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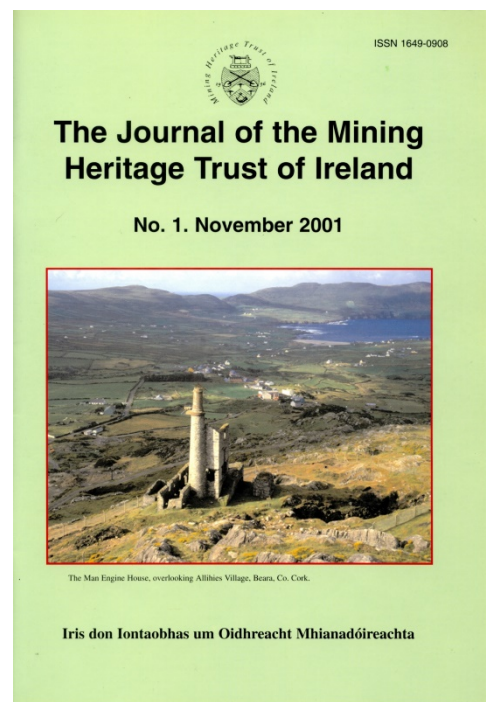
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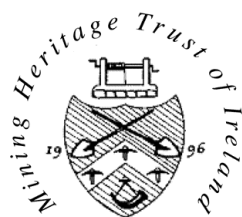
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THE METAL MINES OF DUBLIN CITY AND COUNTY, C. 1740-1825

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Abstract: Most people do not associate Dublin city and suburbs with mining yet the mineral potential of the area was known in from the late middle ages. By the early 19th century some thirty four mineralised sites had been noted and fifteen of them worked. Evidence is limited for most of these but more information may be buried in wills and other family papers. *Journal of the Mining Heritage Trust of Ireland*, 1, 2001, 61-66.

DUBLIN MINES AND MINERALS: BACKGROUND

A mineralogical survey with attributed date of 1497 ascribes three lead locations to the then county of Dublin. These were at Clontarf, Cloghrane and Killiney ("Knockkilleny") (Anon 1497). It is unlikely that these were worked and the next interest expressed in Dublin's mineral potential was in 1561 when John Challoner, a man with an interest in Ireland's mineral potential, sought royal permission to work for lead in Clontarf and Castlknock as well as on his own property on Lambeg Island. The outcome is not reported (Anon 1561).

Even in the next century the only non-ferrous mine reported to be in operation was at Silvermines, County Tipperary. Failure to develop known metal showings even in the 17th century is not altogether surprising since mining is a very vulnerable industry in times of civil unrest as the example of Silvermines showed. Furthermore, royal prerogatives over metal mines were considered to have inhibited their development (Cowman 1988). Such was possibly the case at Clontarf which seems to have been rediscovered around 1660 by a Col. Vernon but not worked (CSPI 1660-'62). Another mineralogical report of about the same period mentions silver under the streets of Dublin city and gives as an example a showing which had been tested "between New Row as you go into Roper's Rest" (Powell c. 1650). A third contemporary report dated 1670 is less specific but enthusiastic nevertheless about Dublin's mineral potential: in the general area of the Pale there was a "store of lead mines affording good quantity of silver; also copper mines and lead mines and other metals and minerals" (Pettus, 1670). However, not until relative tranquillity was restored in the early 18th century, and the question of mineral rights sorted out in favour of the landowner, rather than the royal appointee, could commercial exploitation of known mineral resources confidently begin (Irish Statutes 1699-1720).

The date parameters of this article therefore are bounded by the first evidence of an early industrial demand for minerals towards the mid 17th century and the financing of more technologically advanced operations from 1824 on. During this phase of activity it was economically feasible for short-term workings to be carried out on quite superficial mineral discoveries in Dublin as elsewhere.

NEW DISCOVERIES, 1740-1775

From about 1740 there is evidence of active interest in Dublin's minerals and over the next thirty years, one manganese, three copper and 14 lead mining operations are reported from city and county. Many of these would seem to have been accidental finds in quarrying and road building for an expanding Dublin. Understandably, little detail survives about any of these. In chronological order of known workings, they are:

Robbs Walls, Malahide, c. 1740. An adit from the shore was noted some 80 years later by which time all tradition of it had died. (Weaver 1824).

