
Ireland's Minerals Exploration and Mining Policy

24 July 2015

Introduction

This *L&RS Note* provides the context to Ireland's minerals exploration and mining policy. It outlines the historical and policy background to minerals exploration and mining in Ireland. The *Note* also introduces the purpose of the *Minerals Development Bill 2015*.

In particular, the *Note* focuses on the following:

- Mineral resources in Ireland and the geographical distribution of Ireland's mineral deposits (including maps showing locations by county and for the island of Ireland);
- An overview of aspects of an economic assessment of the contribution of the minerals exploration and mining sector to the Irish economy;
- Abandoned mines in Ireland; and
- The current minerals regulatory and fiscal regime including compensation for the working of privately owned minerals in Ireland under the *Minerals Development Acts 1940 to 1999* and European Union Directives relevant to minerals exploration.

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Mineral resources in Ireland

Defining minerals

Minerals, as currently defined in the *Minerals Development Acts 1940 to 1999* (the *Minerals Development Acts*), include all substances in, on, or under land except:

- the agricultural surface of the ground;
- turf or peat; and
- stone, sand, gravel or clay - except for substances included in the schedule to the [Minerals Development Act 1940](#).ⁱ

The Department of Communications, Energy and Natural Resources (the DCENR) explains that, in practice, this means most quarries producing aggregates for the construction industry, agricultural lime or dimension stone, e.g. for buildings or gravestones, are not working minerals and do not require any permits under the *Minerals Development Acts*.ⁱⁱ

Text box 1: What are Minerals?

For the purposes of prospecting and mining, minerals are defined in the *Minerals Development Acts*. Minerals do not include the agricultural surface or peat. Neither do they include stone, gravel, sand or clay, except for a few listed minerals e.g. Roofing Slate, Connemara Marble, Silica Sand and Ball Clay. The most common minerals covered by the Acts and being mined or prospected for in Ireland are Zinc, Lead, Gold, Gypsum and Coal.

Source: DCENR FAQs webpage available [here](#).

The [Petroleum Minerals Development Act 1960](#) removed petroleum (oil and natural gas) from the scope of the *Minerals Development Acts* and established separate arrangements for the regulation of petroleum exploration and development.

The Schedule to the *Minerals Development Act 1940* sets out a list of substances which are included in the definition of minerals but this list is not exhaustive. The Schedule is reproduced in [Appendix 1](#).

Mineral exploration, also known as 'prospecting', is the process of finding commercially viable concentrations of minerals to mine. Mining refers to the extraction (or working) of minerals.

Ireland's mineral potential

Ireland has a diversity of mineral deposits, with a mining heritage spanning over 4,000 years.ⁱⁱⁱ [Appendix 2](#) contains a brief overview of Ireland's mining history.

Since the 1960s, Ireland has enjoyed the status of a world-ranked producer of zinc, lead and barite. Ireland currently accounts for a significant proportion of both European zinc mine output and European lead mine output (see page 6 for more information).

In addition to Ireland's favourable geological potential (see page 4), Ireland's attractiveness as a mineral exploration location is highlighted by its recent ranking in the [Fraser Institute's 2014 "report card"](#) to governments on the attractiveness of their mining policies', which saw Ireland emerge as the top-rated jurisdiction for policy factors.

