Ardnamurchan Transitions Project

Cladh Aindreis Chambered Cairn
Swordle Bay, Ardnamurchan

Season Three, 2008:
Archaeological Excavations
Data Structure Report

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Ardnamurchan Transitions Report no. 11
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1. INTRODUCTION

1.1 *General*

1.1.1 This report presents the results of archaeological fieldwork undertaken by The Ardnamurchan Transitions Project (henceforth the ATP) on the Ardnamurchan Peninsula, Highland, in the summer of 2008. Excavations took place at the site of the chambered cairn, Cladh Aindreis (SAM 7778, NGR: NM 5470 7076 centred - see Figure 1.1) in Swordle Bay.

1.1.2 The site of Cladh Aindreis is protected under law as a Scheduled Ancient Monument. Scheduled Monument Consent (SMC) was granted by Historic Scotland for the excavation within this designated Scheduled area (Figure 1.2). All excavations followed the methods and specifications set out and agreed upon by ATP and Historic Scotland in the 2008 Project Design (Cobb and Richardson 2008).

1.2 *Background*

1.2.1 Cladh Aindreis was visited and surveyed by Audrey Henshall in the late 1960s (Henshall 1972), along with the other two Neolithic chambered cairns on the peninsula (Greadal Fhinn and Camas nan Geall). Henshall tentatively recorded the cairn as of Clyde type. However she was able only to undertake basic survey work, which at Cladh Aindreis noted the irregular cairn shape, and suggested that this had been subject to some modification over time. Consequently she suggested that the cairn did not completely fit into her typology as a Clyde Cairn owing to possible modifications. She also noted the presence of shells emerging from a rabbit hole in the side of the cairn.

1.2.2 Following Henshall's classification of Cladh Aindreis in the 1960s and 1970s more recent work has speculated that the shells she noted may indicate the presence of a Mesolithic shell midden beneath the Neolithic cairn (Pollard 1997; 2000), similar to the site of Glecknabae on Bute (Bryce 1904).

1.2.3 Because of this, and the potential modifications it has seen over time, Cladh Aindreis was identified by the ATP as potentially significant in understanding the Mesolithic/Neolithic transition. As a result the ATP aims to establish the form and chronological sequence of the cairn and chamber. To achieve this the project has set about conducting several seasons of work on the site, which to date includes excavation work, topographical survey and environmental analysis at and around Cladh Aindreis and Swordle Bay

1.2.4 Preliminary work at the site by the ATP in August 2006 identified a range of areas for examination. Primarily the large-scale clearance of bracken from the cairn added further weight to Henshall's original suggestion that the cairn may indeed have been modified over time. Furthermore excavation outside of the forecourt of the cairn, identified two pits, one of which contained episodes of burning activity and reuse (see Richardson and Cobb 2006, Richardson and Cobb 2005/2006).

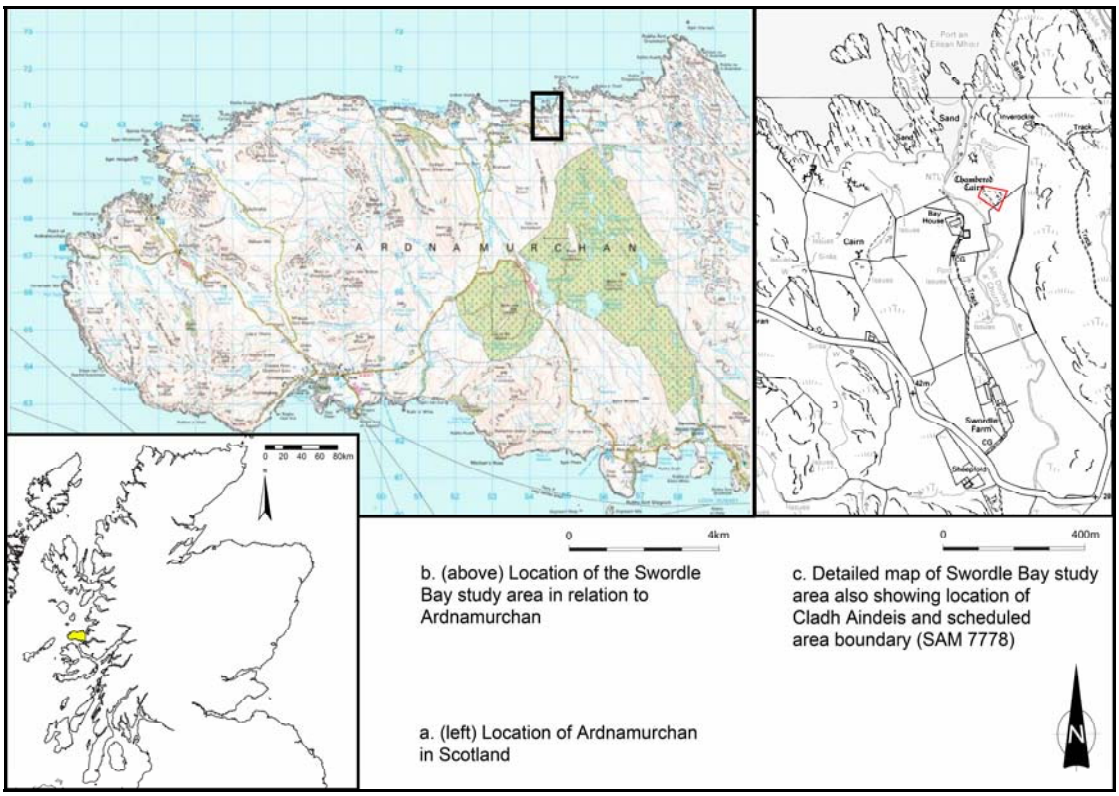

Figure 1.1: The location of Cladh Aindreis and the Swordle Bay study area

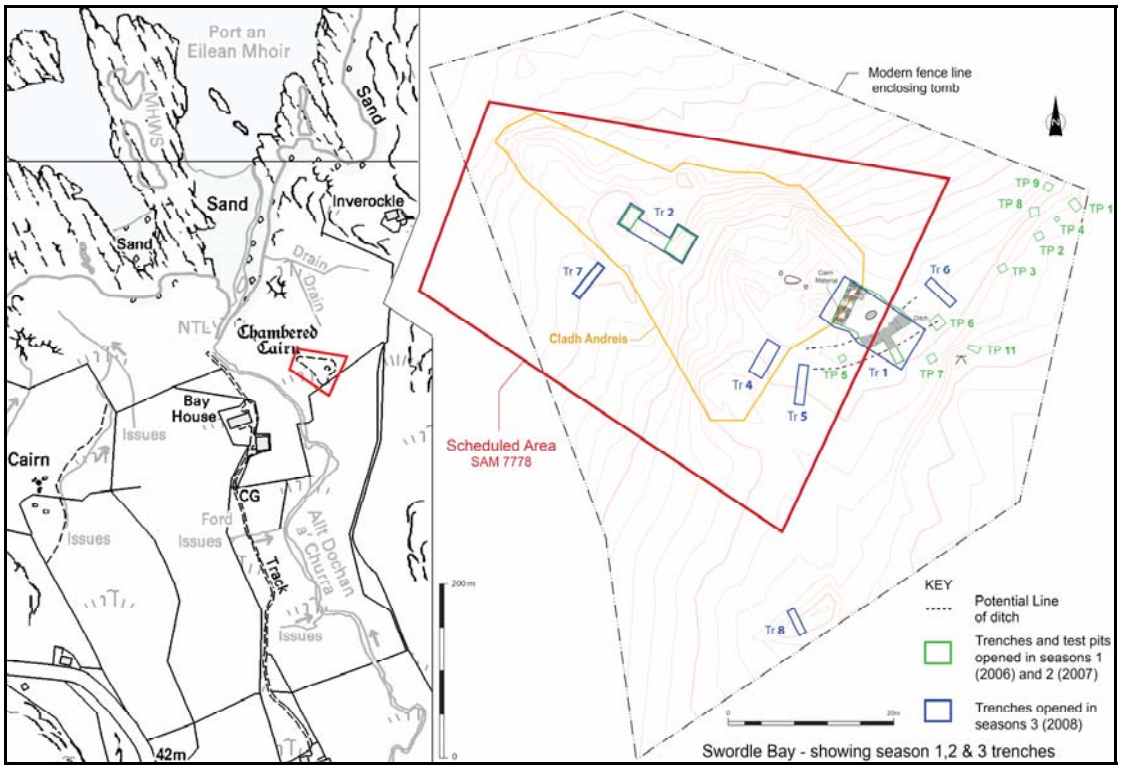

Figure 1.2: The location of trenches opened at Cladh Aindreis in Seasons 1 (2006), 2 (2007) and 3 (2008)

1.2.5 Following our work in Season 1, work in 2007 aimed to investigate the sequences of cairn construction. To meet these aims we applied for and were granted Scheduled Monument Consent to excavate three trenches within the scheduled area of Cladh Aindreis (see Figure 1.2).

1.2.6 Trench 1, at the front of the cairn, revealed a substantial ditch which was also cut into the same layer within which the pits were found in 2006. The ditch was filled with a series of gravel and stone fills, with burnt deposits and flint debitage in its lower fills. The ditch was also identified in test pits 5 and 6.

1.2.7 Two trenches (Trenches 2 and 3) were opened at the centre of the cairn, both revealed in situ cairn material on a sandy basal deposit, but accumulations of sandy subsoil against the south western edge of in-situ cairn material in Trench 2 suggested that there had been some hiatus in cairn construction or deconstruction, however it was not possible to tell the chronological relationship between this and Trench 3.

1.2.8 Test pits were opened to the east and south east of the cairn (Figure 1.2) to investigate whether the outcrop of raised ground in this area is entirely natural or whether it had any anthropogenic enhancement. All test pits (except Test Pits 5 and 6 which revealed the continuation of the ditch) proved this was not the case and that instead the area represented an outcrop of sandstone bedrock that was very close to the surface.

1.2.9 As well as work in seasons 1 and 2, the ATP conducted a Desk Based Assessment for the whole of West Ardnamurchan, and in January 2008 this was also supplemented by a walk over survey in Swordle Bay (Cobb et al 2008 and Midlane et al 2008a). Unique site identification numbers were attributed to each site recorded. Consequently these unique site numbers have been adopted in this report and supersede those used previously, included those reported in the 2007 season's Data Structure Report (Midlane et al 2008b). Table 1 summarises these changes:

Site Number	Previous designation(s)	Site Description
37	Area 1/Site1	Cladh Aindreis chambered cairn and immediate surrounds (2006 Trench 2 now Test Pit 11)
240	Area 2/Site 2	Storm beach
241	Area 3/Site 3	Stone structure and rig and furrow to east of Cladh Aindreis
242	Trench 4/Site 4	Stone platform to west of Site 1

Table 1: Summary of Site Identification

1.2.10 Following the work outlined above this report describes the results of the excavations undertaken in Season Three (2008) by the ATP at the site of Cladh Aindreis.

1.3 *Season Three (2008) – aims and objectives*

1.3.1 The ATP established a series of aims and objects for the 2008 season. Those related to the excavation of the chambered cairn are included below:

Aims

1.3.2 To build upon prior work by investigating the sequences of cairn and chamber construction at Cladh Aindreis.

1.3.3 To examine the typological and experiential relationships between Cladh Aindreis and the other Neolithic chambered cairns on the peninsula.

1.3.4 To continue to encourage local community interest in the prehistory of the area and to develop local interest in archaeology in general.

1.3.5 To build upon previous work and further develop practical methodologies which integrate and situate core theoretical questions within archaeological practice.

Objectives

1.3.6 To excavate selected areas of the cairn and surrounding area at Cladh Aindreis, Swordle Bay in order to explore cairns construction sequences and find chronologically diagnostic material and material that will be subject to radiocarbon dating.

1.3.7 To relate chronological information to findings from preliminary work in prior seasons at Cladh Aindreis and the wider Swordle Bay area.

1.3.8 To disseminate information about the project and its findings to local community groups.

1.3.9 To provide opportunities for local community members of all ages to engage in the excavation process.

1.4 *Acknowledgements*

1.4.1 The Ardnamurchan Transitions Project would like to thank the Ardnamurchan Estate for permission to conduct archaeological works.

1.4.2 We are very grateful to Laura Hindmarch and John Malcolm of Historic Scotland for guiding us through the process of gaining Scheduled Monument Consent.

1.4.3 We would also like to thank Gemma Midlane, Paul Murtagh (GUARD), Mike Cressey (CFA Archaeology Ltd) and Eleanor Casella (University of

Manchester) for their generous help as staff, and also all students and volunteers whose contributions to the project were invaluable.

1.4.4 The field work was generously funded and supported by The Prehistoric Society, The Council for British Archaeology Challenge Fund, The Royal Archaeological Institute, The Students as Partners Fund (through the University of Manchester), The School of Historical Studies, University of Newcastle and The University of Manchester and CFA Archaeology Ltd.

2. METHODOLOGY

2.1 *General*

2.1.1 The Ardnamurchan Transitions Project follows the principles, standards and guidelines established by the Institute for Archaeologists.

2.1.2 Excavation was carried out by hand according to established ATP practice and was recorded by photography, scale drawing and written records using standard record sheets. The location of the trenches and exposed sections were surveyed using industry standard equipment.

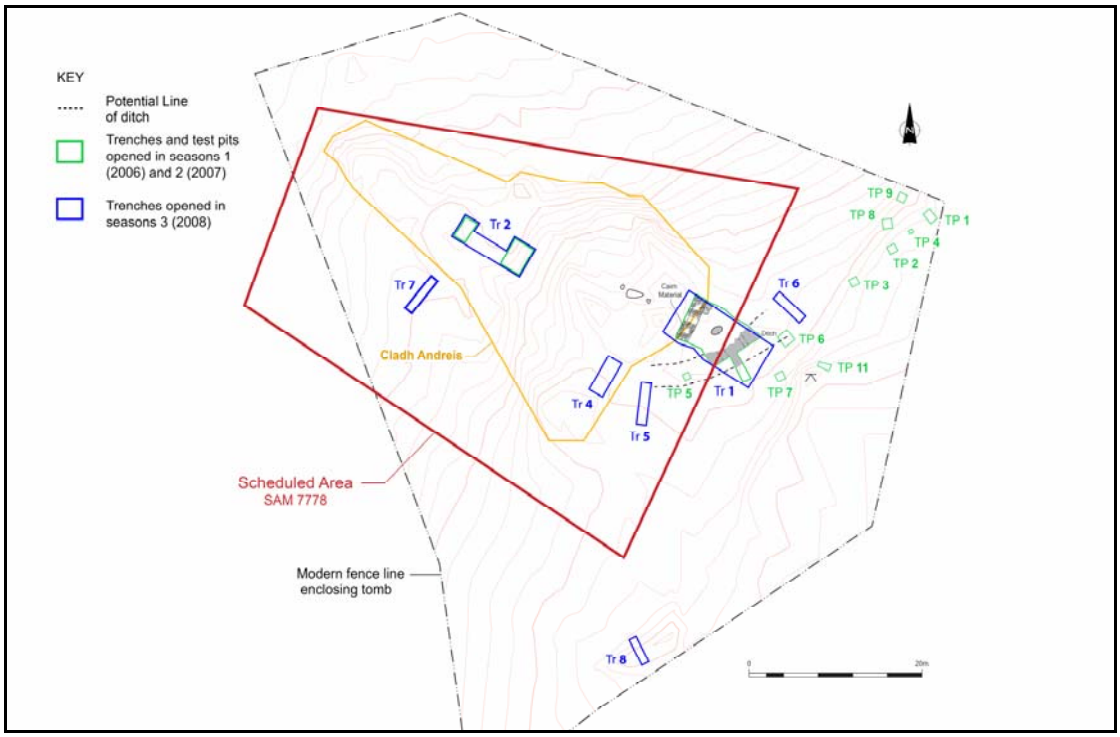

Figure 2.1: The location of trenches opened within the scheduled area at Cladh Aindreis in Season 3 (2008) and earlier seasons

2.2 *Excavation Strategy*

2.2.1 Following consultation with Historic Scotland Scheduled Monument Consent was granted for the excavation of seven trenches (Figure 2.1). The rationale and methodology given in our Project Design for Season Three (Cobb and Richardson 2008) is reproduced in points 2.2.2 – 2.2.8:

2.2.2 **Trench 1:** will be reopened and extended by 1.5m to the northwest, towards the front of the cairn (Figure 2.1). Excavation will stratigraphically remove top soil and backfill from previous robbing events, down to the top layers of cairn material which will be cleaned and fully recorded. This will then enable a comparison to be made between this and material revealed in Season Two, which in turn will enable us to assess what material is in situ and what is

tumble from the front of the cairn. Following this assessment tumble material will be removed down to in situ cairn material with the intention of providing a clearer understanding of construction sequences at the front of the cairn. The identification of in situ remains will provide a clearer idea of the sequence of cairn construction and use with relation to the question of how the chamber was accessed. This will also enable us to confirm the subsoil onto which the cairn was constructed, which will in turn assist with further developing our understanding of stratigraphic sequences in relation to the pits and ditch uncovered in the forecourt of the cairn (Richardson and Cobb 2006; Midlane et al 2008b), and the cairn construction sequences in the centre of the cairn in Trenches 2 and 3. Trench 1 will also be extended 3.5m to the south in order to find the southerly extent of the ditch identified in season two and to define the path of the ditch.

2.2.3 **Trenches 2 and 3:** will be reopened and joined together on their westward side by a trench measuring 4x3m in order to establish the relationship between the in situ cairn material observed in both trenches and the sequence of construction and modification of the cairn over time. Evidence for later episodes of robbing activity at the cairn will also be sought. Excavation intends to remove any backfill down to in situ archaeological deposits, which will be fully recorded.

