EARLY ECCLESIASTICAL PRECINCTS AND LANDSCAPES OF INISHOWEN: INTERIM REPORT OF FIELD WORK BY THE BERNICIAN STUDIES GROUP 2012 - 2014

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Summary of Findings
A programme of fieldwork in 2012 – 2014 by the Bernician Studies Group, under the direction of the authors, has demonstrated dramatically the archaeological potential of Early Medieval ecclesiastical landscapes on the Inishowen peninsula of County Donegal in the Irish Republic:

- Three magnetometry surveys have identified double-circle precincts at Carrowmore, Clonca and Cooley (Moville) in pasture around now-disused graveyards and in association with still-standing high crosses.

- The survey results establish convincing contexts for these high crosses in relation to the ecclesiastical topography at each of these sites.

- Two trial trenches at Carrowmore yielded detailed stratigraphic sequences in both enclosure ditches (shughs) along with finds which included pottery, gaming counters and metal-working debris.

- Calibrated C14 dates from ditch fills and a hearth sealing the fill sequence show a range from the 6th to the 12th centuries.

- Magnetometry survey of the ringfort at Gorey showed evidence of structures within and also of features beyond the ramparts.

- Evaluation of the alluvial sediments and peat deposits along the basin of the Culdaff River shows that a credible, dateable sequence of environmental events in the Holocene evolution of the landscape may be capable of reconstruction.

This document discusses the context and provides an interim report of these findings.

Inishowen and the Cenél nÉogain

In the early medieval period, Inishowen (Fig 1) was the locus of a small kingdom, the homeland territory of Cenél nÉogain and its ruling dynasty which emerged in the 5th and 6th centuries, and the centre from which this polity expanded its influence beyond the peninsula in the 7th and 8th centuries to become the dominant entity in the region. (Lacey 2006, 105-120). Inishowen thus offers a testbed within which to examine the dynamics of an emerging and expanding polity in interplay between geographical space and organisational structures.

