

FROM YOUR OWN CORRESPONDENTS

Updates from Cornwall Archaeological Society's Area Representatives

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Issue 69

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CROSS AT CROSS DAMAGE

Andrew Langdon has dedicated a lifetime to locating, researching, repairing and protecting Cornwall's special medieval crosses, so it is especially upsetting for him when they are damaged. Sadly, this has happened twice recently. Here is Andrew's report:

Two Scheduled Crosses damaged by vehicles in August 2022

Today, vehicle damage is the biggest risk to some of our ancient monuments with medieval bridges continuously being hit and also our roadside medieval stone crosses. Later monuments are also being damaged such as boundary stones, direction posts and milestones. This is clearly the result of much larger and wider vehicles on our country roads, farm vehicles, delivery vans and more powerful cars.

St Buryan Churchtown Cross SAM 1010214, SW 4090 2567

On Tuesday 9th August a delivery lorry hit the stone platform supporting the St Buryan Churchtown Cross, which stands close to the south gate of St Buryan parish church. A large granite stone has been dislodged and has fallen out of the wall and this has caused other stones and the rab fill to fall from the platform. The driver allegedly attempted to leave the village after the accident without reporting it, but was challenged by local people and the company's name and address was obtained for insurance details.

The raised platform almost creates an island in the centre of the village, at a junction with the B3283 road through the village and a minor road which skirts around the west side of the churchyard. Although the damage is not extensive, it will still take time and money to complete a sensitive repair. This monument has been damaged by vehicles on several occasions, the last was in 2007.



St Buryan Churchtown Cross before recent damage, Photo: Ann Preston-Jones



St Buryan Churchtown Cross showing damage to the SE side of the platform,
Photo: Andrew Langdon 9 August 2022



St Buryan Churchtown Cross, showing closer view of the damage.

Photo: Andrew Langdon 9 August 2022

Trevalsa Cross, St Allen SAM 1016290, SW8170 5184

The second cross to be damaged, and this time more seriously is Trevalsa Cross at St Allen near Truro. This cross was reported to me by a walker, who noticed a recent crack in the cross-head.

The Trevalsa Cross was restored in 1997 by Kelland Stonework Conservators, and had previously been leaning in a roadside ditch, with a segment of its wheel head missing and in use at the road junction as a direction post. Part of the broken wheel-head had been whitewashed and 'to the A30' and 'to Zelah' painted in black letters with arrows pointing to both country lanes at the road junction.

In 1981, the missing segment of the wheel-head was re-discovered at Trerice Farm in the parish and placed in the parish church for preservation, in 1997, this segment was reunited with the cross-head and the monument set up on a new base-stone brought from St Breward.

On Thursday 25th August 2022, I received a text message and photographs showing that the joint in the cross-head had become more noticeable, and on visiting the monument the following day I found that the cross was only being held in place by gravity, having been fractured at the bottom of its shaft, where it is fixed into the base-stone. It appears that whoever damaged the cross, left it propped it up for someone else to discover, a rather dangerous thing to do, considering the weight of the monument. As the cross was beside the highway Cormac were notified and their staff came out and laid the cross down in the drainage ditch awaiting restoration.



Trevalsa Cross in 2005 after restoration of the cross-head. Photo: Ann Preston-Jones

Luckily, thanks to our new Area Representative Tracy Dearing, the cross had been recently visited and its stable condition reported on the 23rd May 2022, so we immediately knew that the damage had occurred since this date. Due to the road widening on the A30, this country road where the cross is situated has been closed except for access to one farm and fields in the area, suggesting that it is likely to have been a local vehicle, and possibly agricultural, which hit the monument. In this case proving who damaged the monument isn't going to be possible.

This cross will need to be re-pinned to its base-stone and the former repair to the wheel-head assessed and made good.



Trevalsa Cross fractured and lying down. Photo: Andrew Langdon



Trevalsa Cross with notice stating that the cross was fractured and may fall on someone.

Photo: Andrew Langdon 4 September 2022



This photograph shows the bottom of the shaft snapped off at the base-stone.

Photo: Andrew Langdon 26August 2022

The most important thing for Area Reps and others to appreciate is that visiting monuments should be done with caution, as they can be dangerous. Although this cross looked ok, it could have fallen on anyone that touched it.