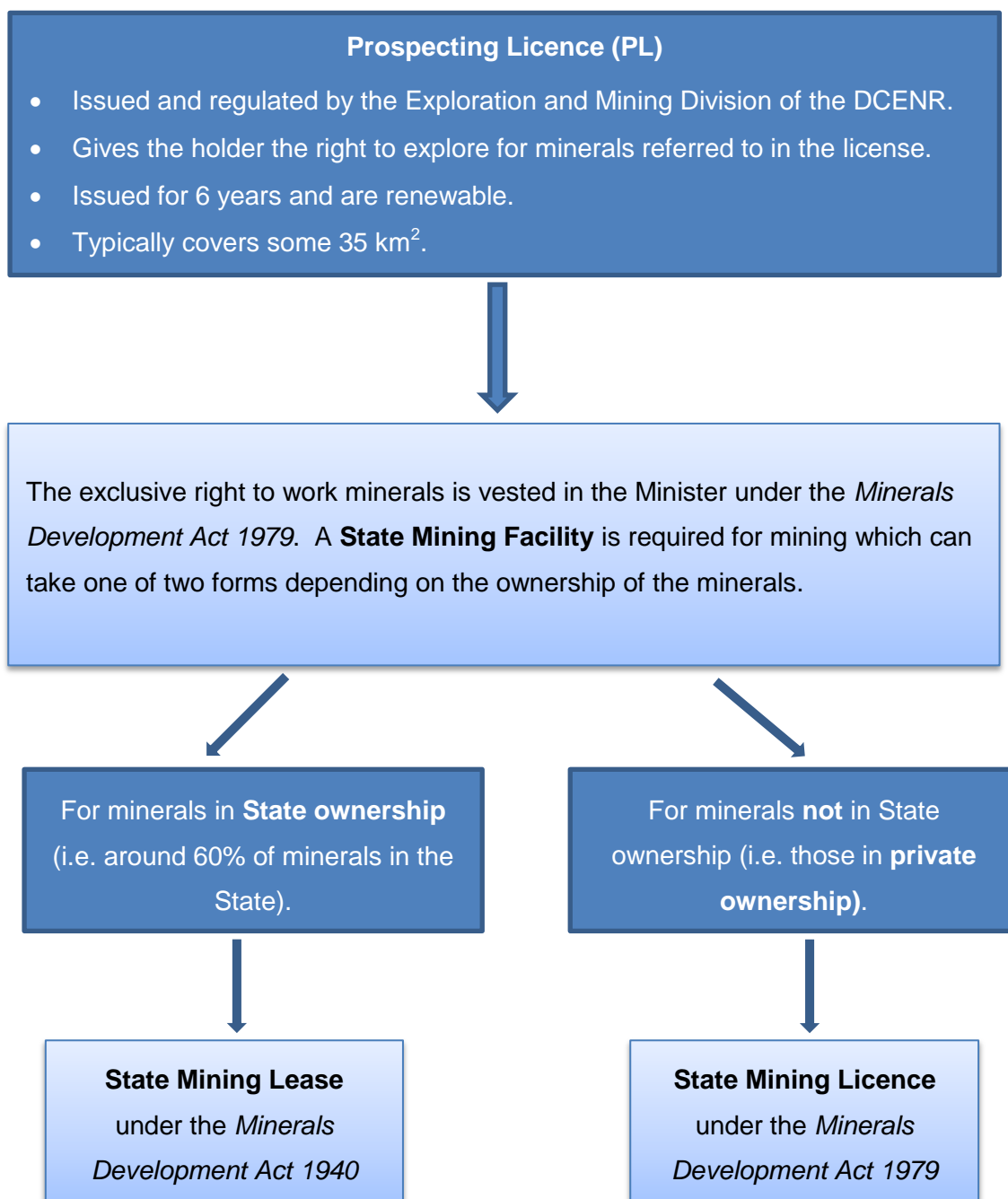
Prospecting and mining leases/licenses

In Ireland, exploration is carried out through a Prospecting Licence - a permit issued by the State which gives the holder (the licensee) the right to explore for specified minerals over a certain area. At the end of 2014 there were 639 Prospecting Licences.^{iv}

There were also 10 State Mining Leases and 11 State Mining Licences – either a lease or a licence is required for minerals development depending on the exact circumstances involved.

Figure 1 provides an overview of the process in relation to the granting of Prospecting Licences, State Mining Leases and State Mining Licences in Ireland. As the distinction between the latter is technical, and the same provisions apply to them, we refer to both as a 'mining licence'.^v

Figure 1: Prospecting and mining leases/licenses



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Geographical distribution of Ireland's mineral resources

The island of Ireland has a widely varied geological framework, with rocks ranging in age from Proterozoic (2,500 million years ago) to the present day.^{vi} Map 1 overleaf illustrates the generalised geology of Ireland showing significant mineral deposits. The island can be divided into a number of mineral provinces endowed with a diverse suite of base and precious metals as well as industrial mineral deposits (see map in [Appendix 3](#)).^{vii} Descriptions of these provinces are available on the DCENR webpage entitled "[Geology and Mineral Potential](#)".

Text box 2: Ireland's mineral potential

In spite of its relatively small size (70,000 km²), Ireland has a notably diverse geology that is prospective for a wide range of mineral deposits.

Large tracts of Ireland are underlain by metasediments and metavolcanics of Proterozoic and Lower Palaeozoic age. These rocks are known to contain significant base metal mineralisation (e.g. copper at Avoca) and gold-bearing quartz veins. The latter style of mineralisation has been the focus of extensive exploration efforts in Northern Ireland, and in 1999, an opencast gold mine was opened at Cavanacaw in Co Tyrone.

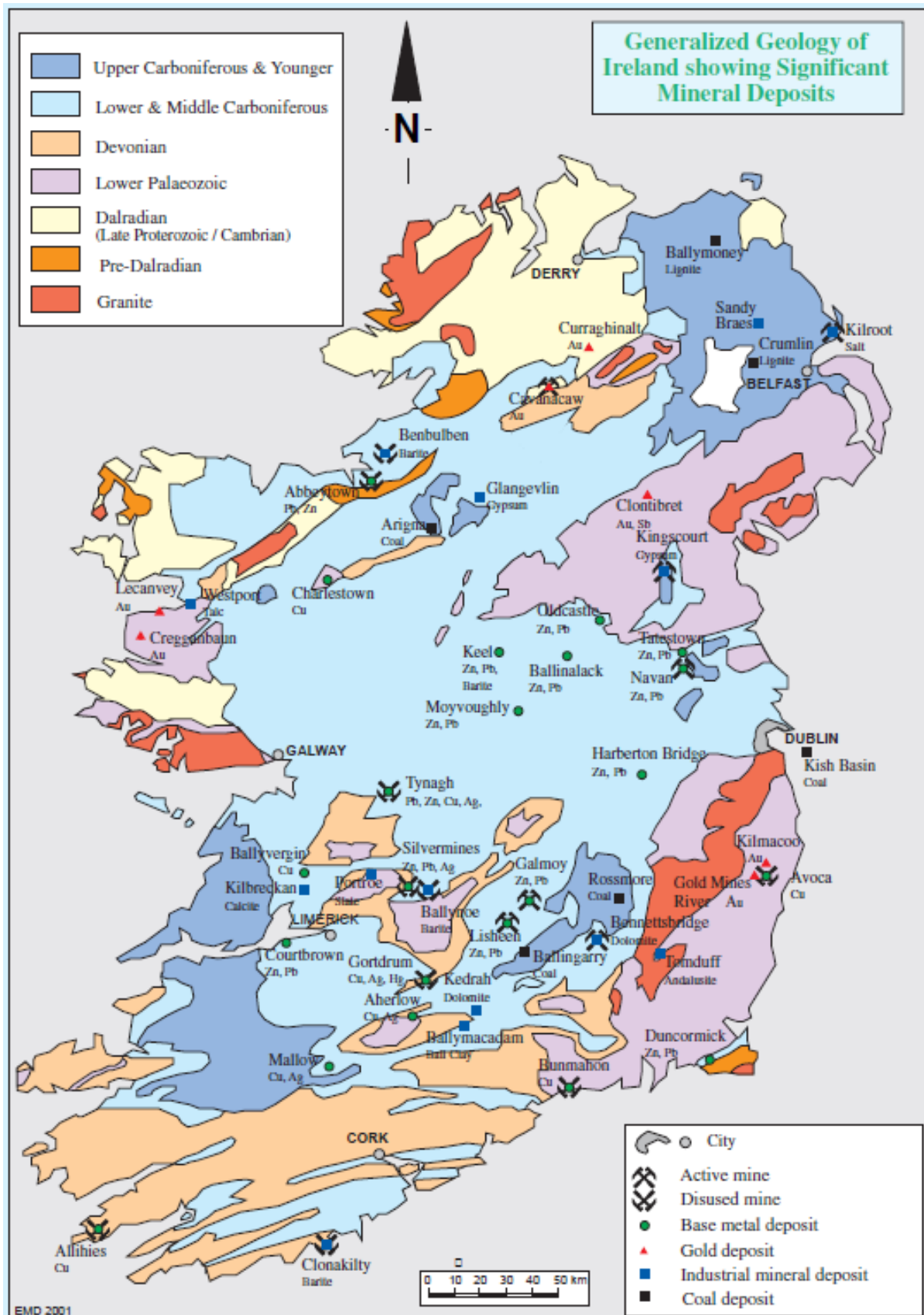
The Lower Carboniferous limestones of the Irish Midlands (the Central Ireland Basin) are host to one of the great orefields of the world.

