CFA ARCHAEOLOGY LTD

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Wilsontown Opencast Coal Scheme (Phase 2)
Forth
South Lanarkshire
Archaeological Evaluation

Report No. 1249

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1. INTRODUCTION

1.1 General

1.1.1 This report presents the results of an archaeological evaluation carried out by CFA Archaeology Ltd (CFA) in September 2006 at Wilsontown Opencast Coal Scheme, Wilsontown, Forth, South Lanarkshire (NGR NS 960 544). The work was commissioned by Hall Construction Ltd in advance of a phased opencast coal mining operation.

1.1.2 A Written Scheme of Investigation (WSI) was produced by CFA and approved by West of Scotland Archaeological Services (WoSAS). The WSI is a revision of an earlier Outline Strategy sent to WoSAS. It is based on documents and plans supplied by Patrick Gillooly Ltd on 10th September 2003 and on an earlier study carried out by CFA in 1998 (Cressey 1998).

1.2 Background

1.2.1 Planning permission has been granted by South Lanarkshire Council for opencast coal mining operations to be carried out near Wilsontown subject to a condition requiring an archaeological strategy for monitoring and recording. The terms of the planning consent were originally issued to Patrick Gillooly Ltd, but remain in place now that mining operations have been taken over by Hall Construction Ltd.

1.2.2 The 1998 study carried out by CFA identified thirty sites (**1 – 30)** of cultural heritage interest within and in close proximity to the development area. The majority of the sites within the development area are thought to relate to post-improvement agriculture and earlier mine workings.

1.2.3 The area in which mining operations will be carried out is divided into thirty-three areas (**A1 – A33**). This program of works targeted areas **A9 – A14** and an additional area beyond the extraction area (**Fig. 1**). Areas **A1 – A8** have already been assessed by an earlier evaluation carried out by CFA in February 2004 (Mitchell 2004) and areas **A15 – A33** will form a later phase of the archaeological monitoring, the results of which will form a later report.

1.2.4 Sites **2, 21** and **23** identified during the 1998 study lay within the area targeted by this phase of archaeological monitoring. These consist of a mineshaft associated with the Cleugh Coal Mines (**2**) (NMRS No. NS95SE 18), an area of rig and furrow (**21**) (NMRS No. NS95SE 50) and the remains of the Lawhead Branchline Mineral Railway (**23**) (NMRS No. NS95SE 56.0). The Cleugh Coal Mines appear on the First Edition Ordnance Survey map (Lanarkshire 1864, Sheet XX.2), the Lawhead Branchline Mineral Railway appears on the Second Edition Ordnance Survey map (Lanarkshire 1897 Sheet XX.2) and the rig and furrow is visible on aerial photographs of the area.

1.2.5 As part of this phase of works, a peat assessment was carried out. The results of the peat assessment are presented in a separate report (Cressey 2006).

1.3 Objectives

1.3.1 The aims of the field evaluation were to determine the location, character, extent and quality of sites **2, 21** and **23** and any other features or objects of archaeological importance that may survive within the application area, and which may be damaged or destroyed by this development.

2. METHODOLOGY

2.1 General

2.1.1 CFA Archaeology Ltd follows the Institute of Field Archaeologists Code of Conduct, Standards and Guidance for Archaeological Field Evaluations.

2.2 Trial Trenching Strategy

2.2.1 It was agreed with WoSAS that trial trenching would assess a minimum of 5% (12445m²) of the development area. This consisted of 4515m² within areas **A9 – A14** and a further 7930m² beyond the extraction area. However, due to a combination of deep peat, a large spoil heap and the haul roads that had already been constructed within the area, the area available for trial trenching was significantly reduced. Consequently, 6384m² were evaluated. Features identified in the earlier survey (Cressey, 1998) were targeted in order to assess whether buried remains still survived. Other trenches were placed with the aim of locating any other buried archaeological remains.

