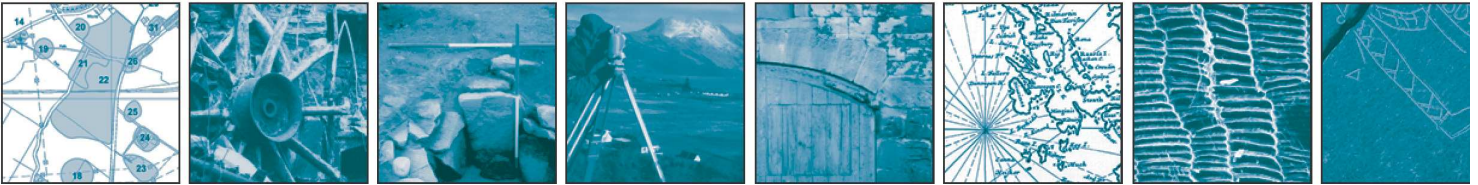


Date: August 2007
Client: Sea & Land and Power Energy Ltd.
Project Code: IKH07



Inchkeith Island, Firth of Forth, Fife: Results of an Archaeological Survey & Assessment

Dan Atkinson

PROJECT SUMMARY SHEET (IKH07)

Client	Sea & Land Power and Energy Ltd.
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Schedule	
Fieldwork	August 2007
Report	August 2007

Summary

Sea & Land Power and Energy Ltd. commissioned Headland Archaeology Ltd to undertake an archaeological survey and assessment of an area for a proposed temporary anemometer mast and anchor points at the south end of Inchkeith Island in the Firth of Forth. As Inchkeith is a Scheduled Ancient Monument (SAM 3838), Scheduled Monument Consent is required for the installation of the anemometer from Historic Scotland, acting on behalf of the Scottish Ministers. The assessment identified thirteen structures and four areas of archaeological interest that lie within the assessment area, which formed an area approximately 90m by 60m or 5400m². The survey succeeded in plotting these structures and features within a general topographic survey in relation to the proposed location of the mast plate and 5 anchor points. These locations were assessed as to the level of potential impacts that their introduction may have on archaeological features. This has resulted in a minor modification of the proposed location in order to minimize any impacts. The revised locations are included in this assessment.

**INCHKEITH ISLAND, FIRTH OF FORTH, FIFE (IKH07)
RESULTS OF AN ARCHAEOLOGICAL SURVEY & ASSESSMENT**

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1 INTRODUCTION

This document presents the results of an Archaeological Survey and Assessment in connection with the proposed introduction of a temporary anemometer mast on the southern end of Inchkeith Island in the Firth of Forth, Fife. As Inchkeith Island is a Scheduled Ancient Monument (SAM 3838), the client, Sea & Land Power and Energy Ltd., requires Scheduled Monument Consent before Historic Scotland, on behalf of the Scottish Ministers, can permit the introduction of the proposed mast. It was agreed with Historic Scotland that an assessment of the potential impact of the scheme on any archaeological remains be carried out to help inform upon a decision with regards to submission of an application for Scheduled Monument Consent, and provide the information required to respond to Fife Council with comments on the current planning application. The work was carried out between the 22nd and 23rd August 2007 in fine weather.

2 SITE LOCATION AND DESCRIPTION (Figure 1)

The Island of Inchkeith is located in the Firth of Forth, approximately midway between Kirkcaldy on the north shore and the Port of Leith to the south. The Island is orientated roughly north to south and is approximately 1km long and ½ km wide. The Island is dominated by a central spine of high ground, reaching the highest point (59m OD) towards the northern end. The Island comprises three main headlands; the East and West Stell at the north end and one at the southern end. On the whole, the shore comprises rocky, bedrock outcrops and areas of boulder strewn beaches backed by steep cliffs.

The area under assessment measured approximately 90m by 60m, or 5400m², and is located at the southern end of the Island; to the north of the rock-cut ditch of the south fort rising upslope to the former brick and concrete anti-aircraft installation (see Structure 1 below). The area was bounded to the east by the cliff edge and to the west by a former metalled track or road.

