

**An Archaeological Watching Brief
at
Shoreham Old Fort,
Forthaven, Shoreham.
West Sussex**

**NGR 523345 104547
(TQ 233 045)**

Scheduled Monument No. WS 390

ASE Project No: 5398

**ASE Report No: 2012081
OASIS NO: archaeol6-122069**

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Abstract

Archaeology South-East were commissioned by Shoreham Port Authority to undertake an archaeological watching brief during the demolition of a 20th century coastguard tower at Shoreham Fort, Forthaven, Shoreham, West Sussex.

Shoreham Fort is a Scheduled Ancient Monument (SAM Number WS390) and the coastguard tower was built atop the No. 2 magazine of the fort, necessitating the implementation of stringent protective measures prior to demolition. To this end, a ground protection mat of a minimum of 300mm of bulk soils and hardcore was laid to the north of the magazine to protect scheduled below-ground remains and a scaffold crash deck constructed to the south to protect scheduled above-ground remains adjacent to the demolition. The demolition of the coastguard tower proceeded broadly according to plan although some damage to the uppermost courses of brickwork of the magazine was incurred. . However, the majority of this damage appears to be restricted to – and indeed related to – 20th century repairs to the historic fabric of the magazine undertaken during the construction of the coastguard tower.

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1.0 INTRODUCTION

1.1 Introduction

- 1.1.1 Archaeology South-East (ASE), the contracting division of the Centre for Applied Archaeology (CAA), Institute of Archaeology (IoA), University College London (UCL) was commissioned by Shoreham Port Authority to undertake an archaeological watching brief during the demolition of the former coastguard tower at Shoreham Old Fort, Forthaven, Shoreham, West Sussex. The site is centred on National Grid Reference (NGR) 523345 104547 and its location is shown in Figure 1.

1.2 Geology and Topography

- 1.2.1 According to current data from the British Geological Survey, the site lies on Storm Beach Deposits (BGS 2012). The site currently comprises the surviving elements of the historic fort, including a dry ditch with attendant crenellated wall and caponiers, gun emplacements and magazines, as well as the below ground remains of the demolished barracks and areas of hard standing and grass.

1.3 Planning Background

- 1.3.1 Scheduled Monument Consent (SMC) has been granted for the demolition of the modern coastguard tower that was built atop the No. 2 Magazine of the fort (Reference S00015067; Fig. 2). Due to the archaeologically sensitive nature of the proposed works a condition of the SMC required that:

“... any ground works associated with the installation of the flagstaff and demolition of the coastguard tower such shall be carried out under the archaeological supervision of an approved archaeological contractor...”

- 1.3.2 Archaeology South-east was duly appointed as the supervising archaeological contractors. All intrusive works, including the demolition of the coastguard tower, were carried out under the supervision of a suitably qualified archaeologist from Archaeology South-East and in accordance with the conditions of the SMC and the relevant standards and guidance of the Institute for Archaeologists (IfA 2008).

1.4 Scope of Report

- 1.4.1 This report details the results of the archaeological monitoring undertaken on between 7th and 15th March 2012 by Diccon Hart and Giles Dawkes (Senior Archaeologists). The fieldwork was managed by Jon Sygrave (Project Manager) and post-excavation by Jim Stevenson (Project Manager).

2.0 ARCHAEOLOGICAL BACKGROUND

- 2.1 Shoreham Fort was built in 1857 as part of a wider series of coastal defences constructed in response to the perceived threat of French invasion at the time. The design of the fort closely parallels that built at Littlehampton in 1854, albeit with some improvements. Together, the forts are of particular significance as they constitute an experimental fortification design developed after the introduction of rifled artillery pieces on the continent (Aldsworth 1891, 181). In essence, the design of the forts comprised an earthen rampart on which the seaward facing gun batteries were positioned, with defence against infantry afforded by a dry ditch with crenel wall and caponier bastions that allowed enfilading fire along the line of the ditch. A defended barrack block lay to the rear and the guns were supplied by two magazines sited beneath the rampart at each end of the fort.
- 2.2 Serious concerns were raised over the efficacy of the forts almost as soon as they were completed; insufficient space behind the guns hindered their traversing and personnel were considered to be inadequately protected. A subsequent review in 1873 found that armament, ordnance and defences were all rendered obsolete by recent developments and that the forts were insufficiently defended against a landward attack. The relative isolation of Shoreham Fort in particular made reinforcement and resupply difficult (Goodwin 1985, 47-50). Despite its obsolescence, the fort remained manned at least until at least 1896 (Aldsworth, *ibid*, 192) and during the Second World War a battery of six inch guns and a searchlight unit were sited on or adjacent to the fort. The barrack block was finally demolished in the 1960s, following use as a film studio and a private residence and it was at this time that the coastguard tower was constructed over the southern magazine.

