

CFA Archaeology Ltd

archaeological consultants

Advice on Archaeology & Planning

Environmental Impact Assessment

Field Evaluation & Excavation

Finds / Environmental Analysis

Geophysical Survey

Historic Building Recording

Site & Landscape Survey

Interpretation, Design & Display

**Todmorden Wind Farm,
Flower Scar Road, Todmorden**

**Aerial Photograph Transcription
and Walkover Survey**

Report No. Y052/12

 01274 864245

 01274 878494

 yorkshire@cfa-archaeology.co.uk

 www.cfa-archaeology.co.uk

CFA ARCHAEOLOGY LTD

Unit 22
Moorlands Business Centre
Balme Road
Cleckheaton
BD19 4EZ

Tel: 01274 864 245
Fax 01274 878 494

email: Yorks@cfa-archaeology.co.uk
web: www.cfa-archaeology.co.uk

| | |
|--------------------------|------------------------------|
| Authors | Phil Moore BA |
| Illustrator | Kevin Hicks BA FSA Scot MifA |
| Editor | Martin Lightfoot BA MA MifA |
| Commissioned by | Wind Prospect Ltd. |
| Date issued | March 2013 |
| Version | 1.0 (DRAFT) |
| OASIS Reference | cfaarcha1-150216 |
| Planning Application No. | 10/01057/WDF |
| Grid Ref | SD 9644 4785 |

This document has been prepared in accordance with CFA Archaeology Ltd standard procedures.

**Todmorden Wind Farm,
Flower Scar Road, Todmorden,
Calderdale**

**Aerial Photograph Transcription
and Walkover Survey**

Report No. Y052/12

CONTENTS

| | |
|-----------------------|----|
| 1. INTRODUCTION | 3 |
| 2. METHODS | 5 |
| 3. RESULTS | 6 |
| 4. CONCLUSION | 10 |
| 5. BIBLIOGRAPHY | 11 |

APPENDICES

1. Gazetteer of Sites and Historical Remains
2. Specification

FIGURES

- Figure 1: Site location and plan of study area
Figure 2: Detailed plan of site features
Figure 3: Shot of open workings associated with Clough Head Fireclay Mine Sites 45-45
Figure 4: Shot of sinkholes: Sandy Road Colliery
Figure 5: Shot of Site 8
Figure 6: Shot of Site 72
Figure 7: Shot of Site 28 viewed from Site 29
Figure 8: Shot of architectural remains of Site 28.1
Figure 9: Shot of structural remains of Site 28.2 and 28.3
Figure 10: Shot of Site 35.27
Figure 11: Shot of Site 35.10
Figure 12: Shot of Site 35.16
Figure 13: Shot of Site 35.12
Figure 14: Shot of Site 35.22
Figure 15: Shot of Site 46
Figure 16: Shot of Site 49
Figure 17: Shot of Site 46.1
Figure 18: Shot of Site 49.8
Figure 19: Shot of Site 60
Figure 20: Shot of Site 48
Figure 21: Shot of Site 1
Figure 22: Shot of Site 62
Figure 23: Shot of Site 66

Summary

CFA Archaeology undertook a programme of archaeological work consisting of historical research and archaeological recording prior to the construction of a windfarm at Todmorden Moor, Flower Scar Road, Todmorden, Calderdale, West Yorkshire. The work involved the consultation of historical documents, transcription of aerial photographs and a walkover survey of the site area.

The walkover survey covered an area of approximately 164 hectares of upland moorland. The purpose of the work was to gather information regarding the extent, condition and character of any surviving archaeological remains, in particular those associated with early mining activity. The recorded sites were predominantly related to the extraction of raw materials including coal, fireclay and sandstone. The remains of Sandy Road Colliery were located to the north of Flower Scar Road. The surviving remains of this colliery were recorded as a linear arrangement of sites indicative of mine entrances, shafts, sink holes and collapsed galleries, vestigial structures, spoil heaps and a probable rail road.

To the south of Sandy Road Colliery, and in the region of Saunder Clough, a large and complicated landscape of mining related sites was recorded. It was not certain to which disused workings these sites were related, although the Todmorden Colliery and the Saunder Foot Colliery were located close by.

Evidence for the extraction of Fireclay could be seen from drift entrances and collapsed galleries immediately west of the Holden Gate Slack. These remains seemed to relate to the extraction of fireclay by the Sharney Wood Fireclay Works.

To the west of the site, adjacent to Bacup Road were the remains of Clough Foot Colliery and Clough Head Quarry.

The survey identified areas where, depending on the final development layout, remains may be impacted upon to some degree.

1. INTRODUCTION

This report presents the results of a programme of historical research and archaeological recording including walkover survey and aerial photographic transcription undertaken by CFA Archaeology Ltd (CFA) during June 2012 at Todmorden Wind Farm, Flower Scar Road, Todmorden, Calderdale (NGR: 389644, 424785 Centred) (Fig. 1). The work was commissioned by Wind Prospect Ltd in advance of the construction of five wind turbines with associated crane pads, access roads, and infrastructure.

The work was undertaken in accordance with a specification produced by David Hunter of West Yorkshire Archaeology Advisory Service (WYAAS) on behalf of Calderdale Council (Appendix 2) in order to comply with a planning condition in advance of development (Ref. 01/01057/WDF). This report will remain a draft pending further work undertaken on the site, the results of which will be incorporated into the final version. Should no further work be undertaken then this report will be issued as final.

1.1 Site Location and Description

The proposed development area is located on Todmorden Moor and consists of 163.5 hectares of upland moorland forming situated to the west of Todmorden and to the south of Cornholme (Fig. 1). The site is divided by Flower Scar Road (FSR) which runs from Sharneyford in the east, before joining with Tower Causeway Road to the west. Flower Scar Road is constructed of hardcore upon sandstone bedrock, with drainage adjacent to the track.

The land is undulating and interspersed by ‘clough’s’ and ‘slack’s’ which can be generally described as small ravines or valleys. The ground level is generally between 410 and 440m above the ordnance datum (AOD). The site is currently common land and used for grazing and recreation, but historically it has been mined and quarried for coal, stone and clay. Evidence of industrial activity, such as disused pits, shafts; tramways and spoil heaps are very evident in the landscape.

The underlying solid geology is Milnrow Sandstone and Pennine Lower Coal measures with inter-bedded mudstone, siltstone and sandstone. The superficial geology is assessed as peat (BGS 2012). The depth of peat within the development area can vary in depth from 0.3m to c. 2m in places and is generally well humified containing very little vegetation content (CFA 2011).

1.2 Archaeological and Historical Background

Cartographic and historical sources as well as the Coal Board abandonment plans of the area show a complex network of underground workings and also land features which relate to the mining and quarrying activity that took place on Todmorden Common during the late 19th and early part of the 20th century. It is not known when mining first commenced on the moor, but the assumption that the natural resources of the moor would have been exploited on a small scale prior to commercial mining seems reasonable.

The Ordnance Survey First Edition map (1848) shows little activity on the area of the site, with only a small track and a pit to the north of Flower Scar Road, and a sandstone quarry to the south. From the later part of the 19th century drift mines are well documented under the common to the south. OS Edition mapping from 1905 show mine shafts and associated buildings to the north of Flower Scar Road with a number of ‘Test Holes’ also depicted in the area. Extracts from Geological Survey maps published in 1870 show the seams of Cannister Coal Measures (ROTE 2011, 38), while the abandonment maps of 1954 and 1967 attest to the extent of the underlying works that mined these coal seams over the years.

1.3 Previous Archaeological Work

The proposed development site was the subject of an archaeological desk-based assessment (Dulas 2010). An archaeological watching brief and auger survey was undertaken during 2012 by CFA archaeology (Hemming 2012). However, no archaeological deposits of significance were recorded and no finds were recovered from either the auger survey or during the watching brief on the geotechnical investigation that took place during this work.

In 2012 the Todmorden Moor Restoration Trust also undertook a systematic survey of the mining remains (ROTE 2013).

No other intrusive archaeological fieldwork is known to have taken place within the proposed development area.

1.4 Aims

In accordance with the specification (Appendix 2), the aim of the project was

‘to identify the presence/absence, extent, condition, character, date (as far as circumstances permit) and significance of any archaeological features and deposits relating to pre 20th century mining which are present.’ (Appendix 2).

This was to be achieved by a combination of historical research and a walkover survey.

2. METHODS

Historical research, examination of historic maps, coal mine abandonment plans and the transcription of aerial photographs, and a review of previous desk-based work took place prior to the walkover survey of the site. The data from the previously undertaken borehole survey was examined although this work contained no information relevant to this program of archaeological work.

2.1 Historical Research

A number of sources were consulted for the purpose of researching in particular the mining history of the site: The Library of the Yorkshire Archaeological Society at Claremont, Leeds; the West Yorkshire Archive Service at Northgate House in Halifax; Calderdale District Archives, the John Goodchild Archive at the Central Library in Wakefield; Todmorden Local History Library; Lancashire County Archive Service; the Coal Authority, and; a number of secondary and internet-based sources. References for all relevant sources appear in the bibliography.

2.2 Aerial photographs

Oblique and vertical aerial photographs from the National Monument Record up to 1:20,000 scale were consulted. The prints were examined under magnification and stereoscopically where possible and profitable. Plotting was at 1: 10,000 accuracy using software suitable for the rectification of vertical and oblique aerial photographs.

2.3 Walkover Survey

The information collected from an examination of the above sources was initially used to identify areas where mining remains may have been present within the site. The entire accessible area of the planning application was then the subject of a systematic field appraisal (walkover survey), which included the identification of existing areas of disturbance. The brief was to assess the extent of the remains of historic mining activity across the development site. Concise but detailed field observations were made where appropriate, including photographs and detailed sketches. Each site was given a site specific feature number that relates to a gazetteer entry (Appendix 1).

The results of this field appraisal were then collated and were accurately mapped on to on a suitable O.S. Map base and depicted for comparison with the footprint of turbines and access routes.

2.4 Standards and Guidance

CFA Archaeology is a registered organisation (RO) with the Institute for Archaeologists (IfA). All work was conducted in accordance with relevant IfA Standards and Guidance documents (IfA 1994a, 1994b), English Heritage guidance, the specification (Appendix 2) and CFA’s standard methodology.

2.5 Archiving

The project archive, comprising all CFA record sheets, finds, plans, reports, and photographs will be ordered according to WYAAS instructions and to nationally recognised standards (Brown 2011) will be deposited with Calderdale Museums, Bankfield Museum, Akroyd Park, Boothtown Road, Halifax, HX3 6HG. A copy of all reports will also be offered to Todmorden Local Studies Library.

The archive currently consists of:

| | |
|--|---------------|
| Digital Photographs and Survey and other files | 1 x CD |
| Notes and Research materials | 1 x A4 folder |
| Topographic and Survey Plans | |
| All non-confidential correspondence | |
| Report x1 | - |
| | |

3. RESULTS

3.1 Historic Research

Although an exhaustive effort was made to identify, particularly pre-modern references to mining or other industrial activity on the site from the historic research none was forthcoming, though background information was acquired. For example, estate maps consulted at the West Yorkshire Archive Office at Northgate House in Halifax did not cover the area of the site in sufficient detail and John Goodchild, a leading expert on the subject was not aware of any relevant sources for mining on Todmorden Moore (pers. comm.). However, information on later mining activity, particularly the Coal Authority’s abandonment plans as well as more general research was used where relevant in the interpretation of the results of the walkover survey (see below).

3.2 Walkover Survey

The results from the aerial photographic transcription and the walkover survey have been combined and are depicted in figures 1 and 2. The individual site numbers annotated on the figures correspond to entries in the gazetteer, which is presented as Appendix 1.

The results of the walkover survey and the aerial photography transcription showed the landscape within the study area has many surviving features related to the industrial exploitation for coal and raw materials on Todmorden Moor. A variety of relict mining and quarrying features were identified across the site including sub-circular features and depressions interpreted as shafts, trial holes, sink holes or air vents, drift mines and former trackways or tram ways, and larger areas of disturbance such as bings, spoil heaps and areas that had previously been quarried. Over 290 individual sites were recorded.

The field survey was able to tentatively ascribe some of the surface remains to collieries that were known to have worked the coal seams under the moor and these are reported below. However, it was not possible to say whether any of the sites were related to early mining such as bell pits. There are some sites that appear to occur either in isolation or in small clusters such as sites 53, 55 and possibly sites 23-22.4 and sites 3-3.2 that may indicate smaller scale workings.

Cloughead Fireclay Mine

The field survey recorded a linear arrangement of mining related sites and features (Sites 45-45.54), orientated north-south, which were located to the west of Holden Gate Slack (Fig. 2). The features probably relate to the extraction of fireclay at the Cloughead Fireclay Mine. The fireclay seam was worked to provide clay for sewer pipes that were manufactured at the pipe works, located outside the study area to the south. The mine was predominantly in the directorship of the Temperlay's and seems to have been in service from the mid-late 19th century until the mid 20th century and employed a relatively small underground workforce of between 3 to 4 people (DMM, 2013). The abandonment plan from 1954 shows the extent of the underground workings (CA 1958).

The typical sites recorded were drifts, vents, and collapsed galleries (Fig. 3); some of which were open with sheer drops.

Sandy Road Colliery

In the centre north of the study area, the extensive remains of the former Sandy Road Colliery were recorded as a north-west to south-east orientated linear arrangement of mining related remains. The remains of many sub-circular depressions may either signify shafts, vents or trial holes or collapsed galleries (Fig. 4). Linear features such as sites 12, 17.5 and 25.1-25.2 were probably the cuttings for drift entrances. Sites 8 (Fig. 5) and 72 are the remains of tram ways that were used to haul coal. Site 72 (Fig. 6) is now a farm access track. There are two bing's that were also associated with this colliery and these were Site 28 to the north of Flower Scar Road and Site 29 to the south (Fig. 7). The abandonment plan of 1966 (CA 1966) shows a number of small colliery buildings and the field survey was able to record the vestigial structural remains these were; sites 28.1 (Fig. 8), 28.2, 28.3 (Fig. 9) and 29.1 which probably related to those depicted on the plan.

Saunder Clough and Todmorden Moor Colliery

In the centre of the study area, and south of Turbine 5, the field survey recorded the remains of sink holes, vents, trial holes or shafts (Fig. 10), relict track ways or tram ways (Fig. 11, 12) spoil heaps and drift mines including some with a brick work revetted entrances (Fig. 13, 14). Unlike the sites located to the west of Turbine 1, which from the abandonment plans could be

attributed to the remains of Sandy Road Colliery, these sites, could belong to either the Saunder Clough or the Todmorden Moor Colliery. The abandonment plans seem to suggest that both collieries had workings under this area (CA 1915, CA 1942).