3 HISTORICAL BACKGROUND

Although the early history of Inchkeith Island is perhaps little understood, its dominant position, both geographically and strategically, suggests that the Island will have been utilized from early times. Since the Roman period the Firth of Forth has been an influential base for maritime activity, and an important centre for trade, commerce, and more recently, military and naval activities.

Other than references to the use of the Island as a quarantine and burial ground for plague victims in the 15th and 16th centuries, Inchkeith first rose to prominence with the building of a Franco-Scottish fort in the 16th century. The fort remained the only defences until a proposal in the 1850s to build two heavy gun batteries on Inchkeith. Despite approval of the plans, the batteries were not completed until the early 1880s. The planned defences were increased from two batteries to three, comprising self-contained forts located on the north, west and south headlands.

With the changing political climate throughout the late 19th and early 20th century the defences located on the Forth Islands were constantly modified, especially in response to the increasing threat from Germany and the building of Rosyth Dockyard which began in 1909. By the turn of the century the defences on Inchkeith included batteries established outside the three forts culminating in six battery groups. The southern battery was known as A Group which in 1915 was equipped with two 4.7" BL Mark VII guns, replaced in 1916 with 6" guns.

The area immediately to the north of the south fort (the area of assessment) remained little developed during this period with the solitary presence of a 'Battery Command Post' and 'Telephone Room' to direct fire from the south fort, and stores and gun platforms for practice batteries along the margin of the east cliff. The area remained as such until 1939 and the outbreak of the Second World War with the introduction of stores and barracks blocks and an AA and light installation upslope to the north. Following the cessation of hostilities, the facilities fell into gradual disrepair culminating in the current condition of the remains.

4 ARCHAEOLOGICAL BACKGROUND

Archaeological intervention on the site has been minimal, the most recent of which comprised an evaluation/excavation and survey of several features on the Island (Pollard *et al* 2001). This included the excavation of the 'Battery Command Post' located within the assessment area and noted as Structure 9 below. Other archaeological investigations on the island include the discovery of a kitchen midden in the late 19th century and again in the 1990s (Grieve 1873; Mowat *et al* 1973).

5 OBJECTIVES

The objectives of the assessment were:

- to survey in detail any structures, features and areas of archaeological interest within the assessment area
- to assess the implications and impact of the proposed location of the mast and anchor points in relation to any archaeological remains and to provide recommendations for any mitigation of the same.

6 METHOD

Desk Based Assessment

A systematic search was undertaken of readily available and relevant documentary sources relating to the Island in general, but the area of the proposed mast in particular. The assessment included sites within the survey area and those sites of interest in the immediate vicinity. These additional sites were assessed to augment information concerning the character of the assessment area and the potential for the discovery of unrecorded archaeology. The archives consulted included:

- Archaeological records held at the NMRS
- Aerial photographs held at the RCAHMS
- Published maps held in the National Library
- Scottish National Archives
- Published and un-published sources

Field survey and assessment

The field survey comprised a topographic survey of the assessment area to provide an accurate impression of the nature of the site and that of the structures and features there-on. Upon the completion of the topographic survey, individual structures, features and areas of archaeological interest were surveyed. The survey was carried out using a Leica 1105 robotic EDM in conjunction with a Toughnote field unit and Penmap software. In tandem with the survey process was a walkover survey and assessment of the structures, features, and areas of archaeological interest. An annotated

sketch plan of all relevant features was compiled and a digital photographic archive was created of the site in general and all individual structures, features and areas of archaeological interest. Particular attention was given to any archaeological remains in the vicinity of the proposed mast plate (MP) and five anchor points (AP1 – 5) (see Figure 1).

7 RESULTS (Figure 1, 2 & 3)

Desk based assessment

The following outlines the results of the desk-based assessment.