2.2.2 The removal of topsoil was conducted by a 360º tracked excavator, equipped with a smooth bladed ditching bucket, under close archaeological supervision to reveal the subsoil surface or the surface of the first significant archaeological level. Any further excavation required to fulfil the objectives of the evaluation was carried out by hand. The features and deposits discovered were excavated to ensure that an account of the development of the area could be produced. Where possible and within safety requirements, the natural subsoil surface was exposed in all trenches.

2.2.3 All excavation and on-site recording was carried out according to standard CFA procedures, principally by drawing, photography and by completing standard CFA record forms. The location of all trenches was recorded using industry standard total station surveying equipment. CFA uses the Museum of London's single context recording system, with minor adaptations.

3. ARCHAEOLOGICAL RESULTS

3.1 Trial Trenches

General

3.1.1 The topsoil across the area varied considerably, with the drier improved ground in areas **A9 – A11** largely consisting of mid grey silt with a depth of 0.1m – 0.45m and the wetter ground in areas **A12 – A14** consisted of peat with a depth of up to c. 2m. Outwith the extraction area, trial trenching was confined to the higher knolls, where the topsoil consisted of mid grey silt with a depth of 0.25 – 0.4m. The underlying subsoil in all areas predominantly consisted of heavy clay.

3.1.2 The following text contains information only on the trenches that contained archaeological features or artefacts. Numbers in bold prefixed with the letter T refer to trench numbers and three/four figure numbers in bold refer to context numbers, a full list of which can be found in appendix 2. A brief summary of all the trenches excavated is contained in appendix 1.

Trench 33

3.1.3 A length of the Lawhead Branchline Mineral Railway (**23**) was uncovered in **T33** at a depth of c.1.7m below the current ground surface. The foundations (**3301**) for the railway measured c.3.75m in width and had been cut into the subsoil to a depth of c.0.3m. They had then been back-filled with black coal shale (**3302**) and wooden sleepers (**3303**) had been laid on top. A number of the sleepers were still *in situ*. They measured c.2.75m in length by 0.25m in width and were located c.0.75m apart. Towards either end of the sleepers there were rectangular holes measuring c.0.2m by c. 0.4m. These holes probably held clamps for the railway tracks. They were located c.2m apart, suggesting that this was the gauge of the railway.

Trench 34

3.1.4 Another length of the Lawhead Branchline Mineral Railway (**23**) was uncovered in **T34**. In this location, the foundations (**3401**) for the railway measured c.8.25m in width and coincide with the location of a siding shown on the 1897 Second Edition Ordnance Survey map. Immediately to the north of the railway, there was a length of brick wall (**3405**) running parallel with the line of the tracks. The wall had a width of c.0.5m and rose to a height of c.1.2m above the level of the railway, whereas the subsoil to the north was flush with the top. The height difference between the railway line and the top of the wall suggests that it may have been a loading bay. It had been constructed with locally produced bricks, stamped 'Auchengray', which is a small village that lies c.3km to the east of the site. A number of sleepers (**3403**) still survived, as did a number of short lengths of metal track, but these were no longer *in situ.* The short lengths of metal track suggest that the lines had been cut up and scrapped after they went out of use. A short length of metal track and one brick were recovered for analysis.

Trench 35

3.1.5 **T35** was excavated across the line of the Lawhead Branchline Mineral Railway where it was visible on the surface as a slightly raised linear feature.

In this location it survived as a raised deposit of shale (**3501**) with a width of c.10m and a maximum depth of 0.55m. The shale sat directly on top of a layer of natural peat (**001**) and overlay a cylindrical ceramic field drain, which had been cut into the peat to a depth of 0.4m.

Trench 36

3.1.6 **T36** was excavated immediately to the south of the Law Burn. Two circular features (**3601** and **3603**) were uncovered towards the south western end of the trench. Feature **3601** had a diameter of 1.9m and feature **3603** had a diameter of 3.3m. They are probably old mineshafts.

3.2 **The Finds,** by Sue Anderson

3.2.1 Three objects were collected from **T34**, and one from **T30** spoil. These are listed in Appendix 5. The following finds were from **T34**.