Clough Foot Colliery and Clough Head Quarry

Evidence for Clough Foot Colliery (Site 46) (Fig. 15) and Clough Foot Quarry (Site 49) (Fig. 16) was recorded. These remains were located to the west of the study area. The 1913 abandonment plan of Clough Foot colliery shows an extensive range of galleries located underground in this area (CA, 1913). The evidence of these galleries could be seen on the surface as sub-circular earthworks and depression, probably sink holes. Over 40 of these features were present. The haulage road (Site 46.1) (Fig. 17) and a hexagonal plinth (Site 46.2) were also recorded. The remains of a possible drift mine entrance (Site 49.7) were located close to the denuded remains of a dry stone structure (Site 49.8) (Fig. 18).

Further to the south, it was harder to distinguish the mining remains from those of Clough Head Quarry (Site 49), although in the south-west of the study area, the exposed quarry faces were clearly related to the extraction of stone (sites 49.5 and 49.6). A trackway (Site 49.3) was probably the remains of a quarry access.

3.3 Potential Impact of Development on Surveyed Remains

This section seeks to address the potential impact the proposed development may have on the surveyed archaeological remains within the proposed development site and specifically the turbine locations, crane pads, access roads and associated infrastructure.

Turbine 1

There were no archaeological sites present within either the proposed footprint of the turbine base, crane pad or turning area. Site 57 which is an earthwork interpreted as a drainage feature of mining origin crosses the proposed access track. The widening of the wind turbine access track will have an impact on FSR (Site 59) where the two are proposed to intersect.

Turbine 2

There were no archaeological sites present within either the proposed footprint of the turbine base, crane pad or turning area. Site 58c which is a boundary stone marker and one of eight situated along the northern boundary of the site is situated within the proposed development area but would not be impacted upon by the current design proposal.

The construction of a site compounded and ancillary building, as well as the widening of the road for a turbine access track where it branches from FSR would impact upon Site 59. However, no specific features, mining related or otherwise were identified in this immediate area.

Turbine 3

There were no archaeological sites present within either the proposed footprint of the turbine base or crane pad. The widening of the road may impact on FSR (Site 59). However, no specific features, mining related or otherwise were identified in this immediate area.

Turbine 4

There were no archaeological sites present within either the proposed footprint of the turbine base or crane pad. The widening of the road may impact on FSR (Site 59), although no specific features, mining related or otherwise were identified in this immediate area. The area around this location, at the far east of the study area was, in general, devoid of archaeological features.

Turbine 5

There were no archaeological sites present within either the proposed footprint of the turbine base, crane pad or turning area. Site 50, which was a pronounced conical depression of mining origin, is situated within the proposed development area, to the west of the turbine base. The site would remain unaffected under the current proposal. Site 59 may be impacted upon due to the widening of the proposed access track where it branches from Flower Scar Road. However, no specific features, mining related or otherwise were identified in this immediate area to the south of Site 59.

Anemometer Mast Location

Site 60, depending on the final design proposal, may be impacted upon by groundworks associated with the erection of a Mast. The site was an elongated area enclosed by a wooden fence (Fig. 19). Its precise purpose is unknown, but the upstanding remains are not of any great antiquity or importance.

Flower Scar Road (Site 59)

The majority of the impact the proposed development may have on archaeological sites, would largely be restricted to Flower Scar Road (FSR) and sites or related features within the corridor of the proposed development boundary. The magnitude of impact would be dependent on the final design of the infrastructure, particularly the widening of the Site 59 and cable array.

Figure 1 show the development site accessed from Bacup Road. Sites 48 (Fig. 20), 48.2-5 and Site 47 were situated within this boundary. Site 61, a turning area may also be affected, although it has no intrinsic or specific characteristics.

Further east, there are no sites within the development boundary that would be affected with the exception of Site 59 (FSR) until Site 54, which was a sub-circular depression situated a short distance to the east of the proposed construction compound, is reached. There is then a concentration of sites, which are within the development boundary and adjacent to FSR. These are sites (west-east); 1, 2, 44, 62, 63, 65, 66, 29, 28, 28.6, and Site 57 (Fig. 2).

The features, with the exception of Site 28.6 were all interpreted as being industrial in origin. Site 28.6 is a perimeter of large stone boulders adjacent to Site 28 and Site 59 (FSR). Sites 1, 54 and 63 were all sub-circular mining related depressions; the largest of which was Site 1 (Fig. 21.). Sites 2, 57 (Fig. 22) and 62 were all linear earthworks comprising gullies, ditches and banks. Sites 65 and 66 (Fig. 22) were the remains of probable trackways. Site 44 was an area of hard-standing. Sites 28 and 29 were shale and mudstone bins of mining waste and were associated with the pit head of Sandy Road Colliery. The field survey did record some

structural remains protruding from both of the bing's, although these were situated outside the current boundary of the proposed development boundary.

4. CONCLUSION

CFA conducted an aerial photographic transcription, desk based research and walkover survey on Todmorden Moor. Over 290 site entries were recorded. Some of the remains were treacherous. All the sites encountered were interpreted as mining or quarrying in origin. The work was unable to confirm whether any of these remains were evidence of smaller scale mining activity such as bell pits. However the assessment of the abandonment plans and the information gained from the walkover survey suggested that the vast majority of these remains were related to collieries or quarries that were known historically to have worked the moor. The body of work is a comprehensive study of Todmorden Moor and a valuable asset in further understanding the moor which when disseminated, will aid local study.

The work has identified a number of sites that, depending on the final design proposal of the windfarm, may be affected by construction. These were largely confined to sites situated either side of Flower Scar Road that lay within the development boundary. The final decision on any mitigation in lies with the archaeological curators for West Yorkshire (WYAAS).

5. BIBLIOGRAPHY

Brown, D. H. 2011, *Archaeological Archives: A Guide to Best Practice in Creation, Compilation, Transfer and Curation of Archaeological Archives* (2nd Edition), Archaeological Archives Forum, September 2011

Dulas, 2010, *Todmorden Moor Wind Farm, Environmental Statement*, Vol. 2, July 2010

EH, 2007, *Understanding the Archaeology of Landscapes: A Guide to Good Recording Practice*, English Heritage

Hemming, K. and Moore, P., 2012, *Todmorden Wind Farm, Flower Scar Road, Todmorden, Calderdale, Auger Survey and Watching Brief*, CFA Archaeology, Report Y040/11

IfA 1994a, *Standard and Guidance for Field Evaluation*, Institute for Archaeologists, Revised October 2008

IfA, 1994b, *Standard and Guidance for historic environment desk-based assessment*, Institute for Archaeologists, Revised November 2012

ROTE, 2011, *Riches of the earth: over and under the South Pennine moors*, Pennine Prospects

5.1 Primary Sources

Yorkshire Archaeology Society Library

Various aerial photographs and Estate Plans, miscellaneous deeds for Todmorden (MD211)

West Yorkshire Archive Service (Northgate House)

The Heather Lawrence Catalogue of all known pre-mid 19th Century Estate Maps (ref. number C. 501)

Plans on abandonment of Todmorden Moor Colliery (WYC 1547/1, 1547/2 and 1547/4)

Lancashire Archives

Conveyance 1838 (DDTO A7/1-3), Deeds 1586-1783 (A15/1-40) and Deeds 1621-1713 (4/18-39)

The Coal Authority

CA. 1913. Clough Foot Colliery, 1913, Plan no. 5938c, (25 inches to 1 mile), dated 27/05/1913

CA. 1915. Saunder Clough Colliery, Plan no. 6426, Upper Mountain Mine, 1915, Messrs George Garnshaw and Sons, (1 inch to 30 yards), dated 21/08/1915

CA, 1942, Todmorden Moor Colliery No. 1, 1942, Plan no. 13283, Forty Yards Seam, (1 inch to 30 yards), dated 25/03/1942

CA, 1953, Todmorden Moor Colliery No. 3, 1953, Plan no. NW82, Forty Yards Mine, (1 inch to 30 yards), dated 10/08/1953

CA, 1958, Cloughead Fireclay Mine, 1958, Plan No. OM15157, (1 inch to 20 yards), dated 18/06/1958

CA, 1966, Sandy Road Colliery, 1966, Plan No. NW587, Union Seam (1:2500), dated 11/10/1966

*Transcribed Aerial Photographs**

| Sortie Number | Library Number | Frame Number | Centre Point | Date | Film | Easting | Northing |
|---------------|----------------|--------------|--------------|------------|--------------|---------|----------|
| RAF/541/27 | 852 | 3051 | SD 895 248 | 17/05/1948 | B&W 8.25x7.5 | 389500 | 424800 |
| OS/69386 | 11356 | 35 | SD 890 246 | 31/07/1969 | B&W 9x9 | 389000 | 424600 |

*All photographs held by the National Monument Record

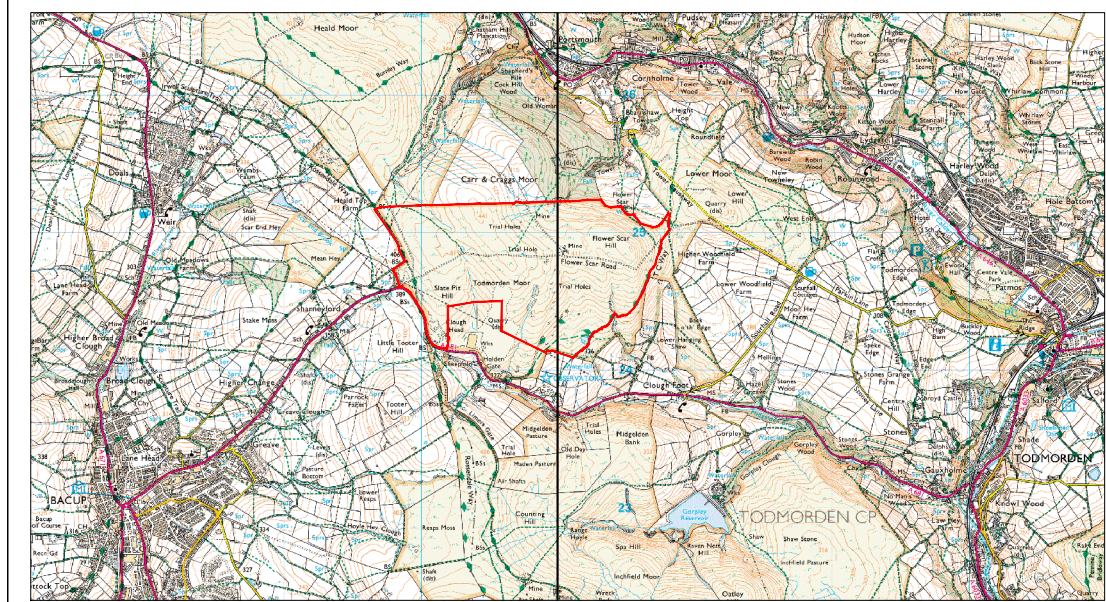
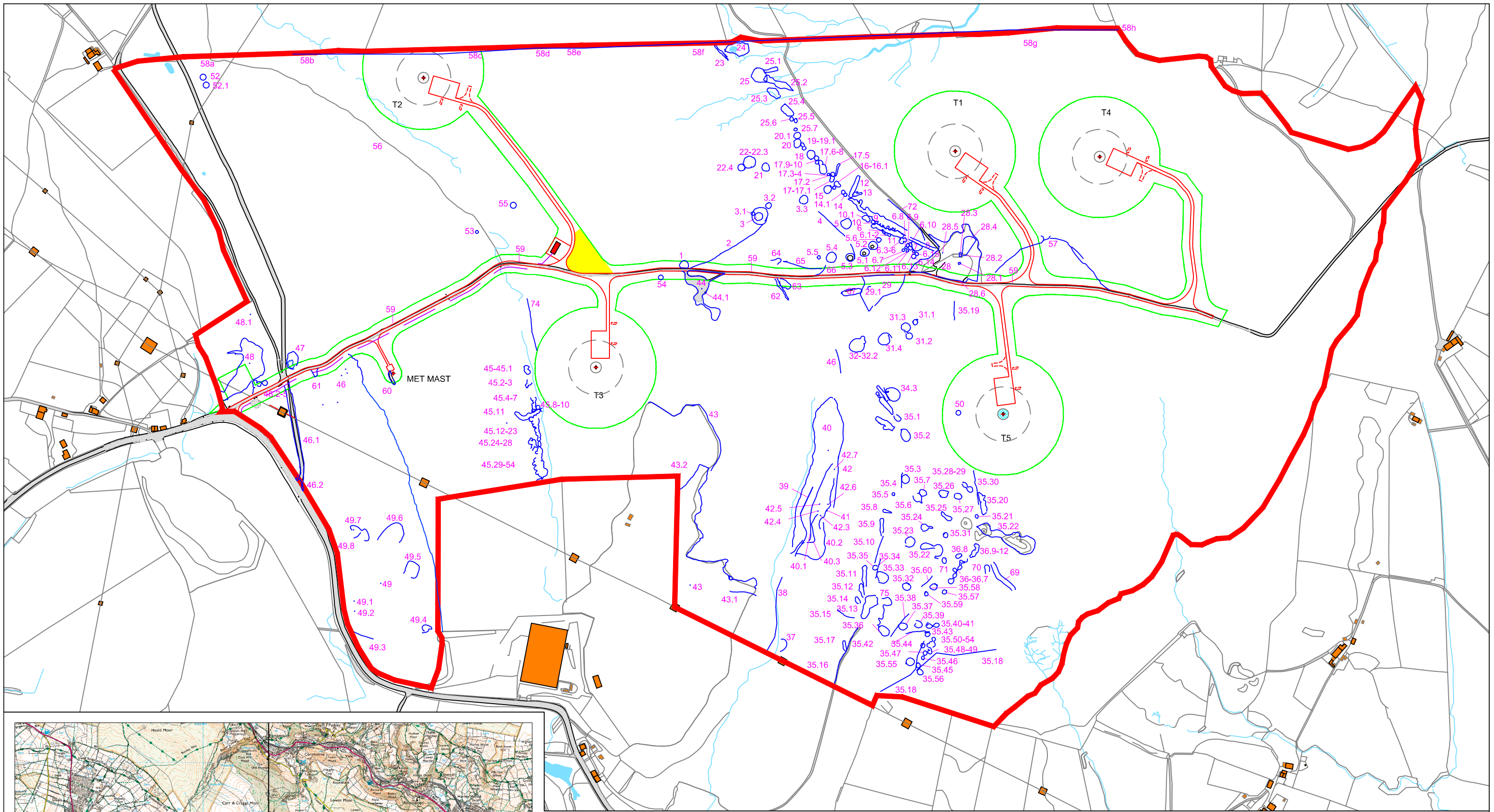
5.2 Online Sources

BGS, 2012, <http://www.bgs.ac.uk>, British Geological Survey (Accessed 27 April 2012)

