

# TRESKILLING FARM CLAY DRY LUXULYAN CORNWALL

Results of a Photographic Survey



The Old Dairy  
Hacche Lane Business Park  
Pathfields Business Park  
South Molton  
Devon  
EX36 3LH  
Tel: 01769 573555  
Email: [mail@swarch.net](mailto:mail@swarch.net)

Report No.: 110322  
Date: 22.03.11  
Authors: L. Bray

# **Treskilling Farm Clay Dry, Luxulyan Results of a Photographic Survey**

*For*

Mr. Ben Oliver

*By*



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**Project Director:** Colin Humphreys  
**Desk-Based Assessment:** Lee Bray  
**Fieldwork:** Lee Bray  
**Report:** Lee Bray  
**Report Editing:** Samuel Walls, Deb Laing-Trengove  
**Graphics:** Lee Bray

March 2011

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## *Summary*

*The Treskillling clay dry was constructed in the early 20<sup>th</sup> century and consisted of 6 settling tanks, a drying pan and a linhay. The second phase of the building probably dates to the mid 20<sup>th</sup> century and entailed the extension of all three elements including the addition of two settling tanks, giving a total of eight. Following some alterations to the linhay in order permit transfer of clay in the form of slurry, operations at the clay dry ended, probably during the 1970s.*

*Following its purchase by the current owners, the area of the Phase 2 drying pan and linhay was converted to a workshop and significant parts of the fabric of the building were removed. The 2010 fire has continued the process as do the ongoing Phase 4 reconstruction works. However, the parts of the building, encompassing most of the original Phase 1 construction and the Phase 2 additional settling tanks, remain in reasonable condition at present.*

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## Acknowledgements

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Ben Oliver for unrestricted access to the site  
Dan Ratcliffe the Historic Environment Planning Advice Officer (HEPAO)

## 1.0 Introduction

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**Location:** Treskilling Farm Clay Dry  
**Parish:** Luxulyan  
**County:** Cornwall  
**NGR:** SX0460058200  
**OS Map copying Licence No:** 100044808

### 1.1 Background

South West Archaeology Ltd. (SWARCH) was commissioned by Ben Oliver (the Client) to conduct a historic building survey on the Treskilling Clay Dry, a Grade II listed structure near Luxulyan, Cornwall. In the summer of 2010 a workshop occupying part of the structure suffered a damaging fire, necessitating significant rebuilding which affected the historic fabric of the building through the removal of some elements. The survey work described in this report was undertaken to fulfil an archaeological planning condition designed to mitigate the destructive effects of reconstruction on the site. It was carried out on 8<sup>th</sup> December 2010 by L. S. Bray in accordance with a Written Scheme of Investigation (WSI, see Appendix 2) produced in concordance with the brief for the work written by Dan Ratcliffe of the Historic Environment Planning Advice Officer (HEPAO) (Appendix 1).

The site is situated approximately 200m north-west of Luxulyan railway station (Figure 1).

### 1.2 Historical Background

The Treskilling Farm Clay Dry does not appear on the 1908 1:10,560 Ordnance Survey map of the area, indicating that it was built later, probably in the early 20<sup>th</sup> century (Phase 1). The construction of the building (see below) indicates that it was later extended at its south-eastern end, probably at some point in the 1950s or 1960s (Phase 2). To this point china clay was dried on the site, however, in the later 20<sup>th</sup> century it became common for china clay to be shipped for sale as a slurry and this is reflected in a further alteration at Treskilling. This took the form of the installation, in the 1970s (B. Oliver *pers. comm.*) of a pipeline running beneath the linhay floor used for transporting the slurry for loading onto railway tankers. However, the use of the Dry in this way was short-lived as it closed probably only a few years later. Subsequently, it was bought by its current owners and parts of it converted for use as an engineering workshop (Phase 3), until July 2010 when much of this was destroyed in a fire. Reconstruction of the workshop had been commenced at the time of the survey (Phase 4).

