

The Archaeological
Practice Ltd.



PEREGRINI
Lindisfarne
Landscape Partnership



LINDISFARNE COMMUNITY ARCHAEOLOGY

KENNEDY LIMeworks LINDISFARNE

Archaeological evaluation, June 2016
Project Design



Cover photo.

View looking southwards over the earthworks of the structure shown as a smithy on old Ordnance Survey maps (see also figs. 2, 3 & 4). Lindisfarne village visible in the distance. Note that work is not proposed on this structure during the first phase, as explained in Section 1.1 of this document. Section Photo by Marc Johnstone.

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1. INTRODUCTION AND BACKGROUND

1.1 General introduction

The Peregrini Lindisfarne Community Archaeology Project, part of the HLF-funded Peregrini Lindisfarne Landscape Partnership, aims to complete a range of archaeological investigations on Lindisfarne and the adjacent mainland during 2016 and 2017. The work will be done by local volunteers, directed by the Archaeological Practice Ltd of Newcastle upon Tyne. Participation is open to all, with full training provided as an essential element of all project fieldwork.

Proposed fieldwork includes the evaluation of structures associated with the Kennedy Limeworks, approximately 1km north of Lindisfarne village. In particular the investigations will target turf-covered earthworks thought to have been cottages and a smithy associated with the limeworks. This fieldwork will be complemented by archival research being undertaken by volunteers working with Linda Bankier, and the results from archaeological fieldwork and archival research will be combined to provide a better understanding of the story of the Kennedy Limeworks.

The site is not a legally protected scheduled monument, so no consent from Historic England is required. However, it straddles the boundary of the Lindisfarne NNR, and any works within the NNR will require the consent of Natural England. The old cottages where work will take place during June 2016, lie just outside the NNR, so consent is not required, but work on the old smithy site will require consent. It is essential that no ground disturbance takes place within the NNR other than that specifically approved by Natural England, and all work must comply with the conditions of the Natural England consent. Work just outside the NNR (eg at the old cottages), although not requiring consent, will nevertheless be planned in collaboration with the NNR manager and care will be taken to minimise potential damage to the vegetation.

This document presents background information about the Kennedy Limeworks, together with a detailed methodology for the proposed fieldwork. It should be carefully studied by all prospective volunteers in advance of participation in the project.



Fig 1. Aerial view of Lindisfarne with the Kennedy Limeworks site (see Fig. 2) outlined in red. (© Google earth).

1.2 Historic Background

Lindisfarne has a fascinating archaeological heritage extending from prehistoric through to post-medieval and recent times. The present-day landscape contains much evidence of post-medieval industrial activity, much of it linked to the lime industry. Lime was used for the production of mortar and also as a sweetener to be spread on fields to reduce the acidity of the soil leading to much-improved pasture. The Kennedy limeworks complex, although only in operation for a couple of decades in the mid-nineteenth century, is an important element of the island's post-medieval heritage.

A good description of the Kennedy limeworks site is provided by O'Sullivan and Young (1995, p 109-111), and is reproduced here:

There is abundant archaeological evidence of the limestone extraction and limeburning industry on Lindisfarne which developed in the course of the nineteenth century. The island was covered in a series of tracks and waggonways linking the outcrops on the north coast with a number of kilns, and jetties were constructed by the castle and Tripping Chare to offload the cargo.

There are two main groups of limekilns on Lindisfarne. On the border between the dunes and the north-west extent of modern farmland are the ruins of the Kennedy Limeworks, now totally overgrown and covered by sand. This was an extensive complex. Two partly collapsed bottle kilns are visible today facing the track at the northern edge of the site. These were built by a local partnership, Messrs Gibson and Lumsden of Belford, and were in use for a short period in the 1840s. The waggonway which partly destroyed the site at Green Shiel [a ninth-century settlement to the north of the Kennedy Limeworks complex) was constructed to transport limestone from the quarries at Ness End and Snipe Point to this site for processing, and then onwards to a stone and timber jetty south of Chare Ends, from where it was shipped along the coast. In the late 1850s these kilns were replaced by a group of three to the south. The new kilns were built 'in error' by one William Nicholl, a lime merchant of Dundee who leased the extraction rights from Donaldson Selby, and were only in use for a couple of years, Nicholl relocating his enterprise in 1860. These short-lived kilns survive as a rectangular shell at the terminus of the large waggonway embankment encircling the area of modern farmland.

Between the two kiln groups are a number of buildings which served the limeworks. The low earthworks of a small cottage to the south of the bottle kilns are recorded as a smithy on the first Ordnance Survey map. Facing this on the other side of the track is a rectangular enclosure with an entrance in its north-west corner; both of these features overlie the ridge-and-furrow ploughing in this area. South-east of these is a row of walled, open bays; these were recorded as linekilns on the first Ordnance map but they are much more likely to have been used for stables or storage. Another ruined and overgrown site lies at the northern end of the raised waggonway; this seems to consist of two buildings and a stone-lined well inside a walled enclosure.

The best-preserved limeworks are those at Castle Point, which are now in the care of the National Trust. These were constructed by William Nichol as a replacement for the kilns at the Kennedy site, and were in use for about twenty years. Their development involved the construction of a further tramway along the east coast, still a conspicuous feature of the island landscape, and another pier to the south-west of the castle, the remains of which can still be seen at low tide. Nichol shipped his product from here to Dundee in a number of different vessels, which returned with coal to fuel the kilns.

