

Dunyvaig Castle 2018

Breaking the ground in more ways than one



Photo: Ben Shakespeare

Breaking the ground

It feels like a long time now since the piper led us from the Plateau down to Dunyvaig Castle on the 12th of August, the first day of the 2018 dig, formally known as the Dunyvaig and Hinterland Assessment Project or DHAP18 for short. This first season of work at the castle will always be significant for more than just literally breaking the ground. With the help of so many of you, who came with your spades, cakes, paint brushes, cameras and enthusiasm for knowledge and discovery, we started the first ever archaeological excavation at Dunyvaig and thus began uncovering its rich history and the history of the landscape that surrounds it. While the plans for the next season and beyond are ticking along it is a pleasure to reflect on the achievements of this summer's work in a little bit more detail than it was possible at the closing talk of the season at the Ramsey Hall in Port Ellen.

What we have set out to achieve is to establish an archaeological project that would be:

1. A community project for the residents and visitors to the Isle of Islay, providing multiple ways in which the historic environment can be explored and enjoyed by everyone.

2. A research project to further understand the role of Dunyvaig in the social, political, economic and environment history of the 11th-17th centuries in the northwest Atlantic region.
3. A teaching and learning project for university students, early career professionals and for those wishing to receive training in field archaeology, post-excavation and heritage management.



Breaking the ground

The 2018 season was designed to evaluate the extent to which a project focused on Dunyvaig Castle would be able to deliver these aims. We have worked closely with the Historic Environment Scotland, who hold Dunyvaig, a Scheduled Ancient Monument, in their guardianship and the Lagavulin Distillery, who own the site. Both their helps, as well as the help and understanding of the residents at Lagavulin, is immensely appreciated.

The specific aims of DHAP2018 were to learn as much as we can about the archaeological potential of Dunyvaig Castle with a view of establishing a multi-year project able of delivering the aims set above. The main ways of doing this were the geophysical survey and the initial evaluation trenches located both within and outside the castle walls. We also wanted to start exploring the wider landscape through geophysics and a palaeoenvironmental survey, which will discover new sites and explore the potential of sedimentary deposits, such as peat bogs in the area, for reconstructing the environmental history, i.e. the changing use of the land, the vegetation and the climate.

Palaeoenvironmental survey

The DHAP2018 evaluated the palaeoenvironmental potential of the immediate hinterland surrounding Dunyvaig Castle, by a walk-over and augur survey. This revealed a number of sequences containing peat that is predominantly herbaceous in nature, together with wood and moss elements. Units of fine-grained mineral-rich silt and clay were recorded either within or towards the base of the sequences. At Cill Mhoire, an intercalated sequence of peat and mineral-rich deposits was recorded. Other deposits of interest recorded during the evaluation include coastal sands with lenses of peat. In summary, the hinterland was shown to have several locations where sedimentary deposits survive and appear suitable for analysis to undertake the palaeoenvironmental reconstruction proposed within the Dunyvaig Project.



Coring at Calumkill and some of the sediment cores the analysis of which will contribute to the study of the past environment.

