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THE FORGOTTEN IRON MINES OF KIRK MAUGHOLD, ISLE OF MAN

David B. Hallis

SYNOPSIS

In the north-east of the Isle of Man, is an almost forgotten iron mining district, covering an area of two or three square miles. Two main fissures and a number of smaller ones, which were filled with a soft earthy mixture of country rock (slate), hematite and carbonates of calcium and manganese, were mined from about 1820 to 1910. This paper describes their location and geology. A history and output analysis of the mines are given. Figures and diagrams illustrate the locations of the mines, mine survey plan and geology of the area.

The name Maughold is pronounced "Mackhold" (Ed.)

INTRODUCTION

The Isle of Man can, through the famous Laxey lead mine, stake its claim as one of the major mining areas of the British Isles. However, few people know of the other, smaller, mining ventures there. Even in the Isle of Man itself, ignorance, and a sense of mystery exist about the old workings. Almost no-one even knows where to find the iron mines of Maughold, even though, for a brief three decades, they contributed significantly to the economy of that part of the Island.

The first figure shows the extent (and also the lack) of knowledge about the geology of the British Isles, and the position of the Isle of Man within it. The Island lies on the western edge of a Carboniferous basin which reaches the eastern shores of the Lake District, North Wales, and Southern Scotland. Although knowledge of the Irish sea basin itself is scant, borings for oil and gas have proved Carboniferous strata. These strata are all middle and lower Carboniferous, and are related to the Pendle limestones. Coal lies in the younger Carboniferous strata which lie near the coast of Lakeland, but are missing as far west as the Isle of Man. The backbone of the Island runs from Maughold in the north-east down to Bradda Head, near Port Erin in the south-west of the Island. A sketch map (Figure 2) shows these features, and their associated mining areas. The axis on which the hills lie is the same as that of Skiddaw in the Lakes, and the Scottish Highlands. Southwards, it projects into the hills of Leinster. These are all Ordovician or Silurian in age, and suffered uplift during and after the emplacement of the Devonian granites. Although some iron is found near these granites, they were not the source of the iron at Kirk Maughold. Instead, the deposit there shows similarities to the iron mines of the Lakeland coast, whose geology appears in more detail in Figure 3.

Two major works have appeared in recent years on the iron ores of the Lake District^{1,2} but none has appeared for the Isle of Man except Lamplugh's definitive and thorough, but now out-of-date, work of 1903.³ One of the problems is that both in the Lakes and in the Isle of Man, the more recent strata are missing. It would appear that, although the granites are of Devonian (Caledonide) age, the metal veins and the

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hematite deposits are post-Carboniferous. However, the Permo-trias and later strata are entirely absent in the slate highlands of the Isle of Man. They can be found on the island, under the Quaternary glacial deposits, and above some steeply dipped, heavily faulted Carboniferous strata, under the Ayres plain, north of Ramsey. The iron staining found in those strata by boreholes will be considered further later.

The Maughold iron mines lie in the north-east of the Island, to the east of the north-south geofracture which runs from Ramsey down to Laxey. Figure 4 shows the geology of the area, Figure 5 shows the Ordnance Survey of the area, Figure 6, a sketch of the area, shows roads, the electric railway route, major farms, iron, copper and lead veins, and the iron mines. Figure 7 is a copy of a plan of Maughold village by Megaw, showing several of the shafts and adits of Glebe Mine, one of the two main mines of Maughold. Figure 8 is reproduced from an old legal document by kind permission of the Manx Museum, Douglas, Isle of Man. It shows the other one of the two big mines – Drynane, alias Dhyrnane or Daunane.



Fig. 1. Geological "jigsaw" map of Northern Britain, showing major features, the relation between the Isle of Man, Scotland and Lake/and, the boundaries of the Carboniferous basin, and the general lack of knowledge about the sea bed areas.

EARLY HISTORY

Lamplugh summarises the early history of these mines. Here is given a summary, based on his account. Iron is first specifically mentioned for the Isle of Man in a grant of the Island to Sir John Stanley by Henry IV in 1406. In 1668, a lease for all the mines of the Island, with leave to erect a smelting mill, was granted to two merchants, one of London, and one of Liverpool. The papers of Charles, 8th Earl of Derby, mention Maughold - in 1700 there was shipped from Daunane (Drynane mine) 277.5 tons of iron ore. Governor Sacheverell in his account of the Island, published in 1702, again mentioned iron as well as lead and copper. From 1710, payments for exploration were offered, to stimulate development of ore lodes there. A few years

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becomes available, and is well summarised by Lamplugh³ – Chapter 12 – “*The metalliferous veins of the Island*”, and by Burt et al.⁴

THE MODERN MINES

Although mining was dominated by Glebe mine and Dhyrnane mine, there were several other mines such as Magher-e-Breck (alias Marbrick) mine. Many of these mines appear to have been originally locally owned and run ventures.