1.3 Aims and objectives

It is important to stress that this project is an evaluation, not a full excavation. The aim is not to completely excavate any structures, but to sample them in order to address the following questions.

This project is small in scale and has one general aim - to characterise the nature and condition of structures associated with the Kennedy Limeworks. The results will be interpreted in association with those of documentary research being undertaken by Peregrini Lindisfarne project volunteers under the direction of Linda Bankier.

Questions which the project may help to address include the following:

What is the condition of buried deposits and how do these buried remains relate to the visible earthworks?

What was the original nature of the structures, and how did they change through time?

Is there any evidence for activity within or in the vicinity of the structures?

To what extent can the physical remains on site be linked to documentary records being studied simultaneously by a different group of Peregrini Lindisfarne project volunteers?

Are the sites being damaged in any way, for example through footpath erosion, and if so can practical suggestions be made as to their future management?

What potential do these sites offer for further investigation?

Is there potential for consolidation and/or public interpretation of the sites investigated?

A further key objective is to provide the opportunity for local volunteers to learn techniques of archaeological excavation. Some volunteers will be experienced, having participated in other community archaeology projects, but others will have no previous experience. Full training and constant professional supervision will be constantly available throughout the project, and volunteers will be encouraged to take part in all aspects of fieldwork, including recording.

