

Millpond, Hayle, Cornwall Archaeological Watching Brief

Cornwall Archaeological Unit

Report No: 2018R008

Report No	Report Name	Report Author		
2018R008	Millpond, Hayle, Cornwall: Archaeological Watching Brief	Ryan P Smith		
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Watching Brief				
Client Organisation	on Client Contact			
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23/01/18	25/01/18 Ryan Smith	01/02/18		
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(Town – for urba	n sites)	(Postcode)		
Hayle	TR27 4HA			
(Easting) X co-or	rd (Northing) Y co-ord			
SW	55837 36950			



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1 Project background

Cornwall Archaeological Unit (CAU) was commissioned by Mr. Stuart Wallace, Cornwall Council Public Space Officer, to carry out a watching brief at part of Harvey's Foundry in Hayle, a Scheduled Monument ref 1402648. The work was required during the excavation of footings for replacement playground equipment within the site occupied by part of the former foundry; the excavations occupied an area of a maximum of 73m² (see Figs 1, 2 and 7).

An application for Scheduled Monument Consent for the works was submitted on 14th December 2017. Consent was granted with a requirement that an archaeological watching brief should be carried out and reported on. CAU produced a Written Scheme of Investigation which set out the standards for archaeological recording (summarised in Appendix 1).

The work was commenced on the 23rd January 2018, and involved the excavation by CORMAC staff of twenty small pits reaching depths of a maximum of 0.6m. This report details the results of the watching brief.

2 Aims and objectives

The principal aim of the study was to gain a better understanding of the archaeology of the development area.

The objectives were to:

 Obtain an archaeological record of the site during the groundworks required for the installation of the play equipment.

Key objectives were to:

- Create a record of any sub-surface archaeology encountered during the excavation of four 900mm deep posthole sockets for the swing and fifteen excavations averaging 300mm x 300mm in plan and between 400mmm and 560mm deep for the other item of play equipment.
- Recover any artefacts from the excavated areas.
- Produce a report for Historic England and the Cornwall HER on the results of the watching brief.
- Produce an entry to the Historic England/ADS-online OASIS national database of archaeological projects.

3 Site history

The area under investigation has previously been the subject of several archaeological and historical studies which have informed the rest of this section.

The Scheduled Monument description reads:

The Hayle Estuary has been a focus for settlement and maritime trade since prehistoric times. From at least the mid-18th century it developed into one of Cornwall's main industrial ports, serving surrounding mines and becoming home to Copperhouse Foundry and Harvey's Foundry. Internationally renowned for the scale of their work and the breadth of their engineering expertise, these rival companies were largely responsible for the expansion of Hayle during the C19.

Harvey's Foundry was established at the head of Penpol Creek, an area later known as `Foundry', in 1779. Initially serving local mine needs, it became one of the world's leading suppliers of industrial pumping engines in the early C19, a role shared with the rival Copperhouse Foundry located in the north-east part of the town. Fierce competition over access to quays produced the `South Quay' built by Harvey's in 1819, aggravating the natural problems of estuarine silting. These problems were resolved by impounding Copperhouse Pool and, from 1834, creating the wholly artificial Carnsew Pool as tidally-filled sluicing pools whose waters were directed to the canal, quays and

harbour mouth. This complex system maintained the port facility that gave the foundries their national and international role besides serving their regional hinterland. Accompanying this industrial growth, the foundry companies operated as general merchants, developing the necessary storage, cartage and stabling facilities and further stimulating use of the port.

The former industrial complex to the east of Millpond Avenue includes the remains of hammer mills, a grist (grain) mill, and a ropeworks. The initial development of the site dates from circa 1780 and it developed through the C19 as an industrial focus growing from the establishment of John Harvey's iron foundry at the head of Penpol Creek in 1779. The site finally ceased operation in the early C20, having spanned the full duration of Harvey's engineering production. Part of the original water management at the site includes a leat that possibly originally powered a metal-boring mill in the northeast part of the site which was later replaced by or converted to a grist (corn) mill; and a reservoir or millpond which John Harvey gained permission to impound in 1780 and which powered hammer mills at the site. The leat allowed the Penpol Stream to bypass the millpond or reservoir as required; it was recut to its present course in 1795 following a dispute over rights to the land it originally crossed. The earliest mill at the site may have originally been a boring mill but by at least 1827 it was grinding corn, which was in demand to feed the many horses that provided Harvey's land transport needs.

Milling was one of the major industries in Hayle from the early C19 due to the demand for supplying horses and men with feed. It expanded into a major commercial concern, with flour production and export, baking and retailing all becoming more important throughout the C19 and into the mid-C20. In 1851, in a division of Harvey's property, the grist mill complex was sold to J H Trevithick & Son. It was extended during the C19. Milling ceased in the 1890s when a mint humbug factory took over part of the building.

A ropery was established at the site in 1796. Rope making was one of the first of Harvey's diversified activities after establishing his foundry and especially used in mines and for ships' rigging and cordage. The ropeworks closed in 1916, demand for its products having declined with the collapse of Cornish mining and the replacement of hemp rope with wire for maritime uses.