2.2.4 **Trench 4:** As the ditch was revealed in test pit 5, we hypothesise that the ditch runs to the south west of the cairn front, between this and the anomalous accumulation of material in the south west of the cairn. Furthermore, as this accumulation of material has particularly straight sides to its east, south and west, as well as the clear dip between this and the cairn itself (visible in the contour plan - see Figure 2.1), we hypothesise that this represents a much later accumulation of material not associated with the prehistoric use of the cairn. Consequently a trench 4x2m is proposed. Here we will only excavate down to in situ material, but by doing so this trench will not only provide information about the nature of the south west accumulation of the material and the ditch and the relationship between both of these and the cairn.

2.2.5 **Trench 5:** Following the above definition of the route the ditch takes, a trench, measuring 5m by 1m will be excavated to the west of test pit five in order to trace the line of the ditch. No excavation of the ditch will take place in this trench only its presence and absence will be recorded (planned) before the trench is re-instated. Five metres is deemed necessary due to the width of the ditch in Trench 1.

2.2.6 **Trench 6:** Again following the above definition of the route the ditch takes, a trench, measuring 5m by 1m will be excavated to the northwest of Trench 1 in order to trace the line of the ditch. Once again no excavation of the ditch will take place in this trench only its presence and absence will be recorded (planned) before the trench is re-instated.

2.2.7 **Trench 7:** A further trench (5m by 1m) will be excavated to the south of Trench 3, again this will be excavated in order to establish the route of ditch,

and a terminus if there is one. Through consultation with Historic Scotland it may prove necessary to discuss an amendment to any Scheduled Monument Consent if based upon the initial trench the ditch appears to veer in another direction. This may mean that this trench would not be opened at all. If a terminus is discovered in this second trench but not in the trench to the east of the cairn, out with the scheduled area, then Historic Scotland will be consulted over the possibility of excavating a quadrant in the terminus of the ditch.

2.2.8 **Trench 8:** A trench measuring 3m by 1m will be opened across the low stone knoll to the south-east of the cairn in order to assess its nature and extent.

3. ARCHAEOLOGICAL RESULTS

3.1 *General*

3.1.1 Numbers in bold in the following sections correspond to contexts listed in Appendix 1.

3.1.2 The remains of the Chambered Cairn lie within the v-shaped inlet valley of Swordle Bay approximately 250m from Swordle Bay House. This cairn is now a Scheduled Ancient Monument (SAM) and as such all works were conducted following consultation with and agreement of Historic Scotland.

3.1.3 The natural subsoil comprised of a mix of wet sand and black chemically altered gravel beds in Trench 1 and a natural shell sand in all other trenches.

3.1.4 Eleven test pits were excavated along the edge of the knoll to the east of the cairn (see figure 2). A summary of the results is presented in Appendix 6. Only those test pits that contained archaeology, i.e. the ditch (**035**) (Test Pits 5, 6 and 10) are discussed in the text below.

3.1.5 For ease of reference and out of completeness all trenches and archaeological deposits recorded during the excavations at Cladh Aindreis since 2006 are discussed below.

3.2 *Trench 1 (Figure 3.1)*

'*Small Cairn'*

3.2.1 In the north of the trench a small stone cairn was discovered immediately below topsoil. This stone deposit measured 3.7m long x 2m wide x 1.16m deep. It consisted of medium to small sub-angular rocks (**004**), some of which showed signs of being water rolled. The stones were tipped, showed no signs of being structural and were surrounded by a loose silty soil (**005**).

3.2.2 Only the western portion of this stone mound was removed. The stones were sat on a reddish brown sandy silt old ground surface (OGS) (**011**). This OGS was stratigraphically above subsoil (**008**), into which the two pit features were cut. Thus it appears that **011** was a remnant of the original turf line and subsoil upon which these stones were originally placed. Given this it is presumed that this 'cairn' was the result of a much more recent 'robbing' activity at the site of Cladh Andreis, and may even represent the spoil removed from around the chamber.

Pit Features

3.2.3 A sub-oval pit (**015**) with two phases of use was present in the centre of the trench. The first pit measured 1.6m by 1.1m by 0.2m and contained a compact, stained and humic layer at the base (**019**). This may suggest that it had been lined with turf or other organic matter. The pit was also lined by a series of small stones around the upper edge (**021**). The principal fill consisted of a dark

blackish brown sandy silt which contained much charcoal and ash. The upper portion of the feature (**028**) silted up after the pit had gone out of use.

3.2.4 Some time after the larger feature silted up another smaller pit was cut into it (**020**). In this case the pit was lined by large stones in a smaller sub-oval setting (**022**). This pit contained a compact lower fill (**016**) which contained large quantities of charcoal. Above this was a loose grey-black fill which also contained large quantities of charcoal and carbonised wood. Again the upper fill was silting (**009**).

3.2.5 An oval pit (**014**) was present in the north-west of the trench and consisted of two fills; the lower, a silting action (**013**), was overlain by a silty gravel upper fill (**012**). This feature would also appear to have been re-cut by (**026**) which whilst consisting of similar fills did represent a change in the nature of the cut. Both pits had a very flat base with compressed gravel in the base which may suggest that **014** was a stone hole whilst **026** could be the cut for the removal of the stone.

Ditches (with Lewis Stitt)

3.2.6 A large linear feature (**035**) partially excavated in 2007 was re-exposed and excavations continued across the entire width. Following full excavation in two slots the ditch turned out to have two phases of use. The first ditch (**091**) measured over 3m wide by 1.24m deep and had steep sides and a flat base. It was filled by re-deposited white sand basal fill (**101**), suggesting that the ditch was left open for time and silted up. Following this the ditch was backfilled with a dark brownish black stony silty sand fill (**092**) very similar in nature to the natural **018**.

3.2.7 Sometime later the backfilled ditch was cut by a second ditch (**035**). This ditch had sloping sides and contained four fills. The basal fill was a charcoal rich sand (**036**) which was a silting deposit following the opening of the ditch. Suggesting the ditch was open long enough for this deposit to have formed. Above this a reddish brown clayey sand (**034**) also containing charcoal was deposited within the ditch. It is unclear whether the burning deposit in these deposits was deposited into the ditch or whether a fire took place on the basal sands. Shortly afterwards a brownish black clayey silt (**032**) was formed in the ditch. The upper fill (**031**), a charcoal rich brown/black sandy silt, appears to be a turf line covering the ditch. This ditch has a shallow amorphous profile and may not be a ditch in the traditional sense; it is just as likely to be a quarry scoop.

3.2.8 Two circular postholes were found to be cut into the base of the ditch. Both features were sealed by (**034**) in the secondary ditch suggesting that they predate ditch **035**. It seems probable that the posts were removed either at the same time or before ditch **091** was backfilled. Both of postholes contained packing stones and survived to a depth of 0.4m. The posts may have been related to revetting at the edge of ditch **091**.

Chambered Cairn

3.2.9 Topsoil was removed from the north west of Trench 1. Beneath the topsoil a layer of loose small stones in the topsoil matrix was recorded. These smaller stones overlay a more compact layer of similar stones (**048**), some of which appeared to be tipped. In 2007 it was thought that these stones were the result of tumble from the original cairn and extending the trench in 2008 confirmed this. Unexpectedly, however, following the removal of stones **048** no in-situ cairn material was encountered. Instead a layer of grey gravel (**085**) measuring 2.2m wide by 0.6m deep had built up against a further layer of orange gravel (**084**). This layer measured 3.2m wide by 0.6m deep and overlay an orangey black gravel (**124**) which ranged from 0.04m-0.6m deep.

3.2.10 In the south of the excavated area layer **124** overlay a number of large flat stones (**125**) some of which are tipped. These stones may be natural stones in the natural gravel (**018**), however, they may well be paving associated with original use of the cairn.

3.2.11 In the north of the area layer **124** was only partially exposed as it was cut by a linear feature (**123**). This feature was sealed by gravel layer **085** suggesting that the unexcavated fill (**122**) had formed before the gravel layers.

3.2.12 What remains unclear is where the front of the cairn is. Given that no cairn material has been discovered it may be that the cairn has a curved facade similar to that at Monamore on Arran (MacKie 1963-4), a feature common to Clyde cairns (Henshall 1972) generally. The nature of the deposits encountered then is reminiscent of blocking, again common at Clyde cairns, although usually the blocking is of stone. Further work will help understand these processes better.

Figure 3.1: Post-excavation shot of Trench 1 from the east.

3.3 *Trench 2 (Figure 3.2)*

3.3.1 Following the removal of turf (**039**) and topsoil (**040**) a layer of loose tumbled stones (**041**) were revealed throughout the trench small stones in the topsoil matrix. Below these tumbled stones two further deposits were recorded; in the south east of the trench in-situ cairn (**038**) material was exposed, whilst throughout the majority of the trench a buried soil (**042**) was uncovered. This buried soil (**042**) was removed onto natural sand (**043**) and gravel (**047** and **050**). Within these natural sand and gravel deposits a number of stone holes (**051**) were recorded. One stone (**038**) which may be in-situ was also recorded. A sondage was excavated against the north west baulk to confirm that the sand (**043**) was natural.

3.3.2 The nature of these deposits suggests that this part of the cairn was constructed on natural sand, probably a low dune. At some time later the cairn was robbed down to its base, leaving only stone-holes **051**. Consequently buried soil **042** formed over the exposed area and later tumble **041** covered that. A number of the in-situ cairn stones (**038**) appeared to have been edge set and may mark the extent of an earlier cairn, however this arrangement is more likely to be fortuitous.

3.3.3 Two rabbit burrows were also recorded in the north west of the trench.

Figure 3.2: Post-excavation shot of Trench 2 (from Season 2, 2007) from the north.

Trench 2a

3.3.4 Following the results of the 2007 excavation season, a trench measuring 2m x 4m was excavated between Trenches 2 and 3. The removal of topsoil revealed a natural soil deposit (**065**), equivalent to layer **042** recorded in Trench 2. This was overlain by post-robbing tumble (**068**). Layer **065** overlay a gravely sandy

buried soil (**104**) (**055** in Trench 3), in the south-east end of the trench, onto which in situ cairn material (**046**) was present. This deposit was not present across the whole of Trench 2a, its extent to the north east suggesting either the limit of robbing of cairn material, or how far a potentially later phase of cairn (**046**) extended. Below this lay another possible buried soil or OGS (**086**), was present in the southern half of the trench. This could be the remains of the prehistoric soil that was de-turfed down to natural dune sand during the construction of the earlier phase of cairn, suggested by excavation in Trench 2. The extent of **086** could therefore indicate the southern limit of this earlier phase of cairn prior to robbing. Layer **086** overlay two vestigial deposits of sand (**105** and **049**), probably the result of pre-cairn storm events, under which lay **106** and **087**, suggested to be the remains of a pre-cairn turf-line that formed over the main dune sand (**043**).

3.4 *Trench 3*

3.4.1 The removal of topsoil thin layer of loose small stones (**045**) in the topsoil matrix were recorded. Beneath this layer the majority of the trench was made up of layers of stone. The majority of these (**046**) appeared to be in-situ, a pocket of tipped stones (**057**) in the south west of the trench could also be in-situ. Due to the small area of excavation it was unclear whether stones **057** were in-situ or tumble from the original cairn. The stones were compact in the west and looser in the east but otherwise it was difficult to establish the true nature of this material. Consequently **057** was not excavated in 2007. To the south east of the trench a topsoil matrix (**044**) was removed onto a buried soil (**055**) very similar to, the buried soil deposit in Trench 2 (**042**). However, buried soil **055** was more like a mixed version of the natural sand **043** than buried soil **044**. It would appear that this deposit may well be an OGS on which this part of the cairn was built.

3.4.2 Resolving this sequence of buried soils and OGS has important implications for understanding the phasing and development of Cladh Aindreis. This will be an aim of the 2008 season.

3.4.3 Two further burrows (**056** and **062**) were noted in the south east of the trench.

3.4.4 The nature and extent of deposits present in Trenches 2/2a/3, suggests that there were two phases of cairn building. The earliest phase involved de-turfing a prehistoric topsoil down to natural dune sand (Tr.2). Following cairn construction, another layer of soil formed to the south, either naturally or by design, onto which a second phase of cairn was built. The second phase may not have fully abutted the first phase of cairn, although the evidence for extensive robbing present in Trench 2 and 2a obscures a more definitive answer.

3.5 *Trench 4 (with Paul Murtagh) (Figure 3.3)*

3.5.1 A roughly square accumulation of material to the south west of the cairn was thought to be a later extension. This feature had straight sides to its east, south and west, as well as the clear dip between itself and the cairn (Figure 2) and is thought to be some kind of cellular structure. A trench measuring 4m by 2m was excavated on to in situ material, in order to provide information about the

nature of the feature. The trench revealed the possible entrance of the structure. A double skinned sandstone wall (**109**) measuring 0.74m wide by 0.5m high ran from the possible entrance to the southeast. Judging by the shape of the possible cellular feature and from stones protruding through the turf outside the trench this wall extends c.2-3m to the south east and c.1.6m the south west. The west side of the entrance was made up of a similar wall (**111**) although the size of the trench restricted the amount of the wall uncovered to just the outer face the wall appears to extend c.3-4m to the north west. Again this wall appears to extend c.1.6m to the southwest. That both walls extend to the south west like would make the entrance long and narrow being 2.6m long by 0.6m wide. However this can only be confirmed with further excavation.

3.5.2 The part of the entrance exposed in the trench contained flat paving stones (**110**), which continued to the northern edge of wall **109**. Outside the entrance between the entrance and cairn a dense layer of rounded pebbles (**095**) appeared to make up a cobbled surface, creating a path outside the possible entrance. This cobbled surface overlaps with the supposed alignment of the ditch present in Trench 5 and this may not be coincidental. Given that the presence of the ditch in Trenches 6, 1 and 5 coincides with waterlogged deposits the cobbled surface may have been installed as a necessity.

3.5.3 A sub-rectangular feature was inserted on top of paving **110** and cobbles **095** in the entrance of the possible cellular structure. This measured 2.2m long by 1m wide by 0.4m high and comprised upright angular stones (**080**). The feature abutted wall **111** in the west and made use of the outer face of this wall and the cellular structure entrance to form its south west corner. This feature would effectively have blocked the entrance. The feature had a grave/long cist like appearance but no deposits were present below the turf which overlay it. Extending the trench to the northwest would reveal the features full extent and provide further evidence for its form and function.

Figure 3.3: Post-excavation shot of Trench 4, from the north-east

3.6 *Trench 5 (with Paul Murtagh)(Figure 3.4)*

3.6.1 Topsoil was removed to a depth of 0.3m and following cleaning the upper fill of a linear feature (**075**) was recorded. The feature measured 2.6m long and continued into the northern baulk of the trench. The feature was filled with by a dark grey sandy silt (**070**) of moderate compaction. This fill was similar to the upper fill (**092**) of ditch **091** in Trench 1 and is on the same suspected alignment. However, no further excavations were conducted in this trench and it is not possible to confirm whether the feature in the trench is the same feature as the ditch in Trench 1. Nor were we able to confirm which ditch (**035** or **091**) as no sign of any re-cut was discovered. On present information however, it would not be unreasonable to suggest that the feature recorded in Trench 5 is an extension of ditch **091** excavated in Trench 1.

Figure 3.4: Post-excavation shot of Trench 5 from the north

3.7 *Trench 6 (with Beth Thomas) (Figure 3.5)*

3.7.1 Trench 6 was also opened in order to trace the line of the ditch in Trench 1. Following the removal of the peat topsoil a linear feature (**107**) was recorded. The feature measured 3.1m long and was filled with by a dark grey sandy silt (**102**). This fill was similar to the upper fill (**092**) of ditch **091** in Trench 1 and is on the same suspected alignment, curving to the north. Due to the waterlogged nature of the trench no further excavations were conducted and therefore it was not possible to confirm whether both of the ditches found in Trench 1 (**035** or **091**) were present.

Figure 3.5: Post-excavation shot of Trench 6, from the west

3.8 *Trench 7*

3.8.1 This trench measured 5m by 1m and again was excavated in order to establish the route of ditch. However no features were discovered. A thick layer of turf and topsoil onto a sand and gravel layer (**097**) within which a large chipped stone was discovered. Below this a sand layer (**098**) overlay a further gravely layer (**099**) which in turn overlay natural sand (**100**). These layers are all thought to be natural events produced either through natural soil formation combined with sporadic inundations from the burn immediately to the south **099** and **097**) and windblown sand storm events (**098**). Interestingly it seems likely that layers **098** and **097** are the same natural layers recorded in Trench 2a (**105** and **065** respectively).

3.9 *Trench 8 (Figure 3.6)*

3.9.1 A trench measuring 3m by 1m was excavated across the low lozenge shaped stone knoll to the south-east of the cairn. The knoll measured 10m by 4m and was found to be sandstone bedrock. There were signs of stone quarrying within the trench but root damage was extensive rendering it impossible to identify tool marks. It remains possible that the knoll was quarried for stone for the cairn; however the proximity of the nearby field walls may be more likely destinations for the quarried stone. Further specialist advice will be sought in order to clarify this issue.

Figure 3.6: Post-excavation shot of Trench 8 from the south-west

4. DISCUSSION

4.1 *Summary*

4.1.1 Excavations to date at Cladh Aindreis have contributed fundamentally to knowledge of this fascinating site. Although we await full confirmation from radiocarbon dates, we can already suggest a broad narrative of the use of the site in prehistory.

4.1.2 We know that the cairn itself was constructed directly onto natural sand and gravels which most likely represent low dunes and/or raised beach deposits from the main Holocene marine transgression. However, evidence from Trenches 1 and 2/2a/3 indicate that rather than one homogenous phase of construction, in fact the cairn saw a complicated history of modification over time.

