

Castle Point Limeworks, Holy Island Northumberland

Desk Based Assessment: February 2009

for

The National Trust



19th century painting by John Moore showing the Castle Point Limekilns on Holy Island firing at night

Addyman Archaeology

Building Historians & Archaeologists

a division of Simpson & Brown Architects
St Ninians Manse Quayside Street Edinburgh Eh6 6EJ
Telephone 0131 555 4678 Facsimile 0131 553 4576
admin@addyman-archaeology.co.uk www.simpsonandbrown.co.uk

Lindisfarne Castle Limeworks, Holy Island Northumberland

Desk Based Assessment (February 2009)
(project AA. 1783)

by Amanda Gow and Tom Addyman

Illustrations by Kenneth Macfadyen

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Archaeological Desk Based Assessment

1. Introduction

i. General

Addyman Archaeology was commissioned by the National Trust (contacts Catherine Atkinson, Property Manager, Lindisfarne Castle, and Harry Beamish, Regional Archaeologist) to undertake an archaeological and historical study of the Castle Point limeworks on Holy Island, Northumberland. An overall project design for the study and recording of Castle Field, the lime works remains, and an historical study was originally developed in 2007. The commission for works in 2009 involved a reduced scope, to include the following components that were originally proposed: (i) a review of historical sources / Desk-Based Assessment, (ii) a topographic survey of the castle field, (iii) an assessment of aerial photograph evidence. Thus a detailed survey of the limekilns (including illustrations, photographic record, context record and analytical report – item (iv)) was deferred to a later phase of the project.

This report presents the findings of items (i) and (iii) above, and provides a historical assessment of the Castle Point limeworks on Holy Island. Item (ii), the topographic survey data, will be submitted separately, but a synthesis of the interpretation of the data is incorporated into this report.

The lime workings form a part of the industrial landscape of Holy Island and comprise a number of features which include the Castle Point limekilns, which are a Scheduled Ancient Monument designated as an industrial monument of national importance. Other features associated with the limekilns include tramways, a jetty and quarry.

ii. Aims

The aim of this report is to outline the findings of the desk-based assessment undertaken in order to better understand the construction and operation of the Castle Point Limekilns and associated workings, owned and operated by William Nicoll, a Dundee merchant, from 1860 to 1883.

An excellent previous study that examines the history of lime working on Lindisfarne¹ already draws together a significant amount of the available information, including information regarding the Castle Point limekilns. However, this study did not include a review of material available in Scottish archives and as such it was felt that an appraisal of these sources may provide new information regarding the construction and operation of the site.

Unfortunately, although a search was made of a number of archival sources, no significant information directly relating to the construction and operation of the limekilns came to light. However, a number of other useful sources of information were consulted and provided information from which inferences could

¹ Jermy, R 1992 *Lindisfarne's Limestone Past: quarries, tramways and kilns*, Northumberland County Library

be drawn. Of particular use were the shipping records of John P. Ingram,ⁱⁱ at one time chief reporter and shipping correspondent of the Dundee Courier and Evening Telegraph. He was particularly interested in shipping and built up an extensive collection of notebooks on the subject. He continued to write regular shipping articles for the Dundee newspapers until his death in 1984 at the age of 74. The note books contain information on ships built in Dundee, Arbroath, Perth and Fife, their subsequent history, builders, owners, masters etc. However, the information collected by Ingram was in the form of notes and is by no means a comprehensive record of all the sailing activities at the time. The information compiled from the various notebooks in relation to ships relevant to this study is presented in Appendix A.

The aim of this study is therefore to present a general desk based assessment, augmented by information gathered from Scottish archival sources regarding the construction and operation of the Castle Point limeworks. This desk based study also included the assessment of aerial photograph evidence for the site, in order to better understand the scope of the operation and its impact on the wider landscape, but also to identify any other sites or features of potential archaeological significance in the area surrounding the lime workings, in the castle field.

This aim of this study is therefore not to reiterate the information previously presented in Jermy 1992 (except where necessary to provide background and augmentative information) but to attempt to add to it.

iii. Setting

The Holy Island of Lindisfarne is situated approximately 10 miles to the south-east of Berwick-upon-Tweed. Holy Island itself measures only 1.5 square miles and it is connected to the mainland by a causeway measuring 1 mile long at low tide.ⁱⁱⁱ



Figure 1: Holy Island, showing location of Castle Point limekilns and tramway to quarry at the north of the island. Google maps, annotations by S&B.

ⁱⁱ Located at Dundee University Archives

ⁱⁱⁱ Linsley, S 2005 *Ports and Harbours of Northumberland* Tempus

There is a long history of occupation on the island, with it first being occupied well before it became an island (finds of flint working dating from c.8000-1500 BC). The island also has a notable religious association (relating to St Aidan and St Cuthbert) which will not be considered here.^{iv} The only settlement on the island overlooks the well sheltered natural harbour at the south-west corner of the island.

The fortunes of the island varied over the years and the dissolution of the monasteries in 1537 resulted in an order for all havens to be protected against intruders by the construction of defences. This resulted in the construction of an earth and timber work on the whinstone crag of Beblow, at the east end of the inner harbour. However, this defence was not considered sufficient and was replaced by a stone castle between 1565 and 1571.

The Castle Point Limekilns are located approximately 150 metres east of Lindisfarne Castle, with the principal access elevations facing south and east over the beach. A rough path leads from the castle steps to the north-east of the kilns, leading down to the lower levels of the kilns. The site is composed of a bank of six pots in an almost square plan building set into the slope of the ground. Each of the kiln pots has three or four draw arches with tunnels through the structure giving access to the internal draw arches. Associated with the kilns are several principal tram ways, leading from the lime quarries at the north of the island and around the north side of the castle to take the burnt lime to the pair of jetties constructed to the west of the castle. There is also a more complex pattern of tramways associated with the kilns, covering the ground directly surrounding the kilns (see section 4.i).



Figure 2: Castle Point Limekilns and Lindisfarne Castle, annotations by S&B.

2. *The Nicoll Firm*

i. *The early years*

The information relating to the early years of the Nicoll enterprise is somewhat confusing – John Ingram^v makes no distinction between what are likely to be two different William Nicoll's (possibly father and son) when listing the ships belonging to *William Nicoll*. It appears that the lime merchant William Nicoll (b. 1814, d. 1889) who leased the Castle Point lime kilns may have inherited the lime business from his father.

^{iv} Linsley, S 2005 *Ports and Harbours of Northumberland* Tempus

^v Dundee Fleets, Volume 24, c1815-1891, John Ingram

The first reference to a William Nicoll in the Dundee Directories is in the year 1829/30 (hereafter referred to as William Nicoll *Senior*), where he is listed as a lime merchant with the business premises located at St Roques Lane near the centre of Dundee. However, it appears that the Nicoll business may have been operating for some time prior to this, as the earliest ship attributed to William Nicoll *Senior*, the *Martin*, was purchased as new in 1811.^{vi} A number of other ships were also purchased by the Nicoll firm prior to its first listing in the Dundee Directories, namely the *Crichton* and *Nelly* (both purchased in 1820), the *Williams* (purchased 1822) and the *Margarets* and *Catherines* (both purchased in 1825). It appears that William Nicoll *Senior* also owned a number of other ships: the *Aries* (purchased 1835), the *Bunyan* (purchased 1826), the *Craigie* (purchased 1829), the *Margaret* (purchased 1836) and the *Origen* (purchased 1828). It is known that the *Aries* was used for the lime trade along the coast^{vii} and this therefore gives an indication of the business activities of Nicoll *Senior*. (See Appendix A for further information on ships).

The steady expansion of the Nicoll firm is pointed to by the steady increase in the numbers of ships purchased and by 1834 William Nicoll *Senior* is listed as a ship owner, variously listed as being located at Cowgate Port^{viii} and Greenmarket.^{ix} Both of these addresses are located within the central area of Dundee. The last specific reference to William Nicoll *Senior*, lime merchant, is in 1840/41, listed as being located at Cowgate Port.

ii. *Nicoll and Webster*

A 1838 reference lists William Nicoll as taking a James Webster as a partner (in March) and they are listed as lime, coal and brick merchants with premises in St Roques Lane^x It seems possible that this 1838 partnership possibly represents William Nicoll *Junior* breaking away from the family firm (for which he may have worked for some time previously) as the firm neared the end of its commercial life (as it is last listed two years later in 1840/41, however, several directories are missing and the firm may have continued for some years after this). However, as the first business premises for Nicoll and Webster is located in St Roques Lane (the first business address listed for William Nicoll *Senior*) this may suggest that Nicoll *Junior* was occupying the former family firm premises and thus still tied in some way to his father. This is also suggested by the fact that William Nicoll appears to sell his ship the *Origen* to Nicoll and Webster in 1838 (see Appendix A).

The firm of Nicoll and Webster appears to have been in operation from 1838 until 1853, with addresses listed variously as St Roques Lane (listed as lime, coal and brick merchants 1838-44), 155 Seagate (listed as coal merchants and ship owners 1844-53) and Gellatly Street (1853-4?).^{xi} This is the last entry for Nicoll and Webster – the next entry is in 1856/7, when William Nicoll appears to have set up business independently.

The firm of Nicoll and Webster owned a number of ships which were used for their various enterprises: *Margery*, *Origen*, *Pearl*, *Reaper*, *Archduke*, *Eclipse*, *Jessie* and *Tid* (of these the *Origen*, *Tid*, *Archduke* are incorrectly listed as belong to Nicoll in Jermy 1992, p42). Of these only the *Jessie* and *Origen* had any cargo mentioned – namely coal and lime. A number of these ships foundered or were sunk over the

^{vi} Dundee Fleets, Volume 24, c1815-1891, John Ingram

^{vii} Jermy 1992 p42

^{viii} Dundee Directory 1834

^{ix} Dundee Fleets, Volume 24, c1815-1891, John Ingram

^x Dundee Fleets, Volume 24, c1815-1891, John Ingram

^{xi} Dundee Directories 1845-53/4

life of the Nicoll and Webster enterprise, but a few were still afloat at the end of the life of the business and Nicoll appears to have kept these ships (or bought out Webster's share) to start off his independent enterprise.

(see Appendix A for additional ship information)

iii *Nicoll of Dundee*

a. *General*

The first reference to William Nicoll as an independent enterprise is in 1856/7^{xii} (however, there are several directories missing and it appears likely that the business began a few years earlier, likely directly after the end of the Nicoll and Webster, which is supported by the purchase of several ships under the Nicoll name in 1854) where he is listed as a merchant and ship owner with the business located at 155 Seagate. The business premises remain in Seagate until roughly 1874/5, then his business address is given as 53 Dock Street. The last reference to William Nicoll is in the directory for 1888/9, where his business address is given as 1 Trades Lane, with his home address listed as 33 Dock Street.

