



Inverlaidnan and Sluggan/Inchluin, near Carrbridge, Inverness-shire

The Report of a Project to Identify, Survey and Record Archaeological Remains in 2018



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**The Report of a Project to Identify, Survey and Record
Archaeological remains at Inverlaidnan and Sluggan/Inchluin,
near Carrbridge, Inverness-shire,**

**carried out by the North of Scotland Archaeological Society,
May – November 2018**

Members of the team

Beth Blackburn, Tim Blackie, Anne Cockcroft, Anne and Dave Coombs, Bob and Rosemary Jones, Anne MacInnes, Meryl Marshall, Marion Ruscoe, Roland Spencer-Jones, Alan Thomson, Anne Wakeling, John and Trina Wombell, Jonathan Wordsworth

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This report was compiled and produced by Meryl Marshall

Cover photographs – The Old House at Inverlaidnan with its surrounding enclosure, viewed from the north and (below) a group discussing the corn drying kiln at Sluggan/Inchluin

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1. Location



2. Introduction and Method

A project to survey and record archaeological features at Inverlaidnan and Sluggan (originally named Inchluin) was undertaken by NOSAS members in 2018. The area is 4kms west of Carrbridge, Inverness-shire and in Duthil Parish. It is part of the Seafield Estate and covers an area of two square kilometres on both sides of the River Dulnain, a tributary of the River Spey. The area is at an altitude of 300m and largely marginal ground, but the two areas, of Inverlaidnan and Sluggan/Inchluin, are very different to each other in their physical geography and in their history too.

Much of the land around Inverlaidnan is flat open pastoral farmland on broad river terraces with the ruined Old House and the current farmhouse, occupied by tenants, standing at its centre. Sluggan/Inchluin is mostly woodland, part Caledonian pine forest part birch woods; the river narrows here as it passes through the defile of Poll an Fraoich and General Wades Military road traversing the area crosses the river over Sluggan Bridge. There is limited fertile ground for cultivation around Sluggan and the single former farmhouse is used as a holiday house with groups from the Scout/Guide Movement occasionally camping in the meadows.

Several archaeological sites had been recorded previously and are on the Highland Council (HC) HER and Canmore databases. Of particular note are three outstanding monuments:

- Sluggan Bridge, an A listed building <http://portal.historicenvironment.scot/designation/LB240>,
- Old Inverlaidnan House, a ruined “lairds house”, scheduled by Historic Environment Scotland <http://portal.historicenvironment.scot/designation/SM10481> (see Appendix 3 for Scheduled Monument Document)
- A significant stretch of General Wades Military road, constructed c1728, Canmore ID: 139319 <http://canmore.org.uk/site/139319>

It was not the intention to include the Bridge and the Military road in the project as these have received attention from others in the past, but we decided to devote some time to the Old House in particular the surrounding banks and associated buildings and in addition Historic Environment Scotland used the opportunity to undertake a laser scan of the house. The main focus of the project was to be on the many previously unrecorded archaeological sites in the area. The aims were to:

1. Locate and take details, including photographs and plans, of currently unrecorded sites.
2. Verify the sites already recorded and provide additional information as appropriate. The sites on the two databases, Canmore and the Highland Council HER, were confusing; many were duplicated and several had different grid references and different names (see Appendix 2)
3. Undertake limited documentary research on the historical background of the area
4. The new information to be entered on the HC HER and Canmore databases and a digital report to be produced; this to be available on the NOSAS website. A few hard copies will be printed, one to go to the Estate and one to be lodged in the NOSAS library.

Information on previously recorded sites on the Canmore and Highland Council HER databases was studied. A total of 31 sites were identified, 11 on Canmore and 20 on the HC HER – some were duplications.

Old maps were consulted and were to prove very useful during the fieldwork phase of the project. As usual the Roy military map of c1750 and the 1st and 2nd edition OS maps of 1867-71 and 1903 on the NLS website were useful. A request for images of the early estate maps catalogued on the National Records of Scotland website was fruitful and produced some particularly helpful maps of 1771, 1808 and 1860 (see References p15 for details)

Limited documentary research on the history of the area was undertaken mostly using internet resources. The Scotlandspeople/National Records of Scotland websites and the National Library of Scotland digital gallery were particularly useful but the online catalogues only were consulted, no visits to view the actual documents in Edinburgh were made; please note that the online catalogue entries only are quoted in the section on “Historical Background. The Edina website with the Old and New Statistical Accounts gave general background information and the newspaper archive on the Am Baile website was helpful. Several visits were made to the Highland Archive Centre and the Library in Inverness to search the Sasines, the Census Records and Secondary sources.

Between 8 and 11 people attended the four formal field days. On each occasion smaller groups walked over an allocated area taking notes, GRs, photographs and drawing sketches. On a separate day aerial photographs (APs) were taken of the Old House and of a township (*site 14 named “North Inverlaidnan”*) using a quadcopter. After processing photogrammetric images of these were produced; these images were also to form the draft surveys for measured plans (see images p14 and 15, also p19). The measured plans were drawn up digitally using OCAD, a programme used for drawing orienteering maps with the symbols altered to represent archaeological features. In addition a day was needed for 3 members to liaise with the HES survey team of Rebecca Brown and Eve Boyle who undertook the laser scan. Four single days were needed for checking and tidying up details.

3. Historical Background

3.1 Clan Grant

The Strathspey/Seafield Estate was held for many centuries by the Chiefs of Clan Grant, known in early times as Grant of Freuchie but later Grant of Grant. Their centre was Castle Grant near present-day Grantown-on-Spey. In 1613 the Grant of Freuchie family was joined to that of the Ogilvies by the marriage of Mary, daughter of Sir Walter Ogilvie, and Sir John Grant of Freuchie. In 1735 Sir Ludwick Grant of Grant made the crucial marriage which brought the Ogilvie estates of Seafield in Lower Strathspey together with those of the Grants when he chose Lady Margaret Ogilvie, the eldest daughter of the second Earl of Seafield as his bride. The son of this union was Sir James Grant of Grant, ‘the good Sir James’, who was responsible in 1766 for founding the township of Grantown on Spey

3.2 Duthil Parish (formerly Duthil and Rothiemurchus) and Glencarnie

Inverlaidnan and Sluggan are in the Parish of Duthil and the Parish Church is 3kms east of the village of Carrbridge. In former days the parish was joined with Rothiemurchus, but circa 1826 Rothiemurchus separated to form its own "*quod sacra*" parish. Carrbridge today is the main centre but it was not established until c1808 when a new road which crossed the River Dulnain at this point was constructed. The Roy map of c1750 has a small settlement named Dalrachnie (*Delrachnie/Dalrachney*) here and today the farms of "Dalrachney Beag" and "Dalrachney" are part of Carrbridge

In 1792 the Reverend Patrick Grant started his report in the Old Statistical Account for the Parish of Duthil with "the ancient name of the Parish of Duthil was Glen-cearnich". The historian Alasdair Ross tells us that:

"Rolls in 1456 provide the earliest surviving inventory of the principal lands in the lordship of Glencarnie but, rather frustratingly, does not list their actual extents. The lands were listed as (*modern equivalents given in brackets*): Duthale (Duthil),(Kinveachy), Advylochan (Avielochan), Advymore (Aviemore), Granych (Grainish), and Dalrechny (Dalrachny).....Quite remarkably perhaps, a document dated 15 May 1773 which provided a complete register of all fourteen dabhachean (*davochs*) in Duthil parish listed virtually identical place-names to the 1456 lordship Inventory" (Ross, A. 2003)

Alasdair Ross also comments:

"..... The lordship of Glencarnie was located in a strategic position in central Strathspey where it commanded two very important routeways. The first of these ran southwards from Inverness through to Mar, the second ran east-west from the mouth of the Spey to Laggan parish, from where either Atholl or Lochaber could be easily reached. Anyone in possession of the lordship of Glencarnie could effectively monitor all traffic moving along these routes."

It is certainly true today that this area is at the centre of two important routeways although it is not perhaps as important to monitor the routes, however perhaps John Grant of Delrachnie thought otherwise when he chose to build his house at Inverlaidnan at the beginning of the 18th century.

Much of Duthil Parish is marginal land at an altitude of 300m. The parish had a largely pastoral economy like many other parts of Badenoch and Strathspey, cattle and sheep were reared for export. The OSA 1792 for Duthil reports that "cattle average 1022 and sheep 3424". The 18th and 19th century was a time of "Improvement", a period of great upheaval, as landowners attempted to organise their land so that it gave them a better revenue. Much of the fertile land lower down the Strath was turned over to "large farms" and the marginal ground was leased to the displaced people for a nominal rent, the intention being that they would improve its fertility. The OSA 1792 has;

"the letting (of) small improvements towards the skirts of the hills called Hill-improvement all concur as causes of great alteration in the customs and style of living of the inhabitants within these 20 years."

By 1839 the NSA has;

"a considerable quantity of waste ground has been brought into culture".

But many people were also to drift away from the area during this period, the OSA of 1792 again:

"since that memorable period (1745) the population has decreased considerably owing chiefly to two causes. The opportunity afforded young adventurers to traverse the field of fortune and throwing land into large farms."

The dispersal of people was to continue over the next century. A witness giving evidence to the Crofters Commission in 1884 reported that there was a total decrease of 239 in the population of Duthil Parish between 1861 and 1881

Inverlaidnan and Sluggan/Inchluin are very different to each other in many ways – not only geo-physically but also in their history and usage. In outlining their history they are taken separately.

3.3 Inverlaidnan/Inverladnen

The earliest reference to Inverlaidnan (*also Inchluin*) found in the documents was 1640, a Charter of James Grant of Frewchie has:

"In the lands and davoch of Duthil, the lands of..... Little Delrachnie and Inchloyne (*Inchluin*); the half lands of Innerlaidnan and Strondow". (Fraser W. 1883)

1666 is the earliest mention of tacksmen styled "of (*or in*) Inverlaidnan". This family was a cadet branch of the Grants of Frewchie, Chiefs of Clan Grant. The family "in/of" Inverlaidnan appear for three generations in a genealogical table from 1666 to 1706 (Fraser W. 1883¹) after which John Grant of Dalrachnie:

"obtained in 1706, from the Laird of Grant, a wadset of Wester Duthil (*almost certainly including Inverlaidnan*) Beananach and Inchluin, redeemable for 4466 merks". (Fraser W, 1883¹)



Extract from an Estate plan of 1771 (RHP8930) "Plan of the lands of Inverlaidnan and Dalnahaitach" surveyed by George Taylor (Note – north is towards the bottom of the image)



Extract from an Estate Plan of 1808 (RHP13916) "Plan of Slochd Mhuic and Inverlaidnan" surveyed by George Brown

In 1711 an agreement was made

"between the Laird of Grant (*Chief of Clan Grant*) and Delrachnie (*John Grant of Delrachnie*) anent building a stone house at Inverlaidnan, the latter having got a long tack of the lands" (NRS GD248/151/11).

In 1717 John Grant of Delrachny seems to be on the way to building his house. In a letter from Inverlaidnan he writes to Brigadier Alexander Grant (Chief of Clan Grant)

"Enclosing a draught, ground plan and elevation of a proposed house." (NRS GD 248/170/3)

The early estate plans of 1771 (NRS RHP 8930) and 1808 (RHP 13916) and the Roy map of c1750 show the house at the centre of lands enclosed by a wall. The maps show some "Improvements"; not only is the land enclosed but there is also a limekiln suggesting efforts to improve the fertility of the land. There are also signs of the "old system", a mill and lade indicate "thirling", John's tenants were forbidden to grind their own grain by hand and had to pay for it to be ground by his miller. Also on the estate plans are many discrete patches of arable cultivation annotated with acreages and names perhaps signifying allocation to more marginal settlements nearby; frustratingly only one of the names could be linked with a nearby settlement. John was very successful in his lifetime, in 1720 he was Baillie of the Regality of Grant and also of Gordon and in 1729 he is described as Chamberlain for Strathspey. He died in 1735 and was succeeded by his eldest son Alexander.



Extract from General Roy Military map circa 1750 (copyright British Library)

John was very successful in his lifetime, in 1720 he was Baillie of the Regality of Grant and also of Gordon and in 1729 he is described as Chamberlain for Strathspey. He died in 1735 and was succeeded by his eldest son Alexander.

Alexander Grant of Dalrachnie's "fine new house" was burnt down in 1739. But by 1746 it had been rebuilt; Bonnie Prince Charlie stayed there on the night of 15th Feb before going on to Moy Hall and Culloden in April (Blaikie, 1897). Clan Grant, like many Highland families, was divided in its support for the Jacobite cause. The majority of the Clan "came out" for the British Government in the Rising of 1715. In 1745 they again supported the British Government, but their troops were withdrawn at the battle in Inverurie leading to the defeat of the Government forces. In addition one branch of Clan Grant, the Grants of Glenmoriston, sided with the Jacobites and fought at the Battle of Prestonpans. There seems no doubt that Alexander Grant of Dalrachney supported Government Forces. IF Grant (1980) states:

"Alexander Grant of Dalrachney.....had obtained a wadset of the farm of Inverlaidnan. It was there that the Prince had stayed the night before he came to Moy no doubt much against Grants' will for he strongly supported the Government.....his mother refused to bake bread for the Prince's party on the excuse that it was the Sabbath"

And a letter from "Anonymous" (*endorsed in pencil "Delrachnie"*) written "Tuesday night 7 at night" refers to a missing enclosure brought by a spy who succeeded in concealing it from the enemy in the thumb of his mitten; "(about the) state of the Jacobite army" (GD248/48/3)

Other documents refer to Alexander being in debt; perhaps he had inherited the debt or perhaps he had borrowed in order to rebuild his house. By the time of his death in 1765 his house and lands were in the hands of trustees and in 1771 the wadset was redeemed for 26,750 merks or £1486 and the estate reverted to the "Laird of Grant" (Sir James Grant of Grant).

James's widow, Catherine, continued at Inverlaidnan with her family of 8 children. She was still there in the 1851 census and in the 1861 census she is described as "a farmer of 80 acres". She has the help of 6 servants - a governess, a house maid, a shepherd, 2 farm servants and a herd, but things are changing. In 1851 the roof of "the Old House" had fallen in (*SMD*) and the house has been replaced by an L shaped farmhouse on higher ground to the west (*see 1860 Estate plan, NRS RHP14027*). The date of the construction of this farmhouse is difficult to determine, it is not on the 1809 estate plan but the OS namebook of 1867 describes it as "a large farmhouse and steading one storey high and offices all thatched and in bad repair" suggesting that it had been in existence for some time. By 1903 the 2nd Edition OS map has a building with a different ground plan.

The 1860 estate plan indicates a further phase of "Improvement"; a large square steading is marked, there is consolidation of the former discrete plots of arable land (*shown on the 1771 and 1808 maps*) into larger enclosures and indication of improvement to drainage. A ruin is marked at the location of the mill on the 1860 plan; the 1841 census has Alex Macgregor, miller aged 40, and his wife and young family, but he does not appear in subsequent census records. Alex Macgregor was the last miller at Inverlaidnan.

By 1871 John Grant, a farmer of 160 acres aged 36, and his family are living at Inverlaidnan, he continues there for the next 30 years. In 1881 he is described as a farmer of 4000 acres of which 100 are arable, he employs 5 farm servants and his house has 10 rooms with 1 or more windows; this surely was the new house marked on the 2nd edition OS map of 1903.

In 1916 Inverlaidnan was chosen as the location for a Prisoner of War camp to accommodate 400 German prisoners who were provide the workforce for the Canadian Forestry Corps in the local forests. In 1919 an advertisement appears in the Aberdeen Journal for an auction of "43 wooden huts, elevated watch towers and other equipment".

Census	Inverlaidnan	Sluggan/Inchluin
1841	8 adults + 9 children (total 17) in 3 households	15 adults + 8 children (total 23) in 6 households
1851	10 adults + 8 children (total 18) in 2 households	12 adults + 5 children (total 17) in 7 households
1861	9 adults + 5 children (total 14) in 3 households	25 adults + 17 children (total 42) in 10 households - several over 70 and some described as paupers
1871	6 adults + 12 children (total 18) in 2 households	23 adults + 13 children (total 36) in 8 households - 6 over 70 and some paupers
1881	7 adults + 7 children (total 14) in 2 households	23 adults + 3 children (total 26) in 6 households - 3 over 80
1891	7 adults + 3 children (total 10) in 2 households	11 adults + 2 children (total 13) in 3 households

A comparison of population numbers from the Census Records

3.4 Sluggan/Inchluin

The Wade Military road traverses this area; it was constructed circa 1725-29 probably following the same line as a well-trodden route that had been in existence for many years. The Wade road retains some of its original features, the Roman precedent for straight lines and alternative lines to reduce the steepness of these straight lines are a feature and a five-mile marker stone, NOSAS site 35, is located at a high point on the road. Bishop Forbes, travelling north in 1762, describes fording the river at Sluggan/Inchluin. The first bridge was not constructed until 1764, it had two arches but unfortunately the central pier was swept away in a flood of 1768. A year later it was replaced by the present single soaring arch "the builder being resolved that the same accident should never happen again" (*Sir Eneas MacIntosh, 23rd Chief of the Clan*). By 1803 the military road had been replaced by a road built by James Donaldson; this road took a completely different route along the line of the present A9 and avoided some of the steeper sections of the old road. The original road thereafter was to fall into disuse with Sluggan/Inchluin becoming a backwater.

