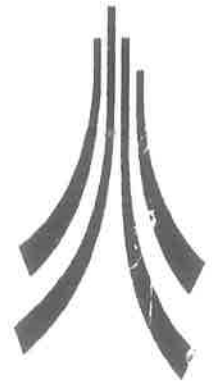


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**LANCASTER**  
UNIVERSITY  
ARCHAEOLOGICAL  
UNIT



July 1998

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**GREEN MOOR QUARRY**  
**ROSSENDALE**  
**Lancashire**

**Archaeological Assessment Report**

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Commissioned by:

Lancashire County Council

Green Moor Quarry, Rossendale  
Lancashire

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Archaeological Assessment Report

Report no 1997-98/093/AUA7819

Checked by Project Manager. ..... Date
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July 1998

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## SUMMARY

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This report summarises the results of an archaeological assessment of Green Moor Quarry, Rossendale, Lancashire, in advance of proposed reclamation works. The survey follows on from a programme of assessment of eight other quarries within the Rossendale area. The results of this investigation should be considered in conjunction with the earlier Rossendale Quarry assessment report (LUAU 1997).

The assessment of Green Quarry was carried out by the Lancaster University Archaeological Unit on behalf of the Lancashire County Council and included a brief discussion of the archaeological survival of the quarry, together with the compilation of a gazetteer of archaeological remains. The survey record comprises identification survey plans, and this report, which includes the gazetteer.

The survey allowed an assessment to be made of the archaeological value of the site, and from this a set of comments have been made on the likely impact of reclamation works, on the potential of the quarries for educational and tourism use, and on the potential for further archaeological work.

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## 1. INTRODUCTION

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### 1.1 CIRCUMSTANCES OF PROJECT

1.1.1 An archaeological assessment was undertaken by the Lancaster University Archaeological Unit (LUAU) on behalf of Lancashire County Council in advance of a programme of reclamation at Green Moor Quarry, Rossendale, Lancashire. The purpose of the assessment was to provide an accurate archaeological assessment of the designated area, within its broader context. The survey was to collate existing information on the archaeology of the site and to determine the significance of the archaeological resource. The survey follows on from a programme of assessment of eight other quarries within the Rossendale area (LUAU 1997b). The assessment survey of Green Moor Quarry was undertaken between the 29th and the 30th June 1998.

### 1.2 LOCATION OF SITE

1.2.1 This report sets out the results of an archaeological assessment of remains relating to the quarrying industry in Green Moor Quarry, Bacup, Rossendale, which extends between SD 859 206 and SD 864 217, approximately 1km south of Rockcliffe, with Greens Moor to the south, Lee Moss to the east and Brandwood Moor to the west. Historically, the quarry lay within the Brandwood Lower End subdivision of the Spotland township (Rochdale parish). The site is one of a large number of quarries on this moor, and its boundary with the neighbouring Lee Quarry to the east is now indistinguishable. Lee Quarry has been recorded by an earlier assessment (LUAU 1997b).

### 1.3 METHODOLOGY

1.3.1 **Project Design:** the work was carried out by Lancaster University Archaeological Unit (LUAU) in response to a project brief from Lancashire County Council (*Appendix 1*) and following the methodology set out in the project design (*Appendix 2*).

1.3.2 **Assessment Survey:** reconnaissance was undertaken in a systematic fashion, walking on approximately 30m wide transects within the extent of the defined study area. The sites were located by Global Positioning System (GPS) techniques which uses electronic distance measurement along radio frequencies to satellites to enable a positional fix in latitude and longitude which can be converted mathematically to Ordnance Survey National Grid.

1.3.3 A photographic record was undertaken simultaneously. All archaeological information collected in the course of field inspection was recorded in standardised form, and includes accurate national grid references forming the basis of a gazetteer (*Appendix 3*).

1.3.4 **Gazetteer of Sites:** the collated information on the site has been presented in the form of a gazetteer (*Appendix 3*) in conjunction with an annotated map showing the locations of the sites. Locations are given as eight or ten figure National Grid References, as appropriate to the extent of the site and the accuracy of survey. A

summary description of each site is provided in conjunction with a reference to the source of the information with references as appropriate.

1.3.5 **Archive:** The resulting archaeological record is provided as a full project archive, produced to a professional standard in accordance with current English Heritage guidelines (Management of Archaeological Projects, 2nd edition 1991). The archive will be deposited with Lancashire Record Office and comprises the following.

- A set of survey drawings in hard copy and digital format, which were generated from LUAU's instrument survey.
- This analytical report, which includes a gazetteer of site components, an academic interpretation of the remains, reproductions of the survey drawings and the reproduction of selected historical illustrative material relevant to the study.
- Archive of oblique surface photography.

## 1.4 GEOLOGY

1.4.1 The geology of Rossendale is comprehensively described by Wright et al (1927), which should be used in conjunction with the relevant 6" geology map sheets published in 1925 (sheets 72 and 80). The earlier account of Aitken (1868) is also of historical interest. The quarrying industry in Rossendale was mainly concerned with the series of hard Millstone Grit sandstones of the area (within which are interspersed shaley mudstones and narrow coal seams), although other sandstones were extracted. The specific deposits relevant to the quarries of this study are as follows:

- Rough Rock - softer, coarser-grained stone with pebbles of quartz and feldspar up to ¼" long. Many earlier quarries were situated on this rock. It was more suitable for ornamental work than the harder stones.
- Upper and Lower Haslingden Flags - better, harder, fine-grained sandstones that formed the basis of the nineteenth-century boom in the local industry (within these deposits, the locally known 'Lonkey' stone was viewed as the best). Generally considered too hard for ornamental work.
- Dyneley Knoll Flags of Lower Coal Measures - quarried from at least the medieval period.

## 1.5 HISTORY

1.5.1 An early account of the history of the Rossendale area is that of Newbiggin (1868 and 1893 editions), however, this and later works have given scant attention to the quarrying industry. The history of the textile industry of Rossendale is well known from the study by Tupling (1927), which focused on the genesis of the industry through the medieval and early post medieval periods. Other work has equally focused on aspects of the textile industry, including that of Hamilton (1974) and King (1979). Texts relating to the history of quarrying are limited to those by Aspin (1983), Collins (1960), Roberts (1974), Rossendale Groundwork Trust (1985) and Smith (1977). The archaeology of Rossendale's quarries has received even less attention. Ashmore (1981, entries for Bacup, Rawtenstall and Whitworth) barely mentioned the quarrying aspect of the area although he highlighted the scale of working at the Facit and Britannia

quarries in Whitworth. The importance of the quarrying industry was highlighted in a study by LUAU (Trueman 1988 and 1995). None of this work is comprehensive and there is considerable potential for historical and archaeological research into the quarrying industry of Rossendale. Such work will benefit from the monumental efforts that have been made by various local history society group members to collate early directory and newspaper entries and other material relating to the quarries (particularly Davies 1985-96 and Taylor 1991 in Rawtenstall library). These provide a ready means of identifying quarry owners and a basic history of each quarry, although the newspaper entries are mainly concerned with accidents at the quarries. There is continued strong interest in the history of the industry by local history groups (Whitworth Historical Society and Bacup Natural History Society), who also house relevant documentary material. Bill Kearns (of the Whitworth Historical Society) has developed a particular knowledge of the quarrying industry and has compiled an extensive slide collection of its remains. The physical growth of each quarry is documented in the sequence of Ordnance Survey maps from the 1840s to the present, together with tithe maps for the southern half of the district (no tithe surveys were carried out for the northern half). Stereo-pair aerial photographs taken by the RAF in the 1940s show the final form of quarries in great detail. Lancashire County Council hold a series of later aerial photograph surveys.

1.5.2 The quarrying industry in Rossendale may broadly be divided into the following periods of development.

- |                              |   |
|------------------------------|---|
| <i>Pre late 18th century</i> | <ul style="list-style-type: none"> <li>• Generally small scale quarrying for local use (building of houses, field boundaries, etc).</li> </ul>  |
| <i>1770 - 1840</i>           | <ul style="list-style-type: none"> <li>• Turnpike improvements in late eighteenth century and early nineteenth century allowed easier transport of materials.</li> <li>• The scale of quarrying began to increase in late eighteenth century and early nineteenth century to satisfy local building needs (textile mills, housing using watershot construction) and demand for stone walling for agriculture enclosure.</li> <li>• By 1847, there were many small shallow quarries and several already large concerns, such as Cragg quarry (shown on OS 1st edn 6").</li> </ul>  |
| <i>Mid 19th century</i>      | <ul style="list-style-type: none"> <li>• A railway was built through Rossendale in 1846-52. Connections with mineral tramways were complete by 1870.</li> <li>• A great expansion of the quarries, fuelled by demand of urban growth, was made possible by the presence of the railway. General quarrying practice was to be very selective, looking for the hardest, toughest stone, and hence leaving lots of waste. Methods included underground quarries.</li> <li>• The period saw improved stone-working techniques and mechanisation (of cranes, saws, polishing mills). From c1840, rock-faced (or pitched) building stone was being produced (it was quicker to do).</li> <li>• All the quarries in this survey grew to close to their final size by the 1890s.</li> </ul> |
| <i>Post World War I</i>      | <ul style="list-style-type: none"> <li>• A huge decline in local quarrying industry due to drop in demand (competition with brick, concrete, etc) and rising costs of extraction (the easiest near-surface deposits had been got).</li> </ul>   |



- Following a series of strikes in 1919, most quarries in Rossendale closed and the mineral tramways were scrapped. There were a few notable exceptions, such as Lee quarry, which continued in use through much of the twentieth century.
- Late 20th century*
- Occasional large quarries in 1970s in connection with road construction.
  - Three aggregate quarries were active from the 1980s.