William Nicoll died in 1889 in Dundee. In his obituary he is described as being a lime merchant and ship owner and as leasing quarries at Holy Island.^{xiii} His executry was granted to his brother Robert Nicoll, Clovelly, Harecraig, West Ferry and his nephew William Nicoll Machan, ship owner Dundee on 30th September 1889. His estate was valued at £3120 11s 7d.^{xiv}

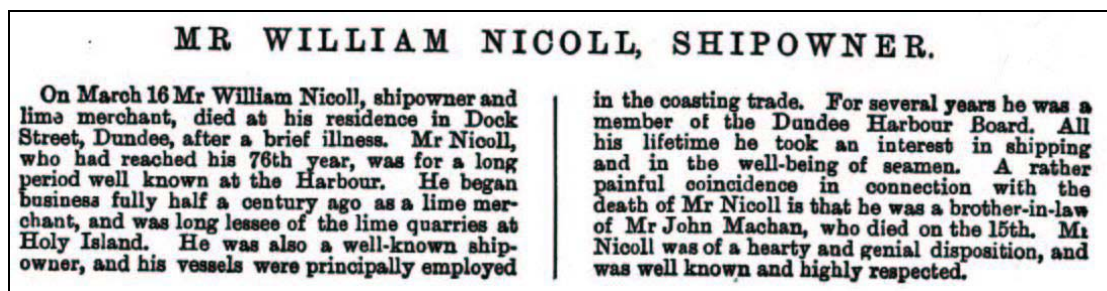


Figure 3: Obituary of William Nicoll, Dundee Year Book, 1889.
Dundee Central Library, Local History Section.

b. *Business concerns 1854-70*

The Nicoll enterprise appears to have been a fairly sizable operation. To begin with Nicoll appears to have started the business with the ships he acquired from the Nicoll and Webster enterprise, namely the *Origen*, *Pearl* and *Reaper*. These have cargos listed as lime and coal. Nicoll's business then appears to have grown relatively swiftly as he quickly purchases five more ships: *Belford* (1854), *Brothers* (1855), *Elizabeth* (1855) and *Lancaster* (1855), *Jessie* (1857) which were used for a variety of purposes, such as carrying jute and coal (see Appendix A).

^{xii} Dundee Directories 1856-7

^{xiii} Dundee Fleets, Volume 24, c1815-1891, John Ingram

^{xiv} Calendars of Confirmations and Executries 1889

Nicoll became involved in the lime enterprise on Holy Island in 1858, when he signed a lease to last for 21 years. However, Nicoll appears to have rushed into the enterprise without fully considering the land ownership issues and therefore constructed his first set of kilns at Lower Kennedy on land belonging to Mr Selby. He was therefore required to relinquish these kilns once the new kilns were ready at Castle Point in 1860 (see section 3.1).

Clearly Nicoll anticipated a larger scale of works at the Castle Point limekilns than had been anticipated at the Kennedy Works, as he purchased a number of new ships in 1860, apparently to deal with the production at the Castle Point limekilns: the *Isabella*, *Agnes* (although this is incorrectly listed in Ingram as 1865) and *Maria*. He also used two of his other ships (*Lancaster* and *Belford*) for the lime trade associated with the Castle Point kilns. Operations apparently increased in the first year (as supported by the dramatic increase in the 1861 census in the number of people employed in the lime industry on the island) as the *Margaret Reid* was purchased to sail between Holy Isle and Dundee in 1861.

During the operation of the Castle Point limekilns, Nicoll was also apparently involved in a number of other operations, as he owned a number of other ships not involved in sailing between Holy Island and Dundee: the *Elizabeth*, *Hovilah*, *Neve*, *Ophir*, *Reaper*, *Tay*, *Harvest Queen* (see Appendix A).

One of the few documents which do exist which relate directly to Nicoll is the expenditure book for the *Reaper* for 1859-60.^{xv} This includes disbursements at Newport 28 June 1859, at St. Thomas, 5 September 1859, at Oruba Island, September and October 1859, and at Benin, Africa, 22 August, 1860 – the Captain appears to have died shortly after leaving here. It also includes the amount of crew's wages on the voyage at Liverpool December, 1859, and January and February, 1860 (the crew are named) and there is a doctor on board named as Dr McMath.

The *Reaper* was also involved in transporting coal from Grrangemouth to Dundee in 1861 and the *Ophir* transported coal from Tayport to Valparaiso in 1862.

c. Business concerns 1870-1889

Throughout the 1860s and 1870s Nicoll continued to be engaged in the lime industry on Holy Island, although throughout the later part of the 1870s and into the start of the 1880s the productivity of the Castle Point limekilns appears to have declined and certainly by the 1883 Nicoll's involvement in the lime industry on the island had come to an end.

During this time (1870-1885) a number of Nicoll's ships were directly involved in the lime industry relating to Holy Island (the *Lancaster*, *Margaret Reid*, *Agnes*, *Wave*, *Fanny* and *Maria*). However, the number of sailings between Holy Island and Dundee with lime does not appear to be as great in as in the previous decade.

He also had a number of other ships involved in different businesses – the *Hovilah*, *Neve* and *Harvest Queen* continued in operation whilst a new ship, the *Lindisfarne*, was purchased in 1871. This ship was co-owned by Nicoll and a number of other businessmen (John Machan (Nicoll's brother in law), Cooper and David Brown), as was the ship the *Harvest Queen* (James Yeaman, Peter Miller Duncan, John Anderson Mitchell, Peter Milln Duncan, George H.R.C William and Earl Vane the Marquis of Londonderry). The cargo of the *Lindisfarne* is listed variously as oats (Riga 1878) and a coal hydraulic crane for Hamburg.

^{xv} Dundee University Archives Reference No. MS 105/10/17/1

3. The Castle Point Limekilns

i. Background

The earliest limekiln on Holy Island was located to the north of Snook House on the North Shore. This was a single kiln of which nothing survives today. The next limekilns to be constructed were known as the Kennedy Limeworks and these comprised two sets of kilns. The most northerly group, which consisted of two kilns side by side with curved frontages and single pots, were constructed by Messrs Gibson and Lumsden of Belford and were in operation in the 1840s.

The second group of the Kennedy limekilns were located to the south of those constructed by Messrs Gibson and Lumsden. These kilns were constructed by William Nicoll after he signed a lease with the Lord of the Manor, John Strangeways Donaldson Selby, to quarry and process lime on Holy Island for 21 years, starting from Michaelmas 1858.^{xvi}

The Lower Kennedy Limeworks consisted of three pots built as a rectangular block (Northumberland SMR no. NU 14 SW 18). They are situated directly beside the track which led from the earlier lime kilns to the south, past Chare End, to the jetties at Tripping Chare, thus presumably using the same tramway to take burnt lime to the jetty for export. Part of an old wagonway is also marked leading into the quarry from the north-east. This presumably came from the quarry at Nessend, bringing the limestone to the kilns.

The OS map shows another rectangular plan structure located between the two kiln banks at Lower Kennedy, directly beside the track way. This is marked as 'lime kilns' on the 1st edition OS map but is unmarked on the second. However, the form of the structure makes it unlikely that these are in fact lime kilns and they are more likely to be kelp pits, which are marked on an undated and unattributed map in Perry^{xvii} in this location.^{xviii}

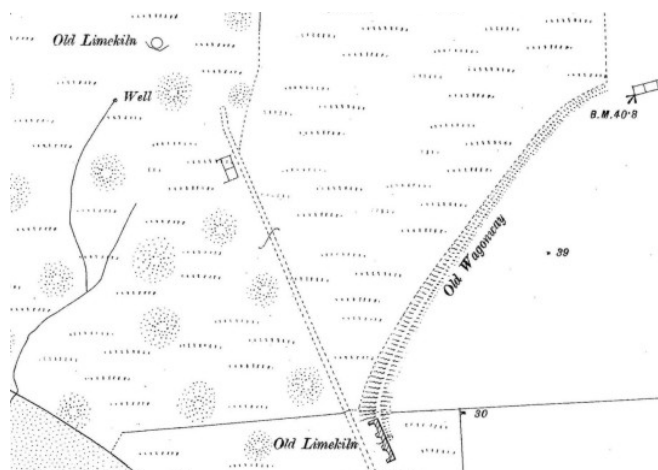


Figure 4: Detail of 2nd edition OS map (1898), Northumberland sheet XII. 2, scale 25 inch to the mile, showing the Lower Kennedy lime works, by this time marked as 'Old Limekilns'.