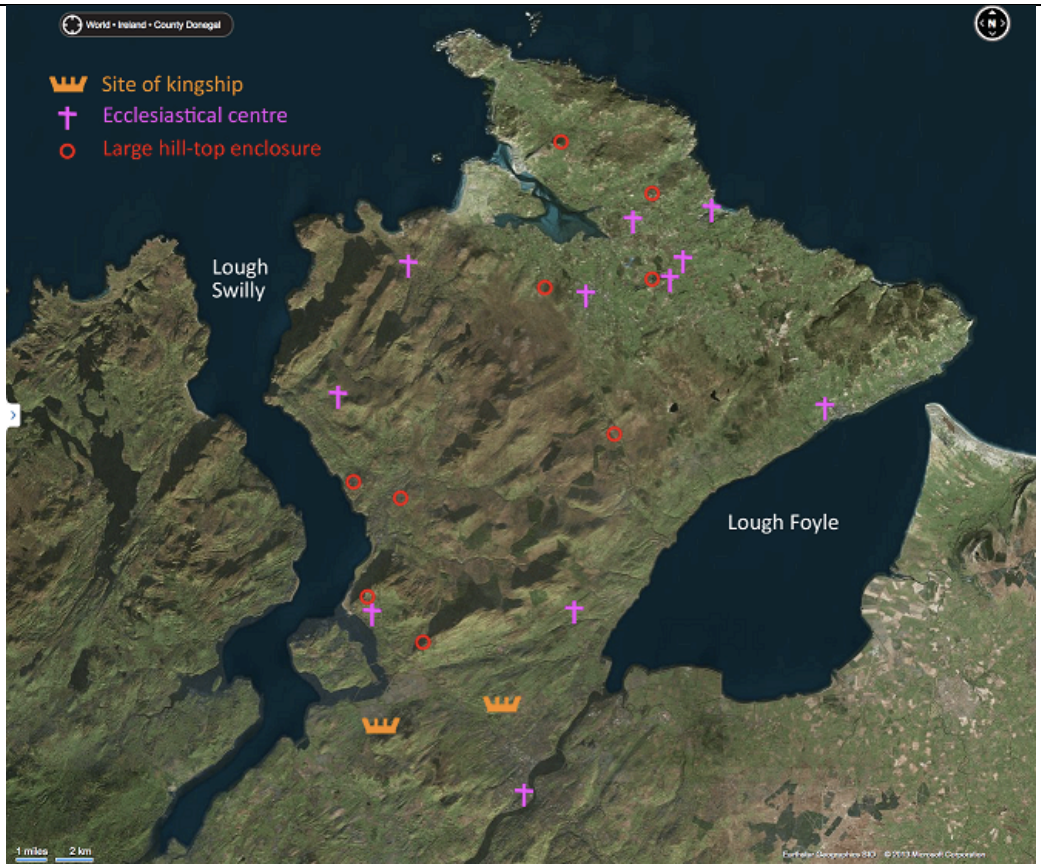

Fig 1: The Inishowen Peninsula

The landscape of *Magh Tóchuir* (Fig 2)

The land in the north of Inishowen, around Trawbreaga Bay and with Carndonagh now as its principal town, is the sort of land unit, fertile, productive and to some extent self-contained, which the historical geographer Brian Roberts from studies in Northumbria has characterized as a 'cultural coreland' (Roberts 2010). These are lands used and warmed by cultivation over long periods which, in the early medieval era, emerged as small economic and political units in their own right. In the north-east of England the river basins of the Tweed, Tyne and Tees are examples; in the south-west the Severn basin is cited as the core of the Hwicce; and so on. These are the cores of emerging Anglo-Saxon kingdoms, corresponding in some cases in Britain with Romano-British *civitates*. In Ireland, the topographic term for such corelands is the Magh, or fertile plain. The Trawbreaga Bay area of Inishowen is identified as *Magh Tóchuir*, the Plain of the Causeway, a coherent territorial unit or sub-kingdom, comparable to the Northumbrian sub-kingdom of Bernicia.

For an Early Christian imprint on the landscape of *Magh Tóchuir*, attention focuses on five ecclesiastical centres set in a ring around the eastern, inland edge of Trawbreaga Bay. Templemoyle, at the base of the Malin sub-peninsula, and working clockwise, Culdaff at the estuary of the Culdaff River, Clonca, Carrowmore, and finally Carndonagh (*Domnach Mor Magh Tóchuir)* at the foot of the valley and the roadway leading down through Glen Tochair. High crosses stand at Carndonagh, Carrowmore and Clonca, (Harbison 1992, I. 32, 33, 44-5) in topographical settings similar to those of many of the prehistoric stone features, that is at boundaries between contoured land and the flat terrain fringing the bay. All five sites are, in landscape terms, edge places, and some are also close to high status secular sites.

A set of large stone enclosures on hilltop or hill-slope settings suggests something of the context of elite secular centres existing alongside the ecclesiastical. Lacey (2009) has identified this site type with nine examples on Inishowen which, while allowing for scant firm information on chronology, might be understood as defensive or monitoring structures operating within the political and military geography of the early medieval period. If so, then a ring of four around Trawbreaga Bay, adds further evidence to the status of *Magh Tóchuir*.

