

ART. X – *Coalmining at Reagill, Sleagill and Newby, 1683-c.1837*

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ALTHOUGH a detailed history of coalmining in Cumbria has been published for the West Cumberland coalfield,¹ the local significance of other coal deposits in the county has been much neglected. Thus this article will examine evidence for the existence and working of some thin coal seams, not in the Coal Measures, but more than twenty miles away from them in the Yoredale Group of rocks that lie immediately above the Carboniferous Limestone about six miles west of Appleby. The seams have not been worked for more than 150 years.

I first became aware of this coal source in about 1984 while studying estate accounts for enlarging the Old Dairy about 250 yards north of Maulds Meaburn Hall.² That work occurred in 1739-40 and the building was eventually demolished, by the County Council, for road widening shortly after they rebuilt Dairy Bridge over the river Lyvnnet in 1969. An early job in the Dairy construction process was to build a limekiln nearby.³ For fuel, 8s. 9d. was paid on 6 October 1739 to “Wm Hebson for 30 Load of Reagill Coals (getting) at 3¹/₂d. per load”. Hebson supplied a further 90 loads before the end of 1739, 27 more by 12 July 1740, plus six loads “for burning plaister” before 18 October 1740. He was a carpenter since, “by Agreement”, £3 10s. was paid on 11 June 1740 to “Wm Hebson and Thomas Dent Carpenters for Cutting down Timber for the Dairy house, Roofing the same, makeing 3 pair of Door Cheeks and fixing pulleys in the slaughter house”. On 20 October 1740 Hebson was paid “for 3 Days work Saweing Jists & lying Floors”. In view of Hebson’s trade and the common use of “coals” to denote charcoal, and of “collier” for charcoal-burner, it is necessary to show that he was more likely to be delivering coal than charcoal. Reagill was a township in Crosby Ravensworth parish whose registers record the burial, on 2 April 1736, of “John Richardson, killed in a Coal Shaft ”.⁴ He was more likely to have been working in a coal pit rather than any other cause for the accident. In the same parish there are relevant place-names such as Pithills Plantation and Coal Pit Hill. At Newby, in the next parish (Morland), Parson and White in 1829 noted: “a seam of coal six inches thick and 25 yards below the surface . . . worked for the use of the lime-kilns near the hamlet of Towcett” (NY 574 184) where “Matthew Betham, gentleman, has an estate, and is working a thin seam of coal”. They noted that Sleagill, also in Morland parish, was “crossed by the thin seam of coal mentioned above”, but made no reference to it in Reagill.⁵ Matthew Betham’s farm will be studied later and his family is traced in the Appendix.

A Geological Survey Report published in 1893 refers to:

a thin and not very pure, but remarkably persistent, bed of coal . . . [which] may be traced for three miles or more in the neighbourhood of Reagill. It is rarely more than 8 or 10 inches in thickness; but at one time, judging by the number and extent of workings, . . . must have been regarded locally as of considerable importance.⁶

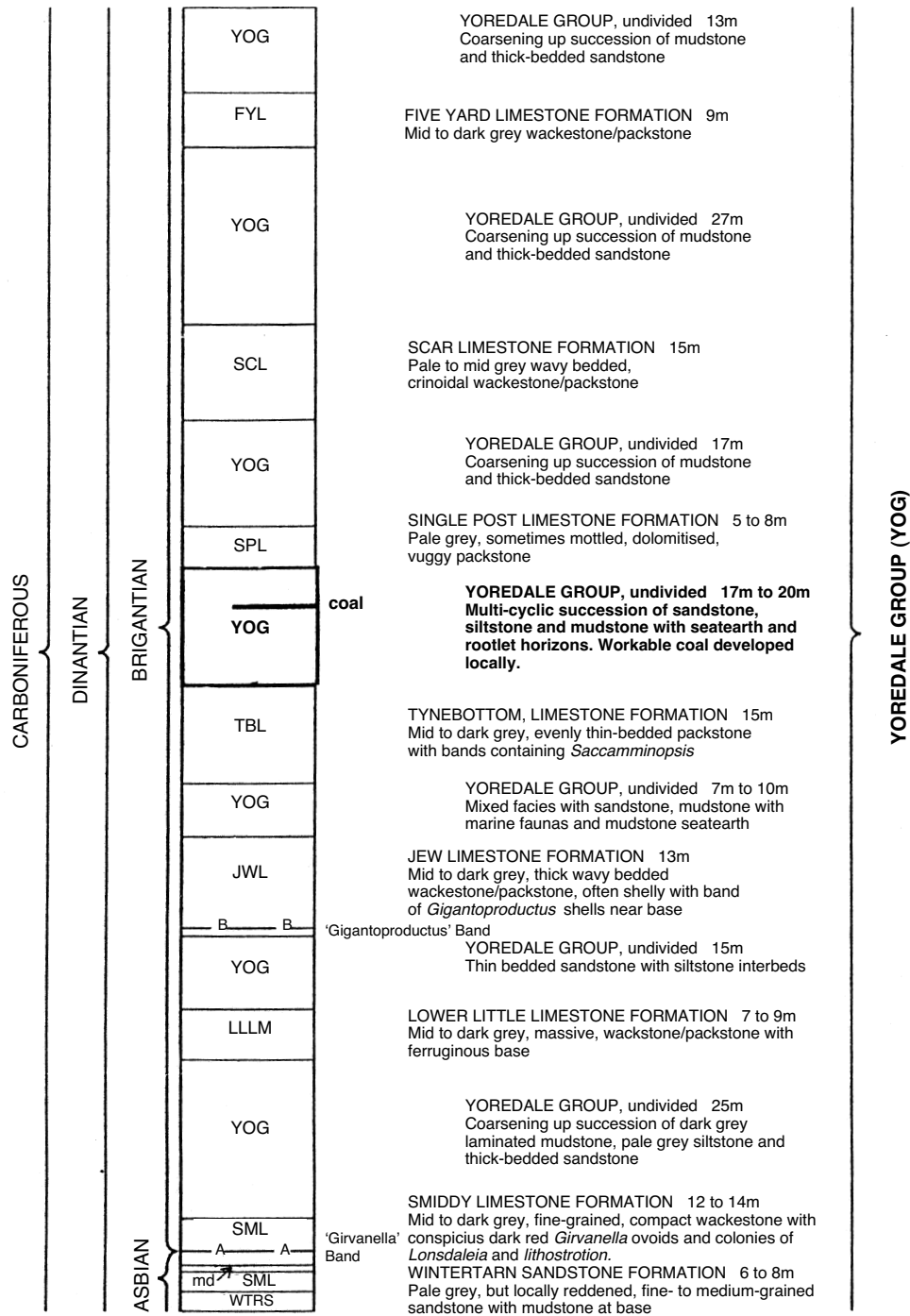


FIG. 2. Generalized stratigraphic section of the Yoredale Group, showing the coal in the middle of a complex series of deposits. (Based on 1:50,000 geology map of Appleby, 2003, sheet 30. Reproduced by permission of the British Geological Survey). Vertical scale 1:1,000.

Previously, J. S. Bland had prepared more detailed observations for presentation to a meeting of the Manchester Geological Society on 30 December 1862 but, as he could not be present it was read for him by E. W. Binney and will be summarised shortly.⁷ Perhaps the reason for Bland's absence was illness with consumption from which he died. He was buried on 9 January 1867 aged only 27. John Salkeld Bland was born at Reagill on 23 February 1839 and was baptised at Crosby Ravensworth on 5 June following, the second child of farmer William Bland and Elizabeth his wife, of Wyebourne (NY 596 162). John had an older sister Agnes Garnett Bland baptised on 27 November 1836.⁸ Their father, who was buried on 28 November 1881 aged 82, was baptised on 2 March 1800, as the second son of John Bland of Reagill and his wife Elizabeth (*née* Salkeld, of Meaburn).⁹ This couple married on 13 October 1796 and had an older son Thomas baptised 9 July 1798 and a third son John, baptised 16 January 1802 and buried just three days later. The eldest son was therefore J. S. Bland's uncle who was the self-taught artist Thomas Bland, creator of the ornamental garden at Yew Tree Farm, Reagill,¹⁰ and who was buried on 21 September 1865. The 1851 Census lists J. S. Bland's family. He was aged 12 and his sister Agnes was 14. His father, born at Reagill, was aged 51 and his second wife Jane was aged 50 and born at Penrith.¹¹ William's freehold farm of 80 acres employed three labourers and a female servant. During his short life, John Salkeld Bland had not only prepared manuscript notes on Reagill, later edited for publication in *The Vale of Lyvennet*, but also took a keen interest in local geology.

His stratigraphical observations need to be outlined from the lowest (oldest) to the highest (youngest) relevant rocks within the local Carboniferous Yoredale succession. According to Bland, on top of a hard crystalline "Greenriggs Limestone", there is a twelve feet thick yellow sandstone of fine texture very suitable for architectural work (his "Scattergate Sandstone"). It forms a base for a series of clay-shales, sandstones and thin limestones, interstratified within which are the Reagill coal seams. The lowest clay-shale, 2 to 3 ft thick, is followed immediately by a coal seam, 6 to 12 ins thick with *Sigillaria* (foliage) fossils whose *Stigmaria* (root) fossils penetrate the underlying clay (the forest soil). Above this seam, a clay-shale (6 ft thick) is followed by 2 ft of hard limestone ("Ironstone") and then a sequence of shales and sandstones that alternate two or three times, sometimes with a thin coal seam, one of which is called the "Crow Coal", 2 to 3 ins thick. A further limestone (9 ft thick) is overlain by sandstone and clay with a coal seam 11 ins thick, "but not of such extent as the other coal seam" of similar thickness. Figure 1 shows the outcrop of the coal with its structural contours and, while the modern stratigraphical description of the Yoredale Group (Fig. 2) differs considerably from Bland's pioneering work, the detail he observed shows remarkable insight and diligence, particularly since the rhythmic cyclical succession of the Yoredale rocks was not well understood until 1924.¹² The rock changes resulted from a periodic subsidence of the earth's crust with respect to the water level in a tropical deltaic environment, producing a sequence of deposits which reduced water depth as they built up: limestone (in deep clear water), sandstone (in shallower water), clay-shale (very shallow inter-tidal conditions) leading to a tropical swamp forest, followed by subsidence in which the forest (preserved as coal) was covered by further sediments as a similar sequence began again.

Bland continued his account by commenting on historical aspects of the coal deposits.