<u>Principal elements</u>. A former industrial complex which includes the earthworks, standing and buried remains of hammer mills, a grist mill, ropeworks, store, reservoir and leat. It was established in the late C18, and was expanded and altered in the C19. The site is situated in a slight valley extending south from Penpol Creek, and to the east of Millpond Avenue.

<u>Details</u>. In the north-east part of the site are the ruins of a building which map evidence confirms as the earliest mill at the site. Rectangular in plan, the grist mill was converted to steam power in about 1830 and was extended southward by about 1832. By the end of the C19, photographs show the mill rising five storeys high to a shallow pitched roof. In 1940 the mill was reduced to first-floor level, reputedly to prevent the tall building from being used as a landmark to guide German bombing raids. The surviving north end and east side walls of the mill are faced externally by granite block masonry and internally by granite rubble, with dressed granite quoins and lintels. Large brick arches pierce each ground-floor wall, with an original window above the north wall arch. A ground-floor doorway and first-floor window in the east wall are now blocked.

Extending west and south-west from the grist mill are remains of Harvey's C19 hammer mills. Early-C19 map evidence indicates that they occupied most of the area between the grist mill and the millpond, with an extended frontage to the millpond which provided the power. An 1864 plan adds detail, showing three elongated roofed ranges adjoining side by side, ending along Foundry Hill to the north but extending south to different lengths, the central range being the shortest. The western range has a rounded projection with a dormer roof extending into the edge of the millpond and is considered to have housed sluices controlling the distribution and force of water to the

mill. Early-C20 photographs, taken about the time of the mill's closure, show the western range and its projection as a single-storey building with a shallow-pitched slate roof; a later aerial photograph, prior to 1940, shows that the hammer mills were roofless by this date. The hammer mills survive with their north, west and southern walls standing to single-storey height, of granite rubble masonry with dressed granite quoins and lintels. The north wall, extending west from the grist mill, shows at least three construction phases, corresponding with the ends of the three ranges: the gable end of each range has two window openings with blocked doorways beneath, and the west range has a large brick-arched opening. Against the internal north-east corner of the west range is a masonry chimney stack base with its brick lining projecting above. The mill's west wall, facing the millpond, has closely-spaced window openings, all truncated just below lintel level; the rounded projection into the edge of the millpond is entered by a doorway in its rear wall, set back slightly within the mill, and has a small window facing towards the millpond. The mill's south wall again combines several construction phases, with a window near its west end and the base of a first floor opening at the east.

The ropeworks is situated to the south of the hammer mills. The ropewalk extended SSE, straight along the narrow strip between the millpond and the leat, eventually reaching about 210m long at its maximum extent by the 1840s. Of this, the northern 158m survives, lacking its roof. The ropewalk interior, about 5m wide, is defined to the west by a substantial rubble wall, now slightly reduced, with frequent external buttresses. Along the wall, small rectangular sockets with iron linings are considered to have held spars used in stretching the rope. The eastern side of the ropewalk has a very low wall and was largely open-sided to assist ventilation, the roof being held on supports which no longer survive. East of the ropewalk's northern end are two large, wall-lined flat-bottomed pits; one of these, circular with a rectangular extension to the south, is identified as housing a former steam-powered rope-spooler. The 1870's mapping shows a roofed building over the pits, of which some walling survives, with another ropery building to the south which stands to gable height. At the north-eastern end of the ropeworks is a mid- to late-C19 building that is marked on a plan of the 1880s as a store. It survives to first-floor height and is roughly square in plan, subdivided into several rooms, one containing a chimney base and another, a small hearth. The frontage to the lane has three broad brick-arched openings appropriate for wagon-loading.

The reservoir, known as the millpond, remains largely water-filled, though partly silted at the south end. It measures about 200m NNW-SSE by up to 55m wide; its slender northern third is sub-divided as an inner pool by a bank. On the east it is defined by a strip of raised ground, broad on the north but narrow further south, separating the millpond from a leat which allowed the Penpol stream to bypass the millpond as required. The leat, part of the Harvey's original water management at the site, powered the wheel of a metal-boring mill (Figures 3 and 4).

All modern fences and railings, the pedestrian barriers under the entrance arches, modern path surfaces and kerbing, signs and notices, seating, electricity supply cables, control and fuse boxes, telephone pole, cables and guys, lamp posts, modern drains and covers, playground equipment, modern statuary and artwork, litter bins, life-belt and housing, and the modern culverts along the millpond edge are all excluded from the scheduling. The ground beneath all these features is, however, included.

The Millpond Gardens form an attractive park and amenity developed on this formerly industrial land. Modern landscaping has created an open air performance space using the ruinous remains of a hammer mill. Other industrial remains are extant within the park and include those relating to a former a grist mill, a boring mill and other industrial structures probably dating to the 1790s. The mill ponds and leat system that powered these activities form an attractive feature and offer amenity value including wildlife interest. A former rope walk has been made into a walking trail.

The site was saved from clearance by the Hayle Town Trust, which was formed in the 1980s following the demolition of the nearby 'Coliseum'. The village pond and nature reserve that have been created from the hammer mills complex is in great contrast to the gritty realities of its industrial origins and its urban surroundings. It is, however, attractive in its own right and important as a natural environment in the town centre, and provides a link between the urban environment and the immediately adjoining open fields to the south.

