

The Bernician Studies Group on Inishowen 2016



Interim report



On behalf of the Lands of Éogain project group



1. Summary

The Bernician Studies Group (BSG), on behalf of the Lands of Éogain project group (LoÉ) and with the kind support of P&O Ferries and the University of Newcastle Department of History, Classics and Archaeology, has undertaken a fifth successive year of fieldwork on the Inishowen Peninsula. The BSG has also collaborated with the LoÉ in organising the second annual Lands of Éogain lecture and Inishowen Heritage festival (below, Section 7).

Trial excavations carried out in the field surrounding the graveyard at Cooley, Moville revealed a complex series of ditch and enclosure features, including metalworking structures and a palisade feature inserted into the base of the ditch.

Preliminary assessment of temporarily exposed grave covers was conducted in Cooley graveyard. A previously unrecorded cross fragment was recognised in the graveyard by a local archaeologist. A second incised cross, which had previously been recorded but had not been seen by archaeologists for many years, was located and recorded at the Parochial House in Moville.

A GPS earthwork survey of a suspected hilltop enclosure site at Carngarve, west of Greencastle, was carried out by the BSG with students from the University of Newcastle.

Geophysical surveys of sites at Eskaheen and Carndonagh have revealed the outlines of two further circular monastic precincts, in addition to those already mapped by BSG at Carrowmore, Clonca and Cooley. Survey of a 'souterrain' at Cooley has been carried out using geophysics and physical inspection of the interior.

2. Evaluative excavation at Cooley ecclesiastical complex, Moville 2016

2.1 Fieldwork Summary

The Bernician Studies Group, in association with *Lands of Éogain* projects and the University of Newcastle upon Tyne, undertook a 2-week evaluative field season centred on Cooley graveyard, Moville.

In the graveyard the thin grass covering was peeled back from several lintel graves in order to visually inspect them and to assess their potential for future work including limited DNA and isotope sampling of skeletal material, identification of structural and sculptural material and mapping of the complex row graves. Several graves with the potential for sampling were identified and new levels of diachronic complexity were observed to inform future research and management programmes. The grass was replaced after recording.

An 8m X 3m trench was excavated in the field north-west of the cemetery. It successfully identified the line of the outer enclosure, which yielded considerable complexity, including a palisade trench inserted into the base of a substantial ditch. In addition, stone settings



Geophysical survey at Carndonagh confirmed the previously suspected double circular enclosure around the Donagh church. Part of a similar enclosure has also been identified by geophysical survey at Eskaneen.

The Bernician Studies Group has been investigating the Early Christian landscapes of North Inishowen since 2012 (Adams and O'Brien 2013; O'Brien and Adams 2016). Preliminary geophysical survey of the known burial ground at Carrowmore revealed a double vallum of suspected monastic nature, whose relationship to the two famous high crosses demonstrates that the latter stand in their original positions. These enclosure ditches were subjected to trial excavation in 2013 and yielded a sequence of ditch fills dated between the

late 6th century and the 11th century (BSG 2014) and the remains of a metalworking hearth. Subsequent geophysical surveys at nearby Clonca (2013) and at Cooley graveyard in Moville have revealed similar outlines of known or suspected monastic foundations. At Clonca an existing high cross is associated with a standing but ruined church of uncertain date; gradiometry revealed a complex series of enclosures, trackways and a possible area of burials surrounding the high cross. Once again, the enclosure seems to have been formed by a double, concentric ring earthwork of typical form for the earliest monastic establishments in Ireland (O'Brien, Adams, Haycock and Pennie forthcoming).

At Cooley, overlooking Lough Foyle and Magilligan Point, a high cross and 'skull house' and the remains of more than a dozen early cross-marked memorials can now be seen, as a result of detailed survey work in 2014 and 2015, to have lain at the core of a substantial complex containing rectilinear and circular buildings and possible metalworking sites.

The high cross and a now-disused graveyard containing an intact tomb-shrine, now known as the 'skull house', remains of two other buildings, row graves of suspected Post-medieval, Medieval and Early Medieval date, and monumental grave plots of the past three centuries occupy a hill-side setting above the town of Moville and the west shore of Lough Foyle. This is identified as the site of the Early Medieval ecclesiastical complex of *Domnach Magh Bile*, which Dr Paddy Gleeson (pers. comm.) argues belongs to an Early Medieval polity, the Bredagh. A community-run group is currently actively researching the geography and history of this landscape, while the cemetery is maintained by the Cooley Graveyard Heritage Committee.

The complex at Cooley offers potential for several key issues to be explored. The first revolves around its identification as the site of a *domnach* church (Bhreathnach 2014, 168-70). So far as the authors are aware, no *domnach* church complex has yet been dated by scientific excavation. This is a key priority in broader agendas for studying Ireland's landscapes of Christianisation. Cooley would also provide an invaluable set of comparanda for the results obtained previously at Carrowmore. The recent publication of the Ballyhanna research project (McKenzie et al 2015) demonstrates the value of recording burial communities in their context (although no excavation of human remains will be undertaken at Cooley and no excavation is planned inside the graveyard). Much less intrusive options may be available here.

On a broader, more international scale, the identification and analysis of the populations of maritime and estuarine communities has recently been identified by Carver et al (Carver 2013) as a high-priority in Early Medieval European studies. Cooley's row graves belong to a maritime community in a monastic and regional polity context and place it in a wider, Atlantic and European setting. Ongoing work by the BSG and others is demonstrating the transmarine intercultural significance of the early memorials – that they belong to a

tradition linking Pictish and Dál Riata sculptural and ecclesiastical traditions, particularly those of Iona, with the North of Ireland. Cooley thus represents a highly significant focus of scholarly interest, combined with a very high level of potential for supporting a community sense of Inishowen's unique identity.

2.3 Previous work at Cooley

Detection Licences: 13R78 (2013) 14R0095 (2014) and 15R0066 (2015)

National Monuments Service Reference No: DG 021-008001

National Grid reference: 259844 438384

Townlands: Cooley, Gort

Gradiometer surveys of the pasture fields surrounding the Cooley Graveyard were carried out in three seasons between September 2013 and September 2015, using a Geoscan Fluxgate Gradiometer FM256. Results were processed using Geoplot 3.0.

Surveys and subsequent reporting were carried out in accordance with English Heritage's guide to *Geophysical Survey in Archaeological Field Evaluation* (2008), the IfA's *Standard and Guidance for Archaeological Geophysical Survey (Draft)* (IfA, 2010) and the ADS' *Geophysical Data in Archaeology: A Guide to Good Practice* (Schmidt, 2001).

The resulting composite, below, shows clearly that, as at Carrowmore, a double circular enclosure existed around the graveyard. At about 150-160 m in diameter, it was constructed on a larger scale than that at Carrowmore (and, as is now confirmed, Carndonagh). The significance of detecting three (now five) of these monuments in North Inishowen, all roughly of the same form, cannot be overstated; it will be considered in detail in later reports. The incidence of a high magnetic response within the anomaly which indicates the outer 'ditch' of this enclosure on its east side (although given the anomalies, these could equally represent banks rather than ditches) is to be considered in the context of the metalworking debris and evidence of a hearth in a similar relative location at Carrowmore. There was obvious scope for the sort of evaluative excavation carried out at Carrowmore to determine the nature, date and vulnerability of the sub-surface features identified here; further, there was the possibility of testing the geophysical survey by addressing key questions on the nature, longevity and abandonment of the complex.

More detailed geophysical surveys in 2014 and 2015 used the same instrument and software as used at Cooley previously, with an enhanced setting of 0.1NT at intervals of 0.125 m X 0.5 m on a non-parallel traverse of 20 m x 20 m grids.

