

Pickan's Dyke, Dalmellington: Archaeological Investigation

Stage 2 Post-Excavation Research Design



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on behalf of Forestry Commission Scotland

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Introduction

1. This Post-Excavation Project Design has been prepared for Forestry Commission Scotland in support of their management of Pickan's Dyke, Dalmellington within the national forest estate. As such it is part of a programme of sequential archaeological works that are designed to understand the consequences of inadvertent damage to the monument and to establish its importance as an archaeological resource.
2. A preceding Project Design (Gordon 2012) presented a baseline of the known archaeological resource, the objectives of the project and the structure of the archaeological works to be undertaken.
3. Previous stages of works have included an intrusive evaluation carried out in September 2012. The results of these works are found within a Data Structure Report (Gordon et al 2012), which is the basis of this Post Excavation Project Design.
4. The implementation of this Post Excavation Project Design is subject to the agreement of the Forestry Commission Scotland Archaeologist, Historic Scotland and Moray Council Archaeology Service.
5. This Post-Excavation Proposal provides a summary of the works and contractual terms for the post-excavation works. Presented below is the:
 - ❖ Research Design (see Gordon 2012, Objectives);
 - ❖ clarification of the Post-Excavation Stages;
 - ❖ project team for the Post-Excavation work; and
 - ❖ timetabling details for the Post-Excavation work
6. All works proposed will continue to comply with the Forestry Commission Scotland Archaeologist's Standard Conditions, the Institute for Archaeologists' Standards and Policy Statements and Code of Conduct and Historic Scotland Policy Statements.

Research Design

7. The Research Design included within the original project design (Gordon 2012, Objectives) remains unchanged. Listed below are those aims which it is expected that post excavation work will help to elucidate:
 - a. to establish whether the monument as we view it today is the product of a single coherent build, or a sequential build, and if the latter, to identify and interpret each separate phase of occupation or rebuilding as appropriate;
 - b. to recover palaeo-environmental and artefactual evidence which may clarify the nature and function of activities undertaken within and immediately adjacent to the monument. In particular, evidence will be sought for the structured deposition of material both within the boundary ditch and within the dyke interior;
 - c. to consider the evidence for the process of abandonment of the monument;
 - d. to determine whether the monument has subsequently been reused;
 - e. to establish where this particular archaeological resource fits in with the medieval activity occurring within the immediate locale, and throughout the wider area of Moray and north-east Scotland.

Methods: Specialist Analysis

8. To achieve the aims of the research design the following methods will be required.

Sediment Processing and Palaeo-environmental Assessment

9. A sub-sample of the bulk soil samples recovered (Eleven in number) will be flotation sieved in a Siraf style flotation tank. Floating material will be recovered using a 250 µm sieve and retent material in a 1mm mesh. Retents will be sorted for artefacts and palaeoenvironmental finds while flots will be scanned using a low powered binocular microscope.
10. An assessment will then be prepared that will include: statements on abundance, diversity and state of preservation of the material recovered; discussion of material; and recommendations for specialist analysis.

Thin Section Analysis

11. One kubiena tin was recovered covering the primary layers of the bank. This sample will be prepared as slides for thin section analysis – the microscopic analysis of the sediment. This process involves the kubiena samples being impregnated with resin and cut, ground and polished into thin sections (30µm thick) on glass slides. Analysis would then be undertaken with an optical microscope.
12. Through analysis of the micro-texture and structure of the sediments and their interfaces the Thin Section analysis will provide a more refined interpretation of soil profiles including the process of deposition, the character of the material deposited and post-deposition modification. In this particular context, it will help to determine whether bank context were original ground surface.

