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 The National Trust for Scotland

**Watching brief carried out during the insertion of a new water  
supply system for the Isle of Canna.**

**June - October 1998**

Damian Hind, January 1999

✓ National Trust for Scotland Archaeology Report No. 17



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## **Watching brief carried out during the insertion of a new water supply system for the Isle of Canna, July – October 1998.**

Damian Hind, NTS Archaeological Assistant

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### **Executive summary**

Between July and November 1998, excavations were carried out on the Isles of Canna and Sanday for the installation of a new water supply, telephone cabling and ducting for electricity cabling. This was done in two phases, the first covering Canna and Canna Harbour; the second Sanday (see figure 2).

The renewal of the water supply utilised existing water sources, with settling tanks, pipework and a new reservoir being built. A ring main now connects all the present buildings on Canna and Sanday, and those which can potentially be renovated. An extension to St Edward's Church and Point House has been made to provide a future connection to the island's supply.

A watching brief was kept on the harbour crossing, for the recording of any marine archaeology. Phase 1 also covered the sampling of the landscape features disturbed by excavation work on Canna. Careful preparatory work helped to avoid sensitive areas of archaeology being disturbed at all. In the event, no marine archaeology was discovered, while three different areas of rig and furrow and two lynchets were recorded.

On Sanday, a watching brief was kept on the excavations through the croft land and from the Machair to the shoreline. The former uncovered evidence of rig and furrow and paths from the front of two ruined crofts. The latter uncovered no evidence of archaeological features, as those nearby were deliberately avoided.

Also undertaken during this project was a limited excavation of the area immediately to the side of the West Bothy, formerly Coroghon House. This revealed evidence of an incomplete floor surface of cobbles and paving slabs set into sand (see figure 6). It also showed the stratigraphic relationship between the West Bothy and the remains of the ruined wing of Coroghon House, which now forms the garden wall for Canna House.

### **Acknowledgements**

A great deal of preparation was necessary for this project, and I would like to thank all members of the project team jointly, but especially Donald McAskill, John Peden and Murdo Jack for their support and input during the work. The project itself owes a great deal to the residents of Canna, who make the island what it is, and whose welcome and hospitality is remembered fondly by all who visit there.

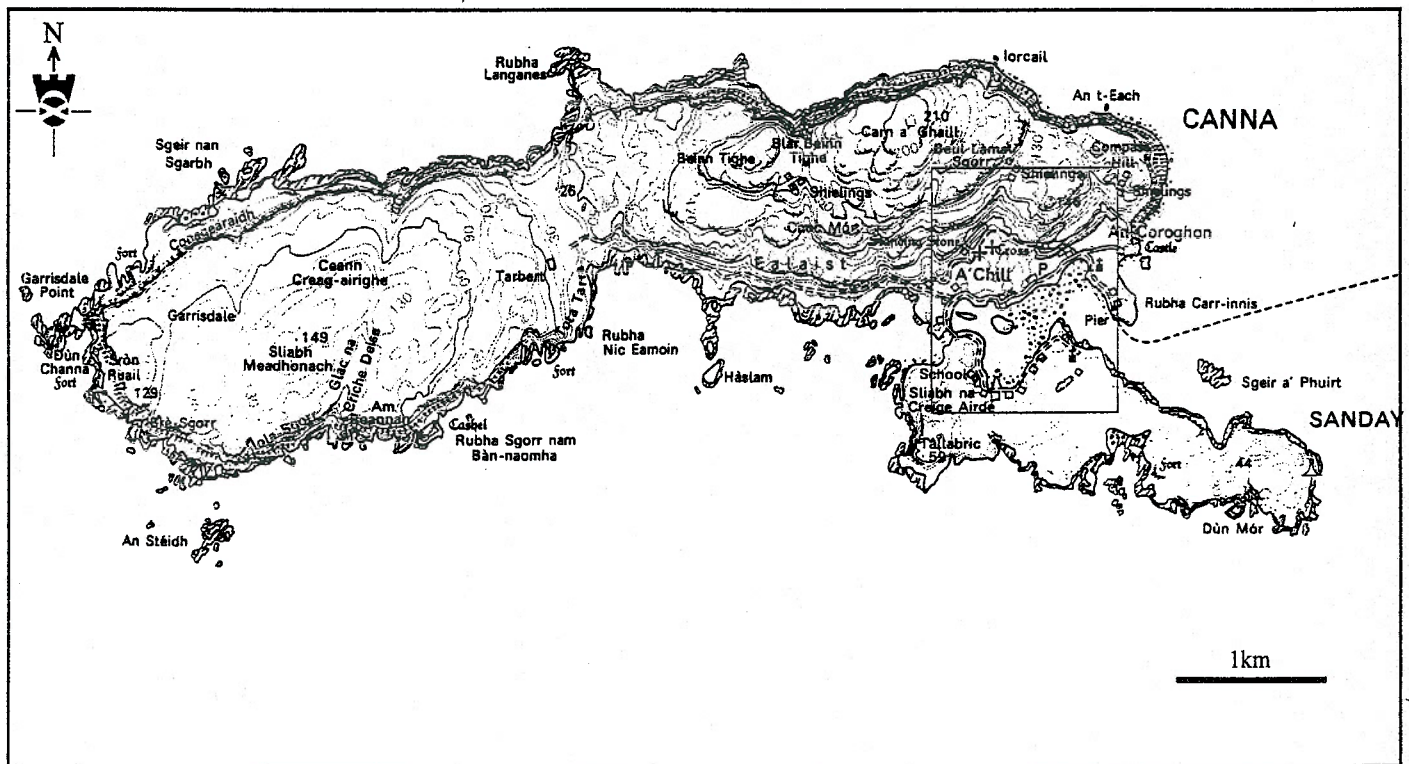
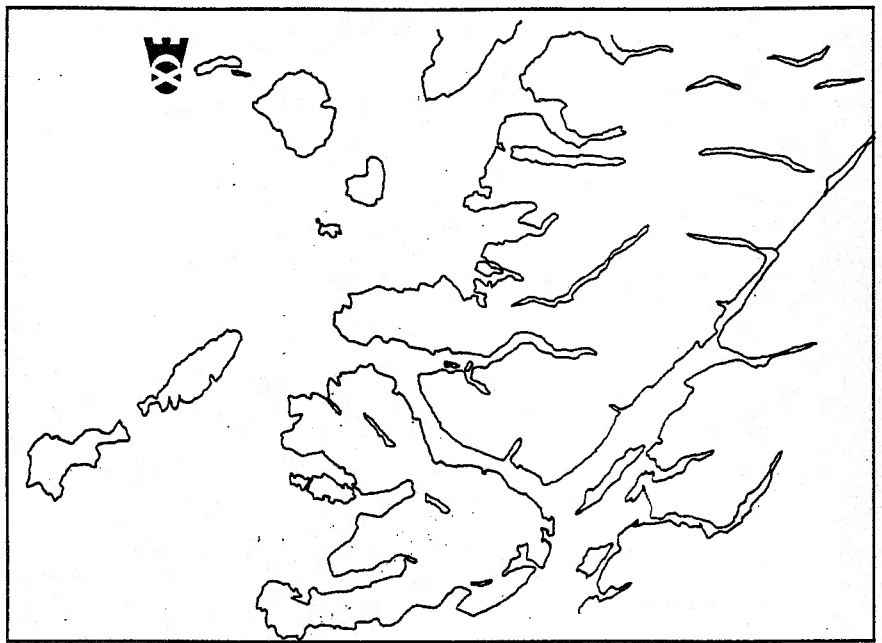
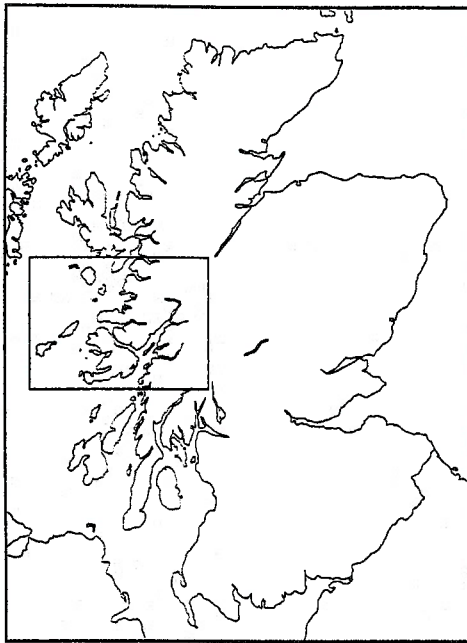