The historical story of Sluggan/Inchluin has been more difficult to research as, not surprisingly, there were fewer documents and it did not have the same significance as Inverlaidnan. The earlier name for the area was Inchluin but later the two names Sluggan and Inchluin seem to have been interchangeable. Inchluin is mentioned in a charter of 1640 and in 1706 (along with Inverlaidnan) in the tack of Wester Duthil given to John Grant of Dalrachney (*NRS GD248/151/11*). It appears to have become separate from Inverlaidnan after the death of Alexander Grant in 1765 and by 1785 Robert Cumming of Lethendrychuil (2kms east of Sluggan Bridge) had the tack (*GD248/533/3/57*).



Extract from estate plan of 1809 (RHP13921) "Plan of Beananach, Inchluin and S Dalnahaitnach"



Extract from estate plan of 1809 (RHP13917) "Plan of Foregin, Sluggan, Dalrachneybeg"



Extract from Estate plan of 1860 (RHP14036) "Plan of Sluggan" surveyed by George Mackay

Sluggan Bridge is at the centre of the area. The "Grantown" road (now a footpath) joins the Wade road on the north side of the bridge. This road was constructed by Caulfield c1760-68 probably along the line of a previous route. The road is marked on estate plans of 1768 (RHP98260) and 1770 (RHP98355). A building, known as "Inchloun" (Innis Loinn – "riverside field of the enclosure") was noted at the junction in 1706 (MacGregor, 1993) and was possibly an inn (see site 62). A plan of the military road of 1768 (NRS RHP98355) shows three buildings. At a later date further evidence for the inn is provided by a letter (GD248/357/3) from Lewis Grant to Sir James Grant dated at "Sluggan on Dulfanside", June 1782:

"His dwelling house fell down a few days earlier and is uninhabitable; he needs a house to accommodate passengers and has not the means to repair the same; asks for money to do this and offers to pay interest on the money"

And a minute of tack (GD248/533/3/58) dated Jun 1785 has:

"to Robert Cumming in Lethendrychule of part of lands of Bienanach and Inchluin, Dalrachnybegg and Improvement of Rymackaig, parish of Duthil, with provision as to possible resumption of part of the lands for accommodation of Publick House at the Bridge of Inchluin"

By 1809 the two buildings on the 1768 map have been joined by several more buildings; these were probably outhouses or stables.



Extract from First Edition OS map 1867-71

The area around Sluggan/Inchluin is largely wooded and has a limited amount of fertile land, one might expect it to have had little settlement in the 19th century, but yet the census records of 1841 to 1861 reveal the opposite. The population was to increase from 23 in 1841 to 42 in 1861 (*see table p7*). It seems unrealistic for such a large number of people to have sustained themselves on such a limited amount of marginal ground but yet that seems to have been the case. And even 10 years later in 1871 the numbers were much the same. Many of the people in these years were described as elderly and some as “paupers”. In 1867 the Ordnance Survey Namebook describes the buildings at Inchluin as “very small farmhouses in miserable condition”! Clearly Sluggan/Inchluin appears to have been a place where people who had nowhere else to go could find refuge, even if it was pretty humble.

In 1881 and 1891 there is a steady decline in the number of people at Sluggan and by 1901 just 7 adults are living at “Easter Sluggan” (*formerly North Inchluin*) and “Wester Sluggan” (*formerly South Inchluin*). By 1903 a new farmhouse, (*marked on the 2nd Edition OS map*) had been built; this is currently in good repair and occupied in the summer months only.

4. Results and Conclusions

Details of 84 individual sites were recorded. Each site or feature was allocated a number, but in order to simplify the recording of those sites which had several associated features such as townships or farmsteads the features were grouped together under one number and each given an identifying letter - A,B,C etc. All the sites are detailed in the gazetteer. Selected photographs of some are included in a separate section.

We were pleased to find evidence of prehistoric settlement even though the land was marginal and at an altitude of 300m. A fine example of a previously unrecorded roundhouse was located on the south facing slope 300m to the NW of the Old House. However the previously recorded “possible” roundhouse on Carn Challard was not located, but this was hardly surprising as there had been extensive forest operations in the area. But we did identify an extensive prehistoric field system of clearance cairns in the same vicinity. Lower down the slope, a measured survey was carried out on an unusual cairn and cist, site 45; it has been suggested that this features, together with the associated group of cairns, site 46, may be a Pictish burial ground.

There was no evidence of the pre-improvement cultivation strips extending beyond the large boundary wall of the Inverlaidnan policies on the Roy map of c1750, but building 14L which had very rounded corners may date from this earlier period, also the buildings of the township, site 10, which had rounded corners.

The majority of the sites at Inverlaidnan were post medieval and several were associated with the period when John Grant of Dalrachney first took a long tack of the lands c1720. The remains of several features marked on the Roy map of c1750 and the early estate plans of 1771 (NRS RHP 8930) and 1808 (RHP 13917) are still extant;

- The Old House, site 17A with its enclosure, site 17B, and 2 or 3 associated buildings, sites 17C, D and E, all of which are depicted on the plan; they may have been kitchens or stables.
- The boundary wall, site 05, enclosing the lands
- The mounded U shaped form of the lime kiln, site 16.
- The mill, site 01, is much wasted but the lade, site 02, is remarkably well preserved.
- No evidence of the discrete patches of arable cultivation shown on the early maps within the boundary wall was found, but this was hardly surprising as the land had been subjected to extensive “Improvement”. More research into the documents may reveal whether or not they were connected with nearby settlements
- Three un-named settlements are marked on the early maps; one has been replaced by a much later farmstead (site 25B) but the remains of the other two were located to the NW of the Old House. Site 10 is annotated “cotts” on the plans and has the remains of 4 or 5 buildings and a corn drying kiln. Site 14 on the summit of a knoll is now an area of nebulous humps and bumps; several buildings and possible kilns can be identified but their extent is difficult to discern. Clearly the site has seen much post settlement activity

There is evidence of a second period of “Improvement” at Inverlaidnan in the middle of the 19th century on both the estate map of 1860 and “on the ground”. The 1860 map shows consolidation of the former discrete plots of arable land into larger enclosures with in some cases substantial surrounding walls, sites 31 and 78 for example, and fences, the lines of which are still in place today (*the fences were not included in the survey*). It is clear from the 1860 map that there was an attempt to improve the drainage particularly of the small burn which runs from west to east around the north side of the farmhouse and the Old House. Flooding around the Old House appears to have been a chronic problem and the double banks on the west side of the surrounding enclosure may have been an early attempt to alleviate it. It is not unreasonable to surmise that flooding may have been the reason for abandoning the site of the Old House in the first half of the 19th century; the farmhouse which replaced it is on higher ground 100m to the west. The

dam, site 37, marked on the 1860 map, was probably a further attempt to control the water; a substantial channel leading away from the dam disappears under a wall, site 78, and probably continued as a field drain. Unfortunately these measures did not improved matters and the water has reverted back to its old course with substantial boggy areas developing.

Little remains of the large square steading of farm buildings marked on the 1860 map, but building 25B is probably a component of it and the horse gang, site 09, although not marked on the map was almost certainly associated with a threshing barn which would have been another part of it. What appears to be a sheepfold is also marked on the 1860 plan; and a "sheepfold" (*not in the same position*) annotated on the OS First Edition map of 1867 is still in use today. By 1860 the settlements marked on earlier maps have gone, probably deserted long before. The presence of midden pits, sites 14E and 14F, probably associated with buildings, 14C and D at the upper settlement, suggest that these buildings continued in use as byres for overwintering cattle. Higher up the slope close to the military road a building, site 38, which has opposing entrances, may have been a winnowing barn.

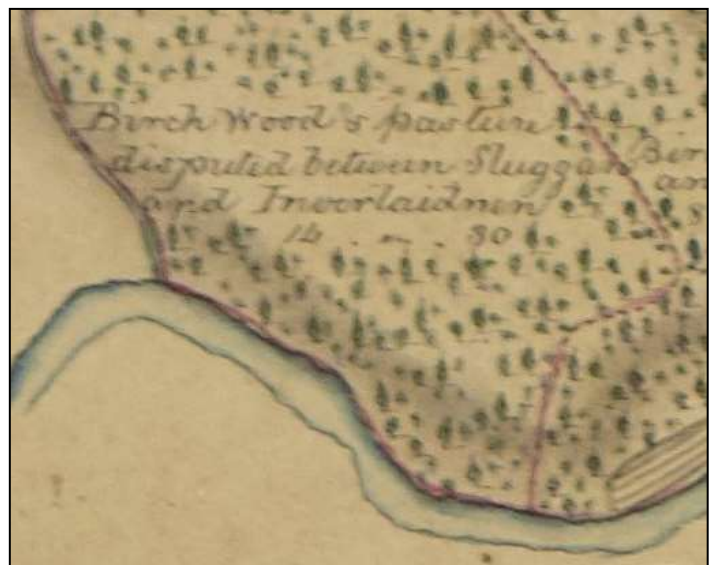
Very little evidence of the WW1 POW Camp, site 03, at Inverlaidnan is to be seen. The camp covered an area of approx.130m² on the large level river terrace to the SW of the main farmhouse. A dump of debris comprising bits of broken concrete, rusting barbed wire, a few broken bricks and some fragments of asbestos has been pushed over the edge of the terrace and is all that remains. However a platform, site 07, may have held a Nissen Hut, the remains of rotting timber beams there suggesting a floor which is more or less the correct dimensions (Nissen Huts were patented in 1916 the smallest version being 36ft 6ins(11.1m) x16ft (4.87m)). After WW1 the opportunity to purchase an "in situ" Nissen Hut for use as a farm building was perhaps too good to miss!

There is no doubt that Inverlaidnan was an "Improved" farm, but whether or not it brought in the intended increase in revenue is debateable; judging by the occurrences of bankruptcy it seems that it was not a very profitable concern. The farm seems to have been an organised agricultural affair employing several people who were able to support relatively large families and the population numbers remained fairly steady throughout the 19th century (*see table p10*). However quite the opposite can be said of the Sluggan/Inchluin area of the project.

In 1861 and 1871 the population numbers at Sluggan/Inchluin soared (*see table p10*). This was a much smaller fertile area with few resources but yet there was close on 40 people living in 10 households. A disproportionate number were paupers and elderly people, who probably had nowhere else to go. The large number of households would have included nearby settlements where meagre patches of land were being brought into cultivation. Several small settlements each with a farmstead and a small patch of improved ground were identified in the survey - Baile an Amadain, (sites 53- 56 and 64), on the south facing slopes of Carn Challard, and site 57 lower down nearer to Sluggan Bridge, also two settlements to the SW of Sluggan Bridge, both marked on the 1860 plan (NRS RHP14036), site 76-77 (*named Crask*) and site 75 in the bend of the river. Two other sites are of particular interest in that they concern boundary disputes between Inverlaidnan and Sluggan/Inchluin:

- the map of 1771 (RHP08930) has two different boundary lines at the bend of the river, "the march according to Dalrachney" is annotated on one and "march according to the country people" on the other, site 75 is wholly within this disputed area
- the 1808 map of Sluggan (RHP13917) has an area on the north side of the river annotated "birchwood and pasture disputed between Sluggan and Inverlaidnan", site 32 a large area of rig and furrow cultivation is entirely within this area.

Land that was disputed was probably easier to occupy or "squat" on.



Extract from estate plan of 1809 RHP13917 with annotation "birchwood and pasture disputed between Sluggan and Inverlaidnan"

It seems clear that the people who sought refuge at Sluggan/Inverlaidnan were “victims” of “Improvement”, they were “squatters” who were probably unable to provide for themselves and had nowhere else to go. Most estates in the Highlands were being “Improved” and would have had such a group of people; some made provision for them, in 1803 for example when the tacks were let in Strathconon

“an area of land was reserved for the accommodation of such of the natives as could not provide for themselves to better advantage” (Marshall, 2011).

More research into the Ogilvy-Grant papers may reveal if that was the case at Sluggan/Inchluin.

A multitude of new sites have been surveyed and recorded during this project and two very different contrasting archaeological landscapes, both products of the same move towards “Improvement”, have been identified. The project has been very interesting and worthwhile.

References

Secondary sources

Blaikie, WB (1897) - Itinerary of Prince Charles Edward Stuart, Scottish History Society reprinted 1975 ?p39

Forbes Bishop (1762) - First Journal

Fraser, W (1883) – Histories of Scottish Families - The Chiefs of Grant, Vol 1. Memoirs and Vol 3. Charters – ¹ p526-527 “Pedigree of the Grants of Gartinbeg, Kinveachy, Dalrachnie, Inverlaidnan and Dalvey” <https://digital.nls.uk/histories-of-scottish-families/archive/96597280#?c>

Grant, IF (1980) - Along a Highland Road

Grant, P (1792) - Old Statistical Account

Grant, W (1839) - New Statistical Account

Inverness Advertiser - www.ambaile.org.uk/en/pages/Newspaper_Index.html

MacGregor, N (1993) – “Gaelic Placenames in Strathspey”, Transactions of the Gaelic Society Inverness, Vol LV111

Marshall, M (2011) - Strathconon, the History and Archaeology of a NE Highland Glen

Murray DC (1957) – “Notes of Parish of Duthil” Transactions of the Gaelic Society Inverness, Vol XL111

Ross, A (2003) - The Lords and Lordship of Glencarnie (in “Exercise of Power in Medieval Scotland” Edited Boardman and Ross)

Urban, S (1828) - The Gentlemans Magazine and Historical Chronicle, Vol 98 (online at <https://books.google.co.uk>)

Maps

NRS maps of Inverlaidnan and Sluggan (all PL440 Duthil and Rothiemurchus Parish, Papers of the Ogilvy family, Earls of Seafield (Repository code 234 - GD248))

RHP8930 Plan of the lands of Inverlaidnan (Inverlaidnin) and Dalnahaitnach (Delnachatnichs)

1771 Surveyor - George Taylor

RHP98355 Sketch plans of Sluggan Bridge (Inchluin) 1770 Surveyor unattributed

RHP13916 Plan of Slochd Mhuic (Slockmuick) and Inverlaidnan, part of the estate of Strathspey: 1808. Surveyor - George Brown

RHP13921 Plan of Beananach, Inchluin [East Sluggan] and South Dalnahaitnach with the wood and moor ground between Dulnan and Allt Lorgy: 1809 Surveyor - George Brown

RHP13917 Plan of Foregin (Forrigen), Sluggan, Dalrachneybeg (Delrachny-Beg) etc: 1808.

Surveyor: George Brown

RHP14027 Plan of farm of Inverlaidnan (inverladran) 1860 Surveyor - George G Mackay

RHP14036 Plan of Sluggan: 1860 Surveyor - George G Mackay

Roy map of circa 1750

1st Edition OS map 1867-71

2nd Edition OS map 1903

5. Gazetteer of Sites

The project area was divided into two sectors – the SW part covered the improved pastoral lands of Inverlaidnan and the NE part Sluggan/Inchluin, around the wooded area of Sluggan Bridge. Photographs were taken of most of the sites and selected photos of some can be seen in section 5.3; all are listed in section 5.4.

5.1 Inverlaidnan

Inverlaidnan Old House (NOSAS site 17) and the boundary wall (NOSAS site 05) surrounding the lands are detailed first, thereafter the sites have then been divided into two groups;

- Those on the lower flatland around the Farm and the Old House
- Those on the SE facing slopes above and to the north of the farm and the Old House

17 The Old House, associated Enclosure and Buildings – centred on NH 86199 21440 (Canmore ID: 14968, HC HER: MHG4702) The ruins of the Old House are situated on a river terrace, facing ESE and overlooking the grassy haughs of the River Dulnain. The house sits at the centre of the enclosure and the remains of the three associated buildings to its SE are also within the enclosure. This layout is marked on the Roy map of 1750 and on the estate plan of 1771; the main focus of the project was the enclosure and the three associated buildings. It was not the intention to add to the detail of the Old House already on the record, however we did use the opportunity to carry out a photogrammetric survey of the Old House by taking aerial photos from a drone. The comparison of this survey with the laser survey carried out by the Historic Environment Scotland team provided an interesting experiment (*see Appendix 1 “Recording Buildings using Photogrammetry vs Laser Scanning”*). The results of these surveys are included here

Comment - Flooding around the Old House appears to have been a chronic problem and it is clear from the 1860 estate map (*RHP14027 – see p9*) that there was an attempt to control and improve the drainage of the small burn which runs from west to east around the north side of the farmhouse (*site 25A*) and the Old House. The dam (*site 37*) marked on the 1860 map was probably an attempt to control the water; a substantial channel leading away from the dam disappears under a wall (*site 78*) and probably continued as a field drain. Unfortunately these measures have not improved matters and the water has reverted back to its old course with substantial boggy areas developing. The double banks on the west side of the surrounding enclosure (*site 17B*) may also have been an early attempt to alleviate the flooding too. It is not unreasonable to surmise that flooding may have been the reason for abandoning the site of the Old House in the first half of the 19th century; the farmhouse which replaced it is located on higher ground 100m to the west.

17A The Old House – centred on NH 86199 21440 (*see photos Figs 5 and 6 p34, and also Appendix 1 “Recording Buildings using Photogrammetry vs Laser Scanning and Appendix 3 “Scheduled Monument document”*)

The Results of the three surveys of the Old House:

1. results based on photogrammetry using ground-based cameras only (120 photos)
2. results based on photogrammetry using ground-based and drone cameras (244 photos)
3. results based on point cloud from laser scanning, processed further using Metashape, exactly as with the first two cases.



1. Based on photogrammetry using ground-based cameras only (120 photos).

A good visualisation of the house. The tops of the walls are not properly defined, and were edited during processing to remove rough corners.

