

The Islay Prehistory Project

An Archaeological Excavation and Survey of Slochd Measach (Giant's Grave), Isle of Islay: Project Design for 2016/17 fieldwork

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Summary

This Project Design describes the research background, aims, objectives and the methodology for an archaeological excavation and survey of Slochd Measach (Giant's Grave) near Nereabolls (NGR NR 2105 5642) on the Rinns of Islay in western Scotland (Figure 1).



Figure 1. Location of Slochd Measach on Islay and in relation to nearby Bolsay Farm site excavated by S. Mithen in the 1990s (Mithen 2000)

The site contains the remains of an Early Neolithic chambered cairn (RCAHMS Site No. NR25NW 3; Henshall 1972: ILY 2), which is protected under law as a Scheduled Ancient Monument (File Ref. SC 27281/1B). The proposed fieldwork is projected to take place during two seasons between 20 August and 3 September 2016 and 19 August and 2 September 2017 and will require Scheduled Monument Consent (SMC) and Section 42 Consent. It contributes to a long term project exploring the early prehistory of western Scotland undertaken by Steven Mithen and his colleagues (e.g. Mithen 2000; Mithen et al. 2007; Wicks, Pirie & Mithen 2014; Wicks & Mithen 2014). It represents the second stage of investigation of Slochd Measach following the survey and test-pitting carried out at the site in August 2015, which was granted Scheduled Monument Consent (Case ID: 201407980) and Section 42 Consent (Case ID: 201407979) on 2 April 2015. The results of the 2015 fieldwork have been described in detail in the Interim Report (Mithen and Maričević 2015a), which was submitted to Historic Environment Scotland (HES) and West of Scotland

Archaeological Services (WoSAS). A summary of the results was submitted to *Discovery and Excavation in Scotland (DES)*.

1. Research Background

1.1 The transition to Neolithic in Western Scotland

The transition from hunting and gathering to Neolithic farming lifestyles is one of the most pivotal events in human history. Having occurred independently in several different regions of the world during the early Holocene, including the Southwest Asia shortly after 8000 BC, Neolithic farming lifestyles spread across the European continent and eventually reached Britain sometime around 4000 BC. In the British archaeological and environmental record this 'event' is marked by the near simultaneous appearance of pottery, polished stone axes, domesticated animals and plants, increased vegetation clearance and the construction of monuments. The latter includes several groups of monument from throughout the western seaboard of Europe, including the Clyde type of chambered cairns in western Scotland, which are concentrated in Argyll, Arran and Bute (Figure 2). The current range of radiocarbon dates from the chambered cairns of this type places the start of their construction sometime before 3700 cal BC, although it remains unclear when exactly the first chambered cairns were built in western Scotland (Schulting and Richards 2002, Noble 2006, Cummings and Robinson 2015, Harris et al. 2015, Ashmore in Scottish Radiocarbon Database (SRD) via Canmore).

The exact timing and the prime instigators of the Mesolithic–Neolithic transition in Britain remain hotly debated. There are three main groups of theories: (1) 'population influx' involving colonization from the European continent by farmers whose lifestyle is seen as responsible for most if not all of the changes in subsistence and the material culture (Sheridan 2000, 2007, 2010); (2) 'population continuum' involving the adoption of a Neolithic farming way of life by indigenous hunter-gatherers without significant (or perhaps any) influx of continental incomers (Armit and Finlayson 1992, Thomas 2004); and (3) 'population coexistence' the presence of both incoming farming and indigenous hunter-gatherer communities participating in the transition through interaction and competition (Mithen et al. 2007, Cummings and Harris 2011 and the comments therein).

Western Scotland plays an important role in this debate not only because of the richness of its Mesolithic and Neolithic archaeology but also because of the coastal nature of human settlement. This provided a wealth of food resources that were exploited by the Mesolithic population resulting in the creation of shell middens. Late Mesolithic human burials were inserted into the middens, in some cases following the cessation of midden accumulation (Wicks, Pirie & Mithen 2014). The marine orientated diet of the Mesolithic population has been confirmed by isotope analysis of their skeletal remains (Schulting and Richards 2002). The absence of a marine signature within Neolithic skeletal remains has been used to

suggest an abrupt replacement of a marine diet with a terrestrial diet at the onset of the Neolithic implying population replacement (Schulting and Richards 2002). This evidence is further supported by recent analysis of lipid residues on Neolithic pots, which suggest rapid replacement of marine foods with dairy products (Cramp et al. 2014).

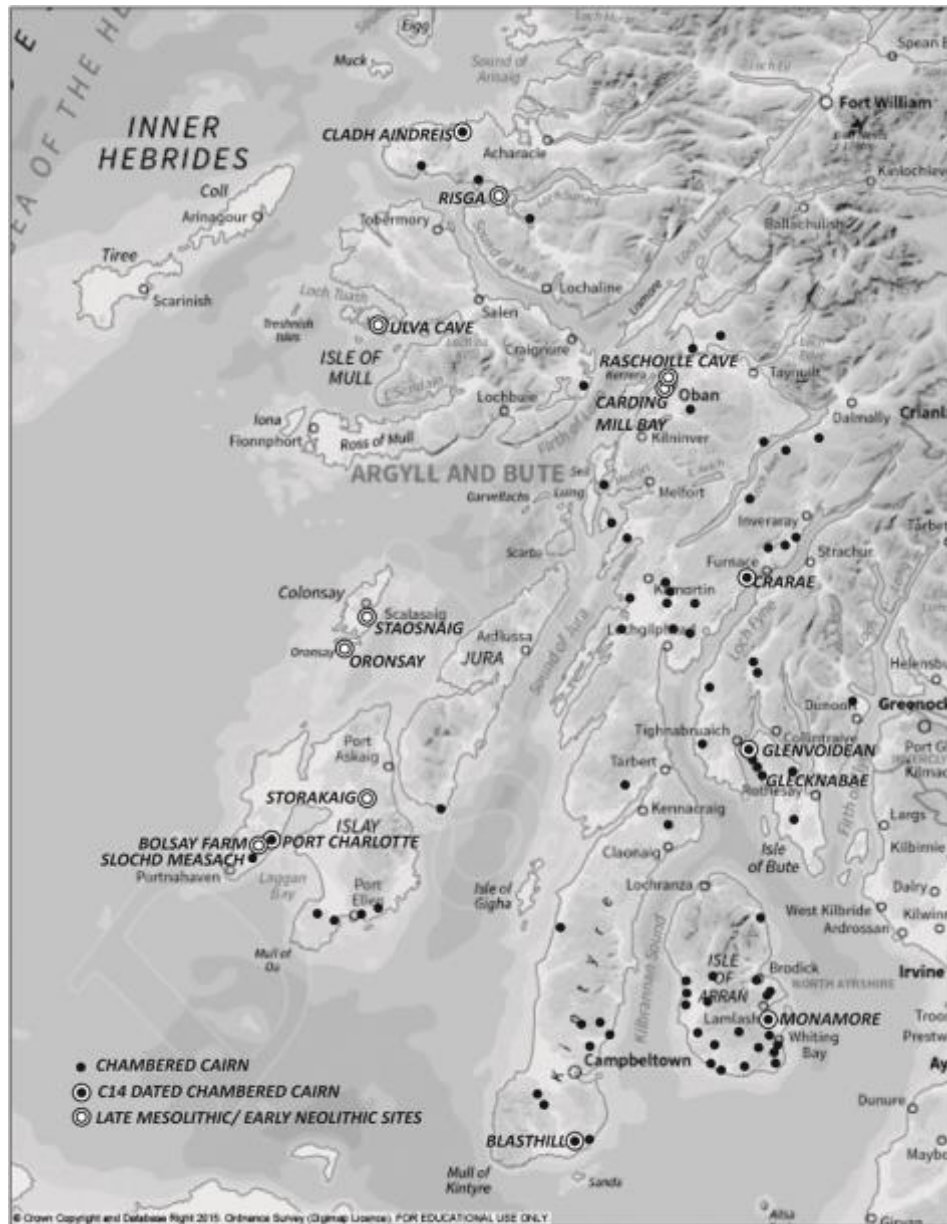


Figure 2. Distribution of chambered cairns in Argyll (after Ritchie 1997) showing the chambered cairns with C14 dates and the sites with evidence for both Late Mesolithic and early Neolithic occupation

Countering these arguments is the evidence for continuity of site location across the Mesolithic and Neolithic transition (Armit and Finlayson 1992) and with some aspects of the lithic industry (Mithen et al. 2007), suggesting that the stereotypical and polarized views of the Mesolithic and the Neolithic might not be appropriate for western Scotland. The radiocarbon dates from shell middens at Risga, Ulva, Raschoille Cave, Carding Mill Bay and Oronsay (Figure 2), all span both sides of the Mesolithic-Neolithic transition (Mithen et al.

2007, Scottish Radiocarbon Database). Recent Bayesian modelling of the radiocarbon dates from the Oronsay shell middens and the inland site of Storakaig on Islay provide further evidence for a significant overlap between the late Mesolithic and the earliest Neolithic within western Scotland (Wicks, Pirie and Mithen 2014).

1.2 Islay and the Mesolithic-Neolithic transition

The work of the Southern Hebrides Mesolithic Project on Colonsay and Islay (Mithen 2000), together with the previous investigations by Mellars on Oronsay (1987), Mercer on Jura (1968-86) and at Newton on Islay (McCulloch 1989), created a nationally important record of Mesolithic sites in the southern Hebrides. The recent East Islay Mesolithic Project has discovered further important early (Rubha Port an t-Seilich) and late (Storakaig) Mesolithic sites on Islay (Mithen and Wicks 2011), the latter having implications for the transition to the Neolithic.

Storakaig, located at an inland moorland location in the east of Islay (Figure 2), is the only non-shell midden Mesolithic site in Scotland to provide a faunal assemblage. This includes red and roe deer, wild boar and badger (Wicks, Pirie & Mithen 2014). The site is interpreted as a hunting campsite with a date range between 4460-4330 cal BC and 3930-3650 cal BC, which provides a significant overlap with the combined date range for the Oronsay middens between 4740-4060 cal BC and 4250-3140 cal BC (Figure 3). Such overlap illustrates a greater diversity in the subsistence strategies of the Late Mesolithic hunter-gatherers in the Hebrides than the previous identification of the Mesolithic with a marine diet implies.

