Acadamh Ríoga na hÉireann
Royal Irish Academy

Department for Communities

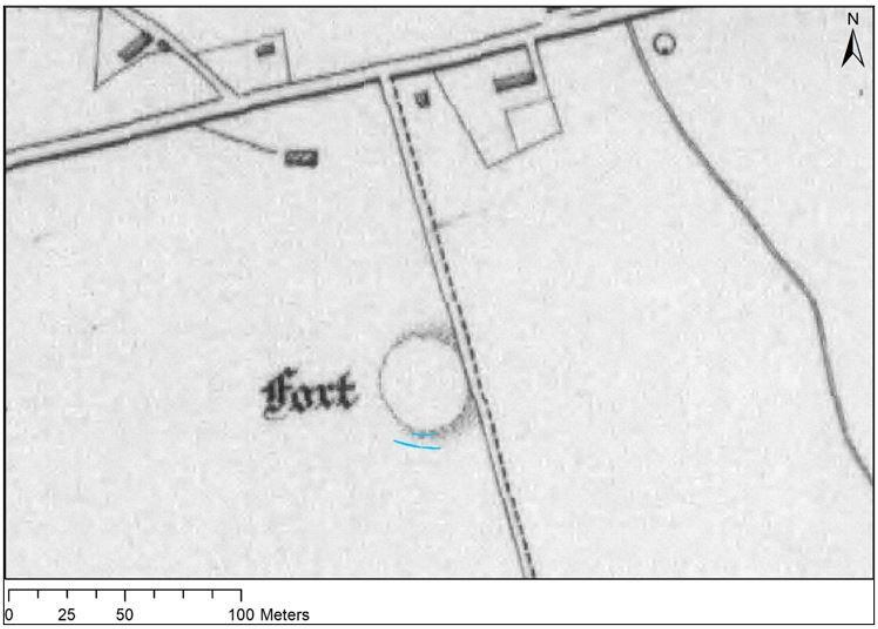
Archaeology Research Grant Report

Name of Grantee:	Dr Colm Donnelly
Title of Project:	A Community Archaeology Project at Killyloughran, Creggan, South Armagh
Amount and year awarded:	€1,557 in 2020

Summary of report:	The project was undertaken in collaboration between the Centre for Community Archaeology at QUB, the Creggan Local History Society, and the Ring of Gullion AONB, and centred on a geophysical survey of a circular enclosure depicted on the 1st edition Ordnance Survey mapsheet of the 1830s. Known locally as Killyloughran, the site is located in the townland of Urcher in south Armagh, and there was a local tradition that it may have been the location of a Medieval church, abandoned in the Plantation period. The geophysical survey identified feint traces of the now levelled enclosure, with the suggestion that this may have originally been a ringfort. Local oral tradition gathered during the survey suggests that the church may have been in a neighbouring field, the "graveyard field", and it can be suggested that it was in use during the Penal era prior to the construction of a new Catholic church at Crossmaglen in the 1830s. The public outreach element of the project was affected by the Covid-19 pandemic, but we have set up an online platform where the public can lodge details of the placenames and folklore associated with the townland of Urcher.
Please outline the objectives of the Project:	The objective of the project was to investigate the nature of a monument on the outskirts of the village of Creggan which had long been considered to be the location of the "lost" church of Killyloughran, which was in use prior to the establishment of a new church at Creggan in the 16th century by the Medieval lords of the area, the O'Neills of the Fews (and a branch of the main O'Neill lordship from Tyrone) who had moved into this region in the late 15th century (see Ó Fiaich 1973). The project involved an assessment of aerial photography, historical maps and terrain data to inform an electrical resistivity survey of the green-field site where a circular enclosure was depicted on the 1st edition Ordnance Survey mapsheet of the 1830s. The project was led by Dr Siobhán McDermott, Digital Archaeologist with the CCA, and Gearóid Trimble, local historian and Treasurer of the CLHS. The project's overall aim was to foster greater levels of awareness of the rich nature of the archaeological resource in south Armagh, and the Creggan area.
Please describe the methodology used in conducting the research:	Two shallow geophysical survey techniques (Earth Resistivity and magnetometry) were applied over the location of a circular enclosure marked on the 1st Edition map of the area. A 30m survey gird was established and tied into Irish National Grid (ING) using the Leica GS15 GNSS RTK. The GPS observation were re-projected to ING TM75 in Leica Infinity. Earth Resistivity (ER) is measured in ohm-meter (Ω-m) or the resistance of one meter cube of the material when a potential difference of one volt is applied. It is especially useful for identifying buried stone walls and foundations, and cut features with higher resistance fills than the surrounding soils. It can also identify ditches and pits with more waterlogged soils, which have higher conductivity and thus conversely have lower rates of electrical resistance. The technique requires direct contact with the ground and is a slower form of geophysical survey. A GeoScan MSP25 sensor platform and RM85 ER meter gathered data at a sampling interval of 0.25m. This sampling density is four times that of traditional ER surveys and similar to characterisation grade magnetic geophysical surveys.