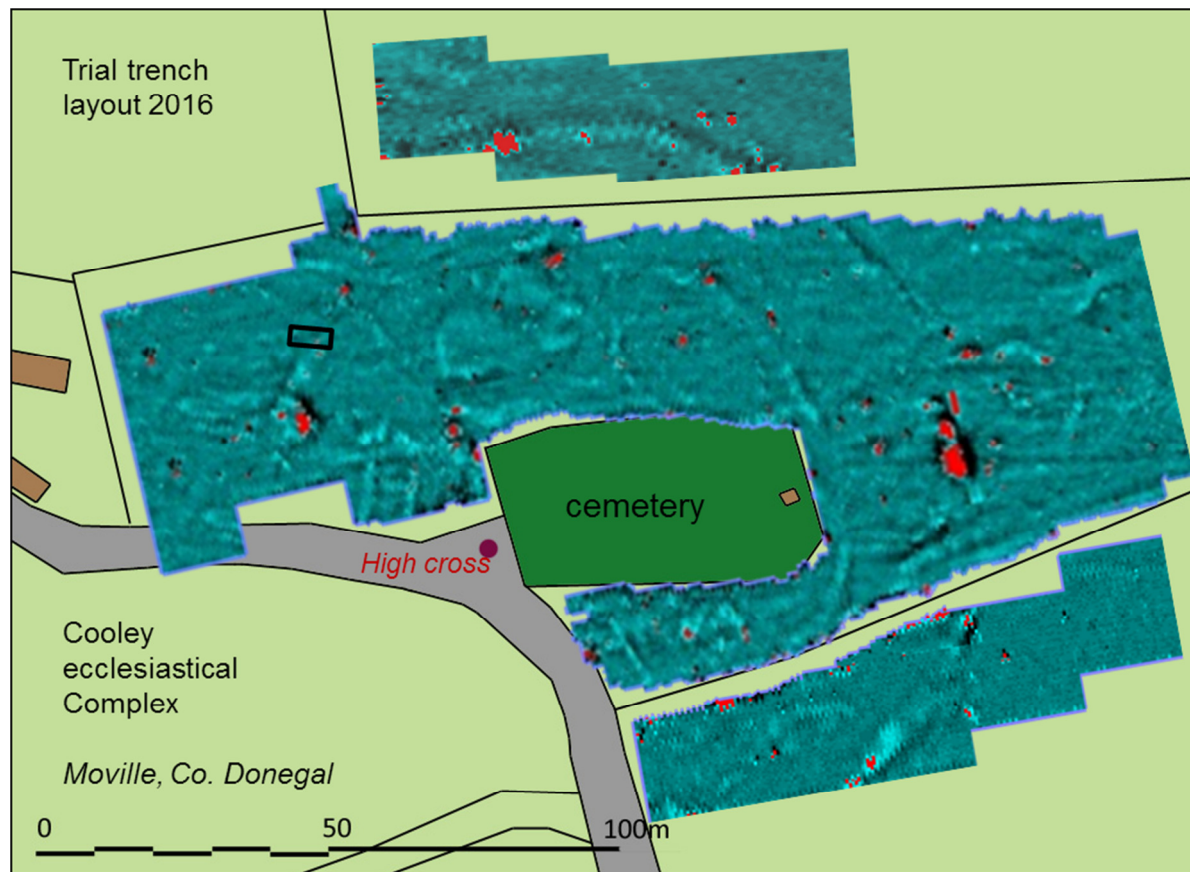


Figure 2: Gradiometry survey results and location of excavation trial trench

An arc of a circle curves around the east (right hand) edge of the graveyard and continues counter-clockwise in a loop around the top of the survey area. Beyond this arc, further east, north and south of the graveyard, is an external arc, concentric with the first. This can be seen to continue clockwise south of the graveyard and it is supposed that it might still exist beneath the surrounding fields to the west. The inner arc describes a circle of some 100 m diameter, and if the outer arc also forms a circle, as suspected from the trial survey in 2013, its diameter would be 150-160 m. Again, we have evidence of a double-circle precinct, comparable with those at Carrowmore and Cooley and, as at both of these sites, the high cross can now be seen to be sited within the inner precinct. Extremely high readings (red patches on the plot) are likely to show the sites of small-scale industrial processes. Two prominent patches exist by the outer precinct boundary, a position comparable with that of hearths identified in excavation at Carrowmore. Within the inner precinct, circular marks, possibly the outlines of buildings or small enclosures, show north of the graveyard and a large rectangular outline at the edge of the field, close to the high cross by the graveyard gate, seems likely to reflect a building foundation.

In the 2015 field season the field to the south of that previously surveyed was mapped and shows that the return of the inner ditch survives, if perhaps in truncated form, where the break of the ground indicates erosion of the surface by ploughing.

Within the graveyard, the group has now completed a survey of the grave marker stones, plotting their positions to high accuracy with a Total Station Theodolite (TST).

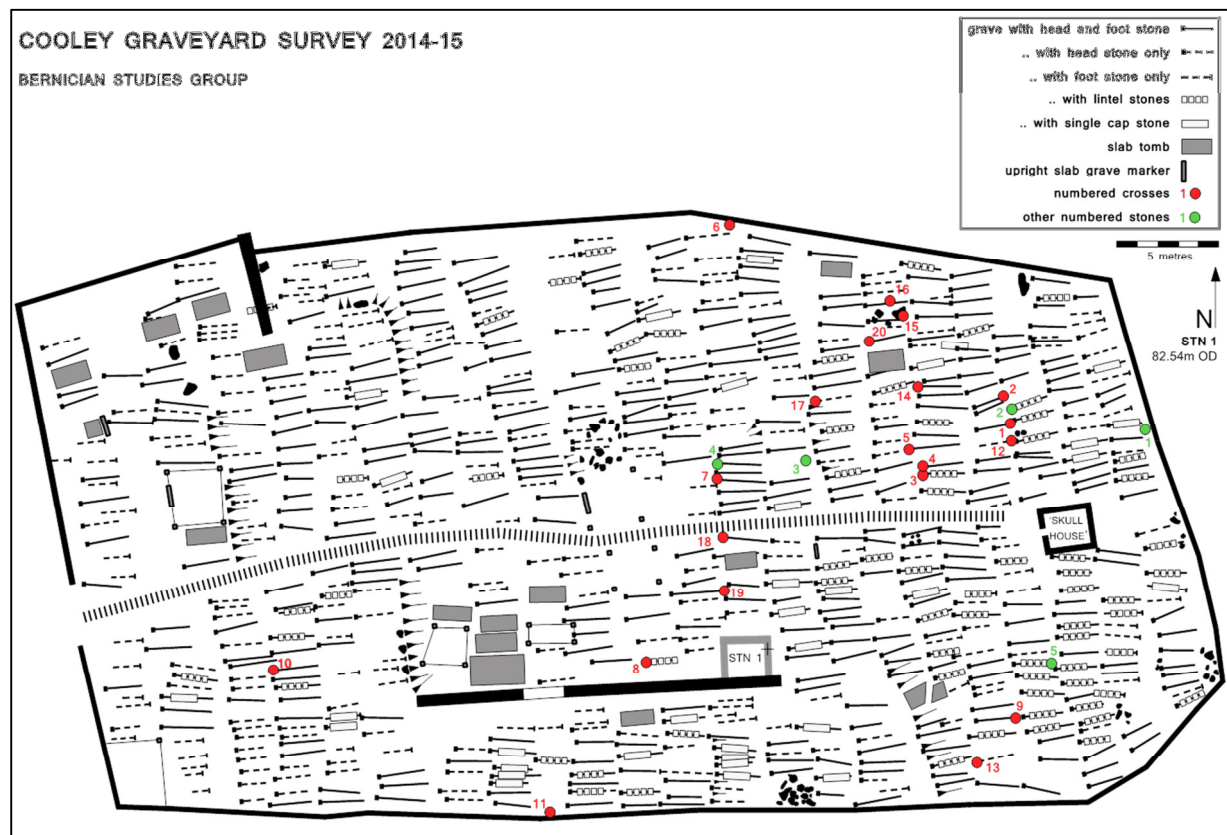


Figure 3: Cooley Graveyard survey

This survey shows that the apparent jumble of stones resolves out into head and foot markers of graves arranged in very tightly packed rows (Figure 3: above). The date range of these graves is unknown but some points of sequence through horizontal stratigraphy are now clear: the rows respect the position of the skull house; the first three rows stop short of the north and south sides of the skull house, while the fourth row, which is continuous across the graveyard, curves slightly around its west edge; graves are more tightly packed towards the east end of the graveyard, near the skull house, than towards the west; the graves extend in unbroken rows across what is supposed to be the interior space of a medieval church, represented now by a single standing wall. Where they are exposed the graves have been shown to consist of two predominant forms: lintel graves, comprising a stone long-cist covered by several squarish slabs with a head and foot stone marker; and capstone graves, where the same arrangement is covered by a single stone. Only one of these, exposed during a previous clearing programme, has yielded firm evidence of a medieval date in the form of a decorated cap stone slab (DH021-008010). It is estimated that the graveyard contains a minimum number of individuals between 800 and 900. It is not yet possible to determine if there are underlying layers of earth-cut graves: to the east

where the field shelves away there is a substantial drop from the internal height of the graveyard to the exterior; elsewhere the graveyard is raised above the surrounding field by between 0.5 m and 1 m.

The BSG has identified and recorded twenty grave marker stones formed in the shape of a cross or with a cross shape carved into the stone; ten of these are ring-headed crosses. Most survive as broken fragments and are re-used in the positions in which they now occur; they constitute evidence of an earlier stage of use of the graveyard. Three crosses show skeuomorphic elements, two in the form of a point at the base of the cross shaft (photo, right), and one in which the shaft appears to be set into a base stone. In most cases, the inscribed cross slabs can be shown to be in secondary contexts. Survey results have now



been incorporated into the National Monument Records for Cooley, courtesy of Mr Caimin O'Brien.



A previously unrecognised cross slab fragment (photo, left) was identified during routine grass cutting in the graveyard during the early summer of 2016. The finder, Brian Lafferty, is a locally based archaeologist.

It is now strongly apparent that any received wisdom on dates and phasing of features in this graveyard is likely to be unreliable and that models must be developed from the logic of horizontal stratigraphy from a detailed survey shown on the previous page. It was evident that visual assessment of individual graves and rows would provide valuable new data from which to develop a model of burial practice here.

2.4 Programme of work 2016

Excavation

In order to evaluate the stratigraphic and environmental potential of the presumed ecclesiastical enclosure at Cooley, an initial trial excavation was carried out between 15th and 29th August 2016. Its objectives were as follows.

Objective 1: to obtain C14 samples, stratigraphic profiles and environmental samples from the inner ditch and/or bank of the enclosure outside the cemetery, as identified by gradiometry. The proposed trench measured 8 m X 3 m.

Objective 2: to determine the survival and nature of buried ground surfaces pertaining to the occupation and abandonment of the enclosure, by excavation of a sample of the interior of the enclosure.

Excavation was carried out under the direction of Max Adams on behalf of the Bernician Studies Group and Lands of Éogain Group under Licence 16E0334. All deposits were excavated by hand. Recording was by single context using the University of Durham 1998 recording sheet and methodology. Plans were drawn at 1:20; sections at 1:10. All stratified finds were recorded in 3D using a TST laser theodolite. Photographs were taken using an X-pro 1 digital rangefinder camera and recorded in RAW mode. Donal Donnelly-Wood of BSG has filmed a video of the 2016 Cooley excavation and survey, currently in editing, which will be posted to the groups website in due course.