Report and photos: Andrew Langdon

CURIOUS AND CURIUSER

Adrian Rodda has been investigating a mystery at Chysauster:

Sometimes when I am looking at the stones of ancient sites in Penwith I feel like Alice in Wonderland: questions leap to mind which have contradictory or vague answers, if any answers at all. One stone which is fascinating me this summer is this one from the Romano-British courtyard settlement at Chysauster (HER 36008; Scheduled Monument CO37; SW 4722 3497; Madron parish). What is it? A Game board? A mould for tin ingots? A recycled saddle quern?



The mystery stone

Photo: Adrian Rodda

The stone is 52cms long. 13cms wide at its narrower end and 23cms at the widest part, rounding down to 20cms. The depressions are roughly 2cms deep, 3-4cms wide and the three in the vertical line are spaced 13cms, top to middle, then 10cms. The horizontal depressions are 8cms apart. The stone apparently fractured when two other depressions were made, the top one in line with the top existing depression and another horizontally in

line with the middle one, but not vertically. It is the faintest suggestion of a depression, so may be discounted.



Stone with scale

Photo: Adrian Rodda

It protruded from what I assume was a dump from the excavations and I only had to cut away some grass and turf to expose its shape. There is no mention of it in the English Heritage guidebook, though they do talk about the evidence for tin processing on the site.

That it was a recycled saddle quern is suggested by its shape and smoothness. The exposed granite at Chysauster is smoother than the Land's End granite.



Quern stone

Photo: Adrian Rodda



Saddle quern and muller from the Chysauster handling collection

Photo: Adrian Rodda

Now, what are the depressions about? Can we find any clues in the scholarship that attends prehistoric tin working?

Barry Cunliffe has published a book “The Extraordinary Voyage of Pytheas the Greek” (Penguin 2001). His voyage, circa 330 BCE, included a visit to Cornwall where he commented on the tin trade. His account “On the Ocean” was published circa 320 BCE, but lost in the fire of the library at Alexandria. However, it did inform the histories of later writers. Cunliffe quotes Diodorus Siculus, a contemporary of Julius Caesar. He was apparently drawing on the historian Timaeus, who wrote some 40 years after Pytheas’s account was published.

“The inhabitants of Britain who live on the promontory called Belerion are especially friendly to strangers and have adopted a civilized way of life because of their interaction with traders

and other people. It is they who work the tin, treating the layer which contains it in an ingenious way. This layer, being like rock, contains earthy seams and in them workers quarry the ore which they then melt down to clean from its impurities. Then they work the tin into pieces the size of knuckle-bones and convey it to an island which lies off Britain, called Ictis; for at the ebb-tide the space between the island and the mainland becomes dry and they can bring the tin in large quantities over to the island in wagons.

On the island of Ictis the merchants buy the tin from the natives and carry it from there across the straits of Galatia (the Channel) and finally making their way on foot through Gaul for some thirty days, they bring the goods on horse back to the mouth of the Rhone. (Histories 5.1-4) “

We assume that Ictis is St Michael's Mount and Cunliffe describes some of the finds of tin ingots from Penwith, including an oval ingot found under a hut floor within Chun Castle, 8x7x2.5 inches in size and weighing 11lbs. He refers to another ingot from Castle Dore near Fowey, but both Iron Age sites were reoccupied in post Roman times and the stratigraphy is not obvious enough to date the ingots. Chun did have an elaborate furnace with 3 flues which may well be Iron Age and suitable for tin smelting. Temperatures in excess of 1000C are needed in the process, necessitating charcoal and directed draughts of wind.



The "furnace" at Chysauster

Photo: Adrian Rodda

A structure in house 3 at Chysauster gives the appearance of a hearth or forge, but excavations revealed no signs of intense burning (EH Guide to Chysauster and Carn Euny). A granite weight found in House 3 was probably intended to weigh quantities of tin for trading. Pebbles of cassiterite were found at both Chysauster and Carn Euny, a lump of tin and other fragments of metalworking waste was found in House 6 at Chysauster. W C Borlase found fused tin inside the fogou passage at Carn Euny in 1863.