DMM, 2013, <http://www.dmm.org.uk>, Durham Mining Museum (Accessed 28th March 2013)

Old Maps, 2012, <http://www.old-maps.co.uk>, (Accessed 28th March)

FIGURES 1-23



Location Plan
N.T.S

- Legend**
- Turbine Position
 - Blade Swept Area
 - Planning Boundary
 - Construction Compound
 - Boundary of Study Area
 - Site Tracks
 - Temporary Turning Head
 - Switchgear Building
 - CFA Surveyed Features



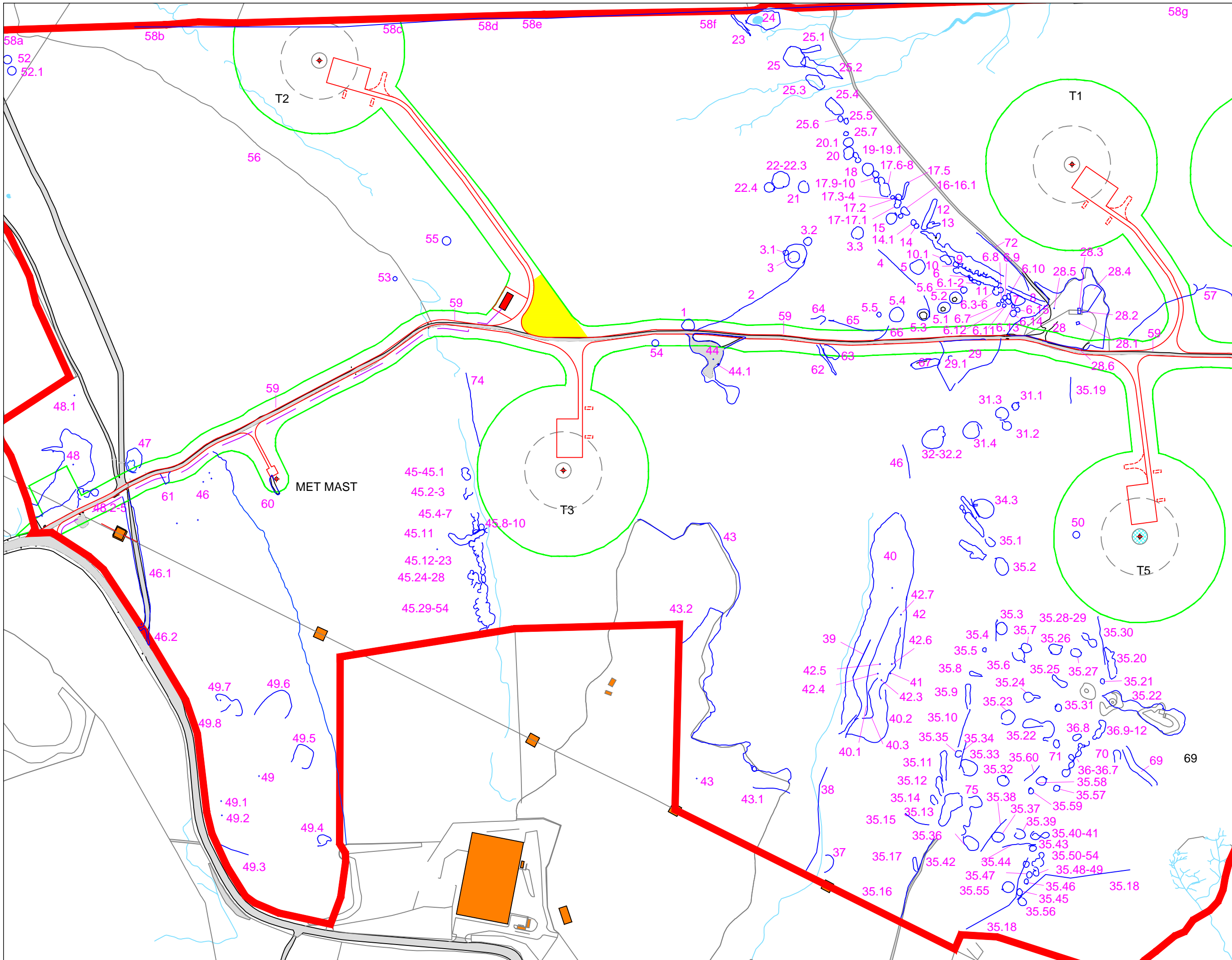
CFA
ARCHAEOLOGY LTD










CFA ARCHAEOLOGY LTD
Unit 22
Moorland's Business Centre
Balme Road, Cleckheaton
West Yorkshire, BD19 4EZ

T: 01274 864245
F: 01274 878494
yorkshire@cfa-archaeology.co.uk

| | | | | | |
|---|-----------------------|------------------------|--|------------------------------|-------------------------------------|
| Fig. No: 1 | Revision: A | Drawn by: LW | Checked: LW | Report No: Y052/13 | Client: Wind Prospect Ltd |
| Title: Site location and plan of study area | | | Project: Todmorden Wind Farm | | Scale at A3: 1:6000 |

The copyright in this document (including its electronic form) shall remain vested in CFA Archaeology Ltd (CFA) but the Client shall have a licence to copy and use the document for the purpose for which it was provided. CFA shall not be liable for the use by any person of this document for any purpose other than that for which the same was provided by CFA. This document shall not be reproduced in whole or in part or relied upon by third parties for any use whatsoever without the express written authority of CFA.



- Key:
-  Turbine Position
 -  Site Tracks
 -  Blade Swept Area
 -  Temporary Turning Head
 -  Planning Boundary
 -  Switchgear Building
 -  Construction Compound
 -  CFA Surveyed Site
 -  Boundary of Study Area

CFA ARCHAEOLOGY LTD
 CFA ARCHAEOLOGY LTD
 Unit 22
 Moorland's Business Centre
 Bame Road, Cleckheaton
 West Yorkshire, BD19 4EZ
 T: 01274 864245
 F: 01274 878494
 yorkshire@cfa-archaeology.co.uk

Fig. No: 2 Revision: A

Title:
Detailed plan of site features

Project:
Todmorden Wind Farm

Client:
Wind Prospect Ltd

Scale at A3:
1:4000

Drawn by: LW Checked: LW Report No: Y052/13



Fig. 3 - Shot of open workings associated with Clough Head Fireclay Mine Sites 45-45.3



Fig. 4 - Shot of sinkholes: Sandy Road Colliery



Fig. 5 - Shot of Site 8



Fig. 6 - Shot of Site 72



Fig. 7 - Shot of Site 28 viewed from Site 29



Fig. 8 - Shot of structural remains of Site 28.1

| | | |
|------------------------|-----------------------|--|
| Fig. No: 3-8 | Revision: A | Project: Todmorden Wind Farm |
| Drawn by: SW | Checked: PM | Report No: Y052/13 |
| | | Client: Wind Prospect Ltd |



CFA
ARCHAEOLOGY LTD

CFA ARCHAEOLOGY LTD
Unit 22
Moorland's Business Centre
Balme Road, Cleckheaton
West Yorkshire, BD19 4EZ

T: 01274 864245
F: 01274 878494
yorkshire@cfa-archaeology.co.uk

The copyright in this document (including its electronic form) shall remain vested in CFA Archaeology Ltd (CFA) but the Client shall have a licence to copy and use the document for the purpose for which it was provided. CFA shall not be liable for the use by any person of this document for any purpose other than that for which the same was provided by CFA. This document shall not be reproduced in whole or in part or relied upon by third parties for any use whatsoever without the express written authority of CFA.



Fig. 9 - Shot of structural remains of Site 28.2 and 28.3



Fig. 10 - Shot of Site 35.27



Fig. 11 - Shot of Site 35.10



Fig. 12 - Shot of Site 35.16



| | | | | | |
|--|-----------------------|------------------------------|--|---|---|
| Fig. No: 9-12 | | Revision: A | Project: Todmorden Wind Farm |  |  |
| Drawn by: SW | Checked: PM | Report No: Y052/13 | Client: Wind Prospect Ltd | | |
| <small>The copyright in this document (including its electronic form) shall remain vested in CFA Archaeology Ltd (CFA) but the Client shall have a licence to copy and use the document for the purpose for which it was provided. CFA shall not be liable for the use by any person of this document for any purpose other than that for which the same was provided by CFA. This document shall not be reproduced in whole or in part or relied upon by third parties for any use whatsoever without the express written authority of CFA.</small> | | | | | |



Fig. 13 - Shot of Site 35.12



Fig 14 - Shot of Site 35.22



Fig. 15 - Shot of Site 46



Fig. 16 - Shot of Site 49



| | | | | | |
|--|-----------------------|------------------------------|--|---|--|
| Fig. No: 13-16 | | Revision: A | Project: Todmorden Wind Farm |  |  |
| Drawn by: SW | Checked: PM | Report No: Y052/13 | Client: Wind Prospect Ltd | | |
| <p>The copyright in this document (including its electronic form) shall remain vested in CFA Archaeology Ltd (CFA) but the Client shall have a licence to copy and use the document for the purpose for which it was provided. CFA shall not be liable for the use by any person of this document for any purpose other than that for which the same was provided by CFA. This document shall not be reproduced in whole or in part or relied upon by third parties for any use whatsoever without the express written authority of CFA.</p> | | | | | |
| | | | | | <p>CFA ARCHAEOLOGY LTD Unit 22 Moorland's Business Centre Balme Road, Cleckheaton West Yorkshire, BD19 4EZ T: 01274 864245 F: 01274 878494 yorkshire@cfa-archaeology.co.uk</p> |



Fig. 17 - Shot of Site 46.1



Fig. 18 - Shot of Site 49.8



Fig. 19 - Shot of Site 60



Fig. 20 - Shot of Site 48

| | | | | | | |
|--------------------------|-----------------------|------------------------------|--|--|--|---|
| Fig. No: 17-20 | | Revision: A | Project: Todmorden Wind Farm | | | CFA ARCHAEOLOGY LTD Unit 22 Moorland's Business Centre Balme Road, Cleckheaton West Yorkshire, BD19 4EZ T: 01274 864245 F: 01274 878494 yorkshire@cfa-archaeology.co.uk |
| Drawn by: SW | Checked: PM | Report No: Y052/13 | Client: Wind Prospect Ltd | | | |

The copyright in this document (including its electronic form) shall remain vested in CFA Archaeology Ltd (CFA) but the Client shall have a licence to copy and use the document for the purpose for which it was provided. CFA shall not be liable for the use by any person of this document for any purpose other than that for which the same was provided by CFA. This document shall not be reproduced in whole or in part or relied upon by third parties for any use whatsoever without the express written authority of CFA.



Fig. 21 - Shot of Site 1



Fig. 22 - Shot of Site 62



Fig. 23 - Shot of Site 66

| | | | | | |
|--|-----------------------|------------------------------|--|--|--|
| Fig. No: 21-23 | | Revision: A | Project: Todmorden Wind Farm | | |
| Drawn by: SW | Checked: PM | Report No: Y052/13 | Client: Wind Prospect Ltd | | |
| <small>The copyright in this document (including its electronic form) shall remain vested in CFA Archaeology Ltd (CFA) but the Client shall have a licence to copy and use the document for the purpose for which it was provided. CFA shall not be liable for the use by any person of this document for any purpose other than that for which the same was provided by CFA. This document shall not be reproduced in whole or in part or relied upon by third parties for any use whatsoever without the express written authority of CFA.</small> | | | | | |

APPENDICES

APPENDIX 1: Gazetteer of Sites and Historical Remains

| Site No. | Type | Source | Description |
|----------|------------------|--|--|
| 1 | Probable shaft | Field survey; maps | The remains of a large roughly circular feature. The southern extent borders and merges with Flower Scar Road. Probably related to mining activity |
| 2 | Gully. | Field survey; maps; aerial photography | The linear remains of a gully. The feature is orientated NE-SW and runs from Site 1 (SW) to Site 3 (NE) and has a slight bank of upcast to the east. The gully peters out and the feature becomes more ephemeral and appears more like a relict track in the vicinity of Site 3. |
| 3 | Probable shaft | Field survey; maps; aerial photography | The remains of what appears to be a large roughly circular shaft. It has steep sides which lead to a vertical opening. A distinctive berm or apron of upcast is situated down slope to the north-east. |
| 3.1 | Vent, trial hole | Field survey; maps; aerial photography | A small circular depression on the edge of site 03 maybe the remains of a trial hole in this area. |
| 3.2 | Vent, trial hole | Field survey; maps; aerial photography | A sub-circular depression to the north-east of Site 3 is possibly a trial hole. There is a small amount of upcast to the north. |
| 3.3 | Shaft | Field survey; maps | The remains of a well defined, steep sided possible shaft. The base is near vertical and there is evidence of subsidence or erosion of the sides. There is a steep bank of upcast to the north-east. |
| 4 | Track | Field survey | The remains of a trackway orientated roughly NW-SE. There is some evidence of rutting along its length. The feature is approximately 6m wide. The feature is slightly terraced into the east facing slope, probably as a result of wear and usage. The feature can be traced curving southwards around Site 5.2. It is probably mining related, possibly providing access to sites 3.3, 5 and 5.3. |
| 5 | Shaft | Field survey; maps; aerial photography | The remains of a well defined, steep sided shaft. There is a bank or apron of upcast to the east. One of series depressions in a linear (E-W) orientation that was probably associated with the Union Seam and the workings at Sandy Road Colliery. |
| 5.1 | Shaft | Field survey | The remains of a well defined, steep sided feature. The base is near vertical and there is a steep bank of upcast to the north-east. One of series depressions in a linear (E-W) orientation. Associated with the Union Seam and the workings at Sandy Road Colliery. |
| 5.2 | Shaft, vent | Field survey; aerial photography | The remains of a well defined shaft or vent. The base is near vertical and there is a steep bank of up cast around the rim. A deep central hole is c. 1.5m x 1.5m. One of series depressions in the ground in a linear (E-W) orientation. Associated with the Union Seam and the workings at Sandy Road Colliery. |
| 5.3 | Shaft | Field survey | The remains of a well defined, steep sided depression, possibly a vent. The base is near vertical and there is a steep bank or apron of upcast around the rim. A deep central hole is c. 1.5m x 1.5m. One of a series features in a linear (E-W) orientation and probably associated with the Union Seam and the workings at Sandy Road Colliery. |
| 5.4 | Shaft | Field survey; aerial | The remains of a well defined, steep sided, deep shaft. The base is near vertical and there a steep bank or apron of |

