

From Classification to an Interconnected Settlement Network: A Case Study on the Iron Age Monuments in Mid Argyll, Scotland.

Appendix 1: A Statistical Alalysis of the Iron Age Monuments of Mid Argyll

Mike Middleton



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Cover photo:
tl: 22843 DUN NA NIGHINN
tr: 39164 CASTLE DOUNIE
bl: 39463 BALLYMEANOCH
br: 22772 DUN CHONALLAICH
All photos by Mike Middleton

Dairsie, January 2025

From Classification to an Interconnected Settlement Network: A Case Study on the Iron Age Monuments in Mid Argyll, Scotland.

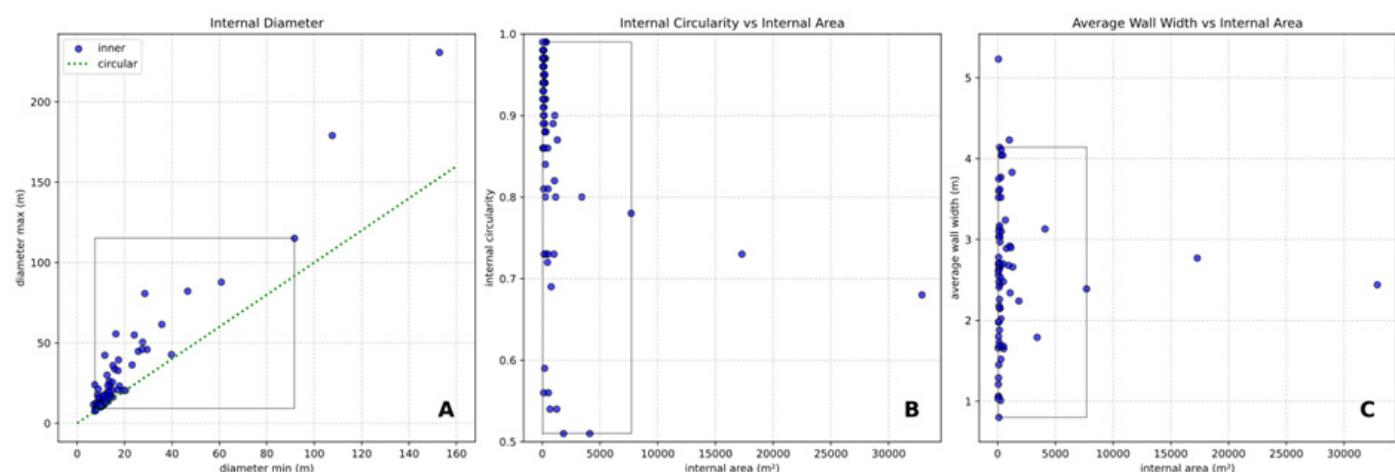
Appendix 1: A Statistical Analysis of the Iron Age Monuments of Mid Argyll

Mike Middleton, Jan 2025.

This document is a statistical analysis of the Iron Age monuments of Mid Argyll. The aim is to put aside current classifications and to look at the data gathered by archaeologists to see if insights can be made based on this raw data alone. The approach identified 85 sites in the National Record of the Historic Environment (NRHE) and where plans existed, these were georeferenced into a QGIS project to create a spatial model of the study area. Plans were digitised to create vector linework and this was used to calculate core attributes shared by all the structures in the study. These attributes are, minimum and maximum, inner and outer diameter; the minimum and maximum wall width; the internal and external area and a calculation of circularity. The full context for this study is explained in the paper, 'From Classification to an Interconnected Settlement Network: A Case Study on the Iron Age Monuments in Mid Argyll, Scotland', to which this document serves as appendix 1.

The study begins with a spreadsheet into which the key attributes above were recorded against each structure. Where more than one structure was identified at a site, each was recorded individually. In total 92 structures were analysed.

The first task is to plot the key attributes against each other so that outliers can be identified as well as those that cluster toward the norm.



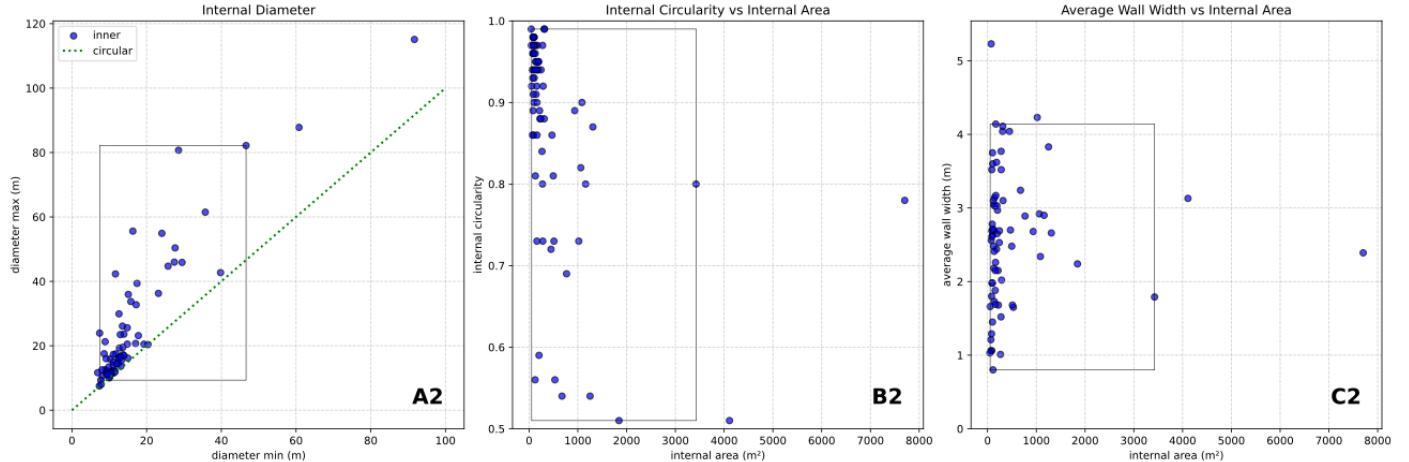
What is shown here are three plots showing, the minimum internal diameter (width) against the maximum internal diameter (length); circularity against internal area and average wall width against internal area.

Plot A compares the minimum and maximum internal diameter. The green dotted line shows where these are the same, in which case the structure will be either circular or square. Because the maximum internal diameter (the length) will always be equal to or larger than the minimum (the width), the data will all plot on or above this green line. Where points plot high above the green line this indicates the structure is either oval or rectangular. A boxplot is placed over the data which encloses 95.6% of the data or two standard deviations from the norm. This shows us what is common within the box and what is an outlier and therefore rare. The first observation is that there are two outliers that plot outside the boxplot, with dimensions considerably larger than that of most structures in the study. These are the least common structures in the study area. It is a group of rare larger structures. For now, the study will put this group aside to be returned to later in this document. The second observation is the cluster to the bottom left corner of the boxplot. The density of this cluster shows these are the most common structures and it is here where the study will begin.

