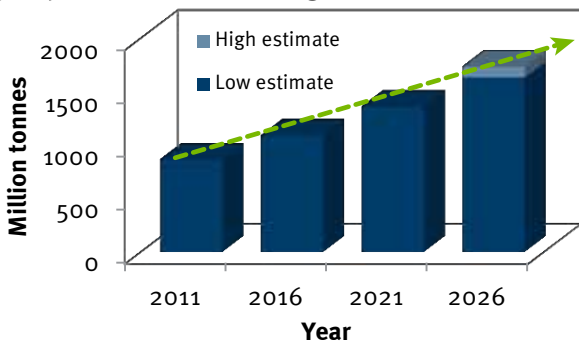


Freight growth

Queensland’s future freight task is expected to be driven by strong economic activity including population growth and international trade. As a result, freight volumes are estimated to increase from 871 mt in 2010–11 to 1643–1741mt by 2026¹⁰ (see **Figure 7**). **Table 2** identifies estimated freight volumes for key commodity groups.

Figure 7: Estimated future freight volumes



Source: Pekol Transport and Traffic 2013 and TMR aggregation

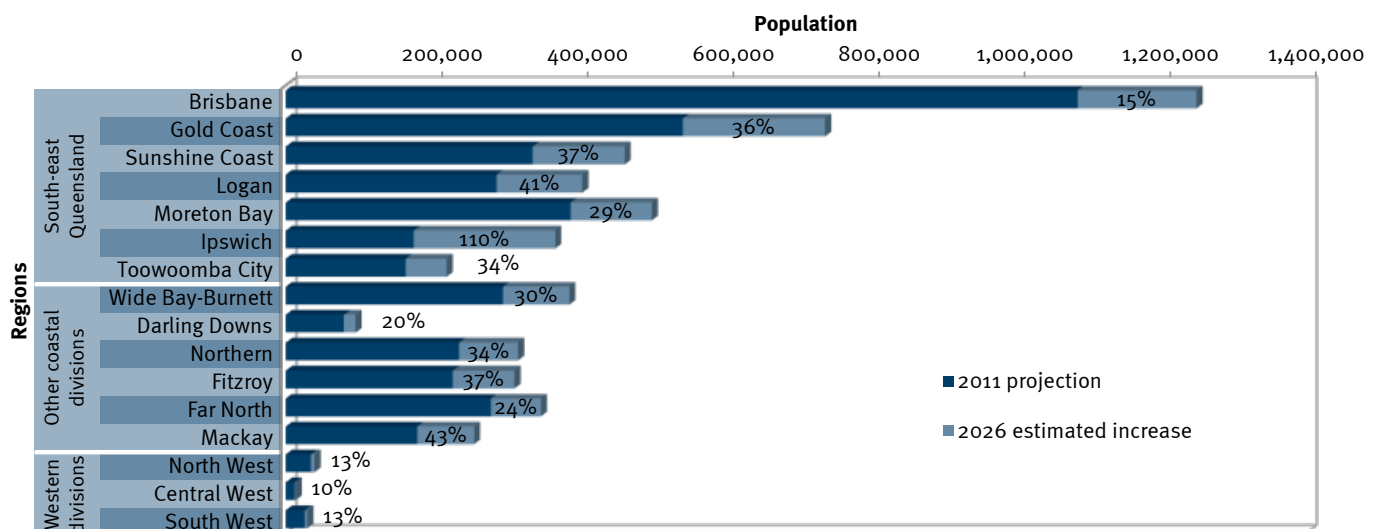
Commodity	2016	2021	2026 (Low)	2026 (High)
Export coal	216	282	378	378
Export minerals	40	57	68	76
Export agriculture	9	11	13	13
General freight	830	1016	1185	1274

Source: Pekol Transport and Traffic 2013 and TMR aggregation

Growing population

Queensland’s population is estimated to grow from 4.6 million people projected in 2011, to 6.1 million people in 2026.¹¹ This growth is likely to be largely concentrated in regions along Queensland’s coastline (see **Figure 8**).