4 Working methods

All recording work was undertaken according to the Chartered Institute for Archaeologists standards for archaeological work, including *Standards and Guidance for Archaeological watching briefs (CIfA 2014a, 2014b, 2014c, 2017).* The Chartered Institute for Archaeologists is the professional body for archaeologists working in the UK.

Staff from CORMAC excavated twenty small pits between the 23rd and 25th of January 2018. An archaeologist from CAU recorded the first four pits associated with the swings on the 23rd January and the remaining sixteen (associated with the slide and climbing frame) on the 25th January.

Site drawings (plans and sections) were made by pencil on drafting film; all plans have been linked to the Ordnance Survey Landline (electronic map; all drawings were made at either 1:10, 1:20 or 1:50 scale). All contexts were sequentially numbered (Appendix 2). No significant artefacts were found.

Photographs were taken using a Nikon D3300 Digital SLR with a resolution of 24.2MP.

5 Results

The work involved the excavation of twenty small pits reaching depths of a maximum of 0.6m (Fig 8). Four of the pits revealed a possible floor surface on the southern side of the area siting the new play equipment (Fig 5). During the excavation of the pits various pieces of domestic rubbish were revealed, together with items associated with the earlier play equipment which had been removed in November 2016.

Detailed descriptions of the contexts are given in Appendix 2. The stratigraphic sequence in each individual trench is described below from top to bottom.

All of the pits contained similar deposits.

Pit 1

See Figures 5 and 6.

Measuring 1m x 0.4m x 0.6m deep, this contained four deposits. The topsoil (1/1) was a dark brown plastic clay silt, <0.2m deep containing small stone inclusions, unsorted; this was topped with a layer of low cut grass. This covered (2/1): a dark grey/blackish/brown friable sandy deposit, a very gritty mixture which appeared to be redeposited waste material <0.15m deep. Below this was a similar deposit (3/1): a grey/brown friable sandy gritty deposit <0.2m deep which appeared to be a mixture of (2/1) and (4/1). The basal layer (4/1) was a dark grey/black friable gritty sand deposit containing a piece of broken red brick.

It was clearly evident that other red brick fragments had been removed during the excavation of this pit and the other three pits associated with this piece of play equipment. None carried any markings and they were in poor condition; they had not been *in situ* as part of a structure.

Pit 2

See Figure 5.

Measuring $1m \times 0.4m \times 0.6m$ deep, this contained four deposits: topsoil (1/2), a thin layer of sand (2/2), a layer of grey compacted clay (3/2) and the basal fill which consisted of a dark grey/black friable gritty sand (4/2) containing fragments of red brick.

Pit 3

See Figure 5.

Measuring 1m x 0.4m x 0.6m deep, this contained four deposits: topsoil (1/3), a light greyish/grey/black compact gritty sand (2/3), a dark, almost black compact gritty sand, (3/3) and a dark grey loose very sandy grit (4/3) containing some fragments of ferrous material and broken brick.

Pit 4

See Figure 5.

Measuring $1m \times 0.4m \times 0.6m$ deep, this contained three deposits: topsoil (1/4), a thin layer of yellow sand (2/4) and a dark greyish/black friable sandy grit (3/4) containing some fragments of brick and ferrous material.

Pit 5

See Figure 5.

Measuring 1m x 0.35m x 0.2m deep, this pit was wholly within the topsoil layer.

Pit 6

See Figure 5.

Measuring $0.7m \times 0.38m \times 0.55m$ deep, this contained six deposits: topsoil (1/6), a thin layer of yellow sand (2/6) sat on top of sandy soil (3/6), a shallow layer of yellow sand (4/6), a layer of buried topsoil (5/6) and the dark sandy grit (6/6) found as the basal deposit within all of the other pits (apart from pit 5).

Pit 7

See Figure 5.

Measuring $0.55m \times 0.55m \times 0.6m$ deep, this contained three deposits: topsoil (1/7), a shallow layer of yellow sand (2/7), and a dark grey loose gritty sand (3/7) which covered a solid grey piece of stone which appeared to have a flat upper surface (4/7) and may have been part of a floor surface.

Pit 8

See Figures 5 and 10.

Measuring $0.6m \times 0.5m \times 0.6m$ deep, this contained two deposits; topsoil (1/8) and a dark grey friable sandy grit, which covered a solid grey piece of stone which appeared to have a flat upper surface (3/8) and was interpreted as part of a possible floor surface.

Pit 9

See Figures 5 and 9.

Measuring $0.95m \times 0.35m \times 0.6m$ deep, this contained four deposits: topsoil (1/9), a shallow layer of yellow sand (2/9), a mid-grey plastic clay/sand mixture (3/9) and a dark grey/black friable sandy grit (4/9).

Pit 10

See Figure 5.

Measuring $0.64 \text{m} \times 0.41 \text{m} \times 0.62 \text{m}$ deep, this contained two deposits: topsoil (1/10) and a dark grey loose sandy grit (2/10) which contained fragments of ferrous material.

