



King Edward Mine Trench Recording, Cornwall
Archaeological Recording

Cornwall Archaeological Unit

Report No: 2017R088

King Edward Mine Trench Recording, Cornwall

Archaeological Recording

Client	King Edward Mine
Report Number	2017R088
Date	December 2017
Status	Draft/2nd draft/Final
Report author	S R Taylor
Checked by	Adam Sharpe BA MCIFA
Approved by	Andy Jones

Cornwall Archaeological Unit

Cornwall Council

Fal Building, County Hall, Treyew Road, Truro, Cornwall, TR1 3AY

Tel: (01872) 323603

Email: enquiries@cau.org.uk Web: www.cau.org.uk

Acknowledgements

This study was commissioned by Kevin Baker of King Edward Mine and carried out by Cornwall Archaeological Unit, Cornwall Council.

The Project Manager was Adam Sharpe. Sean Taylor undertook the fieldwork.

The views and recommendations expressed in this report are those of Cornwall Archaeological Unit and are presented in good faith on the basis of professional judgement and on information currently available.

Freedom of Information Act

As Cornwall Council is a public authority it is subject to the terms of the Freedom of Information Act 2000, which came into effect from 1st January 2005.



Cornwall Archaeological Unit is a Registered Organisation with the Chartered Institute for Archaeologists

Cover illustration:

Retaining wall and labyrinth leading from the Brunton arsenic calciner.

© Cornwall Council 2017

No part of this document may be reproduced, stored in a retrieval system, or transmitted in any form or by any means without the prior permission of the publisher.

Contents

1	Summary	1
2	Introduction	3
2.1	Project background	3
2.2	Project extent	3
2.3	Aims and objectives	3
2.4	Working methods	3
2.4.1	Fieldwork: survey	3
2.4.2	Fieldwork: description	3
2.4.3	Fieldwork: photographic recording	3
3	Location and setting	4
4	Designations	4
5	Site history	4
6	Description of recorded features	8
6.1	The flue and chimney	8
6.2	The walled yard	8
6.3	The Brunton Calciner and labyrinth	10
7	References	12
7.1	Primary sources	12
7.2	Publications	12
7.3	Websites	12
8	Project archive	12

List of Figures

Fig 1 Location map.

Fig 2 First Edition of the Ordnance Survey 25 Inch Map, 1877.

Fig 3 Second Edition of the Ordnance Survey 25 Inch Map, 1907.

Fig 4 Site survey.

Fig 5 The chimney, right, flue wall, left.

Fig 6 The cobbled yard, wall to rear (facing west).

Fig 7 Wall to the southwest of the cobbled yard (facing northeast).

Fig 8 Calciner, left, leading to labyrinth, right (facing southwest).

Fig 9 The retaining wall, left, and labyrinth (facing northeast).

Fig 10 The water channel, or flue (facing SSE).

Abbreviations

CAU	Cornwall Archaeological Unit
CIfA	Chartered Institute for Archaeologists
CMP	Conservation Management Plan
HER	Cornwall and the Isles of Scilly Historic Environment Record
KEM	King Edward Mine
NGR	National Grid Reference
OS	Ordnance Survey

1 Summary

King Edward Mine (KEM) was established in the late 19th century on the site of the former South Condurrow mine site as the Camborne School of Mines training mine, and was used as such until relatively recently. It was taken over by Cornwall Council, who assisted in its conversion into a mining heritage centre. The site has recently been the subject of a major conservation programme. It is largely staffed by Trevithick Society volunteers.

Cornwall Archaeological Unit was commissioned by King Edward Mine to carry out a record of structures uncovered during excavations carried out by KEM volunteers in two areas at the mine: at a small Brunton arsenic calciner, and a wall of the boiler house associated with the South Condurrow stamps engine house.

The calciner lies to the south west of the South Condurrow stamps engine house where it, and associated flues connecting it with a now-demolished chimney to the north, were constructed. The second area was focussed on the eastern end of the demolished stamps boiler house, adjacent to the cobbled floor of a walled yard.