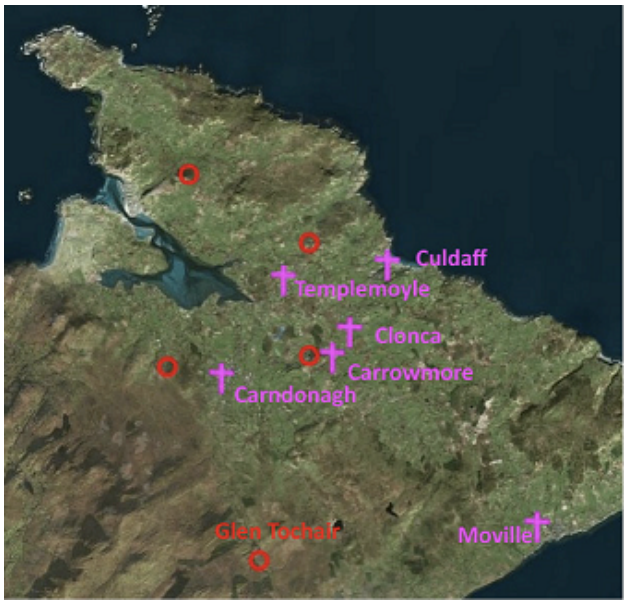

Fig 2: *Magh Tóchuir*

These are Crockraw and Doonmore Hills on the Malin peninsula, with Crockaughrim and Glenmakee overlooking the bay from the south. Associated with these, some way south, is Glentogher, sited on the watershed at the head of the valley leading down to Carndonagh, the gateway into *Magh Tóchuir*. The close geographical proximity of Doonmore to Templemoyle, Crockaughrim to Carrowmore, and Glenmakee to Carndonagh reflects the dynastic status of Carrowmore in suggesting integration between secular and ecclesiastical power. By contrast, Crockraw, in the middle of the Malin peninsula, appears isolated, with no known ecclesiastical centre nearby. But the townland of Drong, which occupies a spur of the hill south-west of the enclosure and reaches down to the edge of Trawbreaga Bay, has been identified as a place of assembly (Gleeson forthcoming) and this may be the reason for the enclosure on Crockraw Hill.

Project Methods

The aim of the Bernician Studies Group since 2011 has been to develop an understanding of the *Magh Tóchuir* and its ecclesiastical landscapes as a cultural coreland using three inter-connecting scales of analysis:

1. wide-terrain, desk-based analysis of the peninsula from archaeological data bases;
2. townland-scale landscape assessment from maps and field reconnaissance;
3. site-specific field investigations.

In 2011 the ground-evaluation phase of the project for site-specific analysis identified geophysical prospection as a key tool in a pasture-dominated landscape, to place the upstanding field monuments in a convincing economic, geomorphological and historic context.

In 2012 the group demonstrated the effectiveness of this approach by identifying through magnetometry survey the extent and nature of the early ecclesiastical enclosure at Carrowmore, identified as the location of *Both Chonais* (Lacey 2010),

and evaluating the environs of the ringfort at Gorey whilst developing an increasing understanding of its landscape context by close field observation and by identifying key loci for future environmental and archaeological field study.

In 2013 the group evaluated in a test excavation features identified in the magnetometry survey at Carrowmore; extended the magnetometry element of the project to the neighbouring ecclesiastical centre of Clonca; and collaborated with Dr Richard Tipping of the University of Stirling in a field appraisal of the geomorphological setting of Carrowmore and Clonca within the valley of the Culdaff River.

In 2014 the group carried out magnetometry survey and graveyard recording at the ecclesiastical centre of Cooley, close to Moville (identified in Patrician literature as *Domnach Bile*)

1: Carrowmore

Carrowmore occupies a position on the lower slope of a hill with a peak at 90 metres above sea level, immediately above the alluvial deposits by the confluence of the Carrowmore and Gleneely Rivers. A minor road runs through the former ecclesiastical complex which is represented in the landscape now by a high cross on each side of the road; a disused graveyard occupies a rectangular area defined by low earthen embankments west of the road.

Magnetometry Survey

The group conducted a magnetometry survey with a Geoscan FM36 Fluxgate Gradiometer set at 0.1NT at intervals of 1m X 0.25m parallel traverse of 20m X 20m grids and processed using Geoplot 3.0 software (Fig 3). This has revealed for the first time clear evidence of a double-circle precinct, with diameters of some 115m and 60m. The outer circle is truncated on its west side by an eroding river cliff and extends east of the modern road; the east side of the inner circle is clipped by the road. A gap of some 10m wide in the north-east quadrant of the outer circle appears to mark an entrance. Small anomalies occur just outside of the putative entrance, indicating possible post-hole structures. A faint arc visible as a very weak anomaly immediately south-east of the high cross might reflect a prehistoric or early medieval enclosure. In the north-west quadrant, the alignment of the outer circle appears to be displaced to the north. This is a distortion of the result attributable to a steep slope down on the alluvium. Two sets of anomalies occur beyond the outer ditch, to the south-west.