Kennedy Limeworks shown on the 1st Edition Ordnance Survey, 1862

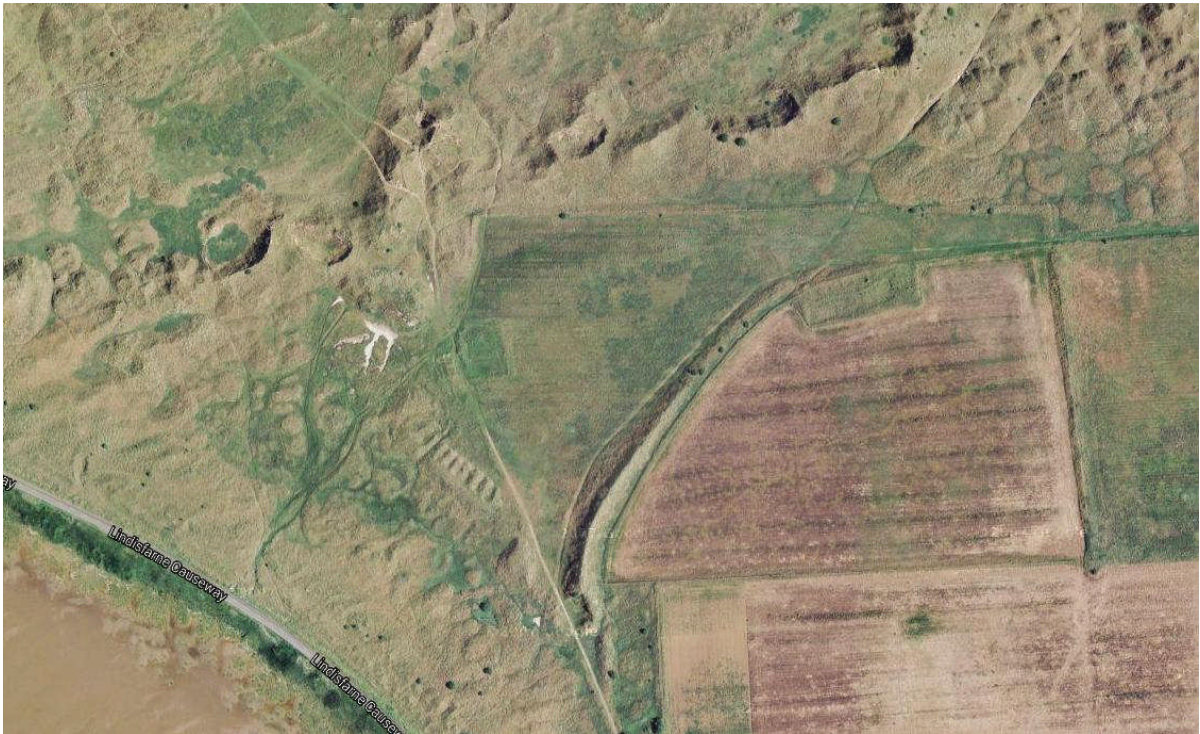
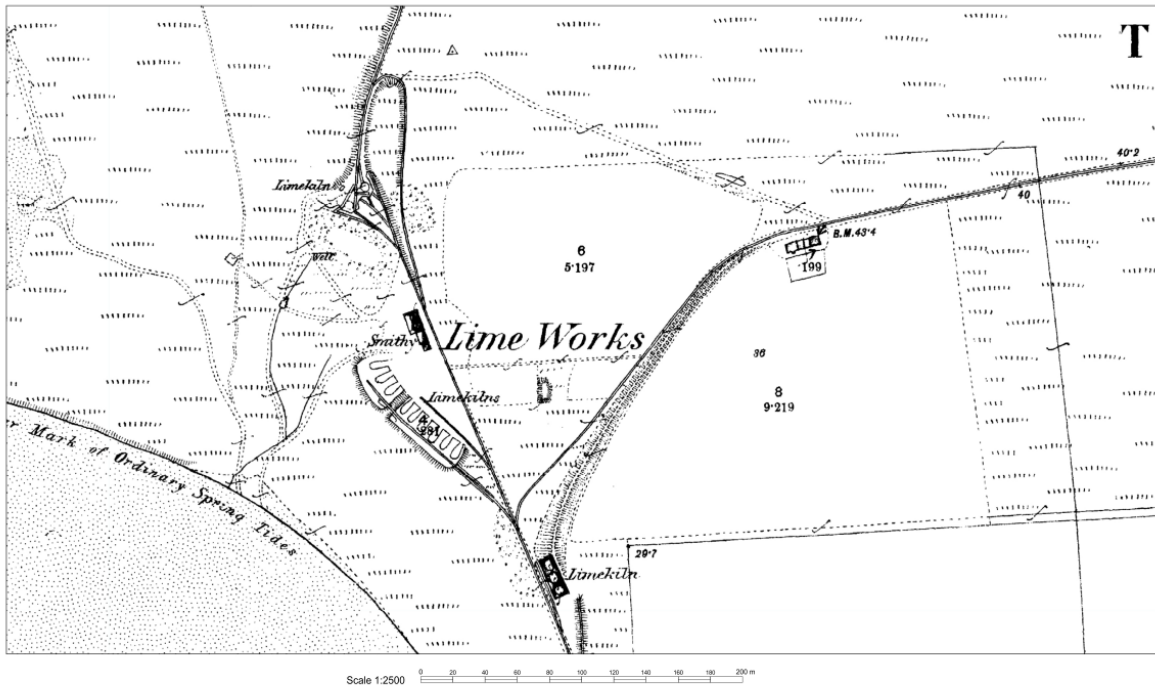
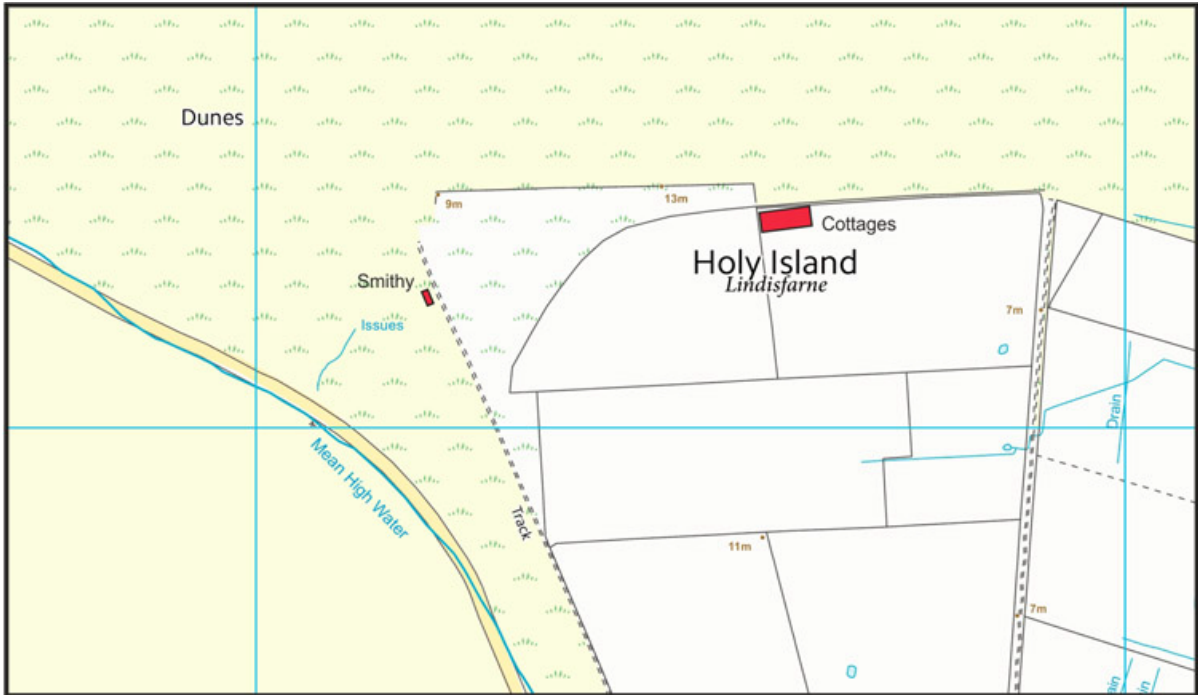
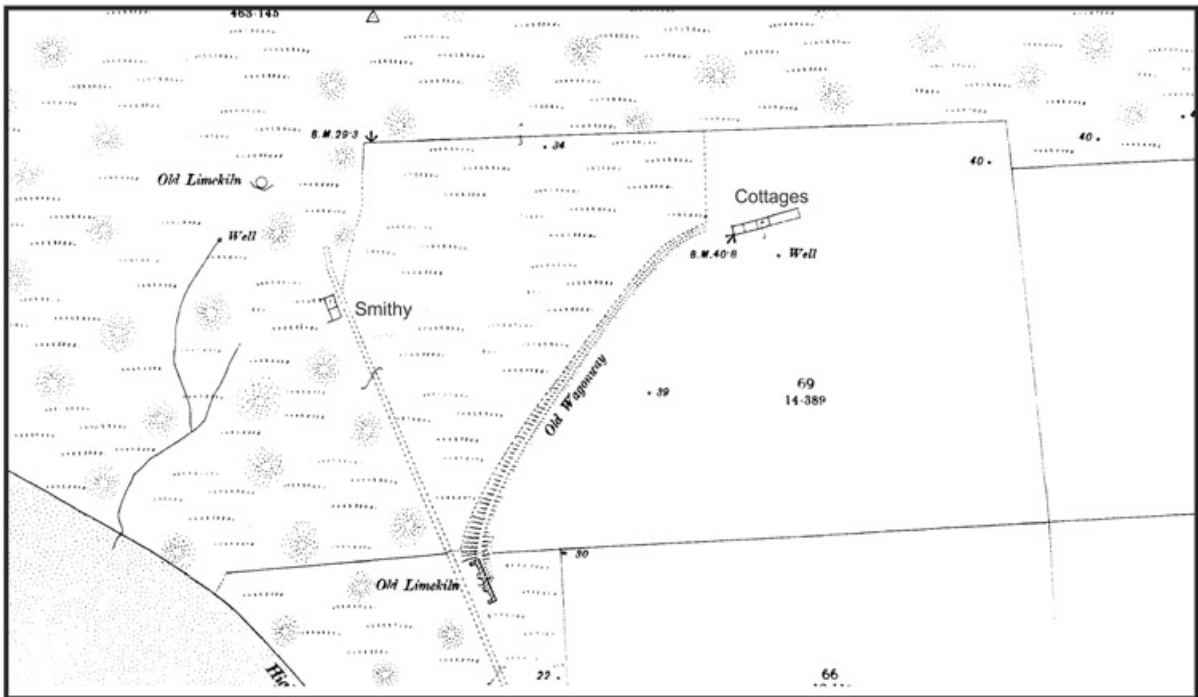