Figure 8: Projected population in growth areas of Queensland



Source: OESR: *Local Government Areas by Statistical Divisions, 2011*

While this growth will result in an increase in business and household demand for general freight across the state, it will primarily drive the north to south freight movement. This will lead to an increased demand on existing road and rail links along Queensland’s coastal corridor as well as the interstate corridor to southern states as illustrated in **Map 4, page 19**. It also has the potential to increase demand along the inland north to south road corridor comprising of the Gregory Developmental Road, the Gregory, Dawson and Carnarvon highways and associated connections to the coastal corridor.

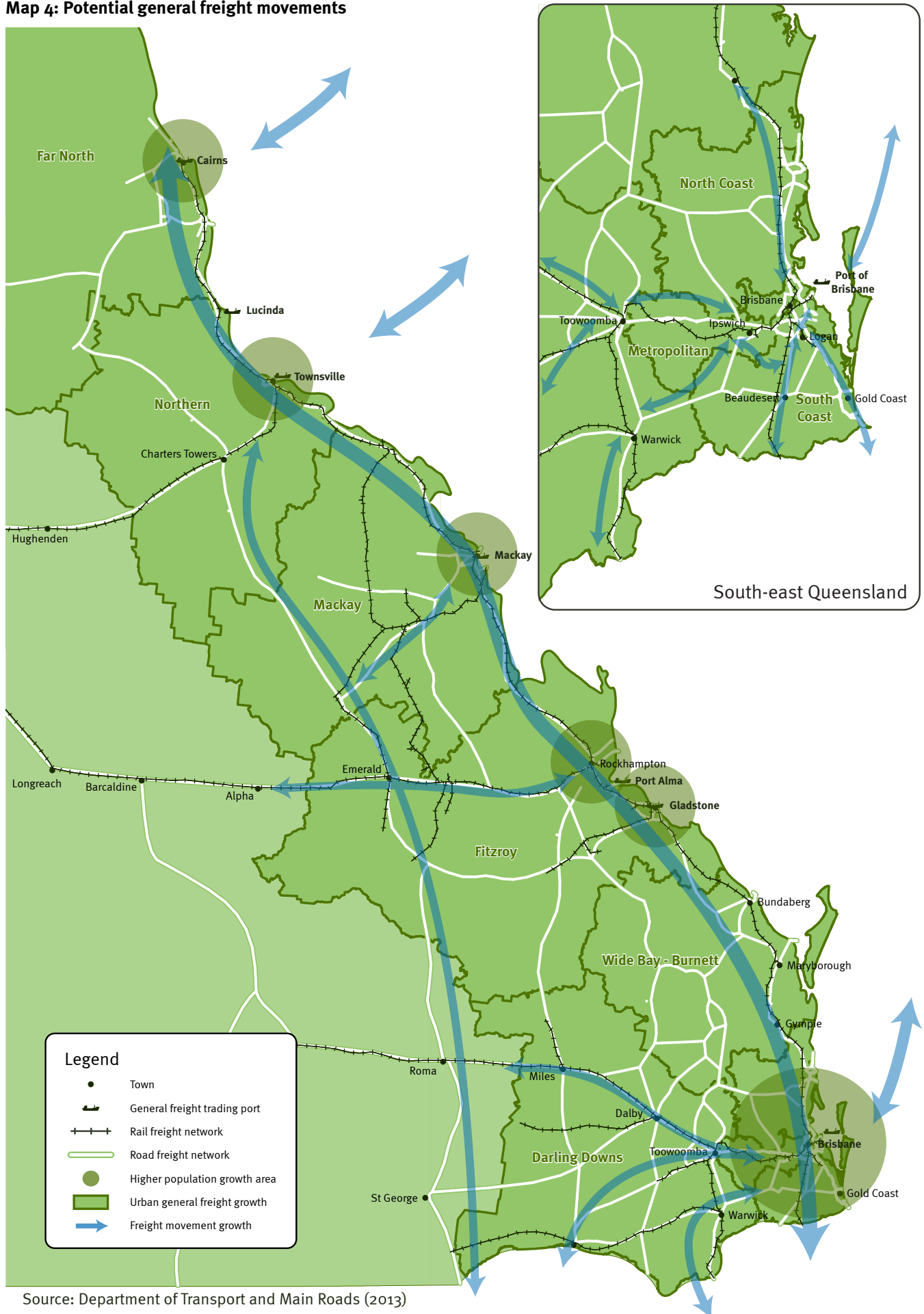
Increasing imports

Increasing demand for general freight from businesses and households, combined with the reduction of manufacturing in Australia, is continuing to drive imports. This is expected to translate into increasing general freight import growth through the Port of Brisbane, which is the state’s primary import port.