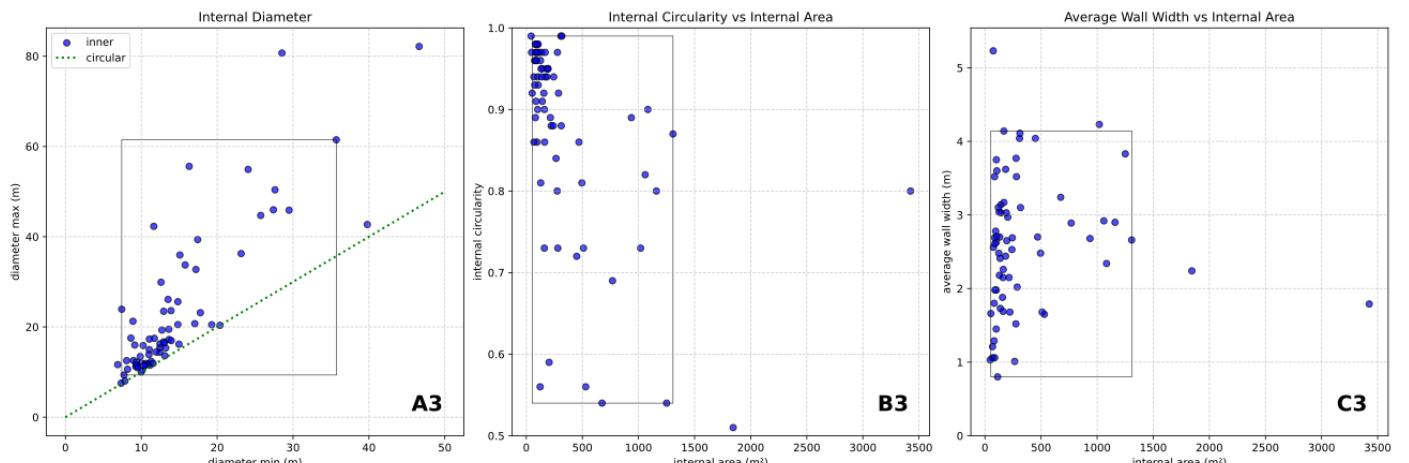
The cluster spans from 7.42 to 20.37 meters in minimum internal diameter at which point there is an abrupt cliff in the data, creating an absence of data until the next points plot close to the green line at 40 meters. This suggests there is a practical constraint influencing the data to cause this cliff and it is proposed that this constraint might be the maximum roofable area. Twenty meters is a large roof but excavations at Culduthel, on the outskirts of Inverness, by Candy Hatherley and Ross Murray, identified Iron Age roofed wooden buildings of near this size (Hatherley & Murray 2021: 83-4).

Plot B shows the internal area against internal circularity. Circularity scores range between 0.5, for not circular up to one meaning circular. Because their larger dimensions give them larger internal areas, the same rare group of larger structures can be seen outlying the boxplot. These areas are so much larger than the rest of the data, the smaller sites are shown compressed to the lower end of the internal area axis, causing a cluster near the top left corner of the plot to be flattened. We see the same situation in plot C but this time there is a broad cluster, running from just below 1 meter to just over 4 meters, again flattened into the left axis.

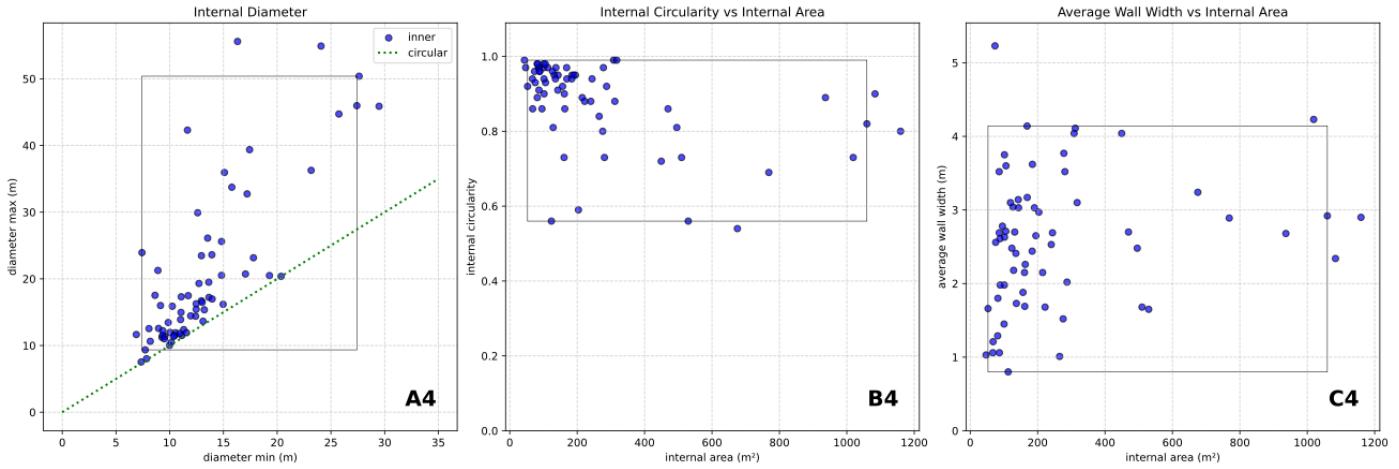
To continue, the group of rare larger structures is isolated and removed by filtering out structures with a minimum internal diameter of over 100 m (Group 7). The data is then plotted again.



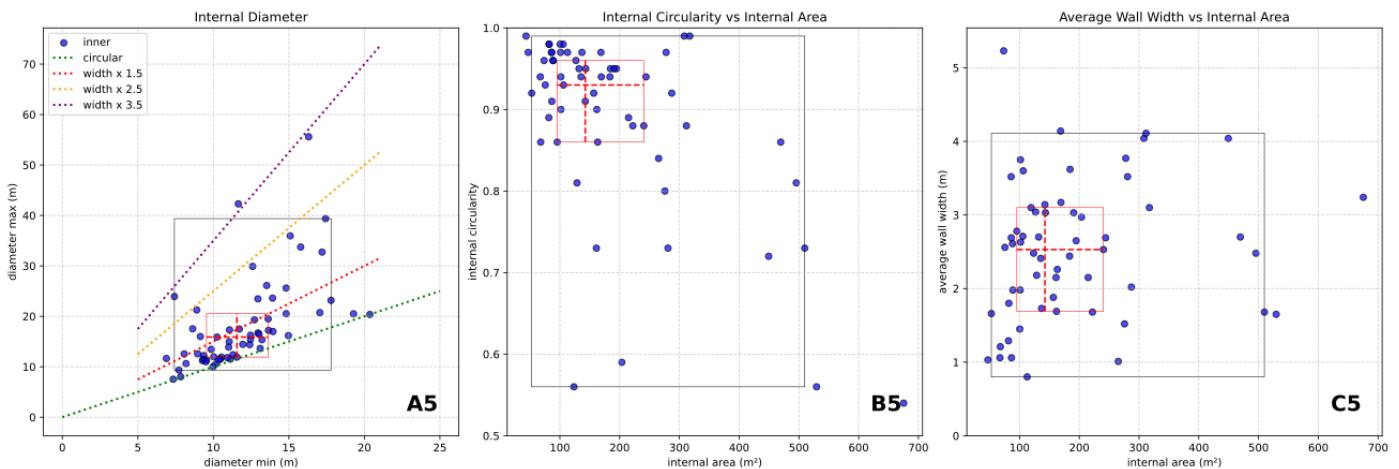
The new plot looks a lot like the first but this time, across all three plots, it shows us a second group of two rare larger structures outwith the boxplot. As before, their size makes it difficult to see any detail in the clusters, so they are isolated and removed by filtering out structures with a minimum internal diameter (width) of over 50 m. This is the second group of rare larger structures, and they will be returned to later in this document (Group 6).



In this third set of plots the clusters are beginning to decompress but there are still a small number of large sites outside the boxplot indicating that these too can also be removed to allow us to see the clusters in more detail. This is the third set of rare larger structures. These structures are isolated by filtering out structures with a minimum internal diameter (width) of over 30 m or a maximum internal diameter (length) of over 60 m. As previously, these will be returned to later in this document (Group 5).



The clusters are beginning to reveal themselves and in plot A4 the cliff in the data at 20.37 m minimum internal diameter is now located toward the centre of the plot. As has already been discussed, it is believed that beyond this diameter, roofing the structures would have been impossible. This allows a final group of data to be isolated and filtered out. These are medium sized structures over 20.37 m minimum internal diameter (width) (Group 4).



The study has now isolated the most common structures in the data, all of these have a width that would allow any of the structures in this group to be roofed. This is not to say all these structures are roofed. It is just believed to be possible.

It is now useful to add a second boxplot. This red box shows the middle 50% of the data (the Inter Quartile Range (IQR)). The red dotted lines show the mean values for each axis. These give a mean diameter for structures of 11.56 m by 15.89 m with a mean area of 142.51 m² and a mean average wall width of 2.53 m. The mean circularity index is 0.93 suggesting that most structures tend toward being sub-circular. This manifests itself in plot A5 where we can see that most points plot close to the green line. To aid in discussing these structures, three groups will be reviewed in more detail. These groups are shown on plot A5 using three coloured lines. These lines show the length as a proportion of the width. The three groups are: below the red line - structures with lengths of less than 1.5 times the width (Group 1); between the orange and red line – structures with lengths between 1.5 and 2.5 times the width (Group 2) and above the orange line – structures with lengths over 2.5 times the width (Group 3).

