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## **Standing Building Survey & Archaeological recording at Old House Point, Nr Cairnryan, Dumfries & Galloway**

**Report No. 1731**

## **CFA ARCHAEOLOGY LTD**

The Old Engine House  
Eskmills Business Park  
Musselburgh  
East Lothian  
EH21 7PQ

Tel: 0131 273 4380  
Fax: 0131 273 4381  
email: [info@cfa-archaeology.co.uk](mailto:info@cfa-archaeology.co.uk)  
web: [www.cfa-archaeology.co.uk](http://www.cfa-archaeology.co.uk)

Authors	Michael Cressey HND BA MSc PhD MifA FSA Scot & Stuart Mitchell MA AIfA
Illustrator	Kevin Hicks BA FSA Scot and Graeme Carruthers MA MAAIS
Editor	Bruce Glendinning BSc PgDip MifA and Melanie Johnson MA PhD FSA Scot MifA
Commissioned by	ERM Ltd on behalf of Stena Line Ltd
Date issued	March 2010
Version	1
Grid Reference	NX 0577 7013
OASIS Reference	cfaarcha1-74677

This document has been prepared in accordance with CFA Archaeology Ltd standard operating procedures.

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## **0. Executive Summary**

- 0.1 This report presents the results of a comprehensive desk-based assessment, archaeological field recording and Level 2 standing building survey carried out by CFA Archaeology Ltd in January and March 2010 at Old House Point, 1.5km north of Cairnryan, Dumfries and Galloway. The former WW2 military fabrication yard at Old House Point is scheduled for redevelopment as a new ferry terminal, to replace existing port facilities at Stranraer. The archaeological work was commissioned by ERM Ltd on behalf of Stena Line Ltd in response to a planning condition for the proposed new port development at Old House Point. The survey was carried out according to a Written Scheme of Investigation (WSI) approved by the Dumfries and Galloway Council Archaeologist.
- 0.2 Forty-one individual features have been recorded. These comprise the extensive remains of two concrete casting beds associated with the construction of concrete piers for the Cairn Point Military Harbour, and a large concrete base that was used as a fabrication yard associated with the construction of Spud pontoons and the remains of their launching slip. The Spud pontoons were an integral part of the Mulberry Harbour that was constructed to support the D-Day landings. The remains of six concrete 'Beetle Craft' now lie beached in the inter-tidal zone and all are now in poor condition. The recorded features also include the remains of early 20th century oyster farm rearing tanks and an associated single storey cottage.
- 0.3 The survey concludes that a detailed and adequate record has been made of the WW2 features and earlier features within the proposed redevelopment area and that no further archaeological recording work is required.

## **1. INTRODUCTION**

### **1.1 Scope of the study**

- 1.1.1 This report presents the results of a standing building survey and topographic survey carried out at Old House Point, near Cairnryan (NGR: NX 0577 7013; Fig. 1). A site visit was conducted in December 2009 by CFA to assess the survey requirements and to establish the scale of the extant remains.
- 1.1.2 As part of the mitigation for impacts on these features, a full programme of archaeological recording work was undertaken in January and March 2010 and included standing building and topographic surveys. The surveys were carried out in fine conditions at a time when the tidal range allowed best access to the beetle craft, which are never fully exposed during ordinary neap tides.
- 1.1.3 A number of archaeological features have been identified within the proposed development area and these relate to the use of the site as a WW2 military port. Features of interest included:
- The remains of six beetle craft that supported the roadways from WW2 Mulberry Harbour
  - A Spud pontoon slipway and the remains of a wooden pier
  - A pile construction yard
  - The remains of a small WW2 building and an early 20th-century roofless cottage
  - The former Loch Ryan Oyster Farm rearing tanks.

## **2. OBJECTIVES**

- 2.1 The archaeological survey was carried out in two stages, these were as follows:

### *Stage 1 - Desk-based assessment*

- To carry out a comprehensive desk-based assessment to place the archaeological features in their historical context

### *Stage 2 - Archaeological recording*

- To carry out standing building surveys to record the upstanding remains
- To carry out a topographic survey of the hinterland WW2 remains of the fabrication site
- To record the in situ remains of the Loch Ryan Oyster Farm tanks
- To record the Beetle Craft as best as conditions allowed

### **3. METHODOLOGY**

#### **3.1 General**

- 3.1.1 An effective standard for this type of project has been established by previous research conducted by CFA. Recording of all elements followed established CFA methodologies and included standard architectural building recording supported by photography and base-line measurements and note-taking on architectural record sheets.
- 3.1.2 CFA follows Institute for Archaeologists' Code of Conduct, Standards and Guidelines as appropriate.

#### **3.2 Desk-based assessment**

- 3.2.1 CFA conducted a desk-based assessment prior to fieldwork, the results of which are presented in Section 4. Sources consulted are listed below.
- 3.2.2 *National Monuments Record of Scotland*. All relevant records relating to the site and its immediate vicinity were checked and bibliographic sources followed up.
- 3.2.3 *Sites and Monument Record*. Information was obtained from Jane Brann at Dumfries and Galloway Council in order to determine what relevant information was held within their records on Old House Point.
- 3.2.4 *National Map Library and National Archives of Scotland*. An examination of all the Ordnance Survey map editions was made, together with any other readily available cartographic information on pre-recent land use within the project area.
- 3.2.5 *Aerial photographic coverage*. Available RAF vertical aerial photographs were examined for the distribution of World War II structures associated with the fabrication yard.
- 3.2.6 *Historical documentary search*. Readily available documentary sources for the area were checked for relevant information.
- 3.2.7 *Photographic Archive*. Photographs held with the Imperial War Museum have been examined from a fairly comprehensive collection of photographs relating to the construction of part of the Mulberry Harbour.
- 3.2.8 *Consultations*. The Imperial War Museum, Stranraer Local History Museum and a local Historian Archie Bell were consulted. All provided very useful information on the history of the site.

### **3.3 Walk-over survey**

- 3.3.1 A walk-over survey was carried out within the proposed development area to establish the extent of the building remains. Any features of archaeological interest were noted and photographs taken.

### **3.4 Historic building survey**

- 3.4.1 In line with the Written Scheme of Investigation (WSI) a Level 2 standing building survey (English Heritage 2006) was carried out on the remains of the cottage and the possible transformer block (Features 3 and 4). This level of survey provides a descriptive record and includes details on form and function and development of a given site or building complex. A comprehensive photographic record, a rectified photographic record and basic plans and elevation drawings have been produced. The results of the survey are presented in Section 5.

### **3.5 Photographic survey**

- 3.5.1 A comprehensive photographic survey was carried out of all the standing structures and remains of the casting beds and fabrication yard. General characterisation shots were taken including any significant architectural details or fixtures and fittings.

### **3.6 Feature recording**

- 3.6.1 Structural survey and feature recording was carried out using an industry standard Leica Total Station with an accuracy of 0.03m. All of the recorded features were tied into the established site grid. Extant features were measured by hand and described using pro-forma field monument forms. Internal measurements of the standing structure were carried out using a hand-held Leica disto-meter.

## **4. DESK-BASED SURVEY RESULTS**

### **4.1 National Monuments Record of Scotland and Sites and Monuments Record**

#### *National Monuments Record of Scotland (NMRS)*

- 4.1.1 The NMRS holds a generic record for Old House Point (NX06 NE 11.09) which includes a mention of the Pile Construction Yard. The record mentions that Old House Point was established in early 1941 by the Royal Engineers to produce pre-fabricated concrete piles for the Military Port 1km to the south. The surviving remains consist of abandoned railway sidings and concrete casting beds.
- 4.1.2 The NMRS also holds record NX07SE 8004 which mentions the remains of several Beetle Craft lying on the foreshore, three-quarters of a mile north of Cairn Point.
- 4.1.3 Record NX06NE 11.03 records the presence of the former Cairnryan Military Railway. The railway was constructed to facilitate the building of the military harbours at Cairnryan (NMRS No. NX06NE 11). Construction took place between November 1941 and June 1942. The whole of the railway line is visible on vertical air photographs (106G/Scot/UK 3135-3130) taken in November 1945 (Plate 1), which show that at this period it was still in use. A branch line from the military railway terminated at Old House Point (Feature 11 and Fig. 2b, see below).

#### *Sites and Monuments Record (SMR)*

- 4.1.4 The Dumfries and Galloway Council's SMR database provided Record No. MDG 11312 that contains a reference to the remains of the Beetle Craft lying on the shore at Old House Point. The record cites at least seven craft being present but only six were visible at the time of the survey.

### **4.2 Cartographic sources**

- 4.2.1 The 1st (Fig. 2a), 2nd and 3rd Edition Ordnance Survey (OS) maps show the same detail with no upstanding buildings present within the proposed development site. The 1849 First Edition Map depicts the place name 'Old House Point'. Four field enclosures are shown.
- 4.2.2 The 1957 1:10,000 scale map (Fig. 2b) shows the configuration of railway lines running parallel to each other and these appear to respect the position of the two concrete casting beds. The railway line served the military fabrication site that lay to the south of Old House Point. The oyster rearing tank and cottage are also shown.
- 4.2.3 The 1978 Ordnance Survey map (Fig. 2c) shows that by this year the railway lines had been removed. The only notable features present are the oyster



rearing tank and the cottage. The earthwork embankment of the former railway siding (Feature 12) is also depicted.

### **4.3 Aerial photographic survey**

- 4.3.1 The 1945 and 1946 RAF aerial photographs (Plates 1 & 2) of Old House Point show the remains of the former pile construction and spud pontoon fabrication yard. The other features that are recognisable on the two photographs are listed in Table 1.
- 4.3.2 The Beetle Craft which currently occupy part of the inter-tidal zone on the site were brought to the site after the Second World War. They are not present on the 1945 RAF aerial photographs but they are present on the 1946 images.
- 4.3.3 The RCAHMS holds a set of oblique aerial photographs of Old House Point (D60093-D600096) taken in 1999. The photographs are taken mainly from the seaward side of the site and show the Beetle Craft at low water. The Spud pontoon launching slip blocks are visible and the chequer-board arrangement of the nearby concrete fabrication yard.

### **4.4 Historical documentary sources**

- 4.4.1 The NMRS holds a copy of the primary records for the Defence of Britain Project. Record No. MS 2043/274, dated July 1988, contains a descriptive summary of the military remains at Old House Point with an accompanying sketch of the site. The sketch is rough and some details are incorrect. The oyster beds are depicted as ‘oil spillage settlement tanks’ which is clearly wrong.
- 4.4.2 Three historical postcards held at Stranraer Museum (Fig. 3a-c) show the Loch Ryan Oyster Fishery. Fig. 3a shows the oyster farm cottage and rearing shed which covered the tanks. Fig. 3b is another panoramic view taken from the south-east and shows the whitewashed gable of the cottage and the rearing sheds in the distance. Fig. 3c shows the interior of the sheds with workers stood inside the water tanks. Interestingly, the shed was a steel-framed structure with wooden roof joists and its interior was lit by roof-lights. The concrete partitions between the water tanks are also visible.

Feature No.	Description summary	1945 RAF	1946 RAF
1	Six WW2 Beetle Craft at LWM		✓
2	Spud Pontoon launching slip	✓	✓
3	Brick-built building (transformer block)	✓	✓
4	Oyster farm cottage	✓	✓
5	Oyster farm rearing tanks	✓	✓
6	Fabrication yard foundations	✓	✓
7	Workers Mess Building	✓	✓
8	Concrete casting bed	✓	✓
8/1	Concrete casting bed	✓	✓
8/2	Three concrete anchor/ballast blocks		
8/3	Stock pile of concrete pier parts		
8/4	Stockpile of concrete pier parts		
8/5	Two anchor blocks		
8/6	Broken anchor block		
8/7	Stockpile of concrete pier parts		
8/8	Single concrete pile		
9	Concrete casting bed	✓	✓
9/1	Stockpile of concrete pier parts		
9/2	Stockpile of concrete pier beams		
9/3	Stockpile of concrete pier deck slabs		
9/4	Two concrete pier transom beams		
9/5	Line of concrete transverse pier transoms		
9/6	Curb of concrete transverse pier transoms		
9/7	Three concrete pier stanchion		
9/8	Four concrete pier stanchions		
10	Seven concrete pier transoms		
11	Three pointed pier piles		
12	Railway embankment (remains of)	✓	✓
13	Building foundations (remains of)		
14	Partially buried concrete anchor/ballast block		
15	Pier piles (displaced)		
16	Building foundations and engine plinth		
17	Revetment wall		
18	Wooden Pier (remains of)	✓	✓
19	Dump of pier piles		
20	Building (remains of)	✓	✓
21	Military railway (site of)	✓	✓
22	Dump of concrete features		
23	Trackway leading into the site	✓	✓
24	Drystone wall		
25	Concrete slabs (building remains?)	✓	✓
26	Track-bed of Military Railway	✓	✓

Table 1. List of features shown on Fig. 4 and those that are identifiable on the RAF vertical aerial photographs.

## 4.5 Bibliographic Sources

- 4.5.1 Owing to the importance of the Mulberry Harbours much has been written on the subject. The desk-based assessment focused on publications pertinent to the proposed development area. A very useful publication is that by Murchie (1999). This publication focuses on the Mulberry Harbour Project in Wigtownshire between 1942-1944. A publication by Richard Holme (1997) focuses on the military port of Cairnryan. Although the focus of this

publication is primarily the decommissioning of naval ships and the disposal of ordnance, the publication underlines the importance of Loch Ryan and its role as a deepwater military port during the Second World War. A personal first-hand account of the construction of the Mulberry Harbour is provided in a publication by Harris (1989), who commanded an advance party, 933 Port Construction and Repair Company. The paper, published by the Newcomen Society, provides a very detailed description of all the components of a Mulberry Harbour. A panoramic pull-out of Mulberry A and B is provided in a Pitkin Guide (Jordan 2005) which includes contemporary photographs and descriptions of the harbours following the D-Day landings. A close-up photograph of a 'Spud' pontoon and connecting floating road resting on 'beetle' craft provides details of the superstructure of both features.

- 4.5.2 An in-depth discussion on technical details relating to the specific elements that made up the Mulberry Harbour is provided by Becket (1991). His first-hand account of his personal contribution in the design and construction of the Mulberry Harbour is very useful as it describes the technical problems and failures encountered during its construction. He mentions that the War Office favoured Cairnryan, Old House Point and Cairn Head as military sites as they considered them to be beyond the normal range of enemy reconnaissance aircraft.

#### **4.6 Imperial War Museum Archives**

- 4.6.1 The Imperial War Museum was contacted to determine what records they hold on the Spud pontoon fabrication yard. Digital copies of several photographs were made available. Selected images from their archive are produced as Plates 3-10. These photographs show a Spud pontoon in various stages of construction. The craft is resting on a series of concrete plinths, some of which were purposely designed as a launching slip.

#### **4.7 Consultations**

- 4.7.1 Dr John Pickin, Principal Keeper of Stranraer Museum, was consulted to establish if the museum held any historical information on the proposed development site. He was able to provide digital copies of three historical postcards of the oyster farm cottage and oyster rearing shed (Fig. 3a-c). Mr Archie Bell, a local historian and resident of Stranraer, provided a very interesting video clip of one of the Spud pontoons being launched at Old House Point. Mr Bell also provided useful first-hand information on the site during the 1950s and confirmed that the oyster farm cottage was occupied up until the 1970s.

## 5. FIELD SURVEY RESULTS

### 5.1 General

- 5.1.1 Forty-one individual features (including groups 8/1-8/8 and 9/1-9/8) were identified during the field survey (Features 1-26, Table 2). This section provides an assessment of the archaeological results obtained during the survey and from standing building recording. Appropriate historical and field survey photographs (Plates 1-38) accompany the discussion.
- 5.1.2 Table 2 lists the features identified within the proposed development area. The distribution of features and other upstanding remains surveyed are shown on Fig. 4. The photographs taken are listed in Appendix 1 and accompany the thumbnail prints bound at the rear of the report.

Feature No.	Description summary
1	Six WW2 Beetle Craft at LWM
2	Spud Pontoon launching slip
3	Brick-built building (electrical transformer block)
4	Oyster farm cottage
5	Oyster farm tanks
6	Fabrication yard (Spud pontoons)
7	Workers mess building
8	Concrete casting bed
8/1	Three concrete anchor/ballast blocks
8/2	Stock pile of concrete pier parts
8/3	Stockpile of concrete pier parts
8/4	Two anchor blocks
8/5	Broken anchor block
8/6	Stockpile of concrete pier parts
8/7	Single concrete pile
8/8	Stock pile of concrete pier parts
9	Concrete casting bed
9/1	Stock pile of concrete pier beams
9/2	Stock pile of concrete pier deck slabs
9/3	Two concrete pier transom beams
9/4	Line of concrete transverse pier transoms
9/5	Curb of concrete transverse pier transoms
9/6	Three concrete pier stanchions
9/7	Four concrete pier stanchions
9/8	Seven concrete pier transoms
10	Three pointed pier piles
11	Railway embankment (remains of)
12	Building foundations (remains of)
13	Partially buried concrete anchor/ballast block
14	Pier piles (displaced)
15	Building foundations and engine plinth
16	Revetment wall
17	Wooden pier (remains of)
18	Dump of pier piles
19	Railway line (section of)
20	Building (remains of)
21	Military railway (site of)
22	Dump of concrete features
23	Trackway leading into the site

24	Drystone wall
25	Concrete slab (building remains?)
26	Track-bed of military railway

Table 2. List of features recorded during field survey

## 5.2 Feature 1: Six WW2 Beetle Craft (Fig. 4, 5a-d)

### *Craft, general*

- 5.2.1 The remains of six concrete Beetle Craft are situated at the low water mark and are exposed at mean low water mark during ordinary spring tides during calm weather. Four of the craft are grouped together on the shoreline (Plate 11). This group included the single Beetle accessible at low tide which was subject to detailed survey. The other two craft are situated approximately 50m to the south, and are capsized and submerged hulks only exposed during low spring tides (Plate 12). All are in a very poor condition. The surveyed Beetle had been stripped of much of its iron deck fittings; however, these were still present on the most inaccessible Beetle, affording a visual and photographic appraisal from a distance.
- 5.2.2 Only the surveyed craft will be described here, although all of the Beetle Craft present appear to be identical. The craft measures 15.4m long and 6.75m wide and comprises a reinforced concrete deck (**101**) and hull (**102**) built around a frame of shuttered concrete bulkheads (**118**) forming ten internal compartments (Plate 13). One side of the hull features two 1650mm wide ramps (**113**), cut 1510mm back from the gunwale and drop 810mm down the side (Plate 14). It is presumed that these features were included to accommodate the road sections. The bow and stern have moulded concrete heads (**115**) with three hooked iron capstan mounts surviving on the seaward facing one (Plate 15).