The coal, lying at no great depth, . . . it has been the custom to obtain it by sinking shafts, now marked by numbers of mounds, called in the neighbourhood 'metal heaps' of the superincumbent shales etc. In many places, so near was it to the surface that the shale was bared off and the coal taken out [opencast]. Pit Hills has been worked thus, but at what time was not known till the late excavations at Shap Abbey . . . [where] from one compartment, a quantity of Reagill coal was found in a heap . . . It is not very bituminous and burns with a dull red, emitting a strong sulphurous smell. It was used considerably up to the last twenty years, but in these railroad days Lancashire coal has used [affected] it pretty much as the steam engine has used the post horses.

Bland then went on to discuss the red Triassic sandstone rocks further east. His remarks suggest that railways caused Reagill's coal mines to fail, as if freight services, begun on the Lancaster to Carlisle line over Shap in January 1847, were responsible.¹³ This does not appear to be supported by the fact that both the 1841 and 1851 Census returns record no coalminers anywhere near Reagill. However, the identity of colliers could be masked by inclusion among labourers and small farmers. Also, it is worth wondering how the Shap Abbey coal was identified as coming from Reagill. Was it based on how it burned? Perhaps it depended more on Nicolson and Burn's statement that Reagill was granted to Shap Abbey in 13 John (1212) and that it would be logical to obtain coal from its own property.¹⁴ The same source records also that, at the Dissolution, the abbey's revenues were granted to Thomas Lord Wharton, whose descendants sold Reagill Grange and one half of the demesne to Dr Lancelot Dawes (1580-1654, the vicar of Barton from 1608) and the other half to Sir John Lowther of Lowther who later bought the whole property. After Philip Lord Wharton (1698-1731, created Duke 1718) was outlawed for treason in 1729, his remaining abbey lands were bought by Robert Lowther (1681-1745) of Maulds Meaburn Hall. His son James (1736-1802) inherited the Lowther estates and title in 1751, the Whitehaven estates in 1756, and was created Earl of Lonsdale in 1784.¹⁵ This train of events helps the search for documentary evidence, for the Lowthers controlled all of the manors in Morland and Crosby Ravensworth parishes, except King's Meaburn which was managed from Appleby Castle.¹⁶

Seventeenth-century evidence.

The earliest document found is a letter from Sir John Lowther (1642-1706) of Whitehaven to Thomas Tickell (d.1692), his estate steward there.¹⁷ Both had ample experience of exploiting coal resources in West Cumberland. On 10 April 1683 Sir John wrote:

Sir John Lowther [1655-1700 of Lowther] writes me last post that he has some hopes of Coal in Westmorland and would have some Borers from our side. I have writ him my Opinion that they have better wombles¹⁸ and better men at Newcastle and that I intended to have made use of Stoker that sunk the Gin Pitts [at Whitehaven] if I had bored along the Sea Coast as I intended. If he send to you assist him the best you can, either by getting such [skilled men] as our parts afford, or by writing to some at Newcastle.

As the Lowther family owned Reagill manor and those parts of Morland closest to the coal outcrop, this letter suggests that coal would have been won previously from surface deposits along the outcrop. The letter is also very useful in interpreting the

last two pages of accounts of personal payments made by Sir John Lowther of Lowther on his buildings and estate up to November 1688.¹⁹ For example on 29 May 1686, £1 2s. 6d. was "Paid for the Collieries att Regill to the two Boarers, ten days each" (1s. 1½d. per day), and £1 6s. 0d. was paid to "Wharton and his son and Francis Backhouse, 26 Days" presumably at 1s. a day each. Perhaps two of them had worked the same ten days as the borers and took on extra help for six days. Every fortnight thereafter, on Saturdays until 24 July "the Two Coal Boarers" were paid £1 10s. 0d. and each time Wharton received 12s. "for the same" (day rates of 15d. and 12d. respectively). Three weeks later on 14 August, £2 1s. 0d. was paid to "Wharton & two more whilst the other Boarers went to Whitehaven" and £1 7s. 6d. more was paid to "the two Boarers . . . since and before they went". Thus the borers did not stay long at Whitehaven and were, perhaps, viewing their next job. Afterwards, fortnightly from 29 August to 24 October "the two boarers and Wharton" received £2 2s. 0d. jointly. Incidental costs during the whole period included a rope on 29 May and "a Tubb" on 12 June, for which Wharton was paid 3s. On four occasions "the Smith's bill" was paid, probably for sharpening tools and totalled £2 17s. 7d. by 24 October when boring payments ceased. Later accounts suggest that the boring was successful, but there are no comments about the depth at which coal was found, or where and how many shafts were sunk. As Bland noted that coal was "at no great depth" (75 ft according to Parson & White), the five months work should have allowed at least three probes, so that the dip of the seams could be estimated to help select locations for further probes.

The first mention of coal deliveries in the Lowther estate accounts is dated 22 February 1695/6,²⁰ when 6s. was "paid to John Bryham . . . for 4 Load of Stainmoor Coales". It is followed by a similar entry for the same person, place, quantity and price of 1s. 6d. per load on 14 March. The next entry notes £2 0s. 6d. paid to "Tho. Harrison then for 102 load of Regill Coales (whereof 96 load were brought by Tho. Boulton and 6 load by Robt Mounsey) at 5d. per load". Harrison probably contracted with Mounsey and Boulton for the carriage. As this quantity should have cost £2 2s. 6d., it might be simplistic to assume that Harrison perhaps accepted 2s. as earnest when he agreed to supply coal from a Reagill pit worked by him. The next payment also on 14 March points to an alternative solution. It was £1 3s. 9d. "for 60 load of Coals to Wharton & Sanderson [suppliers] which were brought from Sleegill head²¹ per Robert Mounsey at 5d. per Loade allowing 21 to the score". The latter was a way of countering short measure, poor quality and loss during transport, but this would have reduced the number of loads paid for to 57 which, at 5d. each, equals £1 3s. 9d. On the same basis the other consignment of 102 loads (at 21 to the score) would comprise 4¹⁸/₂₁ score which, at 100d. a score, would cost £2 0s. 5.7d. The wording seems to suggest that the price of 5d. a load probably covered both mining and carriage and is compatible with the 3½d. a load paid to William Hebson in 1739-40 for getting coal and taking it 1½ miles from Reagill to Meaburn. For comparison, at Whitehaven in October 1676, coal at the pithead cost 28d. a ton and transport was 6d. a ton for about a mile.²² Allowing ten packhorse loads per long ton²³ and four-times higher carriage cost for the greater distance from Reagill to Lowther, the cost per horse load works out at about 5.2d. a load. As the Stainmore price differed so much from the Reagill cost some explanation is needed.

The manor of Stainmore, its coal output and royalties were controlled by the

Appleby Castle owners,²⁴ so that Lowther would pay full price for that coal, including royalties, mining, transport and a toll of 2d. for each horse load “toward the repair of the way to the coalpits”.²⁵ Also Lowther is more than 25 miles from Stainmore by the direct route via Appleby. By contrast, Reagill coal was no more than six miles from Lowther whose owners were lords of the manor, and so would collect royalties on coal produced (or have coal in lieu), and could command boon services from customary tenants to carry at least some of it. Thus J. S. Bland noted “another service disputed was the carrying of coals. The tenants of Maulds Meaburn had to carry sixty horse loads [per year] . . . each . . . containing two bushels after the measure used at the pit. They had to bring them from wherever Mr Lowther chose to buy them, which was on Stanemore, and to carry them to his residence”.²⁶ Presumably “Mr Lowther” was Robert (1681-1745) of Maulds Meaburn Hall, whose only surviving son James (1736-1802) became 5th baronet in 1751.²⁷ As pack-horses were the major form of rural transport in Cumbria, the many loads brought by several individuals suggest that they were contractors, some of whom may have been customary tenants hired by the mine lessees or other customary tenants. If they were tenants, their overall charge might have included a reduction to allow for their own boon loads liability.

The price difference between Stainmore and Reagill/Sleagill coal allows sources to be deduced when wording in the accounts is otherwise inadequate. Thus £7 10s. 6d. paid “to Tho. Gate . . . for 129 loades of Coales at 1s. 2d. per load” suggests that Stainmore was the likely source and may include a discount for quantity, since the preceding entry paid 3s. to John Bryham for just two loads of Stainmore coal on 23 March 1695/6. No more coal deliveries were recorded until 1 January 1696/7, as if carriage stopped during summer and early autumn, when tenants and carriers might be busy on farms and less fuel would be needed for domestic use. Between 1 January and 24 March 1696/7, the accounts note 26 payments to 17 named men, sometimes working together, for 286 loads of coal. All loads (save two at 1s. 4d.) cost 1s. 6d. a load, so would come from Stainmore. The main carriers were John Shepherd of Crackenthorpe (76 loads), John Addyson of Colby (42), Robert Williamson of Bolton (35), William Smith of Bolton (34), Thomas Blacket of Bolton (28) and John Nelson of Crackenthorpe (22). All but two of the others carried fewer than five loads, as if they may have been customary tenants (perhaps paid by other tenants to take boon loads), but were not identified by place. The three named places are all within three miles of Appleby in the direction of Lowther, and well placed to collect coal brought to Appleby for Saturday markets that were “well supplied” with Stainmore coal,²⁸ and take it to Lowther, probably by contract.

By contrast, between January and 24 March 1696/7 only three account entries mentioned Reagill coal including 8s. 3d. paid about 18 January “to Wm Williamson & Edm Baxters wives” for 33 loads at 3d. a load, suggesting that women earned less than men. On 23 January James Robinson was paid £2 1s. 0d. for 123 loads at 4d., and then £1 1s. 8d. on 27 February for another “65 load of Coales brought by John Walker from Reagill” at 4d. a load, as if Robinson probably worked a colliery. Thus, under 45 per cent of Lowther coal came from that source. Except for £5 3s. 2d. for 72 “load of Coales” (c.1s. 5d. per load), paid among several purchases by “my son Hugh”, there are no coal entries from the old New Year’s day until the next 17

January (1697/8). From then until 18 March, ten payments for 402 loads mainly at 1s. 6d. a load (Stainmore coal) were carried by William Smith and John Nelson (both noted above) and Anthony Nicholson brought 62 more loads for £4 13s. 0d. From 11 March 1697/8, the price per load was cut to 1s. 4d. for the last 74 loads. Reagill coal was noted only once when John Walker had 7s. for 28 loads on 23 February. Again a lack of entries after 18 March suggests that most coal was to heat Lowther Hall.