Pit 11

See Figure 5.

Measuring $0.50 \text{m} \times 0.47 \text{m} \times 0.6 \text{m}$ deep, this contained three deposits: topsoil (1/11), a shallow layer of yellow sand (2/11) and a dark grey loose sandy grit (3/11) which covered a flat dark grey solid piece of stone (4/11), interpreted as part of a possible floor surface.

Pit 12

See Figure 5.

Measuring $0.52m \times 0.49m \times 0.65m$ deep, this contained three deposits: topsoil (1/12), a shallow layer of yellow sand (2/12) and a dark grey/black friable gritty sand (3/12) containing fragmented brick and ferrous material which covered a sold grey piece of stone (4/12), interpreted as belonging to a possible buried floor surface.

Pit 13

See Figure 5.

Measuring $0.48 \text{m} \times 0.47 \text{m} \times 0.5 \text{m}$ deep, this contained two deposits: topsoil (1/13) and a dark grey/black friable sandy grit (2/13). A cavity had been left within this as the result of the removal of a piece of concrete which had supported the previous playground equipment.

Pit 14

See Figure 5.

Measuring $0.53 \text{m} \times 0.47 \text{m} \times 0.55 \text{m}$ deep, this contained two deposits: topsoil (1/14) and a dark grey/black friable sandy grit (2/14) which contained some fragmented pieces of red brick and ferrous material.

Pit 15

See Figure 5.

Measuring $0.54m \times 0.5m \times 0.6m$ deep, this contained two deposits: topsoil (1/15) and a dark grey/black friable sandy grit (2/15) which contained some fragmented pieces of red brick and ferrous material.

Pit 16

See Figure 6.

Measuring $0.48 \text{m} \times 0.4 \text{m} \times 0.52 \text{m}$ deep, this contained two deposits: topsoil (1/16) and a dark grey/black friable sandy grit (2/16).

Pit 17

See Figure 5.

Measuring $0.45 \text{m} \times 0.45 \text{m} \times 0.6 \text{m}$ deep, this contained two deposits: topsoil (1/17) and a dark grey/black friable sandy grit (2/17) which contained some fragmented pieces of red brick and ferrous material.

Pit 18

See Figure 5.

Measuring $0.5m \times 0.44m \times 0.5m$ deep, this contained two deposits: topsoil (1/18) and a dark grey/black friable sandy grit (2/18) which contained some fragmented pieces of red brick and ferrous material.

Pit 19

See Figure 5.

Measuring $0.45 \text{m} \times 0.44 \text{m} \times 0.5 \text{m}$ deep, this contained two deposits: topsoil (1/19) and a dark grey/black friable sandy grit (2/19) which contained some fragmented pieces of red brick and ferrous material.

Pit 20

See Figure 5.

Measuring $0.5m \times 0.48m \times 0.55m$ deep, this contained two deposits: topsoil (1/20) and a dark grey/black friable sandy grit (2/20) which contained some fragmented pieces of red brick and ferrous material.

6 Summary of results and discussion

All excavation was carried out by CORMAC staff following liaison with the CAU archaeologist, who investigated and recorded each pit following its excavation. The pits did not exceed 0.6m in depth, which in the case of four of the pits (7, 8, 11 and 12) revealed a possible floor surface still *in situ*. The identification of this feature and the extent of its survival could not be confirmed, as it was not possible to excavate the area between the pits in which parts of it were revealed.

During the excavation the CORMAC staff retrieved fragments of brick and a number of metal objects. The latter appeared to represent discarded rubbish; identified among this material were an old milk churn, a metal bath and pieces of a vehicle battery.

The lowest fill exposed within all but one of the pits was consistent, this being a dark gritty material mixed with sand and fragments of brick. Similar material recorded on other similar sites has been is interpreted as process waste from former industrial operations. In the case of the Millpool site it did not appear to be *in situ* and had the appearance of having been landscaped, mixing with various items of rubbish during the reclamation of this part of the Foundry site. The playground which was subsequently constructed in this part of the site further disturbed this material through the excavation of foundation pits.

The light yellow sand found in many of the play equipment foundation pits probably represents either the contents of a former sand pit or a cloaking layer laid around some of the playground equipment. A Google image dated 2005 shows some detail of the original play equipment, though no evidence for a sand layer. The mass concrete removed during the current work was almost certainly associated with the earlier playground equipment.

7 Suggestions for further work

The results from the watching brief suggest that at least in the area within which pits 7, 8, 11 and 12 were excavated, parts of an original stone floor survive at around 0.6m below the modern land surface. It seems likely that it will survive beyond the locations of these pits, but its full extent is currently unknown. It is suggested that, should the opportunity arise, a geophysical survey of the documented footprint of the buildings formerly occupying this site is undertaken to determine the extent of the sub-surface survival of this floor and any other features. The results of such a survey would inform the appropriate future management of this Scheduled Monument and, in conjunction

with the results of this watching brief, guide Historic England's responses to any future proposed interventions on the site.

