

# Minerals West Coast submission to the Ministry of Business, Innovation and Employment on a draft Critical Minerals List for New Zealand

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## INTRODUCTION

[1] Minerals West Coast is an industry organisation representing the shared and collective interests of people and businesses operating in the minerals sector of the West Coast region and elsewhere in New Zealand.

[2] Our membership is diverse, spanning individuals engaged in part-time or fulltime mining operations and associated services, through to small and medium-sized, family-owned enterprises, all the way through to large companies with international shareholdings.

[3] Miners on the West Coast and throughout New Zealand produce a variety of minerals via a range of methods. This includes gold from alluvial and hard rock deposits, sub-bituminous coal as a source of energy for food production and space heating, bituminous coal for steelmaking, aggregates and gravels for roading and construction, limestone for fertiliser, pounamu (often as a by-product of gold mining), and mineral sands producing industrial minerals and rare earth elements.

[4] In 2023 the GDP of the West Coast region was about \$2.6 billion NZD. When breaking this down by sector (using the ANZSIC system) mining was the third largest source of GDP in the region (see Appendix 1), accounting for \$217,900,000, or 8.4% of the total.

[5] Mining is among the highest-paid sectors in the New Zealand economy. In most of the past 15 years it has ranked highest paying sector in the country. In 2023 the annualised average earnings for the sector were \$94,276, third after finance and insurance services (\$117,260 per annum) and information, media, and telecommunications (\$100,204 per annum). See Appendix 2 for further information.

[6] In 2023 Māori working in mining earned higher incomes than Māori working in any other sector in New Zealand, with annualised average earnings of \$102,856 (see Appendix 3). This was one of several sectors in which average Māori earnings were higher than the workforce in the sector overall. Of all sectors in New Zealand, the workforce in mining has the highest proportion of people identifying as Māori (see Appendix 4), recorded at 32% in 2023.

## THIS CONSULTATION

The New Zealand Government is consulting on a 'Critical Minerals List' for New Zealand. A consultancy business, [Wood Mackenzie](#), has drafted this list on behalf of the Ministry of Business, Innovation and Employment. It includes the minerals that are (1) economically important to New Zealand and (2) whose supply is at risk, and are:

- essential to New Zealand's economy, national security, and technology needs, including renewable energy technologies and components to support our transition to a low emissions future; and/or
- in demand by New Zealand's international partners to enable us to benefit from international economic opportunities, contribute to the diversification of global mineral supply chains and improve the pipeline of the end-use products for which these minerals are essential; and
- susceptible to supply disruptions domestically and internationally. In some instances, New Zealand relies on domestic sources of minerals, but the supply of these minerals can be constrained. Internationally, supply chain disruptions could arise due to global supply shortages, or geopolitical risks."

Of interest to the West Coast and the broader New Zealand mining and quarrying industry, however, are the minerals New Zealand *already* produces, and is likely to produce commercially in the future, and for the Government to enable this production to be maintained and enhanced by way of appropriate policy settings.

## AN OUTLINE OF MINERALS WEST COAST'S SUBMISSION

Minerals West Coasts submission is structured as follows:

1. The case for developing a critical minerals list
2. The case for neglecting to develop a critical minerals list
3. Why commercially mineable minerals such as coal, gold, mineral sands, limestones, and aggregates need to be included on a list, should a list be developed

## THE CASE FOR DEVELOPING A CRITICAL MINERALS LIST

A mining industry of sorts has existed in this country since the earliest Polynesian settlers discovered the utility and beauty of what is now called pounamu / greenstone. In the subsequent seven or eight centuries, people have invested their time, energy, labour, and capital into developing the mineral resources with which Aotearoa is endowed. All of this activity has taken place in the absence of a critical minerals list, which raises the question – why have one?

In the document [A Draft Minerals Strategy for New Zealand to 2027](#) (authored by MBIE/The New Zealand Government) the development of a critical minerals list for New Zealand is listed at #2 on the below list of actions already underway:

*1. Implementing the Fast-track Approvals Bill.*

*2. Producing a critical minerals list for New Zealand.*

3. Improving the efficiency of the permitting process under the Crown Minerals Act 1991 and clearing the minerals applications queue.

4. Making amendments to the Resource Management Act 1991 and its national direction to improve consenting

processes and ensure it provides an enabling and enduring framework for responsible minerals development.