See <https://skfb.ly/6KpVO>



2. Based on photogrammetry using ground-based and drone cameras (244 photos).

Use of additional images, and drone perspective produces an enhanced result over 1.

See <https://skfb.ly/6lrCU>



3. Based on point cloud from laser scanning, processed further using Metashape.

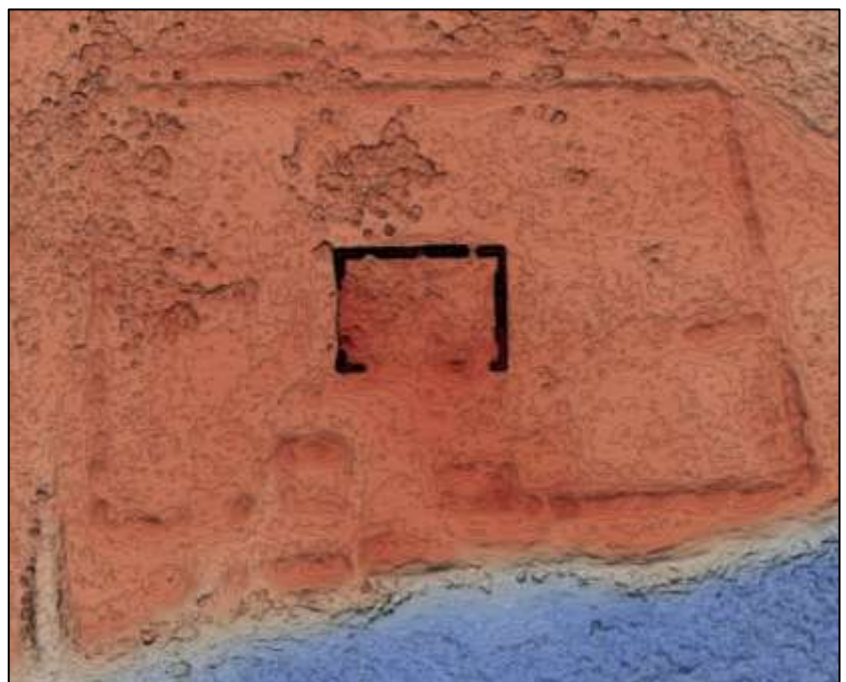
As 1, suffers from poorly defined wall tops, and ground (grass). Colour is different due to different method used.

<https://skfb.ly/6KpWs>

This image © HES

17B The Enclosure surrounding the House - centred on NH 86199 21440. This enclosure is sub-rectangular aligned NNE-SSW and measures 38m(42m) x 68m(62m). The turf and stone banks are generally up to 0.6m in height and have a spread of 1-1.5m. There are two parallel banks on the NNW side which are much more substantial than the others; possibly a flood prevention measure (*see notes above*). The banks on the SSW side of the enclosure are more degraded and discontinuous; the bank on the SSE side, in front of the house, is contiguous with the associated buildings and also discontinuous.

17C The south building within the enclosure - centred on NH 86212 21424. The turf footings of a rectangular building (*see photo Fig 7 p35*) on a WNW-ESE alignment measure

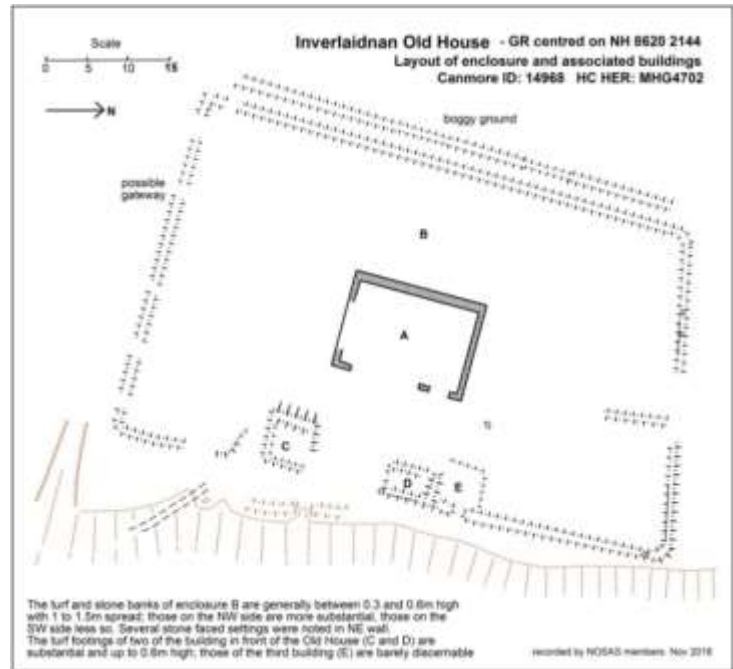


The aerial photogrammetry image of the Old House of Inverlaidnan, site 17, its surrounding enclosure and associated buildings

6m x 5m overall. The west bank of the building is more substantial and 0.6m high with a spread of 2m, elsewhere they are 0.2-0.3m high. There is a possible entrance at the east end of the north wall.

17D The north building within the enclosure - centred on NH 86217 21438. The turf and stone footings of a rectangular building are on a NNE-SSW alignment and measure 6m x 4m overall. The north and east walls are the more substantial being up to 0.8m height with a spread of 2m; there is a stone face on the outside of the east wall. A probable entrance is in the south wall.

17E A further possible building within the enclosure - centred on NH 86220 21466. The indistinct footings of this building are roughly square and measure 5m x 5m. The building adjoins 17D on its north side and appears as a shallow depression, it has a possible entrance in its east wall (the bank of the main enclosure).



05 Boundary Wall – NH 85782 21099 (SW end,

south of Allt an Aonaich) to NH 86398 21986 (NE end) The wall encloses the improved land of Inverlaidnan on its NW and NE sides; the River Dulnain provides the boundary to the SW and SE. The boundary wall is continuous for almost 1.6km and its construction is almost certainly contemporary with that of the Old House; it is depicted on the Roy military map of c1750 and on an estate plan of 1770. The wall is constructed of stone or turf and stone and can be divided into 4 sections:

A – on the S bank of the Allt an Aonaich from NH 85789 20937 (SW end) to NH 85788 20859 a stone wall 80m in length has a N-S alignment is 0.5m height with a spread of 1 – 2m; there is a gap or “gateway” at NH 85789 20909.

B – on the north bank of the Allt an Aonaich from NH 85785 21091 to NH 85780 21504 where a track crosses. The remains of the stone wall (see photo Fig 3 p33) have a N-S alignment and are continuous for 400m; it is 0.5m to 1m high and has a spread of 2m.

C – from NH 85780 21504 to NH 85862 21755 a section 300m in length continues steeply N uphill over a knoll, it then turns NNE and continues climbing steeply uphill to meet the military road. The wall here is 0.3m high and has a spread of 1m; it is much more wasted and in the higher parts it is covered with heather and juniper

D – From NH 85862 21755 to NH 86398 21986. A turf and stone bank runs intermittently in a SW-NE direction for 700m along the south side of the military road. It is up to 1m high and has a spread of 2m. At GR NH 86398 21986 the bank turns southward and heads downhill for 120m becoming less distinct and ending at NH 86451 21922

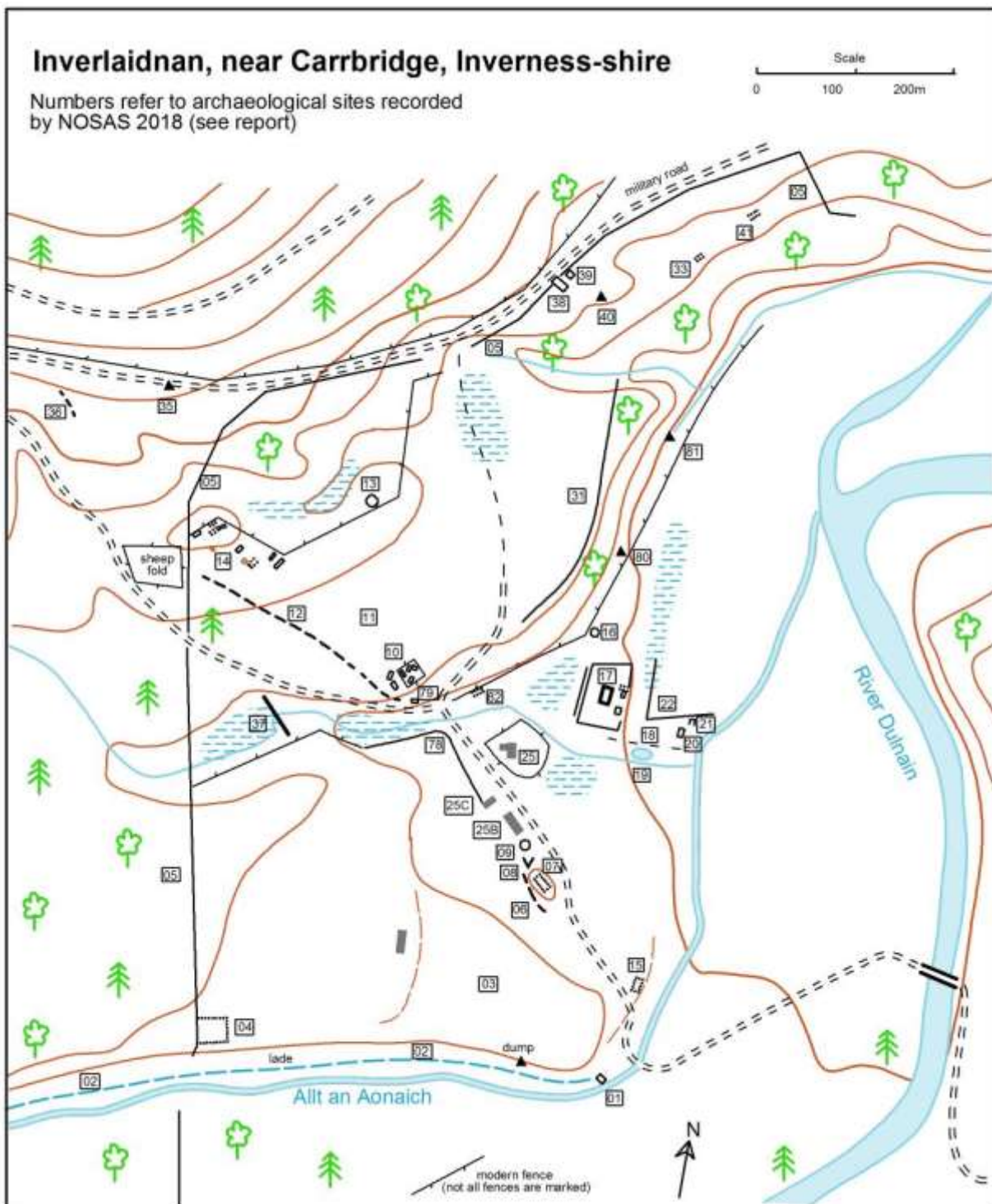
Lower flatland around the Farm and the Old House

01 Mill - centred on NH 86204 21052 the scant remains of a rectangular building on a N-S alignment measure 4m x 2m internally and are at right angles to the burn – the Allt an Aonaich. The wheel would have been at the N end of the building and aligned with the end of the nearby lade (NOSAS site 02) which is 30 metres to the W and approximately 2m higher. The tail race which is contained by a bank, 0.7m high, curves to the east and joins the burn just before the bridge. The mill is marked on estate plans of 1771 and 1808, but by the time of the 1860 plan it is a ruin. It is possible that the ruin marked on the 1st edition OS map and recorded during the FESP project of 1996 (Canmore ID: 116057 and HC HER ID MHG26462) is this mill but it is not quite in the correct location

02 Lade - NH 85541 21022 (west end) to NH 86169 21055 (east end) This substantial lade (see photo Fig 4 p33), associated with the mill (NOSAS site 01) is approx. 650m in length and runs parallel to the Allt an Aonaich on its N bank. The lade is generally 0.7m deep and 2m in width at the east end but reduces in size further west. It is contained by a bank 2 to 3m in width x 2m height. No evidence of a sluice was seen at the west end. The lade is marked on the Roy map of c1750 and on estate plans of 1771 and 1808, also on the 1st edition of 1867-71.

04 Enclosure - centred on NH 85796 21098 A small irregular enclosure on the east side of the stone boundary wall (NOSAS site 05). The enclosure is roughly 20m x 16m; the turf walls are incomplete and up to 0.4m high.

03 WW1/POW Camp - centred on NH 86083 21116. (Canmore ID 332704 and HC HER: MHG58787 at NH 860 210 - note that this GR is at least 150m too far south) The site of the camp is approx. 130m² of rough pastureland on



a large level river terrace on the N bank of the Allt an Aonaich. A dump of debris centred on NH 86112 21068 is the only visible remains of the camp. It has been pushed over the south edge of the river terrace and is approx. 20m in diameter spread over a vertical height of 10m. It mainly comprises bits of broken concrete (from 30cm² to 5-10m² in size), rusting barbed wire, a few broken bricks and some fragments of asbestos.

Note - NOSAS site 07 at NH 86123 21271 150m to the NE may have been the base for a WW1 Nissen hut.

15 Building – centred on NH 86228 21127. Situated on a raised bank on the east side of the track this rectangular feature is 5m x 4m and aligned N-S; a low turf and stone bank encloses 3 sides of a depression 0.5m deep. A circular outshot to the NE, 2m in diameter has a shallow scoop 0.2m deep.

06 Old track - NH 86116 21256 (SE end) to NH 86136 21235 NW end) The line of an old road climbs the SW side of a small knoll. The track is recessed into the slope and c40m in length x 3m in width. It can also be traced southwards on the east side of the present track.

07 Building – centred on NH 86123 21271. A rectangular platform recessed into the top of a knoll (*see photo Fig 2 p32*) holds the degraded timber floor beams of a building. The platform is aligned SE-NW and measures roughly 13m x 4.2(SE end) to 8.4m(NW end); it is bounded on 3 sides by earthbanks, that to the south being 1m in height. The building indicated by the timber beams occupies only part of the platform, it is rectangular, roughly c13m x 4.2m. A number of the timber beams have been roughly sawn, but some are regularly sawn 24mm wide x 11mm thick. This may have been the base for a WW1 Nissen Hut associated with the POW camp, if so it is possibly in its original position (Nissen Huts were patented in 1916 the smallest version being 36ft 6ins(11.1m) x16ft (4.87m))

08 Pit – centred on NH 86140 21255. This large rectangular pit on a SW-NE alignment is recessed into a SW facing slope; it measures circa 20m x 6 to 8m, is generally 1.2m deep and has an assortment of farm and corrugated iron debris dumped within it.

09 Horse gang – centred on NH 86118 21296. Located adjacent and to the south of a roofed farm building. This horse gang platform is 10m in diameter and 0.7m in height. A central circular depressed area of 4m diameter is now filled with debris and loose stones and has an underground shaft exiting under the bank to the north. Two concentric grassy “grooves” around the central area may or may not be significant.

25A Inverlaidnan Farmhouse - centred on NH 86106 21394, (Canmore ID 111009, HC HER - MHG23557) The farmhouse is occupied and no details were taken during the NOSAS survey. It was noted that a roofed L-shaped building was marked in this location on the 1st edition OS map of 1867-71; it is described in the Name Book of that date as “a large farmhouse (and steading) one storey high, thatched and in bad repair”. The 2nd edition OS map of 1903 however has a building with a different ground plan which is the same as that of the current building.

25B Building/Steading – centred on GR NH 86110 21321 A roofed rectangular stone building open to the weather and falling into disrepair. This building may be part of the building marked on the 1st Edition OS map (*see photos Figs 1 and 2 p32*)

25C Building – centred on NH 86091 21340 A timber building with corrugated iron roof in good repair.

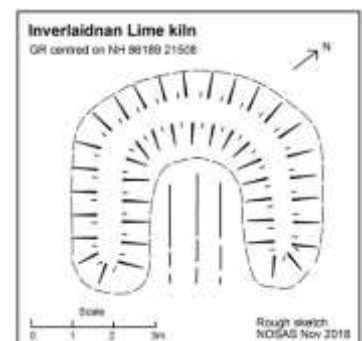
82 Possible building – centred on NH 86070 21455 A grassy platform measuring 15m x 4m overall may have held a timber building. A roofed building is marked on 2nd Edition OS map of 1903.

78 Wall – west end NH 85962 21392 to NH 86044 21413 (corner) and SE end NH 86084 21339 To the west of the farmhouse an L shaped stone wall bounds a field, a marshy watercourse is to the north. The turf and stone wall is circa 170m in length, up to 0.7m high x 0.8m spread. The wall is on an estate plan of 1860.

79 Building - centred on NH 86021 21433 A small building measuring 3m x 2m is indicated by a rectangular depression within a gravel quarry at the south end of the old track (NOSAS site 12)

37 Dam/Embankment – centred on NH 85881 21426. This linear earthbank is up to 1m high x c50m in length, it is covered in heather, juniper and self-seeded pine trees. The dam and a small pond are marked on the estate map of 1860 and on the 1st edition OS map. On the 1860 map a channel leads away from the dam to the SE but disappears under wall 78; this probably continued as a field drain which has now become completely choked. It is possible that the dam, along with the field drain was part of flood prevention measures to protect the Old House

16 Lime Kiln – centred on GR NH 86189 21508. Located just 60m to the east of the Old House this site is at the foot of the glacial terrace and between two fences. It is a U-shaped grassy knoll 6m x 5m x 0.6m high overall and open to the south. The central recessed area is graded from 0.3 to 0.5m deep. A lime kiln is annotated on the 1771 and 1808 estate plans.