8 References

Ordnance Survey, 2007, Mastermap Digital Mapping

Cahill, N. 2000. *Hayle Historical Assessment Main Report*, 200R057, Cornwall Archaeological Unit, Cornwall County Council

Cahill, N. 2000. *Hayle Historical Assessment Inventory*, 200R058, Cornwall Archaeological Unit, Cornwall County Council

CIfA, 2014b. Standard and guidance for an archaeological watching brief, CIfA, Reading CIfA, 2014d. Code of Conduct, CIfA, Reading

Historic England, Scheduled Monument description Ref 1402648

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

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

9 Project archive

The CAU project number is 146761

The project's documentary, digital, photographic and drawn archive is maintained by Cornwall Archaeological Unit, Cornwall Council, Fal Building, County Hall, Treyew Road, Truro, TR1 3AY.

Electronic data is stored in the following location:

\CAU\Archive\Sites H\Hayle Millpool watching brief 146761

No artefacts were recovered during the course of the evaluation.

Historic England/ADS OASIS online reference: 307608

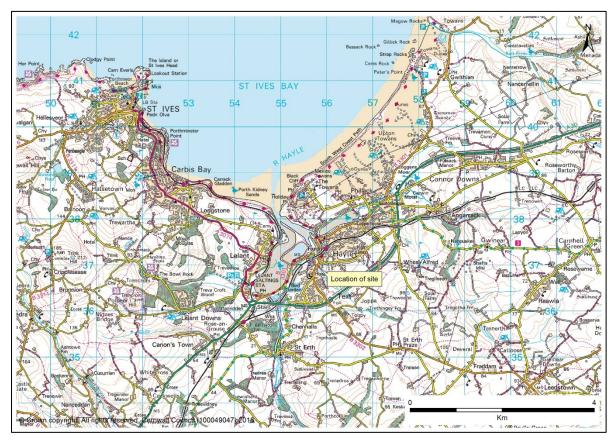


Figure 1: Location of site.

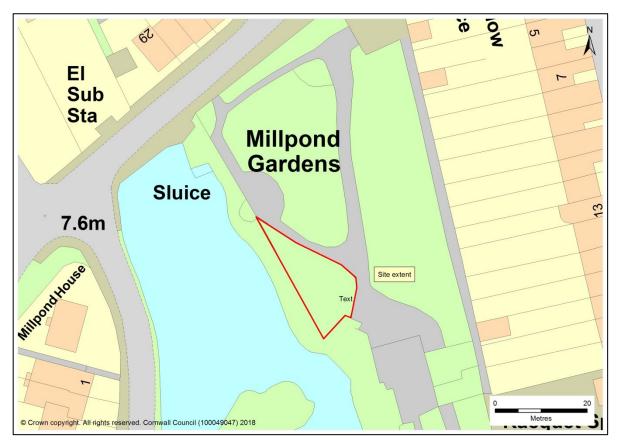


Figure 2: Site extent.

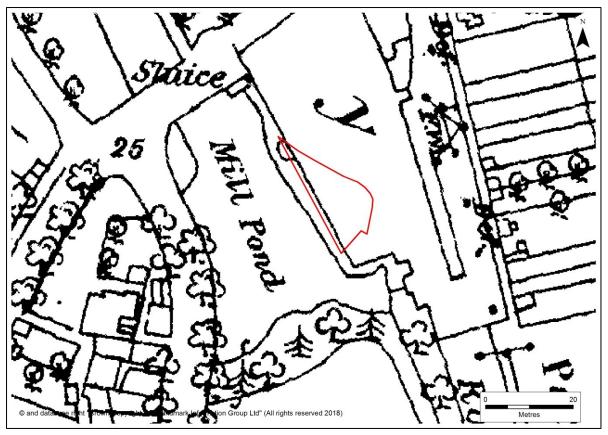


Figure 3: First Edition of the Ordnance Survey 25 Inch Map c1877.

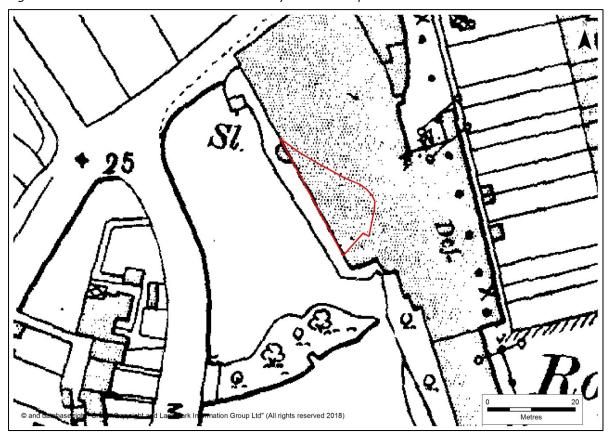


Figure 4: Second Edition of the Ordnance Survey 25 Inch Map c1908.