Castlknock, 1745, an Edward Ford was reported to have been raising lead there, amount unspecified (Rutty 1772).

Killiney, rediscovered and worked for lead 1751-'52, amount unspecified (Pococke 1752)

Dalkey, 1751-'71, "some hundred tons" of lead raised (Rutty 1772) A later report says that here had been a smelter here while another describes the lead vein at the water's edge, the workings filled with sea-water and no landward extension of the mineralization (Stewart 1801; Stewart 1801). In the later 19th century this was considered to be the only mine in Ireland in which tin also was found (Kinahan 1886).

Howth, 1754 lead and manganese reported from between the light house and the castle (Rutty 1772). It was later reported that "a considerable quantity" of manganese and "brown iron-stone" was got from here (Stewart 1801). Either this or a later reworking of it was of sufficient significance to be marked on the 1837 O.S. map (sheet 15) as "manganese and iron works".

Dolphins Barn, c. 1756-70. At Jones Quarry sufficient lead was apparently raised to warrant the building of a smelter (Anon 1768). It was later reported to have been abandoned due to flooding (Fitton and Stephens 1812).

Clontarf, 1756-c. 1770. This lead showing, twice noted previously, quickly reached the tide limit and by 1768 eighty yards of lode were exposed but could only be quarried by bailing out as the tide dropped (Anon 1768). It was mainly worked at that time for silver, the processing of which was reportedly done at Dolphins Barn smelter (Dalton 1838).

Loughshinney, c. 1760-c.'72. This copper showing may first have been worked by Arthur O'Connor who also claimed to have discovered coal here (O'Connor 1762), then been taken over by a Benedict Arthur of Seafield, the ore-body being

noted as “thready and small”..(*Rutty 1772*) Nevertheless, it is the most likely source of the 56 and three quarter tons of copper ore noted as being exported from the Drogheda customs’ area in 1771-2.(*Customs Books*).

Dunsink 1762-?: Such was the exaggerated expectations of a lead showing there that “several people will find employment and comfortable subsistence from the very bowels of the earth”. (O’Connor 1762). This probably didn’t happen!

Kilmainham, 1767-’69, 60 or 70 tons of lead were reported to have been produced from Kilmainham Quarry in 1767-’68 producing 60% lead with 24 ounces of silver per ton. Its closure was reputedly due to flooding but lead was also found at the nearby Commons from which ten tons were raised before that too flooded the following year having reached a maximum dept of only 27 feet according to a later report. (*Rutty 1772*; “Adventurer” 1835).

Some of the workings are undated but seem to have taken place in the decades before 1772, viz (all *Rutty 1772*)-

Diswellstown, where a Thomas Keenan was reported to have extracted copper from a quarry, with no mention of whether he managed to sell it.

Crablough, where lead was raised by Capt. Vernon, possibly a descendant of Col. Vernon who investigated Clontarf a hundred years earlier.

St. Catherines where Sir Samuel Cooke reportedly raised lead. **Cloghran**, apparently rediscovered (i.e. first noted 1497), with two lead lodes there being anonymously worked.

Lead was also reported at **The Scalp** and at **Old Johns Bar**.

The existence of lead in the rock under **Stephens Green** was noted in 1772 and when gravel was brought in for the pathways there it is reported to have contained traces of gold! (*Rutty 1772*; Wakefield 1812) A later report states that the source of this gravel was the river Dodder at Ballinascorney and Rathfarnham (Kinahan 1886).

