heyday was in the late 18th century when some ships were armed entirely with them. However, experience demonstrated that their short range was a serious disadvantage that could be exploited by a skilful opponent and they gradually became another useful option rather than the 'wonder weapon' of their early proponents. They continued in naval use until about 1850.

4.2.7 The track-plot buffer intersects twenty-two sites and anomalies, the majority of which are recorded as 'uncertain'. As none of the known sites are the wrecks of naval vessels of the right period, the site from which the gun was dredged remains unlocated. It could conceivably be associated with some of the Strike 8009-8018 timbers or with the Second Tranche Strike 8027 timbers, but in the absence of precise dating evidence for the timbers, there is currently no real evidence to support this. It should be noted that as this type of weapon could be mounted on a very large undecked boat, it could have been deposited as an isolated find, even though the vessel that carried it was also lost.

4.2.8 Although further research of both public and private collections will be required to understand its rarity, no other early 12 pounder Royal Navy carronade has been traced. This object is therefore likely to of considerable importance and is quite clearly one of the most important LGP finds. As a numbered piece, it may be possible to trace its history through primary records and it certainly merits conservation treatment.

4.3 Strike 8008: Mauser M30 (C96)

4.3.1 A collection of 15 Mauser C96 semi-automatic pistols and their original stocks (which doubled as storage cases) was recovered by the *Lange Wapper* on the 19th February 2011 during dredging operations in Zones 29 to 36 (**Figure 4**). The condition of the guns as recovered was fairly good, although much of the thinner and softer metal had corroded away.

4.3.2 This type of pistol was manufactured by Mauser between 1896 and 1937. Characterised by its long barrel, integral box magazine and a long wooden shoulder stock that enabled the

weapon to be fired automatically and doubled as a holster or carrying case, the gun had a uniquely shaped wooden grip that earned it the name 'Broomhandle'. Blessed with excellent range and penetration for a pistol, the weapon was a worldwide success and approximately one million were produced. In addition an unknown number of unlicensed copies being made in the first half of the 20th century in Spain and China (Skennerton 2005: 8). Although it did not become a military or police primary service pistol, it was very widely used and proved particularly popular with the British Army before the First World War. Winston Churchill was one of many private purchasers. It remained popular with the German military during the Second World War.

4.3.3 As the Mausers were stored in their wooden stocks and stacked in pairs, they appear to have either been in storage at the time of loss or were part of a cargo in transit. Serial numbers are stamped upon the lock mechanism frames of the weapons and are five and six digit numbers (26201, 40689, 76566, 321879, 32293., 391…). There are also three digit numbers and letter combinations on two of the hammers (04C, 06.).

4.3.4 The serial numbers indicate that one of the pistols was manufactured in 1900, two in 1905 and three between 1915 and 1921, with at least three manufactured no earlier than 1915. This rules out any connection with the *Dovenby* and rules out the possibility that the guns are a consignment of new weapons.

4.3.5 X-ray analysis indicates that although fourteen of the guns are of the standard 140mm length, one has a shorter barrel, approximately 100mm long (no serial number can be seen on it). Following the Treaty of Versailles in 1919, German manufacturers were prohibited from producing pistols with barrels longer than four inches. As a result the barrels of pre-war pistols in German government service were cut down to 99mm. The shorter barrel and smaller size made the gun easier to carry and conceal and between 1920 and 1921 Mauser began manufacturing the 'compliant' version for general sale. Although widely exported, the M1921 became particularly associated with the Bolsheviks and was therefore nicknamed the 'Bolo'. However, thousands of short-barrelled and short-framed C96s were made from quite early on, and received no special designation (J. Ferguson, Royal Armouries, email). As a result the earliest date that these guns could have been deposited on the seabed is 1915.

4.3.6 Although it is conceivable that the guns were being carried on board a vessel as part of its armoury, the large number of this one particular type of pistol suggests that they were being carried together as cargo. As such, their different manufacturing dates suggest that they were a consignment of used but serviceable guns.

4.3.7 It has not been possible to demonstrate a link between any of the nineteen anomalies that intersect the trackplot buffer. The only identified wreck in the general vicinity of the trackplot that could conceivably be dated to 1920 or later is 5230 ('Brick Barge'). This has been identified as a Thames sailing barge, which is not an obvious means of carrying a consignment of guns. Therefore the means by which the guns came to be deposited on the seabed remains unknown

4.4 Strike 8009 to Strike 8018: Timber assemblages

4.4.1 Four strikes were made during the first phase of dredging that contained significant numbers of worked ship or other structural timbers: 8002, 8003, 8004 and 8005 (**Figure 5**).

4.4.2 Strike 8002 consisted of nine timbers recovered by the dredger *Uilenspiegel* from Zones 32-34. The wood appears to be wreck material including a post-medieval deadeye, together with planking and framing from an unknown number of wrecks. The carvel framing timbers

appear to come from one or more relatively small wooden vessels and are similar in size to the framing from a local sailing barge. Fastenings are a mixture of treenails and iron nails. One of the possible planks had horse hair caulking on part of the face of the timber, suggestive of clinker planking. No trackplot was retained for the strike and it has not therefore been possible to associate the finds with known sites or anomalies.

4.4.3 Strike 8003 was made on 31st January 2011 when five worked timbers were recovered by the dredger *Lange Wapper* from Zones 31-37. The following day the same dredger hit an obstruction in Zone 37 west of 5010 (*Dovenby*). Subsequent recovery of the drag head resulted in the recovery of thirty two ship or boat timbers (Strike 8004), although as the dredger had been working in Zones 30-37, it was not clear where the timbers had actually been recovered from. Strike 8005 occurred between 31st January and 6th February 2011, when further worked timbers were recovered by the *Langer Wapper*.

4.4.4 Timbers recovered from Strikes 8003-5 were reassessed at WA. As the combined assemblage appeared to include timbers from at least two vessels and one intertidal structure, they were regrouped according to their characteristics and assigned new strike numbers as follows (**Appendix 3**):

- Strike 8009: (Group A) - clinker floor frame and similar timbers.
- Strike 8010: (Group B) - slender frames of carvel construction.
- Strike 8011: (Group C) - planking approximately 60mm to 40mm thick.
- Strike 8012: (Group D) - various functional timbers with similar dimensions and treenails.
- Strike 8013: (Group E) - large components.
- Strike 8014: (Group F) - damaged timbers with worked features but unknown function.
- Strike 8015: (Group G) - possible pier/ jetty structure.
- Strike 8016: (Group H) - timber stumps.
- Strike 8017: (Group I) - assorted timbers.
- Strike 8018: (Group J) - artefacts, fixtures and fittings.

4.4.5 Within the assemblages, there are notable examples of both clinker and carvel construction, with functional components such as knees, a chock/buttress, breasthook, stringers and hull planks.

4.4.6 One timber in particular, an oak clinker floor timber, could be of medieval date (Strike 8009; Group A; find number 1127). It displays a tight angled conversion with an offset limber hole to one side that formed part of either the bow or stern. The timber has comparable moulded and sided dimensions to the medieval ship timbers that were discovered during excavations in Dublin in 1974-76, and is also similar in construction to those found in Newport in 2002 and Drogheda in 2006 (Holger Schweiter, pers. comm. and Trett 2010). The timber is certainly from a vessel with the scantlings of that of a small ship (McGrail 1993). However, the timber was not suitable for dendrochronological dating.

4.4.7 The depositional environment appears to have been mixed, with several timbers showing excellent states of preservation consistent with anaerobic conditions. The clinker floor timber has an outer forward/after face that is heavily eroded and eaten by marine borers. This indicates long periods of exposure, whilst the opposing side and outboard faces showing a relatively intact original surface, with tool marks clearly visible within rebates.

4.4.8 Attempts to associate the timbers with anomalies and known sites have not been successful. The track-plots show that dredging occurred predominately between Zones 28 and 36, with Zones 11, 9 and 10 also dredged. The relevant track plots intersected with 103 anomalies, with some anomalies intersected as many as four times. None of the known sites intersect, although the 8004 trackplot passes very close to 5010 (*Dovenby*). The position supplied for an obstruction hit on 1 February 2011 close to the *Dovenby* (5010) and which resulted in Strike 8004 was investigated during the interim geophysical survey and was interpreted as a possible area of ferrous debris from the *Dovenby*. The possibility exists that the Second Tranche timber finds of Strike 8032 are linked with 8009-18, as the track plots intersect and there is a broad similarity between some of the timbers.

4.5 Strike 8020: Propeller Hub

4.5.1 On the 16th March 2011 a variable pitch aircraft propeller hub was recovered by the *Lange Wapper* during dredging in Zones 31 and 36 (**Figure 6**).

4.5.2 The hub was manufactured by 'Vereinigte Deutsche Metallwerke' of Germany (VDM) and is inscribed '1.25' on the forged steel. This type of hub was compatible with a variety of BMW, Bramo, Jumo and Daimler-Benz engines and equipped at least thirty three models and variants of Luftwaffe aircraft during the Second World War, including the Dornier 17, Bf 109 and Bf 110, Heinkel bombers and Junkers Ju 86 and Ju 88 models (Vereinigte Deutsche Metallwerke A-G 1941).

4.5.3 Two anomalies of 'uncertain' archaeological potential lie within the trackplot buffer but it is not possible to demonstrate an association with either. CMS Site 7543, from which a Jumo engine that was recovered and possibly Strike 8006 lies approximately 70m south of the buffer. It is unlikely that these are associated unless the aircraft broke up in flight. It is not however possible to prove an association.

4.6 Strike 8021: Lead Sounding Weights

4.6.1 Seven solid lead sounding weights ('sounding leads') were recovered aboard the dredger *Uilenspiegel* on the 4th April 2011 from within Zones 9 and 10 (**Figure 7**). Six of the leads vary between 180-280mm in length and 2.7-4.5kg in weight (6-10lbs). The seventh is much larger and is 12.2kg (27lbs) and 500mm in length. Two have indentations in the base for wax, which is not present. The largest has a stamp near the base which is unidentified but which may be a maker's mark. Two others have scratches that appear deliberate but which are not obviously owners' marks. Some are bent, one has damage to the loop and all appear to be very worn.

4.6.2 There is no clear typology for sounding leads but their form suggests that they are post-medieval in date. Finding a group of this number is very unusual and suggests that they are not isolated finds and come from a single site. Various mechanisms of loss are possible, including shipwreck or being washed overboard in a box. This type of object tended to be personal property and a number might therefore be on board a ship at any one time. However, given the recovery method and the improbability of small objects being caught in the screen, it would be surprising if a significantly larger number of leads had not been present on the seabed. They are therefore more likely to have been part of a larger packaged consignment carried as cargo, perhaps as scrap lead, than as personal tools.

4.6.3 Nine anomalies were intersected by the trackplot buffer, seven of 'uncertain' archaeological origin and two of 'probable' archaeological potential, 7345 and 7404. There is no evidence to suggest an association with any of them.

4.7 Strike 8023: Probable P-38 aircraft landing gear

4.7.1 An oleo strut from an aircraft was recovered from Zones 35-36 by the dredger *Brabo* on 6th April 2011 (**Figure 8**). An oleo strut is a pneumatic air-oil hydraulic shock absorber designed to reduce the impact of landing and the tendency for the aircraft to bounce. The strut is in a damaged condition. The axle stub has been being twisted around 180 degrees. As a result the torque arm has separated in the middle. It is not clear whether this damage occurred when the aircraft was lost or subsequently during recovery.

4.7.2 'Air Associates' is cast into the heads of three steel bolts that form part of the strut. This indicates that the strut was manufactured by or for Air Associates, a US aircraft and aircraft parts supplier and manufacturer formed in the 1920s. During the Second World War it became a giant concern and remained one of the most recognisable aviation catalogue suppliers throughout the 1950s until it was taken over in 1964. 'G4510' is cast into the object and this is likely to be a part number, currently untraced.

4.7.3 The strut appears to be similar to those fitted to the American P-38 Lightning fighter. Until the introduction of the P-51 Mustang, this twin-engined aircraft was the main American long range fighter during the Second World War. Based in Britain it flew over Europe as both a bomber escort for the American Eighth Air Force and in the reconnaissance role.

4.7.4 The strut is likely to be from a P-38 crash site. The dredge track buffer intersects 22 anomalies, including eight recorded as 'debris', but otherwise there is no evidence to connect them with a P-38. The possible association between this find, a Second Tranche parachute find and aircraft wreckage recorded by the UKHO is discussed under Strike 8031 below.

4.8 Strike 8024: Ju 88T German reconnaissance aircraft wreck

4.8.1 On 9th August 2011, forty five pieces of aircraft wreckage, much of it anodised aluminium, and a large tangle of coloured insulated electrical wire were recovered by the dredger *Congo River* during dredging in Zone 105.

4.8.2 Stamped numbers close to the rivet heads enabled the parts to be identified as coming from a Junkers 88, a twin-engined German bomber of the Second World War and one of the Luftwaffe's most successful aircraft (**Plate 1**). The recovery of parts of a reconnaissance camera indicated the probable type of mission that the aircraft was lost on.

4.8.3 Two small anomalies about 20m apart and close to the dredge track were subsequently identified during the interim geophysical survey (**Figure 9**). Subsequently inspected by WA divers, both anomalies proved to contain aircraft wreckage similar in character to what had been recovered. The wreck was in the middle of the new channel and above the design depth and rerouting was not possible. As excavation was judged to be impracticable in the circumstances, the wreckage was partially cleared to the depth required for navigation by a grab dredger under MOD licence and with an archaeological watching brief. Altogether just over 350 items of wreckage were recovered and retained in July 2012.

4.8.4 As no data plate giving the aircraft's unique construction number was recovered, dating and identification therefore relied upon the particular combination of equipment found. A control for heated flying clothing indicated that the aircraft had not been lost before 1943. Camera and film cassette parts from a specialist German topographic camera and ultra-wide format

film indicated that it was a reconnaissance aircraft. A combination of BMW 801 radial engine and parts from a nitrous oxide engine boost system and FUG 25 'friend or foe' system identified it as either a Ju 88T or Ju 88S, but the camera would only have equipped the T variant (Vizard and Vizard 2012). As only one Ju 88T appears to have been shot down over the estuary, the aircraft was identified as Works Number 0678 T9+FH.

4.8.5 This aircraft, part of the covert Luftwaffe special operations unit *Versuchsverband Oberbefelshaber der Luftwaffe* (VOdL), was shot down on 20th April 1943 during a reconnaissance mission to assess bombing raid damage at the Marconi New Street Works in Chelmsford, an important wartime production centre for military radio and radar components. The aircraft was a high altitude prototype, fitted with an engine boost system designed to provide it with the power to escape pursuing fighters. However, the British were paying equal attention to developing the high altitude performance of their fighter engines and the German pilot's confidence in the ability of his aircraft to escape proved misplaced as it was caught and shot down by Norwegian fighter ace and future film star Marius Erikson in his Mark IX Spitfire (AIR 50/130/8). We know from British interrogation records that the pilot, Hans-Joachim Baeumer, bailed out and survived the attack (Air Intelligence Reports, 21 April and 5 June 1943). However, his two crewmen did not survive.

4.8.6 Intriguingly, the two propellers recovered from the site are different, indicating the presence of a second aircraft, probably a German Stuka dive bomber. The likelihood of finding two crash sites within twenty metres of each other is remote, so it is possible that the clearance work undertaken to open up the estuary to beam trawling in the late 20th century has resulted in two wrecks being brought together (Kent Sea Fisheries, email).

4.8.7 The site has been published as client reports and a popular publication. An archaeological report has been published in the *Journal of Conflict Archaeology* (Scott & Gane 2015). A number of public talks have also been given by WA staff.

5 INTERIM GEOPHYSICAL AND DIVING SURVEYS

5.1.1 The Interim Archaeological Geophysical Survey undertaken in November 2011 encompassed Zones 9-11, 26-36 and part of Zone 105, together with three individual anomalies identified within strike reports. A total of 543 anomalies of potential archaeological interest were found, including 44 that had not previously been observed. When grouped, these produced a total of eighteen areas of archaeological potential, mainly distributed on the edges of the edged channel within Zones 26-36 (WA 2012a).

5.1.2 Diving inspections were undertaken of twenty-three anomalies in fourteen areas. The presence of an aircraft wreck was confirmed in Zone 105 (Strike 8024; WA 2012b). The anomalies were identified as being natural features in two areas and nothing was found in two others. Otherwise the anomalies were identified as being modern debris with no archaeological potential.

6 SELECTED TRANCHE TWO FINDS

6.1.1 With one exception each strike listed below concerns finds that were recovered from a drag head. The exception is Strike 8033, which resulted from the drag head hitting a very substantial obstruction on the seabed. Finds from that Strike were recovered by grab dredger.

6.2 Strike 8027 – worked timbers

6.2.1 Twelve worked pieces of timber (WA 1140-51) were recovered by the dredger *Brueghel* between 24th October and 23rd November 2012 in Zones 34-40 (**Plate 2**). These finds were reported together but are from multiple dredge tracks and are unlikely to be from a single site.

- WA 1140 has only been examined in photographs taken on board the dredger. It appears to be a plank that has been bent in half by post-depositional or recovery damage.

- WA 1141 is oak and has been radially converted. It measures approximately 1240mm long and has a maximum width of 120mm wide and thickness of 110mm. It is broadly square in cross-section and is of uncertain function. There are traces of a ferrous plate or fitting on two sides of the timber with ferrous staining along about 450mm of its length. Five ferrous through fastenings are visible: two holes adjacent to each other at one end; one centrally located; and a further two adjacent to each other at the other end) and two further holes are visible outside of the stained area on the timber.

- WA 1142 is an oak plank, tangentially cut and approximately 1200mm long by 160mm wide by 52mm thick. Three treenails are present, arranged in a single fastening fashion. Both ends have been damaged. One of the flat surfaces also has damage in the form of historic pitting and abrasions, although it is not clear whether these are pre- or post-depositional in nature.

- WA 1143 has only been examined in photographs taken on board the dredger. It appears to be a fragment of a broken dead-eye.

- WA 1144 measures approximately 1.2m long by 120mm wide by 90mm thick and is radially cut oak. It has a square cross-section and is in fair condition, apart from being damaged at one end. The opposing end has an unsymmetrical taper at the head of the timber forming a v-shape which aided the abutment of the timber to another on a vessel. This timber is potentially a deadwood, although this cannot be confirmed, and the lack of a substantial fastening may suggest otherwise. It has three 30mm diameter treenails set in an alternating or diagonal pattern and one hole for an iron fastening. A curving 'cut' seen on the side of the object is interpreted as post-deposition or recovery damage.

- WA 1145 is oak and is possibly a futtock or half frame. It measures 600mm by 100mm by 90mm and has a broadly square cross-section. It has four *in situ* treenails in an alternating pattern and extending through one axis of the timber, whilst the other axis has two ferrous through fastenings. Although damage makes further interpretation difficult, one end was probably cut to abut a reciprocal timber with a plain scarf joint.

- WA 1146 measures 890mm by 160mm by 130mm and is possibly a futtock or half frame. It is boxed heart oak. It is square in cross-section and has four *in situ* treenails as well as one ferrous through fastening. Whilst some of the original worked surface can be seen no tool marks are apparent. The futtock is in fair condition apart from a post-recovery longitudinal split and damage to one end. The damaged end is cut to abut a reciprocal timber with what appears to have been a plain scarf joint and has a single empty treenail hole.

- WA 1147 is probably a fragment of heavily abraded plank with one *in situ* treenail and one treenail hole. It is tangentially cut pine. It is lighter in both colour and weight than other wooden objects in Strike 8027 and has been affected by bio-infestation. It is a tropical hardwood of as yet unknown species. On a balance of probability basis it is therefore likely to be teak or Iroko and to originate from a 19th or early 20th century wooden vessel.

- WA 1148 is an oak knee with sub-halved conversion. It has been badly damaged during recovery. Three 'grazes' on the surface of the wood may be tool marks. It has a single empty treenail hole which measures 20mm diameter.

- WA 1149 measures 700mm by 100mm by 60mm and is radially converted oak. It is a very worn and has suffered damage. Damage to all of its faces makes identification difficult. It has a single treenail hole of 35mm diameter with a broken cylindrical treenail.

- WA 1150 is in particularly poor condition. It is oak and the timber has been radially converted. It is grossly deformed, very worn and has sustained heavy damage post-deposition or during recovery. It has a single treenail hole and one hole with iron staining. It is likely to have originally been a thin plank.

- WA 1151, also radially converted oak, measures 1060mm by 150mm by 30mm and is unidentified. It has two partial treenail holes. Damage to the object, probably during recovery, makes interpretation very difficult, although it is probably a plank.

6.2.2 Although the finds are reported to have been recovered during dredging of Zones 34-40, in the absence of a trackplot no attempt has been made to identify anomalies that may be associated with the finds. It has also not proved possible to identify associations with previously recovered finds on the basis of similarity.

6.2.3 All of the finds are likely to be from a vessel or vessels, with the possible exception of WA 1141, which may be debris from a damaged structure. WA 1143 may be an isolated loss. An association with the ship's timbers of Strike 8032 (Zones 36-40) is possible, although the timbers found in both strikes are not sufficiently similar to make a positive connection.

6.3 Strike 8028 – anti-submarine boom fitting

6.3.1 WA 1096 was reported with Strike 8027 (see above). Although the relevant trackplot has not been identified, the strike is reported to have been recovered from Zones 34-40.

6.3.2 The object is a large ferrous fitting with a square base from which project two outwards curving horns. The plate appears to have bolted onto a surface below. It is clearly deck furniture and is bitt-like (**Plate 3**).

6.3.3 A Second World War anti-submarine defence boom constructed between Shoeburyness and Minster on the Isle of Sheppey formerly crossed Zone 35 and a UKHO record (CMS WA 5195) and a number of geophysical anomalies have previously been associated with this structure (Firth *et al.* 2012: 63-4). Part of the anti-submarine boom hung from surface floats. A number of contemporary photographs of the boom show that the floats had bitts for securing the net. As these very closely resemble it, WA 1096 can be identified as one of these bitts.

6.4 Strike 8029 – 16th century cannon fragment

6.4.1 Part of a cast iron smooth bore cannon barrel (WA 5001) was recovered by the dredger *Brueghel* on 30th July 2013 from Zones 30-35 (**Figure 10a**).

6.4.2 The find is a broken fragment of just under one half of the circumference of the breech end of the barrel. It includes part of the first and second reinforces and the first reinforce ring. Total length is 450mm. The fragment is very worn and corroded and there is some concretion of the bore. The diameter of the reinforce ring is 165mm, although as very slightly less than half of the circumference of the barrel survives, the true diameter will have been slightly greater. Barrel diameter forward of that is 148mm and behind it (First Reinforce) 172mm. Measurement of the bore is complicated by the fact that the edges are worn and slightly irregular, but appears to have been 70-76mm (2.75-3.0 inches).

6.4.3 The fragment is probably part of a cannon manufactured in the period 1550-75 (Charles Trollope, email). Barrel thickness and bore suggest that it may be a falcon, a gun of the culverin type that fired a shot of up to 2.5 pounds. It is likely to have been of North European origin. Given that many of the cast iron guns in circulation at the time were English and given the geographical location of the find, it is quite likely to have been manufactured in England. Early cast iron guns are rare and therefore even fragments are archaeologically significant.

6.4.4 It is not impossible that the gun burst on board and was dumped over the side. However, it is more likely that the fragment was part of a worn out or damaged gun that was being carried as ballast or cargo. Whilst both ballast and cargo can be jettisoned from a ship at sea in certain circumstances, it is more probable that its presence on the seabed results from the loss of a vessel and that therefore the find comes from a wooden wreck. In those circumstances the date of loss is uncertain, as the gun could have been very old at the time. However, a date of loss in the second half of the 16th century or during the first half of the 17th century is plausible.

6.4.5 This wreck has not been located. No recorded wreck of this period that could account for the presence of the find has been identified and no obstruction was recorded during dredging prior to the recovery of the drag head. There were three anomalies within the trackplot buffer but none have any obvious characteristics of a wooden shipwreck.

6.5 Strike 8030 – 17th century cannon fragment

6.5.1 Part of a cast iron smooth bore cannon muzzle (WA 5004) was recovered by the dredger Breughel on 1st August 2013 from Zones 35 to 40 (**Figure 10b**).

6.5.2 The find is a broken fragment of just under one half of the circumference of the barrel and includes the muzzle, five concentric muzzle mouldings, the muzzle astragal and fillets and a section of the chase. It is 380mm long and the bore is estimated from the segment that survives to have been approximately 92mm (3.63 inches). Barrel wall thickness is approximately 55mm. The muzzle has a pronounced flare which commences just forward of the muzzle astragal.

6.5.3 The shape of the muzzle swell and the diameter of the bore suggest that it is from an English saker of the English Civil War era. It is likely to have been manufactured within the period 1640 to 1670 (Charles Trollope, email).

6.5.4 Although there is a small gouge mark from damage that occurred during recovery, the broken edges of the find are highly worn, which suggests that the damage is historic and not caused by impact with the drag head. It could therefore have resulted from accidental

damage caused during firing, or from the deliberate breaking up of a worn out or damaged gun.

6.5.5 Early iron sea service guns were prone to losing part of their muzzle if they accidentally struck the side of the gun port during recoil. This is the most likely explanation for the presence of this find on the seabed. In those circumstances the muzzle might fall into the sea, resulting in an isolated find. However, naval vessels and possibly merchant ships also carried old iron guns as ballast and these have been discovered on the nearby wreck site of the English warship *London*, lost in 1665 (WA 2012: 8-9). If the muzzle was carried inside a vessel as ballast, then it is likely to have come from the wreck of a wooden ship.

6.5.6 In the second half of the 17th century the bulk of the English navy was based in the ports of the Medway and Thames Estuary due to the threat posed by the Dutch. Furthermore, the find was made seaward of the important naval anchorage of the Nore, where the fleet was accustomed to muster. However, we cannot be sure that the gun was in the possession of the English fleet and it could also have been part of the armament of a sizeable merchant ship. Furthermore, captured English guns were frequently used on-board Dutch ships.

6.5.7 None of the eleven anomalies within the trackplot buffer have any obvious characteristics of a wooden shipwreck. Comparison of the relevant trackplots also rules out an association with Strike 8029. Find WA 5032, the base of a late 16th or 17th century stoneware jug manufactured on the Rhine was recovered from Zones 38-39 during Trip 0585 and could possibly be associated. However, in the absence of evidence of a 17th century shipwreck, this is probably an isolated find resulting from an accident during the firing of a cannon on board an English naval vessel in the mid to late 17th century.

6.6 Strike 8031 – Second World War Allied parachute

6.6.1 Part of a parachute (WA 5007; **Plate 4**) and two small fragments of what is probably riveted aircraft aluminium (WA 5008-9) were recovered by the dredger *Brueghel* on 6th August 2013 from Zones 35-40 (**Figure 11a**).

6.6.2 The parachute is a substantial fragment with the canopy and some suspension lines. It is not attached to a harness and it was found unpacked, although this could have been due to the manner in which it was recovered. No data panel or printed serial number was found. However, printed markings on the canopy read ‘AN’ (interpreted as standing for ‘Army Navy’) and the number ‘24’. This is likely to indicate that this was a 24ft canopy constructed of 24 individual panels. Each panel should have been marked along the edge of the parachute though the incomplete nature of the find means that only the 24th panel has a remaining mark.

6.6.3 The parachute is a standard US pattern manufactured by various companies and widely used during WWII by pilots. It is likely to have been in use on an American plane overflying the Thames Estuary. It was also in use by other Allied nations including the British.

6.6.4 The aluminium pieces are fragments and have been crushed. There is evidence of small rivets characteristic of aluminium aircraft parts and evidence of a dark paint coat. There are no serial numbers or other markings and their function is unknown. They are likely to be debris associated with an aircraft that has crashed into the sea and are therefore likely to be from a military aircraft of the Second World War.

6.6.5 There were ten anomalies within the trackplot buffer but none have any obvious characteristics of an aircraft wreck and cannot be associated with the finds. A 12m section of the fuselage of an unknown aircraft is reported to have been fouled by a fishing vessel in

1992 approximately 120m south-west of the trackplot in Zone 39, but it was not subsequently located (WA 5041; WA 2007). The oleo strut (Strike 8023) derived from dredging in Zones 32-38 and it is therefore possible that the parachute and aluminium fragments and possibly the aircraft fuselage are all derived from the dispersed crash site of a Second World War American aircraft or an Allied aircraft equipped with American landing gear. The aircraft has not been identified.

6.7 Strike 8032 – worked timbers

6.7.1 Nine fragments of worked timbers were recovered by the dredger *Brueghel* on 7th August 2013 from Zones 36-40 (WA 5017-25; **Figure 11b**; **Plate 5**).

- WA 5017 measures approximately 420 by 130mm and has a square profile. It has suffered recent mechanical damage, probably during recovery and it has also suffered damage due to infestation by marine borers. Concretion on one surface suggests that a metal nail is preserved within the wood and a small section of one side appears to have been protected from weathering by the attachment of a rectangular object.

- WA 5018 measures approximately 100 by 150mm and is interpreted as a plank. There is a single empty treenail hole. There is evidence of infestation by marine boring organisms. One end appears angled; the other has been damaged, possibly during recovery.

- WA 5019 measures approximately 640 by 200mm wide and 140mm deep and is interpreted as a plank. It has three treenails and three empty 28mm diameter treenail holes set in an alternating, regularly spaced pattern at 250. Each hole measures approximately 28mm. Both ends of this find have been recently broken by mechanical force, probably during recovery.

