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Infrastructure Australian Government Australia

# Regional Strengths and Infrastructure Gaps

**Regional Analysis:** Queensland



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# 6.4 Queensland

Townsville, Queensland

### 6.4.1 Central and Western Queensland

Stretching from the Great Barrier Reef to the outback, the Central and Western Queensland region has significant natural assets, established



agricultural and mining industries and the potential to grow its renewables and ecotourism offerings. The Central and Western Queensland Regional Development Area covers the local government areas of Banana, Barcaldine, Barcoo, Blackall-Tambo, Central Highlands, Diamantina, Gladstone, Livingstone, Longreach, Rockhampton, Winton and Woorabinda.

While agricultural and mining industries have become more sustainable in response to climate change, water security and extreme weather events that affect the region remain long-term challenges. As a result, the region has also placed a greater focus on the role of renewable energy and green manufacturing opportunities in transitioning to a low carbon economy.

In addition to capitalising on its renewable energy potential and hydrogen opportunities, the region is looking to retain existing agribusiness and mining, as well as leverage its port to improve freight transport and grow exports. The region also wants to see investment in its communities and improvements in digital connectivity, social infrastructure and services to attract and retain a skilled and diverse population.



### **Strengths**

### Key existing assets

	Gateway ports	The Port of Gladstone (with rail connection) and Port of Rockhampton, alongside 11 airports with passenger services, provide connectivity and freight capacity.
Economic	Defence assets	The region is home to the Shoalwater Bay Training Area – the Australian Defence Force's largest permanent training area.
	Water infrastructure	Eden Bann Weir, Fitzroy Barrage, Fairbairn Dam, Awoonga Dam and the under-construction Rockwood Weir.
Natural environments Natural Climate and topography Natural resources		The Great Barrier Reef and Great Keppel Island, as well as the Sandstone Wilderness and many other wild landscapes, offer tourism and recreational value. Waterways running through this region include the Barcoo River, Georgina River, Thomson River and Diamantina River as well as others.
	The climate and soil type of the eastern region provide advantages in the production of crops. <sup>1</sup>	
		The region is home to coal and gas reserves, alongside a range of metal and mineral resources.
Social	Education and research institutions	As a dual sector operator, Central Queensland University provides significant education and research capacity and training offerings for the region.

### Key regional growth industries

Tourism	Energy
Tourism is part of a sustainable long-term pathway in further diversification for the region, with the region's natural environment providing opportunities for growth. Self-drive tourists to the region have been growing, seeking authentic outback experiences by road. <sup>2</sup> There are a number of existing high-quality tourism assets in the region however some are under- utilised and underdeveloped. <sup>3</sup> Outback heritage tourism and First Nations tourism opportunities are promising areas for growth. <sup>4</sup> Connectivity by road, air and rail are key enablers for growing the region's tourism industry <sup>5</sup>	The region has plentiful solar resources <sup>6</sup> as well as wind resources which are being investigated. Strong commitments have also been made by industry in the region, which will increase demand for renewable energy infrastructure and hydrogen. <sup>7</sup> The Central Queensland Renewable Energy Zone (QREZ) aims to support industrial decarbonisation and the emerging hydrogen economy. <sup>8</sup> The first stages are in planning and further detailed market-sounding and transmission planning is required, with subsequent stages having the potential to deliver significantly more renewable capacity in the future. <sup>9</sup> Barcaldine's Renewable Energy Zone will feature a large-scale solar farm and biosteam turbine generator, which will be used to produce fresh fruit and vegetables, green ammonia, hydrogen and urea for stock feed. <sup>10</sup>
	Investigations are also underway for the largest electrolyser manufacturing plant in the world in Gladstone. <sup>11</sup> Gladstone has also been selected as the location for The Hydrogen Utility's (H2U) latest project, H2-HubTM Gladstone, a proposed chemical complex for the production of green hydrogen and ammonia at industrial-scale. <sup>12</sup>
Agriculture, forestry and fishing	Mining
Currently, the industry is driven by high-value beef production with cattle and calves making up 80% of the total agricultural production value for the region. <sup>13</sup> Agriculture has significant potential to add value through innovation and technology, <sup>14</sup> such as the Central West LoRa Network. <sup>15</sup> Water, roads, energy and rail are key enablers for growth of this industry. <sup>16</sup>	Mining is a strong contributor to the region's economy, employing a workforce both inside and outside of the region. Mining is the most specialised industry for this region, contributing \$7.359 billion gross value added (GVA) in 2018 which is projected to increase to \$11.039 billion GVA in 2030. <sup>17</sup>

### Infrastructure gaps

Sector:	Water
Sub-sector:	-
Infrastructure gap:	Water security

The Central and Western Queensland region produces significant outputs from its mining, manufacturing and agricultural sectors. Throughout the region's history, heavy reliance on these water-intensive sectors has placed a significant value on water security to drive economic growth. The region faces challenges in ensuring sustainable water supply in the face of increased climate variability and rising demand for water.<sup>18</sup> With additional water supply, there is potential to unlock investment and increase existing horticultural activities in the region.<sup>19</sup>

A number of key water infrastructure assets already exist within the region including the Eden Bann Weir, Fitzroy Barrage, Fairbairn Dam and Awoonga Dam. Construction is underway on Rockwood Weir, which will make thousands of megalitres of water available to help underpin agricultural, industrial and urban growth in the region.<sup>20</sup> The proposed Fitzroy to Gladstone Pipeline seeks to address the single source water supply risk from Awoonga Dam.<sup>21</sup>