Archaeology Research Grant Report

	Magnetometer survey easily identifies thermoremanentmagnetized features such as kilns and hearths as well as infilled ditches and pits. It does not usually positively identify wall foundations, unless such foundations contrast magnetically with the surrounding soil, for example fired bricks. However, walls can leave negative magnetic signatures. A Bartington 601-2 dual sensor gradiometer captured data at a sampling interval 0.125m. Both survey techniques were walked at 1m traverse intervals in a zig-zag motion. Data was processed in GeoPlot v.4. Both data sets were clipped to +/- 3 Std Dev. with defects removed and visualised in shade, relief and trace plots. The ER data had High Pass and Low Pass filters applied to remove slowly changing geology and to enhance weaker features respectively. neither approach extracted the weak curvilinear response r_1 any better than it is visible in the raw data. The gradiometery data required little further processing after defect removal that included the application of Zero Mean Traverse to account for traverse stripping. The ASCII datasets were georeferenced to ING TM75 in QGIS. Further GIS analysis of the dataset were carried out in ArcGIS, such as interpretation against the OSNI County Series historical maps and available aerial imagery.

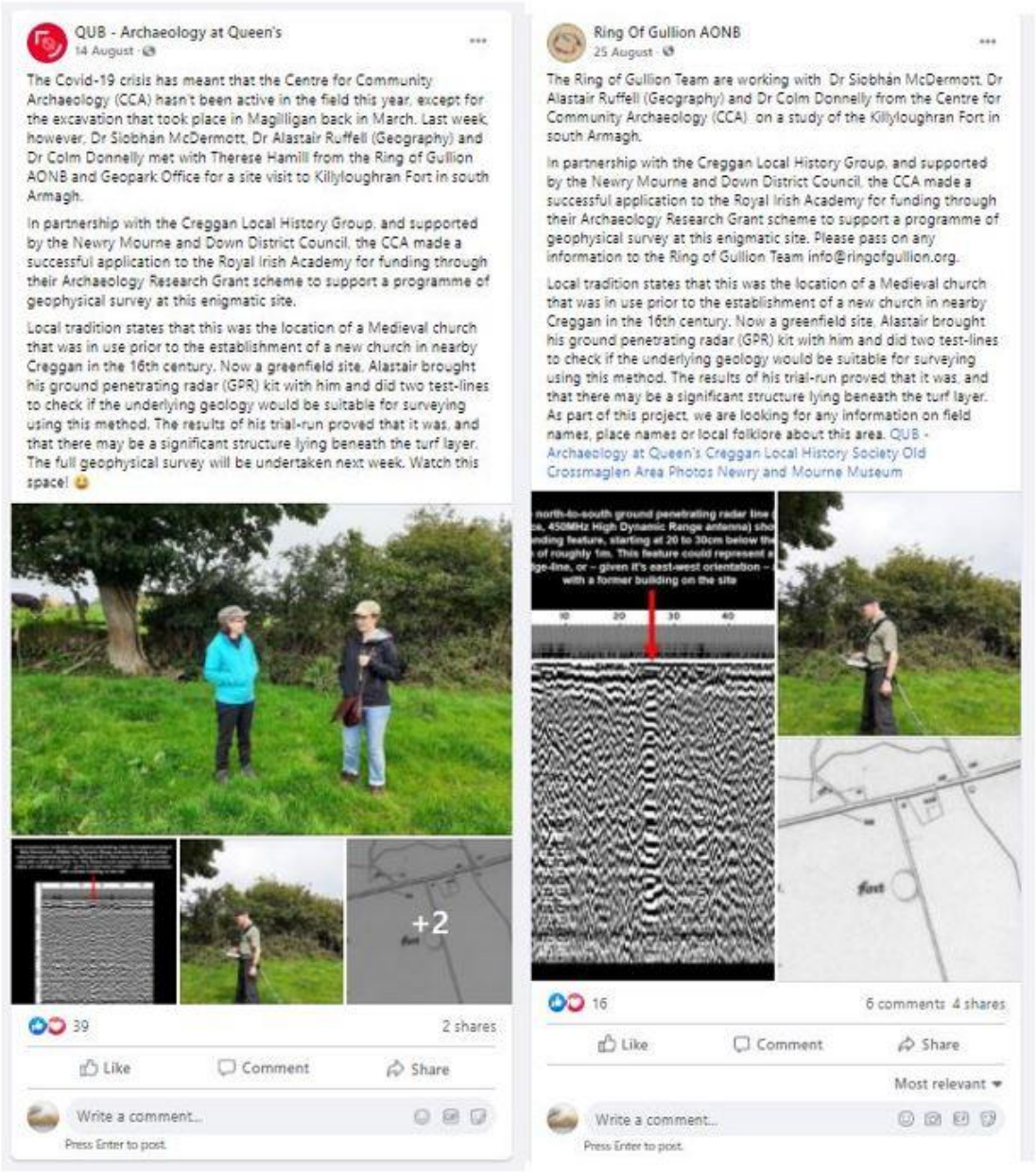


Resistivity anomaly overlaid on 1st Edition Ordnance Survey six-map sheet (c.1830). Note that an outer enclosing feature was detected in the survey. This element is not recorded in the mid-19th century map, and it suggests this was once a more complex monument.

Please outline the findings of your research and/or milestones achieved:	The geophysical data was fair but there was little evidence of archaeological anomalies. Clay soils can be difficult to survey in with the mineral leaching associated with waterlogged conditions reducing magnetic contrast thus limiting the ability of magnetometry to identify anomalies with archaeological potential. The ER data captured the subtle hint of the enclosure recorded by the 1st Ed OS but not the type of features expected from an early church site. It did suggest that the enclosure had two enclosing elements the inner anomaly is subtle but aligns with the feature recorded by the 1st Ordnance Survey. The second has a stronger resistivity reading, but is still faint. It is situated just under 5m to the south and appears to run parallel following the path of the enclosure. The magnetic survey identified three areas of high magnetic activity but these may be related to modern agricultural activity. This would suggest that the circular feature depicted on the 1st edition six-inch mapsheet was a ringfort, perhaps in