80 Well (1) - NH 86249 21662 The eastern of 2 wells annotated on the 1770 estate plan. There is now no physical remains of any well structure but the site of it is on a SE-facing slope at the foot of a glacial terrace and 4m NW of a post-and-wire fence which separates the hillside from a field of improved pasture. A spring emerges from the ground and is manifest as an area of reed-grown water approx. 0.75m diameter and 0.5m

deep, surrounded by marshy ground to a spread of 2m. This marshy ground is limited on the SE side by a raised bank up to 0.75m high. To the NE a ditch runs for approx. 50m parallel to, and 4m NW of, the fence, draining the spring and marshy ground into an area of wet scrub.

81 Well (2) NH 86217 21564 The site of the western of two wells annotated on the 1771 estate plan of Inverlaidnan is on the gentle SE-facing slope at the foot of a glacial terrace approx. 2.5m NW of a post-and-wire fence which separates the slope from a field of improved pasture; it comprises a 3m diameter area of scattered stones, old rusty fencing and reeds. There is an area of raised turf on the NW side, and large scattered stones on the SE side. It is hard to establish any form to these scattered stones; apart from them there is no physical remains of any well structure.

18. Track –W end is at NH 86197 21426 to E end/ford at NH 86294 21396 This track descends from the raised terrace occupied by the Old House down to the lower ground and a ford across the Allt an Aonaich to the SE. The track is c110m in length, 3m in width and initially cut into the terrace. The track is probably recent in origin.

19 Pond – centred on NH 86255 21387. This pond is situated on lower ground to the SE of the Old House. It measures circa 25m x 10m and the dam at the south end is roughly 0.6m high. A small burn on the SW side feeds the pond at its NW corner and there is an outlet at its SW corner. This feature is probably recent.

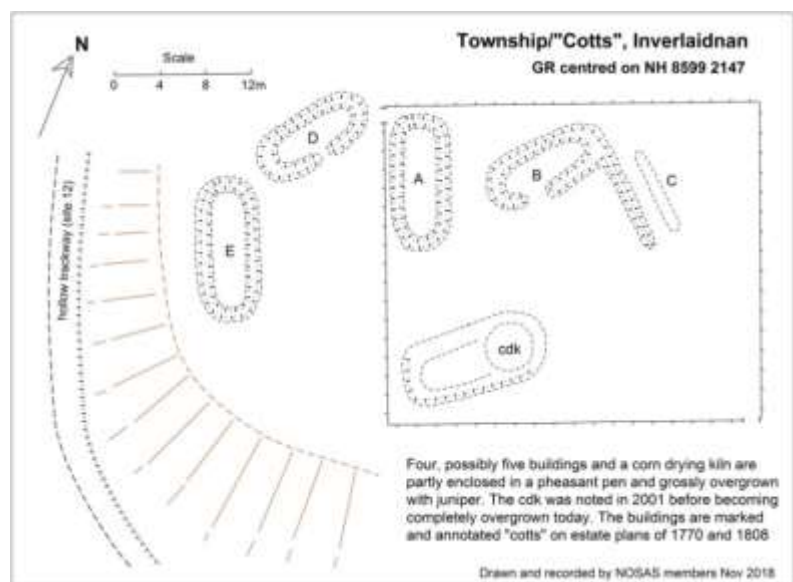
20 Building – centred on NH 86284 21399 Close to and on the west bank of the Allt an Aonaich this building with grassy stone and turf footings appears more as two rectangular depressions or compartments which are 0.6m in depth. The building is on a N-S alignment and measures 11m x 4m internally.

21 Building – centred on NH 86297 21416. A few metres to the NE of site 20 this building is on the same N-S alignment and measures 6m x 3m. The turf banks are up to 0.7m height with a spread of 1.5m. The absence of a south wall suggests that it had been a byre.

22 Bank/Garden wall – NH 86317 21424 (E end) to NH 86241 21414 (SW end) and NH 86244 21491 (N end) On lower ground to the east of the Old House the footings of this L shaped stone and turf wall may be all that remains of an enclosure marked as “garden” on estate maps of 1771 and 1808. The E-W leg is circa 100m in length and up to 0.6m in height x 1m spread; the N-S leg is in marshy ground and much less distinct, it is circa 80m in length and up to 0.2m height.

SE facing slopes above and to the north of the Farm and the Old House

10 Township/“Cotts” – centred on NH 85600 21470 The remains of a settlement of 4, possibly 5 buildings, and a corn drying kiln sit on a terrace above and to the NW of the present farmhouse. Mature juniper obscures most of the structures and a pheasant pen with a high wire fence encloses the east half of the settlement. The buildings have rounded ends and are between 11 and 13m in length x 4.5 to 5m in width overall; their stone and turf footings are up to 0.5m height and have a spread of up to 1m. The settlement is marked on the Roy map of c1750 and on an estate plan of 1771 where it is annotated “cotts”. It does not appear on the 1st edition OS map of 1867-71. **Note; the corn drying kiln was identified in 2001 when the vegetation was low, today (Nov 2018) it is completely overwhelmed**



11 Field clearance cairns - centred on NH 85950 21535 An area of field clearance cairns roughly 150m x 50m lies on a S facing slope of impoverished ground. The cairns vary from c0.2m to c2.5m high and c0.5m to c5m in diameter. They also vary in character; some have visible stone throughout, others appear to be almost entirely of turf or peat.

Old Road or Track (sites 12 and 36)

These two tracks are probably part of the same track which was the former access route from the military road to Inverlaidnan House marked on the estate plans of 1771 and 1808. The two tracks are on the same alignment but separated by a distance of approximately 200m. The ground between the two tracks was explored and the only evidence of a track was a low grassy causeway crossing marshy ground at NH 85743 21625

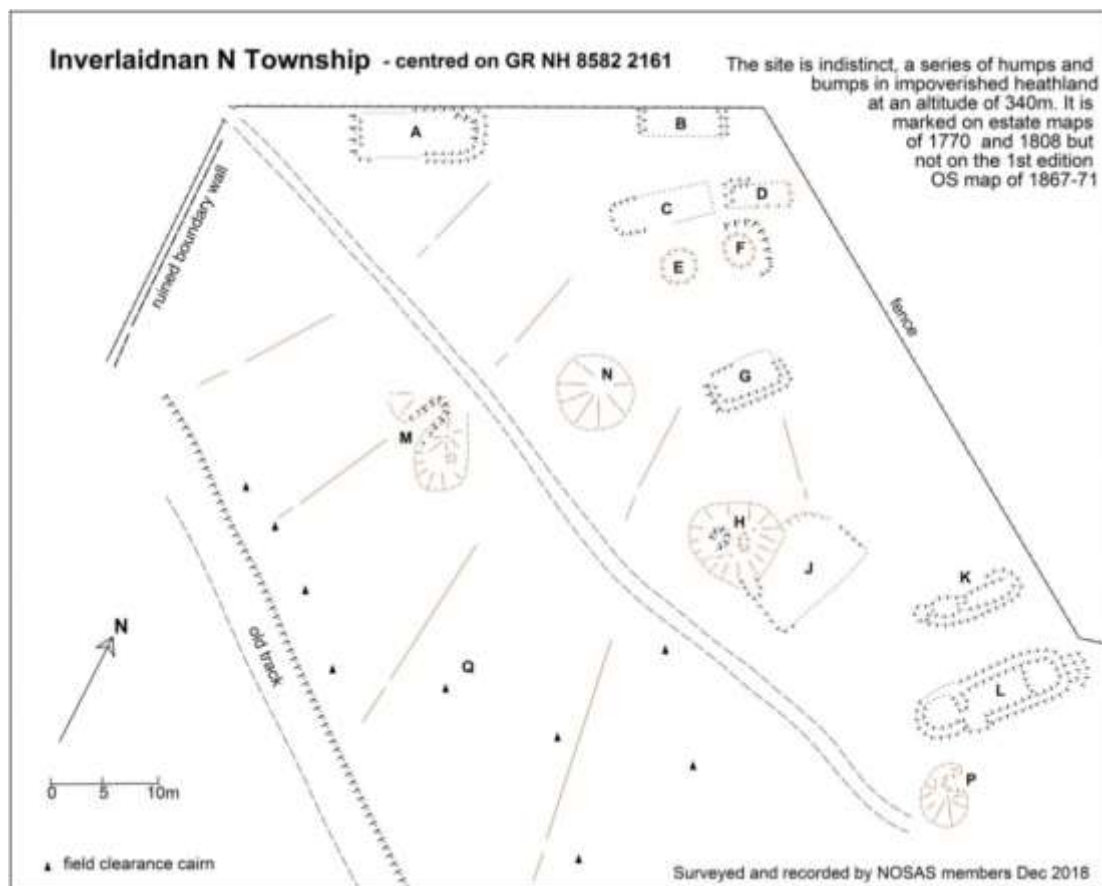
12 Track/Hollow way - NH 86019 21432 (SE end) to NH 85779 21574 (NW end/sheepfold) An old track ascends the slope immediately above Inverlaidnan Farm; it heads in a NW direction and can be traced for 300m to a sheepfold on the top of a knoll. It may have continued to join a second track (NOSAS site 36) higher up the slope.

This lower track is in two sections;

- a short steep section of 50m at the bottom of the slope has been truncated by a gravel quarry. Higher up a "hollow way" 1.5m deep and almost overwhelmed by juniper bushes, has developed;
- An obvious grassy section of 200m through pine woods (*see photo Fig 8 p35*). The track is 3m in width, recessed into the slope and built out on its lower/SW side.

36 Probable Trackway - NH 85604 21778 (W end) to NH 85628 21745 (E end) A sunken gully on a NW-SE alignment is c50m in length, 1 to 2m in width and has a bank of 1.5m height on its SW side. This was most probably the line of an old track from the Old House to the military road. NOSAS Site 12 lower down to the SE may be a further section of the track.

14 Township – centred on NH 85827 21598 This township is located on top of a knoll at an altitude of 350m within the enclosed lands of the Inverlaidnan estate. The ruined boundary wall, NOSAS site 05, is close by to the west and the track, NOSAS site 12, linking the Old House with the military road passes to the south of the township. The remains of



several buildings and associated features appear as nebulous humps and bump in rough impoverished grassland. Three buildings (A G and L) are fairly obvious and 4 appear as platforms (B, C, D and J) with barely discernible evidence of footings; there are two possible kilns (H and M), 2 possible middens (E and F), a number of field clearance cairns Q and a feature identified as possible storage pits(K) (*possible wartime trench has also been suggested*) The township is marked on the Roy map of c1750 and on estate plans of 1771 and 1808.

14A Building – centred on NH 85789 21605 The stone and turf footings of a rectangular building on a NE-SW alignment are close to the fence. The building measures 11.5m x 4m. The footings at the NE corner are distinct and 0.6m high, at the west end they are 0.3m high.

14B Platform/Possible building – NH 85809 21615 close to the fence, a rectangular platform measuring 7.5m x 3.2m between two banks, one at each end. The banks are 3.5m in length x 1m spread x 0.3m height.

14C Platform/Probable Building – NH 85813 21608 A small square recess probably represents the SW end of a rectangular platform/building on a NE-SW alignment measuring circa 10m x 3m. A depression (site E) to the south may be a midden associated with this building

14D Platform/Probable Building – NH 85819 21614 A rectangular building on a NE-SW alignment measuring 6.6m x 3.3m surrounded by barely discernible turf banks. A depression (Site 14F) to the south may be a midden

14E Possible Midden – centred on NH 85816 21603 A shallow depression c 5m in diameter may be a midden associated with a building (site 14C) to the north

14F Possible Midden – NH 85822 21608 A circular depression surrounded by a rectangular recess with NW-SE alignment - 6m x 4m x 0.5m deep. This may be a midden associated with buildings (14D and 14C) to the N

14G Building – NH 85825 21599 A platform on a NE-SW alignment measuring 6.4m x 3.6m is surrounded by a low turf and stone bank particularly evident at the SW end

14H Kiln – NH 85832 21587 An oval grassy mound on an E-W alignment measuring 7.7m x 5m x 1m height overall. Two pits are recessed into it, the east one is a shallow oval hollow on a N-S alignment, 2.5m x 1m x 0.2m deep, the larger west one is on a N-S alignment measures 2m x 1m x 0.5m deep and is open to the S.

14J Platform/Possible Building – NH 85838 21589 A platform aligned NE-SW measures 8m x 4m, it is recessed at its N corner and has a stone setting at its S corner. Kiln H is adjacent to the west.

14K Trench - centred on NH 85855 21589 Aligned NE-SW this linear trench is 9.7m x 3m overall; it is surrounded by a low turf bank 0.15m high x 0.6m spread. It has 3 compartments the NE one being the largest at 5m x 2m x 0.5m deep; the other two are smaller and shallower. These may be storage pits although a wartime trench possibly associated with the WW1 POW camp has been suggested

14L Building – centred on NH 85864 21591 This complex rectangular building is on the eastern edge of the township near to a fence corner. The building is aligned NE-SW and measures 14.6m x 4.8m overall. The low footings are of turf and stone and have a spread of up to 1m. The building has at least 2 compartments; the largest/NE is 9m x 3m internally, the SW is 3m x 3m internally and has an entrance in its NE arc. There is a second rounded end at the north end suggesting that the building has gone through at least 2 phases; it may have been an earlier building which continued in use into the period of the later township. The original building may predate the township on the 1771 estate map and the c1750 Roy map.

14M Possible Kiln – centred on NH 85802 21590 This grassy earthwork is on a N-S alignment and measures 7.4m x 6m overall; it comprises, in its NW part, a pit on a N-S alignment 2.5m x 2m x 0.5m deep open to the S and a knoll with a stepped south facing slope in its east part.

14N Cairn – centred on NH 85818 21593 This large flat grassy mound measures 7m x 6m overall and is most likely field clearance material

14P Cairn - centred on NH 85864 21585 A prominent grassy cairn on a N-S alignment, measuring 5m x 3m and with a recess 1.5m x 1m x 0.3m deep in its north half.

14Q Field Clearance cairns – centred on NH 8582 2156 A grassy S facing slope to the SW of the township has at least 9 clearance cairns; they vary in size from 1m to 3m in diameter and 0.2m to 0.5m height

31 Turf and stone bank - NH 86104 21507 (SW end) to NH 86205 21770 (NE end) Aligned NE-SW this bank is located along the top edge of a glacial terrace and encloses an area of grassy pastureland to its NW. The bank is c300m in length and much of it runs through birch woodland. The south west part is up to 0.4m high x 1m thick and enhanced by cleared stones. The NE end is more substantial 0.8m high x 1.5m thick, it has a ditch 0.75m wide on its W side. At the N end the bank runs down a steep slope into a wide gully to terminate at NH 86205 21770.

33 Possible Building - NH86283 21891 A line of rough stonework 3m long by 0.75m wide and up to 0.8m high may mark the E end of a building aligned WSW/ENE and set into a steeply sloping hillside.

34 Stone - NH 85408 21811 A stone close to the south side of the military road and aligned with it measures 0.7m height x 0.8m width x 0.40 thick. Confusingly this stone may have been previously identified as the Inverlaidnan Hill Stone/Marker stone (Canmore ID: 139468, HER ID: MHG34346) (*see entry for site 35*)

35 Stone/Inverlaidnan Standing stone - NH 85751 21762 (HC HER ID: MHG25010 also Canmore ID: 139468 and HER ID: MHG34346) At a high point on the S side of the old Military Road and aligned with it, this large stone is 1.5m high x 2m width x 0.5m thick. A “large stone” is annotated in this position on the estate plan of 1808. **Note** - *This stone is that in the photograph on the record for “the Inverlaidnan Hill stone/marker stone” at GR NH 8553 2181, Canmore ID: 139468 and HER ID: MHG34346 - no stone was located at GR NH 8553 2181 (MMM May 2018)*

13 Round House – centred on NH 85971 21663 This site (*see photo Fig 9 p36*) is located on top of a knoll to the N of a fence. The round house has an internal diameter of 8m and a substantial encircling bank of stone and turf with a spread of up to 2.5m and a height of 0.6m internally (1m externally). There is an entrance of 3m width in the SE arc of the structure; it has a linear stone setting across it indicating that the structure has probably had more recent use as an animal pen. The terminals of the entrance are “expanded” but this may be due to more recent activity too. A further feature is a shallow depression 3m x 1.5m to the east of the entrance.

38 Building – centred on NH 86163 21867 (HER ID: MHG25011) Situated on top of a knoll and on a NW-SE alignment this rectangular building measures 10.8m x 3m internally, although it may have been truncated at its NW end where there is “up-throw” from the adjacent military road (*now a cycleway*). The turf and stone footings are more substantial in the SE part of the building where they are up to 0.5m in height. There are entrances 1.5m in width at the centre of both long walls. An area of improved land is to the SW.

39 Building – centred on NH 86179 21870 This rectangular building is a few metres to the east of building/site 38. It is recessed into an E facing bank and measures 4m x 3m internally, the height of the walls is between 1m to 0.5m and there is an entrance in the N end of the E wall.

40 Clearance cairn – NH 86147 21917 Located on improved ground near the remains of two buildings, sites 38 and 39

41 Building – centred on NH 86342 21910 A rectangular recessed platform on a NE-SW alignment slopes towards the SW and measures 8m x 2.5m. A linear stone setting 1m thick x 0.6m high at the NE end may be an end wall.

