

# Helston Flood Alleviation Scheme Helston Cornwall

Archaeological Watching Brief



*for:* Kier Services Highways

CA Project: EX0114 CA Report: EX0114\_1

June 2022



# Helston Flood Alleviation Scheme Helston Cornwall

Archaeological Watching Brief

CA Project: EX0114 CA Report: EX0114\_1

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A	30 November 2020	Sara-Jayne Boughton	Laurent Coleman	Internal review	_	Richard Young	
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С	6 May 2022	Sara-Jayne Boughton	Derek Evans	Curator review (2)	Added WSI as appendix	Derek Evans	
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# **SUMMARY**

**Project name:** Helston Flood Alleviation Scheme

**Location:** Helston, Cornwall

**NGR:** 16545 02793 to 16555 02739

Type: Watching brief

**Date:** 19 February – 16 October 2020

Planning reference: Cornwall Council planning ref. PA14/03441/PREAPP

Location of Archive: To be deposited with the Museum of Cornish Life, Helston, Cornwall

Site Code: HFAS 20

Between February and October 2020, Cotswold Archaeology carried out an archaeological watching brief during groundworks associated with flood defence improvement works at Helston Flood Alleviation Scheme, Helston, Cornwall.

No archaeological features or deposits pre-dating the post-medieval period were encountered. Two upstanding structures comprising a Cornish hedge and a historic garden wall were partially excavated and recorded for the installation of flood defences. A possible dump deposit associated with a nearby former gasworks was also encountered.

A spherical worked stone object (recovered from a made ground deposit) may be of Late Neolithic/Early Bronze Age or Roman date.

# 1. INTRODUCTION

- 1.1. Between February and October 2020, Cotswold Archaeology (CA) carried out an archaeological watching brief at Helston Flood Alleviation Scheme, Helston, Cornwall (located from NGR: 16545 02793 to 16555 02739; Fig. 1). This watching brief was undertaken for Kier Services Highways.
- 1.2. Cornwall Council (CC) has granted planning permission (CC planning ref. PA14/03441/PREAPP) for flood defence improvement works on either side of the River Cober, entailing the construction of new flood defence walls and the raising and reinforcement of the existing bank at Helston (Jackson Hyder 2019). In consultation with Sean Taylor, Senior Development Officer Historic Environment, CC, the works were subject to an archaeological watching brief.
- 1.3. The scope of this watching brief was defined by Sean Taylor. Archaeological monitoring was recommended in areas where foundations were excavated for the construction of the new flood defences, including the breach of historic Cornish Hedges and the recording of historic vertical dry stone walling (Jackson Hyder 2019). The watching brief was carried out in accordance with a Scope of Works prepared by Jackson Hyder on behalf of the Environment Agency and approved by Sean Taylor. A Written Scheme of Investigation (WSI) for the watching brief is appended to the present report (Appendix D).
- 1.4. The watching brief was also in line with: Standard and guidance for an archaeological watching brief (ClfA 2014; updated October 2020), Management of Research Projects in the Historic Environment (MoRPHE) PPN 3: Archaeological Excavation (Historic England 2015) and Management of Research Projects in the Historic Environment: The MoRPHE Project Managers' Guide (Historic England 2015).
- 1.5. This report on the archaeological watching brief (in PDF format) will be distributed to Cornwall Council Historic Environment Record; Phil Copleston, Senior Development Officer (Historic Environment Planning) Archaeologist, Cornwall Council; and Kier Services Highways.

#### The site

1.6. The site encloses an area approximately 236ha in extent and a c. 5.25km stretch along either side of the Rover Cober. It is located at the south-western edge of the

town of Helston, to the east of Penzance Road (A394), either side of the River Cober from Mill Land in the north to the Listed County Bridge, which crosses the River Cober, to the south of the Kingdom Hall. The site is fairly flat within the northern part of the site at 13m AOD, before steeply sloping to 8m AOD toward the river in the southern part of the site.

1.7. The underlying bedrock geology of the site is mapped as Mylor Slate Formation hornfelsed slate and siltstone, which formed in the Devonian Period, with later intrusions of Unnamed Igneous (BGS 2020). Superficial deposits of alluvial clay, silt, sand and gravel of the Quaternary Period are noted within the course of the River Cober (ibid.).

## 2. ARCHAEOLOGICAL BACKGROUND

2.1. The site has been subject to a preliminary Historic Environment impact assessment and archaeological desk-based assessment (AC 2014), as well as a subsequent archaeological watching brief for geotechnical works (AC 2016). The following is a summary of the results of these, along with pertinent publicly obtainable information.

#### **Prehistoric**

- 2.2. There is limited evidence for prehistoric activity within the site and the immediate surrounding area. A Bronze Age barrow and scattered settlement activity consisting of Neolithic pits and possible Bronze Age huts have been identified through aerial photography on the higher ground surrounding the Loe and Cober river valley (AC 2014). There is currently no evidence that this activity extends onto the lower slopes or the valley floor where the current site is located (Jackson Hyder 2019).
- 2.3. No Iron Age activity has been recorded within the site (AC 2014). Seven probable 'rounds' or settlement sites of Iron Age to Roman date have been identified in the surrounding area on hill slopes at Newham Barton, south of the Loe overlooking Carminowe creek and at Castle Teen Herne in Lowertown (ibid.).

#### Roman

2.4. Two find spots of Roman coins have been recorded in the surrounding area, including a coin of Caracalla said to have been found in Looe Pool Valley, approximately 1km south-west of site (Cornwall and Isles of Scilly HER 2020).

#### Medieval

- 2.5. The name Helston is Cornish and contains the element 'hen-lys' meaning 'ancient court' and 'tun' meaning 'village' or 'town'. The name implies Helston to have been an important early medieval administrative centre, although it is not clear where the original focus of this settlement was located (AC 2014). Helston was mentioned in the doomsday survey as *Henilstone*, with the castle built in the 13th century, as it became a town important for its tin (ibid.)
- 2.6. There is evidence for medieval activity within the area of site. The medieval bridge of St Johns was built in 1260 is located approximately 20m to the east of a proposed flood relief culvert (AC 2014). The bridge has largely been rebuilt but possible early medieval elements survive (Jackson Hyder 2019). The site of the medieval hospital of St John the Baptist with the associated chapel of St Johns was also located 35m to the west of the proposed culvert (ibid.). The remains of both structures and the fulling mill of St Johns (first mentioned in 1260) may extend across the proposed line of the culvert and a flood wall (ibid.).

#### Post-medieval/modern

- 2.7. Helston served as a market centre for a wide agricultural and industrial hinterland during the post-medieval period, at which time the town grew substantially. Its prosperity resulted in a number of affluent buildings being built in the 18th and 19th centuries (AC 2014). The post-medieval layout of Helston Town Mill is well recorded on historic mapping and is located 20m west of the flood relief culvert. It is understood that the mill's main structure will not be impacted but it was thought that the structure of the mill leat and a footbridge shown on 1st edition OS mapping may be encountered during the proposed works (Jackson Hyder 2019).
- 2.8. The demolished sites of a Wesleyan chapel built in 1760 and a toll house were also located within the line of the proposed works, although their remains are thought to have undergone substantial truncation during the construction of a modern road (Jackson Hyder 2019). The site of a former gasworks was also located near site at Lower Green, east of the A394, having commenced production *c*. 1822 before closing in 1967 (AC 2014).