4.1.3 The presence of windblown sands, an old ground surface and possible edge set stones revealed by Trenches 2/2a/3 in the centre of the cairn suggests that Cladh Aindreis may initially have been a round cairn that was later modified, by the addition of 'tail' in order to form a long, trapezoidal structure. The orientation of the chamber also supports this; the chamber not being on the same orientation of the trapezoidal cairn as it appears today.

4.1.4 However our understanding of this construction process has been complicated by the substantial removal of cairn material at the point where Trenches 2/2a/3 is located. Whilst our excavations here did not provide secure material to date this activity it is likely that the stones were removed relatively recently, perhaps corresponding to the increasing enclosure of land in Swordle Bay from the 18th Century. If this is the case then the wind blown sands and OGS are relatively recent deposits and in turn this may mean the cairn saw less modification than we hypothesise above.

4.1.5 Whilst the dating and phasing of changes to the broader morphology of the cairn remain unclear at present, at the wider, front (south eastern) end of the structure we can be somewhat firmer in our suggestion that the modifications that our excavations have revealed are prehistoric. Apart from analogies with other Clyde type cairns (discussed below) remains in this area were also partially stratified beneath a small stone mound and a remnant turf line and subsoil (**011**) associated with the more recent 'robbing' activity at the site of Cladh Andreis.

4.1.6 Excavation of the front of cairn deposits (Trench 1) which were initially thought to be in situ cairn material has revealed a lack of true cairn, suggesting that Cladh Aindreis had a curved facade similar to many Clyde cairns (Henshall 1972). Within this area we suggest that a number of large flat stones (**125**) may have acted as a paved surface immediately in front of the façade. In turn we suggest that the three deep, homogeneous gravel deposits situated above **125** represent several rapid filling or blocking events in this façade area. A further, unexcavated, linear feature (**123**) which aligns with the chamber,

may also represent the deliberate blocking of the chamber or entrance to this. The blocking and filling of the chamber, chamber entrance and façade area are all also traits common to Clyde cairns. Further excavation and radiocarbon dates are needed to clarify this complicated sequence of deposits.

4.1.7 Whilst Cladh Aindreis itself was undoubtedly modified over time, so too was the area south of the cairn. Here, between the cairn and the natural sandstone bedrock outcrop, a large linear ditch feature was dug running parallel to the front of the cairn. It appears that this was steep sided and flat bottomed and it was backfilled after being open for only a short time. An edge scraper typical of the early Neolithic was found in the basal fill of the first cut of the ditch. After it had been backfilled, the ditch was then re-cut by a more amorphous scoop which silted up following the deposition of burnt material or a fire in its base (although the former would appear more likely). Two pieces/a piece of pottery that has tentatively been dated to the middle Neolithic was found in the basal fill of the re-cut of the ditch.

4.1.8 Although its route has not yet been entirely established, the ditch seems to continue on an almost circular alignment; similar features having been found in Trenches 5 and 6 and Test Pits 5 and 6.

4.1.9 Although the ditch and the cairn are likely to both date to the Neolithic, without radiocarbon dates it is unclear how this ditch relates to the use of Cladh Aindreis, and whether or not the two were contemporary. Undoubtedly, however, the position of the ditch would have enhanced the natural topography, creating a clear and significant dip between the bedrock outcrop to the south of the cairn and the old dune on which the front of the cairn is situated. If the cairn and the ditch were contemporary it is likely that the presence of the ditch could have enhanced the monumental appearance of the cairn's façade. The ditch may also have acted to delineate the forecourt area and the presence of two circular post holes associated with the first ditch (both were truncated by the re-cut of the ditch) may have been related to revetting at the edge of ditch.

4.1.10 The amorphous nature of the re-cut of the ditch also suggests that its use may have changed over time, from a conventional ditch, prior to its initial backfilling, to a quarry when it was then re-cut. Although this is purely supposition at this point, it is possible that the material taken from the re-cut of the ditch was used as part of the blocking episodes in the front of the cairn.

4.1.11 To date, then, the ATP has shown the complicated extent of construction and modification that is likely to have taken place during the Neolithic and perhaps the early Bronze Age at and around Cladh Aindreis. Radiocarbon dates and further excavation are now required to clarify our understanding of the construction of the cairn and surrounding area (detailed in Annex 1 – 2009 Project Design). However, between this activity in the Neolithic /Bronze Age, and the undoubted piecemeal robbing of stones from the cairn for field walls in the last couple of hundred years, the structure revealed in Trench 4 indicates that the south west edge of cairn has seen at least one further significant modification of or alteration.

4.1.12 Although deposits in Trench 4 were only cleaned down onto and not excavated, our work has nonetheless revealed the presence of a roughly square, possibly cellular structure with at least one double skinned wall and a paved (**110**) possible entrance, facing the cairn. Outside the entrance, between this and cairn, a dense layer of rounded pebbles (**095**) appeared to make up a cobbled surface, creating a path. This cobbled surface overlaps with the supposed alignment of the ditch present in Trench 5 and as observed above in point 3.5.2 above, this may not be coincidental. Given that the presence of the ditch in Trenches 6, 1 and 5 coincides with waterlogged deposits the cobbled surface may have been installed as a necessity.

4.1.13 A sub-rectangular feature that was inserted on top of paving **110** and cobbles **095** in the entrance of the possible cellular structure may have marked the deliberate blocking or closing of the entrance noted above. The feature had a grave/long cist like appearance but no deposits were present below the turf which overlay it.

4.1.14 With no artefacts and only a small area excavated it is difficult to interpret our findings to date in Trench 4. Undoubtedly the structure is later and very different in form and construction to the rest of the cairn however there are a range of periods it could belong to. As discussed in section 4.3 below, there is a recognised trend of Iron Age modifications to and structures being built beside Neolithic cairns in Scotland. However we are also informed that Swordle is a Viking name and there is similarly evidence for Viking use and modification of earlier monuments in Scotland (e.g. Maes Howe). In addition Cladh Aindreis literally translates from Gaelic as Andrew's Grave, suggesting a possible Christian appropriation of the site. Indeed the structure in Trench 4 could be only a few hundred years old, given that Swordle Bay and the surrounding are were also a relatively well populated until the Highland Clearances, as they provide some of the relatively rare good farming ground on the peninsula.

4.1.15 In summary the work of the ATP in its first three seasons has enabled the development of an already detailed narrative of Cladh Aindreis as a site that reflects the many different people who have lived in and around Swordle Bay for at least six thousand years. Yet the findings of the project are not simply of localised importance. If it does reflect the incorporation of two small cairns into a larger trapezoidal one then Cladh Aindreis will join only a handful of other known examples of this practice from Scotland. In addition, as discussed in below, Cladh Aindreis may be unique as the only known *early* Neolithic chambered cairn with an associated ditch (other known examples are late Neolithic), and it is certainly the only known chambered cairn in western Scotland with such an associated feature. Consequently the site is of national importance in understanding Neolithic funerary practices. Further excavations are now required to refine our understanding of the chronology and sequence f changes that the monument has seen over time. Details of this are outlined in Annex 1, our Project Design for our fourth season of work in 2009.

4.2 *The wider comparative context of Cladh Aindreis*

4.2.1 Although we await the results of a full post-excavation programme the wider comparative context of four aspects from the 2008 season merit further provisional consideration here, they are;

- The ditches in Trench 1
- Trench 4 and re-use of cairns
- The cairn material and forecourt
- Phases of cairn building

Ditches (with Iain Pringle)

4.2.2 As discussed above, a ditch was cut and then backfilled and re-cut in the forecourt of Cladh Aindreis. Although distorted by the general absence of excavation of cairn forecourt areas, it is clear that this practice is incredibly rare and only a small number of chambered cairns have been found to be encircled by ditches. The only three examples of which we are aware are not only thought be later than Cladh Aindreis they are not from the west of Scotland and all appear to be very different kinds of monument. These are Bryn Celli Du and Castell Bryn Gwyn in Wales and Maes Howe in Orkney are surrounded by ditches but

4.2.3 The ditch at Bryn Celli Du, like Maes Howe, was flat bottomed (Lynch 1970: 94). The site itself is two phased, the first phase being a henge monument, which is when the ditch was been created. This was then destroyed and the second phase of construction, the passage grave structure, was erected. This was then reconstructed and can be seen today (Wellings 2008). The ditch was "partially silted over by the time the passage grave was constructed suggesting that it had been used for some years before it was destroyed" (Lynch 1970 94). This then grassed over forming a "recognisable layer of purplish-blue clay" (Lynch 1970 94) which left two clear fills in the ditch. As discussed above, it is possible that the original ditch at Cladh Aindreis could have been out of use by the time Cladh Aindreis was built although at present this would seem unlikely. The awaited Radiocarbon dates will help with this issue

4.2.4 Another site, not far from and similar to Bryn Celli Ddu, is Castell Bryn Gwyn. Although Castell Bryn Gwyn was reused throughout the Iron Age and the Roman Period the original structure is thought to be Neolithic. Like Maes Howe and Bryn Celli Ddu, Castell Bryn Gwyn was also surrounded by a flat bottomed ditch (Lynch 1970: 101). What is interesting about Castell Bryn Gwyn is the apparent reuse and re-cutting of the surrounding ditch. The first ditch has been dated by finds to the Neolithic and the last one to the Iron Age, or later, by the slope of the ditch and to use of timber revetting on the bank (Lynch 1970: 103). It is believed by Lynch that the later ditches are Iron Age fortifications and the earlier ditch is part of the Neolithic monument (Ibid).

4.2.5 The ditch at Maes Howe was also thought to be a later addition based upon radiocarbon dates however the dates are now not thought to represent the original use of the ditch, the ditch having been cleaned out (Ballin Smith 1994).

4.2.6 There have been a number of suggestions as to why Maes Howe has a ditch. One suggestion put forward by James Farrer is that the "chamber's encircling ditch was originally intended to be filled with water" (Farrer 'Maes Howe' Orkney). Another suggestion put forward is that there is "no recognisable entrance through the bank or across the ditch, and in this respect the bank and ditch serve to give an impression of separation in acting as an all encompassing boundary" (Challands et al 2005 229). These are both possibilities at Cladh Aindreis as the ditch holds water and the location of the ditches would have had a dramatic impact upon the way the forecourt could have been used.

4.2.7 Research into similar sites and a thorough post-excavation programme is currently being undertaken in order to assess this important range of features and explore their potential. Excavations and geophysics in 2009 will aim to investigate the relationship between these deposits further (see Annex 1).

Trench 4 (with Clare Caunce)

4.2.8 The possible cellular structure in Trench 4 is of particular interest and requires much more work. However provisional results suggest that a walled structure with a paved entrance and external cobbled path is present. That this entrance was blocked by a sub-rectangular feature reminiscent of a long cist makes things even more interesting. If the sub-rectangular feature is a cist/grave a later historic or Norse date would not be out of the question. Unfortunately no deposits associated with this feature were discovered meaning that dating may only be possible through association with the cellular structure and morphological characteristics. A full literature search for comparisons is currently underway but three possibilities for the nature of the possible cellular structure immediately standout; later Neolithic/Bronze Age addition, Iron Age and Post Medieval.

4.2.9 Richard Hingley identified a number of monuments especially chambered cairns and stone circles that had been re-used in the Iron Age (Hingley 1998). There are several theories as to why these sites were so important, most centre on the idea of group identity (Hingley 1996:232). It is possible that monuments such as chambered cairns were interpreted as houses rather than as cairns by Iron Age people, which may account for why the building of round houses on this kind of site was so popular (Hingley 1996:232). By building their homes on the site of the homes of the ancestors, they were creating a bond between themselves, the ancestors and the landscape around them (Driscoll 1998, Hingley 1996). Forging a link with the past using ancient monuments also occurred in England during the Anglo-Saxon period (Semple 1998). Cairns were thought to be places of great supernatural power where the ancients had buried kings and great treasures (Semple 1998, Williams 1998). They were also seen as places that linked the living with the dead, leading them to become sites of burial usually for the very wealth in Anglo-Saxon society, as well as for criminals in the latter half of the period (Semple:1998). It is possible that Iron Age peoples also believed this; building homes on these

sites would create a link with the ancestors giving them a claim to the land and a sense of history (Hingley 1998).

4.2.10 However, post-medieval structures of similar form were found at Loch Olabhat, North Uisit (Armit 1997). These structures were thought to be shielings and given the location of the structure, in an area of rough pasture, this cannot, at the moment be ruled out. Swordle sheep farm was already fully established by the 1850s suggesting that if the structure is a sheiling it would predate the clearances at Swordle. However, without further excavation we are unable to assess the structures original use. The possibility that the structure is a modern sheep fank can also not be ruled out at this stage.

Cairn material and the forecourt

4.2.11 Unfortunately in-situ cairn material was not uncovered in the 2008 excavation, and when considered in relation to the position of the chamber and comparison with other Clyde cairns suggests that the cairn had a curved facade similar to that at Monamore on Arran (MacKie 1963-4). The gravel layers in this forecourt then are probably the result of the blocking of the entrance.

4.2.12 At Monamore MacKie suggested that the gravel and earth deposits built up gradually, being the result of hill-wash, due to the presence of 'hearths' at various depths (1963-4, 1977). This seems unlikely at Cladh Aindreis where the homogeneity of the layers is suggestive of relatively rapid events and the fact that layer **085** does not continue beyond the limits of the tumbled cairn stones. This suggests that hill wash from the slopes to the east of the cairn only filled the forecourt, which seems unlikely, unless the cutting of the hearth and ditches removed this material. Radiocarbon dates will help shed light on this, however, at this stage the presence of Neolithic pottery at the base of ditch 035 makes this scenario unlikely. It may be that layer 085 had built up against layer 084 or had tipped forward from a gravel and earth facade following the blocking of the forecourt. Again further work is needed.

Phases of cairn building

4.2.13 The excavation results suggest that Cladh Aindreis was built in two phases, a smaller round or oval cairn was extended to the east. This sequence requires further analysis but the modification of Neolithic cairns is not uncommon elsewhere. Foe example Tulach an t'Sionnaich, in Caithness was a heel-shaped cairn extended into a long cairn (MacKie 1963-4) and at Mid Gleniron, Wigtonshire, a Clyde type cairn, a long cairn latter enclosed a smaller one (Corcoran 1969).

4.3 *Post-excavation*

4.3.1 Sample processing, artefact and eco-fact analyses, a programme of C14 dating and publication of the results from the fieldwork so far is currently underway in order to provide a more conclusive picture of this site.

4.4 *Archiving and Finds Disposal*

4.4.1 The project archive, comprising all ATP record sheets, plans and reports, will be deposited with the National Monuments Record of Scotland on completion of fieldwork and any relevant post-excavation analyses. Finds will be subject to the Scots Law of Treasure Trove and Bona Vacantia, and will be reported to the Queen and Lord Treasurer's Remembrancer for disposal. Appropriate conservation of finds will be conducted before disposal.

5. BIBLIOGRAPHY

Armit, I. 1997 Excavation of a post-medieval settlement at Druim nan Dearcag, and related sites around Loch Olabhat, North Uist *Proceedings of the Society of Antiquaries of Scotland* 127: 817-919

Bryce, T. 1904 'On the Cairns and Tumuli of the Island of Bute', *Proceedings of the Society of Antiquaries of Scotland* 38: 17-82

Ballin Smith, B *Howe: Four Millennia of Orkney Prehistory Excavations 1978-1982*, Society of Antiquaries of Scotland: Edinburgh

Challands A, Muir T, Richards C, 2005 The Great Passage grave of Maes Howe in Richards, C 2005 *Dwelling Among the Monuments*, McDonald Institute for Archaeological Research: University of Cambridge

Cobb, H. and Richardson, P. 2008 Project Design- *Cladh Aindreis chambered cairn 2008*, Ardnamurchan Transitions Project Report No. 9

Cobb, H., Midlane, G., Gray, H. and Richardson, P. 2008 *Field Survey in Swordle Bay, Ardnamurchan. Cultural Heritage Baseline* Ardnamurchan Transitions Project Report No. 10

Corcoran, J. 1969 Excavation of two chambered cairns at Mid Gleniron farm, Glenluce, Wigtownshire. *Transactions of the Dumfries and Galloway Natural History*

Driscoll, S.T. 1998. Picts and prehistory: cultural resource management in early medieval Scotland. *World Archaeology* vol.30(1): 142-158. Routledge.

Farrer, J 19/9/08 'Maes Howe' Orkney, available http: www.orkneyjar.com/history/maeshowe

Henshall, A. 1972 The Chambered cairns of Scotland. Vol. 2, Edinburgh: Edinburgh University Press

Hingley, R. 1996. Ancestors and identity in the later prehistory of Atlantic Scotland: the reuse and reinvention of Neolithic monuments and material culture. *World Archaeology* vol, 28(2): 231-243. Routledge.

Lynch, F 1970 *Prehistoric Anglesey: The Archaeology of the Island to the Roman Conquest*, The Anglesey Antiquarian Society

MacKie, E. 1963-4 New excavations on the Monamore Neolithic chambered cairn, Lamlash, Isle of Arran in 1961 *Proceedings of the Society of Antiquaries of Scotland* 97: 1-34

Mackie, E. 1977 *The Megalith Builders* London

Midlane, G., Cobb, H. and Richardson, P**.** 2008a *Ardnamurchan Peninsula Desk Based Assessment A*rdnamurchan Transitions Project Report No. 7

Midlane, G., Cobb, H. and Richardson, P**.** 2008b *Excavations and Field Survey in Swordle Bay, Ardnamurchan. Data Structure Report* Ardnamurchan Transitions Project Report No. 8

Pollard, A. 1996 ‘Time and Tide: Coastal Environments, Cosmology and Ritual Practice in Early Prehistoric Scotland’, In: A. Pollard & A. Morrison (eds.) *The Early Prehistory of Scotland*, Edinburgh: Edinburgh University Press, 198-212

Pollard, A. 2000 ‘Marine Mollusca’, in: R. Bradley *The Good Stones*, The Society of Antiquaries of Scotland, Monograph Series 17: 151-4

Richardson, P. & Cobb, H. 2005/2006 The Ardnamurchan Transitions Project: Excavation and Survey Work Season One (2006). Interim Report. The University of Newcastle, School of Historical Studies *Postgraduate Forum e-journal*.