Since 1960, fifteen significant zinc-lead deposits have been discovered, with six becoming producing mines. These include the world class mine at Navan, Co Meath. Ireland has been ranked first in the world in terms of zinc discovered per square kilometre, and second in the world with respect to lead. Ireland is Europe's largest zinc producer. Its two underground base metal mines account for some 31% of European zinc production, and they also produce 11% of its lead.

Ireland's younger rocks contain significant deposits of industrial minerals, most notably the gypsum deposit at [Knocknacran], Co Monaghan, that is found in an outlier of Permian rocks.

Source: DCENR webpage [Geology and Mineral Potential](#).

Map 1: Generalised geology of Ireland showing significant mineral deposits



Source: Minerals Ireland (2006) [Land of Mineral Opportunities](#).

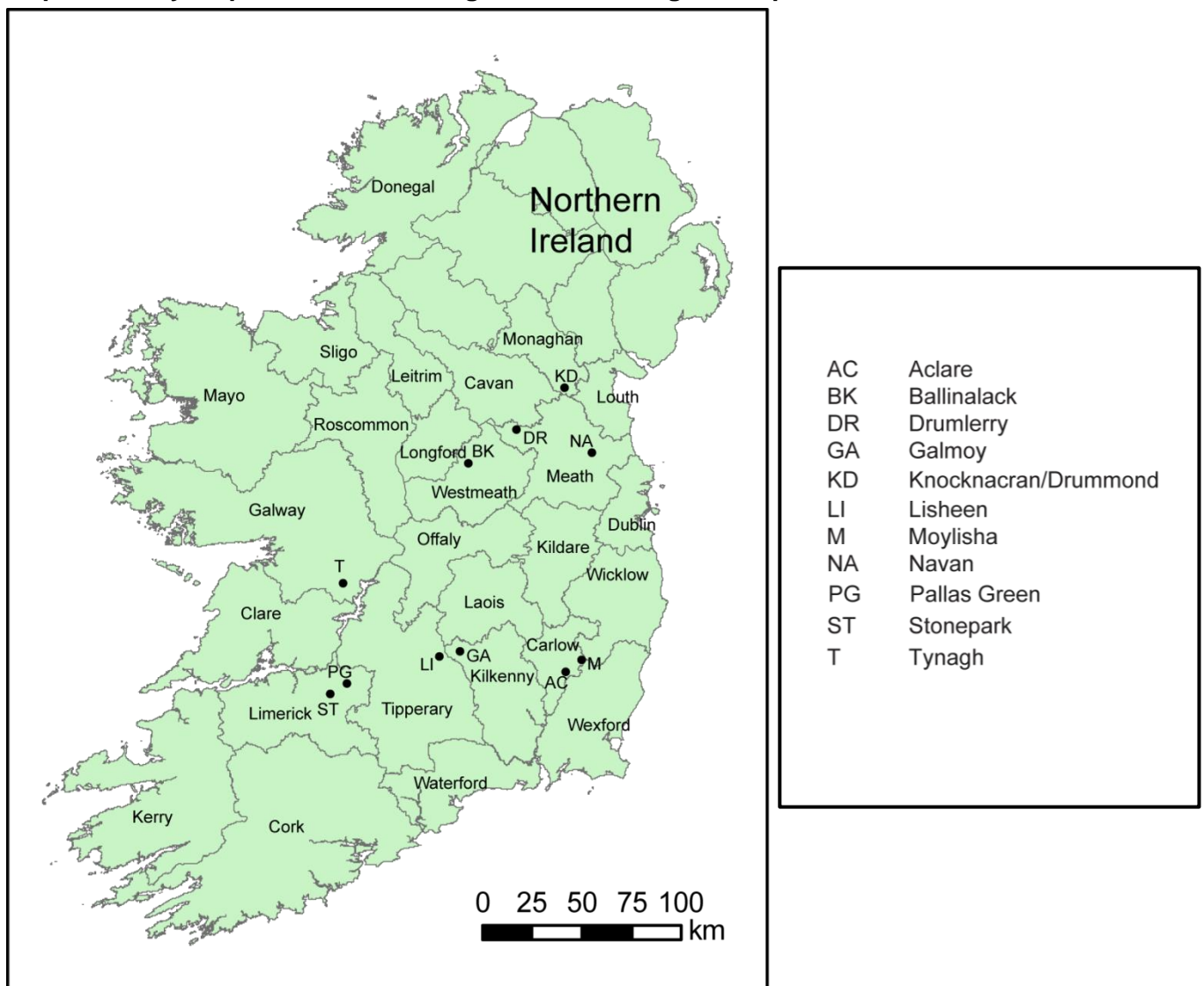
Note: Galmoy Mine in Co. Kilkenny ceased mining operations in October 2012.