# 3. AIMS AND OBJECTIVES

- 3.1. The general objectives of the watching brief were:
  - to monitor the development groundworks, and to identify, investigate and record any significant buried archaeological deposits/features thus revealed;
  - at the conclusion of the project, to produce an integrated project archive and a report setting out the watching brief results and the archaeological conclusions that can be drawn from the recorded data.

## 4. METHODOLOGY

- 4.1. The watching brief comprised the observation by a competent archaeologist of all intrusive groundworks associated with the proposed development. These works comprised the machine excavation of foundation trenches, as well as the removal of existing trees and hedges and the hand-excavation of an upstanding wall (Fig. 2).
- 4.2. Archaeological features/deposits were investigated, planned and recorded in accordance with *CA Technical Manual 1: Fieldwork Recording Manual*.
- 4.3. Deposits were assessed for their palaeoenvironmental potential in accordance with CA Technical Manual 2: The Taking and Processing of Environmental and Other Samples from Archaeological Sites. No deposits were identified that required sampling.
- 4.4. Artefacts were processed in accordance with *CA Technical Manual 3: Treatment of Finds Immediately after Excavation*.
- 4.5. CA will make arrangements with the Museum of Cornish Life, Helston, for the deposition of the project archive and, subject to agreement with the legal landowner(s), the artefact collection. A digital archive will also be prepared and deposited with the Archaeology Data Service (ADS). The archives (museum and digital) will be prepared and deposited in accordance with Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives (CIfA 2014; updated October 2020).
- 4.6. A summary of information from this project, as set out in Appendix C, will be entered onto the OASIS online database of archaeological projects in Britain.

# 5. RESULTS

- 5.1. This section provides an overview of the watching brief results. Detailed summaries of the recorded contexts are given in Appendix A. Details of the artefactual material recovered from the site are given in Section 6 and Appendix B.
- The natural geological substrate was not revealed during the current groundworks. The earliest deposit encountered was grey alluvium 702 within Trench 7 at approximately 0.5m bpgl. This was overlain by 0.4m of silty gravel subsoil 701, which was in turn sealed by topsoil. Within Trenches 2 6 and 10, only modern made-ground deposits, drains and walls were encountered. Made ground deposit 500, within Trench 5, contained a spherical stone object. This object was 64mm in diameter and is probably of local gabbro igneous rock; it had been carefully formed by pecking and smoothing and exhibited iron staining to a slightly flattened area. The object may be of Late Neolithic/Early Bronze Age or Roman date.
- 5.3. Within Trenches 1 and 9, upstanding structures identified in the preceding historic environment assessment and consisting of a Cornish hedge and a wall were partially excavated and recorded for the installation of flood defences.
- 5.4. Within the northernmost extent of site, a 1m section of Cornish hedge was excavated in Trench 1. The Cornish hedge comprised an outer supporting wall, 102, and deposits 103 and 104.
- 5.5. Wall 102 (Fig. 3, Sections AA and BB) was constructed of roughly squared siltstone blocks. It measured 7.5m in length, 0.4m in width and 0.55m in height. It was butted by hedge deposit 103, which consisted of greyish brown silt with frequent fragments of slate and stone. This was in turn covered by dark brown silt 104 from which one sherd of window glass, one iron nail and one fragment of CBM were recovered. The finds all dated to the post-medieval and/or modern periods.
- 5.6. Within Trench 9, an upstanding wall, 900, was recorded and approximately 5m of its length was demolished to ground level.
- 5.7. Wall 900 (Fig. 4) was constructed of two lengths of large roughly squared granite stones bonded with lime mortar, which formed an internal hollow infilled with soil and rubble. It was butted by modern made ground and pavement at ground level which were not excavated.

5.8. Within Trench 10, the earliest deposit encountered was deposit 1001 consisting of crushed brick, clinker, ash and charcoal, approximately 0.76m in thickness. This was sealed by 0.09m in thickness of tarmac for a current road.

# 6. THE FINDS

Artefactual material, dating to the Late Neolithic/Early Bronze Age or Roman periods and the post-medieval/modern period, was hand-recovered from three deposits (made ground and a Cornish hedge). Quantities of the artefact types are given in Appendix B. The pottery has been recorded according to sherd count/weight per fabric and the fabric code (in parenthesis in the text) was devised for the purpose of this report. The majority of the finds will be disposed of as; they were not recovered from stratified archaeological deposits, they are of recent date and they were not of archaeological interest. The spherical worked stone object is clearly of archaeological interest and will be deposited at the Museum of Cornish Life, Helston, Cornwall.

# **Pottery**

6.2. An unfeatured bodysherd (18g) of glazed earthenware with a white underglaze slip (from made ground layer 402) is likely to be Donyatt earthenware, which is dateable to the mid 16th to 18th centuries.

### **Ceramic Building Material (CBM)**

6.3. A fragment of flat roof tile (50g) from Cornish hedge deposit 104 is post-medieval in date.

#### Other finds

- 6.4. Cornish hedge deposit 104 also produced a fragment (4g) of colourless window glass of modern date.
- 6.5. Two ceramic 'decoy eggs' (102g) were retrieved from made ground layer 500. Such objects were used to encourage chickens to lay and most likely date to the late 19th to 20th centuries.
- 6.6. A fragment of clay tobacco pipe stem (2g) from made ground layer 500 is broadly dateable to the late 16th to late 19th centuries.
- 6.7. A spherical worked stone object (372g, 64mm diameter; Fig. 5) was recovered from made ground layer 500. It is probably of local gabbro igneous rock and has been

carefully formed by pecking and smoothing. Its date and function are uncertain, although stone balls of similar size are known from Late Neolithic or Early Bronze Age sites in Cornwall (Quinnell 2006, 47–8). A possible area of iron staining to a slightly flattened area of the object may indicate significantly later dating. It may represent a weight of Romano-British type, examples of which are known from the area. Such items are typically more well-finished finished than this example (H. Quinnell, pers. comm.).

# 7. DISCUSSION

- 7.1. The watching brief identified limited archaeological remains within the area of observed groundworks.
- 7.2. A previously identified Cornish hedge and wall of post-medieval and/or modern date were partially excavated and recorded, within Trenches 1 and 9 respectively.
- 7.3. A substantial mixed deposit of brick, clinker, ash and charcoal was recorded within Trench 10 and is postulated to be possible dumped material associated with the nearby gasworks at Lower Green.
- 7.4. Within the remaining trenches, only modern made-ground and structures were encountered. The spherical worked stone object may attest to Late Neolithic/Early Bronze Age or Roman activity in the vicinity of the site.

## 8. CA PROJECT TEAM

8.1. Fieldwork was undertaken by Tim Brown, Adam Howard and Steve Brown. This report was written by Sara-Jayne Boughton. The finds report was written by Jacky Sommerville. The report illustrations were prepared by Ryan Wilson. The project archive has been compiled, and prepared for deposition, by Hazel O'Neill. The project was managed for CA by Laurent Coleman and Derek Evans.