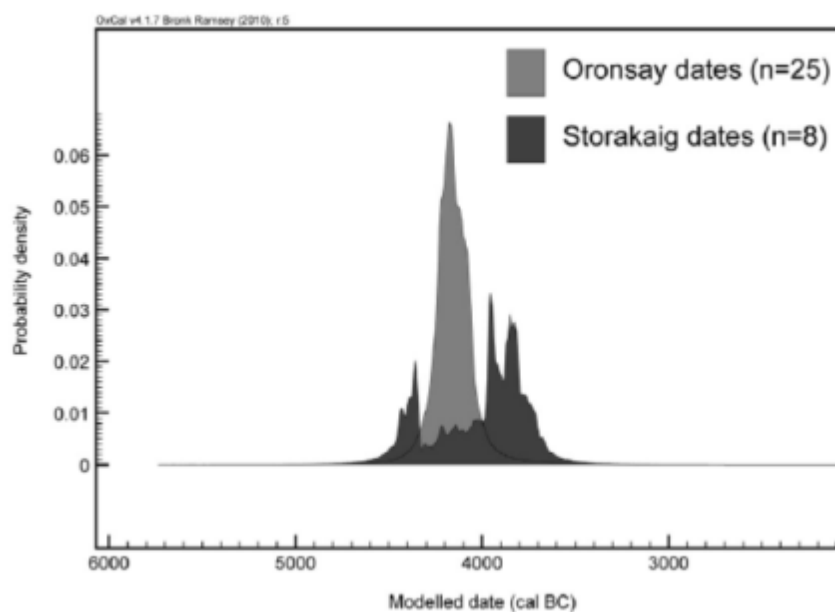


Figure 3. Comparison of summed probability distributions of the Oronsay midden dates and Storakaig dates (from Wicks et al. 2014:Fig. 8)

Furthermore, both date ranges have a significant overlap with the dates of the Clyde cairns, including Port Charlotte chambered cairn on Islay (RCAHMS Site No. NR25NW 1, Henshall

1972: ILY 1, Harrington and Pierpoint 1980), which yielded three preconstruction dates from the occupation layer under the cairn (3980-3640 cal BC, 3950-3630 cal BC and 3650-3100 cal BC). Two dates from inside the chamber of the cairn were 3640-3360 cal BC and 3550-2900 cal BC (Ashmore in SRD). Similar dates come from Newton, c.5km northwest from Storakaig (Figure 4), where two pits containing Neolithic pottery produced dates of 3940-3640 cal BC and 3800-3520 cal BC (McCulloch 1989). Although we are dealing with overlaps between substantial date ranges, which by no means prove overlap in the activities at these Mesolithic and Neolithic sites, there is a significant cluster of dates spanning the transition in a narrow geographic proximity which demands further investigation.



Figure 4. Distribution of chambered cairns on Islay with the location of Mesolithic/Neolithic sites mentioned in the text

The largest Mesolithic site excavated by the Southern Hebrides Mesolithic Project was at Bolsay (NR25NW 44), situated 2km to the southwest from Port Charlotte chambered cairn.

The site is equidistant from the chambered cairns of Port Charlotte and Slochd Measach, the latter being located to the southwest of Bolsay (Figure 4). The excavation at Bolsay recovered 329,667 pieces of chipped stone, including 7000 microliths, which are estimated to be no more than 20% of what is likely to be surviving at this location (Mithen et al. 2007). The site was interpreted as a long term hunting camp, providing a significant 'place' for Mesolithic people who returned to it repeatedly for over millennia. Mesolithic occupation is represented by an *in situ* horizon sealed by colluvium, which was disturbed by ploughing. This colluvium contained a huge number of artefacts of the Scottish narrow blade industry, which is conventionally entirely associated with the Mesolithic period, along with small numbers of Neolithic and Bronze Age artefacts, including the fragment of a polished stone axe.

From ten Bolsay C14 dates only three belong to the Mesolithic with a combined range between 6450-5620 cal BC, thus predating the activities at Storakaig and Oronsay. Activity at the site in the Early Neolithic can be demonstrated by three C14 dates with ranges between 3650-3100 cal BC, 3640-3370 cal BC and 3350-2920 cal BC (Mithen 2000). The second of these dates was taken from a willow sample deriving from what field observations indicated were undisturbed 'Mesolithic' occupation deposits.

In this regard, Bolsay poses further questions about the nature of the Mesolithic-Neolithic transition, not only in terms of dating, but also more fundamentally with regard to what exactly constitutes 'Mesolithic' and 'Neolithic' settlement remains in western Scotland (Armit and Finlayson 1992). The presence of the C14 dated 'Neolithic' material in the 'Mesolithic' occupation horizon warrants explanation and introduces the question of continuity of not only the location, but also the lithic technology, as also noted at Kinloch on Rum (Wickham-Jones 1990) and at Newton (McCulloch 1989:36). The location of Bolsay in the immediate vicinity of two chambered cairns offers a unique opportunity to expand our knowledge of the Mesolithic-Neolithic transition in this landscape.

Port Charlotte has already provided valuable information, not least the C14 dates and the evidence of the Early Neolithic occupation deposit underneath the cairn, which contained charred hazelnuts and animal bones, including sheep (Harrington and Pierpoint 1980). The immediate surroundings of the Port Charlotte cairn, which have never been investigated, have been developed and landscaped with the creation of Port Mhor Centre building, campsite and a football pitch. As such, they hold limited potential for archaeological fieldwork.

Slochd Measach, in contrast, provides an opportunity to investigate the site of an Early Neolithic chambered cairn in the context of the evidence from nearby Bolsay site and other Late Mesolithic and Early Neolithic sites on Islay. Did the 'Mesolithic' technology from Bolsay continue into the Neolithic? Are there signs of Mesolithic or earlier Neolithic activity at this location which may have preceded the Clyde type cairn at Slochd Measach? Can we

find datable material with which to continue modelling the chronological framework of the transition to the Neolithic?

We began to address such questions by surveying and test-pitting the area around the monument in 2015. That demonstrated that full excavation is required to reach the construction and pre-construction horizons, which are crucial for establishing the chronology and architectural history of the monument, and any possible earlier activity on the site.

1.3 Clyde cairns and the Mesolithic-Neolithic transition

Much of our understanding of the way in which Clyde cairns were constructed stems from the 1960's excavation of two cairns at Mid Gleniron (I and II) in Wigtownshire by Corcoran (1969). This showed that despite their apparent uniformity of design, some Clyde cairns were multi-period constructions that had started off as one or more simpler round cairns with single chambers. The 'classic' trapezoidal shape of the Clyde cairns with either curved or a straight façade and multiple chambers or chamber compartments appear to have been developed around these initial round cairns. This has been confirmed from recent Clyde cairn excavations at Blasthill on the Mull of Kintyre (Cummings and Robinson 2015) and in Ardnamurchan (Cobb et al. 2008), while this appears to be a feature evident in other related groups of Early Neolithic chambered cairns in Britain (Noble 2006).

Port Charlotte chambered cairn did not seem to share this construction sequence, but the underlying deposit containing faunal and plant remains confirms either earlier occupation or some kind of foundation deposit. Similarly, the chambered cairn at Glacknabae on Bute was built on top of a shell midden, while at Crarae in Kintyre there were two 'foundation deposits' made up of marine shells, one in the forecourt and one below the floor level of the rear chamber compartment (Scott 1961). At Cladh Aindreis, Ardnamurchan, excavation revealed that a small cremation deposit preceded the construction of the monument (Harris et al. 2010). The repeated occurrences of earlier deposits underneath chambered cairns is significant because it shows concern with the history of the selected places in the landscape. In the context of the earliest Neolithic monuments, such evidence is significant for understanding the Mesolithic-Neolithic transition.

The recent excavations of Clyde cairns at Blasthill and Cladh Aindreis provided important information about the construction and the use of Clyde cairns, their role in the Neolithic landscape, and securely stratified and C14 dated scientific material (Cummings and Robinson 2015, Harris et al. 2014). Unfortunately it was not possible to connect these monuments to Mesolithic activity, either at the sites or within their surrounding landscape: traces of Mesolithic activity were simply absent, or at least unknown. In contrast, Slochd Measach, has Bolsay in its immediate vicinity and a surrounding landscape proven to have been extensively occupied in the Late Mesolithic. As such, this site is better placed to tackle the role of Clyde cairns in the Mesolithic -Neolithic transition in western Scotland more broadly.

2. Slochd Measach (Giant's Grave), Nearabolls, Islay

2.1 History of research and current state of preservation

Slochd Measach cairn is located on the southeastern slope of Beinn Tart a'Mhill near the southern tip of the Rinns of Islay (NR 2105 5642). The remains have been described by Newall and Newall (1961) and described and surveyed by Henshall (1972: ILY 2) and the RCAHMS in 1975 (Figure 1, RCAHMS 1984: 50, no. 7).

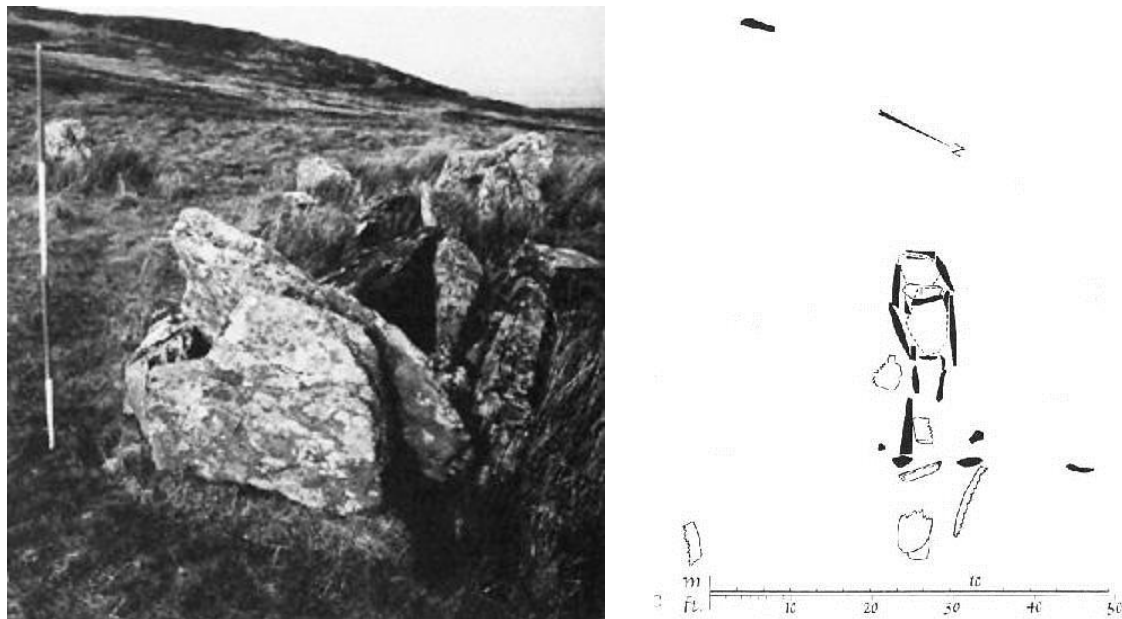


Figure 5. Slochd Measach chambered cairn at the time of the RCAHMS survey in 1975, view from the southwest and plan (RCAHMS 1984:50)

At the time of these visits the site was in open moorland with wide open vistas in all directions except the northwest towards the summit of the hill. The site is now completely enclosed within a forestry clearing, c.70m by c. 55m in extent (Figures 5-8). Over the last two decades the forestry plantation has affected the vegetation surrounding the monument, probably as a result of decreased natural drainage, which has encouraged more invasive bog-loving species to become dominant vegetation cover. This has resulted in diminished visibility of the cairn (Figure 5, 7 and 8) and the increased level of penetrative bioturbation by the roots of invasive species such as bracken, rush and heather (Mithen and Maričević 2015a).