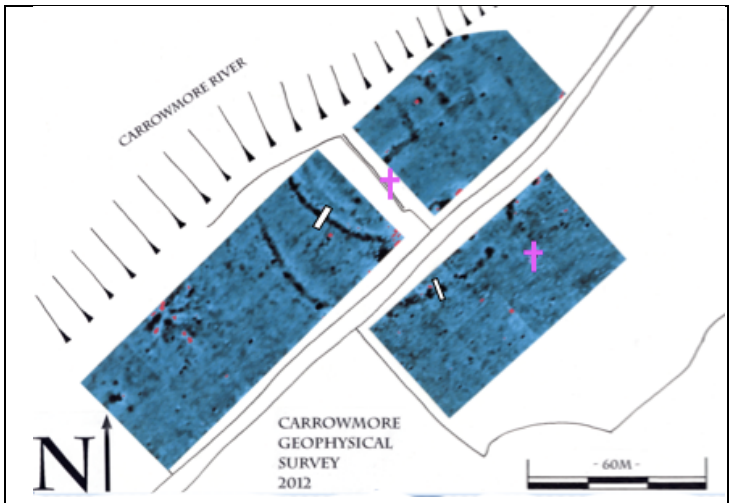

Fig 3 Carrowmore magnetometry survey, with positions of excavation trenches and high crosses.

This survey plan offers a convincing context for the two high crosses whose positions, in the modern fieldscape have until now made little evident sense. The east cross as we can now see it, stands some 15 metres directly outside what we interpret as the main entrance through the outer precinct boundary, and the west cross is sited almost in the centre of the inner precinct. This has profound implications for interpreting the site as a whole: that the enclosures and crosses are contemporary and connected as elements of a coherent complex; that the crosses have stood on their present sites since the period of use of this complex; and that the location of *Both Chonais* is now confirmed and its form precisely defined. Structural evidence within the precincts is limited on account of the graveyard and its associated features which occupy a large proportion of the inner precinct, and on account of the limitations imposed on the magnetometry survey by metal-fenced field boundaries and the road; but the test excavations have shown that that both earth-cut and laid-stone features survive on the site beneath old ploughsoils.

Trial Excavation

The group opened a trench of 2 metres by 10 metres across each of the two precinct boundaries to evaluate the quality of survival of archaeological deposits. The outer boundary ditch (Fig 4) was tested east of the road. It proved to be of 'u'-shaped profile, 3.6 metres wide at the top and greater than 1.6 metres deep below the present ground surface. (Safety considerations prevented excavation to its full depth.) The primary fills suggest natural silting of an open cut, but large boulders occupied the middle reaches of the fills, possibly from the collapse or slighting of a revetment or retaining wall. A thin turfy layer above the primary fills has yielded a calibrated radiocarbon date of AD670-870. A stone-lined hearth with laminations of ash, burnt soil and charcoal, and containing ferrous slag derived from small-scale iron working was placed on the top of the ditch fills. This feature provided a calibrated radiocarbon date of AD1030-1160, effectively a *terminus ante quem* for the whole ditch sequence.

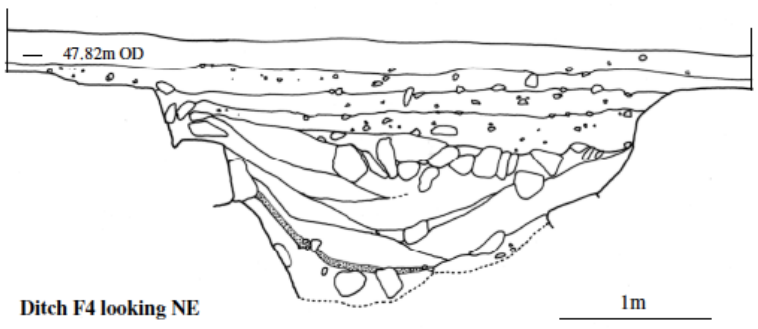

Fig 4 Section through outer precinct ditch

The inner boundary was tested by excavation on the south side, west of the road. This had an ankle-breaking 'V' profile, some 2 metres wide at the top and cut to a depth of 1.55 metres below modern ground surface (Fig 5). Primary fills were again from natural silting, with organic matter in the middle zones. The ditch was then re-cut and its first subsequent fill yielded a calibrated radiocarbon date of AD590-660; the next zone of fills included stone rubble, metalworking debris and a set of small, round pebbles, probably gaming counters, in what seems to be deliberate deposition. A revetment was set back from its inner edge, with linear cut-features and stakeholes in between. When the ditch was fully filled, it was covered over as part of a more extensive cobbled surface.