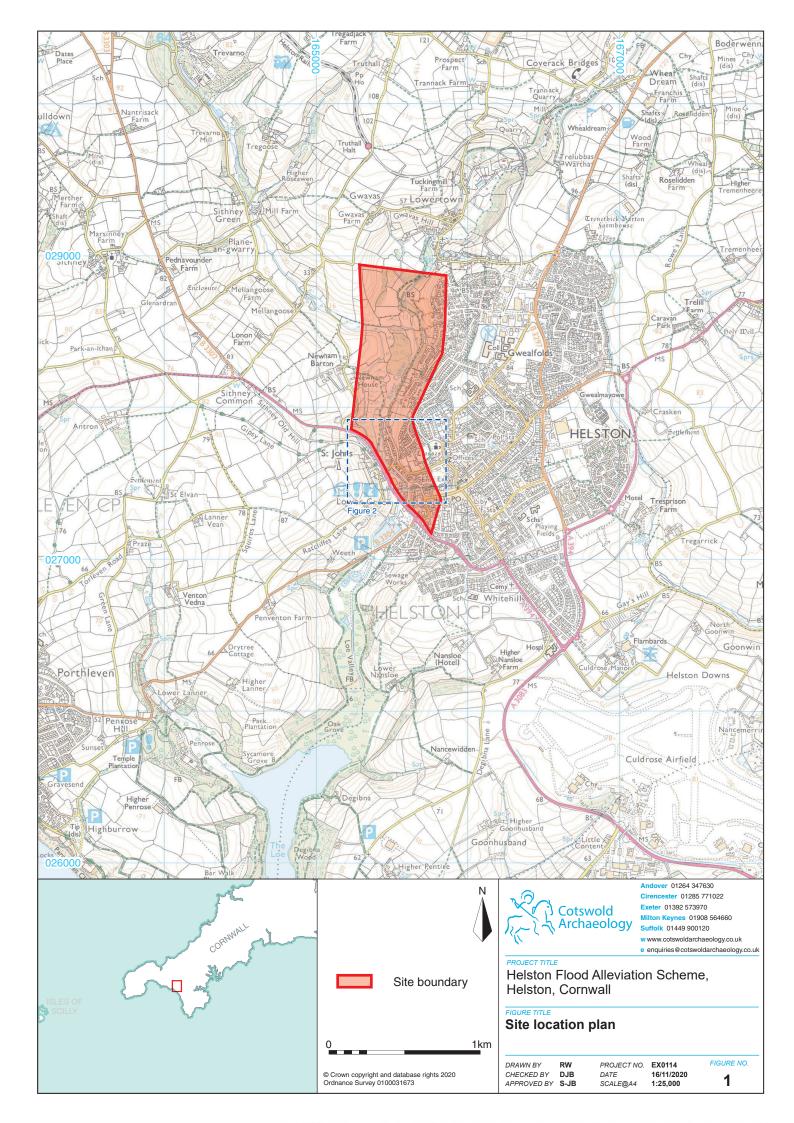
# 9. REFERENCES

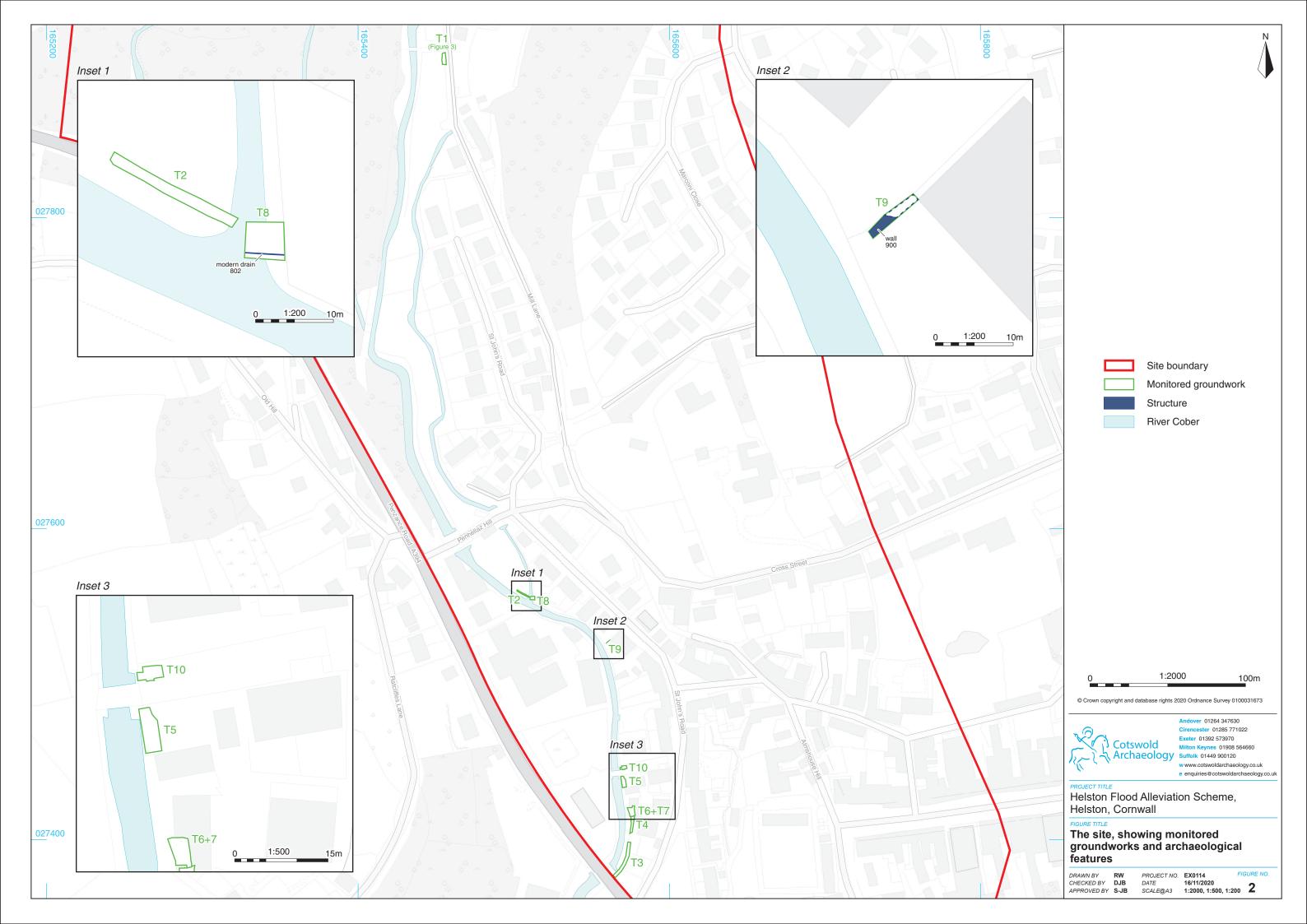
- AC Archaeology 2014 Helston Flood Defence Improvements, Helston, Cornwall:

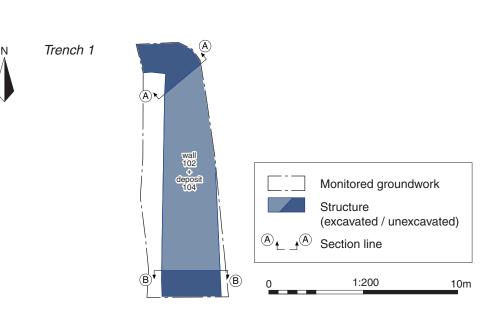
  Historic Environment Assessment, AC Report no. ACD820
- AC Archaeology 2016 Helston Flood Defence Improvements, Helston, Cornwall:

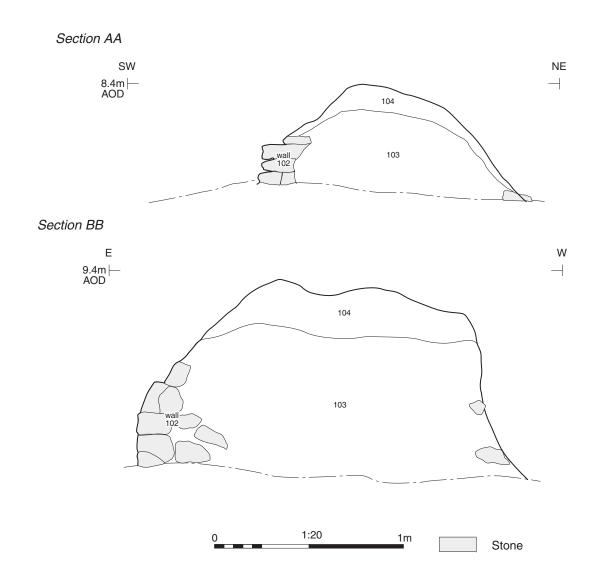
  Results of an Archaeological Watching Brief, AC Report no. ACD1356/1/0
- British Geological Survey 2020 *Geology of Britain Viewer*<a href="https://www.bgs.ac.uk/map-viewers/geology-of-britain-viewer/">https://www.bgs.ac.uk/map-viewers/geology-of-britain-viewer/</a> Accessed 12

  November 2020
- Jackson Hyder 2019 Helston Flood Alleviation Scheme Town, Archaeological Monitoring & Reporting – Scope of Works
- Quinnell, H. 2006 'Cornish Beakers: new discoveries and perspectives' *Cornish Archaeology* **45**, 31–69

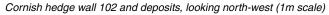














Cornish hedge wall 102 and deposits, looking south (1m scale)



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Helston Flood Alleviation Scheme, Helston, Cornwall

Trench 1: plan, sections and photographs

AWN BY	RW	PROJECT NO.	EX0114	FIGURE NO.
ECKED BY	DJB	DATE	16/11/2020	2
PROVED BY	S-JB	SCALE@A3	1:200, 1:20	3



Wall 900, looking north-east (1m scales)



Wall 900 section, looking north-east (0.4m scale)



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PROJECT TITLE
Helston Flood Alleviation Scheme, Helston, Cornwall

Trench 9: photographs

DRAWN BY RW
CHECKED BY DJB
APPROVED BY S-JB 
 PROJECT NO.
 EX0114

 DATE
 16/11/2020

 SCALE@A3
 1:200





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Helston Flood Alleviation Scheme, Helston, Cornwall

Photograph of spherical stone object

DRAWN BY DJB
CHECKED BY LS
APPROVED BY DE

 PROJECT NO.
 EX0114

 DATE
 07/06/2020

 SCALE@A4
 1:1

FIGURE NO.

5

# **APPENDIX A: CONTEXT DESCRIPTIONS**

Area	Context No.	Туре	Fill of	Interpretation	Description	Length (m)	Width (m)	Depth/ thickness/ height (m)	Spot-date
1	100	Layer		topsoil	Dark grey-brown clay-silt	7.5	1.5	-	
1	101	Layer		subsoil	Mid yellow-brown silt-clay	7.5	1.5	-	
1	102	Structure		Cornish hedge wall	Large roughly squared stones	7.5	0.4	0.55	
1	103	Deposit		Cornish hedge	Mid grey-brown clay-silt; frequent slate and stone	7.5	1.2	0.48	
1	104	Deposit		Cornish hedge	Dark grey-brown clay-silt; occasional stone	7.5	1.4	0.6	Modern
2	200	Deposit		Concrete	Modern concrete		0.4	0.3	
3	300	Deposit		Concrete	Modern concrete				
4	400	Deposit		Concrete	Modern concrete slab	15	4	0.1	
4	401	Deposit		Bedding for 400	Modern building rubble and grey gravel mix	7.5	4	0.26	
4	402	Deposit		Made ground	Modern made ground mix of building rubble with plastic and grey clay-silt	7.5	4	-	MC16- C18
5	500	Deposit		Made ground	Modern made ground of concrete rubble, bricks and silt	10	2.6	0.3	LC19- C20
6	600	Deposit		Made ground	Mid grey-brown sand-silt with frequent plastic and CBM	5	5	0.25	
7	700	Layer		Topsoil	Dark brown-black clay-silt, frequent gravel	5	2	0.1	
7	701	Layer		Subsoil	Mid brown-red silt-gravel	5	2	0.4	
7	702	Layer		Alluvium	Dark grey clay	5	2	>0.6	
8	800	Deposit		Made ground	Mid grey-brown silt-clay; metal inclusions	4.8	4.2	0.08	
8	801	Structure		Wall	4 courses of breeze blocks	4.8	ı	1.5	
8	802	Structure		Drain	Modern metal drain	-	0.75	-	
9	900	Structure		Wall	Roughly squared granite stones with lime mortar	>5	0.53	1.64	
9	901	Deposit		Made ground	Mixed modern aggregates, butts 900	>5	>1	-	
9	902	Deposit		Pavement	Modern garden pavement, butts 900	>5	>1	-	
10	1000	Deposit		Tarmac	Modern tarmac	5	2.3	0.09	
10	1001	Deposit		Made ground	Crushed brick, clinker, ass and charcoal mix	5	2.3	0.76	

# **APPENDIX B: THE FINDS**

Context	Category	Description	Fabric Code	Count	Weight (g)	Spot-date
104	Post-medieval ceramic building material	Flat roof tile		1	50	Modern
	Modern glass	Window		1	4	
	Iron	Nail		1	117	
402	Post-medieval pottery	Donyatt red earthenware	DON	1	18	MC16-C18
500	Ceramic object	'decoy' egg		2	102	LC19-C20
	Clay tobacco pipe	Stem		1	2	
	Worked stone	Sphere		1	372	

# **APPENDIX C: OASIS REPORT FORM**

PROJECT DETAILS						
Project name	Helston Alleviation Scheme					
Short description	Between February and October 2020, Cotswold Archaeology carried out an archaeological watching brief during groundworks associated with flood defence improvement works at Helston Flood Alleviation Scheme, Helston, Cornwall.  No archaeological features or deposits pre-dating the post-					
	comprising a Cornish hedge and a partially excavated and recorded for defences. A possible dump deposit former gasworks was also encountered object (recovered from a made group Neolithic/Early Bronze Age or Roman of the comprision of the comprisi	medieval period were encountered. Two upstanding structures comprising a Cornish hedge and a historic garden wall were partially excavated and recorded for the installation of flood defences. A possible dump deposit associated with a nearby former gasworks was also encountered. A spherical worked stone object (recovered from a made ground deposit) may be of Late				
Project dates	19 February – 16 October 2020					
Project type	Watching Brief					
Previous work	Based Assessment (AC 2014) Watching Brief (AC 2016)					
Future work	Unknown					
PROJECT LOCATION						
Site location	Helston, Cornwall					
Study area (m²/ha)	c. 236ha					
Site co-ordinates	16545 02793 to 16555 02739					
PROJECT CREATORS						
Name of organisation	Cotswold Archaeology					
Project brief originator	N/A					
Project design (WSI) originator	Jackson Hyder, on behalf of the Enviro	nment Agency				
Project Manager	Derek Evans					
Project Supervisor	Tim Brown, Simon Sworn and Adam H	oward				
MONUMENT TYPE	None					
SIGNIFICANT FINDS	None					
PROJECT ARCHIVES	Intended final location of archive	Content				
Physical	Museum of Cornish Life, Helston, Cornwall	Spherical worked stone object				
Paper	Museum of Cornish Life, Helston, Cornwall	Trench sheets, context sheets, permatrace drawings, photographic registers etc				
Digital	Museum of Cornish Life, Helston, Cornwall	Digital photos				
BIBLIOGRAPHY						