Approximately 22 cm of re-worked plough soils, containing fragments of post-medieval domestic refuse, were removed in four horizontal spits before undisturbed archaeological levels were reached. The subsoil was a compact orange-brown silty loam with small angular fragments of 'brash'. To either side of the supposed line of the outer enclosure ditch, located by magnetometry, parallel linear stone settings were revealed. These consisted of irregular thin slabs of schist set vertically, close-packed, into what may have been soft upcast from the original excavation of the ditch (photo above: F7, east end of trench). There was evidence of patching with small water worn pebbles as cobbling, and the wear of traffic along or across (photo page 10, left: F6; 22).

External to the enclosure ditch on the west side, partially-revealed settings of stone, and a pit filled with a very hard concretion, provided evidence that the zone was used for industrial activities after the end of the lifetime of the ditch. At the east end of the trench,



and therefore lying between the outer and putative inner enclosure ditch, a single large post hole was excavated (F20)

The uppermost ditch fill lying between the two linear stone settings was a thin slump, some 10 cm thick (Ctxt 18), of the re-worked ploughsoil. Into this a stakehole (F23) had been driven, close to the edge of a complex metalworking feature, initially identified from a blackish linear

stain, the remnants of a stone-lined flue (F11). Excavation of the flue revealed deposits of ash and charred material (both sampled) and a series of small flat schist stones upcast onto the surface (Ctxt 10). Sectioning and removal of the flue revealed a much larger, deeper pit (photo below right: F26) more than 1m in diameter and full of flat stones in a dark orange-brown brashy matrix which yielded a number of finds of ironworking debris. These included slag fragments, part of a tuyère and a plano-convex hearth base similar to those found at Carrowmore in 2013.

The excavation of the furnace pit (*Figure 4: F26*) substantially delayed excavation of the ditch fills, further complicated by part of a series of linear industrial features running parallel to the eastern ditch edge (F28; F36). These were sampled and part-sectioned.



The bulk of the fill of the enclosure ditch (F29), some 3.6m broad and gently curving from south-west to north-east, was a homogenous deposit of stony orange-brown subsoil (42), apparently introduced in only two or three dumps after a re-cutting episode (F48) which may have removed a more complex stratigraphic sequence. The fill was so loose that it proved impossible to maintain a standing section. The deposit was so apparently sterile that its inferred origin is material which once formed a bank to the ditch: its original upcast, perhaps. The parallel stone settings, in that case, are inferred to have been constructed after the major re-deposition episode, and are perhaps best associated with the ditch's reuse as an area for metalworking.

Removal of the homogenous fill revealed that an apparent palisade trench (photo below left: F45), with straight sides, post settings and some internal structural complexity, had



been inserted into the ditch after the accumulation of stone-free, turfy fills on either edge (41; 49). These, in turn, overlaid what appears to have been a deliberately-placed lining of flattish, small stones. One post setting had been revealed as a post-pipe or stake-hole (F40) truncated by the furnace pit. The other was evidenced by two long, thin vertically placed packing stones (F44) which have been left *in situ*.

The palisade trench was only revealed during the last few hours of the excavation. Such is its likely structural complexity that the decision was taken not to excavate but to take a small sample from its sandy, ashy fill, and re-cover it

with sterile builder's sand. Visible features were planned and photographed. Initial inspection showed a dark, thin, linear stain on either side, which may represent the decayed remains of a plank lining.

Samples and finds await alteration and export licences. The interim report will be updated after their analysis.

2.5 Discussion of excavation results

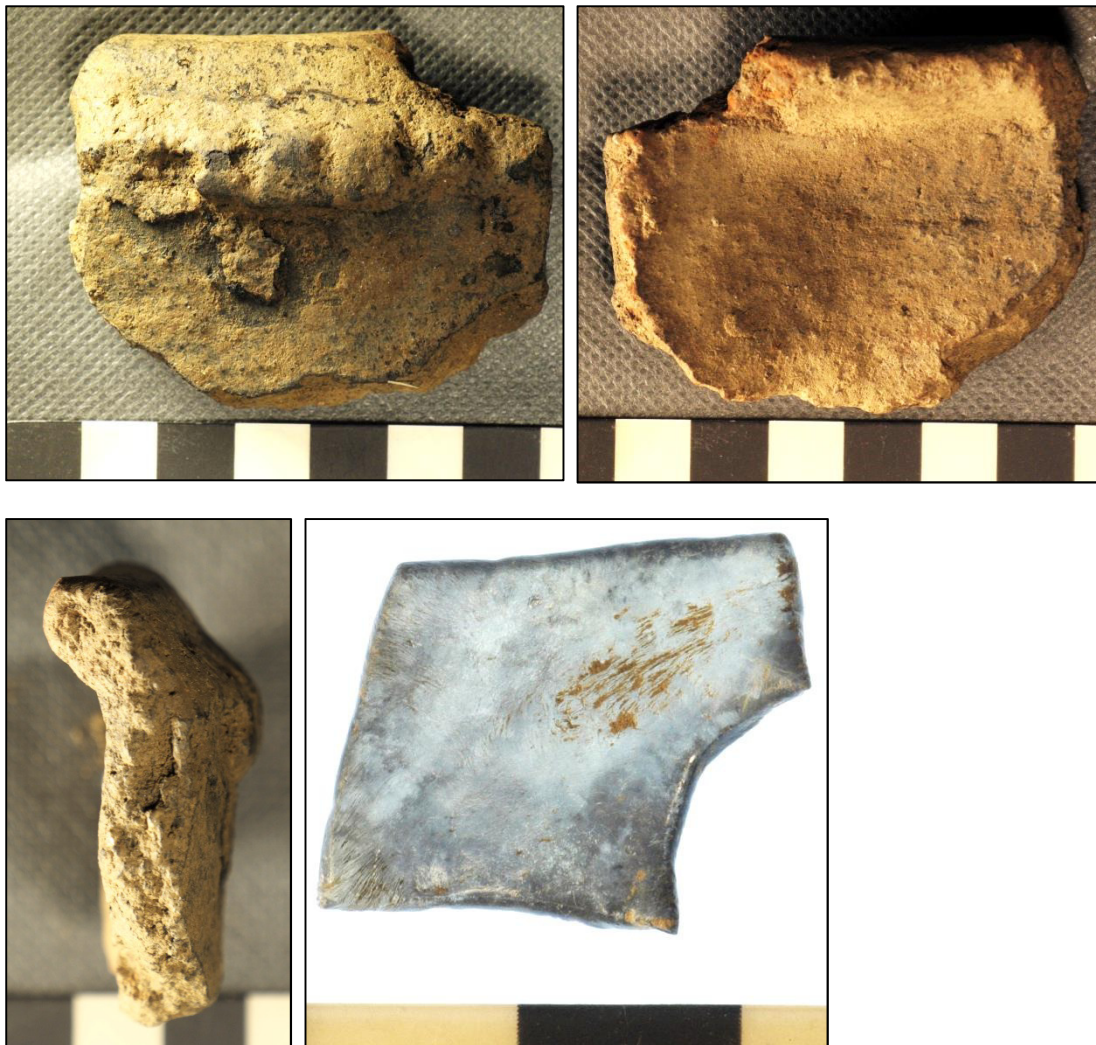
The outer enclosure ditch at Cooley is of similar broad form and dimensions to that at Carrowmore; and in its last phase it, too, had been utilised for industrial activity, including probable iron-working. There the similarities end. The insertion into a monastic enclosure ditch of a palisade feature is rare (one of the authors excavated a similar feature in a 1st-century AD Romano-British enclosure in Northumberland (Adams and Carne 1997)). So far, a literature search has not yet found an equivalent in an Irish context. The only chronologically diagnostic find came from a deposit late in the sequence: a substantial rim sherd of Souterrain ware (photo



below, p.12), which seems to show evidence of external sooting. A fragment of possibly Early Medieval pale blue glass (below, p.12), will be sent for identification in due course.

That the massive enclosure ditch (more than 3m wide and perhaps 1.5m deep) enjoyed a complex life history is beyond doubt. It is not at all clear whether a similar sequence can be anticipated along the entire length of the outer ditch (some 350m) or at all in the inner enclosure ditch. Primary ditch fills offering dating and environmental evidence and sealed beneath the palisade trench must be anticipated during future work. The presence of such a feature marks Cooley as a possible candidate for a reused prehistoric enclosure. The large investment of labour and engineering skill required for such a pretentious piece of architecture argues for the sort of prestige reflected in the quality and quantity of the memorial sculpture identified in the graveyard, and in Cooley's geo-political setting (see below, section 4).

No very obvious candidates for C^{14} dating were collected among the samples but analysis is awaited to see if any of the soil samples might yield a datable piece of charcoal.