### Key facts:



A 2019 assessment noted that Longreach's water supply is able to meet current and projected urban water requirements until at least 2041 with a moderate degree of reliability. However, at current and projected future demands the system may be at risk of falling to very low water levels during extended periods of severe drought, with the potential for water supply shortfalls occurring, even with water restrictions being imposed.<sup>23</sup>



Groundwater in and around Emerald has high salinity levels and is not suitable quality for a town water supply or most agricultural purposes without significant treatment.<sup>24</sup> Ongoing droughts have impacted famers across the region, with farmers based outside of Emerald feeling the effects of no water allocations and needing to adjust their crops.<sup>25</sup>



- Increased climate variability and rising demands may impact upon water security in the region.<sup>26</sup>
- Safe, secure and reliable water supplies are critical for sustaining population and economic growth in the area, as well as for the health and wellbeing of the community.
- Water demand varies from month to month and from year to year depending on various factors, including climatic conditions such as rainfall patterns and volumes, with higher demand usually occurring in hotter, drier periods.<sup>27</sup>



#### **Consultation feedback:**

Consultation with key stakeholders identified that a key challenge for the region is threats to water security. Stakeholders noted that several identified water infrastructure projects in the area, while in development, struggled to receive funding and move ahead. As water is crucial towards the liveability and success of local towns, particularly during times of drought and unpredictable weather events, addressing this issue is a priority.

Another key issue identified by stakeholders during consultation has been slow population growth, with water availability essential to attracting and accommodating future population and economic growth. Thus, availability of sufficient and reliable water is a fundamental priority for the region.

	Sector:	Transport
	Sub-sector:	Freight
	Infrastructure gap:	Capacity, connectivity and quality of freight infrastructure

Central and Western Queensland's economy is largely based on outputs and value-adds generated by its highly productive manufacturing, mining and agricultural industries, all of which are dependent on freight infrastructure. Ensuring effective connections to supplies and markets is crucial in meeting the needs of these and other emerging industries. The road network in the Central Queensland and Western Queensland region is immense, as the region covers one quarter of Queensland's land area.<sup>28</sup> The vast network provides the connection from remote west Queensland and Northern Territory to the eastern seaboard for livestock, mining and resource development.

The Central and Western Queensland region is covered by the Queensland Government's Central West Queensland and Fitzroy Regional Transport Plans (RTP) released in 2019, with these plans detailing the regional freight challenges.<sup>29</sup> The Central West Queensland RTP notes that there are approximately 900 to 1,000km of unsealed roads on the Central West Queensland Priority Road Network and limited overtaking lanes impacting freight movements.<sup>30</sup> Another challenge identified is the reliability and resilience of the rail network with long recovery times after flood events, ongoing problems with heat buckling the track and/ or movements of track requiring levelling due to moisture movements of black soil subgrades.<sup>31</sup> A number of factors impact the efficiency of road freight in the region, including unsealed roads, narrow seal widths, bridge load limits, single track sections, speed restrictions, and distances between signals for the rail network.<sup>32</sup>

Road and rail networks throughout the region are fundamental for serving key supply chains within Central and Western Queensland. A mode shift to rail has been identified as a way of easing pressure on the road network.<sup>33</sup> Improving rail utilisation could help reduce road maintenance costs due to a reduction in heavy vehicle movements on the road network and improved safety as crash risk associated with road freight are significantly less for rail freight.<sup>34</sup>

### **Key facts:**

Livestock is produced across the region's productive agricultural land, with transport east to Rockhampton and south to Brisbane enabling goods to reach domestic and international markets.<sup>35</sup>



Restrictions on the road network by weight or truck type adversely impact continuity.<sup>36</sup>



Queensland is the only state with a rail network that moves cattle.<sup>37</sup> However, quality measures influencing freight mode choice include cost, transit time, reliability and service availability and frequency<sup>38</sup> as well as the flexibility in moving cattle by road freight.<sup>39</sup> The Queensland **Government provides subsidies** through the Regional Freight **Transport Services Contract and** the Livestock Transport Services Contracts to contribute to the affordability and continuation of rail freight services.40

- There have been inefficiencies in beef processing due to the decoupling of road trains on the Capricorn
  Highway increasing overall costs for beef producers. Other parts of the region suffer similar challenges,
  with cattle from the western grazing country often facing two transport mode changes (between road and
  rail) to reach the bulk of Queensland's processing facilities in the east and south-east extents of the state.<sup>41</sup>
- Queensland's livestock rail service presents significant opportunities for the Queensland beef industry to efficiently transport cattle.<sup>42</sup>
- The region's mining outputs are significant contributors to the state's economy. To ensure the region remains productive, inefficiencies in supply chains including at key intermodal hubs have been identified.<sup>43</sup>



#### **Consultation feedback:**

Stakeholders noted challenges have arisen over the past decade with the region's capacity to keep up with industry expansion, specifically with regard to the efficiency of freight movement. With the emergence of hydrogen production on the horizon, there are significant freight infrastructure gaps to address. Stakeholders also noted that there are potential opportunities associated with the Port of Gladstone, for example, if it grows as a container port with improved connections for the transport of goods and produce.

	Sector:	Telecommunications
	Sub-sector:	_
	Infrastructure gap:	Broadband and mobile connectivity

Developing not only liveable but thriving communities is crucial to sustaining and fulfilling the desired growth profile of the Central and Western Queensland region. Digitally connected communities are a key aspect of modern living, particularly in light of the COVID-19 pandemic. The geographic location and dispersed population of much of the region mean a significant number of children are home schooled.<sup>44</sup> Access to high quality broadband is required to increase access to education and skills for those in more remote areas.

