



Regional  
Development  
*Australia*

**ORANA**

# The Orana Hunter Connections and Beyond Golden Highway Transport Study

April 2024

# RDA Orana: The Orana Hunter Connections and Beyond Golden Highway Transport Study

The Regional Development Australia Orana region, the largest in NSW, is poised to experience a transformative shift in its economic landscape. Characterised by booming agricultural and mining sectors, the region is well-resourced to contribute materially to the shift towards renewable energy, critical minerals production and increased agricultural production. However, these drivers will place significant demands on transport networks, notably in road and rail freight in the corridor between the Orana and Hunter regions.

To better understand these shifts and their implications for the transport system, The Stable Group were engaged by Regional Development Australia (RDA) Orana to produce the Orana Hunter Connections and Beyond – Golden Highway Transport Study. RDA Orana received funding from the Regional NSW – Business Case Strategy Development Fund to complete an independent study, shedding light on the drivers of freight demand to develop a business case for road and rail transport solutions between Narromine and Newcastle.

## Scope

The scope of the study included:

- Desktop review of studies and data on existing freight flows including imports and exports.
- Assessment of the performance of infrastructure (road, rail, air) to support the existing freight flows.
- Quantification and understanding of future freight flows.
- Assessment of network impact of future freight flows on existing infrastructure.
- Stakeholder engagement on the preferred mode of transport, infrastructure barriers and opportunities.
- Identification and cost-benefit analysis of infrastructure improvement opportunities



## Desktop study

A desktop study was conducted to evaluate previous infrastructure, transport and freight studies. The findings show that baseline data from previous studies underestimates the volumes, the commodity mix, imports and exports.

Importantly, economic growth in the Orana-Hunter region has surpassed predictions. This is due to the development of the Renewable Energy Zone, non-coal mining operations, and future expansions at the Port of Newcastle.



**56**

infrastructure reports, assessments, strategies and published work discussing supply chain infrastructure, freight, and ports were analysed.



**9**

of these chosen for in-depth analysis.

## Stakeholder engagement

As the desktop study demonstrated a significant underestimation of freight volumes from past studies, key stakeholders were engaged who were critical in informing more accurate current and future freight estimates. These stakeholders provided their freight volumes, including current volumes and future freight task, for 2026 and 2033. Importantly, their data was deidentified for the reporting process to protect their commercial operations.



**167** potential stakeholders were identified



**30** industry representatives were chosen to participate.

## Current and future freight flow volumes

**Finding #1: Freight volumes will increase by 148.2% to 2033, higher than previously estimated.**

Data collection and stakeholder engagement conducted in October 2023 found the current Golden Highway corridor freight task to be over 2 million tonnes. Our data suggests this will grow to over 6.29 million tonnes in 2033 (Table 1). These volumes were significantly higher than the estimates provided by Transport for NSW. In 2016, they estimated the freight volumes on the Golden Highway Corridor to be 4.44 million tonnes by 2036.

**Table 1: Future Freight Task of the Golden Highway Corridor (Road + Rail)**

| Commodity          | 2023             | 2033             | 2050             |
|--------------------|------------------|------------------|------------------|
| Agricultural Input | 90,000           | 90,000           | 90,000           |
| Fuel               | 113,200          | 121,700          | 121,700          |
| Mine Input         | 131,400          | 2,184,000        | 2,184,000        |
| Non-Coal Minerals  | 460,000          | 1,627,000        | 1,627,000        |
| Other              | 100,000          | 350,000          | 500,000          |
| Agriculture        | 1,640,000        | 1,919,500        | 1,817,000        |
| <b>Grand Total</b> | <b>2,534,600</b> | <b>6,292,200</b> | <b>6,339,700</b> |

Total Forecast Freight Volumes Golden Highway Corridor (tonnes per annum)

*Note: Coal transport is not included in data due to dedicated methodology for rail infrastructure provision via ARTC Hunter Valley Access Undertaking. The decrease in fuel transport is directly related to forecast reduction in coal production within the Ulan area.*