### *Deck Features*

- 5.2.3 At the centre of the deck is a reinforced concrete superstructure set on a concrete base (**114**) measuring 6590mm long by 1850mm wide (Plate 16). Upstanding to a height of 1.45m, it comprises two blocks (**111**, **112**) forming a single unit joined with concrete fillets built on a longitudinal spine with tapered lateral buttresses and internal cut-away sections. The top of the outer block (**111**) is 740mm by 920mm with 24 holding-down bolts still in situ. The rectangular top of **112** is 1330mm by 460mm with six in situ bolt stubs. A 'C' shaped girder is present on one of the inaccessible craft, fixed along the spine of the superstructure. Fore and aft of the superstructure are single concrete blocks (**110**) measuring 610mm by 525mm and 190mm high with 8 holding down bolt stubs in situ. This configuration was standard on all the Beetles and these allowed the road sections to be fixed to the craft's superstructure.
- 5.2.4 The deck has ten square hatches (**103**), five on each side and symmetrically arranged, with pairs (Plate 17) at both ends and a single hatch either side of the superstructure (**114**). The hatches measure 830mm by 830mm and are framed with steel rims. None of the hatch covers remain in situ. Distant inspection of

a surviving hatch cover on another craft was possible; the fabric of the covers is unclear but appears to comprise reinforced concrete and has a square central hole. Inaccessibility prevented closer inspection.

- 5.2.5 Four double capstan mounts (**105**) are situated on the outside radii of the deck (Plate 18). They measured 870mm by 230mm and have six in situ bolt stubs. Surviving paired capstans can be seen on the furthest craft.
- 5.2.6 At the aft and prow end and prow are a series of 12 rectangular scars (**104**) which mark the position of cylindrical section capstans (Plate 19), which have been robbed out. The Beetle Craft furthest away from the shoreline has all its capstans intact. The capstans are placed in symmetrical groups of three, with two sets of three at each end of the craft. The scars of 110mm wide beams (**106**) are visible running between the capstans.
- 5.2.7 The robbed remains of 8 ring anchor brackets (**107**) were located in pairs at each corner of the deck. A single ring bracket is also present between the ramps (**113**) and visible on other craft but missing from the surveyed Beetle. The brackets were iron and measured 340mm by 82mm and were held by four hex-head bolts. An intact bracket and ring (Plate 20) survives on an adjacent craft; the bracket has a stapled arch holding the ring, which measures 210mm in diameter.
- 5.2.8 A rectangular concrete fitting base (**108**) with 2 rows of 6 tapped threads is situated half way along the deck at its edge (Plate 21). It has a 100mm high chamfered edge and measures 1320mm by 515mm. An iron leaf-shaped mount (Plate 22) is visible on another craft, although its purpose is unclear. It appears too complex a shape to be a capstan; possibly it is a fixing for a block and tackle or winch.
- 5.2.9 A capstan fitting (**109**), measuring 410mm square, survives as a scar with in situ bolt stubs (Plate 23) on the deck at either end of the superstructure base (**114**). The surviving capstan on the inaccessible craft is square in section.

#### *Hull features*

- 5.2.10 The hull (**102**) of the Beetle Craft is 2.4m high. Arranged at intervals along its side are a series of iron brackets (**116**) and bolts (**117**) fixed in place by bolts that ran through the side of the boat. These clamps held wooden fenders (**119**), the remains of which are still in situ. A repaired hole is present on the hull, patched with concrete. The craft has a flat bottom of reinforced concrete, parts of which have been ripped out by dragging on the shore. Square 'feet' are arranged along the bottom at the outside edge. These are visible on the upturned craft which is closest to the shore. Each foot measures 25mm square and c.10mm high, and is fitted with four iron bolts. The most likely explanation for these is that timber runners were attached along the edge of the base to protect the concrete bottom from abrasion on the sea floor.
- 5.2.11 Becket (1991) who was involved in the design and construction of the Mulberry Harbour mentions that the concrete was normally about 1" thick.



According to Becket (op cit) the Mulberry Harbour Beetles were constructed at Marchwood, on the River Test near Southampton. Beetles were also made in steel but this vital resource was in short supply so concrete was chosen as a suitable replacement.

### 5.3 Feature 2: Former launching slip and fabrication site of the Spud pontoon pier heads (Fig. 4)

- 5.3.1 The Mulberry Harbour Spud pontoon or pier heads (Plates 9-10) were intended for berthing coasters. Each pontoon had eight seats for floating bridge-spans; one at each end and three down each side. Each Spud pontoon had accommodation for a crew of one officer, six NCOs and 15 men (Harris 1989). A telescopic leg in each corner of the Spud allowed the craft to be set on the sea bed at any state of the tide. Spud pier heads were constructed at House Point in prefabricated sections by the Royal Engineers and a skilled civilian workforce. During their construction the hull was fabricated on top of a series of concrete blocks which later acted as a launching slipway.
- 5.3.2 Feature 2 comprises a series of cast concrete blocks which supported the Spud pontoons during construction (Plates 25 & 26). The concrete plinths also carried a series of timber sleeper beams on which the Spud pontoons were launched (Plates 9 & 10). A total of 112 individual blocks were recorded. Of these, there are three different types surviving and these are categorised in Table 3.

Type No	Dimensions	Description
1	1.4m x 0.8m x 1m high	The base is larger and tapers to the rectangular top which is roughly divided with two conjoined squares
2	0.97 x 0.74m x 1m high	Same shape as above but with a square top measuring 0.46 x 0.46m
3	0.8m x 0.37m x 0.8m high	These plinths are more intricate and have a large recess cast into the top and two iron spikes incorporated into the channel to hold the sleeper beam fast.

Table 3. Typology of the concrete plinths recorded at the former Spud pontoon launching slip

- 5.3.3 Some of the plinths on the beach still have fragments of their timber sleepers surviving but these are much degraded. The 1941 Ministry of War photographs show how the Spud pontoon sat on the plinths (see plate nos. H36671 and H36672). The concrete plinths had a large enough platform to carry timber blocks and wooden shims as the need required. The launching slip on the seaward side can be seen in Plate H36672 as the Spud was launched sideways into the sea loch. A video clip sent to CFA by local historian Archie Bell shows the civilian workers working on the craft shortly before the Spud pontoon is launched. This shows that both civilian workers and the Royal Engineers were engaged in their fabrication.
- 5.3.4 Owing to the nature of the beach, with its distinct berm caused by storm activity, some of the plinths are now buried at the high water mark. It is clear

that the plinths are arranged in lines and these are visible on the 1945 and 1946 aerial photographs.

#### **5.4 Feature 3: Brick-built electrical transformer block (Fig. 4 & 6a-c)**

- 5.4.1 The building (3) occupies a rectangular plan (Fig. 6a). It is cuboid in form with a single bay opening on the west elevation (Fig. 6b). It has a concrete foundation block measuring c.0.5m thick and red brick walls laid in English bond, and a flat reinforced concrete slab roof which overhangs the walls by c.0.2m. It is thought that this structure could have been an electrical transformer room.

*External west-facing elevation (Fig. 6b, Plate 27)*

- 5.4.2 The west-facing elevation forms the frontage and measures 5.5m wide by 4.4m high. It features a 2.8m wide by 2.3m high entrance (3/1) surmounted by a concrete lintel (3/2). Four steel tie plates (3/3) are situated high on the wall to the right hand side.

*External north and south-facing elevations (Fig. 6c, Plate 28)*

- 5.4.3 The north (Fig. 6c) and south-facing elevations form the sides of the building. Each measures 4.25m wide by 4.4m high, and feature four square ventilation holes (3/4).

*External east-facing elevation*

- 5.4.4 The east elevation forms the back of the building and measures 5.5m wide by 4.4m high. It features two small square ventilation holes (3/4) close to the roof overhang. A single square hole, which shows sign of a rough repair (3/5), is located lower down at its left hand side.

*Internal details*

- 5.4.5 The interior is floored in concrete with a large channel (3/6) running around the edge of the main concrete block base. An 'I' beam girder (3/7) has been set into the front and back wall, c.0.2m beneath the ceiling, which crosses the building. The internal walls have been whitewashed and partially painted blue on the rear wall.

*Discussion*

- 5.4.6 The building has been built in a single phase and is typical of a WW2 military Standby Set House to provide the yard with an ancillary power supply. The channel (3/6) running around the concrete base may be a cable channel. The entrance most likely had a sliding metal door (3/1). The girder (3/7) does not support the roof so must be for carrying a chain block for lifting, although exactly what is unclear. The 1945 RAF vertical photographs show an L-shaped arrangement associated with the rear of the structure and this might explain the presence of hardstanding surrounding the building. It seems highly

probable that an annex building housed fuel-oil storage tanks and possibly a switchgear room. There are many permutations for such arrangements and these are described by Francis (1996).

## **5.5 Feature 4: Cottage (Fig. 3a-b, 7a-e)**

- 5.5.1 The cottage of the former Loch Ryan Oyster Fishery Co. is shown on the historical postcards. It originally had a slate roof and was whitewashed. The cottage was occupied up until the 1970s (A. Bell pers comm.).

### *Ground plan (Fig. 7a)*

- 5.5.2 The cottage is rectangular in plan, measuring 9.95m long by 5.65m wide. It has a single central doorway on the west side. A cast-concrete built Ordnance Survey trigonometry point (4/1) has been incorporated into the south gable's south-east corner. No room divisions are visible within the interior of the building, the interior of which is overgrown with vegetation.

### *External north-facing elevation (Fig. 7d, Plate 24)*

- 5.5.3 The north-facing elevation forms a pitched gable 5.65m wide and 4.5m high. The wall is rendered and whitewashed, with stone ridged coping (4/5) and a stone built chimney stack (4/6). At mid height on the wall a faint raggle line (4/7) marks the position of a probable former lean-to structure.

### *External west-facing elevation (Fig. 7e, Plate 24)*

- 5.5.4 The west-facing elevation forms the front of the building and survives to a height of 2.5m. It has three bays comprising a central door (4/2) flanked by two windows (4/3, 4/4). The wall survives to just below eave height. It is built of random and coursed local green epidiorite stone with whitewashed render and brown painted margins.

### *External east-facing elevation (Plate 31)*

- 5.5.5 The east-facing elevation forms the rear of the building and survives to a height of c.2.5m. It features a single central window (4/8) which is most likely a converted doorway. The wall is built of random coursed green epidiorite stone with whitewashed render. A concrete buttress (4/1) is present on the left hand edge.

### *External south-facing elevation (Plate 31)*

- 5.5.6 The south elevation forms a pitched gable 5.65m wide and 4.5m high. It is rendered and whitewashed with stone ridge copings (4/9). The chimney stack (4/10) is stone built with brick repairs to the margins. Feature 4/1, a re-used trigonometry point, forms a buttress on the right hand side of the gable.

#### *Internal east-facing elevation*

- 5.5.7 The wall survives to eaves height and is cement rendered and whitewashed at the north end with bare un-rendered stone along its southern end. The central doorway (3/2) has brick edged margins. The two windows (4/2, 4/3) have oblique ingos and shuttered concrete sills.

#### *Internal north-facing elevation (Fig. 7b)*

- 5.5.8 The north-facing elevation contains un-rendered stone and features a partially collapsed open fireplace (4/13) and a press (4/14). The fireplace is centrally placed and measures 1.15m wide and 1.5m high, with the remains of an arched profile across the lintel. The press is situated to the left of the fireplace and measures 0.9m wide by 0.3m deep and 1.8m high. It has brick margins and a shallow arched lintel built from bricks.

#### *Internal south-facing elevation (Fig. 7c)*

- 5.5.9 The south-facing elevation wall has partially surviving render and features a fireplace (4/11) and a press (4/12). The fireplace is situated slightly left of centre and measures c.1.4m wide by 1.4m high. It is brick-built with a brick relieving arch and is partly blocked. The press is incorporated into the corner of the room to the right of the fireplace. It is 0.9m wide by 0.34m deep by 1.8m high, and has a shallow arched lintel built from bricks.

#### *Internal west-facing elevation*

- 5.5.10 The northern half of the west elevation is rendered while the southern half is bare stone. The central window surround (4/8) has been remodelled with brick margins and the wall below the window is inset slightly, suggesting that it may be a former back door which was later blocked and converted to a window.
- 5.5.11 The cottage had been built in a single phase with the only alteration being a blocked back doorway to form a window at a later stage. A lean-to building was situated on the north-facing gable but this has been removed. There is no evidence of partitions within the structure today but one can surmise that a passage ran between the central doorways and that one end of the cottage was possibly an office and the other a workers lobby, both lit on the west wall by two windows. It also seems likely that the slate roof (see Fig. 3a) was carried on simple A-frame rafters that rested directly on the wall head.

### **5.6 Feature 5: Oyster farm rearing tanks (Loch Ryan Oyster Fishery Co. Stranraer)**

- 5.6.1 The remains of the concrete oyster farm rearing tanks (Fig. 4), originally belonging to the Loch Ryan Oyster Fishery Co. are situated approximately 40m west of the cottage (Feature 4). There are four separate tanks, which together measure 56m long and 13.6m wide. The tanks are approximately 1.7m deep from the lip of each tank to the surface of the water contained within them. The tanks are full of debris and their full depth is not known.

Situated at ground level and at regular intervals around the tanks are the remains of steel I-beams which belonged to the steel framed shed that once covered the tanks. At the south-west corner of the concrete tanks is a brick-built man-hole with a valve in the base. This was for draining the tanks when they were replenished with fresh sea water from Loch Ryan. At the south-east corner of the large tanks are two smaller conjoined brick tanks measuring 5.8m long and 1.35 wide overall. It is assumed that these are part of a filtration system when the tanks were used at a later period. Adjacent is a small U-shaped breeze-block-built structure with a small plinth at its centre. The plinth has eight holding down bolts present and presumably it once housed an engine, probably associated with a later use of the tanks. A large diameter modern plastic pipe is present within the easternmost tank. The presence of the engine plinth and the modern plastic pipe attests to the site's more recent use.

- 5.6.2 The oyster rearing tank dates to the early 1900s according to the historical postcards (Figs 3a-c). Fig. 3c mentions within its caption that a special valve allowed pure sea water to enter the tanks with no less than 450,000 gallons of seawater entering the tanks daily.

## **5.7 Feature 6: Five fabrication yard foundations (Fig. 4, Plates 3 & 8)**

- 5.7.1 This large concrete pad measures 89m by 22m. The concrete has been laid with expansion joints. At the west end the concrete has been laid down on a regular grid pattern, whilst towards the east end the concrete was laid in regular sections measuring 3m wide. The precise year in which the concrete was laid is not certain; it may have been laid in 1941 when the site was engaged in producing parts for the Military Port at Cairnryan. However, it seems plausible that the concrete was laid specifically for storing the stockpiles of steel and other construction material associated with the Spud pontoons. Plate 3 shows two cranes and large piles of steel and other equipment on the east side of the near-complete Spud craft.

## **5.8 Feature 7: Workers' mess hall (remains of) (Fig. 4, Plate 29)**

- 5.8.1 This feature is reputed to be the mess hut. It survives as a large concrete foundation pad measuring 28m long by 11m wide. The concrete is 0.4m thick. At its centre is a free-standing brick-built chimney situated 9.8m from the east end. The chimney measures 1.8m by 0.77m at its base and is approximately 7m high. The crenulated pattern of corrugated iron sheeting provides evidence that the building was once clad with this material. The pitched-roofed building was still standing on the 1946 aerial photograph (Plate 2).

## **5.9 Feature 8: Concrete casting bed (Fig. 4)**

- 5.9.1 A rectilinear concrete casting bed is present on the east side of the cottage. The casting bed measures 210m by 5m and is aligned north to south. The casting bed was constructed by the Royal Engineers in 1941 to cast the concrete piers for the Lochryan Military Harbour. The concrete has been laid in sections with expansion joints. Various stockpiles of pier components still

flank each side of the casting bed (Features 8/1-8/8 described below). The bed is visible on the 1946 aerial photograph (Plate 2).

#### **5.10 Feature 8/1: Three concrete anchor/ballast blocks (Fig. 4)**

- 5.10.1 Three anchor/ballast blocks are situated on the south side of the rectilinear casting bed (Feature 8). Each block is trapezoidal in shape, measuring 3m by 2.8m at the base and 1.5m by 1.5m at the top. Each block has three steel slinging loops set in the top. This type of block survives elsewhere on the site (see below).

#### **5.11 Feature 8/2: Stockpile of concrete pier stanchions (Fig. 4)**

- 5.11.1 This pile of pier parts comprises eleven stanchions, each measuring 6m long by 1.6m wide by 0.80m thick, some of which have slinging loops. Some are slightly shorter and most have keying-in slots cast at each end.