Zinc, lead and gypsum are key components of the current Irish mining industry. In the first half of 2014, Ireland’s two underground zinc-lead mines accounted for approximately 30% of European zinc mine output (41% of EU-28 production) and 10.7% of European lead mine output (22.2% of EU-28 production).^{viii} Ireland is also reported to be the largest producer of zinc concentrate and second largest producer of lead concentrate in Europe.^{ix}

There are currently three operating mines in Ireland (see map 2 below):

1. Navan mine in Co. Meath (zinc-lead);
2. Lisheen mine in Co. Tipperary (zinc-lead); and
3. Irish Gypsum’s operations near Knocknacran (open pit and underground) in Co Monaghan (gypsum).

Map 2: County map of Ireland showing selected mining and exploration locations



Source: DCENR, *Ireland: Exploration & Mining News*, 1st November 2014.

Note: Galmoy Mine in Co. Kilkenny ceased mining operations in October 2012.

Gypsum has been produced from both an open cast pit and from underground at Knocknacran mine in Co.Monaghan and the adjacent underground mine at Drummond. While zinc and lead remain the principal commodities of exploration interest in Ireland, other commodities that are currently being sought in Ireland include gold, silver, copper, iron, platinum group elements (PGEs), molybdenum, tungsten, rare earth elements (REE), lithium, caesium, gem minerals, barite, calcite, fluorite, gypsum, coal and fireclay.^x

Text box 3 below encapsulates some of Ireland's mining highlights in the first half of 2014.

Text box 3: Mining highlights, January to June 2014

2014 Half Yearly (Jan-June) Mine Production

- Zinc metal in concentrates: 143kt (Equivalent figure for H1, 2013 was 157kt)
- Lead metal in concentrates: 20kt (Equivalent figure for H1, 2013 was 21kt)

2014 Half Yearly (Jan-June) Mine Output (Metal Content)

(a) Zinc

- Ireland produced 29.7% of European zinc mine output in H1, 2014 (1st in Europe)
- Ireland produced 2.2% of World zinc mine output in H1, 2014 (10th in World)

(b) Lead

- Ireland produced 10.7% of European lead mine output in H1, 2014 (3rd in Europe)
- Ireland produced 0.8% of World lead mine output in H1, 2014 (13th in World)

Source of Production Data: International Lead & Zinc Study Group quoted in DCENR, Ireland: Exploration & Mining News, 1st November 2014.

Economic contribution of the sector

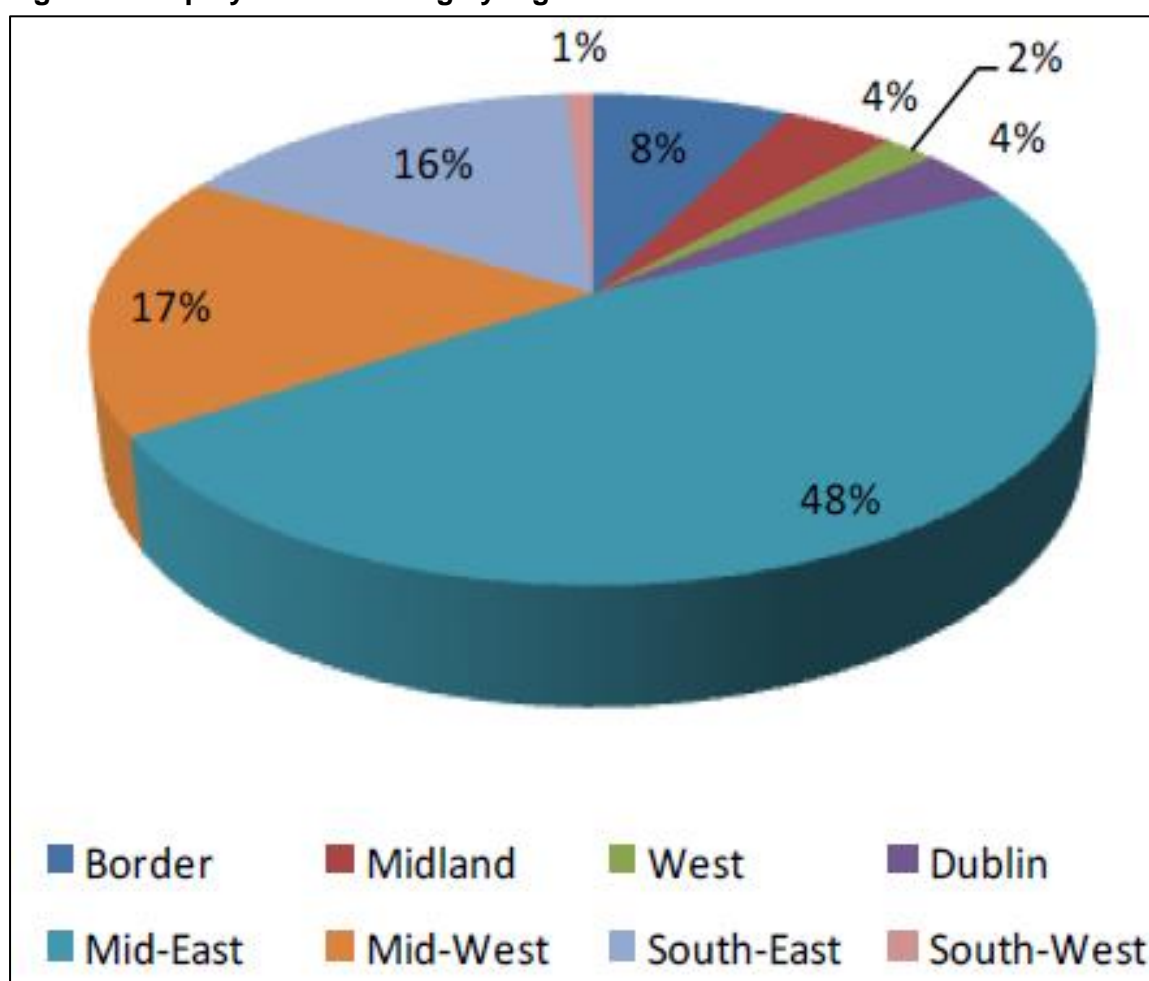
The direct economic impacts of mineral exploration and mining can be assessed in terms of output, employment, expenditures, gross value added contribution of mining and the contribution to local communities.