| Site No. | Type | Source | Description |
|----------|--------------------|----------------------------------|---|
| | | photography | up cast to the north-east. One of a series of mining features in a linear (E-W) orientation and probably associated with the Union Seam and the workings at Sandy Road Colliery. |
| 5.5 | Shaft, vent | Field survey | The remains of a small circular depression west of Site 5.4 may be a vent or mining related trial hole. One of a series shafts in a linear (E-W) orientation and probably associated with the Union Seam and the workings at Sandy Road Colliery. |
| 5.6 | Vent, trial hole | Field survey; aerial photography | The remains of a small circular depression may be a vent or mining related trial hole. One of a series shafts in a linear (E-W) orientation and probably associated with the Union Seam and the workings at Sandy Road Colliery. |
| 6 | Vent, trial hole | Field survey | The remains of a shallow, sub-circular depression. There may be more than one present here. This is one of a many small mining related features that can be found in a NW-SE orientation. It may be slumping caused by a collapsed gallery underneath. Probably associated with the Union Seam and the workings at Sandy Road Colliery. |
| 6.1-6.2 | Vent, trial hole | Field survey | Two sub-circular depressions approximately 1m in depth. This is one of a many small mining related features that can be found in a NW-SE orientation. Possibly caused by a collapsed gallery underneath or the result of a trail hole. Probably associated with the Union Seam and the workings at Sandy Road Colliery. |
| 6.3-6.6 | Vents/ trail holes | Field survey | A cluster of at least three sub-circular depressions possibly vents or trial holes, or an area of collapse. This is one of a many small mining related features that can be found in a NW-SE orientation. Probably associated with the Union Seam and the workings at Sandy Road Colliery. |
| 6.7 | Vent, trial hole | Field survey | One of a concentrated cluster of small, sub-circular depressions possibly vents or areas of collapse in this area. This is one of a many small mining related features that can be found in a NW-SE orientation. Probably associated with the Union Seam and the workings at Sandy Road Colliery. |
| 6.8 | Vent, trial hole | Field survey | One of a concentrated cluster of small, sub-circular depressions possibly vents or areas of collapse in this area. This is one of a many small mining related features that can be found in a NW-SE orientation. Probably associated with the Union Seam and the workings at Sandy Road Colliery. |
| 6.9 | Vent, trial hole | Field survey | One of a concentrated cluster of small, sub-circular depressions either vents , trail holes or areas of collapse in this area. This is one of a many small mining related features that can be found in a NW-SE orientation. Probably associated with the Union Seam and the workings at Sandy Road Colliery. |
| 6.10 | Vent, trial hole | Field survey | One of a concentrated cluster of small, sub-circular depressions possibly either vents, trail holes or areas of collapse in this area. This is one of a many small mining related features that can be found in a NW-SE orientation. Probably associated with the Union Seam and the workings at Sandy Road Colliery. |
| 6.11 | Vent, trial hole | Field survey | One of a concentrated cluster of small, sub-circular depressions possibly either vents, trail holes or areas of collapse in this area. This is one of a many small mining related features that can be found in a NW-SE orientation. Probably associated with the Union Seam and the workings at Sandy Road Colliery. |
| 6.12 | Vent, trial hole | Field survey | One of a concentrated cluster of small, sub-circular depressions possibly either vents, trail holes or areas of collapse in this area. This is one of a many small mining related features that can be found in a NW-SE orientation. Probably associated with the Union Seam and the workings at Sandy Road Colliery. |
| 6.13 | Vent, trial hole | Field survey | One of a concentrated cluster of small, sub-circular depressions possibly either vents, trail holes or areas of collapse in this area. This is one of a many small mining related features that can be found in a NW-SE |

| Site No. | Type | Source | Description |
|----------|---------------------------------------|--|---|
| | | | orientation. Probably associated with the Union Seam and the workings at Sandy Road Colliery. |
| 6.14 | Vent, trial hole | Field survey | One of a concentrated cluster of small, sub-circular depressions possibly either vents, trial holes or areas of collapse in this area. This particular feature is quite shallow. This is one of a many small mining related features that can be found in a NW-SE orientation. Probably associated with the Union Seam and the workings at Sandy Road Colliery. |
| 6.15 | Vent, trial hole | Field survey | One of a concentrated cluster of small, sub-circular depressions possibly either vents , trial holes or areas of collapse in this area.. This is one of a many small mining related features that can be found in a NW-SE orientation. Probably associated with the Union Seam and the workings at Sandy Road Colliery. |
| 7 | Shaft, vents | Field survey | The remains of a well defined, NW-SE orientated feature, possibly a shaft or an area of vents/trial holes. One of a series of features that were surveyed in a linear (E-W) orientation. Probably associated with the Union Seam and the workings at Sandy Road Colliery. The area is close to 'Drift No 1 and 2' annotated on the abandonment plan NW587 |
| 8 | Track or waggonway | Field survey; aerial photography | Field survey recorded the remains of possible track, road or waggonway. The feature ran for some length in a NW-SE orientation and may have provided the access to a large number of mining related features in this area. The feature was seen as a raised bed. There was some visible frogged brick which appeared to provide a make shift surface or possibly a repair to an existing surface. Low vegetation along its length suggested that a surface or deposit of hard standing was present. The linear earthwork is in good condition to the SE but peters out to the NW. Probably associated with the workings at Sandy Road Colliery. |
| 9 | Shafts, vents, trial holes | Field survey; maps; aerial photography | A linear series of depressions of mining related activity, possibly a collapsed gallery or series of vents that were orientated in a NW-SE direction. The feature is very hillocky and field survey accounted for at least thirty depressions. The depressions vary from 1.5 to 2m in depth. Probably associated with the Union Seam and the workings at Sandy Road Colliery. This area is close to 'Drift No3' depicted on the abandonment pan NW587. |
| 10 | Shafts, vents | Field survey; aerial photography | A well defined, steep sided depression either a shaft, vent/trial hole or an area affected by collapse. As the vicinity seems to have subsided slightly. The feature is 1.5m deep and is probably associated with the Union Seam and the workings at Sandy Road Colliery. |
| 10.1 | Shafts, vents | Field survey; aerial photography | A well defined, steep sided depression either a shaft, vent/trial hole or an area affected by collapse. As the vicinity seems to have subsided slightly. The feature is 1.5m deep and is probably associated with the Union Seam and the workings at Sandy Road Colliery. |
| 11 | Vents, collapsed gallery | Field survey; aerial photography | A linear depression that is orientated NW-SE. It is partially water filled. It could be viewed as a series of depressions (similar to Site 9), however, the depressions are very ephemeral and this is possibly a collapsed gallery. The feature is 6m wide and approximately 2m deep. Close to the location of 'Drift No 3' from the abandonment plan NW587. Probably associated with the Union Seam and the workings at Sandy Road Colliery. |
| 12 | Track, waggonway, adit/drift entrance | Field survey; aerial photography | Field survey recorded the linear remains of a feature that was c. 6m wide and 1.5m deep. It is interpreted as possible cutting for a track or waggonway and an entrance to an adit of drift mine. There was deep vegetation in the centre. The location is possibly 'Drift No 6' annotated ion the abandonment plan NW587. Probably associated with the Union Seam and the workings at Sandy Road Colliery. |

| Site No. | Type | Source | Description |
|------------|---------------------------|--|---|
| 13 | Mining related earthwork. | Field survey | The remains of a linear earthwork. It was 9m long roughly E-W and c. 2m wide. At its deepest it was 1m. It may be a cutting for a trackway associated with a mine entrance/drift or associated with a collapsed gallery underneath. The location is close to 'Drift No 6' annotated on the abandonment plan NW587. Probably associated with the Union Seam and the workings at Sandy Road Colliery. |
| 14-14.1 | Shafts, vents | Field survey | The remains of two depressions. The features are sub-circular and relatively steep sided. One of series features that were surveyed in a linear (E-W) orientation, possibly vents, trial holes or an area of collapse/ subsidence. |
| 15 | Shaft | Field survey; aerial photography | The remains of a well defined, steep sided probable shaft. The circular base is near vertical and there is upcast on all sides. One of a series features in a linear (E-W) orientation. Probably associated with the Union Seam and the workings at Sandy Road Colliery. |
| 16-16.1 | Vents, trial holes | Field survey; aerial photography | The remains of at least two depressions, possibly trial holes or vents. The features are sub-circular. One of a series features that were surveyed in a linear (E-W) orientation. Probably associated with the Union Seam and the workings at Sandy Road Colliery. |
| 17-17.1 | Vents, trial holes | Field survey; aerial photography | The remains of at least two vents or trial holes. The features are sub-circular and merge. One of a series features that were surveyed in a linear (E-W) orientation. This may also be an area of a collapsed gallery. Probably associated with the Union Seam and the workings at Sandy Road Colliery. |
| 17.2 | Vent, trial hole | Field survey; aerial photography | One of a series of shallow depressions of mining origin possibly a vent or trial hole or a collapsed gallery. One of a series of features that were surveyed in a linear (E-W) orientation that are probably associated with the Union Seam and the workings at Sandy Road Colliery. |
| 17.3-17.4 | Vents, trial holes | Field survey; aerial photography | The remains of at least two depressions. The features are sub-circular and merge and may be a collapsed gallery or possibly a vent or trial hole. One of a series features that were surveyed in a linear (E-W) orientation that was probably associated with the Union Seam and the workings at Sandy Road Colliery. |
| 17.5 | Mining related earthwork | Field survey; aerial photography | Field survey recorded this linear depression. It was 18m in length and orientated roughly N-S. Its purpose is unknown and it may be a slumped gallery, entrance to an adit or drift or even a drainage feature. Probably associated with the Union Seam and the workings at Sandy Road Colliery. |
| 17.6-17.8 | Vents, trail holes | Field survey; aerial photography | A cluster of at least three depressions in close proximity, some of which merge. Site 17.8 is larger and well defined. It maybe a shaft, vent or trail hole surrounded by an area of collapse. Probably associated with the Union Seam and the workings at Sandy Road Colliery. |
| 17.9-17.10 | Vents, trail holes | Field survey; aerial photography | Two well defined circular features that may well be vents or trial holes. Part of a series mining related features in a linear (E-W) orientation. Probably associated with the Union Seam and the workings at Sandy Road Colliery. |
| 18 | Shaft, vent, trial hole | Field survey; maps; aerial photography | The remains of a well defined circular depression. The base is water filled. There is a shallow bank or apron of upcast around the outer edge. One of a series shafts in a linear (E-W) orientation. Probably associated with the Union Seam and the workings at Sandy Road Colliery. |
| 19-19.1 | Vents, trail holes | Field survey; maps; aerial photography | Two well defined circular features and probable vents, shafts or areas of collapse. Part of a series mining related features in a linear (E-W) orientation associated with the Union Seam and the workings at Sandy Road Colliery. |
| 20 | Shaft, vent or trial hole | Field survey; | The remains of a well defined circular feature, possibly a shaft, vent or trial hole. The base is water filled. One of a |

| Site No. | Type | Source | Description |
|----------|--------------------------------|--|--|
| | | maps; aerial photography | series of features in a linear (E-W) orientation. The feature is c. 10m in diameter and probably associated with the Union Seam and the workings at Sandy Road Colliery. |
| 20.1 | Probable shaft | Field survey; maps; aerial photography | The remains of a well defined circular feature, possibly a shaft, vent or trial hole. The base is water filled. One of a series features in a linear (E-W) orientation. The feature is c. 15m in diameter and probably associated with the Union Seam and the workings at Sandy Road Colliery. |
| 21 | Shaft, trial hole | Field survey; maps; aerial photography | The remains of a well defined steep sided depression, either a shaft, or trial hole. One of a series shafts in a linear (E-W) orientation. The feature is c. 10m in diameter and is 2m deep. May be related to the Union Seam and the working at Sandy Road Colliery. |
| 22-22.3 | Shaft, vents. trial holes | Field survey; maps; aerial photography | A large depression with gradually sloping sides and a well defined circular, vertical sided central opening. The central hole is revetted by stone which is of dry wall construction. The feature is probably a shaft or trial hole and may be related to the Union Seam and the working at Sandy Road Colliery. |
| 22.4 | Sub-circular platform | Field survey; maps; aerial photography | Situated to south-west of Feature 22 in an elevated position. This may be spoil forming an apron to the west or possibly a platform associated with features 22. Possibly related to the Union Seam and the working at Sandy Road Colliery. |
| 23 | Drainage channel | Field survey; aerial photography | A probable drainage channel close to a some natural springs. The purpose of the feature may have been to divert water away from Site 24 which seems to have been quarried. It was 1.5m wide by 1m deep. |
| 24 | Quarry scoop or mining remains | Field survey; aerial photography | Field survey recorded the remains of a possible quarry scoop or mining related feature. The feature was full of water at the time of the survey. It has a 2-3m wide berm of material around its perimeter which is presumably the up cast associated with its excavation. The feature was probed and was >1.5m deep. |
| 25 | Quarry or mining related site | Field survey; maps; aerial photography | Field survey recorded the remains of a possible quarry or mining related feature. The feature was sub-circular and was in the region of 25m diameter and approximately 4m deep. |
| 25.1 | Channel / Cutting | Field survey; aerial photography | Channel located to the east of Site 25 and presumed due to the close relationship to have an association, although the precise purpose is unknown. It was approximately 2m wide. Other interpretations include the entrance to a drift or adit are possible and the site may be associated with the Union Seam and the workings at Sandy Road Colliery. The 1961 Lancashire and Furness Edition mapping 1:2500 shows a mine entrance very near to this location |
| 25.2 | Channel / Cutting | Field survey; aerial photography | Channel located to the east of Site 25 and presumed due to the close relationship to have an association, although the precise purpose is unknown. It was approximately 2m wide. Other interpretations include the entrance to a drift or adit are possible and the site may be associated with the Union Seam and the workings at Sandy Road Colliery. The 1961 Lancashire and Furness Edition mapping 1:2500 shows a mine entrance very near to this location The site was accessed from the existing track (Site 72) track which runs close to the south-east end of the feature. |
| 25.3 | Quarry scoop or mining remains | Field survey; aerial photography | The remains of a large depression were interpreted as related to mineral extraction; either quarrying or mining. The feature is on the same orientation (NW-SE) as a number of similar mining related features that may be related to the Union Seam and the workings at Sandy Road Colliery. |

