CONTENTS

List of Figures

List of Plates

Non Technical Summary

This report results from work undertaken by Cambrian Archaeological Projects Ltd (CAP) for The Flat Holm Island Project, Cardiff city council. The work undertaken consisted of a watching brief on a machine excavated service trench required for the fitting of sustainable energy sources.
The island has a rich archaeological heritage dating from the Neolithic period to the Second World War, thus the archaeological watching brief was carried out on all subsequent groundworks.

1 Introduction

1.1 Location and scope of work

1.1.1 In February – April 2006 Cambrian Archaeological Projects (CAP) carried out an archaeological watching brief on the excavation of a service trench on the island of Flat Holm in the Severn Estuary on behalf of The Flat Holm Island Project – Cardiff City Council. The work was centred on NGR ST 22074 64859 (Fig 1).

1.1.2 This was in respect of a planning application for a renewable energy project (005/02032/C). A specification of works was agreed with the Glamorgan Gwent Archaeological Trust and work was carried out by Cambrian Archaeological Projects Ltd.

1.1.3 The development concerns the laying of a length of cable between the site of the proposed wind turbine, the fog horn station and the farmhouse. Further groundworks were also undertaken to the rear of the foghorn station and adjacent to the barrack block (Fig 2).

1.2 Geology and topography

1.2.1 The island of Flat Holm is located in the Bristol Channel 3 miles from Steep Holm, 5 miles from Cardiff and 6 miles from Barry. The island was recognised as a SSSi (Site of Special Scientific Interest) in 1972 owing to the Gull population that inhabits the island, the special range of maritime grass species which withstand high levels of salt, the geological formation of the island and its inter-tidal zone. Beneath the Bristol Channel lies a foundation of solid rock. The Bristol Channel marks a boundary between the older rocks of Wales and the Forest of Dean and the younger limestones, deposited 350 million years ago in the Carboniferous period. This limestone forms the islands of Flat Holm and Steep Holm and the headlands of Brean Down and Sand Point. These limestones were formed from calcium-rich shells and skeletons of tiny animals which accumulated on the floor of a tropical ocean. During the last 15,000 years a warmer climate has returned and the ice sheets retreated. The extensive flat plains surrounding the estuary flooded, and the hilltops of Flat Holm, Steep Holm and Brean Down became islands. The Bristol Channel is therefore known as a 'drowned valley' type of estuary.

1.3 Archaeological and historical background

1.3.1 Flat Holm Island has a rich and varied archaeological heritage dating back at least to the Neolithic period. This is evidenced by several Neolithic flints having being recovered from the island. No structural evidence for prehistoric occupation of Flat Holm has yet been discovered. A single Bronze Age axe head has also been found on the island. Prehistoric activity on the island seems rather sparse but no evidence of any Roman occupation has yet been identified. The Island was used as a monastic retreat from the 6th century onwards and by the 12th century was listed as a grange of St. Augustine's abbey. Earthworks associated with the monastery are still clearly visible close to the farmhouse. The monastery and grange also had an associated cemetery, inhumations from which have been recorded during previous work undertaken on the Island. Flat Holm was also used for agricultural purposes throughout the medieval period with farm buildings located close to where the current farmhouse now stands. Military occupation of the island commenced in the mid 19th century as a reaction to conflict in Europe. Several gun batteries placed around the island can still be seen and are in a good state of preservation. Military occupation of the island during the Second World War included the reuse of the 19th century emplacements and barracks.

2 Aims and Objectives

2.1 Watching Brief

2.1.1 The watching brief is designed to record the archaeological resource during development within the specified area (Fig 2).

3 Watching Brief Methodology

3.1 Scope of Fieldwork

3.1.1 The work undertaken involved the opening of two trenches. The main trench runs between the wind turbine site, the foghorn stations and the farmhouse (Fig 2) and is approximately 500m long, .3m wide and varies between .2m and .5m deep. The second area of trenching is located within the area of the 19th century barracks. This trench measured 10m in length, .2m in width and was .5m deep.

3.1.2 All groundworks were undertaken using a 1 ton Kubota mechanical excavator fitted with a toothless bucket under close archaeological supervision.

3.1.3 Project Officer Chris E Smith undertook the watching brief under the overall direction of Kevin Blockley (MIFA). All plans and sections were recorded and drawn at a scale of 1:20. All groundworks were photographed using high resolution digital photography and 35mm black and white print film.

3.1.4 All works were undertaken in accordance with both the IFA's *Standards and Guidance: for an archaeological watching brief* and current Health and Safety legislation.

3.2 Finds

3.2.1 Finds were recovered by hand during the course of the excavation and bagged by context.

3.3 Palaeo-environmental evidence

3.3.1 No deposits suited to environmental sampling were located during the watching brief.

4 Watching Brief Results

4.1 Soils and ground conditions

4.1.1 Generally the site and weather conditions were mixed with patchy rain during the initial opening of the main trench occasionally turning to wind driven sleet and snow. Patches of bright sunshine were also present. The topsoil consisted of a mid - dark brown moderately compacted silt with the ground remaining mostly dry throughout the watching brief.