Geophysical survey

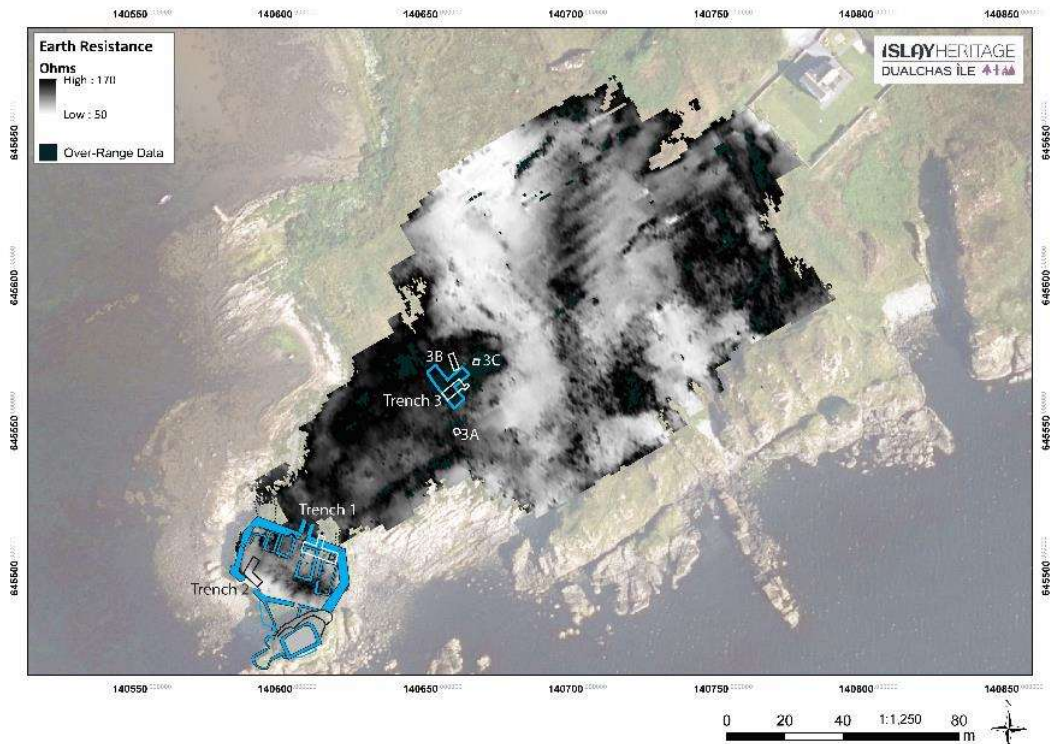
In truth, the archaeological evaluation at Dunyvaig Castle started even before the first turfs were cut. In fact, it started a year before in the summer of 2017 with the first geophysical survey on the site. The only previous archaeological work at the castle was a survey by the Royal Commission for Ancient and Historic Monuments in Scotland (RCAHMS) carried out in the 1970s, which gave us a pretty accurate plan of what can be seen above the ground, but in order to plan the evaluation trenches in the most effective manner we also needed the help from the geophysics, which can tell us a little bit about what is happening underneath the surface. For the main part, we used the technique called electrical resistance survey, which measures the differences in the amount of moisture and, thus, the resistivity in the ground. This is particularly useful for finding stone walls and structures, which are much more resistant to the electrical current than the surrounding soft ground, but, at the same time, not so good where the bedrock is too close to the surface. As soon as we got to the site in August 2018 we continued the survey from where we stopped the previous summer. The combined area we covered was 240 metres by 120 metres and stretches from the castle itself to the Plateau, which is the site of suspected siegeworks from which the castle was bombarded by cannon fire in 1615.



Students from the University of Reading and the University of Highlands and Islands learn the ropes of the electrical resistance survey.

The interpretation of the results of the electrical resistance survey has had us ponder a great deal and it will continue to do so, as it is not always clear whether the plentiful high resistance anomalies, i.e. the dark areas in the plot, are due to the archaeology or the bedrock. Nevertheless, what the results offer are specific questions that relate to the particular spots on the ground, which we can answer by opening a trench in that a particular place, i.e. the geophysics gives us targets.

The positioning of the 2018 trenches is the perfect case in point. Trench 3, for example, was placed in an area dominated by generic high resistance, which was, as we now know, due to the walls and rubble of a collapsed building, but also due to the bedrock outcrop the building was built against. Trench 2, on the other hand, investigated the area inside the courtyard next to the sea gate, which was curiously low in resistance and therefore interesting for other reasons. We speculated that this may have been occupied by a midden of organic refuse dumped in the latter stages of the castle's occupation. As it turned out, we were wrong about the midden, but have instead revealed something just as interesting.

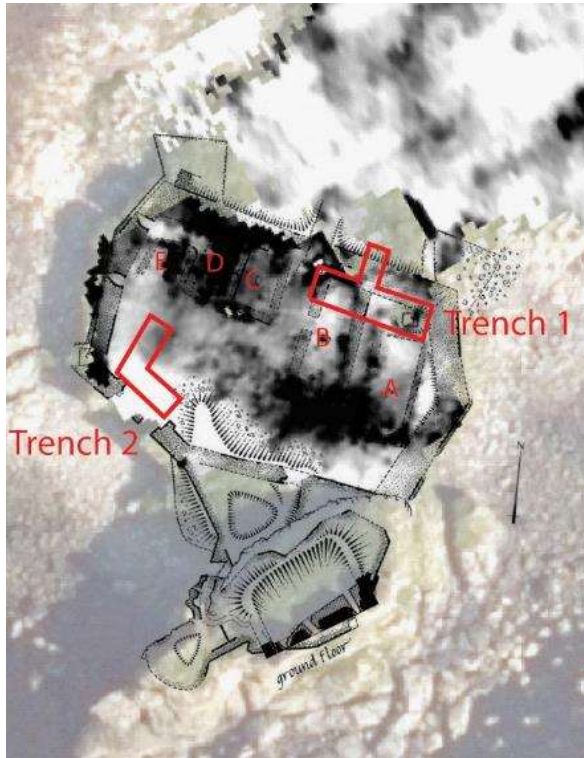


The results of the electrical resistance survey showing the walls of the castle, interior buildings and the external T-shaped building (all in blue) and the evaluation Trenches 1, 2 and 3.

