Report No: 2015R067



## Lane to Roundwood Quay, Feock, Cornwall; Archaeological Recording and Assessment

Scheduled Monument 32940, Multiple Enclosure Fort at Round Wood



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Lane to Roundwood Quay, Feock, Cornwall; Archaeological Recording and Assessment

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

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#### Cover illustration

Quay lane at Roundwood, looking west to the outer cross-promontory rampart of the Scheduled prehistoric fort (by the vehicle) from the point recorded in Profile B (Figure 2), showing its metalling with a linear hollow running through the entrance to the fort

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#### **Abbreviations**

CAU Cornwall Archaeological Unit

CIfA Chartered Institute for Archaeologists

HARPO Heritage at Risk Project Officer (Historic England)

HE Historic England

HER Cornwall and the Isles of Scilly Historic Environment Record

LB Listed Building

NGR National Grid Reference

NMP National Mapping Programme (plotting of sites from aerial photographs)

NT The National Trust
SM Scheduled Monument

SMC Scheduled Monument Consent

OS Ordnance Survey

### 1 Summary

In 2015 Cornwall Archaeological Unit carried out archaeological assessment and recording for a lane to Roundwood Quay, Feock, on the Fal Estuary near the south coast of west Cornwall. The study was commissioned by Cormac, Cornwall Council (CC) for roadworks to the lane, a public byway. It was required by Historic England (HE) as a condition of Scheduled Monument Consent (SMC) for the works at Roundwood, where the lane runs through a prehistoric promontory fort within which is also an oval fort.

The roadworks at Roundwood involved delivering, spreading and rolling some 300 tons of material to resurface the historic metalling of the lane, and digging a drainage ditch in two places beside this. The archaeological project aimed to prevent associated inadvertent damage to the prehistoric earthworks, ensure avoidance or recording of any archaeological remains encountered, as appropriate, and increase understanding of the development and archaeological significance and potential of Roundwood.

Methods used included desk-top study of historic maps and other documentary sources; fieldwork combining photography, description and profile drawing in advance of the roadworks; watching brief and monitoring during the works at Roundwood; and further analysis. (Following the roadworks affecting the Roundwood part, approximately 225m long, others took place along the remainder of the route to the tarmac road near Tregew, some 730m west; these were not monitored.)

Historic maps and other documents, and archaeological remains and relationships, indicate the long development and use of the lane. Portions – at the west end, and from the centre east to Roundwood - appear prehistoric in origin, serving a ridgetop enclosure interpreted as a hillfort west of centre on the route, and linking this with the Roundwood forts and river landing. The high part of the lane west of centre, apparently joining the approaches to the hillfort by using the course of the ditch on its south, was probably established in medieval times. The route may have served for more diverse trade in the post-medieval period when Tregew was held by a wealthy tin-merchant; at that time it is considered to have maintained its line straight through Roundwood to reach the river landing/s around the end of the point, modified in the industrial age.

The diversion of the route at Roundwood to its present course, and the transformation of the whole lane by metalling, are now dated to the period c1805-1811. These improvements, allowing both faster, all-weather traffic to the pre-existing quay, and also embellishment of the promontory with ornamental planting, are attributed to wealthy mine adventurer and merchant Ralph Daniell, who acquired nearby Trelissick c1805 and purchased this site around the same time. The industrial quay itself was established by the Chasewater Copper Company, to serve a copper smelting concern beside it which probably began in or shortly before 1773 and failed around 1786.

An assessment of significance shows that the lane is a very good, accessible and legible example of a historic routeway maintained and modified through deep time. It shows relationships with many archaeological or landscape features, among them nationally important sites including the Listed Roundwood Quay and the Registered Park and Garden of Trelissick, as well as the Scheduled Roundwood prehistoric fort; the possible hillfort west of Roundwood, potentially of equivalent, national value; and inland mining areas in the 'Cornwall and West Devon Mining Landscape' World Heritage Site.

At Roundwood, the archaeological potential of the lane for buried remains associated with the fort is probably limited, the present project indicating that the lane and its boundaries were constructed on a platform levelled into the subsoil. However, any deeper prehistoric pits under this could survive, while the causeway where the route diversion of c1800 runs through the inner cross-rampart is probably formed from the fabric of the latter cut to admit the lane, and may incorporate prehistoric artefacts.

Management considerations based on this new assessment include maintenance of its metalled roadway, rather than further resurfacing; and rapid archaeological evaluation in advance of any future schemes to resurface routes with good survival of exposed historic rock-cut beds or metalling, so that, if appropriate, archaeological significance can then be assessed, and taken into account in initiating and planning the roadworks.

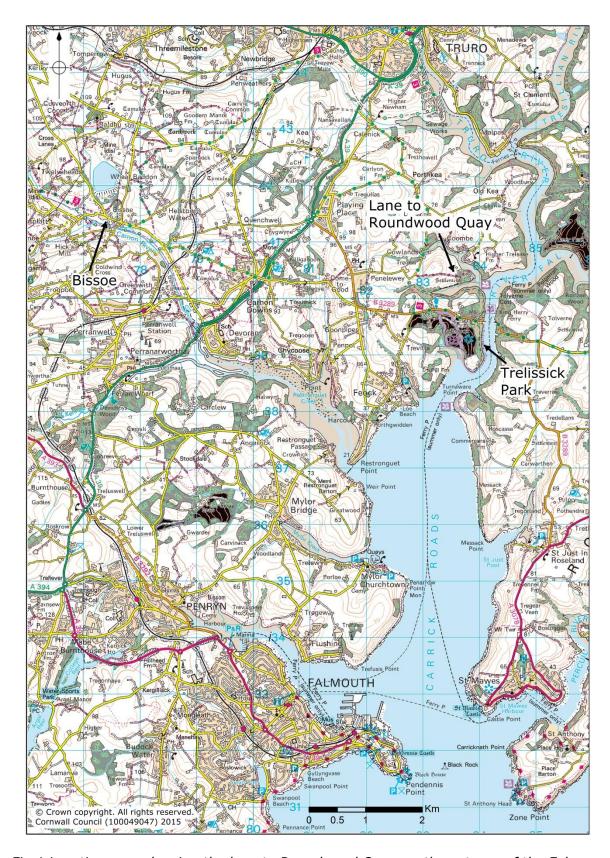


Fig 1 Location map showing the lane to Roundwood Quay on the estuary of the Fal Road links to the mining districts to the ENE beyond Bissoe can also be seen (top left).

### 2 Introduction

### 2.1 Project background

Cornwall Archaeological Unit, Cornwall Council (CAU, CC) was commissioned by Penny Hodgson, Countryside Ranger, on behalf of Cormac, CC, to provide archaeological monitoring and recording for roadworks to part of the lane to Roundwood Quay, Feock. This quay, now in quiet woodland owned by the National Trust, and used mainly for leisure activities, lies at a confluence of creeks on an upper reach of the estuary of the River Fal, near the south coast of west Cornwall (see location map, Fig 1).

The works at Roundwood, the main focus of the archaeological project, consisted of laying a new surface on top of the existing, historic one, and digging a drainage ditch (with a pipe trench across the mouth of a layby at the north east end of the ditching) on one side of this in two places (see plan of these works, Fig 2). Following the roadworks here, others, not monitored but understood to involve filling of potholes and localised surfacing, took place along the lane west of Roundwood (for the whole of the route, see the larger maps at the rear of the report, Figs 51-56).

The archaeological recording was specified as a condition of the Scheduled Monument Consent (SMC) granted for the roadworks by Historic England. The SMC, and recording, were required, since to access the quay the lane runs through a multiple enclosure fort of Iron Age type on the riverside promontory, a Scheduled Monument (Fig 2, and see Section 3.2 for further details of designations).

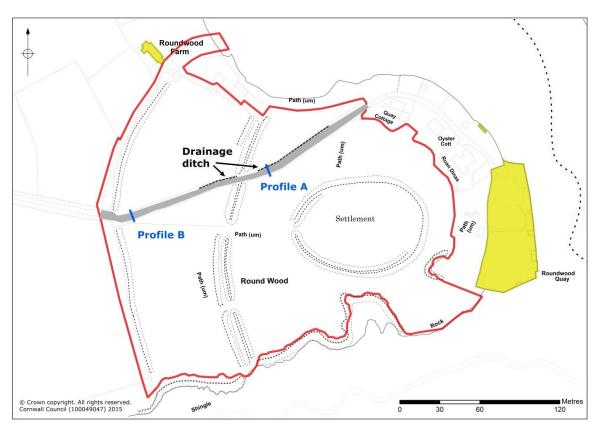


Fig 2 Map of Roundwood, showing the lane running to the quay, with the extent of the roadworks here, and areas of designated heritage assets of national importance

The prehistoric multiple enclosure fort is a Scheduled Monument (outlined in red); the quay, and a limekiln on its north are among the Listed Buildings (yellow). The extent of the full resurfacing of 2015 is shaded in grey; ditches are marked with dashed lines.

### 2.2 Aims

As stated in the project design by Dr Andy Jones of CAU (12 June 2014), the archaeological project was devised to provide the following;

- Recording of the current lane in its condition prior to the repairs, since these would involve surfacing obscuring its historic character.
- Archaeological monitoring during construction works, to identify, record, analyse
  and protect, as appropriate, any archaeological features, layers and finds
  affected by the works; in particular, to investigate and recover evidence in the
  form of artefacts, structures and deposits associated with prehistoric or other
  early activity, in order to enhance our knowledge of the extent, form and
  potential of the promontory enclosure as a whole.

#### 2.3 Methods

#### 2.3.1 Desk-based assessment

An initial rapid desk-top assessment was carried out. This involved consulting historical databases and archives to obtain information about the development and significance of the lane affected, its role in the evolution of Roundwood, and the potential for groundworks encountering significant buried structures and features along its route. Major sources consulted include the Cornwall HER, historic maps, and previous archaeological reports and histories (See Sections 4 and 8 for full details).

