

Informed by excavations that began nearly 40 years ago, a village of roundhouses has been reconstructed on a Welsh Iron Age hillfort. Harold Mytum, who found the first house, and James Meek have excavated one of the modern reconstructions

What goes around comes around: an Iron Age house at Castell Henllys

The inland promontory of Castell Henllys was home to a community between the fifth and the second or first centuries BC. The settlement was defined not only by topography but also, first, a timber palisade fence, and then an arrangement of banks and ditches whose effect was augmented by steepening the promontory's natural slopes. At the time it was a common form of settlement in south-west Wales. Today, however, the site is unique: it has been partially reconstructed, it is open to the public and, since 1992 when taken over by the Pembrokeshire Coast National Park, it has supported an extensive schools programme.

The reconstructions also offer the opportunity for long-term experiments. Castell Henllys has been researched for over three decades. With its unique combination of excavation, on-site reconstruction and public interpretation, the site offers opportunities for experimental archaeology of a kind available nowhere else in Britain. Mytum and James Meek recently led a community excavation on the site of the first roundhouse to be excavated and then reconstructed by Mytum 35 years before, allowing the footprint of a house that had stood for over a generation to be compared with actual Iron Age features. A replacement roundhouse reconstruction was completed in 2018.

Taking in the atmosphere

Hugh Foster, the owner of the site when excavations began in 1981, had a vision to reconstruct an Iron Age settlement and make it accessible to the public. Mytum was asked to direct the project, with instructions to first uncover an Iron Age roundhouse. Trial excavations at Easter were followed by a larger summer programme, and the foundations of a roundhouse in the south-eastern part of the site's interior were uncovered. There was limited stratigraphy, but structural remains such as postholes and wall gullies survived.

The house site had been used for a series of buildings during the Iron Age, all on almost exactly the same plan, with concentric gullies and arcs of features representing the rebuilt timber homes. Sufficient survived of one of these to be able to identify a coherent plan. The northern, uphill arc of the wall foundation aligned with two substantial postholes which represented the door posts. In the centre was a hollow, presumed to be the site of the hearth, and most of the postholes of a concentric arc lay between the hearth and the wall. Outside the wall on the north and west was a gully, interpreted as an eaves-drip to carry rainwater away from the building's walls. This form of roundhouse,

common across Britain and known as the double-ring form, would be the first to be reconstructed at Castell Henllys.

There are three main challenges with building reconstruction: move to from a two-dimensional plan to a three-dimensional structure and materials; how to treat and finish the walls and roof; and how to use the space within and select fittings and portable material culture. The challenges have to be confronted in order.

The circular Iron Age roundhouse had a firmly identified doorway, and although no floor levels survived, soil wash against an enclosing bank downhill of the house suggested that erosion on the site had not been great. The inner ring of postholes was largely intact, with a couple missing because of animal disturbance of the subsoil. For the reconstruction we recut the postholes and foundation gully where the originals had been, but deeper to allow for an estimated loss of the surface. The simplest way to design the house was to form a wall as a cylinder, and top it with a cone-shaped roof, but decisions still had to be made.

The eaves-drip gully and wall line meant that we could infer a wall height and roof angle that ensured that the various components made sense as a structural whole. The door posts were massive (as excavations continued, it turned out uniquely so at this site), so we decided that the door lintel would be higher than the rest of the wall, creating an easier entry to the building and a change in angle for the roof at this point. The inner post-ring would help support the roof. In order that it could stand securely during construction, and to distribute pressures around the structure, this ring was held together by a circular beam, on which some of the rafters could be laid. Some rafters ran right up to the apex from the wall, but others only went as far as the ring beam, and all were joined by thinner horizontally placed purlins.

The outer wall of the roundhouse consisted of uprights in shallow postholes set in the foundation gully, joined together by wattling and covered with daub. There was no wall plate running round connecting the uprights on the wall top, and the rafters which stretched either up to the apex or to the inner ring beam were notched and tied onto the wall posts. This saved a lot of time and labour, and meant that the skills level for constructing the whole structure could be low. Hugh Foster used various mixes for the daub, with water and clay having different combinations of added straw, horsehair and manure.

The completed roundhouse had a distinctive appearance. The timbers retained their bark, though this gradually fell off over the years, and the house was deliberately filled with indications of domestic life – pottery and wooden vessels; textile, hide and fur hangings and drapes; and tools and weapons. At one stage some metal plaques, replicating examples from Iron Age art, were fixed to the uprights, and some of the timbers and the walls were also painted.

A central hearth provided heat from a wood-burning fire carefully tended by the interpretation staff, with smoke filtering out through the thatch. Benches near the hearth provided seating for visitors to take in the atmosphere. Many would sit for some time, absorbing the sight, smell, and sounds of being in this apparently prehistoric cocoon. Most of the light came through the open door, and one experiment was to paint the walls with lime wash – this greatly enhanced visibility. The ring of posts provided uprights to construct subdivisions at the rear, darker, part of the roundhouse, where we created beds and storage areas. Activities within the roundhouse included grinding grain on a replica rotary quern, cooking and storytelling.