The Indecon report (2013) [Assessment of Economic Contribution of Mineral Exploration and Mining in Ireland](#) provides extensive data and analysis of the economic contribution of mineral exploration and mining in Ireland. There are also certain indirect economic impacts.

Selected direct economic impacts identified in the Indecon report include:

- Output in mining, as measured by sales turnover, amounted to €426.1 million in 2012;
- The activities of exploration and mining companies supported 1,373 full-time equivalent persons during 2012. The industry exhibits a broad regional distribution of its workforce, with significant numbers of people employed in the Mid-East, Mid-West and South-East, as well as across other regions in the West and South-West; and
- Exploration and mining companies contributed a total of €56.6 million in tax and other payments to the Exchequer and to local authorities during 2012.

Figure 1: Employment in mining by region in Ireland



Source: Indecon (2013) [Assessment of Economic Contribution of Mineral Exploration and Mining in Ireland](#). Indecon analysis of data from the Census of Population 2011.

Note: Statistics are based on the population aged 15 and over in the labour force and refer to persons engaged in mining of metal ores. These estimates only include mining of metal ores and therefore exclude employment in mining of gypsum.

Abandoned mines in Ireland

Abandoned mines

Historically, in Ireland, it was normal that mining sites were simply closed and little or no thought was given to the remediation and long term aftercare of the site.^{xi} Abandoned mine sites have caused, and may continue to cause, environmental damage and pose risks to human and animal health.^{xii}

The Environmental Protection Agency (EPA) and the Geological Survey of Ireland (GSI) carried out an inventory of historic mine sites in Ireland in 2009. Twenty seven abandoned mine sites or districts have been identified and classified according to the risk they pose to the environment.^{xiii} [Appendix 4](#) lists the twenty seven sites or districts and the classification assigned to each site.

Rehabilitation of abandoned mines

Remediation work has been undertaken at Silvermines, Co. Tipperary in accordance with the [Energy \(Miscellaneous Provisions\) Act 2006](#) (the 2006 Act) which provides that the Minister for Communications, Energy and Natural Resources or a local authority acting on his or her behalf may prepare, revise and implement a mine rehabilitation plan.

The 2006 Act provides that the Minister for Communications, Energy and Natural Resources or a local authority acting on his or her behalf may prepare and implement a mine rehabilitation plan. The rehabilitation provisions contained in the 2006 Act do not affect the obligations of any person, such as the lessee or licensee or the owner or occupiers.^{xiv}

The provisions in the *Energy (Miscellaneous Provisions) Act 2006* are intended as temporary measures only.^{xv} It is proposed that these measures will be further developed in legislation. The *Minerals Development Bill 2015* proposes to provide similar powers for the rehabilitation of abandoned sites to those in the 2006 Act.^{xvi}

Mine closure plans

For mines currently in operation a mine closure plan is required as part of:

- the terms of the mining licence granted by the Minister;
- the conditions of the operating permit granted by the EPA; and
- the planning permission conditions for the site.^{xvii}

The purpose of a closure plan is to ensure the environmental integrity of the site is maintained, by ensuring that necessary measures are taken to avoid the risk of

environmental pollution, and where pollution does occur to return the site to a satisfactory state.^{xviii}

Mine operators must have in place a financial surety to adequately provide for the costs associated with the closure and the subsequent long-term monitoring and maintenance of the site in accordance with the closure plan.^{xix}

Current regulatory and fiscal regime

The minerals regulatory framework is made up of the *Minerals Development Acts 1940 to 1999* and regulations made under those acts. In addition, environmental aspects of minerals development are regulated by national acts and European Union Directives concerning the environment.

Minerals Development Acts 1940 to 1999

The *Minerals Development Acts*, under the aegis of the Minister for Communications, Energy and Natural Resources, govern mineral exploration and mining in Ireland.

Minerals Development Acts 1940

The [Minerals Development Act 1940](#) provided for the compulsory acquisition by the State of minerals in private ownership, subject to compensation, wherever it appeared to the Minister that certain minerals were not being worked, or not being worked efficiently, and that it was in the public interest that the minerals be controlled by the State.^{xx}

Minerals Development Acts 1979

The [Minerals Development Act 1979](#) repeals the compulsory acquisition of minerals by the State and instead vests the exclusive right to work minerals in the Minister and permits the working of those minerals by third parties, subject to compensation.^{xxi} The statutory vesting of power in the Minister to work minerals is subject to one exception; it does not apply to private minerals which were being lawfully developed or worked on the 15th December 1978.^{xxii}

Minerals Development Acts 1995

The [Minerals Development Act 1995](#) allows for the renewal of Prospecting Licences and introduces a statutory basis for the charging of application fees and undertakings for mining licences.

Minerals Development Acts 1999

The [Minerals Development Act 1999](#) clarifies the definition of State minerals by rectifying a discrepancy in the definition of "State minerals" under the *Minerals Development Act 1940*. The Department of Transport, Communications and Energy had received legal advice that certain minerals and exclusive mining rights acquired by the Land Commission were vested in the Land Commission and not in the State.^{xxiii} The *Minerals Development Act 1999* provides that mineral rights vested in the Land Commission shall be deemed to be and to always have been the property of the State and vested in the State.^{xxiv} The Act also addresses issues with the transfer of the right to compensation under the *Minerals Development Act 1979*.^{xxv}

Minerals Development Regulations

In addition to primary legislation, Regulations have been made under the Minerals Development Acts.^{xxvi} The Regulations cover matters such as fees, the information to accompany Prospecting Licence applications and procedures for proceedings before the Mining Board.

