

Chapter 21
Economics

ESMERALDA GRAPHITE PROJECT

aarc ENVIRONMENTAL SOLUTIONS
APEM Group

GRAPHINEX

Table of Contents

Glossary, acronyms and abbreviations 1

21 Economics 1

21.1 Environmental objectives 1

21.2 Existing economic environment 1

21.2.1 Population 1

21.2.2 Market and demand overview 1

21.2.3 Study catchments 5

21.2.4 Local and Regional economic indicators 7

21.2.5 Labour 8

21.2.6 Key industry contributions 9

21.2.7 Resource projects in the region 9

21.2.8 Indigenous businesses 13

21.2.9 Stakeholders 13

21.2.10 Project delivery model 13

21.3 Potential economic impacts 14

21.3.1 Cost-benefit analysis 16

21.3.2 Regional impact Assessment analysis 18

21.3.3 Cumulative impact assessment 21

21.4 Mitigation and management measures 23

21.4.1 Environmental offsets 23

21.5 TOR Reconciliation table 24

List of Figures

Figure 21-1: Forecast global natural graphite demand, 2024 to 2050 3
Figure 21-2: Forecast global battery-grade graphite demand, 2024 to 2050. 4
Figure 21-3: Graphite Announced Supply & Forecasted Demand, 2024-2040 (IEA 2025) 4
Figure 21-4: Study catchments 6
Figure 21-5: Croydon LGA Gross Regional Product, 2014-15 to 2024-25 7
Figure 21-6: Employment by Industry (Place of Work), 2024-25 8
Figure 21-7: Value of agricultural production, 2021 9
Figure 21-8: Approximate location of regional projects 12
Figure 21-9: Total Gross Value Add (GVA) Supported by Industry, Construction ($M) 20
Figure 21-10: Average Annual GVA Supported by Industry, (Qld) Full Operations ($M) 20

List of Tables

Table 21-1: Study catchments 5
Table 21-2: Major projects in the regional catchment 10
Table 21-3: Assessment of beneficial impacts 14
Table 21-4: Potential adverse impacts 15
Table 21-5: Assessment of cumulative impacts 21

Glossary, acronyms and abbreviations

Acronym or Abbreviation	Meaning
ABS	Australian Bureau of Statistics
AEC	AEC Group Ltd
BCR	Benefit Cost Ratio
CBA	Cost Benefit Analysis
CHMP	Cultural Heritage Management Plan
DESI	Department of Environment and Science
DISR	Department of Industry Science and Resources
EIA	Economic Impact Assessment
EIS	Environmental Impact Statement
EO Act	*Environmental Offsets Act 2014*
EV	electric vehicles
FIFO	fly-in, fly-out
FTE	full-time equivalent
GDP	Gross Domestic Product
GHG	Greenhouse gas
GRP	Gross Regional Product
GSP	Gross State Product
GST	Goods and Services Tax
GVA	Gross Value Add
IEA	International Energy Agency
IO	Input-Output
IRR	Internal Rate of Return
IVA	Industry value add
LGA	Local Government Area
ML	Mining Lease
MLA	Mining Lease Application
MSES	Matters of State Environmental Significance
NPV	Net present value
QEOP	Queensland Environmental Offset Policy
QGSO	Queensland Government Statistician's Office

Acronym or Abbreviation	Meaning
RIA	Regional Impact Assessment
ROM	Run-of-Mine
SIMP	Social Impact Management Plan
TCC	Townsville City Council
TOR	Terms of reference

21 Economics

This chapter describes the assessment of potential economic impacts, with specific regard to the regional economy and cumulative impacts.

To assess the Esmeralda Graphite Project (the Project) economic impacts, a targeted assessment has been undertaken in accordance with the Queensland Government's *Economic Impact Assessment Guideline* (EIA Guidelines) (Queensland Government, 2017). The assessment was conducted by AEC Group Ltd (AEC) and included a Cost Benefit Analysis (CBA) and applied Input-Output (IO) modelling in accordance with the EIA Guidelines.

A commercial-in-confidence version of Appendix P (Technical Report – Economic Impact Assessment) has been provided separately to the Coordinator-General to support the evaluation of the EIS. Appendix P contains commercially sensitive information relating to Graphinex's project economics and is therefore not publicly available.

21.1 Environmental objectives

This chapter has been prepared to enable an assessment of the Project with respect to the economic objectives stated in the Terms of Reference (TOR), detailed in Section 21.5. With regard to economic values, the design and all phases of the Project aim to:

1) avoid, minimise and/or mitigate adverse economic impacts arising from the Project;

2) capitalise on opportunities potentially available for capable local businesses and communities; and

3) create a net economic benefit to the region and State.

21.2 Existing economic environment

The existing economic environment has been assessed to describe the 'baseline' economic profile of the Project study area. This represents the economic profile in the absence of the Project, which is then compared with the economic profile that includes the Project. Regional economic data is used to inform economic models against which the Project's impacts are assessed. Regional and cumulative impacts are described.

21.2.1 Population

The local catchment (Croydon LGA) recorded a population of 273 persons in 2025, which accounted for 0.1% of the regional catchment population (ABS, 2026 a). In the decade to 2025, the Croydon LGA population decreased by 24 persons. In the longer term, the population is forecast to decline by a further 40 persons in 2051 from that recorded in 2025, to 233 persons.

Further growth in population is expected for the regional catchment moving forward, which is forecast to rise to approximately 292,700 persons by 2051 (QGSO, 2024). This represents an increase of 71,000 persons from that recorded in 2025, at an average growth rate of 1.1% per annum. Future population growth is expected to remain concentrated within Townsville and larger regional centres, while soft population decline is anticipated in more remote LGAs within the regional catchment (including Croydon LGA) over the long term.

21.2.2 Market and demand overview

The regional impact assessment is required to examine:

- The level of stimulus to the regional and state economy

- The level and location of employment change through:
    - Direct labour inputs;
    - Indirect labour inputs; and
    - The projected effects on the local economy, including housing, labour costs, and services.

The EIA Guidelines also outline that a cost benefit analysis (CBA) should be undertaken for all major complex projects anticipated to generate wide-ranging and detailed economic impacts. The CBA was undertaken in accordance with:

- Business Case Development Framework – Cost Benefit Analysis Guide (Queensland Government, 2021);
- Cost Benefit Analysis Guidance Note (Australian Government, 2020); and
- Handbook of Cost Benefit Analysis (Australian Government, 2006).

Graphite is a naturally occurring crystalline form of carbon, valued for its high thermal and electrical conductivity, chemical stability, and high natural strength. These properties make it suitable for a wide range of applications, including the production of battery anodes, electronic components, lubricants, refractories for steel making, and nuclear technology. Graphite is recognised as a critical mineral by both the Australian Government and the Queensland Government, reflecting its strategic importance and the limited number of countries with established production capacity (DISR, 2024; Geoscience Australia, 2026). Queensland, and Australia more broadly, do not have significant manufacturing industries that rely on graphite, and therefore graphite demand is low domestically. It is therefore expected that graphite produced by the Project would be exported, unless a future industry is established in Australia.

Both the Australian and Queensland Governments have established policy frameworks that explicitly support the development of a domestic graphite industry. At the national level, graphite is listed on Australia's Critical Minerals List and named as a priority material in the Australian Critical Minerals Strategic Reserve. The *Critical Minerals Strategy 2023-2030* sets out the Australia Government's vision to be a global leader in critical mineral production by 2030, supported by funding mechanisms including the $5 billion Critical Minerals Facility (Export Finance Australia, 2026).

Global demand for natural graphite grew by 8% in 2024 reaching approximately 4.8 Mt, with the energy sector comprising 32% of demand (IEA 2025). Demand for battery-grade graphite reached approximately 1.0 Mt. Historically, graphite demand was dominated by industrial applications such as steel making refractories, foundries, and lubricants, however, these applications have been progressively eclipsed by battery demand over the last five years. The key factors driving future demand of graphite include:

- Expanding lithium-ion battery markets: Lithium-ion batteries are the foundational technology of the global energy transition and expanding green technologies:
    - Electric vehicles (EVs) sales reached approximately 22 million in 2025, representing a 25% increase on the prior year. EV sales are expected to increase by around 54% by 2030 (BloombergNEF 2025a).
    - Global grid-scale storage deployment was expected to grow 23% in 2025, with China being one of the largest markets (along with the US). It is projected that cumulative energy storage capacity could rise by eight times the level of 2025 by 2035 (BloombergNEF 2025b).
    - Lithium-ion batteries are the main power source for consumer electronics such as smartphones, laptops, tablets, and wearable devices. While historically a demand driver, it is not expected to be a major factor in the future.
- Geopolitics and critical minerals supply chains: Supply of battery-grade graphite is acutely concentrated. China is projected to supply around 70-75% of global battery-grade graphite production capacity through to 2040 (IEA 2025). Non-Chinese graphite supply is only sufficient to cover 35-40% of demand to 2035. A series of Chinese export controls introduced from October 2023 highlighted the significant risk associated with such highly concentrated supply.
- Graphite alternatives: Battery-grade graphite can alternatively be produced synthetically from petroleum coke or needle coke feedstocks. While competing against natural graphite, it is significantly more energy

and carbon intensive to produce, and has faced rising input costs in recent years. At the start of 2025, Chinese needle coke prices reached US$750 per tonne (IEA, 2025).

The IEA's Stated Policies Scenario, which assesses demand based on current and announced government policies, projects total graphite demand will rise to 8.2 Mt in 2030 (at an average rate of 9.5% per annum from 2024) and approximately double current levels to peak at 11.0 Mt in 2040 (5.4% per annum). More ambitious decarbonisation trajectories project even stronger growth, with the Announced Pledges Scenario and the Net Zero Emissions by 2050 Scenario reaching peaks of 13.1 Mt (6.5% per annum) and 18.5 Mt (8.9% per annum) by 2040. Each of the scenarios project lowering demand from 2040, with the Stated Policies Scenario falling to 9.9 Mt in 2050. Without additional graphite supply being added, demand for graphite will outstrip supply by around 15.4% by 2030 even under the more conservative Stated Policies Scenario, closing to 10.1% in 2040 (Figure 21-3).