The region's 11 local government areas averaged a 2021 Australian Digital Inclusion Index (ADII) of 66.4, lower than the Queensland average of 71.<sup>45</sup> Improving connectivity throughout Central and Western Queensland will not only add to the liveability of the region, but also enhance opportunities for innovation and better connect people to training and jobs, and businesses to growth opportunities. Agricultural technology (AgTech) in particular presents new opportunities for the region's productivity and economic growth. This type of technology can enable innovative, new practices and provide useful data for farmers.<sup>46</sup>

### **Key facts:**

The lack of digital connectivity and mobile black spots dissuade tourists from exploring the region.<sup>47</sup>



Poor and expensive internet connectivity is identified as a challenge for the region, constraining access to education, government services and healthcare.<sup>48</sup> Some businesses within the region are reluctant to embrace technology and utilise digital connectivity in their operations.<sup>49</sup>



- Digital connections allow businesses to operate more efficiently through services such as "tap and go" and EFTPOS. However, a number of small businesses in the region are reticent to adopt digital connectivity in their daily operations expressing a preference to maintain traditional approaches.<sup>50</sup>
- Central and Western Queensland is seeking to further diversify its economic base, with part of this diversification being an increased focus on tourism. Mobile and broadband connectivity is seen as essential in meeting visitor needs and expectations.<sup>51</sup>
- Digital connections offer students and teachers a much wider array of learning materials. Schools in the region are limited by slow broadband connections, with some needing to connect to mobile phone towers for faster data.<sup>52</sup>



### **Consultation feedback:**

Stakeholders placed great value on digital connectivity and highlighted that parts of the region are currently operating with very limited access to mobile or broadband connectivity. With the centralisation of services, digital connectivity will be essential to ensure locals are able to access services such as telehealth and remote education.

Securing high speed broadband was identified as crucial to overcoming a lack of longterm investment in the region. Enhancing telecommunications and digital infrastructure was seen as key to enabling business growth and driving innovation in industries such as agriculture and manufacturing.

### 6.4.2 Darling Downs and South West

The Darling Downs and South West region includes expansive and highly productive agricultural lands benefiting from an elevated position, rich soils and open spaces. The region has ideal conditions



for year-round horticulture along the Granite Belt and is a major producer of cotton, chickpeas and beef. Mining is also a traditional industry with substantial coal, oil and mineral resources. The Darling Downs and South West Regional Development Area (RDA) covers the 10 local government areas of Balonne, Bulloo, Goondiwindi, Maranoa, Murweh, Paroo, Quilpie, Southern Downs, Toowoomba and Western Downs.

Population trends have varied across the region, with growth occurring in the east and some areas experiencing decline in the west. Diversification of the economy has also occurred, with growing tourism and renewable energy activity, as climate change has affected agricultural productivity.

ShapingSEQ identifies the Western Gateway Regional Economic Cluster (REC), located to the west of Toowoomba, at the intersection of national highways and including Wellcamp Airport. This REC's strategic location at the gateway to the west, coupled with long-term investments such as Inland Rail will further strengthen this Regional Hub as a significant inland port.<sup>53</sup>

Future growth will be enabled by better digital connectivity and water security as the region looks to further diversify its economy. The region is well positioned to continue to seize the potential of its natural environments and sustainably grow its transportation and logistics, mining, renewable energy and agricultural industries.

### **Strengths**

### Key existing assets

infrast Economic	Transport infrastructure	A number of significant road freight and passenger routes connect the region to key markets in Queensland and interstate. This includes Warrego Highway as a key freight route for agricultural and resource exports out of the Port of Brisbane.
	Gateway ports	Toowoomba, Charleville and Roma airports, as well as smaller rural facilities, offer air connectivity for passengers and cargo.
Natural –	Climate and topography	The region has a cooler climate and ideal conditions for year-round horticulture, agriculture and viticulture.
	Natural resources	Oil and gas reserves, alongside coal seam gas production, provide economic benefits to the region.
Social	Education and research institutions	Institutions such as University of Southern Queensland (Toowoomba Campus), TAFE Queensland South WEst, Griffith University's Clinical Training Centre and University of Queensland's Rural Medical Clinical School, offer education and innovation opportunities for the region.

### Key regional growth industries

# Agriculture, forestry and fishingMiningThe region is known for its productive agricultural<br/>lands which produce around one third of<br/>strong mining sector which is responsible for over

lands which produce around one third of Queensland's agricultural output, including 22% of Queensland's cattle, 75% of Queensland's wheat crop and 85% of Queensland's cotton.<sup>54</sup>

It is home to Australia's largest cattle selling centres at Roma and Dalby, with opportunities for future growth meeting an increased demand for organic beef domestically and internationally. The transport network is key to supporting agriculture.<sup>55</sup> The Darling Downs and South West region has a strong mining sector, which is responsible for over 25% of regional output.<sup>56</sup> The presence of natural resources such as oil and gas have enabled coal seam gas projects and present opportunities for continued growth once further explorations are complete.<sup>57</sup>

### Transport

The region has emerging opportunities in the transport, freight and logistics sector, with the presence of Inland Rail, the Toowoomba Freight and Logistics Hub, Toowoomba Wellcamp Airport and the Toowoomba Second Range Crossing.<sup>58,59</sup>

In 2019-2020, the industry contributed \$618 million in value-add for the Darling Downs and South West region.<sup>60</sup> The region is covered by the Queensland Government's Darling Downs and South West Queensland Regional Transport Plans (RTP) released in 2019, with these plans detailing the transport goals, challenges and opportunities.<sup>61</sup>