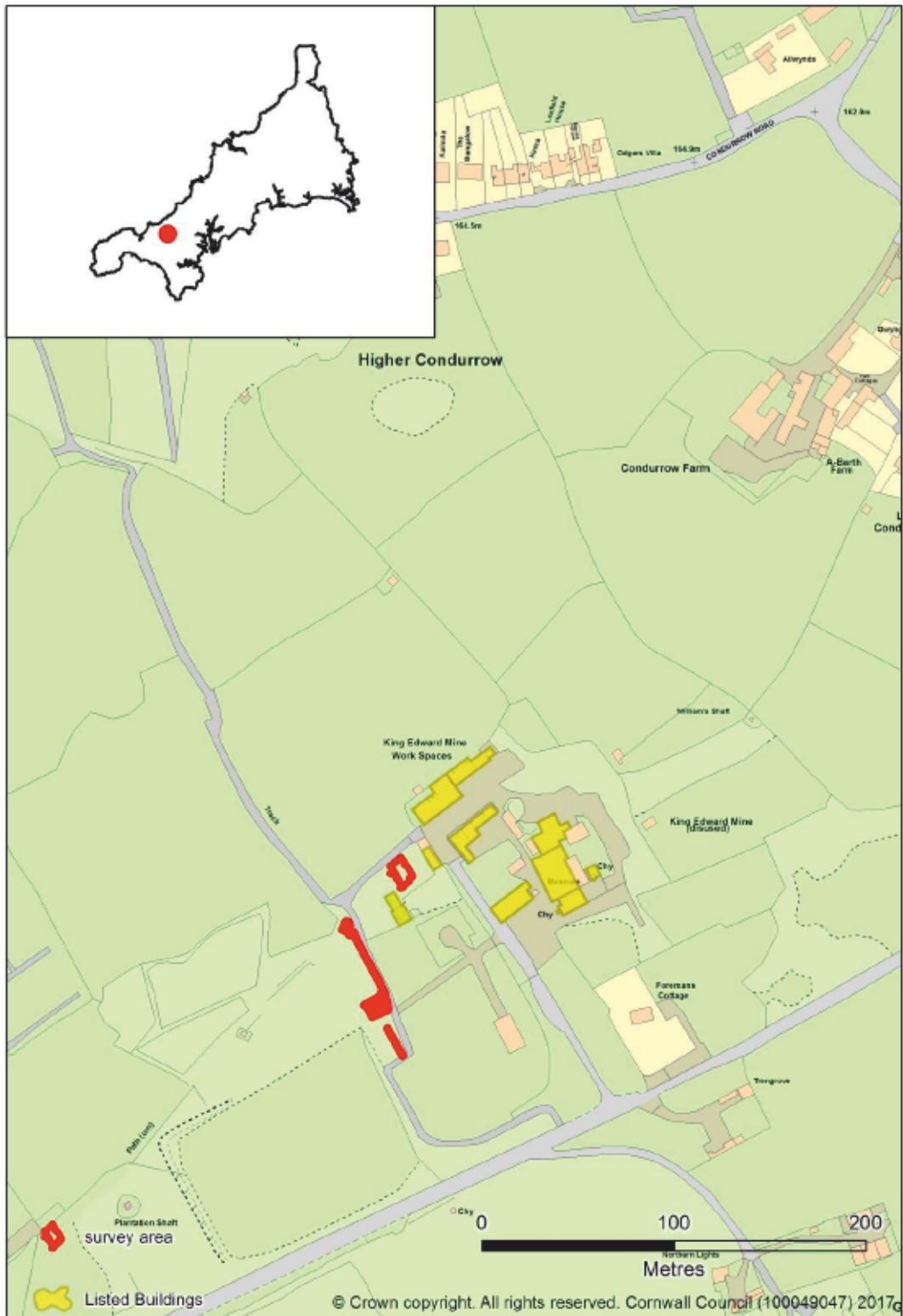


Fig 1 Location map.

2 Introduction

2.1 Project background

This record of volunteer-led excavations was commissioned by King Edward Mine. King Edward Mine is located to the east of Beacon and to the south of Camborne, Cornwall (at NGR SW 6645 3890, Fig 1). Volunteers at King Edward Mine have excavated two sections of trenching on areas of the mine site, these exposing a small arsenic calciner, flues and chimney, and part of the walling of the boiler house associated with the South Condurrow stamps engine house. Given that these present hazards to site visitors and that no further work is currently proposed on either of these sites, it was proposed that the trenches are backfilled to near surface; the exposed features will remain visible. Prior to this taking place, King Edward Mine requested that the trenches were professionally recorded by an archaeologist.