Fig 2. The Kennedy limeworks complex as shown on the first edition Ordnance Survey map of 1862, and a recent aerial view of the same area (© Google Earth)

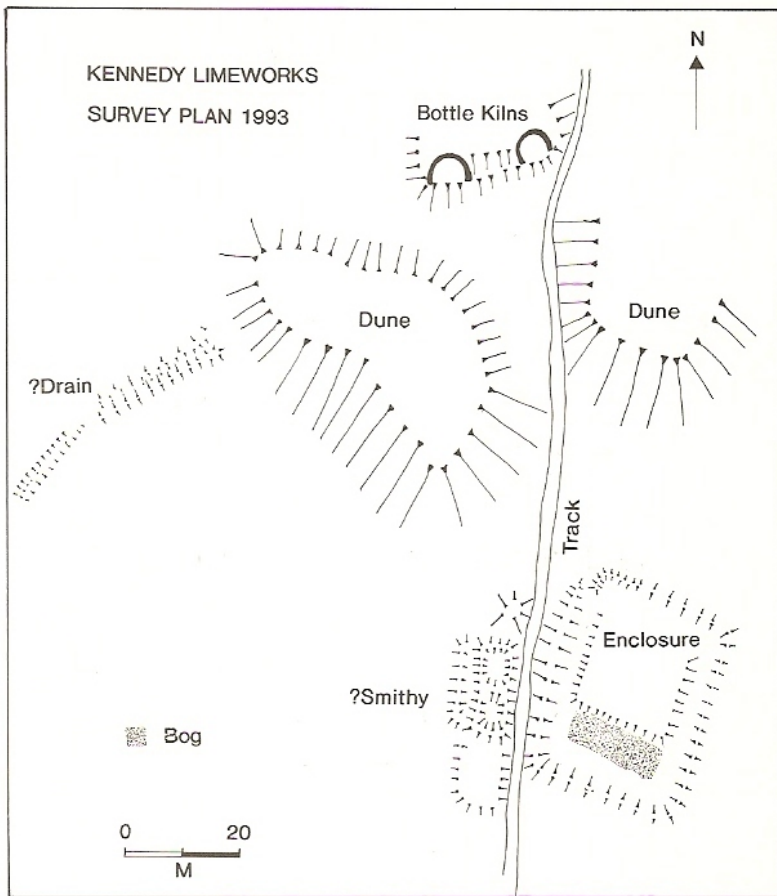


Modern OS plan showing the location of the remains of cottages and a smithy on the Kennedy Limeworks site, Holy Island