Radiometric Dating

13. A programme of radiometric dating will be undertaken to provide absolute dates for the depositional activities excavated during the on-site works. We envisage sourcing dateable materials from macroplant material and charcoal recovered from those sediments being analysed.
14. A suitable example of the latter will be extracted and submitted for dating by single entity Atomic Mass Spectrometer dating by the Scottish Universities Research Reactor Centre. While this process will necessarily destroy the material this is a necessary and appropriate means to acquire an accurate absolute date.
15. The sediment processing and palaeo-environmental analysis will seek to recover suitable dateable materials to enable a dating programme against the key archaeological features. Our chosen material will be charcoal >4mm in diameter or individual identified charred macro-plant material. Should this not prove feasible then attempts will be made to identify the largest fragments of charcoal present for the purpose of dating. As this material will derive from sediment traps they will inevitably supply secondary dating evidence for the primary activity. Care will be taken to select material that is contextually secure and likely to supply meaningful dates for the primary activity.
16. We will seek to acquire sufficient dating material for three radiometric dates. This should be sufficient to provide a broad chronological structure for the sequence of activity on-site.

Site Illustration and Stratigraphic Interrogation

17. All site illustrations will be rendered digitally and related illustrations will be compiled together to best demonstrate the form and chronology of the most significant phases of the site occupation. Selected drawings will then be produced to publishable standard and provided as an element of the final publication.

Methods: Journal Publication

18. On the completion of the specialist analyses the final report would be prepared, seeking to integrate the findings of the specialists with the wider considerations of phasing, function and date. In effect this will bring together the results of all work undertaken until point.

19. The report preparation will also include the undertaking of illustrations, to journal standards, of site based graphics. This will include site photographs where appropriate.
20. During the process of preparing the report provision will be made for appropriate specialists to review and make comment on the structure and content of the report as well as its relevance to other similar publications. This review process will be undertaken to ensure the highest possible standard of quality is obtained by the final report.
21. The final completed report, including illustrations, would then be published through an article within an archaeological journal. For this project we would seek to publish it within the TD&GNHAS as a note. We envisage a five page article, which will outline the findings of the excavation and post excavation works.

Archiving and Materials Disposal

22. All archaeological material recovered is subject to claim by the Crown and its allocation is decided by the Queen's and Lord Treasurer's Remembrancer. All cultural material will be reported to the Crown through the Treasure Trove Unit, which administers the standard procedures operated on behalf of the Crown in Scotland by the Queen's and Lord Treasurer's Remembrancer. For further details of this process and for information on the Scottish law of Treasure Trove and bona vacantia, refer to Treasure Trove in Scotland – A Code of Practice, published by the Scottish Executive (2008).
23. Rathmell Archaeology Ltd will be responsible for reporting cultural material to the Crown and delivering it to the Crown's agents. At the same time the Site Archive will be prepared to the standards and guidelines set out by the National Monuments Record of Scotland, located at the Royal Commission on the Ancient and Historical Monuments of Scotland. The archives will then be deposited with the National Monuments Record of Scotland.

Project: Team

24. The core of reporting, illustration and archive preparation would be undertaken by a combination of staff comprising Douglas Gordon, Thomas Rees, Claire Williamson and Louise Turner.
25. All sediment analysis including thin section analysis for this project would be handled by AOC Archaeology with the results being passed on to an appropriate specialist for analysis as necessary.
26. Radiometric dating will be carried out at the Scottish Universities Research Reactor Centre

Project: Timetable

27. The post-excavation works are anticipated to take up to 6 months to complete. This scale of timeframe is required due to the necessary sequencing of works. A draft timetable from appointment would run:
 - ❖ by end of month 2 complete all sediment analysis and all historical and archaeological research;
 - ❖ by end of month 3 complete the compilation of illustrations;
 - ❖ by end of month 6 complete report, archiving and submission to journal.

References

- Gordon, D et al, 2012 *Pickan's Dyke, Dalmellington: Archaeological Investigation, Data Structure Report*, Rathmell Archaeology Ltd
- Gordon, D, 2012 *Pickan's Dyke, Dalmellington, Archaeological Investigations: Project Design*, unpublished commercial report prepared by Rathmell Archaeology Ltd

Scottish Executive, 2008, *Treasure Trove in Scotland, A Code of Practice*

Contact Details

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