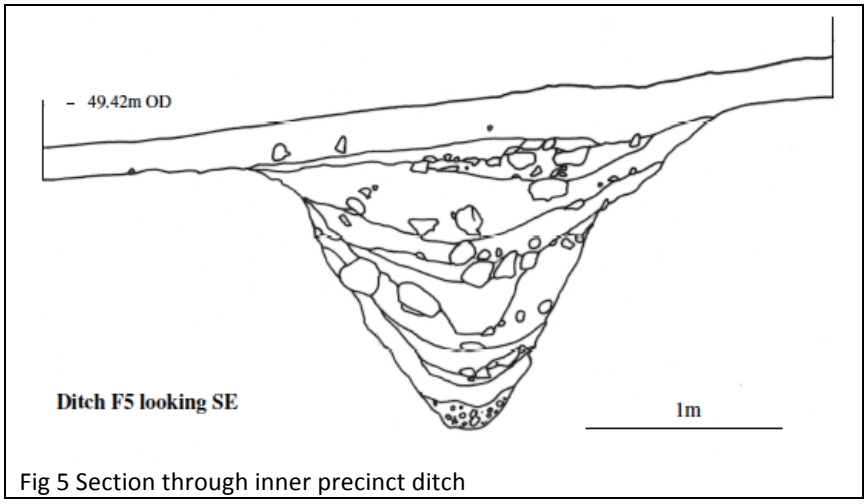

Fig 5 Section through inner precinct ditch

2: Gorey Ringfort

In accordance with an aim of understanding the ecclesiastical precincts within a wider context of secular settlement, we selected for geophysical survey the ringfort of Gorey at the edge of the Carrowmore townland, on a prominent knoll on the south bank of the Culdaff River. South of the ringfort is a second, lower knoll, with a saddle in between the two. To place the ringfort in its immediate topographical setting, we extended the survey area on to the second knoll and the saddle in between.

Survey, to the same standards and with the same equipment as used at Carrowmore, of an area (Fig 6) within the ringfort yielded clear evidence of a rectilinear structure aligned north-east to south-west and apparently defined by parallel ditches. There is just sufficient detail on the plot to show that other structural or earthwork features survive, although determining their nature is not possible without either excavation or more detailed survey with a resistivity metre. It is possible that the magnetic anomalies shown on the survey reflect not the outline of a domestic building but features defining a garth.

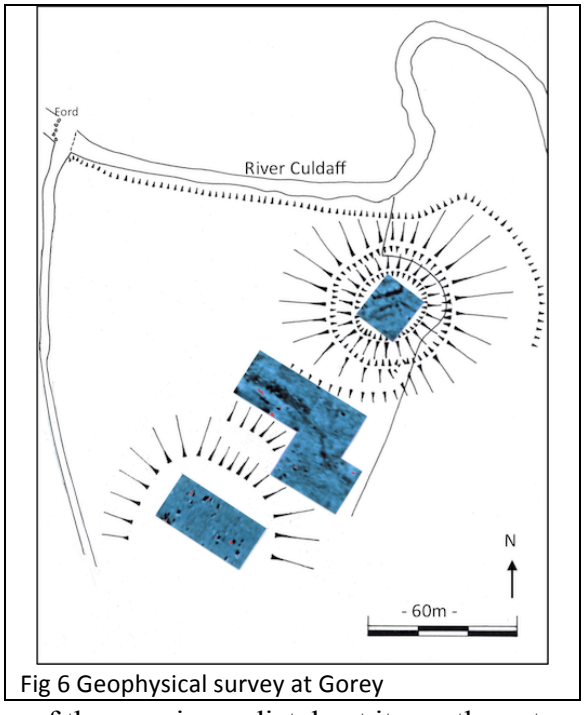

Fig 6 Geophysical survey at Gorey

The survey of the saddle produced a broad anomaly some 5m across at its widest, which traced the north-east contours of the spur immediately at its north-east foot. It appears to be earth-cut by human agency and not natural but is irregular in width and ill-defined compared to what one might expect from a spade-cut ditch. It was possibly a formal means of delineating or protecting the hilltop enclosure but this needs to be tested in further investigation.