Mines were often run and worked by the landowners or tenants of farms at that time. Examples exist in the East Baldwyn mine, a lead mine run by the Crowe family of East Baldwyn in the centre of the Island, the vicar’s Glebe mine of Maughold, and the farms at Magher-e-Breck and BallaCannel in Maughold. Many of these were turned into limited companies from about 1870 in which names from the management of the larger lead mines of the Isle of Man start to appear, such as John Kitto and Richard Rowe; Magher-e-Breck, Glebe Mine, and Dhyrnane, together with the Hematite Development Company, dominate from about 1860 to the end of the mining life of the area around 1910.

We can now consider the individual mines in more detail. For the present study, we disregard the lead-copper mineralisation, which occurred separately from the iron mineralisation. The main feature apparent in the geological map, Figure 4, is a vein striking from Maughold village in a north-west direction to a remarkable exposure at Stack Mooar on the north coast. This was worked by the Glebe mine. Striking south-east of Maughold village was the Dhyrnane vein which reaches the coast south of Maughold. Inland, some copper and lead veins of the type seen at the base of Maughold Head were found and mined, all of them unprofitably. Similarly, almost all the inland iron trials were insignificant. However Magher-e-Breck was more successful. A trial on its [47] northern extension to Ballasaig revealed little, but the main mine was worked under the name Ballajora for some years. Near the coast, and south of the Dhyrnane mine, Port Mooar and BallaCannel had veins of limited total output. For all the iron mines, the country rock was slate. Of gangue there seems to have been none except fault-breccia (mainly slate and clay), quartz at Stack Mooar, and carbonates of lime, and iron at Ballajora. Figure 6 shows the positions of these mines and veins.

DESCRIPTION OF THE MINES

A description of the mines, and their geology and development is given first. Full accounts of these are given by Lamplugh³ and McKay and Schnellmann.⁵

Stack Mooar

This exposure of the Glebe vein in the cliffs of the north coast is almost as remarkable as that of the Bradda copper vein, near Port Erin in the south-west. However, it is rarely seen by anyone, because of difficulty of access. It strikes south-east across the foreshore, into the cliff, and onto Glebe mine, near Maughold. It dips north-east 15° from the vertical, and is filled with quartz and fault breccia, with hematite in cavities. The most important old working was a deep adit, driven from a little above high water for 95 fathoms, with cross-cuts. Little ore appears to have been found.

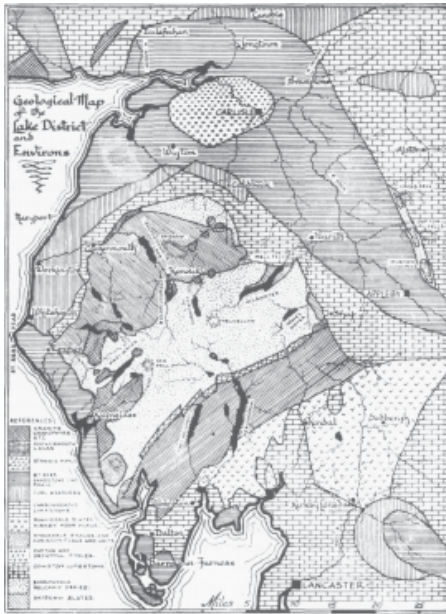


Fig. 3. Simplified Geological map of the Lake District of North West England.

vicar, Rev. Harrison, was disregarded. However, his successor, Rev. Kermode, took legal advice and held a successful lawsuit, and from that time, royalties from the mine were paid to the vicar. Census reports of that time indicate that no more than sixteen men were employed there. A few years later, a Glasgow gentlemen became sole lessee. At that time the annual shipment from Ramsey is said to have been about 500 tons per month, seventy men now being employed. The south-east extension of this lode, if pursued to the coast, would have come out north of the Drhynane lode, so the two lodes (Glebe and Dryhnane) must be in different fissures. A plan of Glebe mine is shown in Figure 7.