It would appear, therefore that the minerals that were worked were generally small-scale short-lived operations on superficial showings. Most of them were lead mines and smelters have already been mentioned in relation to two of them. There is a record between 1751 and ‘69 of a third lead smelter run by an Anne Tyrdell on Lazars’ Hill. If it ran continuously between those dates then it probably absorbed much of the production from the other Dublin mines (*Watson’s Directories 1751-1770*) That there was a demand for such lead at the time seems attested by the decision of Waterford Corporation in 1774, for instance, to advertise in Dublin for the supply and installation of lead water pipes (*Waterford 1774*)

PHASE 2, 1775-1810: LOUGHSHINNEY

This was a less productive phase, possibly because the previous discoveries had been worked out. The only one of these mines that is recorded as being reworked during was the copper showing at Loughshinney (q.v.). However new mineral finds were reported from various parts of the county and these were put together in a fanciful mineralogist’s report of 1800 (*Stewart 1800*) which extols the following additional mineral locations, none of which it seems was actually mined -

Porterstown on the Royal Canal which had not only two courses of lead, but copper, coal, iron and various ochres! A later report of this adds manganese (*Anon 1835*).

Stillorgan-Kilmacud, manganese found at a spring between these locations.

Skerries, islands offshore, lead and sulphur, later said to have been “well spoken of” (*Newenham 1809*).

Near **Balbriggan**, copper.

Powerscourt Estate, copper.

Malahide, lead found when a grave was being dug in St. James’ churchyard.

Loughshinney seems to have undergone two further phases of working in the late 18th century. Possibly the mine lay idle for some years when a London consortium took it over in 1785 and over the next two years it produced 150 tons of copper ore. It was leased again in 1786 to a Dublin surveyor named Frizell. (*Pratt 1996*). He may be responsible for the 115 tons of copper sporadically exported from the area in 1789-1805 (*Customs Books*). However, two other groups were apparently also involved here. One source mentions a Mr. Dempsey along with an English company (possibly the Associated Irish Mining Company which was working in Avoca at the time), and another associates it with a Mr. Kilsby (*Sleator 1806*; *Weaver 1824*)

The latter source provides some detail of how the mine was tested. A horizontal adit was driven for 320 yards apparently at right angles to the earlier workings. Presumably such ore as was found by this method was excavated but the failure to hit a main lode lead to the abandonment of the mine. One comment in 1800 dismisses it as being “poorly worked” but concedes that “very rich ore was got”. Reiterating the following year he states that it was “very productive” but said that the adit by then was “going to ruins”. He attributes the closure of the mine to disagreement among the owners (*Stewart 1800, 1801*)

Loughshinney was reopened about 1807 by a partnership headed by a Mr. Prunt. Associated with him were a James Blacker, a Mr. Penrose and Alderman Hone. This seems to have been a serious attempt to work the mine at depth. They sank a 90 foot shaft and followed the veins of copper they hit there. However, they found the ore body to be diffused “like the branches (recte “roots”?) of a tree”, (*Weaver 1824*) In the process they sold 159 tons of copper and while a later source again attributed the mine’s closure in 1810 to “disagreement between the partners” (“Adventurer” 1836) it is likely that the nature of the ore body meant that the mine was economical. Even if a good vein had been found at depth, there would have been major difficulties keeping it unwatered being so close to the coast. In any case there is no report of any attempt to work Loughshinney again for another thirty years. When it was explored in 1824 it was described as “a cluster of old shafts —delapidated—levels fallen in and choked”. By the time the 1837 OS map was compiled, all that remained of the “Old Copper Mines” was two shafts and an opencast (*Weaver 1824*; OS sheets 5 & 7).