Illicit drinking

Our house stood for 35 years. Its thatch and external daub were patched when necessary, and the roof was twice re-thatched in its entirety, though only a small amount of new reed was required each time as much of the old materials could be re-used. Once standing, the roundhouse did not require much in the way of new materials to maintain it. After over 20 years, the front part of the wall line and the inner ring of posts were replaced, sadly by over-engineered timbers set in much deeper postholes (quite unlike those indicated by the archaeology), with the roof jacked up while this took place. Despite this effort (or perhaps in part at least because of it), the building developed a twisted roof, and flat stones were placed under the timbers to help prop it up, with other timbers added to the roof intended to prevent further movement.

However, the roof continued to slump slightly to the south-east, to the extent that some of the rafters rested on the ground, and the National Park decided it was unsafe. Although the building could not collapse any further, and the wall and the roof itself were both intact and sound, modern as opposed to prehistoric views of safety meant that it could no longer be entered. It is highly likely that in antiquity the house would have continued to be occupied, and could have been adjusted on the next re-thatching (when the weight of the roof is least, and it is easiest to adjust both the wall and roof components). But it was decided to demolish and rebuild the structure. So, after 35 years this roundhouse was taken down and we had the chance to re-excavate the site once more.

The roundhouse was photographically recorded before and during demolition. A community excavation followed, arranged by Dyfed Archaeological Trust in conjunction with the University of Liverpool so that local people and students could collaborate on investigating this unique site. Funded by the National Park, the project could allow us all to learn lessons so that the replacement roundhouse could be appropriately adjusted in its design, and so that we could compare the evidence from a 20th/21st-century roundhouse to that of Iron Age excavated examples.

Parts of the wall were still standing when we arrived, so we carefully dismantled these. The wattle in the replacement wall section was still flexible and was in remarkably good condition, but the uprights, although intact, were already showing clear signs of rotting through at ground level. Those posts from the original building were completely rotted through – the wall was by this stage largely a daub structure. Though the upright timbers in this section were not providing any support, the wall functioned perfectly well – this had not been the problematic part of the building.

Excavation revealed how the eaves drip gullies had gradually filled up with debris, and where they were cleaned out – a process not maintained through the whole life of the roundhouse – they were not always dug on quite the same line and depth. Indeed, within the gully we found some of the plastic disks attached to the bundles of thatch that had had to be imported from Hungary at short notice when Hugh Foster discovered that not enough local reed had been harvested to complete the roof. These had survived in the deposits for 35 years, and represent items from the building's construction phase. Interestingly, further deposits accumulated in the space between the wall's outer face and where the thatch roof came close to the ground. These were probably partly what remained of daub that was unused during construction or maintenance, or had fallen off the walls, but they also comprised decomposed leaves and dust blown in and settled in the protected location over the 35 years.

School props and tools used to maintain this and other reconstructed houses were kept in some of the darker spaces indoors. Some of these were recovered during the excavation – most notably several tins and lids, remains from face-painting school party members by the interpretation staff. Illicit drinking was indicated by a few beer bottle caps tossed against the wall, though who was responsible for these is not known. Visitors are represented by a mobile phone battery, some coins and a significant number of sweet wrappers – reflecting the number of children visiting the site; these came from both inside the house and outside, where they had been blown under the eaves. Finds came not from the swept, maintained areas of the roundhouse at the entrance and around the hearth, but the darker edges. This selective deposition is well represented by a cache of a metal bowl and a tin of beeswax, found under the site of a bed with a mattress raised on legs. The cache was partially buried in floor sweepings of dust and gravel, while beds either side rested directly on the floor and we found nothing where they had been.

The next house

Many people came in and out of the roundhouse over its life – visitor numbers were consistently 10–15,000 a year. At first no specially made floor was placed over the excavated subsoil, so there was wear around the doorway and a little either side of the hearth, but this was later patched with clay, and

we found clear evidence of this during the dig. The excavations also revealed numerous dark, charcoal-rich patches that had accumulated round the hearth, the result of cleaning it out and re-setting it with fresh firewood. On excavation, these deposits were identical in appearance and texture with those excavated from 2,000-year-old sites.

The patterns of deposits and finds in and around the roundhouse reflect its construction, maintenance and use over 35 years. Although the finds reflect heritage use, they follow a pattern of spatial deposition that would have been predicted for a lived-in house. The way in which the structural integrity of the building changed over time also indicates what we would expect to find – or not find – on excavation, and how even with decay and some settlement of a building of this kind, roundhouses could easily stand for one or more generations with very limited amounts of materials required to maintain them. The new roundhouse reconstruction is again based on the foundations of the original, though to conform with structural engineers' worries the wall is topped with a timber wall plate, there are more rafters than previously, and the uprights are thicker than the archaeology suggests was originally the case.

Experimental archaeology involving building reconstruction should not be an event – but rather a process. At Castell Henllys we are now examining another reconstructed roundhouse of a quite different design that has stood for 30 years, which will reveal even more about our experimental reconstructions. This time it will be rebuilt in accordance with the original archaeological evidence and combined with our direct experience of decades of buildings management. In a few decades it will have become another valid experiment open to investigation.

Harold Mytum is professor of archaeology at the University of Liverpool and has worked at Castell Henllys for over 30 years, providing field training for generations of archaeologists. James Meek is head of Dyfed Archaeological Trust Archaeological Services, whose tasks include co-ordinating the community archaeology programme. For Castell Henllys visitor information see www.castellhenllys.com