Figure 1: Extract of OS 1: 50000 map of Isle of Canna (not to scale)  
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### *1.0 Purpose and nature of work.*

Upgrading the Canna water supply involved approximately 1km of excavations for the insertion of piping, settling tanks and the construction of a new 50 tonne reservoir tank. The work not only upgraded the existing water supply, but also crossed the harbour, allowing a connection to Point House and St Edward's Church. The route of excavations crossed several areas of archaeological interest, characterised by areas of rig and furrow, and occasional lynchets. Areas of settlement were avoided, as were other features of obvious archaeological interest. Recording of the cultivation features was carried out in an attempt to learn more about their use, dimensions and date.

A watching brief was carried out during the harbour crossing in case any marine archaeology were discovered. Likewise, excavations from the shore landing to St Edward's Church were watched for any archaeological remains.

Phase 2 linked the newly laid pipework from phase 1 from the point where it crossed Canna harbour in an anticlockwise arc across Canna and Sanday, thereby joining the entire islands' populations onto the central water supply. Also installed was ducting for a future electricity cable and new telephone cabling.

The route of excavations crossed several areas of archaeological interest, characterised by areas of rig and furrow. These were recorded, following on from the recording of similar features for phase 1. A watching brief and summary recording were carried out in the areas where excavation passed particularly nearby ruined crofts and other structures.

Also carried out was a limited excavation of the area south west of the West Bothy: an area known to have been originally part of Coroghon House, the preceding "big hoose" of the island before Canna House was built. This was to record any traces of floor levels remaining from the house, before development work on the West Bothy takes place.

### 1.1 *Historical background*

The islands of Canna and Sanday have been inhabited for probably 5000 or more years and the recorded archaeological features now number in excess of 1000 recorded locations, representing over 300 sites<sup>1</sup>. As this information is relatively new, we have a limited picture of island life through the centuries. Canna was inhabited most densely during the eighteenth and nineteenth centuries, with the island being divided into the communities of Garrisdale, Kiell, Coroghon and Tarbet in 1805<sup>2</sup>. Evidence of these divisions can still be seen today in the form of long boundary dykes, which effectively cut the island into particular compartments.

The land use pattern for Canna is not particularly well understood, especially early patterns, although a profusion of settlement sites and cultivation areas are visible today. These are thought to date from the last major settlement of the island, clearance of which occurred over the eighteenth and nineteenth centuries. The settlement areas affected by the excavation works are known as Kiell and Coroghon. Final clearance of the village of Kiell occurred in 1849, with the remaining population being moved over to Sanday<sup>3</sup>. This has remained the main crofting area of the island for the inhabitants up to present.

Island life was largely traditional Hebridean crofting, supported by fishing. This would have included cultivation using 'lazy beds': hand-dug plots where soil was deliberately heaped towards the centre of a ridge to increase soil depth. Normally this would also include enrichment of the soil, by adding seaweed or other fertilisers to improve yields. It was a highly labour intensive exercise, but was necessary, as use of animal drawn ploughs was severely limited.

Canna Harbour is the finest haven of the Small Isles, and has been used by vessels probably since earliest times. Consequently, it grew in importance during the eighteenth century, with the herring industry forming a substantial part of the island economy during this period (the British Fisheries Society investigated the possible establishment of a fisheries station on Canna as early as 1787<sup>4</sup>). Although this did not come about, herring and kelp were important until after the turn of the century.

The building known as the West Bothy, and the adjacent building, The Bothy, were originally the central and north two portions of Coroghon House. The three bayed Coroghon House preceded Canna House as the main house on the island. When Canna House was built in the 1850s the south west wing of the old house was demolished and incorporated into the garden wall for Canna House. The central portion became known as the West Bothy and largely fell into disrepair, along with the north eastern wing (the Bothy), until both were renovated during the last five years.

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<sup>1</sup> RCAHMS 1999.

<sup>2</sup> Clanranald map of the island, 1805

<sup>3</sup> Canna Management Plan, NTS; 1994, 1.12

<sup>4</sup> *Canna: The story of a Hebridean island* J.L. Campbell, 1984

## 2.0 *Results of work: summary*

Archaeological investigation involved re-excavation of lengths of the pipe cut. The aim was to sample the areas of disturbed rig and furrow, ascertaining wavelength and amplitude, and to recover any residual finds for dating purposes. Re-excavation of several lynchet-like terracing features was also done, again, attempting to date them by residual finds and their relationship with other landscape features. Examination of these features recovered post-medieval pottery, and one piece of prehistoric ceramic. Phase 2 of the work continued this, as well as the recording of areas of ground in front of two ruined croft houses, which showed evidence of paths running from the building thresholds towards the shore.

The watching brief at the harbour failed to uncover any archaeological evidence, although a whale vertebra was recovered 133m from the Canna shore. No archaeological features or artefacts were found during excavations on Sanday.

Before development of the West Bothy took place, it was necessary to undertake a limited excavation up to 2m south west of the end wall, and running the depth of the building. This was to uncover evidence of any surviving flooring from Coroghon House. Excavation uncovered a floor surface of cobbles laid into sand. No further excavation was done, in order to preserve the surface and to allow possible incorporation into the access path to the rear of the West Bothy in due course.