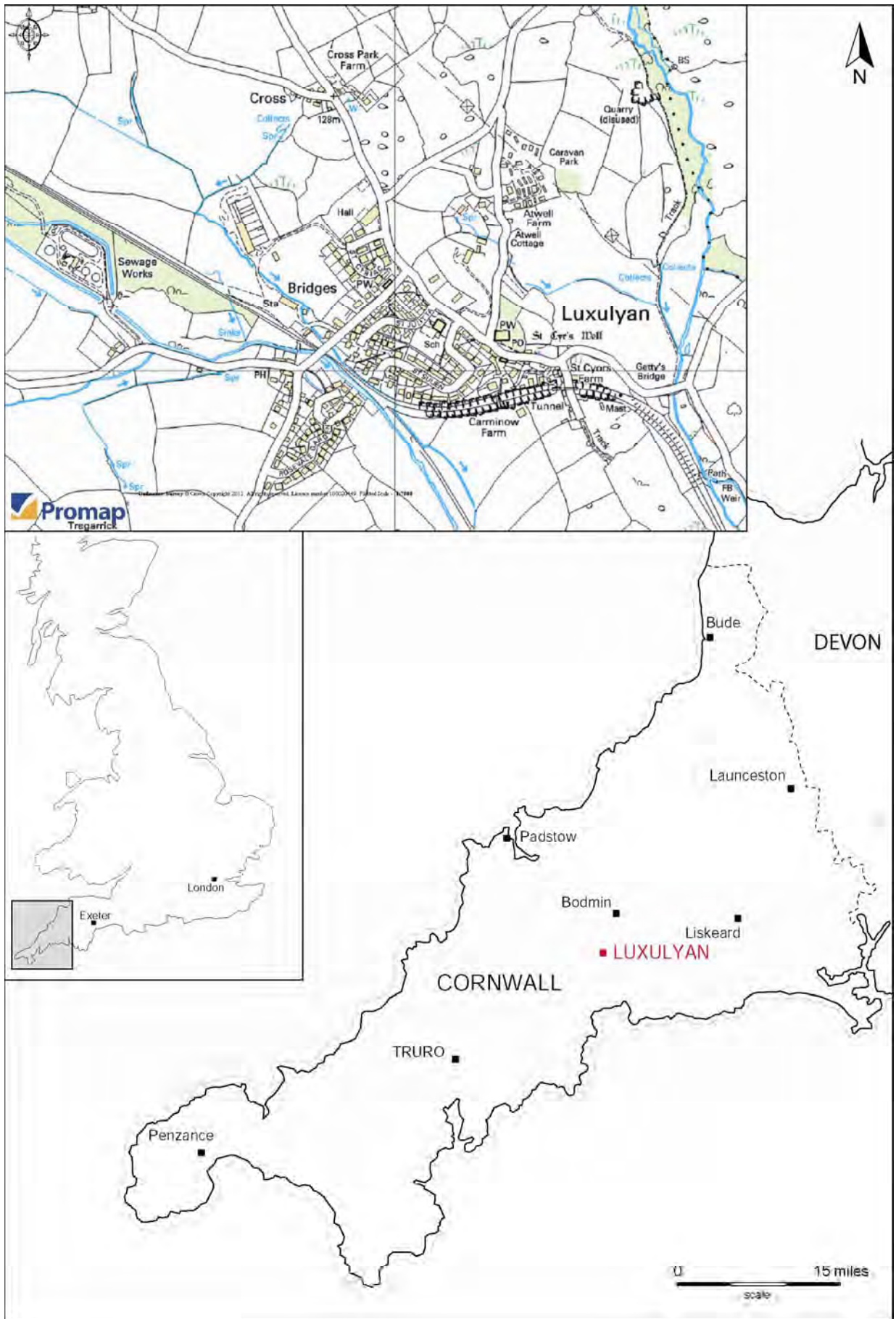


Figure 1: Location map, promap image at a scale of 1:10 000.

### 1.3 Methodology

The nature of the Treskillig Clay Dry, designed as it was to maximize the efficiency of the clay drying process, enabled it to be conveniently divided into three parts; the settling tanks, the drying pan and the linhay. Each of these could be further subdivided into the original, early 20<sup>th</sup> century Clay Dry and the mid 20<sup>th</sup> century extension. The workshops destroyed in the 2010 fire occupied the south-eastern end of the extended drying pan, The proposed rebuilding work involved:

- The removal of the wall separating the drying pan from the linhay
- The removal and replacement of the concrete floor of the linhay
- The removal of the concrete piers which originally supported the open front of the linhay

The location of the workshop in the extended part of the Dry meant that the impact of this work was restricted to the mid 20<sup>th</sup> century fabric of the building. The survey described in this report, while concentrating on the area affected by the rebuilding, also examined the remainder of the Clay Dry focussing on the settling tanks, drying pan and linhay in turn. The methodology and level of recording employed is detailed fully in the WSI (see Appendix 1) and the catalogue of the survey photographic record is presented in Appendix 2.



## 2.0 The Site Survey

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### 2.1 The China Clay Refining and Drying Process

The extraction of china clay is a hydraulic process the result of which is a slurry containing clay, sand and mica in suspension. Refining this material to produce pure china clay involves several stages, the first of which is the physical separation and removal of the sand and mica to leave a mixture of water and pure china clay. This was usually undertaken close to the extraction and waste dumping sites to minimize transport costs and this is the case at Treskilling Farm where the evidence indicates that clay drying was the only part of the process undertaken (Figure 2).

Drying is the removal of water from the slurry produced by the early stages of the refining process to leave pure clay. The precise techniques employed to achieve this end have developed since the start of commercial clay exploitation in the mid 18<sup>th</sup> century, but that employed at Treskilling Farm was a two stage process typical of much of the 20<sup>th</sup> century during which the Dry was in operation. In the initial stage the clay slurry, piped to the Dry from the extraction and preliminary refining site, was fed into large tanks and left to allow the clay to settle. The exit to each tank was blocked with a series of horizontal boards, each with a plugged hole. As the clay continued to settle the overlying water could be progressively released by means of opening the plug in successively lower boards from where it flowed into channels and then into culverts which fed into leats carrying the waste water off-site.

In the second stage of the drying process the clay, now with a much-reduced water content, was transferred from the settling tanks to the drying pan. This consisted of a long, narrow, raised floor adjacent to the settling tanks. A furnace was situated at one end of the pan with a chimney at the other, the two being connected by flues running under the floor. The clay was spread on this surface and the hot gases running through the flues heated the floor and facilitated drying. Once dry the clay was removed from the drying pan and stored for transport off-site.

Clay dries were designed to promote efficiency in undertaking this process, often being built into a slope to harness gravity to aid movement of the clay. The settling tanks were situated on the upslope side in a row along the slope, the clay slurry being fed into them from upslope. Running adjacent and parallel to the row of tanks on the downslope side was the long, narrow, raised floor of the drying pan. At a lower elevation, parallel to the pan on its downslope side was a roofed, open-sided area known as a linhay. This was used for storage of the refined china clay and often had a tramway running into one end from railway sidings to permit easy loading and transfer to transportation.

### 2.2 Phase 1

The original early 20<sup>th</sup> century part of the modern building is at its northern end (Figure 2). It is constructed of semi-coursed granite blocks bonded with cement and can be divided into three elements; the settling tanks, the drying pan and the linhay. The settling tanks were arranged in a row trending north-west to south-east along the contour of the hillslope with the 5 northernmost (Figure 2, tanks 1-5) being heavily overgrown with young trees and thus difficult to examine fully. There were six (tanks 1-6) Phase 1 tanks in total, of two different sizes: all were *c.* 2.25m deep, but the four tanks at the northern end of the row (tanks 1-4) were 7m wide and 30m long, while the two at the southern end (tanks 5-6) were of double size at 14m wide.