Compensation under the Minerals Development Acts

An owner of land for which a mining licence has been granted is entitled to compensation for his or her interest in the minerals. An owner may apply for compensation at any time (for example when the minerals are discovered or when they are being worked and a profit is being turned) and can have the issue of compensation revisited if circumstances change.^{xxvii} A mining operator cannot have the issue of compensation revisited at any time.^{xxviii}

The compensation payable is determined on the basis of what is "fair and reasonable" having regard to all the circumstances in the case. This includes "such proportion of the net profits arising in consequence of the working of the minerals, as is attributable to those minerals as they existed in the land in their natural condition prior to such working".^{xxix}

In the absence of agreement on the amount of compensation, the matter will be determined by the Mining Board^{xxx} and its decision may be appealed to the High Court.^{xxxi} However, in the interest of good relations with local communities, disputes about compensation tend to be resolved quickly.^{xxxii}

Environmental licence and planning permission

Before a mine development can begin operation, the mine operator needs two additional permits to the mining licence. These are:

- planning permission under the [Planning and Development Act 2000](#) (as amended);^{xxxiii} and
- an integrated pollution control licence from the EPA under the *Environmental Protection Agency Act 1992*.

These permits aim to ensure that the development is operated in an environmentally sound manner.

Under the [Planning and Development Act 2000](#) (as amended) where a local authority (or An Bord Pleánala on appeal) grants planning permission it may attach any conditions it considers necessary to avoid, reduce and, if possible, offset the major adverse effects on the environment (if any) of the proposed development.^{xxxiv}

Under Part IV of the *Environmental Protection Agency Act 1992* (as amended) operators are required to obtain an integrated pollution control licence from the EPA for all operations involving the extraction of minerals under the *Minerals Development Acts*, with the exception of small non-metal operations and large quarries. An integrated pollution control licence is a single licence aimed at preventing or reducing all emissions, e.g. emissions to air, water and land, and to reduce and control the disposal of waste from a facility and its associated activities.

An environmental impact assessment (EIA) is required as part of the permitting process to allow the relevant authorities, An Bord Pleánala and the EPA, to assess the likely environmental impacts of the proposed mineral development project and to insert necessary conditions into the planning permission and integrated pollution control licence.

EU framework

There is no single overarching Directive, Regulation or coherent policy regulating the development and extraction of minerals at the European Union (EU) level. The EU minerals framework is made up of a number of legal instruments which regulate environmental aspects of the minerals industry, e.g. waste, water and air pollution.

Waste Management

The Mining Waste Directive ([Directive 2006/21/EC](#)) **aims to prevent or minimise environmental damage and risks to public health** from mining waste by regulating the management of waste from land-based extractive industries. The [Waste Management \(Management of Waste from the Extractive Industries\) Regulations 2009](#) transpose the provisions of the Mining Waste Directive into Irish law.

Control of Major Accidents

Seveso III ([Directive 2012/18/EU](#)) amended and repealed Seveso II (Directive 96/82/EC). It **aims to prevent major accidents involving dangerous substances** and where accidents do happen to limit the consequences for the environment and public health. Seveso III requires operators who bring dangerous substances onto a mining or quarrying site in sufficient quantities to implement Safety Management Systems, including a detailed risk assessment on the basis of possible accident scenarios. The [European Communities \(Control of Major Accident Hazards Involving Dangerous Substances\) Regulations 2006](#) transpose Seveso II into Irish law.

Environmental Liability

The Environmental Liability Directive ([Directive 2004/35/EC](#)) provides that operators of extractive waste facilities under the Mining Waste Directive are liable for **environmental damage** caused by their operation. The [European Communities \(Environmental Liability\) Regulations 2008](#) transpose the Environmental Liability Directive into Irish law.

Environmental Impact Assessment

The EIA Directive ([Directive 85/337/EEC](#)) requires an assessment of the effects on the environment to be carried out for activities listed in the Directive and for projects which are likely to have significant effects on the environment by virtue of, amongst other things, their nature, size or location.

Part X of the *Planning and Development Act 2000* and Part 10 of the [Planning and Development Regulations 2001](#) transpose the EIA Directive into Irish law. Under the [European Communities \(Environmental Impact Assessment\) Regulations 1989](#) an EIA must be carried out in respect of all extraction of minerals within the meaning of the *Minerals Development Acts*.^{xxxv}

Best Available Techniques for tailings and waste-rock management of ores

The EU [Reference Document on Best Available Techniques for Management of Tailings and Waste-Rock in Mining Activities](#) requires that **activities related to tailings and waste-rock management of ores** that have the potential to cause a significant environmental impact are carried out using Best Available Techniques (BAT), e.g. that the most effective and advanced technology which produces the least amount of pollutants is used in the operation of the activity. The BAT contained in the Reference Document on Best Available Techniques are inserted into integrated pollution control licences as part of the EPA permitting procedure for mining activities.

Fiscal regime

Corporation tax is charged at a rate of 12.5% on income and chargeable gains from general trading. Corporation tax on mining operations remains at 25%. On site surface processing is considered to be part of the mining operations and attracts special allowances.

Text box 4: Key features of the fiscal framework

- Sole right of working minerals vested in the State.
- Royalties fixed by individual agreement. Currently a percentage of net revenues for base metals, and on tonnage extracted in the case of industrial minerals.
- Private mineral owners receive compensation.
- Corporation Tax at 25% for mines, and 12.5% on income and chargeable gains from general trading.
- Capital allowances include exploration and development expenditure, expenditure on plant, machinery, buildings, up to 100%.
- Immediate write-off of exploration and development expenditure.
- Cost of rehabilitation after closure is tax deductible.

Source: Minerals Ireland (2011) [Fiscal Framework](#).

It should be noted that Budget 2011 provided for the abolition of an investment allowance for capital expenditure on new machinery and plant for use in mining in addition to normal wear and tear allowances. Prior to this, a 20% investment allowance had applied.^{xxxvi} An allowance of 20% of expenditure incurred on exploration was also available in addition to the 100% exploration allowance for such expenditure. These additional 20% allowances were abolished in respect of expenditure incurred from 1st January 2011 in line with the recommendation in the 2009 Report of the Commission on Taxation.^{xxxvii}

The *Minerals Development Bill*

The [*Minerals Development Bill 2015*](#) (the Bill), published in July 2015,^{xxxviii} seeks to consolidate and modernise legislation on exploration and extraction of minerals (lead, zinc, etc.) and bring certain aspects up to date and in line with current best practice, replacing a compendium of legislation from 1940 to 1999 (collectively termed the *Minerals Development Acts*) in the process. Petroleum and natural gas are the subject of separate legislation.