China accounted for an estimated 80% of global natural graphite mine production in 2025, with the next largest producers – Madagascar, Tanzania, Brazil, and Mozambique – collectively contributing less than 15% of supply (USGS, 2026). Australia produced no graphite in 2024, but ranks fifth globally for graphite economic resources at 22.6 Mt of Economic Demonstrated Resources, having more than doubled from 10.8 Mt in 2023 as new deposits move toward development (Geoscience Australia, 2026).

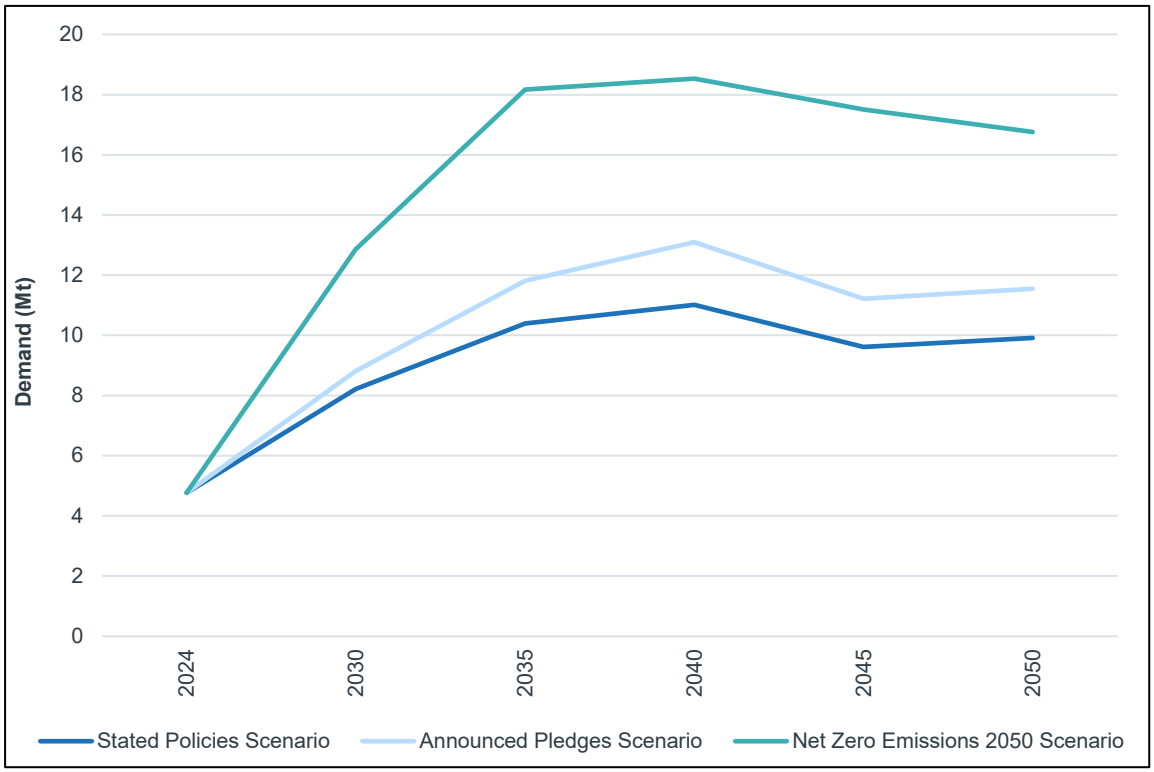
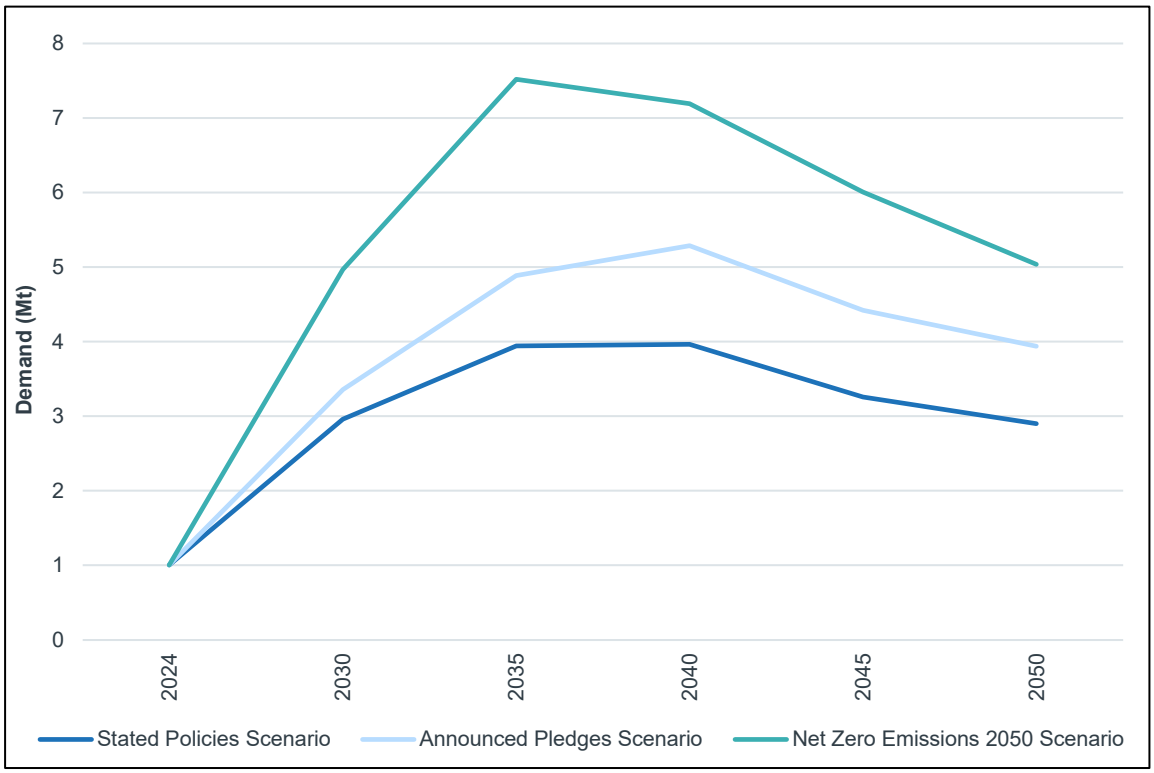


Figure 21-1: Forecast global natural graphite demand, 2024 to 2050



Source: IEA (2025).

Figure 21-2: Forecast global battery-grade graphite demand, 2024 to 2050.

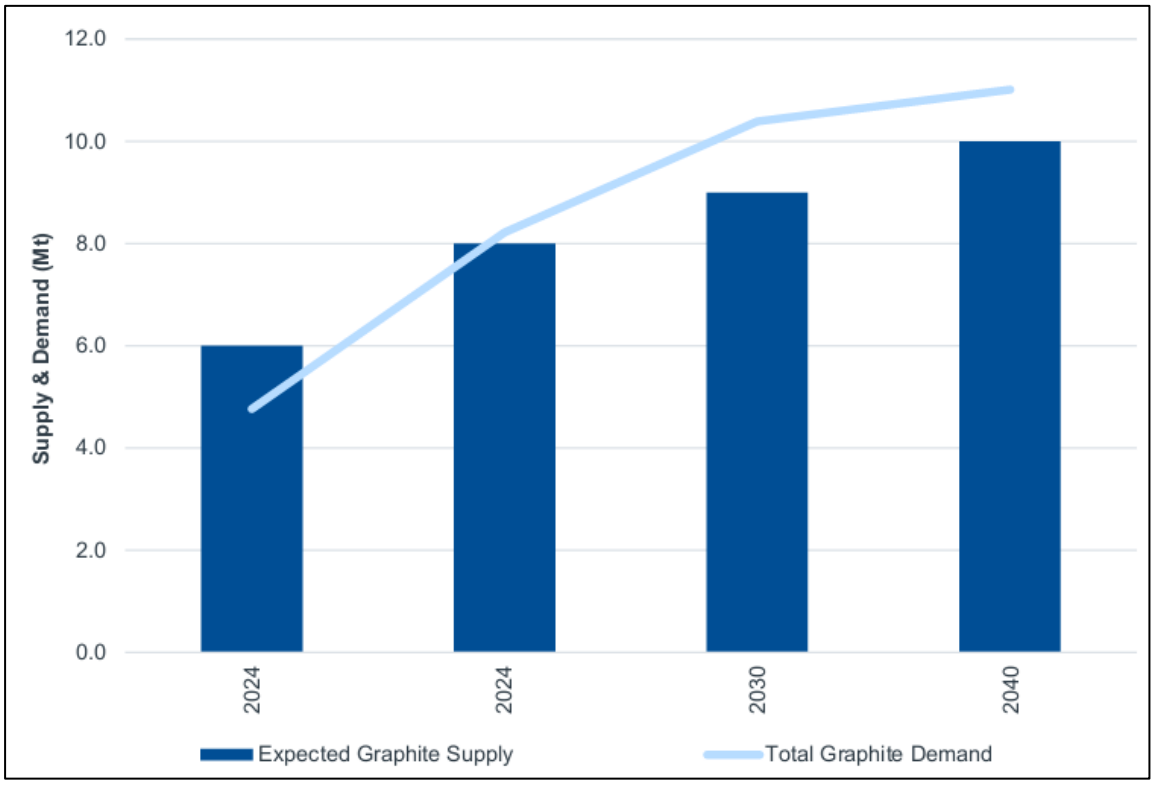


Figure 21-3: Graphite Announced Supply & Forecasted Demand, 2024-2040 (IEA 2025)

21.2.3 Study catchments

Study catchments were devised for the economic impact assessment to describe and assess the economic environment. The study catchments are based on the location of the Project, the likely sources of labour, goods, and services that would be used by the Project, as well as the location of port facilities, as these represent the regional economy most likely to be directly and/or indirectly affected by the Project.

The catchments assessed through the economic analysis are presented in Figure 21-4. A map of the local catchment, Regional Mine Catchment and Port Catchment is provided in Figure 21-4. The designated "rest of Regional Mine Catchment" refers to the Regional Mine Catchment less the Croydon LGA that comprises the local catchment.

Economic activity in the local and Regional Mine catchment (regional catchments) has been assessed against data available in a comprehensive proprietary Gross Regional Product (GRP) by Small Area model (AEC 2026), and using publicly available data as of May 2026.