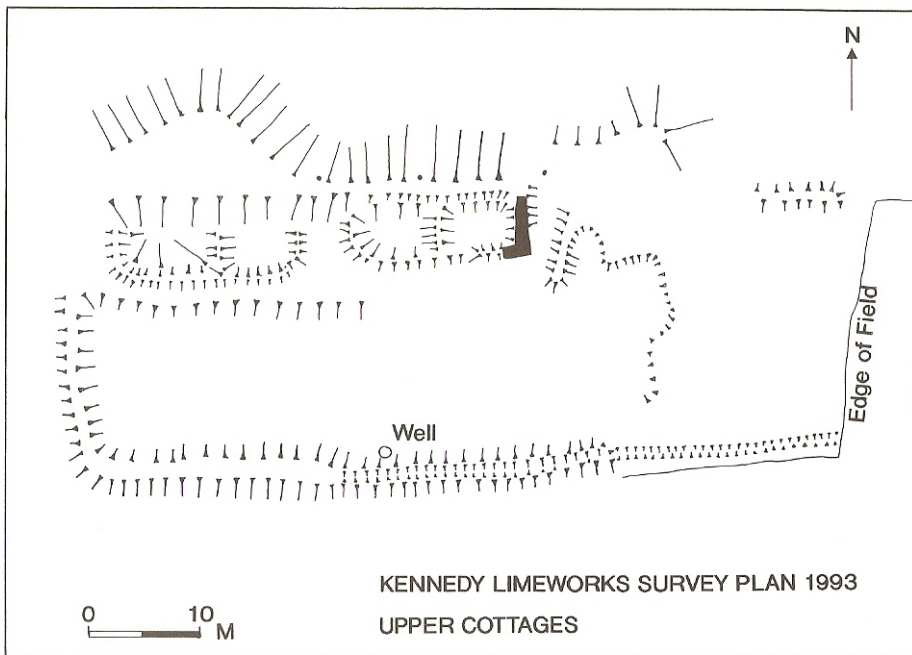
1890s OS plan showing the location of the remains of cottages and a smithy on the Kennedy Limeworks site, Holy Island

Fig 3. Kennedy limeworks, location maps.



d. 2016

85 Plan of the northern part of the Kennedy Limeworks, showing bottle kilns, the smithy and an enclosure.



87 The ruined cottages north-east of the Kennedy Limeworks.

Fig 4. Survey plans of the two proposed excavation sites, reproduced from O'Sullivan and Young 1995.

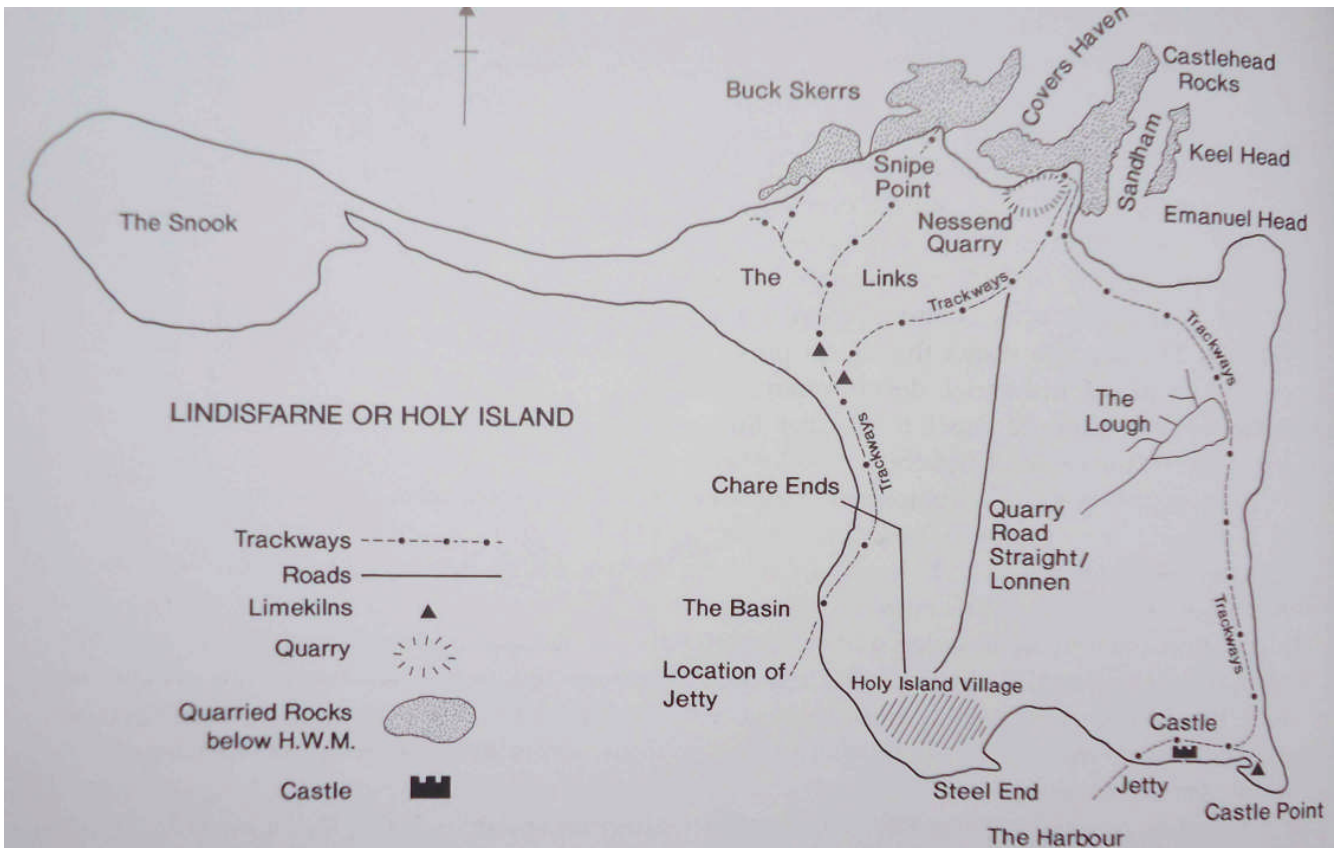


Fig. 5. Map of post-medieval industrial monuments on Lindisfarne (after R. C. Jermy). The Kennedy Limeworks are represented by the two triangles to the north of the village. Reproduced from O'Sullivan and Young 1995.