5.2 Sluggan/Inchluin

The Sluggan area was divided into three;

- North of Sluggan Bridge
- Sluggan Bridge and its surroundings
- South of Sluggan Bridge

North of Sluggan Bridge

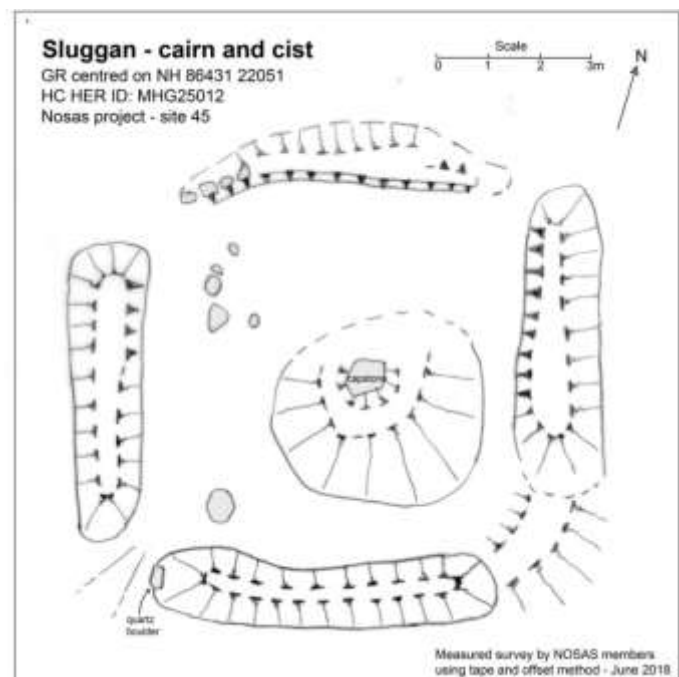
This was divided again into 3 again - the military road area, Carn Challard and Buail an Amadain Croft

Military road area

32 Broad Rig – centred on GR NH 86745 21971 Situated on a raised glacial terrace above and to the west of Sluggan Bridge this roughly rectangular area of rig is set in a sheltered hollow and aligned cWSW/ESE. The extent of the rigs is approximately 40m N/S by 30m E/W although it probably extends NW where there are similar ridges covered by blaeberry on a gently south facing slope – the whole area being approx. 80m x 40m. A dense spread of bracken obscures much of the broad rigs which are c2m wide from centre to centre with the actual rigs c1.2-1.5m wide and up to 0.4m high. Interestingly the area is annotated on an estate plan of 1860 (RHP14036) “birchwood and pasture disputed between Sluggan and Inverlaidnan”

60 Depression/possible Building – centred on NH 86732 21978 This site is on the summit of a broad glacial terrace to the NW of Sluggan Bridge. A rectangular depression measures 7m x 3m and is aligned N-S. A substantial earthbank on its east side is 1m high and has a 2m spread, that on the west is less obvious, the south end is curving.

45 Cairn and Cist - centred on NH 86431 22051 HC HER ID: 1. MHG25012 but see note) (*Note: confusingly this site has been recorded several times under different names and with different GRs. The HER record also has: 2. HC HER: MHG4475 named*



Inverlaidnin House at GR NH 861 2142. 3. HC HER ID: MHG39164, named Sluggan Bridge and at GR NH 8630 2200 (this GR was checked but nothing was found) and Canmore has 1. Canmore ID: 149629 named Inverlaidnin House at GR NH 861 214

The site (see photo Fig 10 p36) is on a gentle S facing slope close to the military road and comprises a small sub square enclosure which has an internal cairn with cist and capstone. The enclosure has an internal diameter of 7m and the surrounding turf and stone banks are between 0.1 and 0.3m height (internally) but up to 0.5m externally. The banks have a spread of up to 1.5m and are becoming overgrown with juniper, particularly in the southern half. The enclosure appears to have "causeways" at the corners, but those to the south, where the ground slopes away more steeply, are less convincing. A white quartz boulder is located in the SW corner. The internal cairn is SE of the centre of the enclosure and is a flattish mound 3.5m in diameter x 0.2m high. In its north half there is a small cist with covering capstone. The capstone is 0.8m E-W x 0.6m N-S.

Five cairns, NOSAS sites 46, in the immediate vicinity may be associated.

46 Cairns - centred on NH 8644 2206 (*a single cairn has been recorded previously HC HER: MHG25013*) Five cairns are close to the cairn and cist, site 45, and may be associated with it.

A - GR NH 86439 22069, A substantial cairn 3m diam x 0.5m height with some stone content, the cairn was covered with heather and juniper.

B - GR NH 86420 22056 A small cairn 1.5m diam x 0.3m height covered in heather.

C - GR NH 86456 22059 A cairn, 3.5m in diam x 0.3m height, with some stone content.

D - GR NH 86454 22055 A cairn, 3m diam x 0.6m height, some stone content and covered with juniper, heather and birch.

E - GR NH 86450 22049 A linear flattish cairn on NW-SE alignment measures c7m x 3m covered in grass.

44 Piles of stones - centred on NH 8652 2208 (HC HER: MHG25014) This is a linear group of 5 piles of stones or pillars, three of them with mortar bonding. They are aligned ENE/WSW and are considered, perhaps, to form a base for a temporary sawmill (*Census records for 1861 and 1871 have Alexander Robertson, saw miller at Sluggan and census 1891 has James Stuart, wood cutter*)

A NH86500 22065 A roughly circular mound of stones 2.9m long E/W x 2.65m N/S and up to 0.6m high. Spread of tumbled stones extends to c3.5m.

B NH86508 22072 A square stone pillar 2.2m wide rises to a height of 0.7m with at least 2 courses of dressed stone with lime mortar bonding.

C NH 86521 22084 A rounded stone pillar 1.8m E/W x 1.7m N/S and up to 0.9m high, with at least 3 courses surviving and stones bonded with lime mortar

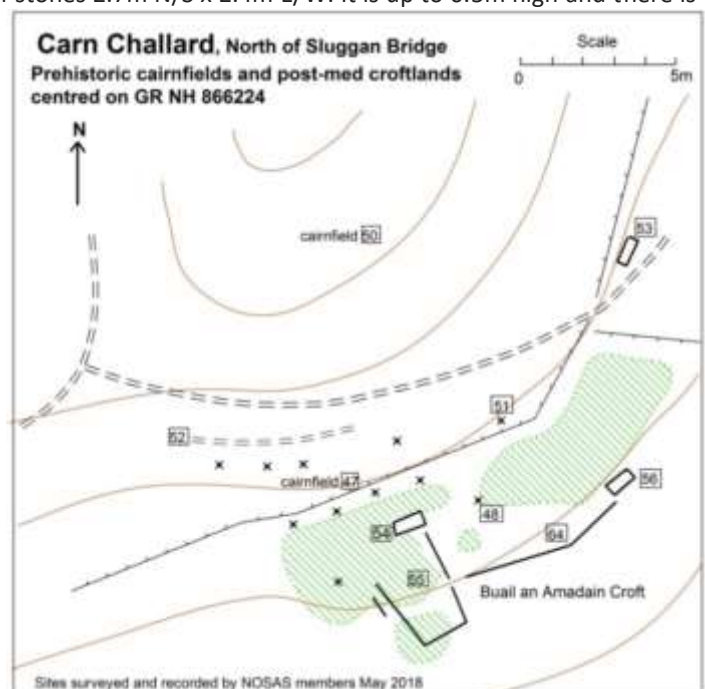
D NH 86532 22086 A stone pillar 1.6m E/W x 1.8m N/S and up to 0.75m high, the surrounding spread of tumble is c4m diameter. Its circular form survives on the E side and there is evidence of mortar bonding. A cast iron metal plate 0.65m square (possibly part of an old stove) sits on the W side of this feature.

E NH86542 22094 A more amorphous rounded cairn of stones 2.7m N/S x 2.4m E/W. It is up to 0.5m high and there is no evidence of a structure or of mortar, although tumble includes a fragment of red brick.

Carn Challard

The following sites are mostly on the south facing slopes of Carn Challard, the hill within the forest plantation 500m to the NW of Sluggan Bridge. A deer fence which runs roughly along the 350m contour defines the limit of the commercial plantation much of which has recently been felled (*May 2018*). Sites 50, 51, 52 and half of 47 are to the north of the deer fence within the commercial plantation. A forest track bisects the area and provides the dividing line between the two prehistoric cairnfields sites 50 and 47. Birch woodland and the settlement of Buail an Amadain Croft are to the south of the deer fence

50 Cairnfield - centred on NH 86650 22485 This cairnfield to the north of the forest track is spread over the summit and southern slopes of Carn Challard, an area of 200m N-S x 140m E-W. This has



recently been felled, ploughed and mounded for forestry plantation. 21 individual cairns varying in size between 0.5m to 1.4m in height and 1.5m to 6m in diameter were recorded. Some of the cairns were upstanding others had been flattened by forestry operations. The cairns are almost certainly prehistoric probably enhanced by more recent activity. **Note** – there was no evidence of the previously recorded hut circles (Canmore ID 14966, HC HER ID: MHG4471) within this area at GR NH 8665 2250 in 1973.

NUMBER	GPS ALL NH	ELEV FROM GPS	SIZE	HEIGHT
1	86584 22498	396m	3.6x3.3m	1.4m
2	86595 22504	393m	3x3m	0.7m
3	86592 22508	393m	3x3m	0.6m
4	86619 22518	385m	3.5x3.5m	0.8m
5	86627 22541	385m	3x3m	0.6m
6	86631 22545	389m	1.5x1.0m	0.5m
7	86617 22487	384m	6x5m	0.5m
8	86622 22487	381m	4x4m	0.4m
9	86608 22478	380m	5x4m	0.8m
10	86604 22472	381m	7x4m	0.6m
11	86598 22460	383m	6x5m	0.8m
12	86634 22447	373m	5x5m	1.0m
13	86681 22361	368m	6x5m	2.0m
14	86676 22373	365m	2x1.5m	0.5m
15	86639 22385	367m	4x3m	0.5m
16	86700 22394	366m	5x4m	1.0m

Also

Cairn - NH86639 22579 2m wide cairn x 0.5m high on eastern edge of cairnfield (dense plantation to E may obscure further extent). Large stone (0.6m high by 0.5m by 0.25m thick) upstanding on NW corner

Cairn - NH86635 22566 cairn 4m diameter

Cairn - NH86584 22424

Cairn - NH86556 22418

Cairn - NH86720 22393 3m+ diameter cut by road to the S, a mass of small 'clearance' stones. Photo x 1

Cairn - NH 86579 224227

47 Cairnfield - centred on NH 8664 2230 On a south facing slope 400m NW of Sluggan Bridge this cairnfield is partly in the commercial plantation (at least 4 cairns) and partly (6 cairns) south of the deer fence in improved ground occupied by the post medieval farmstead of Buail am Amaidain. Nearby prehistoric cairns (NOSAS features 51 and 48) may be associated.

Above the deer fence:

Cairn - NH86534 22326 6m diameter by c1m high

Cairn - NH86546 22322 4.5m diameter by c1m high

Cairn - NH 86561 22337

Cairn - NH 86685 22335

South of the deer fence; most of these cairns are close to the fence but more may lie under extensive juniper nearby:

Cairn - NH 86592 22288 A low rounded cairn c7m diameter c0.5m high and lying mostly S of the modern fence. The cairn stones vary from 0.15m diameter to 0.3m. The cairn ends abruptly 6m SE of the fence with a defined linear edge, perhaps 0.5m high and 1.5m below top of the cairn, though this is heavily obscured by mature juniper. A small hollow in the centre c0.5m diameter could suggest a partially infilled bowl, thus suggesting that this could be a collapsed corn-drying kiln.

Cairn - NH86602 22295 A stone cairn c6m diameter x c1m high extending under the deer fence; visible stones average 0.3m diameter.

Cairn - NH 86645 22306 A possible stone cairn defined by a low mound c6m in diameter extending under the deer fence.

Cairn - NH 86680 22311 A probable cairn also extending under the deer fence has a low spread of stones c5m diameter.

Cairn - NH 86715 22345 A possible cairn c5m diameter by 0.3m high lies adjacent to and extends under the fence.

Cairn - NH86604 22266 An oval spread of stones in the middle of juniper 4m+long E/W x 2.5m wide - may be another building

51 Cairn – centred on NH86683 22329 (Canmore ID: 14967, HC HER: MHG4470) This substantial stone cairn which lies mostly on the N side of the deer fence is 10.5m E/W x 14m N/S. An internal oval chamber possibly excavated at a later modern date is 3.5m E/W x 2.5m internally and c1m deep. The remains of a wall running NE from cairn with 1.2m spread x 0.4m height is approximately 20m in length. A deer fence has been constructed across the south part of the cairn.

52 Old (Forest) Track – NH 86474 22342 (W end) to NH 86675 22345 (E end) The remains of an old track, 200m in length, is recessed into the hill and has a stone retaining wall in places.

Buail an Amadain Croft (alternative names Carn Challard, Fools Fold) GR centred on NH 8667 2229 – (Canmore ID; 14963 and HC HER; MHG4474) This croft 400m to the NW of Sluggan Bridge is located in birch woodland on a south facing slope at an altitude of 350m. It comprises 2 buildings (sites 54 and 56), possibly a third (site 53) and 2 enclosures (sites 55 and 64) with several clearance cairns some of which probably have prehistoric origins. At least half of the croft is covered in dense juniper and it may be that some features are obscured by this, other areas have dense bracken. The farmstead does not appear on the 1st edition OS map of 1875 but it is seen on an estate plan of 1860 (*RHP14036*) with 3 unroofed buildings and 2 enclosures and appears on the current OS map as a ruin.

54 Building – centred on NH86639 22277 The foundations of a substantial rectangular house are aligned E/W and measure 12m x 5m externally The interior of the house is filled with mature gorse so no internal features were noted and only the E gable wall is currently obvious. The low walls survive to one course high and are perhaps c0.65m thick.

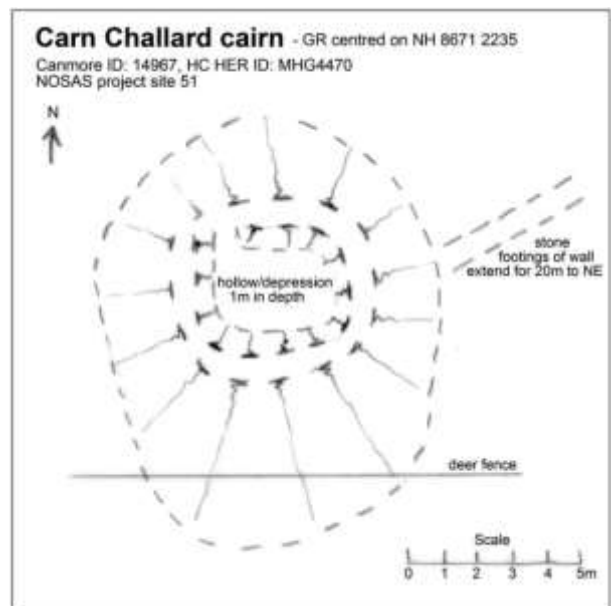
55 Wall/Enclosure – centred on NH 86644 22265 A roughly rectangular enclosure (the westmost of two) aligned NW-SE is mostly surrounded by the remains of a substantial drystone wall/clearance material. The enclosure is roughly 50m x 30-40m and slopes significantly to the south. Much of it is overgrown with dense juniper scrub, particularly in the north part. To the west a stub of wall may mark a trackway but it is heavily obscured by juniper.

56 Building - centred on NH 86747 22312 A substantial rectangular building 14m x 5m externally is aligned SW/NE. The remains of the stone walls are 0.3-0.5m high, and grossly overgrown with bracken.

64 Wall/enclosure – NH86651 22256 (W end) to NH 86747 22305 (E end) The remains of this substantial stone wall on a ENE-WSW alignment bound the southern edge of the improved land in the E part of the croftland. Wall/enclosure 55 is contiguous to the west. The wall abuts building 56 at its east end and is up to 0.5m high with a spread of 1m.