- WA 5020 measures approximately 850 by 250mm wide by 220mm deep and is possibly a futtock fragment. It has two worked sides. There is a single 20mm diameter treenail. One end is angled and there is concretion on one surface which suggests the presence of a ferrous fastening. In addition to recent mechanical damage, the find has evidence of infestation by marine borers.

- WA 5021 measures approximately 840 long by 240mm wide and 100mm deep. It has a rectangular cross-section and is broken at both ends due to recent mechanical damage. One end is angled. Concretion on one surface suggests that a ferrous fastening is present.

- WA 5022 measures approximately 900mm long by 200mm wide and is interpreted as a probable plank. It has three treenails and an empty treenail hole. It has suffered mechanical damage, at least some of which appears recent.

- WA 5023 measures approximately 440mm long by 140mm wide by 90mm deep and is interpreted as being a small plank. Three of its surfaces have been worked and are smooth, whilst the fourth has sustained damage. It is angled for part of its length and has one small treenail. Both ends are broken and the damage appears recent.

- WA 5024 is a rectangular plank with four worked sides and broken ends. It measures approximately 1050mm long by 240mm wide by 100mm deep. It has three 30mm diameter treenails and a treenail hole. One of the face surfaces has

damage and abrasion that is probably historic, possibly incurred prior to loss. Lightly incised diagonal lines along the edge faces are probably saw marks.

- WA_5025 is possible plank measuring 1370mm long by 120mm wide by 30mm deep. It has very heavy damage along its whole length, probably sustained during recovery, and this makes making interpretation difficult.

6.7.2 These finds are likely to be ship timbers from one or more wrecks in the area dredged. Although dendrochronological analysis did not produce dates, it did indicate that WA 5021, 5023 and 5024 cross dated each other within a period of sixty seven years and are therefore probably part of the same structure and possibly the same tree (Bale & Nayling 2015).

6.7.3 However, no recorded wreck that could account for the presence of these finds in the area dredged has been identified. The trackplot does cross the obstruction previously recorded at Strike 8004, but it is not clear whether this position is for the drag head and no finds are reported to have been made when it was recovered following the strike. Seventeen anomalies intersect the trackplot buffer, but none have any obvious characteristics of a wooden shipwreck. 7138 was dived by WA in February 2012 and no archaeological material was found (WA 2012, CMS Datasheet 7).

6.8 Strike 8033 – 19th century paddle tug

6.8.1 On 9th December 2013 the dredger *Victor Horta* struck an obstruction very close to the Sea Reach 1 Buoy, which marks the eastern end of the existing commercial shipping channel, the Yantlet Channel (**Figure 12**; WA 2015). An anomaly with archaeological potential had been discovered very close to the obstruction in 2001 during pre-consent archaeological work. However, the evidence available then was not sufficient to warrant further pre-consent investigation.

6.8.2 Due to its proximity to the shipping channel, it was considered to be a possible hazard to navigation that required investigation. An inspection of the obstruction by Port of London Authority divers confirmed that it was the wreck of an iron or steel vessel and bathymetric survey confirmed that it was at least partially intact and approximately 20m long by 10m wide, with debris scattered over a wider area (**Figure 12b-c**) but mostly buried in fine mud. Finds recovered included a section of riveted iron hull plating and frame, but the initial finds gave no indication as to the type of vessel beyond hull material.

6.8.3 Due to its position within the new channel, and with little information available about the wreck, there was no alternative to the removal of all wreck material above the channel's design depth. In the absence of information, the assumption was that it was a modern wartime wreck and the Port Authority used its powers of obstruction clearance, whilst London Gateway required that the operation was subject to an archaeological watching brief.

6.8.4 Clearance was undertaken in April 2014 by the self-propelled barge Atlantis using its 25 ton salvage grab. Approximately eighty tons of material was recovered from the site. On deck the material was washed and then processed for recycling using a hydraulic shear cutter. Although there were some health and safety constraints, most of the recovered material was recorded by a specialist archaeologist on the vessel. Selected material was preserved intact and subject to more detailed recording ashore at a temporary storage depot. Extensive use was made of photogrammetry to record the larger and more complex objects. In total 346 finds large and small were recorded.

6.8.5 Parts of two single cylinder 'grasshopper' side lever steam engines and two coal-fired horizontal double return flue boilers were recovered, along with part of the main drive shaft, a coupling wheel, three engine beams, two damaged air/vacuum pumps and fragments of at least two engine bed plates. Cylinder diameter was consistent with a 30-33 inch cylinder bore. In addition two parts of a feathered side paddle wheel were recovered (**Cover**). Engines of this type, a modified version of the side-lever engine, typically date from the second and third quarters of the 19th century, although they were still being manufactured for marine use in the early 20th century. They were commonly fitted in small craft such as paddle tugs, which might make use of two so that the paddles could be operated independently. This provided them with such manoeuvrability that they were still being used in the mid-20th century, long after paddles had become obsolescent in almost all other vessel types.

6.8.6 Although there were no makers' plates found on any of this material, a number of firebricks stamped 'HEDDON' and 'RAMSAY' were recovered from the boilers. These were respectively 19th century mine and brickworks companies whose works were located near Newcastle-Upon-Tyne in the North-East.

6.8.7 Five sections of iron hull were recovered and these included shell plating, frames, two floor frames, stringers, the vessel's keelson, two side keelsons and wash plates. There was an irregular coating of a bituminous substance on some of this material, which is likely to have been painted on to improve the watertightness of the riveting and plate caulking and to discourage corrosion where standing bilge water might accumulate. In addition deck beams, a hatch door, a section of the prow where port and starboard stringers meet, together with sections of wooden gunwale and beam were recovered.

6.8.8 The recovered material indicates that the vessel would probably have been of shallow draft with a flat bottom and therefore suitable for shallow water operations and possibly of 100-150 gross registered tons, all typical paddle tug characteristics. The plate dimensions are a consistent 0.65m wide but vary in length from 3.02-3.90m long and are single riveted, which became rare in larger vessels towards the end of the 19th century (McCarthy 2005). The floor frames were stamped FRAZER AND ROBERTS & CO LTD and ABBOTT, both 19th century iron manufacturers based in Gateshead in the North-East. The former company was incorporated in Gateshead in the North-East in 1866 but does not appear in local industrial registers in 1889 (Tyneside Industries 1889).

6.8.9 The domestic assemblage recovered from the site consisted of ceramics, glass, leather footwear and miscellaneous objects including a brass lock and door knob. The ceramics included three complete ceramic vessels and sixty nine sherds. Most of the sherds and a single complete plate are blue and white transfer-printed flatwares, all of which have a single variant of the 'Albion' decorative pattern. Two backstamps are of G.R. Turnbull of Newcastle upon Tyne, working between 1863 and 1875 (Coysh & Henrywood, 1982: 371). The Turnbull backstamp is also evident on a complete cup and several sherds of utilitarian teaware with simple blue band decoration. There were also thirteen stoneware sherds, including a round shouldered flagon with the proprietary mark G SIMMONS Phoenix GRAVESEND. He is listed as being the proprietor of the Phoenix Tavern in Gravesend in 1851, but not in 1882 (Gravesend and Milton Directory, 1851; Kelly's Directory, 1882). A whiteware jug has what is possibly the mark of the Staffordshire potter William Brownfield, active between 1850 and 1871 (Godden 1964: 10). There are also two sponged pearlware vessels, a type that was produced until the 1840s.

6.8.10 The glassware included five complete bottles, a drinking vessel and an oil lamp. Several 'flat egg' bottles are evident, a form thought to have been introduced in the 1870s.

6.8.11 At least fourteen individual items of footwear were found, although none were complete. They were a mixture of working boots including a 'Derby Boot' and a clog and various dress shoes including an 'Oxford Shoe' and a 'Balmoral Boot'. All were made of leather with the grain side facing outwards, known at the time as 'ooze leather' and subsequently as suede (Swann 1982: 55). Size was adult male and varied between 5 (38) and 9 (43), with nearly half being size 8 (42). All were noticeably worn. Curiously, no pairs were recovered. All can be dated on construction and style to the mid-Victorian period, and probably within the third quarter of the 19th century.

6.8.12 Realisation that the wreck was that of a paddle steamer, together with the dating evidence provided by the recovered material have enabled the vessel to be tentatively identified. On Tuesday 13th February 1872, the North-East newspaper Shields Daily Gazette reported:

> "…the screw steamer Rajah, for the north, was in collision below the Nore (Light Vessel) on Sunday, and sank the tug Admiral and afterwards fouled the ship William Davis, for Glasgow, doing damage to her bows, and carrying away her own mainmast and funnel. Both vessels returned to London for repairs…"

6.8.13 Freeman's Journal published a more detailed account of the accident on the same day. It said that:

> "Captain Dunne (of the Countess of Dublin) saw that a most serious collision had taken place between a large screw collier and the steam tug Admiral and a large ship, bound for Glasgow, which she had in tow. In the collision the Admiral was sunk, and the bows were cut clean off the ship. The screw collier had her masts and funnel carried away, and her hull much shattered. Captain Dunne, who saw that no time was to be lost if life was to be saved, put all steam on the Countess, and when near enough to render assistance lowered his boats. By this means he was enabled to save the crew of the Admiral (seven in number), who would certainly have perished only for his prompt and humane conduct. Having landed the rescued men at Gravesend he proceeded on his way to London."

6.8.14 The *Admiral* was an iron framed paddle tug built by Thomas Hepple at his yard at Low Walker in North Shields on the River Tyne in 1870. The 100 gross registered ton vessel was 97.2 feet (29.6m) long and had a beam of 18 feet (5.48m). It was fitted with port and starboard single cylinder side lever engines, probably of the grasshopper type and capable of producing fifty net horse power. Owned by Daniel Mitchell of Gravesend, the vessel would have plied for trade towing ships into and out of the Thames Estuary, as well as towing river barges and lighters.

6.8.15 Identification of the wreck as being the *Admiral* has enabled the bathymetric data to be reviewed. The *Admiral* builder's half-plan model preserved in the collection of the Royal Museums Greenwich has a single funnel aft of the paddle box, which indicates that it mounted both of its two boilers aft of the engines and crank and paddle shafts. The arrangement of the boilers and shafts can clearly be seen in the bathymetry data and this indicates that the wreck is lying with what would have been its bow to the south. Although there is certainly room for doubt because we do not know how long it took the tug to sink, this suggests that the vessel may have been hit by the *Rajah* on the port side, with the sheer force of the collision pushing the Admiral to starboard as it flooded and sank.

6.8.16 There is a distinct seabed hollow in the seabed at the north and south ends of the wreck. Therefore the hull beyond the limits shown is unlikely to have been present prior to clearance. The missing bow would be consistent with the damage known to have been done by the *Rajah*, but it is also possible that the truncation of the wreck was caused by the drag

head impacts that led to its discovery, with the central section only preserved due to the presence of heavy and robust engines and boilers. However, there is no evidence in the geophysical data to suggest an obvious scatter of debris from these impacts.

6.8.17 It is not clear from Captain Dunne's description exactly where the loss occurred and a significant quantity of objects recovered from the site do not fit the date of loss of the tug, including an early 20th century vaginal douche. However, intrusive material is very commonly encountered on wreck sites in the Thames Estuary and the wreck is fairly close to the pre-1925 position of the Nore Light Vessel mentioned in the first account. Furthermore, the characteristics of the wrecked vessel, with its North-East manufactured parts and domestic material, together with the dating evidence suggest that the wreck probably is the sunken *Admiral*.

6.8.18 The significance of the *Admiral* lies in the fact that it was a paddle tug. These were developed in the early 19th century as one of the first applications of steam at sea. The *Charlotte Dundas* of 1802, arguably the first practical steam powered vessel, was built to tow barges on the Forth and Clyde Canal. During the 19th century transition between sail and steam, paddle tugs revolutionised the handling of unpowered craft in river and harbour environments. Equally importantly they reduced the serious risks and delays that sailing ships faced at the beginning and end of their voyages by allowing them to be towed in and out of harbours. Tugs such as the Admiral towed large vessels in and out of the shallow confines of the Thames Estuary, avoiding the necessity to wait in harbour or out in deeper water for favourable winds and reducing the risks of stranding and, ironically, collisions. As sailing ships were largely incapable of operating to a fixed schedule, tugs would often wait outside the Estuary for opportunistic business. Despite the fuel-hungry nature of their low pressure engines, they were capable of ranging far and wide in search of towing business. The manoeuvrability of paddle equipped tugs also ensured that they continued to be built well into the 20th century, long after ship owners had adopted the screw propeller for other types of vessel.

6.9 Strike 8034 – medieval cooking vessel

6.9.1 A medieval jar base (WA 5092) was recovered during an epibenthic trawl survey for LGP during Spring 2014. The trawl track was 500m long and approximately 500m north of Zone 40 (**Figure 13**). This coincides with no known sites or anomalies.

6.9.2 The base is probably from a cooking vessel. It is a sandy fabric with a convex base and unusually straight sides. Date of manufacture was 13-15th century.

6.9.3 When found it had two clusters of whelk eggs, some hydroids and a few barnacles adhering to its surface. This suggests that it was probably buried until fairly recently and that it is unlikely to have been exposed on the seabed for longer than a year.

6.9.4 Although the presence of this find on the seabed may represent the deliberate jettisoning of a broken cooking vessel or an accidental loss, it could also indicate the presence of a 13-15th century ship or boat wreck along the trawl track. The find was made a considerable distance outside of the channel and no further investigation was undertaken.

7 DISCUSSION

7.1.1 Significantly fewer finds were reported during the second tranche of dredging than in the first. This suggests that most of the seabed archaeology encountered was either on or close to the surface.

7.1.2 With the exception of the medieval cooking vessel and the possible medieval clinker floor frame, which may be medieval, all of the finds made during dredging are either of post-medieval or modern date. This is not surprising, as seabed finds earlier than 1700 are rare in the UK and those dating from prior to post-medieval especially so. The dendrochronological dating proved disappointing but was based upon a limited sample assembled by chance. Nevertheless, it is possible to say that a medieval and a 16-17th century wreck were probably encountered and that the quantity of timbers recovered during dredging suggest that other wooden wrecks may have been struck.

7.1.3 The extent to which the unknown ship and aircraft sites impacted by the dredging process have been damaged or removed is unclear. The large numbers of ship timbers encountered suggest that clearance has been extensive and it is notable that neither the geophysical survey nor the subsequent diving investigations resulted in the discovery of any vessel remains. However, the 19th century paddle steamer was not completely cleared and the Ju 88T is unlikely to have been completely cleared. Archaeological monitoring of any future capital or maintenance dredging at these locations is recommended.

7.1.4 A number of methodological issues are apparent that can usefully inform similar future work. The most significant of these proved to be the provision of GPS data for the dredgers during dredging. This was provided at five minute intervals, during which time a dredger can travel a significant distance and even turn across the channel. Even applying a 10m buffer, only a general approximation of the true dredge track could be produced. As a result it proved very difficult or impossible to associate discoveries with anomalies. This contributed to the failure of the geophysical and diving investigations to locate and identify archaeologically significant sites, with the notable exception of the Ju 88T. For future projects the provision of a continuous GPS dredge track, corrected to take into account the position of the drag head relative to the GPS receiver, would assist archaeological investigation of finds.

7.1.5 On board watching briefs demonstrated that the material reported through the protocol and considered archaeologically significant was only a small proportion of the debris recovered from the drag head. The great bulk of it was modern debris that was disposed of. However, recognising archaeological significance during the clearance of a drag head screen is a difficult process. Even for a trained archaeologist identifying what may be archaeologically significant in apparently modern debris is not always a straightforward process.

7.1.6 At least three historic aircraft were impacted by the dredging. Two of these appear likely to have been dispersed or partial survivals and it is likely that only a small proportion of any wreckage present was recovered, the remainder being either below the depth dredged to or disposed of in the dumping area without being observed. Only the more complete aircraft, the Ju 88T, has been recovered to any significant degree. This aircraft wreck was an important find.

7.1.7 The 19th century paddle steamer was an archaeologically significant find and its recovery is certainly worthy of publication in a specialist journal. The late 18th century carronade is also an important find and similarly deserves publication in short note form, as well as full conservation.

7.1.8 Medieval wrecks are so rare that further investigation of Strike 8034 would certainly be worthwhile.

8 SELECTED REFERENCES

Bale, R. and Nayling, N., 2015, *Tree ring dating of timbers retrieved from the Thames during the London Gateway Development*, Unpublished Client Report, University of Wales, Trinity Saint David.

Firth, A., Callan, N., Scott, G., Gane, T. and Arnott, S., 2012, *London Gateway. Maritime Archaeology in the Thames Estuary*, Wessex Archaeology Report No.30.

Lordi JV, 2011, *London Gateway Port. Procedural Note to the Dredging Protocol*, unpublished document ref.LG-LDI-C2501-RPT-MAR-2556.

Maze, R.J., 2002, *Howdah to High Power: A Century of Breechloading Service Pistols (1867–1967)*, Excalibur Publications.

Scott, G. and Gane, T., 2015, 'Aviation Archaeology Offshore: The Recovery of a rare Ju88 Aircraft Wreck during work for the new London Gateway Port', *Journal of Conflict Archaeology, Vol.10 (2)*: 75-95.

Skennerton, I., 2005, *Mauser Model 1896 Pistol*, Arms & Militaria Press.

Wessex Archaeology, 2011, *London Gateway Port: Strike and Track-plot Report. Preliminary Interpretation of Finds*, unpublished report ref. 72436.02.

Wessex Archaeology, 2012a, *London Gateway Port: Interim Archaeological Geophysical Survey,* unpublished report ref. 79800.02.

Wessex Archaeology, 2012b, *London Gateway Clearance Programme. Diving Investigations. Field Report 84350. Zone 105. Data Sheet 25. Ref: 7534, 7535,* unpublished report.

Wessex Archaeology, 2014, *London Gateway Port: Strike and Track-plot Report*, unpublished report ref. 88631.01

Wessex Archaeology, 2015, *London Gateway Clearance Programme: Wreck Site of 19th Century Paddle Steamer, Sea Reach No.1. Post-clearance Assessment Report*, unpublished report ref. 88631.03.

Wessex Archaeology, 2015, *London Gateway Clearance Programme: Wreck Site of 19th Century Paddle Steamer, Sea Reach No.1. Detailed Recording of the Maritime Material Stored at London Gateway*, unpublished report ref. 88631.03.

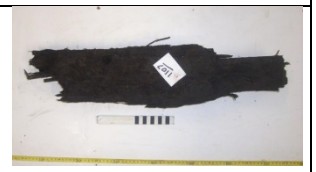
9 APPENDIX 1: REGROUPED STRIKE FINDS, 8009-18

Group A		Strike: 8009
ID	**Description**	**Image**
1127	Clinker Floor Frame: Height 600mm, Breadth 500mm, Thickness 180mm Fashioned from a naturally 'V' shaped tree and side branch, the timber has distinctive stepped joggles on either side. Cut marks are also clearly visible on outboard faces. It has one *in situ* treenail 28mm in diameter and two partial treenail holes, all are situated on the upper arms of the timber, no fastenings appear on the lower block section of the timber. This is a floor frame from either the bow or stern of a clinker built vessel. The angle of the arms and the sloping surface of the outboard face (flare) illustrates the original timber is possibly positioned between the 3rd to 6th floor frame at the forward end of the vessel or similarly of that of the after end. The centre of the converted tree (pith) is visible at the narrow end of the worked timber. The limber hole is cut to the side of this section. This allows bilge water to flow to the pump hole. Axe marks that are visible illustrate a rebate cut to allow plank fastenings to be positioned, which in turn allows the longitudinal planks to sit flush with the transverse frame. This type of timber is slightly smaller than those found on the Newport Ship (c.1445), a larger scale than the Drogheda Boat (c.1520) and possibly similar in scale to the Aber Wrac'h wreck (mid-15th century). Another useful comparison would be that of the 'Copper Wreck' of Gdansk, Poland, raised in 1975-76 and believed to originate from the 15th century.	 
1128	Damaged at either end, this small fragment is 520mm in length, 110mm wide and 70mm thick. There are three treenails, 25mm in diameter and a step (possible joggle) on the underside.	

Group A		Strike: 8009
ID	**Description**	**Image**
1129	One damaged end and an original cut butt end were visible on a timber 620mm in length, 114mm wide and 75mm thick. A side branch is situated close to the butt end and there is one treenail of 25mm in diameter.	
1126	A wedged shaped timber 510m in length, 140mm in width and 125mm at the thickest end. There are three treenails of approximately 24mm diameter. The thicker end appears to be original. This timber has the appearance of a small chock/buttress that would have been used to reinforce internal structural components such as a mast step or cross beam of an upper deck.	
1137	A wedge shaped timber that has an original tapered end and a damaged end. The timber is 722mm in length, 120mm wide and 96mm thick. There are twelve iron nail holes, of various sizes (4-12mm shank), two treenails consisting of one clean through and a partial treenail. There is also a possible joggle step (10mm deep) close to a side branch.	

Group B - Slender Frames (Carvel)		Strike: 8010
ID	**Description**	**Image**
1138	This timber was identified among some 67 timbers of frame fragments, ceiling plank fragments and deck and hull plank fragments on the *Lange Wapper* on the 1st February 2011. It is also very similar to a timber recorded two days earlier on the same vessel. The timber dimensions are 690mm in length, 156mm in width and 93mm in thickness. It has a slight curvature, with five treenails *in situ* and another partial hole evident. They appear to be universal in diameter between 30 and 31mm. The timber also has a sawn cut end and damage to the opposite end. There is also a slight bevel on the outboard face. It is probably oak.	
1139	This timber was identified among some 67 timbers of frame fragments, ceiling plank fragments and deck and hull plank fragments on the *Lange Wapper* on the 1st February 2011. It is also very similar to a timber recorded two days earlier on the same vessel. The length of the frame timber is 910mm, 140mm wide and 145mm thick. There are five treenails holes, 30mm diameter, and one *in situ*. The original conversion would have been a relatively sharp curved timber with the section appearing to be quartered. There appears to be a scarf face on the outboard. It is probably oak.	
1140	Sloping, bevelled small timber, 460mm in length, 120mm wide and 150mm thick. There are three treenail holes 30mm diameter, with one *in situ*, and one small tack iron nail hole that passes clean through. The original function of this timber is difficult to establish although it was converted into a quarter section.	

Group B - Slender Frames (Carvel)		Strike: 8010
ID	**Description**	**Image**
1150	This timber is 900mm long, 160mm wide at its widest, 90mm at its slenderest and approximately 128mm thick. There are eight treenails holes, 30mm in diameter, five *in situ* and one blind. Light brown sapwood of possibly eight rings deep covers much of the surface of the timber. The timber narrows toward a possible scarf joint and could possibly have been a futtock. Certainly a potential dendrochronological sample as it has approximately 50 rings.	

Group C – Planking approximately 60mm think. (ceiling, outer hull, stringer)		Strike: 8011
ID	**Description**	**Image**
1107	This timber was possibly among some 67 timbers of frame fragments, ceiling plank fragments and deck and hull plank fragments on the *Lange Wapper* on the 1st February 2011. Possible ceiling or stringer plank fragment 63mm thick, 670mm in length and 160mm wide. There is a treenail with a 30mm diameter, and two closely positioned iron nails, with 10mm shank driven at an angle of 20°. It was originally tangentially cut.	
1108	Possibly an oak ceiling or stringer plank fragment 61mm thick, 600mm long and 160mm wide. With no apparent original edges there is a 30mm diameter treenail, and an iron nail driven through on the edge.	
1109	This timber was possibly among some 67 timbers of frame fragments, ceiling plank fragments and deck and hull plank fragments on the Lange Wapper on the 1st February 2011. Possibly a ceiling or stringer fragment 60mm thick, 500mm in length and 160mm wide. There are three partial treenail holes, approximately 30mm in diameter. With two damaged ends there is also a chamfered edge evident, cut to 45°. It was originally tangentially cut.	

Group C – Planking approximately 60mm think. (ceiling, outer hull, stringer)		Strike: 8011
ID	**Description**	**Image**
1106	Possibly an oak ceiling or stringer fragment 64mm thick, 550mm in length and 160mm wide. The timber was fashioned tangentially, however no original edges remain. There is one treenail hole toward one end and is 34mm in diameter.	
1110	Possibly an oak ceiling or stringer fragment 56m thick, 690mm in length and 160mm wide. It has two damaged ends with two partial treenail holes and one central treenail hole approximately 30mm in diameter. Also a chamfered/bevelled edge is evident and it was originally tangentially cut.	
1111	An interesting timber fragment that illustrates an angled joint and stop end. The overall timber is 750mm in length from joint end to damaged end, an original width of 250mm and an original thickness of 64mm. There are two adjacent treenail holes, 30mm in diameter centrally and another partially evident at the damaged end. On the outboard surface of the angled joint there are compression marks and also tool marks (probably of an axe head) on the surface of the main timber. It was originally tangentially cut. The timber may have been used as a longitudinal stringer.	
1112	A possible ceiling or stringer fragment. There is one treenail, 30mm diameter. The fragment has no original edges, with dimensions of 64mm thick, 470mm long and 75mm wide.	
1113	A possible ceiling or stringer fragment 64mm thick, four treenail holes, 30mm diameter, two of which are *in situ*. There appears to be possible wear on the outboard face. The timber is 710mm long and 100mm wide.	

Group C – Planking approximately 40mm to 60mm think. (ceiling, outer hull, deck)		Strike: 8011
ID	**Description**	**Image**
1114	Possible ceiling plank fragment 50mm thick, 740mm long and 78mm wide. There are two partial treenails, 30mm in diameter at either damaged end. It was originally tangentially fashioned.	
1115	This timber is similar to planking observed among some 67 timbers of frame fragments, ceiling plank fragments, deck and hull plank fragments and other structural components on the *Lange Wapper* on the 1st February 2011. Possible ceiling plank fragment 42mm thick, 300mm in length and 145mm at the widest point. The timber was split at a side branch. There are two treenails present 30mm in diameter.	
1117	This timber is similar to planking observed among some 67 timbers of frame fragments, ceiling plank fragments, deck and hull plank fragments and other structural components on the *Lange Wapper* on the 1st February 2011. It is a sawn plank that is torn and warped. It is 45mm thick, 900mm long and 190mm wide. There is one treenail 30mm diameter, the timber has wavy grain and saw marks throughout, the section illustrates it was tangentially converted. The outboard surface is worn.	
1118	A sawn plank, there are saw marks throughout, along the 630mm length. It is 41mm thick and 140mm wide and damaged on all edges. There are no fastening holes. The timber was tangentially sawn.	
1119	A sawn plank 410mm long, 45mm thick and 113mm wide. However, there are no original edges present. There are two partial treenail holes 30mm diameter. The timber was tangentially cut. The outboard shows sign of wear.	

Group C – Planking approximately 40mm to 60mm think. (ceiling, outer hull, deck)		Strike: 8011
ID	**Description**	**Image**
1120	Small timber fragment with no original edges. There are cross fastenings, one treenail in one direction and an iron nail in other. The dimensions of the timber are: 210mm long, 50mm thick and 40mm wide. The timber was originally tangentially cut.	
1121	Small fragment, possibly a ceiling plank with no original edges, 330mm in length, 71mm wide and 45 thick. There are two treenails with diameters of between 26-30mm. The outboard face appears to be worn. The timber was originally tangentially cut.	
1122	Plank fragment 47mm thick, 690mm long and 100mm wide. There are two treenail holes 30mm in diameter, with extremely faint tool marks. The timber has wavy grain and was originally tangentially cut. This timber is similar to planking observed among some 67 timbers of frame fragments, ceiling plank fragments, deck and hull plank fragments and other structural components on the *Lange Wapper* on the 1st February 2011.	
1152	Thin sawn plank fragment 38mm thick, 470mm long and 104mm wide. Torn and shredded saw marks are visible on the inboard face and the outboard face is degraded or worn. The timber was originally tangentially cut although the grain is wavy.	

Group C – Planking approximately 40mm to 60mm think. (ceiling, outer hull, deck)		**Strike: 8011**
ID	**Description**	**Image**
1153	Sawn plank 340mm, 160mm wide and 34mm, bevel edge. Outboard worn and degraded. The timber was originally tangentially cut. It was possibly used as a filler board between frames within the hull.	
1155	Planking of small vessel, that has be radial split. The timber is 340mm in length, 78mm wide and 29mm thick.	
1116	Tangentially cut plank, 1100mm long, 115mm wide and 36mm thick. Badly damaged, with no original edges evident. There are clear saw marks at one end and four partial treenail holes 30mm wide.	

Group D – Various functional timbers with similar dimensions and treenails.		**Strike: 8012**
ID	**Description**	**Image**
1146	Timber fragment with a possible vertical scarf joint. It is 470mm in length, 66mm wide and 107mm thick. There is one treenail hole partially visible and is approximately 30mm in diameter, there is also a circular iron nail hole, 14mm wide. It is fashioned from a quarter of the original tree. Possibly similar to **1145** and **1147**.	

1147	A relatively tight grain timber with nine treenail holes, one *in situ*, and universally 30mm diameter. Three partial treenail holes are in close proximity at one damaged end. Slightly curved surface on underside. The timber is 700mm long, 128mm wide and 110mm thick. It is quartered from an original tree and is similar to **1145** and **1146**. It been damaged on either side.	
1145	Large bevelled timber fragment with a large central side branch central. There are six treenail holes, with one *in situ*, 30mm diameter, one on the edge of the timber may have been augured blind. Similar to **1146** and **1147**, although the conversion appears to have used the pith lower half of the timber section.	