1.5.3 Prior to the construction of the railway, the extraction of stone in Rossendale was very largely for local use. Subsequently, that is from the late 1840s, the massively expanded industry sent stone to distant users in Britain and abroad, including Preston, Manchester, Yorkshire, Midlands, London, Europe, and India. For example in 1887-9, Lee quarries provided the stone for the foundations of the Eiffel Tower in Paris.

## 1.6 ROSSENDALE QUARRY FORMS AND METHODS OF WORKING

1.6.1 Most Rossendale quarries are *hillside* workings, where the rock was obtained as it *outcropped*, with little or no removal of overburden. However, at many quarries, this technique was combined with *open pit working*, and cranes were used to hoist the stone out of what could become very deep pits. In addition there was very extensive *underground mining* of stone, often from adits within the working faces of the open quarries.

1.6.2 Work tended to be carried out by men with specific roles, for example:

- Quarry Manager
- Blasters - responsible for blasting (although not infrequently this was done by the quarry manager/owner)
- Rock Getters - used hammers to break rock to size
- Quarry Bottom Man - identified suitability of rock for different products
- Masons - manufactured the products, lots of different specialist tasks

1.6.3 Specific quarry components which are represented by remains at the quarries are as follows:

ACCESS AND TRANSPORT	<i>Access ramps</i>
	<i>Railway sidings</i>
	<i>Ropeways</i>
	<i>Tramways</i>
	<ul style="list-style-type: none"> <li>• <i>Trestle bridges</i></li> <li>• <i>Tramway turning points</i></li> <li>• <i>Incline planes</i></li> <li>• <i>Drum Houses</i> - for winding at an inclined plane</li> </ul>
STONE GETTING AND	<i>Blast Shelters</i>
SPOIL MANAGEMENT	<i>Compressor House</i>
	<i>Crane bases</i>

- Shear-leg type - ie a tripod with lifting tackle
- Jib cranes
- Travelling cranes on trackway

*Dams and small Reservoirs*

*Engine beds and Engine houses and Power houses*

*Gin circle*

*Leat*

*Powder houses*

*Spoil heaps*

*Working faces*

PROCESSING SITES

*Crushing Mills*

*Dressing sheds and dressing floors*

*Rubbing/Scrubbing/Polishing Mills*

*Stone Products*

*Stone Sawing Mills*

OTHER

*Offices*

*Quarrymen's huts*

*Smithy*

*Stores*

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## 2. GREEN MOOR QUARRY SUMMARY

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### 2.1 INTRODUCTION

- 2.1.1 This section gives a summary account of the history and archaeology of Green Moor Quarry survey area. A gazetteer of identified components has been compiled (*Appendix 3*). The location of each component is given on the survey plan (Fig 5).
- 2.1.2 In line with the project brief, the associated processing sites and transport systems have not been studied closely, neither have the features related to the aggregate extraction of the late twentieth century. However it must be emphasised that any study of the quarries must take account of the fact that these features, together with the quarries, formed an integrated system, and the value of any one part of it cannot be properly assessed in isolation.

### 2.2 GREEN MOOR QUARRY

#### 2.2.1 *Historical Summary:*

- *Working Life:* early nineteenth century to present.
- *Geology:* Upper Haslingden Flags and shale with Rough Rock to south east.
- *Methods:* hillside outcroppings, open pit working and mining. Extensive mechanisation from at least the 1880s, included steam powered cranes.
- *Transport:* From before 1893 there was a large inclined plane down to Cutler Greens, with extensive tramway networks in the quarry

2.2.3 *Field Components Summary:* Green Moor Quarry covers a large area, the basic formation of which has been through the quarrying of outcropping stone. There is a large working face, with two potentially deep water filled open pits along the south-west area of the quarry and there is extensive spoil deposited to the north. This is a product of large scale mechanical working after 1930 (OS 3rd edition) which has destroyed many of the earlier features. The best survival of late nineteenth and early twentieth century extraction is along the northern and western edges of the site. The large working face along the northern part of the site was also worked later than 1930, but appears to be earlier in origin than the major extraction to the south, because the southern extraction cuts through the northern area and the northern extraction is of a similar depth and style to extractions identified elsewhere as being earlier than the OS 3rd edition map (1930).

2.2.4 The line of the incline to Cutler Green enters the survey area at the north, where there are several associated structures and tramways (Green 06-09). There is also a major tramway leaving the western quarrying area to the north-west which, although well preserved, lies entirely outside the study area; tramways 06 and 08 are orientated towards the major tramway and were probably linked. The quarry was extremely rich in associated quarry features (see early maps), including the remains of numerous structures, earthwork platforms (representing quarrymen's shelters, storage buildings, and processing areas), crane bases, and extensive tramway remains, including the bases for travelling cranes. However, the majority of these features have been

destroyed by the later quarrying activities, whilst a significant number may survive buried under later spoil heaps and the build up of silt, particularly in the west.

<b>Site Types (Extant)</b>	<b>Green Moor Site Numbers</b>
<i>Site Buildings</i>	02, 15, 16, 17, 28, 30, 31
<i>Loading Platforms</i>	03, 12, 21, 25, 27
<i>Tramway</i>	05, 06, 08, 12, 14
<i>Leat/Culvert</i>	11
<i>Machinery Mounting (Crane?)</i>	18, 19, 20, 32
<i>Pier</i>	33

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## 3. CONCLUSIONS

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### 3.1 ASSESSMENT

- 3.1.1 The archaeological value of the site has been estimated by reference to the standard discrimination criteria used by English Heritage to establish national importance for archaeological monuments in England (Darvill 1988).
- 3.1.2 The modern quarrying and reworking of the spoil (since 1950's) has been concentrated around the southern, central and eastern parts of the site and the nineteenth/early twentieth century remains therefore are only on the surface around the western and northern edges of the quarry. There is a *low* level of survival on parts of the site but in general it has a *moderate* potential for survival of subsurface remains. The diversity of features observed is moderate and the site also has a *moderate* group value in relation to the incline, the railway depot, the adjacent Lee quarry and the extensive quarry systems to the south-east, west and south-west. The open pits of the more recent extractions are very substantial and may potentially be deep, and along with the extensive and high working faces, pose obvious health and safety problems. Because of these health and safety problems the site has a *low* amenity value, however, it is popular with local dog walkers and scramble bikers.
- 3.1.3 The quality of survival of the various archaeological remains is variable. The survival of early spoil heaps is generally poor, although the south-east corner of the quarry exhibits moderate quality multi-fingered spoil heaps. Most of the early working faces have been reworked, although there are some poor to moderately preserved working faces in the central and western parts of the quarry.
- 3.1.4 In general the site has *moderate* archaeological value, although the integrity of the site as a whole has been reduced by reworking and motorbike scrambling activities; it also has a series of water filled deep pits and high working faces which pose a potential danger to visitors. There is, however, a *moderate* potential for sub-surface archaeological remains.

### 3.2 RECLAMATION WORKS

- 3.2.1 The proposed reclamation works should give strong consideration to the potential impact on archaeological remains, both in terms of their physical damage and also the impact on the associated landscape. Potential damage to the associated, and important, ancillary processing sites and transport systems should also be considered.
- 3.2.2 Any reclamation works need to take into account the archaeological significance of the quarry and there must be a varying level of priority for preservation based on the assessment scoring above (*Section 3.1.1*). The reclamation programme should seek to preserve the integrity and topographic context of the earlier identified features of this industrial landscape. The reclamation proposals should be sympathetic to and seek to maximise the preservation of the archaeologically important areas of the site.
- 3.2.2 The site is inherently dangerous because of water filled pits and unstable faces and it is accepted that landscaping, or other works that obscure or remove archaeological features, may need to be undertaken to make the sites safe for the general public.

Wherever this is the case, provision should be made for archaeological recording in advance of such works.