Cultural Heritage Sites within the area of the proposed mast and the immediate vicinity

Inchkeith Island is a Scheduled Ancient Monument

Table 1. Scheduled Ancient Monument (SAM)

Site No.	National Grid Ref.	Site Type	Description	Source
1	NT 2944 8245 (centred)	Island & fortifications	The scheduling comprises the greater part of Inchkeith Island and the structures there-on, and part of the foreshore; except the lighthouse, Leith Harbour jetty and the fog horn stance at the extreme north end.	SAM 3838

In addition to the Island itself, a total of six sites of cultural heritage interest were identified within the area of the proposed works and in the immediate vicinity.

Table 2: Sites of cultural heritage interest in the vicinity or within the assessment area for the proposed mast

Site No.	National Grid Ref.	Site Type	Description	Source
2	NT 2944 8245	Defence/Military/ Coast Batteries; Nissen huts; Huts	Defences and garrison facilities developed from 1870s through both World Wars.	NMRS: NT28SE 5 (includes NT28SE 5.01-5.12); Aerial photos; SAM 3838
3	NT 2950 8242	Defence/Military/ Gun-Emplacement	Emplacement for a 3" anti-aircraft gun. Dates to WW2.	NMRS: NT28SE 5.10; Aerial photos; SAM 3838
4	NT 2957 8226 & NT 2961 8230	Defence/Military/ Coast Battery	Polygonal Fort completed 1880, housed 2 18 ton guns – fort is the south fort; one of three on the Island; WW1 & 2 coastal battery built of brick and concrete, within existing fort; housed 2 6" Mk II guns.	NMRS: NT28SE 5.03; Aerial photos; HB 9709 (B Listed); SAM 3838
5	NT 2947 8247	Defence/Military/ Coast Battery	Situated on the spine of the island. WW1 gun emplacement; WW2 brick and concrete 9.2" gun emplacement.	NMRS: NT28SE 5.06; Aerial photos; SAM 3838
6	NT 297 824	Funerary/Plague burials	In 1497 and 1580, efforts were made to prevent the spread of a contagious disease. People with the disease were sent to Inchkeith	NMRS: NT28SE 9; SAM 3838

Map & photographic evidence

The earlier map evidence clearly shows the undeveloped nature of the southern end of Inchkeith Island prior to the developments of the Island's defences from the 1870s (1st Edition Ordnance Survey (OS) 1853). A plan dated c.1860 however certainly highlights the intentions of the War Department to purchase land on the Island for the improvement of the defences, including the southern extremity upon which the current assessment area sits (RHP2704). The first indication of structures and features within the assessment area or its vicinity are those noted on the revised 1896 OS and the 1909-10 and 1911 revisions of the 1891 OS (Figure 2). The latter maps show the presence of the south fort, associated batteries and the north rock-cut ditch to the south of the assessment area. Within the assessment area was noted a structure labeled 'B.C Post' (battery command post) and 'Telephone Room' (see Structure 9a & 9b below); the 'Ammunition Store' (Structure 2 below) and 'Artillery Store' (area of Structure 3 below); a line of four gun platforms along the eastern fringe (with a further four outside the assessment area to the north); and a series of paths and a road along the western fringe. These developments appear to be little changed until at least the early years of the Second World War. The area under assessment changed quite dramatically during this period with the introduction of ancillary structures situated along the southern and western parts of the assessment area, noted on a 1941 aerial photograph (RAF S309; Figure 3). These structures represent four long, rectangular buildings (Areas A, B, C & D below), two smaller, rectangular buildings (Structures 10 & 11 below), and two square buildings (Structure 7 & 8 below). Three further buildings were also noted outside the assessment area to the northwest of the entrance to the south fort. The maps and aerial photographs from this period mark the full extent of the developments at the southern end of the Island and the assessment area. Post-war maps and photographs depict the gradual demise of the structures and features in this area and the surviving remains to their current condition (1959OS; 1983OS; 2007OS).

The potential for unrecorded archaeology

While the possibility for the discovery of unrecorded archaeological remains can not be disregarded, the nature of the topography and geological characteristics (bedrock outcrops and minimal overburden) within the assessment area suggests potential for unrecorded discoveries remains low. Despite this, the vestiges of more recent activities within the assessment area may well be obscured; particularly relict structures, paths and tracks.