Table 21-1: Study catchments

Catchment	Included Regions
local catchment	Croydon LGA
Regional Mine Catchment	Croydon LGA Etheridge LGA Richmond LGA Flinders LGA Charters Towers LGA Townsville LGA
Port Catchment	LGA - 37010 Townsville (TCC)
State	Queensland
Nation	Australia

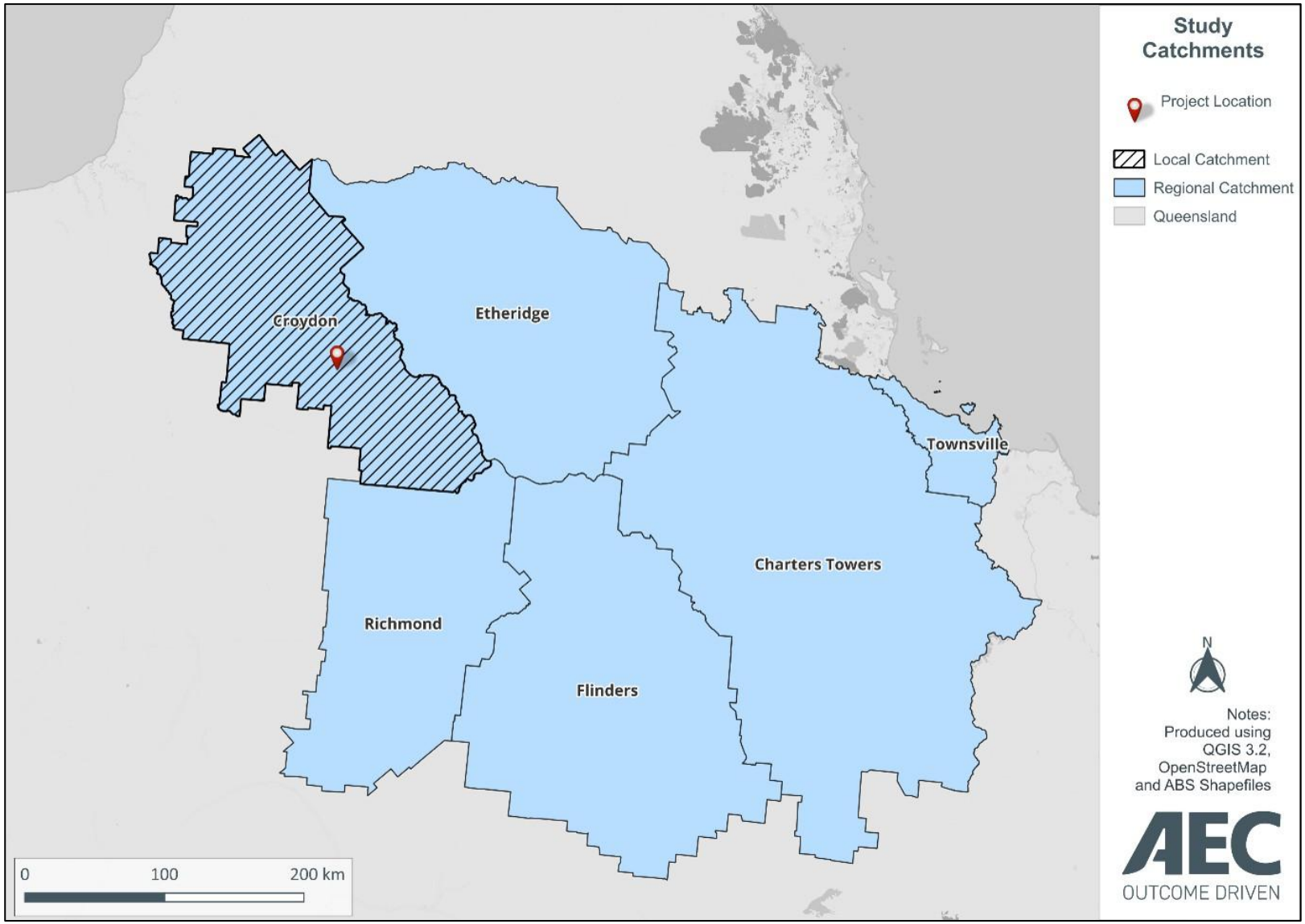


Figure 21-4: Study catchments

21.2.4 Local and Regional economic indicators

The Economic Impact Assessment evaluated key economic indicators using the following metrics:

- Gross Regional Product (GRP) – the total economic output of a specific region (local and regional mine catchment);
- Gross State Product (GSP) – the total economic output of a state (Queensland);
- Gross Domestic Product (GDP) – the total economic output of a country (Australia); and
- Gross Value Add (GVA) – Refers to the value of gross product after deducting the value of taxes and subsidies on products. This includes taxes that are payable on goods and services when they are produced, delivered, sold, transferred or otherwise disposed of by their producers, as well as taxes and duties on imported goods and services that are payable when they enter the economy/ are delivered.

The Croydon LGA economy recorded a GRP of $76.1 million in 2024-25, growing at a rate of 1.3% per annum on average since 2014-15 (AEC, unpublished) as shown in Figure 21-5. Agriculture was the main driver of economic activity in the Croydon LGA over the last decade, comprising 60.2% of industry value add (IVA) in 2024-25 at $38.7 million. The Croydon LGA accounted for 0.4% of the regional catchment economy's GRP of $19.9 billion in 2024-25.

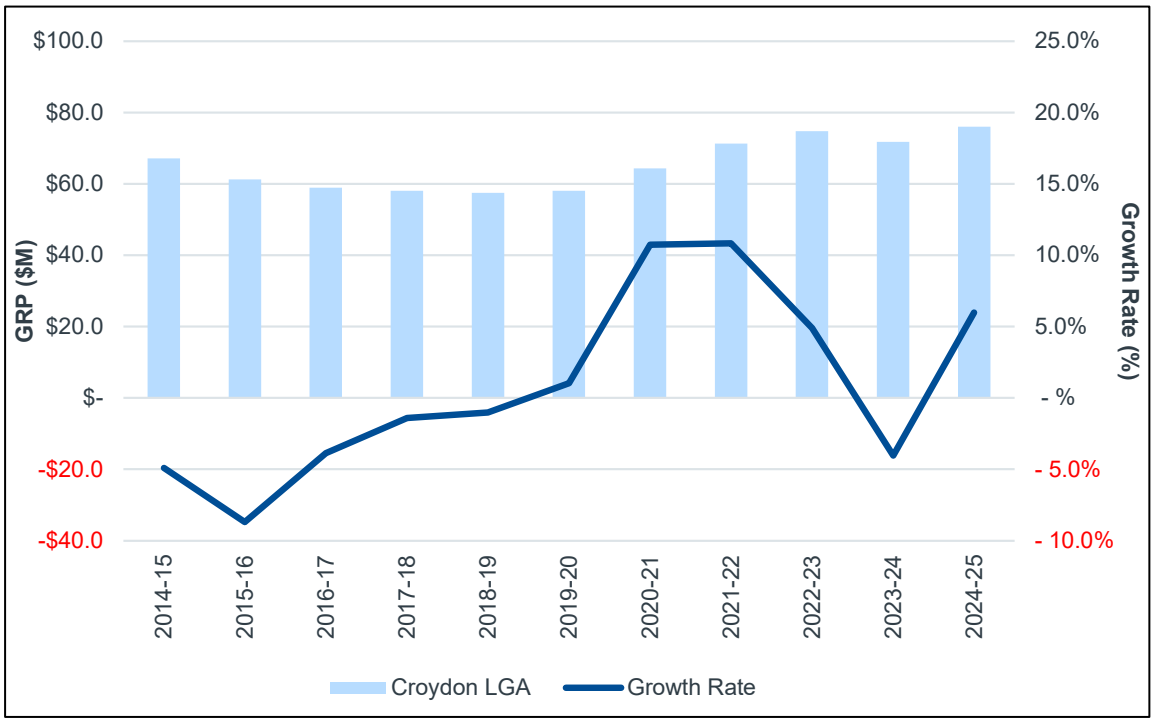


Figure 21-5: Croydon LGA Gross Regional Product, 2014-15 to 2024-25

Economic activity in the local catchment and Regional Mine catchment has had an average annual growth of 1.3% over 2014-2025. Economic activity in the regional catchment over the last decade has been influenced by growth in public administration and safety (comprising 18.4% of GVA in 2024-25) and health care and social assistance activity (comprising 13.1% of GVA in 2024-25), reflecting Townsville's role as North Queensland's major administrative, defence, and service centre, together with continued expansion in health service delivery across the region.

Exogenous factors, such as foreign demand for commodities and commodity prices, can significantly impact the GVA of the mining sector, which can result in significant variations in a region's GRP. The Townsville and Port

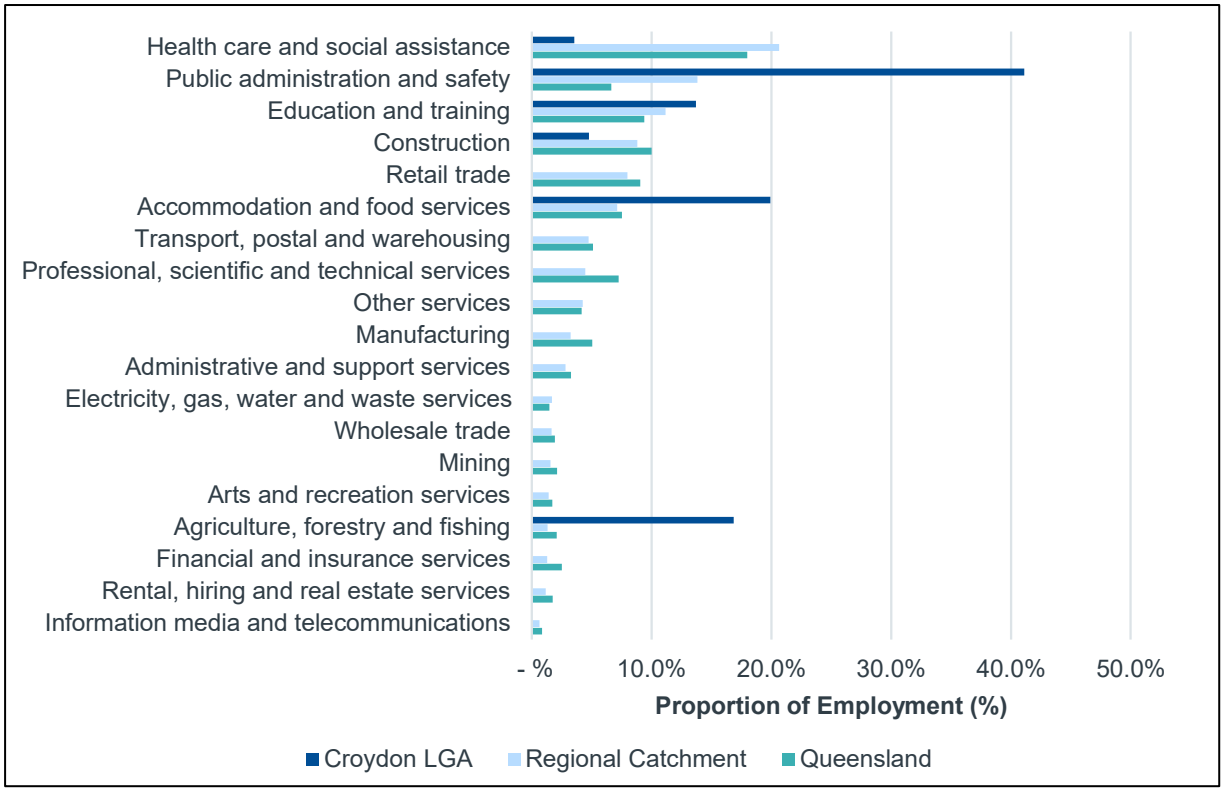
catchment and Queensland economies have experienced more stable economic activity since 2005-06 as they are more diversified than the local catchment and regional mine catchment.