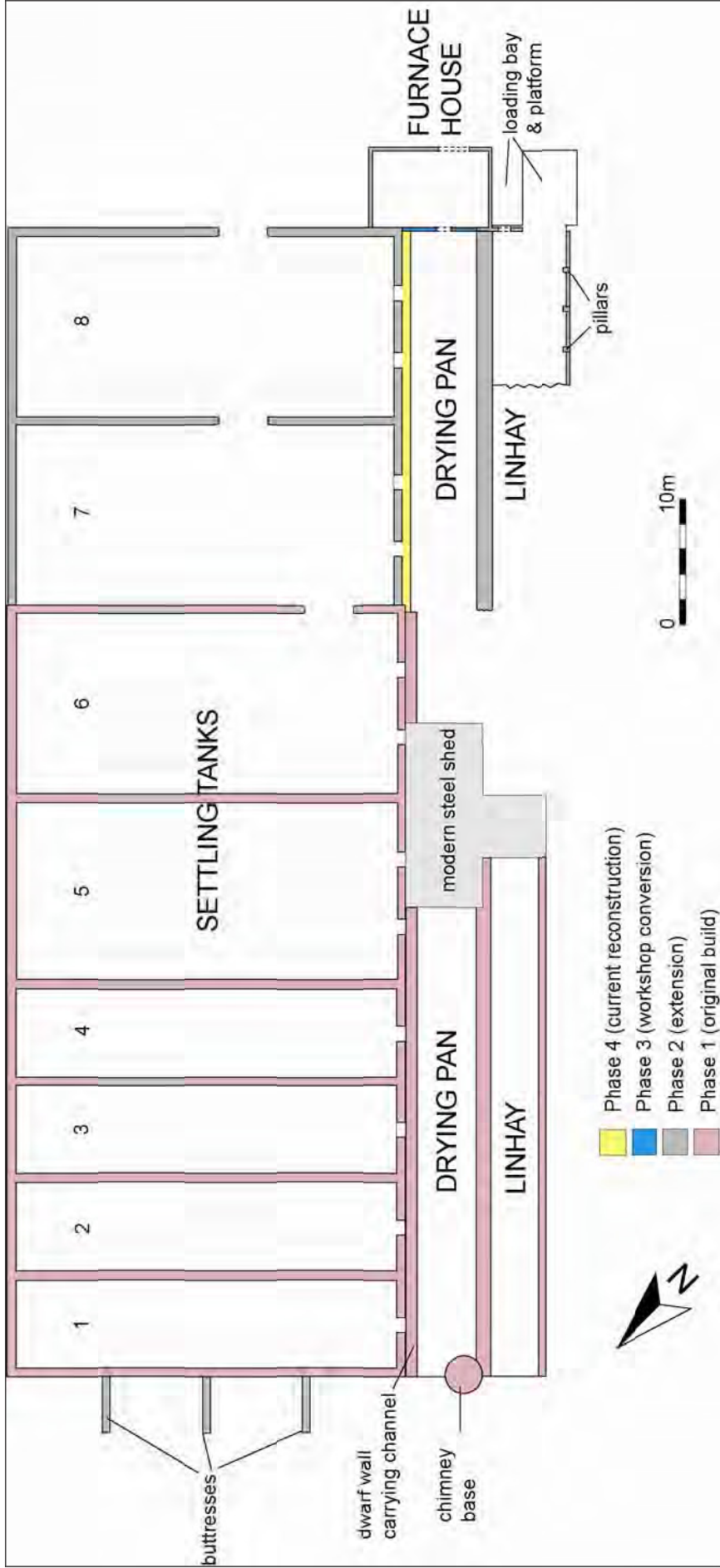


Figure 2: Phased plan of the Treskillling Clay Dry.

The pipe which fed the clay slurry into the tanks was still visible running along the wall between tanks 6 and 7, although the change in the style of wall construction from semi-coursed to more regular coursed work, suggested the pipe had been added after the initial building of the settling tank, but before the phase 2 extension (Figure 3 and see below). Each tank had at least one exit, two in the case of tanks 5 and 6, on the south-western side which were well preserved. They consisted of a gap (Figure 4), 1.2m wide on either side of which was a 0.1m wide vertical slot which would have held horizontal planking (2.2) when the tank was in use. Running along the exterior of the southern side of the row of settling tanks, across each entrance, was a 0.6m wide dwarf wall standing *c.*0.3m above the probable level of the drying pan floor (see below). This wall carried a deep, 0.2m wide channel (Figure 5) intended to carry waste water from the settling tanks as it was released. From here the water was fed into culverts running under the rest of the building (see below) and into a leat which still survives (Figure 6) to the south-west.



Figure 3: Clay slurry pipe on the wall between settling tanks 6 and 7 (see Fig. 2), viewed from the south-east (Scale: 2m).



Figure 4: Entrance to settling tank 3 (see Fig. 2), viewed from the south-west (Scale: 2m).

The Phase 1 drying pan was 4.5m wide and ran parallel and adjacent to the settling tanks on their south-western, downslope side (Figure 2). The original furnace house at its south-eastern end was removed during the Phase 2 alterations but the chimney at the north-western end survived until relatively recently when it fell during a gale (B. Oliver *pers. comm.*). It had an external diameter of *c.*3m and its base was constructed of granite blocks, while its superstructure was formed of yellow bricks which are still present on the site. Unfortunately, when it fell, the chimney smashed through the floor of the drying pan and into the flues beneath, though sufficient survives to show the floor level was *c.*0.3m below that of the settling tanks.



Figure 5: Dwarf wall in front of the entrance to settling tank 3 (see Fig. 2) carrying the waste water channel, viewed from the north-west (Scale: 2m).



Figure 6: Leat for waste water, viewed from the north-west (Scale: 2m).

The contemporary linhay was situated adjacent to the drying pan to the south-west and running parallel to it, though much of it was inaccessible at the time of the survey due to the presence of several cargo containers and scrap heavy machinery. The wall dividing the linhay from the drying pan was 0.6m wide at the top but with a pronounced batter that doubled its thickness at the level (Figure 7) of the linhay floor which was *c.*1.75m lower than that of the drying pan. The floor of the linhay was *c.*0.8m higher than the modern ground level to the south-west and was bounded on this side by a wall of concrete blocks (Figure 8).



Figure 7: Phase 1 linhay, viewed from the north-west (Scale 2m).



Figure 8: Phase 1 linhay, viewed from the west (Scale: 2m).

### 2.3 Phase 2

At a point in the mid 20<sup>th</sup> century the Clay Dry was extended to the south-east, presumably to enable increased production of clay (Figure 2). This work employed shuttered concrete (Figure 9) and granite rubble construction for the settling tanks and drying pan, and concrete blocks for the new furnace house and south-west wall of the linhay. It is thus easy to distinguish from that of the original, Phase 1 structure.

Two new settling tanks (Figure 2, tanks 7-8) were added to the south-eastern end of the Phase 1 row, each 14m wide, 30m long and *c.*2.0m deep, and each with two exits. Subsequent alteration has removed or obscured the channel for the removal of waste water.

The drying pan was also extended, though the original floor and the flues beneath it, leading from the furnace to the chimney, have subsequently been removed in Phase 3 so that the floor level is currently 2.6m below that of the neighbouring settling tanks.



Figure 9: Section through the south-eastern wall of settling tank 8 (see Figure 2) showing the shuttered concrete and granite rubble construction (Scale 2m).