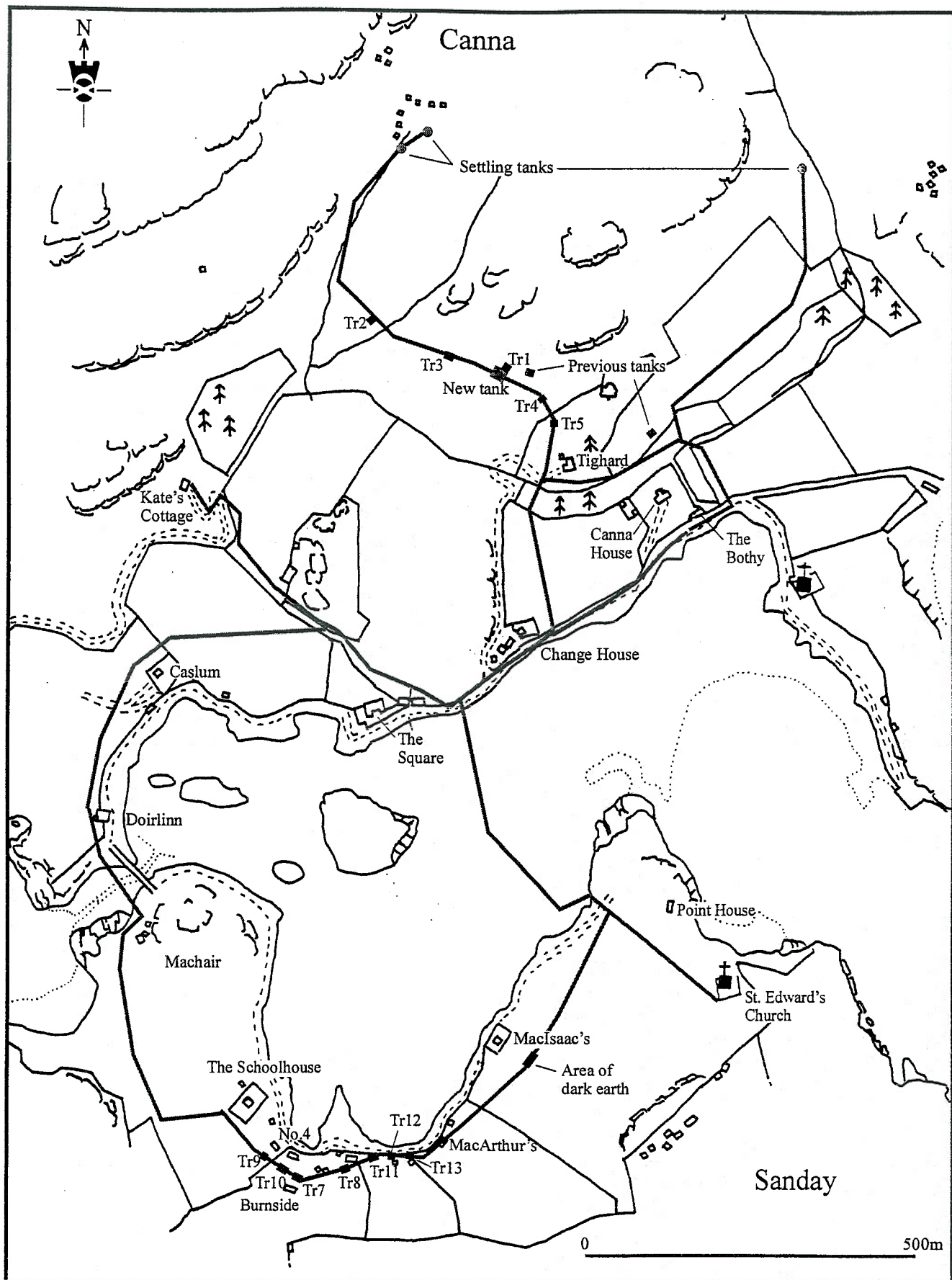


Figure 2: Location of works and trenches



## 2.3 Details of excavation

### Phase 1

Three areas of rig and furrow were excavated, (Fig. 3: Tr. 1-3). These comprised contexts 1.1-1.2, 2.3-2.11, and 3.16-3.17 respectively. Trench 1 was on the site of the new reservoir (NG 2721 0569), with Trench 3 halfway between 1 and 2 (c. NG 2707 0573). Trench 2 was located alongside long term vegetation monitoring site 3 (NG 2702 0562), at the western side of a small burn, south of Blar na Carraigh.

Lynchet features were sampled at NG 2725 0567 (Trench 4) and NG 2725 0562 (Trench 5), and these contained layers 4.12-4.13 and 5.14-5.15 respectively.

As no archaeological features were noted during the excavations across the harbour or on Sanday, no information is recorded for this part of the watching brief. There was however a whale vertebra discovered during excavations for one of the pipeline anchor points.

### *Trench 1*

This was 8.6m in length, and a maximum of 600mm in depth. It was excavated to this length to take in at least 1½ wavelengths of the rig, and to the beginning of naturally occurring deposits. The amplitude of the rig "wave" in this area was fairly shallow, being a maximum of 20 cm over a wavelength of 2-2.8m. The normal wavelength at this location is nearer to 2.8m, although the trench was located to the edge of the cultivated area.

There were only two layers of soil in this trench, 1.1 and 1.2. Layer 1.1 was a very dark brown silty loam topsoil, with moderate to frequent broken stone and humus, comprised mainly of bracken rhizomes. This layer either continued onto bedrock, as at the southern end of the trench, or was underlain by a compacted, dark red-brown silt (02) suggestive of an iron-panned subsoil, 250mm below present ground level.

### *Trench 2*

This trench was excavated by means of two separate "keyhole" excavations, one at the base of the furrow (lowest point, marked A) and the other at the top of the rig (highest point, marked B). The decision to excavate in this area was forced by the unexpected insertion of a bleed valve into an area of well-preserved rig and furrow. Both holes were 0.8m in length, and between 700 and 750mm deep.

In excavation 2a the maximum depth of soil was 700mm, with 630mm occurring at the lowest point of the furrow. The four contexts (2.3-2.6) were underlain by a light to mid-brown stony silt, which was regarded as being naturally occurring. Contexts 2.3 and 2.4 were both dark brown, humic soils, probably topsoil layers. Below this, layer 05, a very dark brown silt, had either orange flecks of iron panning or degraded burnt clay. A possibly prehistoric or Early Medieval potsherd was recovered from this context.

Below 2.5 a very dark brown layer (2.6) was found. Although its colour potentially suggested organic content, none was discernible, and so this is more probably the result of iron panning.

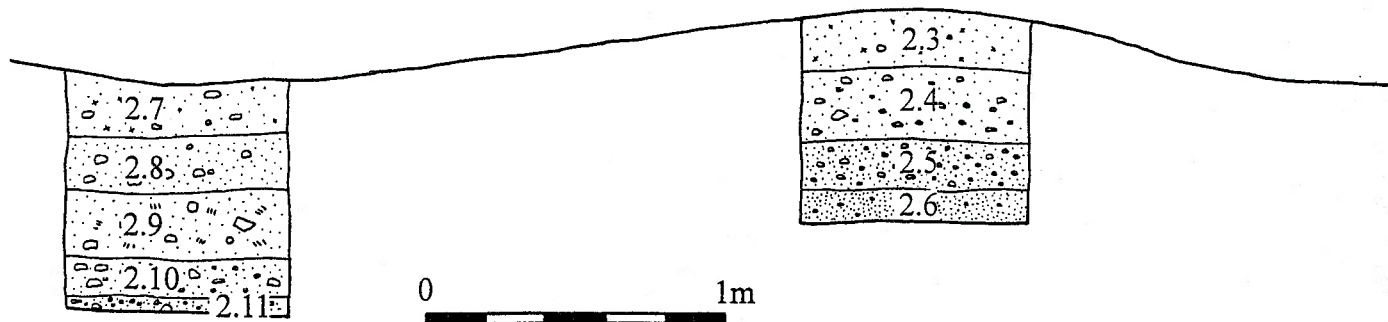


Figure 3: East facing section of trench 2, with the two points sampled.

Figure 4: East facing section of trench 4, through lynchet.