There are no further coal entries in the accounts until 15 March 1699, when the Stainmore charge was still 1s. 4d. a load, but names of carriers were not recorded. However, William Smith had 5s. 2d. “for carriage of 2 load of wheat from Barnard Castle and toll”, probably at 2s. 6d. per load plus 2d. toll.²⁹ In 1699, of 64 payments for 499 loads, more than 68 per cent was Stainmore coal paid for, usually on Fridays, in 55 lots of up to ten loads. On 26 and 27 May, four of them were actually “from Appleby”. A sharp increase in late May suggests that the coal was intended more for the early summer firing of bricks for estate buildings or to burn lime for building work and improving estate land, as at Skirwith Hall in 1773 (see note 3). Thus, on 25 May John Walker had 9s. 9d. for bringing “59 load of Coales from Reagill whereof 8 came to the house and the rest to the lime kilne” at 2d. a load, probably for carriage only. On 29 April, Thomas Wilkinson had 18s. “for leading of 72 load of Coales to the lime kilne” at 3d. a load, as if this was also from Reagill. On 13 May, James Robinson (noted above) received 35s. “for 84 Load of Coales from Sleagill at 5d.” and Robert Powley had 16s. 6d. for 66 loads more at 3d. a load. Thus, in 1699 roughly 35 per cent of the recorded coal came from the Reagill area.

Nineteenth-century evidence

No eighteenth-century coal accounts have been found so that the next evidence is taken from accounts for Reagill coal supplied at 1s. 3d. a load between 7 March 1812 and 7 February 1814, as follows:³⁰

TABLE 1.
Summary account for coal supplied from Reagill in 1812-14.

Date	Loads	Value			Paid to Gasgarth and Birkbeck			Paid to Lord Lonsdale		
7 Mar. 1812 to 8 Jan. 1813	2978	£	s	d	£	s	d	£	s	d
to 10 Feb. 1813	771	186	2	6	124	1	8	62	0	10
to 3 May 1813	415	48	3	9	32	2	6	16	1	3
to 10 July 1813	1305½	25	18	9	17	5	10	8	12	11
to 13 Nov. 1813	474	81	11	10½	54	7	11	27	3	11½
to 7 Feb. 1814	2001½	29	12	6	19	15	0	9	17	6
	7945	125	1	10½	83	7	11	41	13	11½
		496	11	3	331	0	10	165	10	5

Clearly, Lord Lonsdale received a third of the value (probably for royalties) and the rest went to John Gasgarth and ——— Birkbeck, perhaps in equal shares, as if they were colliery lessees. Neither of them is in Parson & White’s 1829 *Directory*. The 1305½ loads noted for 10 July 1813 came from a total in a summary account dated

TABLE 2.
Customers for Reagill and Sleagill coal, 7 March 1812 to 7 February 1814

Date	From to	7.3.12 8.1.13	8.1.13 10.2.13	10.2.13 3.5.13	10.8.13 13.11.13	13.11.13 7.2.14	Total loads	Value		
Customer	Name	Loads	Loads	Loads	Loads	Loads		£	s	d
Ralph Atkinson		409	143				552	34	0	0
Thomas Holme		282.5	131			348	761.5	47	11	10 ¹ / ₂
John Abbott		259				189	448	28	0	0
Jonathan Rigg		64					64	4	0	0
Anthony Dodd		136.5				73.5	210	13	2	6
Henry Yarker		49					49	3	1	3
William Jackson		119.5				91	210.5	13	3	1 ¹ / ₂
Matthew Clarke		91		150.5		170	411.5	25	14	4 ¹ / ₂
Thos Bainbridge		108.5	42	63			213.5	13	6	10 ¹ / ₂
John Henderson		206				73.5	279.5	17	9	4 ¹ / ₂
Henry Nicholson		123	21			105	249	15	11	3
John Rumney		60					60	3	15	0
Thos Hodgson		232.5			139.5		372	23	5	0
Robert Jackson		122.5					122.5	7	13	1 ¹ / ₂
William Corry		42					42	2	12	6
Ralph Bird		39					39	2	8	9
Thomas Laycock		14					14	0	17	6
Richard Winter		105					105	6	11	3
Thomas Taylor		35					35	2	3	9
John Bland		129.5		42	14		185.5	11	11	10 ¹ / ₂
Henry Wharton		33	10		16.5	20	79.5	4	19	4 ¹ / ₂
Anthy Nicholson		115.5			46.5		162	10	2	6
Jos. Richardson		31.5			27	70	128.5	8	0	7 ¹ / ₂
Henry Wilkinson		51.5					51.5	3	4	4 ¹ / ₂
John Kitching		31.5					31.5	1	19	4 ¹ / ₂
Chris Hodgson		87.5		59.5	35		182	11	7	6
John Holmes			203				203	12	13	9
Thomas Abbott			141				141	8	16	3
Jonathan Donald			24				24	1	10	0
John Taylor			56				56	3	10	0
Robert Camplin				28			28	1	15	0
William Smith				23			23	1	8	9
William Jackson				35			35	2	3	9
Isabel Robinson				14			14	0	17	6
John Kirkpatrick					70		70	4	7	6
Wm Atkinson					59.5	168	227.5	14	4	4 ¹ / ₂
Thomas Wharton					30		30	1	17	6
Jos. Williamson					36		36	2	5	0
John Smith						518	518	32	7	6
John Patrickson						56	56	3	10	0
John Marshall						4	4	0	5	0
Frances Hodgson						94.5	94.5	5	18	1 ¹ / ₂
John Hewetson						21	21	1	6	3
		2978	771	415	474	2001.5	6639.5	414	19	4 ¹ / ₂
Plus 1305.5 loads between 3 May 1813 to 10 July 1813 for which only the total has been found								81	11	10 ¹ / ₂
								496	11	3

Note: Pecks have been converted to decimals of loads

30 June 1814, which does not list customers or loads. The other five accounts exist and record the number of loads and value (1s. 3d. a load) for each of 43 customers as summarized in Table 2. The 8 January 1813 account has 26 entries, twelve of which show loads ending in .3 (*not* a decimal but the number of pecks).³¹ For example Thomas Holme of Barnskew bought 282.3 loads (282 loads, 3 pecks). At 1s. 3d. a load, the £17 13s. 1½d cost works out exactly as 282½ loads, so that a load was 6 pecks or 1½ bushels. In a simple test a gallon of coal with sizes from slack to about a cubic inch, compacted by vibration, weighed 8¼ lbs. Thus, if bushels were Winchester measure of 8 gallons, loads of 1½ bushels would weigh about 100 lbs, or less than 40 per cent of a pack-horse load of 256 lbs. (see note 23). Therefore, it seems that a customary bushel was in use. If a 24-gallon bushel (common at Carlisle and Kirkby Lonsdale) was used, 1½ bushels would weigh 297 lbs; an excessive load.³² The 20-gallon bushel (common as far apart as Kirkoswald and Kendal) would give a better compromise at 247½ lbs, but the accounts do not indicate which bushel was actually used.

The next coal information is in accounts beginning on 22 May 1819.³³ They open with “An Account of Coals taken from Bedlam Coalpitts by Lord Lonsdale’s Farmers” (colliery tenants). Bedlands Gate is at NY 568 195, at the north-west limit of the coal seams.³⁴ Coal was charged at 3d. a load, presumably indicating royalties due to Lord Lonsdale for 359 loads total in nearly two years. The five customers are listed in Table 3, but an address for only one is noted. Two others can probably be identified in a list of Reagill customers lower in the same table, while two more are unidentified. Pages 3 to 7 of the account provide details for “Coals taken from Reagill pitts by Farmers &c” starting on 29 May 1819. Of the 29 customers listed in Table 3, all but four have a village or farm address, the furthest being more than five miles from Reagill at Melkinthorpe and at Gibson Hill in Birkbeck Fells. Parson & White’s *Directory* (1829) may help to identify nineteen customers and Table 3 includes page numbers and grid references. About 90 per cent of the coal was from Reagill. Recording a lower royalty of 3d. (compared with 5d. in the 1814 accounts) may suggest depressed market conditions after the Napoleonic Wars ended, and that the estate had backed away from managing the finances and just collected royalties, leaving customers to make their own arrangements for having coal extracted and transported. Other changes occurred in 1812 when Reagill properties (including Reagill Foot farm) were enfranchised,³⁵ and in 1813 when Reagill was enclosed as part of Crosby Ravensworth.³⁶

The same account book then continues in a different format with seven sets of figures for loads of coal carried from “Bedlam” and Reagill pits in 1822, Bedlands and Sleagill in 1826 and 1827 and Bedlands in 1834, all for use on the Lowther estate, with separate columns for each purpose, as listed in Table 4. The figures include loads carried in “Lord Lonsdale’s Carts” from Reagill after 10 July 1822 (possibly indicating a shortage of transport at harvest-time) and from Bedlands after 3 September 1827. The use of carts raises questions as to whether by that time, all loads were in carts and if so, how much did each carry? Were contents calculated as equivalent to so many horse loads, or did carts carry as little as a horse? The former is far more likely. On the Edenhall estate in 1780 the customary service of tenants lending horses or horses-and-carts for the lord of the manor’s use was called “horse catch”, which the agent there defined as providing “a Man, Horse and Cart once in