- 3.2.3 The reclamation project summaries supplied with the project brief indicate that it is proposed to carry out a combination of regrading, fencing, tree planting and access improvement. Fencing will have the lowest impact upon the visual value of the quarries. Regrading, however minor, is likely to have a detrimental effect on the landscape value and appearance of the spoil heaps. Although tree planting may have a limited physical impact upon the quarries it would severely alter their appearance and may have an undue effect on the amenity potential of these relict industrial landscapes, if not undertaken appropriately or sympathetically. As access to the site is generally via the transport route of Lee Quarry, any works to improve access should take full account of the value of this site.

### 3.3 EDUCATIONAL AND TOURISM USE

- 3.3.1 The educational and tourism value of the site is limited unless the safety issues relating to the deep water filled pits and unstable faces can be resolved. However, with health and safety issues aside, the site has a dramatic presence in the landscape and is a significant component of Rossendale's industrial archaeological heritage and as such has an amenity potential. The addition of a series of interpretation boards along this route would significantly enhance the tourist value of these sites, many of which are connected by public footpaths.

### 3.4 FURTHER ARCHAEOLOGICAL WORK

- 3.4.1 The archaeological resource appears to have some significance, but there is no survey base (the current work has simply added the location of components to an OS map base). Detailed survey work, combined with improved understanding of the site, would provide an appropriate basis for informing both the detail of proposed reclamation works, and educational and tourism use. To achieve this, a staged programme of work should include the following:

- **Topographical survey from Aerial Photographic plotting** - to include spoil heaps, working faces and pits. This should be combined with ground checking/enhancement and archaeological interpretation.
- **Survey of structures** - combined with archaeological interpretation, as good practice in the face of continued natural decay.
- **Photographic recording of all areas** - certainly in advance of any reclamation works and as good practice in the face of continued natural decay of structures.
- **Historical research** - referring to original sources and including research into the quarrymen and their businesses. This is essential to inform the archaeological recording/interpretation procedure.
- **Broader assessment of quarrying industry in Rossendale** - the quarries assessed in this report are a sample of a very extensive industry with a long history. An adequate understanding of any group of quarries will be considerably

enhanced by an overview of the whole industry of the area. Such work will also provide material of potential value for educational and tourism uses.

- **Synthetic report** - to summarise the results of all the above studies. This should form the basis of a published academic work, and would also allow publication of an informed popular account as well as the production of on-site interpretation boards.
- **Programme of excavation** - in areas of intense activity shown by the documentary sources to remove more recent overburden, especially in the western part of the site.

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APPENDIX 1  
PROJECT BRIEF

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# BRIEF FOR ARCHAEOLOGICAL ASSESSMENT FOR ROSSENDALE QUARRIES RECLAMATION PROJECT: GREEN MOOR QUARRY

## 1. Summary

1.1 This archaeological brief has been prepared by Lancashire County Council Planning Department Archaeology Service for the Rossendale Quarries Reclamation Project. It relates to the strategic programme for environmental enhancement, conservation, public access and interpretation at eight redundant quarry sites around the Rossendale Valley. The programme is being led by Lancashire County Council Environment Directorate. The first stage of the five year programme is a package of site surveys and investigations. The quarry sites are one of the principal assets of Rossendale's historic landscape and preserve material remains of the stone quarrying and related industries. The first stage of the archaeological assessment has been carried out and a report produced. This brief is for the assessment of Green Moor Quarry, an extension to the area of Lee Quarry, Rockcliffe, which has already been assessed

1.2 The brief is for a desk-based study and preliminary field assessment which will determine as far as is reasonably possible from existing records and field evidence the nature of the archaeological and historical resource preserved in Green Moor Quarry and its immediate environs. This assessment should be considered within the context of the existing report which forms the first stage of assessment of the character and importance of the Rossendale quarries' industrial history. It will form the basis for assessing the impact of any reclamation works and the potential for public access to and interpretation of the historic remains of the industry.

## 2. Site locations

2.1 Green Moor Quarry is located south west of the town of Bacup in the Borough of Rossendale. Its approximate centre is at NGR SD 863 209:

## 3. Archaeological background

The Lancashire County SMR has only limited information on which to base an appraisal of the archaeological potential of the study areas. The majority of the data held in the SMR are plotted from the 1st edition 6" : 1 mile Ordnance Survey mapping and relate to the quarrying and textile industries and agricultural buildings. Some detailed research into the quarrying industries has been carried out in locally-based studies and Lancaster University Archaeological Unit's pilot research project in Rossendale also provides a database for this assessment. The assessment of eight quarries already selected for reclamation by the Rossendale Quarries Reclamation Project provides a considerable amount of information on the local and national context. LUAU's research for MPP for Steps I - 3 of the stone industry will provide a national context for the assessment.

## 4. Background and requirement for archaeological work

4.1 *A Strategy for the Reclamation of Rossendale Quarries* (Lancashire County Council 1996) outlines the scope of the reclamation project and summarises the issues with which it is concerned.

4.2 The purpose of the assessment project is gather sufficient information about the Rossendale quarry sites:

- i. to provide an understanding of the character and importance of the archaeological and historical resource preserved in the quarries;
- ii. to enable the archaeological impact of any necessary reclamation works to be assessed and mitigated appropriately;
- iii. to formulate a strategy for further archaeological and historical research and survey to realise the potential value of the Rossendale quarries for tourism and recreational use.

## **5. Scope and Methods**

### **5.1 Desk-Based Assessment**

A desk-based assessment of the proposed reclamation site should be undertaken in accordance with the Institute of Field Archaeologists *Standard and Guidance for Archaeological Desk-Based Assessments*. The assessment should consider all the known and available sources of information relating to the quarry sites (as shown on the attached drawings). Appropriate consideration should also be given to the information about the surrounding land in order to place the sites in their archaeological, historical and topographical context. No detailed work on the infrastructure of historic transport and communication systems between and beyond the quarries themselves is required at this stage. This aspect may form part of a later phase of work.

### **5.2 Relevant available data in the following sources should be consulted:**

the Lancashire Sites and Monuments Record (copies of the relevant 1:10,000 SMR record map sheets and print out of relevant site records can be supplied on request (to the SMR officer, Mr Peter Iles, 01772 261551);  
the Lancashire Record Office;  
Rawtenstall Local Studies Library I Rossendale Museum;  
any published or unpublished records relating to the  
earlier field investigations or historical research of the quarries;  
published and unpublished historical documentary sources including maps,  
field names, surveys etc.; aerial and other photographic evidence in local collections (including  
Lancashire County Council Planning Department and Record Office);  
geological and soil surveys;  
geotechnical/environmental studies;  
oral evidence from individuals with local knowledge of the industry's history (including Rossendale  
Groundwork Trust and Mr W Kearns) and/or experience of the quarries as working enterprises.

### 5.3 Field inspection and recording

A field inspection of all the quarry sites should be undertaken to assess existing historic structures and remains and the potential of the archaeological and historical sites identified in the desk-based study. Field evidence should be recorded by sketch plotting at an appropriate scale (1:1250 or greater). It is intended, if practicable within the timescale for the project, that the data resulting from the archaeological assessment should be plotted utilising, and integrated with, the topographical survey for the study area. Topographical survey data will be compiled using aerial survey under a separate contract. Technical advice and further information about the topographical survey can be obtained from the Lancashire County Council Environment Directorate's Principal Landscape Architect, (Jane Morwood, 01772 263740). The availability of topographical survey data will affect the timetable for archaeological field assessment work and any programming difficulties which this raises should be discussed with the Environment Directorate's Archaeologist.

## 6. Reporting

6.1 The report on the assessment should briefly described the work undertaken, the results achieved and conclusions drawn from the results. It should provide a synopsis of the industrial history of the locality, a gazetteer of known or presumed archaeological I historical sites (including the sites of previous field investigations or record surveys), a full bibliography of sources consulted and a list of other sources identified. The report should relate to survey data, mapped at an appropriate scale (1:1250 or larger), identifying the location and extent of the gazetteer sites. A copy of this brief and the project design should be appended to the report which should include reference to any departure from this brief.

6.2 The report should present an overview of the archaeological and historical significance of Green Moor Quarry and relate the findings of the assessment to a strategy for further phases of archaeological work. In particular the report should identify areas where the assessment shows that the archaeological resource is significant but is insufficiently defined to permit an appropriate mitigation or other strategy to be devised and make recommendations for further stages of evaluation. The report should also assess the scope for further archaeological and historical research and survey specifically in relation to the quarry's potential - as an individual site and as part of a group - for recreational and tourism use and formulate proposals for a staged programme of further research and field investigation.

## 7. Other requirements.

### 7.1 Project design and costing

A project design and costing, based on this brief and conforming to the IFA's *Standard and Guidance for Archaeological Desk-Based Assessments*, should be produced prior to the commencement of the project. It will detail how the assessment work is to be undertaken, the name of the project director and personnel, the programme of work and proposed allocation of resources. Details of the staff and their qualifications should be included.