21.2.5 Labour

The regional catchment labour force has generally expanded over the last decade, despite several periods of volatility associated with fluctuations in regional economic activity. The regional catchment labour force increased from approximately 95,500 persons in December 2016 to around 114,700 persons by December 2025. This employment growth reflects labour demand in the broader region. Labour market conditions across the regional catchment have historically been influenced by a mix of construction, agriculture, public administration and service sector activity, with labour force growth reflecting both cyclical economic conditions and the role of Townsville as the region's primary service and administrative centre.

Croydon LGA employed 112 persons in 2024-25. The small workforce is dominated by public administration and safety workers (comprising 41.1% of the workforce in 2024-25), while accommodation and food services (19.9%), agriculture, forestry and fishing (16.9%), and education and training (13.7%) workers are also prominent within the region.

The regional catchment employed approximately 109,000 persons in 2024-25. The highest employing industries in the regional catchment were health care and social assistance and public administration and safety, together comprising just over one-third (34.4%) of total employment in the region in 2024-25 (Figure 21-6). Education and training was the third highest employing industry in 2024-25 (comprising 11.2% of total employment), followed by construction (8.8%) and retail trade (8.0%). This industry structure reflects the concentration of government, defence, and health care functions within Townsville, as well as regional service functions within the inland LGAs supporting employment across a broad range of service industries.



Source: AEC (unpublished b).

Figure 21-6: Employment by Industry (Place of Work), 2024-25

21.2.6 Key industry contributions

Mining activity accounts for a relatively small contribution to GRP in Croydon LGA, generating $1.4 million and comprising 2.1% of total GVA in 2024-25. However, the mining industry represents an important contributor to the regional catchment economy, delivering $547.7 million of value-added activity in 2024-25. This indicates an established industry, including experienced and specialised workforce. In particular, Townsville acts as a primary regional processing and service centre for mining, as well as providing an avenue for distribution of product to end-markets both domestically and overseas through the Port of Townsville.

Agriculture is the key industry in the Croydon LGA, comprising 60.2% of total GVA and 16.9% of jobs in 2024-25 (Figure 21-7). The total value of agricultural production in the Croydon LGA was $113.8 million in 2021, comprising 12.9% of the total value of agricultural production in the regional catchment of $883.3 million. Agricultural production within both the Croydon LGA and the broader regional catchment is heavily concentrated in cattle and calf livestock activity, accounting for over 90% of the total agricultural value produced within both geographies.

This industry structure is broadly consistent with the dominant grazing land uses and extensive cattle operations that characterise much of North Queensland, and particularly the inland areas of the regional catchment.

In the Port catchment, the largest industry was public administration and safety, which contributed to 18.7% of GVA in 2022-23, driven by the large defence presence in Townsville. Other significant industries in the Port catchment include health care and social assistance, at 11.9% of GVA ($1.7 billion), and construction at 9.1% of GVA ($1.3 billion).

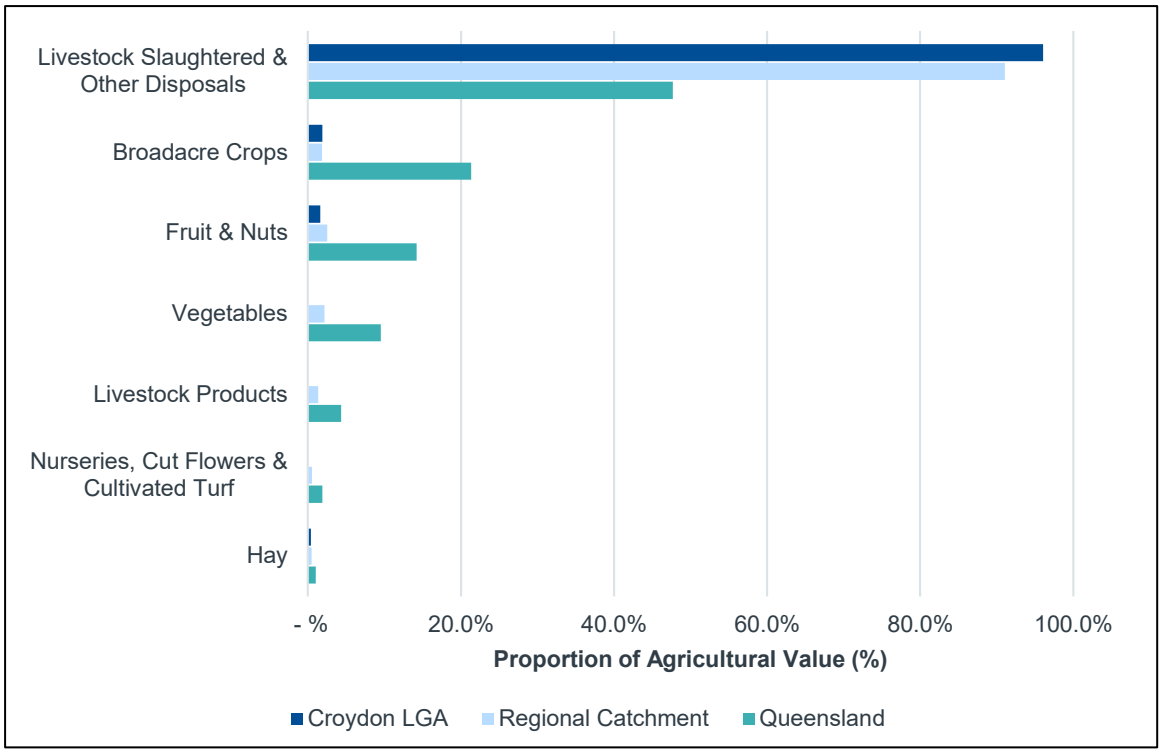


Figure 21-7: Value of agricultural production, 2021

21.2.7 Resource projects in the region

Major projects within, and connected to, the Regional Catchment that may contribute to cumulative economic and labour market activity during the construction and operational phases of the Project have been identified. These projects are listed in Table 21-2. The approximate locations of these projects are shown in Figure 21-8, noting that for linear infrastructure such as the CopperString 2032 project (which will span from Townsville to Mount Isa when completed), an end point has been used.

Key sectors influencing activity across the Regional Catchment include mining and critical minerals, renewable energy, electricity transmission, industrial processing, and regional infrastructure. The projects identified include both proposed developments and expansions or continuation of existing operations, with several projects progressing in stages over extended timeframes. As such, some projects may result in the continuation of existing employment and economic activity within the region, rather than a material step-change in workforce or population growth outside of construction periods.

Table 21-2: Major projects in the regional catchment

Project	Description	Status	Expected timing
CopperString 2032	High-voltage transmission infrastructure connecting Mount Isa to Townsville	Under construction	2024 to 2031
Big Vein South Gold Project	Open cut and underground mining operation near Croydon	Proposed (prescribed project)	Construction Q2 2027 to Q4 2028
Croydon Gold Project	Gold mining and processing redevelopment	Proposed/progressing approvals	Commencing 2026
Eva Copper Project	Iron oxide-copper gold resource	Construction	Late 2028
Julia Creek Vanadium and Energy Project	Vanadium and oil shale mine and processing	Progressing approvals	Construction from 2028
Richmond-Julia Creek Vanadium Project	Vanadium mining and processing development	Coordinated project	Construction from 2027
North Queensland Vanadium Project	Vanadium mining and downstream processing	Proposed	Late 2020s
Kidston Hybrid Project	Pumped hydro, solar and transmission infrastructure	Approved/progressing delivery	Construction from 2026
Mount James Wind Farm	Wind farm and associated transmission infrastructure	Proposed	Commencing 2026
North Queensland Super Hub – Stage 1	Renewable energy and hydrogen-related industrial development	Proposed	Commencing 2026
Ravenswood Expansion Project	Gold mine expansion and operational continuation	Proposed	Ongoing to 2030s
Lansdown Eco-Industrial Precinct	Industrial precinct supporting advanced manufacturing and processing industries	Development approvals progressing	Staged delivery from 2026
Vecco Critical Minerals Project	Vanadium mining, processing and electrolyte production	Progressing approvals	Mid-to-late 2020s
Northern Quartz Campus	High-purity quartz extraction and processing	Proposed	Commencing late 2020s
Sugarbag Hill Ultra High Purity Quartz Sand Project	Quartz sand extraction and processing	Proposed	Commencing late 2020s

Townsville Port Expansion Stage 2	Port infrastructure expansion and freight capacity upgrades	Proposed/staged delivery	Late 2020s
Townsville Powerfuels	Sustainable aviation fuel and green fuels production facility	Proposed	Late 2020s
PhosOne Project	Phosphate operation	Progressing approvals	Construction from 2026
Project Ulysses	Sustainable aviation fuel production development	Feasibility and planning	Late 2020s
Burdekin Falls Dam Raising	Water infrastructure upgrade and dam raising works	Proposed	Timing subject to approvals
Army Aviation Program of Works	Defence aviation and base infrastructure upgrades	Under delivery	Mid-to-late 2020s
Townsville University Hospital Expansion	Major health infrastructure expansion	Proposed/staged delivery	Mid-to-late 2020s

Note: Projects may be subject to change. Information is based on publicly available data as of May 2026.
Source: AEC 2026.