### 2.3.2 Type and extent of fieldwork

The length of the Roundwood part of the lane, where the archaeological profile recording, watching brief, and monitoring of works took place, is approximately 225m. The part between Roundwood and the tarmac road near Tregew to the west, included in the walkover (see below), is some 730m long. The east end of the route, which runs on to the quay through the small group of houses which has developed behind this (where it has been part resurfaced previously to serve that settlement, using non-local stone), was not included in the project.

**Recording in advance of disturbance** Before the roadworks began, the lane was recorded by a 'walkover', a rapid examination along its length from near Tregew to the rear of the quay area, to assess its character, condition, and relationships with other archaeological sites or historic landscape features, using brief description and selective photography.

In the Scheduled Monument (SM) at Roundwood, ahead of any ground disturbance, representative or notable portions or features of the lane were photographed, and transverse profiles across it were drawn at a scale of 1:10 in two places, one showing its probable designed historic form, and the other, wear and erosion to this (Profiles A and B; Figs 2, 4). (The profiles were actually drawn in intervals between episodes of roadworks, before these points were covered by resurfacing.)

**Discussion prior to commencement of roadworks** Historic England's Heritage at Risk Project Officer (HARPO), the CAU archaeologist, the manager of the roadworks and representatives of the client and of the National Trust met at the site, immediately before the works began, to discuss and agree the working methods and programme.

**Monitoring and watching brief for resurfacing and drainage works** The works at Roundwood both in and immediately west of the wood itself were monitored, to help ensure that the movements of the heavy machinery used did not accidentally damage the prehistoric ramparts or the ground beside the lane within them. (As shown in Fig 2, the external ditch of the outer cross-promontory earthworks forming the western edge of the Scheduled Monument lies just beyond the boundary of the wood.)

Watching brief was provided for the two drains, which were cut by machine along parts of the downhill (north west) side of the lane in Roundwood, within the lane's built boundary (again, see Fig 2). This involved monitoring and recording of the character of the excavated ground by notes and photography (no early, complex or otherwise significant remains, deposits, or artefacts remains being disturbed; see Section 5.2.2).

### 3 Location and setting

### 3.1 Topography and geology

Roundwood is located in the parish of Feock, south of the city of Truro. It lies by the estuary of the Fal, the major river running to the south coast of west Cornwall, which meets the sea at the port of Falmouth (Fig 1). The bedrocks here are the sandstone and slates of the Portscatho and Falmouth series; soils are of the type named Powys and known as 'brown rankers' (Geological and Soil Surveys of England and Wales).

The quay is positioned at the opening into the broad estuary of the Fal of the neighbouring tidal mouths of two of its upper western tributaries, Cowlands Creek (the more northerly of the two) and Lamouth Creek (Figs 2, 3, 45, 48). The lane to the quay approaches from near Tregew along a promontory between these side creeks. At its centre the route follows the south side of a broad summit at around 55m OD, while either side of this it runs along the ridgetop, roughly east-west; at Roundwood it formerly continued along the spine of the promontory, before being diverted to slant WSW-ESE down the slope to the north (see further Section 6.3.3).



Fig 3 Roundwood from the air, with the quay at the point where the side creeks meet the Fal Estuary; the tree-covered promontory fort; and the quay lane running west along the ridge beyond (Historic Environment, Cornwall Council, F9/144)

The piece of the lane visible here is most of the third part of it described in Section 5.1.

### 3.2 Designations of national importance

The archaeological project was designed primarily to protect the part of the lane lying in and immediately west of the mature broadwood plantation known as Roundwood (that is, the fourth of the parts described in Section 5.1). This part lies in and/or is very closely associated with several designated sites of National Importance; and is also the part of the route affected by continuous complete resurfacing (Fig 2). Details of these designations at Roundwood are as follows;

- Wood. This is a complex site of Iron Age type, occupying the end of the promontory between the two side creeks and the main river. The SM incorporates two widely-spaced lines of rampart with external ditch across the 'neck' of the promontory, and, within these, on top of the ridge towards the point, an oval enclosure with rampart and ditch the 'round' for which the wood is named. West of Roundwood, the lane forms the original land approach to the fort, addressing its central outer entrance; and the monument includes both the primary and secondary courses of the route within the fort (the route having been diverted here), while a generic clause in the scheduling description excludes the surface of the secondary lane to allow for its maintenance.
- Listed Buildings, LB 1159174, Roundwood Quay (Grade II), and LB 1140897, Lime kiln at Roundwood Quay (Grade II). The quay and remains of an associated lime kiln nearby lie at the east end of the lane, just over 100m from the part of it included in the 2015 project. (See Appendix I for quay Listing). The lane, showing the early origins of the route to the quay and its adaptation, surfacing and use in the early 19<sup>th</sup> century, contributes greatly to understanding of the Listed structure, its time-depth, setting and context.
- **Listed Building, LB 1159170, Roundwood Farmhouse (Grade II)**. The house stands near Cowlands Creek at a similar distance, *c*100m, north of the western end of the extent of full resurfacing in 2015. The quay lane forms the approach to the house via a side lane branching off it just west of Roundwood.

In addition, as noted previously (Kirkham 2005, 10), Roundwood is an outer part of the ornamental landscape of the mansion of Trelissick, though outside the perimeter of the designated area of this;

• Registered Historic Park and Garden 1000656, Trelissick. The registered area of national importance protecting the park extends close to Roundwood, reaching to the opposite, south side of Lamouth Creek.

### 4 Previous archaeological work

The Roundwood Quay lane itself has not been previously assessed as an archaeological or landscape feature in its own right. There is no full modern archaeological survey and assessment of Roundwood with its ramparts and other earthworks and ornamental planting, the quay and associated structures, or the surrounding landscape with notable features including the potential barrows and hillfort on the summit of the ridge (discussed in Section 6.1).

Earlier archaeological recording at Roundwood has been concentrated on sites at the rear of the quay, addressing the effect on the SM or its setting of development and other changes there. Localised measured survey, watching brief and excavations of sections were carried out in 2005 for a reservoir and other related features associated with the quay complex, lying just above the scarp at the end of the headland and threatened by land slippage (Kirkham 2005), the ground in the vicinity having been cut back in the past to form sites for quayside structures (see further Section 6.3.3). A watching brief at Roundwood Cottage in 2010 prior to new building on this site, one of those cut into the base of the promontory (beside the quay road, east of the part of this covered by the present project), indicated cobbling and a burnt deposit with staining apparently from minerals (Parkes 2010).

### **5 Fieldwork Results**

This Section brings together the evidence for the form and fabric of the quay lane found in the pre-works examination and watching brief. These findings, combined with those from the desk-top study, are discussed further in the chronological analysis, Section 6.

### 5.1 Observations in advance of roadworks

### Routeway course and character

Overall, the lane runs fairly directly between Tregew and Roundwood Quay (roughly west-east), and is generally quite regular in width, spanning around 5m between the boundaries to either side, with some variation. However, it comprises four quite distinct parts (see map, Fig 56). These can be distinguished, on historic maps and on the ground, by differences in the orientation of the route, by varying relationships with other landscape features made by people, and with the topography, and by changes in the style of the road's boundaries. Moving from west to east, towards the quay, the 4 parts are as follows;

- **1**. A relatively broad way rises up the spine of the ridge (Fig 5), from the saddle occupied by the settlement of Tregew (probably named from this hollow see Section 6.2) to the narrower, inland side of an enclosure interpreted as a hillfort on the fairly level summit of the river promontory. It curves northwards to address this side of the enclosure which may have had an entrance in its centre, that point being on line with the curve of the lane if projected to the enclosure. Field boundaries with lines indicating they are of medieval origin are attached to, so post-date, this part of the lane.
- **2**. West of centre, a higher, more level part with a gentle south curve respects a wide boundary bank interpreted as a rampart on the south of the hilltop enclosure (Fig 6).
- **3**. From the east side of the hilltop enclosure to Roundwood, a broad descent takes a quite direct but slightly sinuous line down a shoulder of the ridge, with old oak trees, recorded individually on the OS map of c1880 (Fig 54) in its hedge banks. A boundary probably of medieval origin runs off the south side of the lane (Fig 7).
- **4**. At Roundwood, in the prehistoric promontory fort, the lane is more regular in width and strikes for the north end of the quay complex, so appears purpose-built to serve the quay (Fig 13). (This is the part of the route, lying in the SM, where the monitoring and watching brief for the roadworks took place.) The lane cuts and is causewayed over, and narrows a little (to 3.5m) through, the inner cross-promontory earthworks, at the point at which the slope to Cowlands Creek becomes steeper. It takes a line with the optimum angle and grade to reach from the outer rampart entrance to reach this crossing point through the inner cross-rampart, and another optimum line, slightly different, to continue from that rampart to the quay area.

Along with its boundaries, the roadway in this fourth part is levelled into the slope by at least 0.5m. The boundaries are c0.8m wide and 1m high on the south, uphill side, and 1.3m high on the north. Between the cross-ramparts in particular, and to a lesser extent further east, they show unusual facing of single large slabs of local stone c0.1m thick, set on end and sideways (Figs 13, 32). A drainage channel some 0.7m wide and c0.4m deep (but clearly silted), and a flat soft verge indicating either a buried ditch or a simple hollow for drainage between the roadway and its boundary, could be seen at the sites of the north east and south west roadworks ditches, respectively (Figs 34, 30).