Field survey and assessment (Figure 1 & 2; Plates 1-12)

The following presents the results of the archaeological survey and assessment. A total of 13 structures or features and four areas of archaeological interest were identified. It must be stressed at this stage that the nature of the ground conditions and the dense vegetation prevented the identification of any slight or fragmentary structures, features and remains.

Structure 1

Located along the northern boundary of the assessment area, this structure is roughly square in plan and comprises a brick (Stamped – DOUGAL WINCHBURGH) and concrete construction forming a series of rooms and compartments in association with a spot-light and anti-aircraft (AA) installation dating to the Second World War.

Potential impact - This structure will not be impacted upon by the introduction of the proposed mast.

Structure 7

Structure 7 represents the collapsed/demolished remains a roughly square timber framed building with asbestos sheet cladding (similar to Structure 3 and the remains in Area A – D) located on a flat area in the west of the assessment area adjacent to the relict access track. This building is noted on the 1941 aerial photograph (RAF309) and forms part of the Second World War developments.

Potential impact - This structure will not be impacted upon by the introduction of the proposed mast.

Structure 8

This structure is located to the east of Structure 7 and comprises a square brick (stamped – NIDDRIE) construction with a flat concrete roof. The west elevation is open and provides the entrance to the structure via a concrete ramp and floor. The structure is noted on the 1941 aerial photograph and forms part of the Second World War developments.

Potential impact – This structure will not be impacted upon by the introduction of the proposed mast.

Structure 9a & 9b

This structure is located towards the centre of the assessment area and comprises two distinct structures. The first is a semi-circular concrete semi-subterranean emplacement that faces to the south (Structure 9a). This structure was excavated by GUARD in 2001 (Pollard *et al* 2001) and appears to be a 'Battery Command Post', noted on the 1911 OS. To the rear of the post is a connecting building marked as a 'Telephone Room' and accessed via steps to the rear of the command post. It appears as though this structure was superceded by a sunken rectangular brick-built structure (or bunker) with a flat concrete roof (Structure 9b). This bunker was accessed exclusively by a concrete walled tunnel to the west. This tunnel and part of the telephone room appear to have been re-used during the construction of the present bunker. It would appear therefore that the battery post fell out of use with the developments of the south fort battery and observation post sometime in the early 20th century, to be superceded by the current bunker, probably during the Second World War developments.

Potential impact – This structure will not be impacted upon by the introduction of the proposed mast.

Structure 10 & 11

These structures comprise the foundation rafts of two rectangular buildings, comprising a brick plinth with concrete floor above, both of which are partially scarped into the slope along the western margin of the assessment area. Structure 10 is orientated roughly north to south and Structure 11 roughly northwest to southeast. Both structures appear on the 1941 aerial photograph and represent possible Nissen huts introduced during the Second World War developments.

Potential impact – These structures will not be impacted upon by the introduction of the proposed mast.

Feature 12

The remains of tarmac paths with concrete curbs and occasional concrete steps were noted running across the site. In most cases the paths were completely obscured by overburden turf or vegetation. These features quite clearly relate to those noted on the 1911 OS and the 1941 aerial photograph. The tarmac paths are likely to relate to the Second World War developments.

Potential impact – The proposed locations of Anchor Points 4 & 5 are in close proximity to paths marked on the 1911 OS plan (Figure 2).

Feature 13

Feature 13 comprises a number of linear lengths of rubble stones noted in areas throughout the assessment area. These were noted in a double line on the slope to the west of Structure 1, possibly a path; at intervals along the rear of the practice battery gun emplacements, possibly a revetment for a path; along the eastern margin of Area C, forming a revetment to the rear of the terrace; along the eastern margin of Area D; and along the eastern margin of the former access road, forming a revetment. Although the exact date of these features is uncertain, it is suggested that they date to the developments of the area leading up to and during the Second World War.

Potential impact – These structures will not be impacted upon by the introduction of the proposed mast.