#### **5.12 Feature 8/3: Displaced pier parts (Fig. 4)**

- 5.12.1 This group of pier parts is situated to the south of Feature 8/2 and includes transoms and stanchions. They are aligned east to west and north to south. These are the same type as those described above.

#### **5.13 Feature 8/4: Anchor/ballast blocks (Fig. 4, Plate 35)**

- 5.13.1 These two anchor blocks are exactly the same dimensions as those described in Feature 8/1.

#### **5.14 Feature 8/5: Broken anchor/ballast block (Fig. 4)**

- 5.14.1 Lying in the middle of Feature 8, the casting bed, is a recently broken anchor block. The block has the same dimensions as Feature 8/4. This one provides a good example of the aggregates and the 30mm steel reinforcement bars used in its construction.

#### **5.15 Feature 9: Concrete casting bed (Fig. 4, Plate 32)**

- 5.15.1 Another concrete casting bed is present on the north side of Feature 8. This casting bed measures 205m by 15m at maximum and is aligned north-south. The casting bed was constructed by the Royal Engineers in 1941 to cast the concrete piers for the Lochryan Military Harbour. The concrete was laid in individual sections with expansion joints placed in between each one. Various stockpiles of pier components still flank each side of the casting bed (Features 9/1-9/8 described below). The bed is visible on the 1946 aerial photograph (Fig. 2).

#### **5.16 Feature 9/1: Stockpile of pier beams (Fig. 4)**

- 5.16.1 Three concrete beams are situated in a pile to the south of Feature 9/2 (see below). The beams measure c.5m long by 0.9m wide and 0.35m deep.



**5.17 Feature 9/2: Stockpile of pier deck beams (Fig. 4, Plate 33)**

- 5.17.1 A stockpile of nineteen pier deck beams, measuring 6m long by 1.2m wide and 0.30m thick, are situated at the south end of the casting bed (Feature 9). The slabs are all complete and in good condition.

**5.18 Feature 9/3: Two concrete transom beams (Fig. 4, Plate 34)**

- 5.18.1 Two concrete pier stanchions laid side by side are situated approximately 5m from Feature 9/1 and measure 4.5m long and 0.98m wide. At each end the concrete has been cast in the shape of a spanner jaw for keying in with another type of pier stanchion.

**5.19 Feature 9/4: Line of stock-piled concrete pier parts (Fig. 4)**

- 5.19.1 A stock-pile of concrete pier parts are situated on the western edge of the casting bed (Feature 9). The pile runs for a length of about 30m.

**5.20 Feature 9/5: Line of stock-piled concrete pier parts (Fig. 4)**

- 5.20.1 A second group of concrete pier parts have been stockpiled and laid end to end on the western edge of the casting bed to the north of Feature 9/5, and are partially buried by a pile of concrete rubble.

**5.21 Feature 9/6: Concrete pier stanchions (Fig. 4)**

- 5.21.1 Three pier stanchions laid end to end are located on the eastern edge of the casting bed (Feature 9). The stanchions measure c. 4.5m and 0.98m wide and 0.38m. A single stanchion lies c.6m further to the north.

**5.22 Feature 9/7: Concrete pier stanchions (Fig. 4)**

- 5.22.1 Four concrete pier stanchions are laid one on top of another at the edge of the casting bed, and each measures 4m long by 0.98m wide and 0.38m deep.

**5.23 Feature 9/8: Concrete pier stanchions (Fig. 4)**

- 5.23.1 A collection of pier stanchions laid end to end are situated on the west side of the casting bed opposite Feature 9/7. The stanchions measure 4m long by 0.98m wide and 0.38m deep.

**5.24 Feature 10: Pier Piles (Fig. 4)**

- 5.24.1 Three displaced pier piles are located approximately 40m to the north of casting bed Feature 9 and only one of the piles is complete. This pile is 15m in length and is 0.45 by 0.3m in section. At the north end there is a twisted steel plate with four bolts in situ. At the south end the point is tipped with steel. Inscribed while the pile was still wet are a set of numbers: *1500/1600 10/6/41 No 1* (Plate 36).

## **5.25 Feature 11: Railway embankment (remains of the Cairnryan Military Railway) (Fig. 4)**

- 5.25.1 Approximately 50m to the south of the oyster farm tanks is the remains of an embankment which would have formed part of the Cairnryan Military Railway (Feature 5). It was constructed of material excavated directly from the beach and measures 45m long by 3m wide on its summit and is approximately 4m high. It is aligned NW to SE and is steepest on its eastern side. On the seaward side at the north end, an almost vertical cliff has formed where it has been eroded by the sea. The embankment forms a terminus for the track-bed (Feature 26 see below).
- 5.25.2 The embankment is visible on the vertical RAF photographs (Plate 1 & 2) crossing the site track of the fabrication yard. Two branch lines can be seen coming off it in the direction of the heart of the complex. The Cairnryan Military Railway was constructed in 1941 to serve the needs of the Cairnryan Military Port (NX06NE 11.03).
- 5.25.3 Running from Cairnryan Junction (NX06SE 94.00) to Cairnryan, a distance of some six miles, the line required the building of several areas of railway sidings, transit sheds, railway engine sheds and the diversion of the road at Cairn Point from its former course close to the lighthouse. The whole length of the railway is visible on vertical aerial photographs (106G/Scot/UK/3135-3140 and 4129-4130, flown November 1945), which shows that at this date it was still in use.

## **5.26 Feature 12: Building foundations (remains of) (Fig. 4)**

- 5.26.1 The remains of the foundation block for a rectangular building is located c.30m north of the transformer block (Feature 3). The foundations measure roughly 40m long and 30m wide and 0.40m thick. The foundations are in a poor condition and have been ripped up, forming a cruciform void at its centre. The 1945 aerial photograph (Plate 1) shows a large rectangular building was located on this site. The function of the building is not known.

## **5.27 Feature 13: Concrete piles (disturbed) (Fig. 4)**

- 5.27.1 Situated within an area that has been scarped by site clearance operations are the remains of three pier parts comprising one T-section transom, two L-shaped transoms and one square-ended transom. The largest of the group is the T-shaped feature which measures 8m long and is aligned east-west. A section of the remains of casting bed (Feature 9) is situated on the south side of the group and is now separated from the north end of the main casting bed block by a site clearance transect.

## **5.28 Feature 14: Partially buried anchor/ballast block**

- 5.28.1 Partially buried below a c.3m deep pile of concrete rubble is a single anchor/ballast block which is exactly the same as those described previously (Feature 8/4).

## **5.29 Feature 15: Building foundations and engine plinth (Fig. 4)**

- 5.29.1 Feature 15 comprises four individual elements including: (a) concrete floor slabs; (b) a concrete plinth at its centre; (c) an engine plinth; and (d) a hexagonal concrete block.
- 5.29.2 The concrete slabs (a) measure 7m by 5m with the long axis arranged east to west. At the west end of the foundation block there is a smaller rectangular stepped arrangement of reinforced concrete surviving to a height of 0.5m. At the centre of the concrete foundations there is a centrally placed square concrete block measuring 0.8m by 0.8m (b) with an infilled channel measuring about 0.15m wide running southwards from it. Located on the east end of the foundations is a rectangular concrete engine plinth (c) with six steel holding down bolts which have been burnt off flush with the level of the surface. On the south side of the foundations is a large hexagonal block of concrete (d) which is lying at an oblique angle and has clearly been disturbed.
- 5.29.3 The complex is strategically located at the north end of the fabrication yard is thought to be the possible remains of a searchlight facility. The feature cannot be identified on either the 1945 or 1946 RAF aerial photographs (Plates 1 & 2).

## **5.30 Feature 16: Drystone revetment wall (Fig. 4)**

- 5.30.1 The remains of an upstanding drystone wall stands to a height of 1.2m and is 15m long. The wall is constructed of coursed and irregular blocks of sub-rounded boulders. The wall has been built on the east side of a bank of soil. On the west side of the bank is a sheer cliff, with a drop of some 2.5m onto the beach below. The wall appears to have been used to face the bank. The date of this wall is not known.

## **5.31 Feature 17: Pier (remains of) (Fig. 4)**

- 5.31.1 The remains of ten wooden piles are visible within the inter-tidal area. The piles are round with a diameter of 0.45m. The piles are the remains of a wooden pier that is visible on the 1945 and 1946 aerial photographs (Plate 1 & 2). The pier was in use in 1943 when the Spud craft were being constructed as it is shown in the distance on Plate 7.

## **5.32 Feature 18: Dump of piles (Fig. 4)**

- 5.32.1 Situated on the east side of the former railway embankment (Feature 11) is a dump of concrete piles. The piles are the same type as those described for Feature 10 but here they survive as much shorter lengths. Among the piles is a pair of concrete stanchion beams with spanner-jaw ends as described in Feature 9/3. The 1946 RAF aerial photograph shows a collection of pier parts in the general location just described.

### **5.33 Feature 19: Narrow-gauge railway line (Fig. 4)**

- 5.33.1 A small section of railway line was recorded close to the south end of the fabrication yard foundations (Feature 6). The section of line measured 1.8m long and two iron rails were visible on the ground surface. The rail is trending north-south which is in accord with Plate HB5934 which shows the presence of railway lines flanking the fabrication yard. It is presumed that the lines carried bogies for transporting equipment and fabrication steel across the yard.

### **5.34 Feature 20: Building foundations (Fig. 4, Plate 37)**

- 5.34.1 Situated on the east side of the cottage (Feature 3) there is a rectangular concrete foundation block which is associated with a building seen on the RAF vertical aerial photographs (Plates 1 & 2). The foundation block measures 10m by 5m and is aligned north to south.

### **5.35 Feature 21: Route of the Military Railway (Fig. 4)**

- 5.35.1 Situated on the east side of the concrete casting bed (Feature 9) is a fairly level section of overgrown ground which correlates with the route of the former Military Railway. The area measures approximately 100m by 8m.

### **5.36 Feature 22: Dump of concrete piles (Fig. 4, Plate 38)**

- 5.36.1 Situated to the south of the building foundations (Feature 15) is a dump of broken concrete pier parts. The most interesting feature among this group is a cast-concrete ballast block which measures c.1.2m by 1.2m and has an iron slinging loop at its centre. The block has been cast in a steel tank which has left an impression on its side. Plate 8 shows several of this type of ballast block on a mobile crane and others on a nearby bogie.

### **5.37 Feature 23: Track-bed of the former Military Railway (Fig. 4)**

- 5.37.1 The present site trackway leads from the south. This trackway can be seen on the historical postcards (Fig. 3a & 3b) running past the cottage northwards along the coast. The track is also visible on the 1945 and 1946 vertical aerial photographs (Plates 1 & 2).

### **5.38 Feature 24: Section of drystone wall (Fig. 4)**

- 5.38.1 A section of drystone wall survives for a length of about 70m just to the west of the oyster tanks (Feature 5). The wall is much denuded, only surviving to a height of about 0.5m. The wall can be seen on the historical postcards (Figs 3a and 3b).

### **5.39 Feature 25: Concrete slabs (Fig. 4)**

- 5.39.1 Situated in overgrown ground to the north of the Spud pontoon construction site is a pair of concrete slabs. It is unclear what these features represent. The 1945 and 1946 RAF aerial photographs show a small building situated in approximately the location of the concrete slabs.

### **5.40 Feature 26: Track-bed of the former Military Railway (Fig. 4, Plate 1 & 2)**

- 5.40.1 The former track of the Military Railway branches off towards the large railway embankment (Feature 11). The route of the track-bed is c.60m long. It is visible on the 1945 and 1946 RAF vertical aerial photographs.

## **6. DISCUSSION**

### **6.1 Old House Point prior to WW2**

- 6.1.1 Prior to the site's military use in WW2, the only significant features present were the old cottage (Feature 4) and oyster bed rearing tanks associated with the Loch Ryan Oyster Fishery Co., which was established sometime after 1909.

### **6.2 Old House Point during WW2**

#### *Construction of Cairnryan Military Port*

- 6.2.1 With the arrival of the Royal Engineers and a large civilian work force in 1941, the site became the main facility for the construction of the piers for the Cairnryan Military Port which was completed in July 1943. The need for a new port arose from the serious lack of port capacity following the virtual closure of docks on the south and east coasts of England due to heavy bombing (Holme 1997). The arrival of approximately four thousand men housed in eight camps within the region shows the size of the workforce involved in the construction of the military port. The pier casting facility at Old House Point required concrete casting beds, which were large set-down areas flanked by narrow-gauge railway lines. The 1945 and 1946 RAF vertical photographs (Plate 1 & 2) show the larger features such as the casting beds but individual smaller features (sheds and stockpiles) are more difficult to identify owing to the high altitude at which the photographs were taken. The survey recorded a wide range of spare or waste concrete pier parts (Features 8/1-8/6 and 9/1-9/6).

#### *Spud pontoon construction*

- 6.2.2 From late 1943 it is known that the site was used for the construction of Spud pontoons or pier heads for use in the Mulberry Harbours. The remoteness of Old House Point, which was beyond the reach of enemy reconnaissance planes, along with its deep water and well established infrastructure meant that the site was well suited for the fabrication of the Spud pontoons. It would not have taken the Royal Engineers long to create the set-down area, concrete support blocks and the slipway required for launching the vessels. The site where the Spud pontoons were constructed required a large set-down area for the tons of pre-fabricated structural steel used to build them. According to contemporary photographs (see Plates 3 & 8) this resembles a shipbuilding yard with large stockpiles of steel, sheds and mobile cranes. Old House Point was a part of a larger network of construction sites scattered throughout Scotland and England without which the Mulberry Harbour could not have been built within only six months. Anecdotal evidence seems to suggest that four pontoons were built at Old House Point. Some aspects of the history of the site have been confused with some literature mentioning that Whales (floating roads) were constructed here, but there is no evidence to support these claims.



### 6.3 Mulberry Harbour in context

6.3.1 Following an Allied raid on Dieppe in August 1942, when almost 3000 men were killed or captured, the event showed that German forces would defend and if necessary destroy ports to prevent their use by an invading force. Field Marshal Rommel had constructed strong defences on all likely invasion beaches in Northern France, Belgium and Holland to repel any attack (Murchie 1993). The War Office and military planners concluded that in order to provide the anticipated requirement to discharge men, vehicles, ammunition, fuel and other supplies, it would be essential to provide berthing facilities in sheltered water.

6.3.2 In May 1942 Sir Winston Churchill's famous memorandum to the Chief of Combined Operation's said the following:

"Piers for use on Beaches"

*"They must float up and down with the tides. The anchor problem must be mastered. Let me have the best solution worked out. Don't argue the matter. The difficulties will argue for themselves."*

6.3.3 A trial of the three eventual competing designs was set up, with tests of deployment, including floating the elements, in Garlieston, Wigtownshire. A military camp was constructed at Cairnhead to accommodate the increasing numbers of engineering personnel (Sappers) with an additional 200 men being accommodated in the village hall in Garlieston. The designs were by Hugh Iorlys Hughes who developed his "Hippo" piers and "Crocodile" bridge units on the Conwy Morfa, using 1000 men to build the trial version; the Hamilton "Swiss Roll" which consisted of a floating roadway; and a system of flexible bridging units supported on floating pontoons designed by Major Allan Beckett RE. The tests revealed various problems (the "Swiss Roll" would only take a maximum of a 7 ton truck in the Atlantic swell). However, the final choice of design was determined by a storm during which the "Swiss Roll" was washed away and the "Hippos" were undermined; Beckett's floating roadway (subsequently codenamed Whale) survived undamaged. Beckett's design was adopted and manufactured under the management of J. D. Bernal and Brigadier Bruce White, under the orders of Winston Churchill (<http://www.combinedops/Mulberry%20Harbours.htm>).

6.3.4 Codenamed 'Mulberry', the harbours consisted of floating concrete sections (Phoenixes) that when joined together formed huge quays and cargo-handling platforms for the US and the British beaches. Absorbing some two million tonnes of concrete and steel, the artificial harbours also contained a complex infrastructure of pier heads (Spuds or Lobnitz to the Americans). Most of the Spud pontoons were made in Scotland. Part ship, part elevator, the oblong floating steel hull rose and fell with the 7m tide, guided by cables strung over the tops of the Spud legs (Plates 9-10).

6.3.5 Mulberry incorporated around 16km of floating roadways (Whales) supported by pontoons (Beetles) enclosed within a 'lagoon' of specially constructed

breakwaters (Bombardons) and 70 scuttled ships (Gooseberries). Rhino pontoon ferries and DUKW ('Duck') amphibious trucks would supplement the port. The Phoenixes were built on both the River Thames and River Clyde, the Beetle pontoons were assembled in Richborough, Kent, at Southsea, and Marchwood, near Southampton, and the pier heads and buffer ramps at Conwy in North Wales. Once completed, the floating sections were towed to assembly areas off Selsey in West Sussex and Dungeness in Kent until their final journey across the Channel.

- 6.3.6 Before the Mulberry Harbours could be deployed on D-Day, intelligence was gathered on the target beaches, including topography, the composition of the beaches, hidden underwater banks, German defensive obstacles, the depth of water, and tidal conditions. Following this intelligence gathering, two scale models of the landing beaches were prepared. At Cairnryan, the information gathered about the beaches was used to construct a 'life size' reproduction of the beaches (<http://www.combinedops.com/Mulberry%20Harbours.htm>). This would allow the planners to assess the effectiveness of the current landing techniques and the movement of men and machinery over the terrain. It is not clear exactly where this test-beach was constructed.

## 7. CONCLUSION

### 7.1 This programme of work recorded:

- The remains of the pile construction yard, including associated buildings and railway lines
- The remains of a concrete set down area and slipways associated with the construction of Spud pontoons or pier heads for the Mulberry Harbours
- The remains of the oyster tanks and associated the cottage once operated by the Loch Ryan Oyster Fishery Co.