5. Completing a detailed stocktake of New Zealand's known mineral potential.

6. Promoting investment opportunities to increase the scale and pace of development.

On the [consultation page of MBE's website](#) regarding this list, the author argues that "if access was suddenly restricted to some of New Zealand's enabling minerals there would be serious implications".

It goes on to outline the criteria for a mineral being deemed "critical", and in turn added to the list. A mineral must meet the following criteria.

*"To be included in the draft list, a mineral must be:*

- *essential to New Zealand's economy, national security, and technology needs, including renewable energy technologies and components to support our transition to a low emissions future and/or*
- *in demand by New Zealand's international partners, and*
- *susceptible to supply disruptions domestically and internationally.*

*Essential is defined as critical to maintaining the New Zealand's economy today and into the future and not readily substitutable."*

Perhaps, one argument in favour of New Zealand developing a critical minerals list is that many other countries have critical minerals lists, and that active multilateral diplomacy is underway around the world on this subject. Examples are:

- [Minerals Security Partnership](#) - Australia, Canada, Estonia, Finland, France, Germany, India, Italy, Japan, Norway, the Republic of Korea, Sweden, the United Kingdom, the United States, and the European Union
- [C5+1 Critical Minerals](#) Dialogue – US, Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan
- [Quad countries](#) – US, Australia, India, Japan

By developing a critical minerals list, New Zealand would be in good company with like-minded nations, and that would answer the question of why develop a list. But is this enough justification? How relevant is the international context for New Zealand? These are questions which the government will have likely considered.

## THE CASE FOR FOREGOING DEVELOPMENT OF A CRITICAL MINERALS LIST

A great many goods and services are produced, distributed, and consumed in New Zealand on an almost constant basis. One may ask what role, if any, is appropriate for governments in this process. Across any range of goods and services there are three central economic questions to ask, which are:

- 1) What shall be produced?
- 2) For whom shall it be produced?
- 3) How shall it be produced?

In answering these questions it's worth noting that the primary determinant of mineral production and consumption is geology – humans can only mine what's there. Geological processes laid down the mineral riches of the earth before humans came into existence. Human ingenuity over centuries and millennia has discovered the different uses for the basket of minerals geology makes available. Producers and customers operate as willing sellers and willing buyers to determine what minerals shall be produced, and in what quantities, and what their best end-use may be. At the very end of this, is the vital role of government in regulating the impacts on people and our shared natural environments in the production and consumption of these minerals.

If for whatever reason, demand for any given mineral outstrips existing production rates / supply levels, prices will rise. This gives a signal to producers to dedicate available resources to increasing production where possible, practical, and profitable. It also incentivises consumers to reduce consumption and / or seek substitutes, where possible, practical, and profitable.

In a global context, New Zealand competitively produces and exports a limited range of minerals. This may well change in future, but it is difficult for anybody – investors, geologists, miners, consumers, elected representatives or civil servants – to know what such changes will be or when such changes will occur.

For a critical minerals list to add value to the system outlined above, it must include such minerals as are commercially and competitively mined in New Zealand (see below).

### **ANY CRITICAL MINERALS LIST SHOULD INCLUDE MINERALS ALREADY PRODUCED, OR LIKELY TO BE PRODUCED IN NEW ZEALAND**

A critical minerals list, insofar as one is developed, would best be developed with the full inclusion of such minerals as are commercially and competitively produced in New Zealand, as these are critical to New Zealand's mining industry.

Whether deliberately or inadvertently, the Government is exercising judgment in favour of some minerals over others in having a list where some minerals are deemed "critical" according to some criteria, and others, by not being on the list, are deemed "not critical".

It is not difficult to foresee the situation where a mining project proposed in any given location may involve the production of mineral X, Y, or Z, but the list only



includes the mineral A, B, or C. In such a case, could someone use this circumstance to argue *against* a project in need of permissions to proceed being allowed to do so?

To avoid this scenario becoming reality, it is vital that all of New Zealand's minerals already in production (or which have realistic potential to be mined) are included on the critical minerals list.