Woodhorn – Northumberland Collections Service

^{xvi} Jermy 1992 p28

^{xvii} Perry, R. A 1946 *Naturalist on Lindisfarne*

^{xviii} Linsley, S 2005 *Ports and Harbours of Northumberland* Tempus

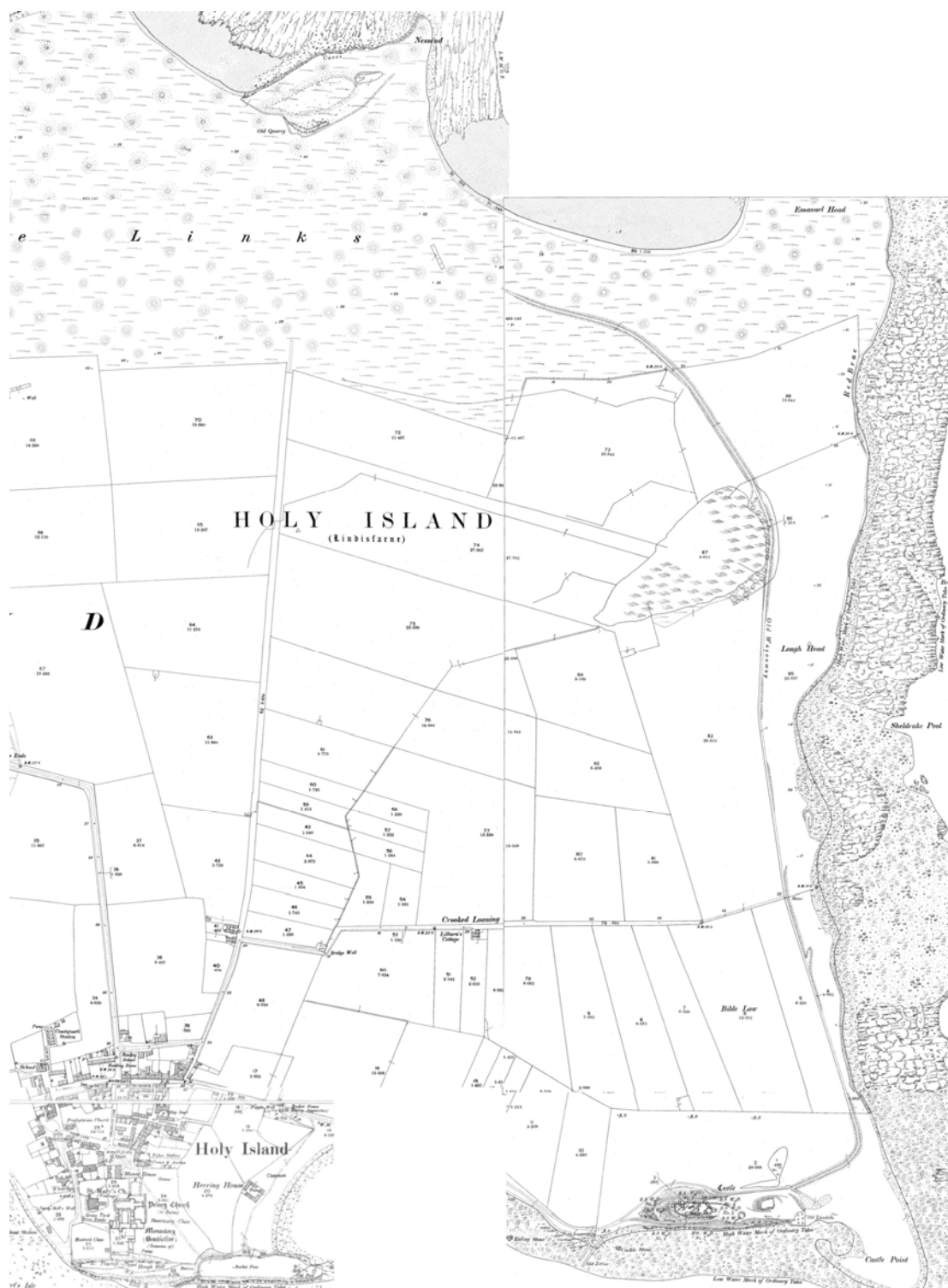


Figure 5: 2nd Edition OS maps (1898), scale 25 inch to the mile; Northumberland sheet VIII. 14 & 15, sheet XII.2, sheet XII.3 and sheet XII.7, showing the geographical extent of the Castle Point Limeworks.
Northumberland Collections Service, Woodhorn.

However, Nicoll appears to have quickly decided that a more favourable location for his limeworks would be at Castle Point, where the deep water would allow for the landing of vessels and where a tramway could be easily constructed down the east side of the island leading from the quarry to the limekilns. It seems that he was soon granted permission to build limekilns in this location; a report from Inspector John Higgins, regarding the boundary fencing of some common land and dated 24th March 1860, states that ‘*he has now received the sanction of the Lords of the Admiralty to build new Lime Kilns at the East End of Castle Rock*’.^{xix}

The report by Higgins goes on to state that Nicoll ‘*has in error built three large kilns upon the property of Mr. Selby...which must now be abandoned; he having determined to build others near the castle*’.^{xx} A map of 1860 produced by the same John Higgins clearly shows the Lower Kennedy Limekilns on J.S.D Selby’s land, as opposed to the common land to the north. This map also shows the proposed lime works at Castle Point.

It therefore appears that the Lower Kennedy limekilns were abandoned in 1860 with the completion of the Castle Point limekilns.

ii. The Castle Point Lime Workings

The Castle Point limeworks consist of a number of different features and cover a large geographical area, spanning the full length of the island along its east coast from the quarry at Nessend at the north of the island to the kilns and jetties at the south-east corner. The Castle Point limekilns first appear on the aforementioned Higgins map of 1860, where the ‘Proposed Lime kilns’ are marked at Castle Point (with six pots clearly marked) and an outline of the route of the proposed new tramway from the quarry at Nessend to the kilns, passing between Selby’s boundary fence and the shoreline. However, the kilns are not constructed at the time of the survey of the 1st Edition OS map in 1860 and therefore do not appear in detail until the publication of the 2nd Edition OS map (1898) by which time the workings have gone out of use.

The principal feature of the lime workings is the bank of six kiln pots located to the east of Lindisfarne Castle (Keys to the Past ref no. N5351). Each pot has multiple draw holes to which burned lime was directed by chutes built into each pot base.



Plate 1: The Castle Point Lime kilns. S&B

^{xix} In Jermy 1992 p28

^{xx} In Jermy 1992 p28



Figure 6: John Higgins map of 1860 showing the proposed Castle Point Lime workings.
The National Archives, ref. no. MFC 1/49-001

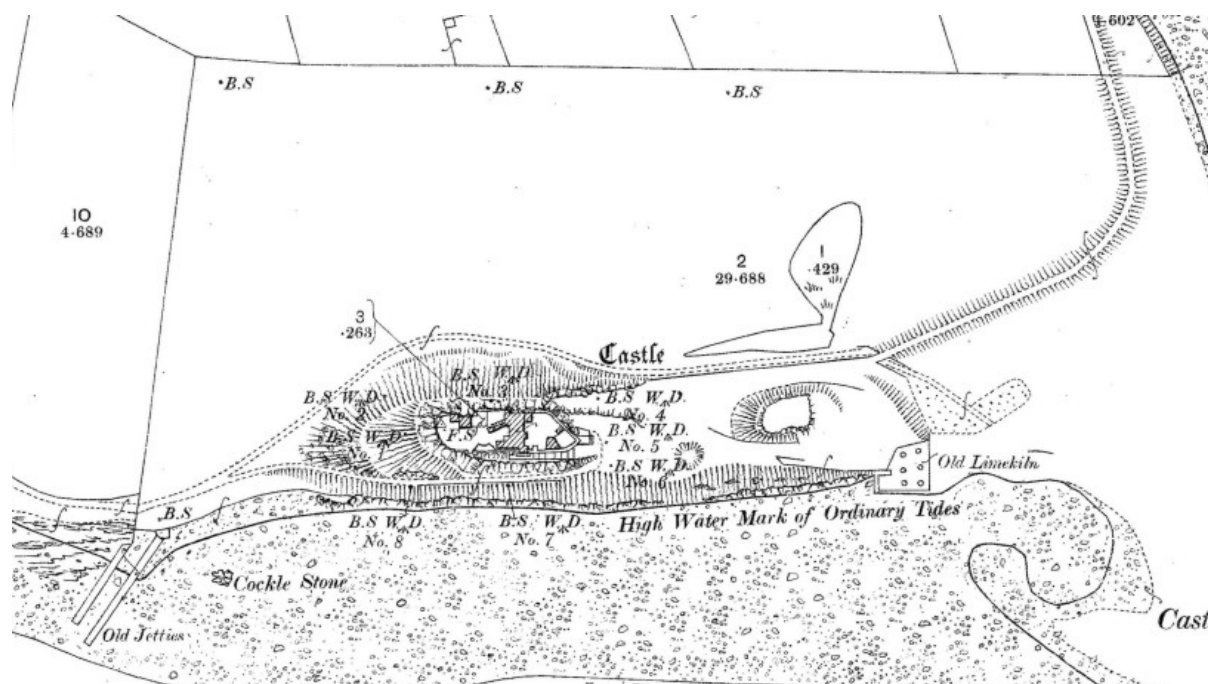


Figure 7: Detail of 2nd Edition OS map (1898), Northumberland sheet XII.7, scale 25 inch to the mile, showing the kilns, jetties and tramways. Northumberland Collections Service, Woodhorn.

Associated with the construction of the kilns was the establishment of a tramway system which linked the various parts of the lime processing system. A new tramway linked the limekilns with the quarry at Nessend at the north of the island, to allow quarried limestone to be transported down to the kilns at the south of the island. Although the most northerly section of the tramway is not marked on the 2nd edition OS map, the route of the track as it leaves the quarry can be clearly made out on an aerial image of the island (see figure 8). This track continued down the eastern side of the island towards the kilns, bearing to the west once it entered the castle field. Then, as the tramway approached the castle it curved sharply round a slight eminence, back towards the kilns, to approach the kiln head from the west. A little bridge carried this section of the track over the second line, which carried burnt lime from the bottom of the kilns, around the north side of the castle to the jetties located to the west of the castle.

The jetty to the west of Castle Point limekilns (Keys to the Past ref no. 5355) was constructed by Nicoll as part of the Castle Point lime workings; this jetty is commonly known as Cocklestone jetty but the site is depicted as Hare Crag on the 1860 Higgins Plan. This jetty is in fact comprised of two separate piers, the eastern one of which may have predated the western (see section 5.ii). Two 19th century paintings by Ralph Hedley (see figures 9 and 11) show the jetties in use. They appear to depict coal being unloaded from a ship by means of a bucket on a pulley system. The coal is being loaded into horse drawn wagons.

The 2nd Edition OS 1898 map and the Hedley paintings show the pair of jetties to be fairly substantial but today all that is visible are rows of vertical timbers which lie within beach boulders, lying at or below mean high water mark and at risk from the tide (see figure 10).

It has been suggested that the tramway rails were presumably constructed of iron, possibly supplied by the Carron Iron Works, giving rise to *The Iron Rails* public house on the island.^{xxi} However, another document dating to 1867 suggests that a steam locomotive may have been used, at least for a short time, on the line.^{xxii} However, the Ralph Hedley illustration shows the wagons to be horse drawn.



Figure 8: 1977 aerial photograph of the northern section of Lindisfarne, showing the tramway as it leaves Nessend quarry. Cambridge University Aerial Photograph Collection –ref no RC8 CB 50.

^{xxi} Linsley, S 2005 *Ports and Harbours of Northumberland* Tempus

^{xxii} Jermy 1992 p34



Figure 9: 'Unloading coal at a wood jetty – Holy Island' by Ralph Hedly, in Jermy 1992 p4



Figure 10: Remains of Cocklestone Jetty, also known as the 'lime jetty', from Linsley 2005 p59



Figure 11: 1883 painting by Ralph Hedley showing a ship unloading at Cocklestone jetty, Holy Island. Private collection.