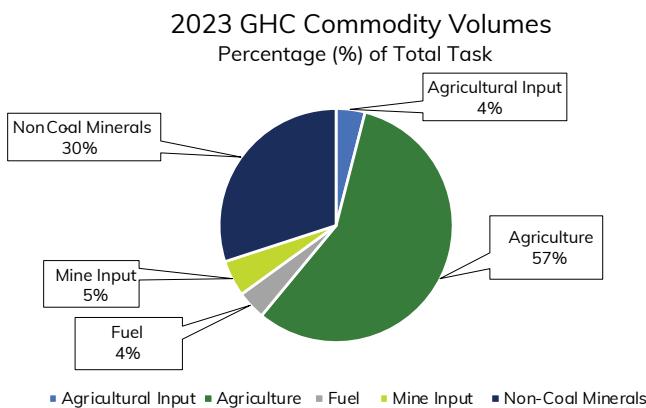
The Business Case identifies that the 2033 estimate (6.29 million) will be higher in 2033 than previously forecast by Transport for NSW in 2016. From 2023 to 2033, there will be a 148.2% increase in commodity volumes, growing from 2,534,600tpa to 6,292,200tpa.

**Finding #2: Commodity mix is far wider than forecast, with significantly larger numbers of imports driven by mining processing materials.**

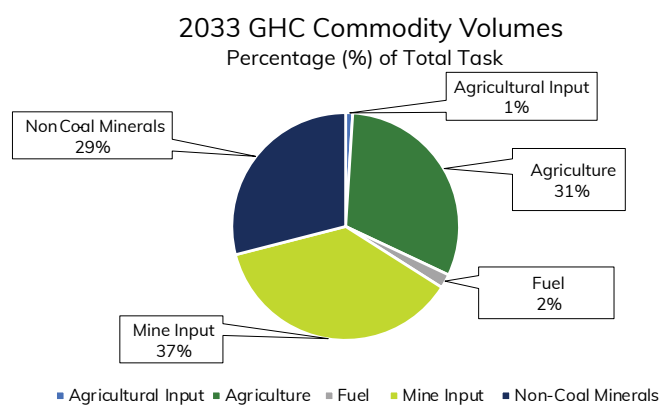
Our consultations indicate that the commodity mix is more diverse than currently estimated by Transport for NSW. The corridor movements will evolve from a majority of agricultural related bulk commodities to those dominated by mining. If transport modes for each commodity remain the same, this wider mix will double truck volumes on the Golden Highway.

There will be a shift from agriculture prominence to mining and mining inputs dominating the increased demand. Specifically, the expected growth in mining inputs is ~2.0Mtpa between 2023 and 2033. By 2033 mining inputs are likely to account for ~37% of all volumes being transported thereby bringing an increase of imports to the Orana region which has previously been assumed to be predominantly focused on export.