Cotswold Archaeology 2020 *Helston Flood Alleviation Scheme: Archaeological Watching Brief* CA typescript report **EX0114\_1** 

# **APPENDIX D: WRITTEN SCHEME OF INVESTIGATION**

Follows



# Helston Flood Alleviation Scheme Helston Cornwall

Written Scheme of Investigation for an Archaeological Watching Brief



*for:* Kier Services Highways

CA Project: EX0114 / CR1043

May 2022



# Helston Flood Alleviation Scheme Helston Cornwall

Written Scheme of Investigation for an Archaeological Watching Brief

CA Project: EX0114 / CR1043

	Document Control Grid							
Revision	Date	Author	Checked by	Status	Reasons for revision	Approved by		
A	6 May 2022	Derek Evans	1	Internal review	1	Derek Evans		

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# 1. INTRODUCTION

- 1.1. This document is a Written Scheme of Investigation (WSI) by Cotswold Archaeology (CA) for an archaeological watching brief to be maintained during groundworks associated with the Helston Flood Alleviation Scheme, Helston, Cornwall (located from NGR: 16545 02793 to 16555 02739). This WSI has been prepared for Kier Services Highways.
- 1.2. Cornwall Council has granted planning permission (planning ref: PA14/03441/PREAPP) for flood defence improvement works to either side of the River Cober, entailing the construction of new flood defence walls and the raising and reinforcement of an existing bank.
- 1.3. The scope of this watching brief has been defined by Sean Taylor, Cornwall Council Senior Development Officer (Historic Environment). The watching brief will be carried out in accordance with a scope of works document prepared by Jackson Hyder on behalf of the Environment Agency (Jackson Hyder 2019).
- 1.4. This WSI has been guided in its composition by Standard and guidance for an archaeological watching brief (ClfA 2014; updated October 2020), Management of Research Projects in the Historic Environment (MoRPHE) PPN 3: Archaeological Excavation (Historic England 2015) and Management of Research Projects in the Historic Environment: The MoRPHE Project Managers' Guide (Historic England 2015).

### The site

- 1.5. The area covered by the flood alleviation scheme comprises a *c*. 5.25km stretch along either side of the Rover Cober. It is located at the south-western edge of Helston, to the east of Penzance Road (A394). The northern part of the site is fairly flat at *c*. 13m AOD, the southern half slopes down toward the river, reaching a low of *c*. 8m AOD.
- 1.6. The underlying bedrock geology of the site is mapped as Mylor Slate Formation hornfelsed slate and siltstone, which formed in the Devonian Period. Superficial deposits of alluvial clay, silt, sand and gravel are noted within the course of the River Cober (BGS 2020).

# 2. ARCHAEOLOGICAL BACKGROUND

2.1. The application site has been subject to a historic environment desk-based assessment and impact assessment (AC 2014), as well as a subsequent archaeological watching brief during geotechnical works (AC 2016). The following text is summarised from these sources and from the scope of works document (Jackson Hyder 2019).

# Prehistoric (pre-AD 43)

- 2.2. There is limited evidence for prehistoric activity within the site and the immediately surrounding area. A Bronze Age barrow and scattered settlement activity consisting of Neolithic pits and possible Bronze Age huts have been identified through aerial photography on the higher ground surrounding the Loe and Cober river valley (AC 2014). There is no evidence that this activity extends onto the lower slopes or the valley floor where the present site is located (Jackson Hyder 2019).
- 2.3. No Iron Age activity has been recorded within the site (AC 2014). Seven probable 'rounds' or settlement sites of Iron Age to Roman date have been identified in the surrounding area on hill slopes at Newham Barton, south of the Loe overlooking Carminowe Creek and at Castle Teen Herne in Lowertown (ibid.).

### Roman (AD 43-AD 410)

2.4. Two find spots of Roman coins have been recorded in the surrounding area, including a coin of Caracalla said to have been found in Looe Pool Valley, approximately 1km south-west of the site.

#### Early medieval (AD 410–1066) and medieval (1066–1539)

- 2.5. The name Helston is Cornish and contains the elements 'hen-lys,' meaning 'ancient court,' and 'tun,' meaning 'village' or 'town'. The name implies Helston to have been an important early medieval administrative centre, although it is not clear where the original focus of this settlement was located (AC 2014). Helston was mentioned in the Domesday Survey (1086) as *Henilstone*.
- 2.6. The medieval bridge of St Johns was built in 1260 is located approximately 20m to the east of a proposed flood relief culvert (AC 2014). This bridge has largely been rebuilt but possible early medieval elements survive (Jackson Hyder 2019). The site of the medieval hospital of St John the Baptist with the associated chapel of St Johns was located *c*. 35m to the west of the proposed culvert (ibid.). The remains of

both structures and the fulling mill of St Johns (first mentioned in 1260) may extend across the proposed line of the culvert and a flood wall (ibid.).

## Post-medieval (1540–1800) and modern (1800–present)

- 2.7. Helston served as a market centre for a wide agricultural and industrial hinterland during the post-medieval period, at which time the town grew substantially. Its prosperity resulted in a number of affluent buildings being built in the 18th and 19th centuries (AC 2014). The post-medieval Helston Town Mill is located *c*. 20m west of a proposed flood relief culvert. It is understood that the mill's main structure will not be impacted but it is possible that the structure of the mill leat and a footbridge shown on early Ordnance Survey mapping may be encountered during the proposed works (Jackson Hyder 2019).
- 2.8. The demolished sites of a Wesleyan chapel built in 1760 and a toll house are also located within the line of the proposed works, although their remains are thought to have undergone substantial truncation during the construction of a modern road (Jackson Hyder 2019). The site of a former gasworks was also located near the site at Lower Green, east of the A394, having commenced production *c*. 1822 before closing in 1967 (AC 2014).

# 3. AIMS AND OBJECTIVES

- 3.1. The general objectives of the watching brief are:
  - to monitor the development groundworks, and to identify, investigate and record any significant buried archaeological deposits/features thus revealed;
  - at the conclusion of the project, to produce a report setting out the watching brief results and the archaeological conclusions that can be drawn from the recorded data;
  - at the conclusion of the project, to compile a stable, ordered, accessible project archive (see Section 6).

#### 4. METHODOLOGY

4.1. The scope of the watching brief is set out in Section 4.1 of the scope of works document (Jackson Hyder 2019). The watching brief will comprise the observation by a competent archaeologist of intrusive groundworks associated with the proposed development. These works are currently anticipated to comprise the

machine excavation of foundation trenches for the new flood defence walls. Additionally, monitoring and recording will be undertaken during the planned breaching of a historic Cornish hedge at the scheme's northern limit, and during the erection of a new retaining wall behind historic drystone walling between Chygothow and St Johns.