King Edward Mine was established in the late 19th / early 20th century on the site of the former South Condurrow mine site as the Camborne School of Mines (CSM) training mine, and was used as such until relatively recently. As such, it was equipped with most of the mine structures to be found on contemporary mines. The mine was eventually relinquished by CSM and was taken over by Cornwall Council, who assisted in its conversion into a mining heritage centre at the western end of the Great Flat Lode. It has recently been the subject of a major conservation programme. The site is largely staffed by Trevithick Society volunteers.

2.2 Project extent

Two areas excavated by site volunteers were recorded: the first to the southwest of the South Condurrow stamps engine house where a small-scale Brunton arsenic calciner and associated flues associated with a now-demolished chimney to the north were constructed; the second area focussed on the eastern end of the demolished stamps boiler house (Fig 4).

2.3 Aims and objectives

The principal aim of the study was to produce a post-excavation and pre-reburial record of the built structures revealed during the trenching exercise. This is linked to the National Grid. The objectives were to produce a short report presenting the survey results and to produce an entry to the Historic England/ADS online national database of archaeological projects.

2.4 Working methods

All recording work was undertaken according to Chartered Institute for Archaeologists (CIfA) guidance (CIfA 2014a). Staff followed the *CIfA Code of Conduct* (2014b). The Chartered Institute for Archaeologists is the professional body for archaeologists working in the UK.

2.4.1 Fieldwork: survey

A GPS/GNSS and photographic survey was undertaken at the two areas excavated by the KEM volunteers.

2.4.2 Fieldwork: description

A concise description of the exposed walls was made during the recording exercise.

2.4.3 Fieldwork: photographic recording

Photographic recording comprised colour photography using a digital SLR camera (with a resolution of 10 million pixels or higher).

CAU follows Historic England guidance on digital image capture and file storage (2015).

The photo record comprised:

- General views.

- Examples of structural and architectural detail.

3 Location and setting

King Edward Mine is located between the settlements of Beacon, to the northwest, and Troon, to the southwest, south of Camborne, Cornwall. The mine lies at the western end of the Great Flat Lode, a tin and copper bearing ore body running east-west to the south of Carn Brea. King Edward Mine has a southerly aspect set within an agricultural landscape dominated by post-medieval fields of semi-improved pasture. The site offers views west, east (covering most of the Great Flat Lode mines), and south towards Troon (Buck 2013).

4 Designations

The sites lie within the area covered by the King Edward Mine Conservation Management Plan (CMP) (Buck 2013). The majority of the standing buildings forming the complex at the heart of the CMP area are Grade II* Listed buildings with the exception of the South Condurrow Stamps Engine House, which is Listed Grade II.

5 Site history

The history of the mine is well understood and is covered in depth in Buck (2013). The subjects of the excavations and the current survey are a Brunton arsenic calciner (site 55 in Buck 2013), a labyrinth and flue (site 52) connecting it to a chimney (site 53), and a walled yard (site 43) associated with the stamps engine house (site 44).

The calciner is located on the site of a dressing floor reservoir pond (site 57 in Buck 2013) shown on the 1877 OS 25" map (Fig 2). The labyrinth and flue running alongside it, to the northeast, is shown on the 1877 map running from a complex of four buddles and calciners/furnaces situated to the southeast to the chimney to the northwest, a distance of around 125m.

The stamps engine house and associated walled yard, part of South Condurrow Mine, are shown on the 1877 OS 25" map, the engine house having been constructed in 1869 (Buck 2013).

The Brunton calciner is first shown on the 1907 OS 25" map (Fig 3), the excavated area forming the northern part of a complex that also included a separate structure to the southeast and a chimney to the south. The flue recorded to the southeast of the calciner runs parallel to this structure and side channels leading off from this flue lead into the structure and on to the chimney. The original flue is shown as just running from the new calciner on the 1907 map to the chimney, a distance of 40m. The complex of buddles and calciners/furnaces had been replaced with a dressing floor and settling tanks by 1907 and the flue was no longer required to run this far.