#### Historic road construction, material and condition

The quay lane is made up with a stony fabric, extending over each of the four parts of it identified above, and, prior to the latest roadworks, exposed fully in and west of Roundwood, and extensively elsewhere. This historic road-bed is 'metalled', that is, made up with roughly sized, redeposited pieces of natural stone or hard industrial waste products (here, copper slag). (There is no evidence of a cobbled surface where evenly sized stones, often beach pebbles or other smooth material, are laid side-to-side, though with the pressure associated with long-repeated vehicular use, the metalling is compacted in such a way that it resembles cobbling in places.)

The lane in Roundwood (the last of the 4 parts noted above) has now been identified as a diversion from the early ridgeway there, made *c*1805-1811, and the metalling of the entire lane is considered to date from the same phase (see Sections 6.3.2, 6.3.3). Before that time, the whole route can be expected to have been a hollow way of the kind typical of quay access and other roads prior to modern improvement, with a surface worn or in places cut into the natural rock, probably with accumulations of earth and loose stones washed down it in the rains. When a section was cut across the lane as part of National Trust groundworks (at the upper, west end of the part here numbered 3), it was found to have a ridge of bedrock running along it just inside and parallel with its southern edge, overlain by loose shillet and silty sand some 0.8m deep (Jim Parry, National Trust archaeologist, pers comm), beneath the metalling.

The metalling was found by inspection and prodding on the 2015 walkover to be  $c3.5 \,\mathrm{m}$  wide, or more where it runs into the mouths of gateways opening into adjoining fields, and at the junction of the Roundwood part with the earlier ridgeway where the full span of  $5.3 \,\mathrm{m}$  is metalled (Fig 12). (The width of metalling visible prior to the roadworks varied, because its sides were obscured by inwardly sloping grassy or muddy verges some  $0.5\text{-}1 \,\mathrm{m}$  wide, probably largely formed of accumulated leaf mould and material eroded from the hedge banks.) Shallow linear depressions and/or soft low ground indicated silted-up open drainage channels running beside it in places. As noted above, the drainage ditches dug as part of the roadworks in Roundwood, north of the lane, were cut into silt filling channels or hollows alongside the roadway. The thickness of metalling was not revealed during the resurfacing, as this involved covering rather than cutting it (Section 5.2.2). However, the observations of the cut through the lane by the National Trust (mentioned earlier) indicate that the metalling was  $15 \,\mathrm{cm}$  thick.

At least some of the metalling has been weathered away, as can be seen where a larger stone is left protruding from it (Figs 19, 20). Where seemingly best preserved, the metalled surface is slightly domed in profile, so as to shed water to the ditches or roadsides (Figs 16, 17). Its regularity can be seen from the scaled drawing, Profile A (Fig 4). Elsewhere the metalling has some limited patching with concrete or granite rubble towards the quay area (Fig 22), and many localised, relatively small and shallow linear or rounded hollows resulting from wear or washing-out. Paired ruts occur in places (Fig 30). These are quite lightly worn (rather than the deep, continuous, paired ruts, made by carts and effectively guiding subsequent traffic, characteristic of rock-cut lanes elsewhere in Cornwall remaining free of tarmac), and may be relatively recent.

Heavier erosion has resulted in a larger, linear hollow, around 1m wide and up to 0.2m deep, running for c20m down the lane north of its centre where it bends to take a more northerly course east of the outer rampart of the Roundwood fort, as recorded in Profile B (Figs 4, 9, 12). This is potentially important, as it may be attributed to the busy quay traffic of the early  $19^{th}$  century 'hugging' the inside of the corner, perhaps combined with scouring by run-off water; and if so, its form would seem to indicate that this traffic consisted of laden pack-animals rather than wheeled vehicles. A similar, lesser hollow was formed at a slighter bend further down the lane (Fig 19).

The metalling consists of pieces of rubble or waste material mostly some 5-10cm across (Figs 8, 18, 20); as already mentioned, occasional protrusions of larger stones show these were also used, and they may be more frequent at the base of the fabric (not exposed in 2015). It includes material of varying types and origins;

- 'Shillet' or grey slaty rubble, typical of the immediate locality.
- White quartz, possibly mining waste, characteristic of parts of Kea and other adjoining parishes and of mining districts further away, regularly used for roadworks across Cornwall in the past because of its durability.
- Limestone, which does not occur in Cornwall and may be from Plymouth and/or South Wales. This may have been imported for lime-burning or as ballast.
- Slag, not analysed but expected to derive from Roundwood's copper smelters.
- Ceramic tile (this was seen only as a small scattering which may represent a later deposition of surfacing material, occurring west of Roundwood where the approach to Roundwood farm runs off the lane).

To the west, the fabric is mostly quartz (Fig 5), while on the east half, including the part in Roundwood, limestone and slag prevail. Because of previous extensive resurfacing on the west half of the route, it is not clear at what point that change occurs (Figs 5, 6). However, the use of shipped or processed material on this outer half of the route clearly reflects the trade and industry at the quay, and also indicates that metalling both in and beyond Roundwood was laid *after* smelting had taken place.

Prior to the latest roadworks, variations were also visible within areas of generally similar metalling at Roundwood, most notably in two places. Roughly half way between the prehistoric cross-ramparts, slag forms a ridge at the south edge of a linear worn area towards the north side of the lane, one of several hollows braiding the predominantly limestone surface here (Figs 13, 14). This may perhaps represent early repair of the roadway. Inside the inner rampart at Profile A (Figs 4, 16-18) the evenly-rounded back of the roadway is almost entirely slag, with some quartz, limestone and shillet, for a length of some 9m. This could be a mended surface but is equally likely to be a good survival of the original one due to use of durable/well bedded slag here.

A piece of flint was also found in the road bed, in the part running through Roundwood, at the point within the outer rampart of the promontory fort where Profile B was recorded (Fig 4). This is a prehistoric artefact, possibly Bronze Age though not of a diagnostic type, which has served as a core for producing several flakes for working into other tools or blades, and was subsequently used itself in some activity involving percussion with its top which has marked both the cortex and the edges of struck facets (Anna Lawson-Jones, pers comm). The flint was embedded in the metalling, so appeared to have been deposited as part of it. It may well have been deposited by the shore at the site of the later Roundwood Quay in prehistoric times, and brought from there with other metalling; though other explanations are possible – for example, it could perhaps have been shipped to the quay with ballast from elsewhere.

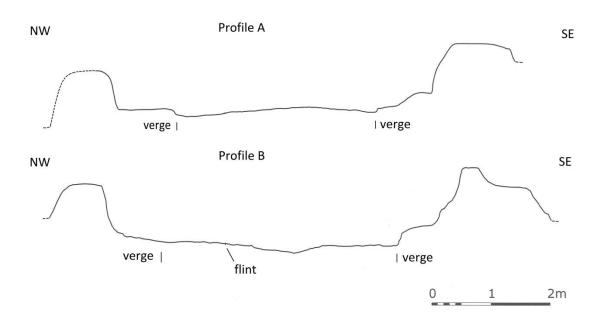


Fig 4 Measured profiles of the Roundwood part of the quay lane prior to resurfacing

The sites of the drawings are plotted on Figure 2. Profile A probably represents the original form of the historic metalled surface with its domed back, while Profile B shows a linear hollow running along its centre possibly worn down by pack animals.

### Part 1 (west) of Roundwood Quay lane prior to 2015 roadworks



Fig 5 West end of the byway, with quartz metalling visible in the mouth of the lane, though largely obscured by previous resurfacing on the ascent in the rear ground (NGR SW 82857 40425, looking east).

# Part 2 (west of centre) of Roundwood Quay lane prior to 2015 roadworks



Fig 6 Centre of the lane, with limestone metalling emerging from earlier resurfacing (NGR SW 83332 40432, looking west).

# Part 3 (east of centre) of Roundwood Quay lane prior to 2015 roadworks



Fig 7 Metalling in good condition, and oak mapped c1880, west of Roundwood (NGR SW 83522 40402, looking west).



Fig 8 Quartz metalling with bluey-grey limestone to left and copper slag to right of that (NGR 83447 40420. Scale is 25cm).

## Part 4 (at Roundwood) of Roundwood Quay lane prior to 2015 roadworks



Fig 9 Entrance to outer cross-rampart with limestone metalling showing linear hollow (NGR 83575 40391, looking east).



Fig 10 Lane branching off (left) from the ridge leading to the oval fort (in trees ahead) (NGR SW 83579 40391, looking east).



Fig 11 Lay-by/passing place, modified in the  $20^{\rm th}$  century, on south inside fort entrance (NGR SW 83588 40388, looking east).



Fig 12 Limestone and slag metalling with linear hollow curving through fort entrance (NGR SW 83595 40391, looking west).



Fig 13 Lane with slab faced boundaries, half way between the two cross-ramparts (NGR SW 83635 40405, looking south west).



Fig 14 Metalling half way between the cross-ramparts with ridge of slag in limestone (NGR SW 83635 40405, looking south west).



Fig 15 Metalled causeway of lane over ditch of inner cross-earthworks, from rampart (NGR SW 83671 40418, looking south west).



Fig 16 Slag metalling with regular rounded back at Profile A inside inner cross-rampart (NGR SW 83699 40426, looking SW).



Fig 17 Low-level view of rounded roadway of slag at Profile A inside inner cross-rampart (NGR SW 83699 40426, looking SW).



Fig 18 Detail of metalling at Profile A with bubbled slag and some paler grey limestone (NGR SW 83699 40426. Scale is 25cm).



Fig 19 Metalling worn NW of centre, half way from inner cross-rampart to Quay Cottage (NGR SW 83725 40443, looking SW).



Fig 20 Detail with larger limestone, half way from inner cross-rampart to Quay Cottage (NGR SW 83725 40443, looking SW. Scale is 25cm).



Fig 21 Gravelled roadside bay, by ruinous caravan (in trees to right), north of oval fort (NGR 83742 40456, looking W).