The partial survey of the southern knoll produced faint but still evident traces of a rectilinear structure which can be interpreted as a building. It is aligned in the same orientation as the feature in the enclosure and is of dimensions which suggest a substantial house or agricultural building, almost 20m in length. Its relation to the structure in the ringfort can only be a matter of speculation without further work.

3: Clonca

A ruined church and graveyard, with a still-standing high cross close by, along with a base and a fragment of the head of another cross lying on the ground, mark the site of the ecclesiastical complex of Clonca on the edge of a plateau above the north edge of a former bog on the valley floor of the Culdaff River.

We conducted the survey with a Geoscan FM256 fluxgate gradiometer at a high resolution of 0.1NT at intervals of 0.25m X 0.5m on a nonparallel traverse of rectangular grids, and processed using Geoplot 3 software. Suffice it to say that a dramatic and complex palimpsest of features exists on all sides of the graveyard and ruined chapel, (Fig 7), including possible prehistoric cattle-management enclosures, stone walls and droveways.

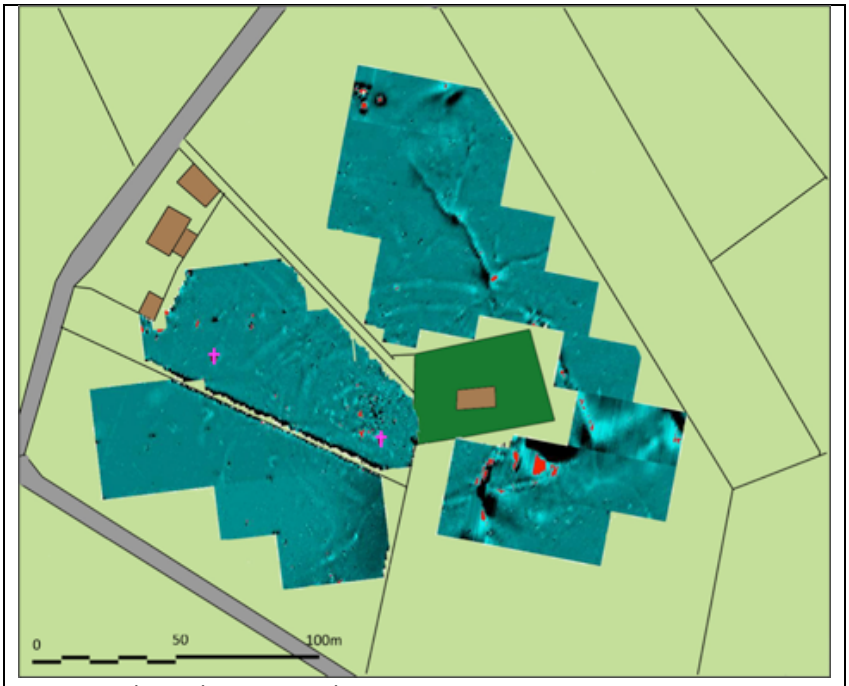

Fig 7 Geophysical Survey at Clonca

On its south and east sides, the graveyard appears once to have occupied a more extensive area. In an arc around the graveyard, from north, to the west and south-west sides, at the edge of the plateau of land, where the downslope to the valley floor begins, are the outlines of a double circle with diameters of some 80 and 95 metres. This looks like a precinct similar to that at Carrowmore, but in a much more complex landscape setting, for it seems that another double-ditched feature merges with this north-west of the graveyard and around the point at which it merges with the circular ring, a double linear feature runs north-west, parallel to the field boundary. One might suggest that these features are from droveways to manage the movement of livestock between the valley floor and the plateau land. North of the graveyard, and intersecting with the outer ring in a way which cannot be defined from the geophysics alone, are somewhat irregular linear features, one seeming to lead north to a tear-shaped enclosure. Areas of high magnetic anomaly could indicate metalworking. The standing high cross is well within the inner circle and in an area with a great density of small features,

possibly graves, which seem to be set within a small single-ditch enclosure with a west-facing entrance.