TABLE 3.
Coal from Bedlam and Reagill Pits, 1819-21

	Date	From to	22.5.19 15.1.21	20.3.19 29.5.19	29.5.19 ?	26.2.20 24.7.20	22.7.20 13.11.20	
Bedlam Customers	Customer address		Loads	Loads	Loads	Loads	Loads	Total Loads
Thomas Hodgson	Strickland Hall		<i>40 + 88</i>					<i>128</i>
Mr Kilner			<i>40</i>					<i>40</i>
Mr Mansell			<i>9 + 36 + 39 + 24 + 27 + 24</i>					<i>159</i>
John Byers (1)			<i>8</i>					<i>8</i>
Thomas Atkinson (1)			<i>24</i>					<i>24</i>
			Plus 15 carts between 16 April and 27 October 1821					<i>[359]</i>
Reagill Customers	P & W (page)		[Grid Ref.]					
Thomas Salkeld		Meaburn Hall	[NY 624 171]	79 3				79½
Richard Patterson				24				24
Thomas Atkinson (591)		Beck Head	[NY 579 107]					
		[Birkbeck Fells, Cr. Ravensworth]		14				14
William Bowness (595)		Melkinthorpe		42				42
Jos Snowdon		Gibson Hill	[NY 584 083]					
		[Birkbeck Fells, Cr. Ravensworth]		24		32		56
Matthew Clark (603)		Shap Abbey	[NY 548 152]	21				21
William Jackson (599)		Bedlam Gate	[NY 568 195]	24 3	"pecks"	24		48½
Thomas Mattinson		Reagill		129 3				129½
Jos. Wilkinson (600)		Lt Strickland		49		100		149
Thomas Bainbridge (600)		Lt Strickland		24				24
John Byers (600)		Dallon Bank	[NY 572 222]	167		20		187
Robert Camplin (599)		Newby		56				56
Ann/Nancy Hewitson		Crosby Hall	[NY 620 148]	56		64	32	152
James Tengate (2) (592)		Reagill		40		76		116
Henry Smith (592)		Winter Tarn	[Reagill, NY 579 170]		96	244	80	420
John Armstrong		Thorney Croft	[Newby, NY 580 206]		42	80		122
Jos. Courry (598)		Bolton Field (3)			42			42
Thomas Chester (600)		Gt Strickland			24			24
Thomas Hodgson (592)		Low Field	[Reagill, NY 617 187]		98	140 + 80		318
Thomas Holme (592)		Barnskew	[Reagill, NY 621 188]		229	103		332
John Kendal		Hasley	[Gt Strickland, NY 587 232]		38			38
John Wilkinson						42		42
William Atkinson (599)		Longlands	[Newby, NY 579 182]			87		87
John Bland (592)		Reagill				140	44	184
James Ruddick (592)		Turnbank	[Reagill, NY 618 194]			36		36
Lancelot Thwaites (592)		[Castlehowe] Scarr	[NY 585 155]			101	45	146
John Jacques (592)		Threaplands (4)	[NY 594 174]			160		160
Robert Smith (600)		Sleagill ?]				27		27
Henry Wharton						32		32
				750½	569	1588	201	3108½
Plus total loads supplied from Bedlam pits								359

Notes: Figures in italics refer to the Bedlam Pits. Reagill supplied the remainder.

1 Customer probably the same as supplied from Reagill pits (below).

2 Parson & White's "Kengate" appears to be an error for Tengate, a common name in Crosby Ravensworth.

3 In 1829, Josiah Corry was at Mansgrove (NY 625 233), Bolton, Morland parish.

4 By 1829 John Jacques' farm was not named and Henry Wilkinson was at Threaplands.

every year, a reasonable days work". His assessment of a reasonable day's work affected tenants taking slate and timber twelve miles, from Kirkby Thore to Kirkby Stephen, for farm buildings. The agent intended to impose penalties on those who "do not appear or will not take a reasonable Cart load which I only fix at 40 Sto[ne] per Cart Load [5 cwts, whereas] the common run in the Country is 48 stone".³⁷ This was no better than the 5 cwt loads in carts shifting sediment from Whitehaven harbour in 1687,³⁸ and confirms the small size of carts seen by Celia Fiennes in 1698.³⁹ Even in 1794, Andrew Pringle reported that cart loads contained "less than sixteen cubic feet".⁴⁰ Such carts could be 3½ ft long by 2½ ft wide and less than 2 ft deep. The weight carried would depend on the bulk density of the contents and the extent of filling. Hence, cart loads are indicated in Table 4 by placing the quantities in square brackets. The accounts seem to cover the whole of the years stated, but no evidence has been found for intervening years.

Table 4 shows three principal coal consumers on the Lowther estate. Lime kilns used 3,000 loads (29.9% of the total), Lowther Castle took 2,554 loads (25.4%), while the gardens used 1,342 loads (13.4%), probably for heating greenhouses. From the Reagill and Sleagill output, 50% went to the limekilns and 23% to the gardens, while the Castle took 44.5% of the Bedlands output. Although there are missing years and four Bedlands accounts compared to three for Reagill and Sleagill together, some interesting preferences are shown. For example, the Castle obtained 75% of its coal from Bedlands and, if its stove, dairy and laundry are included, 78.6%. By contrast, the limekilns had only 27.8% and the gardens 26% of their coal from that source. This situation may well reflect J. S. Bland's remark that the "not very bituminous" Reagill coal burned "*dull red*" with "*a strong sulphurous smell*", qualities which would be unacceptable in a grand mansion and might suggest that the Bedlands coal was of better quality. This contrast becomes even more marked for nine other users, apparently for domestic purposes, namely: Mr [Joseph] Benn (Lord Lonsdale's land agent), Mr Ward (probably Revd James Ward, curate of Lowther and master of the Grammar School),⁴¹ Thomas Yarker (park keeper of Park House), Thomas Crowden (brewer of Park Side), Edward Wallan,⁴² Mr Nicholson,⁴³ John Pearson, unnamed widows, and the shepherd. Of their 1,366 loads of coal, 96% came from Bedlands. All 276 loads for the kennels came from that source, as did 98% of coal for the school, probably the Grammar School at Hackthorpe.⁴⁴ By contrast "the College", which had reverted to its former function as a manufactory in 1740⁴⁵ and later became the estate office in Lowther New Town, had 87% of its coal from Reagill. The large amount of (poorer?) Reagill coal used in lime kilns suggests that improvement of agricultural land was important.

A later account book running from 1837 to 1862⁴⁶ records coal being carted from Bolton (nr. Wigton), Sebergham and other sources, but the dominant supplier until 1839 was Jonathan Thompson, apparently from the coal yard in Penrith. However, in April 1839 he was paid £2 18s. 0d. for "6 Cart loads . . . from Croglin to the Limekiln at Askham . . . each cart load containing 6 Loads of Coals each" as though some cart quantities were still calculated in horse loads. Many other entries show that carts carried from 13 to 16 cwts, but wagons could carry up to 2½ tons each. From September 1839, John Cowper was the chief supplier, followed by John Smith from 1843. The effect of opening "Freight services . . . early in January 1847" on the Lancaster-Carlisle railway⁴⁷ was almost immediate for, on 28 January 1847, "2 Cart

TABLE 4.
Coal Supplies for Lowther Estate Use, 1822-34.

Year Source Destination	1822 Bedlam	1822 Reagill	1826 Bedlands	1826 Sleagill	1827 Bedlands	1827 Sleagill	1834 Bedlands at 1s. 8d.	Total Loads
Castle	507	156 + [216]	696	90	483 + [24]	169	213	2554
Castle stove			45	51				96
Dairy			63		66	3	60	192
Laundry			117		132	9	114	372
College	57	240 + [149]						446
School	108		96		108		69	381
Hackthorpe School		[8]						8
Mr Benn's (1)	105		114		156		45	420
Mr Ward's (2)	96	18	126	18	132	3	63	456
Gardens	36	322 + [56]	9	303	33	310	273	1342
Castle Stables			9					9
Dog Kennels			33		27			60
at Askham			45		57		63	165
at Shap							33	33
at New Town							18	18
Lime Kilns	354	270 + [778]	195	234	186 + [44]	885	54	3000
Widows	6							6
Mr Nicholson's (3)	6							6
Shepherd's		[16]	42		33			91
Park House	66		78		84			228
Edw. Wallan's (*)							33	33
Thos Yarker's (4)							45	45
Thos Crowden (5)							42	42
John Pearson's							39	39
Totals	1341	1006 + [1223]	1668	696	1497 + [68]	1379	1164	10,042

Notes: Figures in square brackets represent loads carried in Lord Lonsdale's carts.

Parson & White's *Directory* (1829), 595) lists the following five individuals all at Lowther New Town:

- 1 Mr Joseph Benn was Lord Lonsdale's land agent at Lowther.
 - 2 Mr Ward was perhaps more likely to be Revd James Thornborrow Ward, curate of Lowther and master of the Grammar School, rather than William Ward the Lowther gardener at Lowther Hall.
 - 3 Mr William Nicholson is listed but without his occupation. Robert Nicholson is listed as "agent".
 - 4 Thomas Yarker was the park keeper living at Park House, Lowther.
 - 5 Thomas Crowden (Crowder in Parson & White) was the brewer living at Park side.
- * Edward Wallan actually wrote out and signed the 1834 account so was probably the estate accountant (not included in Parson & White).

loads of Coals [were brought] from Railway Station at 9¹/₄d. per cwt”, which contrasts with John Smith being paid 11¹/₂d. a cwt. By August 1847 coal was coming from Clifton station at 9d. per cwt, a reduction of 21.7 per cent compared to John Smith’s price. As the accounts do not record any coal from Reagill, Sleagill or Newby, presumably the other sources were cheaper, so that the coal pits started to fail between 1834 and 1837, a decade before the railway could have been a factor. This might help to explain why no colliers were recorded in the 1841 Census. The fact that no “collier” entries occur after 1821 in the parish registers might indicate that men still working the pits were mature with completed families, but still some years from death. Presumably customers near the railway and with the greatest bargaining power, such as the Lowther estate, would be the first to switch allegiance, while small local customers further from the railway might tend to continue with the established source. Thus, the decline was probably gradual as operators found that increasingly deep workings were uneconomic.

Fieldwork at Reagill, 28 August 1989, checked on 14 July 2003 (Figure 3).

To support this study, fieldwork was undertaken, especially around Reagill. Results were plotted on a first edition Ordnance Survey map 1:10,560 (6 in = 1 mile) which shows ancient strip fields extending north-east and south-west of the village. The coal outcrop is less than 700 yards west of the village and, at Pithills Plantation, it turns east to pass about 500 yards south of the settlement. Pithills was awarded to Lord Lonsdale as plot 18 (36a. 3r. 27p.) when Reagill was enclosed in 1813. Its northern quarter has old spoil heaps. North of Pithills, regular lines of spoil heaps of former bell-pits follow the north-east alignment of several strip fields from the outcrop to within 200 yards of the village, but neighbouring fields show no sign of having been disturbed by mining. The linear field widths indicate that medieval strips had been consolidated, and were labelled “Old Inclosures” on the enclosure map. Their survival in that form suggests that villagers prized their occupation, particularly by any who valued extra income derived from working coal. Many spoil heaps are regularly spaced about 35 yards apart, especially along the field length, as if the bell-pits were developed in sequence down the north-eastward dip of the coal (Fig. 3). The spacing reflects the extent to which colliers could work in such thin seams from a central shaft, and also prevent the collapse of rocks above. The highest land (946 feet above datum) lies amid the densest spread of spoil heaps while the contour spacings indicate that ground slope decreases north-eastwards from nearly 3 degrees to about 1 degree. As the estimated coal dip increases from nearly 4 degrees to over 6 degrees, the workings would become progressively deeper down dip, except where erosion had removed overlying rock as around Reagill village,⁴⁸ so that most mining occurred between the outcrop and the village. However the first edition geology map (see note 21) labels “old coal pits” up to 300 yards east of Reagill and more are shown a like distance north-west of the village. Though no trace of either group was seen during the fieldwork, their viability is evident from the cross-sections drawn across those areas. (Fig. 5) The outcrop shows that former quarrying left a small relatively steep scarp, now much overgrown. This would be the site of most pre-1686 coal extraction.