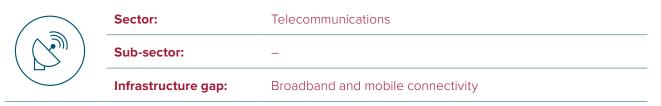
### Energy

The Southern Queensland Renewable Energy Zone (QREZ) is ready for development, with a diverse mix of energy sources and located close to large load centres in South East Queensland and the interconnector to New South Wales.<sup>62</sup>

The Southern QREZ enables quality wind resources across the Darling Downs and adjacent regions, with identified transmission infrastructure upgrades to unlock new renewable energy hosting capacity in the region. This will build on the region's existing network capacity supported by the potential development of the proposed Borumba pumped hydro energy storage site.<sup>63</sup> Bioenergy development could make use of agricultural waste products, supporting this industry to decarbonise and reduce energy costs.<sup>64</sup>



### Infrastructure gaps



High quality digital connectivity facilitates social inclusion and connects industries to their markets. A Digital Connectivity Audit and Strategy developed by the region's RDA noted whilst the eastern parts of region are reasonably well serviced in terms of network coverage, mobile blackspots are more frequent in the western, less populated areas.<sup>65</sup> and there are mobile black spots for rural and remote areas within the region.<sup>66</sup> The region has a strong agricultural sector and improved digital connectivity in these locations would enable the greater uptake of technology in agriculture, improving productivity and resilience, especially through technology-enabled, water sensitive practices and weather and crop monitoring.

Local governments in the region have noted digital connectivity challenges in submission to the 2021 Regional Telecommunications Review. Western Down Regional Council noted that connections via satellite are considered to have a reduced speed and are more susceptible to weather conditions, impacting agricultural and energy businesses.<sup>67</sup> Paroo Shire Council highlighted various impacts of digital connectivity on the community and industries such as agriculture.<sup>68</sup> Maranoa Regional Council noted the local government has very few options for the provision of telecommunication services.<sup>69</sup> Goondiwindi Regional Council notes that landlines remain a primary mean of communication in the local government area.<sup>70</sup>

### **Key facts:**

Submissions to the 2021 Regional Telecommunications Review by Western Downs Regional Council, Paroo Shire Council, Maranoa Regional Council and Goondiwindi Regional Council highlights the digital connectivity challenges experienced in these local

government areas in the region.<sup>71,72,73,74</sup>



The annual gross value of agricultural commodities produced in the South West region

amounts to over



The region's 10 local government areas averaged a 2021 Australian Digital Inclusion Index

<sup>of</sup> 65.3

ranging from



63 in Paroo and Southern Downs, to 67 in Maranoa and Toowoomba. This is below the Queensland average of 71.<sup>76</sup>

- The region produces significant outputs from its manufacturing, agricultural and mining sectors.<sup>77</sup> Investing in improved digital connectivity offers potential for these industries to grow and innovate so that they remain competitive.
- The long distances between settlements and the demanding terrain of rural and remote areas can make delivery of effective telecommunications challenging. Residents in these areas will benefit from improved digital connectivity, as it will allow access to vital services such as tele-health and remote education and will help businesses to access new markets.
- Areas across the region are experiencing limited population growth and an ageing population.<sup>78</sup> Improving
  digital connectivity will help to retain and attract young people and encourage sustainable population
  growth.



#### **Consultation feedback:**

Stakeholders noted that digital connectivity is a key issue across the region. Black spots and poor digital connectivity still exist in many parts of the Darling Downs and South West region, whilst other areas of the region have benefited from investment in communications infrastructure. This has contributed to the emergence of a digital divide across the region.

Remote communities throughout the region have a higher prevalence of households without internet. Participants highlighted the liveability benefits that improved digital infrastructure would bring to the region and the positive impacts for key industries such as agriculture. With the region so heavily reliant on mining, manufacturing and agriculture, the adoption of more technology in these sectors is seen as crucial to the economic sustainability of the region. This adoption would be supported by better telecommunications.

	Sector:	Social infrastructure
	Sub-sector:	Housing
	Infrastructure gap:	Availability, diversity and affordability of housing

Communities across the Darling Downs and South West region are struggling to supply sufficient and affordable housing. In larger centres such as Toowoomba, identified challenges include growing rates of homelessness, lack of housing diversity, housing affordability and demand exceeding supply for affordable and social housing.<sup>79</sup> Similarly, housing availability and lack of variety in housing options is identified as a priority in the Quilpie Shire.<sup>80</sup> Access to attractive and accessible housing to meet the needs of an ageing population will be a defining factor in ensuring community wellbeing, moving forward.

Public housing provision is a point of concern, with an increase of 78% of people on Queensland's social housing register (2017-2021).<sup>81</sup> In Toowoomba Regional Council, the average number of months on waitlist for social housing increased from 8.2 months in 2017 to 23.7 months in 2021.<sup>82</sup>

### Key facts:

The lowest quartile income group is the most represented in the region, comprising

27% of local workers.<sup>83</sup>

## There are over **1,000**

applications for public housing in the region (June 2020).<sup>84</sup>



Toowoomba has a private rental vacancy rate of

0.5%.



- The mining sector is one of the highest-value sectors in the region.<sup>86</sup> The transient nature of the workforce can make infrastructure provision in mining-dependent communities challenging. This includes the provision of sufficient and suitable housing to meet the competing needs of temporary and permanent residents.
- Providing sufficient and fit-for-purpose accommodation for fly-in-fly-out workers in the region, particularly
  given the region's reliance on the mining sector, is critical for economic sustainability and the wellbeing of
  these workers.<sup>87</sup>



#### **Consultation feedback:**

Stakeholders emphasised the lack of available housing across their towns and communities. It was frequently noted as a growing challenge for the region and a major obstacle that needed to be addressed.