Figure 6. View of Beinn Tart a'Mhill with the forestry plantation in which Slochd Measach is located, approximately in line with the mast on the summit (Photo: S. Mithen)



Figure 7. Slochd Measach chambered cairn in February 2014, view from the west. (Photo: S. Mithen)



Figure 8. Slochd Measach chambered cairn in January 2015. Views from the northeast (top) and the north (bottom). Note the increase in the vegetation cover around the cairn in relation to photos in Figures 5 and 7. (Photos: S. Mithen)

Henshall (1972) noted that ‘a considerable growth of peat has grown around the site’, as well as the absence of cairn material around the orthostats of the chamber. She believed that the chamber, which was filled with water, had once been cleared on account of the low floor level in relation to the surrounding ground surface. As in 1972, several stones of a straight-looking façade remain *in situ*, while several others have been displaced and now in

recumbent positions. The chamber has four compartments forming an overall length of 7.5m. The architecture of the rear compartments is generally better preserved. The capstones, although displaced, still partly cover these two compartments. At the distance of 10m SSW of the rear of the chamber there is an additional upright stone, which might have been moved away from the cairn, although it is impossible to know without excavation (Figure 1, RCAHMS 1984). The cairn belongs to the Clyde tradition, as do the other chambered cairns on Islay (Henshall 1972). The dating of this type of chambered cairn has already been discussed above. Apart from the excavation of Port Charlotte in the 1970's, the only 'excavation' of chambered cairns on Islay occurred at the beginning of the 20th century, at Cragabus and Ballynaughton (Figure 4; Bryce 1902:109-114).

2.2 Summary of the results of the 2015 survey and test-pitting

A survey of Slochd Measach (Giant's Grave) was carried out between 22nd and 29th of August 2015 by a team from the University of Reading and Bournemouth University, led by Steven Mithen and Darko Maričević, Scheduled Monument and Section 42 Consent (having been granted by Historic Scotland. All of the fieldwork undertaken took place within the scheduled area, which is 40m in diameter centred on the monument itself (Figure 2, File Ref. SC 27281/1B and John Raven (HES) pers.com.), and it followed the methodology specified in the 2015 Project Design (Mithen and Maričević 2015b), which accompanied the SMC application.

The fieldwork included the following: vegetation survey; vegetation cropping; photographic, digital and drawn recording of the chambered cairn; topographic survey; geophysical survey (electrical resistance); test-pitting (twenty 0.5m² test-pits spread out across the clearing and five 1m² test-pits positioned around the remains of the chamber); environmental sampling and processing; obtaining four C14 dates from the upper part of the sequence exposed in 1m² test-pits; public talk on Islay promoting the aims of the project.

2.2.1 Vegetation survey and cropping

One of the main aims of the project was to evaluate the state of the preservation of the monument in relation to the increased waterlogging, invasive vegetation cover and disturbance, so that this information can be used in the future management of the scheduled monument (Mithen and Maričević 2015b). Vegetation survey and vegetation cropping in 2015 has exposed the full extent of the problem. The monument has all but disappeared in tall bracken, rushes and heather (Figures 8 and 9) and the rushes are growing in the interior of the chamber, especially the front two compartments where the capstones are absent and some of the orthostats have fallen down. The interior of the chamber was filled with water throughout, so that there was no possibility of visually evaluating the damage occurring below the water level, except noting that the rushes were well established inside this part of the monument (Figure 8). In conclusion we expect that if there are any archaeological deposits surviving in the interior of the chamber, these could be severely affected by the root disturbance.



Figure 9. View of the monument from the south prior to vegetation cropping with ranging rods marking each end.



Figure 10. The same view after the cropping of the vegetation

2.2.2 Recording of the upstanding remains of the chambered cairn

Following the cropping of the vegetation it was possible to record the exposed part of the chambered cairn, namely the freestanding megaliths and those recumbent stones which were visible on the surface. The plan in Figure 11 shows the remains of the chamber and the façade without two 'outliers' located several meters to the southwest and the southeast (Figure 18). The stones of two different geological compositions have been represented in different colours. The majority of the megaliths are made of greenish metagabbro, but

several are composed of syenitic gneiss (pers.comm. David Webster), which is pinkish in colour and these stones are represented as such.

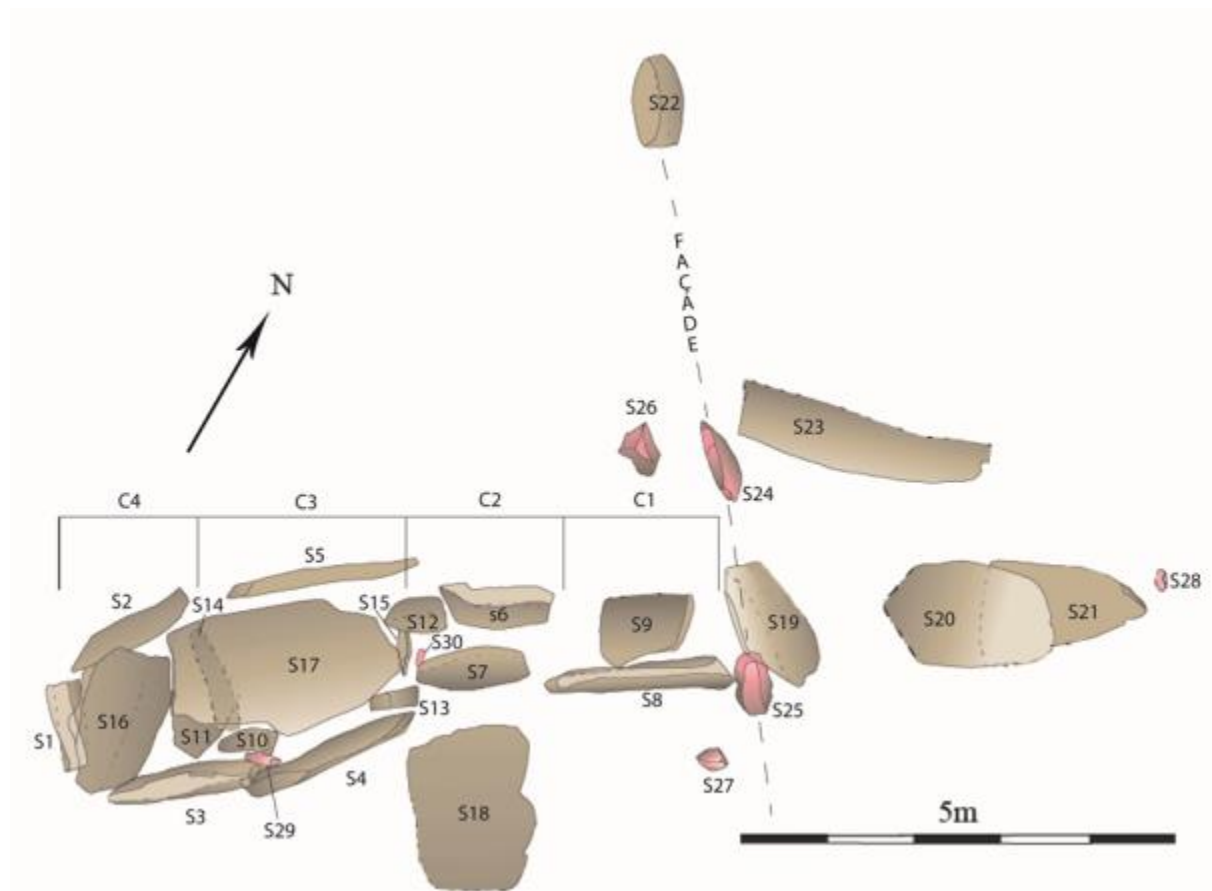


Figure 11. Plan of Slochd Measach with the stones numbered in sequence from 1 to 30

There is an apparent kink between the orientation of the two inner compartments C4 and C3 and the two outer compartments C2 and C1 (Figure 11). Only the axis of the inner chambers C4 and C3 is roughly at the right angle to the line of the façade, of which three stones remain in position, S22, S24 and S25 (Figure 11). Somewhat smaller orthostats (S6, S7) of compartment C2 are both leaning inwards and orthostat S9 of the front compartment C1 has fallen. The line of the remaining in situ front orthostat S8 is, however, at the angle to the back part of the monument. Although this appearance could be due to the current state of preservation of the front two compartments, it is also possible that the apparent difference in the orientation of the two parts of the monument is due to the history of construction, suggestive of two separate phases.

2.2.3 Topographic survey

The actual position of the chambered cairn has been corrected in relation to the information available from the Ordnance Survey maps and previous archaeological surveys of the monument (Figure 12). The discrepancy was undoubtedly a product of the forestation

around the monument after the archaeological surveys have been already conducted. The area in the northeast of the clearing, as marked out on the OS map, does not correspond to anything visible in the field. The monument sits centrally in the northern part of the clearing on the WSW-ENE orientation, occupying a level terrace edge parallel with the break of slope to the south. Such a position enhances its visibility from the lower ground, as it could be appreciated after the cropping of the vegetation (Figure 10).

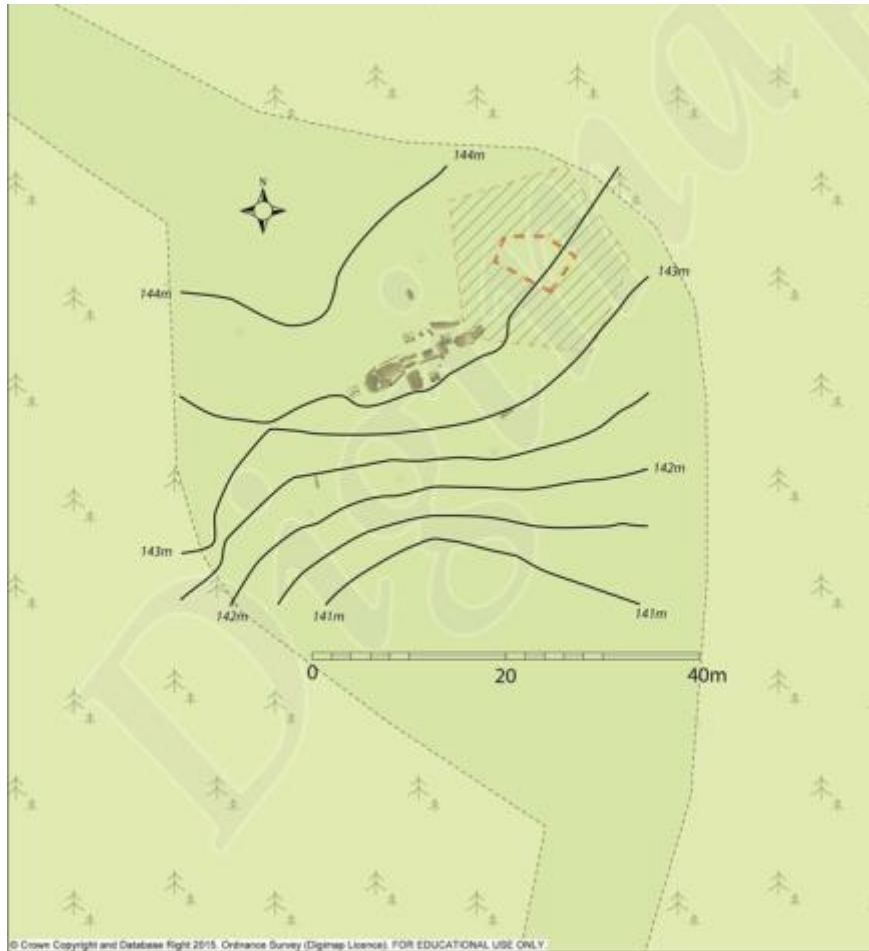


Figure 12. Corrected position of Slochd Measach chambered cairn in relation to the OS map and the topographic survey of the clearing

During the Neolithic period, the monument would have been more imposing than at the present day because it has become obscured by the substantial growth of peat has accumulated around the megaliths and across the rest of the clearing. The excavated test-pits, arranged at 10m spacing across the grid, enabled an approximation of the pre-peat ground surface (Figure 13). The peat is the thickest in the area occupied by the back end of the chamber and the ground to the west of it, it reaching up to 1m deep in places, while elsewhere the peat was on average approximately 0.5m on average. Overall, the indication is that the pre-peat formation topography was not dissimilar to the modern contours and that the peat growth was higher on the level ground of the terrace than on the steeper slope to the south of the chambered cairn.