### 7.2 There appears to be a degree of confusion over the role of the site in the construction of the Mulberry Harbours. However, the desk-based evidence shows that Spud pontoons or pier heads for the harbours were constructed and launched on the site.

### 7.3 As far as we are aware, the Beetle Craft (Feature 1) were not constructed at this site but are nonetheless interesting. It appears that these were brought to Old House Point from an unknown destination between November 1945 and May 1946, according to the RAF vertical photographs. Historical photographs show at least six Beetle Craft being tested at Cairnhead in April 1943. It seems possible that the craft beached off Old House Point were also test craft relating to the extensive testing of the various harbour designs that took place in the area.

### 7.4 The survey results provide a comprehensive record of the surviving remains on the development site and CFA recommend that no further archaeological work is required. However, the final decision lies with the Dumfries and Galloway Council Archaeologist.

### 7.5 The project archive, comprising of all CFA record sheets, digital photographs, maps and reports, will be deposited with the National Monuments Record of Scotland (NMRS) and copies of reports and photographs will be lodged with the Dumfries & Galloway Council Sites and Monuments Record and with Stranraer Museum.

### 7.6 A summary statement of the results of this survey will be submitted for publication in *Discovery and Excavation in Scotland 2010* (Appendix 2).

## 8. REFERENCES

### *Bibliographic*

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[http://www.beckettrankine.com/downloads/Allan\\_Beckett\\_Record\\_Of\\_Wartime\\_Service.pdf](http://www.beckettrankine.com/downloads/Allan_Beckett_Record_Of_Wartime_Service.pdf)

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### *Cartographic*

1849 First Edition Ordnance Survey *Wigtownshire* Sheet V

1896 Second Edition Ordnance Survey *Wigtownshire* Sheet V SE

1909 Third Edition Ordnance Survey *Wigtownshire* Sheet V SE

1957 Ordnance Survey Sheet NX 06NE 1:10,000 scale

1968 Ordnance Survey Sheet NX 06NE 1:10,000 scale (Revised)

### *Aerial Photographs*

106G/UK987/9 Nov/1945/F36/541 SQDN: Plate No 3135

106G/Scot/UK/44/4 May 1946/F/20/840 SQDN: Plate 3197

OS/62/51-OS62/17 1/6/62

### *Imperial War Museum Collections*

Ref: H 35934-43 – entitled 'Photographs show the progress made in one week on the Construction of the Whale and the launching'.

Ref: H 36667-77 – entitled 'Photographs of the new Whales under construction at Cairnryan'.

## APPENDIX 1: PHOTOGRAPHIC REGISTER

January 2010

Photo No.	Description	Taken from
1	General view of cottage 4	NW
2	Cottage 4 exterior	W
3	Cottage 4 exterior	W
4	Cottage 4 exterior	S
5	Cottage 4 exterior	E
6	Cottage 4 exterior	N
7	Cottage 4 interior	S
8	Cottage 4 interior	W
9	Cottage 4 interior	W
10	Cottage 4 interior, press detail	S
11	Cottage 4 interior, fireplace detail	S
12	Cottage 4 interior, chimney detail	S
13	Cottage 4 interior, window detail	W
14	Cottage 4 interior, doorway detail	SE
15	Cottage 4 exterior, trig point detail	S
16	Cottage 4 exterior, trig point detail	SE
17	General view of cottage 4	SE
18	General view of cottage 4	SE
19	General view of generator house 3	SW
20	General view of generator house 3	SW
21	General view of generator house 3	NW
22	Generator house 3 exterior	W
23	Generator house 3 exterior	S
24	Generator house 3 interior	W
25	Generator house 3 interior	S
26	Generator house 3 floor	W
27	Generator house 3 ceiling	
28	General view of cookhouse chimney 7	E
29	General view of cookhouse chimney 7	E
30	Cookhouse chimney 7	NW
31	Cookhouse chimney 7	W
32	Cookhouse chimney fireplace detail 7	W
33	Cookhouse chimney 7	SW
34	General view of oyster beds 5	E
35	General view of oyster beds 5	E
36	Oyster bed engine house	E
37	Oyster bed tanks	S
38	Oyster beds 5	E
39	Oyster beds manhole	E
40	Oyster beds 5	SE
41	Oyster beds 5	SE
42	Oyster beds 5	E
43	Oyster beds 5	W
44	Oyster beds manhole detail	SE
45	Oyster bed shed girder stub detail	
46	8 showing trapezoidal blocks 8/1	S
47	Trapezoidal blocks 8/1	SE
48	Trapezoidal blocks 8/1	S
49	8 showing 'T' beams	N
50	General view of 9	N
51	9 showing 'T' beams	N
52	9 showing 'T' beams	SW

Photo No.	Description	Taken from
53	9 showing 'T' beams	N
54	General view of 9	N
55	Spanner shaped beams 9/3	E
56	Spanner shaped beams 9/3	NE
57	Spanner shaped beams 9/3	W
58	General view of 9 with cottage in background	SE
59	Concrete stack 9/2	NW
60	Concrete stack 9/2	W
61	Concrete stack 9/2	W
62	Concrete stack and beams in 9	SW
63	Concrete stack and beams in 9	SW
64	General view of 9	S
65	General view of 9	SW
66	Trapezoidal blocks and concrete beams in 8	S
67	Trapezoidal blocks and concrete beams in 8	S
68	Socket detail in concrete block, 8	E
69	Trapezoidal block in 8	SW
70	General view from 8 to cottage	SE
71	Slipway blocks, intertidal zone, 2	W
72	Slipway blocks, intertidal zone, 2	S
73	Slipway blocks, intertidal zone, 2	S
74	Slipway blocks, intertidal zone, 2	NW
75	Beetle 6 at low water	E
76	Beetles 5 & 6 at low water	E
77	Beetles 5 & 6 at low water	E
78	Beetles 1-4	S
79	Beetle 1 at low water	S
80	Beetle 1 at low water	S
81	Beetle 1 at low water	S
82	Beetle 1 at low water	S
83	Beetles 1 & 2	S
84	Beetles 1 & 2	S
85	Beetles 1 & 2	S
86	Deck of Beetle 1	E
87	Deck of Beetle 1	E
88	Deck of Beetle 1	E
89	Deck of Beetle 1	E
90	Beetles 2-4 from Beetle 1	SE
91	Beetle 1 deck fittings detail: Capstan foot	W
92	Beetle 1 deck fittings detail: Hatches	S
93	Beetle 1 deck fittings detail: Hatches	N
94	Beetle 1 deck fittings detail: Hatches	E
95	Beetle 1 deck fittings detail: Ramps	E
96	Beetle 1 deck fittings detail: Ramps	E
97	Beetle 1 deck fittings detail: Bridge	NE
98	Beetle 1 deck fittings detail: Bridge	SE
99	General view of Beetles,	SE
100	Beetle 1 deck fittings detail: Bridge	SW
101	Beetle 1 deck fittings detail: Bridge	SW
102	Beetle 1 deck fittings detail: Capstan foot	SE
103	Beetle 1 deck fittings detail: Hatches	E
104	Beetle 1 deck fittings detail: Hatches and damage	NE
105	Beetle 1, general below-deck view	
106	Beetle 1, general below-deck view	
107	Beetle 1, general below-deck view	
108	Beetle 1 deck fittings detail: Capstan	E
109	Beetles 2 showing damaged hull	S

Photo No.	Description	Taken from
110	Deck of Beetle 1	W
111	Deck of Beetle 1	W
112	Code number on inside of Beetle 1	
113	Beetle 1, general below-deck view	
114	Beetle 1, general below-deck view	
115	Beetle 1 deck fittings detail: Bridge	E
116	Beetles 2 & 4	SE
117	Beetle 1 deck fittings detail: Hatch	
118	Beetle 1 deck fittings detail: Bridge re-bar detail	
119	Beetle 1 deck fittings detail: Bridge re-bar detail	
120	Beetle 1 deck fittings detail: Capstan foot	W
121	Beetle 1 hull fittings detail: Fender cleats	
122	Beetle 1 hull fittings detail: Fender cleats	
123	Beetle 1 hull fittings detail: Fender cleats	
124	Beetle 1 hull fittings detail: Fender cleats	
125	Beetle 1 hull fittings detail: Fender cleats	
126	Beetle 1 hull fittings detail: Fender cleats	
127	Beetle 1 hull fittings detail: Fender cleats	
128	Beetle 1 deck fittings detail: Ramp	N
129	Beetle 1 deck fittings detail: Ramp	NE
130	Beetle 2	E
131	Beetles 2 & 3	E
132	Beetle 2	E
133	Beetles 2 & 3	E
134	Beetle 2	E
135	Beetle 5	E
136	Beetle 6	E
137	Beetles 2 & 3	SE
138	Beetles, general view	SE
139	Beetles, general view	E
140	Beetle 5	E
141	Beetle 6	E
142	Beetles, general view	SE
143	Beetles, general view	SE
144	Beetle 5	E
145	Beetle 6	E
146	Beetle 1	S
147	Blockhouse exterior	S
148	Blockhouse exterior	E
149	Cottage exterior 4	S
150	Cottage exterior 4	N
151	Cottage exterior 4	N
152	General view of cottage 4	NW
153	General view of cottage 4	NW
154	Cottage interior 4	S
155	Cottage interior 4	S
156	Oyster tank engine house	SE
157	Oyster tank engine house	E
158	Oyster tank engine house	NE
159	Oyster tank engine house plinth detail	E
160	Beetles general view	SE
161	Pier piles	S
162	Pier piles	SW
163	Pier piles	W
164	Pier piles	NW
165	General view of Spud landing slip blocks 2	NW
166	General view of Spud landing slip blocks 2	S



Photo No.	Description	Taken from
167	General view of Spud landing slip blocks <b>2</b>	W
168	General view of Spud landing slip blocks <b>2</b>	SW
169	Detail of linear block in <b>2</b>	SW
170	Detail of linear block in <b>2</b>	S
171	General view of loch Ryan with Ferries and Beetles 5 & 6	E
172	General view of loch Ryan with Ferries and Beetles 5 & 6	E
173	Railway embankment <b>11</b>	S
174	Railway embankment <b>11</b>	N
175	Railway embankment, erosion on west side <b>11</b>	W
176	General view of cottage from oyster tanks	W
177	General view of cottage from oyster tanks	W
178	Trapezoidal blocks <b>8/1</b> and concrete storage piles <b>9/2</b>	NW
179	N/A	
180	N/A	
181	Concrete storage piles <b>9/2</b>	W
182	Concrete storage piles <b>9/2</b>	W
183	Concrete storage piles <b>9/2</b>	N
184	Spanner-shaped beam <b>9/3</b>	W
185	View of <b>8</b>	S
186	Trapezoidal blocks <b>14</b>	W
187	View of <b>9</b>	N
188	View of <b>9</b>	N
189	Concrete stanchions <b>9/7</b>	W
190	Detail of concrete pile <b>10</b> showing date	W
191	Detail of concrete pile <b>10</b> showing date	W
192	Concrete pile <b>10</b>	N
193	View of <b>8</b>	S
194	Concrete foundations <b>12</b>	S
195	Detail of trapezoidal block <b>13</b>	NE
196	Detail of trapezoidal block <b>13</b>	NE
197	View of <b>13</b> and <b>8</b>	N
198	View of <b>13</b> and <b>8</b>	S
199	Trapezoidal blocks <b>14</b> and cottage <b>14</b>	E
200	General view of <b>8</b> and generator house <b>3</b>	NE
201	North end of <b>8</b>	S
202	'T' and spanner sectioned transoms <b>9/6</b>	W
203	Trapezoidal block <b>13</b>	SW
204	Building foundations and engine plinth <b>15</b>	E
205	Building foundations and engine plinth <b>15</b> general view	N
206	Building foundations and engine plinth <b>15</b> general view	W
207	Building foundations and engine plinth <b>15</b> general view	W
208	Building foundations and engine plinth <b>15</b> general view	E
209	Building foundations and engine plinth <b>15</b> general view	S
210	Building foundations and engine plinth <b>15</b> general view	S
211	Building foundations and engine plinth <b>15</b> general view	E
212	Building foundations and engine plinth <b>15</b> general view	E
213	Building foundations and engine plinth <b>15</b> general view	E
214	Building foundations and engine plinth <b>15</b> general view	E
215	Building foundations and engine plinth <b>15</b> general view	E
216	Building foundations and engine plinth <b>15</b> general view	S
217	Revetment wall and bank <b>16</b>	SE
218	Revetment wall and bank <b>16</b>	SE
219	View of beetles, general view	NE
220	Beetle 3	E
221	Beetle 3	NE
222	Beetle 2	E
223	Beetle 1	N

Photo No.	Description	Taken from
224	N/A	
225	N/A	
226	Beetle 1	N
227	Beetle 1, bumper detail	S
228	N/A	
229	Beetle 1, ramp detail	N
230	Beetles 1 & 3	SE
231	Beetles 1 & 3	SE
232	Beetles 1 & 3	E
233	Beetles 1 & 3	SE
234	Beetles 1 – 4	S
235	Beetle 5	SE
236	Beetles, general view	S
237	N/A	
238	Beetles, general view	S
239	Beetles, general view	SE
240	Beetles, general view	S
241	Beetles, general view	S
242	N/A	
243	N/A	
244	Beetles 5 & 6	SE
245	Beetle 1	SE
246	Beetles 1 – 4	E
247	Spud launching strip blocks <b>2</b>	W
248	Spud launching strip blocks <b>2</b>	W
249	Spud launching strip blocks <b>2</b>	SW
250	Spud launching strip blocks <b>2</b> on beach	E
251	Spud launching strip blocks <b>2</b> on beach	E
252	Spud launching strip blocks <b>2</b> on beach general view with beetle in background	S
253	Spud launching strip blocks <b>2</b> on beach general view with beetle in background	S
254	Spud launching strip blocks <b>2</b> on beach general view with beetle in background	S
255	Spud launching strip blocks <b>2</b> , block type 3	S
256	Spud launching strip blocks <b>2</b> on beach detail of timber bed	S
257	Spud launching strip blocks <b>2</b> on beach detail of timber bed	E
258	Spud launching strip blocks <b>2</b> on beach detail of timber bed	E
259	Narrow gauge railway track remnants <b>19</b>	S
260	Narrow gauge railway track remnants <b>19</b>	W
261	Beetle 1	SE
262	Beetle 1	SE
263	Beetle 1 and whale launching strip blocks	SE
264	Beetle 1 and whale launching strip blocks	SE
265	Railway sleepers	W
266	Railway sleepers	W
267	Railway sleepers and cottage in background general view	W
268	General view from railway embankment to oyster tanks	S
269	General view from railway embankment to oyster tanks and beach	SE
270	General view along railway embankment with beetles in background	SE
271	N/A	
272	N/A	
273	Oblique aerial view of Whale launching strip blocks and beetles	SE
274	N/A	
275	N/A	
276	Oblique aerial view of Whale launching strip blocks and beetles	SE
277	N/A	

Photo No.	Description	Taken from
278	Oblique aerial view of Spud launching strip blocks	SE
279	Oblique aerial view of Spud launching strip blocks and beetles	SE
280	Oblique aerial view of Spud launching strip blocks	S
281	Oblique aerial view of Spud launching strip blocks on beach	S
282	N/A	
283	N/A	
284	Oblique aerial view of beetles	E
285	Oblique aerial view of beetles	E
286	Oblique aerial view of beetles	
287	N/A	
288	Oblique aerial view of beetle 1	S
289	Oblique aerial view of Spud launching strip blocks	SW
290	Oblique aerial view of Spud launching strip blocks	S
291	N/A	
292	Oblique aerial view of Spud launching strip blocks	S

March 2010

Photo No.	Description/Contexts	Taken from
1-6	General view of beetlecraft at high tide	W
7	Square hatches (103)	N
8	Square hatch (103) and internal bulkhead (118)	W
9-11	Deck plate fittings (104)	
12	Deck plate fittings (104) and beam settings (106)	E
13	Capstan fittings (105)	
14-15	Ring fitting plates (107)	
16-17	Central capstan mount (108)	N
18	Square capstan mount on spine (109)	E
19	Block mount (110)	E
20-21	Bolt stubs and fittings on central bridge (111)	E
22	Fittings on central bridge (111) & (112)	W
23	Fittings on central bridge (112)	W
24	Fittings on central bridge (111) & (112)	W
25	Fittings on central bridge (111)	E
26	Ramp from deck (113)	S
27	Ramp profile (113)	E
28-29	Bow/Stern head capstan mount (115)	E
30	Block mount (110) and bridge base (115)	W
31	Ramp (113) from shingle	N
32-33	View of surviving deck fittings on inaccessible craft	E
34	Surviving deck fittings (109) and (105)	E
35	Detail of surviving central capstan (108) fitting	E
36	Surviving deck fittings (109) and (105)	E
37	Detail of surviving central capstan (108) fitting	E
38	View of craft with surviving deck fittings	E
39	Surviving deck fittings (109) and (105)	E
40	Detail of surviving central capstan (108) fitting	E
41-55	View of craft at high tide	NE
56-74	Elevation of central bridge (111, 112, 114)	S
75	Oblique view of central bridge (111, 112, 114)	SW
76-81	Section of broken hatch frame (103)	E
82-83	Hatches (103) and damage to deck (101)	E
84-85	Detail of fabric and fillet of central bridge (112)	S
86	Detail of buttress of central bridge (111)	W
87	Buttress face and top of central bridge (112)	S
88-89	Hatches (103) and internal bulkhead (118)	W