Other more fringe projects identified, where less information was available, include the following:

- Saint Elmo Vanadium Project; and
- Paradise South Phosphate.

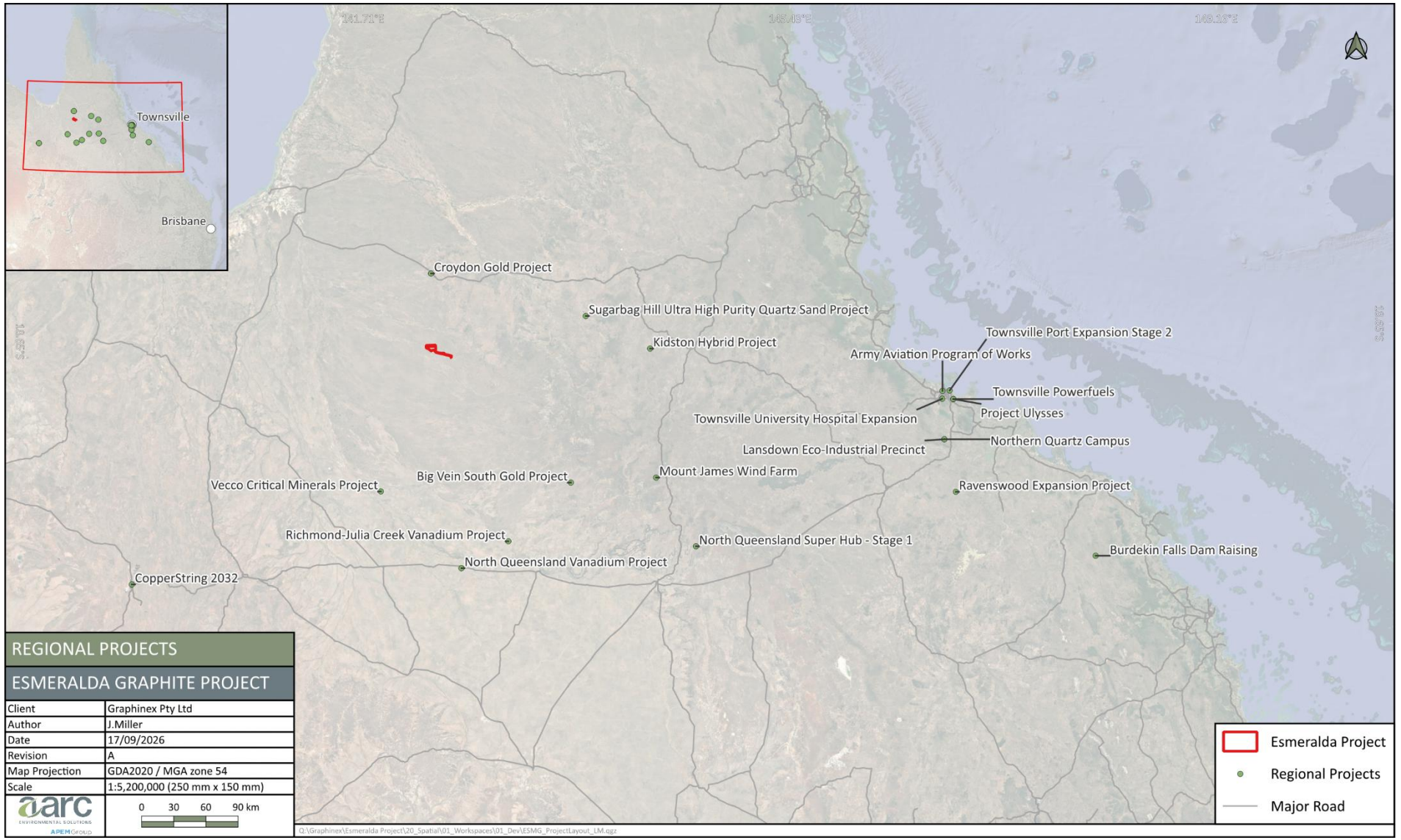


Figure 21-8: Approximate location of regional projects

21.2.8 Indigenous businesses

As part of public consultation conducted for the Project, engagement with First Nations peoples (namely, the Tagalaka People and representatives) was undertaken. Plans have been put in place based on the outcomes of engagement to support economic opportunities for First Nations peoples. Details relating to public consultation and engagement activities conducted in relation to the Project are presented in Appendix C of the EIS.

A Workforce Management Plan and Local Business and Industry Procurement Plan have been developed for the Project that form part of the Social Impact Management Plan (SIMP). The key objectives of the plans are to:

- maximise opportunities for competitive and capable local businesses to provide goods and services to the Project;
- build relationships with local businesses to maximise local awareness of supply opportunities; and
- manage any inadvertent labour competition impacts on local businesses.

The Project would provide opportunities for local and regional businesses to participate in its supply chain, contributing to business sustainability and growth, indirect employment and economic development. The plan outlines the Project's approach to identifying how local industry would be encouraged to register as a supplier, pre-qualify or tender for supply opportunities. The plan aims to maximise benefits for local and regional businesses through measures such as a local and regional business register, targeted engagement with suppliers and supporting local contracts. The Project's business register would allow businesses to express interest and submit their details via the Project website from the pre-construction phase.

Local and First Nations businesses would have a higher preference weighting in competitive bidding processes. Targeted engagement would include supplier briefings and tender sessions in local centres, along with advance notice of supply opportunities shared through the Project website, local notice boards and networks like the Gulf Savannah Development channel.

21.2.9 Stakeholders

Stakeholders relevant to the economic impact assessment include the workforce, industry, businesses, governments at local, regional, state, and federal levels, and indigenous groups. Adverse and beneficial impacts on these stakeholders are detailed in Section 21.3.

21.2.10 Project delivery model

The Project would be owned and delivered by Graphinex and funded via a mix of debt and equity before shifting to an operational cash flow model. The proposed delivery is via an integrated mining and processing facility, road transport of concentrate and export of final product via the Port of Townsville. This model would supply high-quality graphite for production of battery anodes and other products.

Construction and operation of the Project would be managed via an integrated management team and contractor operating model. The on-site processing plant is planned to be operated by Graphinex under an owner-operator structure.

Graphinex is an Australian-owned company with a head office located in Brisbane. The development and operation of the Project would require significant investment. Capital expenditure would be funded via a mix of debt and equity, while operating expenditure would be funding via operating cash flows as per normal commercial requirements.

The following Project elements would require capital expenditure:

- mineral processing plant;
- mining specific infrastructure;

- 30-year mining plant purchase, replacement and salvage; and
- construction works.

Decommissioning and rehabilitation costs for the Project are estimated at approximately $150 million.

Offtake agreements would be commercial-in-confidence, however, in 2025, Graphinex secured an US$860 million Letter of Interest (LOI) from the United States Export-Import (EXIM) Bank, supported by Export Finance Australia. This forms part of the U.S. – Australia Critical Minerals Framework signed by President Trump and Prime Minister Albanese. The LOI from EXIM provides validation of the Project's technical and commercial foundations, and a pathway to accelerate development and sustain production.

Timing for Project delivery would be contingent on timing of approvals, however, for the purposes of undertaking the Cost Benefit Analysis, an assumed start date of 2027 has been adopted (noting this is for modelling purposes only).

21.3 Potential economic impacts

The Project would have an expected life of 65 years, comprising 2 years of construction, 53 years of operation (mining and mineral production), and 10 years of rehabilitation.

The Project would have beneficial impacts on the economy as it would:

- contribute to economic growth through both direct and flow on activity and demand for materials;
- increase employment and household incomes;
- provide support for local and regional businesses; and
- contribute to government taxation revenues through a variety of taxes and duties which can be used by governments to provide additional services and infrastructure to support businesses and households throughout Australia.

A detailed assessment of the impacts, both adverse and beneficial impacts, is provided in the following sections for the construction and operation phases, and the start of the rehabilitation phase. Late stages of the rehabilitation phase are not expected to result in significant economic impacts.

Potential impacts on economic values are summarised in Table 21-3 and Table 21-4 and include impacts on agricultural production, competition for resources and workers, and impacts on traffic. Potential cumulative impacts are discussed in Section 21.3.3.

It is not anticipated that the Project would have a tangible impact on the normal supply/demand of quarry material availability in the region or Queensland during or after construction, and the demand on extractive resources for Project construction is not expected to impact regional supply. It is anticipated that the majority of quarry material would be extracted from the open-cut pit spoil within the Project MLAs.

Table 21-3: Assessment of beneficial impacts

Impact	Description
Economic Growth	The Project would contribute to increased levels of Gross Regional/ State/ Domestic Product (GRP/ GSP/ GDP) in the Regional Mine Catchment, the fPort Catchment, Queensland, and Australian economies during construction and operations, flowing from both direct and flow on impacts: • Construction is estimated to contribute $90.9 million in GRP to the regional catchment, including $39.5 million directly and $51.4 million through flow-on activity; • This level of activity is estimated to support a contribution of $203.7 million to GSP in Queensland (inclusive of regional catchment impacts), including $78.8 million directly and $124.9 million through flow-on activity;

	• At full operations, the Project is estimated to support an average annual contribution of $318.8 million in GRP directly for the regional catchment; and • Direct activity is estimated to deliver an additional $57.3 million in flow-on activity to GRP in the regional catchment, and additional $109.7 in flow-on GSP in Queensland (inclusive of Regional Catchment flow-on activity).
Employment	The Project would support jobs in the regional catchment, and Townsville catchment supporting mining, processing, Port and input sectors. The Project would not utilise a 100% FIFO workforce and would actively work to support local employment. The Project is estimated to support: • during operations, an additional $125.5 million in industry output through flow-on activity, estimated to generate an annual average of $376.1 million in GRP in the regional catchment, supporting 465 FTE jobs; and • during construction, generate a total of $239.7 million in the regional catchment, of which $142.1 million would be supported directly through the initial construction spend stimulus and $97.6 million through flow-on activity, supporting 366 FTE.
Household Incomes	The increase in employment would also support increased incomes in the regional mine catchment, the Port catchment, Queensland, and Australia flowing from both direct and flow-on impacts: During full operations, the Project is estimated to directly generate about $542.8 million per year in the regional catchment and supporting another $125.5 million through flow-on activity. This is estimated to generate an annual average of $376.1 million in GRP in the regional catchment, supporting 465 FTE jobs (including direct and flow-on activity).
Government Revenue	The Project would provide a lift in Queensland and Australian government revenues through a variety of taxes and royalties. Overall, the Project is estimated to deliver government benefits: • $60.3 million in total during construction ($57.1 million to the Australian Government, and $3.2 million to the Queensland Government); • $77.4 million per annum on average during operations ($72.4 million to the Australian Government and $5.0 million to the Queensland Government); and • These additional revenues can be used by government to provide additional infrastructure and services to support business and households throughout Australia.
Opportunity for New Industry Development	Graphite concentrate produced at scale in Queensland, presenting a case study in expanded domestic critical minerals production.
Population Retention in the Regional Mine Catchment	The local catchment population is low and projected to decline. The attraction of workers to the area (although temporary) would help sustain demand for a range of goods and services provided by the local economy, supporting the scale of activity required for local businesses to remain viable.