Appendix 1: List of Scheduled Minerals in the *Minerals Development Act 1940*

Alum Shales	Copper, Ores of	Lead, Ores of	Radioactive minerals
Anhydrite	Corundum	Lignite	Refractory Clays
Antimony, Ores of	Cryolite	Lithomarge	Rock Phosphates
Apatite	Diatomaceous Earth	Magnesium, Ores of	Rock Salt
Arsenic, Ores of	Dolomite	Magnesite	Roofing Slate
Asbestos minerals	Dolomitic Limestone	Manganese, Ores of	Serpentinous Marble
Ball Clay	Felspar	Marble	Silica Sand
Barytes	Fireclay	Mercury, Ores of	Silver, Ores of
Bauxite	Flint and Chert	Mica	Strontium, Ores of
Beryl	Fluorspar	Minerals Oils	Sulphur, Ores of
Bismuth, Ores of	Ganister	Mineral Pigments	Talc and Steatite or Soapstone
Bitumens	Gem minerals	Molybdenite	Tin, Ores of
Calcite	Gold, Ores of	Monazite	Titanium, Ores of
Chalk	Graphite	Nickel, Ores of	Tripoli
China Clay	Gypsum	Oil Shale	Tungsten, Ores of
Chromite	Iron, Ores of	Platinum, Ores of	Witherite
Coal	Kaolin	Potash Mineral Salts	Zinc, Ores of
Cobalt Ores of	Laterite	Quartz Rock	

Note: As amended by s. 69 of the [Petroleum and Other Minerals Development Act 1960](#) which provided that the provisions of the 1940 Act did not apply to petroleum and natural gas.

Appendix 2: Ireland's mining history

Timeline of minerals development in Ireland	
2000 - 400 B.C	During the early Bronze Age (approximately 2400 - 1500 B.C.) Irish mines were an important source of copper, while alluvial gold may have been used for some of the abundant gold ornaments of this period.
200 B.C. - 150 A.D.	Iron ore was mined from during the Bronze Age (approximately 200 B.C.), while the Vikings worked silver and copper mines in Ireland from approximately 150 A.D.
1700s - 1800s	<p>During the industrial revolution of the 18th and 19th centuries, the mining industry flourished due to demand from Britain, with at least one metal mine in almost every county. Copper, lead-silver and other minerals, such as iron were mined along with the extensive mining of coal. Slate quarrying and pyrite mining also took place during this period as well as manganese and barite production in southern Ireland.</p> <p>The late 18th century and early 19th century saw a "gold rush" in Ireland. In the years 1795-1830, it is estimated that 7-9,000 oz. of gold was extracted from alluvial gravels.</p> <p>In 1824 the Mining Company of Ireland was formed and the Irish mining industry flourished until the start of the American Civil War in the 1860s. Mineral prices collapsed and Ireland's mining industry subsequently collapsed.</p> <p>The 19th century in Ireland saw continuous copper, lead and silver output for over 70 years.</p>
Late 1800s - Early 1900s	The exhaustion of deposits, depressed metal prices, the absence of mineral discoveries and competition from African and Spanish copper mines meant that the late 19th century and early 20th century saw little in the way of mining activity.
Mid 1900s - present	<p>The introduction of the <i>Mines and Minerals Act 1931</i> marked a first attempt at the development of a coherent national mining policy and with it the mining industry started to revive. The <i>Minerals Development Act 1940</i> replaced the 1931 Act, and in conjunction with tax relief measures introduced in 1956 encouraged the industry further. The latter half of the 20th century was much more successful, characterised by extensive zinc, lead and barite mining.</p> <p>Since the 1960s, Ireland has enjoyed the status of a world-ranked producer of zinc, lead and barite. With regard to zinc-lead in particular there have been fifteen significant zinc-lead deposits discoveries since the 1960s, with six becoming producing mines.</p> <p>During the 1980s there was a dip in the development of the mining industry in part due to a drop in demand as a result of economic recession. However, mining activity has increased again.</p>

Source: Compiled by L&RS using the following sources: DCENR webpages [Top 55 Deposits](#) and [Geology and Mineral Potential](#); DCENR (2006) *Land of Mineral Opportunities*; and Bouchier-Hayes, T. and MacSweeney, R. (2000) 'Mineral Development in Ireland', Mineral Resources Engineering Journal, Vol. 9 No. 1 March 2000.

Appendix 3: Map of main mineral provinces in Ireland



Source: DCENR webpage [Geology and Mineral Potential](#).

Descriptions of these provinces are available on the DCENR webpage entitled [Geology and Mineral Potential](#).

Appendix 4: Classification of abandoned mine sites by the EPA

Mine / District	No. of Sites	Class
Tynagh	4	I
Silvermines	6	I
Avoca	7	I
Glendalough/ Glendasan	8	II
Caim	1	II
Glenmalure	2	II
Ballycorus	1	IV
Gortdrum	1	IV
Leinster Coalfield	7	IV
Slieve Ardagh Coalfield	10	IV
Clements	1	V
Connacth Coalfield	7	V
Kilbricken	1	V
Allihies	6	V
Abbeytown	1	V
Tassan	1	V
Ballyvergin	1	V
Ballyhickey	1	V
Keeldrum	1	V
West Cork Cu-Ba	8	V
Clare Phosphate	1	V
Bunmahom	1	V
Hope	1	V
Clontibret	1	V
Glentogher	1	V
Benbulbin	1	V
Hollyford	1	V

Source: The EPA and the Geological Survey of Ireland (2009), '[The Historic Mine Sites – Inventory and Risk Classification](#)'