3.2.2 A complete red micaceous machine-pressed brick (4519g) measures 245 x 116 x 80mm. It has a large rectangular frog which contained the manufacturer's name and town: J. MILNER / AUCHENGRAY. The maker is not listed in Douglas and Oglethorpe's (1993) survey, but the village is located within the brick-making region north of Lanark. The brick is likely to be of late 19th-century or later date.

3.2.3 A fragment of cast iron with an L-shaped section is probably a piece of plateway rail. The upright flange is 46mm high and tapers towards the top, the base measures 84mm in width. The fragment is 210mm in length. There is a slight concave groove on the inner side of the angle which would have been made by a wheel. Plateways were used to guide the wheels of horse-drawn wagons from the 1760s to the 1820s, although some continued in use until much later. This is potentially a significant find for the history of early railways, if a plateway was not previously recorded in this location (P. Copleston, pers comm).

3.2.4 A section of rail measuring 1.27m in length was collected as a sample. This is probably a piece of bridge-section rail. In section it measures 65mm wide and 30mm high. There are small holes, c.8mm in diameter, at each end. This rail would have been used for a tramway or waggonway and probably predates the 1860s.

4. CONCLUSION

4.1 An archaeological evaluation was carried out at Wilsontown Opencast Coal Scheme within extraction areas **A9 – A14** and within an area that lies outwith the extraction area (**Fig. 1**). This evaluation represents phase 2 of a program of archaeological monitoring and recording that forms part of the Planning Consent issued by South Lanarkshire Council.

4.2 The trial trenches were positioned to target the sites identified by an earlier study carried out by CFA (Cressey 1998) and to identify any other features of archaeological significance that might be present within the area. The sites previously identified within the area targeted by this phase of works consisted of a pit associated with the Cleugh Coal Mines (**2**), an area of rig and furrow (**21**) and the remains of the Lawhead Branchline Mineral Railway (**23**)

4.3 No evidence of the pit associated with the Cleugh Coal Mines (**2**) was uncovered in the location indicated on the First Edition Ordnance Survey Map. It is thought that it might have been covered over by a recently constructed haul road.

4.4 The remains of the Lawhead Branchline Mineral Railway (**23**) were uncovered in trenches **T33, T34** and **T35**. Trenches **T25** and **T32** crossed the line of the railway, but it did not survive in these locations. The artefactual remains recovered from these trenches suggest that the Lawhead Branchline may have been a plateway rail track. Plateways were used to guide the wheels of horse-draw wagons. They were generally in use from the 1760s to the 1820s, but were sometimes in use at a considerably later date. Cartographic evidence suggests that this possible example was constructed some time between 1864 and 1897 and went out of use some time between 1911 and 1941. The case for this having been a plateway is supported by the very ephemeral nature of the structure where it runs across an area of peat in areas **A12 – A14**.

4.5 No evidence of the rig and furrow (**21**) was uncovered during trial trenching, although it was just visible as undulating ground. This suggests that the rig and furrow was very shallow in this area.

4.6 Two circular features were uncovered immediately to the south of the Law Burn. It is thought that these features are probably mineshafts.

4.7 The project archive, comprising all CFA record sheets, maps and reports will be deposited with the National Monuments Record of Scotland (NMRS) and copies of the report will be lodged with the South Lanarkshire Sites and Monuments Record.

4.8 A summary statement of the results of this evaluation will be submitted for publication in *Discovery and Excavation in Scotland*.

5. REFERENCES

5.1 Documentary

Cressey, M, 1998, *Wilsontown Prospective Opencast Coal Site, South Lanarkshire: Archaeological Appraisal.* CFA Report No 296

Cressey, M, 1998, *Wilsontown Prospective Opencast Coal Site, South Lanarkshire: Archaeological Appraisal.* CFA Report No 401

Cressey, M, 2006, *Wilsontown Opencast Coal Scheme, South Lanarkshire: Peat Assessment.* CFA Report No 1248

Douglas, G & Oglethorpe, M, 1993, *Brick, Tile and Fireclay Industries in Scotland*. RCAHMS, Edinburgh.