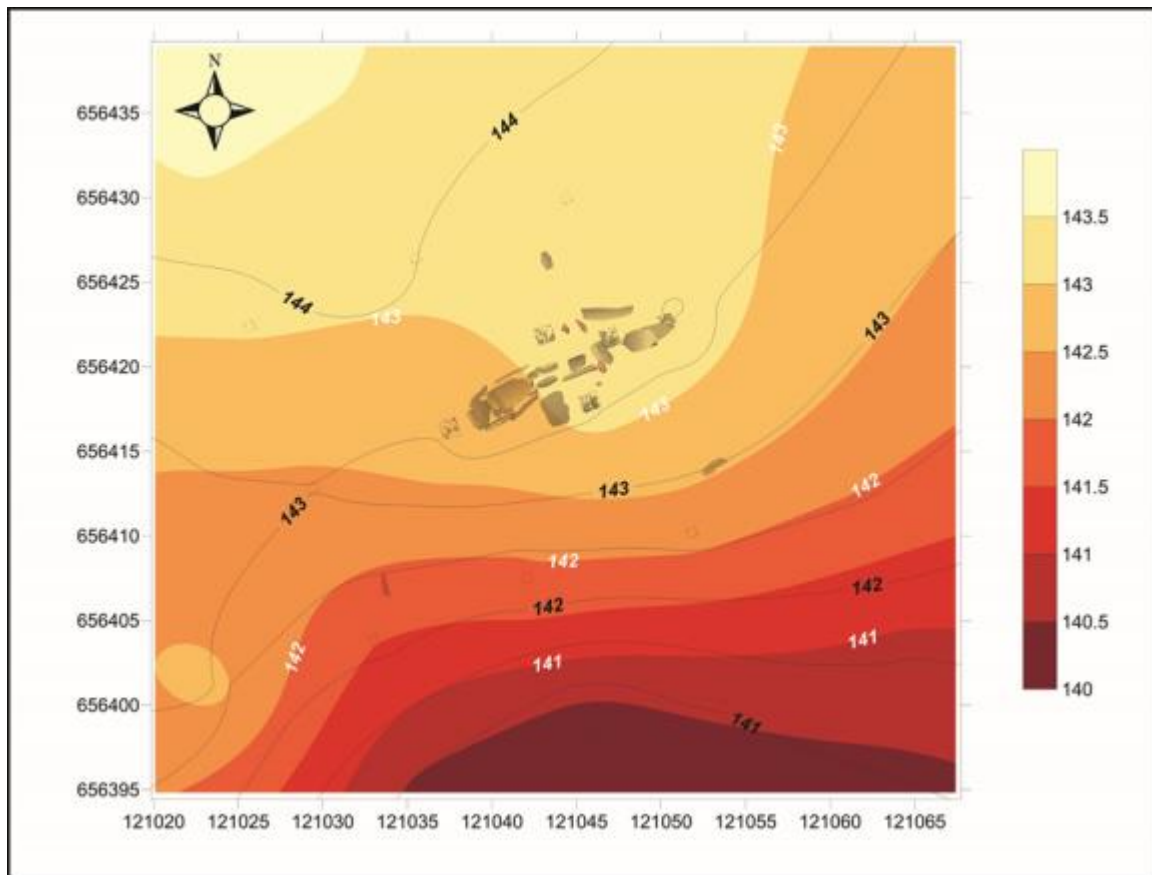


Figure 13. Comparative topography of the modern ground surface (black contours) and the base of the peat (colour contours) in relation to the monument

2.2.4 Electrical resistance survey

The electrical resistance survey grid measured 30m by 20m and was positioned to encompass the main area of the chambered cairn as well as the outliers to the southwest and the southeast (Figure 14). Processed results show several features of archaeological interest, which can be divided into those in the immediate proximity of the megalithic chamber and those which are at some distance from it, mainly to the south.

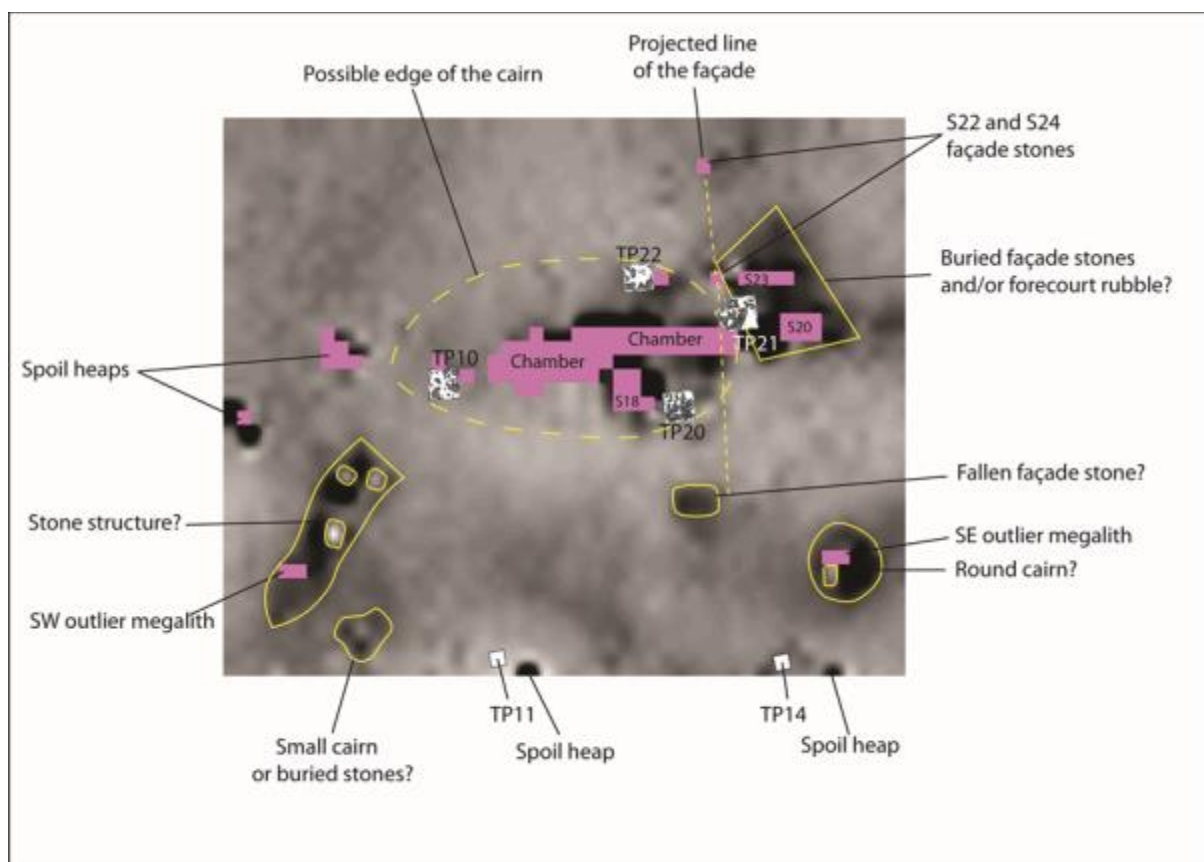
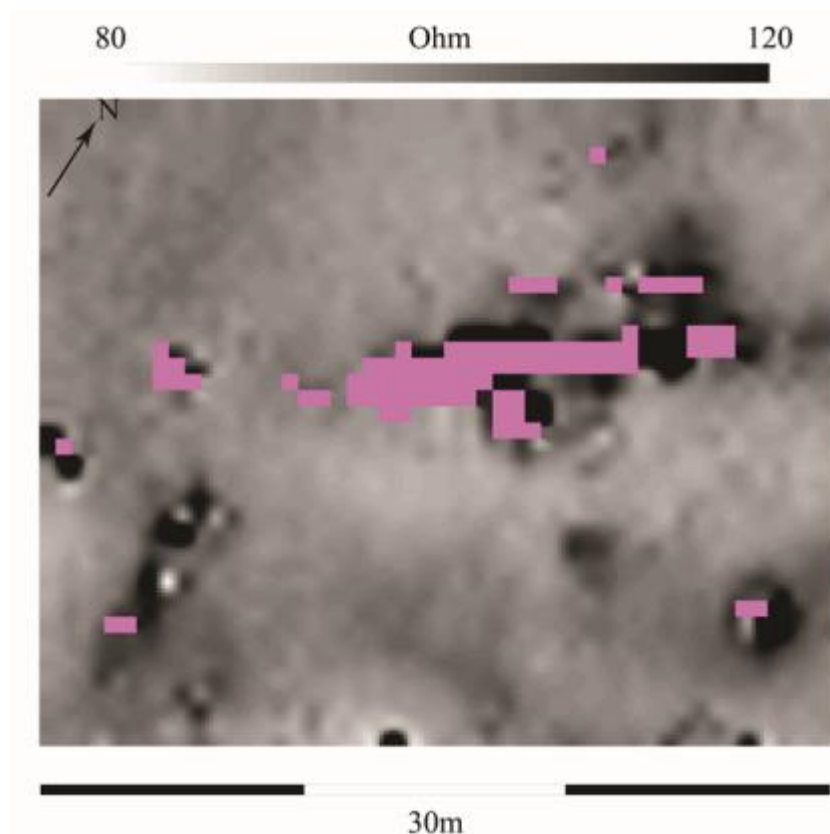


Figure 14. Top: Resistivity plot (clipped and interpolated) for clarity. Bottom: Annotated resistivity plot with interpretation.

In the area immediately next to the chamber and between the visibly surviving part of the chamber and the displaced megaliths there are strong anomalies of high resistance indicating further stone-built architecture, whether in the form of buried megaliths or in the form of concentrated cairn rubble. It is noticeable that the strongest anomalies run along the front part of the chamber, which is not as well preserved and has a higher number of missing stones. The largest area of high resistance in the plot is to the east of the projected façade line or in the forecourt area of the chambered cairn where some of the large displaced megaliths, such as stones S20, S21 and S23 are located. This would be consistent with buried rubble deposits and/or further buried megaliths, such as fallen façade stones. At the southern 'end' of the projected façade line a discrete high resistance anomaly is suggestive of a buried megalith, perhaps an inward fallen façade stone (Figure 14).

There are two further areas of interest focused around the two outlier stones, which are visible on the surface (Figure 21). The simpler of the two surrounds the outlier stone in the southeast and consists of a round area of high resistance, 3.2m in diameter, with a small area of much lower resistance within it and immediately adjacent to the prone stone. The shape and the size of the anomaly and the high resistance suggestive of stone rubble might indicate a location of a round cairn, with a possible negative feature inside it indicated by the low resistance anomaly. If this was the case, then the location of the south-eastern outlier in relation to the chambered cairn would gain new significance in association with so far unknown round cairn.