Fig 22 Surface between caravan and Quay Cottage with concrete patch (foreground) (NGR SW 83755 40466, looking SW).



Fig 23 Lane showing mixed metalling fabric, and boundary bank, west of Quay Cottage (NGR SW 83756 40465, looking NW).



Fig 24 Outer end of byway, where lane continues with modern surfacing by dwellings (NGR SW 83769 40473, looking NE).

### 5.2 Recording during roadworks

### 5.2.1 Monitoring at Roundwood

Before the roadworks, as shown by the photographs in Figures 9-24, the metalling of the lane was fully exposed within Roundwood (though with skims of silty or leafy mud in places), more recent road fabric being visible there only in the concrete or non-local stone mendings of a few potholes towards the lower end of the byway, west of the houses at the back of the quay area (Fig 22). Following the works, the historic road was wholly covered in a new, uniform surface (Fig 25).



Fig 25 Lane at Roundwood, between the cross-ramparts, following the 2015 roadworks.

Heavy machinery was used for the works, accessing Roundwood along the lane via the original, central entrance through the outer cross-promontory rampart of the Scheduled prehistoric fort (Fig 26). The works involved delivering, spreading and rolling material to form the new surface, around 0.4m thick (Figs 27-29). The material laid comprised around 200 tons of `803' granular base aggregate, topped with some 100 tons of mixed small and medium sized recycled tarmac road planings (not hot laid tarmac).

Drainage works were also carried out at Roundwood (Figs 2, 30-39). These consisted of two ditches dug along the lower, north side of the road (within its boundary) to take run-off water away from its surface. One ditch, running for c30m just above (west of) the inner cross-rampart of the promontory fort, was made to drain into the rampart's external ditch via a narrow pre-existing gap in the slab facing of the lane boundary bank there. The other, to the east, roughly twice as long as the first, was fed into an existing shallow roadside gulley running downhill out of the lane west of Quay Cottage.

Both drains were dug in spits to c0.8m wide and 0.5m deep by machine using a bucket operated parallel with the lane (Fig 35). They were left as open ditches except at a  $20^{th}$  century lay-by, north of the round fort (Figs 31, 36, 37). Here it was necessary to bury piping in the trench to take the drain under the opening to the lay-by, a levelled apron of ground built out over the slope below. (Two six metre lengths of black polythene pipe were used.) The material excavated to form the ditches was placed on their inner edges (Figs 31, 32), or, where this would have obstructed the lane surface, 'cast up' from the digger bucket on to the top of the south boundary of the lane (Fig 38), or, in a few spots nearer the quay where this could not be done by machine because of hedgerow growth, deposited on the ground over the boundary, south of the lane.



Fig 26 Truck delivering tarmac planings passing through the outer cross-rampart Its front is on the causeway of the rampart's ditch, already made up with aggregate.



Fig 27 Tarmac planings for finishing the road surface, beside the outer cross-rampart The rampart can be seen in section on the right between the two piles of planings.



Fig 28 Planings spread on aggregate by and immediately within the outer cross-rampart This is the point where the metalled lane branches NE to the quay from the ridgeway.



Fig 29 New road surface on the causeway over the ditch of the outer cross-rampart

This required lengthy rolling to smoothen it, the causeway material being relatively soft.



Fig 30 Site of south west drainage ditch, above inner cross-rampart, from its upper end.



Fig 31 South western drain, with spoil turned onto the roadside, from its upper end This view shows the general character of the ground disturbed by the 2015 roadside drainage ditching - silty, with infrequent small stones and many bramble, ivy, and small tree roots, and lacking in artefacts, features or other archaeological interest.



Fig 32 View NW over the south west drain, with its spoil in front, to the lane boundary



Fig 33 Slab facing to bank NW of lane by inner cross-rampart, with gap used as drain



Fig 34 Site of north east drainage ditch, below inner cross-rampart, from its upper end A hollow, more marked further down the lane, indicates a previous drainage ditch here.



Fig 35 Excavation of north east drain; the inner cross-rampart is by the people beyond



Fig 36 Lay-by above caravan north of oval fort, prior to laying of drain, looking NE



Fig 37 Lay-by with trench for pipe taking north east drain across opening from lane



Fig 38 Lower end of north east drain, with spoil 'cast up' on lane boundary, looking NE

Another, minor adaptation, to facilitate drainage, was made at the upper, west end of the Roundwood part of the lane (Fig 39). Here, the new surfacing material was built up slightly to form a low round-backed bank, running ESE-WSW diagonally across the roadway, to guide run-off onto the north side of the lane just above its passage through the central entrance in the outer rampart of the promontory fort. (Several similar features had previously been made on the sloping third part of the lane, west of Roundwood.) This superficial work did not involve direct disturbance to the pre-existing roadway or prehistoric rampart. Conceivably, though, in heavy rainfall, water fed by it onto the causeway with the ditch below could cause erosion affecting these features of the rampart, part of the SM (see management considerations, Appendix III).



Fig 39 Banked end of new road surface at the external ditch of the outer cross-rampart

### 5.2.2 Watching brief for ditches at Roundwood

No prehistoric or other highly significant or sensitive finds, features or deposits were found during the watching brief for the mechanical excavation of the two drainage ditches along the north west side of the metalled lane at Roundwood. Beneath a top layer of leaf mould c10cm thick, material removed was almost entirely soft mid-brown earth with many woody roots and occasional small rubble shillet and other stone. From this it appeared that both cuts were in silt in similar drain/s dating from the period when the road here was made - either dug from the terrace levelled for the lane and its boundaries here, or effectively made on that level through the building up from it of the round-backed road metalling alongside. No cut edges of earlier drains were exposed though the top of the yellowy, clayey subsoil was visible towards the lower, east end of the drainage works. (Similar material cut by the pipe trench, seen in Fig 43, was probably redeposited to form the apron of the lay-by; see further below.) The historic surfacing of the lane was not disturbed by the new ditches, though in places a few pieces of limestone, or slag, derived from the metalling, were visible in the silt.



Fig 40 Relationship of drain cut and lane (below oval fort, within inner cross-rampart)

Where the lower end of the south western drain cut reached onto the causeway over the ditch in front of the inner cross-promontory rampart (Fig 41), the earth removed was markedly darker brown, probably because of the greater depth and dampness of soil on the causeway, or surface accumulation of leafy silt here at the base of the rampart. It seems most likely that the material used to make this causeway c1805-1811 (see Section 6.3.3) was obtained from the cut through the rampart; the 2015 ditching was too superficial to provide evidence as to whether or not this is the case.

The only other features exposed by the drainage works were relatively recent and were not stratified. The ditching cut through the apron of level ground forming the lay-by associated with a now derelict mid-late 20<sup>th</sup> century caravan downslope. Under around 5cm of granite gravel and humic soil the lay-by was made up of yellowy-brown 'rab' or clayey subsoil of a local type. Either side of this were part-buried tumbled stone slabs, resembling those used in the lane boundary, and no doubt displaced from the part of this levelled to make the lay-by. Further north east, the silt contained some fragments of roofing slate and bottle glass, and loose bricks perhaps thrown or fallen from the lane or redeposited from some drain or other structure here or nearby (Fig 44).



Fig 41 South west drain cut on secondary causeway over ditch of inner cross-rampart



Fig 42 Slabs from lane boundary, displaced earlier for lay-by, from north east drain cut



Fig 43 Trench for piping north east drain through lay-by, showing the lay-by's rab fabric



Fig 44 Brick with some broken glass and building sand in ditch north east of lay-by

Few other artefacts were found in the watching brief and these were also relatively recent and unstratified. A modern brown glass bottle, the base of another, a beer can, and pieces of black plastic sheet were found in the western ditch excavation. A bottle of the early 20<sup>th</sup> century from near the lower end of the eastern drain may have been cast aside in by a worker or visitor at the quay, used at that time for local trade and shipbuilding, a tea garden, and boat hire facilities (Section 6.3.5).

## 6 Analysis; past use and development of the lane

#### 6.1 Prehistoric to Romano-British (to AD 400)

The third part of the quay lane identified in Section 5.1, running down to Roundwood from the summit of the ridge to the west (discussed further below), is considered to follow the prehistoric land approach to the multiple enclosure fort. This can be seen from the line it takes along the back of the river promontory, aligned on the original central entrance in the outer cross-promontory earthwork (Figs 9, 54).

In contrast, within Roundwood, the main focus of the current project, the present quay lane very probably represents a diversion of the early 19<sup>th</sup> century (Sections 6.3.2, 6.3.3). The original route serving the multiple enclosure fort here will have linked the original entrance in the centre of the outermost of the two ramparts crossing the headland to that in the centre of the inner cross-rampart, and that of the round fort within (or at least continued on the line of these entrances - the question of which if any of the several fortifications here was made first is beyond the scope of this assessment), to access the sheltered, shingly, tidal river landing where Lamouth and Cowlands Creeks meet the Fal Estuary with its waterborne trade (Fig 45).

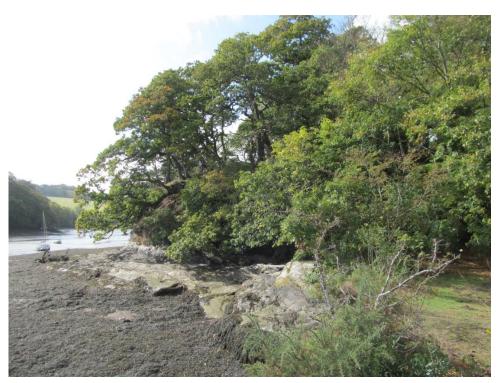


Fig 45 South east flank of the headland on the spine of which the early ridgeway runs

The shore here by Lamouth Creek is modified by quarrying but conveys the character of the natural landing, at the site of the quay behind the camera, which is addressed by the ancient ridgeway and Iron Age forts (Photograph by Ann Preston-Jones).