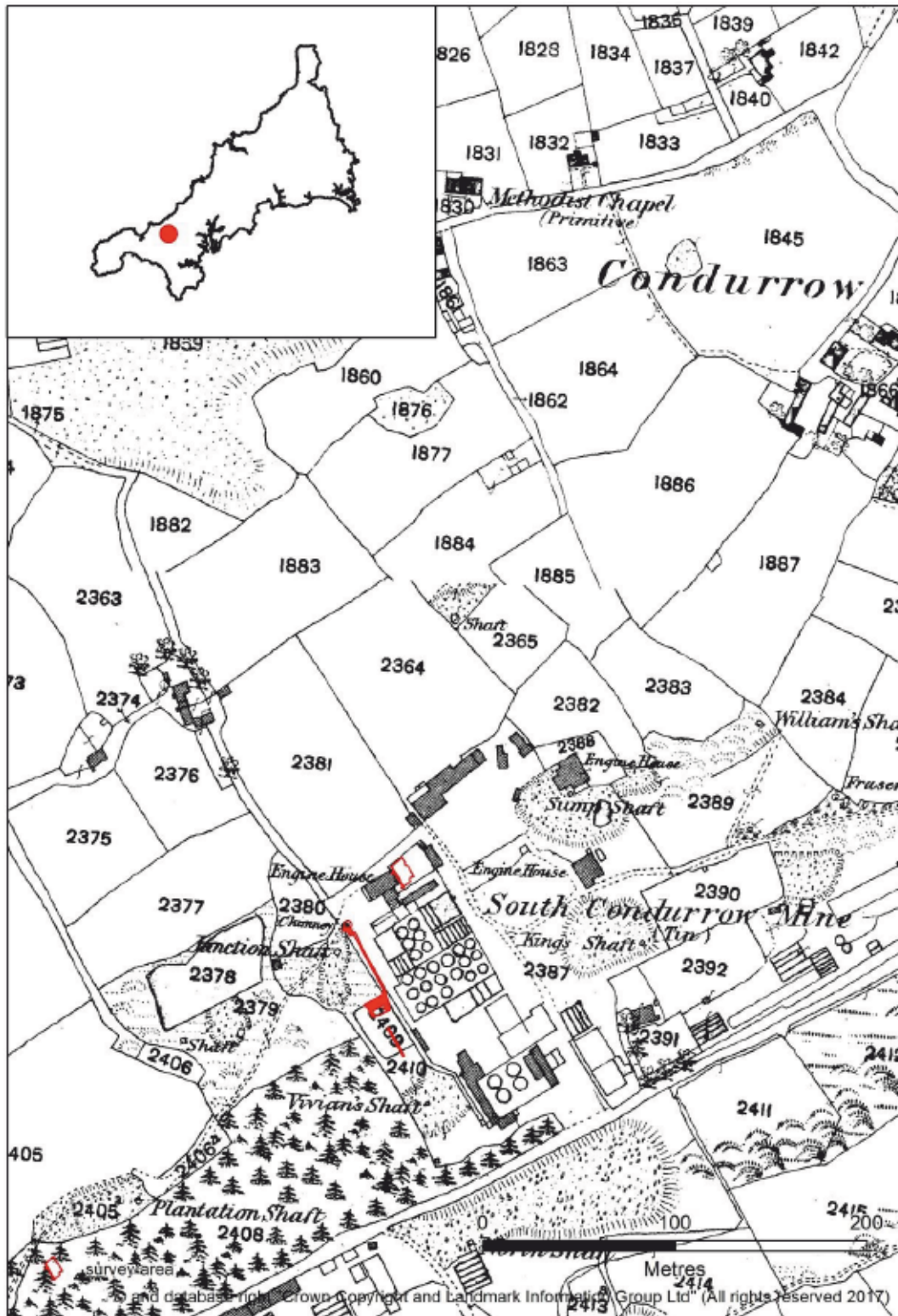


Fig 2 First Edition of the Ordnance Survey 25 Inch Map, 1877.

