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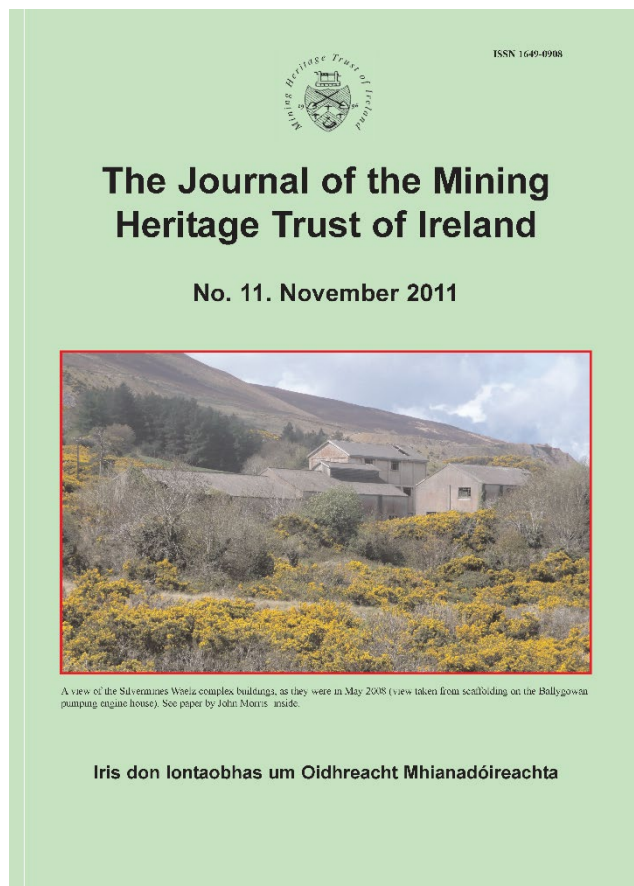
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MINING AND MINERAL WORKING IN THE BELLEEK AREA, IN COUNTY FERMANAGH

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Abstract: Mining in the Belleek area probably started before 1610. After the Great Famine one of the local landlords actively promoted the mineral resources of the area, with a series of mainly short-lived initiatives. The last feldspar working closed in the 1940s. *Journal of the Mining Heritage Trust of Ireland*, 11, 2011 65-70.

BELLEEK

Belleek is a pleasant little town that straddles the River Erne. Most of the town lies in County Fermanagh but some lies in Co. Donegal. The town is famous for its pottery which was founded in 1858, and attracts 150 000 visitors each year (Wikipedia). The town was once part of the Castle Caldwell Estate, in the 19th century owned by the Bloomfield family.

JOHN CALDWELL BLOOMFIELD

John Caldwell Bloomfield inherited the Castle Caldwell Estate in 1849, shortly after the Great Famine. He was "possessed of an obstinate and determined spirit" (Bloomfield 1883) and had a "remarkable insight in to the possibilities for generating employment" (Cunningham, 1980, p168-9). He was involved in an eel fishery, a steamer service on Lough Erne, railway promotion, cottage industries, mines, factories and a pottery. Unfortunately most of these businesses were not financially successful, and the estate went "in to an economic decline from which it never recovered" (Cunningham, 1980, p164). A stained glass window in the Church of Ireland, Belleek, commemorates his part in setting up the pottery (Wikipedia).



Figure 1. John Caldwell Bloomfield. Reproduced from Cunningham 2002 (p71), with permission.

FELDSPAR & CHINA CLAY WORKING

Accounts of the circumstance of the discovery of these deposits vary. In 1883 Bloomfield wrote "nearly a quarter of a century has elapsed since on a hill in Fermanagh, I first found kaolin and feldspar", later he describes the event as "an amateur mineralogist dropping upon a raw material on a mountain side" (Bloomfield, 1883).