The anomalies surrounding the south-western outlier stone are more complex. The linear anomaly might indicate a stone-built structure on account of a line of stones which are partly visible on the surface to the north of the outlier stone. Alternatively this could be the top of a bedrock outcrop. Similarly the smaller anomaly to the east could indicate buried stones or a small cairn, but the interpretation for now has to remain open.

2.2.5 Test-pitting and C14 dating

A series of 0.5m² test-pits were excavated across the clearing (Figure 15) in order to establish sequence of deposits and evaluate the wider area around the chambered cairn for presence/absence of archaeological deposits and artefacts and their preservation. The established deposition history across the clearing, based on the sequence of deposits in 0.5m² test-pits, was relatively simple and uniform across the entire investigated area. The uppermost deposit was a layer of brown peat. The peat was lighter and impregnated with roots in the top part and progressively darker and cleaner with depth. The peat was overlying dark greyish brown silty loam, which was often stony and mottled. The base of the deposit was characteristically filling the voids between the stones and clefts in the bedrock. Occasionally natural chips of quartz were found in this layer among the other stony inclusions. This horizon was interpreted as a buried soil, which predated the onset of the peat formation across the clearing and constituted the ground surface at this time. No artefacts were found in any of the 0.5m² test-pits.

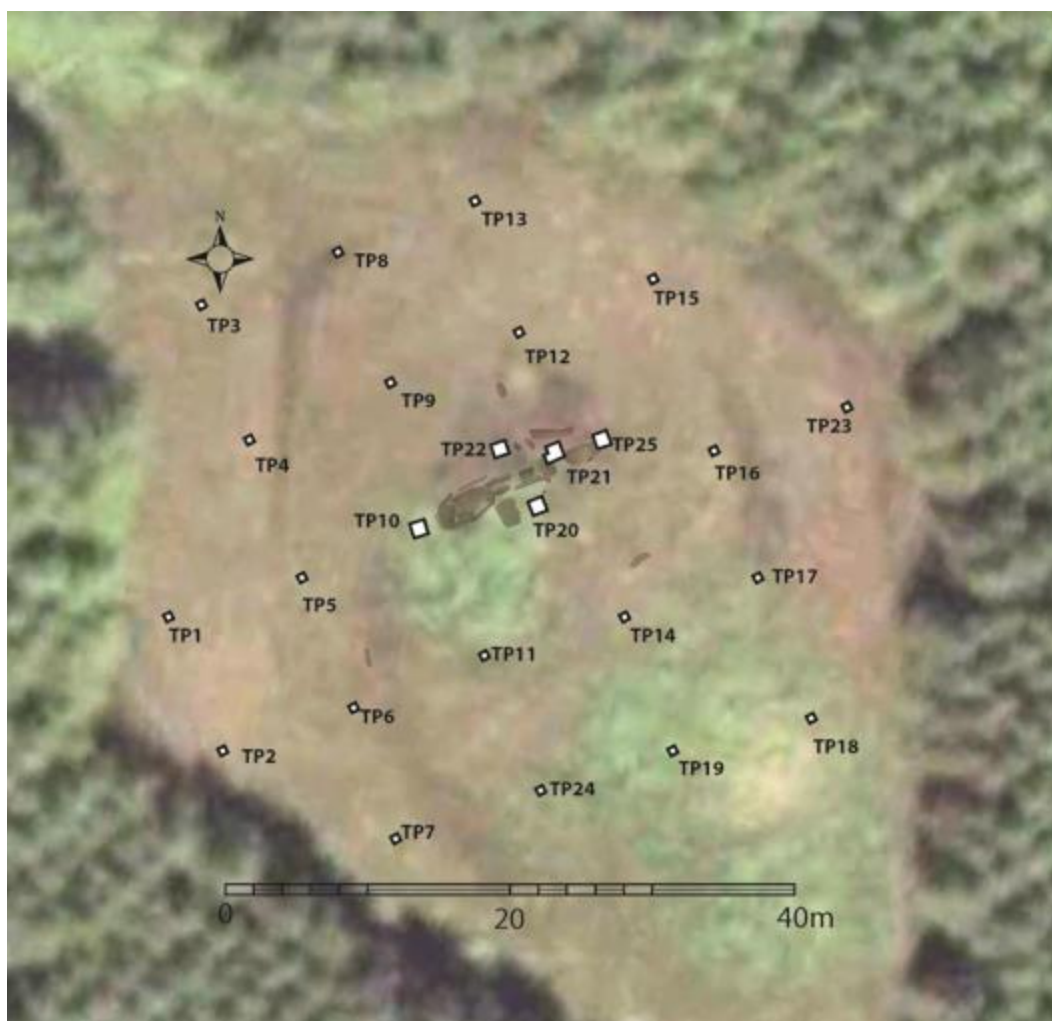


Figure 15. Location of all test-pits in relation to the plan of the chambered cairn georeferenced onto a Google Earth image

The purpose of the 1m² test-pits (TP10, TP20, TP21, TP22 and TP25) was to investigate survival and preservation of the archaeological deposits surrounding the cairn, including the cairn rubble for which the evidence was lacking (Henshall 1972, RCAHMS 1984). It was also hoped that the larger test-pits will allow greater clarity of potentially complex archaeology and stratigraphy and that they might provide the opportunity to obtain radiocarbon samples for C14 dating of different archaeological phases in the history of the site. This includes the date for the construction of the cairn and any potentially earlier deposits, which would be invaluable for the study of the Mesolithic-Neolithic transition, both locally and wider.

The difference in the stratigraphy of the larger test-pits in relation to the 0.5m² test-pits described above was that in all of the 1m² test-pits the peat was overlying substantial rubble deposits. None of the 1m² test-pits have been excavated to below these rubble deposits, which contained stones too large to excavate within the constraints of the test-pits. Additional difficulty in their excavation was that the test-pits were continuously filling up with water which was pouring through the peat from the water-filled chamber.

The larger set of test-pits around the upstanding chamber of the cairn has providing the information about the survival of the archaeological deposits surrounding the chamber. Test-pits TP10, TP20 and TP22 all produced similar sequences consisting of a thin layer of dark peaty silt overlying substantial and randomly sized rubble deposits (Figure 16). These deposits are in the right location in relation to the chamber to be interpreted as the cairn material, although the exact form, extent and thickness could not be determined primarily due to the small size of the test-pits relative to the nature of the deposit. None of the rubble deposits encountered within these test-pits was fully excavated and, hence, the objective relating to the dating of the cairn could not be realised as the excavation did not penetrate beyond suspected cairn material.

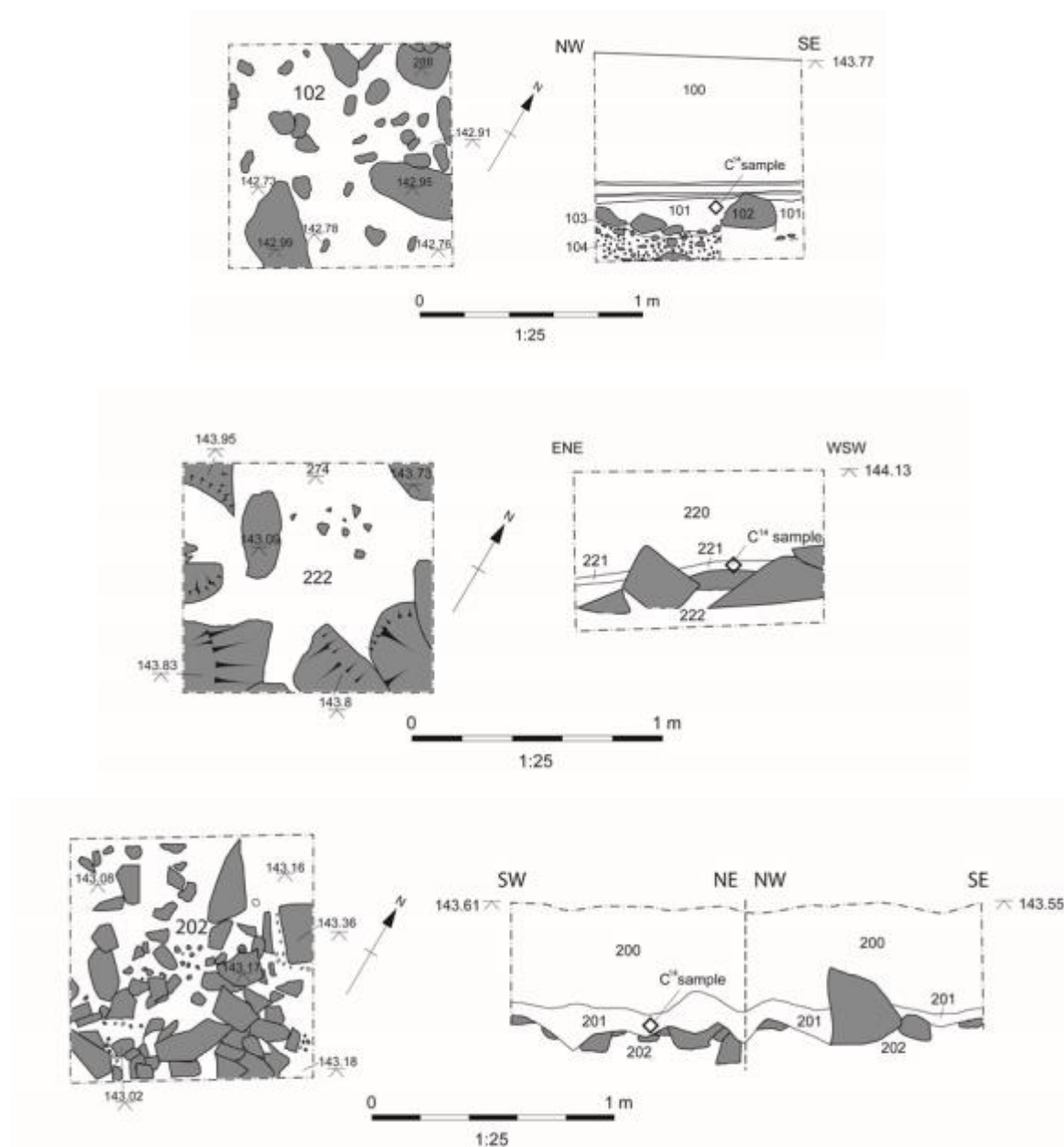


Figure 16. Plan and section drawings for test-pits TP10 (top), TP22 (middle) and TP20 (bottom) showing the locations of the C14 samples at the base of the peat.

The radiocarbon dates obtained from these test-pits indicate that the formation of peat on top of these rubble deposits is relatively recent event dating to the last 300 years or so (Table 1). This is interesting with regard to both the history of the use of the site and the broader environmental picture concerning the land-use around Beinn Tart a’Mhill. This evidence serves to illustrate how quickly a monument of a considerable size can be engulfed by peat and vegetation given the right conditions. The two dates obtained from the uppermost levels of rubble deposit (202) in TP20 fall into the Early/Middle Iron Age. The presence of Iron Age charcoal indicates some kind of activity on the site at this time and adds a new dimension to its history. What this activity might be is unclear at this stage and it brings an additional set of questions and expectations for future research.