To summarise, the study has now identified seven packages of data that will be explored in more detail below. These are: three groups of rare larger structures, one group of medium sized structures with a width over 20.37 m and three groups of structures below 20.37 m with lengths 1.5 times, 2.5 times and over 2.5 times the width.

Before examining the data further, it's important to remember a few key points. Firstly, most of the sites that survive are built of massive dry-stone walls. Only six roundhouses are known within the study area as well as two others within the excavated settlement site of Bruach An Drumein (NRHE ID 39451). Wooden structures are likely to have been common in this period but rarely survive to be recorded and development in the study area has been limited meaning there aren't as many sites located through development led archaeology as there would be in other areas of Scotland. Secondly, the Iron Age in this region, runs from 800 BC to AD 400. It is easy to forget that the structures of interest span 1200 years and we must not assume they are all contemporary. Finally, few of the structures are dated.

It's possible that many of the structures are not Iron Age at all. This is particularly the case for the roundhouses, which could be Bronze Age and for forts, which we already know, run into the Early Medieval period (Lane & Campbell 2000).

Group 1: Structures less than or equal to 20.37 m with a length that is less than 1.5 times the width.

This group is large in number and to aid in discussing it the data will be split further into three sub-groups of structures with a wall width of less than 2 m, structures with wall widths between 2 and 3 m and structures with wall widths over 3 m.

Group 1A: Structures less than or equal to 20.37 m in width with a length that is less than 1.5 times the width and that have a wall width of less than 2 m.

This group contains 12 structures that plot mostly above the green line, meaning they are more likely to be oval than circular. At the smaller end, there are the two roundhouses. The information relating to roundhouses is limited and the only plans that could be found were those excavated at Bruach An Drumein (39451). For the eight in the study, the records suggest they are all near circular and range from 7.34 to 11 m in diameter with a mean of 9.11 m and a mean wall width of 1.5 m. This equates to internal areas of between 43.41 to 75 m² with a mean of 69.46 m². Three of the dry-stone structures have an area less than 75 m² showing that there is an overlap between the wooden and dry-stone structures, in terms of areas they are enclosing.

A few structures, such as Baile Mor (39589), Kilmory (39407) and Creag a'Mhadaidh (22856) show signs of their enclosing wall being constructed from several short sections of straight wall joined by a sharp angle. Often this reflects the constraints of the topography, but it also suggests there was the general ambition to build in the round but without the need to lay out a ground plan, in advance of construction. Where entrances survive, there is no sign of a desire to align on anything other than the local topography. Two of the structures, Balure (290103) and Barnluasgan (39168) overlay earlier structures and two others, Trevenek (141660) and Ormaig Forest (278867), are associated with external enclosures. This study identified outerworks at Trevenek which take the form of two short sections of ditch on either side of a narrow causeway.

At this point the study can reintroduce the classifications of roundhouse and dun. These are both useful classifications that relate to structures that are sub-round and roofed, that are wooden and turf in the class of roundhouse and dry-stone in the class of dun. Duns are the most common structure in this study area. They are the everyday structure that most of the local population would have been familiar with. Roundhouses may also have been common, but they have not survived well enough to be recorded meaning this can't be confirmed.



View looking southwest, from the inner enclosure, down towards the short ditch and causeway which form the entrance to Trevenek (141660)

Group 1A

< 21 m min internal diameter
max internal diameter < min internal diameter x 1.5
< 2 m average wall width



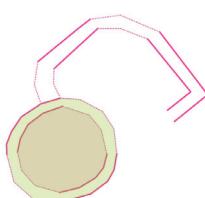
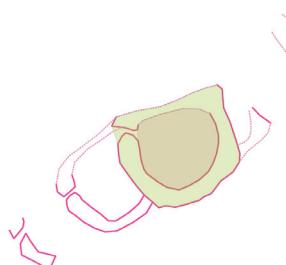
39451
BRUACH AN DRUMEIN
43.41 m²

22546
DUN GLAS
46.97 m²

39589
BAILE MOR
52.84 m²

39407
KILMORY
67.20 m²

39451
BRUACH AN DRUMEIN
81.78 m²

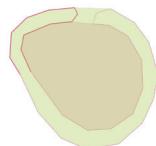
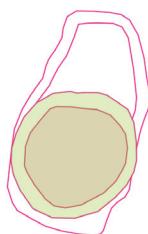
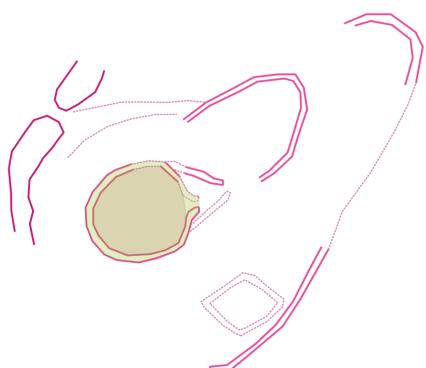


290104
LAGANRUERE
86.55 m²

290103
BALURE
88.86 m²

278867
ORMAIG FOREST
100.40 m²

39191
BARNLUASGAN
101.14 m²



141660
TREVENEK
112.70 m²

39168
BARNLUASGAN
136.90 m²

39165
KILMAHUMAIG
156.60 m²

N

0 10 50 m

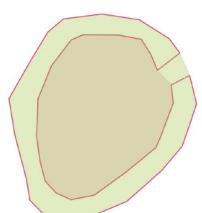
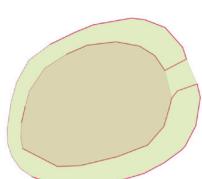
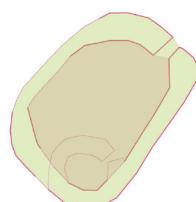
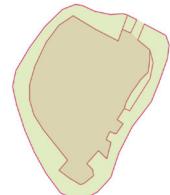
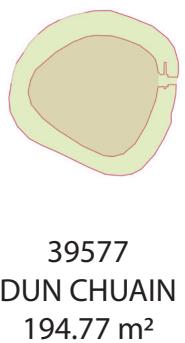
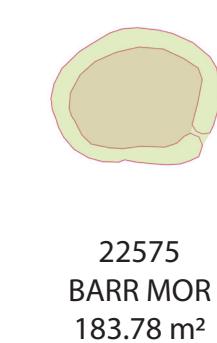
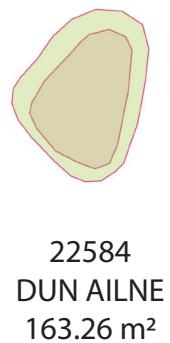
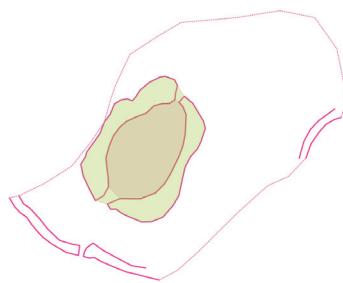
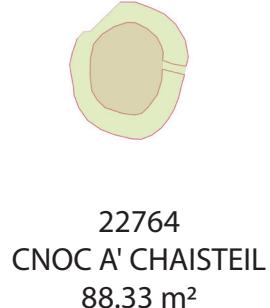
Group 1B: Structures less than or equal to 20.37 m in width with a length that is less than 1.5 times the width and that have a wall width of between 2 and 3 m.

There are 15 structures in this group. These enclose areas from 73.3 m² to 287.22 m². Again, there is an overlap with Group 1A, but these structures go on to enclose considerably larger areas and this may suggest that the width of the wall is relative, in part, to the additional stresses placed on the wall by the need for a larger roof. As with Group 1A, entrances show no sign of alignment. Two structures, Dun Bhronaig (39098) and Torbhlarn (39562) are associated with external enclosures and Dun Chuain (39577) has a 2 m deep bar slot that could have been used to bar the door and restrict access to the interior. Castle Dounie (39164) is classified as a Galleried Dun in the NRHE yet does not look out of place in this group.

This study questions the usefulness of sub categorising duns into duns and galleried duns and suggests that these are essentially the same structures but with more internal fittings. The classification of Galleried Dun only serves to separate these structures away from their closest analogues, in terms of form.