Group E – Large Components.		**Strike: 8013**
ID	**Description**	**Image**
1125	Angled timber, knee or possible breast hook, with cross fasteners 22-24mm diameter, plus a square shank iron nail. Marine organism eaten and damaged at one end with large crack where it was ripped clear of attached timbers. The opposite end is originally cut. Potentially a good chance of obtaining a dendrochronological sequence.	
1123	Wedge shaped oak timber, 700mm in length, 128mm wide and 110mm thick. It has eight treenail holes with seven *in situ*, all approximately 28-30mm in diameter with the possibility of wedges also used. It has a wavy grain and many knots. Due to the number of treenail holes and its shape it was possibly used as a chock or buttress for other larger structural pieces such as a mast-step or crossbeam, certainly within a ship.	

Group E – Large Components.		Strike: 8013
ID	**Description**	**Image**
1135	Ship's oak frame fragment 620mm in length, 235mm wide and 122mm thick. There are nine treenails 30mm in diameter at slightly different angles. Possible wedge in one treenail and two iron nail holes 40mm deep. It was converted with the pith centrally positioned with a light curve on the underside (possibly outboard). It is likely to have been utilised as a floor or futtock framing piece.	
1136	Ship's oak frame fragment 760mm in length, 170mm wide and 195mm thick with a gentle slope upward toward the damaged end. There are seven treenails, with four *in situ*, all of which are 30mm diameter. One treenail is partially on the edge of original surface, and there is a double treenail. Compression marks are visible on both the inboard and outboard faces. On one side (forward or after) the original surface has been torn clear, right on the line of the pith.	
1124	Large ship's timber fragment, possibly broken from a piece over 2m long, with dimensions of 920mm in length, 83mm wide and 268mm thick. There are two original surfaces, the timber tapers gradually and has a shaped chamfer on the lower edge. There is only one fastening, a treenail 31mm in diameter.	

Group F – Damaged timbers with worked features with unknown function.		Strike: 8014
ID	**Description**	**Image**
1141	Ship's frame timber fragment 415mm long, 120mm wide and 135mm thick. There are four partial treenails, 27mm diameter and a butted end. The timber's condition appears torn and shredded.	
1148	Slender fragment, with two *in situ* treenails 27-29mm diameter and axe marks on one side. It is 350mm in length, 74mm wide and 170mm thick.	
1134	Possible futtock fragment 450mm in length, 109mm wide and 115mm thick. Scarf possible on one surface, one partial treenail hole is present with a 30mm diameter.	
1160	Broken small timber frame 450mm long, 62mm wide and 97mm thick, with four partial treenails. Torn damage on both ends and no tool marks.	

Group F – Damaged timbers with worked features with unknown function.		Strike: 8014
ID	**Description**	**Image**
1142	Narrow ship's frame timber fragment 97mm wide, 760mm long and 166mm thick. There are four treenail holes, with a 30mm diameter; a double treenail sequence is situated close to the edge. There are large growth rings with the pith central to the conversion and there is damage at either end.	
1144	Slender timber fragment 570mm in length, 60mm wide, 100m thick. There is an iron nail fastening with a square shank of 11mm and a cross treenail with a 30mm diameter in close proximity to one another. Possible compression/wear on internal face. There is also a possible compression/wear mark on the internal face.	
1149	Possible frame 310mm in length, 158mm wide and 115mm thick, with partial treenail at damaged end, opposing end originally cut.	
1151	Possibly a fragment of a futtock 410mm in length, 128mm wide and 72mm thick, with four treenails, 28mm diameter. There is an obvious curve to one side.	

Group F – Damaged timbers with worked features with unknown function.		Strike: 8014
ID	**Description**	**Image**
1161	Timber fragment with a sloping surface, either butt or sharp scarf end. The total length is 440mm, with a width of 108mm and a thickness of 149mm. There is a large side branch on the inboard surface, two iron nails driven opposing timber length, with a heavily damaged end with some bore holes.	
1163	Heavily torn and damaged fragment 635mm in length, 65mm wide and 105mm thick. There are cross driven fasteners on two sides partially visible.	
1166	Worked timber 520mm in length, 110mm wide and 94mm thick. There is an iron nail centrally placed with an 18mm diameter. The timber is damaged and torn at either end. Possibly converted from side branch.	
1171	A ship's timber, 800mm in length, 115mm wide and 100mm thick. There were four holes and one blind centrally. The timber condition is extremely shredded and damaged.	

Group F – Damaged timbers with worked features with unknown function.		Strike: 8014
ID	**Description**	**Image**
1169	A shredded timber, with wavy grain 910mm long, 125mm wide and 170mm thick. Five partial treenail holes of 30mm in diameter were observed. Sloping surface at one end, cut with the centre of the tree visible due to damage.	
1159	A heavily damaged and shredded timber fragment 450mm long, 15mm wide and 10mm thick. There is a side branch situated at the timbers centre. There are also three treenails, with a diameter of 30mm and one square shank iron nail hole.	
1101	This timber was identified and recorded on the dredging vessel *Lange Wapper* on the 31st of January 2011. A shredded timber fragment 680mm long, 15mm wide and 110mm thick. It has a copper fastener centrally positioned with a diameter of 15mm that was drilled blind. Two partial treenail holes are apparent at one end with a 28mm diameter.	

Group G – Possible Pier/Jetty Structure		Strike: 8015
ID	**Description**	**Image**
1133	Possibly a piece of jetty/marine structure with a large iron square section pin180mm long at one end and sheet iron brace plate surrounding and attached to the timber with small iron tacks. The overall length of the piece is 610mm, with a width of 185mm and a thickness of 135mm. The timber structure is flayed open and the circular head of the pin is visible. Both the square pin and the iron bracing are bent.	

Group G – Possible Pier/Jetty Structure		**Strike: 8015**
ID	**Description**	**Image**
1168	Heavily attacked by marine organisms, the timber is 450mm in length, 98mm wide and 160mm thick. The timber has an iron bolt 30mm in diameter. There is also a sloping outboard surface.	
1158	With many marine organisms bore holes throughout, the timber is 620mm long, 95mm wide and 210mm thick. There is an iron bolt with a diameter of 26mm. There is an original sloping surface of 45°.	
1165	Worked timber with iron nail/bolt 30mm in diameter sent at an angle then downward. (similar to 1158 and 1133) Non-oak. This is possibly a jetty timber.	
1157	Slightly sloping butt end of ship's timber 620mm long, 95mm wide and 210m thick. Fragment with iron bolt (similar to 1154) central, 30mm in diameter and damage at opposing end. There is a bevelled edge and curving inverted surface. An original sloping butt end has saw marks.	

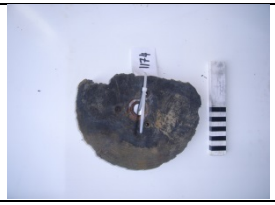
Group G – Possible Pier/Jetty Structure		Strike: 8015
ID	**Description**	**Image**
1167	Heavily eroded and worked timber 545mm long, 100mm wide and 100mm thick, with an iron fastener 23mm in diameter. There are a lot of tar remnants on the inboard surface. However, it is still considered of possible jetty function.	
1170	Timber 970mm in length, 90mm wide and 107mm thick, with an iron fastening central 16mm in diameter. Tapering gradually toward one end for 420mm.	
1172	Damaged timber 950mm in length, 210mm wide and 140mm thick, with cross fastening, two nails driven through from the side in close proximity with a 14mm diameter and a blind treenail on outboard, with two clean through auger holes 28mm in diameter. Straight grain. Original angled butt end. The timber is fashioned from a quarter of the original tree.	
1173	Timber that is possibly non-oak 1101mm in length, 140mm wide and 160mm thick. There are two iron fasteners downward, and two cross driven. Bevel and original end, with red paint evident. The tree rings are large.	

Group H – Timber Stumps		Strike: 8016
ID	**Description**	**Image**
1131	Large rounded tree stump 550mm in height and 250mm wide. The centre of the stump is visible due to the splitting off of a side branch **1132**.	
1132	Small section of wood which would have attached to **1131** as side branch. It is 400mm in length, 380mm wide and 300mm thick.	
1130	Large stump of wood, pith at centre, rounded, similar to **1131** the length is 540mm and the width is 380m. It has a flat end. However no tool marks are visible.	

Group I – Assorted Timbers		Strike: 8017
ID	**Description**	**Image**
1143	Possible plank fragment damaged on three sides 64mm thick, 270m wide and 440mm long. There are three square nail fastening holes driven down and five driven across from edge, one nail hole is 95mm deep. The timber's outboard edge has been eaten by marine borers and is also damaged. There are clear axe/adze marks on the inboard surface.	

Group I – Assorted Timbers		Strike: 8017
ID	**Description**	**Image**
1154	Butt end fragment of ship's timber, with small boreholes and curved in section 320mm in length, 240mm wide and 85mm thick. Possible saw cut mark on butt end.	
1162	Timber 630mm in length, 105mm wide and 65mm thick. Iron concretion next to circular hole, with 31mm diameter. Possibly a square shank iron fastening. This timber is possibly a butt end of ship's timber.	
1164	Heavily gribbled timber 730mm in length, 70mm wide and 140mm thick with curved surface and slender in appearance. The scarf joint at one end is 145mm in length with iron nail partially intact. Heavy and tight grain. Unlikely to be of nautical function.	
1156	Plank 1100mm long, 100mm wide and 24mm thick, may not be a ship's timber, with no fastenings. Many marine organism boreholes on upper and lower edges.	

Group J – Artefacts, fixtures and fittings		Strike: 8018
ID	**Description**	**Image**

1174	Pulley sheave 235mm wide and 29mm thick. A triangular metal bracket is fixed centrally and fixed by three small fastener holes at each corner. The central axel hole is 23mm in diameter. The outer rope groove is approximately 23mm across.	

10 APPENDIX 2: LGP MASTER FINDS LIST, FEBRUARY 2016

Site / Lordi No.	**WA no. / Report no. / RoW droit no.**	**Material**	**Description (may have been superseded by analysis in the report text)**
Finds Stored at Wessex Archaeology Conservation Facilities			
Lordi 1377	WA1046 (Report WA 1003) RoW droit 077/11	Metal	Cannonball
Lordi 1381	WA 1007 (Report WA 1007) RoW droit 076/1	Metal	Explosive shell. Hollow and would have been filled with explosives.
Lordi 1438	WA1013 (Report WA 1008) RoW droit 076/1	Metal	London taxi licence plate. This find may have been manufactured in the interwar period (c. 1920-1935) based on the art deco style decoration around the border.
Lordi 1500	WA 1024 (Report WA1015) RoW Droit 076/1	Metal	Cannonball
Lordi 1641, Strike no. 8006	WA 1036 (Report WA 1022) RoW Droit 074/1	Metal	MG 15 German aircraft machine gun
Lordi 1641	WA 1038_1	Wood and metal	Wooden case for a Mauser C96 semi-automatic pistol.

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
	(Report WA 1024) RoW droit 073/11		
Lordi 1641	WA 1038_2 (Report WA 1024) RoW droit 073/11	Wood and metal	Wooden case for a Mauser C96 semi-automatic pistol.
Lordi 1641	WA 1038_3 (Report WA 1024) RoW droit 073/11	Wood and metal	Wooden case for a Mauser C96 semi-automatic pistol.
Lordi 1641	WA 1038_4 (Report WA 1024) RoW droit 073/11	Wood and metal	Wooden case for a Mauser C96 semi-automatic pistol.
Lordi 1641	WA 1038_5 (Report WA 1024) RoW droit 073/11	Wood and metal	Wooden case for a Mauser C96 semi-automatic pistol.
Lordi 1641	WA 1038_6 (Report WA 1024) RoW droit 073/11	Wood and metal	Wooden case for a Mauser C96 semi-automatic pistol.
Lordi 1641	WA 1038_7 (Report WA 1024) RoW droit 073/11	Wood and metal	Wooden case for a Mauser C96 semi-automatic pistol.
Lordi 1641	WA 1038_8 (Report WA 1024) RoW droit 073/11	Wood and metal	Wooden case for a Mauser C96 semi-automatic pistol.
Lordi 1641	WA 1038_9 (Report WA 1024)	Wood and metal	Wooden case for a Mauser C96 semi-automatic pistol.

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
	RoW droit 073/11		
Lordi 1641	WA 1038_10 (Report WA 1024) RoW droit 073/11	Wood and metal	Wooden case for a Mauser C96 semi-automatic pistol.
Lordi 1641	WA 1038_11 (Report WA 1024) RoW droit 073/11	Wood and metal	Wooden case for a Mauser C96 semi-automatic pistol.
Lordi 1641	WA 1038_12 (Report WA 1024) RoW droit 073/11	Wood and metal	Wooden case for a Mauser C96 semi-automatic pistol.
Lordi 1641	WA 1038_13 (Report WA 1024) RoW droit 073/11	Wood and metal	Wooden case for a Mauser C96 semi-automatic pistol.
Lordi 1641	WA 1038_14 (Report WA 1024) RoW droit 073/11	Wood and metal	Pistol case fragment from a Mauser C96 semi-automatic pistol.
Lordi 1641	WA 1038_15 (Report WA 1024) RoW droit 073/11	Wood and metal	Pistol fragment from a Mauser C96 semi-automatic pistol.
Lordi 1641	WA 1038_16 (Report WA 1024) RoW droit 073/11	Wood and metal	Pistol fragment from a Mauser C96 semi-automatic pistol.
Lordi 1641	WA 1038_17 (Report WA 1024) RoW droit 073/11	Wood and metal	Pistol fragment from a Mauser C96 semi-automatic pistol.

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
Lordi 1641	WA 1038_18 (Report WA 1024) RoW droit 073/11	Wood and metal	Pistol fragment from a Mauser C96 semi-automatic pistol.
Lordi 1641	WA 1038_19 (Report WA 1024) RoW droit 073/11	Wood and metal	Pistol fragment from a Mauser C96 semi-automatic pistol.
Lordi 1641	WA 1038_20 (Report WA 1024) RoW droit 073/11	Wood and metal	Pistol fragment from a Mauser C96 semi-automatic pistol.
Lordi 1641	WA 1038_21 (Report WA 1024) RoW droit 073/11	Wood and metal	Pistol fragment from a Mauser C96 semi-automatic pistol.
Lordi 1641	WA 1038_22 (Report WA 1024) RoW droit 073/11	Wood and metal	Fragment from a Mauser C96 semi-automatic pistol case.
Lordi 1641	WA 1038_23 (Report WA 1024) RoW droit 073/11	Wood and metal	Fragment from a Mauser C96 semi-automatic pistol case.
Lordi 1641	WA 1038_24 (Report WA 1024) RoW droit 073/11	Wood and metal	Fragment from a Mauser C96 semi-automatic pistol case.
Lordi 1641	WA 1038_25 (Report WA 1024) RoW droit 073/11	Wood and metal	Fragment from a Mauser C96 semi-automatic pistol case.
Lordi 1641	WA 1038_26	Wood and metal	Fragment from a Mauser C96 semi-automatic pistol case.

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
	(Report WA 1024) / RoW droit 073/11		
Lordi 1641	WA 1038_27 / (Report WA 1024) / RoW droit 073/11	Wood and metal	Fragment from a Mauser C96 semi-automatic pistol case.
Lordi 1641	WA 1038_28 / (Report WA 1024) / RoW droit 073/11	Wood and metal	Fragment from a Mauser C96 semi-automatic pistol case.
Lordi 1641	WA 1038_29 / (Report WA 1024) / RoW droit 073/11	Wood and metal	Pistol case Fragment
Lordi 1641	WA 1038_30 / (Report WA 1024) / RoW droit 073/11	Wood and metal	Fragment from a Mauser C96 semi-automatic pistol case.
Lordi 1641	WA 1038_32 / (Report WA 1024) / RoW droit 073/11	Wood and metal	Fragment from a Mauser C96 semi-automatic pistol case.
Lordi 1641	WA 1038_31 / (Report WA 1024) / RoW droit 073/11	Wood and metal	Fragment from a Mauser C96 semi-automatic pistol case.
Lordi 1641	WA 1038_33 / (Report WA 1024) / RoW droit 073/11	Wood and metal	Pistol Fragment
Lordi 1641	WA 1038_35 / (Report WA 1024)	Wood and metal	Pistol stock fragment from a Mauser C96 semi-automatic pistol.

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
	RoW droit 073/11		
Lordi 1667	WA 1040 (Report WA 1025) RoW droit 073/11	Metal	Remains of broken anchor, consisting of the crown, arms and flukes of the anchor which has broken at the throat where the shank joins to the crown. The anchor fragment is made of wrought iron. The arms are 80mm thick by 60mm wide, the flukes are symmetrical, 150mm wide by 200m long and 40mm thick. It appears to be from a typical Admiralty type anchor, probably an 1841 pattern.
Lordi 1667	WA 1041 (WA1043) (Report WA 1028) RoW droit 073/11	Metal	Anchor stock. This fragment is part of an iron stock – in this case a foldable one – that was located at the top of the shank, and it allowed the flukes to dig into the seabed when deployed, and to allow for easier storage when folded. The stock likely dates to the 19th century.
Lordi 1667	WA 1042 (Report WA 1027) RoW droit 073/11	Metal	Anchor fluke. This artefact is a fragment from an iron anchor. The fragment is one of a pair of flukes. The fluke measures 850mm in length by 280mm in width by 155mm thick.
Lordi1667	WA 1050_a (Report WA 1050) RoW droit 075/1	Metal	Cannon. This cannon is about 32 inches long. It was originally longer, possibly around 4 feet – its muzzle and part of the chase have been broken off. The small bore of the cannon (approx. 2.1 inches) indicates the cannon is probably a 1 or 1 ½ pounder.
Lordi 1667	WA 1050_b	Wood	Cannon WA 1050_a Ram
Lordi 1691	WA 1061_a (Report WA 1036) RoW droit 075/1	Bone	Human bone
Lordi 1691	WA 1052 (Report WA 1052)	Lead	1 of 7 lead sounding weights. These sounding leads do not have any admiralty marks on them so probably come from a merchant vessel. A

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
	RoW droit 073/11		number of them have voids in the bases for tallow or wax. They are well used, and the largest has a stamp - possibly a maker's mark - near the base. It is difficult to determine the age of these items, but from the type they could possibly be from the 17th or 18th century, or maybe earlier. The fact that they have been discovered as a group is unusual and of interest.
Lordi 1691	WA 1053 (Report WA 1052) RoW droit 073/11	Lead	2 of 7 lead sounding weights
Lordi 1691	WA 1054 (Report WA 1052) RoW droit 073/11	Lead	3 of 7 lead sounding weights
Lordi 1691	WA 1055 (Report WA 1052) RoW droit 073/11	Lead	4 of 7 lead sounding weights
Lordi 1691	WA 1056 (Report WA 1052) RoW droit 073/11	Lead	5 of 7 lead sounding weights
Lordi 1691	WA 1057 (Report WA 1052) RoW droit 073/11	Lead	6 of 7 lead sounding weights
Lordi 1691	WA 1058 (Report WA 1052) RoW droit 073/11	Lead	7 of 7 lead sounding weights
Lordi 1691	WA 1057	Metal	

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
/ Lordi 1641	(Report WA 1023)		Carronade (gun), 1m long, 25cm diameter (not bore). This carronade is of iron construction and is an admiralty gun as it carries the Admiralty arrow on the upper surface of the gun between the trunnions. Other markings on the gun include the number 333 on the chase of the gun (upper face towards the muzzle) and some partial marking on the two trunnions of ?38 and 117?. The trunnions on an admiralty carronade are an early feature and probably mean that the gun was cast before 1782/3.
Lordi 1700	WA 1067 (Report WA 1028)	Metal	Propeller hub for aircraft, possibly from a German WWII Messerschmitt Bf 109 fighter aircraft. It appears to have a pitch change mechanism for the three bladed variable pitch prop, manufactured by VDM circa 1939-1941.
Lordi 1758	WA 1086 (1071 as pipe) (find no. 292) (Report WA 1028)	Metal	Aircraft landing gear. The head of three bolts, fastening different components of the landing gear, has an English inscription with the word 'ASSOCIATES' and a centrally placed six pointed star. Possibly from a De Havilland Vampire or a Hunter Sea Hawk.
1953/1961 Ju 88 *Luftwaffe* German aircraft	WA 1085_1 (Report WA 1051)		
	RoW droit 263/12	Aluminium	Torn single sheet of aluminium
1953/1961 Ju 88 Luftwaffe German aircraft	WA 1085_2 (Report WA 1051)		
	RoW droit 263/12	Metal	7 sheets of aluminium riveted together
1953/1961 Ju 88 *Luftwaffe* German aircraft	WA 1085_3 (Report WA 1051)	Steel	1 cylindrical steel tube

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
	RoW droit 263/12		
1953/1961	WA 1085_4		
Ju 88 *Luftwaffe* German aircraft	(Report WA 1051)		
	RoW droit 263/12	Aluminium	Aluminium with holes and zig-zag rivets
1953/1961	WA 1085_5		
Ju 88 *Luftwaffe* German aircraft	(Report WA 1051)		
	RoW droit 263/12	Aluminium	Mangled piece of aluminium with coving
1953/1961	WA 1085_6		
Ju 88 *Luftwaffe* German aircraft	(Report WA 1051)		
	RoW droit 263/12	Aluminium	Aluminium with black paint
1953/1961	WA 1085_7		
Ju 88 *Luftwaffe* German aircraft	(Report WA 1051)		
	RoW droit 263/12	Aluminium	Aluminium with holes
1953/1961	WA 1085_8		
Ju 88 *Luftwaffe* German aircraft	(Report WA 1051)		
	RoW droit 263/12	Aluminium	Small fragment of damaged and torn aluminium
1953/1961	WA 1085_9		
Ju 88 *Luftwaffe* German aircraft	(Report WA 1051)		
	RoW droit 263/12	Aluminium	Aluminium - Circular 'locking' mechanism heavily riveted
1953/1961	WA 1085_10	Aluminium	

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
Ju 88 *Luftwaffe* German aircraft	(Report WA 1051)		Aluminium - One multiple outtake, possible cooling system or hydraulic piston?
	RoW droit 263/12		
1953/1961	WA 1085_11		
Ju 88 *Luftwaffe* German aircraft	(Report WA 1051)		
	RoW droit 263/12	Aluminium	Aluminium - Hose end attached (pressure) with square metal plate
1953/1961	WA 1085_12		
Ju 88 *Luftwaffe* German aircraft	(Report WA 1051)		
	RoW droit 263/12	Aluminium	Very mangled and damaged thin aluminium sheet
1953/1961	WA 1085_13		
Ju 88 *Luftwaffe* German aircraft	(Report WA 1051)		
	RoW droit 263/12	Aluminium	Heavily riveted piece of aluminium with a small hose/pivot attached
1953/1961	WA 1085_14		
Ju 88 *Luftwaffe* German aircraft	(Report WA 1051)		
	RoW droit 263/12	Aluminium	2mm thick aluminium showing signs of anodisation
1953/1961	WA 1085_15		
Ju 88 *Luftwaffe* German aircraft	(Report WA 1051)		
	RoW droit 263/12	Aluminium	Fuse wire on metal bracket, attached to mangled aluminium sheet
1953/1961	WA 1085_16		
Ju 88 *Luftwaffe* German aircraft	(Report WA 1051)	Aluminium	Riveted section of aluminium sheet with circular hole bracket

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
	RoW droit 263/12		
1953/1961	WA 1085_17		
Ju 88 *Luftwaffe* German aircraft	(Report WA 1051)		
	RoW droit 263/12	Aluminium	Aluminium - coving with anodised tint
1953/1961	WA 1085_18		
Ju 88 *Luftwaffe* German aircraft	(Report WA 1051)		
	RoW droit 263/12	Aluminium	Aluminium - riveted joining section broken and mangled
1953/1961	WA 1085_19		
Ju 88 *Luftwaffe* German aircraft	(Report WA 1051)		
	RoW droit 263/12	Aluminium	Aluminium sheet with a strap guide/holder
1953/1961	WA 1085_20		
Ju 88 *Luftwaffe* German aircraft	(Report WA 1051)		
	RoW droit 263/12	Aluminium	Mangled piece of aluminium with oval cut holes
1953/1961	WA 1085_21		
Ju 88 *Luftwaffe* German aircraft	(Report WA 1051)		
	RoW droit 263/12	Aluminium	Mangled piece of aluminium, dry mud in places
1953/1961	WA 1085_22		
Ju 88 *Luftwaffe* German aircraft	(Report WA 1051)		
	RoW droit 263/12	Aluminium	‘losem schalten' wireless switch. H in star and circle.
1953/1961	WA 1085_23	Aluminium	

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
Ju 88 *Luftwaffe* German aircraft	(Report WA 1051)		Torn a shredded aluminium piece with 4 large rubber coated cables, one with string attached.
	RoW droit 263/12		
1953/1961	WA 1085_24		
Ju 88 *Luftwaffe* German aircraft	(Report WA 1051)		
	RoW droit 263/12	Aluminium	Aluminium frame of a hanger frame for a Fug 10 radio transmitter
1953/1961	WA 1085_25		
Ju 88 *Luftwaffe* German aircraft	(Report WA 1051)		
	RoW droit 263/12	Aluminium	Metal attachment to an aluminium sheet with anodised tint
1953/1961	WA 1085_26		
Ju 88 *Luftwaffe* German aircraft	(Report WA 1051)		
	RoW droit 263/12	Aluminium	Mangled aluminium plate 1mm thick with possible handle.
1953/1961	WA 1085_27		
Ju 88 *Luftwaffe* German aircraft	(Report WA 1051)		
	RoW droit 263/12	Aluminium	Pivot control mechanism
1953/1961	WA 1085_28		
Ju 88 *Luftwaffe* German aircraft	(Report WA 1051)		
	RoW droit 263/12	Aluminium	Very mangled piece of 1mm aluminium
1953/1961	WA 1085_29		
Ju 88 *Luftwaffe* German aircraft	(Report WA 1051)	Aluminium	Hinged section with anodised tint

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
	RoW droit 263/12		
1953/1961	WA 1085_30		
Ju 88 *Luftwaffe* German aircraft	(Report WA 1051)		
	RoW droit 263/12	Aluminium	Cylindrical tube, with black paint
1953/1961	WA 1085_31		
Ju 88 *Luftwaffe* German aircraft	(Report WA 1051)		
	RoW droit 263/12	Aluminium	Aluminium protection tube for 6 rubber cord wires
1953/1961	WA 1085_32		
Ju 88 *Luftwaffe* German aircraft	(Report WA 1051)		
	RoW droit 263/12	Aluminium	Aluminium piece heavily riveted and mangled
1953/1961	WA 1085_33		
Ju 88 *Luftwaffe* German aircraft	(Report WA 1051)		
	RoW droit 263/12	Aluminium	Two sprung closing pins, metal attached to a small section of aluminium
1953/1961	WA 1085_34		
Ju 88 *Luftwaffe* German aircraft	(Report WA 1051)		
	RoW droit 263/12	Aluminium	T-shaped wing like heavy object with rubber.
1953/1961	WA 1085_35		
Ju 88 *Luftwaffe* German aircraft	(Report WA 1051)		
	RoW droit 263/12	Aluminium	Second T-shaped wing like object without rubber
1953/1961	WA 1085_36	Aluminium	Cross valve two to one. 12mm wide.