| Site No. | Type | Source | Description |
|----------|---|--|---|
| 25.4 | Vents, trail holes, collapsed gallery | Field survey; aerial photography | Field survey recorded the remains of a series of depressions that were interpreted as mining related features. The linear arrangement (NW-SE) is the same as other mining related features in the area. This feature probably comprised a number of vents or possibly trial holes or an area of collapse that has amalgamated over time. |
| 25.5 | Vent, trial hole | Field survey; aerial photography | The remains of a possible vent or trial hole. Feature was sub-oval in shape and measured 6m x 5m. One of a series of similar features on a NW-SE orientation. Probably associated with the Union Seam and the workings at Sandy Road Colliery. |
| 25.6 | Shaft, vent | Field survey; aerial photography | The remains of a possible shaft or vent. Feature was sub-oval in shape and measured 6m x 5m. One of a series of similar features on a NW-SE orientation. Probably associated with the Union Seam and the workings at Sandy Road Colliery. |
| 25.7 | Possible vent, trial hole or area of collapse | Field survey; maps; aerial photography | Shallow depression c. 1.2m deep, probably associated with mining activity in the area. Possibly an area of collapse or a vent or similar mining related feature. Probably associated with the Union Seam and the workings at Sandy Road Colliery. |
| 28 | Bing, above ground mining related remains | Field survey; maps; aerial photography | The remains of a bing of mining origin which is visible on Ordnance Survey mapping and aerial photographs. The bing largely comprised shale which formed the bulk of the feature. Other materials noted within the matrix were rubble, concrete and bricks. The area can be divided into three mounds of material, all of which have been eroded by recreational motor biking and other vehicles. The area is presumed to have been the centre of activity for coal mining in this area. It is located immediately north of FSR. The abandonment plan NW587 shows a series of buildings' in this area a track or road, and the termination of the tram or waggonway from the mine working to the North-west. The area is probably a focus of activity for the Sandy Road Colliery. A number of sites within the general curtilage and were surveyed separately. |
| 28.1 | Metal structure | Field survey | Field survey recorded the remains of a metal structure, stance or base within the curtilage of Site 28. The metalwork is warped and twisted but is largely still in situ. Some angled metal uprights are visible which presumably continue into the deposits associated with Site 28. Wood is also noted. The feature is approximately 4m square. It remains possible that more extensive remains associated with this continue below the current ground surface. The abandonment plan NW587 shows a series of buildings in this area and the area in general appears to have been the focus of activity for the Sandy Road Colliery. |
| 28.2 | Structural remains | Field survey | The remains of a structure associated with Site 28. Measured 1.75m x 3.5m E-W. There were the vestigial remains of an outer skin of concrete/asbestos sheet. The internal fabric was a single skin of frogged bricks. The feature had a grassed interior and presumably continued below the current ground surface. The abandonment plan NW587 shows a series of buildings in this area and the area in general appears to have been the focus of activity for the Sandy Road Colliery. |
| 28.3 | Structural remains | Field survey | The remains of a brick structure survived as 2 courses (0.22m wide) of frogged brick work. The feature is closely related to Site 28.2 within the curtilage of Site 28. The abandonment plan NW587 shows a series of buildings in this area and the area in general appears to have been the focus of activity for the Sandy Road Colliery. |
| 28.4 | Shale bing | Field survey; aerial photography | The remains of a shale bing within the curtilage of Site 28. Two wooden posts at the base of the mound to the south are in situ. |

| Site No. | Type | Source | Description |
|----------|--|--|--|
| 28.5 | Brick surface | Field survey | The remains of a brick surface which comprised randomly laid non-standard bricks. The upper surface though was heavily worn. The abandonment plan NW587 shows a series of buildings in this area and the area in general appears to have been the focus of activity for the Sandy Road Colliery. |
| 28.6 | Demarcating line of sandstone boulders | Field survey | A number of large irregular shaped sandstone boulders delimit the southern boundary of Flower Scar Road and to some extent the NW edge of Site 28. There is a boulder either side of Flower Scar Road as it passes to the south of Site 28. The precise purpose is presumed to stop illegal activity and unwanted occupation. However with several gaps, this would fail in that respect. |
| 29 | Area of re-deposited shale, mudstone and rubble (bing) | Field survey; maps; aerial photography | This area appears to be a bing associated with mining activity in the area. It has been heavily eroded by recreational motorcycling. Site 29.1 is probably the base of a structure associated with this. There are a number of possible approaches to the bing, the most convincing of which is from Flower Scar Road to the north. The abandonment plan NW587 shows that underground working continued in this direction and the area in general appears to have been the focus of activity for the Sandy Road Colliery. |
| 29.1 | Structural remains | Field survey | The probable remains of a structure on the northern slope of Site 29. Parts are still covered in shale. It measured 3m N-S by 4m E-W and comprised sandstone block work with a concrete infill. A cast iron grate of unknown purpose is also visible. Some refractory bricks with holes in are also situated near here and are stamped 'NEWHAY'. The bricks are 0.35m sq. The provenance of the bricks would be the Newhey Brick and Terracotta Co. Ltd., a brick and tile works on Huddersfield Road which opened in 1899 and closed in the 1930's. Lengths of in situ and partially covered salt-glazed drain were also present. The abandonment plan NW587 shows that underground working continued in this direction and the area in general appears to have been the focus of activity for the Sandy Road Colliery. |
| 31.1 | Shaft/ vent | Field survey; aerial photography | One of a number of circular vents, trial holes or shafts in this area. Sites 31.1 to 32.2 form a linear line of mine workings orientated roughly east to west and may be related. |
| 31.2 | Shaft/ vent | Field survey | One of a number of circular vents, trial holes or shafts in this area. Sites 31.1 to 32.2 form a linear line of mine workings orientated roughly east to west and may be related. |
| 31.3 | Shaft/ vent | Field survey | One of a number of circular vents, trial holes or shafts in this area. Sites 31.1 to 32.2 form a linear line of mine workings orientated roughly east to west and may be related. |
| 31.4 | Shaft | Field survey | One of a number of circular vents, trial holes or shafts in this area. Sites 31.1 to 32.2 form a linear line of mine workings orientated roughly east to west and may be related. |
| 32-32.2 | Shaft/ vents | Field survey | One of a number of circular vents, trial holes or shafts in this area. Sites 31.1 to 32.2 form a linear line of mine workings orientated roughly east to west and may be related. |
| 33 | Void | Void | Void |
| 34.3 | Shaft and entrance | Field survey | The remains of a well defined circular feature, possibly a shaft with a possible entrance to the west. One of series of large features in this area. The site may be related to features shown on the abandonment plan NW587 and described as 'old workings'. |
| 35 | Possible drift | Field survey | The remains of a possible drift in this area. One of a series of elongated features related to mining activity. The site may be related to features shown on the abandonment plan NW587 and described as 'old workings'. |

| Site No. | Type | Source | Description |
|----------|---|--|--|
| 35.1 | Bank/up cast | Field survey | Large bank of up cast/ spoil associated with mining activity from Site 34.3. The site may be related to features shown on the abandonment plan NW587 and described as 'old workings'. |
| 35.2 | Shaft | Field survey | The well defined remains of a large circular depression, possibly a shaft. Upcast noted around the perimeter, especially prominent to the west. At least 2m deep. The site may be related to features shown on the abandonment plan NW587 and described as 'old workings'. |
| 35.3 | Shaft, vent, trial hole | Field survey; aerial photography | Circular depression and possible remains of shaft, vent or trial hole. Closely related to trackway Site 35.4. Mining activity possibly related to the Forty Yard Seam. |
| 35.4 | Trackway | Field survey; aerial photography | Remains of trackway to the east of Site 35.3. Slopes north to south (c. 3m wide) and rutted on both sides. |
| 35.5 | Vent, trial hole or possibly collapse | Field survey | Mining remains, possibly a vent or shaft or the result of collapse. The entrance is clearly visible and has been fenced off from the general public. A coal damaged board sign is situated at the entrance. |
| 35.6 | Possible vent or collapse | Field survey | Shallow depression related to mining activity. May be the result of a collapsed gallery or a vent or trial hole. |
| 35.7 | Possible shaft | Field survey; maps; aerial photography | Remains of deep circular feature, possibly a shaft or area of collapse. The 1907 Edition Ordnance map, 1:2500 Yorkshire and 1961 Lancashire and Furness show a number of features annotated as 'trial holes' That may relate to workings at the 'Mountain Seam ' or 'Forty Yard Seam'. |
| 35.8 | Possible drift or adit | Field survey | The remains of a possible drift mine or adit located on an east facing slope. The feature has a circular depression at its head to the west and an elongated tail. |
| 35.9 | Possible drift or adit | Field survey | The south facing remains of a possible drift or adit located on an east facing slope. A trackway, Site 35.9 may have serviced the feature as it appears to stem from close to its opening to the south. |
| 35.10 | Track or waggonway | Field survey | The route of a trackway located south of sites 35.8, 35.9. Stunted vegetation suggests probable hard standing under the present ground level. The site runs roughly north-south. Site 35.16 to the south runs on a similar orientation and it is possible that site 35.10 maybe a continuation of this. The same may be postulated for Site 35.4 to the north. |
| 35.11 | Possible drift or adit | Field survey | The remains of a possible drift or adit. The feature is orientated roughly north-south. The partially collapsed entrance is currently fenced off for the safety of the general public. |
| 35.12 | Brick lined drift mine | Field survey | The remains of a probable drift mine orientated roughly north-south. The tail of the drift is partially revetted by brickwork. The site is overgrown. The bricks were laid dry and the elevation has an irregular pattern. |
| 35.13 | Probable mine entrance with upcast/bing | Field survey | The remains of large spoil heap and in-situ brickwork which appeared to revett a way of access to the bing. Track 35.10/35.16. Probably ran close past here. A deep gully which was water filled at the time of the survey encircles the feature and is presumed to be associated although the precise purpose is unknown. The site of probably a mine entrance. |
| 35.14 | Possible adit or vent | Field survey | Small feature possibly a vent or adit associated with mine working in the area. One of several apparently cut into the east-facing slope. |
| 35.15 | Track (cutting of) or collapse. | Field survey | Probably the remains of a cutting for a trackway orientated NW-SE in this located. Presumed to be of mining origin. Other interpretations include a collapsed gallery. |

| Site No. | Type | Source | Description |
|----------|----------------------------------|--|--|
| 35.16 | Probable track | Field survey; maps; aerial photography | The remains of a track or access route orientated roughly N-S. This may be a continuation of 35.10 a trackway noted on the same orientation to the north of here. The feature is c. 3.5 wide and probably has a surface or deposit of hard standing under the current low lying vegetation. The feature was possibly the main route from the mining activity located immediately to the north and Bacup Road to the south |
| 35.17 | Possible drift or adit | Field survey | The remains of a possible drift or adit orientated roughly NW-SE. The entrance is located on an east-facing slope. The feature is in close proximity to Site 35.16 a track which probably serviced the general area. |
| 35.18 | Trackway | Field survey; maps; aerial photography | The remains of a trackway with some shallow wheel ruts. The feature heads SW-NE originating from beyond the development area. It then splits into two branches. One branch heads roughly N-S in the direction of Site 35.43, the other branch heads roughly north-east and then kinks eastwards. The feature is of probable mining origin and possibly provided the access to Sites 35.43-35.56. The route appears to still be in use, presumably to gain access to pasture and livestock. |
| 35.19 | Trackway | Field survey | The N-S remains of a possible trackway cutting, with rutting on both sides. Presumed to be of mining origin and may have been related to the Union Seam and the workings at Sandy Road Colliery. |
| 35.20 | Vents, trial holes, collapse | Field survey; aerial photography | A row of vents or trial holes. The precise number is not known and the area has partially collapsed and been fenced off for the safety of the general public. A trackway of probable mining origin, Site 35.30 runs to the west of here. The area is somewhat hazardous. |
| 35.21 | Possible vent. | Field survey | Remains of small circular feature, possibly a vent of trial hole. |
| 35.22 | Possible mine entrance and bings | Field survey; maps; aerial photography | The elongated remains of upcast form a bing related to mining activity and there may be more than one heap as the bings may have merged. The structural remains of a brick wall of English Garden type were recorded. The function of the masonry appears to be largely for revetting purposes and an associated depression which was heavily overgrown may be a mine entrance. The area has been used for recreational motorcycling. |
| 35.23 | Platform, upcast | Field survey | A roughly circular platform located on an east-facing slope. The feature is presumed to be of mining origin and may be a flattened area of spoil or up cast, although the precise purpose is unknown. |
| 35.24 | Possible shaft | Field survey; maps; aerial photography | The steep sided and deep circular remains of a probable shaft. A small 'tail' protrudes to the east and was possibly the entrance. Other interpretations include a trial hole. |
| 35.25 | Shafts/vents | Field survey | An elongated depression and possibly the remains of two vents or an area of collapse. |
| 35.26 | Platform/ terrace | Field survey | The remains of platform or terrace which is presumed to be of mining origin. The area overgrown. A deep and pronounced shaft, Site 35.27 is situated a short distance to the east and this may be related or be the upcast from it. |
| 35.27 | Shaft, vent, trial hole | Field survey; aerial photography | A deep and steep sided circular feature possibly a shaft, vent or trial hole. The feature is circled by a ring of upcast |
| 35.28-29 | Vents, trial holes | Field survey | The remains of at least two shafts or vents located a short distance to the west of trackway (Site 35.30). The site may have also collapsed. |
| 35.30 | Track | Field survey | The remains of a trackway or access route of probable mining origin. The feature is orientated roughly N-S and is flanked by a series of vents or shafts/trial holes on both sides (35.28-29 & 35.20). |
| 35.31 | Shaft, vent or trial hole | Field survey; aerial | The roughly circular remains of a possible shaft, vent or trial hole. |

| Site No. | Type | Source | Description |
|----------|-------------------------------|--|--|
| | | photography | |
| 35.32 | Shaft, vent or trial hole | Field survey; maps; aerial photography | A deep and steep sided shaft or vent/trial hole. The feature is circled by a ring of upcast and is one of several deep solitary circular features in the area. The 1907 Edition Ordnance map, 1:2500 Yorkshire and 1961 Lancashire and Furness show a number of features annotated as 'trial holes' That may relate to workings at the 'Mountain Seam' or 'Forty Yard Seam'. |
| 35.33 | Shaft, vent or trial hole | Field survey; maps; aerial photography | A deep and steep sided shaft or vent. The feature is circled by a ring of up cast and is one of several deep solitary circular features in the area. The centre was filled with water. Site 35.34 a trackway runs between this site and Site 35.35. |
| 35.34 | Track | Field survey | The remains of a trackway running down a south-facing slope between sites 35.35 and 35.33. Appears to be rutted. It is on a similar alignment to Site 35.16 a trackway to which it may have been connected. |
| 35.35 | Vent, trial hole | Field survey; aerial photography | Small circular depression to west of Site 35.34 it may be a vent or possibly a trial hole. |
| 35.36 | Shaft, trial hole | Field survey; maps; aerial photography | A deep and steep sided possible shaft or trial hole. The feature is circled by a ring of upcast, and is eroding on the interior. It was one of several deep solitary circular features in the area. When seen in conjunction with sites 35.37-35.41 there may be a linear east to west orientated pattern emerging. |
| 35.37 | Shaft, trial hole | Field survey; maps; aerial photography | A large deep and steep sided shaft or vent. The feature is circled by a pronounced ring of upcast which has been flattened. One of several deep solitary circular features in the area. See also Site 35.36. |
| 35.38 | Trackway | Field survey | Remains of a trackway which runs between sites 35.36 and 35.37. As with most relict tracks in this area it heads south in the direction of Bacup Road. See also Site 35.36. |
| 35.39 | Shaft, trial hole | Field survey; maps; aerial photography | A deep and steep sided shaft or possible trial hole. The feature is circled by a ring of upcast See also Site 35.36. |
| 35.40-41 | Shafts, trial holes, collapse | Field survey; maps; aerial photography | The remains of two circular depressions that may be shafts, vents or trial holes. The close proximity also suggested a collapsed gallery although upcast encircles both depressions. See also Site 35.36. |
| 35.42 | Trackway | Field survey | The well worn and deeply rutted remains of a probable trackway run roughly E-W. It presumably provided access to sites 35.36-35.41 and was interpreted as a mining related feature. |
| 35.43 | Shaft, vent, trial hole | Field survey; maps; aerial photography | A deep, circular and steep sided feature, possibly a shaft, vent or trial hole. The feature is circled by a ring of upcast |
| 35.44 | Vent, trial hole | Field survey | Small circular vent, trial hole or mining related feature |
| 35.45 | Vent, sink hole or collapse | Field survey; aerial photography | Small circular depression of mining origin, precise purpose unclear but possibly a vent. It appears as one in a linear arrangement of similar north-south orientated features, and with no associated upcast may be a collapsed gallery. |
| 35.46 | Vent, sink hole or | Field survey; aerial | Small circular depression of mining origin, precise purpose unclear but possibly a vent. It appears as one in a |