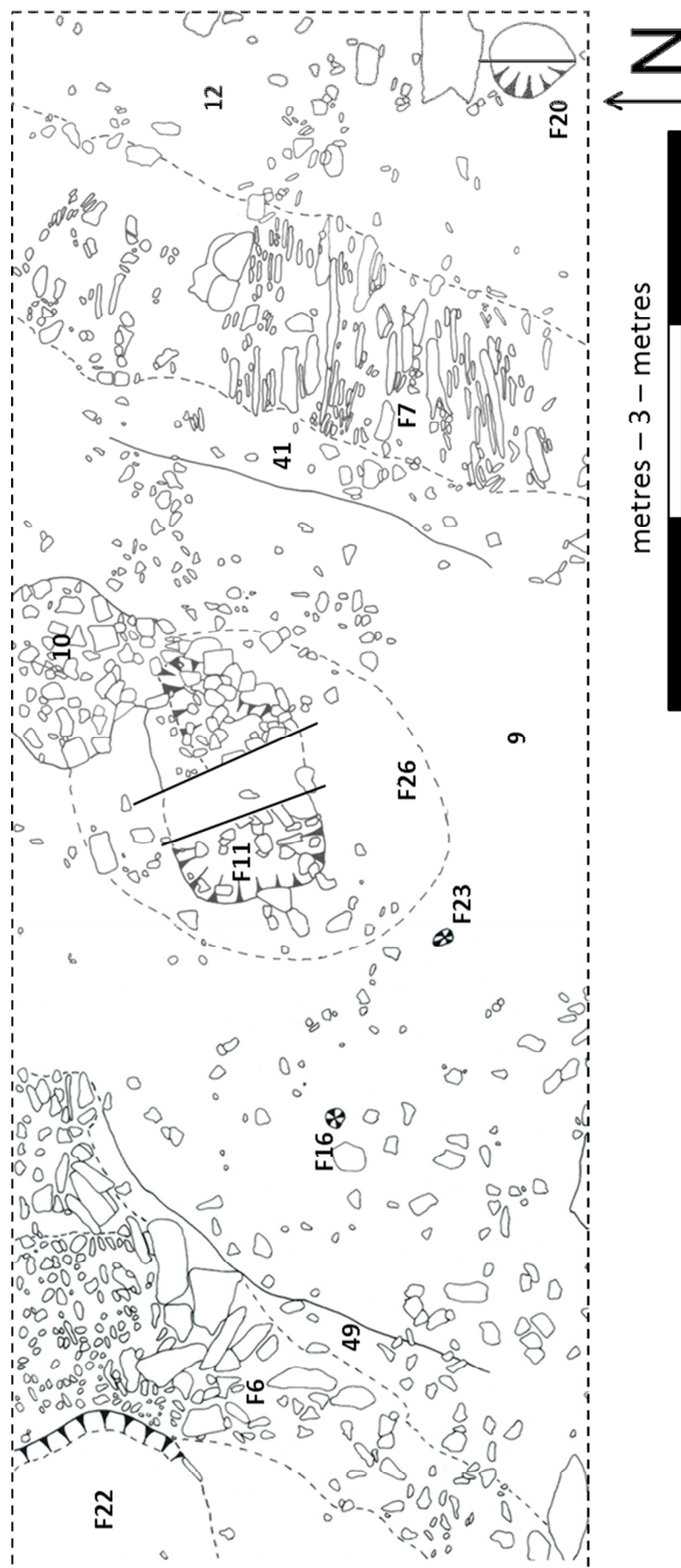
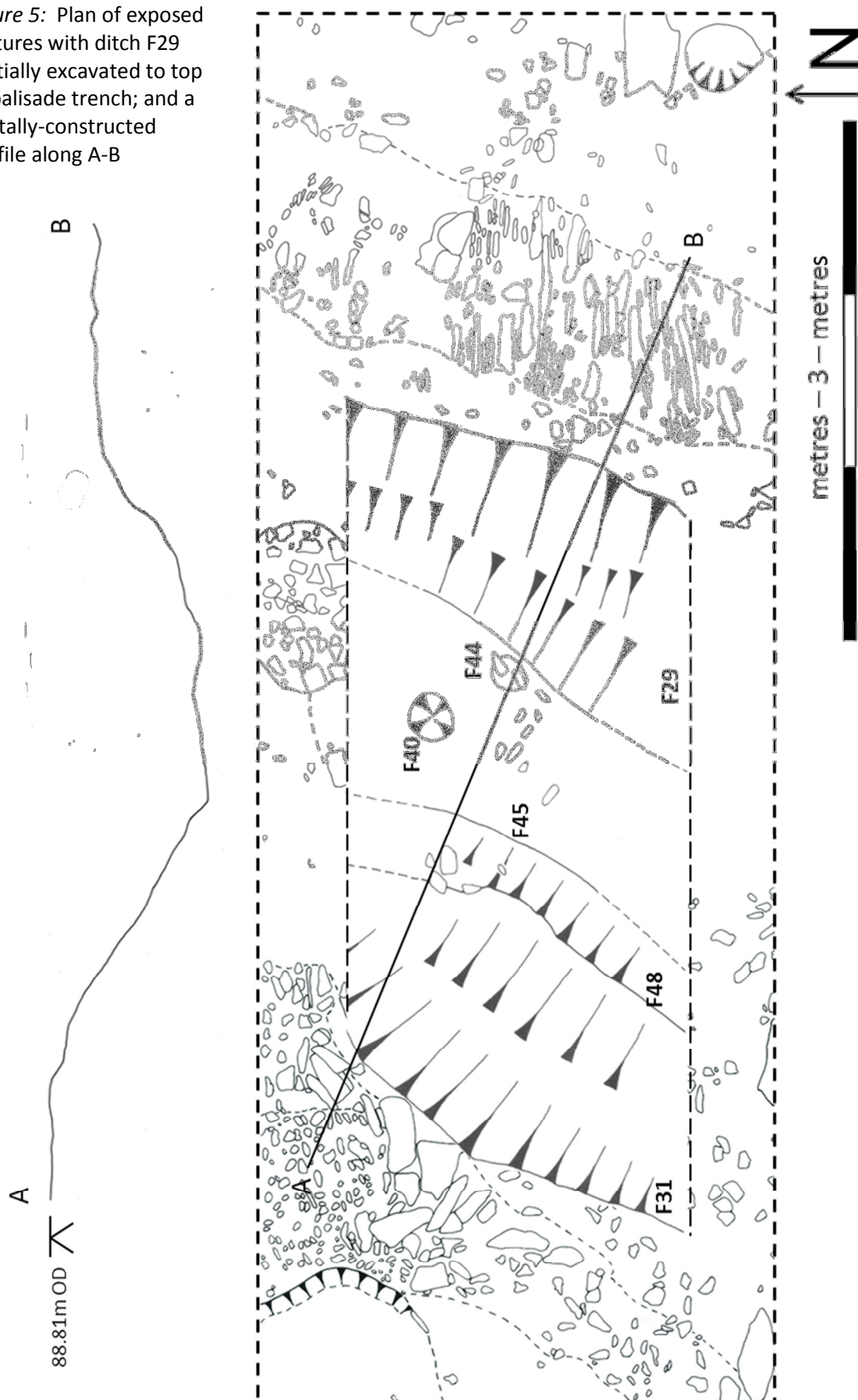


Figure 4: Plan of exposed features with pit F26 partially excavated, showing bands of stone settings either side of ditch

Figure 5: Plan of exposed features with ditch F29 partially excavated to top of palisade trench; and a digitally-constructed profile along A-B



3. Cooley Graveyard survey

BSG carried out limited, non-intrusive investigations of a small sample of the graves in the Cooley cemetery in two areas, immediately north of the Skull House, and mid-way along on the south side. Investigations comprised peeling back, gentle cleaning of the resulting debris and then replacing vegetation which has spread to cover or part-cover surfaces of the row graves planned in the 2014-15 survey. This was the limit of intervention. The purpose of the exercise was to try and refine our knowledge of the grave morphology and to test the impression from the survey that there was no inter-cutting of graves.



Two findings arise from this investigation. First, that, contrary to what had appeared to be the case, there is some inter-cutting of graves and that the density of graves in a row, and hence the total number, may be greater than is apparent from the surface view. This also means that there could be a longer chronology of burial than expected. Second, that the top covering of some of the lintel graves has collapsed, with stones slumped

down into the grave. This factor was not immediately evident from surface observation, for it was masked by vegetation cover. The slab graves, on the other hand, appear to be more robust and not to have suffered distortion. Visual inspection indicates that, at least in some cases, there is a void beneath the top slab.

The principal conclusion from this, as to understanding of the graveyard and methods of investigation, is that the quality of information on graveyard layout and phasing and of the morphology of the graves can be considerably enhanced by the non-intrusive stripping of the vegetation cover which has developed since the graveyard was actively in use.



4. A hilltop enclosure at Carngarve, near Moville, County Donegal

4.1 Introduction

A survey has been conducted on a newly-discovered hilltop enclosure above Carngarve, centred at Irish National Grid C 6205 4071. The site was first recognised in the field in August 2015 by Max Adams of BSG who then confirmed his identification by checking satellite views on the Ordnance Survey Ireland website (below, page 17). Then on 23 August 2016 Colm O'Brien of BSG with two Newcastle University students, Cameron Bewley and Tom Stevenson, took survey points from which the plan below (Fig 6) has been prepared. 59 survey points were logged with a hand-held Garmin 62SC GPS data logger, referencing to the Irish National Grid with 10-figure co-ordinates, that is to an accuracy of 1 square metre. Thick gorse cover over some parts of the features (as described below) made the positioning of some readings uncertain in the field, but reconciliation of the survey to satellite views lends confidence to the overall result. The