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
Ju 88 *Luftwaffe* German aircraft	(Report WA 1051)		
	RoW droit 263/12		
1953/1961	WA 1085_37		
Ju 88 *Luftwaffe* German aircraft	(Report WA 1051)		
	RoW droit 263/12	Aluminium	Hinged section of aluminium, from aircraft
1953/1961	WA 1085_38		
Ju 88 *Luftwaffe* German aircraft	(Report WA 1051)		
	RoW droit 263/12	Metal	Frame with light sockets 'BERLIN' on rubber vibration dampers
1953/1961	WA 1085_39		
Ju 88 *Luftwaffe* German aircraft	(Report WA 1051)		
	RoW droit 263/12	Aluminium	1200mm long anodised frame with T section riveted to it.
1953/1961	WA 1085_40		
Ju 88 *Luftwaffe* German aircraft	(Report WA 1051)		
	RoW droit 263/12	Aluminium	800mm long T section of frame, with metal screws attached
1953/1961	WA 1085_41		
Ju 88 *Luftwaffe* German aircraft	(Report WA 1051)		
	RoW droit 263/12	Aluminium	1000mm T section frame, black paint evident.
1953/1961	WA 1085_42		
Ju 88 *Luftwaffe* German aircraft	(Report WA 1051)	Aluminium	Component of three aluminium pieces sandwiching iron socket, heavy, shows serious high speed damage

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
	RoW droit 263/12		
1953/1961	WA 1085_44		
Ju 88 *Luftwaffe* German aircraft	(Report WA 1051)		Fk.30 Plate, *Carl Zeiss* and *Rathenow*, on 520x360mm black painted aluminium sheet
	RoW droit 263/12	Aluminium	
1953/1961	1516		
Ju 88 Luftwaffe German aircraft	RoW droit 263/12	Rubber	Stud
1953/1961	1507/72		
Ju 88 Luftwaffe German aircraft	RoW droit 263/12	Metal	Cylindrical component
1953/1961	Part of 1520 – 54		
Ju 88 Luftwaffe German aircraft	RoW droit 263/12	Metal	circular hatch
1953/1961	WA 213		
Ju 88 Luftwaffe German aircraft	RoW droit 263/12	Metal	circular cover plate
1953/1961	WA 305		
Ju 88 Luftwaffe German aircraft	RoW droit 263/12	Metal	20mm Shell case
1953/1961	WA 316 - 1475-54		
Ju 88 Luftwaffe German aircraft	RoW droit 263/12	Metal	yellow colour code - small tank - possible de-icer
1953/1961	WA 297		
Ju 88 Luftwaffe German aircraft	RoW droit 263/12	Film	JU88 aircraft - camera film
1953/1961	WA 314	Metal	JU88 aircraft - cylinder

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
Ju 88 Luftwaffe German aircraft	RoW droit 263/12		
1953/1961	WA 308		
Ju 88 Luftwaffe German aircraft	RoW droit 263/12	Metal	Pipework Bakelite fragment attached with symbol and numbers - 10539; ….kmesser ….ss 18b; 127-1052A-; ….0555; Fuess….Sleglitz
1953/1961	WA 306		
Ju 88 Luftwaffe German aircraft	RoW droit 263/12	Leather	Leather strap
1953/1961	WA 311		
Ju 88 Luftwaffe German aircraft	RoW droit 263/12	Leather	Child's Shoe
1953/1961	WA 312		
Ju 88 Luftwaffe German aircraft	RoW droit 263/12	Leather	Shoe
	WA1076		
Lordi 1849	(Report WA 1040)	Metal	9" brass cartridge case, missing nose. The case appears to be for a 4" shell, used with a light Quick-firing gun. The 4" naval gun was used from about 1895 until the end of WWII. The gun would have fired a shell weighing 25 pounds, with a range of up to 15km.
	WA1077		
Lordi 1849	(Report WA 1041)	Metal	4" cannon ball, weighs approximately 9lb.
	WA1078		
Lordi 1849	(Report WA 1042)	Metal	6" cannon ball, weighs approximately 32lbs.
Lordi 1920	WA 1080	Pottery	Clay smoking pipe
	WA 1102		
Lordi 2353	(Report WA 1067)	Pottery	Clay pipe bowl fragment

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
	RoW droit 262/12		
Lordi 2368	WA 1103 / RoW droit 262/12	Fossil	Fossilised sea urchin. It is a flint fossilised echinoid (sea urchin), Latin name: *Micraster*. It is a relatively common find and derives from Upper Cretaceous Chalk (c. 100 to 65 million years ago).
Lordi 2368	WA 1104 / RoW droit 262/12	Pottery	Clay pipe
5204 (Pottery Wreck)	5204-1015	Wood and metal	Piece of elm keel, not recorded in previous context list, found during audit 22/09/09
5204 (Pottery Wreck)	LG_1005	Lead	Lead sheathing
Epibenthic survey trawl 15	WA_5092	Ceramic	13th-15th century jar base
Sea Reach1 Wreck - Paddle Steamer	WA 8001	Bitumen	Sample
Sea Reach1 Wreck - Paddle Steamer	WA 8002	Rubber	Sample Gasket
Sea Reach1 Wreck - Paddle Steamer	WA 8003	Concretion	Concretions - 2 scuppers
Sea Reach1 Wreck - Paddle Steamer	WA 9001	Leather	Shoe 1: Boot, calf-length, left foot, wooden pegged construction bovine leather flesh side outward ('suede') Adult 7 (41). Third quarter of the 19th century.
Sea Reach1 Wreck - Paddle Steamer	WA 9002 & WA 9003	Leather	2 shoes fragment part of WA9001

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
Sea Reach1 Wreck - Paddle Steamer	WA9004 & WA 9005	Leather	Shoe 2: Wooden soled shoe (clog), left foot, with fragmentary upper of above ankle height, Adult 8(42). Third quarter of the 19th century. Shoe 3: Front lacing Oxford shoe, right foot, Adult size 9(43) construction uncertain. Late Victorian period
Sea Reach1 Wreck - Paddle Steamer	WA 9006	Leather	7 shoe fragments :Shoe 5: Front-lacing Derby work boot, right foot, wooden pegged construction, Adult 8. Third quarter of the 19th century.
	WA 9007		
	WA 9008		
	WA 9009		
	WA 9010		
	WA 9011		
	WA 9012		
Sea Reach1 Wreck - Paddle Steamer	WA 9013	Leather	5 shoe fragments, Shoe 6: Balmoral ankle boot, right foot, metal riveted construction, Adult 8(42); Shoe 7: brass riveted construction, right foot, and adult size. Third quarter of the 19th century.
	WA 9014		
	WA 9015		
	WA 9016		
	WA 9017		
Sea Reach1 Wreck - Paddle Steamer	WA 9018	Leather	2 shoes, Shoe 8: Shoe, metal riveted construction, right foot, c. Adult 6(39); Shoe 9: Shoe, left foot, iron riveted construction, Adult 5(38). Third quarter of the 19th century.
	WA 9019		
Sea Reach1 Wreck - Paddle Steamer	WA 9020	Leather	Shoe 10: Boot, 'Wellington', knee length, right foot, wooden pegged construction, estimated Adult 8(42). Third quarter of the 19th century.
Sea Reach1 Wreck - Paddle Steamer	WA 9021	Leather	5 shoe fragments. Shoe 11: Boot, elastic-sided, right foot, wooden pegged construction, estimated Adult 8-9(42-3). Shoe 12 Bottom unit, riveted construction, left foot, Adult 8(42). Third quarter of the 19th century.
	WA 9022		
	WA 9023		
	WA 9024		

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
	WA 9025		
Sea Reach1 Wreck - Paddle Steamer	WA 9026	Rubber	Vaginal Douche. Beginning of 20th century with manufacturer mark.
Sea Reach1 Wreck - Paddle Steamer	WA 9027	Leather	Peak of cap
Sea Reach1 Wreck - Paddle Steamer	WA 9028	Leather	Shoe 14: Bottom unit, wooden pegged construction, left foot, Adult 6-7(39-41). Third quarter of the 19th century.
Sea Reach1 Wreck - Paddle Steamer	WA 9029		
	WA 9030	Animal bone	2 pieces of animal bone
Sea Reach1 Wreck - Paddle Steamer	WA 9031	Wood and brass	Hand pump
Sea Reach1 Wreck - Paddle Steamer	WA 9032	Wood and brass	Door lock
Sea Reach1 Wreck - Paddle Steamer	WA 9033	Steel	Spanner
	WA 9034		
	WA 9035		
	WA 9036		
	WA 9037		
Sea Reach1 Wreck - Paddle Steamer	WA 9038	Brass	4 brass valves and 1 small brass pipe.
Sea Reach1 Wreck - Paddle Steamer	WA 9039	Leather	Strap / Belt
Sea Reach1 Wreck - Paddle Steamer	WA 9040	Copper	3 pieces of copper pipe
	WA 9043		
	WA 9044		
Sea Reach1 Wreck - Paddle Steamer	WA 9045	Iron	5 iron rivets and 2 copper rivets

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
	WA 9046		
	WA 9047		
	WA 9048		
	WA 9049		
	WA 9050		
Sea Reach1 Wreck - Paddle Steamer	WA 9051		
	WA 9052	Iron	A shackle and an iron bar, a metal box (brass?) possibly for engine oil and a rectangular frame/hawsehole.
Sea Reach1 Wreck - Paddle Steamer	WA 9053	Iron	Iron L-shaped floor with manufacturer mark
Sea Reach1 Wreck - Paddle Steamer	WA 9054	Wood	Timber
	WA 9055		
	WA 9056		
	WA 9057		
	WA 9058		
	WA 9059		
	WA 9060		
	WA 9061		9 ceramic fragments of stoneware. The material has feldspathic glaze. Sherds WA9055-WA9063 are from the same vessel. WA9059 – the flagon shoulder is impressed with the stamp ‘G. SIMMONS / Phoenix / GRAVESEND’.
	WA 9062		
Sea Reach1 Wreck - Paddle Steamer	WA 9063	Pottery	
	WA 9064		
	WA 9065		
	WA 9066		5 ceramic fragments of refined whiteware. WA9064 and W9065 are part of the same vessel and share the stamp ‘COMMONWEALTH DOMINION LINE’. WA9067 and WA9068 are fragments of diner plate rim, in the Albion pattern.
	WA 9067		
Sea Reach1 Wreck - Paddle Steamer	WA 9068	Pottery	

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
Sea Reach1 Wreck - Paddle Steamer	WA 9069	Pottery	8 ceramic fragments of refined whiteware. The fragments of dinner plate are in the Albion pattern. The cup rim and saucer rim both have blue banded decoration.
	WA 9070		
	WA 9071		
	WA 9072		
	WA 9073		
	WA 9074		
	WA 9075		
	WA 9076		
	WA 9077		
Sea Reach1 Wreck - Paddle Steamer	WA 9078	Pottery	13 ceramic fragments of refined whiteware. The dinner plate sherds are in the Albion pattern. The saucer sherd has blue banded decoration and is impressed with a backstamp: 'TURNBULL'. The cup rim has blue banded decoration.
	WA 9079		
	WA 9080		
	WA 9081		
	WA 9082		
	WA 9083		
	WA 9084		
	WA 9085		
	WA 9086		
	WA 9087		
	WA 9088		
	WA 9089		
	WA 9090		
Sea Reach1 Wreck - Paddle Steamer	WA 9091	Glass	1 glass bottle bottom, 1 glass fragment, 6 ceramic fragments of refined whiteware. The dinner plates are in the Albion pattern.
	WA 9092		
	WA 9093		

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
	WA 9094		
	WA 9095		
	WA 9096		
	WA 9097		
	WA 9098		
Sea Reach1 Wreck - Paddle Steamer	WA 9099	Pottery	9 ceramic fragments of refined whiteware. The dinner plate rim fragments are in the Albion pattern.
	WA 9100		
	WA 9101		
	WA 9102		
	WA 9103		
	WA 9104		
	WA 9105		
	WA 9106		
	WA 9107		
Sea Reach1 Wreck - Paddle Steamer	WA 9108	Pottery	1 complete tea cup and 8 ceramic fragments of refined whiteware. The fragments are plain with blue banded decoration around the rim.
	WA 9109		
	WA 9110		
	WA 9111		
	WA 9112		
	WA 9113		
	WA 9114		
	WA 9115		
	WA 9116		
	WA 9117	Glass	1 complete glass and two glass fragments.

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
Sea Reach1 Wreck - Paddle Steamer	WA 9118 / WA 9119		
Sea Reach1 Wreck - Paddle Steamer	WA 9120	Animal Bone	Animal bone vertebra
Sea Reach1 Wreck - Paddle Steamer	WA 9121	pottery	Complete dinner plate in refined whiteware in the Albion pattern. Backstamp reads: 'TP: GRT in circle below crown, above banner ALBION; impressed: TURNBULL / STEPNEY / POTTERY'.
Sea Reach1 Wreck - Paddle Steamer	WA 9122	pottery	Complete jug of washstand type in refined whiteware with moulded decoration and a dark blue rim. Basal relief stamp: Staffordshire knot with monogram WB 24.
Sea Reach1 Wreck - Paddle Steamer	WA 9123	pottery	Almost complete pearlware pottery mug with purple sponged decoration.
Sea Reach1 Wreck - Paddle Steamer	WA 9124 / WA 9125	pottery	2 fragments of a pottery wash-bowl. Blue sponged decoration around rim and on base.
Sea Reach1 Wreck - Paddle Steamer	WA 9126 / WA 9127 / WA 9128 / WA 9129	pottery	4 fragments of stoneware pottery with feldspathic glaze over ochre dip. The fragments likely belong to the same jar or flagon.
Sea Reach1 Wreck - Paddle Steamer	WA 9130 / WA 9131 / WA 9132	pottery	3 pottery fragments. The redware may be a fragment of breadcrock. The dinner plate rim is in the Albion pattern. The final piece appears to be sanitary ware, possibly a toilet bowl rim?
Sea Reach1 Wreck - Paddle Steamer	WA 9133	Glass	Small fragment of clear glass from a soda bottle. The embossed mark reads 'SUPER'.
Sea Reach1 Wreck - Paddle Steamer	WA 9134	Glass	Complete glass bottle. The embossed marks read: 'SODA WATER', 'GUISELEY', 'BUSFIELD'S' and 'SPECIAL SUPER'. There are further markings on the bottom of the bottle.

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
Sea Reach1 Wreck - Paddle Steamer	WA 9135	Glass	Brown glass bottle. Possibly for port?
Sea Reach1 Wreck - Paddle Steamer	WA 9136	Brass	button
Sea Reach1 Wreck - Paddle Steamer	WA 9137	brass	bottle rim
Sea Reach1 Wreck - Paddle Steamer	WA 9138 WA 9139 WA 9140	brass	3 sections of chain
Sea Reach1 Wreck - Paddle Steamer	WA 9141	pottery	Oil lamp. Globular reservoir of opaque white glass.WA9141, WA9142 and WA9143 are part of the oil lamp.
Sea Reach1 Wreck - Paddle Steamer	WA 9142	brass	Oil lamp wick holder
Sea Reach1 Wreck - Paddle Steamer	WA 9143	brass	Oil lamp support - chandelier
Sea Reach1 Wreck - Paddle Steamer	WA 9144	Glass	Brown glass bottle intact with cork - possibly port. Basal embossed mark: IMPERIAL QUART.
Sea Reach1 Wreck - Paddle Steamer	WA 9145 & WA 9146	Glass	2 complete clear half-egg soda bottles without marks. Cork in-situ. Containing soda. Stamped: WEBB & COMPANY / LIMITED / [ISLI]NGTON GREEN / LONDON
Unreported	1004 RoW droit 077/11	Metal	Cannonball
Unreported	1013 RoW droit 077/11	Wood	Wooden Deadeye
Unreported	1014 RoW droit 077/11	Metal	Cannonball
Unreported	1057	Metal	Cannonball

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
	RoW droit 077/11		
Unreported	1062 RoW droit 077/11	Metal	Cannonball
Unreported (proj. 72435)	1081 RoW droit 077/11	Metal	Cannonball
Unreported (proj. 72435)	1082	Metal	Cannonball. 4” cannonball.
Unreported	1098 & 1098b	Wood	Frag of ships timber
Unreported (proj. 72436)	1111	Wood	Timber fragment with angled joint and stop end. The overall timber is 750mm in length from joint end to damaged end, an original width of 250mm and an original thickness of 64mm. There are two adjacent treenail holes, 30mm in diameter centrally and another partially evident at the damaged end. On the outboard surface of the angled joint there are compression marks and also tool marks (probably of an axe head) on the surface of the main timber. It was originally tangentially cut. The timber may have been used as a longitudinal stringer.
Unreported (proj. 72436)	1125 / 1123	Wood	Angled timber, knee or possible breast hook, with cross fasteners 22-24mm diameter, plus a square shank iron nail. Marine organism eaten and damaged at one end with large crack where it was ripped clear of attached timbers. The opposite end is originally cut. Potentially a good chance of obtaining a dendrochronological sequence.
Unreported	1127	Wood	Clinker Floor Frame:

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
(proj. 72436)			Fashioned from a naturally 'V' shaped tree and side branch, the timber has distinctive stepped joggles on either side. Cut marks are also clearly visible on outboard faces. It has one *in situ* treenail 28mm in diameter and two partial treenail holes, all are situated on the upper arms of the timber. This is a floor frame from either the bow or stern of a clinker built vessel. The angle of the arms and the sloping surface of the outboard face (flare) illustrates the original timber is possibly positioned between the 3rd to 6th floor frame at the forward end of the vessel or similarly of that of the after end. The centre of the converted tree (pith) is visible at the narrow end of the worked timber. The limber hole is cut to the side of this section. This allows bilge water to flow to the pump hole.
			Axe marks that are visible illustrate a rebate cut to allow plank fastenings to be positioned, which in turn allows the longitudinal planks to sit flush with the transverse frame. This type of timber is possibly similar in scale to the Aber Wrac'h wreck (mid-15th century).
Unreported	1138 & 1138b	Wood	Futtock fragment? with 6 treenail, 5 *in situ*, 31mm diameter, sawn cut end. Tight grain, bevel on OB with possible scarf surface. (similar to 1098, 1139 and 1140?). 156x93mm.
			The timber also has a sawn cut end and damage to the opposite end. There is also a slight bevel on the outboard face. It is probably oak.
Unreported			This timber is 900mm long, 160mm wide at its widest, 90mm at its slenderest and approximately 128mm thick. There are eight treenails holes, 30mm in diameter, five *in situ* and one blind. Light brown sapwood of possibly eight rings deep covers much of the surface of the timber. The timber narrows toward a possible scarf joint and could possibly have
(proj. 72436)	1150 & 1150b	Wood	

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
			been a futtock. Certainly a potential dendrochronlogical sample as it has approximately 50 rings.
Unreported	1185	Wood	Frag of ships timber broken along the longitudinal axis – two treenail in section , one still *in situ*
Unreported	1186	Wood	Frag of ships timber with one end tapering – six treenails (4 still *in situ*).
Unreported	1188	Wood	Floor timber with mortise (30mm x 92mm) at one end and rebate/bilge-way at the bottom. A second smaller mortise (160mm x 20mm) is present at the middle of the upper-ventral face where are signs of compression. Four concretions are present on the upper face, three of them at the turning. Three treenails (20mm diameter) are present – one still *in situ*. Timber dimensions: 1420mm total length , 210 mm width at the bilging and 140 mm towards the keel. Sampled from dendro.
Unreported	1190	Wood	Frag of ships timber – three treenails still *in situ*
Unreported	1191	Wood	Fragment of ships timber with three treenails .One side largely eaten by borers. Dimensions 1130x127mm. 163mm thick.
Unreported	1202 and 1202b	Wood	Frag of ships timber (600x120mm – 70mm thick) with 2 treenails. Axe/Adze marks on side and face.
Unreported	1203 and 1202b	Wood	Fragment of ship timber (940x 170mm). Thickness 140 mm. In the middle: mortise and free rectangular tenon (140mm x 60mm) with 5 iron nails on (5mm)
Unreported	1204b	Wood	Frag of ships timber – tapered at one end – three treenails still *in situ*.
Unreported	1207 and 1207b	Wood	Fragment of ships timber 1010mm in length, 110mm width and 76mm thick– one treenail still *in situ*
Unreported	1216	Wood	Frag timber (1030x160m - 48mm thick). 9 treenails holes (24 mm).

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
Unreported	2003b	Wood	Halved timber with possible scarf joint – dovetail - at one end, tar/resin traces in the scarf. One treenail (27 mm diameter). Timber dimensions 780x180mm – 100mm in thickness.
Unreported	2004	Wood	Fragment of ships timber with edge-halved scarf (26 mm x 98 mm) with two peg holes (13 mm diameter) at one end, two treenails and a small metal nails are exposed. Timber dimensions 520x140mm – 50mm wide.
Unreported	WA1219	Metal	Aircraft material
Unreported	WA1220	Metal	Aircraft material
Unreported	WA1221	Metal	Aircraft material
Unreported	WA1222	Metal	Aircraft material
Unreported	WA1223	Metal	Maritime copper alloy
Unreported	WA1224	Metal	Aircraft material
Watching Brief	WB ID 1072 / (Report WA 1009) / RoW droit 077/11	Organic	Leather jug or possible flask. The leather has come unstitched on one side and the base is no longer attached. It likely dates to the post-medieval period.
Lordi 2709	WA 1164 (Report No 1096)	Metal	Section of anti-submarine boom
Watching Brief U15	1003 / RoW droit 077/11	Ceramic	Ceramic bottle
Watching Brief U15	1006 / RoW droit 077/11	Ceramic	Ceramic bottle
WB	Unknown - Bre4	Metal	Ordnance shell from LG - transferred in Unit 2 from LG
WB	Unknown - Bre5b	Metal	Ordnance projectile from LG - transferred in Unit 2 from LG
WB	Unknown - Bre70	Metal	Ordnance cannonball from LG - transferred in Unit 2 from LG
Lordi 3183	WA 1194	Metal	Turnbuckle or Shaft (?)

Site / Lordi No.	WA no. / Report no. / RoW droit no. / (Report WA 1110) / LG_LDI-POR-PS1-C2501-COR-MAR-3183	Material	Description (may have been superseded by analysis in the report text)
Lordi 3189	WA_5001	Metal	Cannon breech. Probable iron Falcon fragment, manufactured 1550-75
Lordi 3189	WA_5002	Wood	Double wooden rigging block with pin and sheaves
Lordi 3189	WA_5005	Metal	Cannon mussel part of an English saker 1640-70.
Lordi 3195	WA_5006	Wood	Small 2 sheave wooden block WB ID 1006
Lordi 3195	WA_5007	Textile	Parachute WB ID 1007. Markings visible on the parachute read: 'AN', thought to stand for 'Army Navy' a standard US pattern parachute manufactured by various companies and widely used during WWII by pilots.
Lordi 3195	WA_5008	Metal	Riveted metal plate (aircraft?) WB ID 1008. It appears to be part of a casing from an aircraft and it clearly displays the holes where it would have been riveted to the rest of the craft.
Lordi 3195	WA_5009	Metal	Thin aluminium plate (aircraft?) WB ID 1009. The material is associated with the parachute (WA_5007 discussed above).
Lordi 3195	WA_5010	Metal and wood	Possible harpoon tip WB ID 1010. The find consists of a wrought iron spike, hafted into a round wooden pole with a thin iron sheet wrapped around the outside.
Lordi 3195	WA_5014	Wood	Small sheave all wood block. WB ID 1014
Lordi 3195	WA_5015	Leather	Small leather sheet with holes for binding. Rope protector ? WB ID 1015.

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
Lordi 3195	WA_5017	Wood	1 of 9 probable ship timbers. The timber measures approximately 42x13cm and has a square profile. It has suffered damage whilst in the water or during recovery and has been bored by marine organisms. Concretion on one surface suggests that a metal nail is preserved within the wood and a small section of one side appears to have been protected from weathering by the attachment of a rectangular object, such as a plaque or an abutting timber. WB ID 1017
Lordi 3195	WA_5018	Wood	2 of 9 probable ship timbers. This timber measures approximately 10x15cm and is interpreted as a plank. A treenail hole.. It has suffered damage, possibly during retrieval from the water, and shows evidence of having been bored by marine organisms. Timbers. WB ID 1018
Lordi 3195	WA_5019	Wood	3 of 9 probable ship timbers. This timber measures approximately 64x20x14cm and is interpreted as a plank. Three treenails are visible *in situ* and three are missing (evidenced by the remains of treenail holes) and they are set in an alternating pattern. Each hole measures approximately 28mm. The treenails and treenail holes are regularly spaced at approximately 25cm horizontal distance, taken from the centre of one treenail to the centre of the next. Both ends of this plank have been broken. WB ID 1019
Lordi 3195	WA_5020	Wood	4 of 9 probable ship timbers. This timber measures approximately 85x25x22cm and is potentially part of a frame. This large fragment has been damaged but displays two worked sides, one of which has a treenail which extends all the way through and which measures 2cm diameter. The end seen on the right in the image above is bevelled and a concretion on one surface suggests the presence of metal fastenings with this piece. The timber shows some evidence of bio-infestation and boring. timbers WB ID 1020

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
Lordi 3195	WA_5021	Wood	5 of 9 probable ship timbers. This timber measures approximately 84x24x10cm. It has a rectangular cross-section and is in fair condition, apart from being broken at both ends. One end (on the left above) shows evidence of having been bevelled though this is curtailed by damage. A concretion on one surface suggests the presence of a metal fixing (though this has not been confirmed). WB ID 1021
Lordi 3195	WA_5022	Wood	6 of 9 probable ship timbers. This timber is interpreted as being a plank measuring approximately 90x20cm. It has four treenails (three *in situ* and one missing, evidenced by a hole). This timber has sustained damage which obscures a potentially worked edge visible on the item. WB ID 1022
Lordi 3195	WA_5023	Wood	7 of 9 probable ship timbers. This timber is interpreted as being a small plank measuring approximately 44x14x9cm. Three of its surfaces have been worked and are smooth, whilst the fourth has sustained damage. It is bevelled for part of its length and has one small treenail. WB ID 1023
Lordi 3195	WA_5024	Wood	8 of 9 probable ship timbers. This is a rectangular plank with four worked sides and broken ends. It measures approximately 105x24x10cm. Three treenails are *in situ* and one is missing, and each treenail diameter measures approximately 3cm. Interestingly, one of the flat surfaces of this timber has damage and abrasion believed to be historic which is absent from its opposite side. WB ID 1024
Lordi 3195	WA_5025	Wood	9 of 9 probable ship timbers. This possible plank measures 137x12x3cm. It is heavily damaged (potentially during retrieval) making interpretation difficult. 2 worked sides are in evidence though no further diagnostic features were noted. WB ID 1025

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
Lordi 3210	WA_5026	Metal	Base and part of blade of small variable pitch propeller? WB ID 1026
Lordi 3210	WA_5027	Metal	Unidentified tubular metal object - associated with WA_5026? WB ID 1027
Lordi 3210	WA_5028	Metal	Thin steel rod with gear teeth - associated with WA_5026? WB ID 1028
Lordi 3210	WA_5029	Wood	Cylindrical wooden object, thought to be a wooden roller. WB ID 1029
Lordi 3210	WA_5031	Metal	Belt buckle (similar design to RAF 'Staybright' buckle). It measures 5cm in length and has a two-pronged pin. WB ID 1031
Lordi 3210	WA_5032	Stone	Base of small stoneware jug. This type of vessel was manufactured in the late 16th and 17th centuries in Continental Europe, specifically in Cologne and Frechen in Germany. WB ID 1032
Lordi 3210	WA_5033	Wood	This timber measures approximately 35cm long x 15cm wide and displays a broadly triangular cross-section, although this has been affected by damage to the item that has occurred post-deposition. Two of the sides are smooth where they have been worked whilst the third is obscured by damage. It has one treenail. Two steps have been cut into the wood, one of which is visible on the left in the image above, but neither is thought to represent a joggle or scarf. WB ID 1033
Lordi 3210	WA_5034	Stone	Carved granite architectural piece, displaying a scrollwork pattern similar to that seen on Ionic columns. WB ID 1034
Lordi 3210	WA_5035	Wood	Small soft wood plank measuring approximately 78x17x3cm. WB ID 1035
Lordi 3210	WA_5036	Metal	Muleshoe WB ID 1036
Lordi 3210	WA_5037	Wood	Small wooden deadeye WB ID 1037

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
Lordi 3210	WA_5038	Wood	Worn timber fragment with fastening. Plank measures approximately 43x17cm. Boring caused by shipworm is visible on both 141. A small hole for a treenail or spike is present. WB ID 1038
	WA_5039		Small red tile fragment, likely to date from the medieval or post-medieval period. WB ID 1039.
	WA_5040		
Lordi 3210		Stone	Small rim sherd of post-medieval red ware. WB ID 1040.
Lordi 3290	WA_5045	Metal	Iron tongs, measuring approximately 0.5m. The length of the tongs suggests an industrial role. WB ID 1045
Lordi 3290	WA_5047	Lead	Lead block with "Mount ISA" stamp. Mount Isa is a mining town in North-eastern Australia known for its production of metals including lead. The lead ingot was manufactured during the 20th century. WB ID 1047
Lordi 3290	WA_5048	Metal	Iron wall tie plate. It measures 20cm and is approximately 1cm thick. These plates were used to secure rods through brick or masonry buildings to prevent bowing and improve structural stability. WB ID 1048
Lordi 3290	WA_5049	Lead	2 musket balls WB ID 1049
Lordi 3290	WA_5051	Wood	Ship timber with intact treenails. This find measures approximately 60x20cm and is interpreted as a plank. It has been broken at both ends but shows few signs of boring by marine organisms so was potentially buried in seabed sediment, prior to its recovery. WB ID 1051
Lordi 3290	WA_5052	Lead	Lead block with indiscernible stamp. WB ID 1052
Lordi 3290	WA_5053	Wood	Block and tackle with attached rope. WB ID 1053

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
Lordi 3290	WA_5054	Wood	Curved ship's timber with treenail. This find measures approximately 50x22cm, and it is interpreted as being a broken part of frame. Four possible nail holes are present. The narrow gauge suggests metal nails were used and the remaining profile suggests that the nails were square profiled. Two metal nails and a treenail are present on the curved face and four holes were counted on this same face which may have held nails. A further treenail is present which measures 2cm diameter. WB ID 1054
Lordi 3290	WA_5055	Metal	Metal object with curved cross piece. This find measures approximately 46cm and the curved piece has a projected diameter of 27cm. It is manufactured from wrought iron. It is possible that it may be the badly corroded remains of a swivel gun mount or a gimbal mounting for some other device. WB ID 1055
Lordi 3290	WA_5056	Leather	Leather shoe, likely to have been manufactured and lost in the latter half of the 20th century. It is a quarter brogue, characterised by perforated decoration along the edge of the toe cap. WB ID 1056
Lordi 3290	WA_5057	Lead	2x musket balls WB ID 1057
Lordi 3290	WA_5058	Ceramic	Brick. This 'refractory brick' or 'firebrick' is of a type used to line boilers, flues and kilns, due to its ability to withstand high temperatures without cracking due to its composition which includes high aluminium oxide content. It is likely to date from the 19th century onwards.
Lordi 3290	WA_5059	Metal	Elongated concreted metal object. WB ID 1059
Lordi 3290	WA_5060	Metal	Concreted valve/carburettor – recognisably a small part of an engine. A gear wheel is visible towards the base of the item. WB ID 1060
Lordi 3290	WA_5061	Metal	Curved metal fragment. Possible gear or wheel. WB ID 1061

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
Lordi 3290	WA_5062	Iron	Iron fragment, possibly part of a frame. The holes are evenly distributed and are likely to be fixing points for bolts or rivets. The uniform spacing and size of the holes and its general appearance suggest that it was machine manufactured which indicates a 20th century date. WB ID 1062
Lordi 3290	WA_5063	Lead	Lead bullet for a Snider rifle (1867 - c. 1880).
Lordi 3290	WA_5064	Metal	Stanchion. This is a short spiked stanchion, possibly a jack stay stanchion. Jack stay stations were in use from the beginning of the 19th century. WB ID 1064
Lordi 3290	WA_5065 and 5065b	Wood	Plank with treenail. This find measures approximately 42x16cm and has a broadly triangular profile, though this has been altered by damage to the timber sustained post-deposition. Two steps are cut into the side of the timber, visible on the lower part of the find as shown above, potentially representing a three-planed or 'z' scarf joint where two timbers would have been joined. One intact treenail was noted. WB ID 1065
Lordi 3290	WA_5066	Textile	Tarred cordage. WB ID 1066
Lordi 3290	WA_5067	Plastic	Belt, possibly for machinery. WB ID 1067
Lordi 3290	WA_5068	Metal	Bullet. WB ID 1068. The bullet is a .303 Lee-Metford or Lee-Enfield rifle bullet of the Mk.II or Mk.VI pattern which were produced between 1888 and 1914.
Lordi 3367	WA_5070	Wood	This timber measures approximately 83x20x11cm and is interpreted as a plank. It has been bored by shipworm (*Teredo navalis*) and has suffered damage post-deposition. One surface has been worked though this is also affected by abrasion. No treenails were observed on this timber.