Richardson, P. and Cobb, H. 2006 *Excavations in Swordle Bay, Ardnamurchan. Data Structure Report* Ardnamurchan Transitions Project Report No. 4

Semple, S. 1998. A fear of the past: the place of the prehistoric burial mound in the ideology of middle and later Anglo-Saxon England. *World Archaeology* vol.30(1): 109-126. Routledge.

Wellings, B 2008 Bryn Celli Ddu Burial Chamber, ‘Excavations at Bryn Celli Ddu’, available http: http://www.walesdirectory.co.uk/Ancient_Sites/Bryn_Celli_Ddu_Burial_Chamber.htm

Williams, H 1998. Monuments and the past in early Anglo-Saxon England. *World Archaeology* vol.30(1):90-108. Routledge.

APPENDIX 1: Context Register

Context	*Trench*	*Site*	*Description*
001	1	37	Topsoil
002	1	37	Reddish brown layer to west of cairn
003	1	37	Colluvial deposit sealing deposits in trench 1
004	1	37	Stones of Cairn in North of Trench 1
005	1	37	Fill Around (004) in Trench 1
006	1	37	Grey Soil Around Stones in South West of Trench 1
007	1	37	Natural in Trench 2
008	1	37	Stony Layer Under Subsoil in East of Trench 1
009	1	37	Fill of Feature (Pit?)
010	1	37	Fill of Pit in Corner of Trench 1
011	1	37	Soil Layer Under Cairn
012	1	37	Fill of Feature [015]
013	1	37	Black Fill of Feature under (010)
014	1	37	Cut of Feature in North West Corner Trench 1
015	1	37	Cut of Pit in Centre of Trench 1
016	1	37	Fill of Cut [015] under (012)
017	1	37	Layer Surrounding Cut [014]
018	1	37	Natural into which features are cut, under (008)
019	1	37	Burnt Soil in Cut [015] under (016)
020	1	37	Cut of Small Pit Within [015]
021	1	37	Stone Layer Defining Large Pit [015]
022	1	37	Stone Layer Defining Small Pit [020]
023	1	37	Upper Fill of Larger Pit [015]
024	1	37	Upper Fill of Cut [026] (which cuts [014])
025	1	37	Lower Fill of [026]
026	1	37	Cut of Feature In Corner of Trench Cutting [014]
027	1	37	Fill of Small Pit
028	1	37	Top Fill of Big Pit (at edges)
029		242	Topsoil
030		242	Brown Clayey silt with degrading sandstone and charcoal flecks
031	1	37	Grey black sandy clay fill of [035]
032	1	37	Black clay/organic fill of [035]
033	1	37	Pale clay fill of [035]
034	1	37	Dark silty sand fill of [035]
035	1	37	Cut of linear feature
036	1	37	Dark charcoal rich sand
037	1	37	Light sand below charcoal rich sand
038	2	37	Stones of cairn
039	2	37	Topsoil
040	2	37	Matrix surrounding (038)
041	2	37	Tumbled stones of cairn
042	2	37	Possible old ground surface underlying (038)
043	2	37	Natural shell sand
044	3	37	Possible old ground surface underlying (045)
045	3	37	Tumble
046	3	37	Stones of cairn
047	2	37	Gravel subsoil – Quartzy matrix
048	1	37	Stones of cairn in Trench 1 extension
049	2	37	Medium natural gravel band – quartz
050	2	37	Coarse gravel and small sub-rounded stones – natural
051	2	37	Stone holes

Context	*Trench*	*Site*	*Description*
052	2	37	Cut of rabbit burrow
53	2	37	Fill of rabbit burrow
054	4	37	Large stone slabs, possible hearth stones
055	3	37	Sandy layer below (040)
056	3	37	Burrow in (055)
057	3	37	Stones below tumble (045)
058	1	37	Possible cut in of feature 015
059	2	37	Cut of burrow
060	2	37	Fill of burrow
061	3	37	Stone-hole in (055)
062	3	37	Fill of burrow – mixed loose grey clayey silt.
063	2a	37	Possible prehistoric ground surface below 039 and 064
064	2a	37	Possible fill of modern linear, below 034 overlies 063
065	2a	37	Sandy subsoil layer below topsoil
066	2a	37	Cut of linear/furrow. Filled by 067
067	2a	37	Fill of linear 066
068	2a	37	Tumbled cairn material
069	5	37	Angular stones above 070. Possibly tumble from cairn
070	5	37	Dark grey sandy silt upper fill of linear 075
071	5	37	Colluvial deposit in east of trench
072	5	37	Disturbed ground from 2006 excavation
073	2a	37	Tumble form cairn over 065 below 063
074	2a	37	Tumble from cairn over 065 below 064 and 039
075	5	37	Cut of linear filled by 070
076	1	37	Dark brown sandy silt fill of posthole 077
077	1	37	U-shaped cut of posthole, filled by 076
078	1	37	Stony sand natural in south of trench
079	4	37	Displaced stones of cairn or structure in trench, overlies 110
080	4	37	Flat angular stones of wall of structure or possible blocking of earlier entrance, overlies 095 and 110
081	4	37	Colluvial deposit/topsoil mix, overlies 095 and 083, underlies 080 and 074
082	4	37	Cairn tumble? Overlies 082 and 095
083	4	37	Matrix surrounding stones 082
084	1	37	Orange stony gravel. Possible material used to block cairn forecourt/facade. Abuts 085
085	1	37	Grey stony gravel
086	2a	37	Mixed dark brown sandy silt upon which cairn material is built. Underlies 065
087	2a	37	Mid purple sandy gravel overlying natural sand. Possibly filling stone holes. Underlies 065 and overlies 043
088	1	37	Large stone tumble under 048
089	1	37	Circular cut of posthole, filled by 090. Cut into 036
90	1	37	Fill of posthole 089
091	1	37	Cut of linear feature filled by 092 and 101
092	1	37	Fill of linear 091, cut by 035
093	1	37	Natural white sand at base of the ditch
094	1	37	Stony layer cut by 035. Overlies 093
095	4	37	Rounded small pebbles, possible cobbled surface. Under 081 and 083
096	7	37	Topsoil
097	7	37	Dark grey brown layer below topsoil
098	7	37	Pinkish sand deposit below 097
099	7	37	Gravel layer below 098
100	7	37	Natural sand

Context	*Trench*	*Site*	*Description*
101	1	37	Redeposited natural basal fill of 091, cut by 035
102	6	37	Fill of linear 107
103	6	37	Colluvial layer underlies 008 cut by 107
104	2a	37	Orange brown gravely silt under 065 and 046, above 086
105	2a	37	Pinkish orange sand under 086. Overlies 106
106	2a	37	Possible pre-cairn turf line under 105, overlies 043
107	6	37	Cut of linear filled by 102
108	1	37	Cut of posthole in ditch 035, filled by 115 and 116
109	4	37	Possible wall of structure
110	4	37	Flat paved area possibly related to 109 and 111
111	4	37	Possible wall of structure
112	4	37	Disturbed tumble/paving above 095
113	1	37	Tumbled cairn material in silty matrix below 048
114	6	37	Natural deposit of sandy silt
115	1	37	Basal fill of posthole 108
116	1	37	Packing stones within posthole 108
117	1	37	Fill of posthole 118 under 034
118	1	37	Cut of posthole filled by 117. In ditch 035, not cut through ditch fills.
119	8	37	Topsoil
120	8	37	Bedrock
121	8	37	Sand and degraded bedrock
122	1	37	Fill of possible feature in forecourt of cairn 123. Under 084, filled by 123
123	1	37	Cut of possible linear filled by 122
124	1	37	Dark orangey black sand and gravel cut by 123

APPENDIX 2: Photographic Register

Film 1

No.	*Description*	*From*	*Conditions*
1	Registration shot		
2-7	Site 2, north facing section 1, bracketed east-west	N	O/C
8-11	Site 2, north facing section 2, bracketed east to west	N	O/C
12-13	Site 2, general shot of east facing section	N	O/C
14-19	Site 2, north facing section 1, bracketed east-west	N	O/C
20-21	Site 2, machair foreshore showing wave deposited pebbles	SE	O/C
22-23	Site 2, pre-ex of feature 202 showing deposit 201	S	O/C
24-25	Void		
26-27	Site 2, south facing section of feature 202 showing deposit 201	S	O/C
28-29	Site 2, east facing section of feature 202 showing deposit 201, bracketed north to south	E	O/C
30-31	Site 1, pre-ex Trench 1	E	O/C
32-33	Site 1, pre-ex Trench 1	W	O/C
34-35	Site 1, pre-ex Trench 1	S	O/C

Film 2

No	**Description**	**From**	**Conditions**
1-2	Site 1, Trench 1, post-ex shot of Test Pit 11	SE	O/C
3-4	Site 3, Pre-ex shot	SE	O/C
	Site 1, Trench 1, working shot of deposits 002 and 006	W	O/C
7-8	Site 1, Trench 1, working shot of 004	SE	O/C
9-10	Site 1, Trench 1, working shot of deposits 002 and 006	W	O/C
11-12	Site 1, Trench 1, pre-ex of exposed cairn stones 006	SE	O/C
13-14	Site 1, Trench 1, pre-ex of exposed cairn stones 006	SW	O/C
15-16	Site 1, Trench 1, general working shot	SW	O/C

Film 3

No.	*Description*	*From*	*Conditions*
1 - 2	Site 1, Trench 1, general working shot		O/C
3	Registration Shot	n/a	O/C
4 - 7	Site 1, Trench 1, general working shot		O/C
8 - 11	Site 1, Trench 1, upper fill 009 of pit 015	SE	O/C
12-13	Site 1, Trench 1, upper fill 010 of pit 014	NNW	O/C
14-15	Site 3, Pre-ex shot	N	O/C
16-17	Site 1, Trench 1, lower fill 013, of pit 014	SSW	O/C
18-19	South east facing section of 014, showing fills 010 and 013	SSW	O/C
20-21	Site 1, Trench 1, lower fill 016, of pit 020. part of pit 015		O/C
22-23	Site 1, Trench 1, general working shot	NNW	O/C
24-25	Site 1, Trench 1, general working shot	NNE	O/C
26-27	Site 3, pre-ex shot of deposit 302	S	Bright

28-30	Site 1, Trench 1, lower fill 019, of pit 015	SE	Bright

Film 4

No.	*Digital No.*	*Description*	*From*	*Conditions*
1		Registration Shot		
2-3	1353	Site 1, Test Pit 3, record shot of possible feature in south corner	NNW	Bright
4-5	1354	Site 1, Trench 2, south facing section	S	Bright
6-7	1355	Site 1, Test Pit 1 north north west facing section	NNW	O/C
8-9	1356	Site 1, Trench 1, pit 015 prior to removal of western half	SE	Bright
10-11	1357	Site 1, Test Pit 3, post-ex	NNW	O/C
12-13	1365-6	Site 1, Test Pit 6, showing deposits 6/002 and 6/004	NE	Bright
14-15	1373	Site 1, Test Pit 4, West north west facing section	WNW	Bright
16-17	1374-75	Site 1, Test pit 7, showing deposits 7/001 and 7/002	ENE	Bright
18-19	1377	Site 1, Trench 1, post-ex of '06 trench and pre-ex of 2007	SE	O/C
20-21	1378	Site 1, Trench 1, post-ex of '06 trench and pre-ex of 2007	NE	O/C
22-23	1379	Site 1, Trench 1, post-ex of '06 trench and pre-ex of 2007	NW	O/C
24-25	1380-1	Site 1, Test pit 7, showing deposits 7/001 and 7/000	WNW	O/C
26-27	1383	Site 1, Test Pit 8, west south west facing section	WSW	O/C
28-29	1387-8	Site 1, Test Pit 9, showing possible paleo-channel and/or hill wash	NW	O/C
30-31	1413	Site 1, Test Pit 6, showing deposits 6/005 and 6/006	WNW	Bright
32-33	1443	Site 1, Test Pit 5 post-ex	SE	Bright
34-35	1444	Site 1, Trench 1, Possible tumble above 048 exposed below topsoil	SW	Bright
36	-	Site 1, Trench 1, general shot	SE	O/C

Film 5

No.	*Digital No*	*Description*	*From*	*Conditions*
1		Registration Shot		
2-3	1464	Site 1, Trench 2, pre-ex	SE	O/C
4-5	1470	Site 1, Test Pit 6, showing deposits 6/001 and 6/007	SSE	O/C
6-7	1471-2	Site 1, Trench 1, north west facing section	NW	O/C
8-9	1473	Site 1, Trench 1, north west facing section showing deposit 034	NW	O/C
10-11	1474 -5	Site 1, Test Pit 10, north facing section	N	O/C
12-13	1476	Site 1, Test Pit 10, south facing section	S	O/C
14-15	1477	Site 1, Trench 1, north west facing section	NW	O/C

		showing deposit 036		
16-17		Site 1, Trench 3, pre-ex		O/C
18-20		Site 1, Trench 3, pre-ex		O/C
21		Site 1, Trench 1, cairn stones or tumble 048 in west of Trench 1	NE	O/C
22-23	1527	Site 1, Test Pit 10, post-ex	N	O/C
24-25	1528	Site 1, Trench 1, record shot of 037 in ditch 035	NW	O/C
26-27	1529	Site 1, Trench 1, east south east facing section of pit 015	ESE	O/C
28-29	1530	Site 1, Trench 2, post-ex	NW	O/C
30-31	1531	Site 1, Trench 2, south east facing section	SE	O/C
32-33	1532	Site 4, general shot of trench	NW	O/C
34-35	1533	Site 4, pre-ex shot of possible hearth in trench	W	O/C

Film 6

No.	**Digital No.**	**Contexts**	**From**	**Conditions**
1		Registration Shot		
2-3	1534	Site 1, Trench 1, pre-ex of ditch 035	NNW	Bright
4-5	1535	Site 1, Trench 1, pre-ex of ditch 035	SSW	Bright
6-7	1536	Site 1, Trench 1, pre-ex of ditch 035	NNW	O/C
8-9	1537	Site 1, Trench 1 in-situ cairn/tumble 048	NE	O/C
10-11	1538	Site 1, Trench 2, north east facing section	NE	O/C
12-13	1539	Site 1, Trench 2, south west facing section	SW	O/C
14-15	1540	Site 1, Trench 2, sondage	SE	O/C
16-17		Site 1, Trench 2, post-ex	SE	O/C
18-19	1543	Site 1, Trench 1, stone deposit in pit 020	SE	O/C
20-21	1544 -5	Site 1, ditch cut 035 in Test Pit 6	ENE	O/C
22-23		Site 1, Trench 4, post-ex	NE	O/C
24-25		Site 1, Trench 1, post-ex of pits 026 and 014	SSE	O/C
26-27	1550	Site 1, Trench 1, post-ex 020	SE	O/C
28-29	1568	Site 1, Trench 1, south south west facing section of pit 026, showing deposits 010 and 013	SSW	O/C

APPENDIX 3: Drawings Register

No.	*Sheet No.*	*Scale*	*Description/Contexts*
1	11	1:20	Site 37, Trench 1, pre-ex plan
2	12	1:20	Site 37, Trench 1, pre-ex plan
3	9	1:20	Site 37, Trench 1, pre-ex plan
4	10	1:20	Site 37, Trench 1, post-ex plan
5	5	1:50	Site 241, pre-ex plan
6	6	1:20	Site 241, plan
7	6	1:20	Site 241, plan
8	7	1:20	Site 241, plan
9	8	-----	Survey points and controls
10	4	1:20	Site 240, plan of feature 202
11	16	1:10	Site 37, Test Pit 3, plan of 3/001 and 3/002
12	17	1:10	Site 37, Test Pit 2, plan of 2/000
13	16	1:20	Site 37, Test Pit 1, post-ex plan
14	18	1:10	Site 37, Test Pit 3, post-ex plan
15	18	1:20	Site 37, Test Pit 4, post-ex plan
16	19	1:20	Site 37, Test Pit 7, post ex plan
17	20	1:20	Site 37, Test Pit 9, post-ex plan
18	21	1:20	Site 37, Test Pit 8, post-ex plan
19		1:20	Site 37, Test Pit 6, post-ex plan
20	43	1:20	Site 37, Trench 1, plan (W)
21	45	1:20	Site 37, Trench 1, plan (E)
22	42	1:20	Site 37, Trench 1, plan tumble and cairn stones 048
23	35	1:20	Site 37, Test Pit 10, post-ex plan
24	45	1:20	Site 37, Trench 1, plan of cairn stones 048
25	32	1:20	Site 37, Trench 2, post-ex plan
26	33	1:20	Site 37, Trench 3, post-ex plan
27	34	1:20	Site 37, Trench 2, pre-ex plan
28	36	1:20	Site 37, Test Pit 5, post-ex plan
29	37	1:20	Site 37, Trench 3, post-ex plan
30	22	1:20	Site 37, Test Pit 6, post-ex plan
31	46	1:20	Site 37, Trench 1 post-ex plan of ditch 035
32	48	1:20	Site 37, Trench 4, pre-ex plan
33	49	1:20	Site 37, Trench 4, post-ex plan
34	50	1:20	Site 37, Trench 2, plan of possible track 064
35	51	1:20	Site 37, Trench 1, plan of 048
36	52	1:20	Site 37, Trench 5, post-ex plan
37	53	1:20	Site 37, Trench 2, phosphate sample grid
38	54	1:20	Site 37, Trench 2, plan of cairn tumble onto subsoil 065
39	52	1:20	Site 37, Trench 5, intermediate plan
40	55	1:20	Site 37, Trench 1, plan of 048
41	52	1:10	Site 37, Trench 5, west facing section
42	56	1:20	Site 37, Trench 1, plan of post-hole 076/77 and ditch
43	57	1:20	Site 37, Trench 4, pre-plan
44	58	1:20	Site 37, Trench 1, plan of 084 and 085
45	58	1:10	Site 37, Trench 1, section of modern posthole 077
46	59	1:10	Site 37, Trench 2a, Southeast facing section of trench
47	61	1:20	Site 37, Trench 1, plan
48	62	1:10	Site 37, Trench 1, Southwest facing section of ditch
49	63	1:20	Site 37, Trench 4, plan of cobble floor and stone arrangement
50	64	1:10	Site 37, Trench 7, southeast facing section of trench
51	65	1:20	Site 37, Trench 6, post-ex plan