Table 21-4: Potential adverse impacts

Impact	**Description**
Impact on Land Uses and Agricultural Production	Lost value from grazing activity is estimated to be $5.6 million over the life of the Project. This conservatively assumes the land disturbed would otherwise provide a value for grazing production of approximately $45.49 per ha (in line with the average value in the Regional Catchment in 2021), and all of this value would be lost as a result of the Project until the land is rehabilitated, which likely overstates the impact that would be realised.
Impact on Environmental Uses	The Project would cause a significant residual impact to Matters of State Environmental Significance (MSES). A financial offset is proposed to satisfy offset requirements.
Impacts on labour demand	The Project is expected to employ up to 192 personnel, with ~128 of these directly related to mining activity and the remainder undertaking mineral processing and general site work. At full operations (from year five of operations to year 40 of operations), the Project is estimated to average around 166 operations staff per annum.

	The source of labour during operations is expected to be similar as during construction, with up to 5% of the workforce sourced locally (within 125 km of the Project) and the remainder being FIFO workers.
Impacts on Local Businesses from Competition for Resources	While the Project would provide incomes for various businesses and employees engaged either directly or indirectly by the Project, some businesses/ industries may experience small reductions in growth relative to what would otherwise be expected to occur without the Project. This is primarily due to increased competition for constrained resources, particularly in sectors such as mining and manufacturing. Within the Regional Catchment, these sectors might face higher costs due to the competition for limited labour resources and rising input prices.
Impacts on Property Markets	The Project workforce would be predominantly FIFO and accommodated on-site. The use of a FIFO workforce minimises pressure on local accommodation or the local or regional property market.
Impact on GHG Emissions	Scope 1 GHG emissions attributable to the Project is estimated to equate to 85,169 t CO_2-e annually.
Impact on Traffic	The total cost of additional traffic generation due to the Project, as measured through additional vehicle operating costs, road damage costs, and road safety costs, has been estimated and included in economic modelling.

21.3.1 Cost-benefit analysis

A cost-benefit analysis (CBA) was undertaken for the Project as part of the economic impact assessment[1]. The CBA examined the costs and benefits associated with the Project, for the full Project lifespan from construction, operation, and until the end of rehabilitation. The CBA considered the:

- key construction inputs and milestones in the form of a project timeline;
- relevant renewal costs related to the project (including projected repair/replacement of infrastructure);
- operational costs, including all input costs of production;
- costs associated with environmental management, monitoring, mitigation, rehabilitation and offsets associated with the project, including abatement of greenhouse gas (GHG) emissions;
- benefits, including revenue projections (and stipulating unit/price assumptions); and
- expected project life and any residual value over the assessment period.

21.3.1.1 Project alternatives

The CBA did not examine impacts of potential alternative sites/ alignments/ designs for Project components and infrastructure, nor shared use of common user infrastructure with other projects - as the proposed Project has been identified as the most suitable option. An overview of options considered by the proponent is included in Chapter 5 of the EIS.

No common user facilities are proposed in conjunction with the Project.

21.3.1.2 Project scenario

For the purposes of the CBA, key activities of the Project include:

- construction, operation and rehabilitation of an open cut graphite mine;

[1] A commercial-in-confidence version of Appendix P (Technical Report – Economic Impact Assessment) has been provided separately to the Coordinator-General to support the evaluation of the EIS. Appendix P contains commercially sensitive information relating to Graphinex's project economics and is therefore not publicly available.

- mineral processing of ore to produce a graphite concentrate;
- haul road construction and transport of concentrate along a private road to an intersection with the public road network at Esmeralda Prosect Road; and
- transport of graphite concentrate using road trains to Townsville.

For the purposes of modelling economic impacts for the RIA and CBA commercial-in-confidence Project data was used to inform modelling regarding anticipated production, costs and timing for the Project. Initial construction, occurring over approximately two years includes pre-strip, topsoil stockpiling, development of on-site accommodation, mine infrastructure area and mine-access road.

The Project is anticipated to have an initial construction cost of $317.5 million.

The Project is expected to support a construction workforce of up to 100 personnel. For the purposes of economic modelling, it has been assumed that 100 full time equivalent (FTE) construction workers would be supported during the first year of construction, followed by 20 FTE construction workers in the second year of construction.

The workforce would represent a mix of local and remote workers. Due to limitations on available skilled workforce in regional communities within 125 km of the Project, the Project workforce is likely to be primarily sourced externally from regional hubs such as Townsville, Charters Towers, Mount Isa and Brisbane and operate on a fly-in, fly-out (FIFO) basis. Local employment (within 125 km of the Project) from areas such as Croydon, Richmond or Cloncurry is indicatively expected to comprise approximately 5% of the construction workforce, with the remainder reflecting FIFO workers from elsewhere in Queensland.

As the regional catchment includes regional hubs such as Townsville and Charters Towers, for the purposes of modelling impacts in the RIA, it was assumed approximately 50% of the workforce would be sourced from the regional catchment, with the remainder from the rest of Queensland.

Sources of goods and services are planned to be source locally to the extent possible but would be limited by availability of supply. The following assumptions regarding supply of goods and services during construction were adopted:

- Between 30% and 40% from the Regional Catchment;
- Between 30% and 40% from the rest of Queensland;
- Between 5% and 15% from the rest of Australia; and
- Between 15% and 25% from overseas.

Following the initial capital development, a second stage of expansion works is anticipated to occur to lift processing capacity from 100 ktpa to 200 ktpa from approximately year four of operations onwards. Expansion works are expected to take approximately two years to complete, at a cost of around $348.8 million. Labour requirements associated with the expansion works are expected to form part of the operational labour force.

The Project would mine up to 3.5 Mtpa of ROM ore, to a total of approximately 170 Mt of graphite ore over the operational life of the Project. On-site processing of the mined ore would produce up to 100 ktpa graphite concentrate during the first three years of operations, increasing to up to approximately 200 ktpa graphite concentrate for the remainder of the Project following expansion capital works. For the purposes of the CBA, operating costs have been assumed as a range of dollars per tonne of mined ore (excluding expansion and sustaining capital). This includes the cost of:

- labour (site employees and contractors);
- mining (drilling, blasting, loading, hauling);
- processing (reagents, consumables);
- fuel;
- freight (haulage to Townsville);

- maintenance;
- environmental management;
- administration; and
- royalties and other tax obligations.

The CBA assessment period covers the full expected life of the Project of 65 years, comprising 2 years of construction, 53 years of operation (mining and mineral production) and 10 years of decommissioning and rehabilitation. Mining operations are expected to cease progressively from approximately year 48, with processing of remaining stockpiles continuing through to year 53, followed by decommissioning and final rehabilitation. For the purposes of the CBA, an assumed start date in 2027 has been adopted (noting this is for modelling purposes only). All values are expressed in 2026 Australian dollar terms and discounted to 2026 present values, using a real discount rate with sensitivity testing.

No residual value has been included in the CBA. By the end of the assessment period, most Project infrastructure will have been decommissioned and removed, and remaining stockpiles will have been processed. Some infrastructure will remain, including a dam, the airstrip, and the accommodation facility – however no value will be attached to these as they will have supported a long-life Project. The only post-closure value reflected in the CBA is the return of most rehabilitated land to grazing, which is assumed to ramp up linearly over five years during the second half of the rehabilitation phase and reduces the impact on agricultural activities. Excluding residual value is a conservative assumption and ensures the net benefit of the Project is not overstated.

The CBA applies discounted cash flow techniques in accordance with guidelines set out in the Queensland Government Cost Benefit Analysis Guide (Queensland Government 2021) and Australian Government Cost Benefit Analysis (Australian Government 2023). The CBA assesses the impact of the Project proceeding compared to a scenario without the Project, examining the stream of relevant economic, social and environmental costs and benefits anticipated from the Project to assess the net present value (NPV) of the Project to the Queensland community.

The NPV is the primary criteria for the economic appraisal. The NPV of a project expresses the difference between the present value of future benefits and present value of future costs, i.e.: NPV = present value of benefits – present value of costs.

The CBA identified that, at a moderate discount rate, the Project is deemed to be economically desirable with the benefits outweighing the costs. The CBA identifies, across all discount rates examined, the Project would be deemed economically desirable under the CBA modelling assumptions used, with the benefits outweighing the costs.

A sensitivity analysis across the key assumptions in the CBA modelling was used in the economic impact assessment. The sensitivity analysis tested the validity of modelling assumptions and results. This indicated that the Project is likely to deliver a positive NPV across the scenarios.

21.3.2 Regional impact Assessment analysis

A regional impact assessment (RIA) was undertaken to determine the anticipated economic activity that would be supported by the Project based on results of economic in modelling of the construction and operations activities associated with the Project. The RIA used Input-Output modelling to examine the direct and flow-on activity expected to be supported by the Project . The Input-Output model describes economic activity by examining several types of impacts:

- **Output**: Refers to the gross value of goods and services transacted, including the costs of goods and services used in the development and provision of the final product. Output typically overstates the economic impacts as it counts all goods and services used in one stage of production as an input to later stages of production, hence counting their contribution more than once.