Group 1B

< 21 m min internal diameter
 max internal diameter < min internal diameter x 1.5
 2 m to < 3 m average wall width



N
↑

0 10 50 m

Group 1C: Structures less than or equal to 20.37 m in width with a length that is less than 1.5 times the width and that have a wall width of greater than or equal to 3 m.

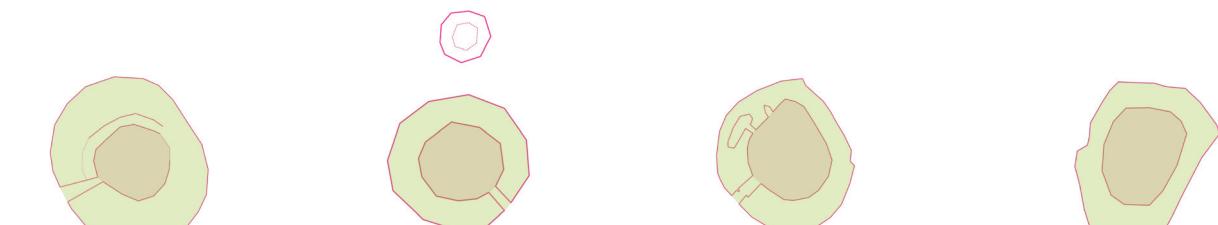
The final group of sub-circular structures in this band have wall widths of three meters or more. There are 14 structures in this group enclosing areas from 73.53 m² to 317.3 m². As before there is an overlap with the groups listed above but again, this group goes on to enclose larger areas. This supports the idea that as the roof area gets larger, the walls are made wider to accommodate the additional lateral stresses. As the structures in this group approach the maximum recorded internal diameter of 20.37 m (Ardifuir 39140), the structures become more circular until at Loch Glashan (40067) and Ardifuir (39140) they are almost exactly circular. This may be a response to the need to respect the maximum length of timber rafters available.

Looking at the spread of the data in Group 1, we see that most of the data is clustered between structures with a width of between 7 and 15 meters. There are only four with a width greater than 15 m and, if these are roofed, as is suggested in this study, these represent the pinnacle of achievement in terms of what could be roofed at the time, in this area. These are unusual structures that reflect the common practice of building round, roofed structures in dry-stone but they are at the extreme end of what is possible, and they come with an element of refinement and pre-planning. The roofs of these structures would have impressed those that visited them because they would have required the largest and straightest trees in the region to use as rafters in their construction. It is in this group that stairs to the wall head are first seen.

Two structures stand out as unusual. Ballymeanoch (39463) has particularly massive walls, at 5.23 m average wall width, yet encloses a relatively modest 73.53 m². In plot C5 it plots high above the boxplot as a clear outlier. This may indicate that this structure had an upper floor to increase the available floor space. Having a massive foundation wall, averaging at 5.23 m in width, and having an upper floor, are the basic criteria for a structure to be classified as a Broch but without an intermural stairway or signs of a scarcement, upon which to support an upper floor, this can only be interpreted as a possible. If it is a broch, it is the only one in the study area. The second that stands out is the unusually shaped Dun Mhuilg (22565) which doesn't seem quite so unusual if the 19th Century quarrying of the site is taken into consideration. If it had survived, the structure would have been the most rectilinear of the structures in the survey.

Group 1C

< 21 m min internal diameter
max internal diameter < min internal diameter x 1.5
≥ 3 m average wall width

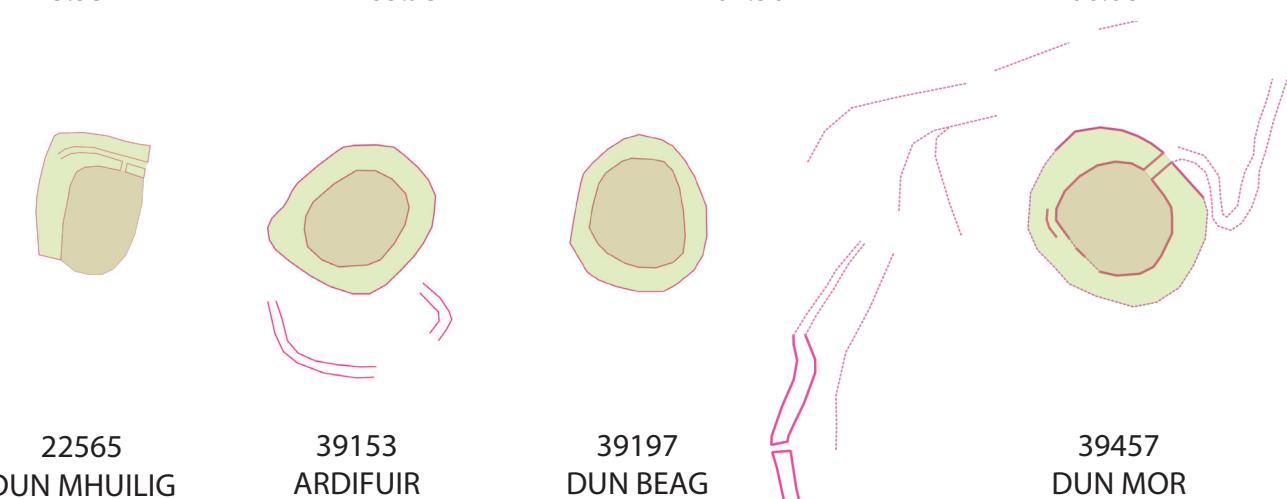


39463
BALLYMEANOCH
73.53 m²

39182
BARNLUASGAN
85.93 m²

22744
CAISTEAL NAN CON DUIBH
101.56 m²

39579
DUN MOR
106.08 m²

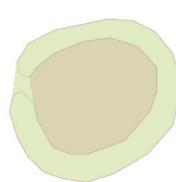
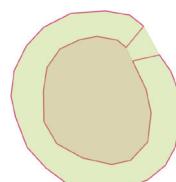
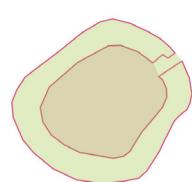


22565
DUN MHUILIG
112.60 m²

39153
ARDIFUIR
126.89 m²

39197
DUN BEAG
143.36 m²

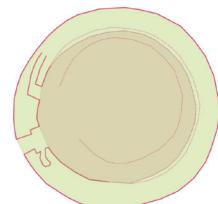
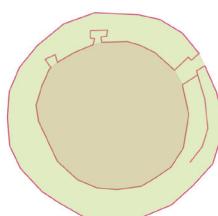
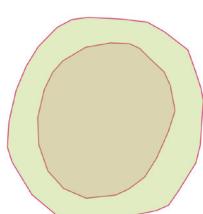
39457
DUN MOR
168.72 m²



22843
DUN NA NIGHINN
169.26 m²

22771
DUN TOISEACH
184.58 m²

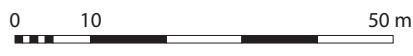
22737
AN DUN
190.57 m²



39409
SHIRVAN
277.77 m²

40067
LOCH GLASHAN
308.18 m²

39140
ARDIFUIR
317.31 m²



Group 2: Structures less than or equal to 20.37 m with a length that is greater than 1.5 times the width and a length that is less than 2.5 times the width.

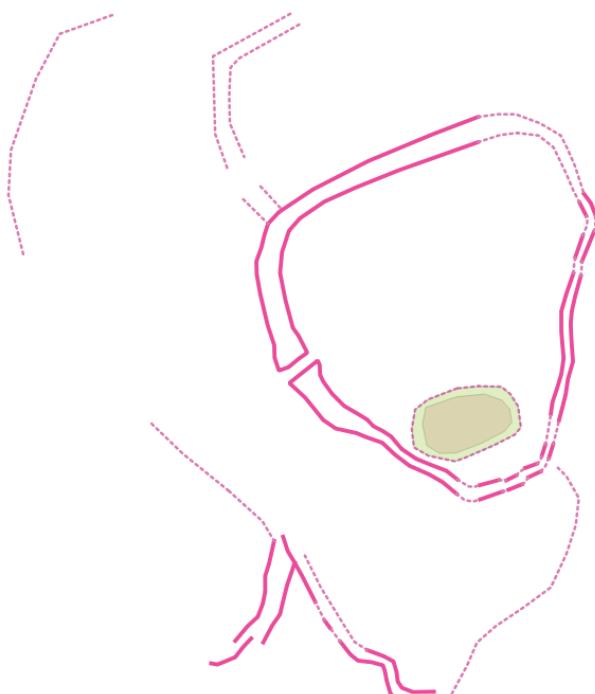
Looking at plot A5, this group is sparse in comparison with the more numerous sub-circular duns. As with group 1, group 2 will be split into three sub-groups of structures with a wall width of less than 2 m, structures with wall widths between 2 and 3 m and structures with wall widths over 3 m.