Figure 12: Detail of 19th century painting by John Moore showing the Castle Point limekilns firing at night and Cocklestone jetty, NT ref no. 2007-1601 NT J Moores 003A.

iii. *The Construction of the Castle Point Limekilns*

The kilns are constructed from dressed, randomly coursed sandstone masonry. At present the origin of this stone is not known. It may be the case that local stone was used but stone may also have been imported and used as ballast. The presence of firebricks at the kilns stamped 'Glenboig' does suggest that at least some of the materials used in the construction were imported. The Glenboig Fire-clay Company was located at Glenboig, an industrial viillage situated on the northeast outskirts of Glasgow. The company was formed by James Dunnachie in partnership with John Hurl and John Young, specialised in furnace lining bricks and pipe work. However, the partnership folded in 1872 and James Dunnachie built the Star Works immediately adjacent to the old works and in competition with them. In 1882 the two companies decided to amalgamate as the Glenboig Union Fireclay Company Ltd with Dunnachie as Managing Director. As the firebricks in the kiln were used to reline the kiln and therefore changed regularly, those which remain at the Castle Point kilns are likely to be of a later date and relate to the end of the functional span of the kilns, possibly the early 1880s. No cargo of bricks could be found for those ships sailing between Dundee and Holy Island in 1860 and 1871 but it is very possible that the bricks were merely listed as ballast.

As previously stated, the iron used for the construction of the tram way rails was possibly supplied by the Carron Iron Works, one of the largest works in Europe throughout the 19th century. The Carron Iron Works was established in 1759 on the banks of the River Carron near Falkirk, in Stirlingshire. The Carron Iron Company also had an established connection with the island, having extracted mineral resources from there in the past.^{xxiii} However, no reference could be found in the shipping intelligence for Dundee for the shipment of iron to Holy Island with which to construct the rails. However, as suggested by Jermy^{xxiv} it could be that the lines of the former tramway associated with the Lower Kennedy Limeworks were lifted and used for the new tramway. If this was the case then there may be a reference in the shipping intelligence around the time of the construction of the Lower Kennedy kilns (however, these were not available for consultation at the time research was being carried out).

iv. *The Operation of the Castle Point Limekilns – 1860-1870*

No direct information could be located regarding the operation of the lime kilns and inferences therefore must be drawn from other sources.

a. *Nicoll's ships*

As discussed in Jermy^{xxv} the Nicoll enterprise at the lime kilns was proving successful in the early part of the 1860s and 1861 saw a dramatic increase in the number of employees associated with the lime industry on the island (this is supported by the purchase by Nicoll of a new ship to deal with the increased production). The manager, Robert Dewar from Scotland, was responsible for 30 labourers, two blacksmiths and an engine smith. Many of these people came from Scotland, with others coming from Ireland and they established a small community at the Coves, near the Nessend quarry.

Although no direct evidence was brought to light to elaborate on the information provided by Jermy regarding the operation of the Castle Point limekilns, it is felt that a more general picture can be painted from the available information, in particular the shipping intelligence recorded in the local newspapers at

^{xxiii} Linsley, S 2005 *Ports and Harbours of Northumberland* Tempus, p54

^{xxiv} Jermy 1992 p29

^{xxv} Jermy 1992 p30-31

the time. ^{xxvi} However, in places these are incomplete and, due to older archiving methods and the quality of the microfilm, very difficult to read.

As stated in Jermy ^{xxvii} there were indeed six of Nicoll’s ships sailing regularly between Holy Island and Dundee in the 1860s – the *Isabella*, *Agnes*, *Maria*, *Lancaster*, *Belford* and *Margaret Reid* (see Appendix A). These ships took burnt lime from the Cocklestone jetties to the west of the Castle Point limekilns to Dundee and brought coal back for firing the kilns, as there were no sufficient coal seams which could be mined on the island, those available being generally thin and poor, the best being only 46cm thick.

However, it does not appear that there was a straightforward pattern of distribution between Dundee and Holy Island regarding coal and lime – the ships certainly brought burnt lime back from Holy Island to Dundee but the source of the coal being taken to Holy Isle is a little harder to determine. There appears to be two distinct sailing patterns for Nicoll’s ships, relating to the import of coal and export of burnt lime, with patterns changing depending on the level of production and raw materials required. The first pattern relates only to the transport of the lime product from Holy Island to Dundee and sees ships leaving directly for Holy Island in ballast then returning with lime. These sailings were fairly frequent and had a quick turn around, the ships not staying for long in port at Dundee. An example of this shipping pattern can be seen in relation to the ship *Agnes* – see *Tables 1 and 2*.

<u>Arrives in Dundee From</u>	<u>Date</u>	<u>Cargo</u>	<u>Departs to</u>	<u>Date</u>	<u>Cargo</u>
Holy Island	24-Apr	Lime			
			Holy Island	27-Apr	Ballast
Holy Island	17-May	Lime			
			Holy Island	19-May	Ballast
Holy Island	23-Jun	Lime			

Table 1: Shipping pattern 1 – the *Agnes*, April-June 1860

<u>Arrives in Dundee From</u>	<u>Date</u>	<u>Cargo</u>	<u>Departs to</u>	<u>Date</u>	<u>Cargo</u>
Holy Island	02-Nov	Lime			
			Holy Island	08-Nov	Ballast
Holy Island	18-Nov	Lime			
			Holy Island	13-Dec	Goods

Table 2: Shipping pattern 1 – the *Agnes*, November-December 1860

Unfortunately it can only be speculated what the ‘goods’ are that are being taken to Holy Island in December.

However, the second shipping pattern is a little more complex and relates to the supply of coal to Holy Island for the firing of the lime kilns. As previously mentioned all those ships leaving for Holy Island directly from Dundee tended to leave in ballast. It therefore appears that some of Nicoll’s ships must have been sailing to other locations to collect coal, then sailing with this to Holy Island before returning to Dundee with lime – the pattern would then be repeated. This can be seen by the fact that some of the ships known to be involved in the Holy Island lime trade left Dundee in ballast for various locations

^{xxvi} Dundee Advertiser 1860 and 1871

^{xxvii} Jermy 1992 p42-3

known to be associated with the extraction and export of coal (eg Methil, Wemyss, Sunderland, Warkworth), then returned from Holy Island to Dundee with lime some time later.

At this time Warkworth and Sunderland were both large coal exporting centres, especially Sunderland, which was an important coal port in the 19th century and where a number of new docks were built between 1837-1868. The fortunes of Methil had declined at this time and it had shrunk from the former large scale coal port it had once been (large scale productions did not resume until 1864 with the sinking of the pit at Muiredge). However, there was a fine harbour and a small amount of trade was still carried out. The fact that only a small amount of coal export was carried out is supported by the fact that there appears to be only one visit of Nicoll's ships to Methil during the year 1860. At this time Wemyss had taken over from Methil as the principal producer of coal in the parish and there were five pits in operation here in 1861.

xxviii

The sailing pattern of the *Lancaster* provides a good example of the organisation of Nicoll's shipping patterns for bringing lime from and coal to Holy Island in 1860 – see Table 3.

Arrives in Dundee From	Date	Cargo	Departs to	Date	Cargo
			Methil	09-Jun	Ballast
Holy Island	27-Jun	Lime			
			Wemyss	03-Jul	Ballast
Holy Island	28-Jul	Lime			
			Warkworth	05-Aug	Ballast
Holy Island	26-Aug	Lime			
			Sunderland	01-Sep	Ballast
Holy Island	12-Sep	Lime			
			London	29-Nov	Potatoes

Table 3: Shipping pattern 2 – the *Lancaster* June-November 1860

The shipment of potatoes to London at the end of November provides an example of the other cargoes that the merchant Nicoll was distributing at the time.

b. Other involvement

As stated in Jermy^{xxix}, a number of other ships are recorded as being involved in the lime trade from Holy Island in the 1860s. These ships included the *Robert Hood*, *Superior*, *Curlew* and *Mersey*. It was hoped that some connection could be traced between the owners of these ships and Nicoll, in order to throw more light on the organisation of the operation of the kilns. However, although more information was found, none of this provided a direct link with Nicoll or the lime kilns.

Any information on the *Superior*, Master Summers has also proved difficult to trace, although a number of possible connections have been found. No record of the *Superior* could be found in Ingram's records but two possible references were found in the shipping registers of Dundee, Montrose and Arbroath. One refers to a *Superior* (official number 6883) which was registered at the port of Arbroath in July 1859 and was owned by a Godfrey McTaggart, ship owner of Arbroath. The vessel was transferred to Aberdeen in 1866. The second reference is to a *Superior* (official number 12807) built in Montrose in 1819 and

^{xxviii} *The Parochial Directory of Fife and Kinross 1861*

^{xxix} Jermy 1992 p43

registered at the port of Montrose in 1829. The owners were James Birnie, senior and junior, ship builders, Montrose. Similarly, a search of *Lloyds Captains Register*^{xxx} (which record the careers of masters and mates holding the certificate of competency who were active on British-owned, foreign-going merchant vessels between 1869-1948 - the series is retrospective to 1851 for those still working in 1869, when the Registers were first compiled) provided a possible lead in relation to the Master of the ship, although nothing concrete. At this date there were five registered *Summers*, but none were seen to have sailed in a ship named *Superior*. Interestingly, one of the captains was a Wilson Summers (cert no: C16953) born Aberdeenshire 1829 and passed Dundee 1863. He seems to have been working in the right area at the right time but, as said, there are no recorded voyages for him in the *Superior*. This may be the correct Summers, as there are no recorded sailings of the *Superior* in the later part of the 1860s, which would tie in with his death. The *Superior* appears to have been involved in the first of the sailing patterns seen with Nicoll's ships, sailing directly between Dundee and Holy Island – see table 4.

<u>Arrives in Dundee From</u>	<u>Date</u>	<u>Cargo</u>	<u>Departs to</u>	<u>Date</u>	<u>Cargo</u>
Holy Island	17-Jun	Lime			
			Holy Island	23-Jun	Light
Holy Island	03-Jul	Lime			
			Holy Island	05-Jul	Ballast
Holy Island	11-Jul	Lime			

Table 4: Shipping pattern 2 – the Lancaster June-November 1860

The Dundee-registered *Robert Hood* was owned and skippered by D. Archer, who is listed as a shipmaster, Carnoustie. Although his executry was located^{xxxii} nothing could be seen in this relating to his involvement with the Castle Point limekilns or his relationship with Nicoll. Furthermore, the 1860 shipping intelligence throws no real light onto the involvement of Archer in the lime trade on Holy Island, but does give an indication of the other trades in which Archer was involved.

v. *The Operation of the Castle Point Limekilns – 1870-83*

a. *Nicoll's ships*

As discussed in Jermy^{xxxii} the level of quarrying and lime production at the Castle Point limekilns was decreasing in the 1870s, when the quarrying was in the hands of a contractor and only ten men were employed at the quarry under the supervision of a foreman. A report by John Higgins to the Crown Commissioners on the 13th September 1870 states that the Nicoll enterprise does not appear to have been as successful as had been anticipated. This decrease in production can be seen in the shipping patterns, as there are certainly fewer sailings between Holy Island and Dundee.