2. TRENCH LOCATIONS AND PURPOSE

As noted above, the proposed trenches will be located in order to evaluate the old cottages and the smithy. During the first phase of work, in June 2016, work will concentrate on the old cottages. It is proposed to investigate the old smithy at a later stage, but no ground disturbance of any kind will take place here without official consent from Natural England. The final form of trenches will be dependent on decisions made once work is in progress, and plans must be to flexible at this stage. The trenches will be located so as to examine walls, interiors, and areas immediately outside the visible structures.

The amount of work actually completed will be dependent on factors such as the number of volunteers attending, the complexity of the archaeological remains encountered, and the weather.

All trenches will be excavated to reveal and appropriately record features of archaeological significance.

The position and initial dimensions of the trenches will be determined by existing knowledge of the position and extent of archaeological remains known to exist in the relevant locations. The trenches may then be expanded depending on available resources and the nature of finds made within them.

3. METHODOLOGY

3.1 General

3.1.1 The Field Investigation will be carried out by means of Archaeological Excavation.

3.1.2 All work will be carried out in compliance with the codes of practice of the Institute of Field Archaeologists (IFA) and will follow the IFA Standard and Guidance for Archaeological Excavations.

3.1.3 All archaeological staff will be suitably qualified and experienced for their project roles. Before commencement of work they will have been made aware of what work is required under the specification and they will understand the aims and methodologies of the project. All participating volunteers will be similarly briefed.

3.1.4 All turf will be carefully removed by hand and neatly stacked adjacent to the trenches for the duration of the excavations, during which time it will not be allowed to dry out, being artificially watered if necessary. All spoil from the excavations will likewise be neatly piled adjacent to the trenches, on plastic sheeting to avoid damage to underlying vegetation. Upon completion of the excavations, spoil will be backfilled by hand, the ground reprofiled, and turf carefully replaced. Within a few weeks, all surface trace of the excavations should have disappeared.

3.2 Excavation

3.2.1 Evaluation trenches will be carefully located so as to maximise the chances of furthering our understanding of the sites. Excavation, recording and sampling procedures will be undertaken using the strategies indicated below.

3.2.2 All excavations will be by hand, with no machinery used on site.

3.2.7 Sufficient of the archaeological features and deposits identified will be excavated by hand through a sampling procedure to enable their date, nature, extent and condition to be described. Pits and postholes will normally be sampled by half-sectioning although some features may require complete excavation. Linear features will be sectioned as appropriate. No archaeological deposits will be entirely removed unless this is unavoidable.

3.2.8 Should excavations reach depths over 1.2 metres, which is considered most unlikely, then the trenches will be widened and a stepping strategy will be employed to ensure that no excavation is carried out on surfaces below sections over 1.2 metres high.

3.2.9 Archaeological stratigraphy revealed by excavation will be recorded by the following means:

3.2.9.1 **Written descriptions.** Each archaeological context will be recorded on a pro-forma sheet. Minimum recorded details will consist of the following: a unique identifier; an objective description which includes measurements of extent and details of colour and composition; an interpretative estimate of function, clearly identified as such; at least one absolute height value; the identifiers of related contexts and a description of the relationship with such contexts (for preference, executed as a mini Harris matrix); references to other recording media in which representations of the context are held (plans, sections, photographs).

3.2.9.2 **Measured illustrations.** Detail plans and sectional profiles of archaeological features will be at appropriate scales (1:20 or 1:10). Archaeological contexts will be referenced by their unique identifiers. All illustrations will be properly identified, scaled and referenced to the site survey control.

3.2.9.3 **Photographs.** Digital photographs will be taken for purposes of record. Any features of archaeological note will also be recorded on colour film stock. A system will be used for identifying the archaeological features photographed.

3.2.10 An appropriate control network for the survey of any archaeological remains revealed in excavation will be established.

3.2.11 The survey control network will be related to the OS grid.

3.2.12 The survey control network and the position of recorded structures, features and finds will be located on a map of an appropriate scale (1:2500 or 1:500)

3.2.13 At least one absolute height value related to OD will be recorded for each archaeological context.

3.2.14 All processing, storage and conservation of finds will be carried out in compliance with the relevant IFA and UKIC (United Kingdom Institute of Conservation) guidelines.

3.2.15 Portable remains will be removed by hand; all artefacts encountered will be recovered.

3.3 Analysis and Reporting of Recovered Data

3.3.1 Following the completion of the Field Investigation and before any of the post-excavation work is commenced, an archive (the Site Archive) containing all the data gathered during fieldwork will be prepared. This material will be quantified, ordered, indexed and rendered internally consistent. It will be prepared according to the *project management guidance provided in MoRPHE (EH 2006) and the accompanying Project Planning Note 3: Archaeological Excavation*.

3.3.2 Following completion of the Field Investigation, a full report will be prepared collating and synthesizing the structural, artefactual and environmental data relating to each agreed constituent part of the evaluation works.