- 4.2. Non-archaeologically significant deposits will be removed by the groundworks contractors under archaeological supervision. Where practical, mechanical excavators will be fitted with toothless grading buckets, although toothed buckets and breakers may be used if necessary to remove difficult deposits.
- 4.3. If archaeological features/deposits are exposed, then construction groundworks in the affected area(s) will be temporarily halted so that the monitoring archaeologist is given sufficient time to investigate and record those features to an appropriate standard.
- 4.4. Any archaeological features present will be investigated, planned and recorded in accordance with *CA Technical Manual 1: Fieldwork Recording Manual*. Records will be entered directly into the CA Digital Recording System (DRS) and/or onto proforma site recording sheets. Hand-drawn sections of excavated archaeological features will be prepared (scale 1:10 or 1:20, as appropriate). Features/deposits will be recorded in plan using Leica GPS or Total Station (as appropriate), in accordance with *CA Technical Manual 4: Survey Manual*. Photographs (digital colour) will be taken as appropriate.
- 4.5. In the event of archaeological deposits being found for which the resources allocated are not sufficient to support excavation and recording to a proportionate standard, or which are of sufficient significance to merit an alternative approach (such as contingency excavation), Kier Services Highways and Sean Taylor will be contacted immediately. Destructive work in the affected area(s) will cease until agreement has been reached on an appropriate archaeological response.

#### **Artefacts**

4.6. Artefacts will be recovered and retained for processing and analysis in accordance with CA Technical Manual 3: Treatment of Finds Immediately after Excavation. Artefacts will be collected and bagged by context. Artefacts from topsoil, subsoil and unstratified contexts will normally be noted but not retained unless they are of intrinsic interest. All artefacts from stratified excavated contexts will be collected,

except for large assemblages of post-medieval or modern material. Such material may be noted and not retained or, if appropriate, a representative sample may be collected and retained.

#### **Environmental remains**

- 4.7. The selection, collection and processing of environmental samples will follow the guidelines outlined in *Environmental Archaeology: A guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation* (English Heritage 2011) and *CA Technical Manual 2: The Taking and Processing of Environmental and Other Samples from Archaeological Sites*.
- 4.8. Due care will be taken to identify deposits which may have environmental potential and, where appropriate, a programme of environmental sampling will be initiated. The sampling strategy will be adapted for the specific circumstances of the site, in close consultation with the CA Environmental Officer and Sean Taylor, but will follow the general selection parameters set out in the following paragraphs.
- 4.9. Secure, phased deposits, especially those related to settlement activity and/or structures, will be considered for sampling for the recovery of charred plant remains, charcoal and mineralised remains. Any cremation-related deposits (where excavated; see *Human remains*, below) will be sampled appropriately for the recovery of cremated human bone and charred remains. If any evidence of *in situ* metal working is found, suitable samples will be taken for the recovery of slag and hammerscale.
- 4.10. Where sealed waterlogged deposits are encountered, samples will be considered for the recovery of waterlogged remains (including insects, molluscs and pollen) and any charred remains. The taking of sequences of samples for the recovery of molluscs and/or waterlogged remains will be considered through any suitable deposits, such as deep enclosure ditches, barrow ditches, palaeochannels, or buried soils. Monolith samples may also be taken from suitable deposits as appropriate to allow soil and sediment description/interpretation, as well as subsampling for pollen and other micro/macrofossils such as diatoms, foraminifera and ostracods.
- 4.11. The need for more specialist samples (such as OSL, archaeomagnetic dating and dendrochronology) will be evaluated on site. If required, any such samples will be taken in consultation with the relevant specialists.

4.12. Sample processing will be carried out in conjunction with the relevant specialists. Flotation or wet sieve samples will be processed to 0.25mm. More specialist samples, such as those for pollen, will be prepared by the relevant specialists.

#### **Treasure**

4.13. Upon discovery of treasure, CA will notify Kier Services Highways and Sean Taylor immediately. CA will comply fully with the provisions of the Treasure Act 1996 and the Code of Practice referred to therein. Findings will be reported to the Coroner within 14 days.

#### **Human remains**

4.14. Any human remains (skeletal or cremated) will be treated with due decency and respect at all times. Where human remains are encountered, these will not be excavated unless their disturbance by the development is unavoidable. In cases where disturbance is unavoidable, or where full exhumation of the remains is deemed necessary, exhumation will be conducted following the provisions of the Coroner's Unit in the Ministry of Justice. All excavation of human remains and associated post-excavation processes will be in accordance with the standards set out in *Updated Guidelines to the Standards for Recording Human Remains* (CIfA 2017), *The Role of the Human Osteologist in an Archaeological Fieldwork Project* (Historic England 2018) and *Guidance for Best Practice for the Treatment of Human Remains Excavated from Christian Burial Grounds in* England (Advisory Panel on the Archaeology of Burials in England 2017).

## 5. PROJECT STAFF

- 5.1. This project will be under the management of Derek Evans, MClfA, Project Manager, CA. The Project Manager will direct the overall conduct of the watching brief during the period of fieldwork. Day-to-day responsibility will, however, rest with the Project Leader, who will be on-site throughout the project.
- 5.2. The field team will consist of a Project Leader, supplemented by additional Archaeologists as necessary.
- 5.3. Specialists who may be invited to advise and report on specific aspects of the project as necessary are:

- Ceramics: Ed McSloy BA (Hons) MCIfA (CA), Grace Jones BA MA Phd MCIfA (CA), Alejandra Gutierrez BA (Hons) PHd MCIfA (CA), Stephen Benfield BA (CA), Jacky Sommerville BSc MA PCIfA (CA), Peter Banks LLB LLM PCIfA (CA) and Alistair Barclay BSc PhD FSA MCIfA (CA)
- Metalwork: Ed McSloy MCIfA (CA), Grace Jones BA MA Phd MCIfA (CA)
- Flint: Jacky Sommerville PClfA (CA) and Pippa Bradley BA MPhil Dip Post-Ex MClfA (CA)
- Animal bone: Andy Clarke BA ACIfA (Hons) MA (CA) and Matilda Holmes
   PhD BSc MSc ACIfA (freelance)
- Human bone: Sharon Clough MClfA (CA)
- Environmental remains: Sarah Wyles MClfA (CA)
- Conservation: Pieta Greeves BSc MSc ACR (Drakon Heritage and Conservation)
- Geoarchaeology: Dr Keith Wilkinson (ARCA)
- Building recording: Peter Davenport MClfA FSA (freelance)
- 5.4. Depending on the nature of the deposits and artefacts encountered, it may be necessary to consult other specialists not listed here. A full list of specialists currently used by CA is given as Appendix A.

# 6. POST-EXCAVATION, REPORTING AND ARCHIVING

#### Reporting

- 6.1. An illustrated typescript report will be compiled on the watching brief results. This report will include:
  - an abstract preceding the main body of the report, containing the essential elements of the results;
  - a summary of the project background;
  - a description and illustration of the site location;
  - a methodology of the works undertaken;
  - integration of, or cross-reference to, appropriate cartographic and documentary evidence and the results of other research undertaken, where relevant to the interpretation of the watching brief results;
  - a description of the watching brief results;
  - an interpretation of the watching brief results, including a consideration of the results within their wider local/regional context;

- a site location plan at an appropriate scale on an Ordnance Survey (or equivalent) base-map;
- a plan showing the locations of the monitored areas in relation to the site boundaries;
- plans of each monitored area, or part of monitored area, in which archaeological features were recorded. These plans will be at an appropriate scale to allow the nature of the features to be shown and understood. Plans will show orientation in relation to north. Section drawing locations will also be shown on these plans. Archaeologically sterile areas will not normally be illustrated;
- appropriate section drawings of archaeological features. These drawings will include OD heights and will be at scales appropriate to the stratigraphic detail being represented. Drawings will show orientation in relation to north/south/east/west;
- photographs showing significant archaeological features and deposits that are referred to in the text. All photographs will contain appropriate scales, the size of which will be noted in the photograph captions;
- summary tables of the recorded contexts and recovered artefacts;
- a summary of the contents of the project archive and details of its location
- specialist assessment or analysis reports (where undertaken). Specialist artefact and palaeoenvironmental assessments will take into account the wider local/regional contexts and will include:
  - o specialist aims and objectives;
  - o processing methodologies (where relevant);
  - any known biases in recovery, or problems of contamination/residuality;
  - quantities of material; types of material present; distribution of material;
  - for environmental material, a statement on abundance, diversity and preservation;
  - a summary and discussion of the results, to include significance in a local and regional context.
- 6.2. The draft watching brief report will be distributed to Kier Services Highways and Sean Taylor for review prior to finalisation. All copies of the report (draft and final) will be issued in pdf format.