At the time of the survey, part of the Phase 2 linhay had been removed during reconstruction work so that only the south-eastern end survived (Figures 10 and 11). However, this was sufficient to show the new linhay had been 5.7m wide, slightly wider than that of Phase 1, and its roof had been supported by a row of pillars along its south-western side constructed of 'home-made' reinforced concrete in which the pillar had been formed around old railway rails (Figure 12). A loading bay was present at the south-eastern end, adjacent to the furnace house. Demolition work has revealed the structure of the linhay, the floor of which was constructed on three compartments running parallel to its long axis (Figure 10). Each of these had been filled using a different material; that to the north-east containing soil, that in the centre containing sand, while that to the south-west contained a mixture of soil, sand and cinder, presumably derived from the furnace. Removal of the north-western part of the Phase 2 linhay had also revealed culverts running beneath it which carried waste water from the settling tanks (Figure 13). During the final stage of Phase 2, clay drying methods changed and clay slurry was then transported in railway tankers. To enable this a pipe was laid under the floor of the new linhay which was uncovered during demolition (Figure 14). The way in which this arrangement worked is unknown as no evidence was apparent to explain how slurry was fed into it or where it went after leaving the Dry.





Figure 10: Phase 2 linhay, viewed from the north west, the three compartment construction is clearly visible (Scale: 2m).



Figure 11: Phase 2 linhay, viewed from the south-east (Scale: 2m).



Figure 12: Concrete pillar on the south-western side of Phase 2 linhay, viewed from the south-east (Scale: 2m).



Figure 13: Culvert for carrying the waste water from the settling tanks under the linhay and drying pan, viewed from the south-west (Scale: 2m).



Figure 14: Clay slurry pipe under the Phase 2 linhay, viewed from the north-west (Scale: 2m).

The furnace house which is currently used as a workshop, was situated at the south-eastern end of the Phase 2 drying pan, measured 9.75m by 6.4m and was constructed of concrete blocks with a mono pitch roof sloping to the south-east (Figure 15). It had a door opening 2m wide on the south-eastern side which appeared to be original and 2 blocked openings in the north-east and south-west walls which may have been to supply fuel to the furnace. In the interior a broad arch was visible in the north-western wall which presumably originally connected the furnace to the flues under the drying pan floor (Figure 16).



Figure 15: Phase 2 furnace house, viewed from the south (Scale: 2m).



Figure 16: Archway through the north-western wall of the furnace house, viewed from the south (Scale:2m).

A further alteration to the building which can be assigned to Phase 2 on the basis of its use of concrete block construction is the addition of three buttresses to the north-western end of the Phase 1 settling tanks.

## 2.4 Phase 3

Phase 3 consists of the alterations to the building undertaken as part of its conversion to a workshop which was centred on the Phase 2 drying pan and linhay. This work involved the removal of the floor and underlying flues from the drying pan and the reconstruction of the upper part of the north-western wall of the furnace house in brick (Figure 17).



Figure 17: North-western exterior wall of the furnace house, viewed from the north-west (Scale: 2m).

## 2.5 Phase 4

Phase 4 consists of the reconstruction work, in progress at the time of the survey, following the fire in 2010. It is likely that the concrete blockwork lining the north-eastern wall of the Phase 2 linhay and Phase 3 workshop (Figure 18) belongs to this phase as it appears new and relatively unmarked by scorching. The same seems to be the case with the concrete blockwork filling the archway in the north-western wall of the furnace house into which a door has been inserted. Additional work includes the construction of a steel framed shed, currently housing the workshop, at the eastern end of the Phase 1 drying floor and linhay (Figure 2). It is not known whether the construction of this building involved the removal of any of the clay dry's fabric. Further work will involve the removal of the Phase 3 linhay and the wall separating it from the drying pan, while work to date has destroyed the junction between the Phase 1 and Phase 2 parts of the building except in the case of the settling tanks where the contrasting styles of construction remain easily visible (Figure 19).



Figure 18: Junction between the Phase 1 and Phase 2 settling tanks, viewed from the south (Scale 2m).



Figure 19: Phase 2 drying pan, the site of the Phase 3 workshop (Scale 2m).

### 3.0 Conclusion

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The Treskilling Clay Dry was constructed in the early 20<sup>th</sup> century, contrary to the listing which suggests a 19<sup>th</sup> century date. At that time it consisted of 6 settling tanks, a drying pan and a linhay. The second phase of the building probably dates to the mid 20<sup>th</sup> century and entailed the extension of all three elements of the building to the south-east. This included the addition of two settling tanks, giving a total of eight, which again contradicts the Listing which suggests seven are present. Following some alterations to the linhay in order permit transfer of clay in the form of slurry, operations at the Dry ended, probably in the 1970s. Following its purchase by the current owners, the area of the Phase 2 drying pan and linhay was converted to a workshop and substantially altered with significant parts of its fabric being removed. The 2010 fire has continued this process, while the ongoing Phase 4 reconstruction work will continue it. However, the other parts of the building, encompassing most of the original Phase 1 construction and the Phase 2 additional settling tanks, remain in reasonable condition at present.

## 4.0 Bibliography

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**British Geological Survey** 2001: Map Sheet no. 1:50,000 scale.

**English Heritage** 2006: *Understanding Historic Buildings, a Guide to Good Recording Practice*.

**Institute of Field Archaeologists** 1994 (Revised 2001 & 2008): *Standard and Guidance for Archaeological Desk-based Assessment*.

**Institute of Field Archaeologists.** 1996 (Revised 2001 & 2008): *Standard and Guidance for Archaeological Investigation and Recording of Standing Buildings or Structures*.

**Soil Survey of England and Wales** 1983: *Legend for the 1:250,000 Soil Map of England and Wales (a brief explanation of the constituent soil associations)*.



## Appendix 1

### BRIEF FOR DESCRIPTIVE HISTORIC BUILDING RECORDING

**Date:** 02/12/2010  
**Address:** Treskilling Farm. Luxulyan  
**Applicant:** Nick Witcomb  
**Agent:**

Historic Environment Advisor (Archaeology): Dan Ratcliffe, Cornwall Council, Historic Environment Service, St Austell One Stop Shop, 39 Penwinnick Rd, St Austell, Cornwall. [dratcliffe@cornwall.gov.uk](mailto:dratcliffe@cornwall.gov.uk)

**Local Planning Authority Officer:** Jim Lee (address as above)

This brief is only valid for six months. After this period the Historic Environment Planning Advice Officer (HEAA) should be contacted. Any written scheme of investigation (WSI) resulting from this brief shall only be considered for the same period. The contractor is strongly advised to visit the site before completing their WSI as there may be implications for accurately costing the project.