- **Gross product**: Refers to the value of output after deducting the cost of goods and services inputs in the production process. Gross product (e.g., Gross Regional Product (GRP)) defines a true net economic contribution and is subsequently the preferred measure for assessing economic impacts.
- **Gross value add (GVA)**: Refers to the value of gross product after deducting the value of taxes and subsidies on products. This includes taxes that are payable on goods and services when they are produced, delivered, sold, transferred or otherwise disposed of by their producers, as well as taxes and duties on imported goods and services that are payable when they enter the economy/ are delivered.
- **Income**: Measures the level of wages and salaries paid to employees of the industry under consideration and to other industries benefiting from the Project.
- **Employment**: Refers to the part-time and full-time employment positions generated by the economic stimulus, both directly and indirectly through flow-on activity, expressed in full-time equivalent (FTE) positions.

Modelling results are described in terms of the direct and flow-on economic impacts of the Project during construction and operations. The model excluded rehabilitation, closure and decommissioning phases as the activities were associated with a relatively small annual impact and that the workforce is likely to be a continuation of the Project's mining workforce.

It was assumed that 25% of production-induced activity from construction would flow on to activity in non-local businesses, captured in the region of interest (i.e. regional catchment or Queensland), while 5% of the household consumption flow-on impacts from these workers would be captured in the region of interest. The RIA considered both mining and processing inputs and outputs.

21.3.2.1 Impact on GRP

Construction of the Project would also provide economic benefits elsewhere in Queensland, both directly through sourcing construction and professional services outside the regional catchment, as well as through flow-on activity. An additional $295.1 million in direct and flow-on output for businesses in Queensland outside of the regional catchment is expected to be generated as a result of construction activity associated with the Project, for a total of $534.8 million in output in Queensland. This is expected to generate an additional $112.8 million in GRP for the rest of Queensland, for a total of $203.7 million in Gross State Product (GSP) in Queensland.

During full operations, the Project is estimated to directly generate an average output of $542.8 million per annum in the Regional Catchment, supporting an additional $125.5 million in industry output through flow-on activity. This level of output is estimated to generate an annual average of $376.1 million in GRP in the Regional Catchment, supporting 465 FTE jobs (including direct and flow-on activity).

Operational activity associated with the Project would also support businesses, jobs, and economic activity elsewhere in Queensland through flow-on impacts. Project operations are estimated to generate an additional average output of $105.7 million per annum in flow-on impacts for businesses in Queensland outside of the regional catchment, for a total of $774.0 million in output per annum in Queensland. This is expected to generate an additional $52.4 million in average annual GRP for the rest of Queensland, for a total of $428.5 million in annual GSP in Queensland.

21.3.2.2 Impact on GVA

Construction is estimated to add $200.9 million to Queensland GVA. Of this, $89.7 million would occur in the regional catchment ($39.0 million directly and $50.7 million through flow-on activity) and $111.2 million in the rest of Queensland. The construction industry is anticipated to receive the largest share of benefits, at approximately $49.2 million, followed by manufacturing at $34.0 million and professional, scientific and technical services at $30.7 million.

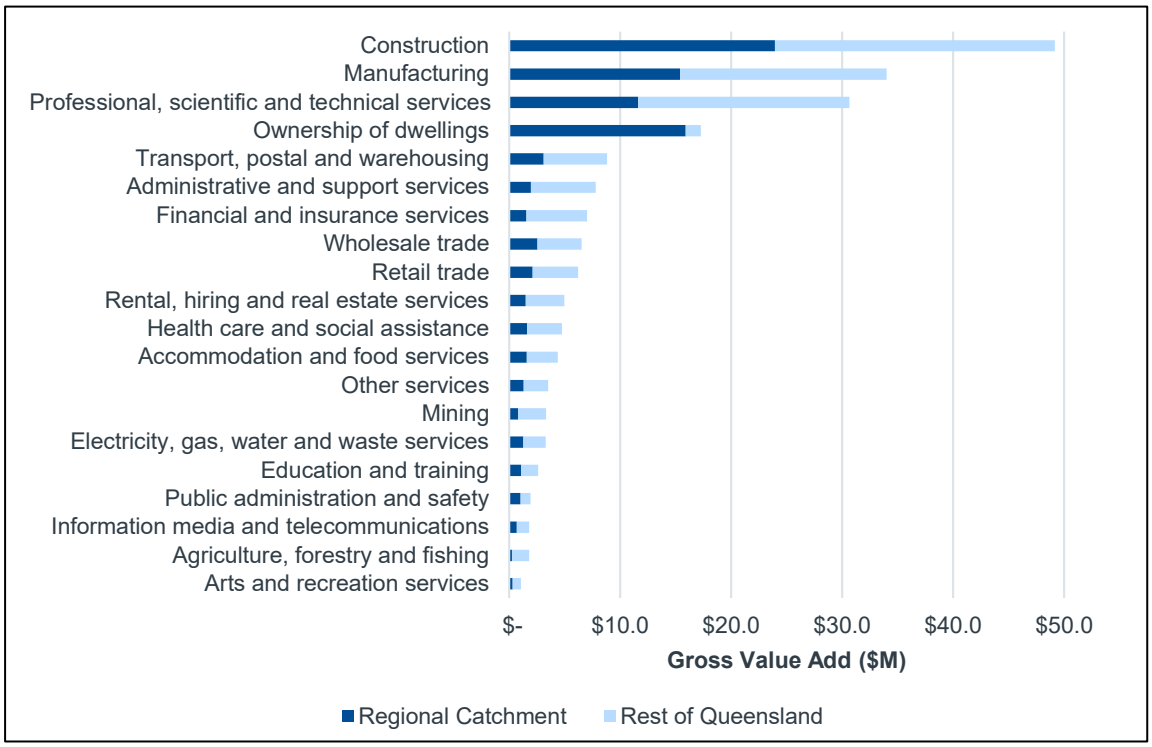


Figure 21-9: Total Gross Value Add (GVA) Supported by Industry, Construction ($M)

Operations are estimated to add $426.0 million to Queensland GVA. Of this, $374.4 million would be generated in the regional catchment ($318.0 million directly and $56.4 million through flow-on activity). The remaining $51.6 million would occur in the rest of Queensland. The manufacturing industry is anticipated to receive the largest share of benefits at approximately $257.1 million, followed by mining at approximately $85.5 million. Most of the economic impact is expected to stay within the regional catchment.

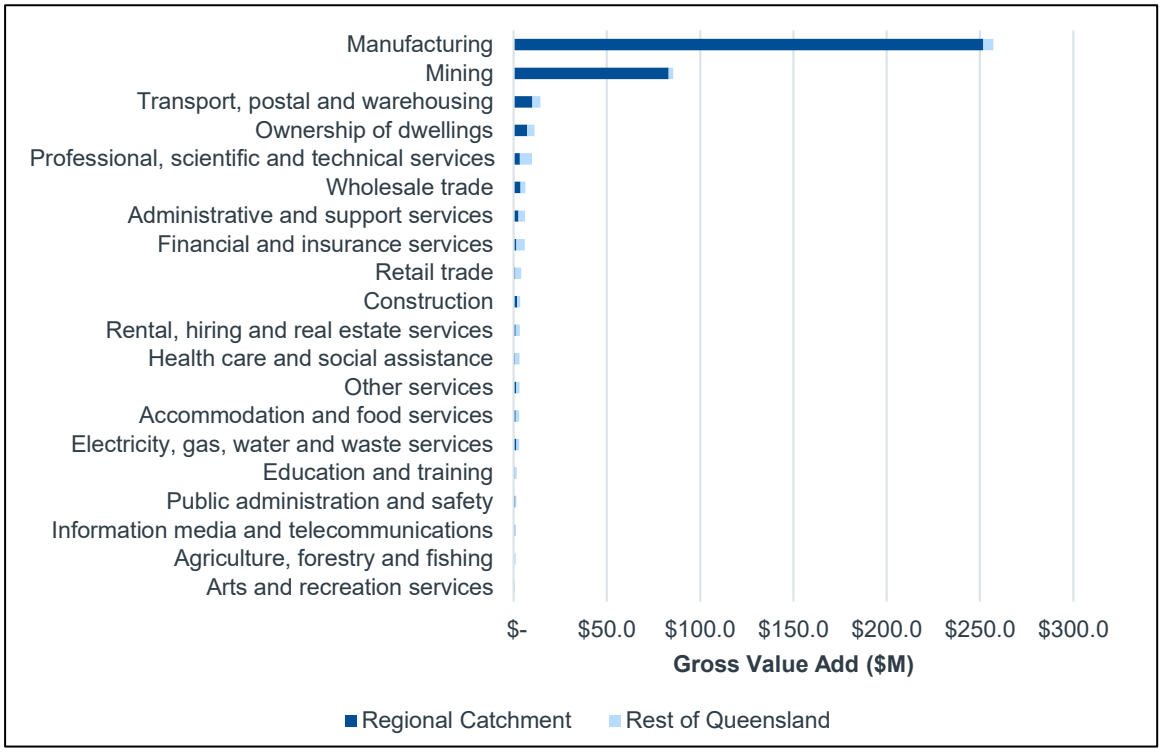


Figure 21-10: Average Annual GVA Supported by Industry, (Qld) Full Operations ($M)

21.3.2.3 Contribution to government revenue

Indicative estimates of taxation revenue to the Queensland and Australian Government have been developed based on benchmarks of taxation revenue received compared to relevant Queensland and Australian measures and applied to results from IO modelling. The Project is expected to generate the following in taxation revenue accruing to the Queensland Government and Australian Government;

- $60.3 million in total during construction
- $77.4 million per annum on average during operations.

During construction, about 94.7% of the additional tax revenue is expected to go to the Australian Government, with about 5.3% going to the Queensland Government. Similarly for Project operations the Australian Government is expected to receive around 93.5% and Queensland around 6.5%.

Most Australian Government revenue would come from company income tax and personal income tax, while Queensland Government revenue would come mainly from payroll tax and royalties.

21.3.2.4 Impact on agricultural uses

The Project site is currently used for cattle grazing. Using an average grazing value of $45.49 per hectare and a disturbance area of 2,414 ha (rounded up from the Project disturbance footprint of 2,413.7 ha), the land could otherwise produce about $109,800 per year in grazing value over the life of the Project. During and after mine operations, land is expected to be rehabilitated to a condition suitable for low-intensity cattle grazing. Grazing impacts are expected to gradually decrease during the second half of the decommissioning period as land rehabilitation activities progress.

In total, the potential lost value from grazing activity is estimated to be $5.6 million over the life of the Project, equating to a net present value of approximately $1.5 million using a 7% discount rate. The total disturbance area accounts for approximately 0.01% of the livestock grazing area in the regional catchment.