#### Academic and public dissemination

- 6.3. It is anticipated that a short note on the watching brief results will be produced for inclusion within *Cornish Archaeology*.
- 6.4. Subject to any contractual constraints, a summary of information from the project will be entered onto the OASIS online database of archaeological projects in Britain. This will include a digital (pdf) copy of the final report, which will also appear on the Archaeology Data Service (ADS) website once the OASIS record has been verified.
- 6.5. A digital (pdf) copy of the final report will also be made available for public viewing via CA's *Archaeological Reports Online* web page (http://reports.cotswoldarchaeology.co.uk).

# **Archive deposition**

- 6.6. All artefacts and environmental samples will be processed, assessed, conserved and packaged in accordance with CA technical manuals and the guidelines of the Museum of Cornish Life, Helston.
- 6.7. An ordered, indexed, and internally consistent site archive will be prepared in accordance with Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives (ClfA 2014; updated October 2020), Archaeological Archives: A Guide to Best Practice in Creation, Compilation, Transfer and Curation (Archaeological Archives Forum 2007) and Standard and Guide to Best Practice for Archaeological Archiving in Europe: EAC Guidelines 1 (Europae Archaeologia Consilium 2019), as well as the relevant Museum of Cornish Life guidelines. A recommendation will be made regarding material deemed suitable for disposal/dispersal in line with the Museum of Cornish Life's collection policy.
- 6.8. Depending on the nature and scope of any subsequent programme of archaeological mitigation works at the site, the watching brief archive may be combined with that for any subsequent works and deposited as a single archive. Confirmation of this will be included in any forthcoming WSI.
- 6.9. CA will make arrangements with the Museum of Cornish Life for the deposition of the site archive and, subject to agreement with the legal landowner(s), the artefact collection.

#### Selection strategy

- 6.10. As noted in para. 4.6, artefacts from topsoil, subsoil and unstratified contexts will normally be noted but not retained unless they are of intrinsic interest. All artefacts from stratified excavated contexts will be collected, except for large assemblages of post-medieval or modern material. Such material may be noted and not retained or, if appropriate, a representative sample may be collected and retained.
- 6.11. The site-selected material archive returned to the CA offices will be reviewed following analysis. Stakeholders will make selection decisions based on CA Finds Manager/Officer reports and selection recommendations. The selection will take place during archive compilation. After discussion with the relevant museum Curator and the CA Finds Managers/Officers, it is possible that no material postdating AD 1800 will be retained for inclusion in the preserved archive.

#### **Digital archive**

6.12. A digital archive will be deposited with the Archaeology Data Service (ADS). This archive will be compiled in accordance with the *ADS Guidelines for Depositors*.

#### Data management

- 6.13. All born-digital and digitally-transferred project data created during fieldwork and post-excavation (other than duplicated files) will be stored by CA. Upon project completion and deposition, the data will be transferred to a secure external server. Data will be selected for inclusion in the final digital archive, as detailed below. It is proposed that data selection will occur following completion of post-excavation work.
- 6.14. Selected digital files will be transferred to the Museum of Cornish Life with the documentary and material archive and to the ADS, in line with the relevant guidance and standards for both organisations. In adherence to CA's *Guidelines for essential archive tasks and the preparation of archives* (2017), it is proposed that the selected files will include final versions only. Digital photographs will be selected for inclusion in the archive in line with CA's *Guidelines for essential archive tasks and the preparation of archives* (2017) and *Digital Image Capture and File Storage: Guidelines for Best Practice* (Historic England 2015). Data produced by external specialists or sub-contractors will be granted under license to CA to allow inclusion in the digital archive as required.

# 7. HEALTH, SAFETY AND ENVIRONMENT

7.1. CA will conduct all works in accordance with the Health and Safety at Work Act 1974 and all subsequent health and safety legislation, as well as the CA Health and Safety and Environmental policies and the CA Safety, Health and Environmental Management System (SHE). Any client/developer/Principal Contractor policies and/or procedures will also be followed. A site-specific Construction Phase Plan (form SHE 017) will be formulated prior to commencement of fieldwork.

# 8. INSURANCES

8.1. CA holds Public Liability Insurance to a limit of £15,000,000 and Professional Indemnity Insurance to a limit of £10,000,000.

## 9. MONITORING

9.1. Notification of the start of site works will be made to Sean Taylor so that there will be opportunities to visit the site and check on the quality and progress of the work.

## 10. QUALITY ASSURANCE

- 10.1. CA is a Registered Organisation (RO) with the Chartered Institute for Archaeologists (RO Ref. No. 8). As a RO, CA endorses the Code of Conduct (CIfA 2019) and the Standard and guidance for commissioning work or providing consultancy advice on archaeology and the historic environment (CIfA 2014; updated October 2020). All CA Project Managers hold Member status within the CIfA.
- 10.2. CA operates an internal quality assurance system as follows: projects are overseen by a Project Manager, who is responsible for the quality of the project. The Project Manager reports to the Chief Executive, who bears ultimate responsibility for the conduct of all CA operations. Matters of policy and corporate strategy are determined by the Board of Directors and, in cases of dispute, recourse may be made to the Chairman of the Board.

# 11. PUBLIC ENGAGEMENT, PARTICIPATION AND BENEFIT

11.1. It is not anticipated that this watching brief will afford opportunities for public engagement or participation during the course of the fieldwork. However, the

watching brief results will be made publicly available on the ADS and CA websites, as set out in Section 6.

#### 12. STAFF TRAINING AND CPD

- 12.1. CA has a fully documented mandatory performance management system for all staff. This system reviews personal performance, identifies areas for improvement, sets targets and ensures the provision of appropriate training within CA's adopted training policy. In addition, CA has developed an award-winning career development programme for its staff. This ensures a consistent and high-quality approach to the development of appropriate skills.
- 12.2. As part of CA's requirement for continuing professional development, all members of staff are required to maintain a personal development plan and an associated log; these are reviewed within the performance management system.