3.0 ARCHAEOLOGICAL METHODOLOGY

3.1 Methodology

- 3.1.1 A ground protection mat of bulk soils and type 1 crush was laid to a minimum depth of 300mm over the demolished remains of the barrack block prior to demolition works as a mat on which the mechanical plant would operate (Fig. 3).
- 3.1.2 An extensive scaffold crash deck was constructed to the south of the coastguard tower to protect the fabric of the historic fort where is in proximity to or abuts the coastguard tower (Fig. 3)
- 3.1.3 Following assessment of the internal structure of the coastguard tower by the main contractors (Edburton Construction Ltd) and Archaeology South-East, the concrete floor slab of the coastguard tower was deemed to afford sufficient protection to the underlying scheduled remains of the fort, negating the need for internal crash mats.
- 3.1.4 Acrow Props were installed to support the centres of the vaulted brick ceiling of the historic magazine as an additional measure against the increased weight of demolished materials resting on the internal floor slab described above.
- 3.1.5 Demolition of the coastguard tower was undertaken using a 45 tonne 360 long-reach excavator, fitted with a rotating hydraulic concrete cruncher, under the supervision of a suitably experienced archaeologist.
- 3.1.6 The level of demolition was, as far as possible, established at a minimum of 500mm above the uppermost level of the historic fort. This was clearly marked with a continuous line of yellow road paint on the building itself.
- 3.1.7 The subsequent removal of the ground protection mat was undertaken using a 13 tonne 360 excavator, fitted with a toothless grading bucket, under the supervision of a suitably experienced archaeologist.
- 3.1.8 A photographic record of the work was maintained throughout the works.
- 3.1.3

4.0 RESULTS

(Figures 3-6)

4.1 Introduction

- 4.1.1 Demolition of the coastguard tower commenced with the removal of the single storey garage to the north of the No. 2 magazine, followed by removal of the blockwork stair tower, also situated to the north of the magazine. (Fig. 4). The concrete roof slab of the coastguard tower was then removed and the brick walls of the tower subsequently reduced to approximately 500mm above the top of the historic magazine (Fig. 5).

4.2 Results of the monitoring

- 4.2.1 Generally speaking, the demolition of the coastguard tower proceeded according to plan. Monitoring of the work showed some slight damage to the historic brickwork of the No 2 Magazine where the blockwork of the stair tower had been stitched into the pre-existing brickwork during construction in the 1960s (see Fig. 6).
- 4.2.2 Some further damage to the historic fabric of the No. 2 Magazine was incurred during the course of the demolition of the brick walls of the coastguard tower, resulting from vertical cracks that developed in the modern brickwork of the coastguard tower that extended into the uppermost courses of brickwork of the magazine. Such damage occurred both on the northern face of the magazine (Fig. 6) and in the northeast corner (Fig. 7), despite the fact that in both areas the demolition works were well above the limit established at 500mm above the top of the historic magazine.
- 4.2.3 Close inspection of damaged masonry from the northern elevation by staff from Archaeology South-East (Diccon Hart, Senior Archaeologist), Shoreham Port Authority (Keith Wadey, Assistant Engineer) and West Sussex County Council (Mark Taylor, Senior Archaeologist) showed that these cracks corresponded to a change in the bonding material of the brickwork and appeared to be largely restricted to the softer, sandier mortar associated with the coastguard tower construction, rather than the very hard lime mortar of the 19th century magazine construction. It seems probable, therefore, that the uppermost courses of brickwork of the magazine in this area was rebuilt or repaired in the 1960s, presumably to consolidate the historic fabric prior to the construction of the coastguard tower. Subsequent inspection of damage to the northeast corner of the magazine by Archaeology South-East suggests a similar level of 20th century rebuilding or repair.