Mitchell, S, 2004, *Wilsontown Opencast Coal Scheme (Phase 1), Archaeological Evaluation.* CFA Report No 892

5.2 Cartographic

Ordnance Survey 25" First Edition (1864) *Lanarkshire Sheet xx.2.*

Ordnance Survey 25" Second Edition (1897) *Lanarkshire Sheet xx.2.*

Ordnance Survey 25" Edition of 1911 *Lanarkshire Sheet xx.2.*

Ordnance Survey 25" Revision of 1941 *Lanarkshire Sheet xx.2.*

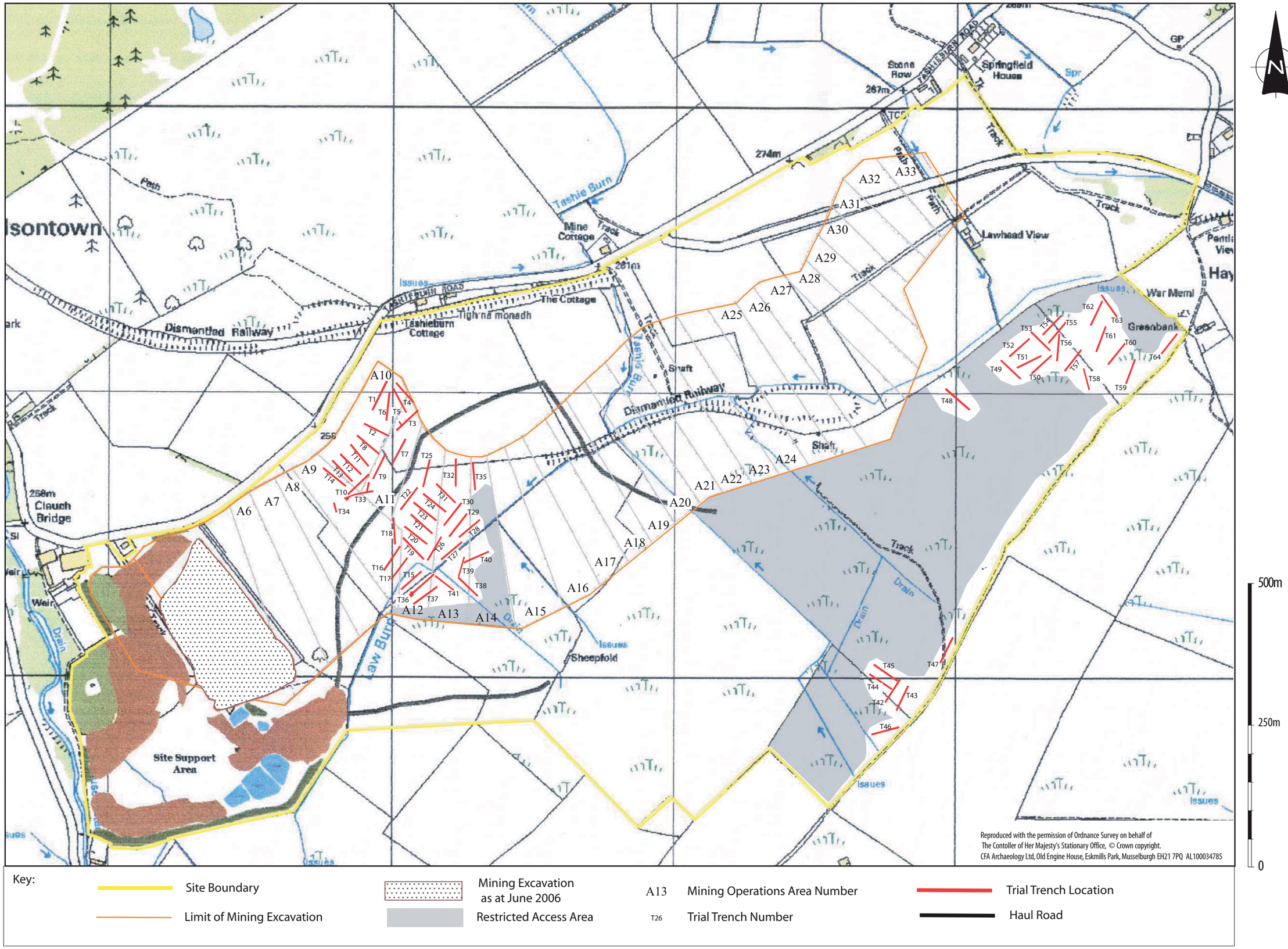

Fig. 1 - Location of Trial Trenches.