Growth in general freight imports will predominately drive the Port of Brisbane’s container trade which accounts for around 94% of the state throughput.¹² Over 90% of Port of Brisbane container imports have a destination in south-east Queensland. This will heighten demand on urban road and rail connections between the port and key industrial precincts in south-east Queensland as well as key freight corridors to regional Queensland.

Future import growth also has the potential to drive development opportunities for broader Queensland ports and their associated transport connections. However, these opportunities will be dependent on economic drivers and/or specific supply chain requirements.

Map 4: Potential general freight movements



Source: Department of Transport and Main Roads (2013)

Increasing mining exports

While demand for mining commodities will fluctuate according to market forces, global demand for Queensland's minerals is expected to drive export growth. This will be reflected in future exports to developing countries, such as China and India, whose economies, according to the International Monetary Fund, are anticipated to more than double from 2012 in terms of GDP by 2020.¹³

Key existing locations likely to experience expanding freight activity and demand by 2026 include:

- Surat Basin – contains large resources of thermal coal, liquid petroleum gas, natural gas, coal seam methane gas, as well as smaller scale deposits of crude oil, gold and iron ore. Demand for coal alone could increase by 25mt per annum.¹⁴
- Bowen Basin – further expansion of coal mines could generate an additional 23mt per annum.¹⁵
- North West Queensland Minerals Province – contains minerals and concentrates such as zinc, copper, lead, phosphate, silver and gold.
- North East Minerals Province – contains zinc, copper, lead, silver and gold.
- Cooper Basin – contains gas, crude oil, condensate and liquefied petroleum gas (LPG) which are primarily for domestic consumption.

Locations with potential to generate new freight activity include:

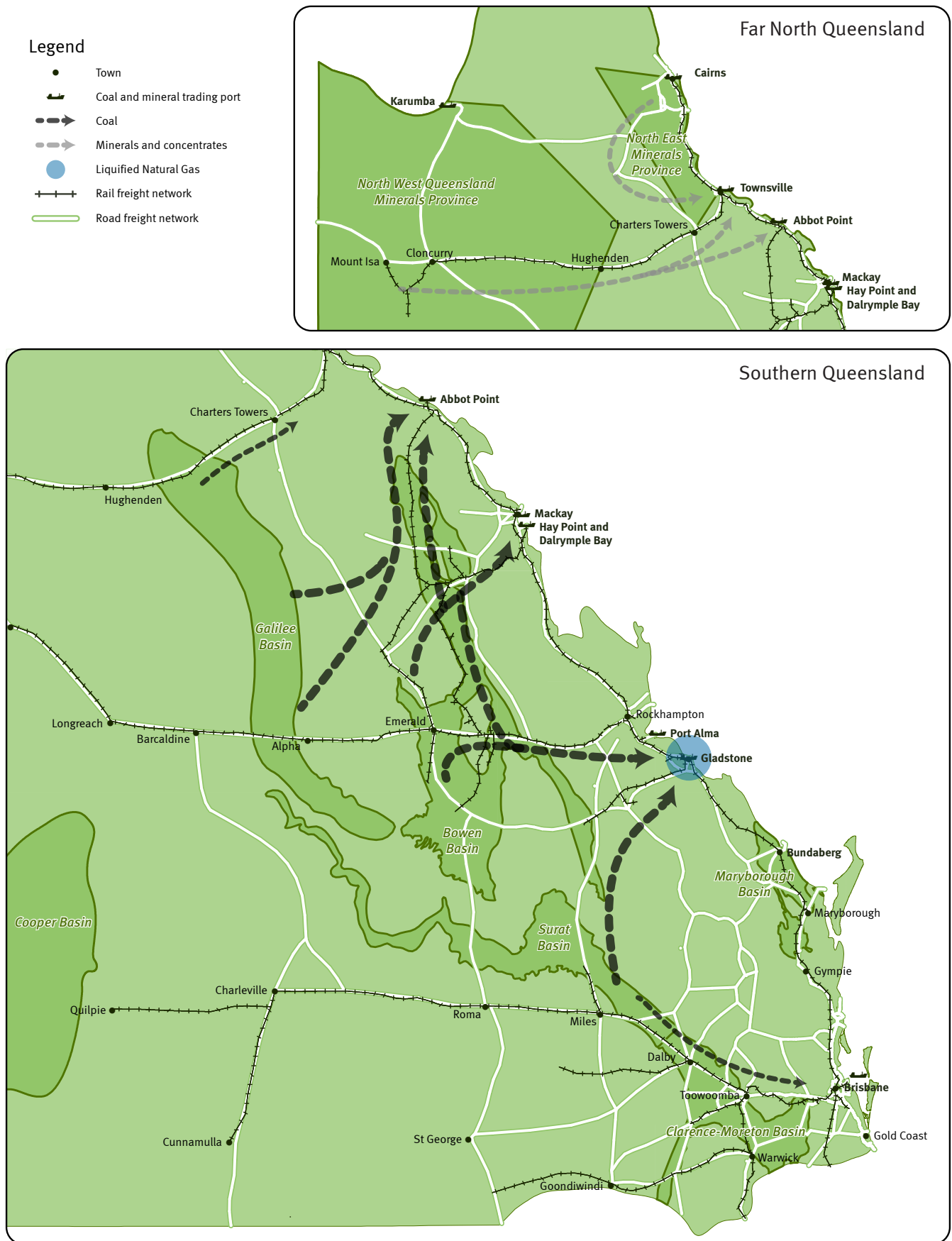
- Galilee Basin – development of this basin could potentially generate approximately 55mt of thermal coal per annum.
- Gladstone – this area is subject to the development of large-scale coal seam/liquefied natural gas (LNG) initiatives. The emerging LNG industry will involve the development of coal seam gas resources from the Bowen and Surat basins for liquefaction at facilities on Curtis Island. LNG exports could be about 25mt annually.¹⁶

Map 5, page 21 illustrates these key mineral resource regions and the critical links subject to the increased demand to support the mining export growth.

Furthermore, increasing global mineral demand could also result in the maturing of additional prospecting activity across the state. This could lead to the development of new mining areas such as the North Burnett Region and Maryborough Basin, and associated transport links to ports.



Map 5: Potential mining activity areas



Source: Department of Transport and Main Roads (2013)

Mining inputs

Mining areas drive significant demand for in-bound freight to support mining operations. This includes direct mining inputs (such as plant and machinery, petroleum products, and building and construction commodities) and broader mining community consumption.

In Queensland, the road freight network typically fulfils a primary role in transporting mining inputs. To date, growth in key existing mining locations in the Bowen Basin has led to the identification of various road network constraints that have impacted on the efficiency of mining inputs, particularly oversize overmass (OSOM) movements. This includes ageing structures, bridge strength, road envelope dimensions and pavement depth.

While OSOM movements occur across the state, activity is particularly concentrated in the South East, Darling Downs, Mackay and Fitzroy regions. **Map 6, page 23** indicates the key road routes supporting OSOM movements in these areas, which are likely to continue to experience future pressure as mining areas expand and develop.