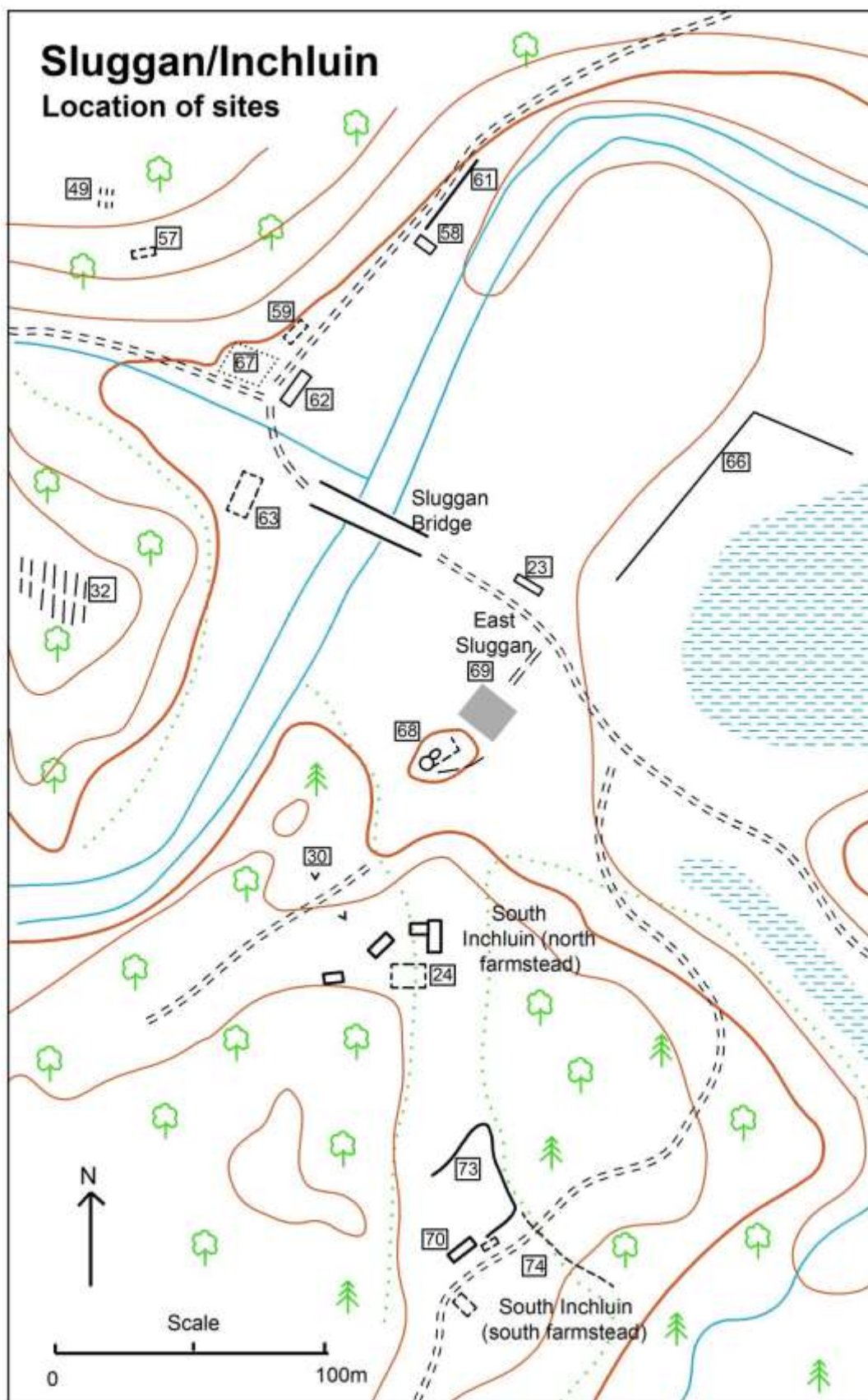
53 Building – centred on NH 86766 22434 Located in the NE part of the croftland, on the north side of the forest road and NE of the deer fence/forest road intersection. The footings of this rectangular building on a NNE-SSW alignment measure 15m x 3-4m internally and are covered in blaeberry bushes. The turf and stone banks are substantial and up to 0.5m height with a spread of 1.5m, but they are indistinct and disturbed by road construction in places. A small outshot at the SW end measures 1m in length by 2m in width.

48 Cairn – centred on NH86671 22291 A circular stone cairn c7m in diameter and up to 1m high lies on the N edge of the improved grassland of Buail an Amadain Croft; it is 30m SSW of another substantial Cairn (Site 51). A small central hollow c0.75m wide is probably a modern intrusion.



Sluggan Bridge and surrounds

Sluggan Bridge carries General Wades military road over the River Dulnain. This area has probably been a focal point for travellers from early times; not only was it a river crossing but it was also the junction of the Wade road and the Grantown/Caulfield road constructed c1765. On the north bank of the river the remains of a stone building (site 62) are almost certainly on the site of an earlier building which was the Inn marked on plans of 1768 and 1808. These plans also reveal that the line of the Wade road was originally directly northwards from the bridge, it now deviates slightly to the east. The estate plans show at least another 3 or 4 building in the close vicinity of the Inn; the two platforms (sites 59 and 67) recorded during the project probably held these buildings which would have been of timber and associated with the Inn. Sluggan/Inchluin was bypassed circa 1803 when a new road was built roughly along the line of the present A9.



62 Building/Inn/Farmstead - centred on NH 86934 22076 - alternative names Inchluin West, Sluggan Bridge, Inchloin. (Canmore ID: 356385, HC HER: MHG30501 and MHG25006). This rectangular building (see photo Fig 11 p37) is on a NE-SW alignment and measures 20m x 6m overall. There are two compartments; the main one to the SW is 13m x 5m internally and the NE one 5.5m x 5m. The walls are of dressed stone, double faced, mortared and generally 0.5-0.6m high x 0.6m

thick although the SW gable has its full height of c5m in a precarious state. The walls of the NE compartment are less substantial and there is much evidence of tumble here.

59 Platform/probable building – centred on NH86939 22116 This platform is set 2m to the north of the Grantown road adjacent to the Inn. It is aligned SW/NE and 6m+ (W end obscured by dense young birch) x 3.5m. The platform is recessed into the slope, there is no trace of stone walling but it almost certainly held a building, possibly of timber and possibly that marked in the same position on an estate plan of 1808.

67 Platform/probable buildings – centred on NH 86918 22079. This is a large sloping platform (see photo Fig 11 p37) located to the rear/northwest of the building/Inn, site 62. The platform is roughly 25m square and covered in heather and birch scrub. It almost certainly held timber buildings associated with the Building/Farmstead/Inn (site 62), three buildings are marked on the estate plan of 1808. The platform is recessed into the slope on its east and north side where there is evidence of quarrying.

57 Building (above/N of Inn) – centred on NH 86852 22163 The remains of a rectangular stone building, one course high and aligned ENE/WSW is sited on a small terrace. The building measures 16.5m x 4.5m overall and has walls with a spread of 1m. The W end is rounded but the E end unclear. There are two compartments the one at the E end just 5m in length. This building is almost certainly associated with the broad rig (site 49) to the NW.

49 Rig – centred on NH 86808 22222 Low linear mounds 2m in width above building 57 may mark remnant rig associated with the building. Their extent was difficult to determine.

63 Wall/possible Enclosure at NH 86906 22018 The footings of a wall c10-12m in length are on a SW-NE alignment and are possibly the remains of a building, shown on an 1808 estate plans, or a small enclosure shown on 1st edition OS

58 Building – centred on NH 86996 22161 The remains of a rectangular building c70m to the NE of site 62 are on a narrow river terrace adjacent to the Grantown/Caulfield road. The building is on a NW-SE alignment and measures c8m x 3m internally. The stone footings of the walls are grossly tumbled and up to 0.5m in height with a spread of up to 1.5m.

61 Wall – NH 87056 22232 (NE end) to NH 87000 22160 (SW end) A substantial stone wall c80m in length with a ditch on its upper/NW side bounds the SE side of the old "Grantown" road.

65 Ditch and Bank – NH 86966 22225 (SW end) to NH 87041 22269 (NE end) A ditch 0.3m in depth with a bank up to 0.6m high on its SE side descends the slope obliquely for c90m

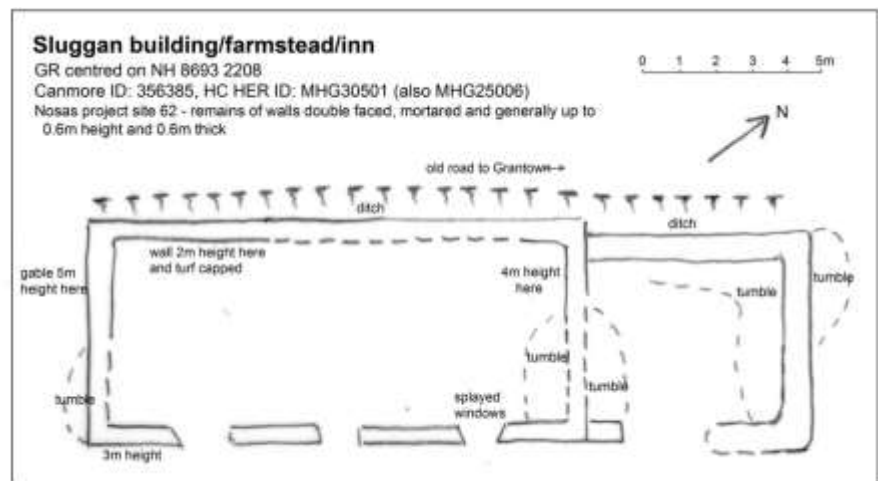
Sluggan, South of the River

The sites here have been divided into 3 areas – East Sluggan, S Inchluin (N and S farmsteads) and Crask

East Sluggan

66 Ditch and Bank - centred on NH 87204 22066 An L shaped ditch enclosing marshy ground with light birch woodland to the NE of the military road.

23 Building - centred on NH 87078 21962 (alternative names North Inchluin (FES)) The remains of this building are under a tree on the NE side of the military road and 150m to the SE of Sluggan Bridge. The building measures 11m x 5m



internally and the stone footings which are up to 0.2m in height and 0.5m thick are badly damaged by the tree. Two buildings are shown as roofed on the 1st and 2nd edition OS map; the name book describes them as “thatched and in bad condition”. No evidence of the second building was seen.

69 Building/Farmstead - centred on NH 8705 2190 (Canmore ID: 14971, HER ID: MHG4466) A single recently renovated roofed building in good order.

68 Corn drying kiln – centred on NH 87032 21883 The remains of a corn drying kiln and barn are situated on top of a large knoll beside the main farmstead at East Sluggan (site 69). The kiln and barn are aligned SW-NE and measure c14m x 5m overall. The structure comprises a bowl at the SW end, a firepit and the barely discernible turf walls of a barn at the NE end. The bowl is 1.2m deep x 4.4m in diameter at the top (1.2m at the bottom); it has evidence of a scarcement around its upper edge. The firepit is 3.2m in length x 2m in width x 1m deep. A well graded access track ascends the south slope of the knoll to the kiln

30 Quarry – centred on NH 86986 21797 Located in a wooded recess to the SW of the main farmstead.

75 Improved ground – centred on NH 86548 21565 This area of improved land is located 500m to the SE of E Sluggan in a bend of the river opposite Old Inverlaidnan House. The NE facing grassy slope is roughly 80m x 60m and is all that remains of a farmstead marked on the 1860 estate plan. The low lying land in the bend of the river has been severely affected by flooding and the 1771 estate plan (RHP8930) has this area annotated as being in dispute between “Inverlaidnan/Dalrachney” and “the country people”

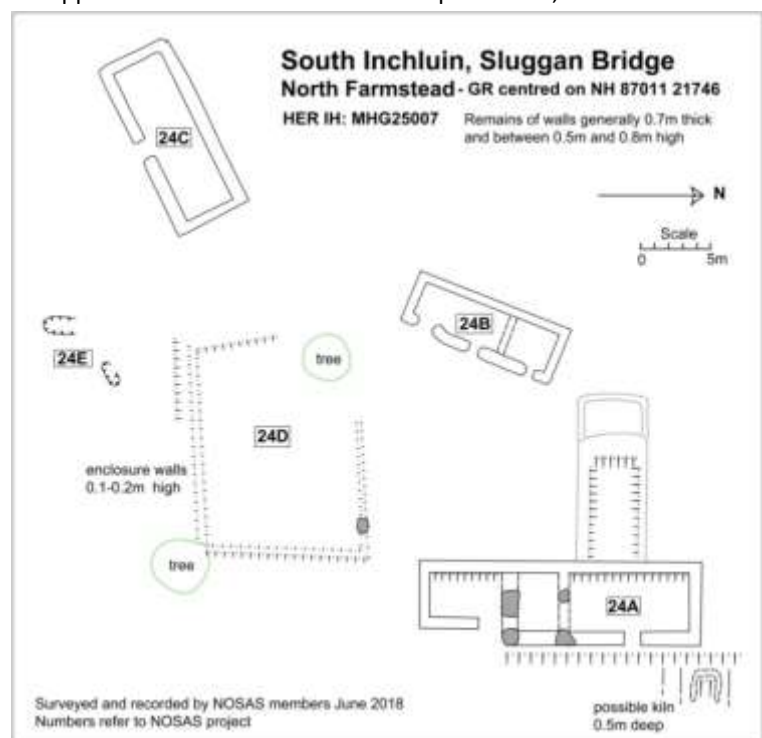
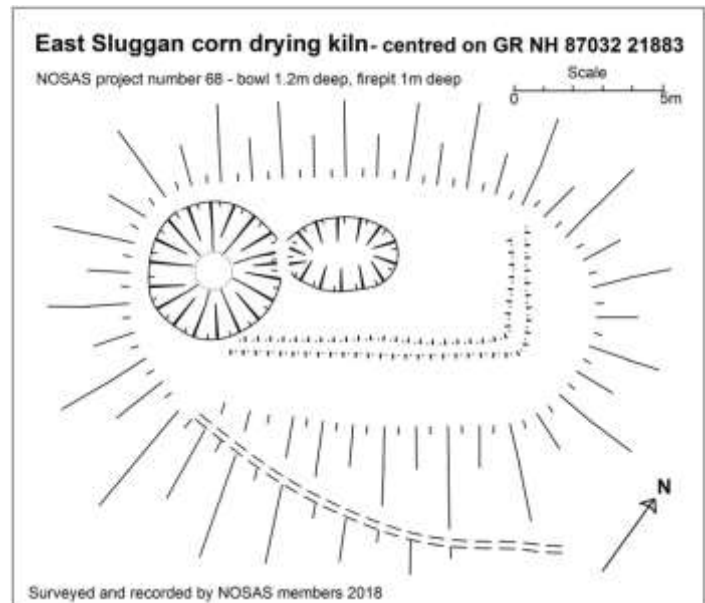
South Incluin (alternative name – Sluggan) Two farmsteads each with improved ground are located in birch woodland on an elevated glacial terrace 400m to the south of Sluggan Bridge. A substantial wall, enhanced by clearance material, separates two areas of improved ground.

The North Farmstead, centred on NH 87011 21746 (HC HER ID: MHG25007) comprises 3 buildings (see photo Fig 12 p37), an enclosure and several pits. The farmstead appears on the 1st Edition OS map of 1867, the name book describing it as “thatched and in miserable condition”

24A Building - centred on NH 87026 21760 This is the main building of the farmstead; it is on a N-S alignment and measures c18 x 4.5m internally. The substantial wall footings are of large stones, up to 0.8m high and 0.7m thick. The building has 3 compartments and an outshot at a higher level to the west; this is recessed into the slope, measures 10m x 5m and has a depth of 0.8m at its W end. At the NE corner of the building there is a small scooped structure which could be a kiln.

24B Building - centred on NH 87009 21754 A rectangular building on a NW-SE alignment measures 10m x 2.5m internally and has 2 compartments. The turf and stone walls are upstanding to between 0.5m and 0.8m. There are 3 entrances in the SE wall, the west one being much wider than the other two.

24C Building - centred on NH 86997 21732 A rectangular building on a NW-SE alignment has internal dimensions of 12m x 3.5m. The turf and



stone walls are between 0.3 and 0.8m high and generally 0.7m thick. There is an entrance in the south wall.

24D Enclosure – centred on NH 87017 21743 A rectangular enclosure, aligned W-E and sloping to the east measures roughly 15m x 12m. The enclosing turf banks are up to 0.2m high and more obvious at the east end. Two large trees one at the SE corner and one at the NW corner are growing in the bank.

24E Pits – centred on NH 87010 21725 Two oval pits measuring 1.5m x 1m are 0.5m deep

24F Pit/possible kiln – NH 86979 21773 A sloping scooped pit 20m to the east of the settlement is recessed into the NW facing slope. It is roughly 4m square, 1.2m deep at its SE end but open to the NW

The South Farmstead - centred on NH 87052 21564. (HC HER ID: MHG25008) Previously recorded as a single building, the remains of three buildings and two enclosures of improved ground are to be seen. The improved ground (but no buildings) is marked on an estate plan dated 1770 (RHP98355).

70A. Building centred on NH 87050 21583 (HC HER ID: MHG25008) The main building is aligned SW-NE and measures 12m x 3m internally. The turf covered stone footings of the walls are generally 0.5m high and there is an entrance halfway along the S wall. There are two compartments to the building, the small SW one being at a slightly higher level and just 2.5m in length.

70B Building - centred on NH 87049 21542. Aligned NW-SE this building is on the summit of a small knoll a few metres to the south of building 70. The building is rectangular and measures 6m x 3m but is, to some extent, obscured by juniper. The grass covered stone walls appear to be crudely constructed

70C Building – centred on NH 87061 21580 Aligned SW-NE this rectangular building is roughly 7m x 2m internally although its extent is difficult to determine. The walls are seen as two slight parallel banks with stone settings 0.2m in height. It may be a predecessor of building 70A

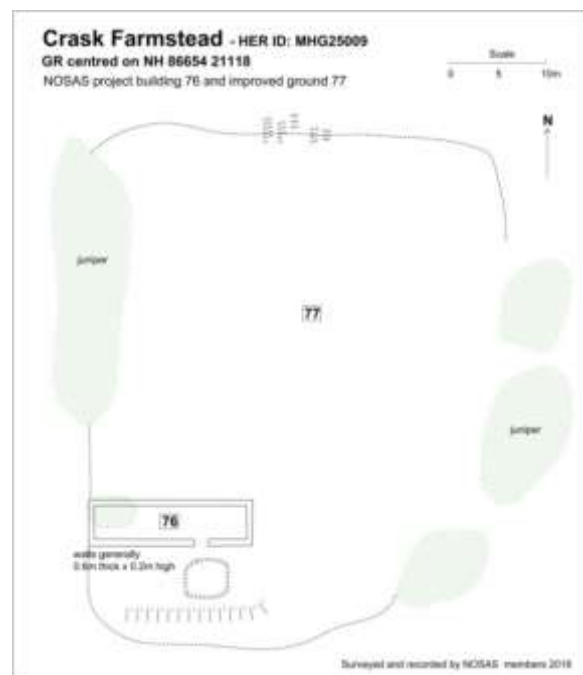
73 Enclosure/Wall – centred on NH87047 21611 The NE of two areas of improved ground associated with the farmstead. It is roughly 70m x 50m and surrounded by a substantial wall mostly made up of clearance material, on its north, east and south sides.