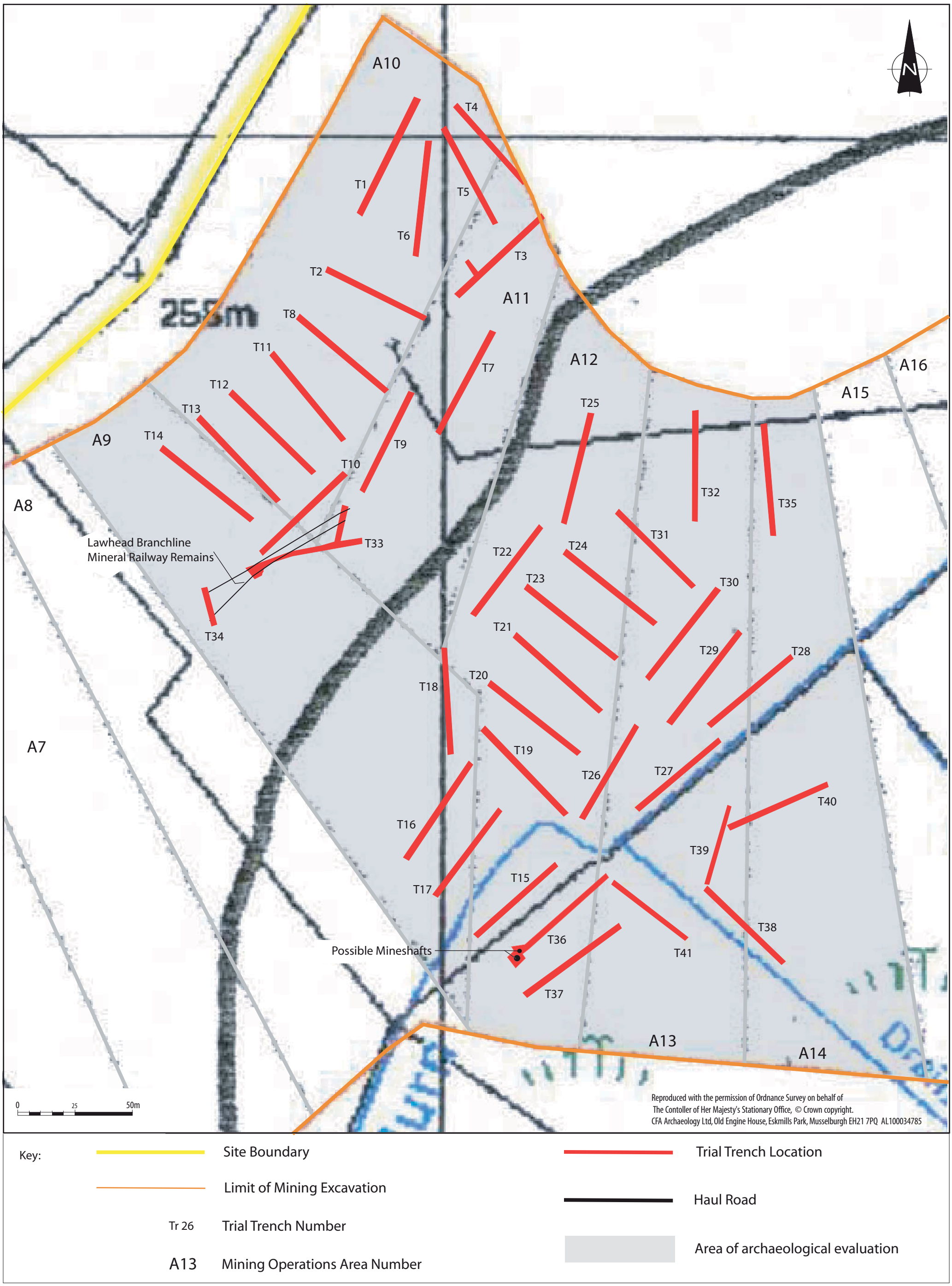

Fig. 2 - **A9** to **A14** Showing Location of Features.