Figure 6: GPS plot earthwork survey of the Carngarve enclosure

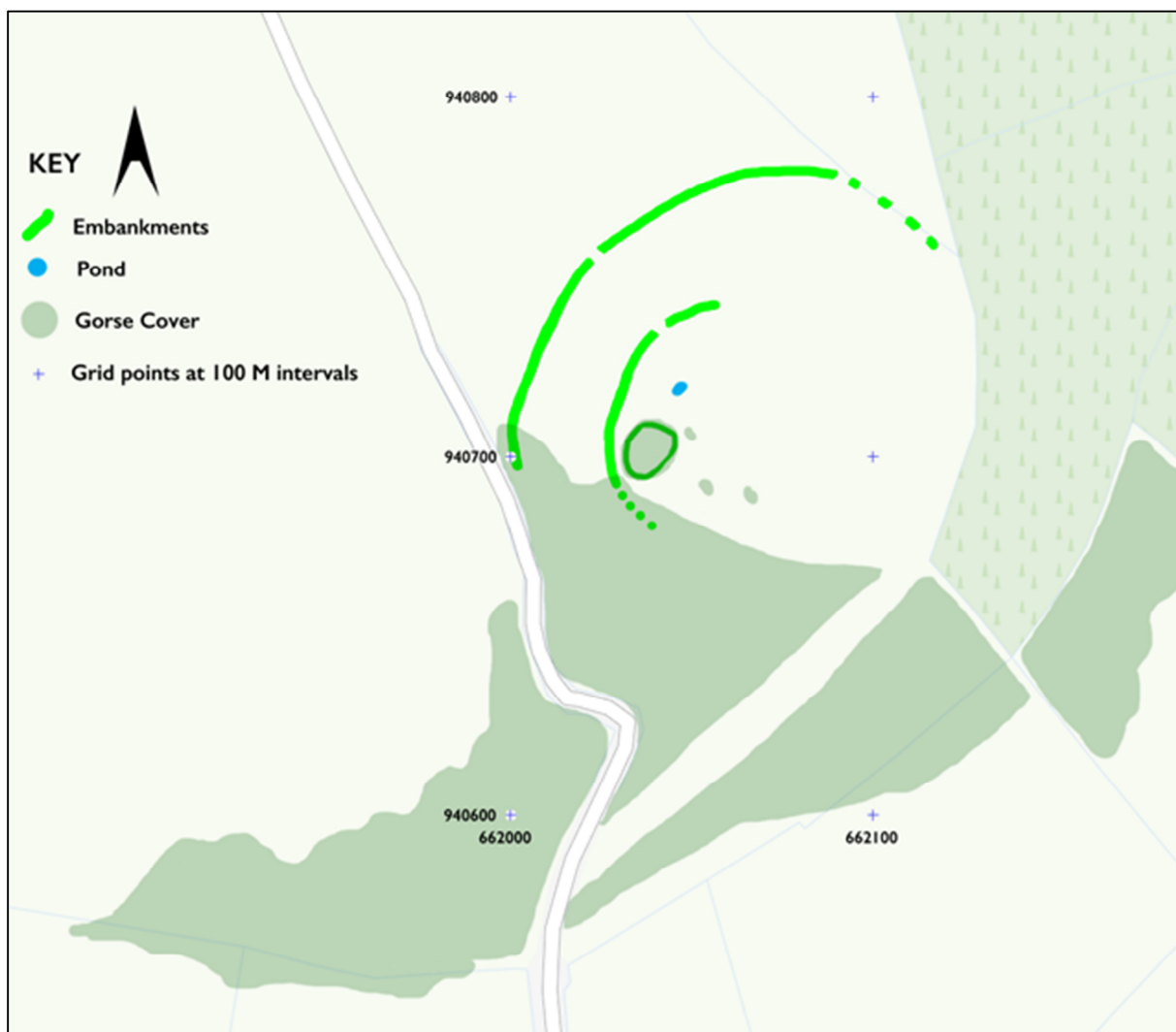




Figure 7: satellite view of enclosure

site has not previously been described and nor is it, up to the time of writing, included in the Archaeological Survey of Ireland data base.

The site sits at 200 m above sea level, at the edge of a block of open hills at the northeast tip of the peninsula. It is at the forward edge of a moorland plateau of heather-covered land, 800 m south of the 290-m peak of Lugmore Hill, immediately above the scarp slope which drops down on to enclosed fields

below to the south. It lies 2.5 km northeast of the centre of Moville and 2.6 km west-north-west of Greencastle. The visible archaeological elements comprise lengths of an outer and an inner ring bank and features within the inner zone.

4.2 The outer ring bank

Half of the outer circuit of the site is defined by the topography: the scarp edge on the east and south sides, marked in part now by a land boundary; and southwest to west, a slight cleft in the scarp slope which also provides the route of the trackway on to the open hill, a little below the level of the enclosure. This gives the enclosure the appearance of a raised knoll when viewed from trackway or the plateau (Fig 8). A thick cover of gorse has established itself on the sloping ground on the west and south sides, masking any archaeological features. At the edge of the gorse, close to the trackway, an outer ring bank becomes visible. This is a slight feature, no more than some 0.3 m high at any point, and with a rounded profile. At the time of survey, a denser flowering of heather than on the surrounding land was the clearest indicator of the line of both the outer and the inner ring banks. From the west side, the outer bank follows an arc north-eastwards along rising ground for some 55 metres to a gap some 2 – 3 m wide, which was probably an entrance. Beyond this, the bank is traced for another 65 m north and north-east, by which point the ground is sloping off towards the steep break of slope now marked by boundary fence at the edge of a plantation. Intermittently, the arc can be traced for another 25 metres, almost to the fence, picked out again by the heather. This east-side boundary continued the arc of the embankment east and south-east. If this is then projected around to the starting point on the west, it defines an oval shape of some 130 m by 115 m, with an area of 1.2 ha. Detail visible on the Bing satellite view seems to suggest a length of embankment on the south slope, but this is unconfirmed.

4.3 The inner ring bank

In the north-west segment, there is a slight slope down immediately inside the line of the outer ring bank to a level strip some 20 m wide, after which the ground level rises again. Here an inner ring bank follows the line of the crest. This too is a slight feature, again most clearly seen from the heather flowering. It emerges from gorse on the west side, from where it traces an arc north-east for some 40 m to a gap, probably an entrance, directly opposite the gap in the outer ring. The bank continues for another 7 – 8 m, beyond which, on level heather-covered ground, it is no longer visible. If the arc of the curve were projected right around, it would result in an oval with dimensions of some 65 m by 55 m, not concentric with the outer oval but closer to its south-west edge.



Figure 8: View from the north; outer ring bank in the foreground, inner ring bank visible as a false crest.

4.4 Features in the inner zone

Close to the west side of the inner ring bank is a feature roughly oval in outline, approximately 16 m by 12 m. This has a thick gorse cover, making observation and

measurement very difficult. Elements which can be seen are a bank around most of the perimeter, and within, several hollows of which one, on the south-west side, is rock-cut to a depth of more than 1.5 m. In the few places where it is possible to see the outer bank clearly, it stands higher than either of the ring banks and with a less rounded profile. It is perhaps the remains of a wall footing from a building with rock-cut chambers within. This interpretation is speculative.

Against a predominantly heather-covered ground surface on the plateau, three small patches east of the possible building (up to about 6 m long and 4 m wide) of gorse with grass undergrowth catch the eye. There is no firm evidence that these are archaeological features, but given the striking contrast in vegetation cover, they merit investigation to test that possibility. Between the putative building and the entrance to the inner ring bank, water collects in a small hollow which might be a deliberately cut feature.

In summary, we have here an oval enclosure of 1.2 ha defined in part by a ring bank and in part by the tops of scarp slopes; it is carefully positioned with respect to its local topography. Within is an inner enclosure, also defined in part by a ring bank, but untraced around much of its circuit. Each ring bank appears to have an entrance facing the higher ground north-west. Within the inner enclosure is a feature which was possibly a building and other small features which might or might not be of archaeological origin. Vegetation cover, particularly the gorse on the south and west sides, limits what can be seen by eye on site or from satellite view. It is likely that a LiDAR survey would show more detail than here reported.

4.5 Landscape setting and interpretation

In a paper of 2009, Brian Lacey drew attention to eleven sites in County Donegal, of which nine are on the Inishowen peninsula, which did not fit the then-current classifications of hillforts and which did not have the characteristics of the domestic-scale structures, the many raths and cashels of the country. Referring to their positions in the landscape, he called them ‘large hilltop and hill-slope stone enclosures’ and he proposed that, as defensive or monitoring structures, they could be understood within the political and military geography of the early medieval period. We now propose Carngarve as an addition to Dr Lacey’s listing. As already noted, the site is carefully positioned in relation to its immediate local topography; the same point applies to its wider landscape setting. From this position, the site commands wide views west and south-west into and across the valley of the River Bredagh and the litoral of Lough Foyle; east and north-east is a view to Greencastle and the entrance to the lough and out to the open sea beyond. This is an ideal position from which to watch the coming and goings of boats in and out of Lough Foyle



Figure 9: View to the mouth of Lough Foyle. Figure 10: View across Bredagh and along the Foyle litoral.