Group 2A: Structures less than or equal to 20.37 m with a length that is greater than 1.5 times the width and a length that is less than 2.5 times the width and that have a wall width of less than 2 m.

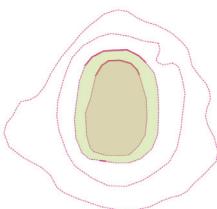
There are seven structures in this group. Five have the proportions to suggest they are roofed structures. They also share a characteristic where one gable wall is straight, and the opposite is rounded. Carnasserie Cottage (22848) sits within the same band as the structures above in terms of area but it has also been heavily quarried for the adjacent castle, and this makes the plan somewhat speculative, making interpretation difficult. Binnein Mor (39448) by contrast is far larger in area, and has a narrow, 1.68 m wall that is irregular in form. This is interpreted as an enclosure. The five roofed structures blend seamlessly with the sub-circular structures of Group 1A making the red dotted line (on plot A5, showing the line of 1.5 times the width) a useful tool in this study but not a meaningful division between types. The sub-circular and the sub-rectangular structures are essentially the same.

Group 2A

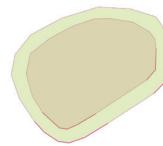
< 21 m min internal diameter
max internal diameter \geq min internal diameter x 1.5
max internal diameter < min internal diameter x 2.5
< 2 m average wall width



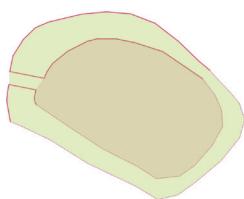
39542
DUN NA MARAIG
67.87 m²



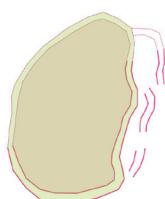
39430
LOCH LEATHAN
81.50 m²



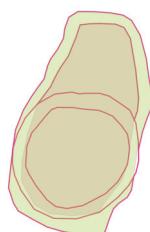
22585
DUINE
161.84 m²



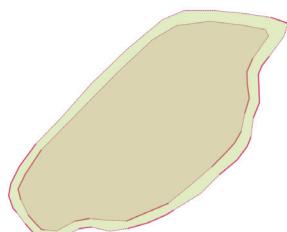
22821
DUN DUBH
222.04 m²



22848
CARNASSERIE COTTAGE
265.28 m²



39168
BARNLUASGAN
275.70 m²



39448
BINNEIN MOR
509.74 m²



0 10 50 m

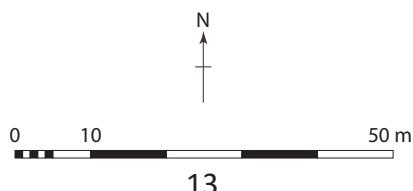
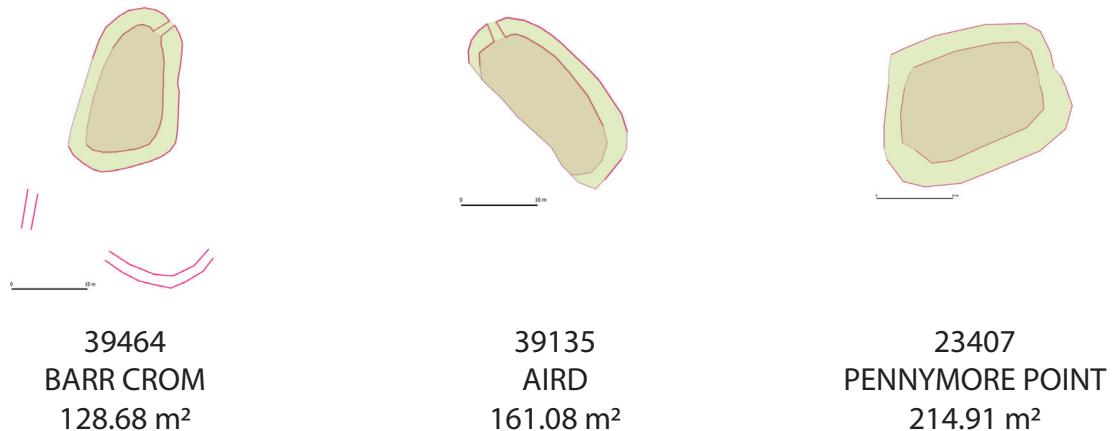
Group 2B: Structures less than or equal to 20.37 m with a length that is greater than 1.5 times the width and a length that is less than 2.5 times the width and that have a wall width of between 2 and 3 m.

There are five structures in this group. Like group 2A, there is a mix, with three roofed structures that share the characteristic gable walls and two larger structures that, although they could conceivably be roofed, are so large they are interpreted here as enclosures.

Groups 1A, 1B, 2A and 2B are the same basic structure. Round to sub-rectangular duns that are the most common structures in the study. These are the everyday structures that, at the smaller end, would have been unremarkable to the local population and at the larger end, such as at Castle Dounie (39164), begin to contain additional internal features, such as niches and cells.

Group 2B

< 21 m min internal diameter
max internal diameter \geq min internal diameter x 1.5
max internal diameter < min internal diameter x 2.5
 \geq 2 m average wall width
< 3 m average wall width



Group 2C: Structures less than or equal to 20.37 m with a length that is greater than 1.5 times the width and a length that is less than 2.5 times the width and that have a wall width of greater than or equal to 3 m.

This group contains three structures that were likely to be roofed, Druim An Duin (39160), Dunadd (39564) and Beinn An Duin (22836) with Beinn An Duin enclosing an area of 311.73 m². This is very similar to the maximum roofed area seen in Group 1C where Ardifuir (39140) had an internal area of 317.31 m². The summit enclosure at Dunadd is that of the early medieval phase of occupation. Limited excavations by Lane and Campbell (2000: 86-97) identified Iron Age occupation on the summit and a fragment of the original Iron Age dun wall but the exact form of the summit enclosure is not known.

The two remaining structures in this group are, Bonnach Mor (22579) and Dun Chonallaich (22772). Bonnach Mor (22579) has an unusual L-shaped enclosure wall enclosing a promontory. Unlike Dun Mhuilig (22565), which had a similar form resulting from later quarrying of the site, Bonnach Mor seems to have been purposely built this way. One observation is that the massive dry-stone wall aligns with the protruding basalt dyke that runs up from the sea, across the rocky beach and up to the promontory. This gives the impression of a single continuous wall rising, up to and enclosing the platform that overlooks a flat area to the north. There is no sign of quarrying or any sign that two of the walls might have fallen. This has been classified as an enclosure. Dun Chonallaich encloses the summit of the hill and is very large at 449.40 m². It seems unlikely that an area this large would have been roofed but the proportions do not preclude the opportunity. Like Dunadd, Dun Chonallaich shows signs of activity in the Early Medieval period, and it has been remodelled in recent times after use of the site as a film set. For this study, Dun Chonallaich is interpreted as an enclosure.

Groups 1C and 2C contain the upper end of the roofed duns for which Groups 1A, 1B, 2A and 2B are the everyday. Shirvan (39409), Loch Glashan (40067), Ardifuir (39140), Druim An Duin (39160), Dunadd (39564) and Beinn An Duin (22836) would have been remarkable structures with massive dry-stone walls and enormous roofs built from the longest timbers. Their size and refined architectural features would have been noteworthy to the Iron Age population, commanding awe. Groups 2A, 2B and 2C are where small dry-stone enclosures begin to appear, ranging in size from 449.40 m² to 509.74 m².