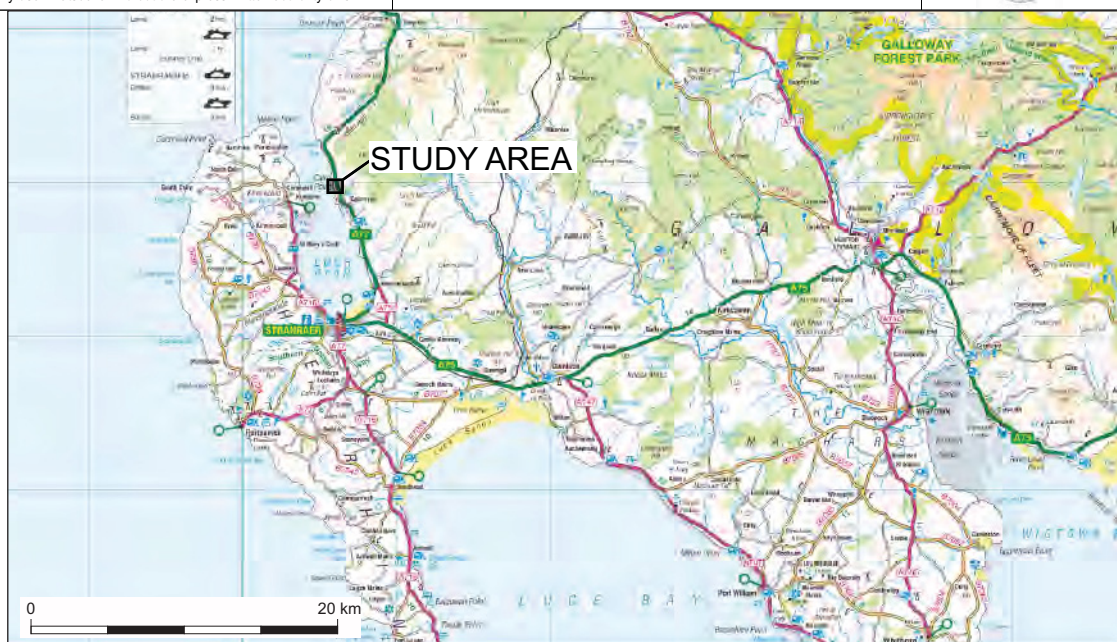
<b>Photo No.</b>	<b>Description/Contexts</b>	<b>Taken from</b>
90	Block mount (110)	W
91-94	External bracket (116)	
95-99	External hull bolts (117)	
100-101	Working shots	E
102-103	Internal bulkheads (118) and damaged floor	
104	Internal bulkhead (119)	
105	Internal bulkhead (118)	
106	Internal bulkhead (118) and underside of deck (101)	
107-108	Inside of hull (102) and bulkhead (118)	
109	Damaged hatches (103), internal bulkhead (118) and inside of hull (102)	S
110	Profile of ramp (113) from inside and internal bulkhead (118)	
111-113	General view of inaccessible craft with surviving deck fittings	E
114-117	Surviving capstan mounts, (equates to 105)	E
118-123	Surviving central side mount (equates to 108)	E
124-125	Surviving square central capstan (equates to 109)	E
126	Surviving central side mount (equates to 108)	E
127-133	Surviving groove girder on central bridge (equates to 111 & 112)	E
134-137	Central bridge on inaccessible craft (equates to 111, 112 & 114)	E
138-139	Detail of ring (equates to 107)	
140-141	Surviving square central capstan (equates to 109)	E
142	Surviving capstan mounts, (equates to 105)	E
143	Surviving capstan mounts, (equates to 105 & 109)	E
144-146	General view of inaccessible craft with surviving deck fittings	E
147-149	Surviving square central capstan (equates to 109)	E
150	Detail of ring (equates to 107)	
151-152	Detail of square hole in hatch (equates to 103) cover	
153-154	Detail of ring (equates to 107)	
155	Hatch cover on Unit 2 (equates to 103)	
156-158	Elevation of hull	S
159	Detail of patch in hull (102)	S
160-176	Elevation of hull (102)	S
177-178	General view of bow/stern of craft	E
179	Detail of bow capstans (115)	E
180-182	Detail of feet on bottom of capsized craft	

## APPENDIX 2: DISCOVERY AND EXCAVATION IN SCOTLAND ENTRY

<b>LOCAL AUTHORITY:</b>	Dumfries and Galloway
<b>PROJECT TITLE/SITE NAME:</b>	Standing Building Survey & Archaeological recording at Old House Point, Nr Cairnryan
<b>PROJECT CODE:</b>	CAIR
<b>PARISH:</b>	Inch
<b>NAME OF CONTRIBUTOR:</b>	M Cressey, S Mitchell
<b>NAME OF ORGANISATION:</b>	CFA Archaeology Ltd
<b>TYPE(S) OF PROJECT:</b>	Standing building recording and archaeological survey
<b>NMRS NO(S):</b>	NX06NE 11.09
<b>SITE/MONUMENT TYPE(S):</b>	Second World War military pier construction yard and Mulberry fabrication yard
<b>SIGNIFICANT FINDS:</b>	Mulberry Harbour Beetle craft and concrete Spud pontoon slipway
<b>NGR (2 letters, 6 figures)</b>	NX 0577 7013
<b>START DATE (this season)</b>	January 2010
<b>END DATE (this season)</b>	January 2010
<b>PREVIOUS WORK (incl. <i>DES</i> ref.)</b>	None
<b>MAIN (NARRATIVE) DESCRIPTION:</b> (May include information from other fields)	Old House Point is situated approximately 1km to the north of the ferry port of Cairnryan. Prior to 1941 the site contained a cottage and the shed of the former Loch Ryan Oyster co. After 1941 the site became a military fabrication yard that was established to make cast concrete pier parts for the Cairnryan Military Harbour. In 1943 the site became one of several Mulberry Harbour yards in which various components of Mulberry were fabricated prior to being taken across the English Channel to Normandy following the D-Day landings. Systematic archaeological field survey and standing building recording was carried out prior to the proposed construction of a new ferry terminal. The work involved recording the position of the upstanding remains of a collection of features associated with the 1941 pile construction yard and the later Mulberry fabrication site on the shore of Loch Ryan. The remains of the pier fabrication yard comprised two rectilinear concrete casting beds each over 100m long and stockpiles of pier parts which lay abandoned on either side. One of six beetle craft was extensively surveyed and recorded. Various degraded building foundation blocks were also recorded. The cottage and a WW2 electric transformer block were afforded a Level 2 survey. In total forty-one features were recorded.
<b>PROPOSED FUTURE WORK:</b>	None
<b>SPONSOR OR FUNDING BODY:</b>	Environmental Resource Management

<b>ADDRESS OF MAIN CONTRIBUTOR:</b>	CFA Archaeology Ltd, Old Engine House, Eskmills Park, Musselburgh, EH21 7PQ.
<b>ARCHIVE LOCATION</b>	Archive to be deposited in NMRS, Reports lodged with SMR and NMRS.





Key:	Fig. No: 1	Revision: A	Client: ERM
	Title: Location Maps		
	Project: Old House Point Survey		
Scale: As Above			



CFA ARCHAEOLOGY LTD  
The Old Engine House  
Eskmills Park  
Musselburgh  
East Lothian, EH21 7PQ  
T: 0151 203 4380  
F: 0151 203 4381  
E: info@cfa-archaeology.co.uk  
W: www.cfa-archaeology.co.uk





Figure 2a - Enlarged extract from the 1849 First Edition Ordnance Survey Map, sheets 5 and 10.



Figure 2b - Enlarged extract from the 1957 Edition Ordnance Survey Map

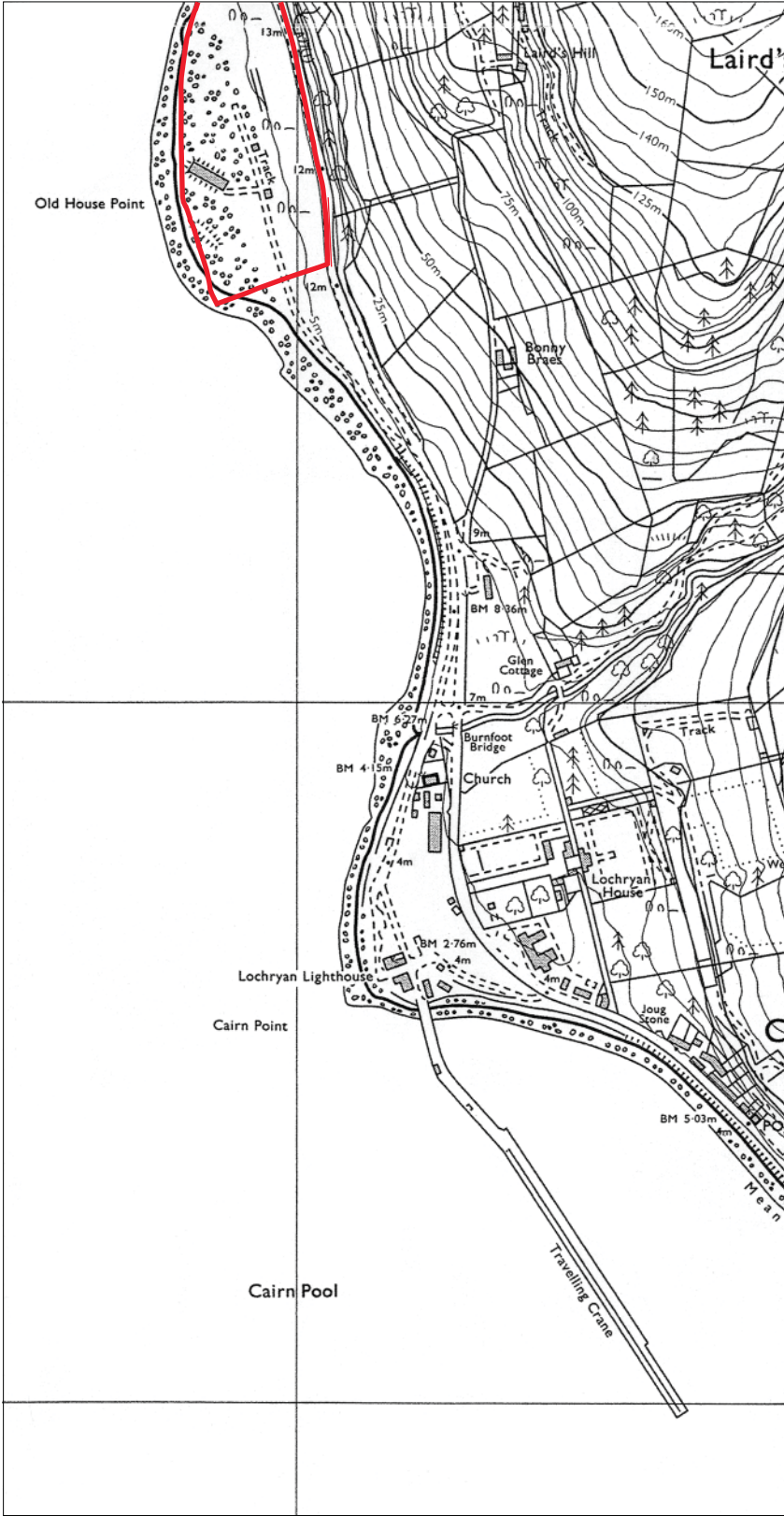


Figure 2c - Enlarged extract from the modern 1:10,000 1978 Edition Ordnance Survey Map



Key:  
Approximate Boundary of Survey Area



Fig. No: 2a-c Revision: A

Title: Historic Mapping

Project: Old House Point Survey

Scale:

Client: ERM

Drawn by: SW Report No: 1731





3a



3b



3c

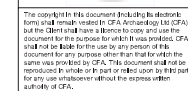
Key:	Fig. No:	3a-c	Revision:	A
	Title:	Historical postcards		
	Project:	Old House Point Sur		



CFA ARCHAEOLOGY LTD  
The Old Engine House,  
Esplanade Park,  
Musselburgh,  
East Lothian, EH21 7PC.

t: 0131 503 4380  
f: 0131 503 4381  
e: info@cfa-archaeology.co.uk  
w: www.cfa-archaeology.co.uk

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Key:

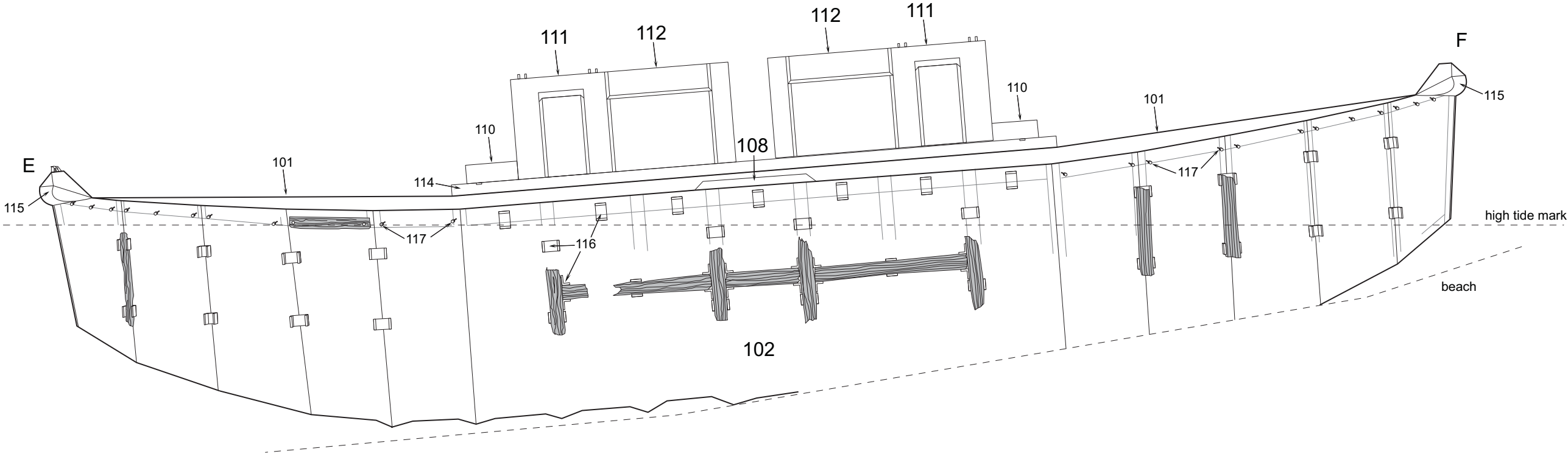
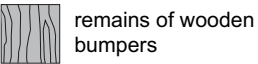


Fig. No: 5a Revision: A

Title:  
South facing elevation of Beetle  
Craft

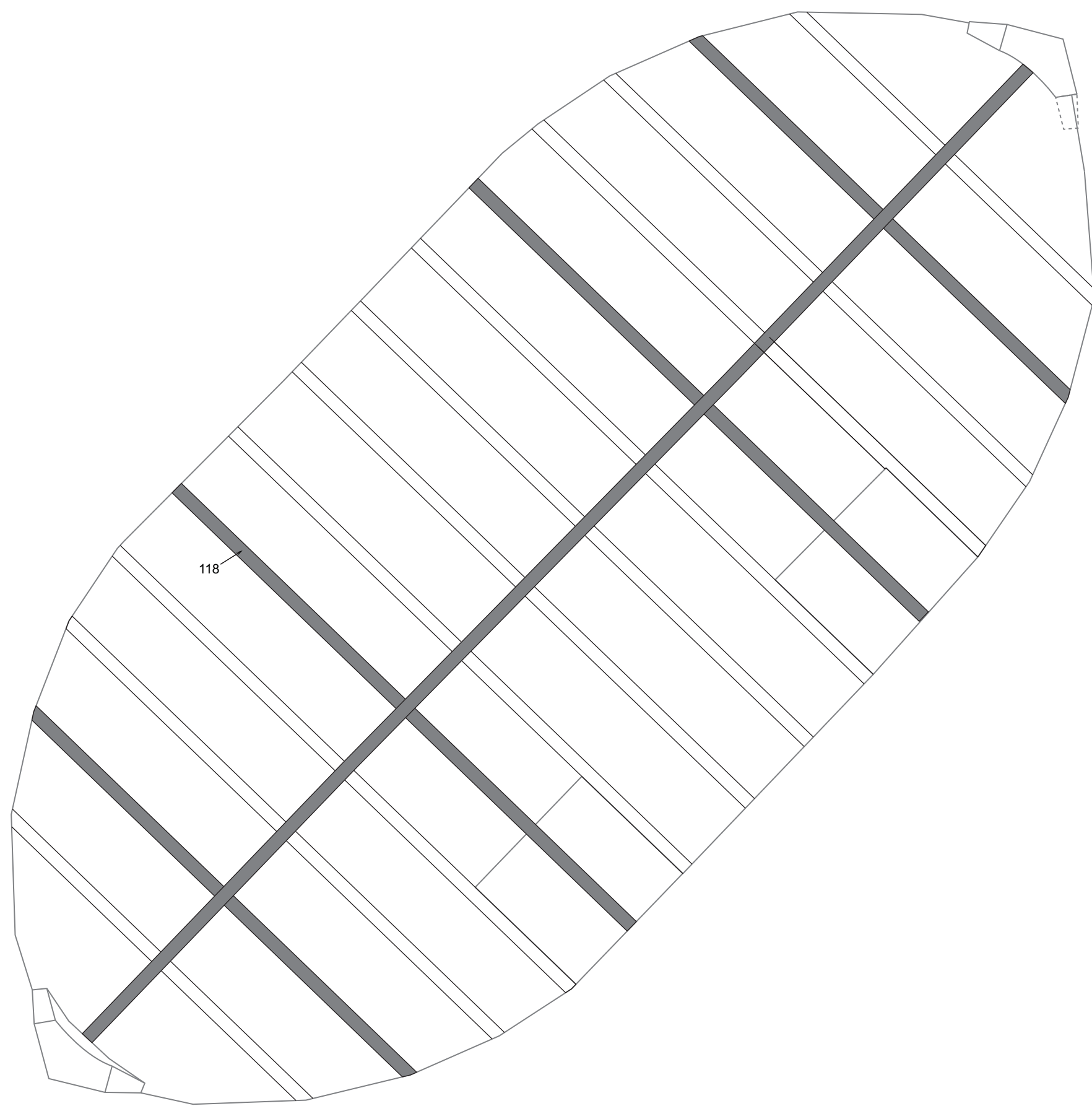
Project:  
Old House Point Survey

Scale:  
1:50 @ A3

Client:  
ERM

Drawn by: GC Report No: 1731





118



Key:



Fig. No:	5b	Revision:	A
Title:	Plan of Beetle Crafts internal bulkheads		
Project:	Old House Point Survey		
Scale:	1:50 @ A3		
Client:	ERM		
Drawn by:	GC	Report No:	1731



Key:



Fig. No: 5c Revision: A

Title: Plan of Beetle Craft

Project: Old House Point Survey

Scale: 1:50 @ A3

Client: ERM

Drawn by: GC Report No: 1731





Key:

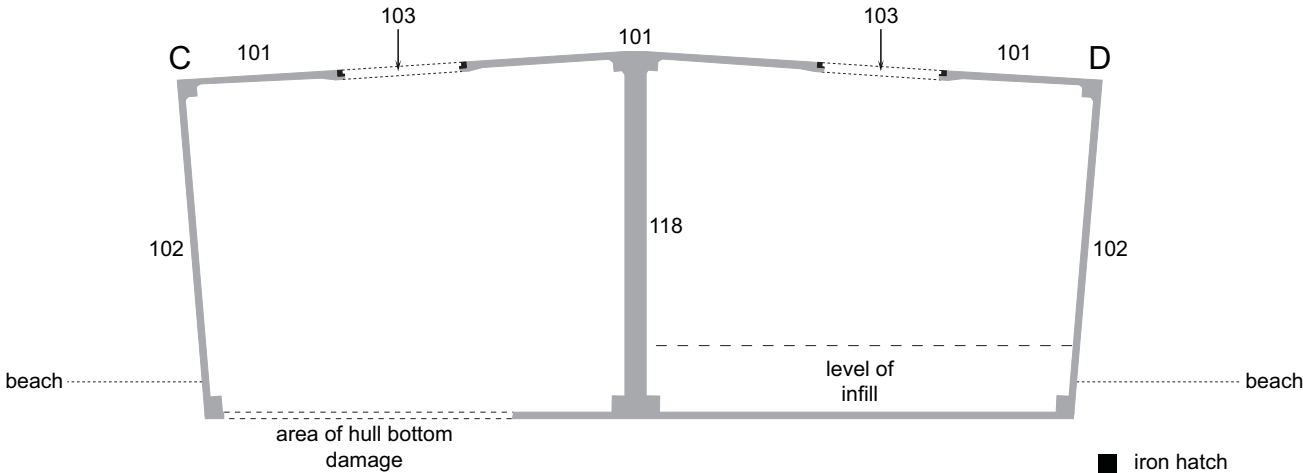
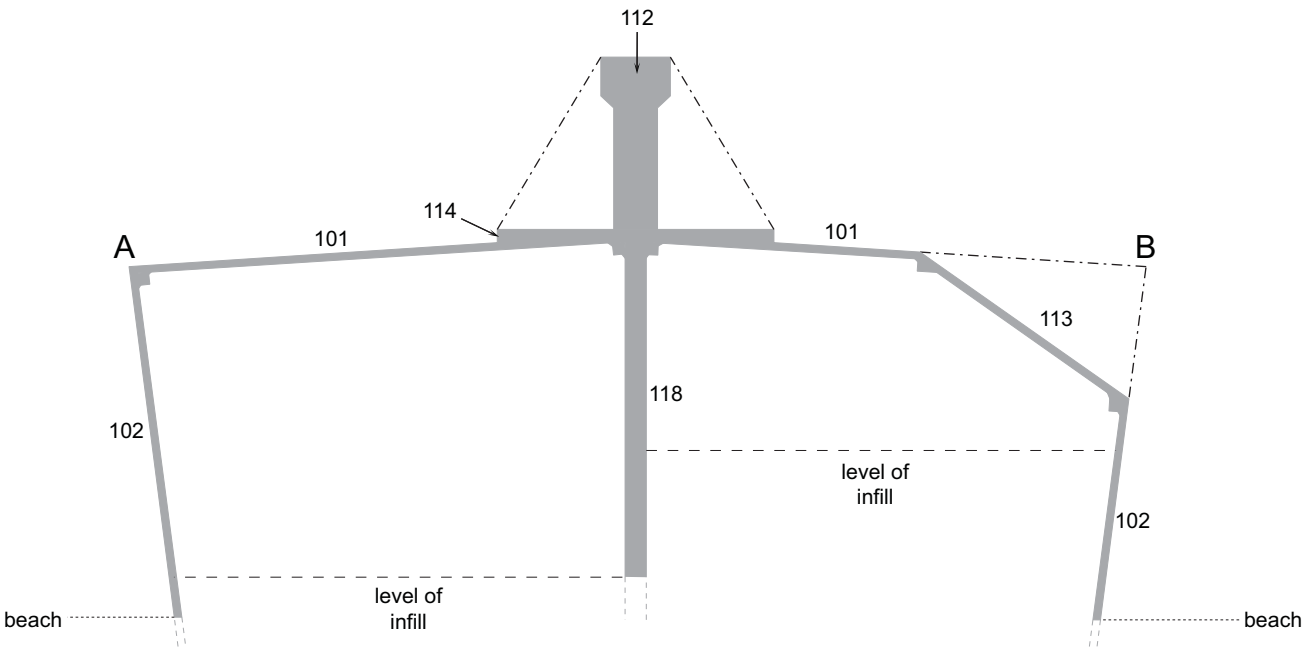


Fig. No:	5d	Revision:	A
Title:	Sections through Beetlecraft		
Project:	Old House Point Survey		
Scale:	1:50 @ A3		
Client:	ERM		
Drawn by:	GC	Report No:	1731



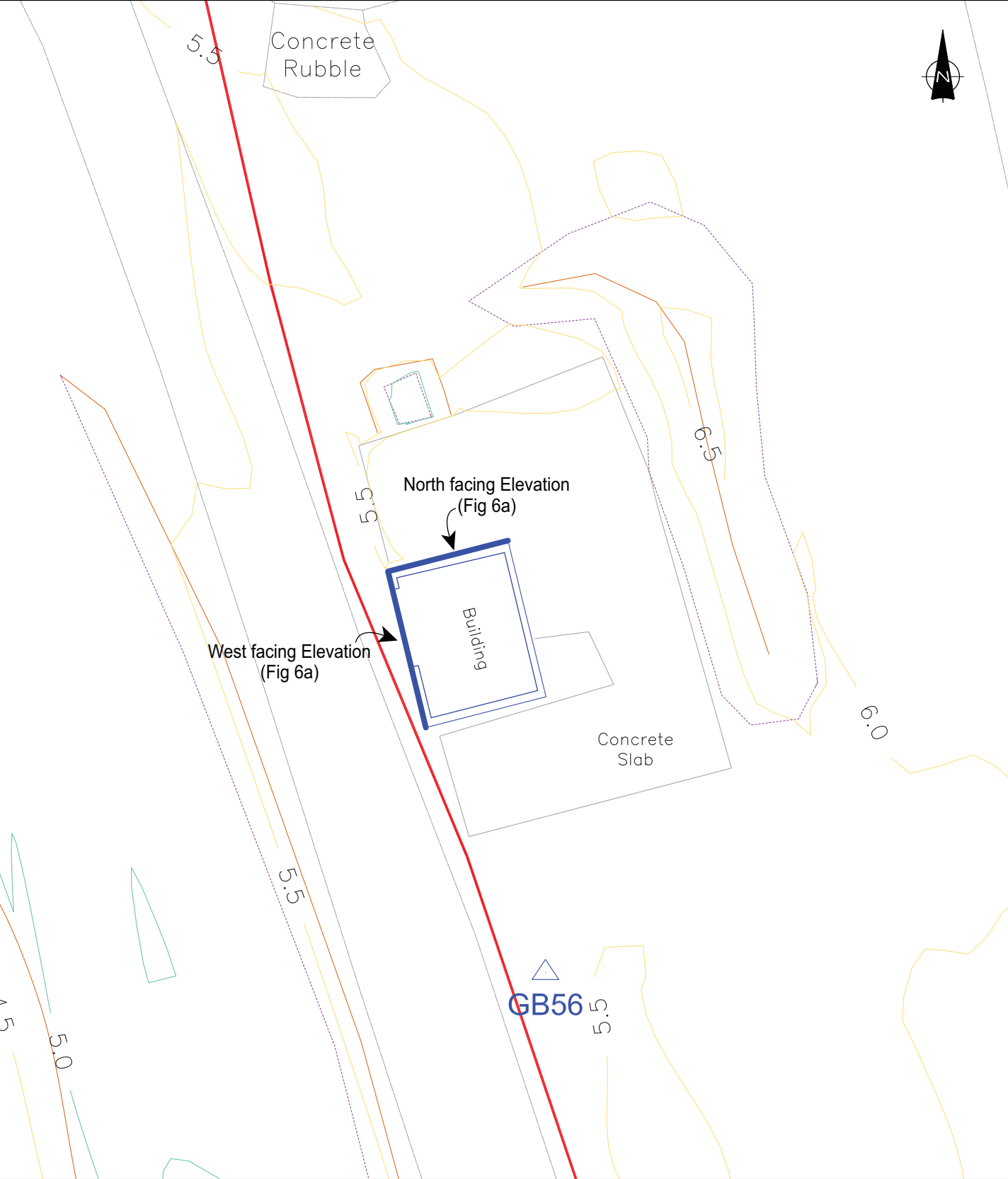


Figure 6a - ground plan

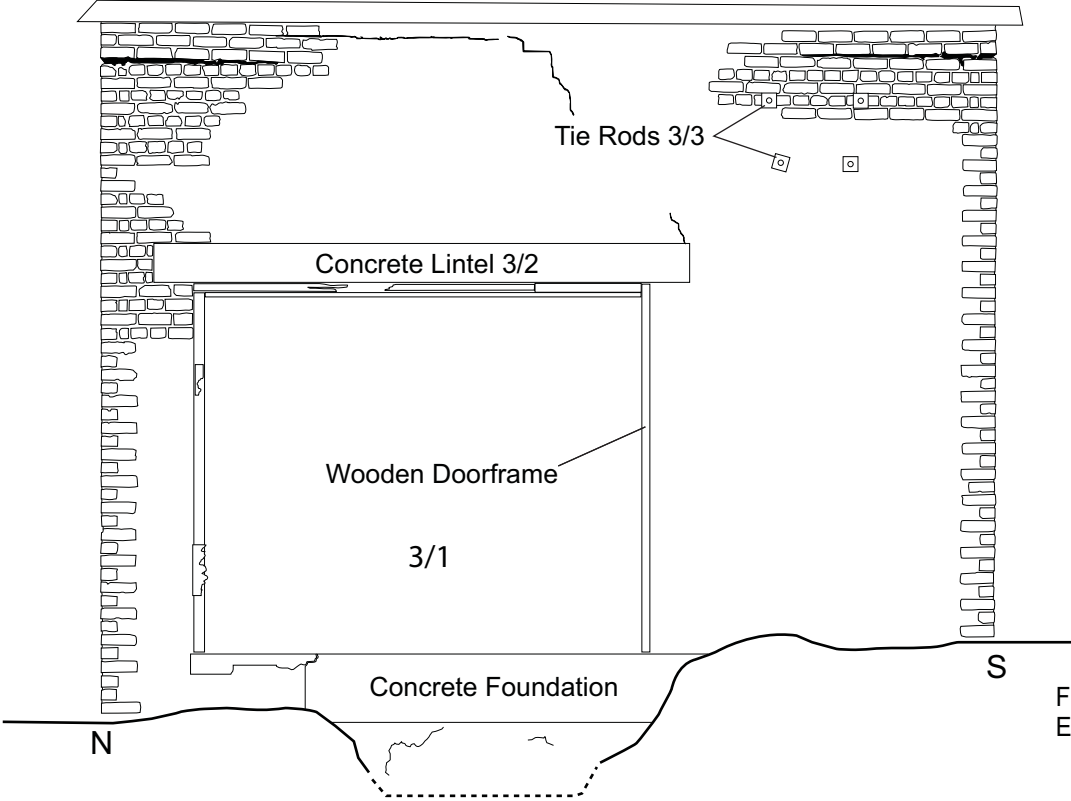


Figure 6b - West facing Elevation

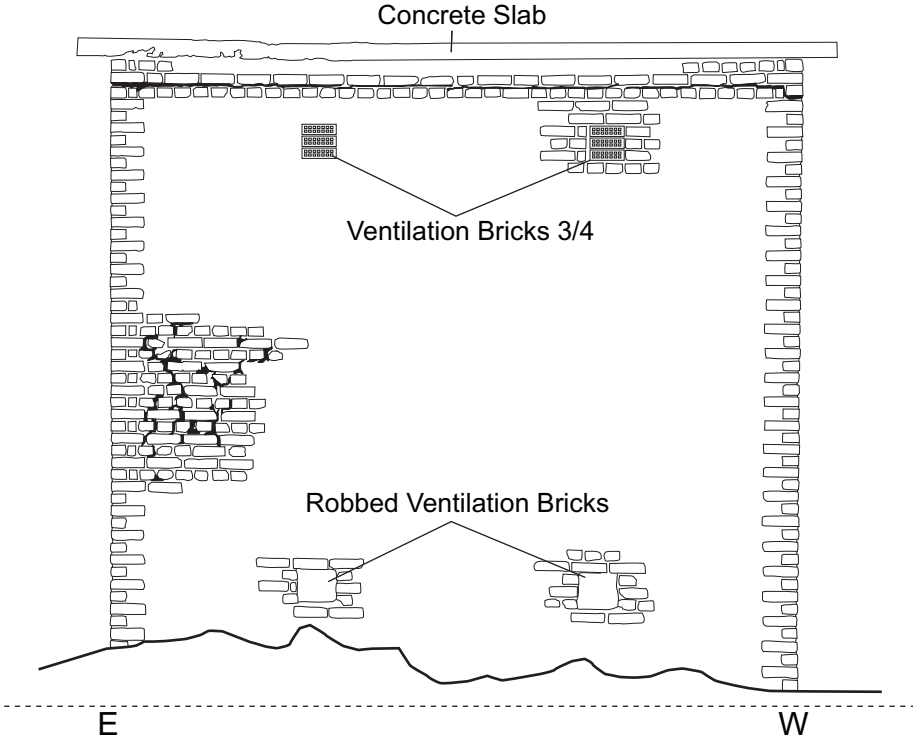


Figure 6c - North facing Elevation

0 5m Scale 1:50

Client: ERM

Drawing No.: Figure 6a-c

Rev: A

Project: Old House Point Survey

Title: Survey of the former Transformer Block



Design: GC

CAD: KH

Chk'd: MC

Report No: 1731

Scale: as annotated

Revision: 1

Date: 28/01/2010



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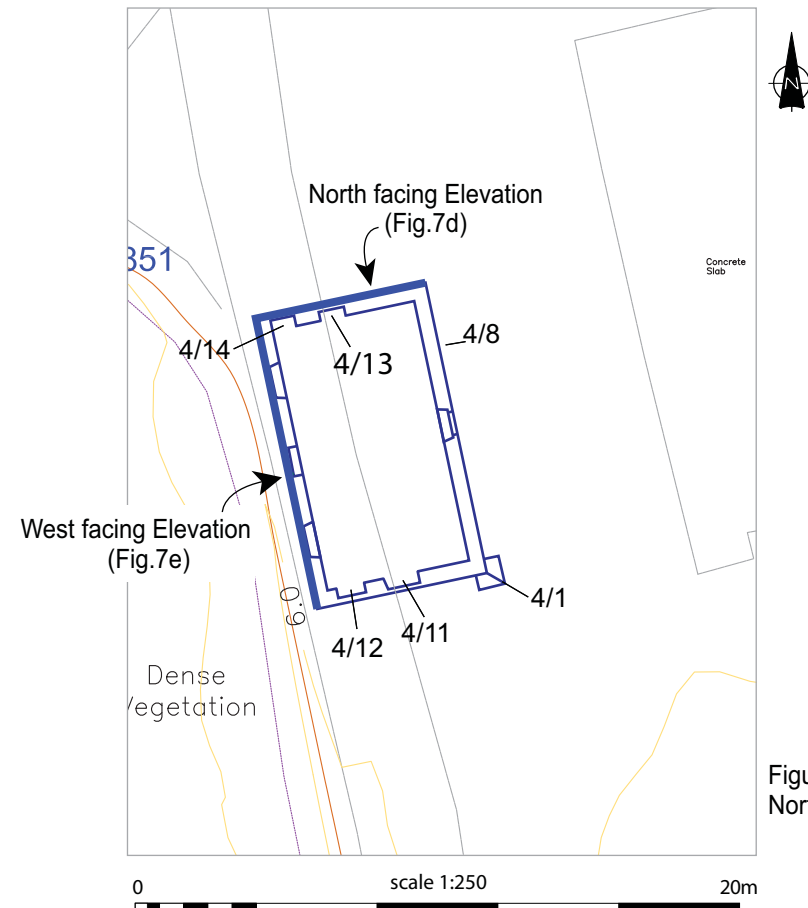