Through the fieldwork and map analysis undertaken for this project, a potential prehistoric hillfort has been identified on top of the ridge between Tregew and Roundwood, immediately north of the lane to the quay. This is a primary feature in the landscape, a large enclosure, roughly pear-shaped in plan with evidence visible on historic maps, aerial photographs and on the ground for a surrounding rampart and external ditch (Fig 46). The Feock parish tithe survey of 1845 (Fig 53) shows it, along with an extension to the west where a smaller field had been amalgamated with it, as one of the large fields of Tregew, of 'barton' type (see further Section 6.3.1). The accompanying schedule records its field-name, Kestle, shown elsewhere to derive from Cornish castell, 'castle, village, tor', which can denote an early settlement though it does not necessarily do so (Padel 1985, 42).



Fig 46 South east corner, by quay lane, of potential hillfort on ridge above Roundwood

The hedge, the platform in the field in front, and the low rise outside that, appear to represent an enclosing rampart, ditch, and counterscarp bank, with a possible entrance. This is important in the context of the quay lane because, if Kestle is indeed a hillfort, it is highly probable that the curving western end of the route towards Tregew, and also the slightly sinuous part of the lane between Kestle and Roundwood (the first and third parts, as identified in Section 5.1 and Fig 56), are derived from prehistoric approaches to entrances to the enclosure. Both these two lengths of routeway run along the spine of the ridge, which being a watershed, maintaining heights, and offering good views was a natural choice for early tracks; and the second would have linked Kestle to the

long-recognised prehistoric earthworks at Roundwood (whether contemporary in origin, or co-eval, with the hillfort) and to the shore and navigable waters beyond.

The National Mapping Programme (NMP) plot of features visible on aerial photographs records possible traces of Bronze Age barrows within Kestle (Fig 56), so this ridgeway may have been a focus for complex human activities even earlier in prehistory. A flint found embedded in the surface of the quay lane during the recording of Profile A is of some interest in this connection (see Section 5.1, and Figs 2 and 4 for location of this find). However, being part of the probably early 19<sup>th</sup> century metalling it was not, of course, *in-situ*, and is as likely to have come from inland mines or more distant ports as from Roundwood or its vicinity.

## 6.2 Medieval (AD 400-1540)

Roundwood is known from later documents (see Section 6.3.2) to have formed part of Tregew, a farming estate of early medieval origin. The place-name Tregew includes the Cornish elements *tre*, 'estate, farmstead', and *kew*, 'hollow, enclosure' (Padel 1985, 57-58, 223-232), and the settlement lies in a hollow on the ridge west of Roundwood.

Tregew, with its several co-operating farmsteads, becoming a barton (or home farm held in hand to support a single higher-status dwelling) in late- or post-medieval times, no doubt required a route to the estuary. Access to a sandy or navigable shore was a great resource, allowing carriage of sea-sand from beach or barge to fertilise the land, a practice common to coastal and creekside farms in Cornwall (Parkes 2000, 14-15). The continuous hedged way to Roundwood will have been used for such purposes in this period, with a central link (part 2 in Section 5.1 and Fig 56) re-using the ditch on the south side of the Kestle hillfort, joining the land approach to Kestle and that from Roundwood with its fort, both thought to originate from prehistoric ridgeways.

Inland, the lane probably ran directly to Tregew (straight across the present T-junction with the public road) prior to reorganisation of the hamlet and its core fields associated with the development of the barton. A track and field boundary, recorded on the maps of c1880 and 1845 respectively, mark its likely course (Figs 53, 54). Towards the river, within the promontory fort, the medieval route is thought to have maintained its line along the ridge, to descend to the confluence of the creeks by the centre of the point, where there may have been a small quay, or simply a beach landing. The detailed surveys of 1821 and c1880 indicate this route (Figs 52, 54). The footpath descending to the shore there is now steep, with steps provided by the National Trust, but this branches off the earlier way, probably used to link an  $18^{th}$  century industrial complex above the point with its quay (Section 6.3.2). The present lane through Roundwood, now resurfaced, is considered to be an early  $19^{th}$  century diversion (Section 6.3.3).

#### 6.3 Post-medieval (AD 1540-present)

## 6.3.1 Possible early use for tin-merchant's trade; 17th century

During the reign of James I (1603-1625), a Mr Edmunds came from London to assay Cornish tin, prospered as a tin-merchant, and bought Tregew as well as other lands nearby, though he later lost his fortune (Davies Gilbert 1838, 30). If, as suggested in Section 6.2, there was an early quay or beach-landing on the creek confluence at Roundwood on the Tregew land, it is possible that the assay-master used the landing with its road to his house for trading activity, beyond the usual farm-related carriage of sand and the like. He might even have purchased the place, with its access to navigable waters and proximity to Truro and mining districts, with such a purpose in mind.

Any such traffic is likely to have been limited in scale and/or longevity, however, since Thomas Martyn's map of Cornwall, published in 1748, shows neither Roundwood Quay, nor the way between it and Tregew (Fig 47). Martyn's is an accurate and reliable map, which includes minor roads, both lanes and unfenced tracks, plotting their courses, or at least, in the case of some 'dead end' routes such as Roundwood's, marking their mouths opening off more important ones. It is probable, therefore, that the quay road was regarded as no more than a farm access way when Martyn made his map.

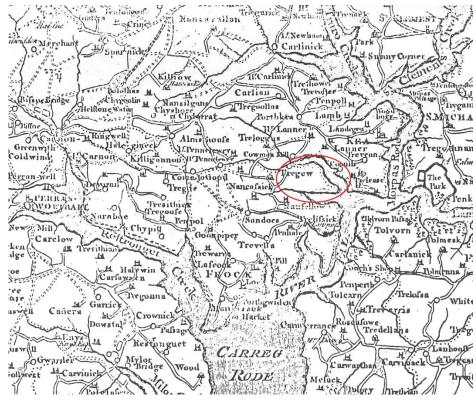


Fig 47 Extract from Martyn's map showing the area c1748; Tregew is right of centre

## 6.3.2 Mule-train road to smelting-works and its quay; late 18th century

The first known documentation of the quay and its access dates from the later 18<sup>th</sup> century. According to a National Trust booklet (undated but with a simple format indicating it was produced quite soon after 1955 when the Trust acquired the Trelissick Estate), 'mention is made in 1780-1783 that Roundwood Quay had "lately" been operated by the North Downs and Chacewater Copper Company' (Curtis n.d., 3). Unfortunately, Curtis does not reference the record of 1780-1783. The earliest sourced record of the quay known at present dates from July 1786, when it was offered for sale in the leading Westcountry newspaper, the *Sherbourne Mercury*; this advertisement was noted by Graeme Kirkham in an archaeological assessment of the quay (Kirkham 2005, 9).

An extract from the 1786 sale notice is reproduced in the present report as Appendix I. As well as indicating the size and effectiveness of the wharves and the character of the associated industrial complex, it includes several points of particular interest for this assessment. The site was part of the Barton of Tregew, and was valuable because it was a moderate distance - 'not more than five or six miles' - from the leading mines of the region (those of the Gwennap and Scorrier mining districts), as well as close (by water) to both Truro upriver and Falmouth on the Channel coast. (The historic market towns in Cornwall are typically around 10 miles apart, so goods were commonly carried 5 miles or so by road.) It had the benefit of 'good roads leading [to]' 'the principal mines of the neighbourhood'. The buildings at the quay were 'lately erected, and originally intended and used' for copper smelting; they were provided with a water supply for powering machinery, via a reservoir located nearby. The quay was over 170 feet (c50m) long; it is now c100m long, so has been doubled in length since 1786; a combination of archaeological and map evidence indicates that as one would expect the quay was beside the industrial complex (see below) and the deepest water, so lies in the southern part of the re-built quay of today (Fig 48).



Fig 48 Roundwood Quay at the east end of the lane, from Lamouth Creek on its south The present quay is an early 19<sup>th</sup> century rebuild and expansion of the smaller quay of the smelting works, recorded in 1786, itself built on an ancient landing place served by the ridgeway (Photograph by Graeme Kirkham for CAU).

The smelting works will have been served by 'trains' of pack-animals, commonly mules (Barton 1961, 47). The 1786 description of the roads to the works as 'good' may be seen as a general characterisation of routes between here and the mines (fairly direct, with moderate gradients, etc), rather than a specific reference to the site access. In fact, a combination of archaeological and documentary evidence indicates that the lane in use today at Roundwood is a diversion of the early 19<sup>th</sup> century, and that the metalling of the whole route from Tregew dates from this period (Section 6.3.3).

The concern may have comprised, as well as structures on its associated quay, others levelled into the shoulder of the point above, immediately east of the oval fort. A complex here appears on a plan of 1821 (Fig 49) when its buildings probably included a cottage made for a new landowner after smelting ceased (see Section 6.3.3). (The OS map of c1880, Fig 58, marks it as 'old quarry'.) The 1821 survey shows a track in Roundwood south of the present quay lane, running to the site along the ridge through the centre of the prehistoric earthworks, and also sloping down from the ridge to link building complex and quay. This potential early outer end of the quay route survives as a ledge with a rock-cut upper side (above a private property, Ruan Dinas). Any adaptations for smelter traffic of the wider approach from Tregew were probably adhoc, localised works, digging back to subsoil or bedrock, or filling of ruts or holes.

The 'North Downs and Chacewater Copper Company' mentioned in the reference by Curtis noted at the head of this Section would seem to be the Chasewater Copper Company discussed in a wider history of copper mining in Cornwall (Barton 1961). (The present report follows the historic spelling 'Chasewater' given by Barton for the mine and smelting company name, and Chacewater for the place-name.) The company was named after two of Cornwall's most productive early deep copper mines, Chasewater, later known under the name Great Busy or Wheal Busy (Dines 1956a, 389), and North Downs, probably Cornwall's largest copper mine around 1740 (Barton 1961, 16).