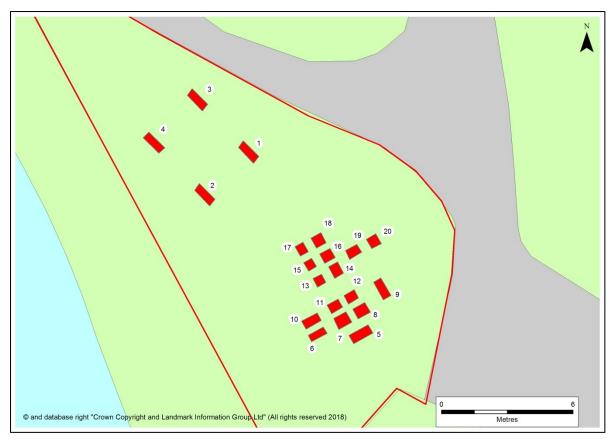


Figure 5: Locations of pits.

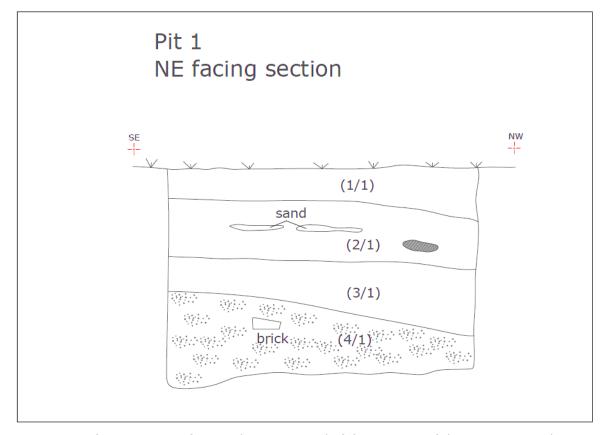


Figure 6: NE facing section of pit 1. This was typical of the majority of the pits excavated.



Figure 7: View looking south toward the site.



Figure 8: View of excavated pits associated with the climbing frame and slide.



Figure 9: NE facing section of pit 9.



Figure 10: Plan image of possible floor surface at the base of pit 8.

10 Appendix 1: Summary of approved CAU WSI

Client Name: Cornwall Council Natural Environment Service

Client Contact: Stuart Wallace
Client tel: 01209 614097

Client email: Stuart.Wallac@cornwall.gov.uk

Site name: Millpond, Hayle
Site location: SW 555837 36950

Summary project background

Stuart Wallace, Cornwall Council Public Space Officer, proposes the installation of replacement play equipment in the area of the former mill complex, ropeworks and water management facilities, part of Harvey's Foundry at Hayle, Cornwall in the area centred at SW 55837 36950. This structure is a Scheduled Monument (National reference HA 1402648) and as part of a grant of Scheduled Monument Consent for the works Historic England has required the production of an approved Written Scheme of Investigation, an archaeological watching brief during the groundworks phase of the project, a report detailing the findings of the fieldwork and the production of an entry to the Historic England/ADS-online OASIS national database of archaeological projects.

This document sets out a Written Scheme of Investigation (WSI) by Cornwall Archaeological Unit (CAU) for a programme of archaeological investigation, this taking the form of a watching brief during the groundworks phase of the development which will be undertaken in January 2018.

The project area is limited to the locations for the footings to be excavated for the new multi-experience play equipment and swing.

Aims and objectives

The principal aim of the study is to gain a better understanding of the archaeology of the development area.

The objectives are to:

• Obtain an archaeological record of the site during the groundworks required for the installation of the play equipment.

Key objectives are to:

- Create a record of any sub-surface archaeology encountered during the excavation of four 900mm deep post hole sockets for the swing and fifteen excavations averaging 300mm x 300mm in plan and between 400mmm and 560mm deep for the other item of play equipment.
- Recover any artefacts from the excavated areas.
- Produce a report for Historic England and the Cornwall HER on the results of the watching brief.
- Produce an entry to the Historic England/ADS-online OASIS national database of archaeological projects.

Methodology

All recording work will be undertaken according to the Chartered Institute for Archaeologists (CIfA) guidance (CIfA 2014a, 2014b, 2014c, 2017). Staff will follow the CIfA *Code of Conduct* (2014d). The Chartered Institute for Archaeologists is the professional body for archaeologists working in the UK.

Archive

Following review with the CAU Project Manager the results from the fieldwork will be collated as an archive.

This will involve the following.

- All finds, etc., will be washed, catalogued, and stored in a proper manner (being clearly labelled and marked and stored according to CAU guidelines).
- All records (drawings, context sheets, photographs, etc.) will be ordered, catalogued and stored in an appropriate manner (according to CAU guidelines).
- Any black and white negative film will be catalogued and deposited with the site archive.
- Colour digital images taken as part of the site archive will be either converted from colour to black and white negative film and added to the site archive, or deposited with the Archaeology Data Service (ADS).
- Completion of the English Heritage/ADS OASIS online archive index.
- All correspondence relating to the project, the WSI, and a single paper copy of the report, stored in an archive standard (acid-free) documentation box.
- Drawn archive storage (plastic wallets for the annotated record drawings).
- Additional digital data (survey, external reports, etc,)

An index to the site archive will be created and the archive contents prepared for long term storage, in accordance with CAU standards.

- The project archive will be deposited initially at ReStore PLC, Liskeard and in due course (when space permits) at Cornwall Record Office.
- Digital data will be stored on the Cornwall Council network which is regularly and frequently backed up.
- Digital data (CAU reports, external reports, survey data, geophysics data, digital photographs, etc.) forming part of the site archive will be deposited with the ADS.