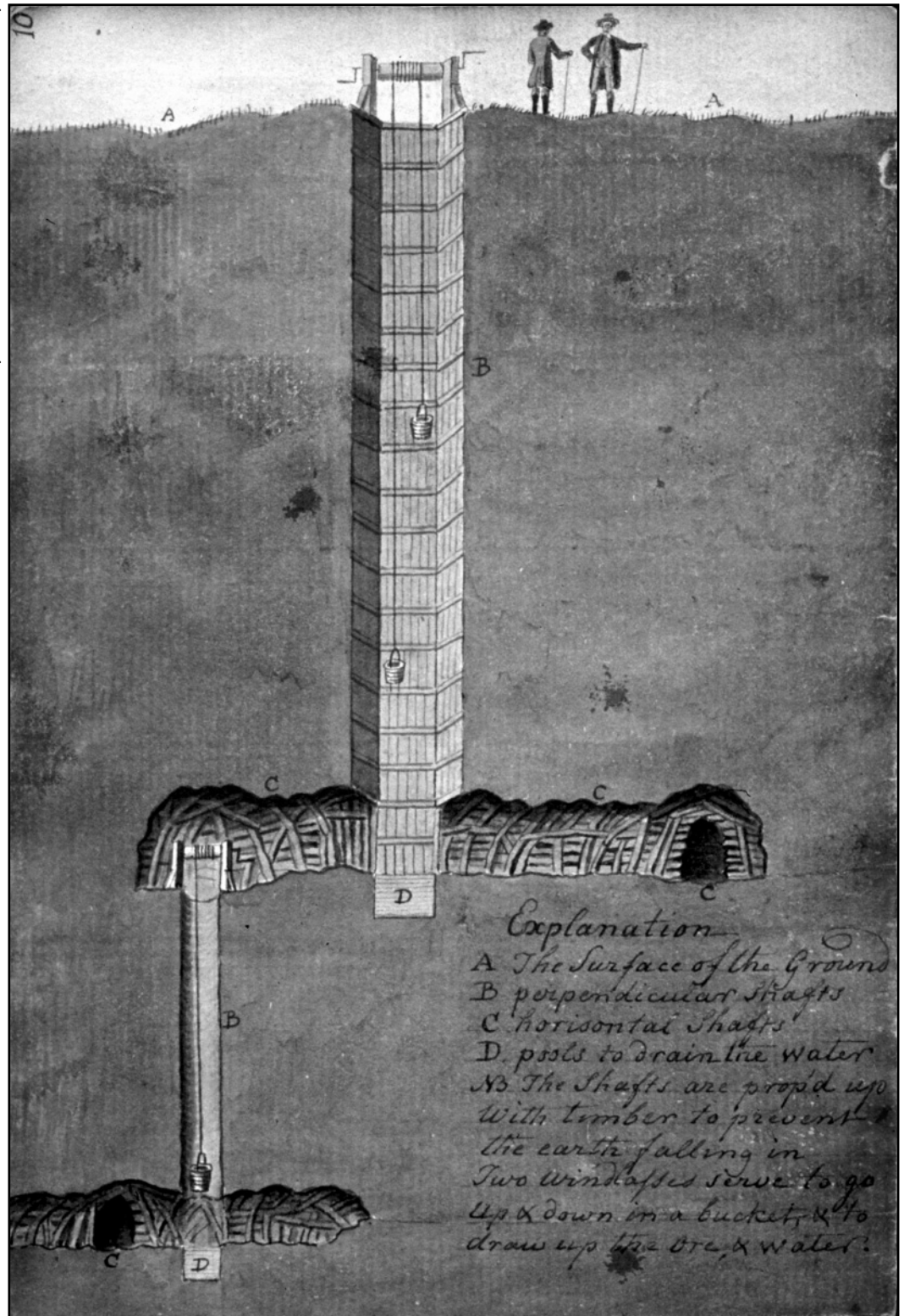
Few of the lead showings were even tested again in the 19th century. Only one deposit awaited discovery. This was the silver –rich lead veins at Ballycorus, which was known by the

"View of some of the shafts of the lead mines at Dolphins barn half a mile from Dublin, I descended in these mines in a bucket with a candle in one hand, & holding the cabel with the other, I was obliged to walk bended in the horizontal shafts holding always the candle in one hand and to support my self with the other against the timbers with Which the shafts are lined to avoid stepping in many little pools of water, or fall over many stones which obstruct the passage, one may conceive from thence, that this view was not drawn below; it was done as soon as I remounted from this subterraneous ramble that I sat down on the ground and drew the general idea of what I had seen below, they being fresh in my memory, this done I threw off the miners dress, and put on my own which some friends were keeping during my absence, I believe notwithstanding my drawing pretty exact, but I confess the truth to deceive nobody these mines have been abandoned these several years, the drawing being in the portfolio that was mislaid."