In addition there has been a change in the shipping patterns from the previous decade. Of those ships involved in the Holy Island lime trade - the *Lancaster*, *Agnes*, *Margaret Reid*, *Wave*, *Fanny* and *Maria* (the *Maria* is not listed in Jermy) at least four (the *Agnes*, *Lancaster*, *Wave* and *Maria* (no mention could be found of the *Fanny*)) appeared to have been employed in the simple shipping pattern of plying back and forth between Holy Island and Dundee, leaving in ballast and returning with lime (shipping pattern 1) – the example of the *Maria*, Master Walker is given in Table 5.

^{xxx} Captains Registers" of Lloyd's of London 1851-1911, Guildhall Library, Lond – ref. no. MS 18567/1-87

^{xxxii} Dundee Archives Reference Number – MS 105/20/1/5

^{xxxiii} Jermy 1992 p35-8

<u>Arrives in Dundee From</u>	<u>Date</u>	<u>Cargo</u>	<u>Departs to</u>	<u>Date</u>	<u>Cargo</u>
			Holy Island	12-Apr	ballast
Holy Island	26-May	lime			
			Holy Island	13-Aug	ballast
Holy Island	??	Lime			
			Holy Island	30-Aug	ballast
Holy Island	30-Dec	lime			

Table 5: Shipping pattern 1 – the Maria, April-December 1871

Only the *Margaret Reid*, Master, Mustard, appears to have been involved the more complex shipping pattern 2, departing for other ports, presumably for coal, then returning from Holy Island with lime. This change in the volume of ships employed in each of the types of trade may reflect the changing production patterns of the kilns, with less men being employed, less firings and therefore less coal required. In addition, the ships tend to sail out with goods, rather than in ballast as previously, perhaps reflecting the fact that Nicoll is increasing his involvement in other industries, possibly as a result of the decline of the Holy Island lime production.

<u>Arrives in Dundee From</u>	<u>Date</u>	<u>Cargo</u>	<u>Departs to</u>	<u>Date</u>	<u>Cargo</u>
			Berwick	28-Jan	ballast
Holy Island	20-Feb	lime			
			Warkworth	? March	goods
Holy Island	10-Apr	lime			
			Warkworth	24-Apr	goods
Holy Island	20-May	lime			
			Holy Isle	12-Jul	ballast
Holy Island	?? July	lime			
			Holy Isle	01-Aug	ballast
Holy Island	18-Aug	lime			
			Warkworth	23-Aug	goods
Holy Island	17-Sep	lime			
			Amble	11-Oct	ballast
Holy Island	25-Oct	lime			

Table 6: Shipping pattern 2 – the Margaret Reid, January-October 1871

b. *Other involvement*

As was the case in the 1860s, there appears to have been other ships involved in the lime trade on Holy Island in the 1870s, notably the *Maggie* (Master, Walker). However, no further information could be traced regarding this ship in Ingram's notebooks and a spot check of *Lloyd's Register*.^{xxxiii} The only possible reference to a *Maggie* (official number 33896), in 1852 in Nova Scotia and registered at the port of Montrose in 1865, having been transferred from Stranraer. The principal owner was Margaret Steel of Montrose, widow. It was sold to Norwegians in 1878. This ship only made a limited number of sailings between Holy Island and Dundee in 1871, sailing out in ballast and returning with lime.

^{xxxiii} "Captains Registers" of Lloyd's of London 1851-1911, Guildhall Library, Lond – ref. no. MS 18567/1-87

c. The final years of production

By the early 1880s the number of men employed in the industry had decreased significantly, with just four men working at the quarry and one at the kilns. The shipping records also indicated that the work had become highly seasonal. This in part may have been due to problematic relations between Nicoll and Crossman (to whom the land had been transferred in 1874). The last recorded departure of lime was in September 1883 and it seems that this was the end of Nicoll's lime burning activities on Holy Island.^{xxxiv}

Following Nicoll's withdrawal the quarries were left untouched and the kilns were only fired perhaps one more time in approximately 1900, perhaps by local farmers needing lime for agricultural purposes. Certainly by this time the houses occupied by the former kiln and quarry workers were abandoned and a ruinous condition, almost completely buried by the sands.

4. Aerial Photographs

As a part of this study an assessment was made of aerial photographic records covering Holy Island, in an attempt to better understand the scope of the lime working operation and its impact on the wider landscape and also to identify any other sites or features of potential archaeological significance in the area surrounding the lime workings, in the castle field.

A search was made of the aerial photograph evidence available for the years 1964, 1975, 1977, 1978, 1986, mid 1990s and the early 21st century. Of these the vertical images taken in 1964, 1977, the 1990s and early 21st century proved to be most useful and shall be discussed here.

i. The Castle Point Lime Kilns

A 1977 aerial photograph (Cambridge University Aerial Photograph Collection –ref no RC8 CB 50, see figure 11) gives a clear indication of the size and scope of the limeworks, clearly showing the tram way coming from the quarry at Nessend at the north of the island down to the lime works at the south of the island.

By focusing in on the area immediately surrounding the lime workings and the castle it is possible to identify a number of possible tramway routes and/or earthworks additional to the main route ways previously discussed (section 3. ii). By combining this with data gathered from the historical research and topographic survey it has been possible to produce a detailed interpretation of the lime-processing operation (see section 5).

^{xxxiv} Jermy 1992 p 337-8



Figure 13: 1977 vertical aerial photograph, showing the full extent of the tramway leading from the quarry at Nessend to the kilns at Castle Point.

Cambridge University Aerial Photograph Collection –ref no RC8 CB 50

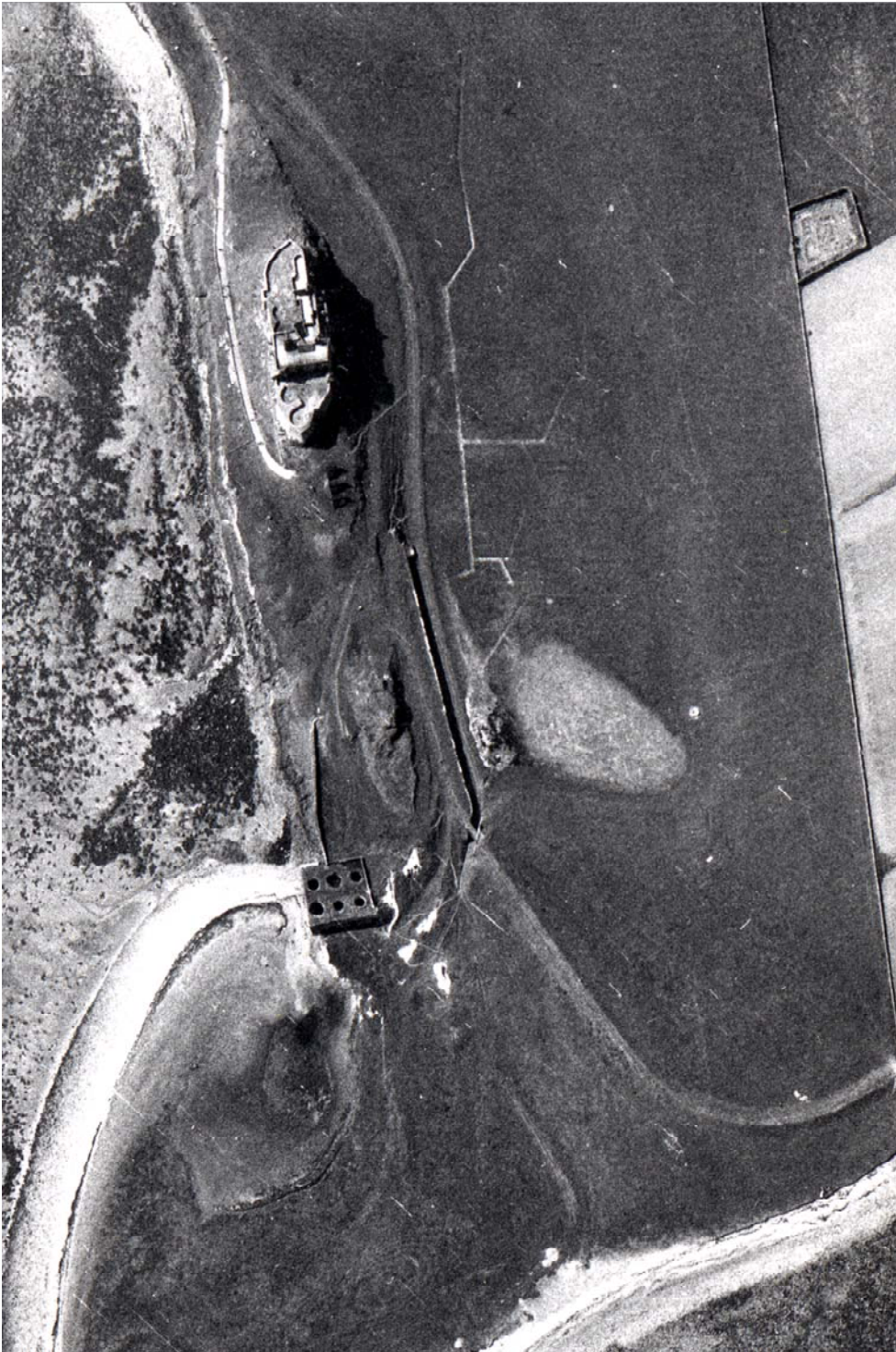


Figure 14: 1964 vertical aerial photograph showing the immediate area surrounding the Castle Point limekilns. 1964, scale 1:8000, Northumberland Council SMR.