Toowoomba was highlighted as attracting a significant number of new overseas migrants. However, there is an inadequate housing supply to support them. There are available jobs for these migrants when they come to centres, such as Toowoomba, but it is difficult to house these people. Stakeholders placed great value on providing sufficient housing across the region, seeing it as a key success indicator.

	Sector:	Water
	Sub-sector:	_
	Infrastructure gap:	Water security

Secure and affordable water for communities and industry is a key challenge now and in the coming decades. The Queensland Government's Regional Climate Change Impact Summaries provide a snapshot of the climate risks and impacts in each region. For the regions covering Darling Downs and South West (South West Queensland,<sup>88</sup> Eastern Downs<sup>89</sup> and Maranoa and District),<sup>90</sup> it is noted that high climate variability is likely to remain the major factor influencing rainfall changes in the next few decades. Projections also indicated that it is likely the region will experience more time in drought, as well as increasing intensity of heavy rainfall events. In parts of the region, decreases in winter and spring rainfall are projected by 2070. These projections highlight the importance of drought resilience in order for the region to have a secure and reliable water supply in the future.

In 2021 local governments in the eastern part of the region formed a regional water alliance with the key objective of progressing future water security and infrastructure outcomes.<sup>91</sup> In response to low water supplies in the region in 2019, the Queensland Government committed \$20 million Southern Downs Drought Resilience Package.<sup>92</sup> Scoping has also commenced for a Regional Water Assessment for the Southern and Darling Downs to investigate opportunities to grow the local economy by identifying long-term water supply options for the region more broadly.<sup>93</sup>

### **Key facts:**

In December 2019, Stanthorpe's Storm King Dam almost ran dry, as did the Leslie Dam.<sup>94</sup>



43.8%

of the region's economic output is from mining, agriculture and manufacturing.<sup>95</sup>



By 2036, there will be an additional

75,500

people living in the Darling Downs.<sup>96</sup>



- Securing regional water security is important to realise significant growth opportunities across agriculture, mining, manufacturing, construction and renewable energy.<sup>97</sup>
- The region has attracted increased investment in recent decades in large-scale infrastructure projects.<sup>98</sup> In order for these projects to be effective, adequate enabling infrastructure including water infrastructure needs to be in place.
- Future growth will increase demand for town water and create competition for strained supplies that
  are being shared with growing industries. Proactive planning to invest in and effectively manage water
  infrastructure is required.



### **Consultation feedback:**

Stakeholders noted that agriculture, mining, manufacturing and construction are significant sectors for the Darling Downs and South West economy. However, stakeholders emphasised that water security is a significant challenge for the region and its importance cannot be overstated.

A lack of access to water for both commercial and domestic use has hindered the development of several communities and towns. Throughout consultation, stakeholders saw securing access to reliable water supply to support population growth as a critical challenge.

### 6.4.3 Gold Coast

Located in fast-growing South East Queensland, the Gold Coast region is renowned for its long beaches, hinterland and tourism industry and has emerged in recent decades as a leader in research, innovation and advanced technology. The Gold Coast Regional Development Area (RDA) covers the one local government of the <u>Gold Coast</u>.



The Gold Coast has experienced major economic and industry diversification over the past two decades, from its tourism, construction and retail roots, into health services, education, manufacturing, professional services and emerging industries such as biomedicine, space, defence, super yachts and automation. Both supporting and resulting from this diversification, the region's population has seen significant growth, which is expected to continue over the coming years.

Looking ahead, the region hopes to further strengthen its emerging industries and become a leader and hub for innovation. It wants to accompany this growth with improved liveability for its residents. Delivering improved transport and digital connectivity will be important to attracting and retaining a skilled workforce.

### **Strengths**

### Key existing assets

	Gateway ports	Gold Coast Airport carries over 6 million passengers annually and provides significant freight capacity. <sup>99</sup>
Economic	Specialised precincts	The region is home to knowledge and technology precincts such as the Gold Coast Health and Knowledge Precinct.
	Major attractions	Attractions such as Currumbin Wildlife Sanctuary, Home of the Arts (HOTA) and multiple theme parks are prominent tourist attractions.
Natural	Natural environments	The region is home to renowned beaches, waterways, wetlands, national parks and hinterland areas.
Social	Education and research institutions	Institutions such as Southern Cross University, Bond University, Griffith University, TAFE campuses and other training organisations offer education choices and innovation potential.
	Community infrastructure	The region has major sporting arenas and sports and recreational infrastructure for locals and visitors.

### Key regional growth industries

#### Healthcare and social assistance Manufacturing

The Gold Coast health and social services industries employs over 40,000 workers, making them the primary source of employment for the region.<sup>100</sup> Recent industry development has been driven by population growth, with leading practices in medical research and innovation putting the Gold Coast in a strong position for continued expansion.<sup>101</sup>

Advanced manufacturing has significant potential in the Gold Coast region, particularly with the establishment of the Industry 4.0 Business and Investment Project.<sup>102</sup> Currently, manufacturing activities contribute \$3.7 billion to the regional economy,<sup>103</sup> with development of manufacturing hubs enabling more high valueadd production.<sup>104</sup>

#### **Knowledge sector**

The region is home to the Gold Coast Health and Knowledge Precinct, which supports growth in both the knowledge and health sectors through innovation.<sup>105</sup> The Regional Biomedical Supply Chain Development Project also creates emerging opportunities in the biomedical space, with clinical trials predicted to bring over \$24.7 million in value-add in 2029.<sup>106</sup>



### Infrastructure gaps

	Sector:	Transport
	Sub-sector:	Public transport
	Infrastructure gap:	Capacity, connectivity and quality of public transport