Today New Zealand is mostly a producer of the following minerals (where the prospectivity is 100%):

- Gold - export
- Silver - export
- Ironsands – export, and domestic steelmaking
- Coal – export, domestic industrial process heat (including for food processing, horticulture, cement and lime manufacture), domestic steelmaking, and, crucially, backup national grid electricity generation
- Aluminium – export (using imported bauxite)
- Aggregate and sand – domestic construction
- Limestone – domestic construction, agricultural lime, industrial applications, including lime and cement manufacture
- Zeolite – export, domestic animal health and other applications, including in low-carbon concrete
- Halloysite clay - export
- Heavy mineral sands (ilmenite) concentrate - export
- Pounamu – owned by Ngāi Tahu iwi, cultural and decorative uses

New Zealand's potential for **new** minerals production (drawn from the Woodmac list) boils down to:

- Antimony, arsenic – potential byproducts of gold mining
- Boron, caesium, rubidium – potential extraction from geothermal brines as byproducts of silica and lithium
- Cobalt, manganese, molybdenum, nickel – deep seabed potential, subject to access
- Copper – Coromandel peninsula, Kermadec volcanic arc, subject to access
- Phosphate – Chatham Rise, subject to access, or potential South Island deposits
- Silicon – eg reopening a West Coast underground coal mine
- Titanium, rare earth elements, zirconium – potential byproducts of West Coast heavy mineral sands (ilmenite, garnet)
- Tungsten – potential recovery from tailings at the Macraes gold mine, East Otago
- Vanadium, titanium – coproducts of titanomagnetite ironsands in the South Taranaki bight, subject to access

Undoubtedly, there will be minerals missing from the above list, and it is also possible that many of the above minerals may never be mined or quarried in New Zealand.

Insofar as a list includes anything worthy of the name “critical”, it is vital that coal be on any such list.

Minerals West Coast’s analysis of the [EECA Regional Heat Demand Database](#) indicates that coal remains the second largest source of energy in New Zealand’s major food producing industries (second only to natural gas). It meets 42% of the energy demands for ‘dairy product manufacturing’, 20% of demand for ‘meat product manufacturing’, 19% of the demand for ‘indoor cropping’, and 15% of the demand for ‘food and beverage product’ manufacturing.

Coal supplies **88.84%** of all process heat energy demand in the entire South Island according to Minerals West Coast’s analysis of the [EECA Regional Heat Demand Database](#).

Finally, coal remains essential in the production of steel from raw materials. New Zealand is a participant in international trade with people of other nations, and our metallurgical coal exports are an essential part of large and complex global supply chains.

To suggest such a fuel and mineral as coal is not critical would be to create doubt as to the meaning of the word “critical” itself.

## WHAT THE MINERALS INDUSTRY NEEDS

Minerals West Coast commends the Government for its commitment to enabling and promoting the minerals industry in New Zealand - by developing a minerals strategy, commissioning a minerals stocktake from GNS Science, and via regulatory reform. The minerals industry faces the following principal challenges:

- A need to improve attractiveness for investment
- Restrictions on access to land and the seabed
- Shortage of skilled or specialised labour
- Social licence – public opinion

The solutions in terms of government action lie in addressing:

- Regulatory complexity
- Mainstreaming acceptance of the minerals industry (the private sector also has a role here)
- Quality of geological data, and level of research & development
- Vocational education and training reform
- Immigration policy settings
- Infrastructure availability

This relates to the respective roles of government, and of the private sector, which are:

- Government to provide enabling policy settings for the free market to function (subject to certain regulation, eg health and safety, and environment)

- The market to respond effectively and efficiently to the key market drivers of supply and demand

## FLAWED CONTEXT OF WOODMAC REPORT

The concept of critical minerals lists, internationally, stems from around 10 years ago when the US was particularly concerned about China's domination of global supply of rare earth elements, and elements such as molybdenum.

Such lists have been a useful tool overseas to underscore the importance of minerals to societies, and of robust minerals supply chains. The focus has always been on enabling domestic production of minerals deemed to be critical, and on ensuring a supply of imported minerals for domestic manufacturing industries.

New Zealand does not fit into the above picture. Our country presents certain features, which the Woodmac report does not consider:

- Besides aggregate and limestone (for domestic use), New Zealand is far and away a producer and exporter of gold, silver, ironsands and coal
- Coal is critical to steelmaking, backup national electricity generation, and as an energy source for food production and processing, and cement and lime manufacture, in New Zealand
- Except for aluminium production (from imported bauxite) and rock phosphate imports, New Zealand's mineral imports are already embodied in finished products
- Advanced minerals processing in New Zealand is limited primarily to one steel mill, a gold refinery on the West Coast, and cement and lime manufacture, and downstream concrete production

Gold, silver, ironsands and coal are all critical to the future of the New Zealand mining industry, and, so, should all be on the list for that reason alone – if the Government indeed decides to create a list.