Area A

This area comprises a rectangular depression terraced into the slope and orientated northwest to southeast. Although the area is particularly overgrown with vegetation, it is still possible to identify collapsed/demolished building debris from a timber framed asbestos sheet clad structure (similar to Structure 3 and 7). The timber floor joists for the former building appears to have comprised of brick plinths, some of which were visible through the thick vegetation. This building appears on the 1941 aerial photograph in association with the barracks-type buildings to the west. The connection of this building with the brick-built oven (Structure 6) suggests that it may have been a kitchen or canteen.

Potential impact – This area will not be impacted upon by the introduction of the proposed mast.

Area B

This area is similar in character to that of Area A and is located in a depression immediately to the west. Like Area A, evidence of building debris from a timber framed, asbestos clad building was noted across the area. This building appears on the 1941 aerial photograph in association with the barracks-type buildings to the east and west.

Potential impact – This area will not be impacted upon by the introduction of the proposed mast, although Anchor Point 5 is in close proximity (approximately 50cm) to building debris.

Area C

This area is similar in character to that of Area A and B and is located on a flat terrace, scarped into the bedrock to the east. Some evidence of building debris from a timber framed, asbestos clad building was noted, as were a number of brick plinth foundations, similar to those noted in Areas A. This building appears on the 1941 aerial photograph in association with the barracks-type buildings to the east and west.

Potential impact – This area will not be impacted upon by the introduction of the proposed mast.

Area D

This area is similar in character to that of Area A, B and C and is located on a terraced area to the west of Area C. Despite the lack of evidence for building debris, brick plinths were noted similar to those in Area A, B and C. This building appears on the 1941 aerial photograph in association with the barracks-type buildings to the east.

Potential impact – This area will not be impacted upon by the introduction of the proposed mast.

8 DISCUSSION

The survey and assessment has succeeded in identifying a number of structures, features and areas of archaeological interest. The archaeological remains within the assessment area relate to the development of the defences on Inchkeith Island, particularly from the late 19th century. With the exception of Structures 2, 4, 5a to 5d and 9, the majority of the remains date to the developments of the Second World War.

With regard to the proposed locations, Anchor Points 2, 4 and 5 were close to mapped paths or structures. In order to minimize any potential disturbance related to excavation for the anchor points it is proposed to adjust the position of the Mast Plate (which involves no ground disturbance) and the 5 Anchor Points by moving them to the northwest as shown in Figures 1 and 2.

9 RECOMMENDATIONS

- It is proposed that the anchor points be moved to the revised positions shown in Figures 1 and 2 to increase distance from mapped structures and paths.
- In order to safeguard against possible damage or loss to any unrecorded archaeological remains, a 'precautionary principle' should be adopted in connection with any further works and excavations for anchor points should be undertaken by hand in an archaeologically controlled manner.

10 REFERENCES

NPPG 5 *National Planning Policy Guideline 5: Archaeology and Planning*, Scottish Office 1994

PAN42 *Planning Advice Note 42: the Planning Process and Scheduled Monument Procedures*, Scottish Office 1994

Ancient Monument and Archaeological Areas Act 1979

LIST OF CULTURAL HERITAGE DOCUMENTARY SOURCES

Scheduled Ancient Monument (SAM) (Historic Scotland)

SAM No. 3838 Inchkeith Island & Fortifications

NMRS (Royal Commission on the Ancient and Historic Monuments of Scotland)

NT28SE 5 Defence/military/coast batteries; Nissen huts; huts
NT28SE 5.10 Defence/military/gun emplacement
NT28SE 5.03 Defence/military/coast battery
NT28SE 5.06 Defence/military/coast battery
NT28SE 9 Funerary/plague burials

RCAHMS

Aerial Photographs

RCAHMS (2000) *Catalogue of the RAF World War II Photographs* in the National Monuments Record of Scotland – Inchkeith Island, Firth of Forth, 20th October 1941

Maps (National Library of Scotland)