As an historically linear, dispersed city with low-density residential development spread over a large area, travel patterns are complex.<sup>107</sup> This settlement pattern brings unique transport challenges for the Gold Coast to deliver a public transport system which provides adequate connectivity and capacity for its existing and rapidly growing population. Benefits in improved public transport on the Gold Coast include reducing traffic congestion, improving community health, improving the economy and protecting the environment.<sup>108</sup>

Despite significant assets such as the Gold Coast Light Rail offering additional capacity and resulting in increased public transport use, the system currently faces other challenges including network coverage outside the coastal corridor, bus network delays and inconsistent travel times due to road congestion and ease of transfer between modes.<sup>109</sup> A significant factor driving the need for improvements to public transport infrastructure has been rapid population growth.<sup>110</sup> The number of Gold Coast residents over 65 years of age is also increasing and as the population ages this raises the need for public transport.<sup>111</sup> Strategic plans and strategies such as the Queensland Government's draft 10 year plan for Queensland passenger transport, *Creating Better Connections, South East Queensland Regional Transport Plan (South Coast)*, the *Gold Coast City Transport Strategy 2031* and *Gold Coast Public Transport Plan 2018-2028* look at addressing these challenges.

### Key facts:

Daily trips on public transport increased from 3.1% in 2011 to



in 2016.112



Gold Coast City Council has set a target of

of all trips on public transport by 2031.<sup>113</sup>



Infrastructure investments are already underway, including through the *Gold Coast Active Transport Plan 2017-2027*<sup>114</sup> and construction of a third stage of the Gold Coast Light Rail, linking Helensvale to Burleigh Heads and providing eight additional stations.<sup>115</sup>

- A low level of public transport use in the region directly contributes to increased congestion on the road network. Improved public transport infrastructure offers potential to more efficiently move a greater number of people and relieve pressure on the region's road infrastructure.<sup>116</sup>
- There are numerous advantages for the region if the public transport system becomes a preferred mode of transport for residents and visitors. Public transport also plays a significant role in supporting the ongoing maturation of the urban form and economic diversity.
- The Gold Coast is renowned for its amenity, tourism and attractive lifestyle. Access to an efficient and reliable means of connecting to social and economic opportunities is critical to ensuring these attributes are retained as the population grows.<sup>117</sup>



#### **Consultation feedback:**

Stakeholders identified access to improved public and active transport is a high priority for the region. Workshop attendees noted that upgrades to existing infrastructure are required to ensure the region's high quality of life is not jeopardised.

Stakeholders also identified recent successes in enhancing public transport in the region, such as introduction of the Gold Coast Light Rail which increased public transport use and has improved physical connectivity. Despite this, many expressed concerns over the heavy reliance on cars amongst the region's population. Cross state border challenges with NSW were also noted, with two separate public transport systems and differences in regulatory environments impacting on low public transport mode share in the Southern Gold Coast and Northern Tweed areas. Improvements to public transport accessibility, connectivity and frequency will help to deliver a higher quality of access to workplaces, economic centres and precincts within the Gold Coast.

	Sector:	Transport
	Sub-sector:	Road infrastructure
	Infrastructure gap:	Capacity, connectivity and quality of road infrastructure

The transport system in the Gold Coast relies heavily on the road network to keep people, goods and services connected and to ensure continued economic growth.<sup>118</sup> Many key routes in the Gold Coast are at or over capacity at peak times.<sup>119</sup> There is high congestion on the Pacific Motorway particularly from Coomera to Nerang and on major east-west roads that link activity centres to the motorway.<sup>120</sup> Stage 1 of the Coomera Connector (between Coomera and Nerang) has been committed to reduce pressure on the Pacific Motorway by providing an alternate route.<sup>121</sup>

It is noted that physical constraints, limited financial resources and sustainability of travel means that alternative approaches are also needed in addition to increasing capacity as a strategy to address congestion.<sup>12</sup> A coordinated response that manages the effects of congestion while addressing its cause is required.<sup>123</sup> Strategic plans such as the *Queensland Government's South East Queensland Regional Transport Plan (South Coast)*, the *Gold Coast City Transport Strategy 2031* and *Gold Coast Road Network Plan 2018-2028* look at addressing these challenges.

### Key facts:



over **32,000** 

people commute into the Gold Coast

for work each day (2016).<sup>126</sup>



- The South East Queensland Regional Transport Plan (South Coast) explores the short, medium and longterm needs for the road network in order to support the existing and future population.<sup>127</sup>
- Optimising and upgrading intersections helps to get the most from existing infrastructure and increase capacity at intersection 'pinch points'. Intersection upgrades often improve safety, resulting in fewer incidents that can cause delays.<sup>128</sup>
- With increasing demand, the network will experience lengthening of peak periods, reduction in reliability and increased journey times.<sup>129</sup>



### **Consultation feedback:**

Stakeholders raised several challenges facing the region in relation to road network connectivity. A high proportion of travel made by private vehicle indicates issues with congestion will continue into the future without appropriate interventions. The network was also described as having increasing congestion issues exacerbated by an underutilised public transport system.

Continued strategic planning and transport were at the forefront of many of the future challenges identified by stakeholders. Collectively, the group expressed concern regarding the ongoing road network maintenance and upgrade requirements in the face of a growing population. Without these interventions, it is unlikely that the needs of road users, inclusive of locals, visitors and freight vehicles, will be met.

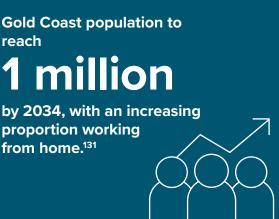
It was also noted that the high cost of providing critical road infrastructure in a sustainable way and balancing the need to shift trip mode share away from private vehicle use is a challenge for the region.