Most of the oxidised ingots discovered in Cornwall were “bun shaped” or plano-convex and impossible to date accurately as this form may have continued well past the Roman period. Cunliffe favours Mount Batten, Plymouth, as Ictis. He refers to ingots found in 1991 on the floor of Bigbury Bay and assumed to be from a wrecked trading vessel. He describes *“2 H shaped ingots with a thick cross branch, 3 inches long by about an inch across. In size and shape it would be perfectly reasonable to compare them to the astragalus of a cow. Could it have been small ingots of this kind that Pytheas was seeing and recording, and Diodorus several centuries later was writing about when he described the ingots as the size of knuckle-bones?”*

This does not describe the shape of an ingot from in our pitted mould, which would come out like a bun or loaf with rounded protuberances. There are small round bottomed depressions in stones at both courtyard settlements of Chysauster and Carn Euny, which might have been for processing cassiterite, the tin oxide, by crushing it to separate the ores. They may have been small moulds or they may have been bases for wooden roof supports.



Worked stone at Chysauster. Bun mould or mortar for cassiterite? Photo: Adrian Rodda

Another useful reference book is Roger Penhallurick’s “Tin in Antiquity” (Maney 2008, but first published 1986). He also is concerned with the use of the word knuckle-bones. Some translators of the Greek text offer “the shape of knuckle-bones” and others “the size of knuckle-bones.” Penhallurick rejects the size translation as no ingots have been found in Cornwall that small. The word *astragaloi* is used for ingots. This commonly means “dice”, which were made of knuckle-bones. It could mean one of the neck vertebrae, the ball of the ankle, one of the mouldings of an Ionic capital, a physician’s measure and a genus of plants. He suggests that Diodorus implied something the shape of a dice, which had 4 flat sides, the other two being round. But no surviving Cornish ingots fit that shape. That the shape of a knuckle-bone is suggested is supported by the Greek word *rhuthmos*, from which we derive “*rythmn*” suggesting a symmetry or a set measure. The verb from it means to mould or fashion.

So we come back to our mysterious stone mould. Let's be more human in our comparisons. If you make a fist your knuckles stand out in a regular form. If a tin ingot was made in this mould how better to describe the bumps than resembling knuckles? No ingots of this shape survive in Cornwall, but Penhallurick points out how oxidised and diminished the surfaces of the bun or pasty shaped ingots are. This may have been a way of signing or trade-marking an ingot from Chysauster, but the bumps have worn off. Penhallurick illustrates a find from Prah Sands, which has not been reliably dated.

"A circular, plano-convex ingot weighing 3.8kgs bears a raised cross which must have been cut into the mould." (Another trade mark?)

The Chysauster mould may have produced a shape that could be stacked easily in the ships. Put the flat sides to meet and then use the bumps on the rounded sides to meet and steady the next ingot by fitting it into the spaces between the bumps.

Who knows? It gets curiouser and curiouser.