74 Enclosure/wall – centred on NH 87091 21551 The SW of two areas of improved ground, this slopes SE and is roughly 80m x 70m; it is bounded on its east side by the remains of a stone wall.

Crask - centred on NH 8668 2158 This farmstead is located in heathery moorland c1km SW of Sluggan Bridge and 100m east of the access bridge to Inverlaidnan. It comprises the remains of a building with a possible midden and an improved area of ground with possible remnants of lazy beds.

76 Building – centred on NH 86654 21118 (HC HER ID: MHG25009) This rectangular building is aligned E-W and measures 16m x 3.5m internally. The turf covered stone footings are just 0.2m high and have a thickness of 0.7m. There is an entrance in the south wall 0.5m width; a scoop roughly 4m in diameter in front of this entrance may be a midden pit.

77 Improved Ground – centred on NH 86660 21140 An area of grassland to the north of the building is roughly 40m square and has patches of juniper surrounding it. At the north end several short linear raised ridges may be the remnants of lazy beds, they are 0.5m high and 1.5m in width.



5.3 Selected Photos



Fig 1. Inverlaidnan Farmhouse and associated buildings looking east, the horse gang, site 09, can just be seen on the right, and also the Old House in the background



Fig 2. The platform, site 07, looking NW. The remains of timber beams were probably those of a floor for a Nissen hut from the period of the WW1 POW camp, Site 02, which was just out of the picture to the left. Inverlaidnan Farmhouse is in the background



Fig 3. The west part of the boundary wall, Site 05, which surrounds the policies and is contemporary with the Old House of Inverlaidnan constructed c1720



Fig 4. The lade, site 02, looking west. It is associated with a much wasted mill, site 01. Both appear on 18th century estate plans and probably originate from the time of the construction of the Old House, c1720. The profile of the dump which is all that remains of the WW1 POW camp, site 03, is seen on the right



Fig 5. The ruined Old House at Inverlaidnan, site 17, looking NE, with the laser scan in



Fig 6. The Old House of Inverlaidnan, site 17, looking NW



Fig 7. The turf banks of a building , site 17C, associated with Inverlaidnan Old House looking west. An enclosure, site 17B, surrounds the Old House and within the enclosure are several buildings which are marked on 18th century plans



Fig 8. The old track, site 12, to the NW of the Old House looking SE. The track linked the House with the Military Road.



Fig 9. The profile of the well preserved prehistoric roundhouse, site 13, is seen on the skyline looking east. Alterations to the entrance suggest that it has had more recent use as an animal pen



Fig 10. Survey of the cairn and cist, site 45, in progress looking N



Fig 11. Sluggan Bridge is seen in the distance looking SE. The building/Inn/farmstead, site 62, is nearer and the platform, site 67, is in the foreground. The platform held several buildings, probably of timber and probably associated with the Inn. They are marked on an estate plan of 1808



Fig 12. The footings of one of the buildings , site 24C, at the north farmstead of South Inchluin looking east. The farmstead comprises 3 buildings, an enclosure, several pits and a possible kiln

5.4 List of Photos

Inverlaidnan

Boundary wall

	05	Wall - section B	Looking N		REJ 23/05	DSCN8714
	05	Wall - section B	Looking S		REJ 23/05	DSCN8717
	05	Wall - section B	Looking SW		REJ 23/05	DSCN8719
	05	Wall - section C	Looking NE	Alongside military road	REJ 23/05	DSCN8721
	05	Wall - section C	Looking N	Alongside military road	REJ 23/05	DSCN8716

Inverlaidnan – lower area

Mill	01	mill	Looking SW		Nov18	P1030138
	01	mill	Looking E		Nov18	P1030139
Lade	02	lade	Looking W		Nov18	P1030140
	02	Lade	Looking E		ACJan17	IMG5084
	02	lade	Looking W		Nov18	P1030142
	02	Lade west part	Looking E		ACJan17	IMG 5090
WW1/POW	03	WW1/POW camp	Looking SE	General view	Nov18	P1030170
	03	WW1/POW camp	Looking W	Dump	Nov18	P1030148
	03	WW1/POW camp	Looking N	Dump	Nov18	P1030143
	03	WW1/POW camp	Looking SE	Dump	ACJan17	IMG5084
	03	WW1/POW camp	Looking E	Dump	Nov18	P1030147
	03	WW1/POW camp	Looking S	Dump detail	Nov18	P1030146
	04	Enclosure	Looking NE		ACJan17	IMG 5087
	06	Old track	Looking SE		Nov18	P1030150
	15	Building	Looking N		Nov18	P1030149

Inverlaidnan Farmhouse and surrounds

Farm	25	Farm and buildings	Looking E	General view	Nov18	P1030165
	25	Farm and buildings	Looking E	General view zoom	Nov18	P1030165
	25 B&C	Steading/Buildings	Looking N		Nov18	P1030158
Horse gang	09	Horse gang	Looking N		Nov18	P1030155
	09	Horse gang	Looking NE		Nov18	P1030157
	09	Horse gang	Looking NW		Nov18	P1030156
	09	Horse gang	Looking N	Detail of centre	Nov18	P1030159
	09	Horse gang	Looking E	Detail	Nov18	P1030161
	08	Pit/depression	Looking W		Nov18	P1030153
	08	Pit/depression	Looking NE		Nov18	P1030154

	07	Platform/Building	Looking N		Nov18	P1030152
	07	Platform/Building	Looking SW		Nov18	P1030151
	82	Platform/?Building	Looking NE		Nov18	P1030300
	82	Platform/?Building	Looking W		Nov18	P1030301
	78	Wall	Looking S		Nov18	P1030217
	79	Building	Looking E		Nov18	P1030201
	37	Dam	Looking SW		Dec18	P1030355

Inverlaidnan Old House and surrounds

Lairds Ho and associated buildings	17	Lairds House	Looking SE	General view of site	Dec18	P1030302
	17	Lairds House	Looking SE	General view of site	Dec18	P1030303
	17A	Lairds House	Looking SE	General view House	Dec18	P1030305
	17	Lairds House	Looking NW	General view	May18	P1020131
	17A	Lairds House		Exterior	Feb18	P1010851
	17A	Lairds House			Feb18	P1010853
	17A	Lairds House			Feb18	P1010854
	17A	Lairds House			Feb18	P1010855
	17A	Lairds House			Feb18	P1010852
	17A	Lairds House	Action photos x 46	Laser scanning + Drone flyover photogrammetry	May18	P1020094-0146
	17C	Building	Looking W		Nov18	P1030172
	17C	Building	Looking N		Nov18	P1030171
	17D	Building	Looking N		Nov18	P1030173
	17D	Building	Looking E		Nov18	P1030174
	17E	?Building	Looking SE		Nov18	P1030176
	17E	?Building	Looking N		Nov18	P1030177
	16	Limekiln	Looking NE		Nov18	P1030178
	16	Limekiln	Looking NW		Nov18	P1030189
	80	Well (1)	Looking NE	Ditch E of well	RSJ11/18	111442
	81	Well (2)	Looking N		RSJ11/18	113433
	19	Pond	Looking NW		MM May18	P1020132
	20	Building	Looking N		MM May18	P1020134
	20	Building	Looking SW		MM May18	P1020136
	21	Building	Looking N		MM May18	P1020135
	21	Building	Looking NE		MM May18	P1020137

Slopes north of Old House and south of military road

Wade stone	35	Marker/ Standing stone	Looking SE	GR NH 85851 21762, HC HER: MHG25010 (also Canmore ID 139468/HER ID MHG34346 but these have wrong GR)	Dec15	
	34	Stone	Looking SW	NH 85408 21811	MM May18	P1020147
	34	Stone	Looking W	ditto	MM May18	P1020148
Track	12	Old Track	Looking NW	Lower part, "hollow" track	Nov18	P1030198
	12	Old Track	Looking NW	Lower part "hollow" track	Nov18	P1030200
	12	Old Track	Looking SE	Upper part near N township	Dec18	P1030354
	36	?old Track	Looking SE	Upper section	MM May18	P1020149
	36	?old Track	Looking SE	Upper section	MM May18	P1020150
Round House	13	Round house	Looking E		MM May18	P1020154
	13	Round house	Linear stone setting	Located in SE entrance	MM May18	P1020156
	13	Round house	Looking NE		MM May18	P1020159
	13	Round house	Looking W		MM May18	P1020160
"Cotts" settlement	10D	Building	Looking N	"D" on cotts plan	MM Nov18	P1030183
	10E	Building	Looking SW	"E" on cotts plan	MM Nov18	P1030186
	38	Building	Looking SE		MM May18	P1020229
	39	Building	Looking N		MM May18	P1020161
	39	Building	Looking NW		MM May18	P1020164
	33	Wall/?building	Looking NW		MM May18	P1020167
	41	Building	Looking NE		MM May18	P1020169
	41	Building, E end	Looking N		MM May18	P1020170
	31	Earthbank	Looking S		JW May18	JW 2305
	31	Earthbank	Looking SW		MM Nov18	P1030182
North township	14A	Building	Looking NE		Dec18	P1030343
	14A	Building	Looking E		Dec18	P1030346
	14A	Building	Looking W		Dec18	P1030348
	14B	Building	Looking SW		Dec18	P1030341
	14B	Building	Looking NE		Dec18	P1030342
	14C	Platform/Building	Looking SW		Dec18	P1030340
	14D	Platform/Building	Looking W		Dec18	P1030336
	14E	Depression/midden	Looking SW		Dec18	P1030332
	14F	Depression/midden	Looking SW		Dec18	P1030334
	14G	Building	Looking SW		Dec18	P1030326
	14G	Building	Looking N		Dec18	P1030328
	14H	Kiln	Looking NE		Dec18	P1030321
	14H	Kiln	Looking S		Dec18	P1030322
	14J	Platform/ Building	Looking N		Dec18	P1030317
	14J	Platform/Building	Looking SW		Dec18	P1030319
	14K	?storage pits	Looking NE		Dec18	P1030307
	14K	?storage pits	Looking S		Dec18	P1030308
	14L	Building	Looking SW		Dec18	P1030312
	14L	Building	Looking NE		Dec18	P1030313
	14L	Building	Looking NE		Dec18	P1030314

	14M	Cairn/possible Kiln	Looking E		Dec18	P1030349
	14M	Cairn/possible Kiln	Looking N		Dec18	P1030351
	14M	Cairn/possible Kiln	Looking NE		Dec18	P1030352
	14P	Cairn	Looking N		Dec18	P1030316

Sluggan

Sluggan North of River

Military road area	32	Rig	Looking N		MM May18	P1020174
	32	Rig	Looking N		MM May18	P1020175
	32	Rig	Looking SE		MM May18	P1020225
	32	Rig	Looking S		MM May18	P1020226
	60	Possible building	Looking N		MM May18	P1020220
	45	Cairn and cist		Central mound looking NW	MM May18	P1020230
	45	Cairn and cist		Central mound looking S	MM May18	P1020231
	45	Cairn and cist	Looking S		MM May18	P1020232
	45	Cairn and cist	Looking SE		MM May18	P1020233
	45	Cist capstone		Capstone looking W	REJ 31.05.18	DSCN 8733
	45	Cairn and cist	Looking N		REJ 31.05.18	DSCN 8737
	45	Cairn and cist		Quartz boulder at SW corner	REJ 31.05.18	DSCN 8736
	46A	Cairn	Looking W		MM May18	P1020209
	46D	Cairn	Looking NE		MM May18	P1020211
	44A	Pile of stones	Looking NW		MM May18	P1020213
	44B	Pile of stones	Looking E		MM May18	P1020214
	44C	Pile of stones	Looking E		MM May18	P1020215
	44D	Pile of stones	Looking E		MM May18	P1020216
	44E	Pile of stones	Looking N		MM May18	P1020218
Carn Challard	50	Cairn/cairnfield		E edge of summit	JW Jun18	
	50	Cairn/cairnfield		Beside forest road	JW Jun18	
	50	Cairn/cairnfield		50c1 – on summit	BB Jun18	
	50	Cairn/cairnfield		50c4	BB Jun18	
	50	Cairn/cairnfield		50c7	BB Jun18	
	50	Cairn/cairnfield		50c10	BB Jun18	
	51	Cairn		Centre looking SW	MM Jun18	P1020242
	51	Cairn	Looking SE	Showing central chamber	MM Jun18	P1020243
	51	Cairn	Looking NE		MM Jun18	P1020244
	51	Cairn	Looking NE		MM Jun18	P1020245
	51	Cairn (wall)	Looking E	Wall running NE	MM Jun18	P1020246
	52	Track	Looking E		MM Jun18	P1020238
	47	Cairn/cairnfield	Looking SE	North of fence	MM Jun18	P1020240
	47	Cairn/cairnfield	Looking E	North of fence	MM Jun18	P1020241
	47	Cairn/cairnfield	Looking NE	S of fence	JW May18	

Buail an Amadhain	48	Cairn	Looking NE		MM Jun18	P1020253
	48	Cairn		Central depression looking N	MM Jun18	P1020255
	53	Building S end	Looking S		MM Jun18	P1020247
	53	Building		S end looking N	MM Jun18	P1020248
	56	Building	Looking NE		MM Jun18	P1020249
	56	Building	Looking SW		MM Jun18	P1020251
	54	Building	Looking W	E end	JW May18	
	64	Wall	Looking W		REJ May18	
	55	Wall	Looking SSE		JW May18	

Sluggan Bridge Area

Sluggan Bridge area	62	Building/Inn	Looking SE	General view showing relation to Bridge	MM Nov18	P1020991
	62	Building/Inn	Looking S		MM May18	P1020267
	62	Building/Inn	Looking W		MM May18	P1020268
	62	Building/Inn	Looking N		MM May18	P1020269
	62	Building/Inn	Looking E		MM May18	P1020270
	67	Enclosure/Buildings	Looking N		MM Nov18	P1020989
	67	Enclosure/Buildings	Looking SE	Showing relation to Inn and Bridge	MM Nov18	P1020990
	59	Platform/Building	Looking W		JW June18	
	57	Building	Looking E		MM May18	P1020263
	57	Building	Looking W		MM May18	P1020265
	49	Rig	Looking SE		MM May18	P1020258
	49	Rig	Looking NW		MM May18	P1020259
	58	Building		Looking S	MM May18	P1020236
	58	Building		Looking E	MM May18	P1020237
	61	Earthbank/Wall	Looking SW		REJ May18	DSCN8742
	65	Ditch and bank	Looking NE	SW end	REJ May18	DSCN8741

Sluggan South of River

East Sluggan	23	Building	Looking SE		BB May18	
	23	Building	Looking SE		AMcIMay18	
	23	Building	Looking N	S end	AMcIMay18	
	23	Building	Looking NW	Showing extent of tree	AMcIMay18	
	66	Ditch and Bank	Looking SE		AMcIMay18	
	66	Ditch and bank	Looking NW		AMcIMay18	
	69	Building	Looking NE		MM Nov18	P1020988
	68	Corn drying	Looking W	Bowl and firepit	MM	P1020985

		kiln			Nov18	
	68	Corn drying kiln	Looking NE	Bowl and firepit	MM Nov18	P1020986
	68	Corn drying kiln	Looking E	Showing extent of barn	MM Nov18	P1020987
	68/69	General view	Looking NE	Showing relation to bridge	MM Nov18	P1020982
	68/69	General view	Looking NE	Showing track up to cdk	MM Nov18	P1020983
	30	Quarry	Looking S		MM Nov18	P1020981
S Inchluin – N farmstead	24A	Building	Looking SE		MM Nov18	P1020973
	24A	Building	Looking S		BB May18	002
	24A	Building	Looking N	Detail of wall	BB May18	008
	24A	Building	Looking E	Showing outshot to rear	MM Nov18	P1020974
	24B	Building	Looking SSW		AMclMay18	IMG0002
	24B	Building	Looking NE		MM Nov18	P1020976
	24C	Building	Looking ENE		AMclMay18	IMG0005
	24C	Building	Looking SE		MM Nov18	P1020979
S farmstead	70A	Building	Looking N		MM Nov18	P1020970
	70A	Building	Looking W		MM Nov18	P1020971
	70C	Building	Looking SW		MM Nov18	P1020967
	70C	Building	Looking SW		MM Nov18	P1020969
	74	Enclosure wall	Looking NW	NE wall of enclosure	MM Nov18	P1020963
Crask farmstead	76	Building	Looking W		MM Nov18	P1020957
	76	Building	Looking NW		MM Nov18	P1020959
	77	Improved land	Looking E	Showing remnants of lazy beds	MM Nov18	P1020960
	77	Improved land	Looking NE	Showing remnants of lazy beds	MM Nov18	P1020961
	77	Improved land	Looking NW	Showing remnants of lazy beds	MM Nov18	P1020962

Appendix 1

Recording Buildings using Photogrammetry vs Laser Scanning - Inverlaidnan Old House

Origins of the Project

Amateur groups such as NOSAS make increasing use of photogrammetry and other technologies alongside traditional recording methods. We are always keen to experiment and try something new, and the survey of Inverlaidnan House provided just such an opportunity.

During an early visit I took a few minutes to take a set of ground level pictures around the house and was able to show that a basic model could be produced using photogrammetry with very little effort. 40 pictures were taken in 6 minutes, and processed in about 20 minutes.

At a subsequent visit I discussed this with Eve Boyle of HES, including the relative merits of using a laser scanner. Eve offered to investigate whether HES could do a laser scan of the house, and I agreed to do a more careful photogrammetric survey of the house. We could then compare the methods, their relative ease and accuracy, and their relevance to the recording being undertaken by amateur groups.