North-west of Reagill, surviving traces of mining are confined to a narrow belt of

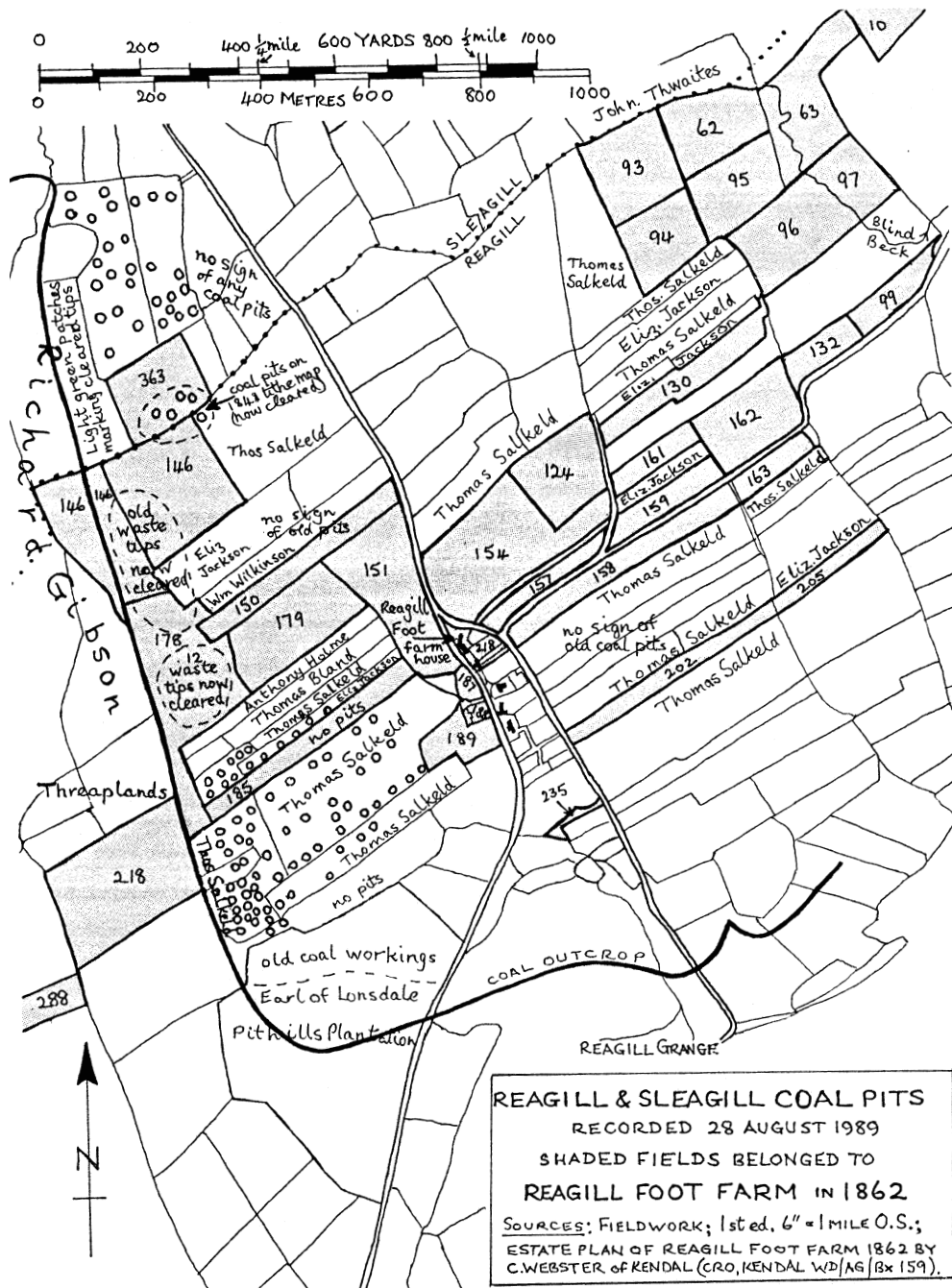


FIG. 3. Location map of surviving and former bell-pits in Reagill and Sleagill townships. Shaded fields belonged to Reagill Foot farm in 1862 when neighbouring owners were identified on an estate plan. Thomas Salkeld's land had clearly been a focus of mining activity.

rough pasture about 150 yards wide next to the outcrop. Beyond the township boundary with Sleagill, to a point where the outcrop turns sharply south-west as it crosses Sleagill beck, more spoil heaps were in a field next to the outcrop, but had been removed shortly before 1989, leaving several lighter green patches in the grass. In the field east of this and touching the township boundary, a few more “coal pits” were shown on the 1841 tithe map,⁴⁹ but have since been removed leaving no trace. In the north-east angle between these fields, spoil heaps occupy two further fields, but in a more random arrangement than those in Reagill. Sleagill residents call these two fields “Pithills” (not to be confused with Pithills Plantation in Reagill). Cross-sections suggest that coal would have been found there, down to the reported working depth of about 75 feet, but would then deepen quickly north and east of these two fields so that mining became uneconomic beyond their boundary. In all about 100 spoil heaps or traces of them were seen in Reagill plus more than 30 in Sleagill. Clearly the total would formerly have been significantly greater. It is clear that the main concentration of surviving pit heaps were on land owned by Thomas Salkeld in 1862 and, while Elizabeth Jackson had a string of six bell-pits in a neighbouring strip, the owner of Reagill Foot had no pits in his strip (no. 185) sandwiched between Salkeld’s fields. However, Reagill Foot’s land⁵⁰ had many pits near the outcrop in fields 178, 146 and 363 (its only field in Sleagill). These pits would be shallow and have all been cleared, suggesting that individual owners exercised preferences for both the selective exploitation of their land and, then much later, its reclamation. The frequency with which the 1862 estate map shows Thomas Salkeld’s and Elizabeth Jackson’s fields next to Reagill Foot land appears to reflect a much earlier medieval distribution of occupation that would have been adapted by centuries of gradual change through mutual trading of strips.

To develop the fieldwork observations, it is useful to study the general geological structure of the coal seam whose V-shaped outcrop to either side of Sleagill beck allows the dip of the coal to be determined by plotting where each topographic contour crosses the outcrop (see Fig. 1). Pairs of equal value lie on a structural contour (strike line) of the same value. In this case pairs of intersections at intervals of 25 feet from 750 to 875 and at about 890 feet, show that the coal dip gradually increases north-eastwards from about 3.6 degrees to about 6.3 degrees.⁵¹ To project strike lines south-eastwards, useful values are found where the southern part of the outcrop crosses ground contours east of Pithills Plantation. Their position suggests that the structural contours are curved, so that the coal seams appear to be gently warped. West of Sleagill Head Plantation, structural contours are more difficult to determine, since the coal outcrop is masked by superficial deposits, mainly boulder clay. The problem is clear when the interpreted outcrop on the late nineteenth-century geology map from Low Murber to north-east of Brown Howe is compared with the geological interpretation of 1965 (Fig. 4). While borehole evidence would be essential to solve the difference, the second survey shows more credible responses to local topography. Both interpretations suggest an undulating deformation of the coal deposit.

In the areas of disturbed ground near Low Murber and Bedlands Gate the position of the coal deposit is clear (Fig. 4). When the estate of Matthew Betham of Towcett is reconstructed from the 1839 tithe map and schedule for Newby,⁵² it is clear that he would have worked coal mainly in field 551. North-east of that field,

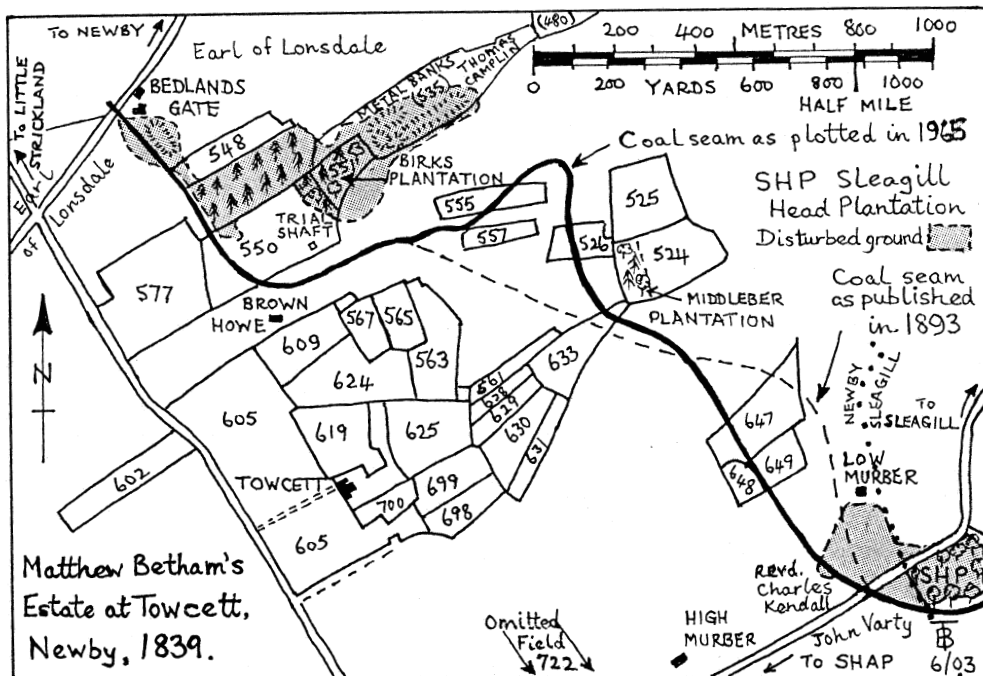


FIG. 4. Matthew Betham's estate at Towcett, Newby in 1839. (Source: CRO(K), WDRC/8/155, tithe map and schedule). Since the coal seam outcrop is masked by superficial Boulder Clay deposits, differing interpretations of its position arise. Only fields north-east of the outcrop could yield coal. It is significant that Betham's field 551 (pasture in 1839, now Birks Plantation) lies between a disused trial shaft on his land and the metal banks (spoil heaps) on Thomas Camplin's land (plot 535). Thus fields 551 and 550 were the focus of Betham's coal working activities, but there is no sign of coal working in most of field 548. When mining ceased some disturbed ground was planted or became overgrown with trees. This also occurred at Pithills and Sleagill Head Plantations and suggests that Betham may also have found coal under Middleber Plantation. His field 722 has been omitted to save space, but is shown at a reduced scale on Fig. 1. It was an enclosure of 26 acres.

the broken ground and metal banks in plot 535 (called Bedlands Bottom) belonged to Thomas Camplin senior, whose farm of 134 acres was scattered across much of Newby. This field and two more north-east of it were isolated from the bulk of his land. Bedlands Gate farm and the most north-westerly section of the coal outcrop is still owned by the Lonsdale Estate, which now also owns Betham's estate (now called "Towcett Mansion") and other properties. In 1839 Low Murber farm, and disturbed ground next to it, was owned by Revd Charles Kendall and occupied by Thomas Kendall. In Sleagill township nineteenth-century property ownership is difficult to trace, since the tithes were commuted at enclosure in 1813, and no relevant property deeds have been found.