Figure 7a - Interior of North facing Elevation



Figure 7b - Interior of North facing Elevation



Figure 7c - Interior of South facing Elevation

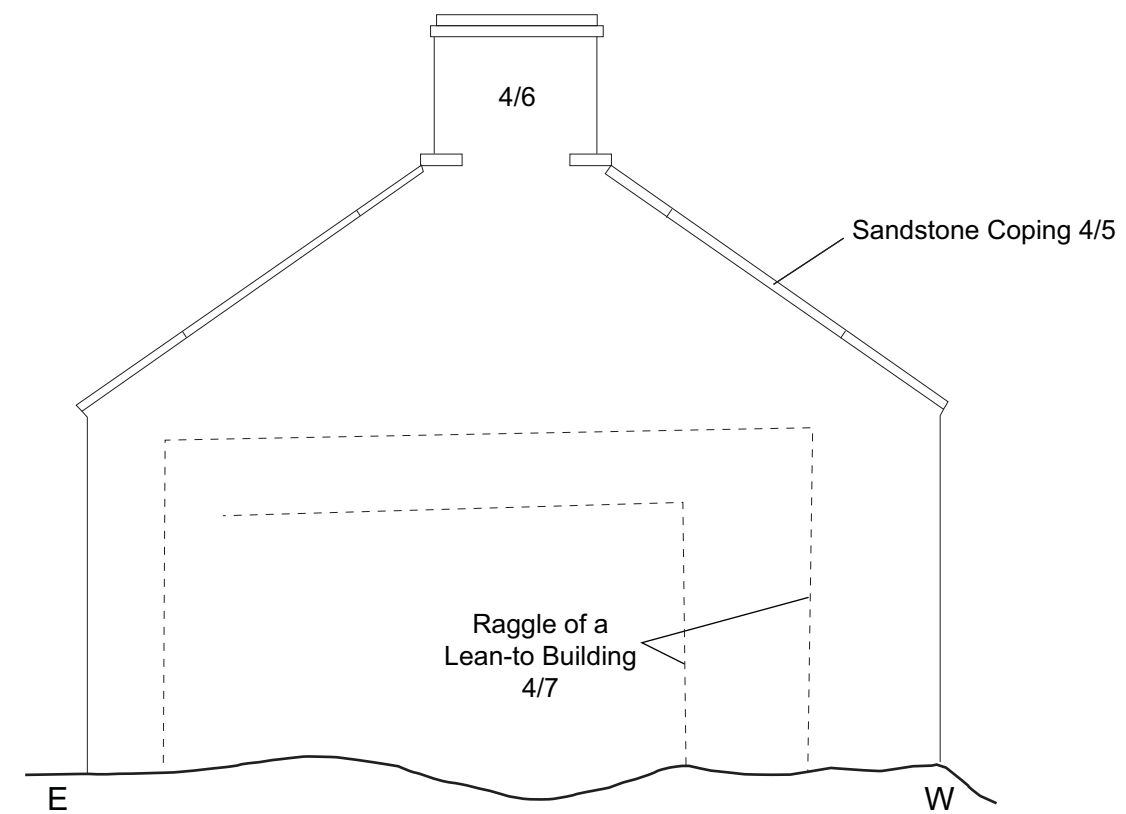


Figure 7d - North facing Elevation

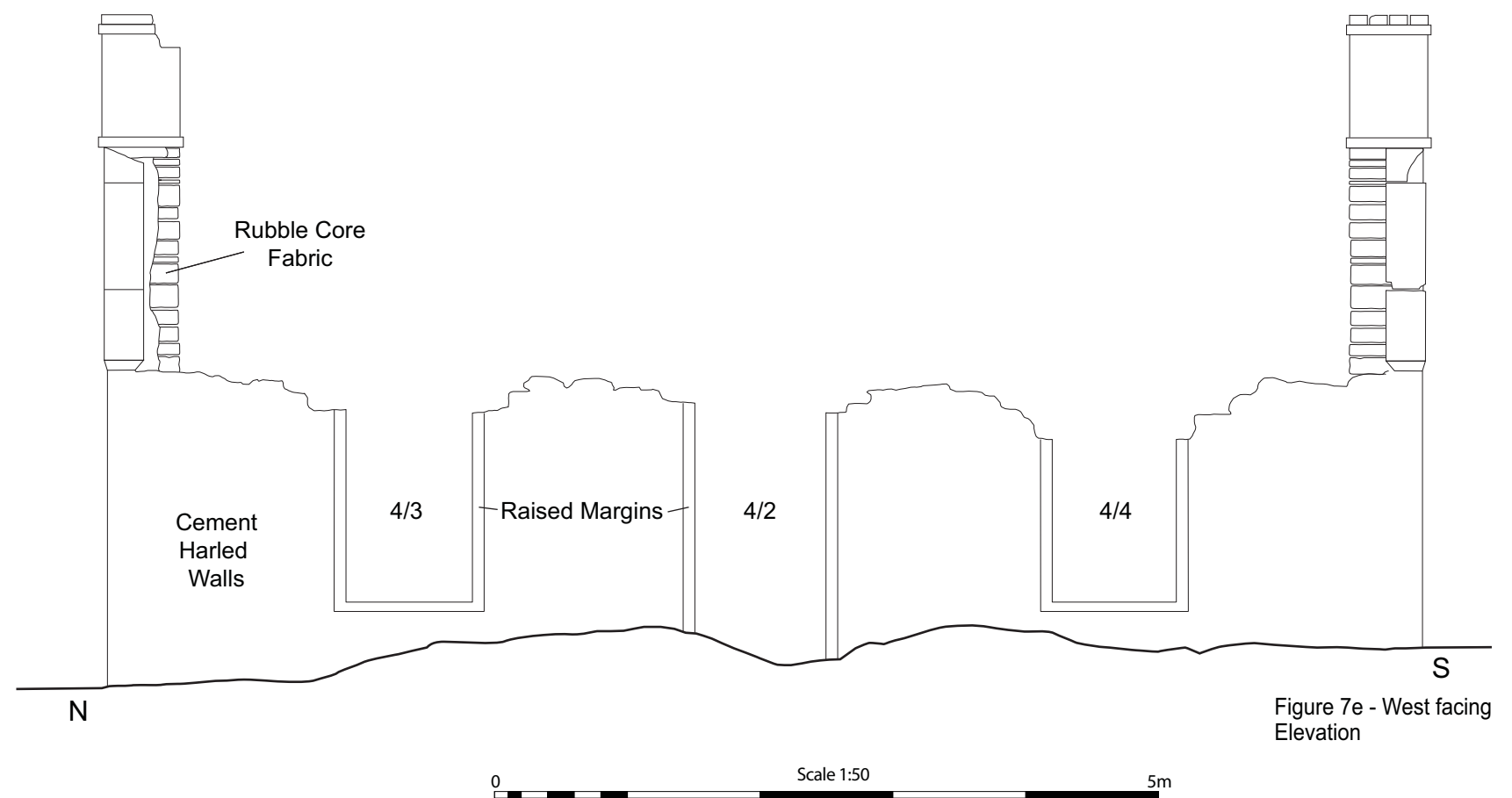


Figure 7e - West facing Elevation



Client: ERM	Drawing No.: Figure 7a-e	Rev: A	 <p>CFA ARCHAEOLOGY LTD The Old Engine House Eskmills Park Musselburgh East Lothian EH21 7PD  t: 0131 273 4380 f: 0131 273 4381 e: info@cfa-archaeology.co.uk w: www.cfa-archaeology.co.uk</p>	Design: GC	CAD: KH	
				Chk'd: MC	Report No: 1731	
				Scale: as annotated		
				Revision: 1	Date: 28/01/2010	
Project: Old House Point Survey	Title: Survey of the former Oyster rearing farm cottage			The copyright in this document (including its electronic form) shall remain vested in CFA Archaeology Ltd (CFA) but the Client shall have a licence to copy and use the document for the purpose for which it was provided. CFA shall not be liable for the use by any person of this document for any purpose other than that for which the same was provided by CFA. This document shall not be reproduced in whole or in part or relied upon by third parties for any use whatsoever without the express written authority of CFA.		



Plate 1 - Vertical 1945 RAF Aerial Photograph



Plate 2 - Vertical 1946 RAF Aerial Photograph


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	Title: Plate 1 - 2: Vertical 1945 & 1946 RAF Aerial Photograph			
	Project: Old House Point Survey			
Scale:				Drawn by: GC
			Page No:	Report No: 1731





Plate 3: Looking south-west with a Spud Craft under construction with storage sheds in the foreground

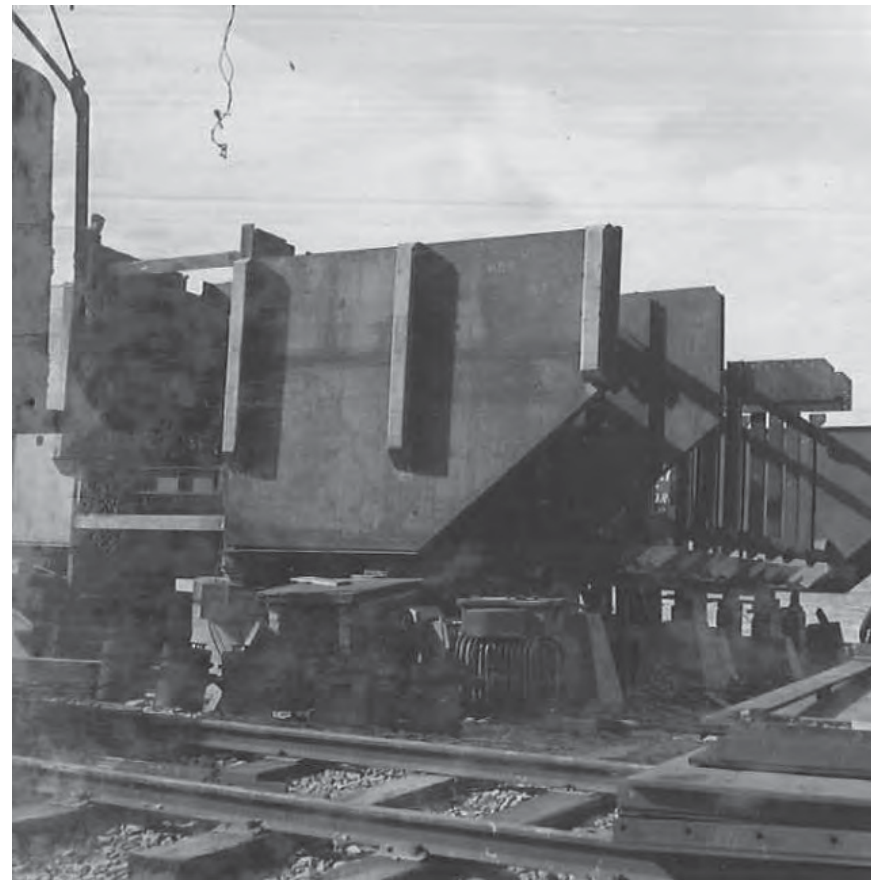


Plate 4: Close-up detail of the bulkhead sections of the prow resting on concrete blocks



Plate 5: The hull of the Spud Craft and the bulkheads in the process of being plated

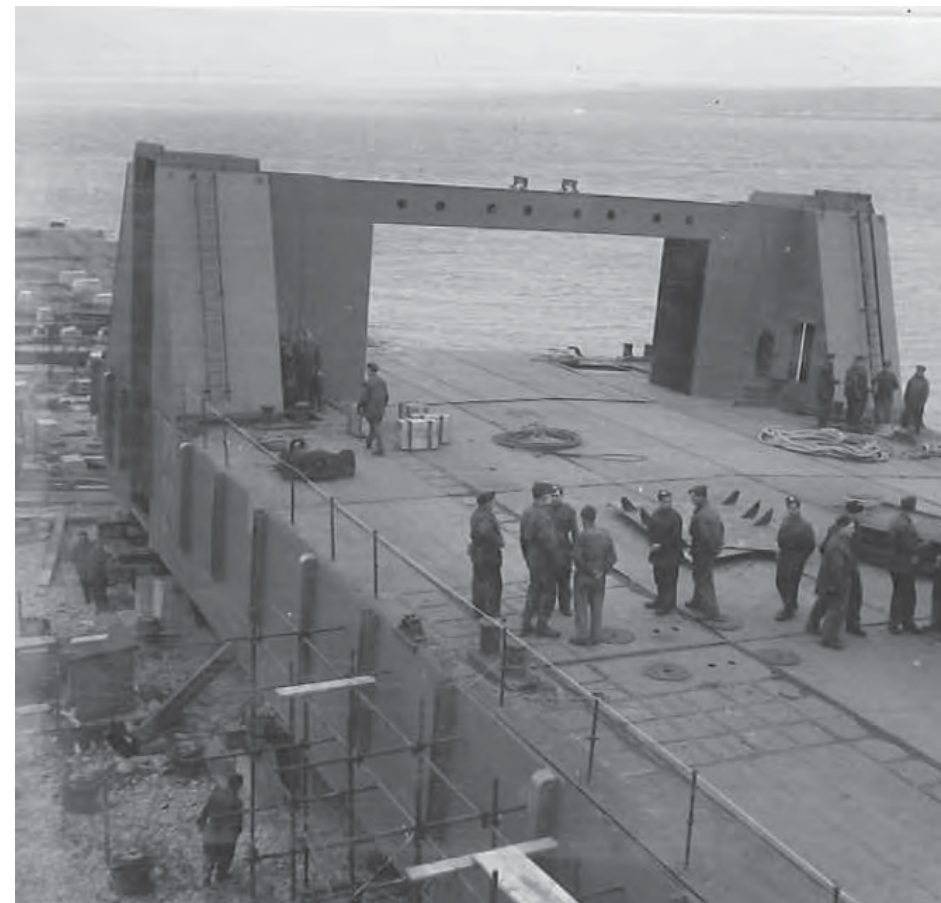



Plate 6: Royal engineers on the deck of the Spud Craft



Key:



Fig. No:	Revision: A
Title:	Plates 3-6
Project:	Old House Point Survey
Scale:	
Client:	ERM
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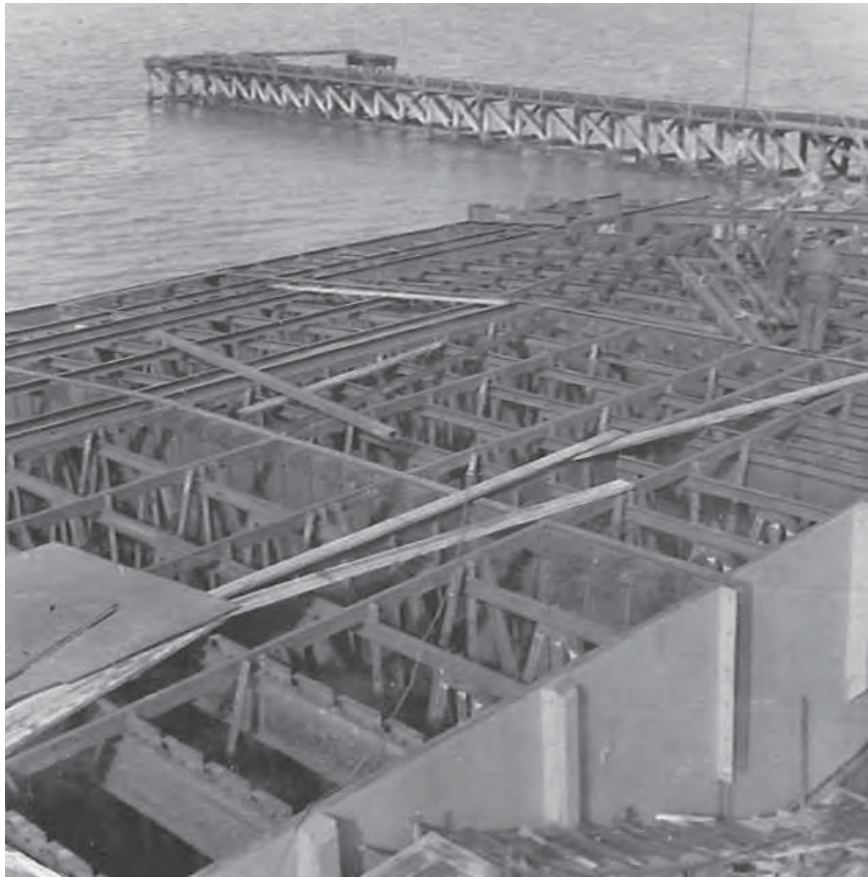


Plate 7: Bulkhead detail of the Spud Craft in the foreground with wooden pier in the distance

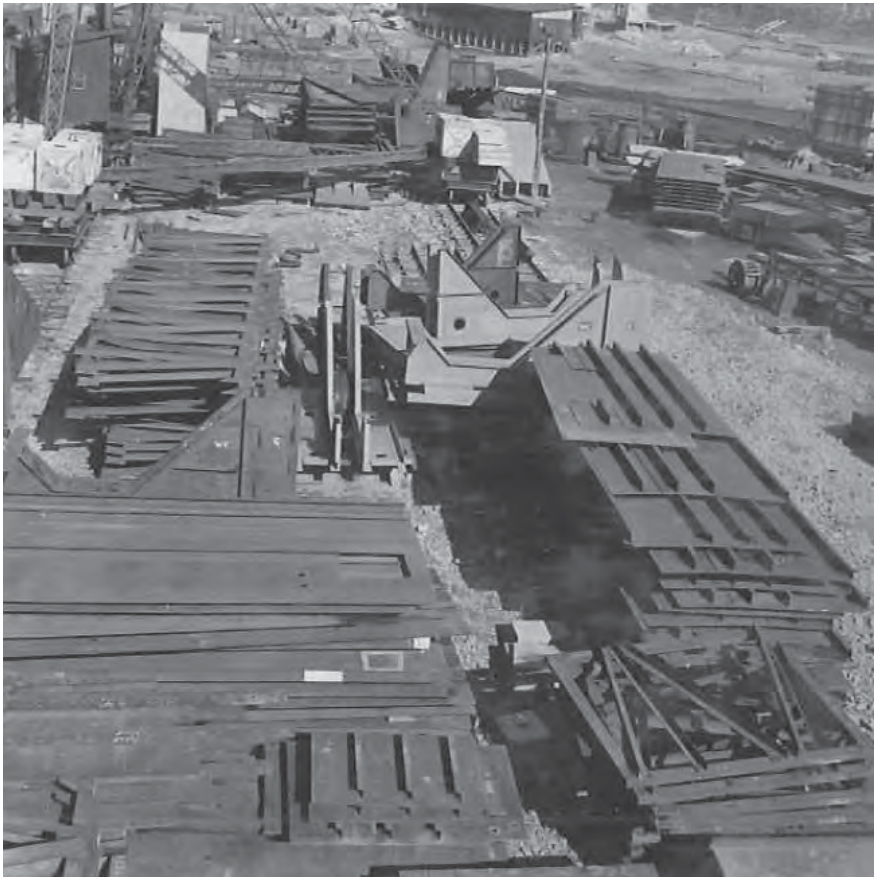


Plate 8: Stockpiles of bulkheads and other steelwork. Note ballast blocks on the mobile crane