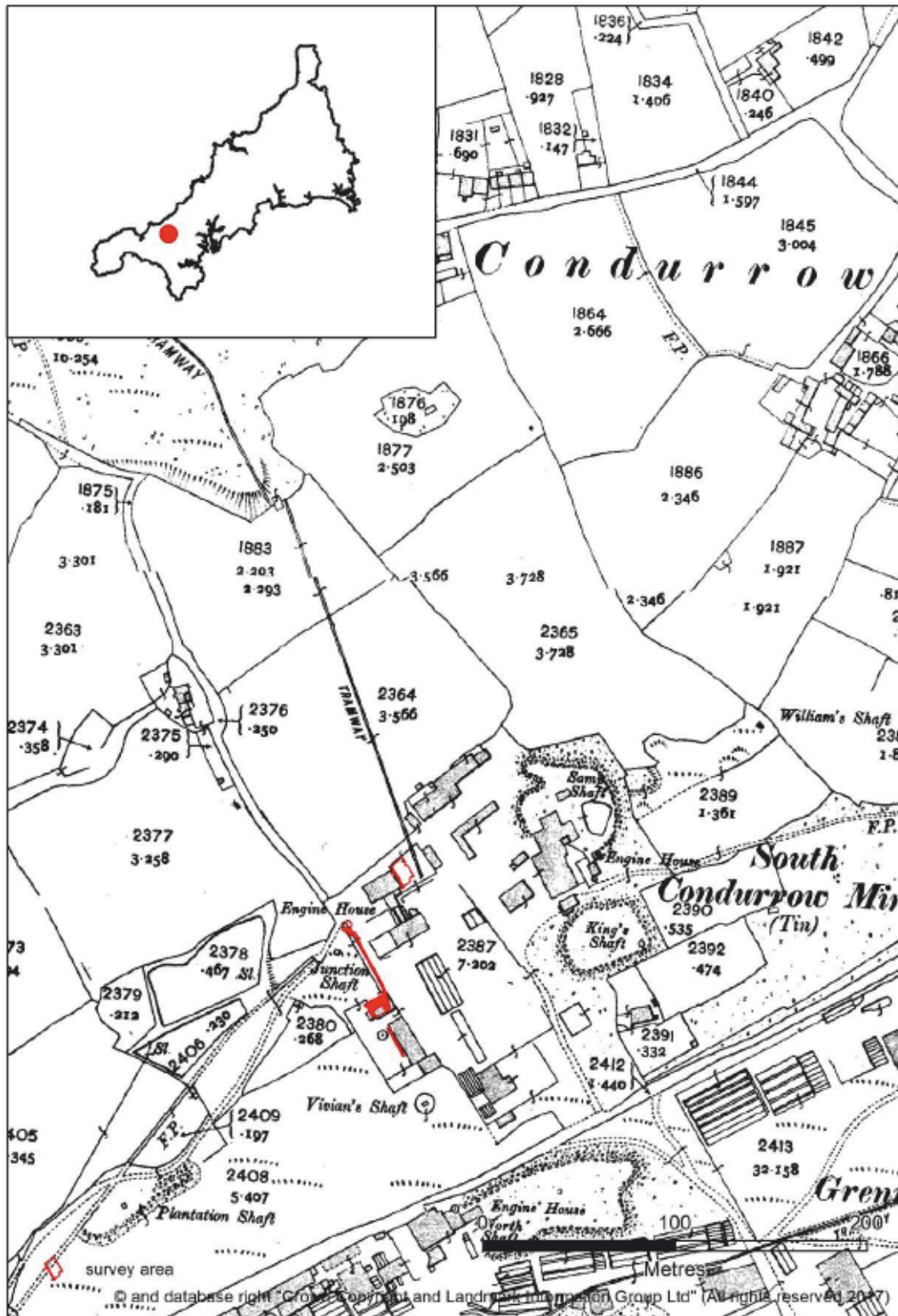


Fig 3 Second Edition of the Ordnance Survey 25 Inch Map, 1907.