Establishing the general geological structure allows sample cross-sections to be drawn, so that the depth and extent of the coal can be judged and linked with landscape features (Fig. 5). As Parson and White noted that coal in Newby was being worked to a depth of 25 yards in 1829, not long before the industry collapsed, it probably gives a reasonable indication of the maximum working depth. Section A-

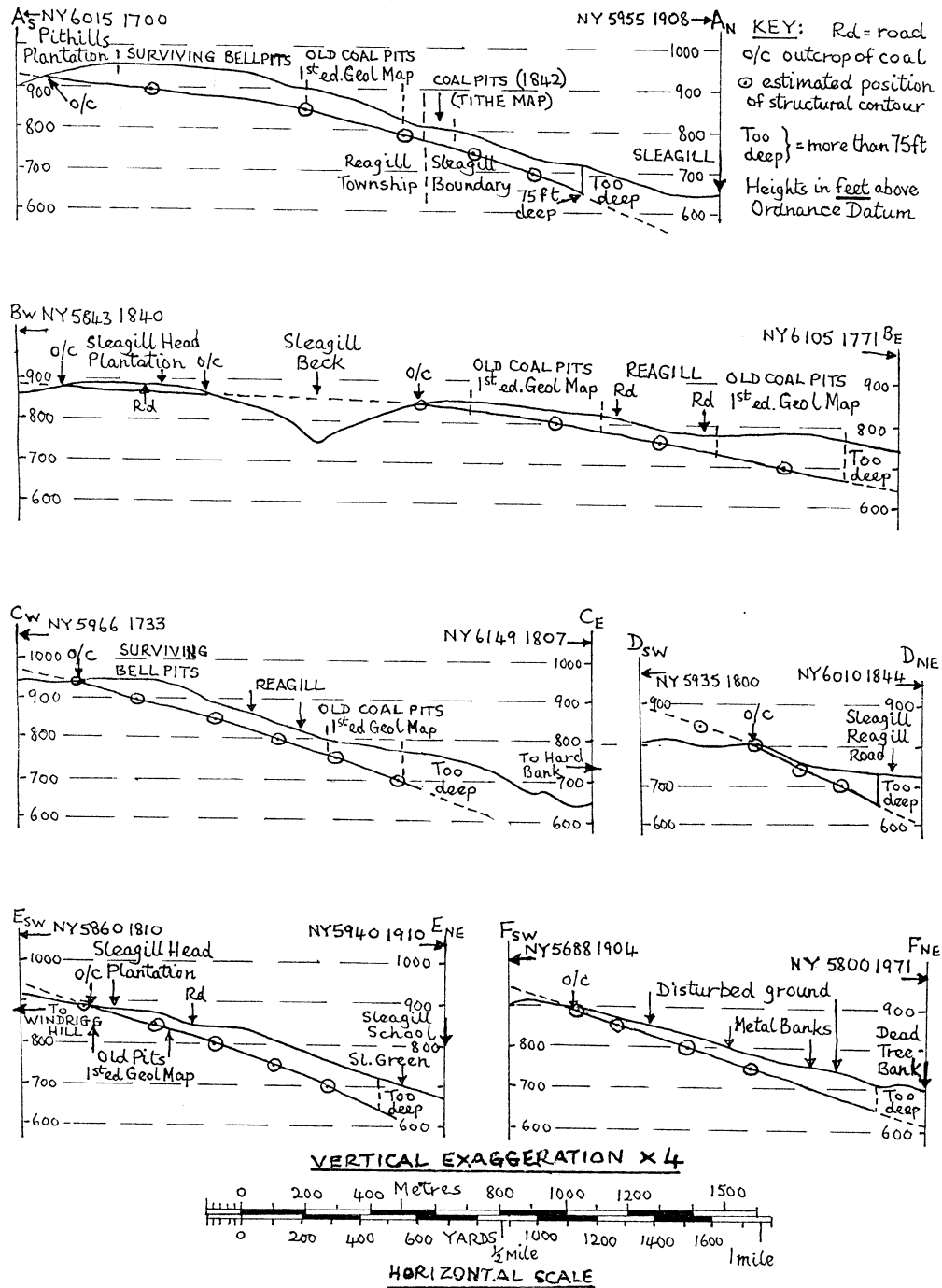


FIG. 5. Cross-sections to reveal the geological structure of the Reagill to Newby coal seam. The general direction of each section end is indicated by letters added to the section identifier. The coal seam and topography were plotted originally using 25 feet contour intervals and then simplified to 50 feet for this illustration. (See text for discussion).

A runs obliquely across the dip from Pithills Plantation to Sleagill and suggests that 75 feet depth was reached right under the northern margin of the two fields of existing spoil heaps north of the Sleagill township boundary at NY 597 186. The thin coal seams would make the effort and expense of deeper workings uneconomic, even though the coal would continue towards Sleagill. Another section D-D, across the same two fields in the direction of maximum dip, shows that a 75 feet depth is reached at the eastern boundary of the same fields and that, at the nearby road to Sleagill, the depth would be about 90 feet.

A third section C-C taken east-north-eastwards through the highest point west of Reagill towards Hard Bank (687 ft) suggests that former erosion had considerably reduced the depth of the coal under Reagill itself. Further east on the section, ground slope lessens so that the area of "old coal pits" soon reached 75 feet deep. Another section B-B was drawn to show the approximate relationship of the Sleagill Head Plantation coal deposit to the "old coal pits" near Reagill and the effect of the Sleagill Beck valley. It is clear that the Sleagill Head workings were relatively shallow. A further section E-E, from the direction of Windrigg Hill to Sleagill school, suggests that the coal perhaps continued close to the workable limit almost to Sleagill Green, but was not exploited.

A sixth section F-F was taken near Bedlands Gate on a line close to a "trial shaft" (NY 573 191)⁵³ and through Birks Plantation and some "metal banks" (spoil heaps) shown on the Newby tithe map (1839). The section follows the line of fields 535, 480 and 482 (most of the Dead Tree Bank holding) owned by Thomas Camplin senior. The coal soon deepens under the plantation, reaching a depth of about 75 feet a little beyond the north-east end of the metal banks, reflecting a clear relationship between the extent of workings and waste disposal. The plantation, like those at Pithills and Sleagill Head, is on the disturbed area of shallow, surface workings.

Conclusions

While it has been possible only to sample aspects of the history of coal exploitation at Reagill, Sleagill and Newby, the detail exposed between the enquiry about suitable borers and the industry failing in the mid-1830s should help other researchers to explore further within the overall framework established in this study. Although the coal output was insignificant compared to the West Cumberland coalfield, it is clear that when transport was relatively difficult and expensive, local people had to make the best use of all available resources to satisfy local needs and to make a living, especially at humble levels of society. With this in mind the appendix exposes family affairs of known colliers and one minor coal owner. It is hoped that this article may encourage more documentary research into other minor rural industries using purely local resources in Cumbria since, in their time, they must have made a significant contribution to the local economy and deserve much more attention from historians.

APPENDIX

Notes on Matthew Betham and some colliers.

Matthew Betham

Parson and White's *Directory* (1829, 598-9) noted Matthew Betham as a yeoman farmer living in the township of Newby at Towcett where "he has an estate and is working a thin seam of coal". The 1841 Census lists him as independent, aged 40 (wrongly), with servants John Goulding (30), William Wilson (15), Elizabeth Fothergill (25) and Elizabeth Thompson (30), all but the last born in Westmorland. At the 1851 census, Matthew Betham (53) farmed 100 acres at Towcett, had married and started a family. With apparent urgency, on 10 February 1848, he married Alice (aged 25), spinster daughter of farmer William Capstick of Warcop.⁵⁴ At Morland, Matthew's children were baptised: Sarah (21 May 1848-), John (22 August 1849-), Matthew William (17 October 1850; buried 12 March 1867, aged 16), Albert Alfred (1 January 1852-), Edward (25 February 1853; buried 8 April 1858, aged 5), George Waistall (22 September 1854-), Charles (6 April 1857-) and Eleanor Alice (27 August 1859-). Matthew Betham, aged 65, was buried on 28 April 1863. By September 1864, his widow had married Thomas Woof and a daughter Mary Elizabeth was born by that December.⁵⁵ They appear to have had two sons, William (born about 1867) and Philip (about 1873). The 1871 census shows the three youngest Betham children still living with Alice and that her son John (aged 21) was described as "Landowner", but not head of household. The 1881 census lists only Alice Woof (aged 56, head of household) and Mary Elizabeth.

Matthew Betham was baptised at Morland on 22 June 1798 aged 8 months, son of Mr John Betham of Towcett and Betty Walker of Newby Stones who had married by licence on 2 March 1797. Their other children were baptised Sarah (23 June 1803, who died at Temple Sowerby aged 78 in November 1880 and was buried at Morland) and Jane (29 June 1809-). John Betham, yeoman of Towcett, was buried on 25 April 1811 aged 56. On 21 April 1813, Betty the natural daughter of Elizabeth Betham of Towcett, widow, and Thomas Wharton, servant, was baptised, but was buried two days later. Within a month, on 18 May 1813, Elizabeth Betham married Thomas Wharton at Morland. At the 1841 census, in the next household to Matthew Betham at Towcett, his mother Elizabeth Wharton (aged 70, and of independent means) was living with agricultural labourer William Walker (aged 71) and Fanny Wharton (a servant, aged 15). Elizabeth was baptised on 30 December 1770, the daughter of Thomas and Sarah Walker of Shap Beck, farmer, and had brothers baptised William (12 June 1769-) and John (18 November 1772-).