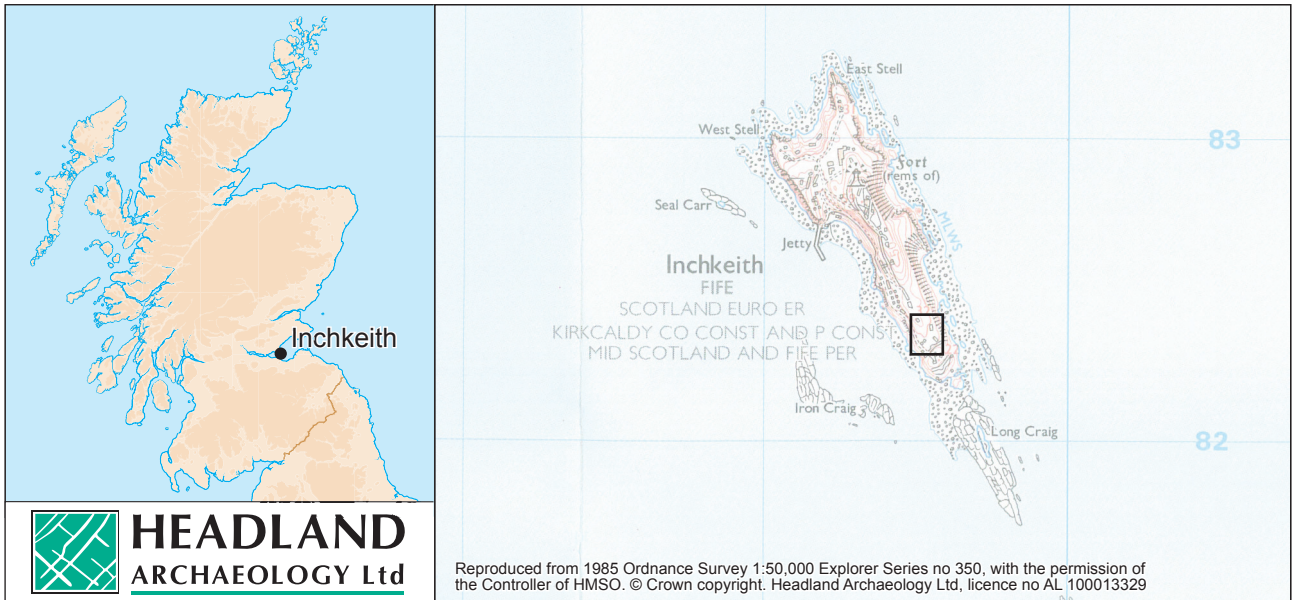
- 1855 Ordnance Survey 1:10560 scale *Fifeshire sheet XLI (surveyed 1853)*
- 1891 Ordnance Survey 1:2500 scale *Fifeshire sheet XLI (revised 1909-10)*
- 1896 Ordnance Survey 1:10560 scale *Fifeshire sheet XLI SW & XLV NW (resurveyed 1892-3)*
- 1911 Ordnance Survey 1:500 scale *Fifeshire sheet XLV.1.3 (surveyed 1891; revised 1909-10)*
- 1958 Ordnance Survey 1:10560 scale *sheet NT28NE (revised 1957)*
- 1983 Ordnance Survey 1:25000 Explorer Series *Edinburgh Sheet 350*

Other Documentary Sources

Grieve D, 1873 *On the discovery of a kitchen midden on Inchkeith* Proceedings of the Society of Antiquaries of Scotland. 9:452-455

Mowat R J C, Campbell J B, Morrison I A, 1973 *'Inchkeith Midden'*, Discovery and Excavation, Scotland, 1973:26

Pollard T, Oliver N, Banks I, Duffy P, 2001 *Firth of Forth* GUARD unpublished report