Figure 15: Detail from 1977 vertical aerial photograph, showing the immediate area surrounding the Castle Point limekilns. Cambridge University Aerial Photograph Collection –ref no RC8 CB 50

5. Overview of the lime-processing operation – synthesis of the survey and historical evidence

The detailed topographic survey of the lime works, when combined with the historical evidence and further on-site analysis of the earthwork and structural remains (Tom Addyman and Harry Beamish) has led to a far better understanding of the operation of Nicoll's limeworks and the systems involved than had hitherto been possible.

i. Supply of limestone to the kilns

Limestone was extracted from the quarry at Nessend, where extensive workings are still to be seen, and brought along a tramway upon a raised embankment that skirted the east side of the improved fields along the rocky shore of the east side of the island. The route entered Castle Field at its NE corner after which point it arced round to the southwest, running along the level raised beach deposits, over a bridge spanning the lower level track, and along the north side of the outlier crag of whinstone to the east of the castle, before running westwards along the north side of the castle crag itself upon an area of terraced ground that is partly bounded by masonry walling on its south side towards its western end where the track evidently terminated – this between the outlier and the castle crag. The wagons were evidently reversed and redirected by means of track points to a short section of tramway that rose up-slope, skirted the north and east sides of the outlier crag and curved round to the south to the upper level of the kilns. On the north side of the outlier crag there survive the remains of what appear to be an upper and lower track – perhaps the upper superseded the slightly steeper lower one. At its south end this track appears to have run onto the kiln platform top at its mid-point, between the banks of kiln chambers.

ii. Supply of coal to the kilns

Coal was delivered to Lindisfarne by ship – the fuel supply for the lime-burning operation. The Castle Point limekilns were supplied from a newly-erected jetty upon the foreshore just beyond the southwest corner of castle field and a little to the east of a rocky outcrop known as the Riding Stone. On the foreshore two groupings of parallel lines of pine piles are still very visible at low tide, associated with parallel accumulations of rubble stone – the remains of two jetties whose superstructure seems to have been wholly wood-framed (see figure 10). The eastern jetty appears to have been the earlier for this is shown on two plans of the limeworks that must date to the earlier years of its operation. The western jetty first appears on the OS map of 1897, this after the abandonment of the enterprise.

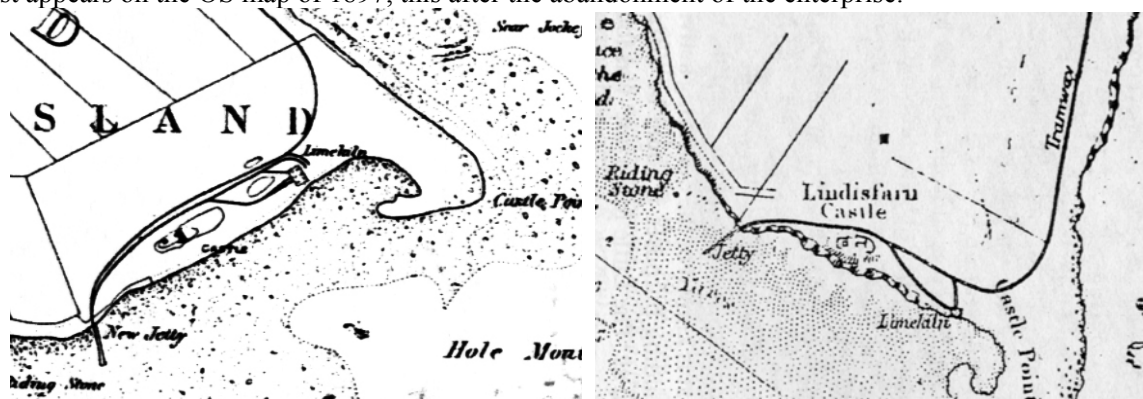


Figure 16: undated plan of the Castle Point limeworks (post-1860 – c1870?) produced as part of an abortive Land Drainage/Reclamation scheme, Northumberland County Record Office, in Jermy 1992 p40

Figure 17: detail of and 1831 admiralty chart of Holy Island Harbour showing the 1867 updating, British Library Map Library, in Jermy 1992 p32

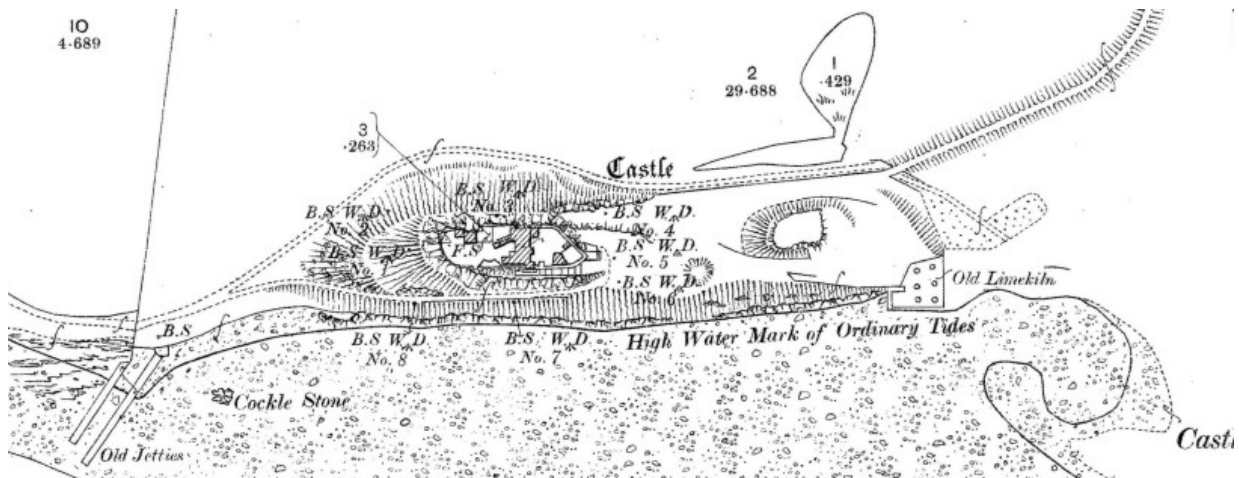


Figure 18: Detail of 2nd Edition OS map (1897), Northumberland sheet XII.7, scale 25 inch to the mile, showing the remaining features of the limeworkings following abandonment, Woodhorn – Northumberland Collections Service.

The two 19th century paintings by Hedley (see figures 9 and 11) suggest that only one of the piers were used at a time. However, it is possible that, in order to increase the efficiency of loading and off-loading, the piers may have on occasion been used simultaneously. There is no obvious earthwork evidence on the shore-top immediately adjacent to suggest one superseded the other. Whether the paired jetties permitted more than one ship at a time to lay-up between tides, or parallel loading operations on either side of a single ship, is open to speculation - either would have resulted in a faster turnover.

The undated plan (see figure 16) indicates parallel tracks running northeast from the jetty area - these then arc round to the east along the north side of the castle crag; however their exact route is open to some debate. At the lower level the route of at least one of these tracks is readily apparent as a broad terraced platform (the present footpath) – and certainly this was employed for transport of quicklime from the kilns to the jetties (see next section).

However the most direct route for delivery of coal to kiln is more problematic. At the west tail of the castle crag there is a slight suggestion of what may have been the beginnings of a tramway track that rose diagonally across the contours of the northern slope of the crag, to the upper level of the lime-works operation. The two earlier plans (see figures 16 and 17) that show the track system certainly suggest this had been the case. However much of the northern slope shows no hint of such a track – rather its scree profile appears remarkably even. It is possible however that Lutyens' rebuilding work at the castle in c1905-6 resulted in an obscuring blanket of scree-fall over much of the northern slope, or even that the slope was deliberately landscaped under the eye of Gertrude Jekyll, who was certainly responsible for plantings upon the crag. Confirmation of the presence of a track upon the slope may only now come from an archaeological evaluation.

A track rising up the slope would represent the most direct route by which coal could be got to the kilns, and this is what both of the early plans suggest. Each shows a continuation of the track curving to the southeast around the eastern end of the castle crag and evidently running between it and the outlier crag further east. Both plans show the track running up to the kiln bank on its west side. The route of the track in this area can still be made out, an embankment and level track bed clearly skirting the south side of the outlier crag. In this area there is a stone retaining wall bounding the north side of the track that supports a

terrace flanking the south side of the crag, which rises above. There seems to have been a branch of the track that rose up from the west to the terrace top. The purpose of this siding was not determined.

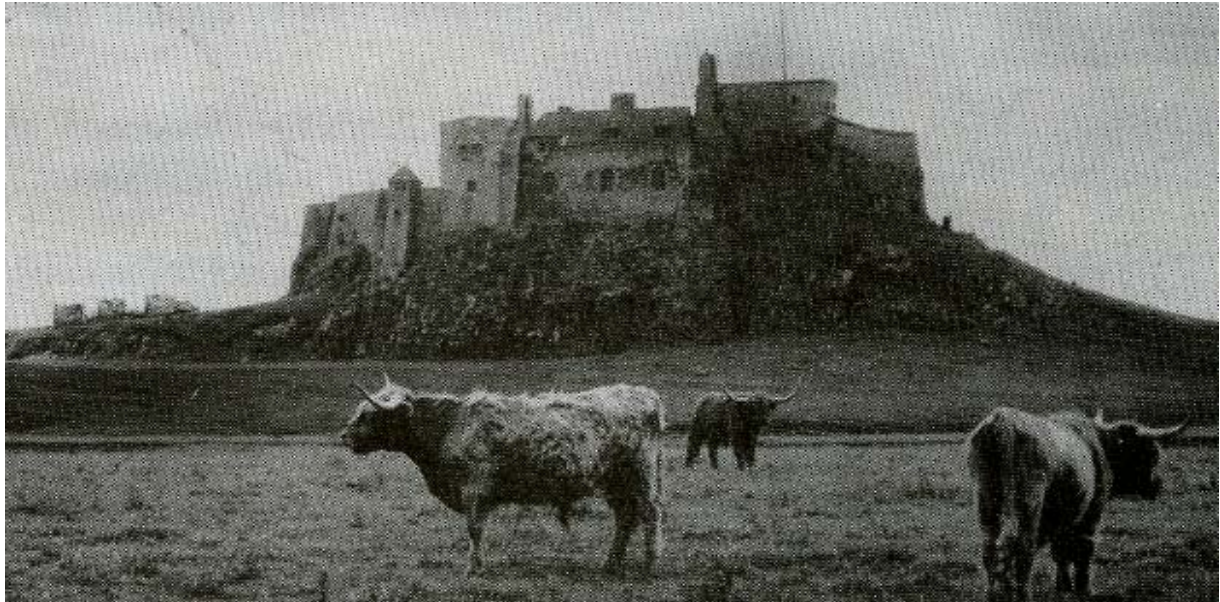


Figure 19: View of Lindisfarne Castle, looking south. Shows remains of tramway routes to the north of the castle. Northumberland County Library, in Jermy 1992 p37.