There is sufficient complexity here to warrant further, more detailed and more extensive survey. Equally, there is scope for evaluative excavation to determine the nature, date and vulnerability of the sub-surface features identified here. However, the picture here is not so straightforward as it seems to be at Carrowmore; and it begs the questions whether any excavation on a small scale would not merely serve to confuse interpretation. Whatever we are to make of these features, the richness and complexity of detail revealed in the geophysics warn against single-phase and mono-functional interpretations.

4: Geomorphological Appraisal

Dr Richard Tipping of Stirling University carried out a geomorphological appraisal of the Culdaff river basin, with a particular focus on later Holocene landforms and sediments. The deposition of fluvial sediment is one of the best measures of the intensity with which a landscape is being used. Soil erosion develops with the removal of a tree cover, and particularly with the creation of bare ground with arable farming. Two transects of hand-augured boreholes describe these sediments, at Clonca Cluain Catha and 1.5km upstream opposite Gorey Fort. Consistent changes observed, tentative at present, well illustrate the complexity and dynamics of this landscape. Alluvial sediments, currently dated with reference to the marine-estuarine clay, seem to have been deposited post-c. 6000-4000 cal BP, related to post-Mesolithic farming landscapes. At Clonca Cluain Clath the accumulation of younger sediment fills is associated with the occurrence of large charcoal fragments to an unusual extent. This could be from woodland clearance and soil instability through burning and could also be linked also to natural changes in climate,

These fluvial sediments continue to form at the present day. In several stream-bank exposures the floodplain appears to be very recent indeed. Somewhere in this sequence must be the early Christian period, and the need is to construct a chronology of fluvial change to find it. It may have been a period of comparative geomorphological quiescence, or through monastic endeavour, highly dynamic and constantly changing. A second-stage investigation to achieve radiocarbon dating of sediments is now needed in order to define a project addressing the monastic landscape.

5: Cooley

A 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, 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 ecclesiastical complex of *Domnach Bile*.

Geophysical survey used the same instrument and software as used at Cooley, with a setting of 0.1NT at intervals of 0.125m X 0.5m on a non-parallel traverse of 20m x 20m grids. (Fig 8) An arc of a circle curves around the east (right hand) edge of the graveyard and continues left in a loop around the top of the survey area. Beyond this

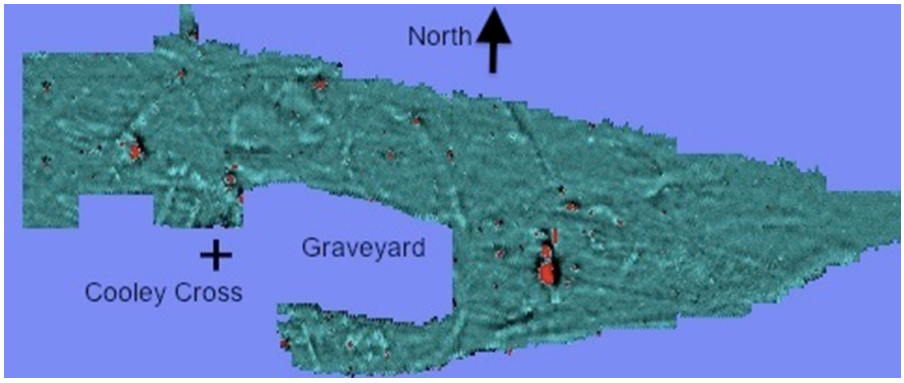

Fig 8 Geophysical survey at Cooley

arc, further east of the graveyard, is a second arc, concentric with the first. We have but a short length of this and the feature continues north and south beyond the survey area. The inner arc describes a circle of some 85 metres diameter, and if the outer arc also forms a circle, its diameter would be 100 – 110 metres. 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 diagram) are likely to show the sites of small-scale industrial processes. Two prominent patches are 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, 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. The 2014 survey covers a complete field, some 250 metres west to east, with the outer precinct extending beyond the survey area. The group hopes to return and extend the survey into the neighbouring fields in 2015.