John Betham had been baptised on 28 November 1754, son of Matthew and Sarah Betham of Towside, who had daughters baptised Jane (19 April 1750-), Elizabeth (5 May 1752-) and Sarah (19 August 1757, probably buried 11 September 1766). Matthew, buried on 31 August 1795, aged 70, was described as "agent to Lord Suffolk". Mrs Sarah Betham, widow of Towcett, was buried on 6 September 1799, aged 84, so was about ten years older than her husband. He had been baptised on 18 February 1724/5, a son of John Betham of Thrimby Grange whose other children were William (5 June 1727-), Sarah (10 June 1730-) and Joseph (15 February 1738/9-). Their father John was buried on 3 March 1747/8.

Some Colliers

From the evidence already studied, it has been difficult to identify specific colliers. As no colliers are mentioned in the 1841 and 1851 censuses for the area around Reagill⁵⁶ earlier sources were searched. The 1787 Census of Westmorland mentions a few,⁵⁷ and the parish registers of Crosby Ravensworth and Morland⁵⁸ have relevant entries. Those that specifically note the father's occupation as "collier" have been indicated by [C] in the summaries which follow.

Westmorland Quarter Sessions (CRO(K), WSQR/259/12)

Order, 7 November 1755 for the payment of £1 14s. 6d. arrears of wages to Richard Wallas, collier and pitman, due for work done for David Johnson of "Murrig" (Moorriggs), Little Strickland, coal owner. David Johnson has not been identified. There was a Richard Willis of Newby Stones who married Anne Levinson of Morland on 21 August 1735 and had four children baptised between 1737 and 1746. As no Richard Wallas or Willis was buried in Morland after 1755 and the only one named in the 1787 census was a servant in the household of Mr Henry Holme in Reagill, he would then have been elderly, but I have been unable to prove whether he was the same person.

1787 Census of Westmorland

There is no surviving census return for Sleagill township. The only colliers recorded in Morland parish were in Newby constablewick (township).

Newby

(p. 241) **John Lough** (*sic*), [C] and wife Jane. Lough was an uncommon name in Morland. John Lough by consent (under 21) married Jane Milburn of Morland on 10 November 1755 (she was older). From Newby they had sons baptised: John (7 July 1756-) and Thomas (30 May 1758; buried 17 June 1758). Jane, wife of John Lough of Newby, was buried on 11 August 1805 aged 79 (born about 1725-6) so that John Lough widower of Newby Stones then married "his servant maid" Elizabeth Fallowfield on 1 September 1806. He was buried on 11 May 1817 aged 81 (born about 1735-6) and she followed on 3 May 1828 aged 67 (born about 1760-1), so at marriage was in her mid-forties when he was 70. His first wife had been about ten years his senior.

(p. 242) **Joseph Burrel** [C] wife Mary, four sons *Edward*, Joseph, Richard, Thomas and daughter Betty (a knitter). Morland baptisms include: Betty (31 March 1776-) [C]; *Edmund* (18 January 1778-); Richard (26 December 1783-); Thomas (27 December 1785-) and John (30 October 1788-). Joseph Burrel [C] of Newby was buried on 29 November 1801 aged 50. At Morland, he and Mary Tompson married on 14 May 1775. He was baptised on 14 July 1751, the son of *Edward* Burrel of Newby and she was baptised on 23 July 1747, a daughter of Thomas Thompson of Morland.

The only colliers noted in the 1787 Census of Crosby Ravensworth parish were in Reagill township.

Reagill

(p. 196) **John Cragg** ("Coleart"), no wife, 5 five children John, Mathew, Agnes, Margaret, Alice. His marriage has not been found, but some children were baptised at Morland: *John* (28 July 1774-) and Thomas (23 September 1776; buried 17 July 1780), both sons of John Cragg [C] and Jane his wife of Towcett, then Susanna (baptised 7 November 1781; buried 20 March 1782); followed by *Matthew* (13 March 1785-) at Reagill, Crosby Ravensworth, where their mother Jane was buried on 16 January 1786, not long before the census.

(p. 197) **Thomas Jaques** ("Coleart"), Mary Jaques [his wife] and three children, Thomas, Elizabeth, and Ann. This simple census entry hides a series of family tragedies. The father had married Deborah Bowness on 11 October 1770 and sired two daughters baptised *Elizabeth* (23 March 1772-)* and Mary (19 June 1774; buried 16 May 1775). Their mother was buried four months later on 12 September 1775, aged 32. Thomas Jaques then married Margaret Hodgson on 24 August 1777, and fathered Margaret (- buried 8 April 1782) and *Ann* (baptised 28 September 1778-), but their mother was buried on 9 October 1784. Undeterred, on 14 May 1786, Thomas Jaques married Mary Robinson and their son *Thomas* was baptised on 29 December 1786 just before the census. More children were baptised: John (27 December 1788-), Samuel (2 May 1791; buried July 1824, aged 33), Anthony (25 December 1794-) [C] and Christopher (25 December 1800-). On 22 May 1809 Thomas Jaques of Reagill, householder aged 64, was buried (born 1744-5) and in July 1838 Mary Jaques of Sleagill was buried aged 81 (so was born 1756-7).

*On 16 March 1794 Debora, illegitimate daughter of Betty Jaques and Richard Hindson, the reputed father, was baptised at Morland. The mother would have been nearly 22.

(For comparison the 1787 Census of Stainmore lists 17 coalminers, two coal carriers and five in "mining").

Crosby Ravensworth Parish Registers

Richard Simpson [C] had two sons baptised: Richard (16 December 1621) and Mungo (30 March 1623).

Mongie Simpson [C] had his son John buried on 13 December 1620. The father may have been a brother of Richard Simpson whose son seems to have been named after him.

William Wynde [C] had two children baptised: James (6 November 1627), Mabel (14 February 1629/30).

It seems likely that "John Richardson, killed in a Coal Shaft" and buried at Crosby Ravensworth on 2 April 1736 was also a miner, rather than a passer-by who might have fallen down an unfenced shaft.

Morland Parish Registers (other than those noted above)

Richard Burton (collier) and his wife Alice, of Little Strickland, had three children baptised: Jane (8 August 1773-), James (30 July 1775 [C], buried 20 September 1776, aged 1), James (12 July 1777-) [C]. The marriage and burials of Richard and Alice have not been found.

William Hebson [C] of Newby High Moor and his wife Betty had Robert (baptised 22 January 1797-) and (at Morland Wood) Richard (13 April 1794-). They also had a daughter Mary baptised on 20 February 1783 while living at Sleagill. In Morland, the only William Hebson marriage before 1794 was on 21 May 1782 to Elizabeth Tebay of Kings Meaburn.

Richard Hebson (collier) of Sleagill was buried on 29 August 1800 aged 43. He was baptised at Morland on 8 November 1756 (son of Richard Hebson). He married Ann Wharton there on 10 May 1790 and they had children baptised: Richard (20 February 1791-) and Thomas (1 April 1795, buried 9 September 1800, aged 5).

Robert Mitchell of Sleagill and his wife Sarah (Wilkinson) had children baptised: Matthew (25 November 1798-), John (6 February 1802-) and Isabel (23 June 1804- [C]. Robert was perhaps baptised in October 1775 the son of Matthew Mitchell and his wife Isabel of Little Strickland.

Matthew Mitchell of Little Strickland, housekeeper and coalminer aged 42, was buried 11 March 1797. His baptism has not been found.

William Davidson of Newby High Sides and his wife Esther (Little) had children baptised: George (30 September 1798-), Hannah (8 November 1801-) [C], Esther (3 June 1804-) [C]. An infant son William was buried 27 October 1797. William Davidson of Newby Head was buried 8 June 1832 aged 69 (so was born about 1761-2).

Jonathan Birkbeck of Sleagill (collier) and wife Ann (née Nanny Mallinson, buried 27 March 1828, aged 59) married at Lowther on 31 October 1793 and had children baptised at Morland: Sarah (aged 2½) and Margaret (both 12 January 1803-) [C] and Elizabeth (28 February 1813-) [C]. Jonathan Birkbeck (not stated as collier) of Newby and wife Ann also had Ann (25 April 1798-), and of Sleagill Joseph (10 June 1810-) and Thomas and Jonathan “reported to be two years of age” (both 12 July 1807). This son Jonathan was buried 4 February 1872 aged 68. Jonathan Birkbeck of Sleagill was buried on 27 March 1843 aged 72. The only compatible baptism in the Mormon microfiche (I.G.I.) was at Brough-under-Stainmore on 3 May 1772, son of Jonathan (who married Jane Addison there on 13 June 1771) and who was buried there on 26 January 1805, a collier of Swindale Head.

Matthew Cragg of Sleagill [C] and his wife Frances had children baptised: John (7 March 1813-) [C], Elizabeth (8 May 1818-) [C] and William (2 April 1821-) [C]. Matthew Cragg husbandman of Long Marton, had married Frances Chapelhow at Bolton, Morland on 29 April 1810. A son Thomas was baptised at Bolton on 11 November 1810.

Richard Lambert of Sleagill and his wife Mary seem to have moved house regularly. They had children baptised: of Angel Hill, Isabel (9 October 1775-) [C]; of Weathery Crook, Richard (26 December 1776-): of Sleagill, Margaret (27 December 1778-) [C]. The marriage and burials of Richard and Mary have not been found.

Thomas Patterson of “Bedlam Gate” married Mary Heling of Sleagill Head on 24 February 1766. Of Howgill⁵⁹ their children were baptised: *William* (14 April 1767-), *Susanna* (26 April 1769-), John (3 March 1771-); of Angel Hill,⁶⁰ Isabel (9 October 1775-) [C]; of Newby, Rebecca (14 April 1776-) [C], *Thomas* (14 February 1778-) [C] and *Grace* (27 March 1782-). At the 1787 census Thomas “Paterston” was listed as a “day labourer” living with wife Mary and children, William, Susan, Thomas, Grace (infant) and Richard (infant). Also a daughter Jane was buried on 10 December 1797, aged 8 [C]. Thomas Patterson of Newby was buried on 18 November 1811 aged 71 (so was born about 1740).

George Woof of Newby and his wife Mary had children baptised: Betty (10 April 1778 [C]; buried 28 August 1778, aged 4 months) and Mary (2 January 1780-).