Within the viewshed, inter-visible at a distance of 3.3 kilometres, is the ecclesiastical site of Cooley, *Domnagh Bile*. A close geographical pairing of one of Lacey’s hilltop and hill-slope enclosures with a prominent ecclesiastical site is noted elsewhere on Inishowen, with the pairing suggestive of working relationships between the secular and religious authorities of a terrain: Glenmakee with Carndonagh; Crockaughrim with Carrowmore; Doonmore with

Templemoyle; Crislaghmore with Fahan Mura. Carngarve and Cooley fit this pattern and we can now understand their pairing as the principal axis of authority, secular and religious, of the small early medieval territory of Bredagh

5. Gradiometry surveys at Carndonagh, Eskaheen and Cooley

By Jack Pennie and Geoffrey Taylor

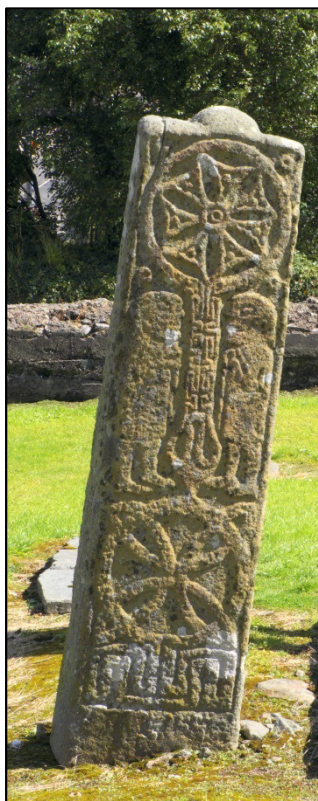
Licences obtained by Bernician Studies Group:

16R0151 Land owned by Mr Seamus McColgan at Drumanail, Eskaheen

16R0150 Land owned by Mr Pat Doherty at Churchland, Carndonagh

16R0152 Land owned by Capt Michael Hegarty, Cooley, Merville

5.1 Introduction and context



Gradiometry surveys were carried out at the above sites, extending the previous programmes carried out by BSG at Cooley, Carrowmore, Clonca and elsewhere on Inishowen. Carndonagh, the Patrician *Domnach Mor Magh Tóchuir*, has a high cross among a suite of carved stones, including the 'Marigold cross' (phot left) set within the graveyard of a post-Reformation church still in use. At Eshkaheen another ruined post-Reformation church stands within a graveyard part of whose boundaries have a suspiciously sub-circular form, which purports to include the grave of the legendary Éogain and a possible enclosure feature surrounding part of the graveyard. A so-called souterrain close by the ecclesiastical complex at Cooley was also made available for survey.

The Inishowen Dalriadan rocks belong to the two youngest Dalriadan Groups. The Argyll Group forms the NW part of the peninsula and consists of the sediments up to and including the Culdaff Limestone. To the southeast, the Southern Highland Group includes all of the Dalriadan rocks younger than the Limestone. The whole Inishowen sequence was laid down between about 650 and about 500 million years ago. All the rocks are metamorphosed to low or medium grade schists, quartzites and marble with numerous intrusions of metamorphosed dolerite. Carndonagh sits on two fault lines, one lying almost southerly in line of the Glentogher R240 road and the other between the schist around Lough Foyle and the limestone of Culdaff just east of

the spring line from the Culdaff limestone which runs along the R244 and R238. Eshkaheen sits on sloping, land overlooking Lough Foyle.

Fertile agricultural land slopes to the north of Lough Foyle extends across the international border toward the eastern shore of Northern Ireland, and into the mouth of the River Foyle towards Derry/Londonderry. Lough Foyle is a large (3,700 km²) tidal, shallow estuary that sits across the border between the Ireland/UK. The Lough has an extensive catchment basin and includes rivers that drain much of the mountain area of Donegal. There are fan and erosional meltwater channels linked to the ice withdrawal from the Ballycramsey ice limit in Trawbreaga bay. There is also an infiltration gallery on the raised beach north of Carndonagh. Both Carndonagh and Eshkaheen areas have a good covering of boulder clay up to a depth of 2 m. This even with early pre 20th C low-level ploughing generally preserves cut-surface archaeological features, despite agricultural works to improve drainage and increase fertility and friability. Only in areas where large-scale peat extraction or addition is seen does this affect Gradiometer readings. This large-scale interference can normally be seen in the relative heights of adjoining fields.

5.2 Carndonagh

5.2.1 Summary of results

Geophysical results in the 3 areas under investigation proved fruitful. In the field North of the present 'Donagh' Church, Field 1, two distinct negative anomalies forming parallel arcs have been identified, whose centres lie on or close to the Marigold cross in the Church yard. In the small, paddock to the East of the Church (Field 2) a trace of what looks like the outer circle can be discerned. Also in the corner of the field to the West of the Church (the Dairy Field 3) another small fragment was identified, although this may prove to be interference due to the closeness of the field access and other factors.

5.2.2 Context

Carndonagh's original Irish name, *Carn Domhnach*, means 'the burial mound of the church' and is home to an impressive high cross. An entry in the *Book of Armagh* suggests that a religious establishment was founded here, in 412, by St. Patrick, to which he appointed McCarthen, brother of the saint of Clogher, bishop, or abbot. Little beyond this legendary tradition is recorded about the origins or history of the monastery at Carndonagh. The Armagh entry is seen as politically motivated and propagandist. However, the occurrence of a 'Domnach' name, as at Moville, suggests the presence of a very early foundation. The cross, which is thought to date from the 7th century, was supposedly located on the grounds of a church. One of the several crosses that marked the limits of its sanctuary, only this one remains, the saint's supposed penitential bed and other relics having once been preserved here also. It is considered one of the most important early Christian sites in Ireland and is still a place of pilgrimage on St. Patrick's Day.

Protestant congregations have existed in the Carndonagh area since at least 1692 and it seems likely that they requisitioned the site of the earlier church to build their own. The present church building is a small neat edifice, erected in 1769 and improved in 1812, but retaining both the Marigold cross in the Graveyard and the St Patrick High Cross. However, the original location of the high cross has been lost: it is known to have been moved on at least two occasions since 1886. The earliest known location identified from local photographs would now lie in the middle of Church Rd, just east of the edge of the graveyard. It is not entirely implausible that this was its original position: it may be that the purpose of such crosses was to guide pilgrims and travelers safely across bog land. Since to the east of the church there is a need to cross the Glentogher River and its flood plain, this may have provided the marker for any causeway. It was moved to a new spot a few yards further north and east in the 1930s by the side of the then road. However, in the 1960s a road widening scheme led to its removal once more and after some political wrangling it now stands beneath a shelter, flanked by two smaller 'pillar stones', themselves of considerable art historical interest.

It is worth noting that although the main R238 Church Rd has been improved on two occasions, the logical line of the road that would cut off the corner across from the church has not been followed. Indeed, when coming from the north the road veers slightly to the west away from the shortest line and then makes a difficult junction with the R244. If it was to have taken the more logical route then any sign of the monastic precinct ditch would probably have been lost.

5.2.3 Methodology

Geophysical surveying using a Geoplot FM256 Fluxgate Gradiometer was carried out in 3 separate areas determined by their availability, commencing in the field (1) North of the Church across Church Road. 20 m X 20 m grids were aligned along a base line running N-S and E-W. This required partial grid surveying and some extra data editing to eliminate the interference from fencing as well as the occasional error in procedures. Both raw data and wire mesh plots are shown below as Figures 13-15; the images shown below have been subject to limited processing, correcting faulty grids, eliminating noise from obstacles such as metal fencing, and clipped with a mean grid traverse applied.

The FM256 gradiometer was set at a sensitivity of at 0.1Nt. Grids were surveyed in NS aligned passes with a 50 cm separation and at a sample rate of 8 readings per metre, giving (8X20X20X20 =) 6,400 reading per 20 m grid. We used the same methodology for all of the surveyed areas.

5.2.4 Results (see Figure 11)

Clear parallel anomalies were detected in Field 1, forming an arc whose centre would coincide with the site of the church. In Figure 11 a 100 m circular highlight has been

imposed for reference, to give scale. Anomalies consistent with the return of the arc in Fields 2 and 3 were detected, although the limits of their interpretation are evident.

There can be little doubt that a double circular enclosure, of form similar to those previously identified at Carrowmore, Cooley and Clonca on Inishowen, existed at Carndonagh, raising the status of the sculptural remains here to match its historical status as the mother church of the *Magh Tochúir*. By comparison, the double circle at Cooley is more than 150 m in diameter.



Figure 11: The Carndonagh complex with gradiometry plots superimposed and for scale, a 100m diameter highlight

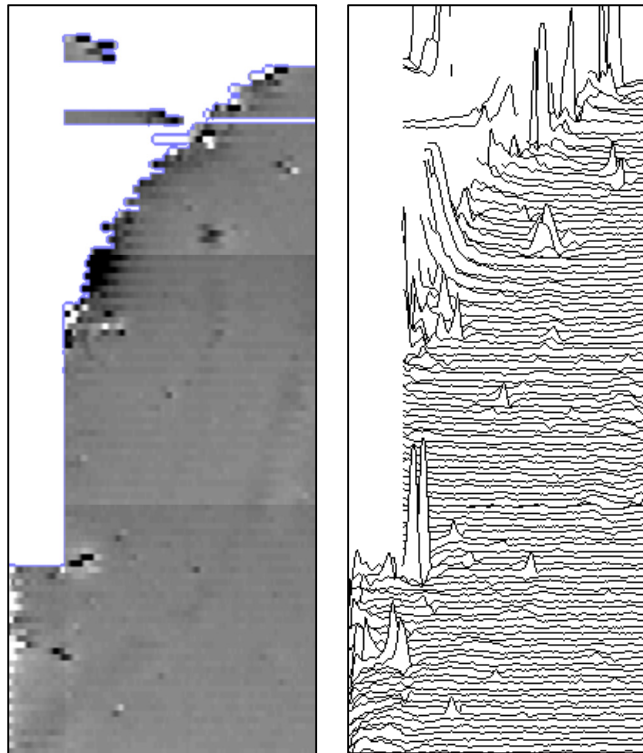


Figure 12: Raw data and wire mesh plots of survey in Field 1, with North at the right.