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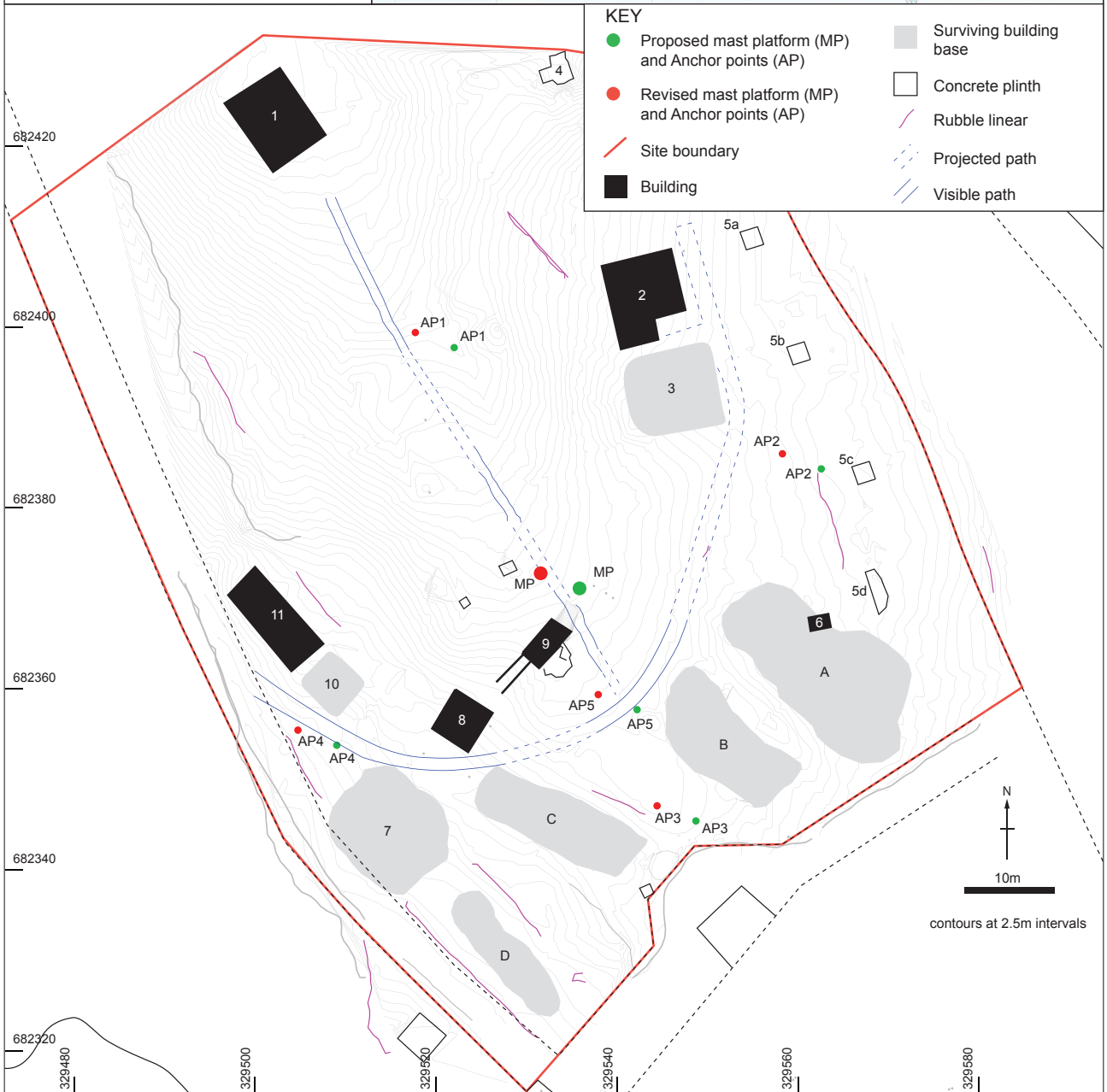


Figure 1 - IKH07: Inchkeith Island, Firth of Forth, Fife. Topographic Site Survey.