Appendix 1: Trench Descriptions.

Trench no.	Dimensions (m)	Size (m^2)	Topsoil depth (m)	Features
1	55 x 2	110	0.3	
2	55 x 2	110	0.35	
3	51 x 2	102	0.3	
4	60 x 2	120	0.33	
5	50 x 2	100	0.35	
6	50 x2	100	0.27	
7	52 x 2	104	0.45	
8	52 x 2	104	0.32	
9	50 x 2	100	0.3	Imported topsoil - red sandy clay and frequent blaze inclusions in south end of trench
10	51 x 2	102	0.52	Imported topsoil - red sandy clay and frequent blaze inclusions in the North-East end of trench
11	54 x 2	108	0.23	
12	50 x 2	100	0.25	
13	50 x 2	100	0.20	
14	52 x 2	104	0.22	Shale dump in the Eastern end of trench
15	50 x 2	100	0.25	
16	53 x 2	106	0.62	
17	50 x 2	100	0.9	
18	51 x 2	102	1.06	
19	53 x 2	106	0.8	
20	50 x 2	100	1.15	
21	53 x 2	106	0.25	
22	50 x 2	100	0.3	
23	52 x 2	104	0.35	
24	53 x 2	106	0.4	
25	51 x 2	102	1.10	
26	50 x 2	100	0.6	
27	50 x 2	100	0.65	
28	52 x 2	104	0.25	
29	55 x 2	110	0.6	
30	54 x 2	108	1.6	
31	51 x 2	102	1.5	
32	48 x 2	96	2.0	
33	50 x 2 + 8 x 2	116	0.3	Site 23 Imported topsoil (red sandy clay with frequent inclusions of blaze – 1.4m in depth)
34	20 x 2	40	0.04	Site 23 Imported topsoil (dark brown, coal rich, with inclusions stone and rough pebbles and some blaze inclusions) Brick structure (possible loading platform).
35	54 x 2	108	0.8	Site 23 – indicated by imported topsoil (red sandy grit with frequent blaze inclusions) depth of 0.55m
36	55 x 2	110	0.27	Possible Mineshafts – 3602 and 3604.
37	54 x 2	108	0.25	
38	51 x 2	102	0.3	
39	45 x 2	90	0.28	
40	48 x 2	96	0.35	
41	45 x 2	90	0.3	
42	50 x 2	100	0.3	
43	50 x 2	100	0.35	
44	50 x 2	100	0.36	

Trench no.	Dimensions (m)	Size (m^2)	Topsoil depth (m)	Features
45	50 x 2	100	0.3	
46	50 x 2	100	0.33	
47	50 x 2	100	0.4	
48	50 x 2	100	0.35	
49	50 x 2	100	0.37	
50	50 x 2	100	0.35	
51	50 x 2	100	0.32	
52	50 x 2	100	0.37	
53	50 x 2	100	0.32	
54	50 x 2	100	0.35	
55	50 x 2	100	0.37	
56	50 x 2	100	0.35	
57	50 x 2	100	0.32	
58	50 x 2	100	0.4	
59	50 x 2	100	0.35	
60	50 x2	100	0.35	
61	50 x 2	100	0.32	
62	50 x 2	100	0.27	
63	50 x 2	100	0.3	
64	50 x 2	100	0.3	

Appendix 2: Context Register.