#### Contractors Written Scheme of Investigation (WSI)

No works on site shall take place until the HEAA and the Local Planning Authority (LPA) have approved the archaeological contractor's WSI.

#### **1 Introduction**

This brief has been written by the HEA and sets out the minimum requirements for the production of a 'Level 2 descriptive record' as defined by English Heritage in *Understanding Historic Building: A guide to good recording practice* (2006) of a Grade II Listed clay drying kiln. A Level 2 record provides an archive quality record of a building in its current state, an assessment of its significance and an indication of its potential for further research. It need provide only a basic analysis of the building concerned but should be capable of forming the basis of later more detailed analysis where required.

A Level 2 record is required in order to discharge condition 3 of planning consent PA10/04824.

#### **2 Site Location**

The Dry is located at OS grid reference SX046582 close to the site of Luxulyan railway station where a spur originally provided access to the Cornwall Mineral Railway.

#### **3 Planning Background**

Consent PA10/04824 relates to the works required following a damaging fire during 2010. Works involved will impact historic fabric in the following ways;

- The demolition of existing concrete wall which separates the former drying area and linhay
- Removal of the raised concrete slab, likely to have been used for loading the dried clay from the linhay to trucks on rails ready for transportation via rail.
- Removal, excavation and replacement of the concrete floor to the linhay
- Loss of concrete piers to the front of the former open fronted linhay

PPS5 *Planning for the Historic Environment* (DCLG 2010) states that where the Local Planning Authority decides that a loss of significance is justified by the merits of a scheme requiring consent, then planning obligations should be imposed to *record and advance understanding of the heritage asset*. The LPA has therefore imposed the following condition-

**"No works shall take place within the site until the applicant has secured and implemented a programme of archaeological work in accordance with a written scheme of investigation to be submitted by the applicant and approved in writing by the Local Planning Authority in consultation with the County Archaeologist"**

The applicant, their agents and any subcontractors should note that where there are other conditions requiring satisfaction in advance of the commencement of works on site; it is the responsibility of the applicant to liaise with the planning officer concerned to ensure that the timetabling of these works is managed.

#### **4 Site Background**

The legal listing description of these buildings is as follows-

LUXULYAN SX 05 NW 6/142 China clay works at SX 046582 II

China clay works, including chimney and remains of tanks. Late C19. Chimney in white brick with metal banding on granite rubble base; tanks in rendered stone rubble. There are 7 tanks to the rear, of rectangular plan; The clay slurry was carried via pipes tunnelled through a hill and over a viaduct into the rear of the tanks. The sediment was taken through sluice gates at the front of the tanks on to the pan, which is a long platform in front of the tanks with heat ducts under the floor. The furnace and chimney is at the left end of the pan. In front of the pan, there is a railway track on a terrace, for carrying away the finished clay in the form of briquettes. The chimney is circular, with tapered shaft, on circular granite rubble base about 3 metres in diameter. The tanks are rectangular, about 20 metres by 10 metres, with walls rendered inside and in granite rubble to front, each with opening to front. The site is close to the railway for transporting the china clay, with the station at Bridges, Luxulyan.

Listing NGR: SX0460058200

The building is also recorded as a monument within the County Historic Environment Record. (Mon no MCO34071)

Site photographs indicate that following the fire the roof structure (itself not thought to have been original) has been removed.

## 5 Requirement for Work

Clay drying pan kilns are an important monument class, largely if not exclusively restricted to the South West of England, with the vast majority in the St Austell Clay District. The 1992 Cornwall Archaeology Unit survey of the clay district concluded that pan kilns were generally of regional to national significance. Consequently most surviving traditional clay kilns have been identified by HES as heritage assets for their archaeological, historic and architectural significance in addition to their contribution to the unique historic character of the county. The proposed changes may constitute a significant and irreversible change to the building's significance. A record is required in order to inform these changes; to advance our understanding of the building type and of this example in particular; and to add to the evidence base for future planning decisions.

### Aim of the work.

To provide a basic, written, measured/drawn and photographic record of the building concerned at an appropriate scale and level of detail to permit a full proper understanding of its present state, in particular where significant elements are at threat.

This recording needs to be directed by a specialist who will 'read' the structure and record the important details. This person will be expected to produce a basic survey or to adapt one produced by a capable building surveyor. As much of the building will be retained following these works, recording should be concentrated on what will be removed or changed. Nevertheless it is vital to convey the context for the parts in question to inform future understanding.

The report should briefly demonstrate an understanding of the building in its typological context. It is not intended to be an exhaustive analysis of the building but to be optimised towards the recording of those features to be lost within the wider context of the building. The archive record should be produce evidence capable of later further analytical development.

## 6 General Methodology

6.1 All stages of the investigation shall be supported by a written scheme of investigation (WSI).

6.2 The archaeological or historic building contractor is expected to follow appropriate codes of practice – i.e. those of the Institute for Archaeologists (IfA) / Institute of Historic Building Conservation (IHBC).

6.3 Details including the name, qualifications and experience of the site director and all other personnel (including specialist staff) shall be included within the WSI.

6.4 All of the latest Health and Safety guidelines shall be followed on site.

6.5 The IfA's Standards and Guidance should be used for additional guidance in the production of the WSI, the content of the report and the general execution of the project.

6.6 Terminology will be consistent with the English Heritage Thesaurus.

6.7 Documentary research will be undertaken before the commencement of fieldwork and will establish the nature and extent of existing records and understanding of the assets involved. Research will include consultation of historic Ordnance Survey and Tithe mapping, the Cornwall and Scilly Historic Environment Record, the Cornwall Record Office, relevant Local Studies Libraries and other relevant collections.

## 7 Site Recording Methodology

**Note: Where the brief is for mitigation recording of a conversion where most significant fabric will remain accessible for future study recording should be targeted on material to be lost with only sufficient recording of other parts of the building to provide sufficient context for the detailed record.**

7.1 The drawn record need not be comprehensive and act principally to support the photographic and written descriptive record but as a minimum should include

- measured plans of all floors at 1:50 or 1:100 as appropriate
- a site plan at 1:500
- Measured elevations shall be required, only where these are necessary to an understanding of a building's design, development or function and are not more readily obtained by photography.
- a phased plan if the building's constructional complexity and the extent of proposed works warrants this, and
- a plan annotated to show the location, shot number and direction of all photographs.