52	65	1:20	Site 37, Trench 6, south facing section of trench
53	66	1:10	Site 37, Trench 2a, southeast facing section
54	67-8	1:10	Site 37, Trench 2a, southeast facing section
55	58	1:10	Site 37, Trench 1, northeast facing section of posthole 108
56	69	1:20	Site 37, Trench 4, interpretative plan
57	70-1	1:20	Site 37, Trench 8, post-ex plan
58	72-3	1:10	Site 37, Trench 1, west-northwest facing section of ditch 035/091
59	72-3	1:10	Site 37, Trench 1, NNE facing section through forecourt/facade of cairn
60	74	1:10	Site 37, Trench 1, NNE facing section of ditches 035/91
61	72-3 and 77	1:10	Site 37, Trench 1, SE facing section through forecourt/facade of cairn
62	75	1:10	Site 37, Trench 1, west facing section of trench 1. Links to drawing 48
63	76	1:10	Site 37, Trench 1, SW facing section through forecourt/facade of cairn
64	60	1:20	Site 37, Trench 2a, plan of deposits 086 and 087
65	78		Site 37, plan of site grid
66	79	1:10	Site 37, Trench 1, NNE facing section through forecourt/facade of cairn
67	80-2	1:20	Site 37, Trench 1, post-ex plan showing ditch and extensions
68	83-4	1:10	Site 37, core sections, N-S Transect
69	85-6	1:10	Site 37, core sections, E-W Transect

APPENDIX 4: Samples Register

Section No.	*Scale*	*Contexts*
201	1:10	North Facing Section of Erosion Face (W)- site 240
202	1:10	North Facing Section of Erosion Face (E)- site 240
203	1:75	PLAN of Cairn – Tape Survey
204	1:10	Section of [014] (013) (010)
205	1:10	NE Facing Section of [014] (013) (010)
206	1:10	NW Facing Section of [026] [024]
207	1:10	E Facing Section of [020] (021) (028) (022) (023) (027) (019) (009) (012) (016) [015]
208	1:10	E-W Section Through Cairn (004) Evaluation
209	1:20	Feature [202] Within N Facing Section of Erosion Face, site 240
210	1:10	WSW Facing Section of Test Pit 2
211	1:10	ENE Facing Section Test Pit 1
212	1:10	NNW Facing Section of Test Pit 3
213	1:10	WNW Facing Section of Test Pit 4
214	1:10	NW Facing Section of Test Pit 7
215	1:10	NW Facing Section of Test Pit 9
216	1:20	Test Pit 8 Post-Ex Section
217	1:10	Test Pit 6 SSE Facing Section
218	1:10	ESE Facing Section of Trench 1 Central Pit
219	1:10	NNE Facing Section of [035]
1-14	1:10	Drawings of Soil Horizons
15-27	1:10	Soil Coring Illustrations
28-38	1:10	Soil Coring Illustrations
239	1:10	Possible Posthole at SE ½ Trench 1
240	1:20	NW Facing Section Trench 2
241	1:20	NE Facing Section Trench 2
242	1:20	SW Facing Section Trench 2
243	1:20	SE Facing Section Trench 2
244	1:20	Trench 3 NW Facing Section
245	1:10	Test Pit 10 N Facing Section
246	1:10	(5/001), (5/002), (5/003), (5/000)
247	1:10	E Facing Section ------
248	1:10	NNW Facing Section Through Ditch Trench 1
249	1:10	NE Facing Section of Test Pit 6
250	1:20	
251	1:10	Cut of Feature in Corner of Trench 1 Cutting [014]

Sample No.	*Context No.*	*Volume*	*Description*
001	003	20ltr	Bulk sample
002	002	5ltr	Bulk
003	006	5ltr	Bulk
004	011	10ltr	Bulk
005	009	5ltr	100%
006	010	15ltr	100%
007	012	20ltr	100%
008	013	7ltr	100%
009	016	20ltr	100%
010	019	10ltr	100%
011	6/004	10ltr	Dark organic layer – possible turf line
012	6/003	10ltr	Stony gravely layer between turf lines

Sample No.	*Context No.*	*Volume*	*Description*
013	1/001		Top soil in Trench 1
014	2/00		Top soil in Test pit 11
015	030		Clay with degraded sandstone and charcoal inclusions Site 242
016	6/006	20ltr	Brown organic layer – probable peat Test Pit 6
017	5/003	10ltr	Turf layer above sand Test Pit 6
018	1/001		Top soil Trench 1
019	031		Grey sandy clay Trench 1
020	032		Black clay organic layer Trench 1
021	033		Pale grey clay Trench 1
022	034		Silty sand layer SW corner Trench 1
023	032		Dark black organic clay from SW Trench 1
024	031		Stony layer, upper fill [035]
025	036		Dark charcoal rich sand Trench 1
026	034		Ditch fill with charcoal, Trench 1
024	036		Dark charcoal rich sand from specific location, Trench 1
028	036		Dark charcoal rich sand from specific location, Trench 1
029	009		Grey brown sandy silt fill of fire pit Trench 1
030	012		Dark brown black gravely silt fill of fire pit Trench 1
031	012	30 litre	Dark brown black gravely silt fill of fire pit Trench 1
032	042		Mid orange brown gravely sand Trench 2
033	054		Mid brown and orange from between possible hearth stones, Trench 1
034	028	40 litre	Dark brown black silt fill of fire pit, Trench 1
035	028		Dark brown black silt fill of fire pit, Trench 1
036	023	10 litre	Dark black charcoal fill of fire pit Trench 1
037	016	10 litre	Dark black charcoal fill of fire pit Trench 1
038	016	10 litre	Dark black charcoal fill of fire pit Trench 1
039	023		Dark black charcoal fill of fire pit Trench 1
040	010	10 litre	Grey gravel upper fill of pit, Trench 1
041	013	10 litre	Dark blackish lower fill of pit, Trench 1
042	019	10 litre	Brown black lower fill of central pit [20], Trench 1
043	019	10 litre	Brown black lower fill of central pit [20], Trench 1
044	065	10 litre	Mid orange sand layer in Trench 2a
045	085	20 litre	Grey gravel layer in forecourt of Trench 1
046	087	10 litre	Purple brown gravely sand layer in Trench 2a
047	086	10 litre	Brownish gravely silt layer in Trench 2a
048	034	40 litre	Ditch fill
049	084	20 litre	Orange layer in forecourt of Trench 1
050	036	2 small bags	Burning at top of 036, in ditch Trench 1
051	036	3 small bags	Burning at top of 036, in ditch Trench 1
052	036	1 small bag	Burning at top of 036, in ditch Trench 1
053	036	1 small bag	Burning at top of 036, in ditch Trench 1
054	036	40 litre	Burning at top of 036, in ditch Trench 1
055	036	4 small bags	Burning at top of 036, in ditch Trench 1
056	036	3 small bags	Burning at top of 036, in ditch Trench 1

Sample No.	*Context No.*	*Volume*	*Description*
057	115	2 small bags	Fill of posthole 108
058	Void		
059	084	40 litre	Orange layer in forecourt of Trench 1
060	085	40 litre	Grey gravel layer in forecourt of Trench 1
061	092	40 litre	Fill of 091
062	117	5 litre	Fill of posthole 118
063	101	40 litre	Basal fill of 091

APPENDIX 5: Small Finds Register

SF no	*Context*	*Area*	*Trench*	*Description*
1	201	Site 240	Section 1	Flint
2	201	Site 240	Section 1	Flint
3	201	Site 240	Section 1	Bone
4	001	Site 37	Trench 1	Bulk Flint and Quartz
5	002	Site 37	Trench 1	Charcoal
6	002	Site 37	Trench 1	Bulk Flint and Quartz
7	003	Site 37	Trench 1	Flint Blade
8	007	Site 37	Test Pit 11	Bulk Flint and Quartz
9	003	Site 37	Trench 1	Bulk Flint and Quartz
10	006	Site 37	Trench 1	Bulk Flint and Quartz
11	012	Site 37	Trench 1	Charcoal
12	301	Site 241	Trench	Possible Rove
13	301	Site 241	Trench	Animal Bone
14	Unstratified	Site 240	Section 1	Possible Weight
15	201	Site 240	Section 1	Modern pottery
16	Western Sondage (002 and 006)	Site 37	Trench 1	Bulk Flint and Quartz
17	Unclear but between 008 and	Site 37	Trench 1	Flint flake with cortex
18	Old land surface	Sanna Bay	n/a	Pottery
19	Old land surface	Sanna Bay	n/a	Pottery
20	Old land surface	Sanna Bay	n/a	Flint flake
21	001	Site 37	Trench 1	Poss. Quartz Core
22	003	Site 37	Trench 1	Poss. Quartz Core
23	003	Site 37	Trench 1	Poss. quartz anvil split pebble
24	Western Sondage (002 and 006)	Site 37	Trench 1	Poss. Quartz Core
25	Western Sondage (002 and 006)	Site 37	Trench 1	Quartz Flake
26	001	Site 37	Trench 1	Coarse stone tool
27	9/003	Site 37	Test Pit 9	Small Piece Struck Flint
28	8/001	Site 37	Test Pit 8	Bulk Finds/ Stone
29	Unstratified	Site 37	Trench 1	Bulk Quartz
30	9/001	Site 37	Test Pit 9	Bulk Quartz
31	Unstratified	Site 37	Test Pit	Unstratified Chert
32	7/001	Site 37	Test Pit 7	19th Century Pottery
33	7/001	Site 37	Test Pit 7	Bulk Quartz
34	7/001	Site 37	Test Pit 7	Worked Quartz
35	Unstratified	Site 37	Trench 1	Quartz
36	Unstratified	Site 37	Trench 1	Worked Quartz
37	Unstratified	Site 37	Trench 1	Hammer Stone
38	Unstratified	Site 37	Trench 1	Worked Flint
39	2/001	Site 37	Test Pit 2	Quartz
40	3/002	Site 37	Test Pit 3	Bulk Quartz

41	3/003	Site 37	Test Pit 3	Bulk Quartz
42	1/001	Site 37	Test Pit 1	Bulk Quartz
43	6/001	Site 37	Test Pit 6	Quartz
44	Unstratified	Site 37	Trench 1	Worked Quartz
45	Unstratified	Site 37	Trench 1	Worked Quartz
46	2/002	Site 37	Test Pit 2	Bulk Quartz and Stone
47	9/003	Site 37	Test Pit 9	Bulk Flint
48	8/001	Site 37	Test Pit 8	Quartz
49	6/003	Site 37	Test Pit 6	Quartz
50	8/002	Site 37	Test Pit 8	Bulk Quartz
51	7/002	Site 37	Test Pit 7	Modern Glass
52	001	Site 37	Trench 1	Bulk Quartz
53	030	Site 242	Trench 4	Flint Flake/Quartz
54	018	Site 37	Trench 1	Flint/Pebble Flake
55	031	Site 37	Trench 1	Worked Quartz/Flint
56	001	Site 37	Trench 3	Stone
57	018	Site 37	Trench 1	Chipped Stone
58	029	Site 242	Trench 4	Bulk Quartz
59	034	Site 37	Trench 1	Chipped Stone
60	034	Site 37	Trench 1	Chipped Stone
61	038	Site 37	Trench 2	Possible Hammer Stones
62	043	Site 37	Trench 2	Flint, Natural Flint
63	043	Site 37	Trench 2	Mudstone
64	034	Site 37	Trench 1	Bulk Quartz
65	034	Site 37	Trench 1	Flint
66	031	Site 37	Trench 1	Flint
67	034	Site 37	Trench 1	Bulk Quartz
68	034	Site 37	Trench 1	Flint
69	023	Site 37	Trench 1	Chipped Quartz
70	055	Site 37	Trench 3	Pottery
71	055	Site 37	Trench 3	Flint
72	019	Site 37	Trench 1	Chipped Quartz
73	6/003	Site 37	Test Pit 6	Bulk Quartz
74	Unstratified	Site 37	Trench 2	Chipped Stone
75	039	Site 37	Trench 2	Bulk Quartz From Cleaning
76	Unstratified	Site 37	Trench 1	Chipped Stone - Spoil Heap

APPENDIX 6: Site 1 Test Pit Register

Number	*Contexts*	*Description*
1	1/000, 1/001	Bedrock
2	2/000, 2/001	Bedrock
3	3/000, 3/001, 3/002, 3/003	Natural degraded bedrock and sand.
4	4/000, 4/001	Bedrock
5	5/000, 5/001, 5/002, 5/003	Ditch 035- unexcavated
6	6/000, 6/001, 6/002, 6/003, 6/004, 6/005, 6/006	Ditch 035- excavated
7	7/000, 7/001, 7/002	Compact sand
8	8/000, 8/001, 8/002	Compact sand and stones
9	9/000, 9/001, 9/002, 9/003	Natural sand
10	10/001, 10/002, 10/003, 10/004, 10/005	Ditch 035- unexcavated (extension of Trench 1)

Ardnamurchan Transitions Project

Cladh Aindreis Chambered Cairn
Swordle Bay, Ardnamurchan

Season Four, 2009:
Archaeological Excavations
Project Design

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Annex 1
in
Ardnamurchan Transitions Report no. 11

CONTENTS

LIST OF FIGURES

BACKGROUND

1.1 The Ardnamurchan Transitions Project (henceforth ATP) was formulated in order to investigate transitions in prehistory on the Ardnamurchan Peninsula. Whilst research into the Mesolithic, Neolithic and Bronze Age periods in Western Scotland has been intensive over the last few decades, the Ardnamurchan Peninsula remains a relatively understudied area for all of these key periods. Consequently little is known of the transitions from hunting and gathering to farming and the arrival of metalworking in the area. It seems likely, however, that this paucity of knowledge does not reflect the true record. A number of finds have been noted by local amateur enthusiasts over the last 20 years. Furthermore, given the geographical position of the peninsula between the northern and southern Inner Hebrides (Figure 1.1), it seems likely that this area could have played an important role during critical periods of early prehistoric change in Western Scotland. As such, the ATP aims to investigate these key transformations in the area through a combination of site specific excavation and wider survey work.

1.2 Work began in 2005 and after three successful seasons excavating at Cladh Aindreis chambered cairn, and surveying in Swordle Valley (in which the cairn is situated) (Figure 1.1. and 1.2), the project has discovered 21 previously unrecorded sites. Our work focusing on the cairn has revealed a series of insights into the structure and history of the monument. We are now in a position to directly address our remaining sources of uncertainty about the cairn. Full background information and the results of the study so far are available on our website and in the above data structure report which summarises our findings from Seasons 1 and 2 and details the results of Season 3.

1.3 The overall success attained during the first three seasons can not only be measured in the excellent archaeological results that were brought to light but the wealth of interest that was generated within the local community, the standard of the training provision for undergraduate students and the introduction of qualitatively better recording systems. Large-scale attendance at all three of the excavation open days and both public lectures also showed the high level of success in public outreach and overall local interest.