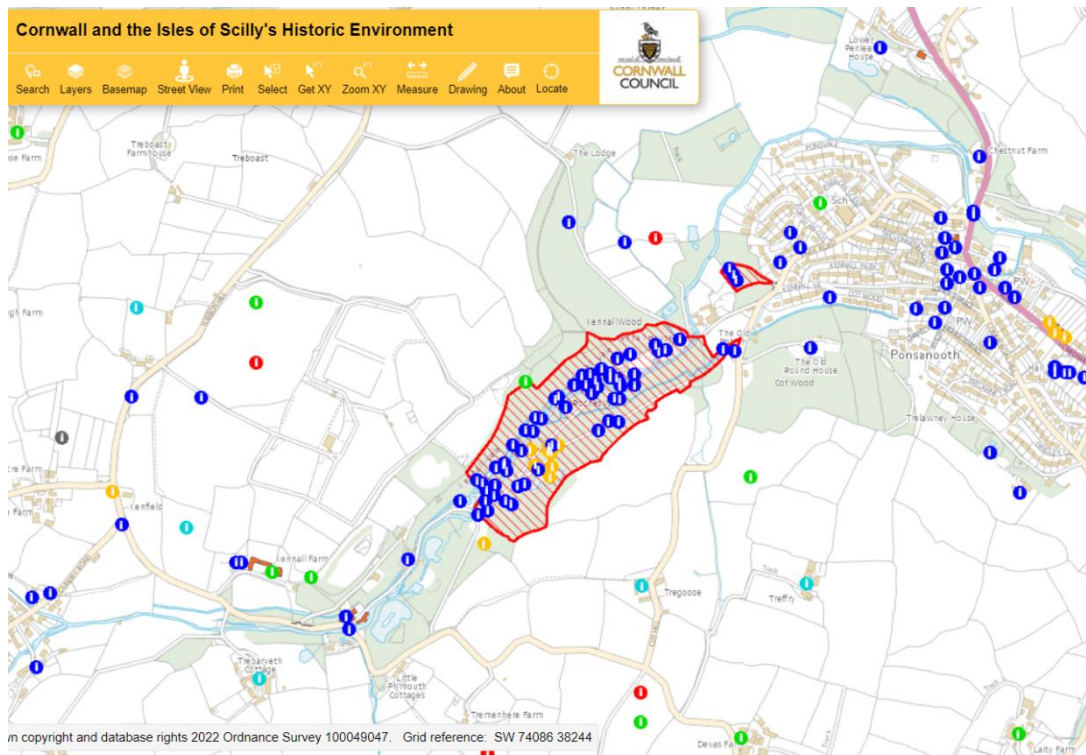
Words and photographs by Adrian Rodda

GUNPOWDER PLOT

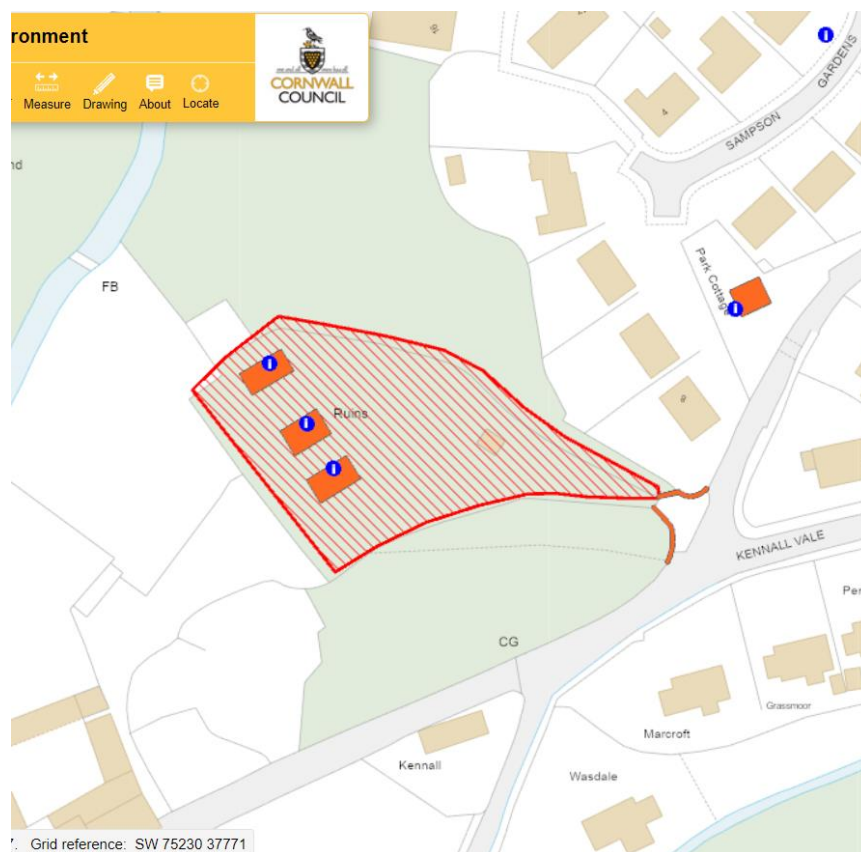
Spoiler alert: if you are expecting an account of early 17th century terrorism, prepared to be surprised. Instead this item concerns Tracy Dearing's recent investigation of a corner of Area A6iii of the Cornwall and West Devon Mining Landscape World Heritage Site, a place which quite literally had an explosive past. Tracy has explored a plot of land in the Kennall Vale gunpowder works. Much of Kennall Vale is owned and managed by Cornwall Wildlife Trust (<https://www.cornwallwildlifetrust.org.uk/nature-reserves/kennall-vale>) and is open to the public. However, the plot that Tracy reported is private and there is **no public access**.

Until the late 19th century gunpowder was the explosive used in Cornish mines and quarries. Gunpowder manufacturing began in the Ponsanooth area in the early part of the century and took advantage of the abundant water power, steep slopes and dense woods of the Kennall Vale.