Drynane Mine

A plan of this mine is reproduced in Figure 8. It reaches the coast in a small inlet about 490 metres east of Port Moor. On the Ordnance Survey map, the inlet erroneously marked Dhyrnane is about 195 metres too far north for this mine. There, a small amber trial followed a (probably Tertiary) dyke, which is unconnected with the iron mineralisation being considered here. The Drynane mine itself consists of a level going in from the cliff about 600 metres in a N-N-W direction on a lode dipping east with sumps on ore bodies at 19 metres and 70 metres from the entrance, and connected with a shaft from the surface at 132 metres. A large quantity of hematite was obtained between the cliff entrance and the shaft, but little was found further in. The chief work was done between 1857 and 1874. In 1858, the level was driven through two bunches of ore, the first small, the next 2-3 metres wide, and capable of remunerative work. In the next two years, no more ore was found, even though the

Glebe Mine

An opening on the Stack Moor vein was made about 0.8 km south-east of Stack Moor and close to Maughold village. At this place, about 100 metres north-west of the vicarage, on an area known as Staff Lands, a shaft and some shallower trials were sunk. Two levels were driven on the lode. The deep level went 196 fathoms (371 metres) south-east, and 212 fathoms (401 metres) north-west.

This work was done principally by a company formed in 1836, under a lease made in 1837. The crown had bought all the mineral rights from the Duke of Athol in 1828, so the mine should pay royalties to the Crown. However, the vicars of Maughold argued that since the mine was on "Staff Lands" (the vicar's glebe) it did not even form part of the Duke of Athol's manorial lands, nor did the Crown have rights to it. The then



shaft had by then been sunk, and a 10 fathom (19 metre) level had been driven. In 1861 the adit was 95 fathoms (180 metres) (beyond shaft?) but without discovery of more ore. Sir W.W. Smyth comments in 1864 *on careful examination I saw that the drift was really carried on in the lode and that it occasionally formed a vein a foot or two in width but utterly valueless*. It carried on until 1873, only minor amounts of ore being found.

Two more lodes form a system $1\frac{1}{2}$ miles further west of the two just described. These are Ballajora (Ballagorra) and Magher-e-Breck (Marbrick). At times in their history they were separately worked; at other times they were worked as one mine. Essentially Magher-e-Breck consists of two almost parallel veins joined at their southern ends, running nearly north-south.

Ballajora Iron Mine

These workings, from which a fair amount of hematite was marketed, were worked between 1858 and 1874 on north and south lodes dipping eastward, close to the farmstead of Magher-e-Breck in the parish of Maughold. There are two shafts north of the farm, one said to be 18 fathoms (34 metres) deep, and the other 30 fathoms (57 metres) deep. Here the best ore was found. An adit connected with these had an entrance in a crosscut 240 metres (250 yards) south of the farm. The

Fig. 5. *Topographical O.S. map of the Maughold area. (with permission of the Controller of Her Majesty's Stationery Office. Crown Copyright reserved.*

2 - 5 feet wide of a fair quantity of hematite. In 1873, Smyth's reports mention two stopes and a sink below the adit, which fell into disuse soon afterwards.

A number of smaller trials forms the southern group, near Ballajora chapel. They are in a field 237 metres (250 yards) south-east of the Wesleyan chapel at Ballagorra, 335 metres (350 yards) north of the same chapel, and on the cliffs 474 metres (500 yards) south of Gob Ny Garvain. All produced little result.

Port Mooar has several hematite veins, strongly evident on its south-west shore, and another vein exists on the coast just south of BallaCannel farm. These were all worked with some success, but dates and tonnages are almost unknown.

Output and Economic History

Returns given for the mineral statistics by Lamplugh³ and Burt et al.⁴ Table 1, show nothing in the interval 1845-1855, so work prior to 1855 must have been sporadic, and small in tonnage. However, a greatly variable annual tonnage is recorded from then up to 1881. No more ore is recorded from then up to and including 1900. The variable annual figures, their small tonnages, and the occasional inclusion of spathose (siderite = chalybite = ferrous carbonate) gives some indication of the bumpy, irregular nature of this small ore field. Over 1000 tonnes per year were sold in the 1855-1865 period, but output rapidly fell after that. All the indications are of a few near-surface pockets of ore which were rapidly worked out. The data given by Burt et al.⁴ might at first sight suggest strong activity up to 1910 or later, but closer inspection of their findings reveals a more accurate picture. As an example, consider references by Burt et al. to Ballajora, alias Ballagorra.