Group 2C

< 21 m min internal diameter
max internal diameter \geq min internal diameter x 1.5
max internal diameter < min internal diameter x 2.5
 \geq 3 m average wall width

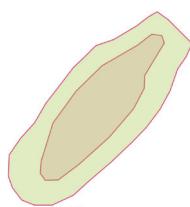


Group 3: Structures less than or equal to 20.37 m with a length that is greater than 1.5 times the width and a length that is greater than 2.5 times the width.

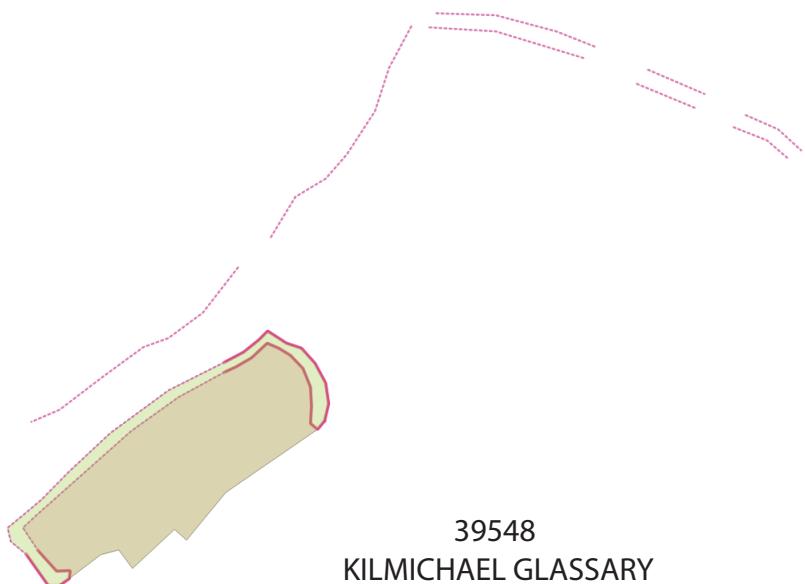
There are three structures in this group. All are elongated as a response to the local topography. Eilean Righ (22857) is small enough in area and has the characteristic straight and curved gables to suggest it is a dun. If it is, it is the most elongated of the form and would have been seen as quite unusual. Kilmichael Glassary (39548) and Hill Park (22756) are far larger and although they overlap in area with the group of small dry-stone enclosures, their form is unusual. They will be returned to later in the document.

Group 3

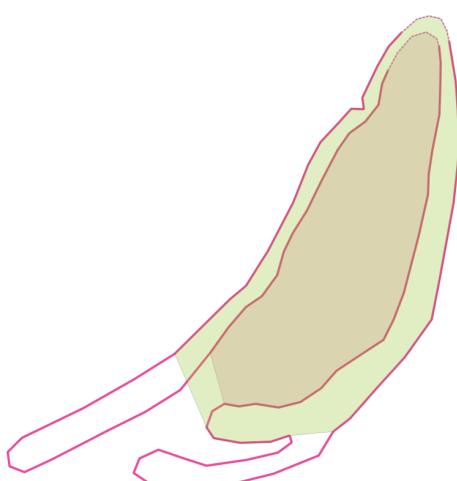
< 21 m min internal diameter
max internal diameter \geq min internal diameter x 2.5



22857
EILEAN RIGH
123.48 m²



39548
KILMICHAEL GLASSARY
529.48 m²



22756
HILL PARK
675.28 m²



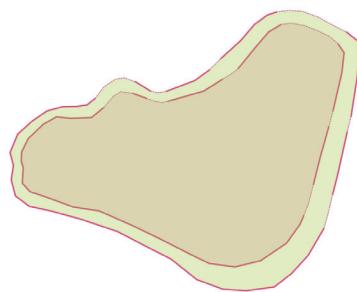
0 10 50 m

Group 4: Medium sized structures with a width over 20.37 m and less than 30 m and a length less than 60 m.

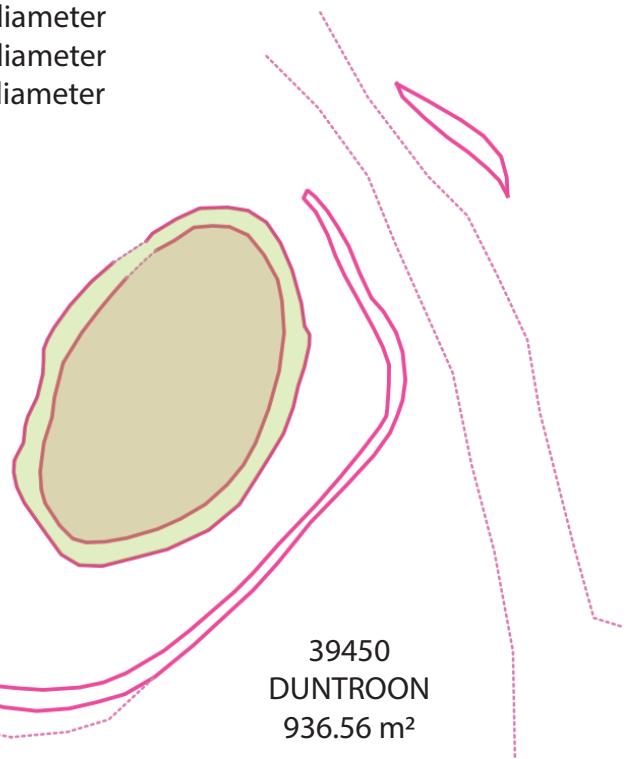
This group contains six structures and four are associated with outer enclosures. Two, Druim An Achanarnaich (22586) and Dun Buidhe (39411) incorporate natural escarpments into their perimeter. Most are sub-circular or sub-rectangular although Dun a'Bhealach (39099) follows the contours to create a more irregular form. All are interpreted as enclosures although whether they are settlement, fortified or stock enclosures will be returned to later in this document.

Group 4

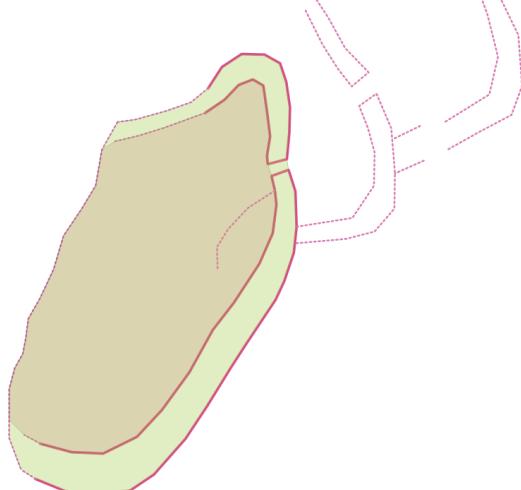
>21 m min internal diameter
<30 m min internal diameter
<60m max internal diameter



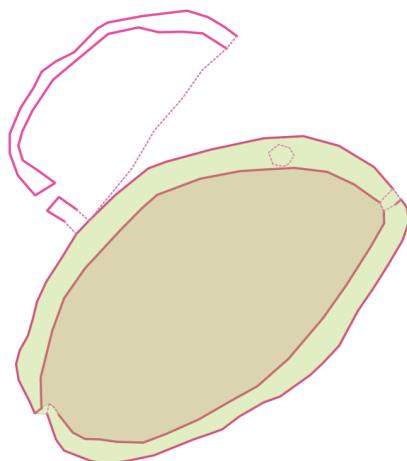
39099
DUN A' BHEALAICH
768.56 m²



39450
DUNTROON
936.56 m²



22586
DRUIM AN ACHANARNAICH
1019.03 m²



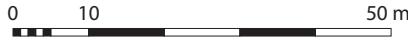
39100
DUN A' CHOGAIDH
1059.58 m²



40031
ALLT AN DUBHAIR
1083.73 m²



39411
DUN BUIDHE
1159.44 m²



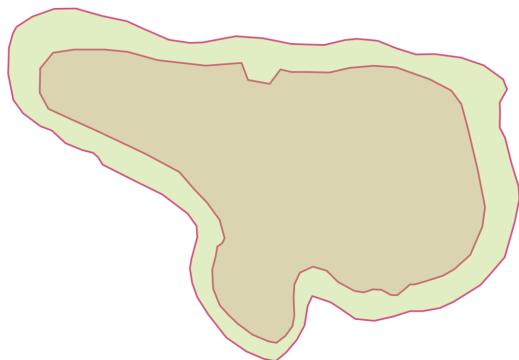
Group 5: Rare larger structures with a width over 20.37 m and less than 30 m and a length greater than 60 m and structures with a width over 30 m and less than 50 m

This group contains four enclosures. One, Dun Na Maraig (39542), is a settlement enclosure containing a dun. Another, Duntroon (39450), is an outer enclosure around a central citadel and Eilean An Duin (22536) is an irregular form following the low cliffs around the edge of a rocky plateau at the north end of what was once a small island. Garraron (22739) is an unusually straight sided form with sharp, angular corners. It is suggested by Marion Campbell and Mary Sandeman that the form reflected later reuse of the site in the Medieval period although it is believed to have originated in the Iron Age (Campbell & Sandeman 1964: 46). Its original form is unknown but as the current enclosure skirts the summit of a low knoll, it is not difficult to imagine that the Iron Age enclosure was more rounded but enclosing a similar area.