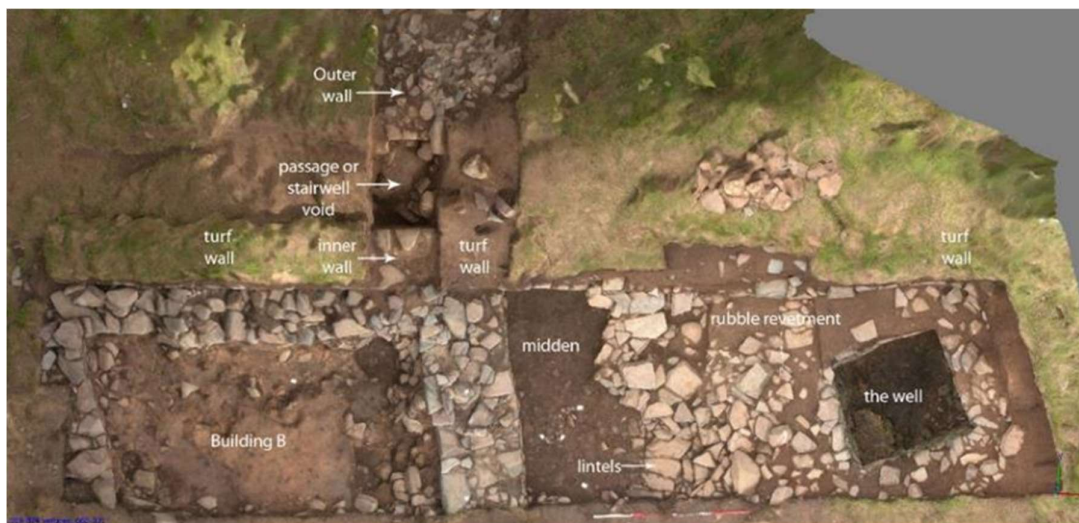
The new set of geophysical results is bringing up a new range of questions, which we will investigate in the coming years. Once again, we are guessing as to what various high resistance anomalies might represent. One suggestion is that we can see the remains of a possible road leading to the castle from the north, which could explain a long dark anomaly across the middle of the geophysics plot. Some of the post-medieval rig and furrow cultivation marks are clear to see as parallel stripes cutting across this larger anomaly. Elsewhere, there are signs of possible structures and enclosures, but we will not know for sure until we test them with the excavation. The trick is to try to balance out the excitement of what we could find with the occasional disappointment that is likely to occur, as some of our targets could indeed prove to be natural in origin. That is the nature of archaeology. As for the 2018 season, there has been hardly any disappointment whatsoever.

Evaluation trenches

Trench 1



Trenches 1 and 2 were inside the castle courtyard. The Royal Commission's survey plan shows five buildings A-E, which are normally visible as the low earthworks when the vegetation is not too high. Two larger Buildings A and B are located to the east of the main courtyard entrance and the smaller buildings C-D to the west of it. Building E was only ever recognised as an open-ended structure, which stopped in line with the adjacent Buildings C and D. Before this year we did not know anything about these buildings. Were they part of the original layout of the courtyard or later additions? Were they contemporary with each other and with the tower? What was their function? Were they garrison barracks, store rooms, stables, kitchens, workshops, residential houses or a combination of these things?



Overhead view of Trench 1 facing north and showing features mentioned in the text.

Trench 1 was placed across the north end of Building B and along the outer courtyard wall, encompassing the 'well' at its east end. A smaller projection was extended across the outer wall of the courtyard in order to investigate the preservation of the masonry and the way the courtyard wall was constructed. The excavation of Trench 1 was challenging due to the large amount of post-abandonment rubble collapse, which covered the entire area of the trench apart from the well, which was empty to the depth of 1.2m. The

excavation of the rubble helped to define Building B, which was built of substantial clay bonded walls and which abutted the inner face of the mortared courtyard wall with its northern gable end.

Both the rubble collapse of this building and its remaining walls were overlain by a stepped turf-built construction, which was also overlying the entire length of the courtyard wall. This turf-built wall was interpreted as the refortification of the ruined masonry walls of the castle at the point in time when Building B had already collapsed. Although the rabbit burrows had damaged this turf wall, where intact it showed a layered construction from individual sods. There was a clear indication that the rubble from the collapse of Building B was used and positioned as the base and the revetment of the stepped turf wall. The stepped construction could be best appreciated around the well, which was clearly kept open during this episode of refortification. The turf wall was overlying the ruined stone walls of the castle, which were almost completely missing in the northeast section of the courtyard circuit.