Ballajora

Iron

Year	ore (tons)	Value £
1858	566.00	226.40
1860	253.80	100.00
1863	188.80	84.90
1864	No detailed return	—
1865	120.00	20.00
1869	1291.60	1013.00
1870	No detailed return	—
1874	100.00	25.00

Ownership

1899 – 1900 John A. Brown

Management

1899 Geo. W. Cubbin

Employment

1900	Underground	None
	Surface	2
	Total	2

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Further collation of information by Burt produced:-

Iron

Year	Ore (tons)	Value £
1859	No detailed return	–
1860	No detailed return	–
1861	222.00	183.00
1862	No detailed return	–
1863	151.00	105.70
1864	No detailed return	–
1865	No detailed return	–
1866	Data missing	–
1867	Data missing	–
1868	220.00	66.60
1872	872.00	436.00
1873	1350.80	1333.80
1874	325.00	408.00

Ownership

1864 – 1873 The Crown

Comment

1867–8 Suspended

Although there is duplication of information and conflict between figures in these two collations because the second source included some other mines, the two sets of data taken together show a strong activity from about 1858 to 1874, and little afterwards. The inference is, that when its heyday was over, local interests worked it as a part-time small venture (only 2 men employed in 1900) and cleared whatever pockets or stringers of ore remained.

Several of the larger mines continued with a few men each under the Hematite Development Company round about 1900 - 1904. The names, Rowe and Wilson, became replaced by Thomas Poulis and St. John A. Biggs. However, by about 1912, a new company - the [Port] Mooar Syndicate Limited [51] had to be formed, to bring in new capital. Few mines by now employed more than two or three men, and the life of the Maughold iron ore mines was nearly over. Burt's cryptic comments bring activity in this ore field to a close:

Maughold –	1902	standing
	1903-1913	not worked
Glebe –	1902-1912	Glebe Mines Limited
	1913	Mooar Syndicate Limited
	1911-1912	Caretaker only
	1913	Reopened - 3 men on surface only

Doubtless, the first world war, and the consequent labour shortage forced the final closure of these mines.

Table 1 from Lamplugh (31, and from Burt et al.,⁴ show that after about 1890, production was insignificant, even on a local level. However, the production from 1855 - 1875 was certainly significant on a local level, and during that period upwards of two hundred men must have found employment in different capacities in all the mines.

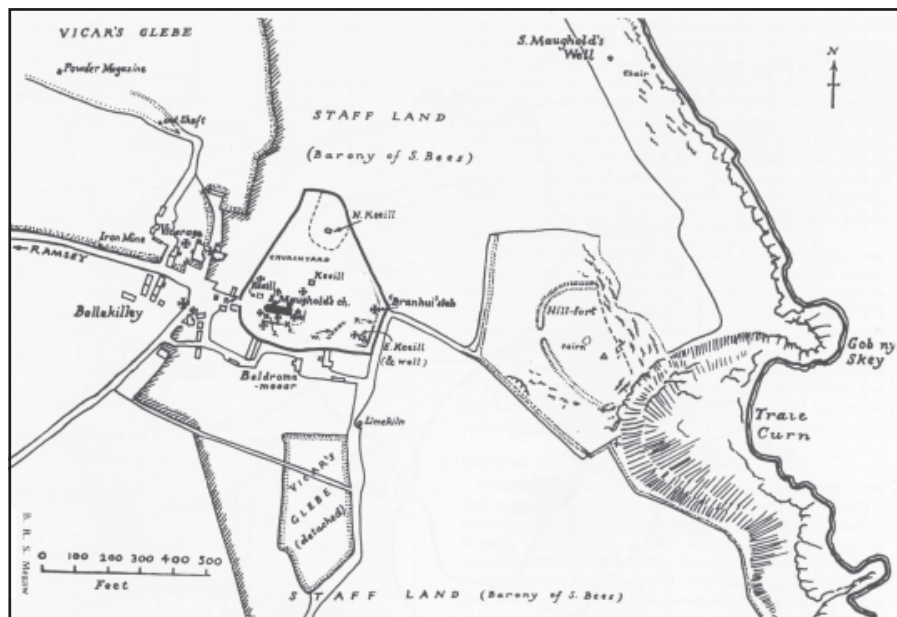


Fig. 7. Megaw's plan of Maughold village showing the position of the Glebe Iron Mine.