7.2 All archaeological work shall be undertaken by appropriate methods that comply with the Code of Conduct, Standards and Guidance of the Institute of Field Archaeologists (IFA). It is preferred that the director of the project should be a validated member of the IFA. Other staff should be suitably qualified and preferably also members of the IFA.

## **8. General Arrangements and Conditions**

8.1 Access to the quarries may be restricted and the contractor should liaise with Ms Jane Morwood (see above 5.3) about arrangements for access for field inspection.

8.2 Appendix 1 of the brief (General Conditions for Archaeological Contractors) outlines the standards, practices and procedures to which the appointed archaeological contractor should conform. This is the model against which the archaeological works will be monitored by Lancashire County Council.

8.3 Enquiries for further information about this brief or the general conditions can be addressed to the Archaeologist, Lancashire County Council, Environment Directorate, Guild House, PO Box 9, Cross Street, Preston PR1 8RD (telephone 01772 261550; fax 01772 26420).

APPENDIX I

**LANCASHIRE COUNTY COUNCIL  
GENERAL CONDITIONS FOR ARCHAEOLOGICAL CONTRACTORS**

Organisations and individuals wishing to be included on the County Council's List of Archaeological Contractors are requested to fulfill the general conditions below which provide a model for best practice and professional conduct in archaeological work. The County Council will require the fulfilment of these conditions in its own contracts. Other clients are advised that it is their responsibility to satisfy themselves that their contractors meet all relevant requirements.

**Professional Standards**

1.1 Contractors shall work to the standards of professional conduct and practice outlined in the Institute of Field Archaeologists Code of Conduct, the IFA Code of Practice for the Regulation of Contractual Arrangements in Field Archaeology and the British Archaeologists and Developers Liaison Group Code of Practice.

1.2 Contractors should be either IFA Registered Organisations or individual corporate members of the IFA. In addition, Project Directors should be recognised in an appropriate Area of Competence by the IFA.

1.3 Contractors with a significant backlog of unpublished projects will not usually be included on the list.

1.4 Where students or trainees are employed on a project, their ratio to professional staff shall not normally exceed 2:1.

1.5 In the case of dispute over matters of professional conduct or practice, arbitration will normally be sought through the IFA or the British Archaeologists and Developers Liaison Group.

**2. Finance**

Contractors shall make available at the request of the County Council a recent set of audited annual accounts.

**3. Insurance**

Contractors shall hold a current certificate of Public Liability and (where relevant) Employers Liability insurance, and shall produce it at the request of the County Council.

**4. Health and Safety**

4.1 Contractors shall comply with the requirements of relevant Health and Safety legislation.

4.2 Site procedures shall be in accordance with the guidance set out in the Health and Safety Manual of the Standing Conference of Archaeological Unit Managers.

## **5. Project Design**

5.1 Individual projects shall be designed in accordance with a brief provided by the County Council. Before commencement of a project, Contractors shall submit a written project design for agreement by the County Council.

5.2 Project designs should be prepared with reference to the guidelines laid down in the *Management of Archaeological Projects* (English Heritage, 1991).

## **6. Sub-Contracting**

The names of proposed Sub-Contractors shall be included in the project design. All such Sub-Contractors shall be required to fulfill the General Conditions for Contractors.

## **7. Form of Contract**

Before commencement of a project, the Contractor shall enter into a written agreement with the Client. It is recommended that such agreements should be in conformity with the IFA Model Contract for Archaeological Services or such other form as approved by the County Council.

## **8. Project Monitoring**

The County Council shall be responsible for arrangements to monitor progress throughout the project.

Contractors shall provide the County Council with an outline programme of work. Any modification to this programme, due to unforeseen or other circumstances, shall be agreed with the Council. It is recommended that project designs include a contingency factor to allow for such circumstances.

## **9. Publication**

9.1 Publication shall be in a form and to a timetable to be agreed on completion of the site archive and narrative. A copy of the site narrative and publication synopsis shall be lodged with the County Sites and Monuments Record.

9.2 Whilst acknowledging the need for confidentiality in some instances, a summary of the archaeological information resulting from a project should normally enter the public domain within six months of the completion of fieldwork.



## **10. Archive**

10.1 Archive deposition shall take place according to a timetable to be agreed on completion of the site archive and narrative.

10.2 The site archive, including finds and environmental material, shall be conserved and stored according to the *UKIC Guidelines for the preparation of excavation archives for long-term storage* (1990) and the *Museums and Galleries Commission Standards in the Museum Care of Archaeological Collections* (1992), 'Standards for the preparation and transfer of archaeological archives'.

10.3 The archive shall be deposited as soon as is practicable in a registered museum fulfilling the HBMC/MGC Eligibility Criteria for the Grant Aided Storage of Excavation Archives. This will normally be the Lancashire County Museum Service (artefact and environmental collections and their documentation), or the Lancashire Record Office (site documentation).

10.4 Any material not to be archived, such as unstable material or items to be retained by the landowner, shall be fully analysed and reported upon.

10.5 A copy of the reproducible elements of the site archive should also be deposited in the National Archaeological Record.

## **11. Acknowledgement**

11.1 The role of Lancashire County Council shall be acknowledged in all publicity - including media releases, site displays, exhibitions and publications - arising from the project.

All enquiries regarding these conditions should be addressed to:

The Environment Director,  
Lancashire County Council,  
Environment Directorate,  
Guild House,  
PO Box 9,  
PRESTON. PR1 3EX

Tel: Preston (01772) 261550/261551

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## APPENDIX 2 PROJECT DESIGN

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### ROSSENDALE QUARRIES LANCASHIRE

#### 1. INTRODUCTION

- 1.1 Historical quarrying forms a major but little-studied aspect of the industrial archaeology of Rossendale District, given added visual prominence by the location of many quarries on the skylines overlooking the urbanised valley floors. The abandoned quarries are of considerable visual, amenity, ecological and archaeological potential, but are also seen as posing problems of public safety, pollution, and dereliction.
- 1.2 In response to this situation, a reclamation strategy (*A Strategy for the Reclamation of Rossendale Quarries*, Lancashire County Council 1996) has been devised by Lancashire County Council, for the Rossendale Quarries.
- 1.3 This Project Design is offered in response to a Brief from Lancashire County Council dated 3rd June 1998, for an archaeological assessment as part of the reclamation strategy, this is to follow on from an assessment programme examining eight other quarries. It is designed to fulfil all the conditions of the Brief.
- 1.4 The Lancaster University Archaeological Unit (LUAU) has considerable experience of the assessment, evaluation, and excavation of sites of all periods, having undertaken a great number of small and large projects during the past 17 years. Recent projects of relevance have included the Survey of the Industrial Archaeology of Rossendale (a general survey of the industrial archaeology of the District), and the Monuments Protection Programme national coverage of the Quarrying Industry (currently in progress). LUAU undertook the first phase of the programme examining eight of the Rossendale quarries.
- 1.5 LUAU has the professional expertise and resource to undertake the project detailed below to a high level of quality and efficiency. LUAU and all its members of staff operate subject to the Institute of Field Archaeology (IFA) Code of Conduct.

#### 2. METHODS STATEMENT

The following programme has been designed to provide a desk-based study and preliminary field assessment of Green Moor quarry.

##### 2.1 DESK-BASED ASSESSMENT

- 2.1.1 The published and documentary sources identified in paragraph 5.2 of the brief will be consulted. In addition to the information contained in the brief. The LUAU library contains all published OS map editions for the Rossendale area, and extracts of the relevant Directories. We have also established that the British Geological Survey (Keyworth, Notts) holds field records and early twentieth century photographs relating to the quarries.
- 2.1.2 It is known from the previous Rossendale quarry survey that the amounts of documentation within the sources identified by the brief are large, and is reflected in the costings. It is anticipated that this phase of documentary study will be undertaken by Michael Trueman, who undertook the earlier phase of recording.

##### 2.2 FIELD ASSESSMENT

- 2.2.1 A field visit will be made to Green Moor quarry in order to assess and briefly record the archaeological structures and features, and assess the potential for research and amenity.

- 2.2.2 The assessments will be informed by the experience built up by the LUAU team in the assessment of quarry sites nationally for MPP. We anticipate that this will allow a considerably enhanced level of feature identification and site interpretation to that achievable by a contractor lacking this expertise on quarrying sites (which are poorly studied nationally, and lack any major published synthesis).
- 2.2.3 Archaeological evidence in the field will be collected by sketch planning at 1:500 scale on enlarged copies of current OS maps. The major points on each feature will also be tied in by use of the Unit's Global Positioning System (GPS) system; this will allow output in digital format accurate to  $\pm 1\text{m}$  relative to OSGB36, suitable for subsequent incorporation into the topographic survey. The data will be superimposed onto digitised topographic data for the quarry and presented as an overlay at an appropriate scale.
- 2.2.4 A written gazetteer of visible site components on each site will be prepared, by use of standard LUAU survey record *pro formas*, to the level of detail recorded on the sketch plans.