Tracy investigated part of the triangular plot of land west of Ponsanooth (see map).



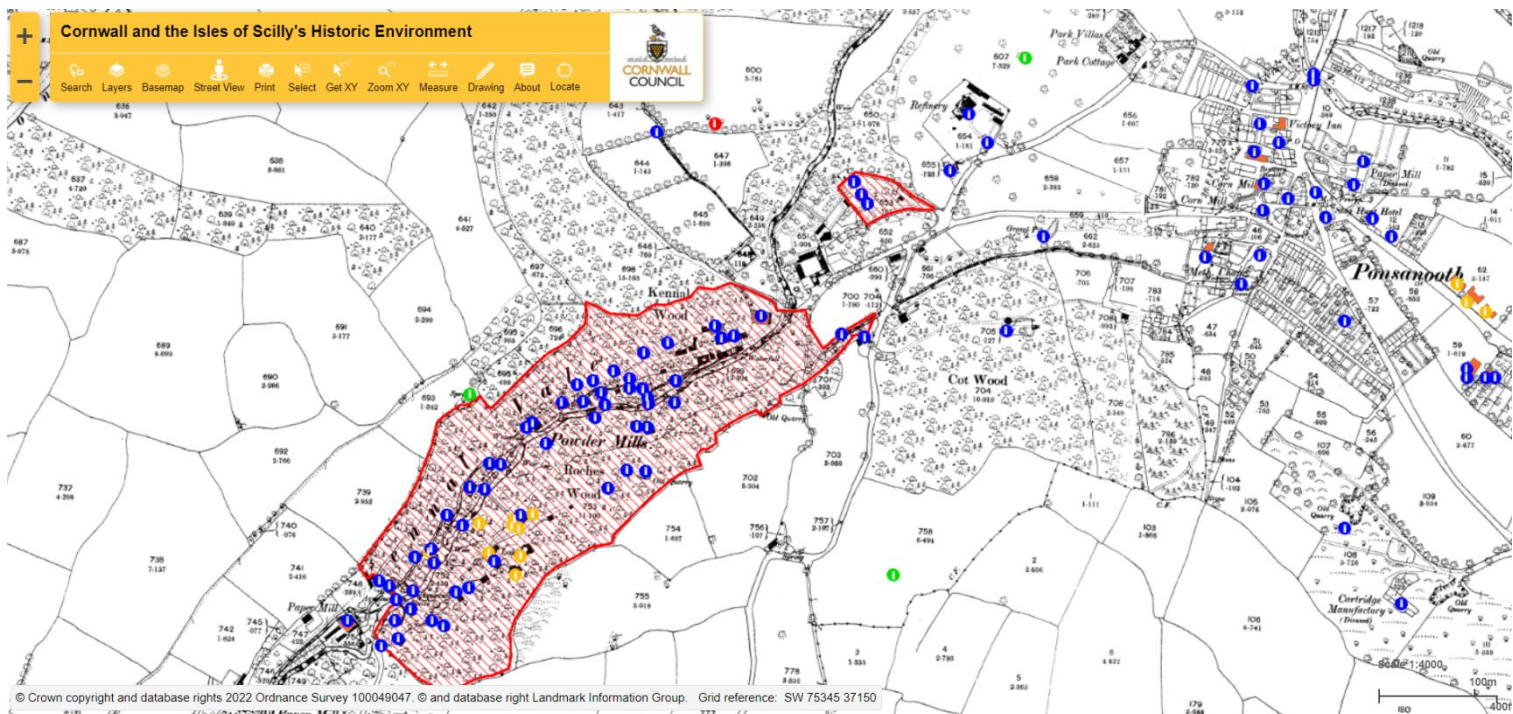
The map shows 4 buildings in the plot, 3 of which are Grade II Listed:



The two northern buildings (HER 18356.52, SW 7533 3771, and HER 18356.22, SW 7534 3770, and both part of Scheduled Monument 15544 and in St Gluvias parish) were powder magazines associated with the earliest phase of the Kennal Vale gunpowder works. The southern building (HER 18356.43; Scheduled Monument 15544; SW 7535 3769; St Gluvias parish) was associated with its later phase. A fourth building on the east of the plot is mentioned in the Listing:

This small magazine is one of the yard's early structures, appearing on the 1840 tithe map, and formed a small powder store called an expense magazine. It would have been the first structure encountered by persons using the yard entrance and from its easily accessible position and small size, it is considered that this magazine may have stored gunpowder for the works' factory-gate sales, without requiring customers to approach the larger magazines where bulk supplies were stored before carriage and shipment to meet the works' major orders (<https://historicengland.org.uk/listing/the-list/list-entry/1020441?section=official-list-entry>).