| Site No. | Type | Source | Description |
|----------|-----------------------------|--|--|
| | collapse | photography | linear arrangement of similar north-south orientated features, and with no associated upcast may be a collapsed gallery. |
| 35.47 | Vent, sink hole or collapse | Field survey; aerial photography | Small circular depression of mining origin, precise purpose unclear but possibly a vent. It appears as one in a linear arrangement of similar north-south orientated features, and with no associated upcast may be a collapsed gallery. |
| 35.48-49 | Vent, sink hole or collapse | Field survey; aerial photography | Small cluster of at least two circular depressions. Precise purpose unclear but possibly a vent. It appears as one in a linear arrangement of similar north-south orientated features, and with no associated upcast may be a collapsed gallery or sink hole. |
| 35.50-54 | Sink holes, collapse, vents | Field survey; aerial photography | Small cluster of at least two small shafts or vents. Precise purpose unclear but possibly a vent. It appears as one in a linear arrangement of similar north-south orientated features, and with no associated upcast may be a collapsed gallery or sink hole. |
| 35.55 | Shaft, trial hole, vent | Field survey; maps; aerial photography | Circular shaft, trial hole or vent. The immediate area may also have collapsed. |
| 35.56 | Vent, sink hole or collapse | Field survey; aerial photography | Small circular depression of mining origin, precise purpose unclear but possibly a vent. It appears as one in a linear arrangement of similar north-south orientated features, and with no associated upcast may be a collapsed gallery. |
| 35.57 | Vent, trial hole, sink hole | Field survey; maps; aerial photography | Remains of circular feature of mining origin. With sites 36 to 36.12 a linear pattern has emerged suggesting that a gallery had collapsed. Other interpretations include vents or trial holes. |
| 35.58 | Shaft, trial hole | Field survey; maps; aerial photography | Remains of pronounced circular feature of mining origin. Possibly a shaft or trial hole with steep sides and a circular berm of upcast. One of several deep solitary circular features in the area. |
| 35.59 | Shaft/vent | Field survey; aerial photography | Remains of circular mining feature, possibly a vent or trial hole. One of several deep solitary circular features in the area. |
| 35.60 | Trackway | Field survey | Vestigial remains of trackway of probable mining origin. The feature was traced for a short distance roughly south-west to north-east. Site 35.38 is on a similar orientation with the suggestion that this is a continuation of that trackway. |
| 36-36.7 | Vents, sink holes, collapse | Field survey; aerial photography | A line of at least 8 circular features seen as depressions. The features are orientated roughly NE-SW and were very closely situated together. With sites 36.9-36.12 and possibly Site 35.57 the features form a linear roughly north-east to south-west orientation and may be associated with a collapsed gallery. |
| 36.8 | Vent, sink hole | Field survey | The sub-circular remains of a vent or sink hole. See sites 36-36.7. |
| 36.9-12 | Vents, sink holes, collapse | Field survey; aerial photography | The remains of at least four depressions of mining origin orientated roughly NE-SW. This is probably a continuation of a line of sink holes, collapse or vents on the same orientation (see 36-36.7). |
| 37 | Quarrying or mining remains | Field survey | The remains of an irregular shaped depression which is probably associated with an elongated quarry feature (Site 40) to the north. The depression is situated east of Site 38 which is interpreted as a chase/ drainage ditch which |

| Site No. | Type | Source | Description |
|----------|-----------------------------------|--|--|
| | | | either diverted water or culverted the Midgleden Brook. The area was very wet here. |
| 38 | Chase or drain | Field survey; maps; aerial photography | This is interpreted as a chase or drainage ditch which appears to divert water from a nearby stream following closely the rout of the Midgleden Brook. The curvi-linear feature is orientated roughly N-S and is possibly associated with Site 40 to the north, which is interpreted as a redundant quarry. There is an elongated bank of spoil adjacent to the ditch presumably from its excavation. |
| 39 | Trackway, mine or Quarry entrance | Field survey; maps; aerial photography | Field survey recorded the remains of a trackway and entrance to Site 40. The feature was very heavily rutted and became narrower to the north. |
| 40 | Old quarry, former mine workings | Field survey; maps; aerial photography | Field survey recorded the remains large feature which had steep sides. It was accessed by Site 39 a meandering track which heads to the northern extent of the site. The feature itself was elongated in shape and was orientated N-S. The height of the slopes was probably exaggerated by deposits of spoil located at higher datum along its length. Along the length of the track (Site 39) there is the partial remains of a dry stone revetment which survives to a height of c. 1.5m. The site is depicted on Ordnance Survey Maps dating 1907 as 'Old Quarry'. |
| 40.1 | Trackway | Field survey | Probable trackway associated with Site 40 a level grassed curvi-linear feature that winds it way to a plateau upon the south-east slopes of Site 40. |
| 40.2 | Spoil heap | Field survey; aerial photography | A stand alone spoil heap to the east of Site 40. Presumably related to the quarrying activity on this site. |
| 40.3 | Sink hole, scoop | Field survey | One of series of small scoops or sink holes situated on a plateau to the east of Site 40. |
| 41 | Sink hole, scoop | Field survey | One of series of small scoops or sink holes situated on a plateau to the east of Site 40. |
| 42 | Former quarry workings | Field survey; maps; aerial photography | Plateau area to south-east of quarry (Site 40). The area has a number of features within it including a ditch and bank, and a series of scoops of probable mining or quarrying origin (Sites 42.3-42.6). |
| 42.3 | Sink hole, scoop | Field survey | The remains of a small scoop on a flatish area on the east slopes of Site 40. |
| 42.4 | Sink hole, scoop | Field survey | The remains of a small scoop on a flatish area on the east slopes of Site 40. |
| 42.5 | Sink hole, scoop | Field survey | The remains of a small scoop on a flatish area on the east slopes of Site 40. |
| 42.6 | Sink hole, scoop | Field survey | The remains of a small scoop on a flatish area on the east slopes of Site 40. |
| 42.7 | Sink hole, scoop | Field survey | The remains of a small scoop on a flatish area on the east slopes of Site 40. |
| 43 | Quarry | Field survey; maps; aerial photography | Site 43 relates to an extensive area of quarrying. The surveyed boundary correlates well with aerial photographic transcription. The Site is accessed from the south-east by a road or track (Site 43.1). A secondary track (Site 43.2) enters the site from the east and has been augmented with crushed sandstone. In general the site has steep edges. The interior had exposed planes of shelving sandstone bedrock. The site has been recently used as a clay pigeon shoot. There are still some cabins in the interior and it is suggested from the debris that the site was still used until fairly recently. |
| 43.1 | Quarry haul road | Field survey | Field survey recorded the remains of a quarry haul road which entered the site from the south-east. |
| 43.2 | Modern quarry haul road | Field survey | The route of a quarry track which enters the site from the east. The slope of the haul road has been augmented with stone fragments and the lack of vegetation seems to suggest this route was still used until fairly recently. |

| Site No. | Type | Source | Description |
|------------|---|--|---|
| 44 | Hard standing | Field survey; maps; aerial photography | An area of hard standing located roughly central to the development and immediately south of Flower Scar Road. The area is irregular in shape and has two access points, both of which branch from Flower Scar Road. This area is clearly visible from aerial photography and Ordnance Survey maps. The extent of the area continues south where field survey noted an area covered by short grass which indicated a further area of hard standing. |
| 44.1 | Marker stone | Field survey | Field survey recorded a marker stone on the edge of Site 44 (an area of hard standing). The stone was 1.25m high by 1m wide. It had a dressed faced which faced roughly north-west, the reverse being roughly hewn. The purpose of the stone is unknown and it is not marked or inscribed. However, it is not heavily weathered and is quite possibly a recent addition to the landscape. The origin of the stone may have (Site 40) to the south? |
| 45-45.1 | Sink holes, vents and collapse | Field survey; maps; aerial photography | A cluster of at least 2 mining related features. This cluster is one of a group of several similar features which are orientated in linear arrangement roughly N-S. The features are probably the remains of fireclay extraction that relate to the Cloughead Fireclay Mine. The abandonment plan OM15157 shows the underground works in this area east of the Holden Gate Slack. The features are located at the base of an east-facing slope and the area is very dangerous with some of the shafts open with vertical edges that drop to the hole floor below. Some openings seem more horizontal. Some wooden fencing survives which is presumably all that remains of safety barrier fencing. The area is subsiding and it although some of these holes may be entrances or adits for the mine, it is very hard to differentiate these from areas of collapse. Approach with extreme caution |
| 45.2-45.3 | Sink holes, vents and collapse | Field survey; maps; aerial photography | A cluster of at least 2 mining related features. See 45-45.1 for interpretation. |
| 45.4-45.7 | Sink holes, vents and collapse | Field survey; maps; aerial photography | A cluster of at least 4 mining related features. See 45-45.1 for expanded interpretation. |
| 45.8-45.10 | Sink holes, vents and collapse | Field survey; maps; aerial photography | A cluster of at least 2 mining related features. See 45-45.1 for expanded interpretation. |
| 45.11 | Possible drift, cluster of sink holes, area of collapse | Field survey; maps; aerial photography | Field survey recorded the remains of this elongated feature of mining origin. The feature may be a drift or possibly a series of small shafts, vents or a gallery which have collapsed. The feature is one of a group of mining related features at the base of an east-facing slope. The area is very dangerous . See Site 45-45.1 for expanded interpretation. |
| 45.12-23 | Sink holes, vents and collapse | Field survey; maps; aerial photography | A cluster of at least 12 mining related features. See 45-45.1 for expanded interpretation. |
| 45.24-28 | Sink holes, vents and collapse | Field survey; maps; aerial photography | A cluster of at least 5 mining related features. See 45-45.1 for expanded interpretation. |

| Site No. | Type | Source | Description |
|-----------|-------------------------------------|--|---|
| 45.29-54 | Sink holes, vents and collapse | Field survey; maps; aerial photography | A cluster of at least 26 mining related features. See 45-45.1 for expanded interpretation. |
| 46 | Area of former mine works | Field survey; maps; aerial photography | A large area of former mine workings although some quarrying may have taken place. The area is characterised by many scoops or sink holes which are then exaggerated in height by upcast and surrounding spoil. In total there are greater were least 40 scoops noted. Other features within this area include the continuation of a road from the north of Flower Scar Road which passes N-S through the site (46.1). A bell mouth entrance (Site 46.2) which provided access to the site from Bacup Road and a hexagonal concrete plinth (Site 46.2) adjacent to Site 46.1. The majority of the scoops are located to the east of Site 46.1. The area has been used for off road biking. The abandonment plan 593/3 shows that the area was mined as part of the Clough Foot Colliery. The map shows extensive galleries under this area and the depressions seen at ground level may relate to collapsed galleries underneath. |
| 46.1 | Road | Field survey; aerial photography | The remains of a road which forms part of Site 46. The road is clearly visible on aerial photographs and Ordnance Survey maps. It was probably a continuation of a road which enters the development site from the north and crossed Flower Scar Road. The road runs roughly N-S and is probably associated with mining activity at Site 46. The road surface comprised a compacted deposit of gravel. It was intermittently kerbed in places. A bell mouth provided access onto the Bacup road. |
| 46.2 | Hexagonal concrete plinth | Field survey; aerial photography | Hexagonal base of concrete construction situated a short distance from Bacup Road and adjacent the bell mouth of the road into Site 46 (Site 46.1). Purpose unknown. |
| 47 | Pond/ scoop | Field survey; aerial photography | Field survey recorded the remains of a roughly circular depression close to the existing gated barrier and entrance to the moor, just to the north of Flower Scar Road. The interior was filled with standing water. It seemed likely that this was a man made feature of probable industrial origin, although the precise purpose was unknown. |
| 48 | Area of former mine or quarry works | Field survey; aerial photography | The remains of a large man made excavation to the west of the development area, and a series of small scoops. The large feature may be a quarry or pit head and has very steep sides; occasionally vertical. The interior was filled by discarded tyres. A narrow channel provided access to the feature from the west which was heavily overgrown although the partial remains of a revetting wall of drystone construction was noted in places. |
| 48.1 | Scoop. | Field survey | Remains of circular scoop. The feature is overgrown and partially filled with rubbish. |
| 48.2-48.5 | Cluster of scoops, sink holes | Field survey | A cluster of at least 4 scoops to the south of industrial Site 48. The features are steep sided and have some evidence of up cast around their perimeter. A possible entrance to this cluster could be seen as a narrow ephemeral channel which led onto Flower Scar Road to the south. |
| 49 | Area of former quarry works | Field survey; maps; aerial photography | A large area of former quarry works. The area had a large number of spoil heaps some of which consist of elongated tips of spoil comprising stone fragments. Some deeper depressions are noted and some of the sides are very steep. Shelving bedrock protrudes or is visible in places. There is an entrance road of concrete construction which runs off the main Bacup road (Site 49.3). The Ordnance Survey, Lancashire and Furness 1:2500 Edition 1893-94 shows this area to be Clough Head Quarry and is annotated as disused. |
| 49.1 | Scoop | Field survey | Pronounced but small circular scoop located within quarry area of Site 49. |