No 2 Rambles through the County of Dublin and some of the neighbouring ones

A view of some of the shafts of the lead mines at Dolphins Barn ½ a mile from Dublin

G.Beranger Date c. 1770
By permission of the Royal Irish Academy © R.I.A.



early 1800s but no account of its origins seems to have survived. By 1807 there was an open-cast there forty yards long and eight feet deep (?) Otherwise, however, by the early 1800s Dublin's mineral potential had almost ceased to be considered. The "Itinerant Mineralogist" of the Dublin Society wrote eight pages devoted to the clays and mineral waters of Dublin giving only a single passing reference to Dalkey mine (Stewart 1800) Furthermore, in a wide ranging 52 page report on Dublin harbour in 1804 there is no mention of mining potential nor are mines such as Clontarf and Howth even marked on the accom-

panying map ("Civis" 1804) Many sites, such as Dolphins Barn and Kilmainham were not considered even worth investigating at a time of widespread testing of potential mining sites around the country after 1824.

There is, however, some contemporary evidence for smaller workings or trials in the early 19th century but it is sparse and unsatisfactory. One source of 1812, for instance, says of Dalkey that it "was not worked for several years", implying an early 19th century opening (Fitton and Stephens 1812). However, the

“several” could mean over 40 years when the mine was noted as in operation before 1772. The same applies to Dolphins Barn which another source of 1828 unreliably reports as having been mined “less than thirty years ago” (Griffith 1828). Likewise, a rather vague account of Shankill in 1820 describes it as “now but little productive though formerly abundantly so” (Cromwell 1820). This is the first mention of Shankill though a company was set up four years later specifically to mine here (q.v.). The most positive reference to a Dublin mining operation at the time was to Cloghran where an Isaac Smith was reported to have taken a 15 year lease in 1809 and to have quarried out 3 tons of lead and two and a half tons of galena over some period thereafter (Weaver 1824).

CLONTARF, BALLYCORUS AND NEW TRIALS, C. 1810-’25.

A more scientific approach to mining is evident from this the end of which saw capital being invest for development. Initially, the major problem of pumping-out such a low-lying mine as Clontarf was apparently solved, for a time at least, by a Mr. Coughlan recently returned from India where he had some “slight contact” with mining, reportedly. He is said to have built a tower in 1809 for pumping purposes. If this was not a windmill it must have provided clearance for a long lever, possibly with counter-balancing bobs, manually operated to either ladle out the mine or, more likely, piston pump a sump-shaft (Coughlan Briscoe 1908). In any case it seems to have worked and probably accounts for some of the 74 tons of lead ore exported from Dublin between 1810 and ‘11 (Customs Books). A later report puts the reopening at 1809 involving a level from the landward side. “A considerable body of ore” was reportedly raised. (Mems. Geol. Survey 1903). A plan of the working shows a sump-shaft some 120 feet deep with levels running off at 48, 60, 90 and 108 feet. (Clontarf 1825) However, it would seem that Mr. Coughlan had been sparing with the timber supports and in 1811 or ‘12 the mine collapsed (Griffith 1828) As much lead still remained irregularly disseminated through the rock there, However, in 1812 it was described as “drowned with every tide” (Wakefield 1812).

Apparently various unsuccessful efforts were made to rescue the mine, presumably due to the knowledge that there was still ore available and that it would fetch a high price due to the Napoleonic war. A Mr. Hurst was reported to have extracted about 20 tons from Clontarf about 1814. Some time later a Mr. Garry invested more heavily in the mine purchasing a steam engine to replace a horse whim for drawing water (Coughlan’s tower must have collapsed before then) and he was said to have built a smelter. Reportedly this worked and between 1818 and 1824 136 tons of minerals had been extracted and sold for £4500. A report of this latter year placed a value of £1000 on the mine equipment and suggested offering another £1000 for the mine itself (Weaver 1824). The offer it seems was not taken up and it does not seem that mining continued there much longer. By 1837 the two shafts were all that were considered worth showing on the OS map, called “shafts made in search of lead” (OS sheet 12). Housing development obliterated any other traces there might have been of Clontarf mine so that

when new drains were being lain there in 1908 considerable surprise was express in finding the remains of a mine (Coughlan Briscoe 1909)