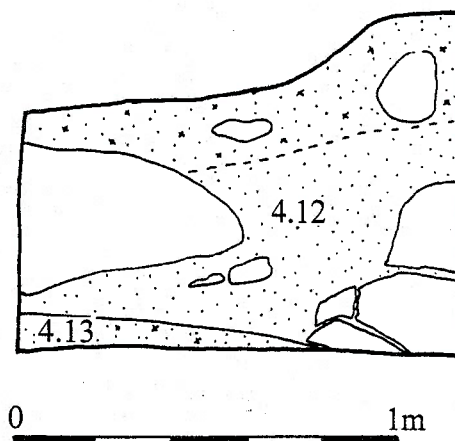
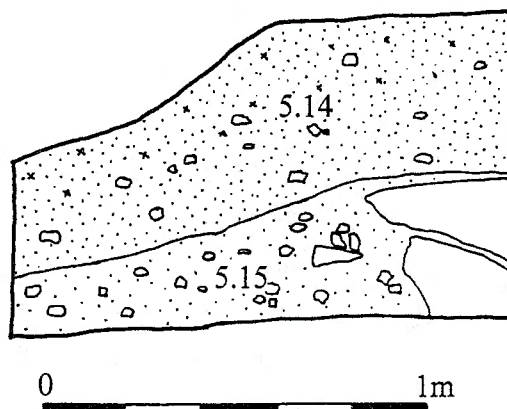


Figure 5: East facing section of trench 5, through lynchet





Excavation 2b uncovered five contexts, broadly following the same pattern of two layers of dark brown humic topsoil, with varying levels of pebbles (2.7, 2.8), overlying a finer layer of silty material (2.9), which in turn overlies a layer of panned silty gravels (2.10). One piece of post-medieval, glazed ceramic was recovered from layer 07.

The profile of the rig in this area was 4.1m in length between highest points, with a 0.25m height difference between top of rig and bottom of furrow. The surface profile was asymmetric, being of more pronounced slope to the uphill side of the rig, which had a distance of only 1.5m between peak and trough. The overall depth of deposits was fairly constant, although they were marginally deeper (750mm as opposed to 700mm) under the furrow. However, this also means that the profile of the rig is also mirrored throughout the soil profiles.

#### *Trench 3*

Trench 3 was re-opened after initial excavation for recording purposes. It was situated west of the reservoir, down-slope at approximately NG 27070570. Excavation showed two contexts: a band of friable dark brown humic silt, 600-700mm thick (3.16), which increased in thickness towards the furrow. Below this lay a cream to very pale brown sticky silt (3.17), more than 100mm in depth.

#### *Trench 4/ Lynchet 1*

This was a section through the lynchets on the eastern edge of the plateau containing the reservoirs at NG 2725 0567. The section was taken through the bank profile, and was 900mm deep up-slope, shallowing to 620mm at the lowest point. Large pieces of rock characterised the deposits, which were partially rotted, and without suggestion of being part of constructional features. Two contexts were noted: 4.12 and 4.13, the dark brown, compacted loamy silt (4.12) occupying most of the depth of excavation, with the highly water retentive dark brown silt (4.13) showing below, at a minimum depth of 600mm. Strangely, it appears to slope in the opposite direction to the line of the hillside, possibly suggesting a large build-up of soil above it over time.

#### *Trench 5/ Lynchet 2*

Trench 5 was a sample of the next terrace or lynchet further down-slope (south-east) of trench 4, located at NG 2726 0562. It also contained two separate layers: 5.14 and 5.15. Again, the profile of the trench cut across the "step" of the lynchet, to allow sampling of any construction associated with it. The profile illustrates that no construction is associated with the bank, layer 5.14 running uninterrupted throughout. This dark brown loamy silt appears to have been a layer of cultivation soil, 470mm deep at its maximum, overlying a reddish brown fine silt with moderate to frequent rotted stone (5.15), here interpreted as largely undisturbed subsoil.

## Phase 2

### *The West Bothy*

Prior to archaeological investigation a work party from the NTS Conservation Volunteers had cleared the site down to a pre-arranged level. This was to remove topsoil from the site and to remove archaeologically less important deposits.

The entire area was overlain by a heavily rooted dark brown-black clayey silt topsoil, with moderate inclusions of mortared stone, overlying all of the area excavated. Varying between 0.6m and 0.8m in depth. This was possibly cut in the northern corner by 6.6: a quarter oval, 0.85 by 0.80m across, aligned with its long axis running NW-SE, alongside and against the side wall of the West Bothy. It was excavated to 0.35m in depth, and sloped down sharply from the top, shallowing out further towards the bottom of the cut. This was filled by a mid-brown sandy gritty clay with occasional mortar fragments, with frequent large stone fragments and voids, classified as 6.5.

Below 6.1 was 6.7: a layer of light grey sandy mortar rubble incorporating large angular pieces of stone. This overlay 6.2 to the northern half of the trench. It was interpreted as demolition debris. Lying below this was an incomplete layer of water-worn cobbles, up to 15cm in length, and occasional flagstones, which were bedded into a coarse creamy-grey shelly sand (6.3), 100-150mm deep. There was a suggestion of edging stones in places and the cobbles came to 20-30mm below the level of plastering, suggesting that they were laid whilst the plastered wall and the building housing it remained in use. The sand lay above a layer of dark grey-brown pebble and gritty sand (6.4).

The wall of the West Bothy was open to investigation during this period, with cut 6.6 cutting into the foundation of the dividing wall between the West Bothy and the ruined section of Coroghon House. The foundations appear to be large, undressed stone pieces, without mortaring, although the full depth was not uncovered. The walls of Coroghon House are plastered in two layers, with the first layer being scored to provide a tooth for the second, presumably finer, layer. The plasterwork continued sporadically down to between 20 and 50mm from the cobbled floor surface.

The wall joints were partially examined at the front of the building, where the construction appeared to show the walls as being simply butt-jointed. (See slide 154.20-21)

### *The ruined crofts*

Excavations for the Phase 2 services largely followed the line of the existing water supply crossing Sanday, which crossed in front of two ruined crofts, at NG 27060454 & 27080454. The excavation crossed in front (towards the shore) of the two crofts, passing 2m from the structures. Excavation was carried out using a mini-digger under archaeological supervision.

Two features were shown up in section during excavation and are recorded as sequences 12.1-12.3 and 13.4-13.7, for the crofts at NG 27080454 and NG 27060454 respectively. Both excavations showed evidence of stone surfaces directly in line with