Laboratory Code	Sample ID	Material and context	$\delta^{13}\text{C}$ (‰)	^{14}C years BP	Posterior density estimate		χ^2 -test
					Cal BP	Median	
Beta-421421	GG15/TP10<101>/ W-facing section /77-72cm/peat	Burial cairn <i>terminus ante quem</i> - plant fraction from base of peaty gley <101> forming after construction of cairn, exposed in TP10 at 77-72 cm below present surface	-27.1	240 ± 30	430-10	290	Dataset failed tests for statistical consistencies
Beta-421420	GG15/TP20<201>/ S-facing section /18-13cm/Peat	Burial cairn <i>terminus ante quem</i> - plant fraction from base of peaty gley <201> forming after construction of cairn, exposed in TP20 at 18-13 cm below present surface	-28.0	101.3 ± 0.3	260-30	230	
Beta-421419	GG15/TP20/Ch/ Salicaceae/b	Wood charcoal from short-lived species of tree/shrub (willow) collected from the ‘rubble’ layer associated with burial cairn exposed in TP20	-27.8	2300 ± 30	2360-2180	2330	
Beta-421418	GG15/TP20/Ch/ Salicaceae/a	Wood charcoal from short-lived species of tree/shrub (willow) collected from the ‘rubble’ layer associated with burial cairn exposed in TP20	-26.4	2390 ± 30	2490-2340	2390	

Table 1. C14 dates obtained from 1m² test-pits in 2015 fieldwork season

The most interesting stratigraphic sequence in relation to the history of the chambered cairn was in TP21 (Figure 17). The relationship between stones S19 and S20 was established proving that S19 was moved at some time from its original position and got to rest on top of heavily leaning S20. The base of S20 was not observed and it is possible that this stone has simply tipped forward from its original position at the entrance of the chamber, which would make it a likely portal stone. Stone S19 was most likely a capstone of the front compartment C1 and was tipped forwards from its original position. Rubble deposit (211),

which was otherwise similar to the rubble in TP20 or TP22, was overlying both S19 and S20, thus post-dating the displacement of these stones. Considering the Iron Age dates from similar rubble in TP20, one could postulate a scenario where these events are related, although that can only be proven by further excavation and dating.



Figure 17. View of test-pit TP21 from the northwest in relation to the megalith stones S19, S20 and S23 (left); exposed rubble deposit (211) overlying S20 and abutting S19 (top right); and the relationship between S19 and underlying S20 after the excavation of rubble (211) (bottom right).

In summary, while the test-pitting in the area of the chambered cairn (1m² test-pits) proved informative in regard to the more recent part of the archaeological sequence, as well as the changing environmental conditions, it was not possible to gain insight into the questions of pre-construction and construction history of the chambered cairn and its dating. It is clear from the experience of the 2015 fieldwork that these questions can only be addressed by excavation of a wider open area, which would allow clarity of different rubble deposits in relation to the chamber and to each other and the ability to investigate part of the sequence underlying the rubble deposits including the construction and pre-construction horizons. This part of the archaeological sequence is crucial to the overarching aims of the project to investigate the potential of the site to contribute to the understanding of the Mesolithic-Neolithic transition on Islay and its broader geographic context.

2.2.6 Conclusions

The combined results of the different strands of the 2015 fieldwork have shown that:

1. There is an active threat to the archaeology on the site from invasive vegetation, waterlogging and further peat inundation. Perhaps the single most significant threat from the vegetation and root disturbance is within the front two compartments of the chamber, which are completely open to the elements and have established vegetation growing inside them;
2. The initial formation of peat is a relatively recent event dating to the last 300 years, which corresponds well with the archaeological and historical evidence for the landscape enclosure and the agricultural use of land on the slopes of Beinn Tart a'Mhill in historic times;
3. It is likely that there has been substantial robbing of the cairn material in the historic times resulting in the exposure of the chamber and its architecture, which may have been already disturbed/robbed in the later prehistory. The C14 dates from the top of the rubble deposit (202), identified in test-pit TP20, indicate Early/Middle Iron Age activity on the site, while rubble deposit (211) in test-pit TP21 was laid over already displaced/disturbed megaliths;
4. Substantial rubble deposits are still present on all four sides of the chamber as identified by test-pitting and further indicated by the results of the electrical resistance survey. The geophysics plot suggests a vague outline which might correspond to the edge of the cairn and further high resistance anomalies, especially in the forecourt area of the cairn;
5. The apparent misalignment of two parts of the chamber might indicate added complexity in the development of the cairn, which would not be unexpected in a Clyde type cairn, several of which have been shown by excavation to consist of several phases of construction;
6. Electrical resistance survey has also identified probable archaeological features/structures in the area of two outlier stones, one of which might be a smaller round cairn and the other possible linear structure;
7. The 0.5m² test-pits have provided a uniform picture of the stratigraphic sequence and the deposition history across the clearing, identifying varying thickness of peat and the presence of underlying buried soil horizon. There were no artefacts from any of the 0.5m² test-pits, which might suggest low level of activity in the past away from the monument itself, although the test-pits provided relatively small sample coverage;
8. There is a large amount of interest among the community and stakeholders on Islay in the monument and the prehistoric archaeology in general, as shown by the high attendance to the public talks and the overwhelming support for the project;

3. Aims and objectives for 2016/17 excavation and survey

The aims of the evaluation season as set out within the 2015 Project Design (Mithen and Maričević 2015b) were:

1. To evaluate the state of the preservation of the monument including the soil profiles, with particular regard to the current vegetation cover and root disturbance;
2. To evaluate the soil profiles on the site with regard to the presence and preservation of archaeological deposits and palaeoenvironmental evidence;
3. To obtain modern digital record of the monument, the surrounding topography and any other relevant archaeological features in the vicinity;
4. To evaluate the potential of the site in contributing to the study of the Mesolithic-Neolithic transition on Islay and in western Scotland;
5. To contribute to the local understanding, appreciation and care for the heritage on the Isle of Islay.

The first three aims have been successfully addressed by the scope of the investigation in 2015 although further fieldwork would continue to improve our understanding of the site taphonomy and its changing environment. Equally, the recording of this architecturally imposing prehistoric monument can be further enhanced through the application of 3D scanning and photogrammetry, as already demonstrated on similar monuments elsewhere in western Scotland (<http://www.scottishheritagehub.com/content/workshop>). The new ways of recording and digitally reconstructing the monument would be a valuable tool in its interpretation and visualisation, which would help to inform and educate a range of audiences.

With regard to the fourth aim the potential contribution of the site to the study of the Mesolithic-Neolithic transition remain largely unknown because the archaeology of its initial construction, and what may have preceded it, have not been established. In retrospect, even without the heavily waterlogged conditions the 1m² test-pits would not have been able to address these questions because of the thickness of the peat and the large size of the stones in the underlying rubble deposits compared to the small size of the test-pits. On the other hand, this is exactly why the test-pitting proved successful evaluation methodology, bringing forth the information required for planning the next phase of investigation, which accordingly has to avoid the pitfalls of narrow trench excavation.

The fifth aim of the 2015 fieldwork – enhancing local understanding and appreciation of the prehistoric heritage by the island community – was addressed via a well-attended public lecture and publicity brochures. This remains the central focus of an associated community archaeology project being led by Steven Mithen.

In the light of the results of the evaluation and the survey work carried out in 2015 and in direct response to as yet unanswered questions related to the circumstances of the initial construction of the chambered cairn, we now propose a plan of investigation to be carried out in 2016 and 2017:

1. To investigate the threat posed by vegetation inside the open part of the chamber and undertake rescue excavation, if necessary, as means of preservation by record of any deposits that might be affected by the disturbance;
2. To gain better understanding of the morphology, stratigraphy and construction history of the chambered cairn;
3. To gain understanding of the site prior to the construction of the chambered cairn;
4. To gain understanding of the ways in which the monument and the site as a whole were used in the Neolithic and subsequent periods;
5. To reconstruct absolute chronology for all parts of the archaeological sequence including pre-, during and post-chambered cairn phases of activity;
6. To use the results of the investigation and its published outcomes to create the basis for a funding application to AHRC in support of a wider landscape based project looking at the Mesolithic-Neolithic transition on Islay;

Fieldwork objectives specifically designed to meet these aims are as follows:

1. To empty the chamber of water in order to investigate the internal deposits within the front two compartments of the chamber (C1 and C2) and establish whether any *in situ* deposits survive in this part of the tomb;
2. To carry out archaeological excavation of four trenches (Trenches 1-4, Figure 18) in the course of two seasons, each lasting two weeks. Trenches 1 and 2 are conjoined and are designed to meet the aims related to the morphology, stratigraphy, phasing, use and dating of the chambered cairn, while Trenches 3 and 4 are targeting the geophysical anomalies spatially related to the two outlier megaliths to the southeast and the southwest of the chamber;
3. To obtain dating evidence for all parts of the sequence including any possible pre-construction deposits, the initial construction of the chambered cairn and any possible subsequent phases of construction or other Mesolithic/Neolithic and later activity that can be identified by the excavation;
4. To carry out further recording of the monument's architecture by the means of 3D scanning and photogrammetry;
5. To expand the existing limits of the geophysical survey and obtain the coverage across the entire clearing;

4. Proposed fieldwork and methodology

4.1 Vegetation cropping and water management

Following the survey and thorough cropping of the vegetation carried out in 2015 it is expected that the cropping of vegetation in 2016 and 2017 season will not need to be as intensive, but the renewed summer growth is expected and some cropping will be required, especially in the areas at the distance from the chamber. The cropping of the vegetation will take place around the cairn to enable the excavation and the recording. Further cropping will be carried out across the clearing to enable geophysical survey. Any vegetation adjacent to the upstanding or recumbent stones of the chambered cairn will be carefully cropped using hand tools to avoid any chance of damage to the monument.

Water from inside the chamber will be initially pumped out with the aid of a generator pump with 50mm inlet/outlet diameter followed by bailing out with the aid of buckets and sponges. The water levels will have to continue to be managed during the course of the excavation as the trenches will have to be bailed out on regular basis due to the saturated nature of the surrounding peat.

4.2 3D survey and recording

Having produced up to date digital plan and elevations, as well as hand drawn record, of the chambered cairn in 2015 (Mithen and Maričević 2015a) we wish to enhance the record of the monument further by the application of 3D recording techniques. Following a successful trial on several chambered cairns on Arran commissioned by the Forestry Commission Scotland (<http://www.scottishheritagehub.com/content/survey-arran>) we wish to undertake a 3D photogrammetry survey at Slochd Measach at during 2016 season. For the photogrammetric 3D modelling of the chambered cairn we will be using *Agisoft PhotoScan* software to process geo-referenced digital images taken with a top of the range photo camera. If considered to a further advantage in the recording of the monument we will also carry out 3D terrestrial laser scanning survey in 2017. The survey will be carried out using Leica HDS6100 laser scanner with the aid of Leica GS09 GPS rover and Leica TCR 407 total station if necessary. The 3D scanning and the photogrammetry of the monument will be carried out by Dr Darko Maričević and Sarah Lambert-Gates from the University of Reading.