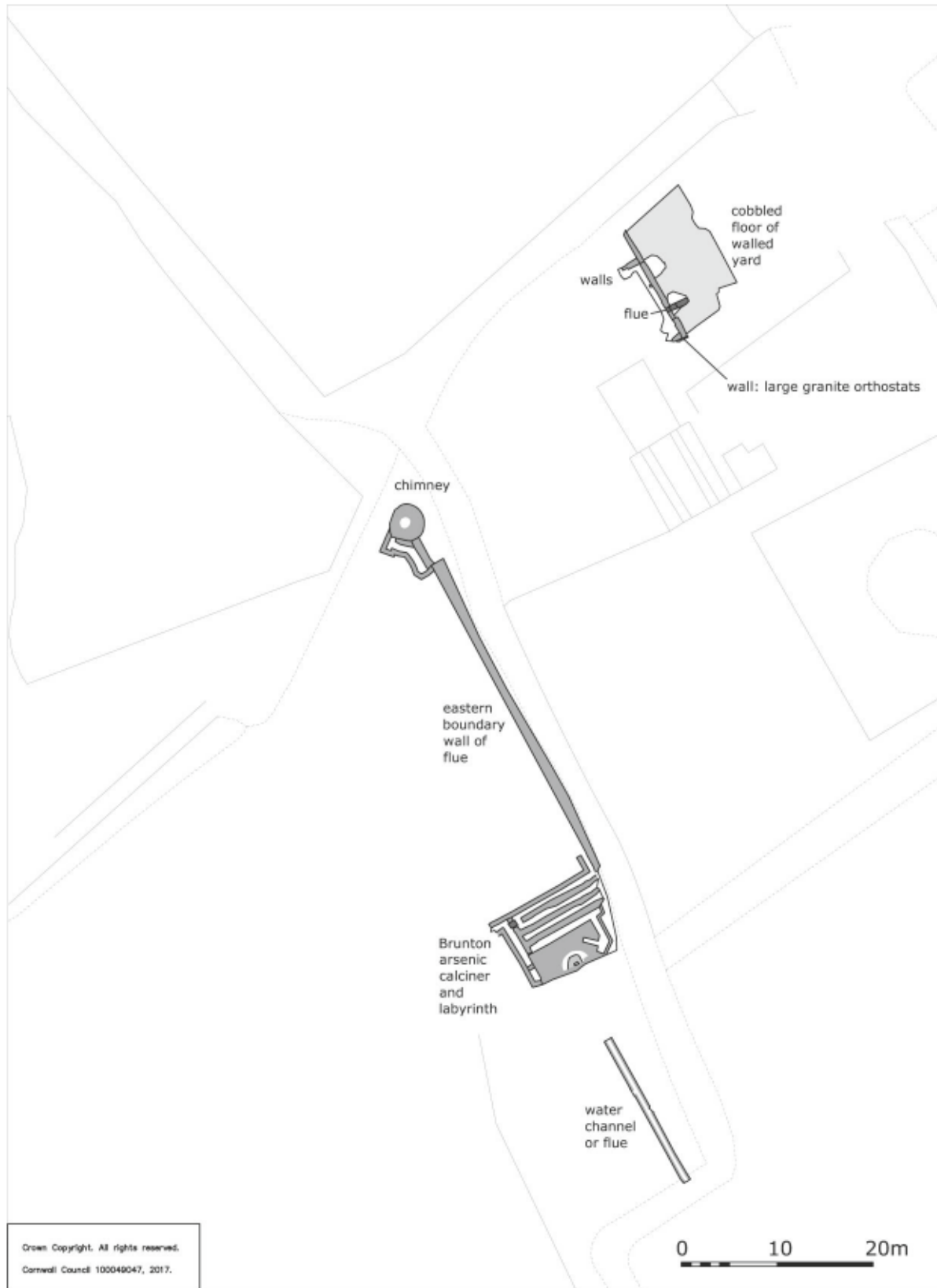


Fig 4 Site survey.

6 Description of recorded features

6.1 The flue and chimney

The flue runs for a distance of 40m between the Brunton arsenic calciner and its adjacent small labyrinth and the chimney to the NNW (Fig 5). For much of the distance only the eastern external bank flanking the flue is visible, the other side being obscured by thick scrub. For the most part this bank is around 0.5m high and 0.6m wide at the top. Much of the bank is obscured by vegetation but where the construction was visible it was of uncoursed killas rubble at the southern end. At the northern end where it emerged from the vegetation it is built exclusively of uncoursed granite rubble, as is the opposite wall, the eastern face of which is visible at this point.

The chimney, of which only the base survives, is built of granite rubble, roughly coursed, and survives to a height of 2m where it joins to the eastern flue wall. It is roughly oval, 3.85m long northeast to southwest, 3.65m northwest to southeast. The walls are around 1.25m thick and surround a flue 1.25m in diameter. This is currently covered with a loose metal grille and a tarpaulin.