| Site No. | Type | Source | Description |
|----------|-----------------------------|--|---|
| 49.2 | Scoop | Field survey | Pronounced but small circular scoop located within quarry area of Site 49. |
| 49.3 | Track | Field Survey | Access from Bacup Road to Site 49, Clough Head Quarry. |
| 49.4 | Quarry scoops | Field survey | Cluster of circular scoops, possibly located within quarry area of Site 49. The area is hillocky which indicated that spoil or upcast has been deposited nearby. |
| 49.5 | Large scoop/quarry face | Field survey | An irregular shaped area with steep sides within an area of former quarry. This deep depression is probably the quarry face. The sides and base are strewn with large angular boulders. |
| 49.6 | Large scoop | Field survey; maps; aerial photography | Part of Site 49. The area has moderately steep sides but a flatish base and could be interpreted as either a quarry scoop/face or possibly a working area. A flattened area to the east may have been a possible trackway or access route. |
| 49.7 | Possible drift, adit | Field survey | Field survey recorded this feature to the NW of probable quarry Site 49. The feature may be a drift or adit. A large degree of stone upcast is present either side of a narrow channel which has some drystone revetting surviving on either side. The area is heavily overgrown. Most features in this area are part of either site 46 or 49 but the site boundaries are hard to distinguish. If this is a drift as suspected, it may well relate to Clough Foot Colliery. |
| 49.8 | Possible structure | Field survey | The sub rectangular remains of a possible structure presumed to be of mining related origin. Comprised low relief dry stone walls 0.8m high. Interior is c. 3m square. Feature has a probable entrance from the north-east. Interior full of rubble. Purpose unknown. |
| 50 | Shaft, trial hole | Field survey; aerial photography | A large shaft or possible trial hole. This is located immediately west of Turbine 5 and with the site boundary. It is approximately 4m deep and 8m in diameter with eroding sides. |
| 51 | Void | Void | Void |
| 52 | Vent, trial hole, sink hole | Field survey | Probable mining related feature. 10m in diameter with a bank or apron of upcast to the north. The feature has steep even sides. |
| 52.1 | Probable shaft/vent | Field survey | Probable mining related feature. 10m in diameter with a bank or apron of upcast to the north. It has steep even sides and is approximately 1.5m deep. |
| 53 | Trial hole, sink hole | Field survey | Small sub-circular depression. Located near a trackway in the NW part of the development site. Distinct band of upcast defines the feature which is 5m in diameter. The bank is 1m wide. The feature seemed to be largely isolated. |
| 54 | Trial hole, sinkhole | Field survey; aerial photography | Field survey noted a sub-circular depression adjacent to Flower Scar Road and within the development site. The feature was interpreted as probably of mining related origin and was 8m in diameter by 1m deep. There is a bank or apron of upcast to the west. |
| 55 | Shaft, trial hole. | Field survey; maps; aerial photography | Mining feature previously located during field survey by separate contractor and visible on aerial photography. (Previously AOC Site 11). The feature is relatively isolated. |
| 56 | Trackway | Field survey; maps; aerial photography | Trackway visible on aerial photography and cartographic sources. Very faint in places, Orientated roughly SE-NW. Appears only as a faint crop mark/earthwork on the ground. The feature is depicted on the Ordnance Survey 1st Edition map 1948-49 (Lancashire and Furness 1:10560) and is annotated footpath. |
| 57 | Curvi-linear feature, | Field survey; | A curvi-linear feature and earthwork branches from Flower Scar Road close to the Sandyford Road Colliery site |

| Site No. | Type | Source | Description |
|----------|--------------------------|--|---|
| | drainage | maps; aerial photography | heading north-east before reaching an apex and return back to FSR in a south-east direction. The feature was c. 1m deep in places. Aerial images show the feature at its southern edge probably discharged into tributaries and natural springs and the feature is therefore interpreted as a drainage feature. Its origin may be industrial or related to an attempt at some form of land improvement. |
| 58a-h | Boundary stones | Field survey; maps | Eight boundary stones along the northern edge of the development site. Seven stones were previously recorded by a separate walkover survey (AOC Sites 192-197 in 2001). CFA recorded a further eighth stone which had fallen over and was prone with the inscription 'D' facing upwards. The rest of the stones also have a well defined 'D' on the south-facing surface and a 'T' on the north-facing surface. |
| 59 | Flower Scar Road | Field survey; maps; aerial photography | Flower Scar Road is a highway across Todmorden Moor and until the turnpike road was built in the 1780s (now the A681) this was the only road connecting Bacup and Todmorden. Field survey recorded the rout of FSR as a roughly E-W orientated track way. A short section turns sharply to the north-east where it joins Tower Causeway which leads eventually to Cornholme. The road surface varies. On occasions stone setts have been reused to repair the route. In general however, the route was found to be often eroded. From the west it climbs quite steeply before levelling out and then dipping down towards Holden Gate Slack. The route then undulates before heading down steeply towards Cornholme. The route appears to have been augmented and in places cut into the surrounding landscape. This is more noticeable in the centre and east of the study area which may indicate these 'improvements' are related to the industrial workings upon t.he moor. Some banks of spoil were noted flanking the road which also infer previous modification to the route |
| 60 | Wire and fence enclosure | Field survey; aerial photography | The upstanding remains of a wire fence and wooden post enclosure. The enclosed land is rectangular in shape. The fencing is weathered but probably relatively modern. The internal area was scrub and was not accessed, although no features could be seen. |
| 61 | Bell mouth | Field survey; aerial photography | Bell mouth or turning area which branches off Flower Scar Road a short distance to the west of the gated entrance. |
| 62 | Ditch and bank | Field survey; maps; aerial photography | The remains of a ditch and bank assumed to be associated with mining or other industrial activity; very probably for drainage. The ditch is 1.5w and the low bank is 2m wide. |
| 63 | Scoop | Field survey | The remains of a small scoop located adjacent to the southern edge of Flower Scar Road. possibly of mining related origin. |
| 64 | Bank | Field survey | Field survey recorded this bank which is possibly upcast from mining activity or from road widening/cutting on Flower Scar Road. |
| 65 | Trackway | Field survey | The probable remains of a trackway which heads in the direction of Site 64 from Flower Scar Road. It runs roughly due west from FSR. It is likely to be of mining related or other industrial activity. |
| 66 | Track and Bank | Field survey | The remains of a curvilinear earthwork and possible track which branches North-east from Flower Scar Road. |
| 67 | Drift or adit | Field survey; aerial photography | Field survey recorded the remains of a possible drift or adit entrance. The feature was approx 2m deep and had dry stone walling as revetment on the south side. It was presumed to be an entrance to part of the Sandy Road Colliery |

| Site No. | Type | Source | Description |
|----------|-----------------------------|--|---|
| | | | and is probably associated with the spoil heap at Site 29 |
| 68 | Void | Void | Void |
| 69 | Possible collapsed gallery | Field survey; aerial photography | The steep sided remains of a mining related feature. The feature was elongated and becomes progressively shallower to the south. This possibly suggested the collapse of an underground gallery. |
| 70 | Possible collapsed gallery | Field survey; aerial photography | The steep sided remains of a mining related feature. The feature was elongated and becomes progressively shallower to the south. This possibly suggested the collapse of an underground gallery. |
| 71 | Trial hole, vent, sink hole | Field survey; aerial photography | The circular remains of a mining related feature. A pronounced feature, deep, with steep sides and a low circular bank of upcast. One of many similar features in this area. |
| 72 | Ditch | Field survey; maps; aerial photography | Linear drainage ditch located to the south-west of the existing NW-SE orientated track/road which is probably of mining related origin and associated with the Sandyford Road Colliery. Some of the upcast may have been used to form the road/ former tramway. |
| 73 | Void | Void | Void |
| 74 | Track/Path | Field survey | The route of a footpath or possibly a track which may have headed from Flower Scar Road to sites 45-45.24 (Cloughead Fireclay Works at Sharneyford) |
| 75 | Upcast, spoil heap | Field survey; aerial photography | A disturbed area characterised by an irregular shaped mound of upcast and spoil. Possibly related to activity at site 35.13 which was probably a mine entrance. |

APPENDIX 2: Specification

**WEST YORKSHIRE ARCHAEOLOGY ADVISORY SERVICE - SPECIFICATION
FOR ADDITIONAL HISTORICAL RESEARCH AND PHASED ARCHAEOLOGICAL
RECORDING AT TODMORDEN MOOR (10/01057/WDF)
(389945 424741)**

Specification prepared on behalf of Calderdale Council at the request of Martin Lightfoot of CFA Archaeology

1. Summary

- 1.1 A phased programme of archaeological research and recording consisting of historical research, a walkover survey and the targeted archaeological recording of any archaeological remains which are revealed and/or disturbed during groundworks is required at this site. This specification has been written by the West Yorkshire Archaeology Advisory Service (WYAAS), the holders of the West Yorkshire Historic Environment Record in response to a grant of planning permission by the local planning authority (10/01057/WDF).
- 1.2 A specification detailing the post determination evaluation of the wind farm site for remains of early prehistoric activity has been produced separately by this office.

NOTE: The requirements detailed in paragraphs 6.2, 6.3, 6.4 and 11.1 are to be carried out by the archaeological contractor **prior** to the commencement of fieldwork.

2. Site Location & Description

Grid Reference: 389945 424741

- 2.1 The proposed site is located on Todmorden Moor and consists of an area of moorland measuring 163.5 hectares, which lies to the west of Todmorden and south of Cornholme. The site is bisected by Flower Scar Road which runs from east to west. Three wind turbines proposed north of Flower Scar Road and two turbines are proposed to the south of the road. The entire site is surrounded by open moorland.
- 2.2 The geology of the site consists of mudstone, siltstone and sandstone of the Pennine Lower Coal Measures. This is overlain by peat deposits.
- 2.3 The site lies in the district of Calderdale and in the historic township of Todmorden and Walsden and was historically part of Lancashire.

3. Background

- 3.1 Planning permission has been granted by Calderdale Council for the construction of five wind turbines at Todmorden Moor (10/01057/WDF). The proposed wind turbines will be 125m tall. New access roads, borrow pits and cable trenches will also be required as part of the wind development.

3.2 WYAAS advised the Planning Authority that there is reason to believe that archaeological remains may be affected by the proposed development and that staged archaeological response is required in before and during development.

3.3 This specification has been prepared by WYAAS, at the request of Martin Lightfoot of CFA Archaeology (mlightfoot@cfa-archaeology.co.uk 01274 864245), to detail what is required for this element of the archaeological fieldwork.

4. Archaeological Interest

4.1.1 A desk based assessment of the site was prepared in 2008 and updated in 2010 by AOC Archaeology entitled Todmorden Moor Windfarm Archaeological Assessment. This assessment identified a number of sites within the proposed development site. These sites consisted of remains associated with post medieval mining and quarrying, boundary stones and a mesolithic site. The WYAAS do not consider the desk based assessment to have adequately dealt with the post medieval mining landscape.

4.1.2 Coal mining remains within the development site consist of pits, shafts, footings of later mine buildings and tramways. It is possible that groundworks associated with the wind farm development may uncover below ground remains and features associated with these historic mine workings.

4.1.3 Cartographic and historic sources show a variety of mining techniques were employed on Todmorden Common during the late 19th and early 20th century. There is little activity shown on the first edition Ordnance Survey map (1848) save a pit and track to the north of Flower Scar Road and sandstone quarry to the south.. Drift mines are well documented driving under the common from the south during the later 19th century. These appear to be the dominant form of extraction used. later maps show "Test Holes" (1905) and later mine shafts with associated buildings and infrastructure to the north of Flower Scar Road. The later suggesting a shaft mine. Earlier lead mining is also recorded in the wider vicinity and the potential for remains of metalliferous mining or prospecting from earlier eras cannot be wholly discounted.

4.1.4 Any remains of pre 20th century mining activity would be of regional significance and worthy of preservation by record.

5. Aims

5.1.1 The first aim is to identify the presence/absence, extent, condition, character, date (as far as circumstances permit) and significance of any archaeological features and deposits relating to pre 20th century mining which are present. This should be achieved by a combination of historical research and a walkover survey.

5.1.2 Subsequently to this research any significant remains threatened by disturbance as a result of groundworks and provision of infrastructure will be recorded to achieve 'preservation by record'.

5.1.3 The results of this work will be placed in the public domain by depositing it with the WY Historic Environment Record (Registry of Deeds, Newstead Road, Wakefield WF1 2DE).

6. General Instructions

6.1 Health and Safety

6.1.1 The archaeologist on site will naturally operate with due regard for Health and Safety regulations. In this case, where archaeological work is carried out at the same time as the work of other contractors, regard should also be taken of any reasonable additional constraints that these contractors may impose. This work may require the preparation of a Risk Assessment of the site, in accordance with the Health and Safety at Work Regulations. The West Yorkshire Archaeology Advisory Service and its officers cannot be held responsible for any accidents or injuries that may occur to outside contractors engaged to undertake this watching brief while attempting to conform to this specification. Any Health and Safety issues which may hinder compliance with this specification should be discussed with WYAAS at the earliest possible opportunity (see section 12.2).

6.2 Confirmation of Adherence to Specification

6.2.1 Prior to the commencement of any work, the archaeological contractor must confirm in writing adherence to this specification (using the attached form), or state in writing (with reasons) any specific proposals to vary the specification. Should the contractor wish to vary the specification, then written confirmation of the agreement of the WYAAS to any variations is required prior to work commencing. Unauthorised variations are made at the sole risk of the contractor (see para. 8.3, below). Modifications presented in the form of a re-written project brief will not be considered by the WYAAS.

6.3 Confirmation of Timetable and Contractors' Qualifications

6.3.1 Prior to the commencement of *any work*, the archaeological contractor **must** provide WYAAS **in writing** with:

- a projected timetable for the site work
- details of the staff structure and numbers
- names and CVs of key project members (the project manager, site supervisor, any proposed specialists, sub-contractors *etc.*)

6.3.2 All project staff provided by the archaeological contractor must be suitably qualified and experienced for their roles. In particular, staff involved in recording mine workings should have proven expertise in the recording and analysis of this industry. The timetable should be adequate to allow the work to be undertaken to the appropriate professional standard, subject to the ultimate judgement of WYAAS.

6.4 Notification and Monitoring

6.4.1 The watching brief will be monitored as necessary and practicable by WYAAS in its role as curator of the county's archaeology. WYAAS should be provided with **as much notice as possible in writing** (and certainly not less than one week) of the intention to start the watching brief. A copy of the archaeological contractor's risk assessment of the site should accompany the notification.

6.4.2 The Calderdale Museums curator, Jeff Wilkinson, should be notified of the date of commencement of fieldwork (Tel.: 01422 352334; email: jeff.wilkinson@calderdale.gov.uk).

6.4.3 As a courtesy, English Heritage's Regional Science Adviser, Andy Hammon, should also be notified of the intention to commence fieldwork. (Tel.: 01904 601983; email: andy.hammon@english-heritage.org.uk).

