



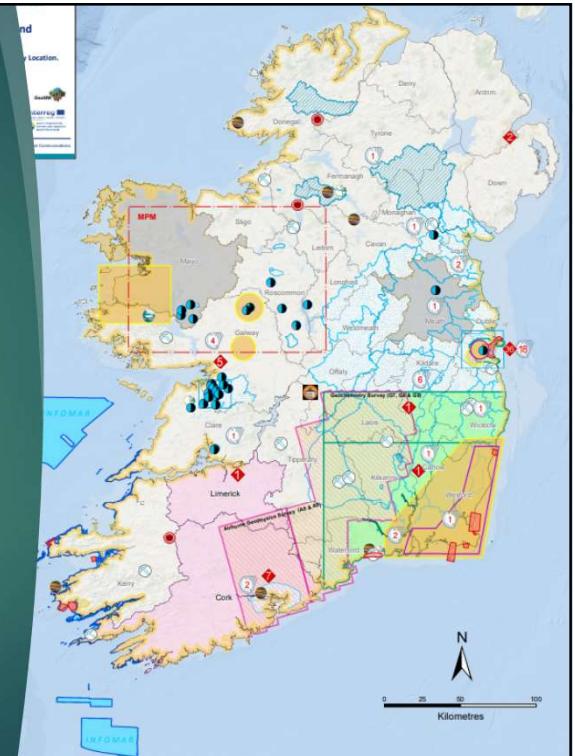
An Roinn Comhshaoil,
Aeráide agus Cumarsáide
Department of the Environment,
Climate and Communications

Lead and Zinc Prospectivity and Mining in Ireland

Ian Devlin, Geoscience Policy Division
ILZSG
26 April 2023

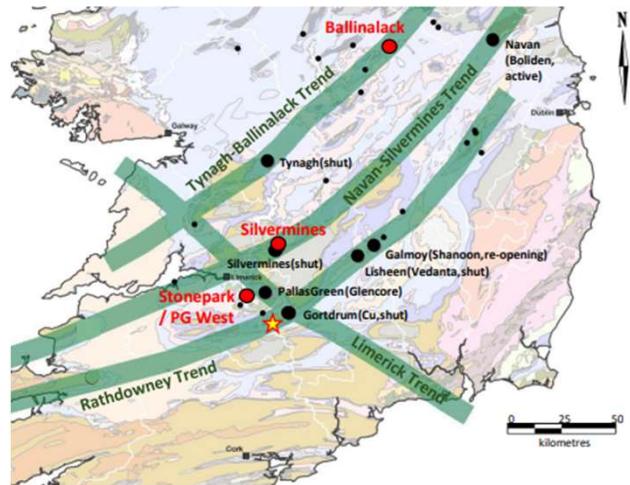
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- ▶ Geoscience Policy Division (GSPD) is responsible for maintaining, developing and promoting policy and legislative frameworks for the mineral, petroleum and geothermal sectors.
- ▶ Geoscience Regulation Office (GSRO) is responsible for the regulation, licensing and enforcement of mineral and petroleum exploration, production and decommissioning, and geothermal applications and regulation (when policy is established).
- ▶ Geological Survey Ireland (GSI) is Ireland's public earth science knowledge centre committed to providing free, open and accurate data and maps on Ireland's subsurface to landowners, the public, industry, and all other stakeholders, within Ireland and internationally.
- ▶ All exploration and mining is carried out by private sector.
- ▶ Draft EU Critical Raw Materials Act calling for National Exploration Programme.



Ireland is #1 in World for Zinc Production per Km2

- Significant Mineral Resources
 - Major Zinc producer
- Consistently High Fraser Ranking. 2021:
 - 1st Policy Perception Index
 - 15th Investment Attractiveness Index
 - 35th Best Practices Mineral Potential Index



Ríaltas na hÉireann
Government of Ireland

Search: [gov.ie minerals](http://gov.ie/minerals)

Policy Statement on Mineral Exploration and Mining

Critical Raw Materials for the Circular Economy Transition

December 2022

- Strong government commitment to mineral prospecting and mining.

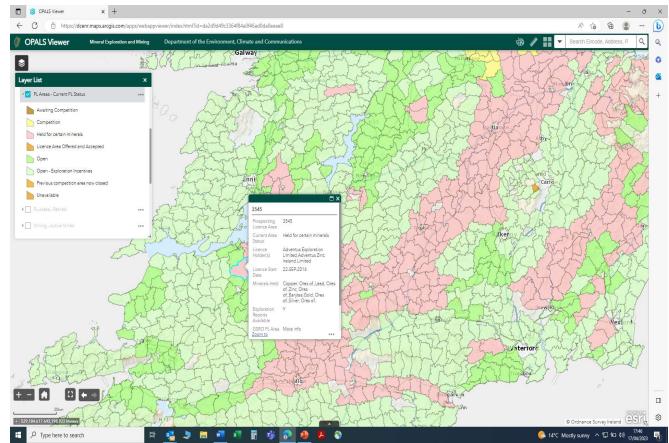
- The policy will be implemented in accordance with a set of principles, grouped under five themes, which are of equal importance and are mutually supportive