*In some cases it may be appropriate to use a diagrammatic sketch not necessarily to scale to demonstrate features not apparent on measured drawings or photography*

Plans may be based on existing architectural survey data where this exists but these must be checked on site to ensure acceptable accuracy and detail and should be recast where necessary to standard EH conventions as illustrated in *Understanding Historic Buildings* as appropriate to Level 1 and 2 surveys. All plans must be tied to the OS grid, show a north point and be accompanied by suitable labelling and naming of parts.

7.2 The photographic record shall include

- A general view or views of the building in its wider setting or landscape
- The building's external appearance- a series of oblique views of all external elevations. Where individual elevations show complex stratigraphy views perpendicular to the elevational frame may be appropriate.
- The overall appearance of principal spaces.
- Any relevant details such as machinery, fittings, graffiti, ephemera and decorative or structural detail not apparent from wider shots

The photographs will be taken with black and white 35mm or medium format film producing archive quality prints and negatives. Colour photography may be utilised for general shots and where it is appropriate for detail shots. For both general and specific photographs, a photographic scale shall be included.

7.4 The written record shall include items 1-3 as set out in *Understanding Historic Buildings* section 4.5.2 and include a summary description. The following may act as a useful *aide memoire* to the details required.

- Building type and function
- Date of construction and any subsequent alteration
- Architect / style of design
- Materials, method of construction
- Plan form
- Façade treatment and fenestration
- Interiors, particularly fixtures and fittings and internal arrangements
- Subsidiary features such eg. machinery, ephemera. decoration
- Historical significance
- Source materials
- The setting of the building in the landscape / townscape

The account should briefly demonstrate an understanding of the building in its typological context. Conclusions should be drawn regarding the building's development and use but there need not be detailed discussion of the evidence on which these conclusions are based. It is not intended to be an exhaustive analysis of the building but to be optimised towards the recording of those features to be lost within the wider context of the building.

## **8 Results**

- 8.1 The full report shall be submitted within a length of time (but not exceeding six months) to be agreed between the applicant and the historic building contractor, Cornwall County Council Historic Environment Service and the Cornwall Records Office. A further digital copy shall be supplied on CD-ROM preferably in 'Adobe Acrobat' PDF format.
- 8.2 The archaeological contractor will undertake the English Heritage/ads online access to the index of archaeological investigations (OASIS).
- 8.3 This report will be held by the Cornwall and Scilly Historic Environment Record (HER) and made available for public consultation.
- 8.4 The report must contain:
- A table of contents.
  - The building's precise location in National Grid and address form.
  - A brief history of the site.
  - A concise non-technical summary of the project results.
  - The aims and methods adopted in the course of the investigation.
  - The date of the record, name of recorder(s) and the location and contents of the deposited archive.
  - A location map, copies of any plans/drawings and copies of such photographs as necessary to illustrate the written description with appropriate annotation.
  - A written description of the building and its structure, materials and layout.
  - A full bibliography where external sources have been used.
  - A copy of the brief and approved written scheme of investigation (WSI) will be included as an appendix.
  - A digital copy of all photographs (in .TIFF format) making up the archive record to be bound into the rear cover of the HER / HEAA copy of the report on CDR or DVDR.

## **9 Archive Deposition**

- 9.1 An ordered and integrated site archive will be prepared in accordance with: *Management of Research Projects in the Historic Environment (MoRPHE) English Heritage 2006* upon completion of the project. The requirements for archive storage shall be agreed with the appropriate organisation.
- 9.2 The archive including a copy of the written report, all drawn materials and all archive quality photographic prints and negatives shall be deposited with the appropriate organisation within two months of the completion of the full report and confirmed in writing with the HEAA.
- 9.3 Documentary archives will normally be deposited with the Cornwall Record Office. Photographic archives are normally deposited with the Cornwall Museum.
- 9.4 A copy of the report will be supplied to the National Monuments Record (NMR) in Swindon.
- 9.5 A summary of the contents of the archive shall be supplied to the HEAA.
- 9.6 Only on completion of 9.1 to 9.4 (inclusive) will there be a recommendation for the discharge of any archaeological recording condition.

## **10 Monitoring**

- 10.1 The HEAA will monitor the work and should be kept regularly informed of progress.
- 10.2 Notification of the start of work shall be given preferably in writing to the HEAA at least one week in advance of its commencement.
- 10.3 Any variations to the WSI shall be agreed with the HEAA, preferably in writing, prior to them being carried out.

## Appendix 2

### WRITTEN SCHEME OF INVESTIGATION FOR HISTORICAL BUILDING RECORDING AT PENHEALE BARTON, EGLOSKERRY, CORNWALL.

**Location:** Treskilling Farm  
**Parish:** Luxulyan  
**County:** Cornwall  
**NGR:** SX0460058200  
**Planning application no:** PA10/04824  
**Date:** 07.12.10

#### 1.0 INTRODUCTION

1.1 This document forms a Written Scheme of Investigation (WSI) which has been produced by South West Archaeology (SWARCH) at the request of Ben Oliver (the Client), and sets out the methodology for historic building recording of a clay drying kiln at Treskilling Farm, Luxulyan and for related off site analysis and reporting. The WSI and the schedule of work it proposes conform to a brief as supplied by the Cornwall Council Historic Environment Service Historic Environment Advisor (Archaeology) Dan Ratcliffe (HEAA).

1.2 Consent PA10/04824 relates to the works required following a damaging fire during 2010. Works involved will impact historic fabric in the following ways;

- The demolition of existing concrete wall which separates the former drying area and linhay
- Removal of the raised concrete slab, likely to have been used for loading the dried clay from the linhay to trucks on rails ready for transportation via rail.
- Removal, excavation and replacement of the concrete floor to the linhay
- Loss of concrete piers to the front of the former open fronted linhay

PPS5 *Planning for the Historic Environment* (DCLG 2010) states that where the Local Planning Authority decides that a loss of significance is justified by the merits of a scheme requiring consent, then planning obligations should be imposed to *record and advance understanding of the heritage asset*. The LPA has therefore imposed the following condition:

*"No works shall take place within the site until the applicant has secured and implemented a programme of archaeological work in accordance with a written scheme of investigation to be submitted by the applicant and approved in writing by the Local Planning Authority in consultation with the County Archaeologist"*

1.3 The programme of work to be carried out by SWARCH and covered by this WSI consists of:

- 1.3.1 Undertaking a photographic survey and description of the extant building;
- 1.3.2 Related analysis and reporting.