Another version is provided by Sir Charles Cameron: "In the fifties I spent my Christmas holidays with the late Mr. John Caldwell Bloomfield, D.L., and his first wife at Castle Caldwell, on Lough Erne., Co. Fermanagh. One day when out shooting with my host, I noticed a white patch of clay and took a portion of it to the castle. I heated it to redness, and on removing it from the fire and allowing it to cool, I found that it had not lost its white colour, this showed the absence of iron oxide. I then said to John Bloomfield that I believed that he had a good porcelain on his estate" (Cameron).

A display of china made from Irish clay at Mr Dargans exhibition of 1853 prompted Bloomfield to approach W.H. Kerr about the clay on his estate, and Bloomfield provided him with a specimen. Kerr tested the clay at his works in Worcester, and found the results favourable (Commission on the Science and Art Department).

In April 1856 The Times carried advertisements for "PORCELAIN CLAY. -To be LET, a BED of PORCELAIN CLAY and FELSPAR. To be worked on such terms as may be agreed upon. Water carriage to all parts of the kingdom. Apply to J. Caldwell Bloomfield, Castle Caldwell, Co. Fermanagh, Ireland" (Bloomfield, 1856).

In 1858 Mr David Birney took out a lease to work feldspar and china clay on the Castle Caldwell Estate "with royalties, at 3s per ton for feldspar, and 1s a ton for china clay", but it seems that the lease was never executed (Anon, 1877). Presumably he found other local sources of these materials, for the pottery that he established in Belleek that year. A mill at the pottery was used to grind feldspar, initially for export to England (Cunningham, 2000).

By 1866 large quantities of feldspar had "been supplied to the Royal Porcelain Company at Worcester, and to the tile factory at Boodeley, Salop" (Anon, 1866). In 1869 a china clay works



Figure 2. Larkhill china clay adit. (Barry Flannery)

was in operation at Garvary Wood, however it had been found cheaper to import the clay from Cornwall, and there was inadequate capacity at the Belleek Pottery for milling Feldspar for export (Commission on the Science and Art Department).

The feldspar deposits faced a similar situation in 1917 when Wright (1918, p111) wrote that they were not "exploited at the present time, because the requirements of the Pottery are so small that it would not pay anyone to mine for the purpose of supplying this demand alone, as long as materials can be obtained from Norway at prices which are reasonable".

During the First World War potash was needed for agricultural and industrial purposes. "It was proposed to use feldspar with lime and water under great pressure for the production of ordinary cement, the residue to be used as potash fertiliser" (Commission on the Natural and Industrial Resources, p31).

In September 1918 the Irish Independent reported "an English company called the Belleek Feldspar Mining Co. has started work at Larkhill, near Castle Caldwell, employing already 30 hands on preliminaries, and 2 shafts have been sunk and some machinery erected. Potash will be produced from the Feldspar mineral or rock, of which there is a large local supply, and the output is estimated at from 300 to 500 tons a week, meaning probable employment of 150 or 200 men and women" (Anon, 1918, p3). The jobs must have been welcome because "workers revelling in the employment were fined for breaking curfew at a house dance. Seventy-three were summonsed and in proper



Figure 3. Interior of Larkhill china clay adit (Barry Flannery).

chauvinistic fashion the women were fined a shilling and the men two and sixpence" (Cunningham, 2000).

In 1919 one shaft was sunk to a depth of 13 metres (Commission on the Natural and Industrial Resources). "Considerable quantities of feldspar were exported to England by the end of 1920. Owing to the conditions then prevailing (i.e.



Figure 4. Tirigannon trial. (Barry Flannery)

the political conditions), the transport difficulties encountered and the cost of installing efficient machinery, the company decided to terminate operations in that year" (Eyles, p3).