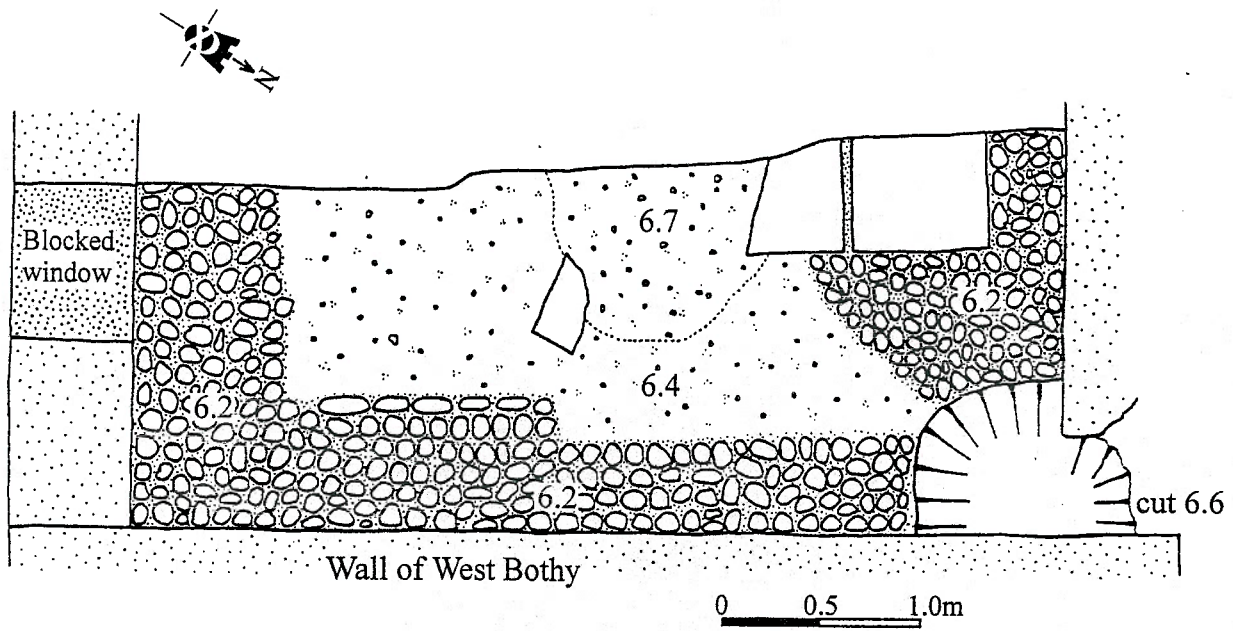


Figure 6: Plan of excavated area to south-west of The Bothy.

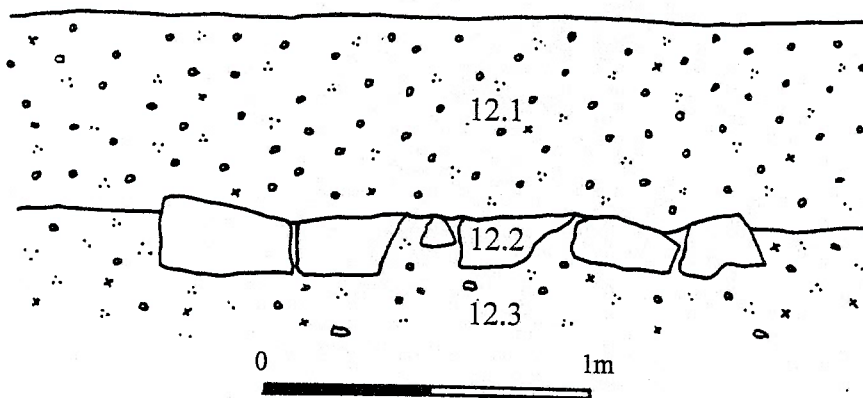


Figure 7: North-west-facing section of Trench 12

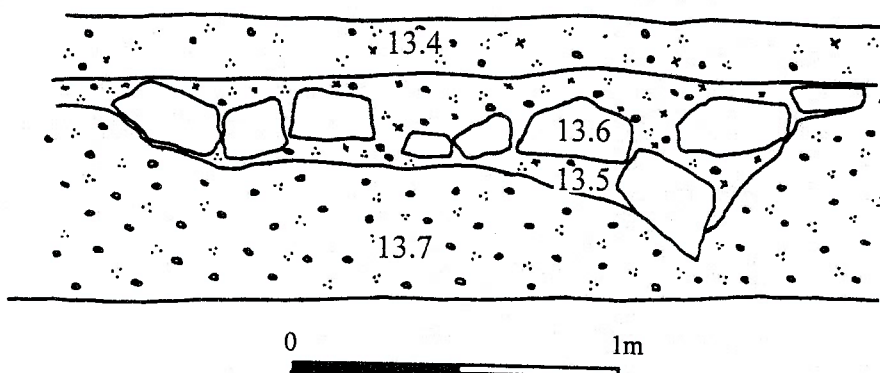


Figure 8: North-west facing section of Trench 13

the thresholds of the houses (12.2 and 13.6), which were covered by topsoil (12.1 and 13.4).

At the eastern croft (NG 27080454) the stone surface 12.2 was covered by 270-290mm of topsoil (12.1), which consisted of dark brown clayey silt containing moderate gravel. 12.2 was made up of angular stones circa 150mm in each dimension. The surface appeared to be positioned directly in front of the entrance to the building, and was of similar width to the doorway, at 0.92m (36 inches). 12.2 was partially bedded into 12.3: a layer of dark red-brown silty clay mixed with gravels and rotted rock.

The area in front of the western croft showed that below the dark brown silty clay topsoil 13.4, the stone layer 13.6 was bedded on a thick silt and gravel surface, up to approximately 300mm in thickness (13.5). It appeared that the stone surface again aligned with the threshold of the croft building, and was 1.1m in section length. Below 13.5, at a depth of 420mm was 13.7: a layer of mid to light brown gravels 20-50mm in diameter, suspended in coarse silt, to the bottom of the trench, at 0.61m. It was interpreted as a subsoil of predominantly degraded rock.

#### *Rig and furrow within the croft land.*

Five areas of rig and furrow were recorded in the croft land, and one further area was observed during excavation work. The first four areas recorded all cut roughly perpendicularly through the rig, with the fifth cutting it at a shallow angle. Hence for that particular area it was only possible to obtain an accurate depth of the rig, rather than wavelength.

*Area 1.* NG 26880453. This comprised contexts 7.1-7.2: a plastic, dark brown clayey silt, between 0.30 and 0.38m, in depth (7.1), overlying a brown-orange degraded stone and silty clay layer (7.2), continuing from 0.30-0.38m deep to 0.80m. The undulation of layer 01 suggested that the wavelength of the rig was 2.5-3.0m in frequency and about 60-80mm in amplitude.

*Area 2.* NG 269904552. This comprised contexts 8.3-8.4: an uppermost layer of plastic, very dark brown clayey silt, 0.15-0.20m deep (8.3), overlying a layer of blue-grey broken stone with some evidence of orange-brown residue surrounding the rock surfaces. This was excavated down to a depth of 0.65m.

*Area 3.* NG 2686 0455. This comprised contexts 9.5, 9.6, 9.7 and 9.10. The topsoil was made up of a layer of dark brown silty clay with frequent inclusions of degraded stone gravels. It appears to form a depression, being as deep as 0.65m in places, although probably more typically nearer 0.30m deep. Below this was a layer of dark red-brown silty clay, no more than 50mm in thickness (9.10), sitting on a gleyed subsoil, the top part of which (9.6) was a compacted, coarse silty clay with frequent coarse gravel. This had patches of mottling, light to mid-grey brown with sporadic orange brown patches within it. Below, and occasionally indistinguishable from 9.7 was the lower part of the gley, which consisted of bright orange clay with frequent light grey clay patches and moderate to occasional dark grey mottling. This was approximately 0.30m thick



*Area 4.* NG 2690 0451. This comprised contexts 10.8-10.9: 10.8 being a dark brown plastic clayey silt with very sparse pea gravels or degraded stone, 0.22-0.30m thick, overlying rotted dark blue-grey stone, excavated to a depth of 0.7-0.8m.