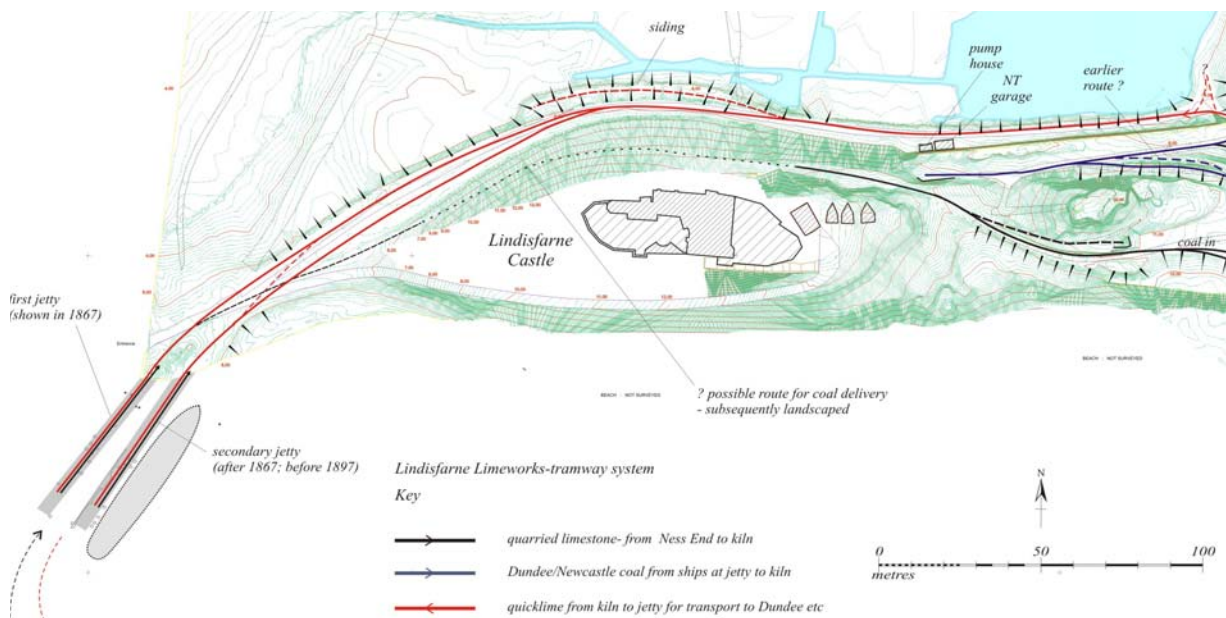


Figure 20: detail from topographic survey plan of the Castle Field and tramway system, showing possible route of wagon track used to bring coal from the Cocklestone jetty to the Castel Point limekilns (see figure 22 for complete plan), AA.

If the route rising around the castle crag had not existed the alternative seems to have been far more convoluted – the second track running parallel to the first at the lower level on the north side of the castle crag (the broad terrace here is certainly wide enough) but further east it would have had to have followed the same route as that of the quicklime, running beneath the bridge, around to the east side of the kilns, and then steeply up-slope on a short connecting section of track to the upper level. The latter then joined the limestone-supply track and then on to the kiln. As well as being inconvenient and with a short section of steeply inclined track, coal delivery along a route shared with the incoming limestone and out-going quicklime would have considerably complicated the running of the system.



*Plates 2 and 3: View east from Lindisfarne Castle looking toward the kilns
and view looking west toward Lindisfarne Castle,
both images show the remains of the high level tramways leading into the kilns from the west, AA.*

iii. Transfer of quicklime from kiln to jetty

Further tramway tracks ran within the stone-vaulted alleys constructed at the lower level between the kiln chambers. At the base of each kiln chamber multiple draw-holes (one on each side) permitted rapid emptying of quicklime into the tramway wagons. These east/west-aligned tracks then emerged on the east side of the kiln bank where they evidently merged within a level terrace platform that was retained to the south and east by a low curving masonry wall. The merged track then ran eastwards upon what seems to have been a fossilised beach shingle ridge; the cars then reversed, doubling back and redirected by means of points to the northwest through a cutting and under between the masonry abutments of the bridge carrying the higher level track. After the bridge the tramway had run westwards along the bases of the outlier crag and the castle crag and thereafter along to the jetties. There also seems to have been a further short siding on the north side of the track to the north of the castle crag that had perhaps permitted storage of unused wagons, or stockpiling of materials.

As already mentioned there was a short, steeply rising link between the lower and upper tramway systems, this lying within a cutting immediately northeast of the kiln bank. It is possible that this had been intended to permit easy redistribution of empty wagons between the levels according to necessity.

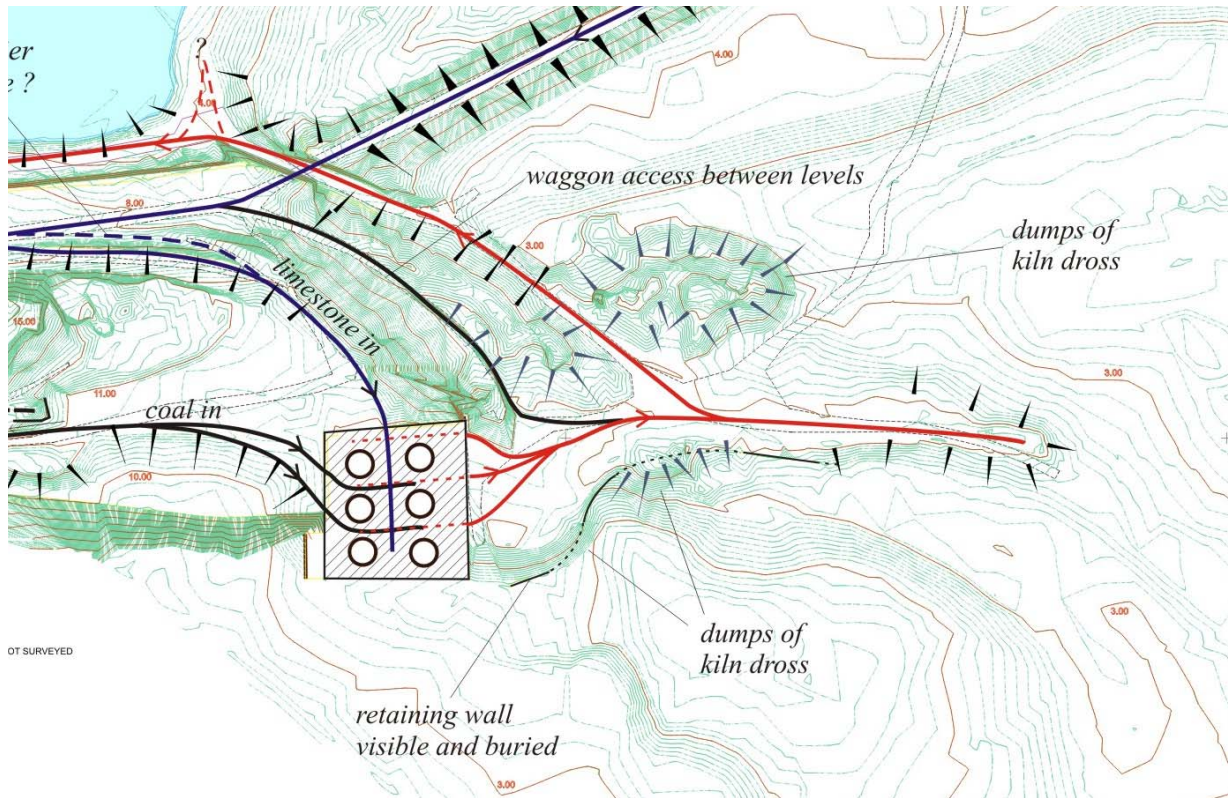


Figure 21: detail from topographic survey plan of the Castle Field and tramway system, showing tramway routes exiting the kiln bank to take quicklime to Cocklestone jetty and dumps of waster material (see figure 22 for complete plan), AA.



Plate 4: Remains of tramways at kiln foot, AA.

iv. Dumping of kiln waste

The contouring of the topographic survey appears to suggest that a tramway may have extended further to the east beyond the kiln bank at its lower level. Here running eastwards there is a broad arc of material that then gently curves round to the southeast and then southwards onto the castle point spit; at its south end this ridge of material appears to spread. It was supposed that this may have been a band of kiln-dross dumpings, successively built-up during the operation of the site. However close inspection of erosion holes in the area rather suggest this to be a natural ridge of relict beach shingle.

Certainly there is much evidence of kiln dumpings elsewhere. There are extensive waste tips immediately northeast of the kiln bank, and to the east where some of the material overlies the terrace retaining wall.