- A. Robust and Stable Regulation
- B. Increasing Awareness and Participation
- C. Sustainable Development
- D. Building Capacity and Access to Knowledge
- E. International Co-operation

Regulation

Exploration

- ▶ Requires a PL, typically 35km² in area. PL gives the holder the exclusive right to explore for specific minerals (e.g. base metals). Licences are normally issued for six years and are renewable, provided that T&C of licence have been met.
- ▶ Currently about 40 companies active in Ireland that hold approx. 400 PLs. Over 20% of the country is under exploration licence



Regulation

Mining

Requires three permits:

- ▶ Planning permission from the Local Authority
- ▶ An Integrated Pollution Control or Industrial Emissions Licence from EPA
- ▶ State Mining Facility issued by the Geoscience Regulation Office, after the other two authorizations have been issued.

Regulation

Mining

- No State shareholding in mines
- Time taken to issue State Mining Facilities is about 18 months (Note: None issued in recent years).
- Applicants for SMFs must demonstrate that:
 - *Have necessary financial and technical capability to work the minerals effectively*
 - *Have provided for orderly rehabilitation of the mine area, once mining has ceased*
 - *An adequate reserve of minerals has been defined, which can be reasonably expected to support a viable mining operation*

Robust and Stable Policy Environment

In the Fraser Institute's most recent (2022) Annual Survey of Mining Companies, Ireland ranked first in the world out of 84 mining jurisdictions in the survey's "Policy Potential Index"

- The Government is committed to encouraging exploration and development that is carried out in an environmentally and socially responsible manner
- New policy statement to underpin public support for prospecting and mining
- Security of tenure: Only holders of exploration permits are considered for mining facilities.
- No State shareholding in mines
- Streamlined permitting procedures for prospecting
 - *Simplified administration procedures*
 - *PLs normally issued within 4 months*
 - *User friendly legislation*
 - *Revised the minerals development Acts in 2017, (to be commenced)*

Favourable Financial Environment

Exploration:

- *Low application fees of €190 per PLA*
- *Low minimum expenditure requirements (MER) for exploration*
 - Usually €45k over six years, but for under-explored ground, MER drops to €17.5k

Favourable Financial Environment

Mining:

- *Competitive royalty rates*
 - Royalties are individually agreed in negotiation between the State and applicant case by case basis taking account of various factors including;
 - *The economics of the deposit being mined*
 - *Royalty rates internationally,*
 - *The need to continue to attract international exploration funding*
 - *Expectations of the State and developer of achieving a fair return depending on economic circumstances and recognising the need to allow for the many exploration failures*

Favourable Financial Environment

Mining contd.:

- Competitive royalty rates
 - For base metal deposits the royalty typically falls in the range 3 to 4% of Net Smelter Return (based on revenue from the sale of concentrates, less all transport costs from the mine to point of delivery to the smelter).
- *Various tax incentives:*
 - Immediate write off of development and exploration expenditure
 - Corporation tax of 25% for mining, but the downstream mineral processing sector attracts a rate of 12.5%
 - Capital Allowances of 100% (includes exploration and development expenditure, expenditure on plant, machinery and buildings)
 - Expenditure on rehabilitation of mine sites after closure is tax deductible

Favourable Geology

Zinc-Lead

- Ireland ranks first in world in terms of in world for Zn discovered per km and 2nd for lead
- Irish zinc deposits are especially attractive due to their relatively high grades and clean metallurgy.
- Over the past half century, multiple economic Zn-Pb deposits have been discovered.
- Five significant Zn-Pb discoveries since 1960s including giant deposit at Navan
- Recent exploration continues to identify significant resources of Zn-Pb including:
 - Pallas Green, Co Limerick (Glencore, Inferred Resource of 45Mt grading 7.2% Zn and 1.2% Pb)
 - Tara Deep (Boliden, Inferred Resource of 28.1Mt grading 8.4% Zn and 1.6% Pb)
 - Kildare Project (Raptor Resources Ltd; Inferred Resource of 11.3Mt grading 7.8% Zn + 1.2% Pb)

Favourable Geology

Copper

- Recent exploration in Ireland for a number of styles of copper mineralization, including:
 - *Sediment-hosted Stratiform Copper (e.g. Red-bed type copper) mineralization.*
 - *Volcanogenic massive sulphide deposits (e.g. Avoca)*

Ease of Exploration

- Ireland's temperate climate means field activities can be carried out throughout the year.
- Highly developed infrastructure (e.g. roads, rail network, ports and grid power)
- Excellent communications facilities
- Skilled workforce
- Wide range of specialist indigenous services available to the minerals sector;
 - Exploration and mining consultants
 - Competitive drilling rates, (typically around €100 per metre)
 - Excellent laboratory facilities (ALS Loughrea)

Freely Available Exploration Data

- Tens of millions of euro worth of mineral exploration data, freely available in digital format accessible online from the Geoscience Regulation Office and Geological Survey, Ireland (GSI)
- Digital, seamless geological maps of Ireland at various scales (GSI)
- National Tellus survey (airborne geophysics and geochemistry data)
- Drill core library (GSI)



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Thank you.

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