*Area 5.* NG 2712 0454. This comprised contexts 11.11-11.12, 11.11 being a homogenous brown silty clay with moderate to abundant pea gravels, to a depth of 0.30m, overlying a light to mid-brown silt and pea gravel mixture, excavated to a depth of 0.80m. It was not possible to attain an accurate measurement of rig wavelength as the excavated cut ran along the line of the rig in this part of the field.

In addition to this, the area directly south of MacIsaac's cottage was recorded by photograph (NG 27200458; see slide collection 154.16-17) as a thick (0.2-0.4m) layer of black silt was noted 0.75m below present ground surface. It was banded between a mid-orange brown silty clay or clay below, whilst above was a mid-brown clayey silt. The ground in this area was particularly soft, containing no evidence of rock. It was not concluded to be archaeological in nature, although of sufficient distinctiveness to be worth noting originally.

### 3.0 Interpretation

The rather irregular form of the rig in Trench 1 could either suggest denuding of the rig or originally a shallow form of rig, possibly resulting from ploughing rather than hand digging in this area.

Trench 2 may have had two separate periods of cultivation, if the lone pot sherd is non-residual, when viewed with the complex stratigraphy of the two. The overall depth of stratigraphy in this area is considerably deeper when compared to trench 1, for example. As the prehistoric sherd was found at least 45cm below turf level, it suggests a considerable build-up of soil after its deposition. These together suggest that soil was brought in from less cultivable parts of the hillside to augment the soil depth and fertility around trench 2. Documentary evidence from other areas supports this practice. The depth of topsoil noted in trench 3 (60cm) would also suggest that topsoil was brought in from elsewhere, especially since the location of the trench was mid-slope and equally prone to erosion as surrounding areas.

The lack of finds from the excavated rig and furrow does not aid accurate dating of the different areas. Dating from the varying forms of the rig is also difficult: for example, both trenches 2 and 3 have an overall wavelength of 4.1m, with the shortest distance from top of rig to bottom of furrow only varying by 0.3m (1.5m as against 1.8m respectively). At trench 1 the wavelength is 5.2m, and roughly symmetrical in pattern. The size difference between area of rig and the others is as likely to be a product of a different location, on a flatter and more exposed area, as it is to be a product of changing styles of cultivation over time. Similarly, amplitude varied between 0.2 and 0.25m: not enough to show any marked difference.

The lack of a discernible stone revetment within the two sampled lynchets (trenches 4 and 5) suggests that little deliberate construction was undertaken to consolidate them, unless turf was the preferred medium. Indeed, occasional stones, covered with a turf and soil bank would have been relatively fast to throw up and would consolidate in a season, avoiding the need for more elaborate dyking methods. This may explain why the layers of the subsoils appear to be sloping back into the hillside, instead of down-slope.

#### *The West Bothy*

The cobbled layer probably indicates the original floor surface of this part of Coroghon House, and study of the cut 06, which cuts through the floor showed that no obvious underlying floor surfaces were visible. Furthermore, the plasterwork on the walls adjacent the excavation show that the plastering was done with respect to this floor surface, suggesting the floor was in place before plastering occurred. It appears that the demolition of the building, presumably occurring when the entrances were blocked and the wall around Canna House was built, has largely preserved this part of Coroghon House.

The construction of the floor suggests that this area of Coroghon House was not meant for residential purposes, but for more utilitarian activities: a cobbled and flagged floor would be more in keeping with a working or storage area, such as a kitchen, dairy or laundry. Also, the construction of the floor, of cobbles laid onto sand, is fairly lightweight and not unduly mixed with other deposits, suggesting any uses would



laundry. Also, the construction of the floor, of cobbles laid onto sand, is fairly lightweight and not unduly mixed with other deposits, suggesting any uses would have been non-industrial and "clean". This would point away from the building being used as stables or a smithy.

In addition to this, the building appears to have been built after the central portion of Coroghon House, as illustrated by the butt-jointing wall. This would further lean towards the excavated remains being of ancillary nature.

#### *The ruined crofts*

Buildings such as MacIsaac's and the ancillary (previously domestic) buildings on Sanday point to a common practice of laying metalled paths to the entrances, evidence of which is recorded here. It might also suggest that the houses of Sanday typically had some more defined areas around the house, such as a garden wall or enclosure. No evidence of such was visible here, although other crofts in the vicinity would tend to support this suggestion. Moreover, intensive cultivation of the soil, as for vegetable growing, would aid overall build-up, which could explain the fairly thick layer of topsoil overlying the path.

#### *Rig and furrow and the croft land.*

No evidence of previous rig systems or fertilising was apparent in the sampled sections of the croft land on Sanday.

## **Appendix 1: List of Contexts**

### *Trench 1*

- 1.1 Very dark brown humic, silty loam containing frequent rotted bracken rhizomes mixed with moderate to frequent rotted stone, grading to pea gravel size lower down the layer between and mm in depth. Topsoil to trench 1. Above 1.2
- 1.2 Dark compacted reddish-brown silt, with moderate to frequent pea gravels. Subsoil to trench 1. Below 1.1.

### *Trench 2a*

- 2.3 Dark brown humic coarse silt with occasional pebbles, 190mm thick. A turfy topsoil. Above 2.4.
- 2.4 Dark brown moderately compacted coarse silt with frequent pebbles, 260mm thick. Below 2.3, above 2.5.
- 2.5 Very dark brown fine silt with frequent pebbles and orange flecks, possibly suggestive of iron-panning or degraded ceramic/ burnt clay. Below 2.4, above 2.6.
- 2.6 Very dark black-brown, compacted and crunchy, fine silt: possibly this is panning. Colour may also suggest organic content, although there is no organic content in the soil itself. Below 2.5.

### *Trench 2b*

- 2.7 Dark brown humic silty topsoil with moderate pebbles, 200mm thick. Above 2.8.
- 2.8 Dark brown moderately compacted silt with moderate to frequent pebbles. Above 2.9, below 2.7.
- 2.9 Mid brown stony clayey silt with moderate to frequent pebbles. Below 2.8, above 2.10.
- 2.10 Hard, mid-reddish brown stony silt, iron-panned. Below 2.9, above 2.11.
- 2.11 Very dark brown silty mineralised soil, with frequent pebbles. Below 2.10.

### *Trench 3*

- 3.16 Dark brown friable humic silt with occasional to moderate stone. Topsoil, above 3.17.
- 3.17 Pale creamy brown sticky fine silt. Subsoil below 3.16.



#### *Trench 4*

- 4.12 Dark brown medium compacted loamy silt with frequent broken stone, 85cm at deepest extent. It appears to have been more humic in the top 25cm, although an actual difference in soil structure was not recognised. Topsoil, above 4.13.
- 4.13 Very dark brown coarse silt, very moist. Below 4.12.

#### *Trench 5*

- 5.14 Dark brown friable loamy silt with occasional to moderate broken stone. Above 5.15.
- 5.15 Dark reddish-brown fine silt with moderate to frequent rotted stone, mainly quite small in size, with occasional large pieces of less degraded stone. Below 5.14.