Relatively little is known of this company, but it smelted 500 tons of ore at works in Cornwall in 1773, making a profit of £18,660 in that one year (Barton 1961, 33). It was one of several copper smelting works set up from the mid- $18^{th}$  century, along with the quays needed to bring their fuel and export their metal, on the coasts north and south of the rich Gwennap mines. These were pioneering works in that they were rivalling, against overwhelming odds, the supremacy of the smelters of Wales, which was established even before the discoveries of Welsh ore around 1770 because of ready access to the Welsh coal required for the smelting furnaces (*op cit*, 24-25).

The chief 'adventurer' (investor/partner) in the Chasewater Copper Company was Thomas Wilson of Chacewater, a mine captain, financial agent and manager of the Cornish affairs of leading mine engineering and manufacturing firm Boulton and Watt (Barton 1961, 4; Bonhams of London website). By 1786 Matthew Boulton also acquired an interest (Barton 1961, 4). Thomas Wilson arrived in Cornwall in 1775, to manage Chasewater Mine on behalf of *its* principal adventurers, the Yorkshire Copper Company and the Swansea-based smelters, Fenton and Co; the Roundwood venture was run in co-operation with Fentons. Wilson oversaw various influential developments at Chasewater Mine in the next few years, when like other Cornish copper producers it was forced to respond to competition from Wales where highly profitable ore deposits had recently been found (Barton 1961, 26-30). These changes included trying atmospheric steam engines of new designs and sizes, and by 1780 connecting Chasewater and North Downs Mines, to the Great County Adit, bringing drainage of great value to this particularly wet mining ground. The Roundwood Quay smelting works may be seen as another aspect of this important innovation.

The Chasewater company is not known to have smelted after 1786, the year when Roundwood Quay was sold; as noted by Kirkham (2005, 9) this match of dates is consistent with the identification of Roundwood Quay as the location of the company's works. At this time, the great Gwennap mines lost profitability, North Downs being among those closing voluntarily after long negotiations, and Chasewater falling idle; and other Cornish copper smelting works also failed (Barton 1961, 36-38). The use of the quay and its lane was thus closely linked to the fortunes of the great copper mines.

## 6.3.3 Improved way to a small, thriving port; first quarter of the 19<sup>th</sup> century

In 1798 Roundwood Quay and its buildings were offered to let, appearing in an advertisement in the Sherbourne Mercury for  $19^{th}$  November worded very like the sale notice of 1786 (Curtis n.d., 4). Following the death in 1790 of John Lawrence, who had built a mansion at his adjoining estate of Trelissick c1750, Trelissick was sold by Lawrence's executors in or about 1805, to the famously wealthy Ralph Allen Daniel (Register of Historic Parks and Gardens documentation for Trelissick, Historic England).

RA Daniell pursued the investment in mining and related trades through which his father Thomas - the genteel adventurer portrayed in 'A Gentleman and a Miner', a famous painting of 1786 by Thomas Opie. Thomas had prospered greatly after serving leading mining entrepreneur William Lemon as a clerk and then successfully taking up much of the Lemon business on William's death (Davies Gilbert 1838, 2). According to Gilbert (1838, 33) RA Daniell made £150,000 in a very few years from 'Wheal Tower' alone (this was probably Wheal Towan in the St Agnes mining district).

Ralph Daniell expanded the Trelissick Estate with lands including Tregew (Lysons and Lysons 1814, 106), the barton farm of which Roundwood Quay had formed part as its 1786 sale notice records (Appendix II). Roundwood was improved by Daniell by 1818 when he had recently built a cottage there (West Briton, July 31<sup>st</sup> 1818, noted in Curtis, n.d.); the area, featuring the present quay road, is included on a Trelissick estate plan dated 1821 (CRO GHW/G/1B) (see Fig 49 below for detail of the Roundwood part of this, and Fig 52 for a wider portion of it, showing the full length of the quay lane).

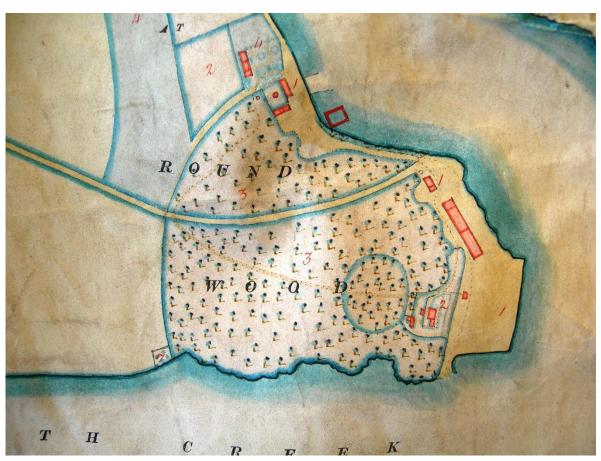


Fig 49 Detail of 1821 plan showing the rebuilt quay and lane and new plantation

Note the ridgeway to the buildings by the oval fort and descent from there to the quay. Roundwood seems likely to have been acquired by the Daniells as part of Tregew to expand the Trelissick estate shortly after 1805, though if it had been sold separately from Tregew following its advertisement in 1786, it might have been bought as a business venture by Thomas before his death in 1793, or by his heir Ralph.

Thomas may have had interests in such sites near Trelissick in 1790, when answers of Margaret Lawrence (widow of John, builder of Trelissick House) to Daniell's complaint of debts due to him from her late husband list rents of 'Trelissick, Lafeock, King Harry quay and cellars, all in Feock' (CRO WH/1/2140/1,2). This raises the interesting possibility that business concerns at Roundwood, as well as elsewhere in the vicinity, helped to attract the Daniell family to Trelissick; instead of, or as well as, their ownership of Trelissick attracting them to Roundwood.

The present lane in Roundwood is clearly secondary to the promontory fort, cutting through its inner rampart at an angle, so is post-prehistoric; it is depicted on the OS drawing of 1811, as well as the map based on this published in 1813 (Fig 51), so predates that survey. This route takes the best line to the quay in its expanded form, diverging from the ancient ridgeway thought to have used by the smelters. Along with the expansion of the quay itself, it can be attributed to the improvements by Ralph Daniell on his acquisition of Tregew in the years after c1805. As a landowner, Daniell would have been able to accomplish the re-routing relatively easily.

The lane boundaries in Roundwood have distinctive facing of large single stone slabs, 'pitched' (upright) and sideways on to the roadway (Figs 13, 32). Upright slabs, set at intervals, are used for coping walls bounding Trelissick Park against the road passing north of the mansion to the King Harry Ferry crossing on the Fal. This road was shifted to its present route for Thomas Daniell (son of Ralph) c1825 (Register of Historic Parks and Gardens entry for Trelissick, Historic England). Like the walling of the ferry road, that on the quay lane at Roundwood is ornamental, and Roundwood is known to have been incorporated in or 'borrowed' by Trelissick's designed landscape, with planting on the oval fort (Fig 50), and building of an ornamental cottage by 1818 perhaps on the former site of industrial quay-related buildings just east of the fort (Section 6.3.2).

The lane diversion here may then have been designed by Daniell for several purposes - taking traffic away from the picturesque fort on top of the headland planted to embellish parkland views; and easing the width and gradient of the approach to the quay, itself doubled in length around this time, to improve its competiveness for trade.



Fig 50 Interior of the oval fort, the 'round' of Roundwood, with ornamental beeches (Photograph by Ann Preston-Jones).

The metalling of the whole of the present route of the lane is also considered to date from RA Daniell's improvements of the early 19<sup>th</sup> century. The substantial investment represented by the full metalling from Tregew is far more likely to have been borne by Ralph Daniell, an extraordinarily wealthy and large-scale adventurer in mines, mineral quays and smelting, than by the operators of a smelting concern, pioneering in the face of great opposition (and, as it turned out, short-lived). The archaeological evidence supports this idea. The extensive use for the metalling of slag from the smelting furnaces is consistent with its post-dating the works; and no historic metalling is known on the earlier route to the smelting works above the point in Roundwood. Metalling meant road carriage here was quicker, and crucially, free of impassable mires which severely delayed it in wet seasons (Barton 1961, 47-48). Daniell is known to have acquired and controlled other landings on the Fal (Point, near Devoran, downriver, was named Daniell's Point at the time of the first OS mapping), and may have intended to develop Roundwood Quay as a leading port on the south coast of the mining region.

## 6.3.4 Wooded way with failing quay traffic; second quarter of the 19<sup>th</sup> century

Despite Daniell's investment in Roundwood Quay, its business declined by 1827, when Richard Thomas' history of Falmouth, as quoted in the NT guide, noted that here 'for some time was carried on a considerable trade, but the place proved to be at too great a distance from the mines to compete with other establishments of the same description' (Curtis n.d., 5). It is probable that the viability of the quay with its road access was affected by complex shifts in the financing and management of the great mines, beyond the scope of this survey, but a major factor may have been competition from wharves further down the estuary served by the Redruth and Chasewater Railway, established following an Act of Parliament of June 1824.

This railway linked the Redruth area to wharves at Devoran on Restronguet Creek, serving to carry ore out from the mining district, and to bring coal, timber, lime, seasand and other goods in, as had the roads to Roundwood and the other quays on the Fal. It used horse traction until the introduction of locomotives in the mid-19<sup>th</sup> century, but was arguably the first true railway in Cornwall, with wagons running on flanged wheels over rails, though a mineral tramway to the north coast at Portreath was made more than a decade earlier (Barton 1960). The railway was planned, managed, directed and part funded by John Taylor from Norwich, a mine captain and trained land surveyor and civil engineer. Taylor was manager of and shareholder in Wheal Busy (Chasewater) as well as Consols and other major mines; both his re-starting of Consols, and his railway, were financed by capital from London industrialists. A projected branch line to Wheal Busy or Chasewater Mine, namesake of the railway company, was never made (Busy was not thriving in 1826, and was re-started by different adventurers in 1856), but the railway was highly successful and profitable, making Devoran in the decade after its opening the leading Cornish port.