Details of turf walling supported by the masonry of the collapsed wall of the courtyard.

The trench projection across the head of the wall cut through the turf wall at the top with a 1m wide slot and below it revealed a rubble-filled void built-in within the width of the collapsed masonry wall. This was clearly part of the construction design as the inside facing was originally rendered. This discovery proved that the courtyard wall was not a single thick masonry construction, but that it had an inbuilt stairwell or a passage, a hypothesis that was first put forward by the Royal Commission. Thus the courtyard wall was in fact built as two skins of walling the outer of which was the double the width of the inner one. It is clear that the wall made in this way was never going to survive cannon fire for long, as it would be only as strong as each single skin of the wall.



The consequences of this were only too clear from the fact that the courtyard wall was hardly surviving in places at all and that the outer face, in particular, has almost entirely crumbled away, as revealed by the excavation on the outside of the courtyard wall. A series of stone collapse and mortar erosion tip lines were also revealed. Underlying these and the base of the wall, were rough stone footings, which projected forward underneath the face of the wall. These appear to have

been a reused part of an earlier mortar-bonded structure which was otherwise comprehensively robbed. The outward (northern) extent of this robbed structure could not be established within the limits of the evaluation trench.

The exact function and design of the castle defences, as they were prior to the 17th century, remains to be determined by future excavation, but it is already clear that they were evolving and had been rebuilt and updated on more than one occasion. Dr Mark Thacker, a buildings archaeologist and the specialist for building materials including the dating of mortars, is studying the upstanding architectural remains of the castle parallel to our excavation. He has this season already found evidence for more than one phase of the courtyard wall, which has been in places completely rebuilt and in others re-faced or added to. It is very likely that the robbed out remains in Trench 1 extension belong to such an earlier phase of the castle.

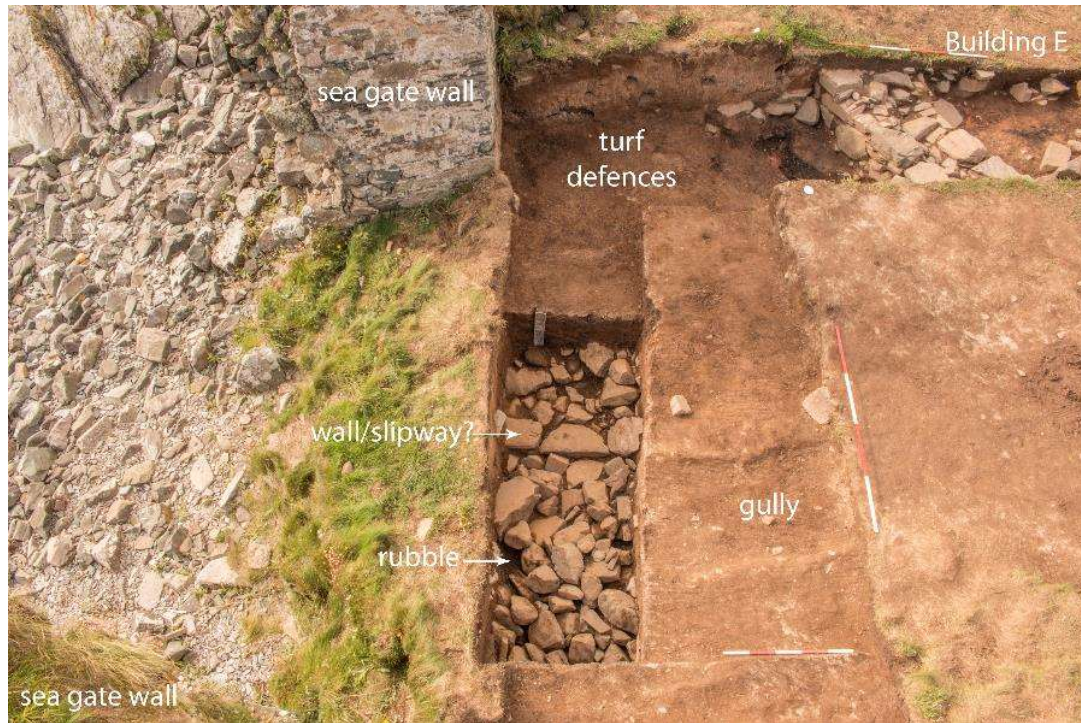
On the outside of Building B, or more precisely along its eastern wall a midden deposit was excavated containing well-preserved animal bone, shell, charcoal, small iron objects, most likely nails, several pieces of worked flint and a compressed musket ball. Further to the east, the trench was covered in heavy rubble, which upon the excavation of the top layers showed some loose structuring, probably as the base and revetment for the turf wall construction. Underlying these stones is a lintel-capped structure, which was not excavated, but which clearly has a hollow interior observed through the gaps in the exposed lintels.