#### *The West Bothy*

- 6.1 Heavily rooted dark brown-black clayey silt topsoil, with moderate inclusions of mortared stone, overlying all of the area excavated. Varying between 0.6m and 0.8m in depth.
- 6.2 Water-worn cobbles, to 150mm in length, bedded into a coarse creamy-grey shelly sand. There is a suggestion of edging stones in places. Above 6.7, cut by 6.5, below 6.1.
- 6.3 Coarse creamy-grey sand, 50-100mm deep, covering whole area of excavation. Below 6.2, above 6.4.
- 6.4 Dark grey-brown pebble and gritty sand layer, below 6.3.
- 6.5 Mid-brown sandy gritty clay with occasional mortar fragments, with very high inclusion rate of large stone fragments and voids. Fill of 6.6.
- 6.6 Cut, quarter-oval in plan 0.8 by 0.85, excavated to 0.35m deep. Steeply sloping sides smoothly shallowing out towards the bottom. Filled by 6.5.
- 6.7 Light grey sandy mortar rubble incorporating large angular pieces of stone: demolition debris, overlying 6.2.

#### *The ruined crofts*

- 12.1 Mix of rounded shore gravel, 20-30mm in diameter bonded with dark brown clayey silt, above 12.2.
- 12.2 Layer of angular stone, c. 150mm at maximum dimension, 0.96m in section length (36 inches). Is positioned directly in front and is the width of the threshold to the house. Overlies 12.3.
- 12.3 Dark red-brown silty clay mixed with degraded stone gravels (50mm maximum diameter), below 12.2.

- 13.4 Dark brown granular silty clay with occasional pebbles, c. 100mm in depth, above 13.5.
- 13.5 Dark brown silty clay with abundant pea gravels, 1-2mm in diameter; above 13.7, below 13.6.
- 13.6 Line of roughly laid angular stones, c. 100mm in all dimensions, 1.10m in section length, extending directly out from threshold of croft house. 200-400mm deep, below 13.4, above 13.5.
- 13.7 Mid to light brown gravels 20-50mm in diameter, suspended in coarse silt. Interpreted as a subsoil of predominantly degraded rock, below 13.5.

*The croft land*

- 7.1 Topsoil: dark brown plastic clayey silt c. 300mm deep. Above 7.2.
- 7.2 Brownish-orange loamy clay mixed with degraded stone, below 7.1.
- 8.3 Very dark brown plastic clayey silt, above 8.4.
- 8.4 Angular pieces of broken/ rotten blue-grey rock with occasional evidence of orange-brown iron panning as residue around edges of rock. Below 8.3.
- 9.5 Dark brown silty clay with frequent small pieces of gravel/ degraded stone. Above 9.10.
- 9.6 Top half of two stage gleyed soil: coarse, compacted silty clay with frequent coarse gravel, mottled light to mid-grey brown with orange-brown patches. Only definable as being different to 9.7 occasionally. Below 9.10, above 9.7.
- 9.7 Lower part of gleyed soil: bright orange clay with abundant patches of light grey clay, and occasional to common dark grey mottles. Below 9.6.
- 10.8 Dark brown humic clayey silt with very sparse pea gravel/ degraded stone. Above 10.9.
- 10.9 Rotten dark blue-grey stone. Below 10.8.
- 9.10 Thin lens (less than 50mm thick) of dark red-brown silt, lying below 05, and above 06.
- 11.11 Homogenous mid-brown silty clay with rotten stone/ pea gravels. 300mm in depth, above 11.12.
- 11.12 Mid to light brown silt with very abundant rotten stone or pea gravels, up to 400mm deep, below 12.11.



## Appendix 2: Details of colour slide photographs

Film numbers refer to the NTS SMR numbering system. Colour slides are in the NTS Archaeology slide archive.

Film number 141; June-July 1998.

### Hill of Tarvit, Craigievar Castle and Canna

|       |       |       |   |
|-------|-------|-------|---|
| 25-26 | CANN# | Canna | Trench 1, view north                                    |
| 27-28 | CANN# | Canna | Trench 1 detail, view east                              |
| 29-30 | CANN# | Canna | Trench 1 view south                                     |
| 31-32 | CANN# | Canna | Trench 1, view north, after excavation                  |
| 33-34 | CANN# | Canna | Trench 1, view south, after excavation                  |
| 35-36 | CANN# | Canna | Trench 1 detail of section, view east, after excavation |

Film number 142; July 1998.

### Canna Water Pipeline project

|       |       |       |  |
|-------|-------|-------|--|
| 1     | CANN# | Canna | View north east of spring source immediately north of Keill field and the Cross (NG 2692 0569) |
| 2     | CANN# | Canna | View north of same spring (NG 2692 0569)   |
| 3     | CANN# | Canna | View south of same spring (NG 2692 0569)   |
| 4     | CANN# | Canna | View north of same spring (NG 2692 0569)   |
| 5     | CANN# | Canna | View east, to harbour from above western water intake  |
| 6     | CANN# | Canna | Detail of excavation for settling tank at western intake                                       |
| 7     | CANN# | Canna | View north east, looking down onto line of excavations from western intake to reservoir        |
| 8     | CANN# | Canna | View south east to monitoring area 3 and trench 2  |
| 9     | CANN# | Canna | Excavations down slope to west of Tighard, using a mini-digger, held in place by rope.         |
| 10    | CANN# | Canna | View east of excavations by reservoir east of Tighard  |
| 11    | CANN# | Canna | View west of infilled excavations to east of reservoir and detail of dyke/ lynchet feature     |
| 12    | CANN# | Canna | General view to south east overlooking reservoir and damaged rig and furrow                    |
| 13    | CANN# | Canna | Overlooking excavations in progress to west of Tighard, above drive, illustrating gradient     |
| 14-15 | CANN# | Canna | View of section of trench 2, at base of furrow, showing contexts 7-11                          |
| 16-17 | CANN# | Canna | View of section of trench 2, at top of rig, showing contexts 3-6                               |
| 18    | CANN# | Canna | Highland koo on headland at Am Beanann, overlooking Rhum.                                      |

|    |       |       |  |
|----|-------|-------|--|
| 19 | CANN# | Canna | View across to Rhum from Glac Bhre-sgorr   |
| 20 | CANN# | Canna | View south east to reservoir, illustrating machine damage to rig and furrow                              |
| 21 | CANN# | Canna | View east to old reservoir with corner of new to right of picture, illustrating damage to rig and furrow |
| 22 | CANN# | Canna | View south to plant monitoring area 3?? And burn, showing damage to rig and furrow                       |
| 23 | CANN# | Canna | View south west to spring at NG 2692 0569, showing machine damage  |
| 24 | CANN# | Canna | Closer view south west to spring at NG 2692 0569, showing machine damage                                 |
| 25 | CANN# | Canna | View down-slope to NG 2692 0569 spring showing sheared turf  |
| 26 | CANN# | Canna | Detail of sheared turf   |
| 27 | CANN# | Canna | View to burn, immediately south of spring, showing piece of earth bank, removed by machine               |
| 28 | CANN# | Canna | View west, across burn to area used for turning contractors' vehicles                                    |
| 29 | CANN# | Canna | View NW, up-slope and across burn showing contractors' track and piece of excavated earth                |

Film number 156; October 1998.