### **2.3 REPORT**

- 2.3.1 A report will be prepared, synthesising the results of the desk-based and field assessments, presenting an overview of the archaeological and historical significance of the quarry. The format of this report is defined fully in section 4.2 below.
- 2.3.2 Consideration of the significance of each quarry site will be informed by the national overview obtained by the LUAU team during their coverage of the Quarrying Industry for MPP; this will allow a clear statement of the national importance (if any) of each site, and of the importance of individual areas and features within each site.

## **3. HEALTH AND SAFETY AND INSURANCE**

- 3.1 LUAU provides a Health and Safety Statement for all projects and maintains a Unit safety policy. All site procedures are in accordance with the guidance set out in the Health and Safety Manual compiled by the Standing Conference of Archaeological Unit Managers (1991). A written risk assessment will be undertaken in advance of project commencement and copies will be made available on request to all interested parties.
- 3.2 LUAU holds Professional Indemnity insurance to a limit of £2 million in any one claim (£1 million for pollution claims).
- 3.3 All other terms and conditions will be in accordance with the project brief and the Lancashire County Council General Conditions for Archaeological Contractors supplied with the brief. However, we ask that payment be made in two instalments, the first instalment to be paid on completion of fieldwork; and the second on submission of the report.

## **4. ARCHIVE AND REPORT**

### **4.1 ARCHIVE**

- 4.1.1 The results of the evaluation will form the basis of a full archive to professional standards, in accordance with current English Heritage guidelines (*Management of Archaeological Projects*, 2nd edition, 1991). The project archive represents the collation and indexing of all the data and material gathered during the course of the project. The deposition of a properly quantified, ordered, and indexed project archive in an appropriate repository is considered an essential and integral element of all archaeological projects by the Institute of Field Archaeologists in that organisation's Code of Conduct. The archive will be deposited in a recognised repository, to be agreed with the Authority.
- 4.1.2 The textual archive will be provided as a combination of printed document and computer disks. Copies of drawings will be provided as photocopies or digital data.

### **4.2 REPORT**

- 4.2.1 One bound copy of a written synthetic report will be submitted to the client, and a further copy will be submitted to the Sites and Monuments Record. The report will be produced in a format similar to this Project Design, subject to any comments from the client. It will include:

- details of any agreed variations on the project design
- a method statement
- an analysis of the data generated by 2.1.1-2.2.5 above, to provide a synthesis of the historical and field evidence for each of the eight quarries, with gazetteer of site components
- plans of the field features and areas of archaeological potential within each quarry, presented as annotations or overlays on 1:500 enlargements of OS base mapping
- an overview of the archaeological significance of the Rossendale Quarries, individually and collectively, in terms of their local, regional, and national importance
- bibliography of all sources used

#### 4.3 CONFIDENTIALITY

- 4.3.1 The report is designed as a document for the specific use of the client, for the particular purpose as defined in this project design, and should be treated as such; it is not suitable for publication as an academic report, or otherwise without amendment or revision. Any requirement to revise or reorder the material for submission or presentation to third parties or for any other explicit purpose can be fulfilled, but will require separate discussion and funding.

#### 5. PROJECT MONITORING

- 5.1 Any proposed changes to this project design will be agreed with the client and the County Archaeologist. LUAU will arrange monitoring meetings if required, and will keep the County Archaeologist informed of the commencement and progress of the project.

#### 6. WORK TIMETABLE

- 6.1 The project can be commenced with only one weeks notice and can be completed within three weeks, subject to the availability of the consultant.
- 6.2 The desk-based assessment will be prepared over a week period. Fieldwork is expected to be undertaken over two days. Preparation of the report (including plotting of digital data if adopted and top copies of sketch maps) is estimated at 3 days work.

#### 7. STAFFING

- 7.1 The project will be under the direct line management of **Jamie Quartermaine BA Surv Dip MIFA** (LUAU Project Manager), to whom all correspondence should be addressed.
- 7.2 The documentary study will be undertaken by **Michael Trueman BSc MA MIFA** (External Consultant). Mr Trueman has extensive experience of survey and analysis on industrial sites, including the Survey of Industrial Archaeology in Rossendale, and the Langcliffe quarry and limeworks. He undertook the earlier study on the Rossendale quarries.
- 7.3 The field work will be undertaken by **Chris Wild** (LUAU supervisor). Mr Wild undertook the fieldwork on the earlier phase of Rossendale quarries survey.

## APPENDIX 3 GAZETTEER OF SURVEY SITES

### Green Moor Quarry

**Site number** Green 01  
**Site name** Green Moor Quarry  
**Site type** Quarry  
**Sources** Identification Survey  
 OS 1st edition map (1893) map

**Description**

An area shown on the first Edition OS map of 1893 as "Old Quarry". It is not shown on the second edition (1910) or later maps. It is mainly covered by later spoil, although a *c* 2m length of working face, protruding *c* 0.5m high on the western face, was observed. It is roughly horseshoe-shaped in plan as shown on the 1893 mapping and was *c* 10m diameter.

**Site number** Green 02  
**Site name** Green Moor Quarry  
**Site type** Structure  
**Sources** Identification Survey

**Description**

A sub-rectangular structure, cut into the bank at the entrance to Green 01, it was *c* 2m diameter with north-west and south-east walls surviving up to 0.5m. It was probably associated with the movement of quarried material from Green 01.

**Site number** Green 03  
**Site name** Green Moor Quarry  
**Site type** Platform  
**Sources** Identification Survey

**Description**

A platform edge *c* 0.4m wide constructed of a double skin of dry-stone walling, and is aligned parallel to and *c* 2m to the south of the present field boundary. Overall the platform *is c* 3m deep, *c* 45m long, and raised 0.3m above the damp ground to the north, which appears to be the end of a trackway leading round the northern edge of the quarry to the main tramway to the west. It was most probably a loading platform.

**Site number** Green 04  
**Site name** Green Moor Quarry  
**Site type** Retaining walls  
**Sources** Identification Survey

**Description**

Two retaining walls on the southern edge of a trackway round the northern edge of the site. The eastern wall was *c* 4m in length, curving to the south-east, and was *c* 0.8m high. The western wall was stepped back *c* 0.5m from the former, overlapping *by c* 1m and continuing west for a further *c* 20m and is up to *c* 2m in height.

**Site number** Green 05  
**Site name** Green Moor Quarry  
**Site type** Tramway  
**Sources** Identification Survey

**Description**

A narrow probable tramway, *c* 1m wide and sunken by *c* 0.5m, to the west of Green 04 leading towards the tramway to the west along the north edge of the study area (*c* 50m in length). At the eastern end was a return wall, and 3m to the west of it was a similar cross-wall which was observed forming a separate cell. The function of this is unclear. No associated structures were observed

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**Site number** Green 06  
**Site name** Green Moor Quarry  
**Site type** Tramway  
**Sources** Identification Survey  
 OS 1st edition map (1893) map; OS 2nd edition (1910) map

**Description**

A Tramway shown on the OS first edition map of 1893; it is only shown an earthwork at its northern end on the 2nd Edition map of 1910. It has survived as a visible terrace set into the hillside and is *c* 2.5m wide with a retaining wall on the western side which is up to *c* 3m high.

---

**Site number** Green 07  
**Site name** Green Moor Quarry  
**Site type** Hollow  
**Sources** Identification Survey

**Description**

A sub-rounded depression, *c* 4m in diameter and up to 1m deep, located on the eastern side of the tramway Green 06 next to the northern boundary of the site. It was most probably the remains of a structure used for monitoring material as it left the quarry to the north. The position of the site is not marked on any of the historical mapping and is unlikely to have been a winding house for the tramway, as its position is part way down the main slope.

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**Site number** Green 08  
**Site name** Green Moor Quarry  
**Site type** Tramway  
**Sources** Identification Survey  
 OS 1st edition map (1893) map; OS 2nd edition (1910) map

**Description**

A narrow tramway bed, *c* 1.5m wide, located *c* 15m to the west of tramway Green 06. Although it is not shown on any mapping its position can be clearly inferred to the north of the study area by the bend in the field boundary up to its junction with the main tramway. As the bend in the wall is shown on the First Edition map of 1893 it would appear that this tramway had gone out of use by this time, but its relationship with the main tramway (Green 06) is unclear. It was not possible to determine whether it was a branch of the tramway which went out of use prior to 1893 or alternatively, the original tramway which was later overlain and re-routed to the line shown on the 1st edition map. On the western slope a well preserved buttressed retaining wall was observed (*c* 7m long and *c* 3m high). The tramway continued up the slope to the south for *c* 20m and had an unclear terminus; it was most probably spoil covered. It appears that the tramway would have served a working face located in this area (Green 10).