To minimise impacts on grazing, disturbance of this land is likely to occur progressively over the life of the mine with potential to maintain production in some areas prior to being disturbed. Further, lost activity of $109,800 per annum may overestimate the potential lost value, as cattle grazing in other areas could be intensified and/or activities currently undertaken in the disturbance area could potentially be located elsewhere.

21.3.2.5 Impact on environmental uses

In addition to agricultural uses of the site, the Project would also disturb some areas that provide environmental and biodiversity value as Matters of State Environmental Significance (MSES). A financial offset is proposed to satisfy offset requirements.

21.3.3 Cumulative impact assessment

An assessment of the Project's potential to generate cumulative impacts in conjunction with other major projects/activities included consideration of the proposed or announced major projects in the Regional Mine Catchment.

Table 21-5: Assessment of cumulative impacts

Impact	Description
Beneficial	
Impact on meeting net zero emissions	The cumulative effect of the Project, in conjunction with the proposed critical mineral projects throughout the Regional Mine Catchment and elsewhere in Queensland, would improve Queensland's ability to produce critical minerals and downstream products. Increasing production of critical minerals has the potential to support the transition to

	renewable energy sources and thereby support Queensland and Australia in meeting net-zero emissions targets.
Enhanced support for business and industry development in the critical minerals supply chain	The Project, in conjunction with other critical minerals projects under development or proposed in the Regional Catchment, is likely to assist in developing the critical mass required to promote strengthening and developing the critical minerals supply chain and supporting industries. Fostering stronger connections between upstream producers and downstream technology manufacturers strengthens the supply chain by helping secure the availability of key inputs required for production of final goods and services. Over time, these interactions are likely to stimulate further investment, innovation, and industry clustering, further supporting both Queensland and Australian Government strategies and priorities for developing the requisite skills and industry capabilities in advanced and renewable energy technologies.
Adverse	
Impact on the Labour Market	The cumulative effect of the Project alongside other regional developments may place pressure on the availability of skilled labour within the Local Catchment and Regional Catchment. With the Project relying predominantly on FIFO arrangements for both construction and operational phases, only a small proportion of the Project's workers will be sourced locally. The use of a FIFO workforce reflects the relatively small local labour force available in Croydon LGA, constraining to some degree opportunities to source local labour which could be exacerbated where a number of projects are developed concurrently in Croydon LGA or surrounding LGAs. Over the long term, the reliance on non-local labour and the finite size of the regional workforce has the potential to reduce the capacity for other local businesses and industries to expand, which could be exacerbated by multiple projects being undertaken concurrently as labour competition intensifies. While operational employment levels are moderate relative to the scale of the regional labour force, the concentration of project-specific demand over construction and peak operational periods may contribute to short-term displacement effects.
Impacts on business from competition for resources	Impact assessment would elevate the level of competition for resources in the Regional Catchment, including labour and other business inputs such as capital, goods and services used in the production process, transport infrastructure, and utilities. This may result in a small contraction for some industries, relative to what would be expected to occur without the Project, as they are out-competed for labour and other business inputs by these major projects. Cumulatively, this may result in a modest increase in costs of production in the Regional Catchment. An increase in production costs has the potential to erode the viability of some businesses, which could reduce the availability of some lower income paying services supporting business and household activities in the region. Cumulatively, the Project and other regional developments may produce modest short-term spikes in competition for skilled labour and specialised equipment, but regional supply chains and staggered project timelines are likely to prevent this from causing severe spikes or sustained adverse impacts.
Impact on agricultural production	Most projects considered in the cumulative impact assessment can be expected to disrupt and consume land suitable for use for agricultural purposes (primarily grazing). Cumulatively, this may exacerbate the Project's impact on agriculture through an overall contraction of land available for agricultural purposes in the Regional Catchment, and may result in a reduced capacity to replace the agricultural activity disturbed by the Project elsewhere in the Regional Catchment. The Regional Catchment has a relative abundance of available grazing land and the Project's impact on agriculture is estimated to be very small, with the land to also be rehabilitated to grazing uses post mining. As such, the Project's contribution to cumulative impacts on agriculture are anticipated to be negligible.

21.4 Mitigation and management measures

The economic impact assessment quantified the expected beneficial and adverse economic impact of the Project on the regional and State economies. The report identified that significant economic benefits would be derived from the Project's contribution to local, regional, state and national economic contributions. These include direct contributions through tax and royalties and indirectly through flow-on economic activities and employment.

The economic benefits of the Project would be maximised through strong collaboration with local communities and all levels of government. The Tagalaka People have also been engaged directly through the development of a Cultural Heritage Management Plan (CHMP), and on-going consultation with this group will determine economic aspirations and practical measures in which the Project can support these. To date, the Project has sponsored community events and sports teams by this group. By operating efficiently, maintaining engagement, and continually seeking improvement opportunities, the Project aims to deliver lasting value to the communities in which it operates. Throughout the mine life, decisions would be guided by both production needs and community priorities to ensure shared, long-term economic benefits.

To ensure benefits of the Project are maximised, and any potential adverse impacts are minimised, the following mitigation measures have been recommended and would be adopted for the Project:

- Development of a Workforce Management Plan and Local Business and Industry Procurement Plan to maximise benefits retained within the Local and Regional Catchment, which collectively include strategies for preferencing of locally sourced labour, implementation of a training and skills development program, and preferencing of sourcing goods and services for the Project from local and regional contractors and suppliers (where feasible and practical).
- To minimise potential adverse impacts on business and labour availability from cumulative impacts of projects, the Local Business and Industry Procurement Plan includes strategies for early procurement planning and local workforce engagement.
- To minimise potential adverse impacts on agricultural production, the proponent would avoid/ minimise the disturbance of productive agricultural land in any areas not immediately affected by mining activity, with rehabilitation of the majority of the site to a post mining land use of grazing (or to support future grazing activity).

21.4.1 Environmental offsets

State-based offsets would be required for the Project for significant residual impacts on regulated vegetation, in accordance with the EO Act and Queensland Environmental Offsets Policy (Version 1.17) (QEOP) (DESI 2025). The Proponent would deliver a financial offset in accordance with the QEOP prior to the commencement of the Project.

A total of $877,020.62 would be required to secure an offset for the removal of REs that intersect with an area shown on the vegetation management wetlands map, and REs within a defined distance of a vegetation management watercourse or drainage feature.

Offset requirements are discussed further in Chapter 18, Flora and Fauna.

21.5 TOR Reconciliation table

Terms of reference - Content requirements of the EIS		EIS Section
Section 21 - Economics		
Economics - Existing environment		
21.1	Describe the existing economic environment consistent with the Economic Impact Assessment Guideline. The analysis is to describe the local and regional economies likely to be impacted by the project, identify the relevant stakeholders, and include: (a) the regional economy's key industries and their contribution to regional output (b) relevant economic indicators (c) existing, approved and proposed projects in the region.	Section 21.2 Section 21.2.6 Section 21.2.4 Section 21.2.7
21.2	Describe the existing and future demand for the project's products in both domestic and international markets over the life of operations, including alternative demand scenarios and detail any assumptions underpinning the demand scenarios.	Section 21.2.2
21.3	Describe the preferred project delivery model (including funding sources) and expected timeframes, outlining assumptions on economic externalities that have the potential to impact on the delivery model and/or expected timeframes.	Section 21.2.9
Economics - Impact assessment and mitigation measures		
21.4	Identify the net economic impacts of the project on the local and regional area and the State, ensuring the analysis is consistent with the Economic Impact Assessment Guideline.	Section 21.3
21.5	The economic impact assessment is to address matters including, but not limited to: (a) labour demand, including the ability for labour (including specialists) to be drawn from the existing local, regional and state workforce, and the potential effects this may have on local and regional businesses (b) raw input demand, including the ability of existing local, regional and state suppliers to provide relevant raw and manufactured inputs (c) the anticipated value of offsets required for all components of the project.	Section 21.3.1 Section 21.3. Section 21.4.1
21.6	Provide a demand analysis as justification for the scale and scope of the project, relative to the demand scenarios examined in TOR item 21.2, with sensitivity analysis for potential changes in product prices.	Section 21.2.2
21.7	Undertake a regional impact assessment (RIA) in accordance with the Economic Impact Assessment Guideline that quantifies the employment by industry (including an estimate of supply chain employment) and value-added contribution of the project to the local, regional and state economies. The RIA is to estimate the changes in key indicators including: (a) gross regional product (b) gross state product (c) employment by industry (d) gross value added by industry.	Section 21.3.2 Section 21.3.2.1 Section 21.3.2.2 Section 21.2.5

Terms of reference - Content requirements of the EIS		EIS Section
21.8	Undertake a cost-benefit analysis (CBA) in accordance with the Economic Impact Assessment Guideline that identifies the structure of the project and the relevant direct costs and benefits from the project. The CBA is to consider: (a) key construction inputs and milestones in the form of a project timeline (b) relevant renewal costs related to the project (including projected repair/replacement of infrastructure) (c) operational costs, including all input costs of production (d) costs associated with environmental management, monitoring, mitigation, rehabilitation and offsets associated with the project, including abatement of greenhouse gas (GHG) emissions (e) benefits, including revenue projections (and stipulating unit/price assumptions) (f) expected project life and any residual value over the assessment period.	Section 21.3.1
21.9	The CBA should also consider all direct, indirect, and external social costs and benefits. These would include: (a) external net benefits to third parties who are providing inputs to the project (b) external net costs (to third parties, community, local and state government) as a direct result of the project (c) comparisons of all direct, indirect and external costs and benefits and valuing those direct, indirect and external costs and benefits in monetary terms (d) assumptions for benefits and costs, including risk assessments (e) all beneficiaries (e.g. individuals, the community, local and state government) of the project.	Section 21.3.1
21.10	The CBA should consider any alternative sites, alignments and/or designs for project components and infrastructure, including shared use of common user infrastructure with other projects, which provide for lower impact.	Section 21.3.1
21.11	Subject to any confidentiality requirements, discuss any economic aspirations identified through engagement with Aboriginal peoples and/or Torres Strait Islander peoples that are enabled via the project, especially for areas where native title exists. Where agreements have been entered into with Aboriginal peoples and/or Torres Strait Islander peoples, describe the net benefit provided by these agreements and how they align with any identified economic aspirations.	Section 21.4