The well, which was exposed and examined for structural stability was not excavated due to the visible collapse of its stone facing at the depth of c. 1.2m. The future excavation of this feature may require shoring. The interior was given a brief examination which revealed thick deposits of burnt iron of no great age.

Inside Building B, underneath the initial rubble collapse was a burnt layer of turf and clay interpreted as collapsed roof. This layer overlay more substantial rubble collapse, which

was overlying burnt clay surface that we think may have been the floor surface, although badly preserved along the edges on account of the heavy rubble that impacted from above. This floor was not excavated as part of the evaluation, but on its surface was a remarkably well-preserved lead seal stamp, found near the gable wall of the building. More of this later.

Trench 2



Trench 2 at the end of the 2018 season showing features mentioned in the text.

Trench 2 was an L-shaped trench positioned across the mouth of the sea gate and projecting inwards into the courtyard of the castle. The position of the trench was designed to investigate an area of the courtyard without any high resistance anomalies in the geophysical results posing the question about the possible use of this area as a midden. Furthermore, the Dunyvaig sea gate is unique among the Scottish castles and we wanted to know more about the way it was used. The historical accounts mention couple of instances of successful escapes from the besieged castle with a small boat via the sea gate, but is this the sole reason it was built or was there a more regular traffic of boats being pulled in for either repairs or shelter from the storms?

As it turned out the cause of the low resistance in this area did not come from a midden, but from a massive accumulation of stacked turf, which was brought into the castle and was built up across the sea gate opening. The technique employed to stack the turfs appears to be much the same as the one used to reinforce the ruined courtyard walls in Trench 1. Once again rabbits had made a warren in this material and a shallow gully had been cut into top of it presumably to act as a drain. A sondage aligned with the middle of the sea gate was excavated providing a section through the entire turf construction. We took samples for micromorphological analysis which will be analysed in the laboratory to

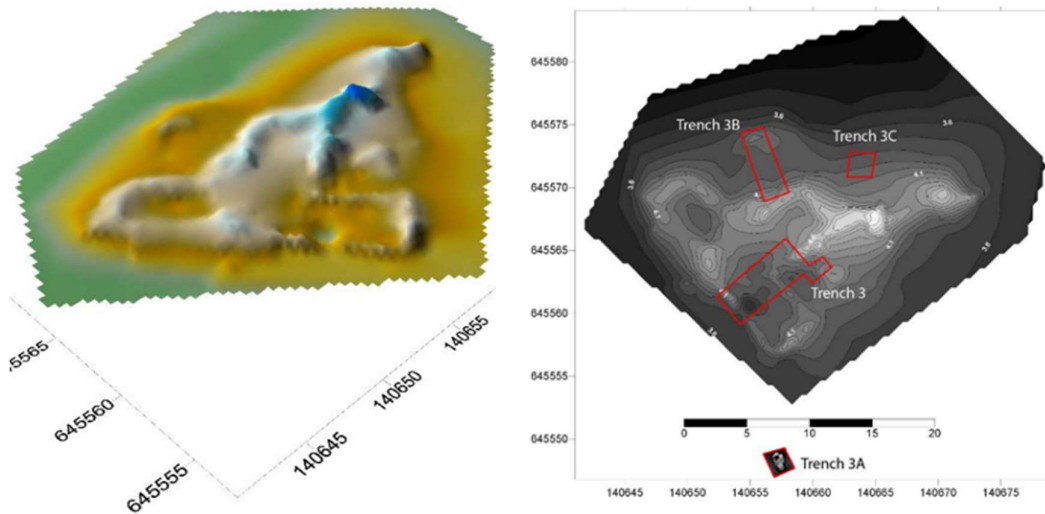
tell us a little bit more about the turfs, their composition, how were they used and perhaps even how far do they come from. Below the turfs the excavation revealed a substantial amount of rubble in the southwest part of the trench. Underneath the rubble we could see an emerging structure orientated perpendicularly to the sea gate and positioned centrally in relation to the sea gate opening. This included a substantial kerb made of three aligned and faced stones with an infilling core material present at the back of the stones. We have run out of time at this point, so it was not clear whether this structure represents a wall face or one side of a possible slipway. Its position in relation to the sea gate suggests this as a strong possibility and we cannot wait to see more of it in the coming seasons.

