

Archaeology Research Grant 2021

John Tierney_ Final report

1. Title:	Mr
First name:	John
Surname:	Tierney
2.	
3. Grant programme	Archaeology Research Grant
4. Year awarded	2021
5. Title of project	Fingerprinting Famine Graves. LIDAR & UAV derived photogrammetry & multispectral approach
6. Summary of report (Minimum allowed 100 words)	<p>The planned drone surveys of two Great Famine cemeteries, Pulla, Co. Waterford, and Gort, Co. Galway, took place in the Summer of 2021 by Dr Paul Naessens. These surveys produced standard orthophotography & multispectral images. All data was imported into a GIS and digital terrain models were produced, over which various ground models were laid. Thereafter Dr Stephen Davis sourced and analysed LIDAR datasets (from TII & the OPW).</p> <p>The combination of LIDAR & orthophotography proved worthwhile. The LIDAR identified long graves in Gort and narrow graves in Pulla. The multispectral analysis identified other linear earthwork features in Pulla. Public engagement through this grant was focused on the Pulla burial ground in Co. Waterford. Local schools, local historians and the County Museum were engaged with the 'grave search'. An RTE News item covered the RIA funded project and a number of local newspaper articles were published along with one radio interview. The schools element of the project will continue into 2022. A one hour video related to the project was made for a TCD archaeological society lecture.</p>
7. Please provide two appropriate images	 
8. Please outline the objectives of the project	We proposed to assess the efficacy of UAV/drone and LIDAR surveys for the identification of 19th century linear burial features.
9. Please describe the methodology used in conducting the research	<ol style="list-style-type: none">1. Pulla & Gort workhouse cemeteries were surveyed by drone/UAV with standard RGB & multispectral lenses. Dr Paul Naessens.2. LIDAR datasets for both sites were examined and analysed for the identification of possible burial features. Dr Steve Davis.3. Both sites were visited multiple times by project director John Tierney to ground truth the survey results.4. All data was loaded into a GIS and compared and analysed there.5. When preliminary results were available we commenced public engagement in the Waterford site.
10. Please outline the findings of your research and/or milestones achieved	<p>All proposed works took place as planned.</p> <p>Gort & Pulla workhouse cemeteries were survey by drone/UAV.</p> <p>LIDAR datasets were accessed and analysed.</p> <p>Both sites were visited and recorded using standard archaeological field survey techniques.</p>
11. a) Please provide details of the dissemination of the outcomes from this project (inc. publications, presentations, outreach, media etc.) including details of any social media/web platforms used to publicise this project	<p>RTE Television News & Online https://www.rte.ie/news/munster/2021/0918/1247554-historic-graves/</p> <p>Youtube Videos One hour lecture to Trinity students</p>

<https://youtu.be/JZtucClOiHg>

Other site videos

1. https://youtu.be/nK4Nu3v_rPk
2. <https://youtu.be/vzZTJUUnBL0w>
3. <https://youtu.be/KhVSA1toLQE>
4. https://youtu.be/43JYfBP_9GM

Twitter

<https://twitter.com/search?q=%23lostfaminegraves&source=desktop-search>

c) No. of Lectures given/outreach events involved in:

1

e) How will you continue to communicate the results of your project and what are your publication plans?

In late Summer 2021 we made connections with approx 6 schools in W Waterford and we plan to continue this element of the project in 2022 We envisage Zoom presentations to the schools followed by an onsite visit to instruct the students on applying scientific archaeological methods to challenging historical subjects.

15. How did the award enhance your professional development (e.g. in terms of specific opportunities, opportunities for enhancing skills, collaborations with others etc.)?

We went from being complete novices in remote sensing surveys and GIS analysis to being moderately proficient. I remember using early GIS software back in the mid-90s but only now, after this project, have I really got to grips with the power of GIS & modelling for archaeological fieldwork.

16. What plans (if any) do you have to further your proposal/project?

This RIA application was the first of a sub-project which we formulated in 2020/early 2021 (a lockdown project). We are calling the project Lost Famine Graves of Ireland and we will continue with the project over the next 3-5 years.