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**Site number** Green 09  
**Site name** Green Moor Quarry  
**Site type** Hollow  
**Sources** Identification Survey

**Description**

A sub-rounded depression (*c* 3m in diameter and up to 0.5m deep) located on the eastern side of the tramway Green 08, up against the retaining wall Green 07, next to the northern boundary of the site. It most probably represents the remains of a structure used for monitoring material as it left the quarry to the north, and was very similar to Green 07.

**Site number** Green 10  
**Site name** Green Moor Quarry  
**Site type** Working Face  
**Sources** Identification Survey  
 OS 2nd edition (1910) map

**Description**

A working face (*c* 6m in length and exposed to a height of *c* 1m) located *c* 10m to the south of tramway Green 08. Only the vegetated northern part of a presumably much larger face was observed, the southern portion being covered by later spoil tipped from the large spoil heaps to the south; these appeared some time between 1893 and 1910 and also blocked tramway Green 06.

**Site number** Green 11  
**Site name** Green Moor Quarry  
**Site type** Leat and Culvert  
**Sources** Identification Survey

**Description**

A water management system at the western summit of the site. It comprises a short length of surviving culvert *c* 10m in length capped by five flagstones (*c* 2m x 1.5m) over a culvert surviving to a depth of 0.3m located near the major break of slope of the stream running along the western edge of the site. To the south of this is a leat which had been created using similar flagstones laid in the base of the stream bed. Retaining walls on either side of the leat were also observed for a length of *c* 6m.

**Site number** Green 12  
**Site name** Green Moor Quarry  
**Site type** Tramway junction and Loading platform  
**Sources** Identification Survey  
 OS 1st edition map (1893) map; OS 2nd edition (1910) map

**Description**

A major tramway junction and platform with a sub-rectangular structure shown on the 1st edition map of 1893. It lies partly outside the study area, especially the tramway to the south-west onto Greens Moor. The number of tramways decreased between 1893 and 1910 and none are shown on the 1929 3rd edition map. The structure on the platform became larger with its own tramway by 1910 and was also recorded on the 1929 3rd edition. The area is now overgrown and has been partially eroded by the stream, but several retaining walls (up to 2m high) were observed, and a small sub-rectangular structure (*c* 2m in diameter) was observed at the northern end of the platform surviving to a maximum height of *c* 0.4m.

**Site number** Green 13  
**Site name** Green Moor Quarry  
**Site type** Structure  
**Sources** Identification Survey  
 OS 1st edition map (1893) map; OS 2nd edition (1910) map

**Description**

A structure shown on all historical mapping, and has an associated chimney. The working face and platform are vegetated and heavily silted in this area with no structural remains visible. It is quite possible, however, that the footings of this structure remain in-situ under more recent silt deposits.

**Site number** Green 14  
**Site name** Green Moor Quarry  
**Site type** Working and Tramway area  
**Sources** Identification Survey  
 OS 1st edition map (1893) map; OS 2nd edition (1910) map

**Description**

An area (c 50m in diameter) containing a large complex of tramways and structures shown on all historical mapping. The bed of the main tramway, aligned north-east / south-west, was observed but no structures survived. However, several low earthwork banks were observed which most probably represent the vegetated remains of several of the structures shown on the 1930 OS map. A more detailed survey may identify the position of individual structures.

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**Site number** Green 15  
**Site name** Green Moor Quarry  
**Site type** Structure  
**Sources** Identification Survey  
 OS 2nd edition (1910) map; OS 3rd edition (1930) map

**Description**

A sub-rectangular structure (c 5m x 3m) shown on the OS maps of 1910 and 1930, with a wall protruding at the south-east corner. An alignment of several slabs (c 4m long) was observed, and probably represents the front edge of this structure, or a platform to the south of it. The working face, shown immediately to the north, was observable in parts, to a height of c 3m, but the majority was covered by later spoil, from both north and south.

---

**Site number** Green 16  
**Site name** Green Moor Quarry  
**Site type** Structure  
**Sources** Identification Survey

**Description**

A three sided sub-rectangular earthwork surviving to 0.2m in height and measuring c 8m x 5m, situated on top of the main northern spoil heap at the western end of a track. It is not shown on any of the historical mapping. It was not possible to ascertain its function, but it was probably related to spoil management, and may have been a shed for storing spoil trucks in.

---

**Site number** Green 17  
**Site name** Green Moor Quarry  
**Site type** Structure  
**Sources** Identification Survey  
 OS 2nd edition (1910) map

**Description**

A kidney-shaped structure (c 3m x 2m) cut into the northern side of the spoil heap surviving to a height of c 1m. It was located at the western end of a probable tramway, which is shown only on the OS map of 1910. It was probably a quarrymen's hut / shelter.

---

**Site number** Green 18  
**Site name** Green Moor Quarry  
**Site type** Mounting  
**Sources** Identification Survey

**Description**

Four steel bolts set into the ground above a working face. It has a square arrangement; they are c 0.3m apart and protrude by c 0.4m. It appears to be a recent fixing for lifting or winching machinery.

---

**Site number** Green 19  
**Site name** Green Moor Quarry  
**Site type** Mounting  
**Sources** Identification Survey

**Description**

Two lengths of a narrow railway track c 0.3m apart protruding c 1m from the northern working face. It is similar to examples seen in other Rossendale quarries, and probably represents some type of machine fixing.



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**Site number** Green 20  
**Site name** Green Moor Quarry  
**Site type** Mounting  
**Sources** Identification Survey

**Description**

A single narrow length of railway track protruding from a sloping working face *c* 1m. It was a probable machinery / hoist fixing.

---

**Site number** Green 21  
**Site name** Green Moor Quarry  
**Site type** Platform  
**Sources** Identification Survey  
OS 2nd edition (1910) map; OS 3rd edition OS (1930) map

**Description**

A flattened platform cut to a bedding plane in the bedrock, it was *c* 40m in diameter with a raised platform *c* 1.5m high in the south-east corner. This may possibly have been a machine base. The whole platform appears to correspond to a major tramway working complex shown on the OS mapping of 1910 and 1930, but no structures survived.

---

**Site number** Green 22  
**Site name** Green Moor Quarry  
**Site type** Pit extraction  
**Sources** Identification Survey

**Description**

A pit extraction to the north-east of platform Green 21, *c* 40m diameter with a 5m wide slot towards the main northern working face. It was filled with water, but appears to be fairly deep.

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**Site number** Green 23  
**Site name** Green Moor Quarry  
**Site type** Crusher complex  
**Sources** Identification Survey

**Description**

A large modern crusher complex with various associated concrete buildings and winding house, situated in an earlier working area.

---

**Site number** Green 24  
**Site name** Green Moor Quarry  
**Site type** Tank base  
**Sources** Identification Survey

**Description**

A modern concrete and brick tank base (*c* 8m x 2m) situated by the side of the modern trackway through the quarry. It was most probably for an oil or water tank.

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**Site number** Green 25  
**Site name** Green Moor Quarry  
**Site type** Platform  
**Sources** Identification Survey

**Description**

A Modern concrete platform (c 10m x 15m) by the side of the modern track and contains a breeze block structure (c 3m x 4m) and the base course of a single-skinned brick structure (c 3m x 3m). It also contains the cylindrical tank - Green 24.

**Site number** Green 26  
**Site name** Green Moor Quarry  
**Site type** Retaining walls  
**Sources** Identification Survey

**Description**

Two curved retaining walls in the multi-fingered spoil heaps at the south-eastern corner of the quarry. They survive to a height of 1.5m and to a maximum of 4m in length. These were probable parts of a retaining wall for a tramway cut through an earlier finger of spoil, as it appears to be too low for a trestle bridge.

**Site number** Green 27  
**Site name** Green Moor Quarry  
**Site type** Loading platform  
**Sources** Identification Survey

**Description**

Two large concrete slabs (c 8m x 3m) running up to a retaining stone wall (c 3m high) with a large timber beam across the top. This has been concreted over and has been used for loading quarry trucks, but the retaining wall and timber may comprise part of an earlier loading platform onto a tramway below.

**Site number** Green 28  
**Site name** Green Moor Quarry  
**Site type** Structure  
**Sources** Identification Survey

**Description**

A brick built structure (c 3m x 2m x 1.5m high) with steel doors at either end. It is associated with modern extraction.

**Site number** Green 29  
**Site name** Green Moor Quarry  
**Site type** Hopper / grader loading area  
**Sources** Identification Survey

**Description**

A huge steel structure (c 10m x 5m x 15m high) for grading aggregates and loading them into quarry trucks. There is also a weigh-bridge and an associated breeze block constructed hut. All are modern features.

**Site number** Green 30  
**Site name** Green Moor Quarry  
**Site type** Platform  
**Sources** Identification Survey

**Description**

A platform (c 6m x 4m) situated at the western end of a pit extraction. It is constructed of a pier of large stone slabs and is similar to others from the Rossendale quarries, especially Cragg Quarry (Q5). No visible structures or fixings were visible on the platform, although it did have a vegetational covering.