Cornwall Council's wonderful Historic Environment Record online mapping shows how this plot fitted in to the extensive complex in the 1880s:



Source for this and all maps: <https://www.cornwall.gov.uk/environment/conservation-and-environment-protection/strategic-historic-environment-service/cornwall-and-isles-of-scilly-historic-environment-record/>

So this plot was clearly an important part of this very significant industrial complex. What did Tracy find during her monitoring visit? Tracy noted: *'The storage complex includes a triangular shaped distribution yard with four 19th century gunpowder magazines. The yard is separated from the main gunpowder production facilities (a separate HE listing) for safety reasons. There are three large magazines essentially similar in construction and size and situated in a row. There is a fourth smaller store situated across the yard.'*



Site entrance

Photo: Tracy Dearing

Given the nature of the industry it may surprise some readers that anything has survived. Despite the inevitable explosions this complex still exists but as Tracy found, its condition is deteriorating:

The three main magazines appear to have deteriorated since the 2000 Listing. Two were described as having largely intact roofs but this is not now the case. It was not possible to get close to the buildings nor to enter but they are supporting a lot of ivy and there is tree

growth inside at least one (the middle of the three). The smaller store still fits the description in the list entry but the corrugated iron roof has gaps or missing sheets.



HER 1020441 Right hand magazine Photo: Tracy Dearing



HER 1020441 Middle magazine Photo: Tracy Dearing



HER 1020441 Small magazine

Photo: Tracy Dearing



HER 1020441 Small magazine

Photo: Tracy Dearing

To see the declining condition of assets like these is disappointing but proper conservation and maintenance is not going to be possible for most private owners. Very few of us would be overjoyed at the prospect of owning a Scheduled or Listed property with all the potential implications for management. This site is of public interest; therefore, should the expense of conservation not come from the public purse? It's an uncomfortable question but not one that should be dodged.

Anyone wishing to learn more about gunpowder manufacturing in Kennal Vale and the archaeological remains could do no better than to read John Smith's highly readable archaeological and historical study, which is available here:

https://map.cornwall.gov.uk/reports_event_record/1986/1986R023.pdf . Also not to be

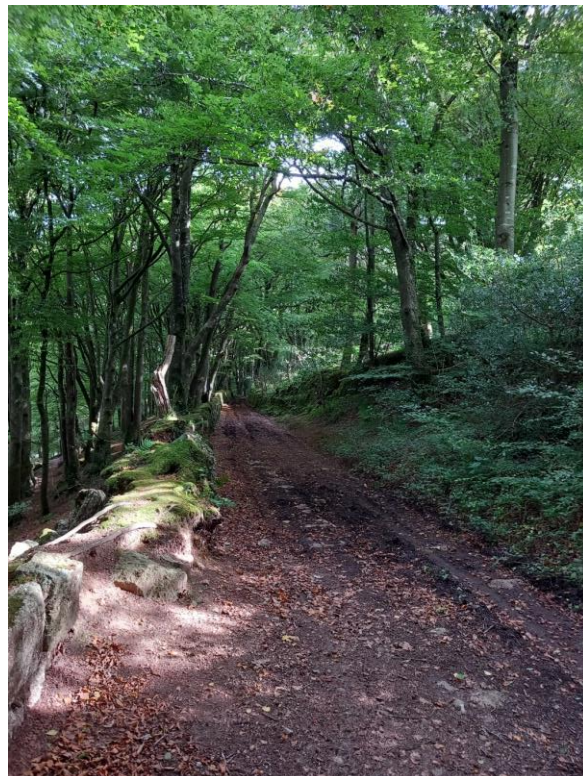
missed is Tony Mansell's account of the works and the Kennall Vale Incident of 1887:

<http://cornishstory.com/2021/05/17/kennall-gunpowder-mill-co/> .