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
Lordi 3367	WA_5072	Composite	Cable with copper terminals. This type of lug is used to connect equipment with battery or generator power and is commonly used in harsh weather environments such as would be found offshore. This find is likely to be relatively modern.
Lordi 3367	WA_5075	Fossil	This is a fossilised echinoid or sea urchin which derives from Upper Cretaceous Chalk (c. 100 to 65 million years old).
Lordi 3400	WA_5079 A /B	Lead	2 shot intended for use with Royal Naval aiming guns or aiming rifles. These weren't intended to cause harm themselves, but rather to check the targeting of a weapon before firing a larger shot or projectile. This type of ammunition was in use from 1893 until the end of WWII.
Lordi 3384	WA_5080	Metal	Possible scupper from a vessel. It is exceptionally heavy suggesting that it is made from lead or has lead in its construction. This type of item is fitted to vessels to allow rain or sea water falling onto the deck to drain into the sea or ocean. It is of potentially post-medieval or modern date.
WB 2012	WA 1020	Metal	Submarine boom
Wreck site 343/26 5046 TDP report of May 2010	WA 1170 (protocol ID)	Metal	Cannon. Blomefield Pattern with a date range of 1787-1822
	1138 (Report WA 1089)	Animal bone	Animal bone
	1139 (Report WA 1090)	Wood	Pulley block
Lordi 2709	1141 and 1141b	Timber	This timber measures approximately 124 x 12cm and is broadly square in cross-section. This is likely to have been framing of a vessel. Two faces of the find display iron staining and the remnants of concreted iron indicating the attachment of a plate or fitting on two sides of the timber. The area with ferrous-staining measures approximately 45cm in length.

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
Lordi 2709	1142	Timber	This timber measures approximately 120 x 16cm and is interpreted as a plank. Three treenails are present, arranged in a single fastening fashion. Both terminals have been damaged. Interestingly, one of the flat surfaces of this timber has damage in the form of pits and abrasions (believed to be historic) which is absent from its opposite side.
Lordi 2709	1144	Timber	This timber measures approximately 1.2m long. It has a square cross-section and is in fair condition, apart from being damaged at one end. The opposing end has been clearly bevelled forming a 'v-shape' which aided the abutment of the timber to another frame on a vessel. This timber is potentially a deadwood, although this cannot be confirmed. It displays three treenails set in an alternating or diagonal pattern and one hole for an iron fastening.
Lordi 2709	1145 and 1145b	Timber	This timber measures 60 x 10cm and has a broadly square cross-section. Four treenails are present set in an alternating pattern and extending through one axis of the timber, whilst two iron nails are present extending through the timber at a 90° angle to the treenails. One end displays a potential scarf join, although damage prevents confirmation of this.
Lordi 2709	1146	Timber	This timber measures 89 x 16cm and is interpreted as a frame. It is square in cross-section and four *in situ* treenails are present as well as one iron fastening. Whilst the timber is clearly worked no tool marks were noted on it. The timber is in fair condition apart from a post-recovery longitudinal split and damage to one end. The affected end also displays a chamfer which is part obscured by damage.
Lordi 2709	1147	Timber	This is potentially a fragment of plank with one *in situ* treenail and one treenail hole set in a vertical pattern.

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
Lordi 2709	1148	Timber	Ships knee. It has one area of recovery damage and three 'grazes' that may represent tool marks from its manufacture, although this cannot be confirmed. No other potential tool marks were noted. Only one treenail hole is present which measures 2cm diameter. Comparable examples have been recorded from vessels of late post-medieval or early modern date.
Lordi 2709	1149 and 1149b	Timber	Ships timber measuring 70 x 10cm.. One broken treenail hole was noted, measuring 3.5cm in diameter.
Lordi 2709	1150	Timber	Ships timber that has sustained heavy damage post-deposition or during recovery. The 'L'-shape seen here is interpreted as having been formed by breakage and the find is thought to have originally been straight.
Lordi 2709	1151 and 1151b	Timber	This timber measures 106 x 15cm and is uncharacterised.
Lordi 2709	1153	Leather	Leather shoe
Lordi 2709	1154	Leather	Leather shoe sole
Lordi 2709	1155	Leather	Leather shoe sole
Lordi 2709	1156	Leather	Leather shoe sole
Lordi 2709	1157	Lead	Lead sounding weight
Lordi 2709	1158	Lead	Lead sounding weight
Lordi 2709	1159	Animal bone	Animal bone
Lordi 2709	1160	Animal bone	Animal bone
Lordi 2709	1162	Ceramic	White glaze ceramic fragment
Lordi 2709	1163	Ceramic	Stone ware pottery base sherd
Lordi 2709	1165	Metal	Hand held air-raid siren
Lordi 2709	1166 or 1167 (one is missing)	Metal	musket balls
Lordi 1381	WA 1065 /	Metal	Propeller

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
	WA 1006 / RoW droit 076/1		
Lordi 2454	WA1080 / RoW droit 077/11	Metal	Cannonball
Lordi 2454	WA 1107	Metal	Metal cap/plate
	WA 1109 / (Report WA 1072)	Metal	Metal object, possible knife or blade
	WA 1110b	Metal	Cannonball (shown on the left)
	WA 1111	Metal	Unknown metal object (chisel/caulking tool)
	WA 1112	Metal	Anchor ball
Lordi 2454	WA 1113	Metal	Decorated fixture/fitting. The decoration includes reeding (a series of raised parallel lines) and a Regency style circular design at one end.
Lordi 2454	WA 1114	Metal	Decorated cast iron wheel, 20cm in diameter. The object has a grid pattern on the two faces and a circular hole in the middle.
Lordi 2413	WA 1115 / (Report WA 1078)	Wood and Metal	Wooden pulley block
Lordi 2413	WA 1116 / (Report WA 1079)	Metal	Modern African coins (numerous)
Lordi 2413	WA 1118 / (Report WA 1081)	Metal	Control panel with two labels
Lordi 2413 / (Lordi 1966)	WA 1121 / WA 1122 / (Report WA 1083)	Metal	2 cannonballs
Lordi 2413	WA 1124	Metal	Metal knife/blade

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
	(Report WA 1084)		
Wreck Site 343/26 5046 Northwest of Sea Reach 1 (TDP)	WA 1168	Wood	Balustrade timber
	WA 1169	Metal	Pulley sheave
	WA 1171	Wood	Block and tackle with attached rope
Lordi 1174	WA 1173 / RoW droit 073/11	Wood	Pulley sheave
Brett Aggregates Cliffe	WA 1175	Animal bone	Mammoth tooth
Brett Aggregates Cliffe	WA 1176	Animal bone	Mammoth tooth
Brett Aggregates Cliffe	WA 1177	Animal bone	Mammoth tooth
	WA 1178 / (Report WA 1116)	Metal	Iron tool
Brett Aggregates Cliffe	WA 1179a	Slag	Iron Tool
Brett Aggregates Cliffe	WA1179b	Slag	Shaped slag
Brett Aggregates Cliffe	WA 1186	Animal bone	Mammoth tooth
Brett Aggregates Cliffe	WA 1187	Animal bone	Tusk (Mammoth?)
Lordi 1377 ??	WA1072 / (Report WA 1010) / RoW droit 077/11	Metal	Fired Shell Casing. The shell is brass and is 0.38m long, 0.12m wide at the base. The shell's firing pin was no longer present when recovered, indicating that the round had been fired, leaving the empty shell behind. The shell casing has been identified as being from a 120mm anti-aircraft gun, most likely from WWII.
Unreported (project 72436)	WA 1077 (Report WA 1012)	Wood and iron	Pulley block - piece of ship's tackle. The object consists of an iron hook and casing around a wooden block with the remains of a wooden wheel

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
	RoW droit 077/11		in the centre of the block. The object is 0.38m long, 0.12m wide and 0.06m thick.
Lordi 1678	WA 1051	Wood	Drill round. This is the cartridge case section (shell section missing) of a 'drill' or practice round. These were inert version of ammunition, used to drill (train) gun crews in 'dry' (no live ammunition) firing practices. It is from a 4.5" gun which would have fired a 55 pound shell. Guns etc. size were used in various forms (naval, anti-aircraft etc.) principally between 1938 and 1945.
Lordi 1667	WA 1048 (Report WA 1030) RoW droit 073/11	Metal	6 inch projectile with double driving band.
1953/1961 Ju 88 Luftwaffe German aircraft	40/1509	Aluminium	Crew station with O2 monitor, mount for paper card , possible attachment for radio (rubber suspension mounts)
1953/1961 Ju 88 Luftwaffe German aircraft	41	Aluminium	Part of instrument panel with rubber suspension mounts with part of instrument mount
1953/1961 Ju 88 Luftwaffe German aircraft	83/1474	Aluminium	Crew seat frame with harness attachment - possible radio operator/ gunner seat
1953/1961 Ju 88 Luftwaffe German aircraft	111	Aluminium	Cockpit framework
1953/1961 Ju 88 Luftwaffe German aircraft	114	Perspex	Cockpit Perspex
Ju 88 *Luftwaffe* German aircraft	150	Aluminium	Armour plate fuselage cockpit
Ju 88 *Luftwaffe* German aircraft	295	Aluminium	Compass direction indicator

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
Ju 88 *Luftwaffe* German aircraft	298	Plastic	GM boost - the instrument seem to be ON as all the lever are in the opposite direction to AUS (off)
1953/1961 Ju 88 Luftwaffe German aircraft	301	Metal	Compass
Ju 88 *Luftwaffe* German aircraft	303	Metal	Possible radio part
1953/1961 Ju 88 Luftwaffe German aircraft	317	Metal	Direction indicator slot still with piece of panel
1953/1961 Ju 88 Luftwaffe German aircraft	20/1463	Aluminium	Push rod control and bell crank - Stamp R8.88.400.4804b (forging.aircraft.group(eq. flying controls).part) - also material specific / inspector stamp marking
1953/1961 Ju 88 Luftwaffe German aircraft	247	Aluminium	Radio slot on mounts for anti vib - quick release attachment for the radio rack
1953/1961 Ju 88 Luftwaffe German aircraft	117	Aluminium	Possible radio component
1953/1961 Ju 88 Luftwaffe German aircraft	127	Aluminium	Instrument with shutter proof glass film remains
1953/1961 Ju 88 Luftwaffe German aircraft	141	Rubber	Possible camera boot
1953/1961 Ju 88 Luftwaffe German aircraft	142	Aluminium	Part of the end railing piece coming out from the cockpit controlling
1953/1961 Ju 88 Luftwaffe German aircraft	252	Aluminium and rubber	Camera aperture and boot with Δ marking

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
1953/1961 Ju 88 Luftwaffe German aircraft	281	Aluminium	Grip for pilot's control column in cockpit
1953/1961 Ju 88 Luftwaffe German aircraft	302	Metal	Radio equipment plate
1953/1961 Ju 88 Luftwaffe German aircraft	307	Metal	Circuit diagram for the electronics
1953/1961 Ju 88 Luftwaffe German aircraft	13/1534	Aluminium	Fuel control
1953/1961 Ju 88 Luftwaffe German aircraft	37	Metal	Engine cowling armour
1953/1961 Ju 88 Luftwaffe German aircraft	248/1273	Aluminium	Engine mount
1953/1961 Ju 88 Luftwaffe German aircraft	256	Metal	Annular radiator
1953/1961 Ju 88 Luftwaffe German aircraft	270/1274	Metal	BMW 801 14-Cylinder radial Engine
1953/1961 Ju 88 Luftwaffe German aircraft	271/1530	Aluminium	Misc. engine parts (x7)
1953/1961 Ju 88 Luftwaffe German aircraft	277	Metal	Fuel or oil filter
1953/1961 Ju 88 Luftwaffe German aircraft	315	Metal	Engine part

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
1953/1961 Ju 88 Luftwaffe German aircraft	88/1472	Aluminium	Engine mount related fragment
1953/1961 Ju 88 Luftwaffe German aircraft	190	Aluminium	Cowling fastener
1953/1961 Ju 88 Luftwaffe German aircraft	192	Aluminium	Cowling fastener
1953/1961 Ju 88 Luftwaffe German aircraft	228/1348	Metal	Engine cog
1953/1961 Ju 88 Luftwaffe German aircraft	22	Aluminium	External section of fuselage hatched (side) - Perspex painted yellow - yellow code letter 480-4b @ 3115
1953/1961 Ju 88 Luftwaffe German aircraft	29/1477	Aluminium	Front of aircraft fuselage frame
1953/1961 Ju 88 Luftwaffe German aircraft	152	Aluminium	Fuselage door section still with pencil mark from factory - front fuselage
1953/1961 Ju 88 Luftwaffe German aircraft	54	Aluminium	Fuselage access port with paint coating traces
1953/1961 Ju 88 Luftwaffe German aircraft	53	Aluminium	Internal Airframe - fuselage - possible bass level - near centreline - when tail is on ground, establish datum level
1953/1961 Ju 88 Luftwaffe German aircraft	85	Aluminium	Push rod controls with universal joints at both ends - fuselage or wing
1953/1961 Ju 88 Luftwaffe German aircraft	39/1483	Aluminium	Back end of the fuselage - painted mark A18 with possible date of inspection

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
1953/1961 Ju 88 Luftwaffe German aircraft	255	Aluminium	Rear fuselage frame
1953/1961 Ju 88 Luftwaffe German aircraft	47	Aluminium	Airframe misc - heavy gauge - inner wing on floor of fuselage
1953/1961 Ju 88 Luftwaffe German aircraft	245	Aluminium	Wing section with screw on panel with access hatch - pipework - inner wing
1953/1961 Ju 88 Luftwaffe German aircraft	257/1475	Aluminium	Section of wing rib -fuel tank bay - inner wing
1953/1961 Ju 88 Luftwaffe German aircraft	251/1522	Aluminium and rubber	Lower fuselage with camera boot - pencil mark from fitter
1953/1961 Ju 88 Luftwaffe German aircraft	223	Aluminium	Main wing piece - spar and webs indicate mid wing
1953/1961 Ju 88 Luftwaffe German aircraft	253/1491	Aluminium	Possible part of floor - slight curve at end - evidence of Mg parts (white powder) - possible bottom of cockpit floor
1953/1961 Ju 88 Luftwaffe German aircraft	10	Metal	High tension lead (spark plugs)
1953/1961 Ju 88 Luftwaffe German aircraft	46	Aluminium	Fuselage side piece - frame with stiffeners - rear fuselage
1953/1961 Ju 88 Luftwaffe German aircraft	246/1454	Aluminium	Rear fuselage skin with jacking levelling bracket - R8 paint print
1953/1961 Ju 88 Luftwaffe German aircraft	254/1517	Aluminium	O2 cylinders (usually dated)

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
1953/1961 Ju 88 Luftwaffe German aircraft	14/1466	Aluminium	Ram for tail or oiler
1953/1961 Ju 88 Luftwaffe German aircraft	3/1467	Metal	Piece of under carriage
1953/1961 Ju 88 Luftwaffe German aircraft	25/1468	Rubber	Rear wheel with serial number/maker markings; AKL Continental Made in Germany (written in English, French, and German) 560 x 200; 5039496 4CP and bullet hole
1953/1961 Ju 88 Luftwaffe German aircraft	48/1527	Metal	Internal framing/support
1953/1961 Ju 88 Luftwaffe German aircraft	87/1479	Metal	Inner wheel or brake disc for landing gear?
1953/1961 Ju 88 Luftwaffe German aircraft	209	Aluminium	Operating hydraulic ram (open gear doors)
1953/1961 Ju 88 Luftwaffe German aircraft	WA 1085_43 (289) (Report WA 1051) RoW droit 263/12	Metal	Part of the flight control mechanism.
1953/1961 Ju 88 Luftwaffe German aircraft	70	Leather	Possible gaiter
1953/1961 Ju 88 Luftwaffe German aircraft	125	Leather	Gaiter for u/carriage legs?
1953/1961 Ju 88 Luftwaffe German aircraft	26/1481	Aluminium	Wing rib (?) - universal controls on it

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
1953/1961 Ju 88 Luftwaffe German aircraft	145/1619?	Aluminium	Further inboard section of wing (to wing piece n 223)
1953/1961 Ju 88 Luftwaffe German aircraft	146	Aluminium	Wing small section
1953/1961 Ju 88 Luftwaffe German aircraft	151	Aluminium	?Piece of the raise bar of the wing flap or aileron - part number
1953/1961 Ju 88 Luftwaffe German aircraft	185	Aluminium	Wing section? - part number
1953/1961 Ju 88 Luftwaffe German aircraft	180	Aluminium	Part 31 - tragwerk-flügel
1953/1961 Ju 88 Luftwaffe German aircraft	249/1450	Aluminium	Propeller , possibly of Stuka or more likely early JU88 models - distinctive spinner backplate - swartzgreen colour traces - one counterbalance *in situ*
1953/1961 Ju 88 Luftwaffe German aircraft	250/1280	Aluminium	Prop hub and VDM hub. Light alloy casing missing - Blade probably pulled out recently (witness mark) - part of engine on reduction gears - paddle blade props - fragment of front of cowling - no apparent evidence of combat - straight blade so engine stopped before impact
1953/1961 Ju 88 Luftwaffe German aircraft	50	Aluminium	Possible cockpit fragment - Serial lettering; D aim
1953/1961 Ju 88 Luftwaffe German aircraft	51	Metal	Electrical component
1953/1961 Ju 88 Luftwaffe German aircraft	283	Plastic	Misc. plastic (?) covering

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
1953/1961 Ju 88 Luftwaffe German aircraft	299	Plastic	Cockpit frag - printed around top of side; Bauart u. Hersteller Friesekeu. Höpfner RSSFS; Sach Nr 124-99702 Wo…Nr..75378 Ln 28669
1953/1961 Ju 88 Luftwaffe German aircraft	300	Plastic	Plug socket
1953/1961 Ju 88 Luftwaffe German aircraft	104	Aluminium	Wing/tail control flap
1953/1961 Ju 88 Luftwaffe German aircraft	153	Aluminium	fuel tank top
1953/1961 Ju 88 Luftwaffe German aircraft	189	Aluminium	Lagerstück - part of spar - angle stiffening channel - part number
1953/1961 Ju 88 Luftwaffe German aircraft	269/1263	Aluminium	Fragment of airframe (wing)
1953/1961 Ju 88 Luftwaffe German aircraft	286	Aluminium	Main spar outboard
1953/1961 Ju 88 Luftwaffe German aircraft	5/1539	Aluminium	Fuselage fragment
1953/1961 Ju 88 Luftwaffe German aircraft	7/1464	Aluminium	Conduit
1953/1961 Ju 88 Luftwaffe German aircraft	8/1540	Aluminium	Piece of airframe with stiffening channels

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
1953/1961 Ju 88 Luftwaffe German aircraft	9	Aluminium	Conduit with code on the electrical insulator
1953/1961 Ju 88 Luftwaffe German aircraft	12/1529	Metal	Rusted fuselage fragment
1953/1961 Ju 88 Luftwaffe German aircraft	16/1537	Aluminium	Fuselage fragment
1953/1961 Ju 88 Luftwaffe German aircraft	18	Aluminium	Riveted fuselage fragment
1953/1961 Ju 88 Luftwaffe German aircraft	19/1531	Aluminium	Rusted fuselage fragment
1953/1961 Ju 88 Luftwaffe German aircraft	21/1465	Aluminium	Corrugated frame/skin
1953/1961 Ju 88 Luftwaffe German aircraft	30/1520	Aluminium	Fuselage fragment with circular hatch built in
1953/1961 Ju 88 Luftwaffe German aircraft	32	Aluminium	Riveted fuselage fragment
1953/1961 Ju 88 Luftwaffe German aircraft	34	Aluminium	Cover
1953/1961 Ju 88 Luftwaffe German aircraft	36	Aluminium	Fuselage fragment with dark green paint elements
1953/1961 Ju 88 Luftwaffe German aircraft	45	Aluminium	Oxygen bottle rack on side fuselage section

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
1953/1961 Ju 88 Luftwaffe German aircraft	52	Aluminium	Fuselage fragment
1953/1961 Ju 88 Luftwaffe German aircraft	56	Aluminium	Misc. airframe
1953/1961 Ju 88 Luftwaffe German aircraft	57	Aluminium	Fuselage frame
1953/1961 Ju 88 Luftwaffe German aircraft	66	Aluminium	Fuselage fragment
1953/1961 Ju 88 Luftwaffe German aircraft	78	Aluminium	Door section similar to n 294
1953/1961 Ju 88 Luftwaffe German aircraft	79/1607(?)	Aluminium	Fuselage fragment with fragments of the airframe
1953/1961 Ju 88 Luftwaffe German aircraft	80/1471	Aluminium	Steuerung im Rumpf
1953/1961 Ju 88 Luftwaffe German aircraft	96	Aluminium	Actuator (releaser ?)
1953/1961 Ju 88 Luftwaffe German aircraft	105	Aluminium	Fuselage fragment with cylinder mount
1953/1961 Ju 88 Luftwaffe German aircraft	144	Aluminium	Fuselage with chained access hatch
1953/1961 Ju 88 Luftwaffe German aircraft	148	Aluminium	Fuselage fragment

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
1953/1961 Ju 88 Luftwaffe German aircraft	149	Aluminium	Fuselage fragment with pipe fabric remains
1953/1961 Ju 88 Luftwaffe German aircraft	161/1541	Aluminium	Fuselage fragment
1953/1961 Ju 88 Luftwaffe German aircraft	162/1457	Aluminium	Fuselage fragment
1953/1961 Ju 88 Luftwaffe German aircraft	182	Aluminium	Airframe of wing or fuselage
1953/1961 -Ju 88 Luftwaffe German aircraft	186	Aluminium	Double skin piece of airframe function uncertain possible part of flying control
1953/1961 Ju 88 Luftwaffe German aircraft	191	Aluminium	Fuselage fragment with circular holes and holding straps
1953/1961 Ju 88 Luftwaffe German aircraft	193	Aluminium	Angled fuselage fragment (?) with attached leather
1953/1961 Ju 88 Luftwaffe German aircraft	208	Aluminium	Bracket for two cylindrical object /tank - some scratch might indicate not cylinders were not fitting properly
1953/1961 Ju 88 Luftwaffe German aircraft	214	Aluminium	Reinforcement ring for panel
1953/1961 Ju 88 Luftwaffe German aircraft	215	Aluminium	Bracket with tap control
1953/1961 Ju 88 Luftwaffe German aircraft	224	Aluminium	Fuselage fragment

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
1953/1961 Ju 88 Luftwaffe German aircraft	244/1343	Aluminium	Fuselage fragment
1953/1961 Ju 88 Luftwaffe German aircraft	259/1288	Aluminium	Fuselage fragment
1953/1961 Ju 88 Luftwaffe German aircraft	261/1278	Aluminium	Bracket with O2 charging valve
1953/1961 Ju 88 Luftwaffe German aircraft	263/1282	Aluminium	Fuselage fragment
1953/1961 Ju 88 Luftwaffe German aircraft	265/1291	Aluminium	Fuselage fragment
1953/1961 Ju 88 Luftwaffe German aircraft	268	Aluminium	Framing (?) (PLA RECOVERY)
1953/1961 Ju 88 Luftwaffe German aircraft	284	Aluminium	Fuselage component for first aid kit
1953/1961 Ju 88 Luftwaffe German aircraft	290	Aluminium	Airframe fragment with iron object
1953/1961 Ju 88 Luftwaffe German aircraft	291	Aluminium	Main wing spar fragment with iron object and part of the fuselage attached
1953/1961 Ju 88 Luftwaffe German aircraft	293/1547	Aluminium	Fuselage fragment with evidence of material traces. Marking V/109
1953/1961 Ju 88 Luftwaffe German aircraft	294/1546	Aluminium	Fragment of door - blue paint covered by green paint - stencil airframe marking - part number 8812327002

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
1953/1961 Ju 88 Luftwaffe German aircraft	1/1494	Aluminium	4 oxygen cylinders (x3 blue, x1 grey) joined together with Luftwaffe label and serial numbers on the base. Volume 2.03 litres
1953/1961 Ju 88 Luftwaffe German aircraft	2	Aluminium	Date on anodized O2 cylinder 18/10/40; cylinder is anodized, which is typical of mid-war
1953/1961 Ju 88 Luftwaffe German aircraft	103	Aluminium	Early O2 bottle - later ones are different - prototype converted
1953/1961 Ju 88 Luftwaffe German aircraft	221	Fabric	Intrusive piece of fabric
1953/1961 Ju 88 Luftwaffe German aircraft	285	Aluminium	Intact first aid kit
1953/1961 Ju 88 Luftwaffe German aircraft	4	Aluminium	Vent/grill
1953/1961 Ju 88 Luftwaffe German aircraft	63	Aluminium	ResinØpart - possible back of instrument
1953/1961 Ju 88 Luftwaffe German aircraft	69	Aluminium	Gasket - green residue - fuel filter top
1953/1961 Ju 88 Luftwaffe German aircraft	71	Metal	Hose with writing on; 3R at one end and NW4 Arms at the other
1953/1961 Ju 88 Luftwaffe German aircraft	72	Leather	?Leather object
1953/1961 Ju 88 Luftwaffe German aircraft	73	Metal	Argus Hose

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
1953/1961 Ju 88 Luftwaffe German aircraft	74	Metal	Metallic card holder?
1953/1961 Ju 88 Luftwaffe German aircraft	75	Aluminium	Cylinder holding straps
1953/1961 Ju 88 Luftwaffe German aircraft	76	Iron	Iron object
1953/1961 Ju 88 Luftwaffe German aircraft	86	Metal	Oxygen charging valve
1953/1961 Ju 88 Luftwaffe German aircraft	92	Metal	Torque (control) tube
1953/1961 Ju 88 Luftwaffe German aircraft	94	Metal	Electrical component
1953/1961 Ju 88 Luftwaffe German aircraft	95	Metal	Misc. electrical components
1953/1961 Ju 88 Luftwaffe German aircraft	99	Metal	O2 line
1953/1961 Ju 88 Luftwaffe German aircraft	101	Aluminium	Control wheel , part of chain driven trimmer controls
1953/1961 Ju 88 Luftwaffe German aircraft	108	Bakelite	Bakelite wheel
1953/1961 Ju 88 Luftwaffe German aircraft	110	Wood	Possible brush

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
1953/1961 Ju 88 Luftwaffe German aircraft	112	Metal	Bolt with attached circular plate
1953/1961 Ju 88 Luftwaffe German aircraft	119	Wood	Angled wooden block
1953/1961 Ju 88 Luftwaffe German aircraft	120	Metal	Misc. electrical components (x2)
1953/1961 Ju 88 Luftwaffe German aircraft	124	Metal	Spring
1953/1961 Ju 88 Luftwaffe German aircraft	126	Aluminium	Aluminium panel
1953/1961 Ju 88 Luftwaffe German aircraft	136	Leather	Leather fragment
1953/1961 Ju 88 Luftwaffe German aircraft	137	Metal	Misc. assorted objects (x3)
1953/1961 Ju 88 Luftwaffe German aircraft	143	Wood	Sawn fragment of wood
1953/1961	WA 1085_45	Metal	Aircraft wires
1953/1961 Ju 88 Luftwaffe German aircraft	159/1456	Metal	Cluster joint oxygen (colour coded = blue)
1953/1961 Ju 88 Luftwaffe German aircraft	168	Metal	Misc. electrical wire

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
1953/1961 Ju 88 Luftwaffe German aircraft	170	Metal	Supply pipes
1953/1961 Ju 88 Luftwaffe German aircraft	171	Metal	Bell crank control for flying surface control - may have R 8.88 and part number
1953/1961 Ju 88 Luftwaffe German aircraft	172	Metal	Electrical material - radio insulator
1953/1961 Ju 88 Luftwaffe German aircraft	173	Metal	Hose clamp and gasket - unusual application of stainless steel
1953/1961 Ju 88 Luftwaffe German aircraft	175	Metal	Misc. electrical wires with attachment
1953/1961 Ju 88 Luftwaffe German aircraft	211	Metal	Possible thermostat
1953/1961 Ju 88 Luftwaffe German aircraft	212	Metal	Iron lever arm
1953/1961 Ju 88 Luftwaffe German aircraft	213	Metal	Access plate; two access panels
1953/1961 Ju 88 Luftwaffe German aircraft	218	Aluminium	Aluminium disc mount
1953/1961 Ju 88 Luftwaffe German aircraft	222	Metal	Circuit breaker - push button
1953/1961 Ju 88 Luftwaffe German aircraft	226	Metal	Misc. diagnostic iron components (x6)