Thomas Daniell (son of Ralph; named after his grandfather), who succeeded to Trelissick after his father's death in 1823, spent extravagantly (Curtis n.d., 5). He was declared bankrupt in 1835 when he was described as a copper-smelter and dealer (Royal Cornwall Gazette, April 24<sup>th</sup> and May 2<sup>nd</sup>). RA Daniell had purchased 'a large smelting-work in Glamorganshire' (Davies Gilbert 1838, 33). This was probably the copper-smelting concern referred to in his son's bankruptcy notices; no evidence for smelting at Roundwood in the 19<sup>th</sup> century is known at present. Thomas Daniell fled abroad (Royal Cornwall Gazette, July 25th 1835); legal actions against him followed; and after long delays, the Trelissick lands, including Roundwood, were sold.

The NT guidebook quotes from a notice in the *West Briton* of September 7<sup>th</sup> 1832 offering Roundwood for let (Curtis n.d., 5). This describes the place as 'desirable as a depot for coal, lime and ship building' and notes 'a beautiful cottage residence, with 9 acres of land adjoining' which could be leased along with the wharf, lime-kiln, and 'excellent dwelling house'. It seems that at this time the Falmouth Estate (based at Tregothnan) must have held Roundwood under lease from indebted Trelissick, or perhaps claimed ownership of the site but was contested by Daniell or other parties with interests in his estate.

In 1839, an advertisement dated September 4<sup>th</sup>, published in the *Royal Cornwall Gazette* for September 20<sup>th</sup>, offered Tregew for sale by public auction on September 21<sup>st</sup>, 'under the authority of the High court of Chancery'. The property at Tregew was to be sold 'together with the spacious and well-constructed Quay at Roundwood, justly considered the most Commodious Wharf within the Rock of Falmouth' [ie, upriver of Black Rock in the centre of its mouth, from which the Cornish name of the natural estuarine harbour, Carrick Roads, is named]. It was noted that the whole was 'exceedingly picturesque, and well adapted for Villa Residences, commanding immediate views of, and adjacent to, the beautiful woods, Preserves and Domain of Tregothnan....'

However, it appears that some legal challenge or other factor prevented the sale of the Roundwood part of Tregew, including the Quay, since the Feock tithe survey of 1845 records the land here as owned and occupied by 'The Assignees of Thomas Daniell, Esq.' The lane to Roundwood Quay is itself recorded in the tithe apportionment survey, along with the other roads in the parish, forming part of the land numbered 1390 and described in the schedule as 'Ditto [ie, road, and 'waste' meaning roadside verges], from Cross Lanes to Penelewey, Tregew, and Roundwood'. John Davies Gilbert purchased Trelissick in 1844 (Curtis n.d., 6), and may have bought Roundwood back into the estate soon after 1845.

## 6.3.5 Minor road to boat- and coal-yards, and tea-garden; later 19<sup>th</sup> and earlier 20<sup>th</sup> centuries

Ship building, referred to as a potential use for Roundwood Quay in the 1832 letting advertisement, was carried out here in the 1870s if not before, Henry Stephens Trethowan running a shipyard at Roundwood at that time in addition to his main site in Falmouth; among vessels launched here was the barge Ellen, registered in 1874 (Curtis n.d., 6). The quay, its lane, and the Roundwood area developed little around the turn of the  $20^{th}$  century, as indicated by the similarity of the landscape depicted on the OS maps of c1880 and 1908 (Figs 58, 59). In the first half of the  $20^{th}$  century, Roundwood Quay was used for landing and distributing coal, repairing and later hiring boats, and catering to summer visitors on a small scale (Curtis n.d., 7). After the Great War, the estate was sold to the Cunliffe family, then passed on to the Copelands, and was then bequeathed to the National Trust in 1955.

The Cornish historian and archaeologist Charles Henderson was among the visitors to Roundwood in the years between the two World Wars, probably in about 1920. While surveying the prehistoric earthworks, he noted the 'small disused wharf' and the 'well metalled Road [which] connects it with Tregew inland' (Henderson c1920, 167), so recording the earliest known description of the roadway made around a century earlier and resurfaced around a century later in 2015.

## 7 Archaeological Significance and Potential

The route from Tregew to Roundwood Quay, as a whole, provides a very good, legible example of a historic routeway maintained and modified through deep time. Its historic road fabric is well-preserved though much is now obscured by resurfacing with modern materials. Continuation as a public byway contributes to its value to the community.

The quay lane's course, form, and fabric, and variations in these all contribute to understanding of aspects of past activity and change. The route can be seen to be derived from a prehistoric ridgeway (see further below), re-used and changed as a medieval sanding-lane, adopted to serve a new smelting complex and quay c1773, and improved and part diverted c1805-1811 to facilitate the mineral quay trade. It has historic metalling throughout, though at Roundwood this is covered by resurfacing. Where visible, along the greater part of the lane, the character of the metalling reflects the materials, processes and products involved in trade and industry at the quay.

At Roundwood (the focus of the present archaeological project) the form of the lane, together with historic map evidence, shows well that this is a diversion of the early  $19^{\rm th}$  century, when the quay was developed to serve the mining region inland (though smelting was discontinued) and the wood was planted. It illustrates aspects of both industrial and ornamental development by landowners on the south coast of Cornwall at that time, and tension or accommodation between these two types of improvement.

The metalling of the entire quay lane is considered to date from this period some 200 years ago. Although archaeological study and recording of historic roads has generally been limited, it is clear that this is a rare survival, in good working condition, partly still exposed to view, of a largely complete high quality metalled road surface designed to serve and increase the trade of an associated mineral quay.

The route has evident associations with many, varying archaeological or landscape features, ranging from prehistoric earthworks to industrial structures and ruins to the ornamental plantation. Sites with close, physical or functional relationships with the quay lane include designated monuments of national importance, most notably the Scheduled high status prehistoric Roundwood multiple enclosure fort (SM 32940), the Grade II Listed Roundwood Quay itself (LB 1159174), and the ornamental parkland of nearby Trelissick (Registered Historic Park and Garden 1000656).

A possible hillfort with upstanding earthworks on the summit of the ridge west of Roundwood, identified in the course of the present project, would be of equivalent value to these designated heritage assets if the identification is confirmed. Parts of the lane may be seen to approach this site and to link it with the Roundwood fort, while another part re-uses part of its external ditch; this adds greatly to the time-depth of the routeway and also to its 'archaeological potential' for buried prehistoric remains.

The quay lane is also an important element of the wider context of inland mining districts, designated as being of international importance as part of an area of the 'Cornwall and West Devon Mining Landscape' World Heritage Site. Interwoven strands of significance can be followed here. Lane and quay transported ore and metal from, and essential coal to, a leading copper mine, the WHS protected (and Scheduled) Chasewater Mine or Wheal Busy. It served one of Cornwall's rare copper smelters with its quay, a venture by Chasewater's manager at a time of innovation at the mine and challenge to the dominant South Wales smelters. Its metalling may be seen as a stage, relatively traditional but still transforming, in the improvement of industrial land transport resulting in the development of tramways and railways, including the Redruth and Chasewater Railway partly in the WHS, whose competition probably led to the decline of Roundwood Quay and retention of its metalled road as a quiet byway.

The archaeological potential of the lane at Roundwood for survival of below-ground remains associated with the fort there is probably limited, the present project indicating that lane and boundaries were constructed on a platform levelled into the subsoil. However, any deeper prehistoric pits under this could survive, and the causeway of its entrance of c1800 through the inner cross-promontory fortification is probably formed from the fabric of the rampart cut for it, and may incorporate prehistoric artefacts.

## 8 References

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(Listed in chronological order)

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Ordnance Survey, 1813. 1 inch map.

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#### 8.3 Websites

Access to Archives (A2A), online national catalogue of historic archives

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Heritage Gateway, Historic England's online database of Sites and Monuments Records, and Listed Buildings

## 9 Project archive

The CAU project number is 146517

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 locations:

Project admin and report: G:\TWE\Waste & Env\Strat Waste & Land\Historic Environment\Projects\Sites\Sites R\Roundwood Quay Lane 146517

Digital photographs: R:\Historic Environment (Images)\SITES.Q-T\Sites R\Roundwood Quay lane recording PR146517

Electronic drawings: L:\Historic Environment (Data)\HE\_Projects\Sites\_R\Roundwood track 146517

Historic England/ADS OASIS online reference: cornwall2-232873

# Appendix I; Listed Building Description, Roundwood Quay, LB 1159174

'Quay. Trading site since at least The Iron Age but present structure is circa late C18. Slatestone rubble with granite quoins and copings linked by iron staples. Situated at the head of a peninsula between Cowlands Creek and Lamouth Creek. Polygonal loading area with retaining quay walling to north, east and south east and south sides. 6 loading bays. Walling is mostly vertically-set drystone rubble alternating to south walling with shorter sections with horizontal coursing. Loading bays have side walls with horizontally coursed rubble and cobbled ramps between. At south end of east wall is flight of granite steps. Roundwood Quay in the C18 was used to ship copper and tin ore from Chacewater and North Downs mines. Vessels up to 300 tons were able to moor alongside at the lowest tides. Information from 'Roundwood Quay on the River Fal' by R.C. Curtis.'