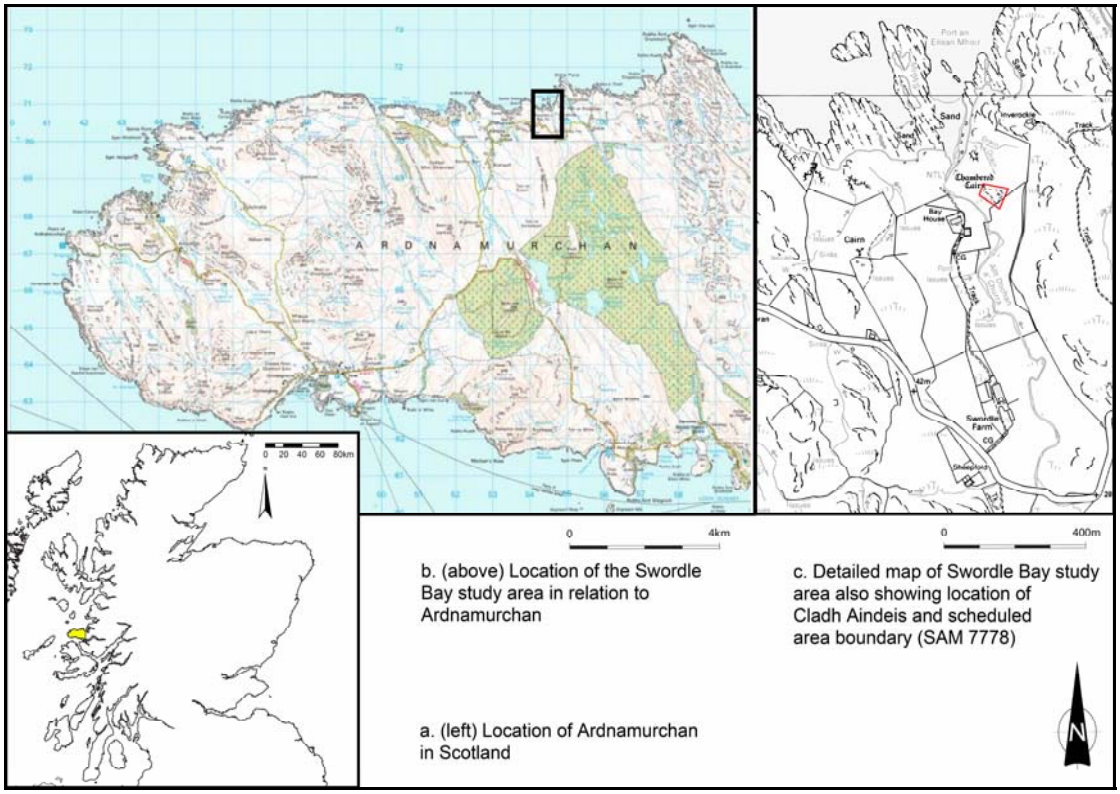


Figure 0.1: The location of Cladh Aindreis and the Swordle Bay study area

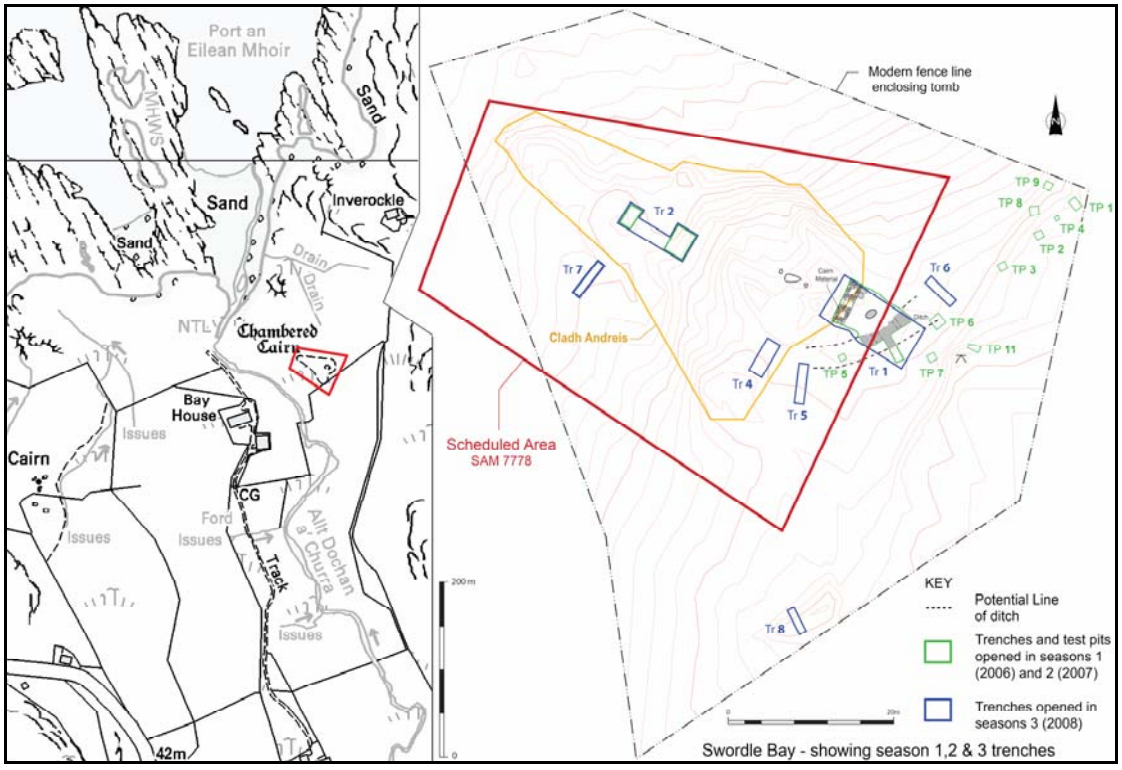


Figure 0.2: The location of trenches opened at Cladh Aindreis in Seasons 1 (2006), 2 (2007) and 3 (2008)

1. AIMS AND OBJECTIVES

2.1 The principal aims of the project are:

2.1.1 To rectify the paucity of information regarding the Ardnamurchan Peninsula in prehistory.
2.1.2 To study a particular landscape on the peninsula (Swordle Valley) in order to assess the potential of the archaeological remains in Ardnamurchan of all periods, and in particular to focus on the different phases of use of the chambered cairn Cladh Aindreis.
2.1.3 To develop a full outreach programme in order to; attract new audiences (participatory and non-participatory); Increase the benefits of this project to a wider geographical audience; provide opportunities for interested parties to get involved in the archaeology of Ardnamurchan and disseminate information about the project and its findings to local community groups (discussed in Section 4 below).
2.1.4 To develop practical methodologies which integrate and situate core theoretical questions within archaeological practice (see Gray et al. 2009).

2.2 To meet ATP's broad aims a range of specific objectives have been identified to meet each aim satisfactorily. The objectives require a set of tasks to be carried out over seasons four and five in order to bring this phase of the project to a successful conclusion. These tasks are defined as follows (a full strategy for the completion of each task is provided in section 3 below):

2.3 The principal objectives of the project in Season Four (2009) and Season Five (2010) are:

2.3.1 Continue excavations at Cladh Aindreis. Re-open and extend the NE corner of Trench 1, place a small trench to the west of the chamber (Trench 8) and extend Trench 4 in the Chambered cairn (Site 1, Fig 3.1). This work will be completed in Season Four (2009).
2.3.2 Investigate the immediate area around the cairn by geophysical magnetometer survey in order to locate the possible continuation of the ditch.
2.3.3 Investigate by survey and trial excavation a sample of the remains of all the clearance cairns within the Swordle Valley (Fig 3.2). Including completion of excavations at Site 3 that were recorded in Season one. This work will be begun in Season Four (2009) and completed in Season Five (2010).
2.3.4 Conduct a shovel pit survey of the lower Swordle valley (Fig 3.3). This work will be begun in Season Four (2009) and completed in Season Five (2010).
2.3.5 Excavate the lithic scatter identified during the 2008 walk-over survey (Fig 3.2). This work will be completed in season Four (2009).

2. METHODS STATEMENT

3.1 General

3.1.1 ATP follows the Institute for Archaeologists' Code of Conduct, Standards and Guidelines as appropriate, and those set out by the University of Manchester.

3.1.2 The following text provides an account of the main tasks to be conducted in each of the two years. The Outreach Programme is detailed in Section 4.

3.1.3 All excavation will be hand excavation and all deposits will be recorded by drawing (at an appropriate scale usually 1:10 for sections and 1:20 for plans), photography (SLR slide and digital), and by completing standard ATP record forms.

3.1.4 All excavation work will be undertaken by a team of 15 staff and 38 students during a two week field season between 23rd August and 5th September 2009.

3.1.5 At all times, both leading up to and whilst undertaking excavation, we will be in active consultation with the Highland Archaeologist (currently Kirsty Cameron) and the Highland Inspector for Ancient Monuments at Historic Scotland (currently John Malcolm), and his team.

3.1.6 Points marked * will take place within the scheduled area and therefore are subject to permission being granted by Historic Scotland.

*3.2 *Task 1: Excavations at Cladh Aindreis (Figure 3.1)*

Trench No	**Area**	**Extent**
Trench 1	Forecourt	6m by 5m
Trench 4	Possible structure	8m by 5m
Trench 8	Centre of cairn	1.5m by 1.5m

Table 1: Summary dimensions of the proposed archaeological trenches within the scheduled area.

3.2.1 The first task at the cairn will be to expand Trench 1 into the forecourt of the cairn in order to identify the front of the monument, its shape and to investigate whether the chamber was accessible from the front of the monument. This will also allow us to investigate a possible feature identified in front of the cairn in season 3, which may be related to a possible passage. The trench will be 6 x 5 metres and all deposits will be excavated in full apart from in situ cairn material. If possible it will also aim to recover secure material for radiocarbon dating in order to date the construction of the monument. In combination with the material already excavated in trenches 1

and 2 and the proposed excavation of trench 8 this will allow us to develop a detailed understanding of how the tomb was constructed.

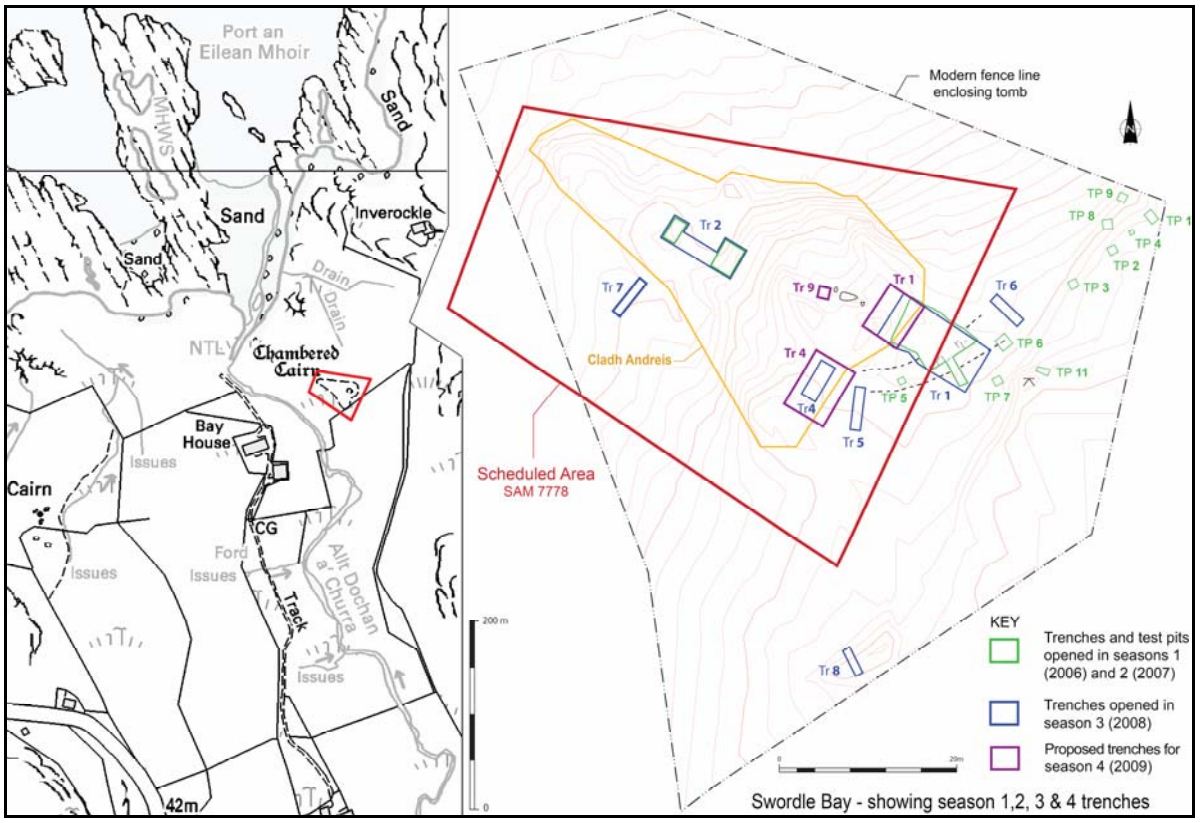


Figure 2.1: Location of previous and proposed trenches

3.2.2 A 8 x 5 metre trench will be opened over the structure located in Trench 4 opened in season 3 (2008). No in situ material will be excavated. We will clean down to in situ layers which will then be properly recorded. The aim of this trench is to be able to identify and date the structure, before designing further research strategies, if required, for 2010.

3.2.3 Initial geophysical analysis will define the route of the ditch discovered in season 2 and excavated in season 3. If this locates the route of the ditch we will excavate any terminals located outside the scheduled area. This will also allow us to check whether the ditch is a two phase construction throughout its length, as it was discovered to be in the portion already excavated. If the ditch cannot be located by geophysics a series of test pits will be dug outwith the scheduled area in order to track the route of the ditch. The ditch will be excavated where necessary within these test pits in order to check whether it remains two phase. This will allow us to trace the development and route of this feature in relation to the cairn.

3.2.4 Trench 8, 1.5 x 1.5m, will be opened immediately behind the chamber in the centre of the monument. The purpose of this trench is fourfold. First, it will allow us to examine and excavate a central portion of the cairn in order to compare this material to that which we have excavated at the edge of the

monument. Secondly it will allow us to check for evidence of any rebuilding or addition to this part of the monument. Finally we will be able to answer our central research question about whether or not the cairn was constructed on a shell midden. Since Henshall's aside noting shells in a rabbit scraping (Henshall 1972) there has been speculation in the literature that this monument may be one of a few in Western Scotland constructed on an earlier, presumably Mesolithic, shell midden. So far there has been no evidence recovered by the ATP to support this conclusion. However, if we are to address this question, one of our original motivating factors, it will be essential that we excavate a central part of the monument. Finally it is hoped that excavating this part of the cairn may allow us to recover stratigraphically secure material for radiocarbon dating that would allow us to date the construction of the cairn.

Southwest	Northwest	Southeast	Northeast
x- 154659.20	x- 154668.08	x- 154704.48	x- 154725.34
y- 770761.07	y- 770784.60	y- 770730.89	y- 770775.28

Table 2: Scheduled Area Coordinates

3.2.5 Following consultation with Historic Scotland we feel it is important to approach this excavation with a clear sampling strategy (which will be implemented under the guidance of the ATP palaeoenvironmental scientist Dr Mike Cressey, CFA Archaeology Ltd) and radiocarbon dating programme. Our sampling strategy is outlined in Appendix 1 and our radiocarbon dating programme is outlined in Appendix 2.

*3.3 *Task 2: Geophysical survey around Cladh Aindreis*

3.3.1 A geophysical survey of the area immediately surrounding the cairn, both within and out with the scheduled area, will be conducted using a magnetometer (exact model to be confirmed). This will be undertaken in order to define the line of the ditch identified in Trench 1 and define any further features.

3.3.2 Although the geophysical survey will not require any invasive works to be carried out it is still necessary to acquire Scheduled Monument Consent. As such Formal Scheduled Monument Consent will be sought for this purpose under Section 42 of the 1979 Ancient Monuments and Archaeological Areas Act 1979.

3.4 Task 3: Clearance cairns (Figure 3.2)

3.4.3 The study area contains a large number of possible cairns (Figure 3.2). These cairns range in size from little over a metre in diameter to over 7m in diameter. The cairns take the form of low grassed over mounds to up-standing stone piles. It is likely that these cairns relate to field clearance activity from the recent past but given the proximity of prehistoric remains there is a possibility that some of these cairns are also prehistoric in date.

These cairns have the potential to provide significant land-use and dating evidence for the whole of Swordle Bay.

3.4.4 All the cairns in the study area will be mapped using industry standard sub-metre GPS equipment and planned at an appropriate scale.

3.4.5 Sample excavation will be carried out at selected cairns in order to recover information related to construction method and dating material. As wide a range of cairn forms will be excavated in this way in order to provide the best coverage possible.