**2023 GHC Commodity Volumes (Percentage of Total Task)**

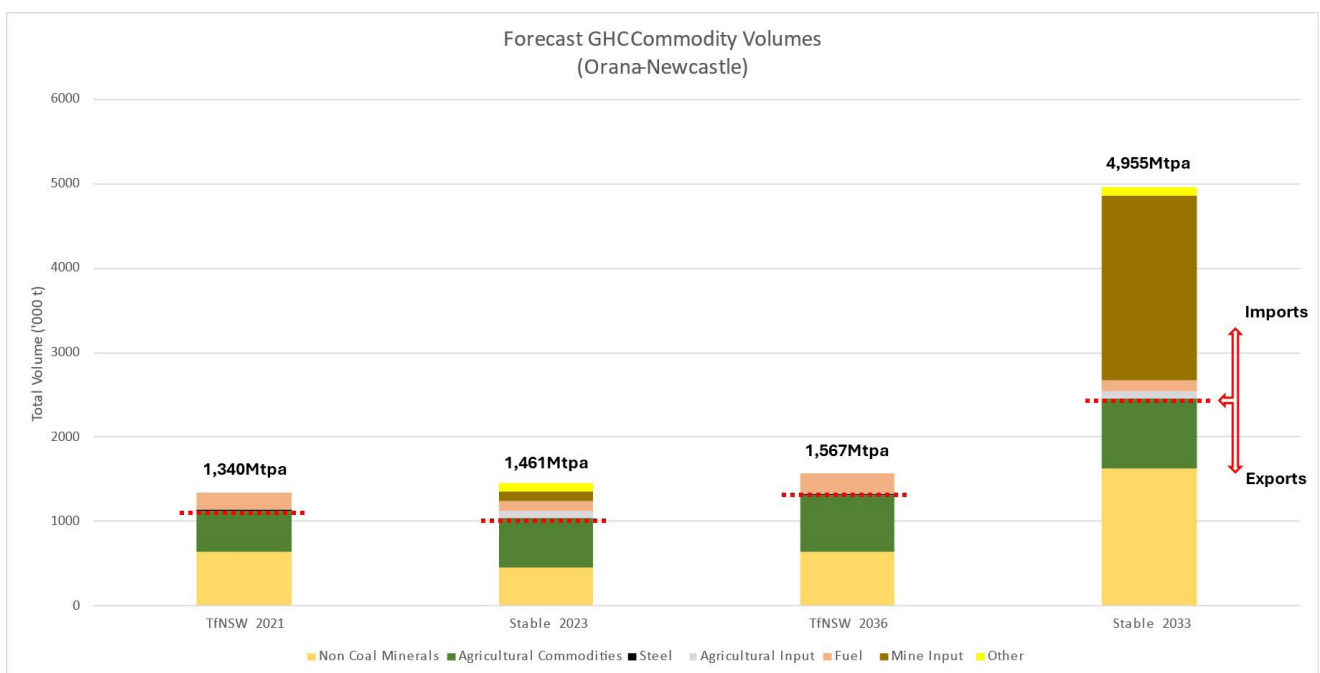


**2033 GHC Commodity Volumes (Percentage of Total Task)**



The Orana region is highly prospective for critical minerals, which will require significant increases in inputs for processing while simultaneously increasing exports of non-coal minerals. Specifically, the expected growth in mining inputs is in the vicinity of 1.2Mtpa or a 1400% increase by 2033.

**Forecast Volumes Orana - Newcastle (Source: TfNSW 2019, Stable 2023). These volumes reflect volume movement between Dubbo and Newcastle given forecast mine commencement.**



## Where have the discrepancies come from?

The discrepancy in freight volumes and commodity mix is most likely due to a lack of stakeholder engagement and data collection from first principles with local importers and exporters in the Orana region.

To ensure the validity of our data, The Stable Group corroborated evidence from ABS (Australian Bureau of Statistics), Transport for NSW Traffic Data and rail volumes, ABARES (Australian Bureau of Agricultural and Resource Economics and Sciences) and AEGIC (Australian Export Grains Innovation Centre) and compared this data with data sourced from our stakeholders' insights.

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## Infrastructure solutions

### What can be done to accommodate the increased road and rail freight volumes?

Two business cases have been developed to improve the freight transportation through the Golden Highway corridor.

#### 1. Golden Highway Road Corridor Business Case

- PBS 2B approved access
- Overtaking lanes
- Right and left hand turn lanes off the state highway
- Bridge widening and realignment

#### 2. Orana to Newcastle Rail Corridor Business Case

- Deliver a new rail line in the existing non-operational rail corridor owned by ARTC from Dubbo to the Port of Newcastle
- This is predicated on the absolute certainty that the Main West Line to Port Botany will be constrained and at capacity by the end of this decade

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## Outcomes

By implementing these infrastructure solutions RDA Orana aims to:

1. Enhance and streamline freight transportation through strategic developments.
2. Foster dynamic precincts to drive regional growth and innovation.
3. Expand and enhance airport and defence capabilities.
4. Boost regional connectivity and safety through strategic enhancements and upgrades.