- ⁱ DCENR webpage '[Definition of Minerals, Scheduled Minerals and Non Scheduled Minerals](#)'.
- ⁱⁱ Ibid.
- ⁱⁱⁱ DCENR (2005) '[The "Top 55" Deposits](#)'.
- ^{iv} [Report by the Minister for Communications, Energy and Natural Resources for the Six Months Ended 31 December 2014](#)
- ^v Scannell (2006), 'Environmental and Land Use Law', at p. 367. **Note:** at present literature sometimes uses the term "extraction licence" as a generic term for both State Mining Leases and State Mining Licences, however as the *Minerals Development Bill 2015* provides for the granting of a "Mining Licence" to work both State minerals or private minerals we will use the generic term "Mining Licence".
- ^{vi} DCENR webpage, '[Geology and Mineral Potential](#)'.
- ^{vii} DCENR (2006) '[Land of Mineral Opportunities](#)'.
- ^{viii} DCENR, *Ireland: Exploration & Mining News*, 1st November 2014.
- ^{ix} DCENR webpage, '[Mineral Deposits](#)'.
- ^x DCENR, *Ireland: Exploration & Mining News*, 1st November 2014.
- ^{xi} Environmental Protection Agency & the Geological Survey of Ireland (2009), '*The Historic Mine Sites – Inventory and Risk Classification*', at p. 8. The report is available [here](#).
- ^{xii} Ibid., at p. 7
- ^{xiii} EPA and the Geological Survey of Ireland (2009), '[The Historic Mine Sites – Inventory and Risk Classification](#)'
- ^{xiv} Section 29 of the [Energy \(Miscellaneous Provisions\) Act 2006](#)
- ^{xv} Clark (2006), '*Energy (Miscellaneous Provisions) Act 2006*', Irish Current Law Statutes Annotated, Westlaw Ireland.
- ^{xvi} Joint Committee on Transport and Communications (2015), '[Minerals Development Bill 2014: Discussion](#)', 01/04/2015, at p. 6.
- ^{xvii} DCENR, '[Minerals and the Environment](#)', Accessed 26/05/2015
- ^{xviii} EPA (2014), '[Guidance on assessing and costing environmental liabilities 2014](#)', at p. 8
- ^{xix} DCENR, '[Environmental Considerations and Mine Closure](#)', Accessed 26/05/2015
- ^{xx} Section 14 of the *Minerals Development Act 1940*
- ^{xxi} Section 11 of the *Minerals Development Act 1979* repealed the compulsory acquisition provision in the *Minerals Development Act 1940* and s.12 of the 1979 Act vested the exclusive right to work minerals in the Minister for Industry, Commerce and Energy, now the Minister for Communications, Energy and Natural Resources.
- ^{xxii} Section 14 of the *Minerals Development Act 1979*. Under s.15 of the *Minerals Development Act 1979* persons who were developing or working privately owned minerals at that date could apply to the Mining Board to register the minerals as excepted minerals allowing them to keep working the minerals. The deadline for registration was the 31st May 1980.
- ^{xxiii} Breslin and Dhonau (2000), '*Recent Developments to Irish Minerals Development Legislation: the Minerals Development Act, 1999*', *Mineral Resources Engineering*, Vol. 9, No. 1 (2000) 19-24.
- ^{xxiv} Section 2 of the *Minerals Development Act 1999*
- ^{xxv} The *Minerals Development Act 1979* provided that this right to compensation could "devolve and be disposed of accordingly" which was interpreted as making the right to compensation capable of being separated from the ownership of minerals (see Breslin and Dhonau (2000), '*Recent Developments to Irish Minerals Development Legislation: the Minerals Development Act, 1999*', *Mineral Resources Engineering*, Vol. 9, No. 1 (2000) 19-24 at pp. 22 - 23). Section 3 of the *Minerals Development Act 1999* provides that ownership of mineral rights is transferred with the land upon sale.
- ^{xxvi} [Minerals Development Regulations 1979; Minerals Development \(Amendment\) Regulations 1994](#); and [Minerals Development \(Application Fees for certain state mining facilities\) Regulations 1996](#)
- ^{xxvii} Bouchier-Hayes, T. and MacSweeney, R. (2000) '*Mineral Development in Ireland*', *Mineral Resources Engineering Journal*, Vol. 9 No. 1 March 2000, at p. 13
- ^{xxviii} *ibid.*
- ^{xxix} Section 23 of the of the *Minerals Development Act 1979*
- ^{xxx} The Mining Board was established by s.33 of the *Minerals Development Act 1940* to deal with disputes under the Act, including determining the levels of compensation payable in default of agreement between the parties. The Mining Board is a quasi-judicial body comprised of a Chairman, who is to be a solicitor or barrister, and two ordinary members.
- ^{xxx} Section 22 of the *Minerals Development Act 1979*

^{xxxii} Bocuher-Hayes & MacSweeney (2000), '*Mineral Development in Ireland*', Mineral Resources Engineering Journal, Vol. 9 No. 1 March 2000, at p. 10

^{xxxiii} DCENR, '[Exploration and Mining Division FAQs](#)', Accessed 29 May 2015. A Prospecting Licence is exempted from the EIA process as it listed as an exempted development in [Part 1 of Schedule 2](#) of the [Planning and Development Regulations 2001](#) (they fall under Class 45 in that Schedule).

^{xxxiv} Section 172 of the *Planning and Development Act 2000*

^{xxxv} [European Communities \(Environmental Impact Assessment\) Regulations 1989](#) First Schedule, Part II, paragraph 2 entitled "Extractive Industry"

^{xxxvi} Section 27 of the *Finance Act 2011*

^{xxxvii} See [Budget Summary 2011](#) (page 5)

^{xxxviii} The Bill is available at <http://www.oireachtas.ie/documents/bills28/bills/2015/6915/b6915s.pdf> and the accompanying Explanatory Memorandum is available at <http://www.oireachtas.ie/documents/bills28/bills/2015/6915/b6915s-memo.pdf>