3.4 Environmental Sampling and Scientific Dating

3.4.1 The investigations will be undertaken in a manner consistent with *MoRPHE EH 2006 and PPN 3* and with “Archaeological Science at PPG16 Interventions: Best Practice for Curators and Commissioning Archaeologists”, English Heritage, 2003.

3.4.2 The following strategy for environmental sampling will be confirmed with the English Heritage Regional Advisor for Archaeological Science before the excavation begins.

3.4.3 Deposits/fills with potential for environmental evidence will be assessed by taking samples from the range of context types and phases, where feasible to determine, and assess all of them. Results are most likely to be achieved through flotation, although waterlogged deposits might just be encountered in features such as pits or wells – and samples from these features would need wet sieving.

3.4.4 Deposits will be sampled for remains of pollen, food residues, microfossils, small boned ecofacts (e.g. fish & insects/micro-fauna), industrial residues (e.g. micro-slugs - hammer-scale and spherical droplets), cloth and timber. Flotation samples and samples taken for coarse-mesh sieving from dry deposits will be processed at the time of fieldwork wherever possible.

3.4.5 Any significant animal bone assemblages, which can be used to explore themes such as hunting and fowling, fishing, plant use and trade, seasonality, diet, age structures, farrowing areas, species ratios, local environment will be assessed by a recognised specialist.

3.4.6 Waterlogged organic materials should be dealt with following recommendations in *Guidelines for the care of waterlogged archaeological leather* (English Heritage and Archaeological Leather Group 1995).

3.4.7 Deposits will be assessed for their potential for radiocarbon, archaeomagnetic (guidance is available in the Centre for Archaeology Guideline on Archaeometallurgy 2001) and Optically Stimulated Luminescence dating. As well as providing information on construction techniques, timbers will be assessed for their potential for dendrochronology dating, in which case sampling will follow procedures in *Dendrochronology: guidelines on producing and interpreting dendrochronological dates* (Hillam 1998) and *Guidelines on the recording, sampling, conservation and curation of waterlogged wood* (R. Brunning 1996). A maximum of 5 samples of material suitable for dating by scientific means (eg: Radiocarbon, Luminescence, Remnant Magnetism, etc.) will be collected.

3.4.8 Information on the nature and history of the site, aims and objectives of the project, summary of archaeological results, context types and stratigraphic relationships, phase and dating information, sampling and processing methods, sample locations, preservation

conditions, residuality/contamination, etc. will be provided with each sample submitted for analysis.

3.4.9 Laboratory processing of samples shall only be undertaken if deposits are found to be reasonably well dated, or linked to recognisable features and from contexts the derivation of which can be understood with a degree of confidence.

3.4.10 Human remains will be treated with care, dignity and respect, in full compliance with the relevant legislation (essentially the Burial Act 1857) and local environmental health concerns. If found, human remains will be left in-situ, covered and protected, and the police, coroner and County Archaeologist informed. If it is agreed that removal of the remains is essential, the Archaeological Practice Ltd, will apply for a licence from the Home Office. Analysis of the osteological material will take place according to published guidelines, *Human Remains from Archaeological Sites, Guidelines for producing assessment documents and analytical reports* (English Heritage 2002).

3.4.11 If anything is found which could be Treasure, under the Treasure Act 1996, it is a legal requirement to report it to the local coroner within 14 days of discovery. The Archaeological Practice Ltd. will comply with the procedures set out in The Treasure Act 1996. Any treasure will be reported to the coroner and to The Portable Antiquities Scheme Finds Liaison Officer for guidance on the Treasure Act procedures. Treasure is defined as the following:

- Any metallic object, other than a coin, provided that at least 10% by weight of metal is precious metal and that is at least 300 years old when found
- Any group of two or more metallic objects of any composition of prehistoric date that come from the same find
- All coins from the same find provided that they are at least 300 years old when found, but if the coins contain less than 10% gold or silver there must be at least ten
- Any object, whatever it is made of, that is found in the same place as, or had previously been together with, another object that is Treasure
- Any object that would previously have been treasure trove, but does not fall within the specific categories given above. Only objects that are less than 300 years old, that are made substantially of gold or silver, that have been deliberately hidden with the intention of recovery and whose owners or heirs are unknown will come into this category

4. PROJECT REPORT

4.1 Copies of the final report will be provided within three months of the completion of fieldwork. An additional digital copy of the report will be lodged with the Northumberland County HER.

4.2 Three bound and collated copies of the report, along with a pdf version, will be provided to the Peregrini Lindisfarne project team. Each will be bound, with each page and heading numbered. Any further copies required will be produced electronically. The report will include as a minimum the following:

A summary statement of methodologies used.

A location plan of the site and any significant discoveries made.

Plans and sections of any archaeological discoveries of note.

An summary of documentary survey work relating to the site undertaken under the direction of Linda Bankier (assuming results are available in time).

A summary statement of results.

Conclusions

Recommendations

A table summarizing the deposits, features, classes and numbers of artefacts encountered and spot dating of significant finds.

4.3 The report will include a section detailing any further recommended archaeological work.

4.4 Following completion of the analysis and publication phase of the work, an archive (the Research Archive) containing all the data derived from the work done during the analysis phase will be prepared. The archive will be prepared to the standard specified by English Heritage (English Heritage 1991) and in accordance with the United Kingdom Institute of Conservation guidelines.