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
1953/1961 Ju 88 Luftwaffe German aircraft	227	Metal	Misc. hose and pipes (x4)
1953/1961 Ju 88 Luftwaffe German aircraft	229/1347	Metal	Iron toothed ring mount
1953/1961 Ju 88 Luftwaffe German aircraft	233/1350	Metal	Iron strap fragment
1953/1961 Ju 88 Luftwaffe German aircraft	240	Metal	Iron bolt
1953/1961 Ju 88 Luftwaffe German aircraft	243	Metal	Possible pedal fitment/instrument
1953/1961 Ju 88 Luftwaffe German aircraft	260/1283	Metal	Hose fragment
1953/1961 Ju 88 Luftwaffe German aircraft	262/1285	Metal	Possible oxygen fitting
1953/1961 Ju 88 Luftwaffe German aircraft	264/1286	Metal	Misc. lever?
1953/1961 Ju 88 Luftwaffe German aircraft	266/1279	Bakelite	Bakelite electrical component?
1953/1961 Ju 88 Luftwaffe German aircraft	267/1287	Metal	Vibration mount
1953/1961 Ju 88 Luftwaffe German aircraft	272	Metal	Roller' composite material

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
1953/1961 Ju 88 Luftwaffe German aircraft	273	Metal	Fragment of door - fitters mark - material inspection V-109 printed
1953/1961 Ju 88 Luftwaffe German aircraft	276	Metal	Threaded cog/ring
1953/1961 Ju 88 Luftwaffe German aircraft	278	Metal	Lever fragment
1953/1961 Ju 88 Luftwaffe German aircraft	279	Metal	Misc. aluminium component
1953/1961 Ju 88 Luftwaffe German aircraft	280	Metal	Part of personal O2 - TH 640 marking
1953/1961 Ju 88 Luftwaffe German aircraft	296	Metal	Tag/label with writing (first part missing) - eisung für Flügel „Auf"
1953/1961 Ju 88 Luftwaffe German aircraft	309	Metal	Pipework
1953/1961 Ju 88 Luftwaffe German aircraft	310	Metal	Pulley with marking LWSKYL61
1953/1961 Ju 88 Luftwaffe German aircraft	313	Metal	Control Panel for heated clothing
Site 5019	001	Wood	Wooden gun stock fragments
Site 5019	002_part 1	Wood	Two parts; carriage wheel
Site 5019	002_part 2	Wood	Two parts; round timber with holes
Site 5019	003	Leather	Leather

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
Site 5019	005	Lead	Lead pipe
Site 5019	006	Brass	Brass ring
Site 5019	007	Lead	Lead fragment
Site 5019	008_a	Wood and Fe metal	Two parts; Wood and Fe deadeye
Site 5019	008_b	Metal	Two parts; Top of concretion with modern rope fragments
Site 5051	030	Wood	Sheave block
Site 5051	042	Fibre	Cord - 2 fragments; one has stopper knot
Site 5051	045	Wood	Shovel handle; roughly inscribed with 'W' followed by a probable 'D' or possibly a 'G'
Site 5051	046	Wood	T-bar tool handle and shaft; thickness is diameter of shaft at lower end; 5 notches at top of shaft
Site 5051	047	Wood	Shovel handle and part shaft; broken across handle; thickness is diameter at lower end
Site 5051	050	Pottery	Flagon. Glazed upright bottle; cork *in situ*; handle attached to shoulder and base of neck missing
Site 5051	051_bag 1 of 3	Wood	Three parts; Several barrel stave and lid fragments; barrel diameter at top 315mm; half-round dowels/pegs
Site 5051	051_bag 2 of 3	Wood	Three parts; Several barrel stave and lid fragments; barrel diameter at top 315mm; half-round dowels/pegs
Site 5051	051_bag 3 of 3	Wood	Three parts; Several barrel stave and lid fragments; barrel diameter at top 315mm; half-round dowels/pegs
Site 5051	066	Leather	
Site 5051	067	Leather boot	
Site 5204	011	Leather fragment	
Site 5204	040	Leather	
Site 5204	1003	Wood	Timber 9, futtock (long)

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
Site 5204	1006	Wood	Timber 13, futtock
Site 5204	1017	Wood	Timber 28, futtock
Site 5204	042_AI	Concretion	Several objects concreted together: washer, bar fragment and square x-section bar fragment and wood flat strip (heavily concreted); from 'lump of concretion'
Site 5204	042_AJ	Concretion	Fe fragments; from 'lump of concretion'; several fragments
Site 5204	042_AK	Concretion	Wood cylindrical object; from 'lump of concretion'; several fragments
Site 5204	042_A	Concretion	Fe bar, three fragments; from 'lump of concretion'
Site 5204	042_AA	Concretion	Lead fitting; from 'lump of concretion'
Site 5204	042_AB	Wood	Wood handle; wooden items from 'lump of concretion'
Site 5204	042_AC	Leather	Leather shoe sole fragment; from 'lump of concretion'
Site 5204	042_AD	Concretion	Fe eyed hook; from 'lump of concretion'
Site 5204	042_AE	Concretion	Fe curved bar; from 'lump of concretion'
Site 5204	042_AF	Concretion	Fe ring attached to stone; from 'lump of concretion'
Site 5204	042_AG	Concretion	Fe looped bar/strip with folded bar through; from 'lump of concretion'
Site 5204	042_AH	Concretion	Fe rod fragments x2; from 'lump of concretion'
Site 5204	042_B	Concretion	Fe object fragments; from 'lump of concretion'
Site 5204	042_C	Concretion	Fe rod; from 'lump of concretion'
Site 5204	042_D	Concretion	Fe eyed bar; from 'lump of concretion'
Site 5204	042_E	Concretion	Fe ring fragment; from 'lump of concretion'; several fragments
Site 5204	042_F	Concretion	Fe shackle; from 'lump of concretion'
Site 5204	042_G	Wood	Wood fitting; Wooden items from lump of concretion'
Site 5204	042_H	Concretion	Fe eyed bar with screw and small wood fragment; from 'lump of concretion'

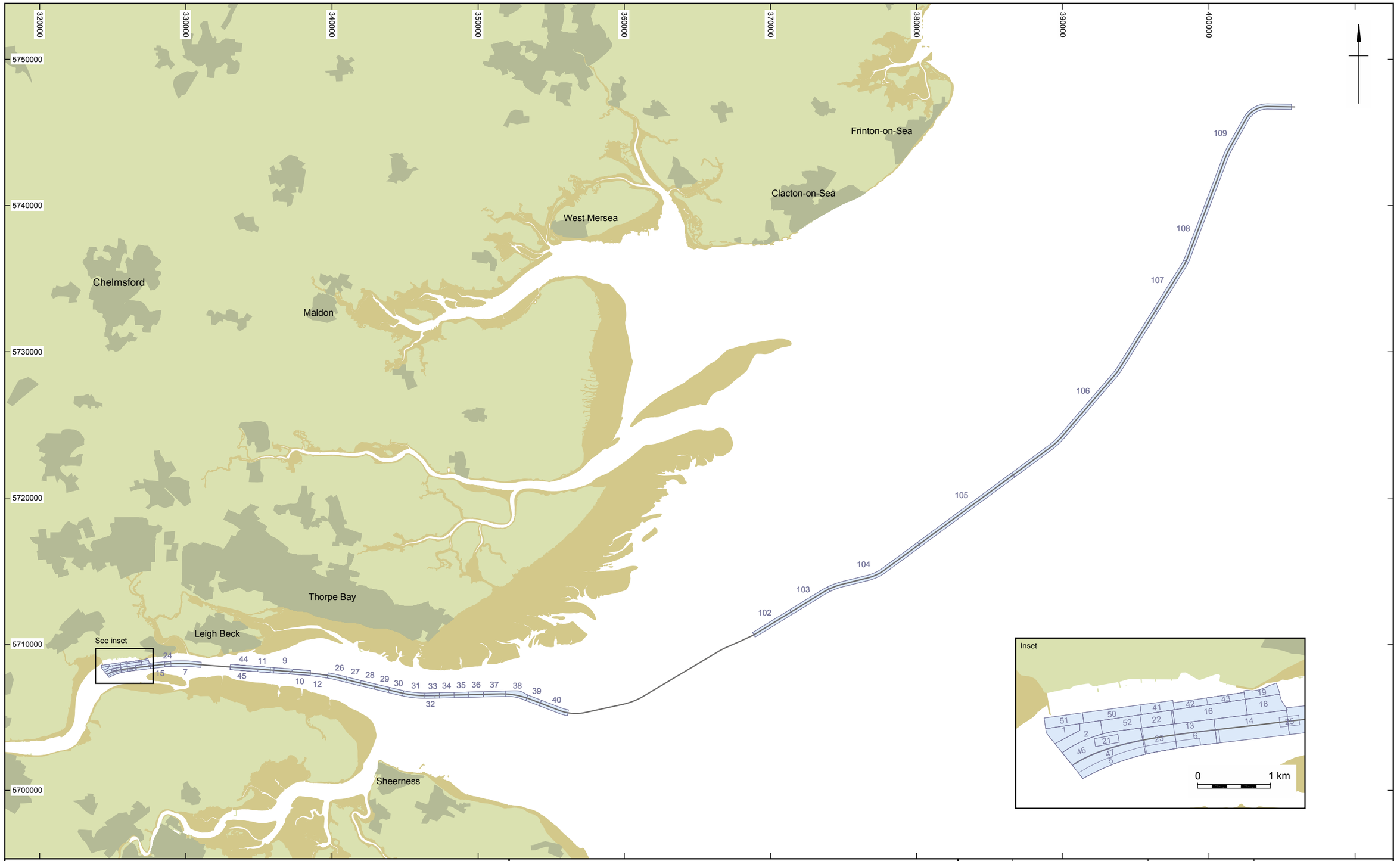
Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
Site 5204	042_I	Concretion	Fe U-shaped loop; from 'lump of concretion'
Site 5204	042_J	Wood	Wood peg/wedge; Wooden items from 'lump of concretion'
Site 5204	042_K	Concretion	Fe ring fragments; from 'lump of concretion'
Site 5204	042_L	Concretion	Fe/graphite washer; from 'lump of concretion'; several fragments
Site 5204	042_M	Concretion	Fe fitting fragments x6; from 'lump of concretion'
Site 5204	042_N	Concretion	Fe and Cu alloy nut and small Fe bar fragment; from 'lump of concretion'
Site 5204	042_O	Concretion	Fe sheet fragment; from 'lump of concretion'; several fragments
Site 5204	042_P	Concretion	Part of Fe ring; from 'lump of concretion'
Site 5204	042_Q	Concretion	Fe eyed bar (Fragile); from 'lump of concretion'; several fragments. Fragile
Site 5204	042_R	Concretion	Fe leyed loop with ring and square x-section curved object; from 'lump of concretion'. Two items in bag
Site 5204	042_S	Concretion	Fe nail; from 'lump of concretion'; several fragments
Site 5204	042_T	Concretion	Fe nail; from 'lump of concretion'
Site 5204	042_U	Wood	Wood object; wooden items from 'lump of concretion'
Site 5204	042_V	Concretion	Fe padlock fragment x2; from 'lump of concretion'
Site 5204	042_W	Wood	Wood handle; wooden items from 'lump of concretion'
Site 5204	042_X	Concretion	Fe and Cu alloy padlock; from 'lump of concretion'
Site 5204	042_Y	Wood	Wood handle; wooden items from 'lump of concretion'
Site 5204	042_Z	Concretion	Fe chain fragments and wooden cylindrical object; from 'lump of concretion' Two items in bag
Site 5204	044_a	Textile	Textile fragments; four parts; from concretion described as 'Palm thimble'
Site 5204	044_b	Concretion	Concretion fragments; four parts; from concretion described as 'Palm thimble'. Separate bags inside

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
Site 5204	044_c	Textile and concretion	Textile conglomeration with Cu alloy button. Four parts; from concretion described as 'Palm thimble'. Separate bags inside
Site 5204	044_d	Textile and concretion	Concretion fragment with textile and fastening. Four parts; from concretion described as 'Palm thimble'
Site 5204	1011a	Wood	Timber 18, sternpost
Site 5204	1011b_1	Wood	Timber 10, sternpost; three parts
Site 5204	1011b_2	Metal concretion	Timber 10, sternpost; three parts
Site 5204	1011b_3	Metal concretion	Timber 10, sternpost; three parts
Site 5204	Timber 11	Wood	Timber 11, futtock
Site 5204	Timber 19	Wood	Timber 19, futtock
Site 5204	Timber 20	Wood	Timber 20, section of hull
Site 7345	Section of four joined timbers	Wood	Planking
?	?	Wood	Frame TN
LG 66894	?	Wood	Fragment of wood
LG 66894	?	Concretion	Concretion lump0
Lordi 1500	WA 1024	Metal	Cannonball
LG 72437	WA 1120	Metal	Cannonball
?	1052	Metal	2x Iron nails - actively falling apart
?	1140	Wood	Wood
WB	WA 5041	Lead	Lead musket ball WB ID 1041
Ju88	201	Metal	Aircraft fragment
Ju88	WA 304	Metal	Shell case
Ju88	1497/79	Metal	Aircraft part
Sea Reach 1	WA 9041	Copper	Pipe

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
Sea Reach 1	WA 9042	Copper	Pipe
LG 72436	WA 1130	Metal	Knife - cutlery
LG 72436	WA 1131	Metal	Spoon - cutlery
LG 72436	WA 1125	Pottery	Fragment of clay pipe stem
LG 72436	WA 1126	Pottery	Fragment of clay pipe stem
LG 72436	WA 1127	Pottery	Fragment of clay pipe stem
LG 72436	WA 1128	Pottery	Fragment of clay pipe stem
LG 72436	WA 1129	Pottery	Fragment of clay pipe stem
LG 72436	WA 1132	Pottery	Fragment of clay pipe stem
LG 72436	WA 1133	Pottery	Fragment of clay pipe stem
LG 72436	WA 1134	Pottery	Fragment of clay pipe bowl
Zone 105; Data sheet 25; Ref:7534,7535	001	Metal	Small fragment of aluminium-like metal with small riveted holes - aircraft
Zone 105; Data sheet 25; Ref:7534,7535	002	Metal	Small fragment of aluminium-like metal with small riveted holes - aircraft
Zone 105; Data sheet 25; Ref:7534,7535	003	Wood	Fragment of shaped wood (Laminate or plywood)
Zone 105; Data sheet 24; Ref:7530	004	Wood	Small fragment of worked wood, 300mm long, evid of a small iron nail
Zone 26-36; Data sheet 13; Ref:7283	005	Concretion	Small bracket-like concretion
Zone 26-36; Data sheet 13; Ref:7283	006	Pottery	Small glazed earthenware pottery sherd, modern
Zone 105; Data sheet 25; Ref:7534,7535	007	Wood	Wooden fragment, angular face
?	?	Metal	Large fragment of metal

Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
?	?	Metal	Iron object
?	?	Ceramic	Brick
?	?	Metal	Canister
Finds stored at London Gateway Facilities			
Sea Reach 1	WA3022 (WA Report 88631.01)	Metal and wood	Wheel #2
Sea Reach 1	WA3044 (WA Report 88631.01)	Metal	Cylinder #1
Sea Reach 1	WA3046 (WA Report 88631.01)	Metal	Cylinder #2
Sea Reach 1	WA3051 (WA Report 88631.01)	Metal	Air pump/ Bilge pump #2
Sea Reach 1	WA3068 (WA Report 88631.01)	Metal	Adm stock anchor #1
Sea Reach 1	WA3071 (WA Report 88631.01)	Metal	Adm stock anchor #2
Sea Reach 1	WA3080 (WA Report 88631.01)	Metal and wood	Hull section with 3 frames and reversed frames, floors , keel , wooden ceiling still attached, bitumen in the bilge
Sea Reach 1	WA3079 (WA Report 88631.01)	Metal and wood	Paddle wheel float
Sea Reach 1	WA3144 (WA Report 88631.01)	Metal	Bow - riveted
	WA 1007 / 113 / RoW droit 076/1	Metal	Small stocked anchor of Admiralty pattern/fisherman's type. The metal stock and shackle suggests a date of mid-late 19th or early 20th century and it could have possibly been used as a main anchor of a large boat or small vessel ship or wish fishing gear.
	WA 1008	Metal	

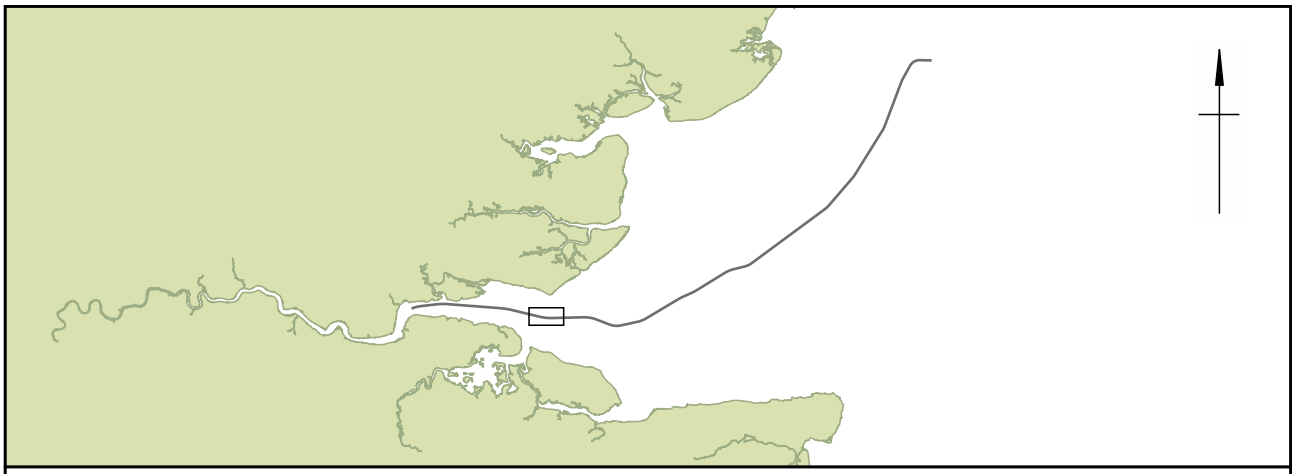
Site / Lordi No.	WA no. / Report no. / RoW droit no.	Material	Description (may have been superseded by analysis in the report text)
	114 RoW droit 076/1		Small stocked anchor of Admiralty pattern/fisherman's type although the stock is missing from this anchor. The rounded arms and metal stock along with the use of a rung instead of a shackle suggests a date 1800-1850.
	WA1009 115 RoW droit 076/1	Metal	Iron capstan with part of the drumhead missing. This had a probable date of late 19th or 20th Century.
Lordi 3065	WA 1188 (WA Report 1106)	Metal	Byers Stockless Anchor. This style of anchor was patented in 1887 and approved by Lloyds in 1904. It is not known where in that period this anchor dates and it is possible that it is a fairly recent example.
Lordi 1614	WA 1035 (Report WA 1019) RoW droit 073/11	Metal	12.5 inch studded projectile
	Unknown		Admiralty pattern anchor
	Unknown		Stockless anchor with Cammell Laird manufacturer mark.
	112 (Report WA 1006) RoW droit 076/1	Metal	Medium sized anchor of Admiralty pattern type with a short shank and curved arms. The metal stock, shackle and stud link chain suggests a date of mid-late 19th or early 20th century.



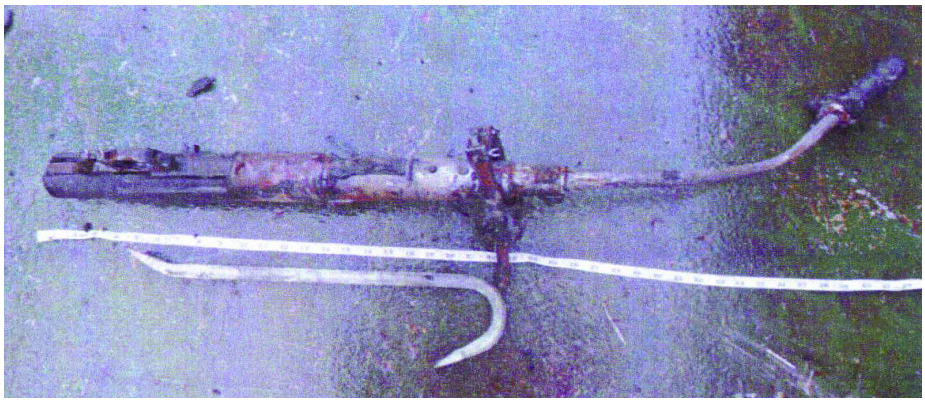
Date:	02/03/2016	Revision Number:	0
Scale:	1:250,000 & 1:50,000 @A3	Illustrator:	KJF
Path:	W:\Projects\London Gateway\LG 2016\Graphics_Office\Rep figs\Assessment\2016-03-02		

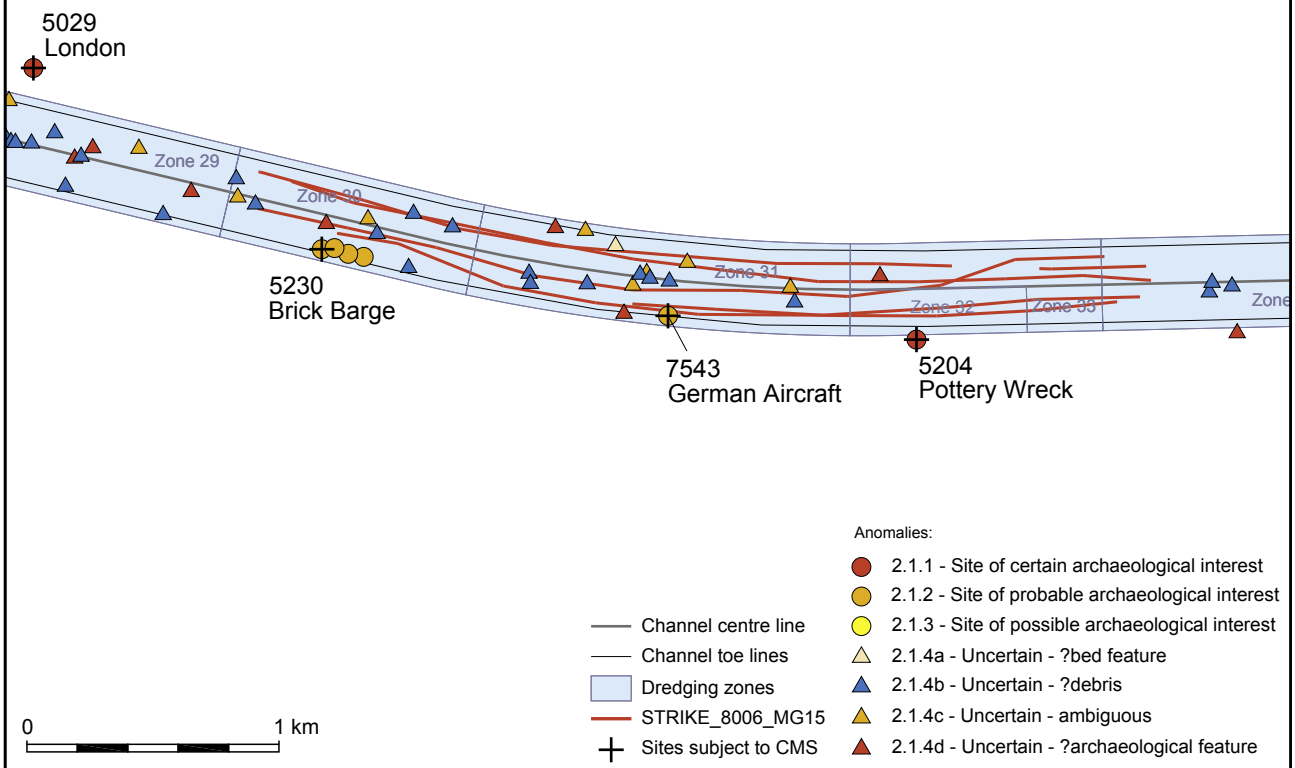
Dredging Zones 1-50 and 102-109

Figure 1



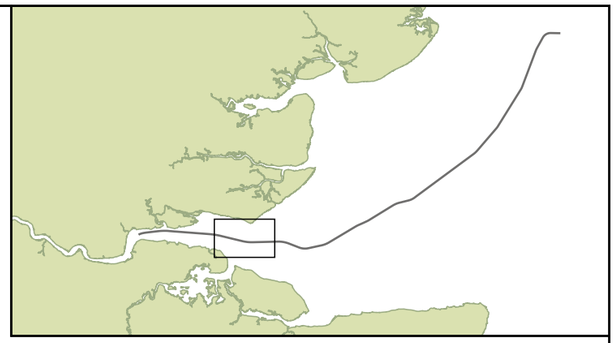
19/01/2011





Contains Ordnance Survey data © Crown Copyright and database right 2016.
This material is for client report only © Wessex Archaeology. No unauthorised reproduction.

Date:	02/03/2016	Revision Number:	0
Scale:	1:30,000 @A4	Illustrator:	KJF
Path:	W:\Projects\London Gateway\LG 2016\Graphics_Office\Rep figs\Assessment\2016-03-02		



19/02/2011

5020
Iron Bar Wreck

5019
London ('King')

5029
London

5012
Dovenby (N Part)

5230
Brick Barge

7543
German Aircraft

5204
Pottery Wreck

5195
Submarine Boom

5010
Dovenby (S Part)

Zone 12
Zone 26
Zone 27
Zone 28
Zone 29
Zone 30
Zone 31
Zone 32
Zone 33
Zone 34
Zone 35
Zone 36

0 1 km

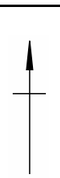
Channel centre line
Channel toe lines
Dredging zones
STRIKE_8007_Carronade
Sites subject to CMS

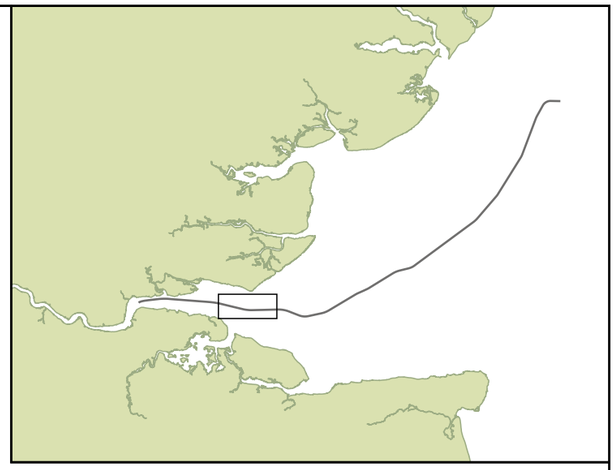
Anomalies:
2.1.1 - Site of certain archaeological interest
2.1.2 - Site of probable archaeological interest
2.1.3 - Site of possible archaeological interest
2.1.4a - Uncertain - ?bed feature
2.1.4b - Uncertain - ?debris
2.1.4c - Uncertain - ambiguous
2.1.4d - Uncertain - ?archaeological feature

Contains Ordnance Survey data © Crown Copyright and database right 2016.
This material is for client report only © Wessex Archaeology. No unauthorised reproduction.