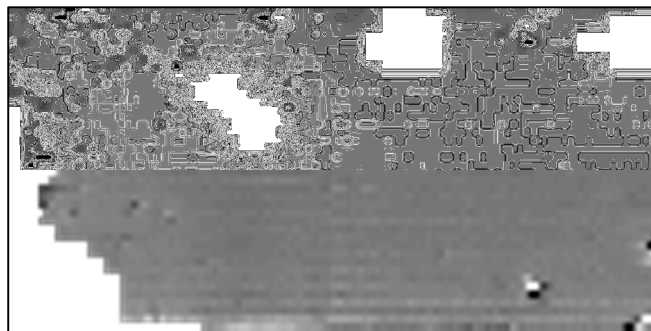
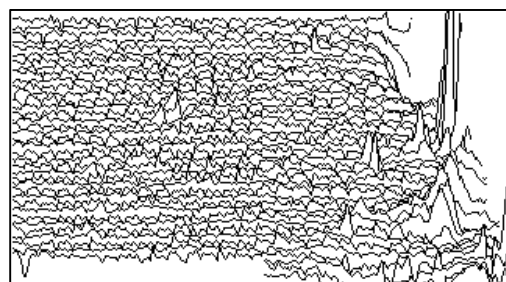
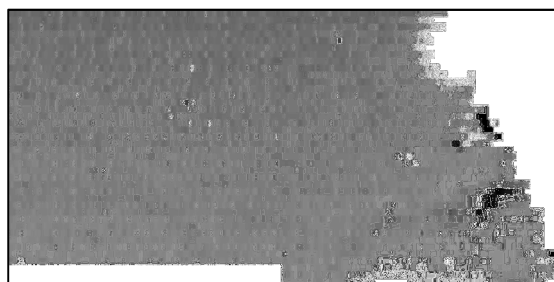
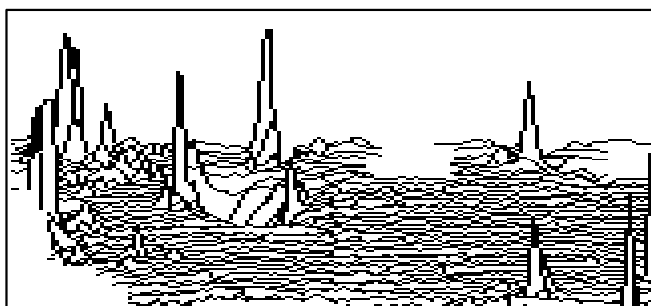


Figure 13: Raw data and wire mesh plots of survey in Field 2, with north to the right; and, below, Figure 14: Field 3, with north to the right



5.3 Eskaheen

5.3.1 Summary of results

A limited area of potential survey was identified SW of the churchyard. It nevertheless produced results which showed that a possible double arc whose centre would include part of the churchyard survives in a field which has been heavily disturbed by agricultural activity. Further possible areas for future gradiometry have been identified

5.3.2 Context

At Eshkaheen it was noted that the land had been improved and the landowner and farmer also confirmed that modern ploughing for both potatoes and barley had taken place in recent years.

St. Patrick's Church and Churchyard are in the parish of Eskaheen and upper Merville, about 2 miles north-west of the village of Muff, County Donegal, Ireland. The remains of a 17th-Century church and graveyard is partially encircled by a bank to the East. Access to this and most of the surrounding area is limited by modern building and roads. We were able to undertake geophysics in a field to the north-west of the churchyard.

5.3.2 Methodology

Geophysical surveying using a Geoplot FM256 Fluxgate Gradiometer commenced in the field (1) West of the Old Church and West of the current church across the road. The 2 areas immediately to the east of both the old and new churches are car park areas and although accessible they had hard surfaces that had been leveled. It was felt if anything remained of the monastic site it was likely to be in the southeast corner of field 1 close to the junction of the roads. In accordance with our standard procedure 20 m X 20 m grids were aligned along a base line running N-S and E-W. This required partial grid surveying and some extra data editing to eliminate the interference from fencing. The FM256 gradiometer was set up as for Carndonagh.

5.3.3 Results

The image (Figure 16, below) shows Field 1; at the bottom left is the field edge overlooking the farm house with its barbed wire fencing and on the bottom left is the edge next to the road which heads roughly North from the site. The two high reading points to the left of the image are metal/concrete drain covers, the high point closer to the right hand edge seems to be another random metal object. However, there is a ditch outlined arching from just below the two high points down to the right and bottom of the image. This is not on the anticipated alignment, predicted from the alignment of the graveyard south wall and highlighted on Figure 16, but it is still a possible ditch associated with a monastic enclosure. It would have an approximate 60-m diameter, centered on the road just outside the graveyard entrance. The field to the south-east of the surveyed area, under the same

ownership, was unavailable for survey, but may be available in future seasons. There is a possibility that the extended arc of the putative enclosure might be detected here.



Figure 16: The church and survey area at Iskaheen.

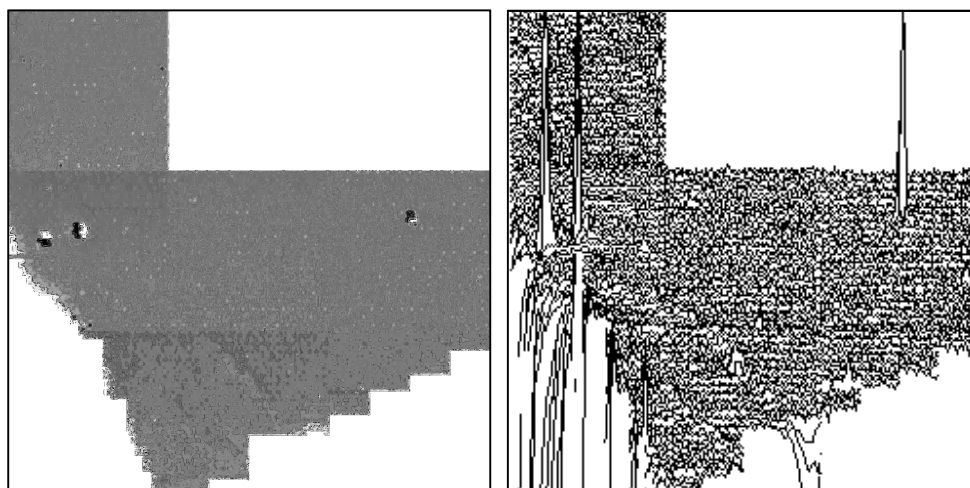


Figure 17: Raw data and wire mesh plots of the survey area in Field 1. North is to the right.

5.4 The Cooley 'Souterrain'

Geophysical results from the Cooley 'souterrain', which lies at the rear of the property owned by Capt Hegarty, about 200 m NW of the graveyard at Cooley, were negative. Visual inspection of three rectangular interconnected chambers separated by door frames, by Brian Lafferty, indicates that they were rock-cut, probably of Post-medieval date. The chambers are not deemed sufficiently stable to allow further, safe recording to be carried out in the near future.

6. The Parochial House inscribed cross slab

Held in the Parochial House in Moville is a ring-headed cross carved on stone slab, found in the townland of Glennagiveny.

The cross is carved on a slab of fine-grained sedimentary stone, light brown in colour, length 624 mm, width varies between 164 mm and 156 mm and tapers off towards the base, thickness approx. 80 mm. The top is flat, rounding gently into the corners, with a small area of damage top left; the left side is straight, the right slightly wavy; the foot is curved; the edges rounded. The upper face is smooth, though with some pitting and flaking now showing mid-length. The bottom 200 mm or so, below the base of the cross, was left rougher; presumably this part was to have been set in the ground. The cross stands in relief and is finely carved. A groove cut into the surface around the ring and along the side and top arms articulates the shape in a double-headed form, inner and outer. This gives the relief particularly strong definition. On the lower limb, immediately below its intersection with the ring, the inner form stands proud of the outer sides, gradually merging down to form a single broad shaft that terminates in a squared base. This skeuomorphic element, referring to a shaft mortised into a slot in a base stone, had been noted also on a cross-marked grave slab in the Cooley cemetery. A small hole drilled into the surface of the stone just below the cross base seems to be a secondary feature, perhaps to take a support for suspending some ornament from the stone.

The first record of this cross is in the field notes of Mabel Colhoun. In her posthumously published study of 1995, the following note is given; the date of the original field record is not presently known, and hence we cannot determine a date of discovery from the description 'some ten years ago'.

No 13/5 (2) Small cross slab:

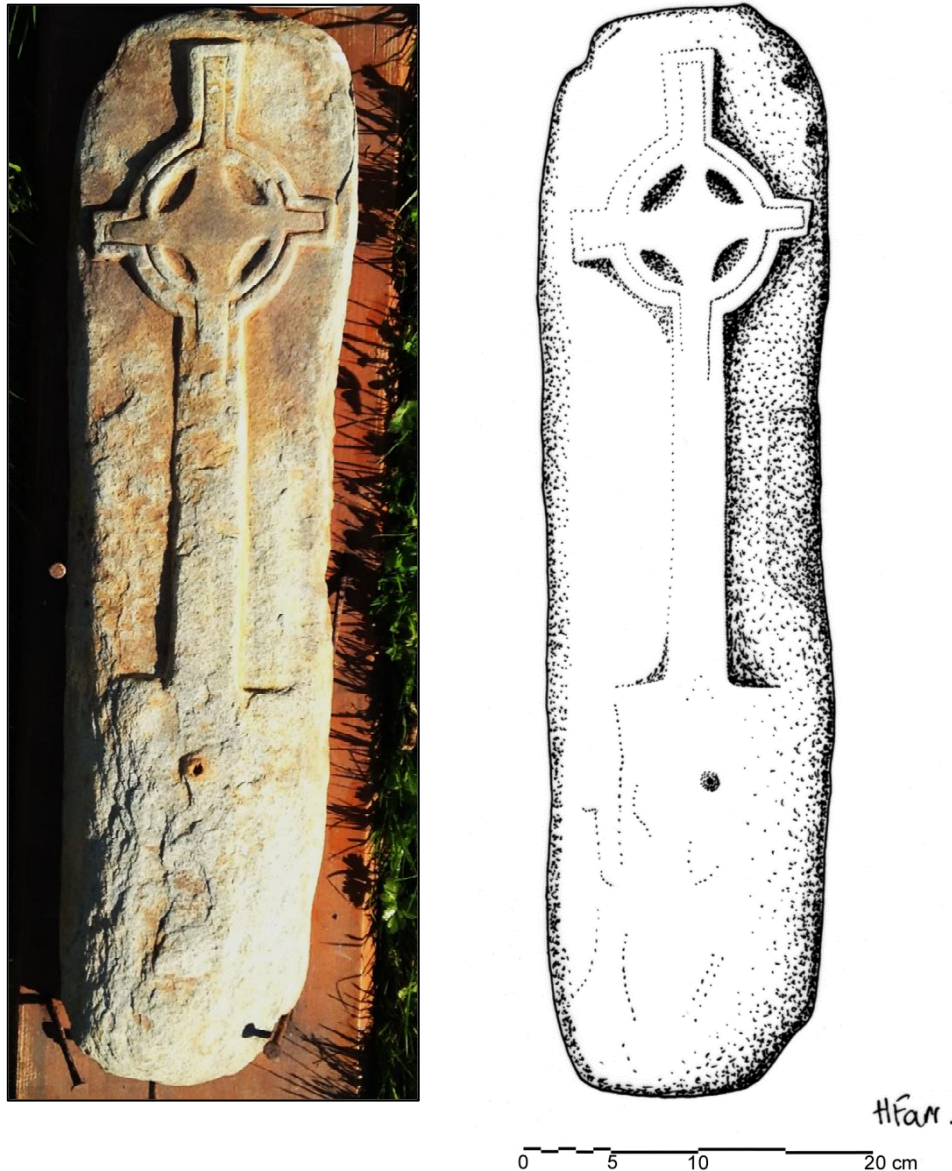
This beautifully shaped stone with a carved wheel cross was found some ten years ago while getting stone for a 10ft. deep drain, by a man called McLaughlin. It was down by the shore to the E. of the river at the foot of the glen, "the brew (bank) would have fallen on it". It is now in the possession of Mr T O'Kane, Moville (N.T. at Bredagh Glen School) who has full

details. [Later note: Mr O'Kane has died and the cross is now (1973) at the Parochial House, Moville].

A photograph of the cross is shown as Plate 4(c), but glare from the lighting obscures some of the detail, in particular the squared base at the foot of the shaft, and so this report, with the photograph and drawing, is the first record of this feature.

The description 'down by the shore' and the suggestion that an embankment had collapsed on to it suggest that it had fallen from an eroding scarp edge above the beach. The National Monuments Service record DG013-003002 shows a grid reference of 6378 4547 as the find spot, in the setting of a ringfort (DG013-003001), where it 'is said to have been found on the NE edge of the enclosure'. This is behind the eroding scarp edge, and thus inconsistent with Colhoun's description.

Some uncertainty on the whereabouts of this cross slab has been expressed by local informants, saying that it had been displayed within the church of St Pius X in Moville but had some time ago been removed. There is no doubt, however, that this is the cross slab Mabel Colhoun described. It is now held in the Parochial House, under the watchful eye of Fr Patrick McGoldrick, to whom our thanks are due for enabling us to take photographs and, for the first time, to make a measured drawing.



Figures 18 and 19: Photograph of the cross by Colm O'Brien; drawing by Harriet Farr

7: Dissemination: The Lands of Éogain Lecture and Inishowen Archaeological Heritage Festival

For the second year in succession, the Bernician Studies Group and the Lands of Éogain Group presented a conference for public dissemination of findings from archaeological research. It was held in the Colgan Hall, Carndonagh on Friday and Saturday 19-20 August 2016. The title of the event was 'Inishowen, Iona and Beyond: Early Christian Connections'. The keynote lecture, the second Lands of Éogain Lecture, was given on Friday evening by Dr Ewan Campbell of the University of Glasgow: *Columba's Iona: new perspectives on the archaeology of the early monastery*. Six contributions followed on Saturday, exploring aspects of the main theme, with speakers from Ireland, Scotland, and England. Colm O'Brien, *Early Christian sites of Inishowen: current research*; Dr Brian Lacey, *The early stone*

crosses of Donegal: the Scottish connections?; Dr Adrian Maldonado, *Whithorn in Context: Early Christian networking in the Irish Sea zone*; Bruce Clark, *Joyful Pilgrimages: To Iona from 563 to 1963 and beyond*; Dr Cecily Spall, *Heirs and Graces: the inheritance and legacy of the monastic estate at Pictish Portmahomack*; Max Adams, *Lindisfarne, Iona's Northumbrian Offshoot*. Poster and table displays were presented of projects by heritage groups on Inishowen and, in one case, by an Inishowen school girl. Our thanks are due to Jeanette Longwill and to the managing committee of Colgan Hall.

Through the good offices of Ursula Cutliffe of the County library service, Max Adams and Colm O'Brien gave a public presentation on the current season's work in Carndonagh Library on the evening of 25 August.

Excavation and survey teams

Research and training directors

Colm O'Brien
Max Adams

Training supervisors

Deb Haycock (excavation)
Jack Pennie (geophysics)

Bernician Studies Group

Sara Anderson
Matilda Bevan
Sandra Richardson
Joy Rutter
Geoff Taylor
Sue Ward
Donal Donnelly-Wood

Newcastle University students

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Paul Clarke
Jenny Rowe
Harriet Farr
Beth Graley
Emily Marshall-Nicholls
Zara Walwyn
Tom Steventon

Cooley graveyard Heritage Committee

Martin Hopkins
Brian Lafferty

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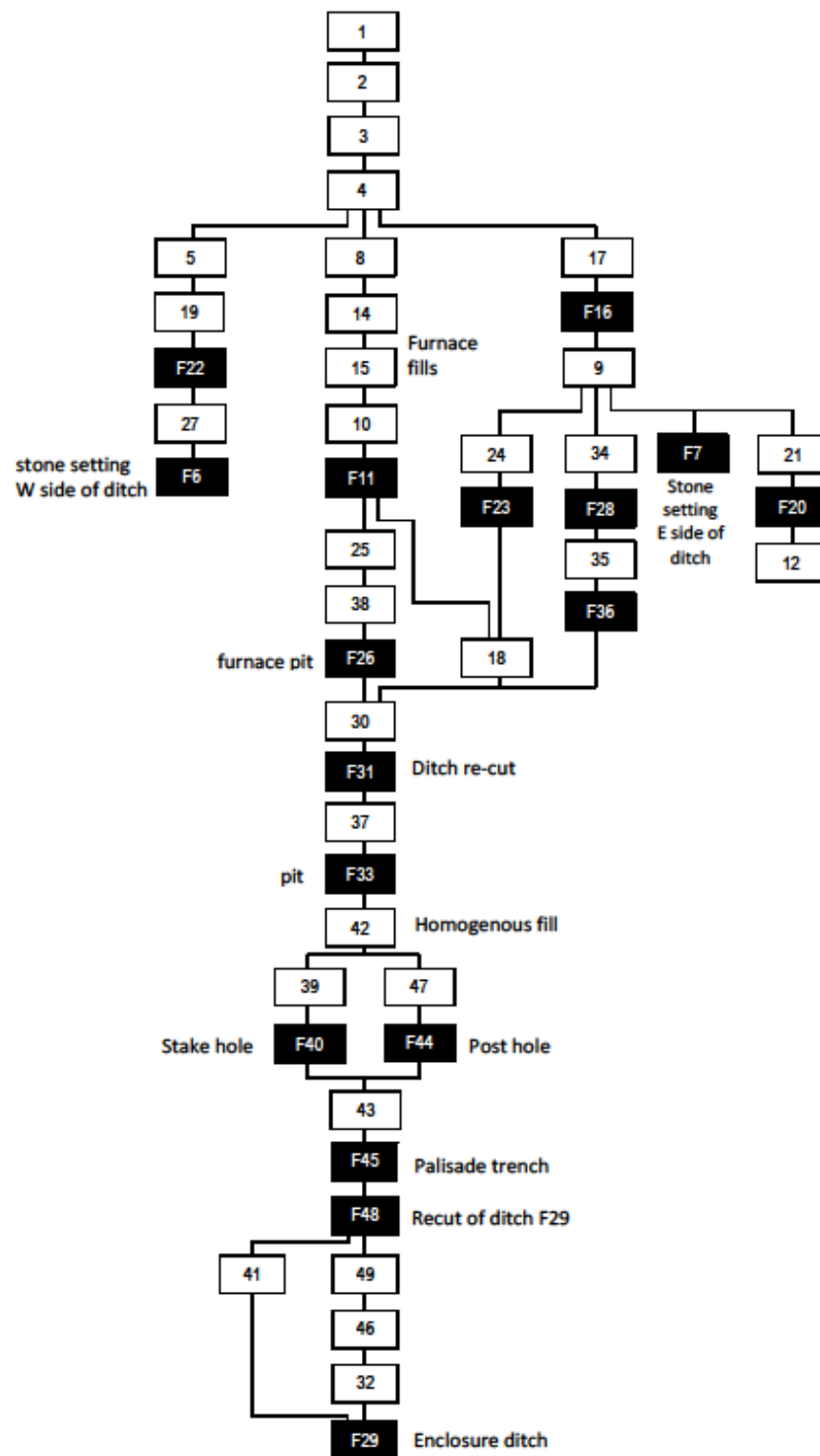


Figure 6: Stratigraphic sequence, evaluation trench