4.5 Arrangements will be made to deposit the Site Archive (including Finds) and the Research Archive with the designated repository within 6 months of the end of the fieldwork. Additionally, a copy shall be offered to the National Monuments Record (NMR).

4.6 Should the results of the work merit full publication, a paper on the findings of excavation will be offered to an appropriate regional or national journal, such as *Archaeologia Aeliana*, while summary reports of the project will be prepared for inclusion in the appropriate Notices, Annual Reviews, Northumberland Archaeology (the Northumberland County Council Annual Reports Series), etc.

4.7 An entry for inclusion in the Northumberland County Heritage Environment Record will be prepared and submitted.

4.8 The Archaeological Contractor will complete the online form for the Online Access to Index of Archaeological Investigations Project (OASIS), following consultation with the Northumberland County Archaeologist. The Contractor agrees to the procedure whereby the information on the form will be placed in the public domain on the OASIS website, following submission to or incorporation of the final report (see 3.4) into the HER.

5. TIMETABLE and PERSONNEL

5.1 Timetable

It is proposed to complete the excavation over a period of up to ten days between 18th June and 2nd July. The exact dates have yet to be determined.

Following the completion of on-site work, further time will be required to produce an appropriately illustrated report on the work, as detailed above.

5.2 Personnel

Fieldwork will be largely undertaken by volunteers, under constant professional direction and supervision. The professional project team will consist of the following individuals, with analysis and writing-up being largely carried out by Richard Carlton. These personnel will be assisted by **Rob Young** and **Paul Frodsham**, both previously Northumberland National Park Archaeologists with much experience of directing fieldwork projects involving volunteers in North Northumberland and elsewhere.

Richard Carlton

Richard Carlton is a Director of the Archaeological Practice Ltd. with responsibilities including project management, fieldwork and desktop research. He has a wide range of research and recording experience accumulated over the last two decades, and has completed many hundreds of professional archaeological reports, including evaluation excavations and historic building records, covering sites and monuments of all periods in northern England and lowland Scotland. He has also directed several community projects involving hundreds of volunteers.

Marc Johnstone

Marc Johnstone has been an associate of the Archaeological Practice since 2007 and is now an employee with particular interests as an Archaeological Computing Specialist and all-round field archaeologist. Following graduation with a BA in Archaeology and an MSc in Internet Archaeology from Newcastle University, Marc established his own heritage interpretation company (Heritage Media), working on a number of high profile, research projects.

Michael Parsons

Michael Parsons is a highly experienced archaeological excavator who has worked intermittently for the Archaeological Practice since 2006. He has wide experience of excavating and recording on a wide range of sites from all periods, and has worked with the Archaeological Practice on Roman, medieval and post-medieval remains. He has just completed a second season of excavation on the Roman fort at Maryport, Cumbria, where he worked on secondment for the University of Newcastle, performing roles of supervisor and excavator.

Additional specialist advice will be taken from Peter Ryder on building remains encountered.

Peter Ryder

Peter Ryder is a nationally renowned expert on the historic buildings of northern Britain, with particular interests including medieval churches, medieval and later defensible buildings, Non-Conformist chapels and historic farm buildings. Since coming to Northumberland in the 1970s as part of the listed buildings team, he has completed over 700 reports on historic buildings for clients in northern England, principally in

Northumberland and Cumbria, and has also published widely on themes as diverse as medieval churches in West Yorkshire, medieval grave covers of northern England and bastles in the northern counties. Since 2003 he has worked as an associate of the Archaeological Practice Ltd., contributing to over 100 reports for that organisation.

Further appropriate specialists will be contracted if necessary, depending on the results of the excavation.

6. HEALTH AND SAFETY

Full consideration will be given to matters of health and safety throughout this project. A comprehensive risk assessment will be produced prior to the commencement of work, and this will be revised if appropriate as the project progresses.

A health and safety induction will be given to all volunteers at project start-up, and all will be required to read the comprehensive risk assessment which will be kept on site and which all volunteers partaking in the project will be required to sign, stating that they have read and understood it and that they will abide by its terms.

All work will be undertaken in full accordance with the Archaeological Practice's health and safety policy, which conforms to the provisions of the Standing Conference of Archaeological Unit Managers (SCAUM) Health and Safety Manual.

Archaeological Practice staff are fully trained with regard to health and safety, including first aid, manual handling, cable detection, site safety and risk assessment.

There will be at least one qualified First-Aider and appropriate first aid supplies on site at all times while fieldwork is in progress. All Archaeological Practice staff are supplied with appropriate safety clothing and equipment, and advice as to appropriate clothing and equipment will be provided to volunteers.

7. PUBLICITY AND OUTREACH

Depending on the results, there may well be much public interest in this project. It is not intended to generate any advance publicity for the work, but if the results appear to be interesting once the work is underway then consideration will be given to issuing a press release and perhaps holding an open day for the media. Any such decisions will only be taken in liaison with Peregrini Lindisfarne project officers, and it is envisaged that any press releases will be issued through the project. Natural England will also be invited to contribute to the production of any press release and to participate in any media work associated with the project.

Once the work is complete, consideration will be given to the issuing of a press release covering the results.

At an appropriate time, a lecture will be given for the benefit of local residents, perhaps linked to a guided walk around the site.

The full report on the project, along with an illustrated summary, will eventually be made generally available on via the Peregrini Lindisfarne project website.