#### 2.0 ARCHAEOLOGICAL BACKGROUND

2.1 The legal listing description of these buildings is as follows:

*LUXULYAN SX 05 NW 6/142 China clay works at SX 046582 II*  
*China clay works, including chimney and remains of tanks. Late C19. Chimney in white brick with metal banding on granite rubble base; tanks in rendered stone rubble. There are 7 tanks to the rear, of rectangular plan; the clay slurry was carried via pipes tunnelled through a hill and over a viaduct into the rear of the tanks. The sediment was taken through sluice gates at the front of the tanks on to the pan, which is a long platform in front of the tanks with heat ducts under the floor. The furnace and chimney is at the left end of the pan. In front of the pan, there is a railway track on a terrace, for carrying away the finished clay in the form of briquettes. The chimney is circular, with tapered shaft, on circular granite rubble base about 3 metres in diameter. The tanks are rectangular, about 20 metres by 10 metres, with walls rendered inside and in granite rubble to front, each with opening to front. The site is close to the railway for transporting the china clay, with the station at Bridges, Luxulyan.*  
*Listing NGR: SX0460058200*

The building is also recorded as a monument within the County Historic Environment Record. (Mon no MCO34071). Site photographs indicate that following the fire the roof structure (itself not thought to have been original) has been removed.

#### 3.0 METHOD

3.1 The IfA's Standards and Guidance will be used throughout the execution of the project.

3.2 The historic building recording will conform to Level 2 of recording levels as set in *Understanding Historic Buildings: A guide to good recording practice - English Heritage 2006* and described in outline below:

*This is a **descriptive record**, made in circumstances similar to those of Level 1 but when more information is needed. It may be made of a building which is judged not to require any fuller record, or it may serve to gather data for a wider project. Both the exterior and the interior will be viewed, described and photographed. The record will present conclusions regarding the building's development and use, but will not discuss in detail the evidence on which these conclusions are based. A plan and sometimes other drawings may be made but the drawn record will normally not be comprehensive and may be tailored to the scope of a wider project.*

The Client will provide SWARCH with details of the location of proposed works within the building area, and of the proposed construction programme.

3.3 Health and Safety requirements will be observed at all times by any archaeological staff working on site, particularly when working with machinery. As a minimum: high-visibility jackets, safety helmets and protective footwear will be worn.

- 4.4.1 Appropriate PPE will be employed at all times.
- 4.4.2 The site archaeologist will undertake any site safety induction course provided by the client.
- 3.4 If significant detail is discovered, all works must cease and a meeting convened with the client and the HEAA to discuss the most appropriate way forward.
- 4.6 SWARCH will agree monitoring arrangements with the HEAA who will be informed of the start of the fieldwork, will be regularly informed of progress and will monitor the project throughout, and may wish to inspect the works in progress.
- 5.0 ARCHAEOLOGICAL RECORDING**
- This will be based on IfA guidelines and those advised by the HEAA and will consist of:
- 5.1 A photographic record consisting of black and white prints, supplemented by digital photography, will be compiled. The black and white prints and negatives of archive quality will comprise the primary archive. All photographs, both general and specific, will include scale and, where appropriate, a north arrow. A full photographic concordance will accompany this archive which will contain a description of each photograph, including structure, direction of shot, scale size, date and photographer identification.
- 5.2 The photographic record will be supplemented by annotated drawn records based on the architect's plans.
- 5.3 A written description of the building will be compiled. The written record shall include items 1-3 as set out in *Understanding Historic Buildings* section 4.5.2 and include a summary description. Any variation of the above shall be agreed in consultation with the HEAA.
- 6.0 ARCHIVE AND REPORT**
- 6.1 An ordered and integrated site archive will be prepared in accordance with Management of Research Projects in the Historic Environment (MoRPHE) English Heritage 2006 upon completion of the entire project. The documentary archive will be produced to the relevant archive standards. This will include relevant correspondence together with field drawings, notes and photographic records and a copy of the project report. The documentary archive will be deposited with the Cornwall Records Office.
- 6.2 A summary of the contents of the archive shall be supplied to the HEA.
- 6.3 An illustrated summary report will be produced within six months of the completion of fieldwork, specialist reports allowing, and submitted to the HEA, and the Client.
- 6.4 A report will be produced. This will include the following elements:
- 6.4.1 A table of contents.
- 6.4.2 The building's precise location in National Grid and address form.
- 6.4.3 A brief history of the site.
- 6.4.4 A concise non-technical summary of the project results.
- 6.4.5. The aims and methods adopted in the course of the investigation.
- 6.4.6 The date of the record, name of recorder(s) and the location and contents of the deposited archive.
- 6.4.7 A location map, copies of any plans/drawings and copies of such photographs as necessary to illustrate the written description with appropriate annotation.
- 6.4.8 A written description of the building and its structure, materials and layout.
- 6.4.9 A full bibliography where external sources have been used.
- 6.4.10. A copy of the brief and approved written scheme of investigation (WSI) will be included as an appendix.
- 6.4.11 A digital copy of all photographs making up the archive record to be bound into the rear cover of the HER / HEAA copy of the report on CDR.
- 6.5 The HEA will receive the report within six months of completion of fieldwork, dependant on the provision of specialist reports, radiocarbon dating results etc., the production of which may exceed this period. If a substantial delay is anticipated then an interim report will be produced. The report will be supplied to the HEAA on the understanding that one of the hard copies will be deposited for public reference in the HER. In addition to the hard copies of the report, one copy will be provided to the HES in digital Adobe Acrobat PDF format, on the understanding that it may in future be made available to researchers via a web-based version of the HER.
- 6.6 A copy of the report will be supplied to the National Monuments Record (NMR) in Swindon.
- 6.7 A copy of the report detailing the results of these investigations will be submitted to the OASIS (*Online Access to the Index of archaeological investigationS*) database.
- 6.9 Should they merit it; the results of these investigations will be published in an appropriate academic journal. If required, after the production of a summary report, a programme and timetable for this will be submitted to the HEAA and the Client for approval.
- 7.0 PERSONNEL**
- 7.1 The project will be managed by Colin Humphreys and recoding will be undertaken by Lee Bray. Where necessary, appropriate specialist advice will be sought (see list of consultant specialists in Appendix 2 below).

Deb Laing-Trengove

South West Archaeology Ltd.