In the northeast part of Trench 2, the redeposited turfs were overlying burnt collapse and abutting the wall of a building, which by its alignment and location most likely represents the continuation of Building E, described as open-ended by the Royal Commission. Only a corner of the building was revealed inside Trench 3. The sequence in this building was very similar to that in Building B. In its interior, there were burnt remains of what may have been collapsed turf or thatched roof overlying rubble collapse, which was overlying a burnt clay floor. On the outside, the collapsed rubble was overlying burnt layer, which was sampled but remained largely unexcavated in 2018 as it continued to extend under the unexcavated part of the turf defences. The sampled burning had visible organics in the form of intertwined plant fibres, perhaps hay, and was in places attached to burnt clay material. It is not clear from the limited exposure in the evaluation trench whether this material was part of the collapsed roof or some kind of clay screen or surface with organic matting.



Southwest corner of Building E with burnt deposits from the collapsed roof and the close up of the burnt organic material.

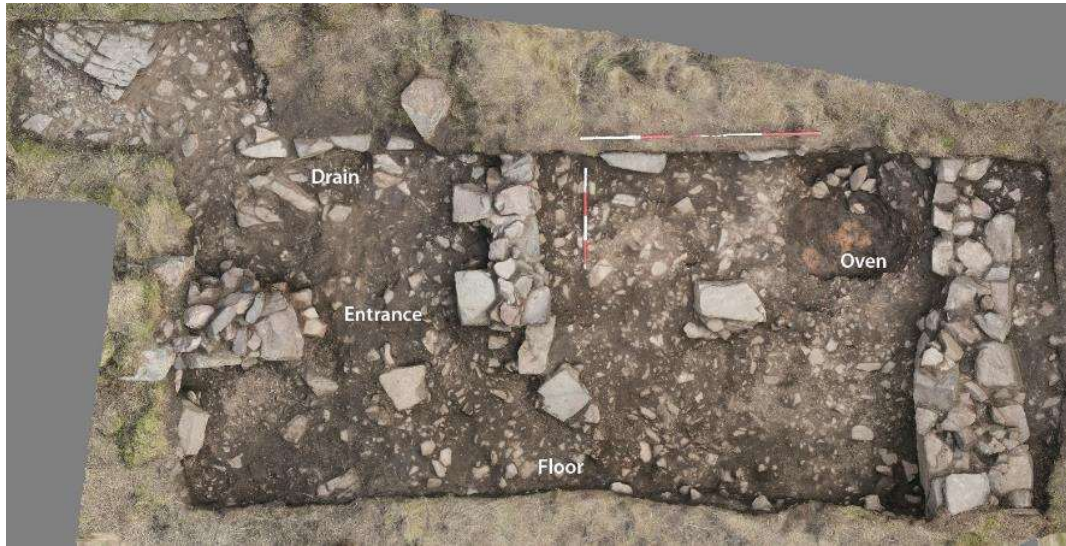
Trench 3



Left: Topographic model of the T-shaped structure evaluated by Trench 3, view to the northeast;

Right: Contour survey of the T-shaped structure with the location of Trenches 3, 3A, 3B and 3C.

Trench 3 was positioned across the T-shaped earthworks located c.60m northeast from the castle. The trench revealed substantial drystone walls with the evidence for rebuilding and reuse of an earlier structure. The SW-NE orientated part of the building was abutting a protruding bedrock knoll to its NE. An entrance was located at this side of the structure with a parallel stone-lined open drain running in front of it. The interior deposits consisted of rubble collapse above what appeared to be the remnants of a burnt turf roof. Below this, there was a roughly cobbled gravelly floor surface with additional traces of burning. In the southwest corner of the trench there was a clay-lined oven or a small kiln filled with burnt material. The interior rubble and the underlying occupation produced many finds, including rotary quern fragments, pottery, metal artefacts, which included couple of musket balls, a large iron object, possibly a hammer, and a significant number of worked flint artefacts.



Trench 3 showing parts of the building mentioned in the text. Note the change in the thickness and alignment of the wall on the right, which indicates multi-phase construction, blocking or repair.



Fragment of rotary quern stone found among the rubble inside the T-shaped building and a fragment of an incised slate from the same horizon.