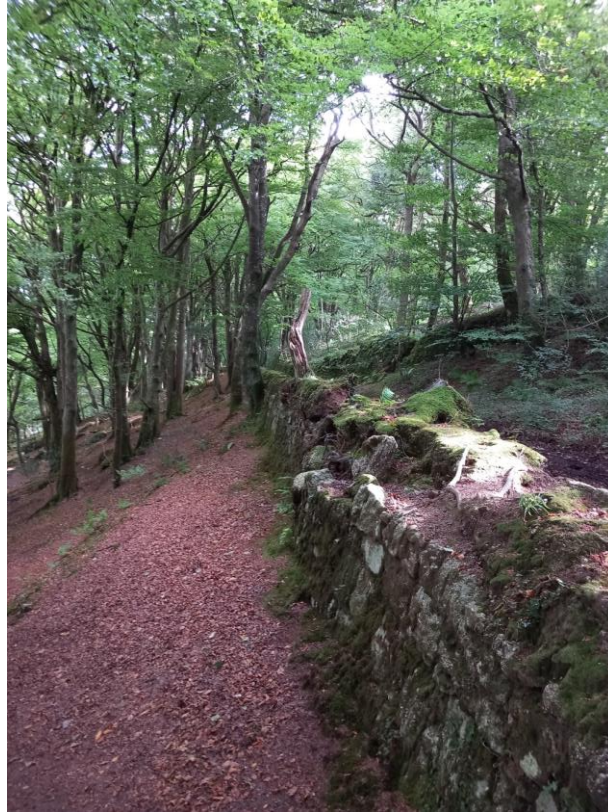
VANDALISM IN LUXULYAN VALLEY

Luxulyan Valley is fortunate in not experiencing very much vandalism. In addition to careful monitoring by the Ranger, Jenny Heskett, there are plenty of walkers who keep a close eye on what is going on, which restricts the scope for misbehaviour. But even this can't prevent some things happening. Recently however, there have been incidents at either end of the Valley.

Near Black Hill car park there is a lovely walled section of a tramway (HER 57886; SX 05793 57227; Lanlivery parish) that formerly connected granite quarries at Colcerrow and Carbeans with the Treffry Viaduct. It is also lined with trees making it an arboreal version of a cathedral aisle, with the scene changing every season.



Recently someone has been dislodging stones from the top of the wall and pushing them down the steep slope where they end up in the Fowey Consols Leat.



Note the steepness of the slope to the left of the wall.



The leat is about 10 feet wide.

Photo: Jenny Heskett



Fowey Consols leat with stones

Photo: Jenny Heskett

This has been reported to the police as a heritage crime but it is also worrying because if anyone was caught in the path of these large stones serious injury or death would inevitably result. Children would not have the strength to move them from the wall so the perpetrators must have been older. It is impossible to remove the stones from the leat manually because of their weight and a mini-digger cannot get to this section of the leat path. Work has been going on recently to restore the leat but these stones will inevitably affect the flow of water.

Towards the southern end of the Valley, a different sort of vandalism has been sorted out very quickly. Jenny Heskett was alerted to graffiti on one of the walls of the Central Cornwall, or Trevanny, china clay dry (HER 9050; SX 0659 5626; Luxulyan parish) and swiftly arranged for it to be removed.