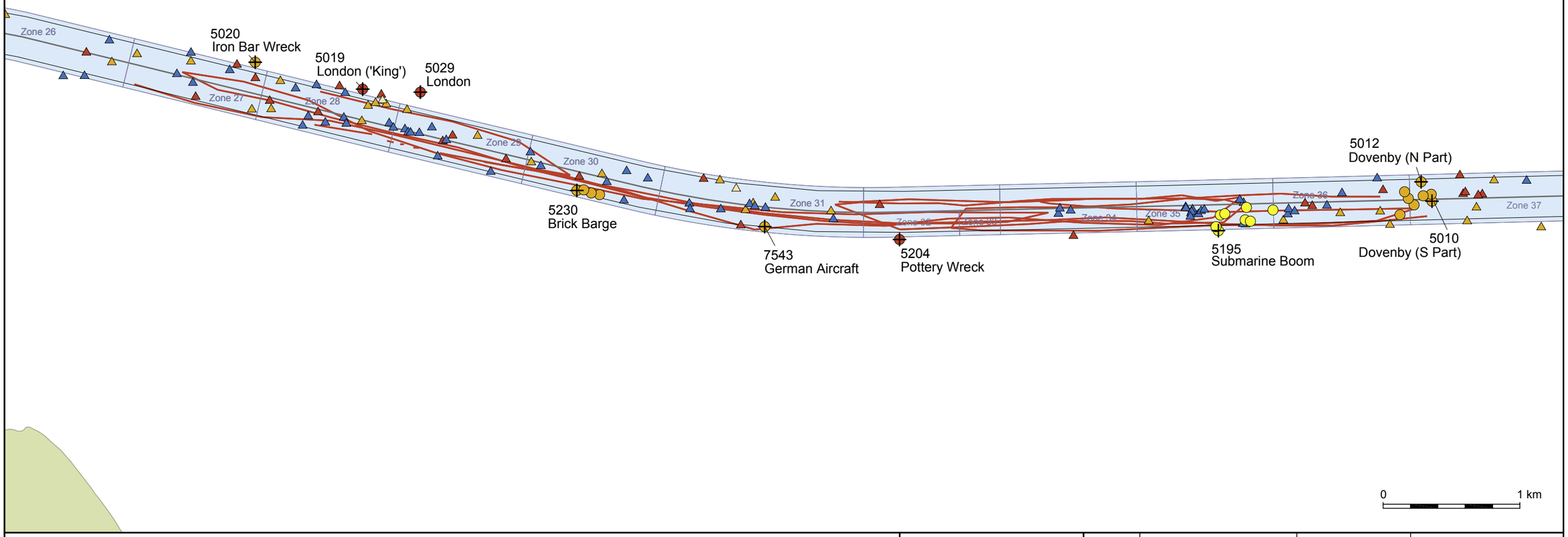
Date:	02/03/2016	Revision Number:	0
Scale:	1:30,000 @A3	Illustrator:	KJF
Path:	W:\Projects\London Gateway\LG 2016\G_O\Rep figs\Assessment\2016-03-02		

X-ray of short-barrelled Mauser





19/02/2011

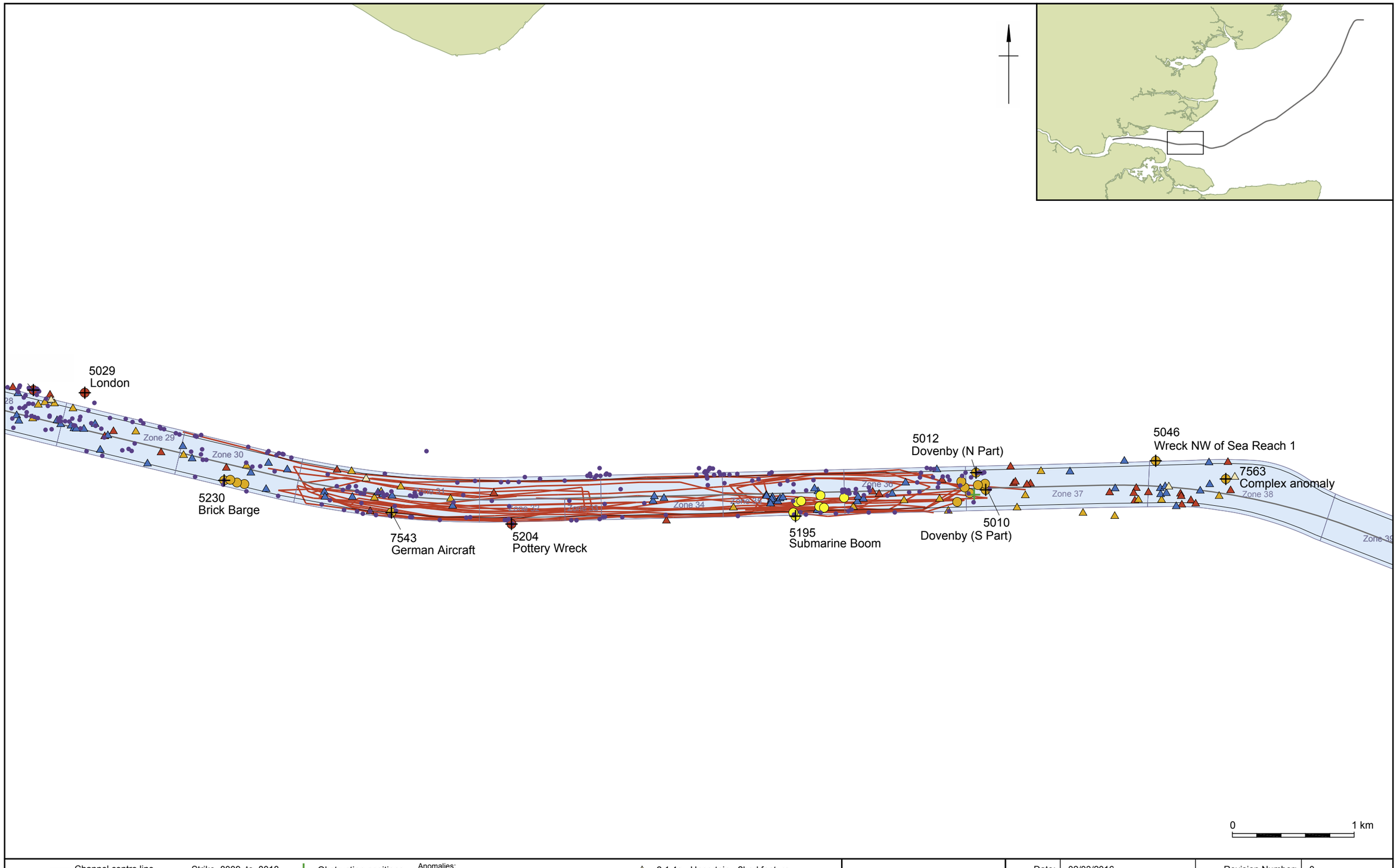


Channel centre line
Channel toe lines
Dredging zones
STRIKE_8008_Mauser
Sites subject to CMS

Anomalies:
2.1.1 - Site of certain archaeological interest
2.1.2 - Site of probable archaeological interest
2.1.3 - Site of possible archaeological interest
2.1.4a - Uncertain - ?bed feature
2.1.4b - Uncertain - ?debris
2.1.4c - Uncertain - ambiguous
2.1.4d - Uncertain - ?archaeological feature

Contains Ordnance Survey data © Crown Copyright and database right 2016.
This material is for client report only © Wessex Archaeology. No unauthorised reproduction.

Date:	02/03/2016	Revision Number:	0
Scale:	1:30,000 @A3	Illustrator:	KJF
Path:	W:\Projects\London Gateway\LG 2016\Graphics_Office\Rep figs\Assessment\2016-03-02		



Channel centre line
Channel toe lines
Dredging zones
Strike_8009_to_8018 _Timber_Assemblage (31/01/11 to 04/02/11)
Sites subject to CMS
Obstruction positions Feb 2011
Interim geophysical survey anomalies

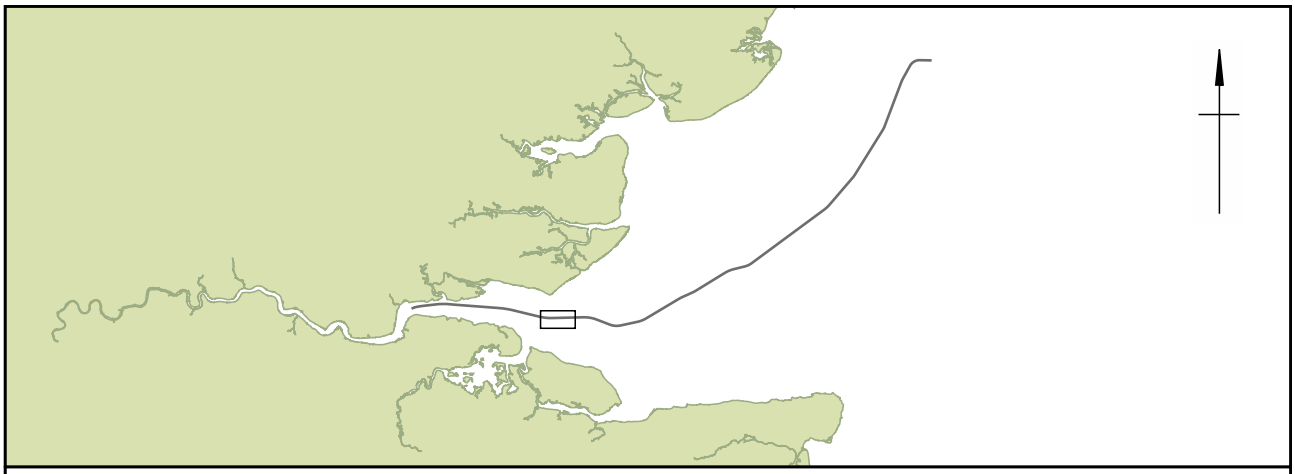
Anomalies:
- 2.1.1 - Site of certain archaeological interest
- 2.1.2 - Site of probable archaeological interest
- 2.1.3 - Site of possible archaeological interest
- 2.1.4a - Uncertain - ?bed feature
- 2.1.4b - Uncertain - ?debris
- 2.1.4c - Uncertain - ambiguous
- 2.1.4d - Uncertain - ?archaeological feature

Contains Ordnance Survey data © Crown Copyright and database right 2016.
This material is for client report only © Wessex Archaeology. No unauthorised reproduction.

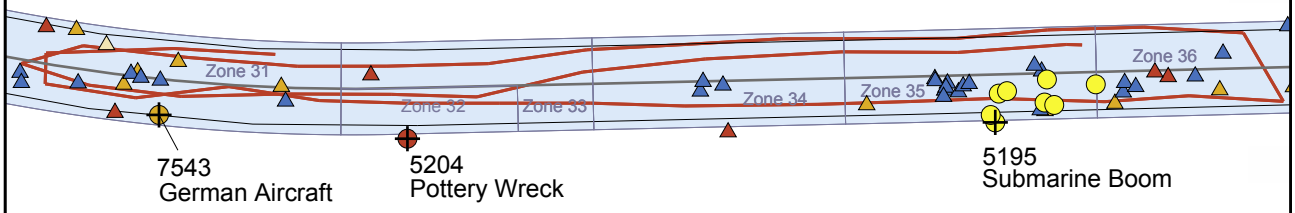
Date:	02/03/2016	Revision Number:	0
Scale:	1:30,000 @A3	Illustrator:	KJF
Path:	W:\Projects\London Gateway\LG 2016\G_O\Rep figs\Assessment\2016-03-02		

Strike 8009-18 trackplots

Figure 5



16/03/2011



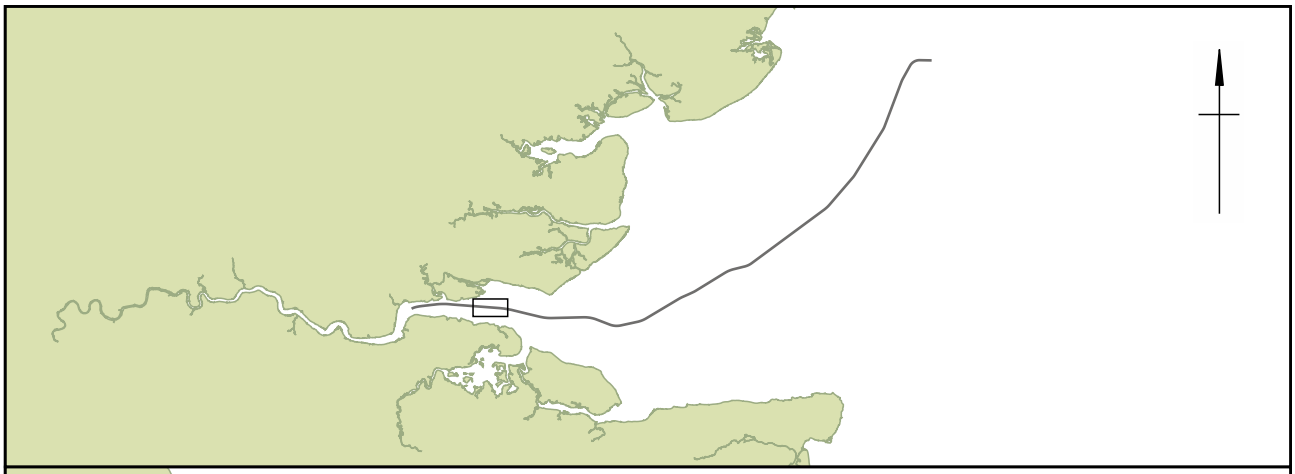
Anomalies:
- 2.1.1 - Site of certain archaeological interest
- 2.1.2 - Site of probable archaeological interest
- 2.1.3 - Site of possible archaeological interest
- 2.1.4a - Uncertain - ?bed feature
- 2.1.4b - Uncertain - ?debris
- 2.1.4c - Uncertain - ambiguous
- 2.1.4d - Uncertain - ?archaeological feature

Channel centre line
Channel toe lines
Dredging zones
STRIKE_8020_PROPHUB
Sites subject to CMS

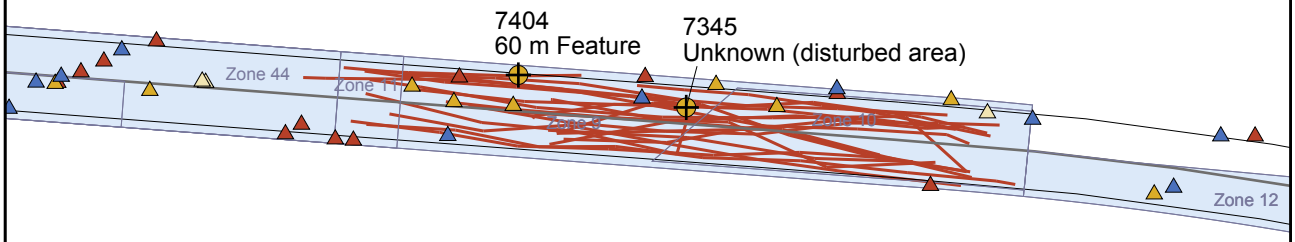
0 1 km

Contains Ordnance Survey data © Crown Copyright and database right 2016.
This material is for client report only © Wessex Archaeology. No unauthorised reproduction.

Date:	02/03/2016	Revision Number:	0
Scale:	1:30,000 @A4	Illustrator:	KJF
Path:	W:\Projects\London Gateway\LG 2016\Graphics_Office\Rep figs\Assessment\2016-03-02		



04/02/2011



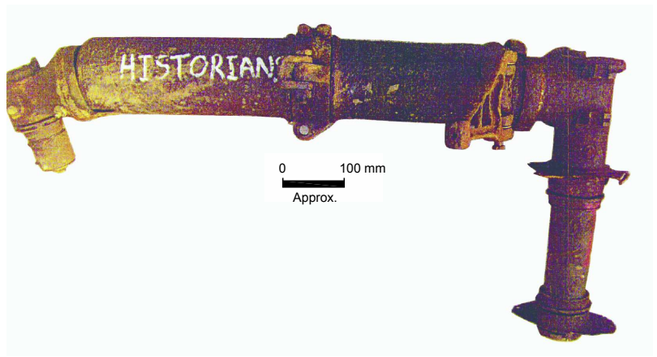
Anomalies:
- 2.1.1 - Site of certain archaeological interest
- 2.1.2 - Site of probable archaeological interest
- 2.1.3 - Site of possible archaeological interest
- 2.1.4a - Uncertain - ?bed feature
- 2.1.4b - Uncertain - ?debris
- 2.1.4c - Uncertain - ambiguous
- 2.1.4d - Uncertain - ?archaeological feature

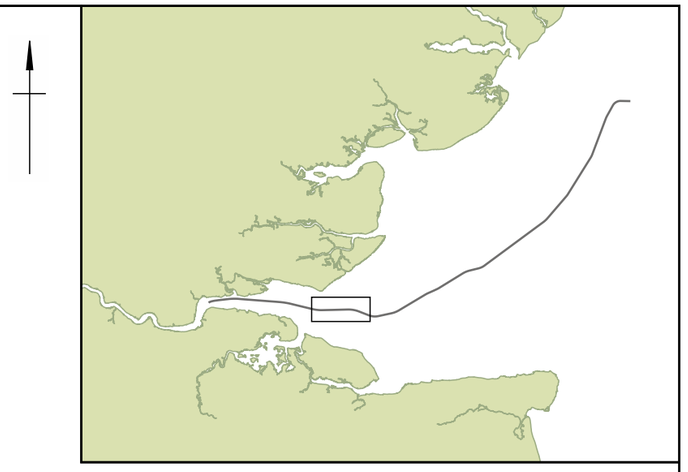
- Channel centre line
- Channel toe lines
- Dredging zones
- STRIKE_8021_Sounding_Weights
- Sites subject to CMS

0 1 km

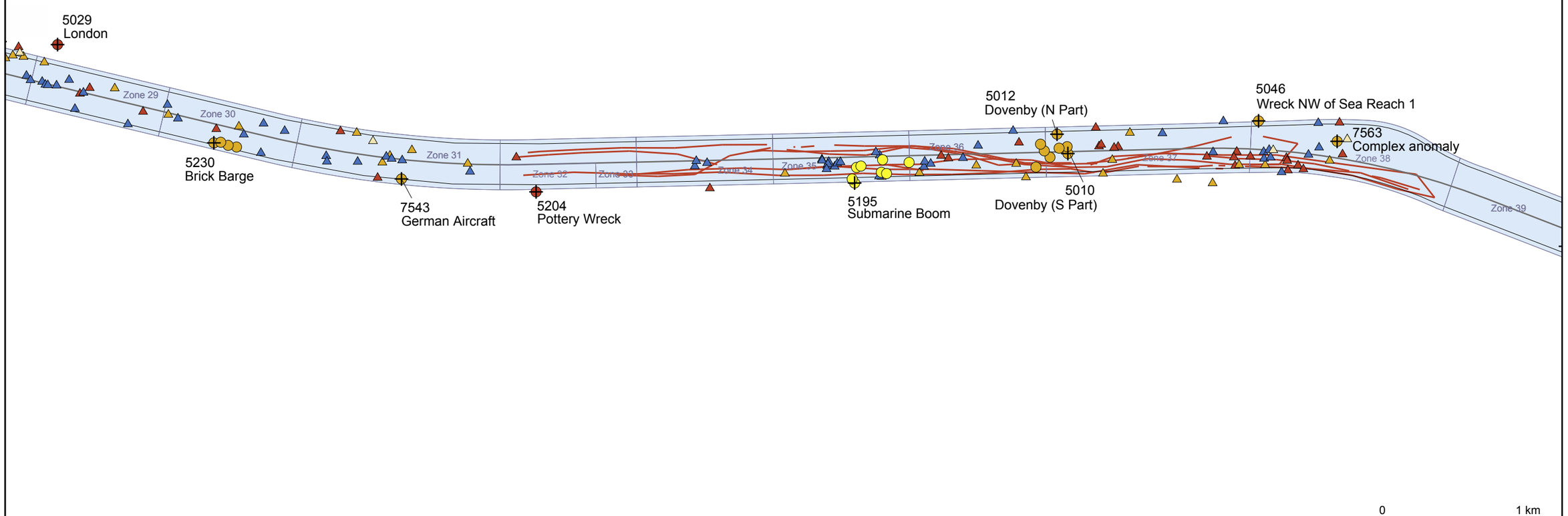
Contains Ordnance Survey data © Crown Copyright and database right 2016.
This material is for client report only © Wessex Archaeology. No unauthorised reproduction.

Date:	02/03/2016	Revision Number:	0
Scale:	1:30,000 @A4	Illustrator:	KJF
Path:	W:\Projects\London Gateway\LG 2016\Graphics_Office\Rep figs\Assessment\2016-03-02		





06/04/2011

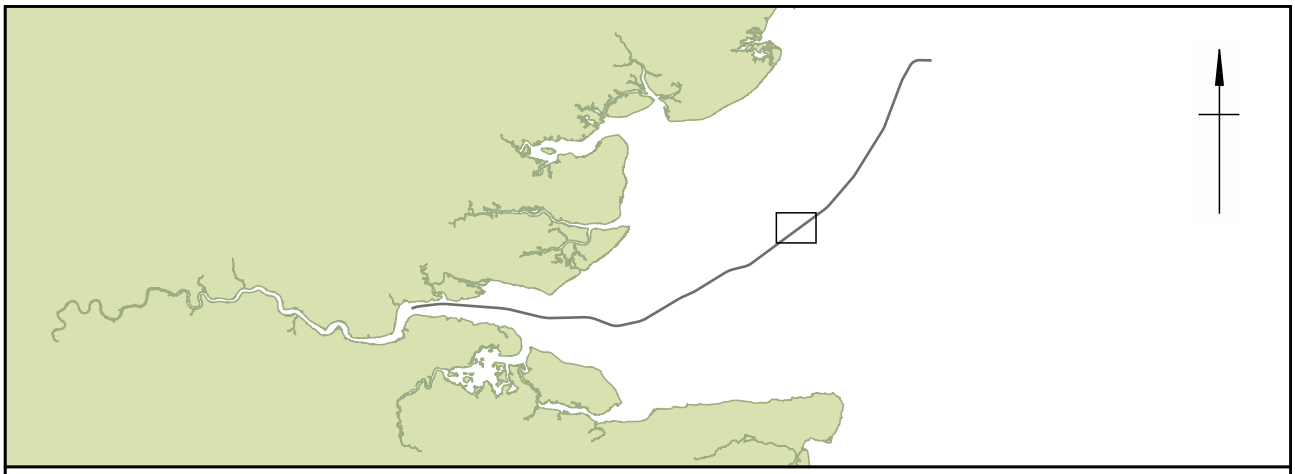


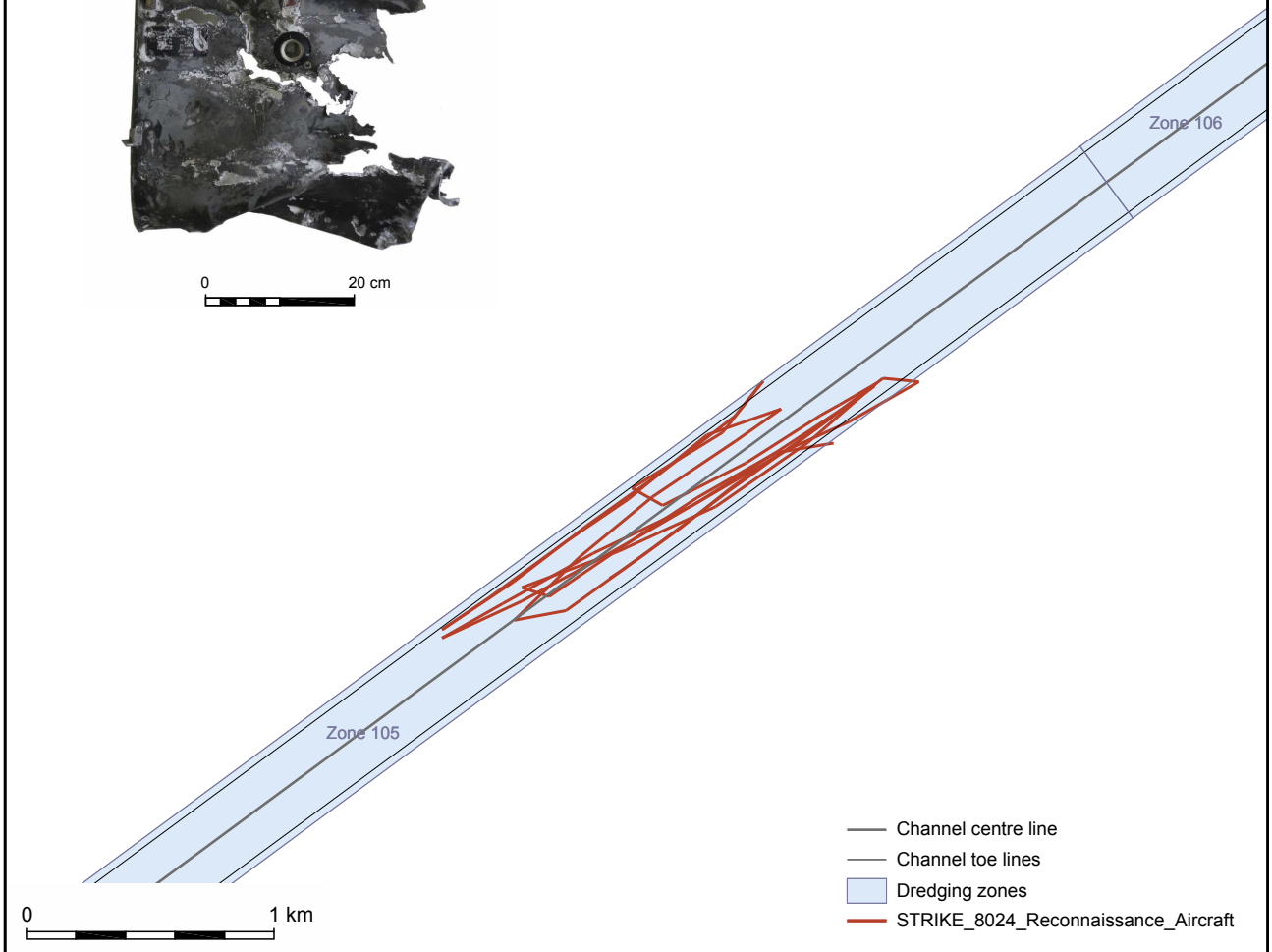
Channel centre line
Channel toe lines
Dredging zones
STRIKE_8023_Aircraft landing gear
Sites subject to CMS

Anomalies:
2.1.1 - Site of certain archaeological interest
2.1.2 - Site of probable archaeological interest
2.1.3 - Site of possible archaeological interest
2.1.4a - Uncertain - ?bed feature
2.1.4b - Uncertain - ?debris
2.1.4c - Uncertain - ambiguous
2.1.4d - Uncertain - ?archaeological feature

Contains Ordnance Survey data © Crown Copyright and database right 2016.
This material is for client report only © Wessex Archaeology. No unauthorised reproduction.

Date:	02/03/2016	Revision Number:	0
Scale:	1:30,000 @A3	Illustrator:	KJF
Path:	W:\Projects\London Gateway\LG 2016\Graphics_Office\Rep figs\Assessment\2016-03-02		

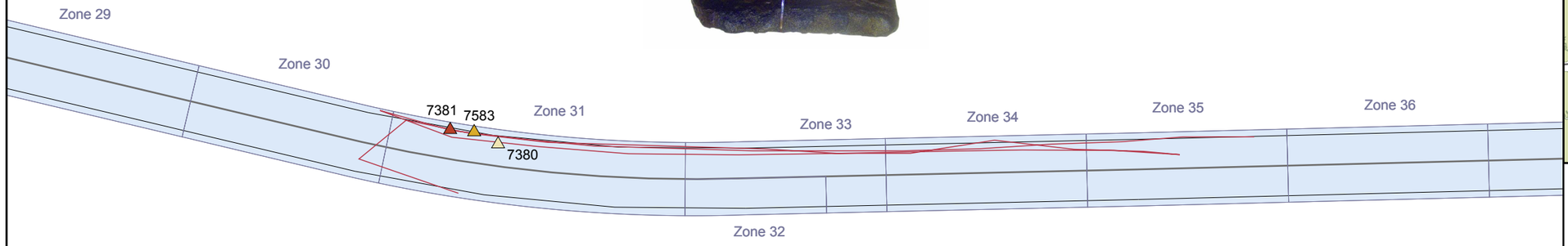




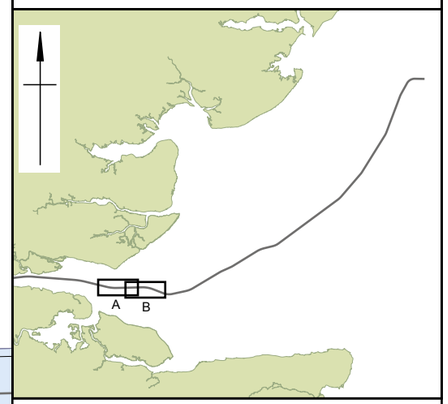
Contains Ordnance Survey data © Crown Copyright and database right 2016.
This material is for client report only © Wessex Archaeology. No unauthorised reproduction.

Date:	02/03/2016	Revision Number:	0
Scale:	1:30,000 @A4	Illustrator:	KJF
Path:	W:\Projects\London Gateway\LG 2016\Graphics_Office\Rep figs\Assessment\2016-03-02		

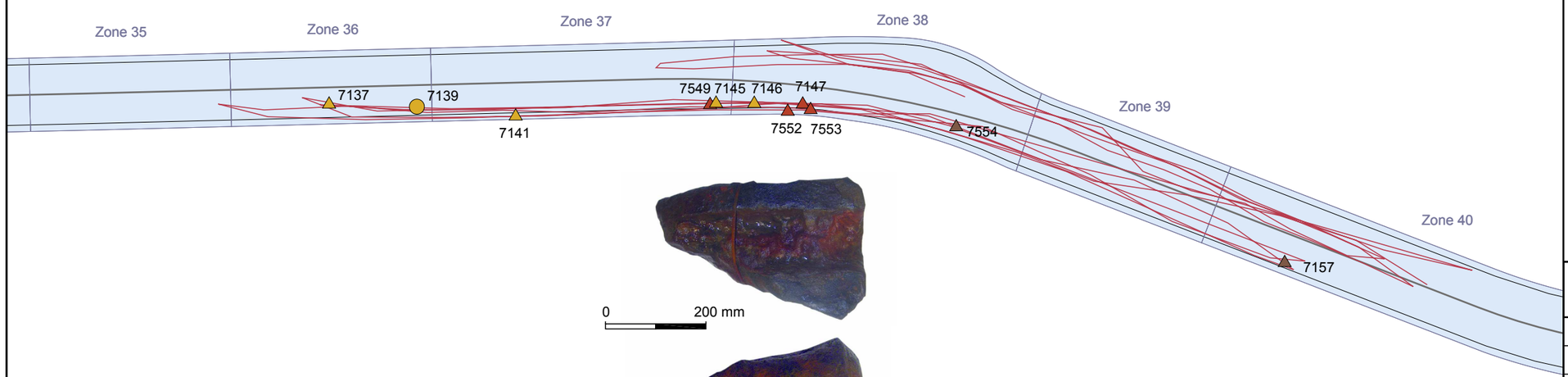
A. Strike 8029

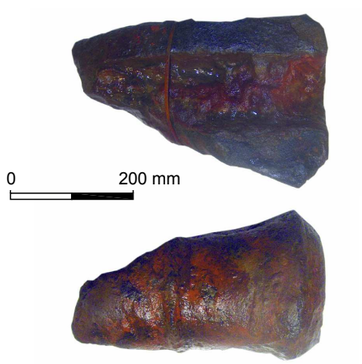


0 1 km



B. Strikes 8030





0 1 km

Channel centre line
Channel toe lines
Dredging zones
Trackplot

Anomalies:
- 2.1.2 - Site of probable archaeological interest archaeological interest
- 2.1.4b - Uncertain - ?debris
- 2.1.4c - Uncertain - ambiguous
- 2.1.4d - Uncertain - ?archaeological feature
- 2.2.4b -
- 2.2.4d -

Contains Ordnance Survey data © Crown Copyright and database right 2016.
This material is for client report only © Wessex Archaeology.
No unauthorised reproduction.