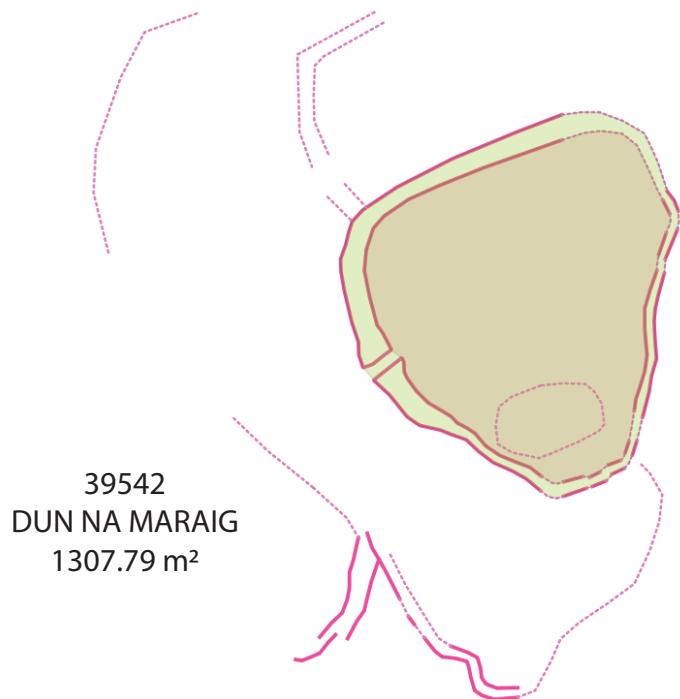
Group 5

≥ 21 m min internal diameter
 < 30 m min internal diameter
 > 60 m max internal diameter

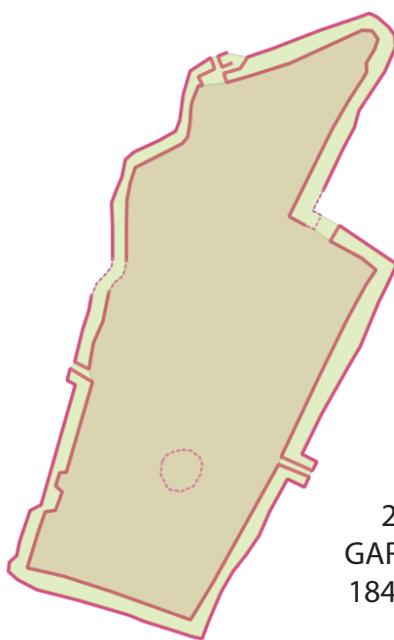
and ≥ 30 m min internal diameter
 < 50 m min internal diameter



22536
EILEAN AN DUIN
1250.81 m²



39542
DUN NA MARAIG
1307.79 m²



22739
GARRARON
1844.02 m²



39450
DUNTROON
3424.62 m²



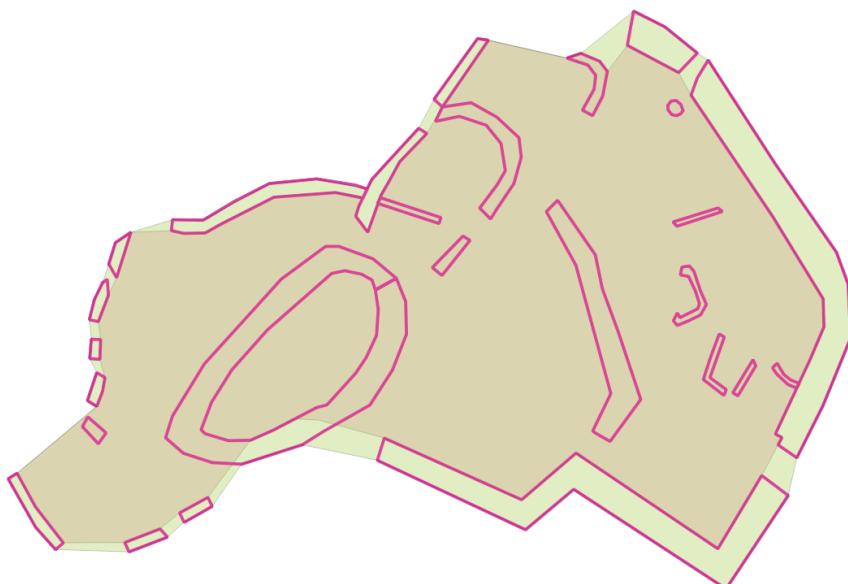
0 10 50 m

Group 6: Rare larger structures with a width over 50 m and less than 100 m

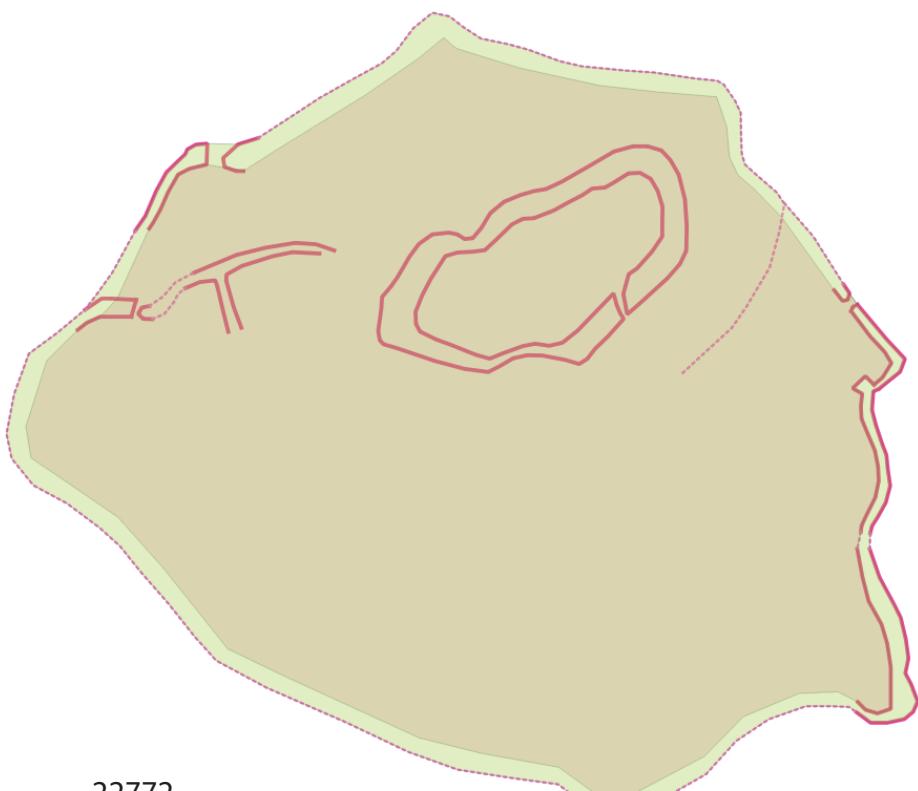
Group 6 contains the two forts of Dunadd (39564) and Dun Chonallaich (22772). The outerworks of Dunadd are known to be Early Medieval but it is hard to imagine that some form of outer enclosure was not in use in the Iron Age that incorporated the impressive natural entrance created by an eroded volcanic dyke. Dun Chonallaich is also known to have Early Medieval activity, in the form of a gaming board, and its form is similar to Nuclear forts, with multiple outer enclosures rising up toward the crowning summit citadel (Stevenson, 1951). For this study neither can be confirmed to be Iron Age, and both are therefore assumed to be Early Medieval.