Graffiti tag after pressure-washing

Photo: Jenny Heskett

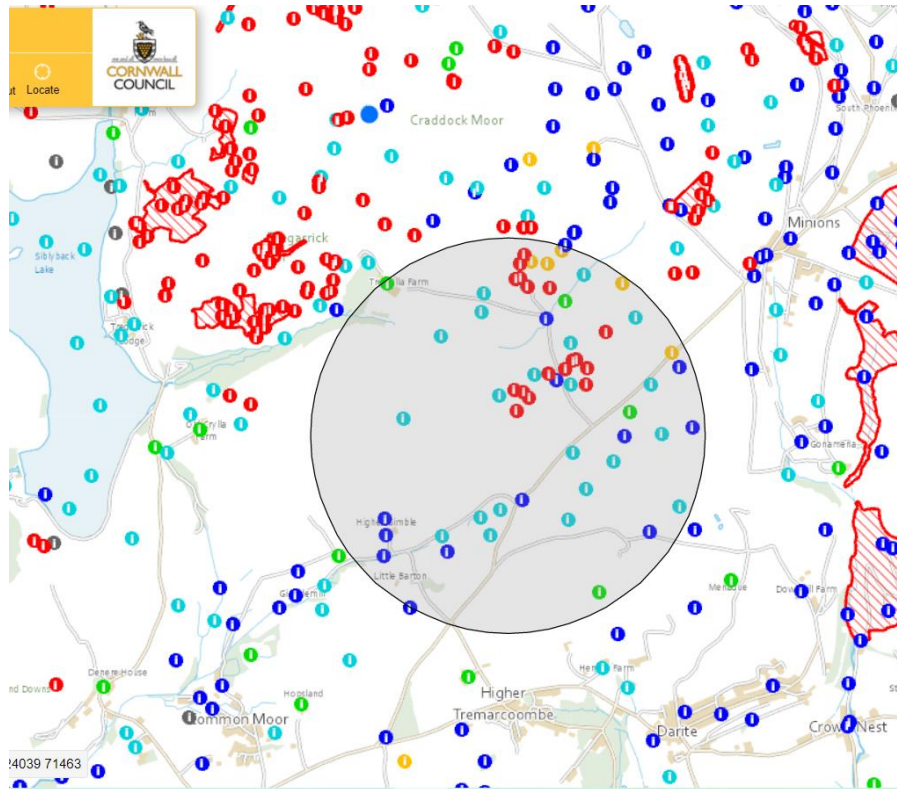


Success!

Photo: Jenny Heskett

MORE MOOR DIGGING

Unexplained digging continued on Craddock Moor in August, this time between Gimble carpark and Walla ford/Trewalla gate. The map gives the general location:



The holes haven't been the regular round shapes noted in early editions of this newsletter but are narrower, deeper and sometimes irregular in shape. Only one had partial replacement of turf, the others had no turf in sight.





ARCH ENEMY

Cornish historic bridges are beautiful yet vulnerable, as Area Reps have reported over many years. This month the news is mixed.

Peter Crispin has sent photos of the lovely restoration of the Prior's Bridge near Launceston (HER 2612; Scheduled Monument 15571; Listed Building (I) 370137; SX 3278 8509; Launceston parish).



Photos: Peter Crispin

Trekelland Bridge (HER 6940; Listed Building (II*) 68430; SX 3004 7984; Lewannick parish) dating from the early 16th century is described on the HER as 'one of the best preserved and most beautiful of Cornish bridges'. The relentless damage being caused to it in modern times by motor traffic probably exceeds all the problems to its integrity in past centuries. Robin Dyer has examined the bridge recently and has noticed the impact of vehicles hitting it.



Photos: Robin Dyer

Cormac has repaired previous damage but Robin has shown that capstones have been dislodged and some cracks have appeared in the parapet on the upstream side. There are tell-tale hints about some vehicles that have caused this, including red paint. However, it is hard to prove exactly which red-painted vehicles are responsible.



Photos: Robin Dyer

Other vulnerable bridges, like Ruthern Bridge (HER 26032 ;) Scheduled Monument 15576; Listed Building (II*) 67605; SX 0129 6682; Lanivet and Withiel parishes), which was damaged earlier in the year, have been repaired recently. Another casualty of the motor wars has been Helland Bridge (HER 17108; Scheduled Monument 1020812; SX 0652 7149; Helland and St Mabyn parishes). This has also been carefully repaired following a catastrophic hit last year, which is good news. Less pleasing news is that traffic has returned, much of it using the bridge as a short-cut between the A30 and B3226 roads.



Helland Bridge repaired – for now



A neat job on Helland Bridge by Cormac.

Thank goodness there are people with the skill to repair Cornwall's too frequently damaged historic bridges. In most cases the cause of the problem, the arch enemy of these lovely structures, is motor traffic.

Area Representatives would love to hear from fellow CAS members, and the general public, about any feature of the historic environment in their parishes, whether a new discovery, something causing concern, or even just to answer queries. If you have any concerns, or new information, about any archaeological feature, please contact the Area Representative for the parish. If you do not know who that is, just look at the inside back cover of the latest journal, *Cornish Archaeology* 58, or send an email to arearep@cornisharchaeology.org.uk.

Roger Smith, 24th September 2022