5.0 DISCUSSION AND CONCLUSIONS

- 5.1 Although every care and attention was taken during the demolition of the 20th century coastguard tower that was built atop the No. 2 Magazine at Shoreham old Fort, some damage to the uppermost courses of brickwork was incurred. However, the majority of this damage appears to be restricted to – and indeed related to – 20th century repairs to the historic fabric of the magazine undertaken during the construction of the coastguard tower.

Bibliography

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Acknowledgements

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HER Summary Sheet

Site Code	DPW12					
Identification Name and Address	Shoreham Fort					
County, District &/or Borough	West Sussex County Council, Adur District					
OS Grid Refs.	523345 104547					
Geology	Storm beach Deposits					
Arch. South-East Project Number	5341					
Type of Fieldwork	Eval.	Excav.	Watching Brief ✓	Standing Structure	Survey	Other
Type of Site	Green Field	Shallow Urban	Deep Urban	Other ✓ Scheduled Ancient Monument		
Dates of Fieldwork	Eval.	Excav.	WB. 07-15.03.12	Other		
Sponsor/Client	Shoreham Port Authority					
Project Manager	Jon Sygrave					
Project Supervisor	Diccon Hart					
Period Summary	Palaeo.	Meso.	Neo.	BA	IA	RB
	AS	MED	PM ✓	Other ✓		

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OASIS Summary Form

OASIS ID: archaeol6-122069

Project details

Project name	An archaeological watching brief at Shoreham Old Fort, Forthaven, Shoreham, West Sussex
Short description of the project	Archaeology South-East were commissioned by Shoreham Port Authority to undertake an archaeological watching brief during the demolition of a 20th century coastguard tower at Shoreham Fort, Forthaven, Shoreham, West Sussex. Shoreham Fort is a Scheduled Ancient Monument (SAM Number WS390) and the coastguard tower was built atop the No. 2 magazine of the fort, necessitating the implementation of stringent protective measures prior to demolition. To this end, a ground protection mat of a minimum of 300mm of bulk soils and hardcore was laid to the north of the magazine to protect scheduled below-ground remains and a scaffold crash deck constructed to the south to protect scheduled above-ground remains adjacent to the demolition. The demolition of the coastguard tower proceeded broadly according to plan although some damage to the uppermost courses of brickwork of the magazine was incurred. . However, the majority of this damage appears to be restricted to - and indeed related to - 20th century repairs to the historic fabric of the magazine undertaken during the construction of the coastguard tower.
Project dates	Start: 05-03-2012 End: 17-03-2012
Previous/future work	No / Not known
Any associated project reference codes	5398 - Contracting Unit No.
Type of project	Recording project
Site status	Scheduled Monument (SM)
Current Land use	Other 8 - Land dedicated to the display of a monument
Monument type	ARTILLERY FORT Post Medieval
Significant Finds	NONE None
Investigation type	'Watching Brief'
Prompt	Scheduled Monument Consent
Project location	
Country	England
Site location	WEST SUSSEX ADUR SHOREHAM BY SEA Shoreham Old Fort
Postcode	BN43 5HY
Study area	0.60 Hectares
Site coordinates	TQ 233 045 50.8263195927 -0.249132985392 50 49 34 N 000 14 56 W Point
Project creators	
Name of Organisation	Archaeology South-East

Project brief originator	English Heritage
Project design originator	Edburton Construction Ltd
Project director/manager	JON SYGRAVE
Project supervisor	Diccon Hart
Type of sponsor/funding body	Client
Name of sponsor/funding body	Shoreham Port Authority
Project archives	
Physical Archive Exists?	No
Digital Archive recipient	Marlipins
Digital Contents	'other'
Digital Media available	'Images raster / digital photography'
Paper Archive recipient	Marlipins
Paper Contents	'other'
Paper Media available	'Correspondence','Report','Unpublished Text'
Project bibliography 1	
Publication type	Grey literature (unpublished document/manuscript)
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