No	Trench	Description
001	All	Topsoil across area
002	All	Subsoil across area
3301	33	Cut of railway foundation
3302	33	Fill of railway foundation
3303	33	Railway sleepers
3304	33	Shale overlying railway line
3401	34	Cut of railway foundation
3402	34	Fill of railway foundation
3403	34	Railway sleepers
3404	34	Shale covering railway line
3405	34	Bricks forming possible loading bay
3501	35	Shale layer forming base for railway line
3601	36	Cut of smaller mineshaft
3602	36	Fill of smaller mineshaft
3603	36	Cut of larger mineshaft
3604	36	Fill of larger mineshaft

Appendix 3: Drawing Register

Drawing Number	Trench	Plan/ Section	Description
1	33	Plan	Detail plan of railway line
2	34	Section	Section of **T34** showing possible loading platform
3	36	Plan	Plan of possible mineshafts

Appendix 4: Photographic Register

Film 1			
1-2	Registration shot		
3-4	Trench 13 – General shot	E	Overcast
5-6	Trench 14 – General shot	E	Overcast
7-8	Trench 15 – General shot	NE	Overcast
9-10	Trench 16 – General shot	SW	Overcast
11-12	Trench 17 – General shot	NE	Overcast
13-14	Trench 18 – General shot	S	Overcast
15-16	Trench 19 – General shot	SE	Overcast
17-18	Trench 20 – General shot	SE	Overcast
19	Trench 21 – General shot	SE	Overcast

Film 2			
1-2	Registration		
3-4	Trench 21	SE	Overcast
5-6	Trench 22	NE	Sunny
7	Wasted shot		
8-9	Trench 23	SEE	Bright
10-11	Trench 24	SEE	Bright
12-13	Trench 25	W	Rain
14-15	Trench 26	NE	Drizzle
16-17	Trench 27	NE	Rain
18-19	Trench 28	NE	Rain
20-21	Trench 32	NNE	Drizzle
22-23	Trench 1	NE	Fine
24-25	Trench 2	SE	Bright
26-27	Trench 3	NE	Bright
28-29	Trench 4	E	Bright
30-31	Trench 5	SE	Bright
32-33	Trench 6	S	Bright
34-35	Trench 7	NNE	Bright
36-37	Trench 8	E	Bright

Film 3			
1-2	Registration		
3-4	Trench 9 – General shot	NE	Bright
5-6	Trench 10 – General shot	NE	Bright
7-8	Trench 11 – General shot	E	Bright
9-10	Trench 12 – General shot	E	Bright
11-13	Trench 33 – Pre-ex shot of Site 23		
14-21	Trench 33 – West facing section of Site 23 (Taken from the Southern end proceeding to the Northern end of section)	W	Bright
22-23	Trench 31 – General shot	N	Sunny
24-25	Trench 30 – General shot	SW	Sunny
26-27	Trench 29 – General shot	SW	Sunny
28-29	Trench 35 – General shot	NNE	Sunny
30-32	Trench 35 – Site 23 (Indicated by made-ground) and field drain under Site 23 in section	NW	Overcast
33-34	Trench 35 – General view of Site 23 (Indicated by made-ground) with earthworks (Site 23) in the background	NWW	Overcast

Film 4			
1-2	Registration		
3-4	Trench 36 – Also showing probable mine shafts – 3602 and 3604	SW	Overcast
5-6	Trench 37 – General shot	NE	Overcast
7-8	Trench 38 – General shot	S	Overcast
9-10	Trench 39 – General shot	NE	Overcast
11-12	Trench 40 – General shot	W	Overcast
13-14	Trench 41 – General shot	W	Overcast
15-16	Trench 33 – Site 23, Post-ex showing railway sleepers	E	Overcast
17-18	Auchengray Brick from Trench 34		Overcast
19-20	Railway sleeper from Trench 34		Overcast
21-22	Trench 34 – SE facing section showing brick wall and platform	SE	Overcast
23-24	Trench 34 – General shot	SSW	Overcast
25-26	Trench 42 – General shot	E	Drizzle
27-28	Trench 43 – General shot	E	Bright
29-30	Trench 44 – General shot	S	Overcast
31-32	Trench 45 – General shot	S	Overcast
33-34	Trench 46 – General shot	SE	Overcast
35-36	Trench 47 – General shot	W	Overcast