At Ballycorus by 1819 excavations had extended to 220 yards reaching a deepest point of over 130 feet (Weaver 1919). After that the working had to be by adits driven horizontally in from lower down the slopes of Ballycorus hill. Production from here must have accounted for most of the 1129 tons of lead ore exported from Dublin up to 1820 most of which (1056 tons) had been extracted before 1814 (Customs Books). The diminution in exports may be attributable, however, to the decision to build a smelter here. Surprisingly little information has emerged about this operation prior to 1825 when the smelter (and probably the mine also) was bought for £875 by the newly-formed Mining Company of Ireland (MCI Reports 1824-).

This began in 1824 in which year there was a speculative boom in Ireland’s mineral potential. The reasons for this are diverse but it resulted in five mining companies being set up, in competition with each other, to investigate and get leases on known mineral locations (Cowman unpublished). However, only a quarter of the sites in Dublin listed above were deemed worth considering. Loughshinney, Clontarf, Robbs Walls and Cloghran were checked by Thomas Weaver for the Hibernian Mining Company but only Clontarf was recommended (worth £1000 for the mine) (Weaver 1824).

South east of the city

The Mining Company of Ireland took mining leases at Ballycorus, at an apparently new location, Tic Nic (where they had short-lived hopes for lead) and at Dalkey (MCI Reports 1824-). Nearby the Royal Irish Mining Company investigated Killiney at about the same time as the Shankill Mining Company of Ireland was carrying out trials for lead in the same neighbourhood. At Killiney in 1825-26 “a considerable quantity of ore (i.e. lead though there is also mention of copper) was raised from several shafts and drivings — towards the sea shore, but on descending the vein was found to be so irregular and unproductive that the works were abandoned”, according to a contemporary. Of Shankill he says simply “several shafts were sunk on the vein but no ore worth following was met with”. (Griffith 1826/’28) These were probably quite representative of most of the lead showings around Dublin or, as a later commentator puts it, “none of them maintained their produce to any depth, or were of a magnitude which would justify any extensive trials” (Kane 1845).

The only successful company that emerged from the mining boom of 1824 was the Mining Company of Ireland. It had also tested Robbs Walls as well as Tic Nic and Dalkey but the only location they considered purchasing (cost £150) was the mine at Ballycorus. Within six months, however, they found it “Short of our expectations”. Along with that mine, however, was the smelter which was to play an important role in the company’s fortunes (MCI Reports 1824-). Two reports of 1819 and 1828 describe the mineralized area of Ballycorus. It comprised two roughly parallel veins which sometimes join or split near the surface, approximately following the contour of the hill. At

depth, however they diverged and since the downhill vein was by far the better (four to five feet wide in places) only that was being worked by adit in the early 1820s. The 1828 account stresses the difficulty of smelting the lead from there which may account for the anonymous previous owner deciding to experiment for himself with this ore. The arrangements made for so doing are described by him shortly after they had been taken over by the Mining Company of Ireland. "Attached to the mine is a well-contrived smelting establishment, consisting of an air-furnace, ore hearts and slag heaps" (Weaver 1919; Griffith 1928). Over the next forty years this was to grow into a major industrial development.

Mineralisation was also noted at **Ashtown**, **Crumlin**, **Kellystown** and in the **Phoenix Park**, plus a discovery when cellars were being built under **Christchurch Place** (all lead showings) as well as at **Seapoint**, **Blackrock** (copper). There is no evidence of when these discoveries were made but it is unlikely that they were ever worked (Anon 1835).

CONCLUSION

Most Dubliners today would be surprised to hear of all the mineralisation and mine working reported in and about the capital. Of the 34 mineral showings reported only 15 were worked and of these only Loughshinny and Clontarf produced any significant amount of ore. These ore bodies were dismissed as too insignificant once capital and technology was brought to bear on them post 1825. That Dublin city and county was seen to have had so much potential probably raised questions about the other parts of Ireland, particularly the remoter regions. These indeed transpired to be the places where mining activity took place post 1825 rather than in Dublin.

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