Within the graveyard, the group has begun a survey of the grave marker stones, plotting their positions to high accuracy with a Total Station survey. This survey is not yet complete, but already it shows that the apparent jumble of stones resolves out into head and foot markers of graves arranged in rows. The date range of these graves is unknown but some points of sequence though 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 north edge; graves are more tightly packed towards the east end, 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.

The group 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 bottom end of the cross shaft, and one in which the shaft appears to be set into a base stone.

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. The group hopes to continue this work in 2015.

6: Conclusions

At the site-specific scale, we are now in a position, as a result of this project work, to propose a characterising of the form of early Christian sites on Inishowen in broad terms: a bounded double-circle precinct whose innermost zone is marked with a monumental cross and possibly a saint's tomb-shrine, both of which held the memory of the place beyond its original use as a monastery, and which have attracted burials into modern times. We still need to find out such matters as what buildings and other features stood within the monastic precincts and how they were used, but the way is open towards this; and it is now open to us or to others to test this model against other sites on the peninsula and beyond.

In respect of project organisation and method, the Bernician Studies Group is a small community archaeology group in north-east England, operating under professional direction and with university support in the UK, and with collaboration from individuals and community groups on Inishowen. The project has to this point been entirely self-financed, with no external funding. The results of the 2012 – 2014 fieldwork have proven in a dramatic way that a strategy of gradiometry supported by keyhole excavation and landscape survey, applied with a sharp, clearly-defined focus at a manageable scale for a small group, is a powerful tool in accessing the cultural and economic framework of an area strongly associated with Saints Patrick and Columcille and with critical political and cultural developments in the history of ancient Ulster. It is a foundation on which to build a more ambitious project.

The Northumbrian king Aldfrith (685 – 703) was born on Inishowen, the son of Fina, daughter of King Colmán Rímid, fifth in line in the dynasty of Éogain. His father Oswiu, king of Northumbria 642 – 670, and Oswiu's older brother Oswald, king of Northumbria 635 – 642, as princes of the Idings of the Bernician line and youths in exile in the Irish kingdom of Dál Riata on the island of Britain, came under the influence of St Columcille's monastery of Iona, under the abbacy of Segéne, and thus the daughter-house of Iona was established in Northumbrian Bernicia on the island of Lindisfarne. The set of connections which links Inishowen-Donegal, with Iona and Northumbria was but one part of a rich network of communications and knowledge exchange throughout western Christendom in the early medieval era. The Bernician Studies Group project on Inishowen is creating an Anglo-Scottish-Irish network of knowledge exchange in the 21st century.

7: Bibliography and Further Information

This is an informal document, what in the UK would be regarded as 'grey literature', issued in advance of formal publication of most of the information contained here.

The 2012 Carrowmore survey is formally published as:
Adams M and O'Brien C 2013 'A Geophysical Survey at Carrowmore Ecclesiastical Complex, Inishowen'. *Donegal Annual*, 65, 5-7.

A statement on Carrowmore and Clonca, with a wider appraisal of the landscapes on *Magh Tóchuir* is forthcoming in:
O'Brien C and Adams M, 'Early Ecclesiastical Precincts and Landscapes of Inishowen, Co. Donegal' in T. Ó Carragain and S. Turner (eds) *Making Christian Landscapes in Atlantic Europe. Conversion and consolidation in the early Middle Ages.* Publisher: Cork University Press.

A report of the 2013 excavations at Carrowmore is in preparation and being edited with a view to submission for publication in an appropriate journal.

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For further information on the Bernician Studies Group and for public-information reports on the Inishowen project, see our website www.bernicianstudies.com
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Document authors and checking: Colm O'Brien + Max Adams