	Sector:	Telecommunications
	Sub-sector:	_
	Infrastructure gap:	Broadband and mobile connectivity

As the Gold Coast grows and technology becomes increasingly crucial to household and business functions, high-quality broadband connectivity will be a catalyst for social and economic transformation. The region has a significant opportunity to develop as a driving force in high-technology and advanced industry, drawing businesses of all sizes from neighbouring regions in South East Queensland, and leading the implementation of Internet of Things (IoT) applications.

Given the expected population growth and the region's existing technology-related industry capacity, it is critical that the region's digital connectivity enables the region to be at the forefront of innovation. Innovations such as an IoT network unveiled in 2019 will need to be supported by wide-ranging access to robust telecommunications infrastructure which is fit-for-use for smart services.<sup>130</sup> Enhancing region-wide access to high-quality digital connectivity with suitable bandwidth to support high-technology applications presents a significant opportunity for the Gold Coast to leverage its strategic position to develop as a nation-leading technology and innovation hub.

### **Key facts:**



## 70,812

local businesses in the City of the Gold Coast which can derive productivity benefits from

enhanced digital connectivity.<sup>132</sup>



- Access to fast and reliable broadband ensures businesses remain competitive and innovative in today's lucrative small business market.<sup>133</sup>
- The Gold Coast Industry 4.0 project enables the ongoing automation and digitisation of supply chains. The region can build on these existing strengths to improve business productivity and stay competitive in the international market.<sup>134</sup>



#### **Consultation feedback:**

Stakeholders identified high-quality digital connectivity to be a crucial factor in enabling small to medium enterprise growth in the region and, as well as further development of innovation precincts such as the Gold Coast Health and Knowledge Precinct.

Connectivity was a key area of concern for workshop participants. Equitable access to high-quality telecommunication infrastructure was also noted as one of a number of interventions which may assist in building social capital across the region's population and address concerns over socioeconomic disparity.

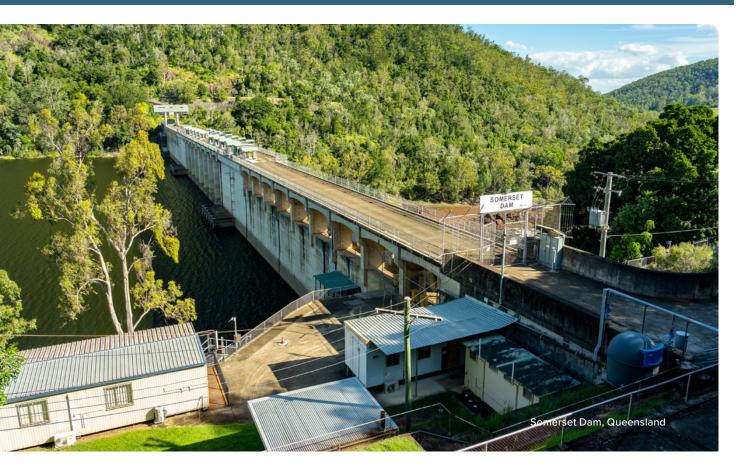
### 6.4.4 Ipswich and West Moreton

The Ipswich and West Moreton region sits within the rapidly growing South East Queensland region, occupying a strategic peri urban location and sharing a part of its border with New South Wales. The Ipswich and West Moreton Regional Development Area (RDA) covers the four local government areas of Ipswich, Lockyer Valley, Scenic Rim and Somerset. The region has leveraged its long history of significant agricultural and manufacturing production to innovate in emerging sectors including advanced manufacturing and value-add processing for agribusiness.

The region has experienced significant population growth as it accommodated growth pressures from its urban neighbours. This has resulted in the growth of a younger demographic and a multicultural community. However, there are concerns that this population growth has not always been adequately accompanied or preceded by increased essential services and social infrastructure.

Looking ahead, the region will likely continue to experience significant population growth and hopes to accompany this growth with the transport and social infrastructure to support liveability as well as employment opportunities for its residents. There are also plans for further industry diversification, with technology to drive growth in the defence, aerospace, manufacturing and agriculture sectors.

The Bromelton State Development Area (SDA), totalling approximately 15,610 hectares within the Scenic Rim, has access to the standard gauge rail network along the Sydney-Brisbane rail corridor.<sup>135</sup> The SDA provides for the growing demand for greenfield land in South East Queensland which is suitable for medium to large scale industrial activities of regional, state and national significance. Importantly, the location of the SDA is ideal for freight and logistics operations, to access intrastate and interstate markets.<sup>136</sup>



### **Strengths**

### Key existing assets

Economic	Transport infrastructure	Multiple highways connect the region to Western, Central, and Northern Queensland and to NSW. These include Warrego, Brisbane Valley, Centenary, Cunningham, D'Aguilar, Ipswich and Mount Lindesay Highway. Three rail lines connect the region with two carrying freight. <sup>137</sup>
	Defence assets	The region is home to RAAF Amberley, Australia's largest Air Force base, as well as the Military Vehicle Centre of Excellence.
	Water infrastructure	Somerset Dam and Wivenhoe Dam provide water supply, flood mitigation and recreation opportunities.
	Specialised precincts	The Bromelton SDA provides industry, logistics and intermodal facilities supporting economic development.
Natural	Natural environments	Multiple national parks, including Lockyer, Glen Rock and Main Range national parks and the world heritage listed Gondwana Rainforests, which hold significant biodiversity value. The region also contains the waterways of seven valleys – Stanley, Brisbane, Lockyer, Bremer, Fassifern, Logan and Albert. <sup>138</sup>
	Climate and topography	The region is home to expansive and fertile agricultural land. The Lockyer Valley is one of the top ten most fertile farming areas in the world with wonderful dark alluvial soil, good quality water and an ideal climate for agricultural innovation. <sup>139</sup>
Social	Education and research institutions	Multiple tertiary education facilities and specialised education offerings provide education, research and innovation opportunities, such as the University of Southern Queensland, Studio of Performing Arts Springfield, UQ Gatton Campus (Qld Animal Science Precinct and Gatton Farms) and TAFE Queensland campuses.

provides tertiary education and research support to the industry.