It is hoped that the 3D modelling and visualisation can be expanded in the future onto the other five chambered cairns on Islay and that the resulting imagery can be used by the heritage professionals and the Islay community in the presentation of the island's prehistoric heritage.

4.3 Geophysical survey

The geophysical coverage of the entire clearing at Slochd Measach was one of the original objectives proposed in the 2015 Project Design (Mithen and Maričević 2015b), which was

not possible to fully implement due to the weather and the time constraints. In addition, the attempt to survey the site with magnetometry was cancelled after the exploratory scan of the site with *Bartington Grad601* fluxgate gradiometer. This revealed that the geology emitted very strong magnetic background 'noise', which was preventing correct balancing of the instrument and, hence, the magnetic survey was not possible. It is feasible to balance the instrument on a more neutral geological background and transport it to the site, but this was logistically impractical in the given time frame. We would like to re-attempt the magnetic survey at Slochd Measach in 2016 and 2017 for which we seek Section 42 Consent for the use of magnetic geophysical equipment for research purposes. We are hoping that this will be successful and that in the course of next two fieldwork seasons we can complete complementary magnetic and electrical resistance surveys across as much of the clearing as possible. The extended surveys will provide a broader archaeological context in which the chambered cairn is set. To the best of our knowledge the magnetic survey will be the first such contribution for the application of magnetic survey equipment on the unique geological make-up of this part of the Rinns of Islay where predominant bedrock is composed of 1.8 billion years Palaeo-proterozoic gneisses known as Rinns Complex.

Magnetic survey will be carried out using *Bartington Grad601* fluxgate gradiometer with 0.5m traverse spacing and 0.25m reading intervals insuring high resolution coverage of the site. The geophysics data will be processed using *Geoplot* software. If successful, magnetic survey might be particularly useful in determining any burnt features or otherwise magnetically enhanced deposits, as well as most stone-built features buried in the peaty soils.

As in 2015 the electrical resistance survey will be carried out using *Geoscan RM15* resistance meter with the twin probe electrode configuration. The readings will be taken at 0.5m intervals along the traverses with 0.5m spacing, thus the resolution will be high and directly compatible with the magnetic survey. The electrical resistance survey might be particularly useful in determining the presence of buried stone-built structures and megaliths.

Geophysical surveys will be carried out by Dr Darko Maričević and Dr Rob Fry from the University of Reading.

4.4 Excavation

The following excavation proposal is specifically designed to meet the aims and objectives set out in Section 3. It is comprised of four excavation trenches, two of which are larger and conjoined (Trenches 1 and 2) and located over the remains of the chamber and the surrounding cairn and the smaller two (Trenches 3 and 4) positioned over the geophysical anomalies spatially associated with the outlying stones in the southeast and the southwest (Figure 1). Trenches 1 and 3 are planned to be excavated in 2016 field season and Trenches 2 and 4 in 2017, thus providing comparable amount of work per season.

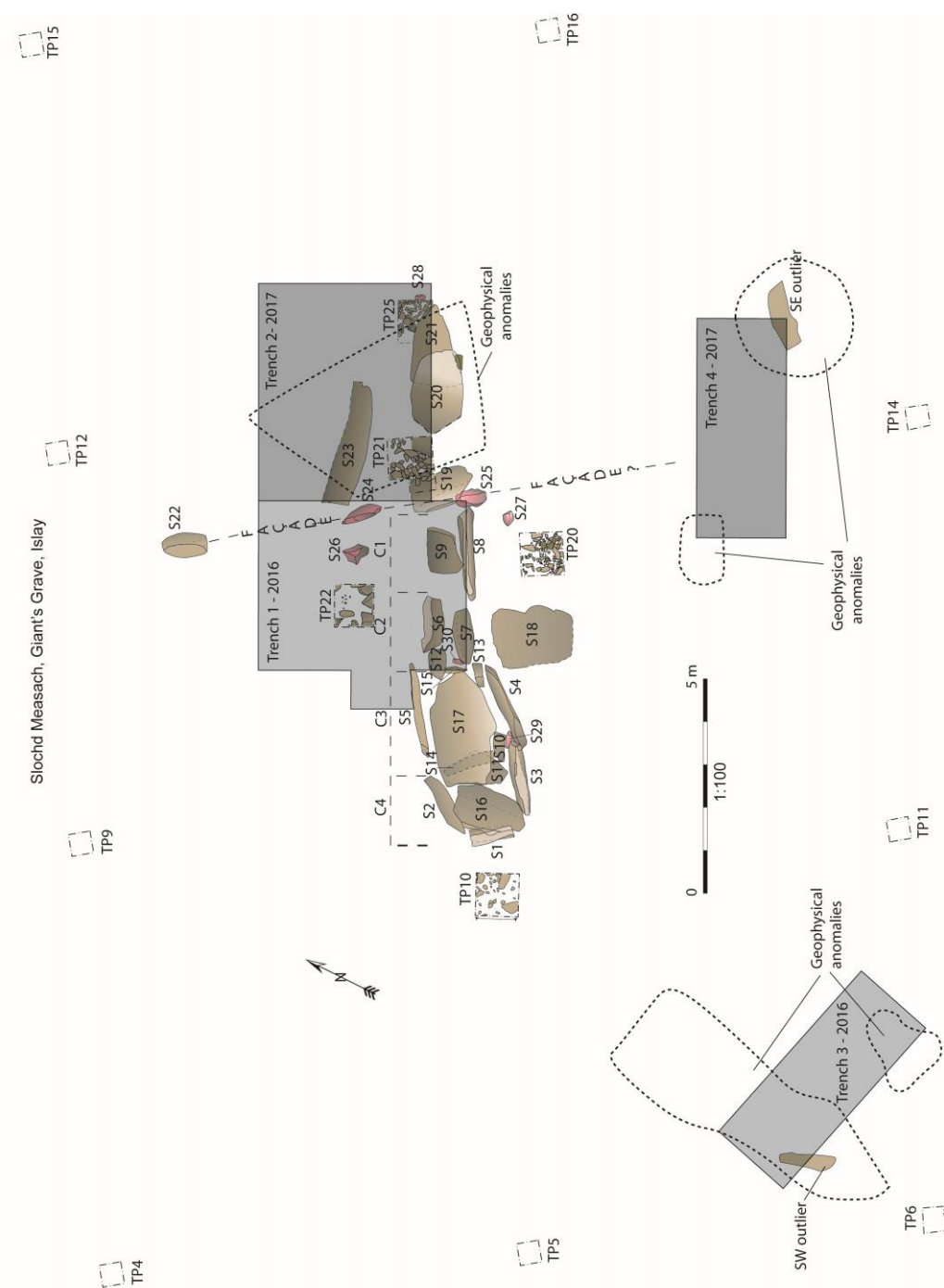


Figure 18. Plan of Slochd Measach chambered cairn showing the test-pits excavated in 2015 and the layout of the proposed trenches in relation to the cairn and the most significant geophysical anomalies

4.4.1 Trench 1 (2016)

Proposed Trench 1 is NW-SE orientated, its main part is 5m by 4m in area with a smaller 2m wide extension jutting out 1m to the SW along the outside of the compartment C3 of the chamber (Figure 1). The majority of the trench will be located alongside the northwest side of the chamber. This covers the area around test-pit TP22 where rubble deposit (222), thought to represent cairn material, was discovered in 2015. Trench 1 will attempt to define the distribution of this material to the northwest, establish the outer edge of the cairn, and determine the stratigraphic relationships between the cairn material and the orthostats of the chamber and the upstanding stones of the façade. The larger extent of the trench in comparison to TP22 will enable better informed sample excavation of the cairn material with the aim to establish the underlying stratigraphy and obtain dating material from all crucial parts of the stratigraphic sequence including the pre-construction horizons. The southwestern area of Trench 1 will run alongside apparently misaligned compartments C3 and C2 in order to investigate possibility of their separate construction and phasing. In the northeast of the trench we will investigate the northwest arm of the façade in order to establish the position of the missing stones and in combination with Trench 2 perhaps even locate some of the toppled and buried stones.



Figure 19. Cropping of vegetation inside chamber compartment C1 in August 2015 (left) and the view of the interior of compartment C2 after the cropping of the vegetation

In the southeast part of the trench we propose to investigate the interior of much disturbed compartments C2 and C1 and establish whether any in situ deposits survive within them. Considering the current environment in this part of the chamber (Figure 19) we expect that the total excavation and preservation by record of any soft deposits within the compartments might be the best policy. However, we propose to assess the interior of the compartments first, once the water has been bailed out, by cleaning off the top of the water-laid mud/turf to see if any archaeological deposits survive and if they are being disturbed by the roots. This will be followed by the consultation with Historic Environment Scotland via email (or in person if possible for HES staff to visit the site) which would present

visual evidence in the form of photographs and our recommendations regarding how to proceed. No further excavation inside the chamber will take place without the approval from HES.

In addition to mitigating the threat to any surviving deposits in the interior of these two chamber compartments, their excavation would contribute to the overall aims of the project and general understanding of the site. In the unlikely event that undisturbed Neolithic deposits have survived, it would be an opportunity to sample these for C14 dating, phosphate analysis and the environmental micro- and macro-fossil evidence.

4.4.2 Trench 2 (2017)

Proposed Trench 2 will be SW-NE orientated and measures 5m by 4m (Figure 18). It will be a continuation of Trench 1, but be excavated in the 2017 field season. Its purpose will be to investigate the stratigraphic sequence in the northwest part of the forecourt and to help reconstruct the façade, the portal stones and the entrance area of the chambered cairn. This information will contribute towards the overall reconstruction of the monument's appearance in the Neolithic and add crucial data to the 3D modelling of the upstanding part of the monument. We know from the excavation of test-pit TP21 that part of this area contains rubble deposit(s) which post-date the displacement of capstone S19 and portal stone S20; it is possible that this activity corresponds to the Iron Age dates obtained from TP20.

The results of the resistivity survey in this area are suggestive of much more extensive rubble deposits and possibly buried stones belonging to the monument. Open area excavation within Trench 2 will enable us to define spatial activity areas and establish stratigraphic and chronological course of events in the history of the monument, relating to the previous use of the location (if any), its construction and subsequent treatment. The southeast extent of the trench will not extend beyond test-pit TP21 thus not affecting the stability of leaning portal stone S20, which is additionally counterweighted by the overlying displaced capstone S19.

4.4.3 Trench 3 (2016)

Trench 3 will be 5m long and 2m wide and roughly E-W orientated. It is designed to be positioned over two different high resistance anomalies, the larger of which runs on an N-S alignment below the southwestern outlier stone and the other is c.3m to the east. Trench 3 will effectively evaluate these anomalies, their archaeological significance and any potential relationship with the outlying stone and with each other. Considering their size and shape it might be possible that they represent stone built structures, but it is equally possible that the high resistance derives from a bedrock outcrop buried by the peat. Excavation in Trench 3 might also provide information on whether the outlying stone has been moved into its current location or perhaps represents a standing stone that has toppled in its original location.

Considering the unknown nature of the archaeology in Trench 3 we suggest a two stage excavation approach. The first stage would be to remove the overlying peat and clean onto the uppermost recognisable archaeological deposits. The second stage, which would include further excavation of the archaeological deposits and features, would be carried out in consultation with HES, having informed them by email (or in person if possible), of the content and the nature of the archaeology.