When V.A. Eyles visited the area in 1943 he found only two small mines in operation, the Castle Caldwell Mine, 2 miles north of Castle Caldwell Station, and Cashel Ard Mine, 2.5 miles north of Belleek in Co. Donegal. "Both mines are operated, by local labour, on behalf of W. Podmore & Sons Ltd., Caledonian Mills, Shelton, Stoke-on Trent. Messrs. Podmore stated (at the end of 1942) that they had the mineral rights over an area of about 3000 acres. Only a few men are employed at each mine. At Castle Caldwell there were about 8 men, including a foreman, and one man was continuously employed in hand-picking the material mined. Only 4 men were employed at Cashel Ard. No mechanical aids to mining were in use. Holes for shot firing were made by hand-jumper, and no pump of any sort was available, so that the accumulation of surface water caused difficulties, preventing the efficient working of veins beyond a comparatively shallow depth. The output in 1942 was, according to Messrs. Podmore themselves (letter to the Ministry of Supply, Raw Materials Department; 25/11/42), about 200 tons from trial workings. Raw Materials Department state in a letter to the Non-Ferrous Mineral Development Control (19/11/43) that 460 tons were produced between April and October 1943" (Eyles, p4)

IRON MINING

According to Boate (1652, p128) iron "is digged out of the mountains, in severall parts of the kingdom; in Vlster, in the County of Fermanagh, upon Lough Earne". He continues "The English having discovered these mines, endeavoured to improve the same, & to make profit of them, and severall iron-works were erected by them in sundry parts of the land as namely by Sir John Dunbar in Fermanagh, in Ulster; and another in the same county, by the side of Lough Earne, by Sir Leonard Bleverhasset" (Boate, p129-130).

McCracken (1965, p134) mentions the iron-works at "Castle Caldwell: extensive works belonging to Blennerhasset. Working in 1611, burnt 1641." It is highly likely that these works used the locally available ore.

In this era Francis Jennings "was extensively engaged in the iron export trade" and "most of the iron produced by Donegal, Tyrone and Fermanagh found its way to Ballyshannon, where it was bought at about £11 per ton; from thence it was shipped to London, where it realised £17 per ton" (Allingham, p85).

The first recent account of iron on the Castle Caldwell Estate occurs in December 1866 when it was found near a railway line: "Here within a few weeks past there have been discovered bands of haematite, weighty with metal, which promises to be most productive, and, as they lie in the immediate neighbourhood of the line (the workings are not a stone's throw from it), here is a new source of traffic to the line and a new occupation for the peasantry of the district" (Anon 1866). This discovery may have been near the Black Cat Cave, Finner townland, Belleek.

By 1871 Mr Bloomfield "is arranging for bringing forward his really fine haematite iron ore, which description is so scarce and so much wanted by the iron masters of England" (Anon 1871).

In 1873 The Irish Times reported on the "The hematite iron mine at Belleek, - The working of this mine by the Wigan Coal and Iron Company is being proceeded with, and the ore taken away in wagons to the works of the company in England. It is situated near the now famous little town of Belleek, on the property of JC Bloomfield, Esq, DL, of Castlecaldwell, by whom it has been leased to the Wigan Company" (Anon 1873). By 30 June 1875 the same paper carried an advertisement for the Wigan Coal and Iron Company Limited "who are closing the iron works at Belleek and Castle Caldwell". The sale included "1 portable engine, about 12 horse power...head frame, pumping, winding apparatus complete" and 34 tons of rails (M'Gloin 1875).

The mineral statistics for 1877 list an iron mine at Magheramine, owned by Fred B Scott, and managed by John Brockenskin (Hunt 1878). This is the last record of iron mining in the area.

In 1888 parts of Castle Caldwell Estate were for sale. Lot 13 included "The mines, minerals, mineral earths, and royalties upon, within, or under the Lands of Commons, Finner" and other townlands (O'Connor 1888, p29). Mr A. O'Connor bought Lot 13 for £110 (Anon 1888).

COPPER AND LEAD MINING

Copper and lead mining has only been carried out to a very limited extent. The earliest record of copper mining in the area is in 1853, when the Ballyshannon Herald noted "the copper mine is also producing excellent specimens; we have no doubt that, under the direction of Francis Lisabe, Esq., and Captain Stephens, the works will be in full operation in a few weeks (Anon 1853).