**Site number** Green 31  
**Site name** Green Moor Quarry  
**Site type** Structure  
**Sources** Identification Survey

**Description**

The bottom course of two walls of a brick and breeze block constructed modern structure on the working area of the main aggregate quarry. The surviving walls suggested a structure that was *c* 10m x 4m in size.

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**Site number** Green 32  
**Site name** Green Moor Quarry  
**Site type** Crane base / fixings  
**Sources** Identification Survey

**Description**

Three machinery fixings at the north-eastern corner of a pit extraction. The western example was a square-cut crane base, *c* 0.3m square and 0.15m deep with sloping sides. The eastern portion had been broken off. The central fixing comprised a steel pipe with screw-thread (*c* 0.07m diameter) protruding *c* 0.1m from the platform. The eastern example was a machine drilled hole (*c* 0.1m diameter and 0.1m deep) which probable contained a similar fixing

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**Site number** Green 33  
**Site name** Green Moor Quarry  
**Site type** Pier  
**Sources** Identification Survey  
OS 1st edition map (1893) map; OS 2nd edition (1910) map

**Description**

A stone constructed pier on the northern face of the spoil heaps (*c* 4m x 4m and up to 3m in height); it has a low wall extending west for *c* 3m from the north-west corner. This was most probably a pier at the end of a spoil tramway; it is similar to examples seen at Cragg Quarry (Q5).

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## ILLUSTRATIONS

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| Figure 1 | Green Moor Quarry Location Map           |
| Figure 2 | Green Moor Quarry - OS 1:2,500 map, 1893 |
| Figure 3 | Green Moor Quarry - OS 1:2,500 map, 1910 |
| Figure 4 | Green Moor Quarry - OS 1:2,500 map, 1930 |
| Figure 5 | Green Moor Quarry Survey Plan            |
| Figure 6 | View of Southern Working Face            |
| Figure 7 | Kidney shaped structure - Green 17       |