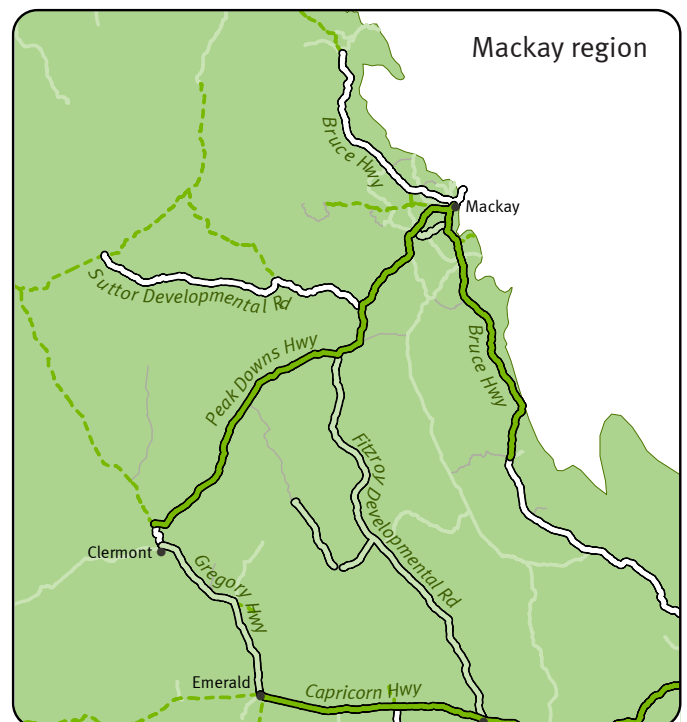
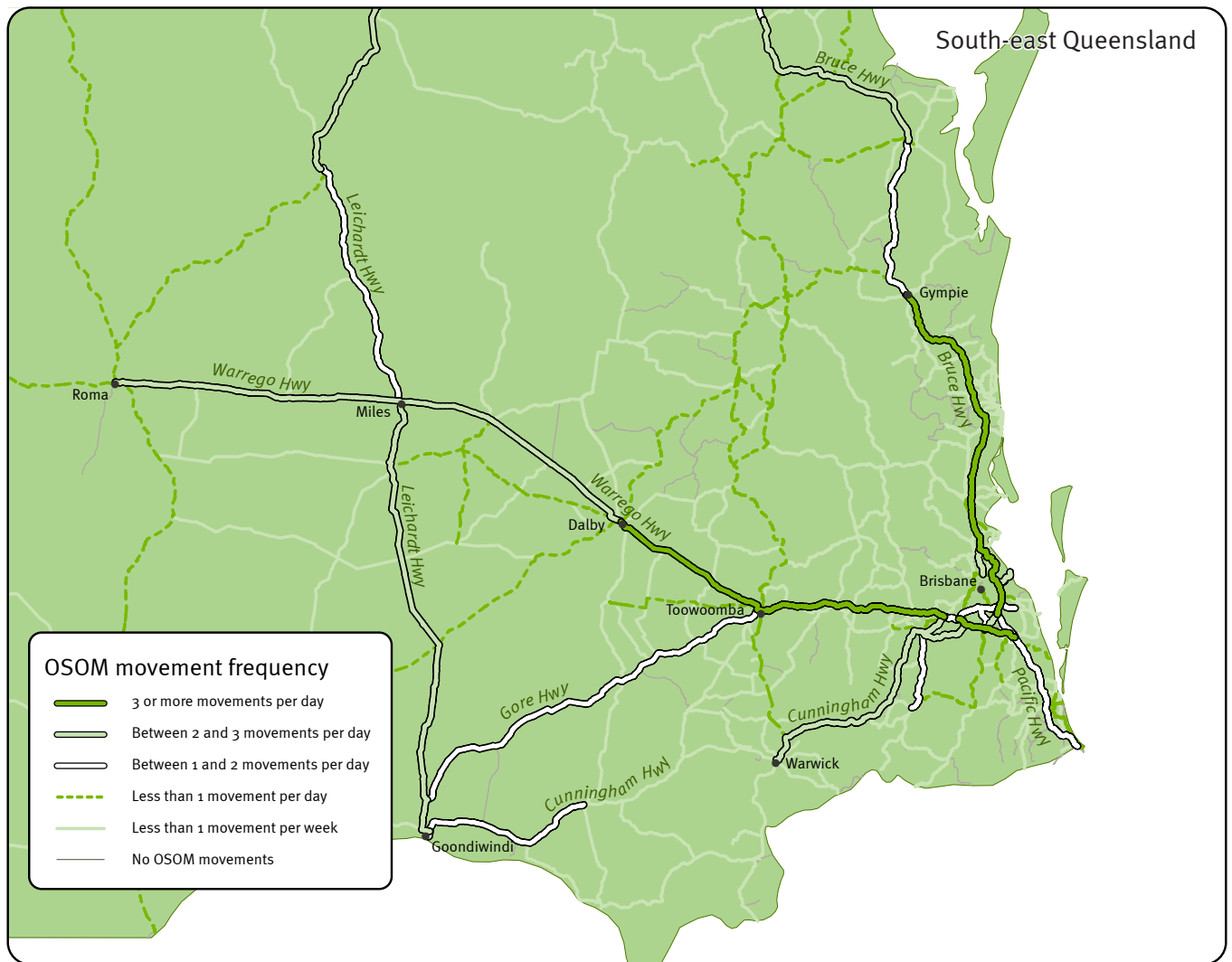
The potential development of the Galilee and Surat basins is likely to lead to further network constraints. This is due to mining inputs and OSOM movements extending to other areas of the network, such as the north-south inland road corridor comprising the Gregory Developmental Road and Gregory Highway.