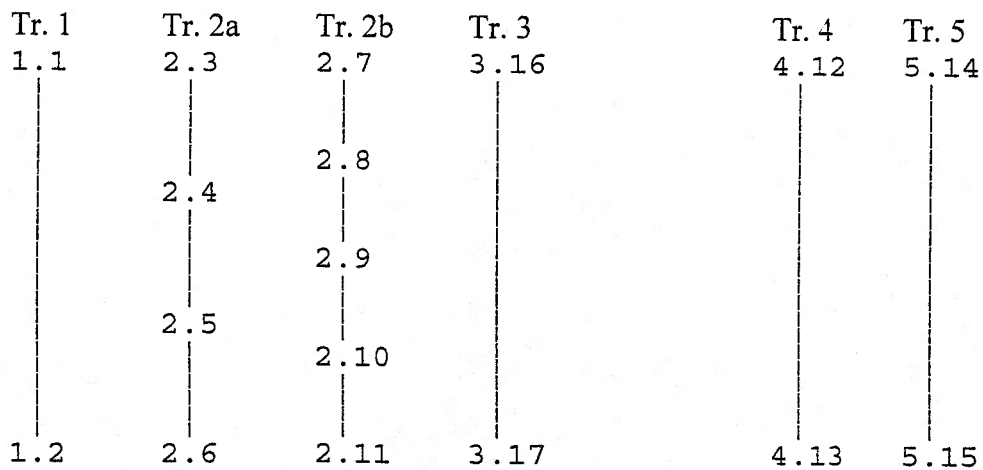
|       |       |       |  |
|-------|-------|-------|--|
| 1     | CANN# | Canna | View of completed excavations, NW to Schoolhouse, Sanday                     |
| 2     | CANN# | Canna | View of completed excavations, E past Burnside to the new house              |
| 3     | CANN# | Canna | View of completed excavations, NW across Machair                             |
| 4     | CANN# | Canna | View of completed excavations, N from Machair across to Doirlinn             |
| 5     | CANN# | Canna | View of completed excavations, N across Machair, with Caslum in the distance |
| 6     | CANN# | Canna | View of completed excavations, E to Schoolhouse                              |
| 7     | CANN# | Canna | View NW towards No. 4, Sanday and the Schoolhouse, from E of Burnside        |
| 8-10  | CANN# | Canna | View of the Cullin Hills from Canna Harbour                                  |
| 11-12 | CANN# | Canna | Shot of section through pathway at western croft (NG 27060454)               |
| 13    | CANN# | Canna | Underexposed view of Canna Harbour   |
| 14-15 | CANN# | Canna | Shot of section through pathway at eastern croft (NG 27080454)               |
| 16-17 | CANN# | Canna | View looking NE of dark banding in soil at NG 27200458                       |
| 18-19 | CANN# | Canna | View SE of cobbled floor adjacent West Bothy                                 |



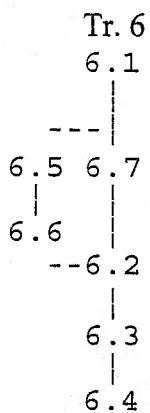
|       |       |       |  |
|-------|-------|-------|--|
| 20-21 | CANN# | Canna | Detail of wall joint between West Bothy and ruined part of the building/ garden wall |
| 22-23 | CANN# | Canna | View SE of cobbled floor adjacent West Bothy, fully excavated                        |
| 24-26 | CANN# | Canna | View NW of cobbled floor adjacent West Bothy, fully excavated                        |
| 27-28 | CANN# | Canna | View SE of excavations across channel by Doirlinn                                    |
| 29    | CANN# | Canna | Underexposed silhouette of mechanical digger   |
| 30-31 | CANN# | Canna | Excavations by rectangular structures on shore to Sanday                             |
| 32    | CANN# | Canna | View NW of excavations across from Sanday to Doirlinn                                |
| 33    | CANN# | Canna | Excavations by rectangular structures on shore at Sanday                             |

### Appendix 3: Site matrix diagrams

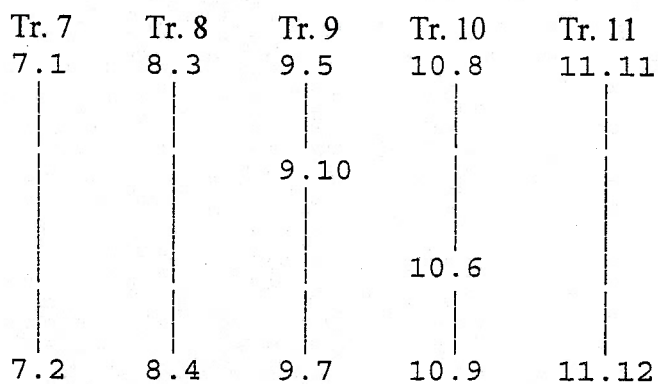
#### *Rig and Furrow*



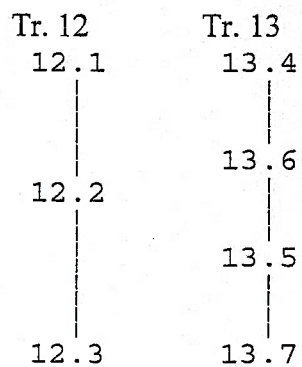
#### *The Bothy*



#### *The Croft land*



#### *The ruined crofts*





#### Appendix 4: Description of finds

| CA | 1998 | Context  | Date  | Description  |
|----|------|--|---|--|
|    |      |  |   | <b>Pottery</b>   |
| CA | 1998 | Unstratified   | mid-19 <sup>th</sup> century  | 3 sherds transfer-printed onto white background beneath clear glaze<br>3 white and cream-glazed earthenwares   |
| CA | 1998 | Unstratified (area around "MacArthur's")               | 1820's – 1850's<br>mid-19 <sup>th</sup> century<br>mid-19 <sup>th</sup> century<br>early 19 <sup>th</sup> century | One manganese-glazed lid from large teapot or lidded jar<br>7 sherds of cream-glazed stoneware jars (representing at least 2 vessels)<br>3 sherds of relatively fine patterned wares<br>2 sherds of transfer/ sponge printed tablewares<br>3 sherds white-glazed earthenware |
| CA | 1998 | Unstratified (close to plateau containing reservoirs)  | Possible late Iron Age/ Early Medieval  | 1 sherd of coarse, vegetable-tempered hand built pottery. External sooting suggests cooking vessel.<br>3 further fragments of ceramic material- 2 are small sherds of prehistoric pottery, as above  |
| CA | 1998 | 6.6  | Probably late 18 <sup>th</sup> century  | Sherd from large storage jar: redware, black glaze   |
| CA | 1998 | 2.5  | Prehistoric   | Single sherd of prehistoric pottery with an internal residue   |
|    |      |  |   | <b>Stone</b>   |
| CA | 1998 | Unstratified (associated with the prehistoric pottery) |   | One possible heat-shattered stone  |
|    |      |  |   | <b>Clay pipes</b>  |
| CA | 1998 | Unstratified (area of MacArthur's)                     | 19 <sup>th</sup> or early 20 <sup>th</sup> century (probably 19 <sup>th</sup> century)                            | 2 pipe bowls, upright forms,   |
|    |      |  |   | <b>Plaster</b>   |
| CA | 1998 | 6.4  |   | 1 moulded fragment   |
| CA | 1998 | 6.6  |   | 1 fragment of wall plaster: buff-white, formerly painted   |

#### General Comments:

An assemblage of mainly 19<sup>th</sup> century material, including pottery, plaster, clay pipes and stone, along with a small group of prehistoric pottery, of possible Iron Age/ Early Medieval date. The 19<sup>th</sup> century material represents kitchenwares/ tablewares, in the main.

*Identified by Adrian Cox, Post-Excavation Manager, Scottish Urban Archaeological Trust.*