Other trials near Maughold, and other sources of iron on the Island.

Two other trials are connected with their proximity to the Dhoon granite, an intrusion about 2 km south of Maughold, and are therefore, strictly speaking, outside the range of this study. They were a trial at Cornaa bay – about 300 metres upstream from the sea, and high up on the north-east bank of the glen, and also at Dhoon glen where a conspicuous wheelcase and waterfall can be found. The nearby Dhoon quarry which cuts into the top of the Dhoon granite also contains hematite. However, these three occurrences of iron are “skarn” mineralisations related to separation of metal oxides from the aluminosilicate mass as the Dhoon granite cooled. The second type of mineralisation found in the Isle of Man, lead-cop perzinc-silver, produced mines in the Maughold area, notably the Barony mine in a copper lode south of Cornaa, the Ballaskeg (Great Mona) copper mine into the cliff 700 yards north of Cornaa, the Maughold Head copper mine (just below the present day lighthouse, and erroneously marked on maps as a lead mine), and also the Ballaglass lead mine. All of these were unprofitable, and contained little if any mineral worth mining. They contained no significant amounts of hematite and were therefore separate from the main Maughold iron deposits. The only other Manx mine which had iron in any quantity was at Central Foxdale, which was a lead-copper-zinc mine in the southern central part of

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the Isle of Man. Here, some hematite was found at depth, and profitably sold. However, its association with the lead, zinc and copper and also with the Foxdale granite again separates it from the Maughold group.

The iron mines can thus be summarised and related to the three mineralisation episodes in the Isle of Man.

Maughold group – hematite mineralisation

Glebe and Drynane

Ballajora and Magher-e-Breck, + trial at Ballasaig + trials near the Wesleyan chapel at Ballajora.

Trials on the coast, at Port Mooar, BallaCannel.

Dhoon group – skarn mineralisation

Dhoon Rhennie – including wheel case, and numerous small trials in Dhoon glen. Cornaa trial, and Dhoon quarry.

Foxdale group – sulphide ore intrusions

Central Foxdale, deeper levels.

[52]

The geology of the oreloade

One might ask why the minerals have only been found in two localities - the Lakes on their west coast, and the Isle of Man on its east coast. Dunham⁶ indicates that subsidence of the Irish Sea basin, followed by loading with more sediments compressed the Permian and Carboniferous strata, causing updip movement of fluids bearing iron, thereby bringing the iron to the edges of the Irish Sea basin where the Carboniferous and Permian beds are upturned and uplifted to their highest altitudes. We note: first that the Manx iron oreloades dip eastwards (seawards) steeply, as do the slate strata; second, that the north-south geofracture (Ramsey-Laxey) has higher ground to its west, lower ground to the east; third, that in the south of the Isle of Man, the “Chasms” near Port St Mary, represent the edge of a down throw east of the island; fourth, that divers have found a “wall” of limestone about two miles out to sea from that area. Concerning the Lake District, note that again the strata dip seawards (eastwards), and the hematite deposits contain large quantities of (Permian?) sand, some carbonate minerals, and little else.^{1,2,6,7} (Sedimented ironstones exist in the U.K. - such as in Lincolnshire or Teesside – but contain appreciable quantities of phosphorus in the form of apatites, and minerals related to these.^{9&10} Minerals from the Lake District and the Isle of Man iron ore deposits are known to be low in phosphorus^{1,2,8} and do not exist as sedimented strata; therefore they do not have the same origin as the sedimented ironstones.) Gravity and seismic surveys by Bott,¹¹ Bacon and McQuillin,¹² Cornwell,¹³ and discussions in Moseley,² Naylor and Mounteney,¹⁴ and Donovan,¹⁵ all confirm subsidence of the Irish Sea basin, and presence there of Carboniferous and Permian sediments.

The origin and nature of this oreloade is still a subject for debate, but Sir Kingsley Dunham and others^{1,2,6,7} favour the hypothesis put forward by Lamplugh,³ page 539,

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CONCLUSION

The economic future for the Maughold workings is non-existent: they are worked out, and iron ore from other sources is plentiful. However, as a geological feature, and for their part in the Manx economy of the mid-to late-nineteenth century, they retain a unique place in mining history.