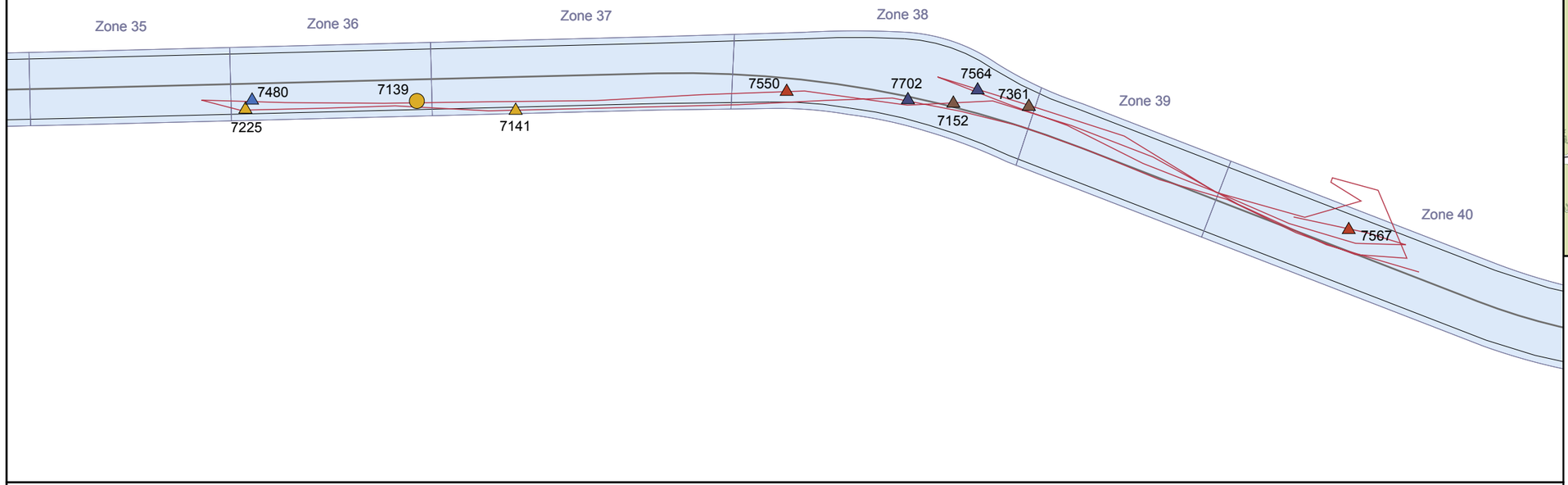
Date:	04/03/2016
Revision Number:	0
Scale:	1:25,000 @A3
Illustrator:	KJF
Path:	W:\Projects\London Gateway\

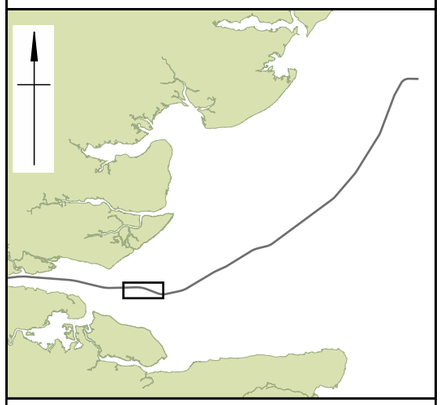
LG 2016\Graphics_Office\Rep figs\Assessment\2016-03-02

Strikes 8029 and 8030

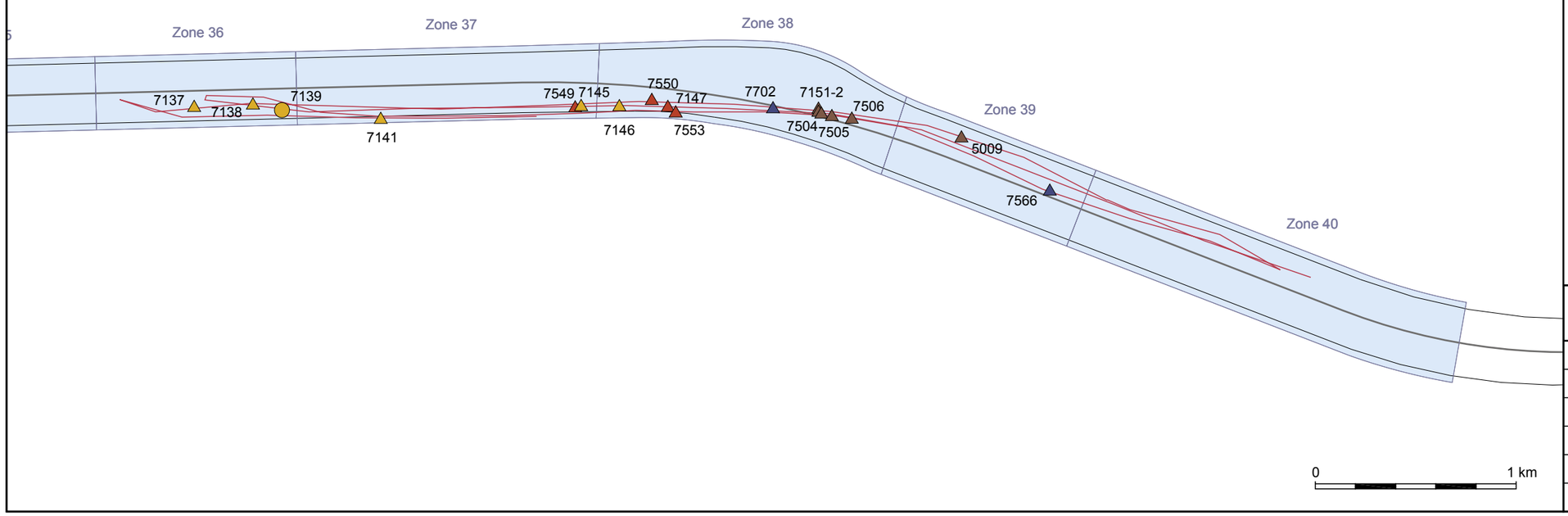
Figure 10

A. Strike 8031





B. Strike 8032



Channel centre line
Channel toe lines
Dredging zones
Trackplot

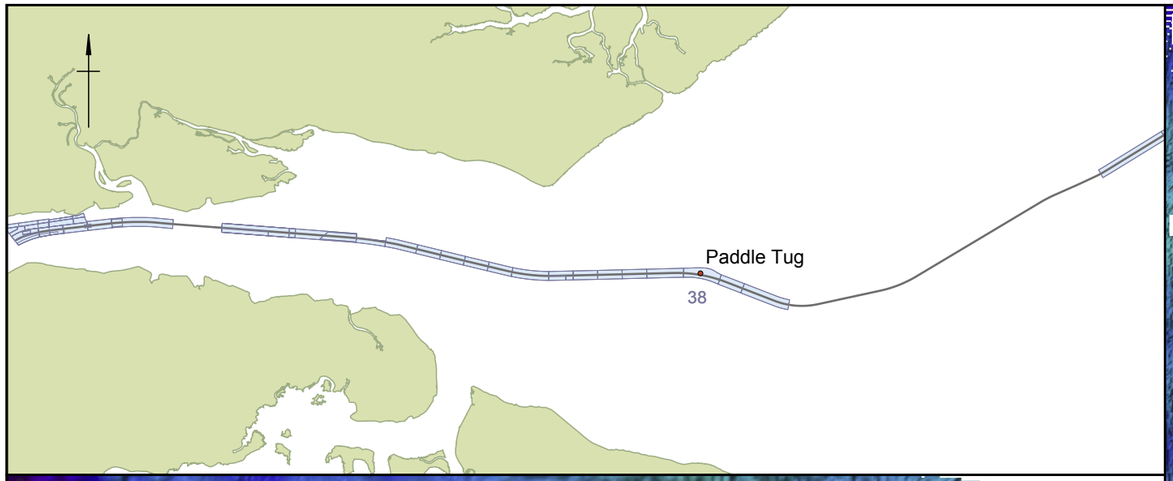
Anomalies:
- 2.1.2 - Site of probable archaeological interest archaeological interest
- 2.1.4c - Uncertain - ambiguous
- 2.1.4d - Uncertain - ?archaeological feature
- 2.2.4b -
- 2.2.4d -

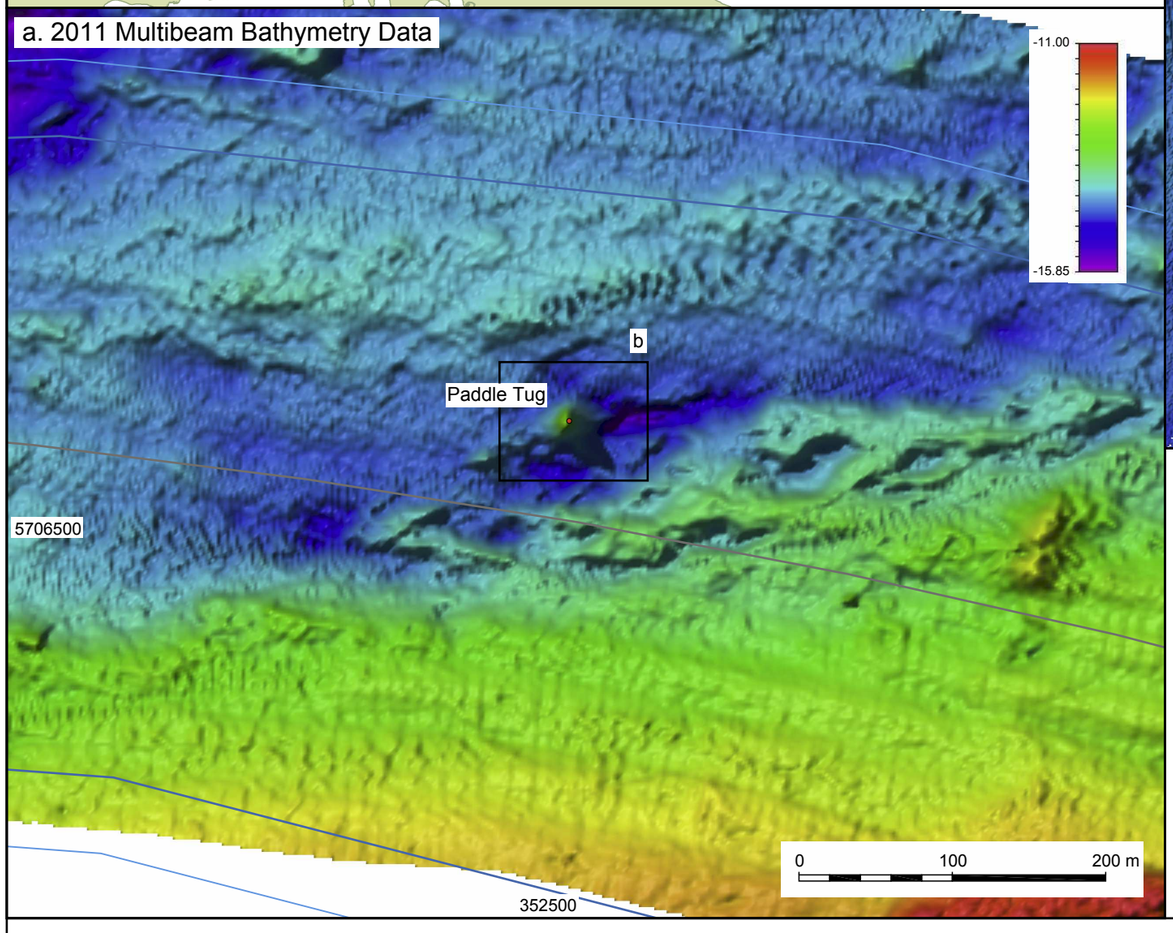
Contains Ordnance Survey data © Crown Copyright and database right 2016.
This material is for client report only © Wessex Archaeology.
No unauthorised reproduction.

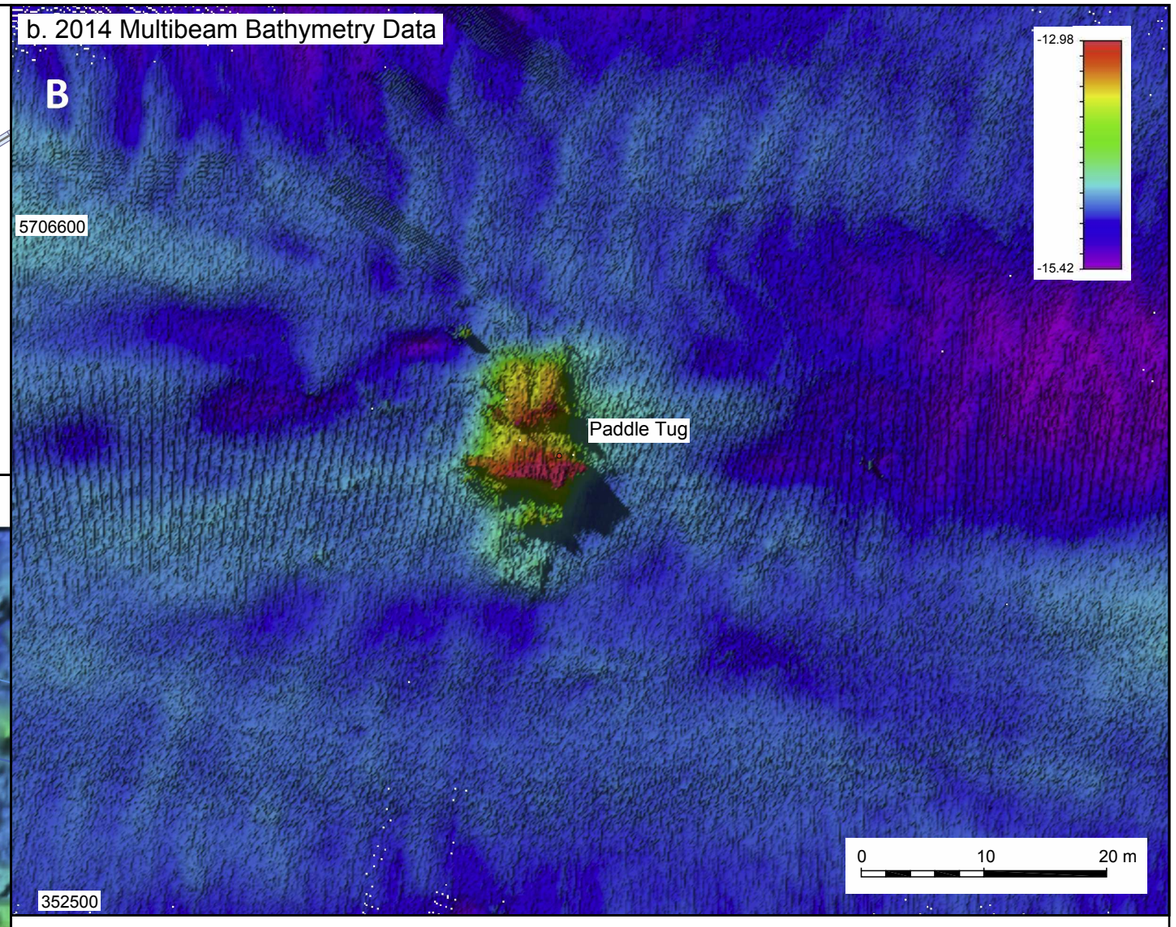
Date:	04/03/2016
Revision Number:	0
Scale:	1:25,000 @A3
Illustrator:	KJF
Path:	W:\Projects\London Gateway\
LG 2016\Graphics_Office\Rep figs\Assessment\2016-03-02	

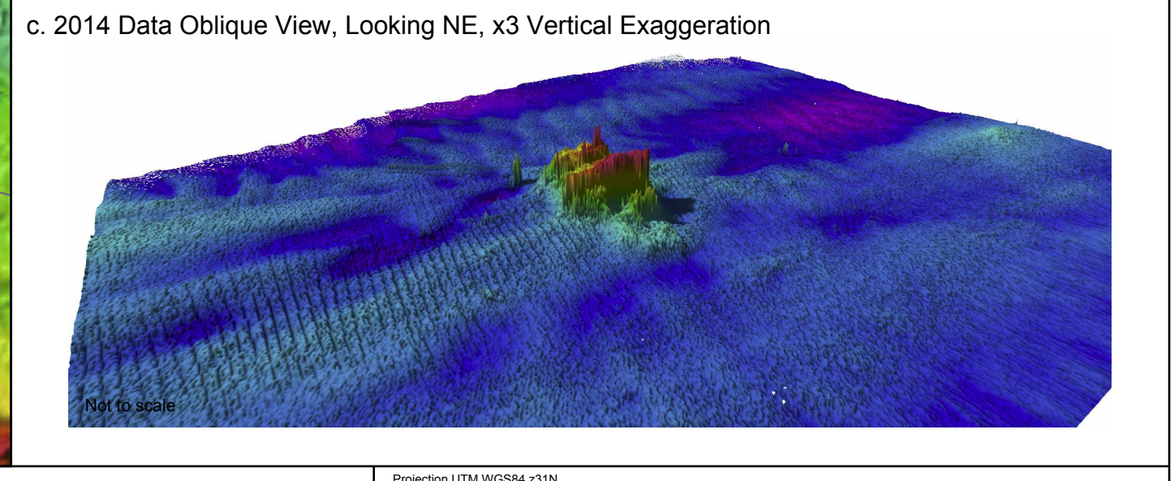
Strikes 8031 and 8032

Figure 11







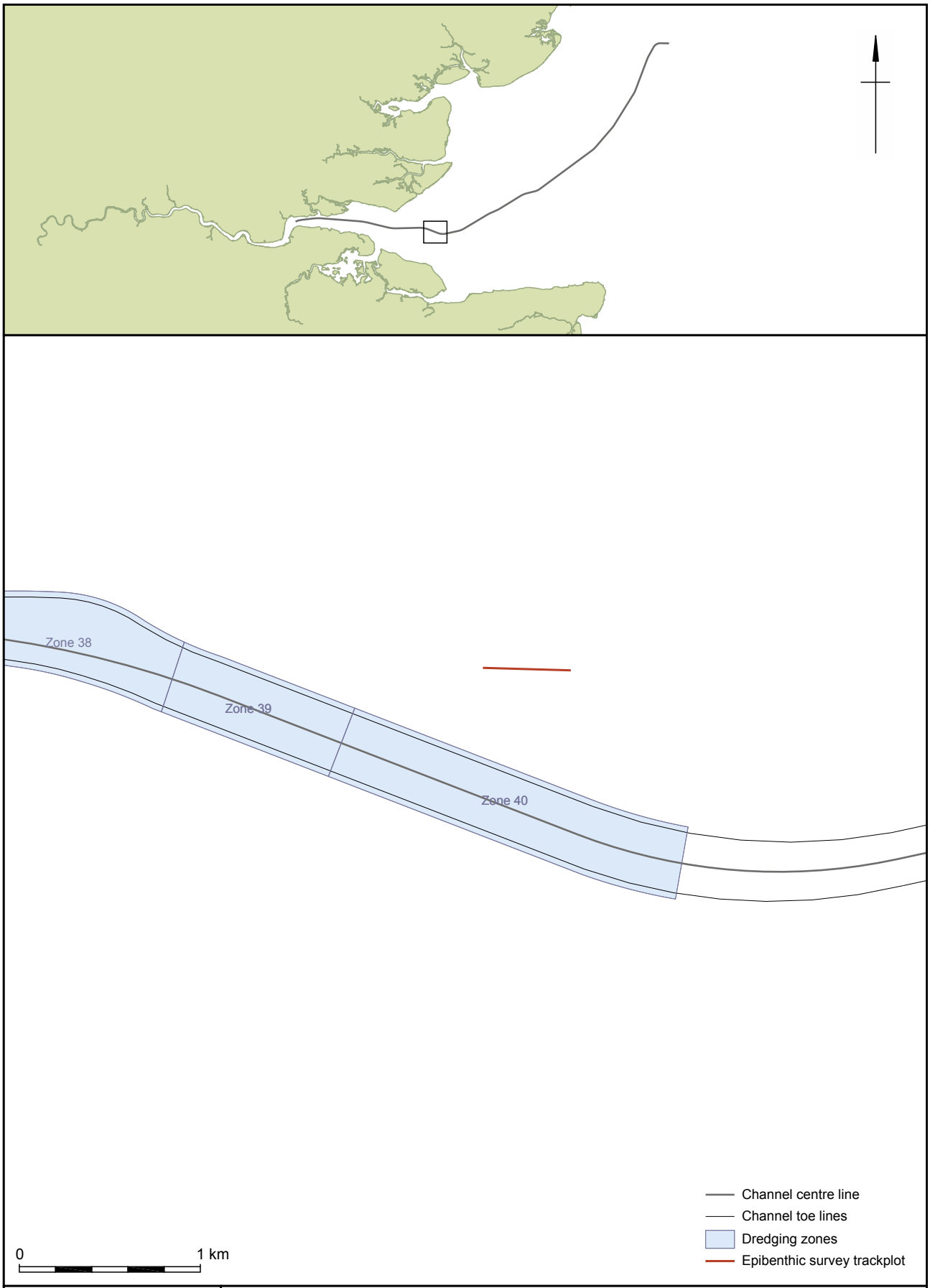


Site location
Channel centre line
Dredging zones
Dredging limits
50m buffer on dredging limits

Projection UTM WGS84 z31N

Multibeam Bathymetry Data Acquired by the Port of London Authority.
Contains Ordnance Survey data © Crown Copyright and database right 2015.
This material is for client report only © Wessex Archaeology. No unauthorised reproduction.

Date:	03/03/2016	Revision Number:	0
Scale:	(Inset)1:250,000 (A)1:4000 (B)1:500	Illustrator:	KJF
Path:	W:\Projects\London Gateway\LG 2016\Graphics_Office\Rep figs\Assessment\2016-03-02		



Contains Ordnance Survey data © Crown Copyright and database right 2016.
This material is for client report only © Wessex Archaeology. No unauthorised reproduction.

Date:	02/03/2016	Revision Number:	0
Scale:	1:30,000 @A4	Illustrator:	KJF
Path:	W:\Projects\London Gateway\LG 2016\Graphics_Office\Rep figs\Assessment\2016-03-02		

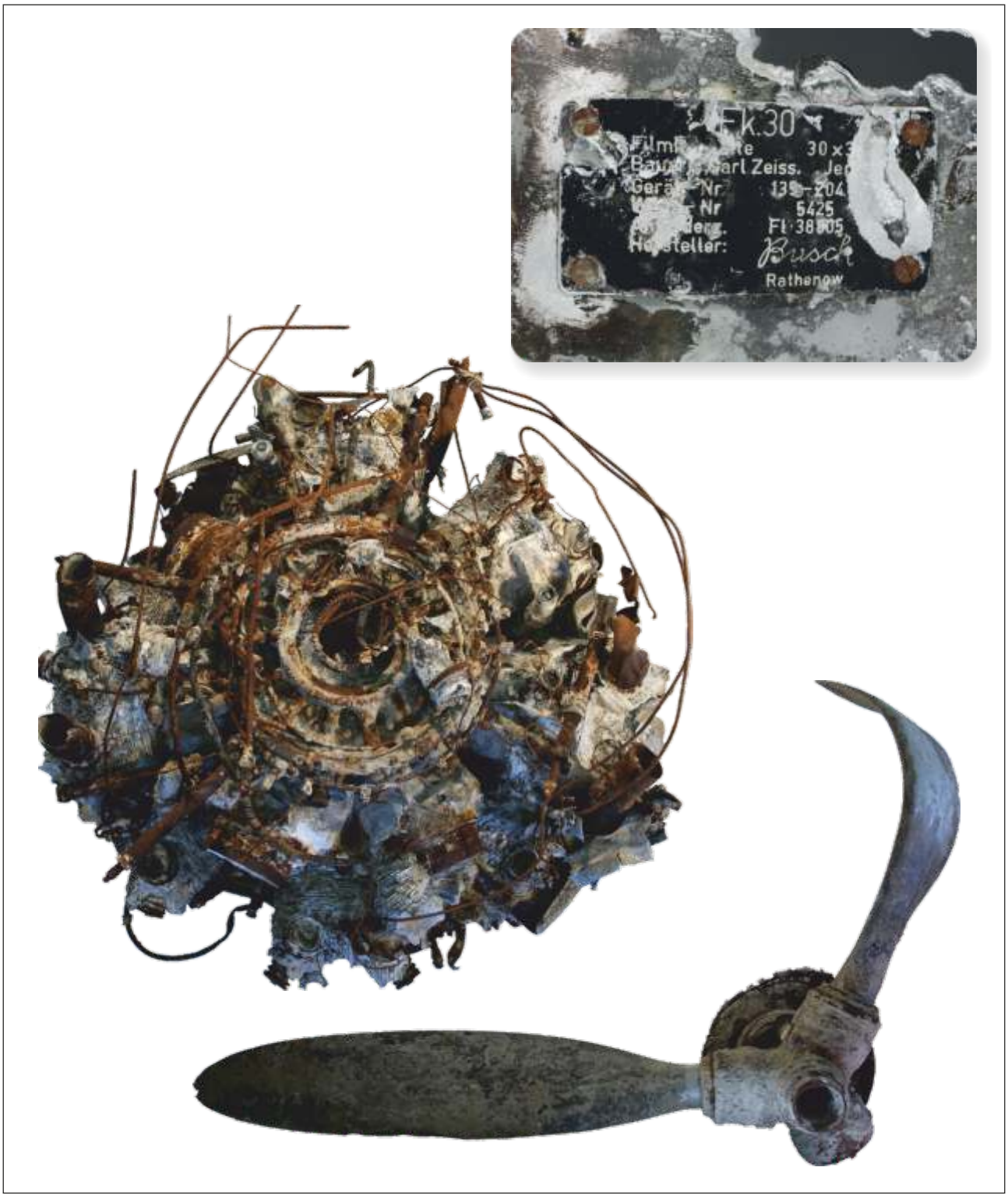


Plate 1: Junkers 88

This material is for client report only © Wessex Archaeology. No unauthorised reproduction.

Date:	03/03/2016	Revision Number:	0
Scale:	N/A	Illustrator:	KJF
Path:	W:\Projects\London Gateway\London Gateway 2016\Graphics_Office\Rep figs\Assessment\2016-03-02		

Plate 1a: WA 1040

Plate 1b: WA 1041

Plate 1c: WA 1042

Plate 1d: WA 1043

Plate 1e: WA 1044

Plate 1f: WA 1045

Plate 1g: WA 1046

Plate 1h: WA 1047

Plate 1i: WA 1048

Plate 1j: WA 1049

Plate 1k: WA 1050

Plate 1l: WA 1051

This material is for client report only © Wessex Archaeology.
No unauthorised reproduction.

Date:	03/03/2016	Revision Number:	0
Scale:	N/A @ A3	Illustrator:	KJF
Path:	W:\Projects\London Gateway\LG 2016\Graphics_Office\Rep figs\Assessment\2016-03-02		

Plate 3: Strike 8028 – Anti-submarine boom fitting

Plate 4: Strike 8031 – Second World War Allied parachute

This material is for client report only © Wessex Archaeology. No unauthorised reproduction.

Date:	03/03/2016	Revision Number:	0
Scale:	N/A	Illustrator:	KJF
Path:	W:\Projects\London Gateway\London Gateway 2016\Graphics_Office\Rep figs\Assessment\2016-03-02		

Plate 6a: WA 5017

Plate 6b: WA 5018

Plate 6c: WA 5019

Plate 6d: WA 5020

Plate 6e: WA 5021

Plate 6f: WA 5022

Plate 6g: WA 5023

Plate 6h: WA 5024

Plate 6i: WA 5025

This material is for client report only © Wessex Archaeology.
No unauthorised reproduction.

Date:	04/03/2016	Revision Number:	0
Scale:	N/A @ A3	Illustrator:	KJF
Path:	W:\Projects\London Gateway\LG 2016\GO\Rep figs\Assessment\2016_03_02		

Wessex Archaeology Ltd registered office Portway House, Old Sarum Park, Salisbury, Wiltshire SP4 6EB
Tel: 01722 326867 Fax: 01722 337562 info@wessexarch.co.uk www.wessexarch.co.uk

FS 606559

Wessex Archaeology Ltd is a company limited by guarantee registered in England, company number 1712772. It is also a Charity registered in England and Wales, number 287786; and in Scotland, Scottish Charity number SC042630. Our registered office is at Portway House, Old Sarum Park, Salisbury, Wiltshire SP4 6EB.