4.4.4 Trench 4 (2017)

Trench 4 will be 6m long and 2m wide and excavated at the same time as Trench 2 in 2017. The trench is roughly E-W orientated and links two different geophysical anomalies, the larger of which might be a circular cairn underlying the southeastern outlier stone. The trench would investigate the north half of the putative cairn at its east end, while its opposite end would investigate a smaller high resistance anomaly, which might be a buried megalith, perhaps associated with the southeast arm of the façade of the chambered cairn. The alignment and the positioning of Trench 4 are designed to investigate whether the façade extended that far to the southeast, thus mirroring the length of the northwest arm with surviving stone S22 at the end.

Considering the unknown nature of the archaeology in Trench 4 we suggest a two stage excavation approach. The the first stage would be to remove the overlying peat and clean onto the uppermost recognisable archaeological deposits. The second stage, which would include further excavation of the archaeological deposits and features, would be carried out in consultation with HES, having informed them by email (or in person if possible), of the content and the nature of the archaeology.

4.4.5 Excavation and environmental sampling methodology

The excavation of all trenches will be carried out with hand tools and it will be recorded using single context recording system tied into the overall digital survey of the site. All archaeological deposits will be photographed and drawn at the scale of 1:20, all sections to the scale of 1:10. Any newly exposed architectural parts of the chambered cairn will be incorporated into the 3D scanning/photogrammetry part of the recording process. Any features will be excavated to less than 50% of their total, thus leaving part of the *in situ* deposits for future research. All small finds will be recorded in 3D using a GPS rover or a total station. Bulk samples (20l) from each context will be wet sieved through 4mm sieve in order to recover very small artefacts and/or ecofacts. Further samples from key contexts will be taken for flotation and laboratory fine sieving through 4mm/2mm/1mm/0.5mm sieves. Further specialist samples (e.g. pollen, phytoliths, geochemistry) might be taken as required in consultation with palaeoenvironmental specialist Dr Karen Wicks from the University of Reading who will advise on the overall environmental sampling policy. If required micromorphology samples through buried soil horizons and/or other archaeological surfaces will be taken.

4.5 Reinstatement

Following each season the site will be returned to its original state. All excavation trenches will be backfilled at the end of each season. Special care will be taken during the excavation and recording of the cairn material, which will be reinstated according to the 3D records obtained prior to its excavation, so it resembles its original appearance and stratigraphic order as closely as possible.

5. Post-excavation and reporting

Each season of fieldwork will generate post-excavation tasks, which will be carried out at the University of Reading in the immediate aftermath of the fieldwork. These will include:

1. Preparation of photographic record and site drawings, to be undertaken by Sarah Lambert-Gates and Dr Darko Maričević;
2. Processing of the 3D survey and photogrammetry data, to be undertaken by Sarah Lambert-Gates and Dr Darko Maričević
3. Preparation of topographic and geophysical survey results and their interpretation to be undertaken by Dr Rob Fry and Dr Darko Maričević;
4. Data entry of the excavation records;
5. Wet sieving, stack sieving and flotation of sediment bulk samples;
6. Geochemical and particle size analysis of sediment samples;
7. Micromorphological analysis;

The following post-excavation tasks may also be required depending upon the results of the fieldwork and processing of bulk samples:

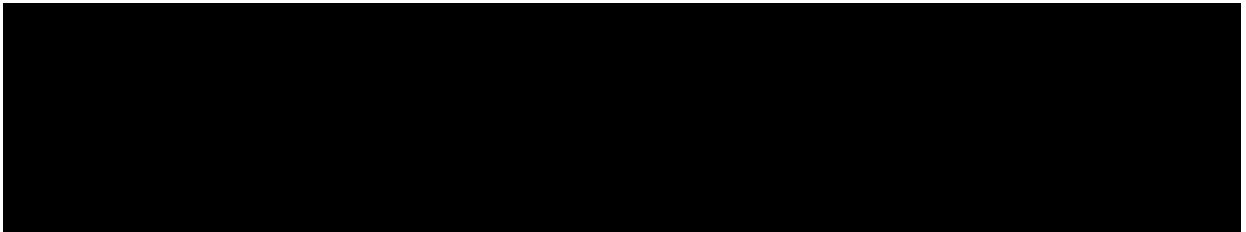
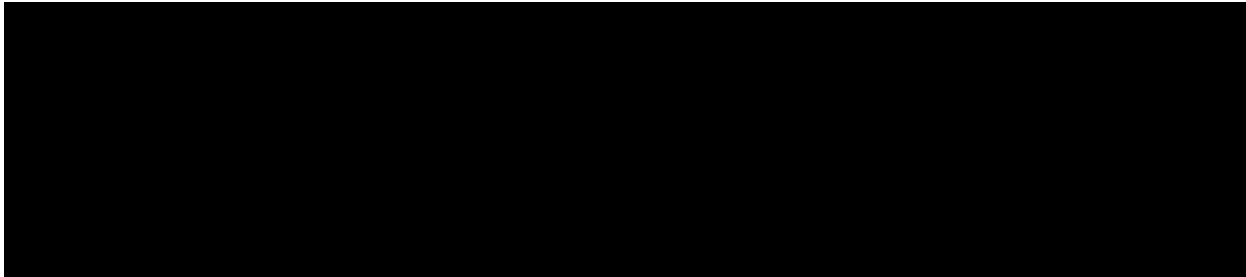
8. Chipped stone cataloguing, illustration and interpretation, to be undertaken by Dr Anne Pirie
9. Coarse stone, ceramic and charred bone cataloguing, illustrating and interpretation, to be undertaken by an appointed specialists
10. Charcoal identification and interpretation, to be undertaken by Dr Karen Wicks
11. Preparation and submission of samples for AMS dating, to be undertaken by Dr Karen Wicks, University of Reading. Should such samples be available a request will be made to Historic Scotland for dating within their annual programme. Should that not be possible, samples will be submitted to Beta-analytic
12. Bayesian analysis of AMS dates from Slochd Measach and from late Mesolithic and Neolithic localities with the region, to be undertaken by Dr Karen Wicks

A Data Structure Reports, drawing together all of the above lines of evidence and addressing the aims and objectives listed above, will be prepared by Professor Steven Mithen and Dr Darko Maričević and sent to Historic Environment Scotland and West of Scotland Archaeological Services within three months of the completion of each phase of the fieldwork. An interim statement will be submitted to *Discovery & Excavation Scotland* in November 2015. One or more, as appropriate, academic articles will be submitted for publication in peer-reviewed journals at the final stages of the project. A summary of the results of the fieldwork will also be submitted to *Archaeology Scotland* or similar public friendly publication. The project website hosted by the University of Reading will be updated after each fieldwork/post-excavation season. The results of the project and its implications on wider archaeological frameworks for western Scotland will be submitted for presenting at the *Archaeological Research in Progress* conference organised by *Archaeology Scotland* and the *Society of Antiquaries of Scotland* in 2017/18. Detailed post-excavation research and publication design will be prepared and submitted to HES within six months of the completion of the Project.

6. The Islay Community Context

During the course of the excavation a programme of public engagement activities will take place. These will be led by the recently established community organization called 'Islay Heritage', formed to enhance the value and use of archaeological sites and monuments to the residents and visitors to Islay. The activities will begin at the Islay Show on 11 August at which Islay Heritage will present an exhibition about the archaeology of Islay and provide a demonstration of experimental archaeology. During the excavation of Slochd Measach, Islay Heritage will lead visits to the excavation for each of the four primary Schools on Islay (Bowmore, Keills, Port Ellen and Port Charlotte), entailing about 100 children in total. This will provide the basis for the Islay Schools Archaeology Project that will be undertaken during the autumn, supported by Islay Heritage. Although planning with the school teachers is on-going, the current proposal is that each school will 'adopt' an archaeological monument to undertake its own scheme of activities, involving art, drama and surveying (with the support of archaeologists). In addition to the schools' activity, Islay Heritage will lead a public visit to the excavation on Sunday 28 August, jointly organized with the Islay Natural History Trust as one of its regular events. Islay Heritage will be organizing an event on Monday 29 August (Bank Holiday) for the Islay & Jura Youth Action Group. The content of this remains in discussion; one possibility is a drama event on the theme of Neolithic burial inspired by the excavation of Slochd Measach. Finally, a public lecture about the excavation will be delivered by Dr Darko Maričević. On the basis of previous lectures, this is likely to attract a large audience of over 100 persons and be supported by a local business on Islay. Throughout the field work there will be regular updates on various social media devices about progress of the excavation and the community engagement events.

7. Ownership and access



8. Dates of fieldwork and the field team

The 2016 fieldwork has been scheduled for two weeks starting 20 August and finishing 3 September. These dates have been fixed because of the need to book summer accommodation on the island at least nine months in advance. The team will be based in Port Charlotte, with the use of 4x4 vehicles for access to the vicinity of the site (followed by a walk). The following fieldwork season will probably run between 19 August and 2 September 2017.

The team members in 2016 will consist of:

- Professor Steven Mithen: Co-Director for the project, with particular responsibilities for academic planning and interpretation, health & safety, community relations, finance;
- Dr Darko Maričević: Co-Director for the project, with particular responsibilities for directing the fieldwork;
- Dr Karen Wicks, Project Manager and archaeobotanist, with responsibility for logistical planning, environmental sampling, C14 dating and Bayesian modelling;
- Sarah Lambert-Gates, staff member, with responsibility for photogrammetry, photography, recording and illustration;
- Dr Rob Fry, staff member, with responsibility for survey and geophysical survey;
- Nick Pankhurst and Tom Lyons, staff members, responsible for excavation;

- Six student volunteers from the Universities of Reading and Bournemouth;

All named individuals in the above list have extensive experience of undertaken archaeological fieldwork in western Scotland, including the Isle of Islay. There will be 50:50 staff to student ratio in the field at all times.

9. Funding

The University of Reading has agreed to fund the fieldwork and post-excavation analysis as means of a research support grant to Professor Steven Mithen. This excludes the cost for an AMS 14C dates that might be required, for which a separate case will need to be made to the University of Reading, Historic Scotland or another funding body.

10. Conclusion

It is proposed that an archaeological excavation and survey will be undertaken at Slochd Measach between the 20 August and 3 September 2016 and 19 August and 2 September 2017. This is a continuation of the evaluation by test-pitting, survey and geophysical prospecting, which was granted Scheduled Monument Consent (Case ID: 201407980) and Section 42 Consent (Case ID: 201407979) in 2015. The overarching aim of the project is to contribute to our understanding of the Clyde cairn group of Neolithic monuments, with a specific focus on the early phase of the monument with regard to the Mesolithic-Neolithic transition in Western Scotland. This project contributes to a long-term investigation into the early prehistory of Western Scotland by Professor Steven Mithen and his colleagues. It will involve a small team of archaeologists providing the required specialists skills, all of who have extensive experience of working within Western Scotland. The University of Reading will provide funding and a final report will be produced for all stakeholders within 3 months of the completion of fieldwork. Permission from the landowner has been secured and the support from local residents has been forthcoming and will be further sought in Summer 2015. Because Slochd Measach is a Scheduled Ancient Monument (File Ref. SC 27281/1B), Scheduled Monument Consent and Section 42 Consent are requested from Historic Environment Scotland.

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