Fig 1 Green Moor Quarry Location Plan

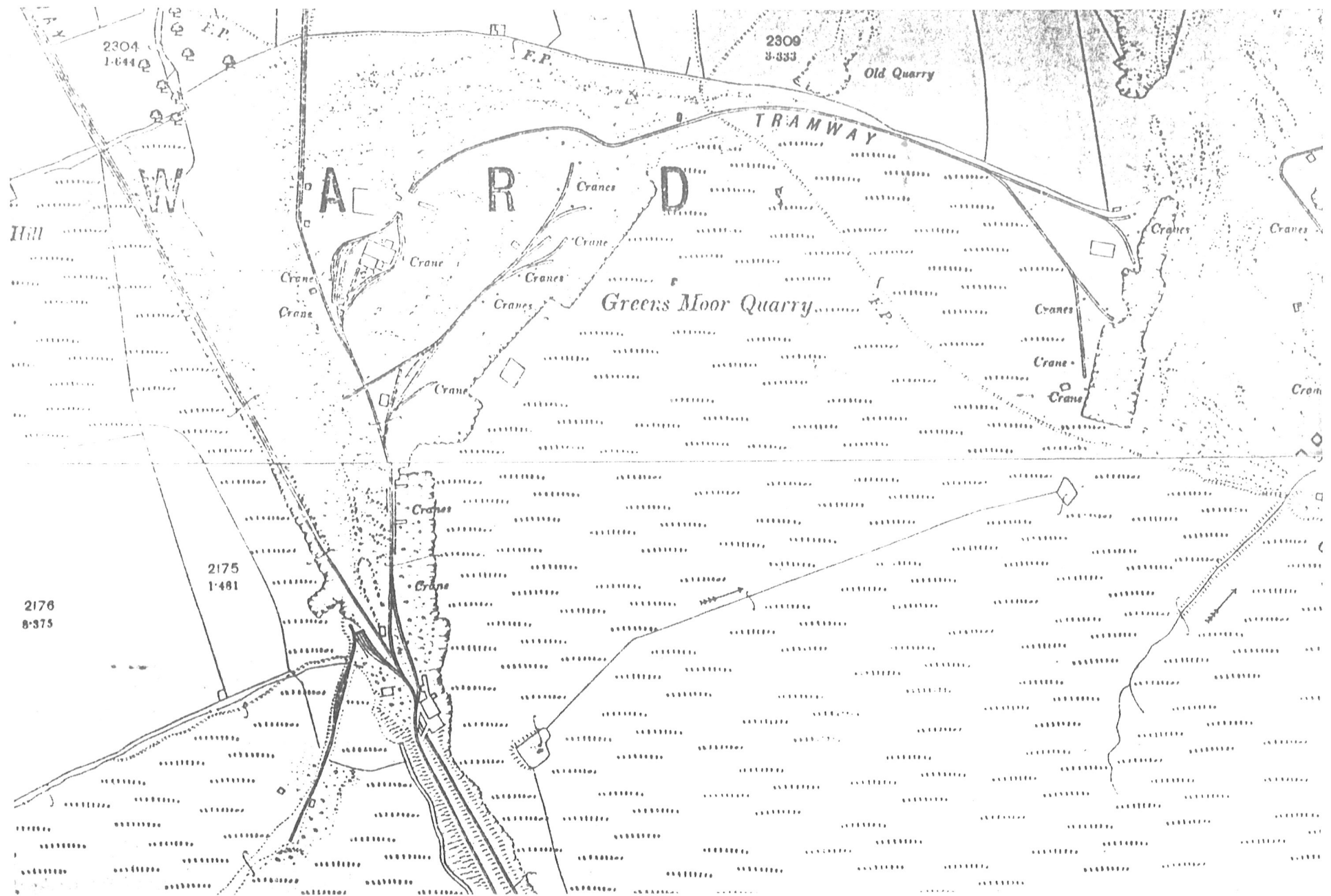


Figure 2 Green Moor Quarry – OS 1:2,500 Map 1893

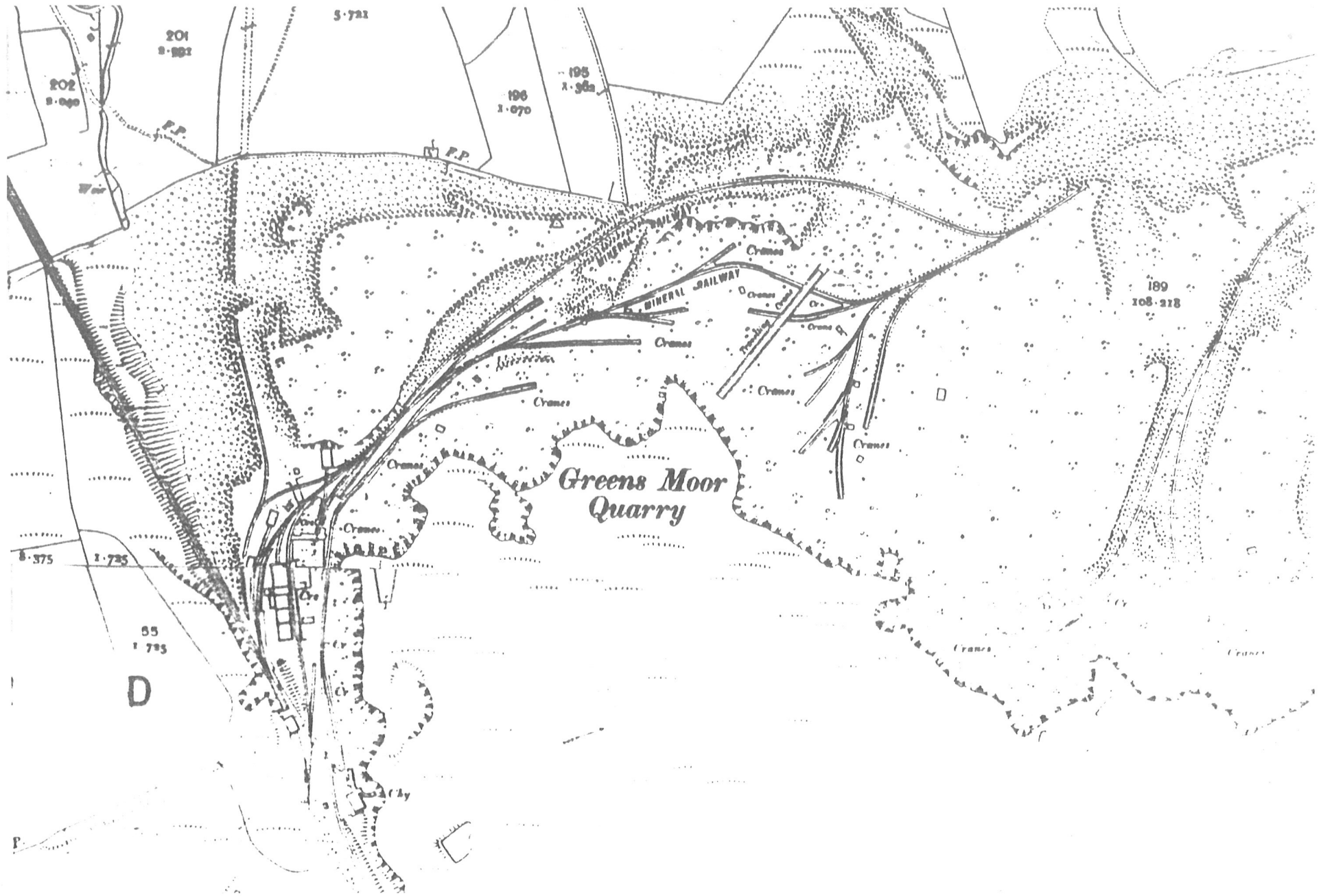


Figure 3 Green Moor Quarry – OS 1:2,500 Map 1910

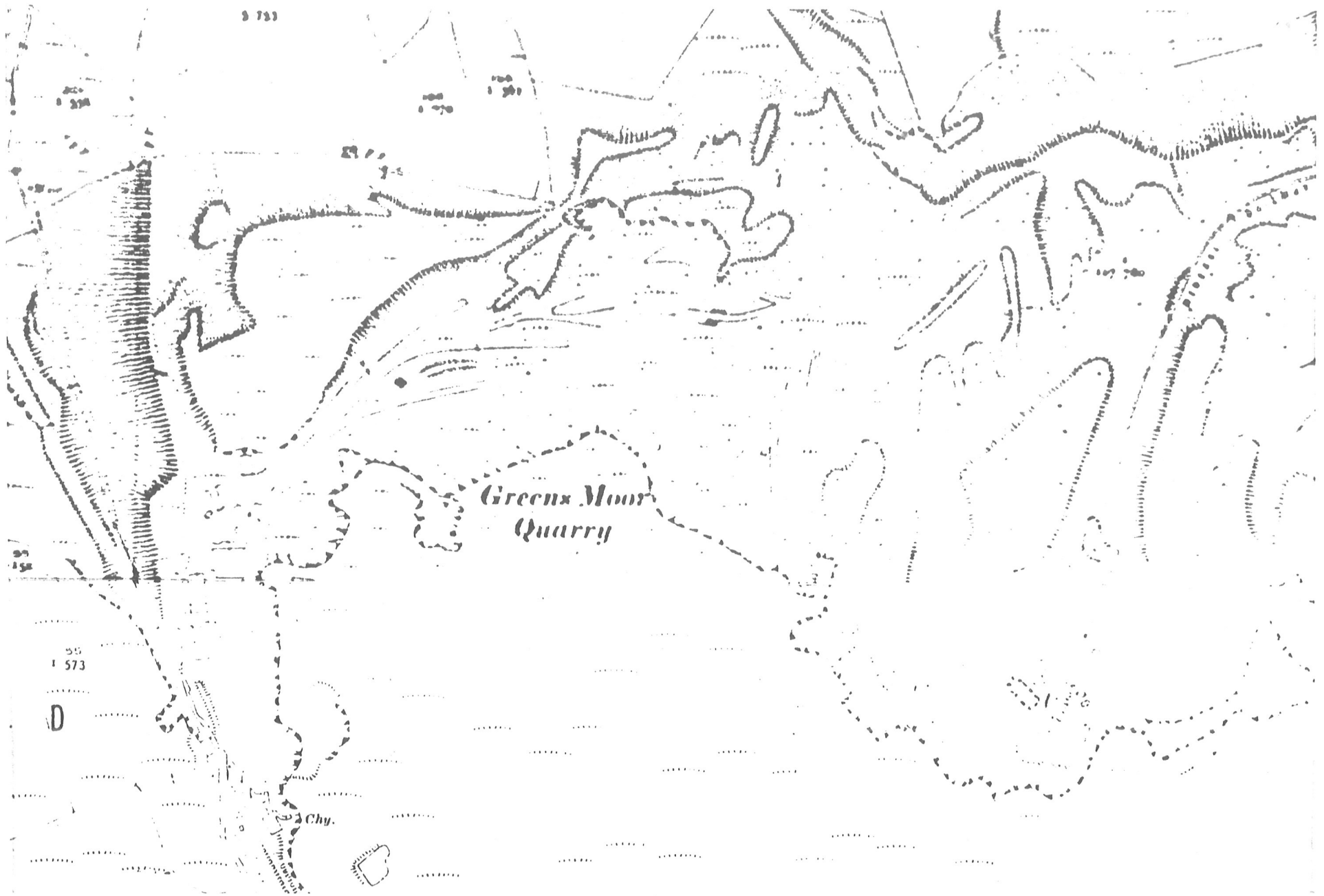


Figure 4 Green Moor Quarry – OS 1:2,500 Map 1930



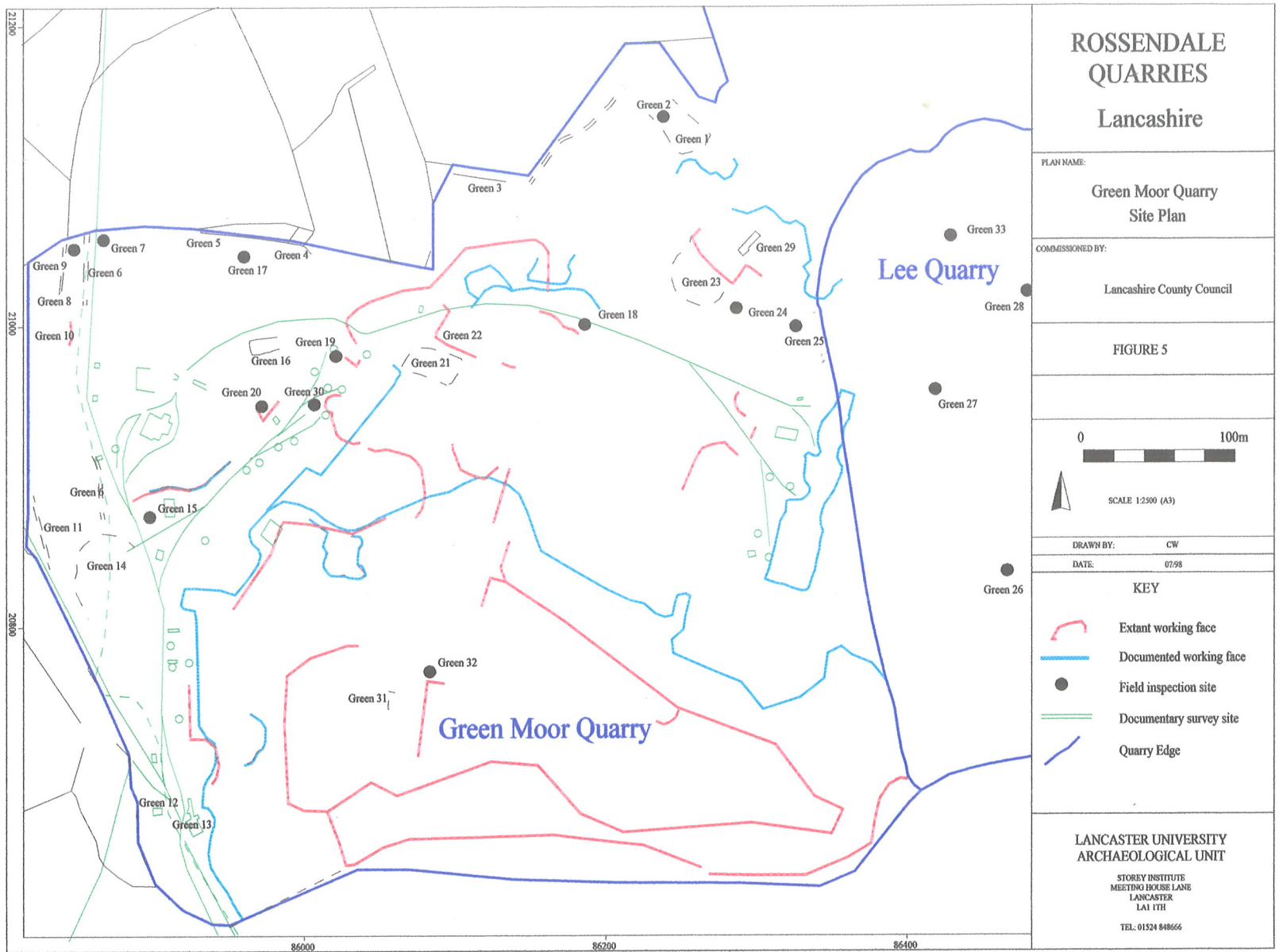


Fig 5 Green Moor Survey Plan



Fig 6 View of Southern Working Face



Fig 7 Kidney Shaped Structure – Green 17