In addition to road constraints, the increasing frequency of OSOM movements is placing greater demand on permit processing timeframes, route suitability assessments and traffic management.



OSOM, Eton Range

Map 6: Roads supporting oversized overmass movements (OSOM)



Source: Department of Transport and Main Roads – Permit data May 2011 to May 2012

Future agricultural production

Queensland's agricultural sector is well placed to respond to future global food demands, particularly emerging Asian markets. To support the growth of the sector, the Queensland Government has outlined an Agriculture Strategy, which aims to double the value of Queensland's food production by 2040. This will require increasing emphasis on the development of existing agricultural regions across the state, with particular focus on the north.

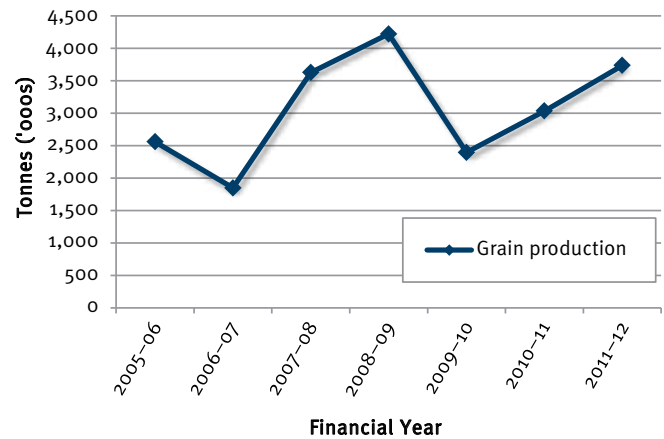
The Queensland Government's Agriculture Strategy also acknowledges the importance of improved freight access and options to support the sector's growth. **Map 7, page 25** identifies the key agricultural production areas and road/rail links critical to supporting agriculture.

Currently, agricultural production across the state is dispersed, encompassing the gulf country in the north to the south-west and along the coast from the far north of the state to the Tweed River. This dispersion, along with the seasonal nature and variation of agricultural production can make it difficult to commit to long-term freight solutions. For example, **Figure 9** demonstrates the seasonal fluctuations and variability in grain production.

In addition, international market forces can contribute to fluctuations in production volumes. As a gross exporter of agricultural commodities, the exchange rate of the Australian dollar can further impact on the state's agricultural production.

Regardless of the challenges confronting agricultural production, opportunities exist to develop more reliable, efficient and cost-effective freight solutions to satisfy future food consumption demands. This can be realised through enhancing supply chain relationships, challenging existing roles and responsibilities and better managing commercial risks.