Three smaller trenches, Trenches 3A, 3B and 3C, investigated less pronounced earthworks in the vicinity. Trench 3A encompassed a bedrock outcrop with a rock-cut basin, which was situated c.10m to the south from the T-shaped building. The purpose of the basin is not entirely clear. Where features like this occur near the shoreline they are thought to be bait mortars for crushing and mixing fish and shellfish for bait, a practice ethnographically recorded in Shetland and the Western Isles, for example. The location of the rock-cut basin at Dunyvaig does not go against such interpretation, but the fact that it is so close to the buildings and the castle may throw open other possibilities. One problem with a feature like this is that it is very difficult to date.



Rock-cut basin in the rock located near T-shaped building.

Trench 3B extended from the outside of the north wall of the T-shaped building to a low curved bank, which upon excavation turned out to be collapsed dry stone wall of a possible enclosure or a structure. In Trench 3C, coarse rubble was overlying several stone boulders set into gravel deposits. These boulders may have been part of a structure, but its shape could not be determined within the confines of this trench. There is much more to learn in this area, not only in relation to the full sequence of construction and use of the T-shaped building, but also these other structures and features which we do not understand as well. Throughout the excavation we have been uncovering, not only medieval finds, such as medieval pottery, iron nails, bronze buttons, lead musket balls and occasionally glass, but also prehistoric flint artefacts, which hint at the much longer history of habitation around Lagavulin Bay. One of our aims is to investigate a possible Iron Age fort at the opposite side of the bay at Barr an t-Seann Duine, where we have already conducted some geophysical survey.



Tip of the flint arrowhead found inside the castle in Trench 1 and a flint scraper or knife from trench 3C.

The seal stamp of John Campbell of Cawdor

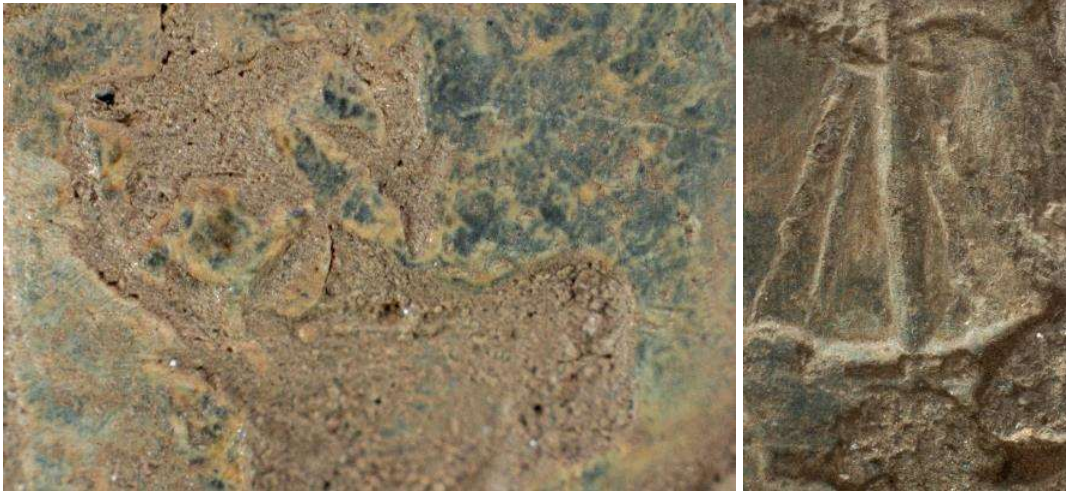


There is no doubt what the star find of the season was. The seal stamp got a fair bit of attention from the media in the summer and, indeed, it is a wonderfully preserved object that was so easily legible after only rudimentary cleaning. From the weight of the object it was instantly clear that it was made from lead, but this is not the whole story. Our on-site archaeological scientist Dr Rowena Banerjee has managed to scan the seal with the help of X-ray fluorescence, or the XRF for short, which is a non-destructive technique able to analyse the chemical composition of materials at the elementary level. The XRF revealed that apart from the predominant lead, the seal matrix also contained some tin and also some silver. While the addition of tin has been documented in other contemporary seal matrices from Scotland, this being added to make them harder (Caldwell 1993), the addition or the residue of silver is a little bit more curious.



XRF analysis of the seal

The front of the seal has a broad-pointed shield bearing the arms of the Campbells of Calder (or Cawdor) whose quartered arms derive from both the Campbell family and Thanes of Cawdor, when the families were united in marriage after (1511). The Campbell elements on the arms include the Gyronny and a lymphad or galley (representing the galley of Lorne), while the stag's head, star and buckle elements derive from the Cawdor family arms. The armorial shield is encircled by a Latin inscription in roman capitals, reading (J)OANNIS. CAMPBEL. DE. CALDER. while the area between the shield and inscription have a simple floral decoration.