In 1854 the paper reported "the mines throughout the counties of Donegal and Fermanagh, under the management of F. Lisabe, Esq., C.E., are producing an abundant supply of copper, lead, zinc, and silver. Some gentlemen from the Donegal Mining Company have lately arrived from London, and are making arrangements for extending the works; we wish them every success. The working classes are receiving constant employment, a high wages, at the mines" (Anon 1854).

These references to copper mining must relate to the Belleek area of Fermanagh because there are no significant copper - dominant deposits nearby in County Donegal (E.G. Griffith 1854 and Cole 1922), and there are no lead, zinc or silver workings elsewhere in Fermanagh (Legg 1980).

In 1856 the Anglo Celt reported that "the Mining Company of Ireland have arranged to work, the mines discovered by Francis Lisabe Esq., on Magheramenagh, county Fermanagh, the estate of Mr Johnston, near Belleek. The miners are expected to arrive and commence operations immediately" (Anon 1856).

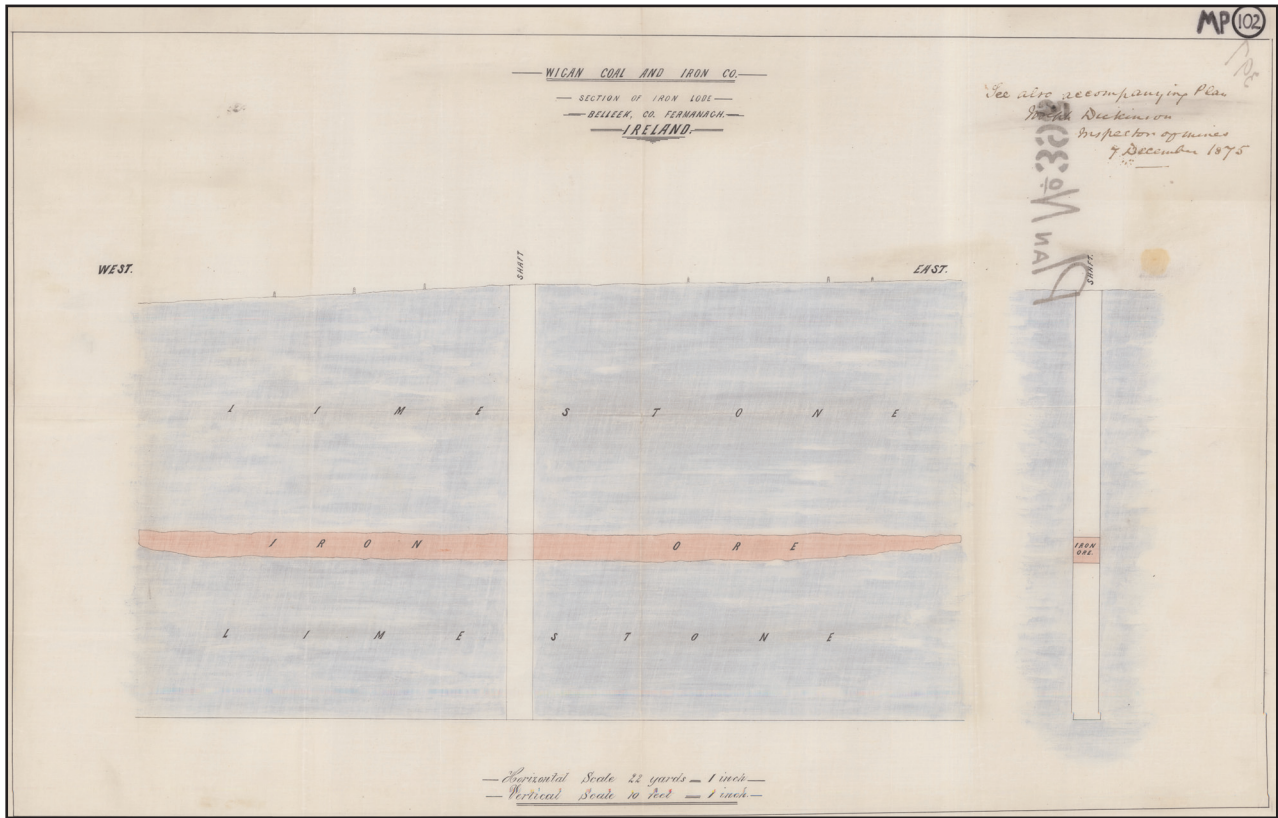


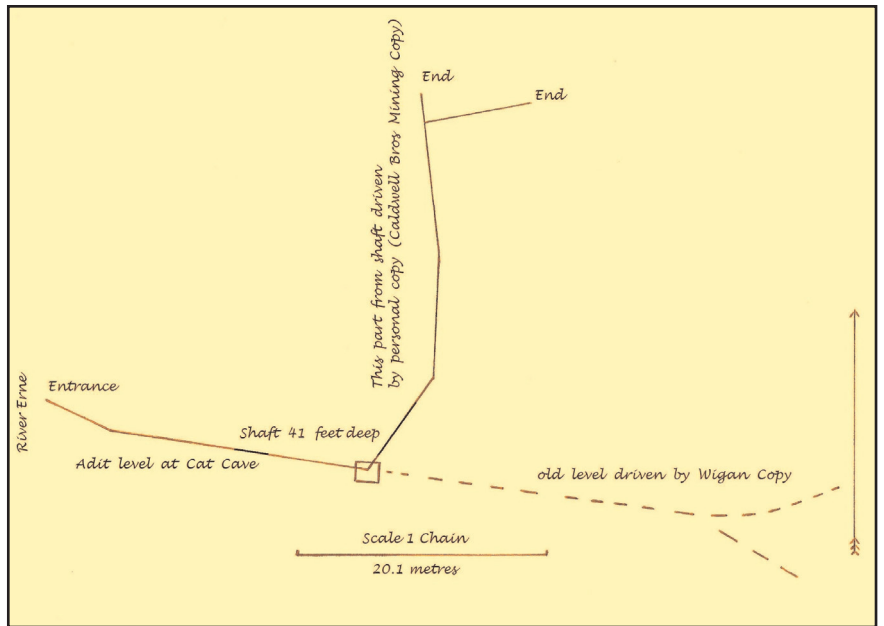
Figure 5. Above. Section of the workings in Commons townland, Belleek, by the Wigan Coal & Iron Company, 1875.

Reproduced with permission from the Geological Survey of Northern Ireland. The vertical exaggeration in the section is 6.6. The shaft was 80 feet deep.

Figure 6. Right. Plan of adit at Cat Cave, redrafted from a tracing by Joseph Dickinson, 1877. Original held by the Geological Survey of Northern Ireland. The north arrow may indicate magnetic north, about 23 degrees west of true north in Belleek in 1880.

Figure 7. Below left. Subsidence at Commons iron mine, Belleek.

Figure 8. Below right. Western and middle adits, Leggs iron mine. (Barry Flannery)



The company's half yearly report records "Magheramenagh Mine, County Fermanagh, - The Company have recently obtained a lease of the mineral rights on this property, and have commenced prosecuting the necessary searches". The accounts showed an expenditure of £12 3s 1d on the mine (Anon 1857). Later The Railway News reported "There are, too, very fine indications of copper on this property, and a mining company was for a short time busily and profitably employed in working it, but had to give over owing to some legal dispute in regard to the royalty. Were that point settled there is not anything to prevent the company resuming its labours" (Anon 1866). The problem may have been that Magheramenagh was held in tenure by James Johnston under a fee-farm grant, which had been lost (Cornwall & Mecredy 1876).