Some time later this was all agreed, and we met at the site on 16 May 2018. Eve, along with Georgina Brown of HES brought the laser scanner, and I brought my camera, 5m pole, and drone, accompanied by Meryl Marshall and Anne Cockroft.

Field Work

Photogrammetry

The essence of the field work side of photogrammetry is to capture a sufficient set of photographic images of the subject, taken from different locations. In this case I took four sets:

Set 1: around the house at hand height (as in the earlier experiment, but with more care)

Set 2: around the house at 5m above ground (pole mounted camera)

Set 3: from the drone, around the house looking down at about 45°

Set 4: from the drone, camera pointing vertically downwards



In all 244 photos were taken. These were later processed using Agisoft Metashape to produce the 3D model. In order to work, photogrammetry requires that each point is visible in at least two images, ideally more. From the ground, and 5m pole, the wall tops and some other features are not visible, and the use of the drone was in part to overcome this problem.

Laser Scanning

Georgina and Eve set up the laser scanner, and set it running. Unlike photogrammetry, the laser scanner only needs to 'see' each point at least once, but not all will be visible from a single location. In this case scans were made from 9 carefully chosen locations, and these then had to be reconciled to produce a total result. All were at ground level, and so the tops of walls were again not visible. The scanning took some hours to complete.



Processing the Results

As this is an experiment, we wanted to compare the results.

Processing of the data from the laser scanner is different from that used for photogrammetry. A 'point cloud', a file containing the x,y,z locations of millions of points, is one stage in the photogrammetry process, and Georgina therefore processed the results from the laser scans and provided me with a 'point cloud' file containing x,y,z co-ordinates of about 40 million points.

In addition, the use of the drone seemed useful but was it really necessary? We therefore had three cases to compare:

1. results based on photogrammetry using ground-based cameras only (120 photos)
2. results based on photogrammetry using ground-based and drone cameras (244 photos)
3. results based on point cloud from laser scanning, processed further using Metashape, exactly as with the first two cases.



1. Based on photogrammetry using ground-based cameras only (120 photos).

A good visualisation of the house. The tops of the walls are not properly defined, and were edited during processing to remove rough corners.

See <https://skfb.ly/6KpVO>



2. Based on photogrammetry using ground-based and drone cameras (244 photos).

Use of additional images, and drone perspective produces an enhanced result over 1.

See <https://skfb.ly/6lrCU>



3. Based on point cloud from laser scanning, processed further using Metashape.

As 1, suffers from poorly defined wall tops, and ground (grass). Colour is different due to different method used.

<https://skfb.ly/6KpWs>

This image © HES

Discussion

Visualisation. Each of the three experiments produced a useful visualisation of the house.

Scale and accuracy. Once we have any of the models, other processing is possible, for example a plan can be produced at any height.

The photogrammetry models are correct in their proportions but are unscaled. A simple measurement between known points can be used to fully scale the model. The laser scan model uses more sophisticated software and is directly, and probably more accurately, scaled.

Ease of capture. The laser scanner is heavy to bring to site, and takes some hours to set up and capture the data. In contrast the ground only photogrammetry requires simply a camera and pole, which are easily transportable and the necessary images can be taken in about 45 minutes. Use of the drone adds another level of complexity, and the flight could be undertaken in under 15 minutes. The drone did in this case provide the opportunity to model the wider landscape around the house.

Approximate Cost. Laser scanner ca. £50k, Camera £500, Pole £50, Drone £1,000, Metashape software £100.



Conclusions

The choice between the three methods depends on the subject, and the reason for the survey.

If we are looking for a basic 3D visualisation, photogrammetry is easier and quicker, especially for a site like Inverlaidnan House which is a simple shell. If it had been more complex, for example with machinery inside, or dangerous to enter, then the laser scan may have been a better choice.

If it had been in an inaccessible location, then the weight and bulk of the laser scanner would count against it.

The option of using the drone to supplement the ground photos is not available with the laser scan, which may give an edge to the photogrammetry method in some situations.

The other question is the relative accuracy of the methods. Based on our experiment we cannot come to any conclusions about accuracy, but it seems likely, based on the physics of the method and the sophisticated equipment and software used, that the laser scanner will be more accurate.

For amateur groups, the low cost and easy portability of the photogrammetry method (with or without the drone) make it attractive, and it is likely to be accurate enough for most purposes.

Thanks to Eve Boyle and Georgina Brown of HES for working with us on this interesting experiment.

Alan Thompson
6-May-2019

Appendix 2

Inverlaidnan and Sluggan/Inchluin - Verification of previously recorded archaeological sites on the Canmore and Highland Council HER databases. All previously recorded sites were visited

Canmore records	HC HER records	NOSAS survey No.	Comments
Inverlaidnan Building, Canmore ID: 116057 at NGR NH 862 211 (<i>recorded as part of FESP 1996 - appears as a ruin on 1st edition OS map of 1867-71</i>)	Inverlaidnan Building, HER ID: MHG26462 at NGR NH 862 211		No evidence of this building was seen at the site and it is not shown on the current edition of the OS 1:10000 map (1982). This may have been confused the mill, NOSAS site 01, at NH 86204 21052 50m to the SW.
1. Inverlaidnan, Old House, Canmore ID: 14968 at NGR NH 8619 2145 2. Inverlaidnen, Farmstead Canmore ID: 111009 at NGR NH 8610 2131	1. Old House of Inverlaidnan HER ID: MHG4702 at NH 8619 2145 2. Inverlaidnen House HER ID: MHG23557 at NH 8610 2131	Site 17 – Inverlaidnan, Old House centred on NH 86199 21440	
Inverlaidnan, Prisoner Of War Camp (WW1) Canmore ID: 332704 at NGR NH 860 210	Inverlaidnan, Prisoner Of War Camp (WW1) HC HER: MHG58787 at NGR NH 860 210	Site 03 – Inverlaidnan, WW1 POW camp centred on NH 8608 2112	This site appears on the S side of the Allt an Aonaich on Pastmap but on the N side of the burn on Canmore
Inverlaidnin House, Cairn, Cist Canmore ID: 14962 at NGR NH 861 214	1. Sluggan, Cist HER ID: MHG25012 at NH 8642 2208 (<i>this record has the correct GR</i>) 2. Inverlaidnin House, Cairn and Cist HER ID: MHG4475 at NH 8610 2140 (<i>this site was noted in 1875 see Canmore ID 14962</i>) 3. Sluggan Bridge, Short Cist HER ID: MHG39164 at NH 8630 2200 (<i>marshy ground, no evidence of a cist at this location</i>)	Site 45 – Sluggan, Cairn and Cist centred on NH 8642 2208	
	Sluggan, Cairn HER ID: MHG25013 at NH 8642 2211 (<i>this cairn together with 4 other cairns comprise NOSAS site 46</i>)	Site 46 – Sluggan, group of cairns at NH 8644 2206	
	Inverlaidnan Standing Stone HER ID MHG25010 at NH 8575 2176 (GR and dimensions are correct for the obvious stone at a high point in the road)	Site 35 – Inverlaidnan, Marker Stone at NH 85751 21762	See record and comment below
Inverlaidnan Hill, Stone/Marker stone Canmore ID: 139468 at NGR NH 8553 2181 (<i>photo in this record is stone at NH 85751 21762</i>)	Inverlaidnan Hill, Stone/Marker Stone HER ID: MHG34346 at NH 8553 2181		No stone at this GR. But these records clearly refer to the "5 mile" marker stone at NH 85751 21762 (NOSAS site 35) see above
		Site 34 – Stone at NH 85408 21811	This stone was noted in the NOSAS project; it may have been confused with the marker stone, site 35 (it is close to the military road, aligned with it but far smaller and not on a prominent high point)

	Inverlaidnan, Building HER ID: MHG25011 at NGR NH 8615 2186	Site 38 - Inverlaidnan, Building at NH 86163 21867	
	Sluggan, Stone piles and pits HER ID: MHG25014 centred on NGR NH 8653 2208	Site 44 - Sluggan, Stone piles centred on NH 8652 2208	Thought to be bases for a temporary saw mill
Buail An Amadain Croft Canmore ID: 14963 at NGR NH 8670 2227	Buail an Amadain, Croft HER ID: MHG4474 centred on NGR NH 8670 2227	Sites 53-56 and 64 - Buail An Amadain Croft/ Carn Challard centred on NH 8667 2229	
Carn Challard/Inverlaidnan Farm, Cairn Canmore ID: 14967 at NGR NH 8671 2235	Carn Challard cairn HER ID: MHG4470 at NGR NH 8671 2234	Site 51 - Carn Challard, Cairn at NH 86683 22329	
Carn Challard (Inverlaidnan Farm), Hut Circles Canmore ID: 14966 at NGR NH 8665 2250	Carn Challard - possible Hut Circles HER ID: MHG4471 at NGR NH 8665 2250	Not found	Not found on NOSAS survey but hardly surprising as there had been extensive recent forest operations. However a large previously unrecorded cairnfield, NOSAS site 46, was identified
Sluggan Bridge, Building Canmore ID: 356385 at NGR NH 86931 22078	1. Inchluin West, Farmstead HER ID: MHG25006 centred on NGR NH 8693 2208 2. Sluggan, Building/Inn HER ID: MHG30501 centred on NH 8693 2208	Site 62 - Sluggan Bridge, Building/Inn/Farmstead centred on NH 86934 22076	
East Sluggan, Farmstead Canmore ID: 14971 at NGR NH 8705 2190	East Sluggan Farmstead HER ID: MHG4466 centred on NGR NH 8705 2192	Site 69 - East Sluggan Farmstead at NH 8705 2190	
	South Inchluin, Farmstead HER ID: MHG25007 centred on NGR NH 8700 2176	Site 24 - S Inchluin/Sluggan, Farmstead (N) centred on NH 87011 21746	
	South Inchluin, Building HER ID: MHG25008 centred on NGR NH 8705 2158	Sites 70-74 - S Inchluin/Sluggan Farmstead (S) centred on NH 8705 2158	
	Crask, Building HER ID: MHG25009 centred on NGR NH 8667 2113	Sites 76-77 - Crask, Farmstead centred on NGR NH 8668 2158	

Appendix 3 – Scheduled Monument Document

Inverlaidnan Old House - GR NH 861 214, Scheduled monument ID10481

The monument comprises the upstanding ruins of Inverlaidnan Old House, an 18th-century laird's house, located in a shallow valley, 350m SW of the confluence of the Allt an Aonaich burn and the River Dulnain, at about 300m OD. The house was built almost certainly by John Grant of Dalrachney sometime between 1717 and his death in 1736. He was succeeded by his son, Alexander, but the house was extensively damaged by fire in 1739. It was rebuilt by 1746, when Bonnie Prince Charlie is thought to have stayed there one February night.

The Grants continued to occupy the house for some time thereafter, but, by 1851, the roof of 'the old house of Inverlaidnan' had fallen in. The remains today consist principally of the W and N walls of the house, which stand to full height, and the E and N corners of the S elevation. The outbuildings survive as turf-covered footings and the enclosure as a substantial bank, in parts spread to 3m across, and ditched along its W side. The laird's house was originally rectangular in plan, of two storeys and garret, and aligned N-S with subsidiary buildings to its E. The house measures about 16m N-S by 11.5m E-W over walls about 0.9m thick. The original entrance was located probably midway along the E elevation; at a later date a doorway was inserted at the N end of this same elevation. Each floor would have been two rooms deep with a stairway located centrally along the W elevation. Windows were positioned between the flues at attic level on the end gables and two small fireplaces would have provided warmth to each of the four principal rooms on the first floor. The large W-facing first floor windows had inner relieving arches behind their lintels. The house and outbuildings stood in the centre of a walled enclosure which measures approximately 65m N-S by 40m E-W over all. One of the outbuildings probably housed the kitchen. Evidence of some re-building survives, in particular at the NW corner.

The monument is of national importance as a good example of the layout and architecture of a type of monument about which little is presently known. Its importance is enhanced by its potential, together with the contemporary documentary sources available, to improve our understanding of the social structure and culture of landed families in the 18th century. Given its early abandonment and lack of later disturbance, the monument also has high archaeological potential.

Bibliography:

Blaikie, W. B. (1897) *Itinerary of Prince Charles Edward Stuart*, Scottish History Society, reprinted 1975, 39.
Fraser, W. (1883) *The Chiefs of Grant*, Vol. 1, 505, and 526-527.
Mac William, H. D. (1927) *Letters of Patrick Grant, Lord Elchies with Memoir*, etc., 94, 103, and 225.
The Seafeld Estate Papers, National Archives of Scotland, GD248/170/3 and GD248/38/1.

Appendix 4

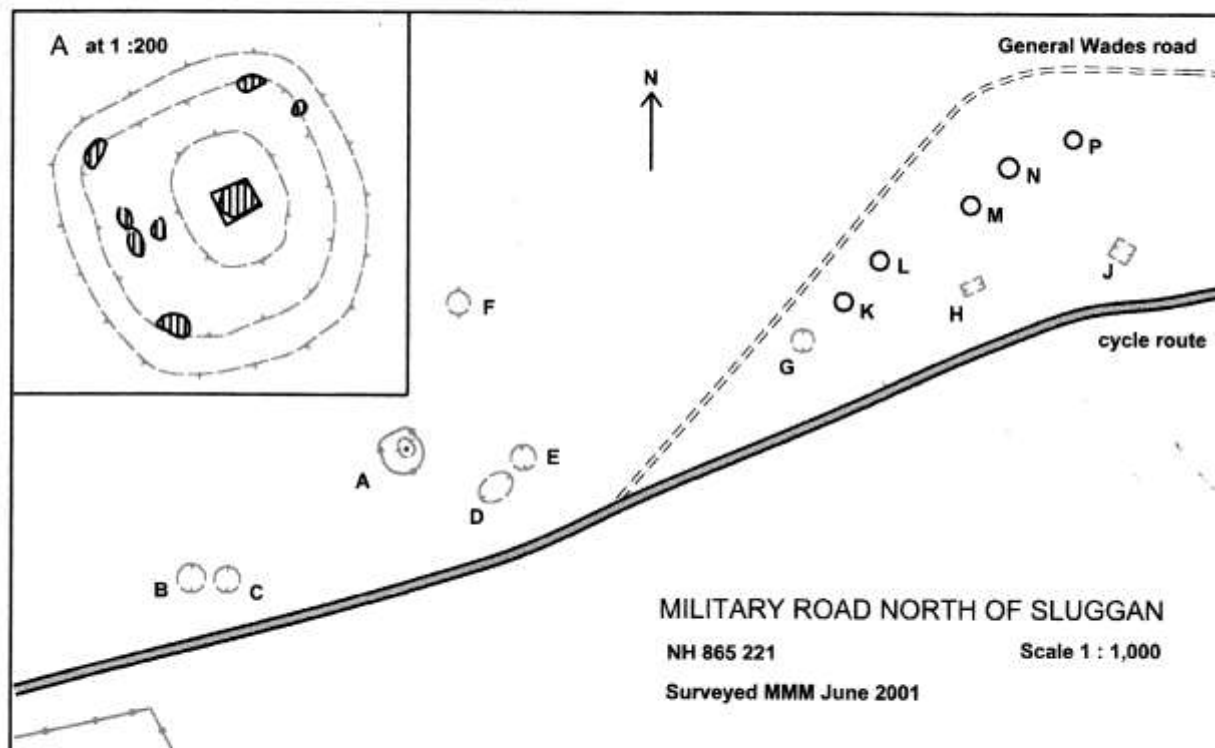
A short report following a visit to the cairn and cist area in June 2001

MILITARY ROAD – North of Sluggan

GR - Centred on NH 865 221

SMR number – NH82SE 0028

Visited Saturday 23rd June 2001 – Meryl Marshall. Weather – sunny, warm and dry. An area of pits and piles of stones is situated to the north of the cycleway and on either side of the military road.



Structure A – GR NH 8643 2205 - A square/circular structure, internal diameter 7m, has a surrounding turf embankment, generally 1m in width and between 0.1 and 0.3m in height. Some stonework is evident in the embankment. The 2 northmost corners are "squarer" whilst the 2 southmost are circular.

There is a raised area, roughly 4m diameter and 0.3m in height in the eastern half of the structure. At the centre of this mound is a "cist", roughly 0.8m square and 0.3m deep, apparently lined with stones and covered with a capstone.

The depression in the western half of the structure has some obvious boulders

Pits B and C - At the west end of the site and just north of the road there are two pits rebated into the slope, each is 4m in diameter and 1.5m deep.

Pits D and E - Two adjacent pits are 1.5m deep, the eastern one is 4m in diameter and the western one is oval being 4m across and 5m on its long axis.

Knoll F - A grass covered knoll is 1m in height and 3.5m in diameter.

Pit G - A rectangular pit south of the Wade road, measures 4m by 1m and is 1m deep

Pit H - A rectangular pit measure 4m by 2m and is ?1m deep.

Pit J - A square pit measuring 4m by 4m, has recently been filled with debris from the construction of the cycleway

Piles of stones K and L - Lying to the south of the Wade road, these piles of dressed stone and mortar are roughly 1m in height and, with tumble, cover an area of 3m diameter each. They lie 6m apart and it is thought they formed a base for a temporary sawmill.

Piles of stones M and N - Similar to the previous two, these lie 5m apart. There is a curved facing wall to the outside of each. Also thought to be the base for a temporary sawmill.

Cairn P - A pile of rounded stones 1m in height and ?2m in diameter