Treatment of human remains

- If human remains are discovered within an archaeological context on the site the client, Historic England, and Public Health, Cornwall Council will be informed.
- Any human remains should only be excavated and removed if it is considered that they will contribute towards further scientific understanding.
- A coroner's license must be obtained from the Ministry of Justice before any remains are disturbed.
- Any consents or licenses required will be obtained on behalf of the client by CAU
- If human remains are uncovered, which require excavation, they will be will be excavated with due reverence. The site will be adequately screened from public view. Once excavated, human remains must not be exposed to public view. If human remains are not to be removed their physical security will be ensured, by backfilling as soon as possible after recording.

Treatment of finds

The fieldwork may produce artefactual material. The following recording and retention policies will be followed:

- In the event that objects containing precious metal(s) are encountered, the coroner will be informed as per the provisions of the Treasure Act 1996.
- Significant finds in stratified contexts will be plotted on a scaled base plan or with a Leica GPS unit and recorded as small finds.
- All finds will be collected in sealable plastic bags which will be labelled immediately with the site code, the context number or other identifier, the type of material, and the finder's initials. The only exception to this policy will be that large assemblages of modern (post-1800) material may be representatively

sampled.

• Modern (post-1800) finds may be disposed of at the cataloguing stage. This process will be reviewed ahead of its implementation.

Reporting

The results from the project will be drawn together and presented in a concise report. The scope of the report will be dependent on the scale and significance of the results from the project.

In the case of negative results the findings will be presented in a CAU short report format. In the case of limited results the findings will be presented in a concise archive report. Which type of report is most appropriate will be agreed by CAU and Historic England at the conclusion of the fieldwork stage.

In the case of significant and/or extensive results a post excavation assessment report will be produced in accordance with CIfA's guidelines for post-excavation assessment (2014c). This will include a summary of the site archive and work carried out for assessment, a discussion of the potential of the data, and an updated project design (UPD) setting out proposals for analysis and publication.

The report will include the following elements:

- Summary
- Project background
- Aims and objectives
- Methodology
- Location and setting
- Designations
- Site history
- Archaeological results
- Chronology/dating evidence
- Conclusions
- References
- Project archive index
- Supporting illustrations: location map, historic maps, plans, elevations/sections, photographs

Report distribution

Paper copies of the report will be distributed to the client, to local archives and national archaeological record centres.

A digital copy of the report, illustrations and any other files will be held in the Cornwall HER and also supplied to the client on CD or other suitable media.

Agreed monitoring points

Monitoring of the project will be carried out by the Historic England Assistant Inspector of Monuments. Where the Historic England Assistant Inspector of Monuments is satisfied with the archive report and the deposition of the archive, written discharge of the planning condition will be expected.

- The Historic England Assistant Inspector of Monuments will monitor the work and should be kept regularly informed of progress.
- Notification of the start of work shall be given preferably in writing to the Historic England Assistant Inspector of Monuments at least one week in advance of its commencement.
- Any variations to the WSI will be agreed with the Historic England Inspector of Monuments, in writing, prior to them being carried out.
- If significant detail is discovered, all works must cease and a meeting convened with the client and the Historic England Assistant Inspector of Monuments to discuss the most appropriate way forward.

Monitoring points during the study will include:

- Approval of the WSI
- Completion of fieldwork
- Completion of archive report
- Deposition of the archive

Project staff

The project will be managed by Adam Sharpe BA MCIfA who will:

- Discuss and agree the detailed objectives and programme of each stage of the project with the client and the field officers, including arrangements for health and safety.
- Monitor progress and results for each stage.
- Edit the project report.
- Liaise with the client regarding the budget and related issues.

Work will be carried out by CAU field staff, with assistance from qualified specialists and sub-contractors where appropriate. All staff will follow CAU's Health and Safety Policy and work in accordance with a site-specific risk assessment.

The project is expected to be undertaken by:

Ryan Smith, BSc (Hons), PCIfA

Archaeologist Ryan Smith has worked on a variety of projects with the Cornwall Archaeological Unit. Projects undertaken have involved the excavations at Porthleven and the TEDC site in Truro, evaluations of various sites around Cornwall including Tintagel Island, St Tudy, St Mabyn, and Four Burrows, as well as a large number of watching briefs, including St Buryan, St Breock Downs, and Otterham Wind Farm.

Ryan will undertake the fieldwork, write the archive report and OASIS entry.

This WSI was produced by: Adam Sharpe BA MCIfA Archaeology Projects Officer 12 January 2018

Cornwall Archaeological Unit

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Email: asharpe@cau.org.uk

This WSI was approved by Nick Russell, Inspector of Ancient Monuments, Historic England on 15 January 2108.