The Times of 23 February 1858 carried an advertisement for "COPPER MINES to be LET, a first-rate investment. Apply to J.C. Bloomfield, Castle Caldwell, Inniskillen" (Bloomfield 1858).

Some further exploration was carried out in the Magheramenagh area, because Kinahan (1889, p17) notes "lead in small quantities: worked about 1872".

There is no further record of exploration until the early 1970s when Amax Exploration Inc. carried out a geochemical survey over a large area of counties Fermanagh and Tyrone. The survey found "moderately anomalous" levels of copper, lead and zinc in the soils south and east of Keenaghan Lough (Horsnail, p20). Percussion "drilling revealed minor amounts of disseminated chalcopyrite, galena and sphalerite, with somewhat more abundant pyrite" (Horsnail, p22).

OTHER MINERAL PRODUCTS

According to Gray (1869, p30) the Belleek Pottery had "an ample supply of the most superior fire-clay from the sandstone, within about seven miles...This clay is required to make 'seg-gars,' or cases, in which the ware is burnt, and must be capable of resisting a very intense heat". Saggars were also made using clay from the brickfield on the banks of the Erne near Belleek (Cunningham 1980).

The discovery of boulders of an attractive marble during the construction of the railway prompted Bloomfield to search for marble on his estate. He found an "extensive quarry of it" nearby, and another marble containing fossils varying in colour from pink to "a rich red". Marble from the second quarry was "extensively used in the external decorations of one of the finest mansions in the neighbourhood" (Anon 1866).

In 1871 Bloomfield made arrangements "for the erection of a Hoffman kiln for the manufacture, at a cheap rate, of both lime and bricks, and probably cement" (Anon 1871). The kiln was probably near Castle Caldwell Station and connected by a tramway to a "brickfield many acres in extent, covered to a depth of from two to three feet with excellent brick earth" (Anon 1878). Sand for making the bricks was available in the River Garvary (Anon 1878), to the north.

By 1878 bricks, drainpipes, roofing and flooring tiles were

being manufactured (Cunningham 1980) and the Castle Caldwell Cement Company was inviting investors to buy shares in their business. According to the company's engineer, Gilbert D. Redgrave, "the quarries adjoin the works, and have been opened out to show a face of about thirty feet of excellent limestone, intersected with layers of shale and cement stone. There is scarcely any bearing on the top of the rock, and, while the upper beds consist of nearly pure limestone suitable for the preparation of first-rate agricultural limes, the lower beds contain silica and alumina in the right proportion to form Portland cement" (Anon 1878). The company was probably dissolved in 1886 (Anon 1886).

SURFACE REMAINS

Feldspar workings are visible in Garvary, Larkhill and Scardans Lower townlands, to the north of Castle Caldwell.

Iron-ore workings can be found from the banks of the River Erne in Belleek, eastwards towards Castle Caldwell in the following townlands: Finner, Commons (subsidence feature only), Ballaghee, Tirigannon and Leggs.

Very little remains of the cement works in Leggs townland, but the nearby quarry is quite impressive.

The copper and lead working sites have not yet been identified. The locations of many historic mine workings are given on the Geological Survey of Northern Ireland's GeoIndex website: http://maps.bgs.ac.uk/gsni_geoindex/. Industrial heritage records are given on the Northern Ireland Environment Agency's Built Heritage Map Viewer: <http://maps.ehnsi.gov.uk/MapView/Default.aspx>.

RECOMMENDATIONS

This study has mainly used the internet to find published information on mining in the area. Local newspapers should be checked for further information on the mines, as should the very large archive of The Wigan Coal and Iron Company. The main priority should be to find anyone that worked in the 1940s feldspar operations, and record their memories while they remain clear.

The area to the west of the former Castle Caldwell Station includes the remains of iron mines, three quarries and a cement works, along with a section of the Ulster Way. A good circular geological heritage trail could be created, and interpretative boards or leaflets provided.

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