Film 5			
1-3	Registration		
4-5	Trench 48 – General shot	SE	Rain
6-7	Trench 49 – General shot	SEE	Overcast
8-9	Trench 50 – General shot	SW	Overcast
10-11	Trench 50 – NNE facing section showing modern plough marks	NNE	Overcast
12-13	Trench 51 – General shot	SW	Rain
14-15	Trench 52 – General shot	SW	Rain
16-17	Trench 53 – General shot	NE	Overcast
18-19	Trench 54 – General shot	NE	Overcast
20-21	Trench 55 – General shot	NE	Overcast
22-23	Trench 56 – General shot	SW	Overcast
24-25	Trench 53 – General shot	SW	Overcast
26-27	Trench 57 – General shot	SSW	Overcast
28-29	Trench 58 – General shot	NE	Overcast
30-31	Trench 59 – General shot	NE	Overcast
32-33	Trench 60 – General shot	NNE	Overcast
34-35	Trench 61 – General shot	NNE	Overcast
36-37	Trench 62 – General shot	NNE	Overcast

Film 6			
1	Wasted shot		
2-3	Registration		
4-5	Trench 63 – General shot	E	Overcast
6-9	General shots of spoil tip covering ‘outside extraction zone’ area	SW	Sunny

Appendix 5: Finds list

Context	Description	Spotdate
Tr.34	Complete brick, 245 x 116 x 80mm, rectangular frog with manufacturer’s name: J. MILNER / AUCHENGRAY. Fine red micaceous fabric.	L.19th c.+
Tr.34	Cast iron plateway fragment. 210+ x 84 x 46mm, L-section.	L.18th-E.19th c.
Tr.34	Cast iron bridge rail section. 1270 x 65 x 30mm. Small holes at each end.	19th c.

Appendix 6: DES Entry

LOCAL AUTHORITY:	South Lanarkshire
PROJECT TITLE/SITE NAME:	Wilsontown Open Cast Coal Scheme (Phase 2)
PROJECT CODE:	WOCO2
PARISH:	Carnwarth
NAME OF CONTRIBUTOR:	Magnus Kirby and Mike Cressey
NAME OF ORGANISATION:	CFA Archaeology Ltd
TYPE(S) OF PROJECT:	Archaeological Evaluation and Peat Assessment
NMRS NO(S):	NS95SE 18, NS95SE 50, NS95SE 56.0
SITE/MONUMENT TYPE(S):	Industrial (Cleugh Coal Mines), Agriculture (Rig and Furrow), Lawhead Branchline Mineral Railway
SIGNIFICANT FINDS:	None
NGR (2 letters, 6 figures)	NS 960 544
START DATE (this season)	September 2006
END DATE (this season)	September 2006
PREVIOUS WORK (incl. *DES* ref.)	Cressey M (1996), Wilsontown (Carnwath parish), Evaluation *DES 1996* Mitchell S (2004), Wilsontown Opencast Coal Scheme, Forth, *DES 2004*
MAIN (NARRATIVE) DESCRIPTION: (May include information from other fields)	An archaeological evaluation and peat assessment was carried out in advance of an extension to Wilsontown Open Cast Coal Scheme. Several features associated with earlier coal mining were uncovered. These included parts of the Lawhead Branchline Mineral Railway and two possible mineshafts. A section of railway track recovered from the Lawhead Branchline suggests that it may have been a horse drawn plateway.
PROPOSED FUTURE WORK:	None
CAPTION(S) FOR ILLUSTRS:	N/A
SPONSOR OR FUNDING BODY:	Hall Construction Ltd
ADDRESS OF MAIN CONTRIBUTOR:	The Old Engine House, Eskmills Park, Musselburgh, EH21 7PQ
EMAIL ADDRESS:	cfa@cfa-archaeology.co.uk
ARCHIVE LOCATION (intended/deposited)	National Monuments Record of Scotland South Lanarkshire Council Sites and Monuments Record