The eastern flue wall has been built on to the southeast side of the chimney. The flue leads up to the southwestern side of the chimney, where it enters it through a small opening around 0.5m square.



Fig 5 The chimney, right, flue wall, left.

6.2 The walled yard

An area of cobbled surface around 11m by 7.7m lies exposed to the north of the stamps engine house (Fig 6). The surface is composed of lightly worn rubble, predominately killas but with some granite. Two semi-circular cobble-free areas are located where the floor is butted by a large wall along its southwestern edge. One of these is in the area of an excavation to uncover a flue running under the floor and through the wall; it is unclear whether the floor was removed at this point or whether it never existed. There is some hint of an edging kerb lining the other cobble-free area and it may be that both areas are deliberately cobble-free.



Fig 6 The cobbled yard, wall to rear (facing west).



Fig 7 Wall to the southwest of the cobbled yard (facing northeast).

The wall (Fig 7) is of uncoursed killas and granite rubble, in places bonded with what looks like relatively recent cement-based mortar at its southeastern end. Here the wall appears to have been heightened with dry stone granite. The wall is around 13m long and up to 1.15m high to the southeast, lower in the middle, and rising again to 0.7m to the northwest. Another wall, largely uncoursed killas rubble, runs off to the southwest perpendicular to it at the northwestern end. At the southeastern end another wall, composed of large dressed drystone granite, runs off to the southwest.

6.3 The Brunton Calciner and labyrinth



Fig 8 Calciner, left, leading to labyrinth, right (facing southwest).



Fig 9 The retaining wall, left, and labyrinth (facing northeast).

This structure covers an area of around 10m northeast to southwest and 8m northwest to southeast. The northwestern retaining wall (Fig 9) is the largest, over 2m high, and composed of uncoursed mostly killas rubble. It runs for 10m along the edge of the labyrinth, beyond which it is much lower and disappears into thick vegetation. The taller section of walling fills a gap shown on the 1907 map, whilst the lower wall may

represent the outer wall of the dressing floor reservoir pond shown on the 1877 map (Fig 2).

The labyrinth (Fig 9) consists of three parallel walls of uncoursed rubble to a height of up to 0.5m and 0.6m wide. These form a labyrinth of flues 0.5m wide leading from the semi-circular cement-surfaced platform of the calciner at the southeastern end of the complex to the flue leading to the chimney at its northeastern corner. The calciner would have been set within a small square building.

The edge of the calciner is marked by a path. Beyond this to the southeast is a narrow water channel or flue 0.4m wide (Fig 10), running northwest to southeast for 14m to a path, beyond which it continues. The channel is concrete-block lined and is 0.6m deep. Two partly excavated spurs run off to the northeast and west.



Fig 10 The water channel, or flue (facing SSE).

7 References

7.1 Primary sources

Ordnance Survey, 1877. 25 Inch Map First Edition (licensed digital copy at CAU)

Ordnance Survey, 1907. 25 Inch Map Second Edition (licensed digital copy at CAU)

Ordnance Survey, MasterMap Topography

7.2 Publications

Buck, C, 2013. *King Edward Mine, Camborne, Cornwall, Conservation Management Plan*, Historic Environment Projects, Truro

CIfA, 2014a. Standard and guidance for the archaeological investigation and recording of standing buildings or structures

CIfA, 2014b. *Code of Conduct*, CIfA, Reading

Historic England 2015. *Guidance note on Digital Image Capture and File Storage*. Historic England, Swindon

7.3 Websites

<http://www.heritagegateway.org.uk/gateway/> Online database of Sites and Monuments Records, and Listed Buildings

8 Project archive

The CAU project number is **146732**

The project's documentary, digital, photographic and drawn archive is maintained by Cornwall Archaeological Unit.

Electronic data is stored in the following location:

\\CAU\Archive\Sites K\King Edward Mine trench recording 2017 146732

Historic England/ADS OASIS online reference: cornwall2- 304088

Cornwall Archaeological Unit

Fal Building, County Hall, Treyew Road, Truro, Cornwall,
TR1 3AY

(01872) 323603
enquiries@cau.org.uk
www.cau.org.uk