The Old Dairy, Hacche Lane Business Park, Pathfields Business Park, South Molton, Devon EX36 3LH

Telephone: 01769 573555; email: [deblt@swarch.net](mailto:deblt@swarch.net)

**Appendix 1 – List of specialists**

**Building recording**

Richard Parker;

11 Toronto Road, St James, Exeter. EX4 6LE; Tel: 07763 248241

**Conservation**

Richard and Helena Jaeschke; 2 Bydown Cottages, Swimbridge, Barnstaple EX32 0QD; Tel: 01271 830891

**Curatorial**

Alison Mills; The Museum of Barnstaple and North Devon, The Square, Barnstaple, North Devon; EX32 8LN; Tel: 01271 346747

Thomas Cadbury; Curator of Antiquities, Royal Albert Memorial Museum, Bradninch Offices, Bradninch Place, Gandy Street, Exeter EX4 3LS; Tel: 01392 665356

Fiona Pitt; Plymouth City Museum, Drake Circus, Plymouth, PL4 8AJ; Tel: 01752 204766

**Geophysical Survey**

Substrata; Tel: 07788 627822

GSB Prospection Ltd.

Cowburn Farm, Market Street, Thornton, Bradford, West Yorkshire, BD13 3HW; Tel: 01274 835016

gsb@gsbprospection.com

**Human Bones**

Louise Lou; Head of Heritage Burial Services, Oxford Archaeology, Janus House, Osney Mead, Oxford, OX2 OES; Tel: 01865 263 800

**Lithics**

Martin Tingle; Higher Brownston, Brownston, Modbury, Devon, PL21 OSQ; Tel: 01548 821038

**Metallurgy**

Sarah Paynter; Centre for Archaeology, Fort Cumberland, Fort Cumberland Road, Eastney, Portsmouth PO4 9LD; Tel: 02392 856700; sarah.paynter@english-heritage.org.

**Palaeoenvironmental/Organic**

Vanessa Straker; English Heritage SW, 29 Queen Square, Bristol BS1 4ND; Tel: 0117 9287961

vanessa.straker@english-heritage.org.uk

Dana Challinor (wood identification); Tel: 01869 810150

Julie Jones (plant macro-fossils); juliedjones@blueyonder.co.uk

Heather Tinsley (pollen analysis); heathertinsley@aol.com

Ralph Fyffe (pollen analysis) University of Plymouth

**Pottery**

John Allen; Exeter Archaeology, Custom House, The Quay, Exeter, EX2 4AN; Tel: 01392 665918

Henrietta Quinnell; 39 Polsloe Road, Exeter EX1 2DN; Tel: 01392 433214

**Timber Conservation**

Liz Goodman; Specialist Services, Conservation Museum of London, 150 London Wall, London EC2Y 5HN

Tel: 0207 8145646; lgoodman@museumoflondon.org.uk

## Appendix 3

List of jpegs contained on CD to the rear of this report.

<i>Photo Number</i>	<i>Description</i>	<i>From</i>	<i>Scale</i>
LCD10 (1)	Junction between Phase 1 and Phase 2 settling tanks	south	2m
LCD10 (2)	Phase 2 drying pan and site of Phase 3 workshop	south-east	2m
LCD10 (3)	Phase 2 drying pan and site of Phase 3 workshop	south-east	2m
LCD10 (4)	North-western wall of furnace house showing Phase 3 & 4 alterations	north-west	2m
LCD10 (5)	North-western wall of furnace house showing Phase 3 & 4 alterations	north-west	2m
LCD10 (6)	North-western wall of furnace house showing Phase 3 & 4 alterations	north-west	2m
LCD10 (7)	Section through south-western wall of Phase 2 drying pan	north-west	2m
LCD10 (8)	South-eastern end of Phase 2 drying pan north-eastern wall	south-west	2m
LCD10 (9)	Phase 2 linhay	south-east	2m
LCD10 (10)	Phase 2 linhay	west	2m
LCD10 (11)	Phase 2 linhay pillars	east	2m
LCD10 (12)	Phase 2 linhay	south	2m
LCD10 (13)	Phase 2 linhay	west	2m
LCD10 (14)	Phase 2 linhay	north-west	2m
LCD10 (15)	Phase 2 linhay showing the compartmentalised construction	north-west	2m
LCD10 (16)	Clay slurry pipe under the Phase 2 linhay	north-west	2m
LCD10 (17)	Culvert running under Phase 2 drying pan and linhay	south-west	2m
LCD10 (18)	Concrete pillar on south-western edge of Phase 2 linhay	east	2m
LCD10 (19)	Culvert running under Phase 2 loading platform	south-west	2m
LCD10 (20)	Leat to south-west of building	east	2m
LCD10 (21)	Leat to south-west of building	north	2m
LCD10 (22)	Phase 1 linhay	west	2m
LCD10 (23)	Phase 1 linhay	north-west	2m
LCD10 (24)	Phase 1 linhay	north-west	2m
LCD10 (25)	Base of Phase 1 chimney	north	2m
LCD10 (26)	Phase 1 drying pan	north-west	2m
LCD10 (27)	Entrance to settling tank no. 3	south-west	2m
LCD10 (28)	Dwarf wall carrying waste water channel	north-west	2m
LCD10 (29)	Entrance to settling tank no. 3	north-west	2m
LCD10 (30)	Interior of settling tank no. 3	south-west	2m
LCD10 (31)	Phase 2 buttresses of Phase 1 settling tanks' north-western wall	west	2m
LCD10 (32)	Phase 2 buttresses of Phase 1 settling tanks' north-western wall	north-west	2m
LCD10 (33)	Phase 2 buttresses of Phase 1 settling tanks' north-western wall	north	2m
LCD10 (34)	Section through south-eastern wall of settling tank no. 8	south-west	2m
LCD10 (35)	Gaps in walls of settling tanks 7 and 8	south-east	2m
LCD10 (36)	Section through south-eastern wall of settling tank no. 6	south-west	2m
LCD10 (37)	Clay slurry pipe feeding settling tank no. 6	north-west	2m
LCD10 (38)	Clay slurry pipe on top of wall separating settling tanks 6 and 7	south	2m
LCD10 (39)	Archway on interior north-western wall of furnace house	south	2m
LCD10 (40)	North-eastern interior wall of furnace house	south-west	2m
LCD10 (41)	South-western interior wall of furnace house	north-east	2m
LCD10 (42)	Furnace house	south	2m
LCD10 (43)	North-eastern exterior wall of furnace house	north-east	-
LCD10 (44)	Recent steel shed	south	2m
LCD10 (45)	Recent steel shed	west	-
LCD10 (46)	Phase linhay	south	-



The Old Dairy  
Hacche Lane Business Park  
Pathfields Business Park  
South Molton  
Devon  
EX36 3LH

Tel: 01769 573555  
Email: [mail@swarch.net](mailto:mail@swarch.net)