## Appendix II; Extracts from notice in the Sherbourne Mercury for July 17<sup>th</sup> 1786

**'CORNWALL** 

To be SOLD, on Monday the  $21^{st}$  [or  $31^{st}$  – not clearly legible on microfilm version seen] day of July next....All that compact Freehold and Leasehold Estate, commonly called or known by the name of the BARTON OF TREGEW

And also those very extensive and most commodious HOUSES and BUILDINGS, which were lately erected, and originally intended and used for carrying on the business of smelting and refining copper, and may be still employed for the same purpose, or for carrying on any other manufactory, trade, or business, which requires large and roomy covered buildings, cellars, or warehouses....

And the situation of the place is the best adapted for that or any other of the above (copper manufactory) purposes of any on the south of the county of Cornwall, as it is situated on a branch of the sea leading from Falmouth to the navigable river of Truro, at the distance of about three miles from each of these ports, and of consequence has a communication with the trading towns of Penryn, Flushing and St Mawes, and all the neighbouring places of trade.

The wharfs and quays belonging to the said premises are entirely new....are upwards of 170 feet in length; and have at the lowest tides such a depth of water, that ships of 300 tons burthen may lie close alongside the quay, which will admit of three ships loading and unloading at the same time....The wharfs are large enough for the landing and disposing of any quantity of timber, coals, or other heavy articles and merchandise....

The premises are situated not more than five or six miles from the principal tin and copper-mines in the neighbourhood, with good roads leading thereto.

For viewing the premises apply to Ambrose Triggey, at Penelewey; and for other particulars, to Peter Tripper, Esq; Truro; or Mr Prender, attorney at law, Redruth. Dated June 21, 1786.'

## Appendix III: considerations for future management of the track

As a result of the provision, through this project, of an archaeological assessment of the Roundwood Quay lane in its own right, and of an evaluation of the lane's potential for buried prehistoric remains, the following measures are suggested, subject to agreement with the relevant organisations, including Historic England and the National Trust, or if subject to a Planning Condition, the Local Planning Authority.

- **1** In view of the historic and archaeological significance of the lane, it is proposed that it continues to be preserved and used through maintenance of its metalled roadway, rather than complete resurfacing or laying any hot tarmac.
- **2** On the Roundwood part of the lane, in the event that the new surfacing applied here in 2015 is washed out or worn away, and on the remainder of the route to the T-junction east of Tregew, any areas requiring mending in the future might be filled on an *ad hoc* basis using stone to repair the historic surface.
- **3** In the high part of the lane west of its centre, where it may re-use the ditch of a hillfort, as well as at Roundwood where it runs through the promontory fort, any road-related ground-disturbing works such as excavation or scraping of the road surface or sides, roadside ditching or draining, should be monitored and recorded by an archaeologist (as provided by the 2015 project at Roundwood). This would avoid inadvertent damage to prehistoric earthworks, and allow for recording of any significant buried remains encountered, as appropriate.
- **4** Avoidance or minimisation of adverse impact on the integrity or character of the Roundwood Quay lane as a whole, should further repairs to the surface be necessary, might best be achieved by agreeing, before any such needs arise, a general scheme of maintenance based on points **1-3** above. This could be followed by projects providing archaeological input similar to the present one as necessary, in advance of any particular works proposed.
- **5** Archaeological monitoring is recommended for the external ditch of the outer cross-promontory rampart of the fort at Roundwood, by the causeway carrying the lane to the central entrance through the rampart, to ensure that the increase in rainwater runoff fed to this point as part of the roadworks (see Section 5.2.1) does not result in significant erosion damage to the earthworks.
- **6** Rapid archaeological evaluation could also be undertaken in advance of any future schemes to lay tarmac planings, hot tarmac or other modern road surfacing, affecting routes with good survival of exposed historic rock-cut beds or metalling, so that, if appropriate, archaeological significance can then be assessed, and taken into account in initiating and planning the roadworks.
- **7** Finally, a few of the areas where further archaeological or historical work could contribute to our understanding of the Roundwood Quay lane may perhaps be mentioned here any documents such as adventurers' correspondence relating to the Chasewater Copper Company, detailed study of the whole area of Roundwood and its quay including relationships with Trelissick Park, and investigation of the potential hillfort at Kestle and its relationship with the latter.



Fig 51 OS 1 inch map of 1813, scaled to match the more detailed maps below, to show how it records the lane from Tregew to the quay



Fig 52 Estate plan, 1821. Note a boundary indicating the lane once ran by Tregew; and its ancient course in Roundwood (see also Fig 49)



Fig 53 Tithe survey (Feock 1845, Kea 1840); field 1051, the possible hillfort served by the ridgeway, is named in the schedule as 'Kestle'

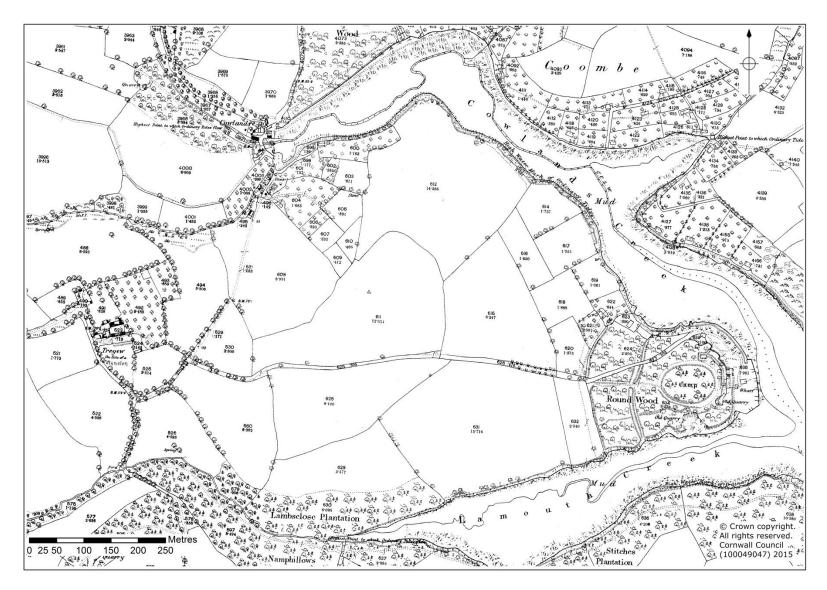


Fig 54 OS 25" map, c1880; details indicate the early ridgeway, later bypassing hilltop enclosure 611, re-routed at Roundwood by 1811

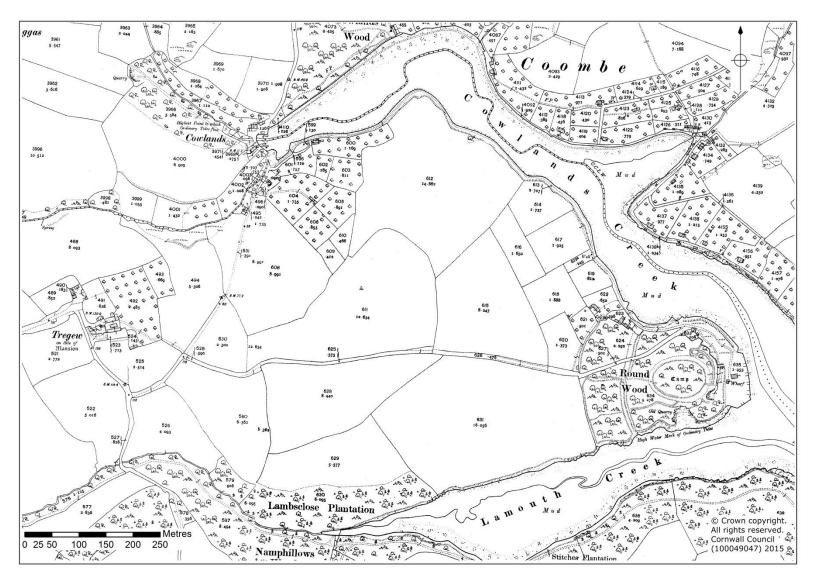


Fig 55 OS 25" survey revision, c1908, showing no significant change to the lane and quay since the previous large-scale survey was made

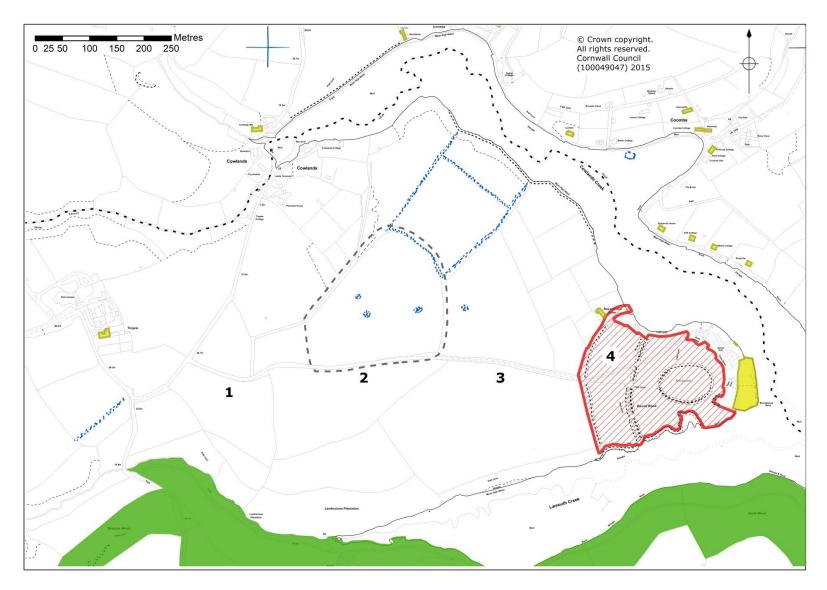


Fig 56 Modern map, with phases of the lane (numbered), possible hillfort (dashed line), NMP survey (blue), LBs (yellow), and SM (red)