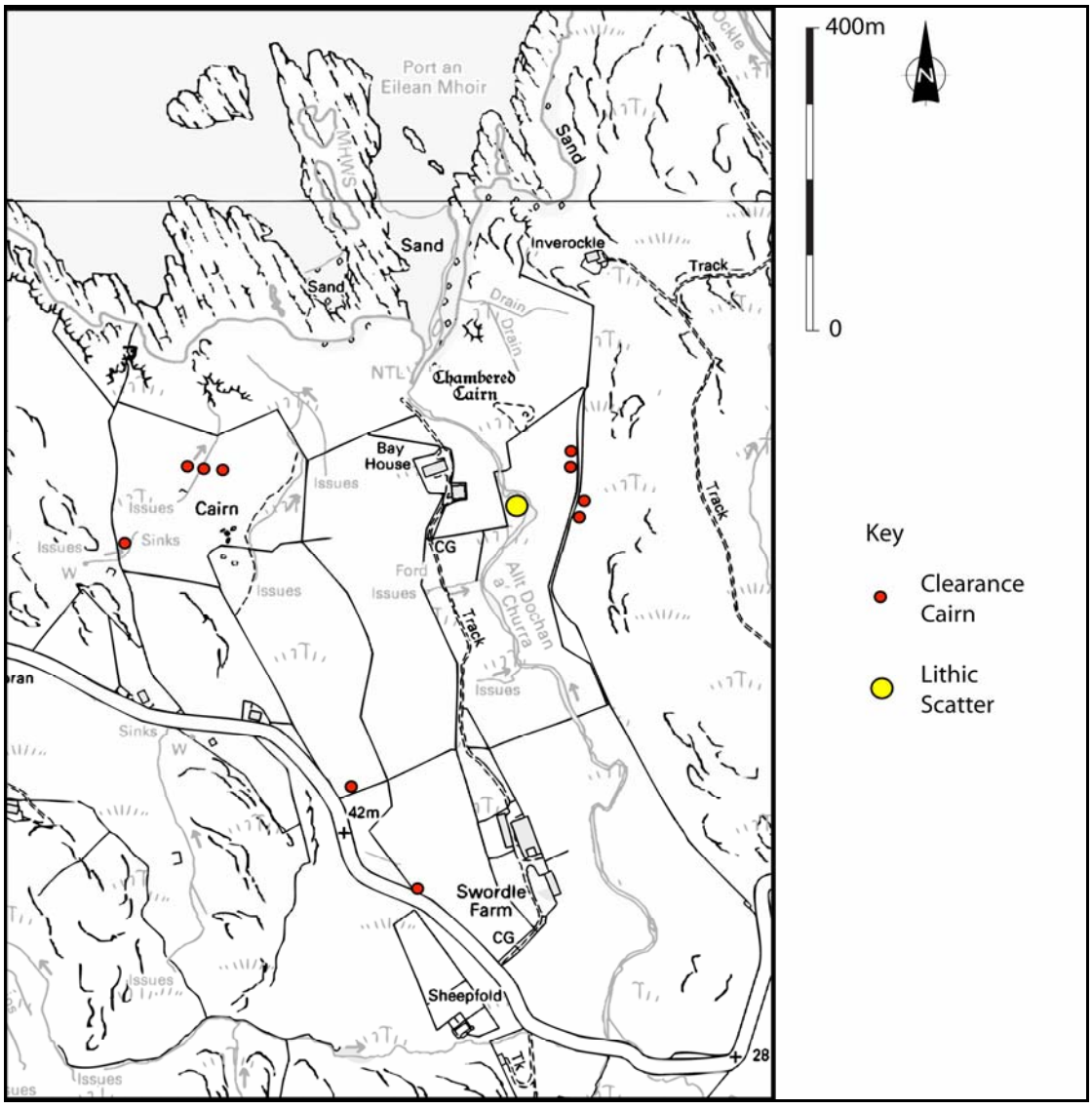


Figure 2.2: Location of clearance cairns and lithic scatter

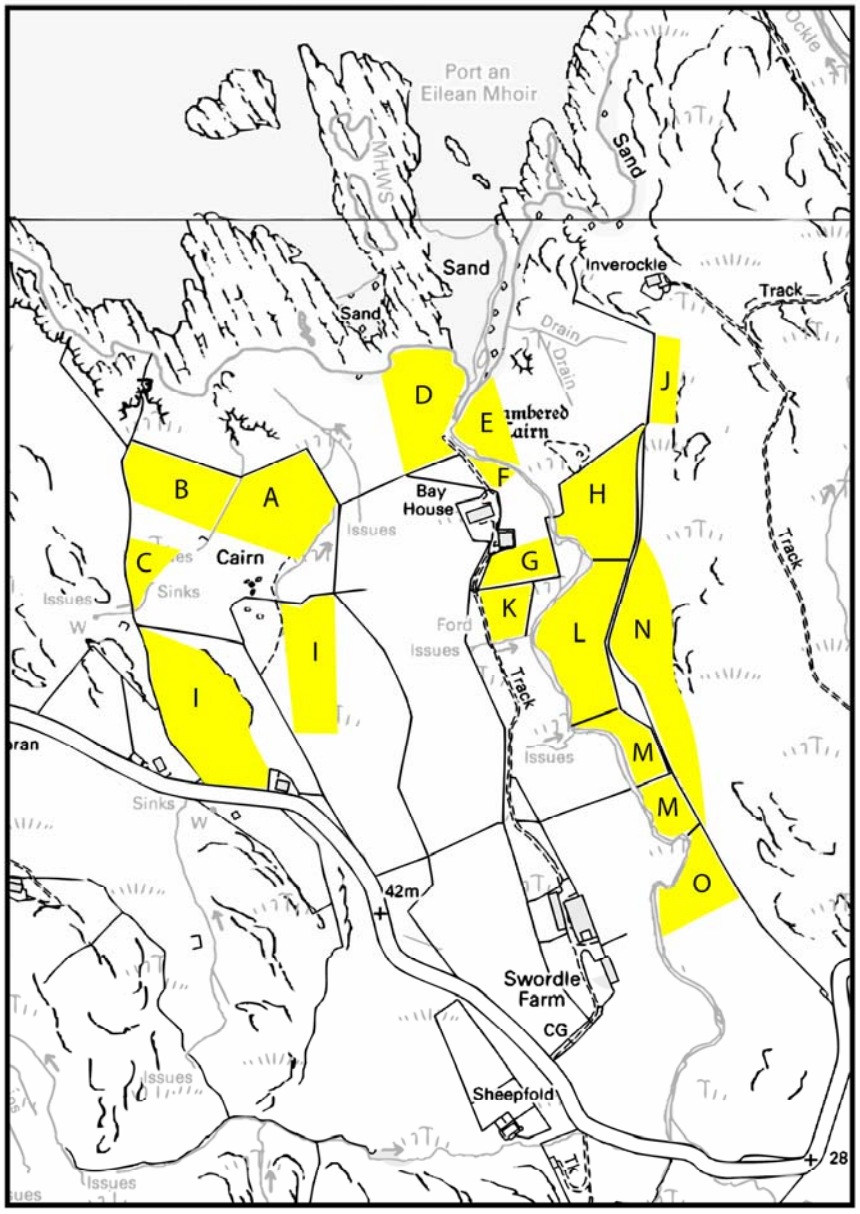
3.5 Task 4: Shovel Pit Survey (Figure 3.3)

3.5.1 To maximise our investigative coverage of the rest of Swordle Bay, to situate the use of the cairn and other sites under full excavation in their wider context and to identify areas that may be worth further investigation in the light of this a broad shovel pit survey will be undertaken. Where intensive

shovel pitting survey has taken place elsewhere in western Scotland (e.g. the work of the Southern Hebrides Mesolithic Project (Mithen 2000) on Islay and Colonsay) this has revealed large amounts of previously unknown sites and consequently we hope the same may take place in Swordle Bay.

3.5.2 Following the Southern Hebrides Mesolithic Project (henceforth SHMP) test pitting methodology (Mithen 2000: 58) test pits will be dug on a 10m grid and each pit will be 0.5 x 0.5m. The spoil from the test pits will be hand-sorted rather than wet sieved. Unlike the SHMP however, the contexts within each test pit will be recorded so that any vertical artefact distribution can be understood within its wider spatial context.

3.5.3 Sixteen areas around the edges of the lower portion of Swordle Bay will be subject to test-pit excavation (Fig 3.3). Test-pits will measure 0.5m x 0.5m and be located on a grid within each area (see table).



Area	Grid Size
A	30m by 30m
B	10m by 10m
C	20m by 10m
D	30m by 60m
E	10m by 10m
F	10m by 20m
G	20m by 30m
H	20m by 20m
I	Two grids
J	2m by 40m lines
K	60m by 20m
L	2x 100m by 30m
M	10m by 10m
N	1 30m line
O	1 40m line

Figure 2.3: Location and sizes of areas for shovel pit survey

3.6 Task 5: Lithic scatter (Figure 3.2)

3.6.1 A small lithic scatter was recorded on the eastern bank of the Swordle burn (Figure 3.2 above) during field walking in January 2008. The lithic scatter was found to be eroding out of the bank and its extent was never established. Consequently the lithic scatter will be excavated during the 2009 season.

3.6.2 A 1m x 1m area will be excavated in the top of the bank above the eroding lithic scatter in order to establish the extent of the scatter and record any associate features. The area for excavation will be extended in size if this is deemed necessary. The scatter will then be recorded and excavated in both plan and section using the tapestry excavation method developed by Barber et al during excavations in the Hebrides.

3. PUBLIC OUTREACH/VOLUNTEER TRAINING

3.1 *Programme of informal and formal archaeological training*

4.1.1 Thus far archaeological training has been provided based on workshops, lectures and on-site training. The project is run as a field school for undergraduate students who are trained in all aspects of the projects work (see Cobb and Richardson 2009 and Gray et al. 2009). It is envisaged that volunteers will undertake an adapted version of the student training programme and will include the following elements:

1) All ATP members will receive an Archaeological Site Manual. This will be in the form of an A5 folder with all recording information provided relevant to the project. This will form an archaeological excavation logbook that will track all the relevant training modules.
2) All ATP members will be encouraged to keep their own site notebook;
3) A series of workshops will be given providing training on single context recording methodology and how to complete site recording forms;
4) Training will be given in archaeological photography and the use of 35mm and digital photography;
5) Archaeological survey techniques will also include use of the EDM and its use with *PenMap* for general plan surveying and elevation recording;
6) Training will be given in standing building survey and use of the software used to produce final drawings;
7) Training in post excavation handling of pottery and other finds will be provided;
8) Students and volunteers returning from previous seasons will be encouraged to act as Site Assistants and encouraged to pass on their experience of excavation to the new members of the ATP team;
9) Training will be given on maintenance and updating the ATP web site. Members of the task groups will be encouraged to produce a news update for inclusion on the web site. The group will receive training on format and house style to enable to work together as a team to produce web site output.
10) Training will be given to a designated ATP press officer, a person who will be responsible for putting material on the web site once it has been edited.

3.2 *Attract new audiences (participatory and non-participatory)*

4.2.1 In 2006 and 2007 a public seminars were held to take the project into the community. In 2009 a third seminar will be held in Kilchoan. At this seminar people attending the meeting will be asked if they would like to sign up to be involved in the project. We will build on the success of previous seasons by encouraging new volunteers to join the existing volunteer force. This will be achieved by contacting all the individuals who sign up at the public seminar and advertising in the press.

3.5 Continued and new project deliverables

ATP Website Group

4.3.1 ATP has an active and continually updated project website. A new ATP website task group made up of interested volunteer members will be encouraged to further enhance this by providing regular news items and updates as the project progresses. ATP will provide guidance on the format and house style of the material to be included on the web site.

School Groups

4.3.2 ATP will work with local schools to provide resources and training for educators to engage and involve local school children in the archaeology of the area, and to increase the use of archaeology within the Scottish Curriculum of Excellence (following initiatives by Archaeology Scotland). This will involve the creation of resources such as teachers' packs, material/finds boxes, dig boxes, and posters. Congruently, ATP also aims to set up a Young Archaeologists Club for West Ardnamurchan, and to provide training for interested individuals within the community to take over the running of this YAC. ATP will provide further support and resources as required to maintain and continue these initiatives.

Adult Learning

4.3.3 During the 2009 fieldwork season, ATP will aim to run a series of Adult Learning Courses at the Kilchoan Community Centre to coincide with The Highland Council Adult Learning Programme 2008/09. These will be introductory seminars to archaeology and archaeological field techniques.

3.3 *Dissemination*

4.4.1 **Exhibition Materials:** ATP will contribute appropriate material (site plans, drawings, excavation photographs (previous and new) for exhibitions and educational use. ATP will aim to provide a permanent but flexible exhibition to be housed in the Kilchoan Community Centre.

4.4.2 **Public Lecture:** A public lecture will be given by ATP in both the 2009 and 2010. A series of lectures will be given to local history societies and community groups and appropriate regional conferences.

4.4.3 **Popular Articles:** Articles about the project will be published in appropriate local and national media publications (both popular and academic) for example, British Archaeology, Scottish Archaeology News, History Scotland, PAST etc. This will include a minimum of three summary articles at the end of the project for submission to British Archaeology, Scottish Archaeological News and The Archaeologist and two summary articles for submission, following each respective year, to be submitted to PAST (the news letter of the Prehistoric Society) and A Touch of Gas.

4.4.4 **Open Days:** Building on previous success at least two Open Days, one in each year, will be held allowing members of the public to visit the excavations and view the finds. A series of short lectures, probably over the course of a day, by the Project specialists, if appropriate, will be given to the local community to highlight importance of the site.

4.4.5 **Scottish Archaeology Month and Highland Archaeology Fortnight:** To coincide with Scottish Archaeology Month and Highland Archaeology Fortnight, ATP will run a series of activities targeted at various age and capability groups that fulfil the goals of Scottish Archaeology Month. The activities will be listed in the appropriate guides and event literature.

4.4.6 **Cultural Heritage Creation Strategies:** Archaeological trails through Swordle Valley and the immediate area will be designed and constructed (subject to land-owner permission and liaison). These will involve designated pathways through the Swordle landscape to various sites excavated and surveyed by ATP, and will include interpretation boards and potentially small scale reconstruction. The trails will be advertised in current tourist information media with the aim of aiding local economic development. Alongside, it is hoped that the fieldwork task group, and wider community, can be involved in the management, monitoring and improvement of the trails and the archaeological sites in the area.

3.4 *Links to wider archaeological audiences*

4.5.1 ATP sees the importance of linking the ATP Project with other archaeological projects, such as Shorewatch, Scotland's Rural Past and Adopt-A-Monument.

4.5.2 A conference and workshop on Community Archaeology in Scotland to be held in 2009 will be attended by the ATP members. A poster presentation will be given and a stall will be hosted on the results of the ATP Project to date. It is envisaged that ATP will produce the publicity material for the poster and stall.

4.5.3 To date, ATP has given four papers regarding our recording methodologies and student training, at the EAA conference September 2006 (Cobb and Richardson 2008) and 2007 and the TAG conference December 2007 and 2008 (Cobb et al. in prep; Richardson forthcoming). ATP aims to continue to disseminate the results of our fieldwork, training and community outreach programmes at appropriate future conferences, as well as publishing articles in relevant academic journals. ATP as also presented the results of the first two seasons at the Highland Archaeology Seminar in 2007 and will aim to present a similar paper in 2010.

4. PRODUCTS

5.1 The products of the project over the 2 years will include:

5.1.1 A full written report at the end of the second year of the project. This report will detail the work carried out and contain a synthesis of the results and conclusions and recommendations for any further work. This report will contain an account of the site archive, fulfilling all the requirements of an Historic Scotland Data Structure Report.

5.1.2 A summary report for Discovery and Excavation in Scotland.

5.1.3 A Costed Assessment for post-excavation and publication (as appropriate) following the final year's work.

5.1.4 A digital copy of the DSR with plans and DES entry on CD in a PDF format.

5.1.5 An outline for projected costs and timetable for any successive phase.

5.1.6 A minimum of three summary articles at the end of the project for submission to British Archaeology, Scottish Archaeological News and the Archaeologist.

5.1.7 Two summary articles for submission, following each respective year, to be submitted to the PAST and Touch of Gas.

5.1.8 The project archives, comprising all ATP record sheets, plans and reports, will be deposited with the National Monuments Record of Scotland within six months of completion of fieldwork and any relevant post-excavation analyses. Finds will be subject to the Scots law of Treasure Trove and Bona Vacantia, and will be reported to the Crown Agent for disposal. Appropriate conservation of finds will be conducted before disposal.

5.1.9 A press release will be prepared for the local paper

5.1.10 A public lecture will be given by the ATP for both the 2009 and 2010.

5.1.11 A Public Open Day weekend with guided tours will be held in each year, coinciding if possible with Scottish Archaeological Month and Highland Archaeology Fortnight.

5. HEALTH AND SAFETY

6.1 All ATP staff have been inducted into ATP's Health and Safety Policy.

6.2 All work for the projects will be subject to Risk Assessment procedures. A risk assessment has been drawn up for each aspect of the work and this takes into account all the procedures necessary to minimise the risk of injury to the ATP staff and volunteers (Appendix 1). Each trench or test pit will have to be assessed whether it poses any risks to not only the professional staff but also the community workers.

6.3 All volunteer workers will be given a health and safety induction and equipped with all necessary personal protective equipment prior to commencement of fieldwork.

6.4 ATP's Health and Safety advisor, Mike Cressey is accredited by a nationally recognised Health and Safety in Archaeology Programme.

6.5 The project will have 5 registered first aiders, Hannah Cobb, Mike Cressey, Alasdair Curtis, Helena Gray, and Phil Richardson.

6. POST EXCAVATION

7.1 A full (costed) post-excavation will be produced, following consultation with Historic Scotland, Dr Mike Cressey and Dr Melanie Johnson (CFA Archaeology Ltd), which will set out the analysis needed. Relevant specialists will be engaged to conduct such analysis.

7.2 All finds and samples will be analysed by the project team in the first part and then sent to appropriate experts where necessary.

7.3 All chipped stone will be analysed by Dr Hannah Cobb with the support of Dr Elizabeth Healy and Dr Chantal Conneller (University of Manchester).

7.4 Any prehistoric pottery will be analysed by Phil Richardson with the support of Dr Melanie Johnson (CFA Archaeology Ltd).

7. TIMETABLE

8.1 It is envisaged that the investigations in Swordle will take place over a further two field seasons, two weeks in 2009 and a further 2-4 weeks in 2010. Finds cleaning and wet-sieving will be carried out within each task group, with the wet-sieve tank and other facilities set up at Coldstream Cottage. Cladh Aindreis and the walkover survey in the Swordle Area will be finished in 2009. The clearance cairn survey will begin in 2010. The walkover survey should highlight other important targets for consideration during 2010, at present the most important sites would be all evidence of earlier settlement and medieval remains.

Milestones	**Projected date**
Desk-based research	December 2010
Completion of 2009 fieldwork	September 2009
Post-excavation processing and analysis for Cladh Aindreis	March 2010
Completion of 2009 DSR	October 2009
Publication of Cladh Aindreis	November 2010
Completion of 2010 fieldwork	September 2010
Completion of 2010 DSR	October 2010
Post-excavation processing and analysis for Cladh Aindreis	March 2011
Completion of all publications	December 2011

8. REFERENCES

Bayliss, A., Bronk Ramsay, C. and McCormac, F. G. 1997 'Dating Stonehenge', *Proceedings of the British Academy* 92: 39-59.