Close up photos of the details from the seal: the stag's head with a star and the galley. Photos: Ben Shakespeare

On the reverse side encircling the handle is a floral decoration of eight petals. An engraved cross or X marks the top of the seal and either side of this lower down are a date, 1593, and a maker's mark, this the conjoined initials DM. The seal bears a striking similarity to a seal matrix of James Hamilton now in the collection of the National Museum of Scotland and described in an article by David Caldwell which also has the same initials DM but bears a slightly latter date of 1601 (Caldwell 1993, Illus 6). Caldwell has suggested that the DM might be the mark of David Mylne an Edinburgh goldsmith who was admitted to the guild in 1573 and this fits well with the dates on both matrices (Jackson 1905, 470). If so the similarity in design and the type of punches used in the decoration suggests the two matrices were likely produced in the same workshop and possibly from the same original blank which would have been kept ready to be engraved or punched to the specifications of any client.



Close up of DM hallmark Photo: Ben Shakespeare

The date 1593 is also an inauspicious one for the Calder family as in the previous year John Campbell the laird of Calder was assassinated by other members of his clan. His heir and son, another John, however, was a minor on his father's death and his estates were initially administered by Mr Donald Campbell, himself only 22 and an illegitimate son of the murdered Calder. His title of 'Mr Donald' when he first appears on record suggests he had been educated at university and was initially trained for the church. Donald, on the death of his father, now took control of the affairs of the family (and later as Campbell of Barbreck-Lochawe and Campbell of Ardnamurchan becoming one of the strongmen of Campbell family). In 1593 the young Calder is referred to as 'Johne Campbell now of Calder' in a discharge by the Earl of Mar, although he was not retoured of his father's estate until 1596. Despite this delay in officially inheriting his father's titles and the fact he was still a minor does not seem to have prevented a new seal being made in 1593 just after his father's death, possibly to ensure that grants and charters and other official family business could continue in the young heir's name.

It seems likely that the seal matrix was being used in this capacity by a family official at Dunyvaig. But, who had been using it and when and how exactly it came to be left inside Building B? Was it lost, hidden or simply abandoned during the destruction of the building? This is where the archaeological sequence inside Trench 1, the artefactual evidence in the form of the seal and the historical records come together to provide the most likely scenario.

Firstly, it is extremely unlikely that the seal could get to Dunyvaig before 1615 when the Campbells officially took charge of the island and the castle. Considering it was made in 1593 suggests that either this seal stamp had already been in use for some time elsewhere or that a copy of the original seal was made for the purpose of bringing it to Islay when the time came. David Caldwell suggested that the initials DM are a silver hallmark and that the original seal was made in silver, presumably for John Campbell himself, after which a certain number of copies would have been made in lead for various Cawdor administrators (David Campbell pers.comm.). Could this process somehow account for the traces of silver in the Dunyvaig seal? It seems plausible and looking into the craft techniques of the time may shed more light on this process in due time.

If the seal arrived to Dunyvaig after 1615 then it follows that the burning of Building B also occurred after 1615, as the rubble collapse buried the burnt floor that the seal was found

on. This event could, of course, be an accidental fire, but the fact that the only deposits that overlie the collapse of the building are related to the refortification of the courtyard walls with turf suggests a violent takeover of the castle and a significant investment of labour to refortify it against an impending attack. Such turn of events fits very well with the last Macdonald uprising in 1647 and the takeover of the castle, which was then held by Coll Ciottach until it was besieged and retrieved by General Leslie.

Thus the seal enables us to make certain observations about Building B and its place in the history of the castle. This was a very substantial building built against the courtyard wall, but the questions that remain are when was it built and what was its function? Well, it seems likely that it was built after the courtyard walls were already demolished, i.e. after 1615, and that the building was reusing the castle masonry, but we will not know this for sure until further excavation enables us to date its construction firmly. Regardless of when it was built it appears certain that the building was occupied by Campbell representatives or members of the family and the presence of the seal suggests that the Campbell administration was stationed at Dunyvaig in the period between 1615 and 1647. Whether all of the interior buildings within the courtyard adhere to this pattern remains to be seen, but we know that, at least, Building E, had suffered the same fate as Building B. Its burnt remains were also succeeded by the turf refortifications, so the same date for the destruction of two buildings seems plausible. The T-shaped building we evaluated in Trench 3 outside the castle walls has also burned down, but whether this event is related to the burning of the buildings in the castle courtyard is more difficult to say until further excavation and dating takes place.