4.2 Distribution of deposits

4.2.1 The topsoil on Flat Holm does not appear evenly distributed and in some places can be as shallow as .10m before solid bedrock is encountered. This seems due to the exposed and wind blown nature of the islands surface. Deposits of thin topsoil were consistent throughout the watching brief although seemed to be primarily located on the high ground towards the foghorn stations. In other areas of the trench a fine mid brown – orange silty clay subsoil was present. In all areas of the trench a thick layer of natural bedrock, fragmented through natural freeze – thaw action, was present at varying depths.

4.3 Descriptions

Main Power Cable Trench (Fig 2) (Plates 1 - 5)

4.3.1 Turf along the length of the main trench had been removed by a turf cutting machine prior to any groundworks taking place. Topsoil was subsequently removed by the mechanical excavator under close archaeological scrutiny. The topsoil (101) was found to vary in depth between .10m and .30m. In the majority of the trench across the higher ground by the foghorn stations no real subsoil was encountered. The topsoil appeared to be located directly above a highly compacted layer of frost shattered natural bedrock (103). Where a subsoil was encountered it appeared as a fine grained mid brown – orange silty clay deposit (102) and was also located above the layer of frost shattered bedrock. As the trench began to progress closer to the farmhouse deeper soil deposits were encountered; as the farmhouse is located at the bottom of a natural slope in the landscape this increased soil depth is most likely due to the natural process of soil creep. Immediately adjacent to the farmhouse soil conditions were such that the trench could be excavated to the required depth of .5m before encountering the layer of broken bedrock (103). As could be expected the majority of material recovered came from the area around the farmhouse owing to the intensity of human occupation within this

specific area of the island. Two walls (104) & (105), seemingly 19th century in date were located and recorded in the stretch of trench between the farmhouse and the hospital complex (Plates 3 & 4). The walls were made up of un-coursed rough hewn limestone blocks occasionally bonded by a lime mortar and are likely to represent foundation levels. A pit (106), also likely to be 19th century in date, was located close to both the hospital complex and the farmhouse (Plate 5).

Barrack Block Trench (Fig 2) (Plate 6)

4.3.2 The removal of the topsoil (201) revealed orangey brown silt clay subsoil (202) located immediately above frost shattered natural bedrock (203). The ground surface within the barracks area is very flat and uniform, possibly hinting at levelling in certain areas whilst the barracks were still in use. A single piece of fine white ware pottery stamped "Newhall Pottery 1942" attests to the wartime occupation of the barracks. A path made up of loosely place bricks was also truncated by the excavation of the service trench.

5 Finds

5.1.1 A small group of finds were recovered from during groundworks. These included several post medieval and modern pottery sherds, glass, waste iron objects such as nails, clay tobacco pipe fragments and several pieces of iron slag.

5.2 Pottery

5.2.1 The assemblage was in fair condition representing a small group of material (Appendix 2). The main focus of activity appeared to be 19th – 20th century although a residual sherd of post medieval (1600-1750) North Devon Gravel Tempered Ware was located in the subsoil (103) in the main power cable trench. The domestic character of the wares, their proximity to the farm together with the nature of their located context strongly suggests that they represent household debris.

6 Discussion and Interpretation

6.1 Reliability of field investigation

6.1.1 The watching brief was unhampered by any modern building or agricultural activity. It was slightly hampered by the extremely thin deposits of topsoil in places (Plate 7). Several services were located along the length of the main power cable trench although these did little to hamper the field investigation.

6.1.2 The overall findings of the watching brief were somewhat inconsistent with the amount of known archaeological activity on the island of Flat Holm. Evidence of medieval activity on the site of the monastery is likely to have been largely impacted upon by the later farmhouse and its occupants, thus all finds from the general area appear to be of post medieval date. Although Flat Holm has a rich and varied archaeological heritage it

should be noted that only an extremely small area of the island has been sampled by the excavation of this relatively small service trench.

6.2 **Overall interpretation**

6.2.1 The excavation of the service trench revealed a paucity of archaeological remains apart from evidence of post medieval and modern occupation in the area of the farmhouse. No medieval activity, either features or material culture, relating to the monastery was located. This is perhaps indicative of the amount of truncation the later farmhouse has imposed on the area. Owing to the gun batteries, the cholera hospital and the farmhouse 19th century material seems to proliferate the archaeological record in this area. Doubtless large areas of the monastery and its surrounds (including its associated cemetery) do survive *in situ* to the east of the path of the excavated service trench with which this report concerns itself.

6.3 **Significance**

6.3.1 The watching brief, although having revealed no areas of great archaeological significance, has demonstrated that whilst prehistoric and medieval activity is present on the island of Flat Holm, it is the 19th century and later remains that proliferate the archaeological resource.

7 Acknowledgements

7.1.1 Thanks are due to all the employees and volunteers of the Flat Holm Island Project for all their help during groundworks.

ARCHIVE COVER SHEET

Flat Holm Island

Site Name:	Flat Holm Island
Site Code:	FHI/06/WB
PRN:	-
NPRN:	-
SAM:	-
Other Ref No:	Project no. 738
NGR:	NGR ST 22074 64859
Site Type:	Multi period
Project Type:	Watching Brief
Project Officer:	Chris E Smith
Project Dates:	February – April 2006
Categories Present:	Post medieval - Modern
Location of Original Archive:	-
Location of duplicate Archives:	CAPLtd Office
Number of Finds Boxes:	1
Location of Finds:	-
Museum Reference:	-
Copyright:	CAPLtd
Restrictions to access:	None