Benson, D. and Whittle, A. (eds.) *Building Memories: the Neolithic Cotswold long barrow at Ascott-Under-Wychwood, Oxfordshire.* Oxford, Oxbow

Cobb, H., Gray, H., Harris, O., Midlane, G., and Richardson, P**.** 2009. *Excavations and Field Survey in Swordle Bay, Ardnamurchan. Data Structure Report for Seasons One to Three*. Ardnamurchan Transitions Project Report No. 11

Cobb, H., Harris, O., Jones, C. and Richardson P. in prep. *Different perspectives on subjects and objects: confronting tensions in practice and theory*.

Cobb, H., Midlane, G., Gray, H. and Richardson, P. 2008 *Field Survey in Swordle Bay, Ardnamurchan. Cultural Heritage Baseline* Ardnamurchan Transitions Project Report No. 10

Cobb, H. & Richardson, P. 2009. Transition/Transformation: Exploring alternative excavation practices to transform student learning and development in the field. *Research in Archaeological Education Journal*, 1(2), 21-40.

Cobb, H. and Richardson, P. 2008 Project Design- *Cladh Aindreis chambered cairn 2008*, Ardnamurchan Transitions Project Report No. 9

Gray, H., Cobb, H., Harris, O. and Richardson, P. 2009. *An Archaeological Research Design for the Ardnamurchan Transitions Project: excavating, learning, teaching and methodology.* Ardnamurchan Transitions Project unpublished report no. 6

Mithen. S. 2000. *Hunter-gatherer landscape archaeology*. Cambridge: McDonald Institute Monographs.

Midlane, G., Cobb, H. and Richardson, P**.** 2008 *Ardnamurchan Peninsula Desk Based Assessment* Ardnamurchan Transitions Project Report No. 7

Richardson, P., Cobb, H., Harris, O, and Jones, C. (eds) forthcoming. *Reconsidering the on-site relationship between theory and practice*. New York: Springer.

APPENDIX 1 – SAMPLING STRATEGY

Following consultation with Historic Scotland we feel it is important to approach this excavation with a clear sampling strategy which will be implemented under the guidance of the ATP palaeoenvironmental scientist (Dr Mike Cressey, CFA Archaeology Ltd). This is outlined below. Clauses marked † will not be undertaken without a detailed consultation with Historic Scotland as these will require some (although a minimum amount) intrusive sampling into in situ deposits. All deposits not collected as part of this sampling strategy will be sieved on site using a sieve of no greater size than 10mm. This strategy is highly dependent on the nature of the deposits encountered, however, it is envisaged that the following will be included:

- ***Bulk Sampling*** - Bulk samples will be taken from each deposit or layer and will usually amount to no less than 50% of the deposit or 20-40 litres of mixed layers (such as topsoil). These samples will be collected in bags and tubs in order to recover organic materials and very small artefacts. Such samples will be processed in a water separation/flotation tank, where light material can be collected as coarse/fine flots (1mm – 300 micron mesh) and heavy material as residue (1mm mesh). A number of vertical monolith bulk samples will also be taken, as appropriate, in order that they can be used for other kinds of analysis. This will apply to all trenches excavated.

- †***Phosphate Analysis*** - Where appropriate, test-tube size samples for phosphate analysis from a series of grid squares will be taken. Samples taken below the modern root level (c.20cm) will have their location recorded and be taken in bags for laboratory analysis. This will apply in trenches 1 and 8.

- †***Magnetic Susceptibility*** – This is particularly relevant to soils and sediments adjacent to hearths. Magnetic susceptibility offers a means of recognising palaeosols on which fires have been used for clearance or ash has been spread. Either horizontal samples, taken in the same manner as the phosphate samples, or vertical samples (i.e. from sections using test tubes) will be taken, as appropriate. This will be undertaken in any circumstances where suitable material is discovered, particularly in trenches 1 and 8.

- †***Soil thin section micromorphology*** - Usually associated with old ground surfaces or similar, soil thin section micromorphology will be used to identify, describe and interpret the natural and anthropogenic features of the palaeosols associated with the cairn. The samples will be taken (usually from sections) in Kubiena tins (80mm x 50mm x 4mm) or as soil blocks in areas that are too stony. Samples will be taken from trench 8, providing that a suitable subsoil is discovered (it is possible that the centre of the cairn will be composed mainly of large stones making thin sections unviable). Thin sections will also be taken of sections in trench 1, particularly through the material suspected to have been imported to deliberately block the possible passage.

- †***Microfossil analytical techniques*** – These include analysis of soil pollen amongst other things and will be used in order to provide environmental information relating to the vegetation prior to the monument construction. These will be taken on a judgement basis by the ATP paleoenvironmental scientist in Kubiena tins

(80mm x 50mm x 100mm) or in bags where it is too stony in both trenches 1 and 8 where in situ cairn material will be removed. An assessment as to the potential of a core analysis will also be conducted as part of this process.

APPENDIX 2: RADIOCARBON PROGRAMME

Introduction

The establishment of a radiocarbon chronology for the chambered cairn at Cladh Aindreis presents a significant challenge both in terms of the complex taphonomic issues associated with the excavated deposits and the inherent difficulties in dating some of the types of material available from chambered cairns (especially cremated human bone, fish bone and organic residues adhering to pottery). Nonetheless there are a number of reasons why this challenge should be faced. Firstly the site is clearly an important one, both in terms of its local/regional context and in the suggestion that it is typologically variant, and may well be multi-phased. This means our findings have the potential to provide a vital contribution to the current ongoing debate regarding the nature and chronology of Neolithic colonisation along the European Atlantic façade. We believe, therefore, that archaeological understanding of this important site would be best served by an explicitly problem-driven radiocarbon dating programme which will specifically address the problems and potentials of the material that are likely to be encountered. Furthermore, this dating programme will be published as part of the general taphonomic consideration of the deposits. The best opportunities for radiocarbon dating relate to the sequence of deposits excavated within trenches 1 and 8. Also test pits which expose the ditch will also provide good opportunities for radiocarbon dating. Contexts will be selected for radiocarbon dating based on the results of the soil micromorphology analysis. The Ardnamurchan Transitions Project regards it critical to design a dating strategy at this stage (prior to excavation) as this is a key aim of the project. By entering the field with a concerted dating strategy already outlined such issues will be at the forefront of the teams' excavation strategy and explicit questions may be investigated in the field. This will minimise errors, both human and methodological, and thus result in the smallest amount of disturbance to in situ archaeological deposits possible.

Likely character of the dateable materials:

- **Cremated bone:** This material, derived from secure contexts, would be suitable for sampling for AMS dating.
- **Pottery:** Certain sherds may have interior organic residues. It is hoped organic residue analysis will also be conducted.
- **Fish bone:** In situ remains maybe suitable for AMS dating, following close examination of the stratigraphic record and associated taphonomy.
- **Plant macrofossils:** Again in situ remains maybe suitable for AMS dating, following close examination of the stratigraphic record and associated taphonomy.
- **Wood charcoal:** Again in situ remains maybe suitable for AMS dating, following close examination of the stratigraphic record and associated taphonomy.

Radiocarbon Programme Aims:

- To provide an indication of the periods of activity (both human and animal) that can be observed from the assemblages of dateable material incorporated in the deposits.
- To examine whether these remains relate to what originally were single deposits of fish-bone, wood charcoal, cremated human bone and plant macrofossils, as opposed to the repeated deposition of the same types of material.

- To establish whether the surviving remains could relate to sporadic rather than continuous activity – can we for example identify two chronologically distinct "pre-Neolithic", "Neolithic" and "Beaker" uses of the cairn, with a hiatus between?
- To confirm that these assemblages represent activity that occurred during the period of use of the cairn for burial activity rather than later.

Radiocarbon Programme Limitations:

In proposing the following dating strategy, it is recognised that:

- As work will be undertaken within the scheduled area, any intrusive sampling for radiocarbon dating will only take place following a detailed consultation and obtaining full permission from the Highland Inspector for Ancient Monuments with Historic Scotland.
- Most, if not all, of the sediment strata contain conflations of re-deposited material, potentially of different ages. Thus, sediment deposits may not relate to single depositional events. It may, therefore, not be possible to accurately date individual sediment deposits by dating the materials contained within them.
- Not all the chronological history of use of the cairn need be represented by the materials available for dating. It is possible, for example, that the cairn could have been in use before any of the surviving fills entered the cairn, and that earlier deposits were deliberately removed. The same may be true of any sealed old ground surface (OGS) or turf line beneath the cairn. Such contexts may be subject to OSL dating in future seasons of work although this will be beyond the remit of the project this year.
- There may be taphonomic uncertainties surrounding any wood charcoal and plant macrofossils, and to a lesser extent fish bone. There are also issues relating to the accuracy of dates obtained from fish bone, organic pottery residues and cremated human bone. A dating strategy restricted to a single material is therefore inadvisable.

The best dating strategy is therefore one which does not rely solely upon dating a single material or a single context, but rather one which examines a range of contexts and materials. A strategy will be devised during the post-excavation process based upon the stratigraphic and other data following the processing and analysis of all samples. In advance of this a mixed dating strategy can be provisionally put forward. A number of dates taken from each of the potential materials identified above (i.e. human bone, fish bone, plant macrofossils, wood charcoal) will allow periods of use of materials within the deposits to be established. This can then be compared to the same materials dated from other deposits. This is of importance for understanding chronological patterns in the character of material introduced into the cairn. This strategy will also allow the implementation of a Bayesian statistics approach to chronological resolution. Bayesian statistics is a mathematical modelling technique which combines radiocarbon dating results with archaeological relative dating evidence such as stratigraphy. This allows a more precise dating model to be constructed by determining which parts of simple calibrated radiocarbon dates are unlikely because of the known relationships between the samples. This is based on probability and as such is interpretative; however it has been used successfully on a number of important projects such as Stonehenge (Bayliss *et al*. 1997) and the barrow at Ascot-under-Wychwood (Benson and Whittle 2006).

APPENDIX 3: RISK ASSESSMENT

SCHOOL OF ARTS, HISTORIES & CULTURES
FIELD COURSE RISK ASSESSMENT

Subject Area: Archaeology

The Ardnamurchan Transitions Project
23rd August – 5th September 2009

COURSE STAFF: Project Directors: Hannah Cobb (University of Manchester), Helena Gray (CFA Archaeology Ltd), Oliver Harris (University of Cambridge) and Phil Richardson (University of Newcastle)

OTHER: Eleanor Casella and Hannah Lawson (University of Manchester), Alasdair Curtis (Jacobs Engineering UK Ltd), Paul Murtagh (GUARD), Mike Cressey and Cara Jones (CFA Archaeology Ltd), Gemma Midlane, Eleanor Rowley-Conwy and Rob Lee (Freelance), Lewis Stitt (Oxford Archaeology North)

MOBILE NUMBER: Hannah Cobb: 07833 710044

DATE OUT: Sunday 23rd August 2009
DATE IN: Saturday 5th September 2009

ACCOMMODATION: c/o Steading Holidays, Kilchoan, Ardnamurchan, PH36 4LH
TEL: n/a

Documentation attached: General Risk Assessment Form (6 pages)

University risk assessment form and guidance notes.
Feb 05

MANCHESTER 1824

The University of Manchester

SCHOOL OF ARTS, HISTORIES AND CULTURES
General Risk Assessment Form

Date: 09/06/09	Assessed by: Hannah Cobb	Validated by: (3)	Location: Swordle Bay, Ardnamurchan, Scotland	Assessment ref no n/a	Review date: 09/06/10
Task / premises: General archaeological field excavation and field survey work in various locations on the Ardnamurchan Peninsula					

Activity (8)	Hazard (9)	Person(s) in danger (10)	Existing measures to control risk (11)	Risk rating (12)	Result (13)
Use of manual excavation equipment	Danger of physical injury from incorrect use of equipment	All those using and in the vicinity of those using manual excavation equipment	A Health and Safety lecture will be provided and students will be instructed in the safe use of manual equipment (mattocks, shovels etc). They will also be provided with a field manual instructing them in appropriate use of the equipment. All project members will wear a high visibility vest to ensure they can be clearly seen. A fully trained first aider will be on site at all times and there will be a first aid kit on site at all times and in all vehicles**.** Also mobile phone on site at all times and transport will always be available on site.	Low	A
Vehicles on site	Danger of project members walking in front of vehicles or equipment being left in the path of vehicles	All those driving in or as passengers in vehicles, all those on site who may be near vehicles	Students will be instructed to be aware of project vehicles on roads and tracks, and of other vehicles including those supplying a service to the excavation. At all times the project staff will endeavour to keep vehicles a safe distance from the site.	Low	T

Activity (8)	Hazard (9)	Person(s) in danger (10)	Existing measures to control risk (11)	Risk rating (12)	Result (13)
Excavation in trenches	Trench Collapse	All those within and by the sides of trenches	Helmets will be provided for anyone in trenches below 1.20m. Shoring will be provided if trenches are below recommended depths. All project members will be fully briefed to keep a reasonable distance from trench edges and not to sit or stand on them, to prevent collapse.	Low	A
All fieldwork (including excavation and survey)	Wet weather, very hot weather, insect bites and stings.	All project members	Students will be advised to bring their own suncream, waterproof clothing, and insect repellent. We have explained the environmental conditions to them, and will assist in taking them to local stores where they can purchase extra protection if necessary. All project members will be given adequate time for breaks and all fresh water needed in order to prevent dehydration. No work will be undertaken in extreme weather. Project members with allergies to insect bites and other allergies have informed the project directors, and all staff will be made aware. Additionally any required medication for those with allergies will be available on site for immediate use if necessary.	Low	A
Driving to the project and around the peninsula	Vehicle failure or accident	All project members	Drivers will be responsible for checking the vehicles they are driving are in good order before making journeys. Students will be required to wear seatbelts when travelling in project vehicles. A First Aid box will be kept in all vehicles. Drivers will have mobile phones with them at all times.	Low	A

Activity (8)	Hazard (9)	Person(s) in danger (10)	Existing measures to control risk (11)	Risk rating (12)	Result (13)
Field survey or work away from site that may involve walking on roads or tracks	Traffic on roads or tracks	All project members undertaking work near roads or tracks or work that is accessed by roads or tracks	Project member will be advised to be alert to traffic on the public highway and on the forestry tracks. Where project members are required to walk on a road or track without a pavement they will walk on the right hand side of the road towards on coming traffic. All project members will wear a high visibility vest so that they are visible	Low	T
Food preparation	Food Safety	All project members who eat communally prepared food and who will cook and prepare food in the communal kitchen areas	All project members will be instructed on food safety and hygiene, and will be shown a food safety poster which will be kept in both kitchens in the dig accommodation. They will be required to follow basic food safety and hygiene precautions as outlined on that document. Furthermore, we require all students with specific dietary needs and especially food allergies to notify us of these so we can ensure their dietary needs are met.	Low	A

Activity (8)	Hazard (9)	Person(s) in danger (10)	Existing measures to control risk (11)	Risk rating (12)	Result (13)
General personal safety and personal illness	General personal safety and personal illness	All project members	We do not monitor all students continually during off-site hours, most notably after the evening meal has finished. We consider there are times when we supervise the students and times when they can be reasonably expected to supervise themselves, and they are notified of this. We will, however, step in and supervise them at those times if the need is apparent to us or is communicated to us. Therefore we ask students to tell us if they experience any difficulties in the evenings rather than checking on them. However the excavation team forms a very small community. Absences at meals or at social gatherings will be noted and if there is good reason to suspect a student is unwell or otherwise at risk staff will check up on them. Students will be asked to inform staff immediately if they are feeling unwell, including by phone and including by waking up a member of staff. They are also asked to look out for one another and let us know immediately if they think another student is unwell or otherwise at risk. Students will be told that if they have any concerns over security or personal safety they must tell a member of staff immediately, even if that means waking them up. We provide all of the students with our own mobile phone numbers, and ask them to provide theirs for us so we can reach them if we have reason to be concerned about their well-being. Phones can be charged at the accommodation.	Low	A

Activity (8)	Hazard (9)	Person(s) in danger (10)	Existing measures to control risk (11)	Risk rating (12)	Result (13)
General personal safety and personal illness ctd…			Students are required to tell staff if they leave the general vicinity of the project (meaning by day the excavation site or house if on cooking duty and by evening the house but also meaning at any time when they are present with a member of staff) and notify us of their likely time of return. While we expect them to work every working day unless they are unwell etc, we do not require them to stay within our supervision outside of working hours (usually on site c.9-5.30, but those on cooking duty will have duties in the early morning and evening). We do not consider them our responsibility if they are away from the project (e.g. if they visit friends or relatives including overnight), though we ask them to notify us of these absences. Staff will take any unexplained and prolonged absences as cause for concern and attempt to contact the student. If we cannot contact that student and if a sufficiently long time has passed since their movements were known we will follow any relevant lines of enquiry and if we are not satisfied the student is well and safe we will contact emergency services at our discretion. On the day off we often run field trips to sites of local interest and to local towns. We supervise students who accompany us on these trips – we ask those who are not with us to supervise themselves according to the project practices, and follow the usual codes of conduct.		

Activity (8)	Hazard (9)	Person(s) in danger (10)	Existing measures to control risk (11)	Risk rating (12)	Result (13)
General personal safety and personal illness ctd…			We ask those who do not come on field trips to act responsibly and we leave them with full access to the house. If they go into local towns or take their own vehicles off elsewhere we do not consider them our responsibility for that time. If necessary project staff may work on site on a day off. If this happens students will be given the option of joining us and being supervised, or taking a day off under their own supervision. Students will be required to call us on our mobile phones if any accidents occur, if they are unwell, or if they experience other problems during the day off and we will then act appropriately.		

REFERENCES:

HSE guide to Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995. (RIDDOR) HSE
Health and Safety at Work Act 1974.HSE
Health and Safety (First-Aid) Regulations 1981. HSE
Management of Health and Safety at Work Regulation 1999.HSE
Advice on travel-related DVT. The Department of Health