### 13. REFERENCES

- AC Archaeology 2014 Helston Flood Defence Improvements, Helston, Cornwall:

  Historic Environment Assessment, AC Report no. ACD820
- AC Archaeology 2016 Helston Flood Defence Improvements, Helston, Cornwall:

  Results of an Archaeological Watching Brief, AC Report no. ACD1356/1/0
- British Geological Survey 2020 *Geology of Britain Viewer*<a href="https://www.bgs.ac.uk/map-viewers/geology-of-britain-viewer/">https://www.bgs.ac.uk/map-viewers/geology-of-britain-viewer/</a> Accessed 12

  November 2020
- Jackson Hyder 2019 *Helston Flood Alleviation Scheme Town, Archaeological Monitoring & Reporting Scope of Works*

#### APPENDIX A: COTSWOLD ARCHAEOLOGY SPECIALISTS

#### Ceramics

Neolithic/Bronze Age Ed McSloy BA MCIFA (CA)

Alistair Barclay BSc PhD FSA MCIfA (CA) Grace Jones BA MA Phd MCIfA (CA) Jacky Sommerville BSc MA PCIfA (CA)

Emily Edwards (freelance)

Dr Elaine Morris BA PhD FSA MCIFA (University of Southampton)

Anna Doherty MA (Archaeology South-East) Sarah Percival MA MCIFA (freelance)

Steve Benfield BA (CA)

Iron Age/Roman Ed McSloy BA MCIFA (CA)

Alistair Barclay BSc PhD FSA MCIfA (CA) Grace Jones BA MA Phd MCIfA (CA) Peter Banks LLB LLM PCIfA (CA) Jacky Sommerville BSc MA PCIfA (CA) Kayt Marter Brown BA MSc MCIFA (freelance)

Steve Benfield BA (CA)

(Samian) Gwladys Montell MA PhD (freelance)

Steve Benfield BA (CA)

(Amphorae stamps) Dr David Williams PhD FSA (freelance)

Anglo-Saxon Alejandra Gutierrez BA (Hons) PHd MCIfA

Alistair Barclay BSc PhD FSA MCIfA (CA) Grace Jones BA MA Phd MCIfA (CA) Jacky Sommerville BSc MA PCIfA (CA) Paul Blinkhorn BTech (freelance)

Dr Jane Timby BA PhD FSA MCIFA (freelance) Sue Anderson, M Phil, MCIFA, FSA (freelance)

Medieval/post-medieval Alejandra Gutierrez BA (Hons) PHd MCIfA

Ed McSloy BA MCIFA (CA)

Alistair Barclay BSc PhD FSA MCIfA (CA) Grace Jones BA MA Phd MCIfA (CA) Jacky Sommerville BSc MA PCIfA (CA) Kayt Marter Brown BA MSc MCIFA (freelance)

Stephanie Ratkai BA (freelance) Paul Blinkhorn BTech (freelance) John Allan BA MPhil FSA (freelance) Richenda Goffin BA MCIFA (CA)

Sue Anderson M Phil, MCIFA, FSA (freelance)

South-West Henrietta Quinnell BA FSA MCIFA (University of Exeter)

Clay tobacco pipe Reg Jackson MLitt MCIFA (freelance)

Marek Lewcun (freelance) Kieron Heard (freelance) Richenda Goffin BA MCIFA (CA)

Ceramic building material Ed McSloy MCIFA (CA)

Peter Banks LLB LLM PCIfA (CA)

Richenda Goffin (Roman painted wall plaster) CBM, BA MCIFA (CA)

Steve Benfield BA (CA)

Dr Peter Warry PhD (freelance)

Sue Anderson M Phil, MCIFA, FSA (freelance)

Other finds

Small finds Ed McSloy BA MCIFA (CA)

Richenda Goffin, (non-metalwork) BA MCIFA (CA)

Steve Benfield CA Dr I Riddler (freelance)

Dr Alison Sheridan, National Museum of Scotland

Metal artefacts Ed McSloy BA MCIFA (CA)

Grace Jones BA MA Phd MCIfA (CA)

Dr Jörn Schuster MA DPhil FSA MCIFA (freelance)

Dr Hilary Cool BA PhD FSA (freelance)

Dr I Riddler (freelance)

Lithics Ed McSloy BA MCIFA (CA)

Jacky Sommerville BSc MA PCIFA (CA)

Pippa Bradley BA MPhil Dip Post-Ex MCIfA (CA)

Michael Green (CA) Sarah Bates BA (freelance)

(Palaeolithic) Dr Francis Wenban-Smith BA MA PhD (University of Southampton)

Worked stone Dr Ruth Shaffrey BA PhD MCIFA (freelance)

Dr Kevin Hayward FSA BSc MSc PhD PCIFA (freelance)

Inscriptions Dr Roger Tomlin MA DPhil, FSA (Oxford)

Glass Ed McSloy MCIFA (CA)

Dr Hilary Cool BA PhD FSA (freelance)

Dr David Dungworth BA PhD (freelance; English Heritage)

Dr Sarah Paynter (Historic England)

Dr Rachel Tyson (freelance)

Dr Hugh Wilmott (University of Sheffield)

Coins Ed McSloy BA MCIFA (CA)

Dr Ruth Beveridge (CA)

Dr Peter Guest BA PhD FSA (Cardiff University) Dr Richard Reece BSc PhD FSA (freelance)

Jude Plouviez (freelance)

Dr Andrew Brown (British Museum)
Dr Richard Kelleher (Fitzwilliam Museum)
Dr Philip de Jersey (Ashmolean Museum)

Leather Quita Mould MA FSA (freelance)

Textiles Penelope Walton Rogers FSA Dip Acc. (freelance)

Dr Sue Harrington (freelance)

Iron slag/metal technology Dr Tim Young MA PhD (Cardiff University)

Dr David Starley BSc PhD Lynne Keys (freelance)

Worked wood Michael Bamforth BSc MCIFA (freelance)

Biological remains

Animal bone Dr Matilda Holmes BSc MSc ACIFA (freelance)

Julie Curl (freelance)

Lorrain Higbee (Wessex Archaeology)

Human bone Sharon Clough BA MSc MCIFA (CA)

Sue Anderson M Phil, MCIFA, FSA (freelance)

Environmental sampling Sarah Wyles BA MCIFA (CA)

Sarah Cobain BSc MSc ACIFA (CA)

Dr Keith Wilkinson BSc PhD MCIFA (ARCA)

Anna West BSc (CA) Val Fryer (freelance)

Pollen Dr Michael Grant BSc MSc PhD (University of Southampton)

Dr Rob Batchelor BSc MSc PhD MCIFA (QUEST, University of Reading)

Diatoms Dr Tom Hill BSc PhD CPLHE (Natural History Museum)

Dr Nigel Cameron BSc MSc PhD (University College London)

Charred plant remains Sarah Wyles BA MCIFA (CA)

Sarah Cobain BSc MSc ACIFA (CA)

Wood/charcoal Sarah Cobain BSc MSc ACIFA(CA)

Dana Challinor MA (freelance)
Dr Esther Cameron (freelance)

Insects Enid Allison BSc D.Phil (Canterbury Archaeological Trust)

Dr David Smith MA PhD (University of Birmingham)

Mollusca Sarah Wyles BA MCIFA (CA)

Dr Keith Wilkinson BSc PhD MCIFA (ARCA) Dr Mike Allen (Allen Environmental Archaeology)

Ostracods and Foraminifera Dr John Whittaker BSc PhD (freelance)

Geoarchaeology Dr Keith Wilkinson BSc PhD MCIFA (ARCA)

Soil micromorphology Dr Richard Macphail BSc MSc PhD (University College London)

Dr Mike Allen (Allen Environmental Archaeology)

Scientific dating

Dendrochronology Robert Howard BA (NTRDL Nottingham)

Radiocarbon dating Alistair Barclay BSc PhD FSA MCIfA (CA)

SUERC (East Kilbride, Scotland) Beta Analytic (Florida, USA)

Professor John Hines (Cardiff University)

Archaeomagnetic dating Dr Cathy Batt BSc PhD (University of Bradford)

TL/OSL Dating Dr Phil Toms BSc PhD (University of Gloucestershire)

**Conservation** Karen Barker BSc (freelance)

Pieta Greaves BSc MSc ACR (Drakon Heritage and Conservation)

Julia Park-Newman (Conservation Services, freelance)



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