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REFERENCES

1. Rose, W.C.C., Dunham, K.C. (1977) *Geology and hematite deposits of South Cumbria*, Econ. Mem. Geol. Surv. G.B. Sheets, 58, 48.
2. Moseley, F. (ed.) (1978) *The geology of the Lake district* Yorks. Geol. Soc., Occasional Publication No.3.
3. Lamplugh, W.G. (1903) *The geology of the Isle of Man*, Mem. Geol. Survey, HMSO, London.
4. Burt, R., Waite, P., Atkinson, M., Burnley, R. (1982) *The Lancashire and Westmorland mineral statistics with the Isle of Man*, Dept. of Economic History, Exeter University, Northern Mine Research Society, Peak District Mines Historical Society.
5. McKay and Schnellmann - Consulting geologists and mining engineers (1963) *The mines and minerals of the Isle of Man*, Report to the Isle of Man Government Industrial Officer, 1963.
6. Dunham, K.C. (1984) *Genesis of the Cumbrian hematite deposits*, Proc. Yorks. Geol. Soc., 45(1 2), 130.
7. Anon (1983) *Excursion notes - the iron ore field of West Cumbria*, Yorks Geol. Soc.
8. Cubbon, M.A. (1984) Private communication with D.B. Hollis, Manx Museum, Douglas, Isle of Man.
9. a) Northolt, A.J.G., *Phosphate rock*, General Meeting - *Phosphate rich sediments*, Yorks. Geol. Soc., Hull University, 14 March 1987.
b) Balson, P., *Phosphogenic episodes*, *ibid*.
10. Goldring, D.C. (1974) *British iron ores: their future use*, Proc. Roy. Soc. Lond. 339 (No.1618), 271-416.
11. Bott, M.H.P. (1965) *The deep structure of the northern Irish Sea - a problem of crustal dynamics*, in *Submarine geology and geophysics*, Whittard, W.F., Bradshaw, R. (eds) Butterworths, London.

12. Bacon, M., McQuillin, R. (1972) *Refraction seismic surveys in the north Irish Sea*, J. Geol. Soc. Lond. 128, 613-621.
13. Cornwell, J.D. (1972) *A gravity survey of the Isle of Man*, Proc. Yorks. Geol. Soc., 39(1), No. 6, 93-106.
14. Naylor, D.N. Mounteney, S.N. (eds) (1975) *Geology of the northwest European continental shelf*, Volume 1, 89-107 *Irish Sea Basins*, Graham Trotman Dudley, London.
15. Bott, M.H.P. (1968) in *Geology of the shelf seas*, Donovan, D.T. (ed), Chapter 7 - *The geological structure of the Irish Sea basin*, pp. 91-115.
16. Hollis, D.B. (1987) *Similarities and differences between the iron ores of Lakeland and the Isle of Man*, Proc. Yorks. Geol. Soc., (manuscript in preparation).

TABLE 1
Iron ore production in the Isle of Man
as given by Lamplugh and Burt.

Year	Tons	Year	Tons	
1845	0	1871	75+	
1846	0	1872	122+	872*
1847	0	1873	512+	2256*
1848	0	1874	718+	425*
1849	0	1875	—	
1850	0	1876	—	
1851	0	1877	—	
1852	0	1878	100+	
1853	0	1879	230+	
1854	0	1880	91+	
1855	2240*	1881	120+	
1856	—	1882		
1857	—	1883		
1858	566*	1884	100X	
1859	1282*	1885		
1860	1671*	1886		
1861	967*	1887		
1862	647*	1888	16X	
1863	339*	1889	—	
1864	—	1890	—	
1865	120*	1891	—	
1866	—	1892	13X	
1867	—	1893	—	
1868	220*	1894	no iron	
1869	1291*		to ore	
1870	—	1900	recorded	

* Hematite + Spathose

X Mentioned only by Burt et al; type of ore not given

Sites of major iron mines on topological map.

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Name	O.S. Grid Ref.	When Worked
Maughold	SC493908	1857-1874
Glebe	SC493918	1857-1874
Ballajora	SC466904	1858-1874
Maughold Head	SC484927	1866-1867

Dr D.B. HOLLIS
Dept. of Ceramics, glasses and polymers,
Sheffield University,
Northumberland Road,
Sheffield S10 2TZ

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