Group 6

> 50 m min internal diameter
< 100 m min internal diameter



39564
DUNADD
4109.56 m²



22772
DUN CHONALLAICH
7703.38 m²

N
↑

0 10 50 m

Group 7: Rare larger structures with a width over 100 m

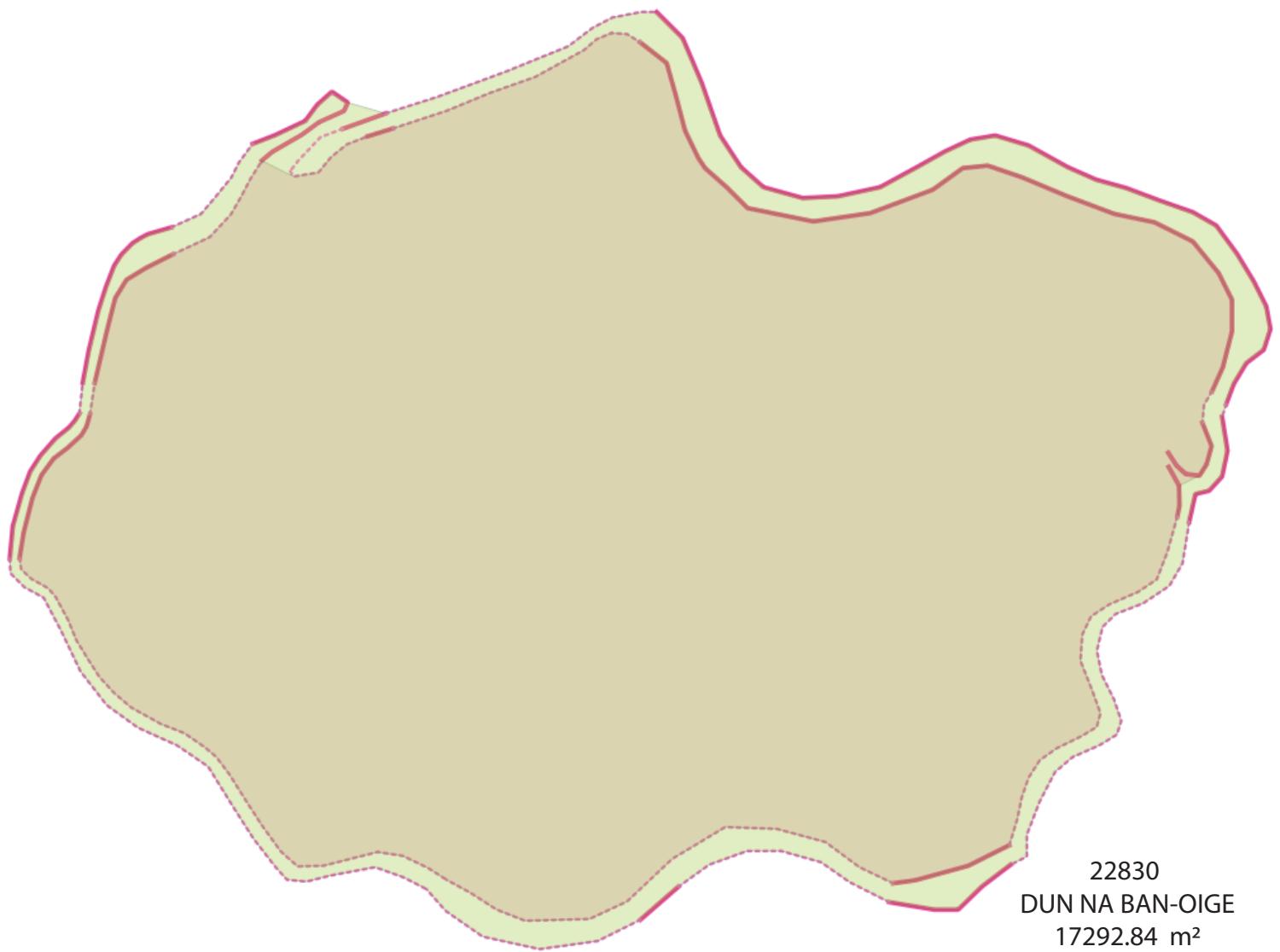
The final group contains two large hilltop enclosures. Neither contains any evidence of internal structures. Dun Na Ban-oige (22830) encloses 17,292.84 m² within a sinuous wall that follows the contour of the hilltop. Creag a'Chapuill (22773) is the largest structure in the study area at 32,885.44 m².

Unroofed enclosures span Groups 2A, 2B, 2C, 3, 4, 5, 6 and 7. Most of the enclosures fall at the smaller end, between Carnasserie Cottage (22848) at 265.28 m² and Dun Na Maraig (39542) at 1307.79 m². Somewhere around 1000 m² looks to be the ideal area the Iron Age community hoped to enclose by these types of enclosure. Dun Na Maraig is an enclosure around a dun, and it is probable that some of the other enclosures in this group, especially those with outer enclosures are settlement enclosures. The citadel at Duntroon (39450) also sits within this group at 936.56 m² although it sits within larger enclosing works that at 3424.62 m² are the largest in Group 5. It is suggested here that the citadel at Duntroon and most of the other enclosures in the range of 1000 m² are settlement enclosures that double as forts. Duntroon is the only enclosure with outerworks to suggest it is a true fort, however the location of many of these enclosures at higher altitudes, on exposed ridges suggests they are not intended to be easily accessed. Sites such as Kilmichael Glassary (39548). These are enclosures that could shelter a small community and are small enough that only a few people would be needed to defend them.

Beyond the small forts of around 1000 m² there are just four structures. The outer works of the forts of Dunadd (39564) and Dun Chonallaich (22772), in terms of their current form are both thought to date from the Early Medieval period. Iron Age activity is known from Dunadd and is assumed for Dun Chonallaich but insufficient evidence is available to interpret the structures they contained. This leaves the two very large enclosures of Dun Na Ban-oige (22830) and Creag a'Chapuill (22773). Compared with the fortified enclosures, these are enormous. They bear no relation to the smaller fortifications and if they were forts, they would require huge numbers of people to defend them. Instead, they are interpreted here as enclosures. Further justification for this interpretation is given in the supporting paper.

Group 7

> 100 m min internal diameter
part 1



0 10 50 m

Additional Observations

In looking at these structures, drawing them and visiting them in the field, it has been noted that four of the sites have entrance elements surviving that seem to have similarities. Rather than these similarities being structural, what was observed was a similarity in the experience of arriving. At Trenenek (141660), to access the site there is a correct path (Driver 2023: 160) that leads up a short section of steep embankment to a ditch. To cross the ditch there is a narrow causeway that then leads up to a lower enclosure that must be crossed before arriving at the dun. At Dun Na Maraig (39542), a short steep embankment leads up to a narrow, stone lined entrance that leads up to a lower enclosure that must be crossed to reach the dun. At Binnein Mor (39448) a long steep slope leads up to a natural entrance formed by the erosion of a volcanic dyke creating a narrow entrance that leads into an inner enclosure that would have to be crossed to reach internal structures that are no longer visible. At Dunadd (39564), a rocky lower slope must be crossed before arriving at a natural entrance formed by the erosion of a volcanic dyke. Passing through the narrow entrance leads to a lower enclosure that must be crossed before climbing up to the dun. There is a sense of performative arrival that would be familiar to the Iron Age community that involved a steep initial approach, a narrow entrance that funnelled the user to an enclosure, across which would be the main building.

Summary

This statistical analysis of Iron Age sites in Mid Argyll has identified five structural types: small timber and turf round-houses; duns, which at the smaller end, are sub-circular to sub-rectangular, common and unremarkable and at the larger end, are architecturally monumental and rare; a possible broch, small forts of around 1,000 m² which are relatively uncommon and large upland enclosures which are rare.

The full context for this study is explained in the paper, ‘From Classification to an Interconnected Settlement Network: A Case Study on the Iron Age Monuments in Mid Argyll, Scotland’, to which this document serves as appendix 1.

Short Bibliography

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Group 7

> 100 m min internal diameter
part 2