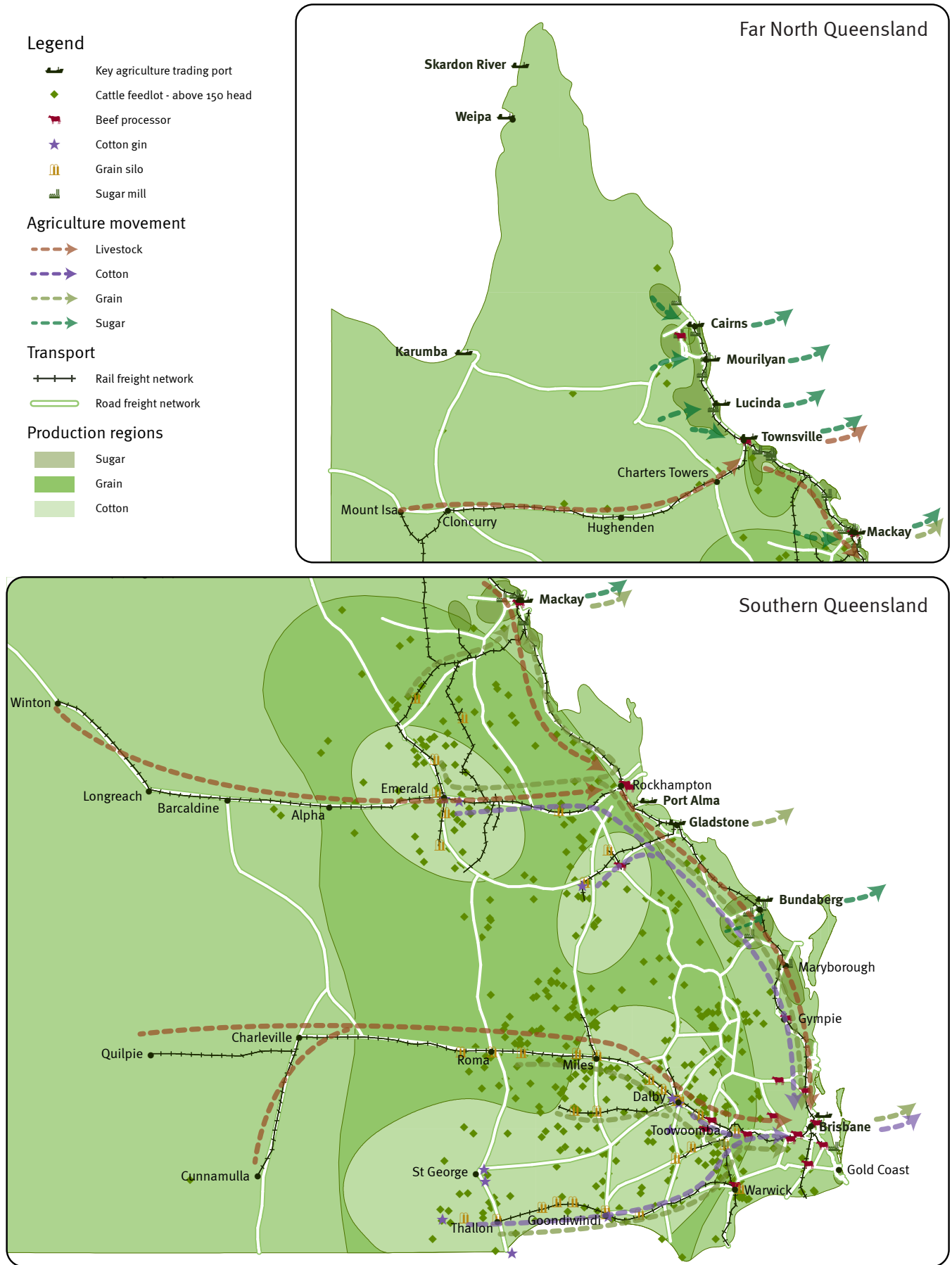
Figure 9: Queensland grain production



Source: OESR: *Agriculture: production by main crop, Queensland, 1985-86 to 2011-12*



Map 7: Key agricultural production regions



Source: Department of Transport and Main Roads (2013), Department of Agriculture, Fisheries and Forestry (2013), Cotton Australia (2013)