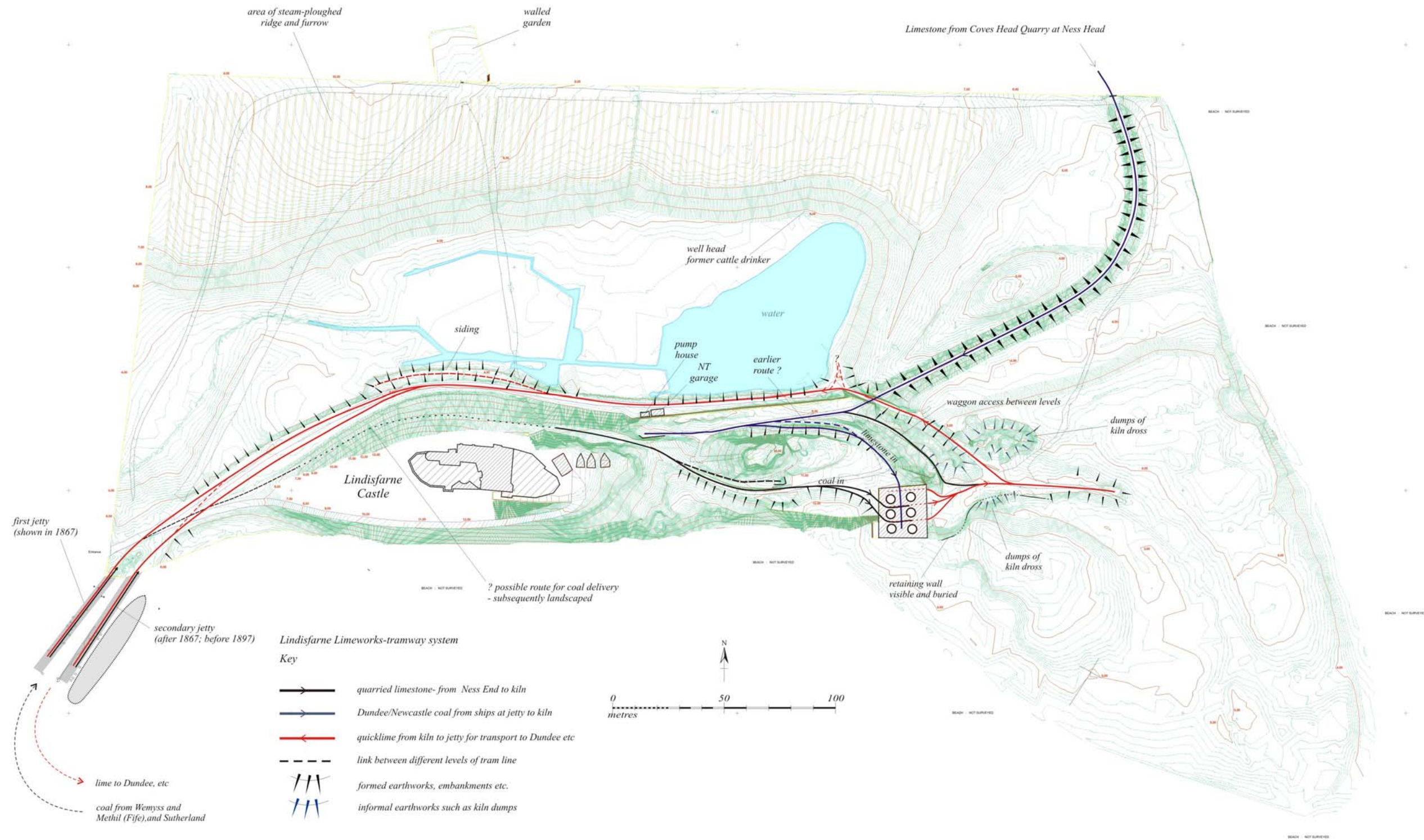
Lindisfarne Castle, Holy Island, Northumbria





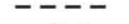

Survey of Castle Field, Lindisfarne Limeworks and the associated tramway system

February and March 2009

Base survey : D. Connolly
Analysis: Addyman Archaeology

Addyman Archaeology for The National Trust



- Lindisfarne Limeworks-tramway system**
- Key**
-  quarried limestone- from Ness End to kiln
 -  Dundee/Newcastle coal from ships at jetty to kiln
 -  quicklime from kiln to jetty for transport to Dundee etc
 -  link between different levels of tram line
 -  formed earthworks, embankments etc.
 -  informal earthworks such as kiln dumps

Primary Sources

Dundee University Archives

Dundee Shipping Records, Volumes 1-5 (Chronological), 1867-1890, John Ingram
-Dundee Archives Reference Numbers - MS 73/1-5

Dundee and District Shipping, Volumes 9A-13 (Alphabetical), John Ingram
-Dundee Archives Reference - MS 73/9A-13

Dundee Shipping Records, Volume 15, 1840-1915, John Ingram
-Dundee Archives Reference Numbers - MS73/15

Ships Launched at Dundee, Volume 18, 1808-1878, John Ingram
-Dundee Archives Reference Numbers - MS73/18

Dundee Fleets, Volume 24, c1815-1891, John Ingram
-Dundee Archives Reference Number - MS73/24

Notice of sale of building lots in Dundee
-Dundee Archives Reference Number – MS 57/4/11/2

Executry of David Archer, Ship Master, Carnoustie
-Dundee Archives Reference Number – MS 105/20/1/5

Captains Ship Expenditure Book, W Nicoll for the ship ‘Reaper’ 1859-60
-Dundee Archives Reference Number – MS 105/10/17/1

John Ingram Shipping Database

Dundee Central Library Local History Section

Dundee Advertiser – Years 1860 and 1871

Dundee Year Book 1889

Shipping Catalogues – Relating to the Nicoll firm

Dundee City Archives

Dundee Directory – 1829/30, 1834, 1845, 1850-51, 1853-54, 1856-57, 1874-75, 1884-85, 1888-89

Customs’ Registers of Shipping for the ports of Dundee, Montrose and Arbroath

Calendars of Confirmations and Executries 1889

Cartographic

1831 chart showing 1867 updating (in Jermy 1992, British Library Map Library)

Admiralty Chart, c. 1855 (in Jermy 1992, British Library Map Library)

John Higgins 1860 Map of Tramways and kilns (The National Archives, ref. no. MFC 1/49-001)

1st edition OS 1860 6 inch to the mile – Northumberland Sheet 12

2nd edition OS 1896-8 25 inch to the mile – Northumberland sheet VIII. 14 & 15, sheet XII.2, sheet XII.3 and sheet XII.7

3rd edition OS 1920 6 inch to the mile – Northumberland Sheet 8 SE

Map showing tramway between Nessend and Castle Point kilns (in Jermy 1992, Northumberland County Record Office)

Aerial Photographs

1990s Vertical Colour image, Google Earth

1964 Black and white vertical aerial photograph, 1:8000 – Northumberland Council SMR

1975 Black and white oblique aerial photographs, ref no. ADU 22, BTN 066 - Cambridge University Aerial Photograph Collection.

1977 Black and white vertical aerial photographs, ref no. RC8 CB, 49, 50, 51 - Cambridge University Aerial Photograph Collection.

1986 Black and white oblique aerial photographs, ref no. CQS 37 - Cambridge University Aerial Photograph Collection.

Guildhall Library, London

Lloyd's List

Lloyd's Register

Lloyd's Captains Register 1851-1911 – ref no. MS 18567/1-87

Secondary Sources

Jermy, R. C. 1992 *Lindisfarne's Limestone Past: Quarries, tramways and Kilns*, Northumberland County Library

Linsley, S. M 199-, *Lime Burning on Holy Island* (Unpublished manuscript)

Linsley, S.M 2005, Ports and Harbours of Northumberland, Tempus.

The National Trust, 19--. *Around Lindisfarne Castle*. (Leaflet) (1)

The National Trust SMR online and Northumberland County Council SMR online

- Both at ADS online - <http://ads.ahds.ac.uk/catalogue/search/map.cfm>

Appendix A – Ship Information

Ship name	Type	Tonnage	Where built	Year +dBuilt	When bought	Comments
Agnes	Schooner	51	Berwick	1838	1865	Sold Dundee, burnt Dundee 19/12/1893
Archduke	Sloop	68	Pallon	1809	1837	Wrecked near Belfast 13/3/1853
Aries	Sloop	29	Dundee	1835	New	Built by Dundee Ship building Co.. Sold Dundee 1836 and Kirkcaldy 1849 to Robert Rentoul. Used for Balmerino trade.
Belford	Schooner	90	Dundee	1854	New	Built by Tay shipbuilding Company. Foundered off Eyemouth 18/9/1863. Cargo - 1859 jute London, 1863 Sunderland coal
Brothers	Schooner	57	Newcastle	1836	1855	Stranded and burnt Elie 9/7/1856
Bunyan	Sloop	27	Newburgh	1819	1826	Balmerino ferry, lost 1840
Camolle	Sloop	63	Perth	1815	1850	Foundered off Shields 21/8/1857
Catherines	Sloop	58	Dundee	1825	New	Built by D & A Brown. Sold Dundee 1850. Foundered off St Abbs 9/9/1859
Cragie	Brig	136	Dundee	1818	1829	Built by James Smart. Sold London 1837 and wick 1845. Burnt Serabster 20/7/1852
Eclipse	Brig	195	Dundee	1841	1842	Built by Dundee Shipbuilding Co. Sold 1845. Wrecked Hebrides
Eliza	Sloop	51		1786		
Elizabeth	Ship	484	Arbroath	1852	1854	Wrecked near Swater 16/7/19867
Hovilah	Bar.	491	Dundee	1868	New	Sold Germany 1881, Denmark and Sweden
Helen	Brig	256	Dundee	1842	New	Nicolson and P. Davidson and Scott. Sold Dundee 1850 and London 1852
Jessie	Brig	133	Perth	1848	1847	Wrecked Sweden 27/11/1859
Jessie	Schooner	135	Dundee	1846	New	Built by Thomas Adams. Foundered off Farne Isle. Oct 1847. Cargo - coal 1847 Dundee.
Lancaster	Schooner	74	Graves	1843	1855	Lime schooner. Sold Grangemouth as lighter 1894. Broken up prior to 1910.
Lindisfarne						
Margaret	Sloop	81	Arboath	1816	1836	Sold Dundee 1837
Margarets	Brig	139	Anstruther	1825	New	Sold Dundee 1838

Margaret Reid	Schooner	94	St Anthony's	1848	1860	Sold Berwick 1891
Margery	Schooner	79	Dundee	1842	New	Built by Dundee Ship building Company. Registered originally in names of Rattery, J.B & P. Kerr, Trustees of Dundee Ship Building Co. Wrecked Immanuel Head Dec 1845
Margery	Schooner	97	Dundee	1846	New	Built by Thomas Adams. Ran aground on Ross Sands, Holy Isle 1850, cargo coal. Abandoned Biscay 21/12/1851
Martin	Smock	75	Dundee	1811	New	Built James Smart. Sold 1832, 50% share. Wrecked Islay 25/8/1835
Maria	Schooner	90	Berwick	1844	1860	Wrecked Catherine 26/8/1876
Nelly	Schooner	99	Dundee	1803	1820	
Neve	Brig	208	Dundee	1847	187?	Sold Denmark 1880. Abandoned atlantic 23/3/1891
Ophir	Ber.	451	Dundee	1852	1882	Tay Shipbuilding Co. Sold 1864. Lost July 1885
Origen	Sloop	92	Dundee	1828	New	Built by James Smart. Sold Nicoll & Webster 1836. Wrecked Bren Sands 8/4/1861. Cargo 1838 lime.
Pearl	Brig	188?	Dundee	1849	New	Tay Shipbuilding Co. Sunk in collision off Cape Verde 20/11/1859
Reaper	Bar.	186?	Dundee	1848	New	Built by Thomas Adams. Wrecked Ronne 5/11/1861
Tid	Schooner	96	Dundee	1829	1839	Built by Geo Clark. Lost about 1848
Tay	Schooner	93	Dundee	1825	1861	Wrecked 30/11/1866
Wave	Schooner	104	Newburgh	1864	1869	Wrecked Dunbar 5/2/1885
Williams	Sloop	91	Dundee	1822	New	Sold Hull 1836