Archaeology Research Grant Report

	the process of being removed from the landscape. Oral tradition related that the neighbouring field was called the "graveyard field". It may be the case that this field was the location of the church, but that it has become connected in the public mind to the known monument nearby.
Please provide details of the dissemination of the outcomes from this project:	The level of community involvement in the project was hindered by the Covid-19 situation. We had hoped to hold an open day event in Creggan in September in the aftermath of the fieldwork (carried out in August) but by that stage infection rates were on the rise again and it was judged ill advised to proceed with the open day. As an alternative, we set up the Urcher placename and folklore online platform (https://canvas.instructure.com/enroll/XBEG6C) which will be used to continue the community involvement in the project over the winter months of 2020-2021, with a view to a public engagement event being held at a later date.



Archaeology Research Grant Report

How will you continue to communicate the results of your project and what are your publication plans?	We are planning to write an article in Archaeology Ireland on the work conducted in the townland of Urcher where the Killyloughran monument is located. The geophysical survey has demonstrated that the map of c.1830 is accurate and that this was indeed the location of a monument (presumably a ringfort), but whether this was a church site is perhaps more open to question. The oral tradition indicates memory of a graveyard in the neighbouring field, and it may be the case that this was the location of a chapel, possibly in use for burials during the Penal era before the local Catholic population established a new church in Crossmaglen in the 1830s. Our ongoing placename and folklore project, however, seeks to collate these oral traditions and to explore the ecclesiastical traditions associated with this townland and its immediate hinterland.
How did the award enhance your professional development?	The project enabled the Centre for Community Archaeology (CCA) to continue our connections in south Armagh, working with the Creggan Local History Society and the Ring of Gullion AONB. This is an ongoing process, with the objective of fostering greater levels of awareness of the rich nature of the archaeological resource in this region.
What plans (if any) do you have to further this project?	The project is ongoing and we have set up a platform on CANVAS (the virtual learning platform used by QUB) where we will collect the placenames and folklore associated with the townland Urcher where the monument is located, working with members of the local community.