## CONCLUSION

It is important to promote and enable mining and quarrying in New Zealand, for all the minerals we are able to produce - just as the rest of the world does.

-ENDS-

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## Appendix 1: West Coast GDP by sector 2023

Industry	Level	Share of total
Electricity, Gas, Water and Waste Services	\$364m	14.00%
Agriculture, Forestry and Fishing	\$358.3m	13.80%
<b>Mining</b>	<b>\$217.9m</b>	<b>8.40%</b>
Construction	\$188.8m	7.30%
Manufacturing	\$158.5m	6.10%
Health Care and Social Assistance	\$155.3m	6.00%
Accommodation and Food Services	\$105.3m	4.10%
Retail Trade	\$104.4m	4.00%
Transport, Postal and Warehousing	\$85.2m	3.30%
Rental, Hiring and Real Estate Services	\$79.3m	3.10%
Professional, Scientific and Technical Services	\$68.2m	2.60%
Public Administration and Safety	\$62.1m	2.40%
Education and Training	\$48.6m	1.90%
Arts and Recreation Services	\$45.6m	1.80%
Wholesale Trade	\$41.8m	1.60%
Administrative and Support Services	\$40.6m	1.60%
Other Services	\$29.3m	1.10%
Financial and Insurance Services	\$28.4m	1.10%
Information Media and Telecommunications	\$24.1m	0.90%
Owner-Occupied Property Operation	\$190.2m	7.30%
Unallocated	\$198.3m	7.60%
<b>Total</b>	<b>\$2,594.10m</b>	<b>100%</b>



## Appendix 2: Annualised mean earnings by sector (New Zealand) in 2023

Sector	Mean earnings per annum 2023 in NZD
Financial and Insurance Services	\$117,260.00
Information, Media and Telecommunications	\$100,204.00
<b>Mining</b>	<b>\$94,276.00</b>
Electricity, Gas, Water and Waste Services	\$91,988.00
Professional and Administrative Services	\$89,908.00
Public Administration and Safety	\$89,908.00
Wholesale Trade	\$83,980.00
Rental, Hiring and Real Estate Services	\$83,044.00
Transport, Postal and Warehousing	\$79,300.00
Construction	\$76,180.00
Manufacturing	\$75,660.00
Total All Industry Groups	\$74,204.00
Health	\$68,380.00
Not Specified	\$66,040.00
Education and Training	\$65,104.00
Art, Recreation and Other Services	\$65,000.00
Agriculture, Forestry and Fishing	\$64,116.00
Retail Trade and Accommodation	\$46,436.00

### Appendix 3: Annualised mean Māori earnings by sector (New Zealand) in 2023

Sector	Mean earnings per annum 2023 in NZD
Mining	\$102,856.00
Financial and Insurance Services	\$97,344.00
Public Administration and Safety	\$89,596.00
Rental, Hiring and Real Estate Services	\$86,320.00
Professional and Administrative Services	\$77,532.00
Electricity, Gas, Water and Waste Services	\$76,024.00
Wholesale Trade	\$76,024.00
Information, Media and Telecommunications	\$73,996.00
Not Specified	\$73,008.00
Construction	\$72,852.00
Transport, Postal and Warehousing	\$70,304.00
Manufacturing	\$69,940.00
Total All Industry Groups	\$67,496.00
Education and Training	\$64,168.00
Health	\$64,168.00
Art, Recreation and Other Services	\$59,956.00
Agriculture, Forestry and Fishing	\$56,628.00
Retail Trade and Accommodation	\$39,884.00

## Appendix 4: Percentage of workforce identifying as Māori by sector 2023

Sector	Percentage of workforce identifying as Māori 2023
<b>Mining</b>	<b>32%</b>
Electricity, Gas, Water and Waste Services	21%
Agriculture, Forestry and Fishing	20%
Construction	19%
Manufacturing	18%
Public Administration and Safety	17%
Transport, Postal and Warehousing	17%
Not Specified	17%
Art, Recreation and Other Services	16%
Retail Trade and Accommodation	15%
Health	15%
Education and Training	15%
Total All Industry Groups	15%
Wholesale Trade	11%
Rental, Hiring and Real Estate Services	11%
Information, Media and Telecommunications	11%
Professional and Administrative Services	10%
Financial and Insurance Services	10%