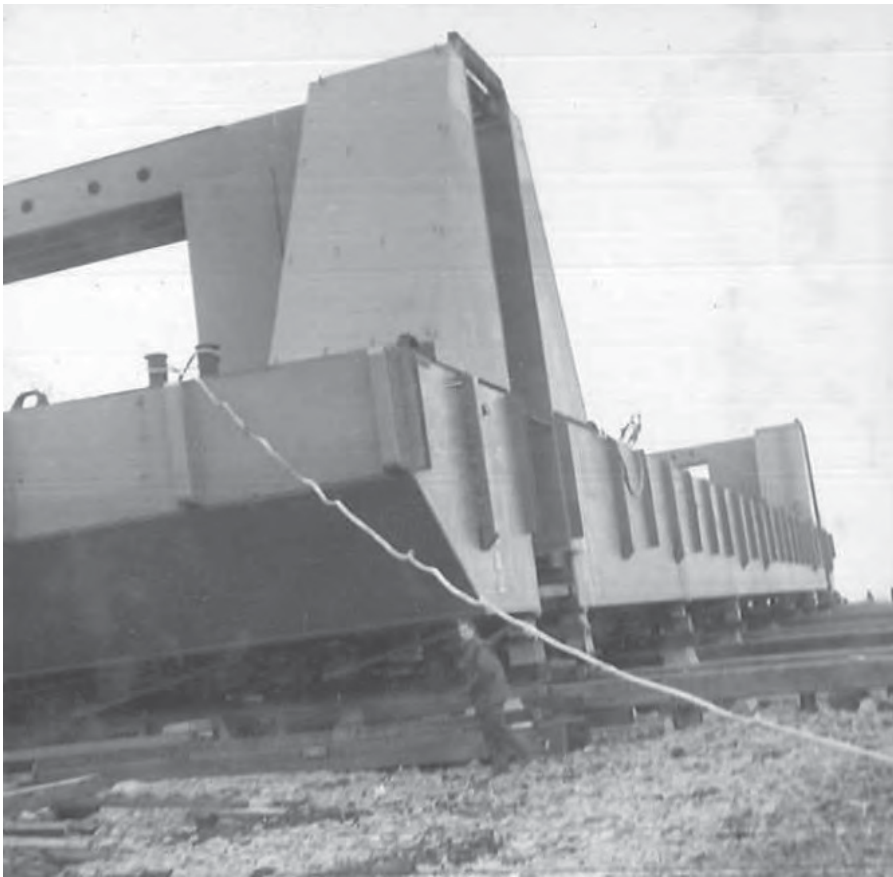


Plate 9: Completed Spud pontoon (without its legs) resting on the slipway prior to its launching

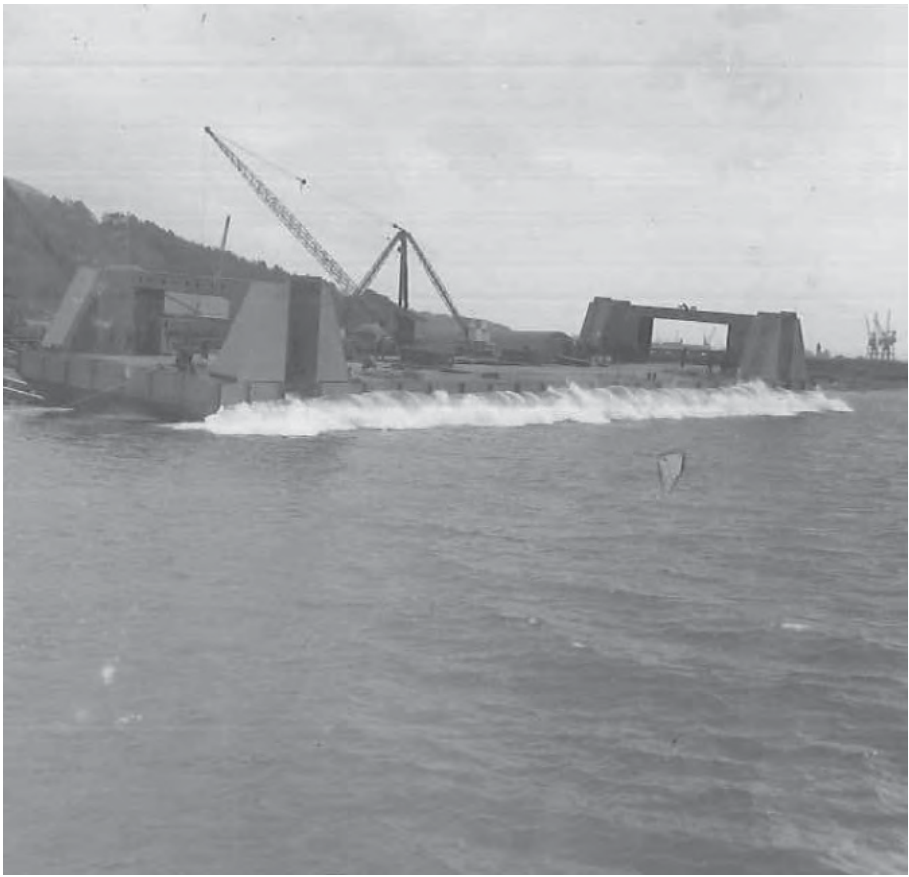


Plate 10: A Spud pontoon entering Loch Ryan



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Fig. No:	Revision: A
Title:	Plates 7-10
Project:	Old House Point Survey
Scale:	
Client:	ERM
Drawn by: SW	Report No: 1731



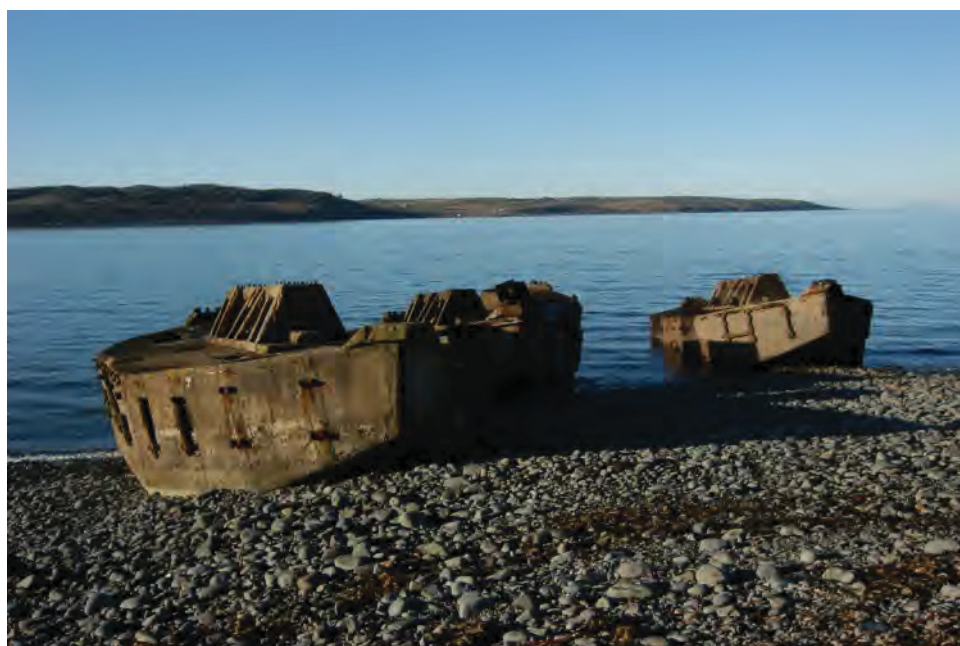


Plate 11 - Four on the six Mulberry Harbour Beetle Craft exposed during low tide

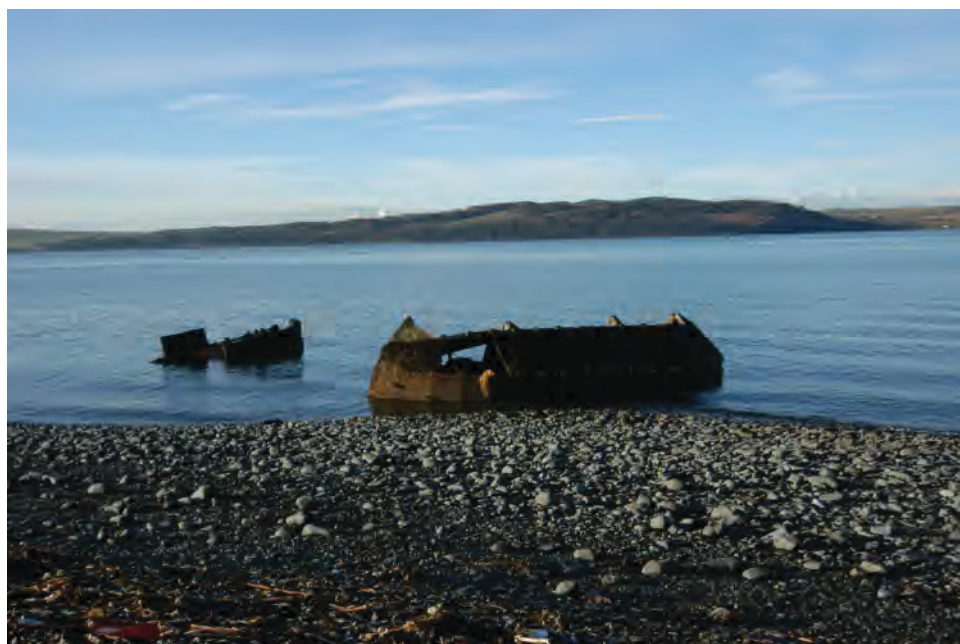


Plate 12 - Two capsized Beetle Craft


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	Title:			
	Project: Old House Point Survey			
Scale:				Drawn by: GC Page No: Report No: 1731



Plate 13 - View of internal bulkheads and floor



Plate 14 - Beetle Craft ramp detail


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	Title:									
	Project:	Old House Point Survey								
Scale:					Drawn by:	GC	Page No:		Report No:	1731





Plate 15 - Capston fittings detail on bow of Beetle Craft, 115



Plate 16 -Superstructure on deck of Beetle Craft, 110,111,112,114


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	Title:					
	Project:	Old House Point Survey				
Scale:				Drawn by: GC	Page No:	Report No: 1731



Plate 17 - Paired hatches, 103



Plate 18 - Double capston mounting plate, 105


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	Title:			
	Project: Old House Point Survey			
Scale:				Drawn by: GC Page No: Report No: 1731





Plate 19 - Fixing plate, 104



Plate 20 - Ring and holding plate, 107



Plate 21 - Central mount, 108



Plate 22 - Surviving central fitting on 108


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	Title:			
	Project: Old House Point Survey			
Scale:				Drawn by: GC Page No: Report No: 1731





Plate 23 - Square capston plate, 109


Key:	Fig. No:	Revision: A	Client: ERM	 <div>CFA ARCHAEOLOGY LTD The Old Engine House, Essex Mill Park, Musselburgh, East Lothian, EH21 7PC.  t: 0151 503 4380 f: 0151 503 4381 e: info@cfa-archaeology.co.uk w: www.cfa-archaeology.co.uk</div>		
	Title:					
	Project:	Old House Point Survey				
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Plate 24 - Feature 4, North and West facing elevation of the cottage

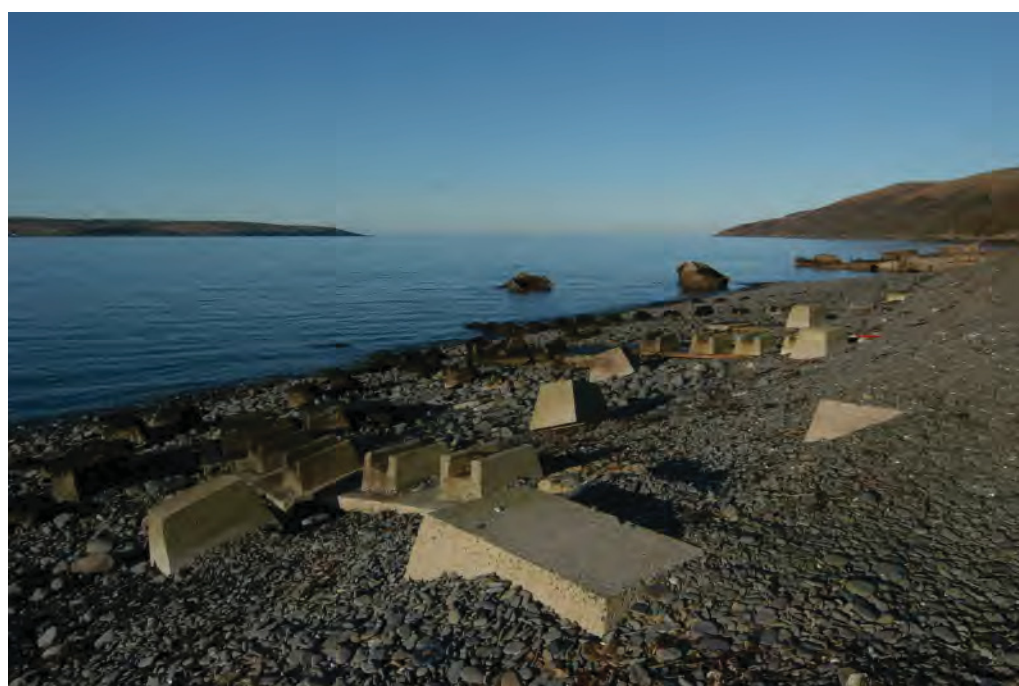


Plate 25 - Feature 2, in situ concrete blocks from the Spud pontoon launch slip within the inter-tidal zone


Key:	Fig. No:	Revision: A	Client: ERM	 <p>CFA ARCHAEOLOGY LTD The Old Engine House, Esplanade Park, Musselburgh, East Lothian, EH21 7PC. t: 0131 503 4380 f: 0131 503 4381 e: info@cfa-archaeology.co.uk w: www.cfa-archaeology.co.uk</p>
	Title:	Plates 24-25		
	Project:	Old House Point Survey		
Scale:				Drawn by: GC Page No: Report No: 1731





Plate 26 - Feature 2, in situ concrete blocks that supported the Spud pontoon during fabrication



Plate 27 - Feature 3, West facing elevation of the brick built transformer block


Key:	Fig. No:	E-F	Revision:	A	Client:	ERM	 <div>CFA ARCHAEOLOGY LTD The Old Engine House, Essexville Park, Musselburgh, East Lothian, EH21 7PC.  t: 0151 503 4380 f: 0151 503 4381 e: info@cfa-archaeology.co.uk w: www.cfa-archaeology.co.uk</div>				
	Title:	Plates 26-27									
	Project:	Old House Point Survey									
Scale:						Drawn by:	GC	Page No:		Report No:	1731



Plate 28 - Feature 3, South West facing elevation of the brick built transformer block



Plate 29 - Feature 7, the former mess-hut chimney and floor


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	Title:	Plates 28-29				
	Project:	Old House Point Survey				
Scale:				Drawn by: GC	Page No:	Report No: 1731





Plate 30 - Feature 12, building foundations and engine plinth



Plate 31- Feature 7, South facing elevation of of the cottage


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	Title:	Plates 30-31								
	Project:	Old House Point Survey								
Scale:					Drawn by:	GC	Page No:		Report No:	1731



Plate 32 - Feature 9, concrete casting bed looking north



Plate 33 - Feature 9/3, a stock-pile of concrete pier decks


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	Title:  Plates 32-33							
	Project:  Old House Point Survey							
Scale:						Drawn by: GC	Page No:	Report No: 1731






Plate 34 - Feature 9/4, a pair of concrete pier stanchions



Plate 35 - Feature 8/4, a pair of concrete anchor blocks

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	Title:	Plates 34-35			
	Project:	Old House Point Survey			
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Plate 36 - Feature 10, discarded pier pile with the inscription 1500/1600 10/6/41 No.1



Plate 37 - Feature 20, concrete building foundations



Key:	Fig. No:	Revision: A	Client: ERM	 <p>CFA ARCHAEOLOGY LTD The Old Engine House, Esplanade Park, Musselburgh, East Lothian, EH21 7PC. t: 0131 503 4380 f: 0131 503 4381 e: info@cfa-archaeology.co.uk w: www.cfa-archaeology.co.uk</p>		
	Title:	Plate 36-37				
	Project:	Old House Point Survey				
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Plate 38 - Feature 22, concrete ballast block

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	Title:	Plate 38				
	Project:	Old House Point Survey				
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