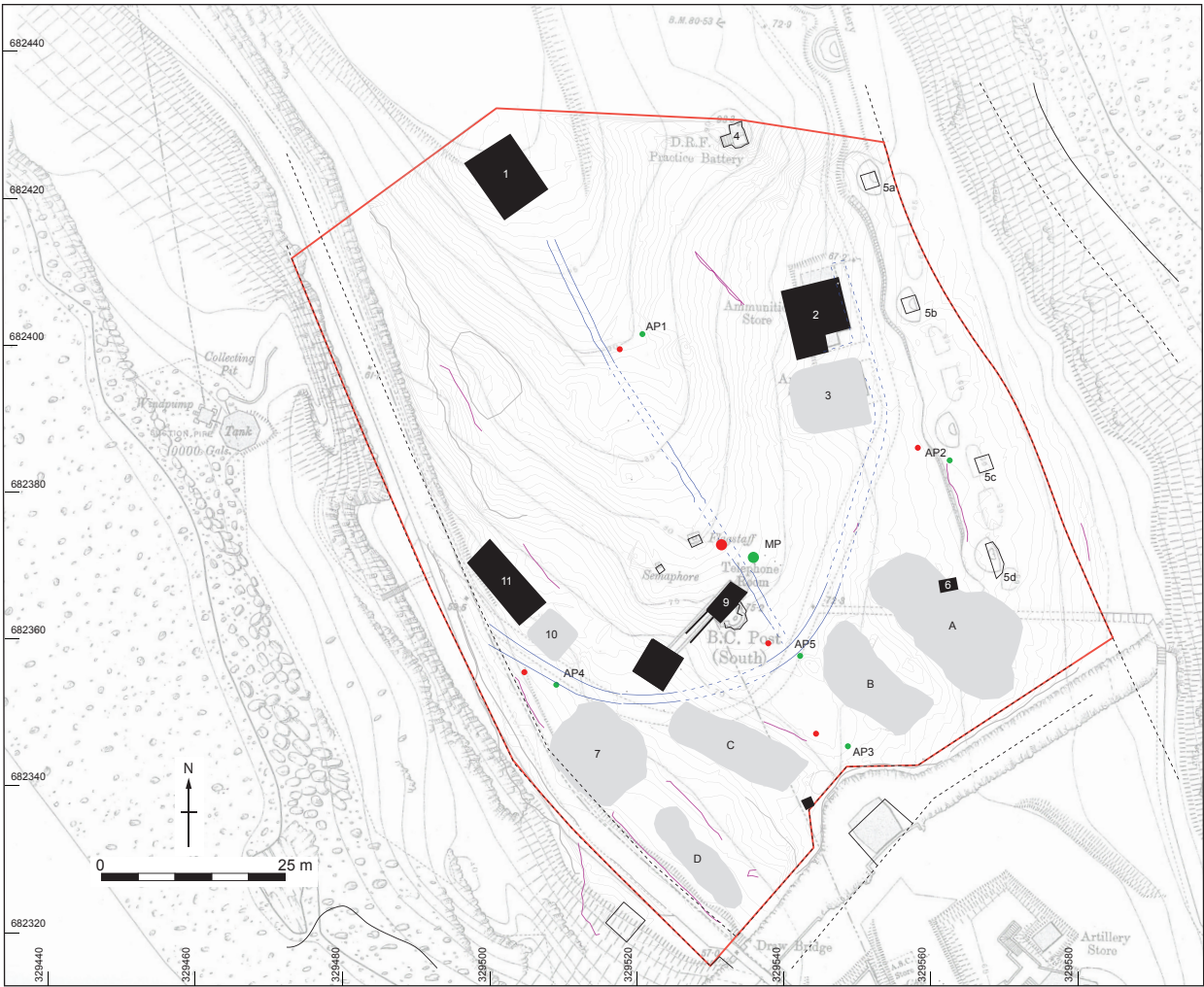


Figure 2 - IKH07: Inchkeith Island, Firth of Forth, Fife. 1911 OS showing details of site survey.



Figure 3 - IKH07: Inchkeith Island, Firth of Forth, Fife. Aerial photograph, 1941.



Plate 1: Panoramic view



Plate 2



Plate 3



Plate 4



Plate 5



Plate 6



Plate 7



Plate 8



Plate 9



Plate 10