7. Fieldwork Methodology

7.1 Historical Research and Walkover Survey

7.1.1 The archaeological contractor should consult all appropriate local and regional record repositories and libraries, and selected national records. The following is a list of sources that are to be consulted initially. This list is not necessarily comprehensive, and any appropriate additional lines of investigation are expected to be identified (if necessary in consultation with the WYAAS) and followed up by the archaeological consultant.

7.1.2 The West Yorkshire Historic Environment Record (details on known archaeological sites and findspots, the First Edition 6" : mile O.S. maps, selected field names from Tithe Award and some estate maps, some oblique aerial photographs, secondary information from selected sources. Please note that the West Yorkshire HER makes a charge for consultations of a commercial nature.

7.1.3 The National Monuments Record Centre (Great Western Village, Kemble Drive, Swindon SN2 3GZ; tel. 01793 414600). Aerial photographs and details on archaeological sites and finds.

7.1.3 The Yorkshire Archaeological Society ('Claremont', 23 Clarendon Road, Leeds, LS2 9NZ; tel: 0113 245 6362) for aerial photographs.

7.1.5 West Yorkshire Archive Service, Calderdale (Central Library Northgate House Northgate Halifax HX1, 1UN: Telephone 44 (0)1422 392636. The Heather Lawrence catalogue of all known pre-mid 19th-century estate maps for West Yorkshire (accession no. C.501). Estate maps for the area may be held either at Calderdale District Archives (see above) or the Yorkshire Archaeological Society (23, Clarendon Road, Leeds LS2 9NZ; tel. 0113 245 6362). It is possible that the John Goodchild Archive (Below Central Library, Drury Lane, Wakefield WF1 2DT; tel. 01924 298929) may hold relevant information on mining, as may the Todmorden Local History Library (Todmorden Library, Strand, Rochdale Road, Todmorden OL14 7LB: Telephone 01706 815600). Given that historically the site lay in Lancashire the Lancashire Archaeological Service and Lancashire Record office should also be contacted (Lancashire County Archaeological Service Environment Directorate, PO Box 100, County Hall, Preston, PR1 0TD: Telephone 01772 533404 and Lancashire Archives Lancashire Record Office, Bow Lane, Preston PR1 2RE: Telephone 01772 533039).

7.1.6 All available aerial oblique photographs and vertical photographs up to 1:20,000 scale are to be consulted. The prints are to be examined under magnification and stereoscopically where possible and profitable. Plotting is to be at 1: 10,000 accuracy, preferably using stated software suitable for the rectification of vertical and oblique aerial photographs.

7.1.7 It is anticipated that the archaeological consultant will access any relevant, readily available primary source material. However, judgement should be exercised in this regard. The consultant should examine this material in detail **only** where it is anticipated that the time spent extracting information will be worthwhile in terms of supplying detail **directly** relevant to establishing the nature and extent of archaeological survival.

7.1.8 The archaeological consultant should examine and extract archaeologically relevant information from any borehole survey or other site investigations that have been carried out on the site to date.

7.1.9 The information collected from an examination of the above sources should initially be used to identify areas where mining remains may be present within the site. The entire accessible area of the planning application should then be the subject of a systematic field appraisal (walkover survey), which is to include identification of existing areas of disturbance. The intention is to assess the occurrence of historic mining activity across the development site. Concise but detailed field observations should be made, illustrated where appropriate by photographs and (possibly) sketches. It should be made clear in the report which areas were not accessible to be walked over, and if they were viewed from neighbouring footpaths and roads. The results of this field appraisal should then be collated with information from documentary research and photographic sources to identify locations containing remains of mining activity and these should be accurately mapped on to on a suitable O.S. map base (minimum scale 1:2500) along with the footprint of turbines and access routes.

7.2 Watching Brief

7.2.1 Where evidence of historical mining is present an archaeological watching brief will be held. An archaeologist should be present on site during all ground breaking operations in the areas of interest. The archaeologist should view the area as it is being dug and any trench sections after excavation has been completed. Where archaeology is judged to be present, the excavated area should be rapidly cleaned and the need for further work assessed. Where appropriate, any features and finds should then be quickly hand excavated, sampled if appropriate, and recorded.

7.2.2 Features/deposits of archaeological concern should be accurately located on a site plan and recorded by photographs, scale drawings and written descriptions sufficient to permit the preparation of a report. Section drawings (at a minimum scale of 1:20) **must** include heights O.D. Plans (at a minimum scale of 1:50) **must** include O.D. spot heights for all principal strata and any features.

7.2.3 The actual areas of ground disturbance (even if no archaeological remains are present) should be recorded on a suitable base map/development plan and the

stratigraphic sequence and the depth of the excavations will be briefly recorded. If archaeological remains are identified, their location is to be accurately tied into the National Grid and located on an up-to-date 1:1250 O.S. map base.

7.2.4 Excavated soil should be searched as practicable for finds. Given exploitation of the site continued in to the 20th century all finds should be collected and retained for processing.

7.2.5 All securely stratified contexts should be sampled for environmental analysis and scientific dating. Additional 'spot' samples should be taken if suitable material is encountered during the watching brief.

7.2.6 The intention of the archaeological watching brief is not to unduly delay the work of other contractors on site, however, a degree of flexibility is also expected of the developer in order that the archaeologist can fulfil the terms of this specification (see 8.1 below). The archaeologist shall not excavate any area beyond those scheduled for destruction by the development.

7.2.7 If, in the professional judgement of the archaeologist on site, the watching brief reveals below-ground conditions which indicate that potentially archaeological levels are absent, the archaeologist should contact WYAAS to discuss reducing or curtailing the requirements. The work may only be curtailed with the prior agreement of WYAAS and written confirmation will be provided by WYAAS.

7.2.8 Digital photography: as an alternative for colour slide photography, good quality digital photography may be supplied, using cameras with a minimum resolution of 4 megapixels. Note that conventional black and white print photography is still required and constitutes the permanent record. Digital images will only be acceptable as an alternative to colour slide photography if each image is supplied in three file formats (as a RAW data file, a DNG file and as a JPEG file). The contractor must include metadata embedded in the DNG file. The metadata must include the following: the commonly used name for the site being photographed, the relevant centred OS grid coordinates for the site to at least six figures, the relevant township name, the date of photograph, the subject of the photograph, the direction of shot and the name of the organisation taking the photograph. Images are to be supplied to WYAAS on gold CDs by the archaeological contractor accompanying the hard copy of the report.

8. Unexpectedly Significant or Complex Discoveries

8.1 Should there be, in the professional judgement of the archaeologist on site, unexpectedly significant or complex discoveries made that warrant more detailed recording than possible within the terms of this specification, then the archaeological contractor is to urgently contact WYAAS with the relevant information to enable the matter to be resolved with the developer.

8.2 Any human remains that are discovered must initially be left *in-situ*, covered and protected. WYAAS will be notified at the earliest opportunity. If removal is necessary the remains must be excavated archaeologically in accordance with the *Guidance for Best Practice for Treatment of Human Remains Excavated from Christian Burial*

Grounds in England published by English Heritage (2005), a valid Ministry of Justice licence and any local environmental health regulations.

8.3 The terms of the Treasure Act, 1996 must be followed with regard to any finds, which might fall within its purview. Any such finds must be removed to a safe place and reported to the local coroner as required by the procedures laid down in the 'Code of Practice'. Where removal cannot be effected on the same working day as the discovery, suitable security measures must be taken to protect the finds from theft.

9. Post-excavation Analysis and Reporting

9.1 On completion of the fieldwork, any samples shall be processed and all finds shall be cleaned, identified, analysed, dated (if possible), marked (if appropriate) and properly packed and stored in accordance with the requirements of national guidelines. Finds of 20th century date should be quantified and summarily described, but can then be discarded if appropriate. All finds associated with mining activity should be retained and archived.

9.1.2 A fully indexed field archive shall be compiled consisting of all primary written documents, plans, sections, photographic negatives and a complete set of labelled photographic prints/slides. Standards for archive compilation and transfer should conform to those outlined in *Archaeological Archives – a guide to best practice in creation, compilation, transfer and curation* (Archaeological Archives Forum, 2007). An index to the field archive is to be deposited with the West Yorkshire Archaeology Advisory Service (preferably as an appendix in the report). labelled photographic prints (mounted in KENRO display pockets or similar, and arranged in such a way that labelling is readily visible) bound in a form which will fit readily into a standard filing cabinet suspension file (not using hard-backed ring-binders). Labelling should be on the *back* of the print in pencil giving film and frame number only and on applied printed labels on the front of the appropriate photographic sleeve which should include:

- film and frame number
- date recorded and photographer's name
- Site Name
- national grid reference
- specific subject of photograph.

Negatives should be supplied in archivally stable mounts (KENRO display pockets or similar), and each page of negatives should be clearly labelled with the following:

- Township name 'Todmorden and Walsden'
- Site name and address
- Date of photographs (month/year)
- Name of archaeological contractor
- Film number

Colour slides should be mounted, and the mounts suitably marked with – 'Todmorden and Walsden' (the Township name) with 'Todmorden Common' under,

at the top of the slide; grid reference at the bottom; date of photograph at the right hand side of the mount; subject of photograph at the left hand side of the mount. Subject labelling may take the form of a numbered reference to the relevant photographic register. The slides should be supplied to the WY Archaeology Advisory Service in an appropriate, archivally stable slide hanger (for storage in a filing cabinet).

9.2 The original archive is to accompany the deposition of any finds, providing the landowner agrees to the deposition of finds in a publicly accessible archive (see Section 10 below). In the absence of this agreement the field archive (less finds) is to be deposited in the West Yorkshire Historic Environment Record.

9.3 A fully illustrated report should be produced, which should include background information on the need for the project, a description of the methodology employed, and a full description and interpretation of the results, placing them in a local and regional, and if appropriate, national context. It is not envisaged that the report is likely to be published, but it should be produced with sufficient care and attention to detail to be of academic use to future researchers.

9.4 Location plans should be produced at a scale which enables easy site identification and which depicts the full extent of the areas covered by the watching brief (a scale of 1:50,000 is not regarded as appropriate unless accompanied by a more detailed plan or plans). Plans should be at an appropriate scale showing: areas excavated and the identified (and, where possible, predicted) archaeological features/deposits. Trench and feature plans **must** include O.D. spot heights for all principal strata and any features. Section drawings **must** include O.D heights and be cross-referenced to an appropriate plan.

9.5 All artefacts and environmental material will be analysed by a qualified and experienced specialist. Artefact analysis is to include the production of a descriptive catalogue. Finds critical for dating and interpretation should be illustrated.

9.6 Details of the style and format of the report are to be determined by the archaeological contractor, but should include a full bibliography, a quantified index to the site archive, details of the current and intended location of the archive and, as an appendix, a copy of this specification.

10. Report Submission and Deposition with the HER

10.1 The archaeological contractor will supply a copy of the report to the client and another copy **directly** to the WYAAS and digitally to Andy Hammond of English Heritage (see 6.4 above) within a period of **one month** following completion of fieldwork, unless a revised date has been agreed in writing with WYAAS. Completion of this project and a recommendation from WYAAS to discharge the planning condition are dependant on receipt by WYAAS of a satisfactory report which has been prepared in accordance with this specification. Any comments made by WYAAS in response to the submission of an unsatisfactory report will be taken into account and will result in the reissue of a suitably edited report to all parties, within a timescale which has been agreed with WYAAS.

10.2 The report will be supplied on the understanding that it will be added to the West Yorkshire Historic Environment Record. and will become publicly accessible once deposited with the WYAAS unless confidentiality is explicitly requested, in which case it will become publicly accessible six months after deposition.

10.3 Copyright - Please note that by depositing this report, the contractor gives permission for the material presented within the document to be used by the WYAAS, in perpetuity, although The Contractor retains the right to be identified as the author of all project documentation and reports as specified in the *Copyright, Designs and Patents Act 1988* (chapter IV, section 79). The permission will allow the WYAAS to reproduce material, including for non-commercial use by third parties, with the copyright owner suitably acknowledged.

10.4 The West Yorkshire HER supports the Online Access to Index of Archaeological Investigations (OASIS) project. The overall aim of the OASIS project is to provide an online index to the mass of archaeological grey literature that has been produced as a result of the advent of large-scale developer funded fieldwork. The archaeological contractor must therefore complete the online OASIS form at <http://ads.ahds.ac.uk/project/oasis/>. Contractors are advised to contact the West Yorkshire HER officer prior to completing the form. Once a report has become a public document by submission to or incorporation into the HER, the West Yorkshire HER may place the information on a web-site. Please ensure that you and your client agree to this procedure in writing as part of the process of submitting the report to the case officer at the West Yorkshire HER.

10.5 The attached summary sheet should be completed and submitted to the WYAAS for inclusion in the summary of archaeological work in West Yorkshire published on WYAAS' website.

11. Archive Deposition

11.1 Before commencing any fieldwork, the archaeological contractor must contact the relevant District museum archaeological curator in writing (copied to WYAAS) to determine the museum's requirements for the deposition of an excavation archive. In this case the contact is Jeff Wilkinson of The Calderdale Museums (Tel.: 01422 352334; email: jeff.wilkinson@calderdale.gov.uk).

11.2 It is the responsibility of the archaeological contractor to endeavour to obtain consent of the landowner, in writing, to the deposition of finds with the Leeds Museum.

12. General Considerations

12.1 Authorised Alterations to Specification by Contractor

12.1.1 If, on first visiting the site or at any time during the course of the recording exercise, it appears in the archaeologist's professional judgement that:

- i) a part or the whole of the site is not amenable to recording as detailed above, and/or

ii) an alternative approach may be more appropriate or likely to produce more informative results,

then it is expected that the archaeologist will contact WYAAS as a matter of urgency in order that the matter can be resolved in liaison with the developer and the Local Planning Authority.

12.2 Unauthorised Alterations to Specification by Contractor

12.2.1 It is the archaeological contractor's responsibility to ensure that they have obtained WYAAS's consent in writing to any variation of the specification prior to the commencement of on-site work or (where applicable) prior to the finalisation of the tender. Unauthorised variations may result in WYAAS being unable to recommend determination of the planning application to the Local Planning Authority based on the archaeological information available and are therefore made solely at the risk of the contractor.

12.3 Technical Queries

12.3.1 Similarly, any technical queries arising from the specification detailed above, should be addressed to WYAAS without delay.

12.4 Valid Period of Specification

12.4.1 This specification is valid for a period of one year from date of issue. After that time it may need to be revised to take into account new discoveries, changes in policy or the introduction of new working practices or techniques.

David Hunter

November 2011

**West Yorkshire Archaeology Advisory Service
West Yorkshire Historic Environment Record
Registry of Deeds
Newstead Road
Wakefield
WF1 2DE**

**Telephone: (01924) 306798
Fax: (01924) 306810
E-mail: dhunter@wyjs.org.uk**