Appendix 2 List of contexts

Context No	Description	
(1/1)	Dark brown plastic clay/silt, some small stone inclusions, unsorted <0.2m deep.	
(2/1)	Dark greyish/black/brown friable sandy grit, some waste material within the deposit comprising shattered brick and ferrous material, <0.15m deep.	
(3/1)	Dark grey/brown friable sandy grit, interface layer between (2/1) and (4/1) <0.2m deep.	
(4/1)	Dark grey/black friable gritty sand containing some brick fragments, not bottomed.	
(1/2)	Dark brown plastic clay silt, some small stone inclusions, unsorted $<0.1 m$ deep.	
(2/2)	Light yellow loose sand, $< 0.05 m$ deep, thin layer of beach type sand, remnants from old playground.	
(3/2)	Mid-grey compact clay with common small stone inclusions, <0.06m deep.	
(4/2)	Dark grey/black friable gritty sand containing some brick fragments, not bottomed.	
(1/3)	Dark brown plastic clay silt, some small stone inclusions, unsorted <0.25m deep.	
(2/3)	Light greyish/grey/black compact gritty sand <0.15m deep.	
(3/3)	Dark almost black compact grit, <0.05m deep.	
(4/3)	Dark grey loose very sandy gritty mix, some rubbish, not bottomed.	
(1/4)	Dark brown plastic clay silt, some small stone inclusions, unsorted <0.35m deep.	
(2/4)	Dark greyish/black friable sandy grit some metal pieces (ferrous), not bottomed.	
(3/4)	A thin layer of loose light yellow sand below (1/4), <0.02m deep.	
(1/6)	Dark brown plastic clay silt, some small stone inclusions, unsorted <0.12m deep.	
(2/6)	A thin layer of loose light yellow sand below, <0.01m deep.	
(3/6)	Dark brown friable sandy soil some organic inclusions, <0.06m deep.	
(4/6)	Light yellow loose sand <0.01m deep.	
(5/6)	Dark brown plastic clay silt <0.08m deep (buried soil).	
(6/6)	Dark grey sandy gritty waste containing fragments of ferrous material, not bottomed.	
(1/7)	Dark brown plastic clay silt, some small stone inclusions, unsorted <0.2m depth.	
(2/7)	Light yellow loose sand <0.01m deep.	
(3/7)	Dark grey loose gritty sand mix, contained some ferrous material and fragmented brick pieces. Sits on top of a possible floor surface.	
(4/7)	Dark grey solid stone slate or granite stone floor surface.	
(1/8)	Dark brown plastic clay silt, some small stone inclusions, unsorted <0.2m deep.	
(2/8)	Dark grey friable sandy grit <0.4m deep.	
(3/8)	Dark grey solid stone probable floor surface.	

(1/9)	Dark brown plastic clay silt, some small stone inclusions, unsorted <0.2m deep.
(2/9)	Light yellow loose sand, <0.01m deep.
(3/9)	Mid grey plastic clay sand mix <0.18m deep.
(4/9)	Dark grey/black friable sandy grit, not bottomed.
(1/10)	Dark brown plastic clay silt, some small stone inclusions, unsorted <0.09m deep.
(2/10)	Dark grey/black loose sandy grit, some rusted metal fragments within the deposit, not bottomed.
(1/11)	Dark brown plastic clay silt, some small stone inclusions, unsorted <0.2m deep.
(2/11)	Light yellow loose sand <0.02m deep.
(3/11)	Dark grey loose sandy grit, some brick fragments and ferrous material, not bottomed.
(4/11)	Dark grey solid stone (possible floor surface)
(1/12)	Dark brown plastic clay silt, some small stone inclusions, unsorted <0.2m deep.
(2/12)	Light yellow loose sand <0.01m deep.
(3/12)	Dark grey/black friable gritty sand which contained ferrous fragments and brick fragments <0.44m deep.
(4/12)	Dark grey solid stone probable floor surface.
(1/13)	Dark brown plastic clay silt, some small stone inclusions, unsorted <0.23m deep.
(2/13)	Dark grey/black friable sandy grit, not bottomed.
(1/14)	Dark brown plastic clay silt, some small stone inclusions, unsorted <0.26m deep.
(2/14)	Dark grey/black friable sandy grit, some brick fragments and ferrous material, not bottomed.
(1/15)	Dark brown plastic clay silt, some small stone inclusions, unsorted <0.3m deep.
(2/15)	Dark grey/black friable sandy grit, not bottomed.
(1/16)	Dark brown plastic clay silt, some small stone inclusions, unsorted <0.2m deep.
(2/16)	Dark grey/black friable sandy grit, not bottomed.
(1/17)	Dark brown plastic clay silt, some small stone inclusions, unsorted <0.2m deep.
(2/17)	Dark grey/black friable sandy grit, some fragments of brick, not bottomed.
(1/18)	Dark brown plastic clay silt, some small stone inclusions, unsorted <0.2m deep.
(2/18)	Dark grey/black friable sandy grit Some rusted metal, not bottomed.
(1/19)	Dark brown plastic clay silt, some small stone inclusions, unsorted <0.33m deep.
(2/19)	Dark grey/black friable sandy grit Some rusted metal, not bottomed.
(1/20)	Dark brown plastic clay silt, some small stone inclusions, unsorted <0.23m deep.
(2/20)	Dark grey black friable sandy grit, some fragments of brick, not bottomed.
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