No references to colliers were found after April 1821.

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Notes and References

- ¹ Oliver Wood, *West Cumberland Coal, 1600-1982/3* (1988), CWAAS Extra Series, xxiv.
- ² Blake Tyson, “Building Accounts for enlarging a farm building at Maulds Meaburn, Cumbria”, *Vernacular Architecture*, **18** (1987), 17-24. Based on CRO(C), D/Lons/L, AM 73.
- ³ As also happened at Kirkland in 1773 when arrangements were being made to rebuild Skirwith Hall two miles away. *CW2*, lxxxi, 101. As the work progressed at Meaburn, a brick kiln was built and clay was taken from the field across the road. The clay pit was filled with the rubble when the barn was demolished.
- ⁴ J. F. Haswell, *Registers of Crosby Ravensworth, 1570-1812*, CWAAS (1937).
- ⁵ W. Parson & W. White, *Directory . . . of Cumberland & Westmorland . . .* (1829), 598, 597, 590.
- ⁶ J. R. Dakyns *et al.*, *Geology of . . . Appleby, Ullswater and Haweswater* (1893), 49-50. Surveyed in 1876.
- ⁷ J. S. Bland, “On the Carboniferous Rocks in the neighbourhood of Shap and Crosby Ravensworth”, Manchester Geological Society, *Transactions*, **iv** (1863), 44-68, esp. pp. 55-7.
- ⁸ On 29 September 1869 Agnes aged 32 married Edmund Dufton, a 44 years old widower and an assistant controller at the Post Office in Liverpool.
- ⁹ Elizabeth was baptised on 9 March 1767, the daughter of William Salkeld of Meaburn. Her father had married Barbara Parkin of Meaburn on 24 May 1762. They had five other children baptised: John (9

- March 1763-), James (20 September 1764-), *Elizabeth*, Thomas (13 June 1771-), William (20 January 1774-) and Mary (11 October 1780-).
- ¹⁰ Penrith Farmers' and Kidd's auction sale of statuary from the garden, planned for Saturday 21 August 1999, was prevented by last-minute Grade II spot listing by the Secretary of State on 18 August. (Auction catalogue; and CWAAS, *Newsletter*, 33 (2000).
- ¹¹ According to F. H. H. Parker (ed.), *The Vale of Lyvennet* (1910), who used information from J. S. Bland's sister, Bland's mother Elizabeth died when he was six months old, but I have not found confirmation of this.
- ¹² R. G. S. Hudson, "On the rhythmic succession of the Yoredale Series in Wensleydale", *Proceedings of the Yorkshire Geological Society* 20 (1924), 125-35.
- ¹³ D. Joy, *Regional History of the Railways of Great Britain: the Lake Counties* (1983), 26.
- ¹⁴ Nicolson & Burn (1777) i, 505-6.
- ¹⁵ N. & B. i, 506; R. S. Boumphrey and C. R. Hudleston, *Armorial for Westmorland and Lonsdale* (1975), 97, 192 and 316.
- ¹⁶ Parson & White (1829), 588-600.
- ¹⁷ CRO(C), D/Lons/W, Tickell correspondence, box 4, 54.
- ¹⁸ Wimble: an auger. An instrument for boring in soft ground or for extracting rubbish from a bore-hole in mining, 1692. (*OED*)
- ¹⁹ CRO(C), D/Lons/L3/1/18. The accounts run from April 1674 to November 1688.
- ²⁰ CRO(C), D/Lons/L3/1/16, Estate accounts 1694-1701, second half of volume.
- ²¹ The 1st edition solid geology map (Radcliffe Science Library, Oxford) shows "old pits" close to the coal outcrop at NY 588 183 near Sleagill Head Plantation, half-a-mile southwest of Sleagill village.
- ²² B. Tyson, "The Whitehaven Salt pans 1632-86 . . .", *CW2*, xcix, 202, 211.
- ²³ In 1719 Westmorland magistrates defined a packhorse load as 256 lbs, or 2 cwts, each of which contained eight stones of sixteen lbs. (CRO(K), WQ/I/ 4) At 21 loads to the score, a long ton would therefore weigh 2688 lbs rather than 2240 lbs, a difference of four modern cwts. For discussion of another example of these units see B. Tyson, "The Troutbeck Park Slate Quarries", *CW2*, lxxxiv, 168.
- ²⁴ Based on N. & B. i, 577.
- ²⁵ J. F. Curwen, *Later Records of North Westmorland* (1932), 106, quoting a Quarter Sessions order of 8 January 1682/3, following a petition of tenants on the south side of "Stainmoordale".
- ²⁶ F. H. H. Parker (ed.), *Vale of Lyvennet* (1910), 61.
- ²⁷ H. Owen, *The Lowther Family* (1990), chapter 22.
- ²⁸ Parson & White (1829), 522.
- ²⁹ This is supported by an entry on 6 May when Thomas Ellan and William Smith were paid 10s. 4d. for carrying 16 bushels of wheat from Barnard Castle, including 4d. for toll, so that a load was 4 bushels.
- ³⁰ CRO(C), D/Lons/L, manorial boxes, Reagill and Sleagill, 17.
- ³¹ Four pecks = one bushel. The number of loads was wrongly added to a total of "2977 Lds 3 P"; 3 P short of the correct addition which was incorporated into the accountant's later calculations.
- ³² Bruce Jones, "Variations in the Length of the Perch in Cumbria", *CW2*, lxxxiii, 177-9, esp. p. 178.
- ³³ CRO(C), D/Lons/L3/5/74.
- ³⁴ A. H. Smith, *Place-names of Westmorland* (EPNS, 1967), ii, 147, supposes that Bedlandgate or "Bedlam yate" is suggestive of "a madhouse". Perhaps understanding of the bedding of geological deposits there would allow a more credible interpretation.
- ³⁵ CRO(K), WD/AG/ box 159, Title Deeds of Reagill Foot.
- ³⁶ CRO(K), WQ/R/I, Misc. papers re Reagill 1802-1812. After the 1801 General Enclosure Act, in 1803 the 1767 private Crosby Ravensworth Inclosure Act was repealed and new Commissioners were appointed to carry a scheme into execution. In the Commissioners' Proceedings Book the final entry, on 22 December 1812, shows that Robert Lumb and Thomas Harrison minuted a notice for a meeting to be held at John Herd's Inn at Shap in January [1813] "for the purpose of reading over and executing our Award pursuant to powers given us" by the Act of 41 Geo. III [1801].
- ³⁷ CRO(K), WD/CAT/Mus., letters of Christopher Dobson, especially 13 May 1780.
- ³⁸ CRO(C), D/Lons/W, Tickell letters, box 5, no. 74 & 76, discussed in B. Tyson "Some harbour works in West Cumberland before 1710", *Transactions of the Ancient Monuments Society*, 29 (1985), 194.
- ³⁹ She wrote that Westmorland carts could "hold not above what our [southern] wheele barrows would carry at three of four tymes". (J. Hillaby (ed.), *The Journeys of Celia Fiennes* (Futura, 1983), 224).
- ⁴⁰ A. Pringle, *View of the Agriculture of . . . Westmorland* (1794), 307.

- ⁴¹ James Ward seems a more likely candidate than William Ward, the Lowther gardener whose household coal might have been included in the garden supplies. Their occupations are derived from the Parson and White *Directory* (1829) as have those of Yarker and Crowden.
- ⁴² Edward Wallan drew up and signed the 1834 coal account, so was probably the estate's clerk/accountant.
- ⁴³ Either Robert Nicholson (agent) or Mr William Nicholson (occupation not stated by Parson and White).
- ⁴⁴ Parson and White, *Directory* (1829), 594.
- ⁴⁵ J. V. Beckett, "Lowther College 1697-1740", *CW2*, lxxix, 104.
- ⁴⁶ CRO(C), D/Lons/L3/5/115, "Account of Coals bought for [Lowther] Castle and other places".
- ⁴⁷ See note 13, p. 26.
- ⁴⁸ See cross-sections B-B and C-C on Fig. 5.
- ⁴⁹ CRO(K), WDRC/8/114, Reagill tithe award January 1841.
- ⁵⁰ The Reagill Foot title deeds (CRO(K), WD/AG, box 159) trace the ownership from a John Burra in the 1770s until 27 March 1806 when his daughter and heir, Elizabeth, was admitted customary tenant at Reagill manor court. At Crosby Ravensworth she married William Bland (of Knock), Long Marton on 30 December 1794 and their second son, John Bland, was baptised at Long Marton on 26 August 1794. On 20 December 1845, Elizabeth Bland died and her will, dated 9 November 1841, left to her son John and his son William the use of her real estate at Reagill and elsewhere during John Bland's life. At Long Marton, John married Ann Bellas on 25 October 1821 and had seven children. The third of these was William, their eldest son, baptised on 11 January 1825. John Bland was buried in July 1862 aged 68 and his wife Ann aged 68 followed in October 1863. The Inland Revenue succession accounts for John are listed in the estate papers immediately after the Estate Plan of 1862 on which Fig. 3 is based.
- ⁵¹ Vertical spacing divided by horizontal distance equals tangent of dip. For example $(890-850)/700 = 3.63^\circ$; $(850-800)/600 = 5.29^\circ$ and $(800-750)/500 = 6.34^\circ$.
- ⁵² CRO(K), WDRC/8/155, Newby tithe award 1839.
- ⁵³ Shown on the O.S. 1:25,000 map.
- ⁵⁴ The Warcop parish registers record William and Eleanor Capstick as *innkeepers* at the *Wheat Sheaf* inn and had children baptised: Margaret (3 January 1818-), George (24 March 1821-), *Alice* (8 December 1822-), William (9 February 1825-), Eleanor (28 September 1828-) and Richard (2 May 1830-).
- ⁵⁵ Based on 1871 census and General Register Office records 10 b 789 and 10 b 561.
- ⁵⁶ Westmorland Census microfiches now available at CRO Kendal.
- ⁵⁷ L. Ashcroft (ed.), *Vital Statistics: the Westmorland Census of 1787* (1992). Publ. by CRO Kendal, Curwen Archives Trust.
- ⁵⁸ Crosby Ravensworth registers WPR/7, published from 1570-1812 (CWAAS, 1937). Morland registers WPR/76, published from 1538-1742 (CWAAS, 1957).
- ⁵⁹ Howgill (NY 585 203) is in Newby, Morland.
- ⁶⁰ Angel Hill (NY 595 201) is half-a-mile north of Sleagill.