### Key regional growth industries

Defence	Manufacturing	Agriculture, forestry and fishing
The defence industry is a major driver of economic growth in the region, with almost 10% of local employment in Ipswich involved in defence activities or in occupations across its supply chain. <sup>140</sup> The expansion of RAAF Base Amberley is forecast to bring another 2,800 jobs to the region with increased federal spending on defence. <sup>141</sup>	Given the significant Defence presence, the Ipswich and West Moreton region also showcases strong defence manufacturing capabilities. The locally based Military Vehicle Centre of Excellence is Australia's most advanced military vehicle manufacturing facility and is predicted to generate over \$1 billion for the state economy. <sup>142</sup>	Lockyer Valley, Scenic Rim and Somerset have a large agriculture-forestry industry sector. <sup>143</sup> Lockyer Valley has fertile farmland and produces the most diverse range of commercial fruit and vegetables in Australia and accounts for 28% of Queensland's horticulture production. <sup>144</sup> Similarly, Scenic Rim's fertile land and proximity to South East Queensland markets provide a comparative advantage for the sector. <sup>145</sup> The Warrill and Fassifern Valleys are highly productive agricultural areas with significant potential for growth in production and high-value-added processing. <sup>146</sup> The University of Queensland Gatton Campus also

### Infrastructure gaps

	Sector:	Transport
	Sub-sector:	Public transport
	Infrastructure gap:	Capacity, connectivity and quality of public transport

The Ipswich and West Moreton region has a growing population, with the highest rates of growth occurring in the City of Ipswich. As a high growth area, effective passenger transport through road and rail will improve connectivity for current and future residents.

With an expectation that the Ipswich's population will double in the next three decades, the delivery of efficient and accessible public and active transport will improve connectivity for current and future residents, in addition to contributing to a sustainable and healthy city.<sup>147,148</sup> Lack of public transport in Scenic Rim has also been identified by communities as impacting access to health services, employment training, education, shopping and recreation.<sup>149</sup> A business case for passenger rail between Toowoomba and Brisbane is underway (covering Brisbane City Council, Ipswich City Council, Lockyer Valley City Council and Toowoomba Regional Council), exploring a range of route options with the potential to improve connectivity, boost tourism and development.<sup>150</sup>

Strategic plans such as the *Queensland Government's Creating Better Connections* draft 10 year plan for Queensland passenger transport, *South East Queensland Regional Transport Plan* (Ipswich included in the Metropolitan region, Scenic Rim in the South Coast region and Somerset in the North Coast region) and *Darling Downs Regional Transport Plan* (Lockyer Valley) look at addressing these challenges.

### Key facts:



of resident's trips to work were made on public transport (2016).<sup>151</sup>



The region's population grew by 2.59% between 2019 and 2020, compared to 1.37% growth in regional Queensland.<sup>152</sup> Looking within the region, the City of Ipswich had the highest population growth at 3.39% in this period.<sup>153</sup>



## 39%

commuters were unhappy or very unhappy with the public transport system in Ipswich (2017 survey).<sup>154</sup>

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- An inefficient public transport network exacerbates reliance on private vehicles, resulting in congestion and poor health and wellbeing outcomes.<sup>155</sup>
- The impact of the public transport system's inefficiencies is felt by lpswich residents and commuters who use the network, with slower travel times on public transport reinforcing the dominant role of travel by private motor vehicle.<sup>156</sup>



#### **Consultation feedback:**

One of the main challenges identified by the stakeholders in the regional workshop was a lack of supportive public transport infrastructure and adequate strategic planning. These challenges are significant impediments to sustainable growth in the region. Despite improvements to rail infrastructure in recent times, stakeholders reported that public transport connectivity remained a significant issue for the region.

Stakeholders also expressed concerns regarding future transport infrastructure investments, noting that these should be prioritised to connect larger population hubs to support liveability and the better integration of existing transport networks.

	Sector:	Social infrastructure
	Sub-sector:	Education (tertiary)
	Infrastructure gap:	Access to further education and skills training

The Ipswich and West Moreton region faces both opportunities and challenges in improving access to further education and skills training. In 2016, 45% of residents in the region have no qualifications<sup>157</sup> and significant opportunity lies in its strategic location and linkages to South East Queensland.

The concentration of growth in South East Queensland poses challenges for future training delivery and infrastructure.<sup>158</sup> Investments at Bundamba TAFE for metal trades, manufacturing and robotics will help support this growing sector in the region.<sup>159</sup> Other revitalisation works for Bundamba TAFE have been committed, alongside master planning for the region with a focus on this site.<sup>160</sup> Training demand in the Ipswich region is expected to increase significantly over the next ten years reflecting projected employment growth.<sup>161</sup>

### Key facts:

15.3% of 15-24 year olds in the region were disengaged with employment and education, compared to 11.5% in Queensland (2016). Disengagement for all age groups in the region

was higher than the Queensland average.<sup>162</sup>



## 23%

of recent school leavers were not engaged in education, employment or training (2019 survey).<sup>163</sup>



Regional employment in Ipswich to increase



2022.<sup>164</sup>



- Investing in high-quality training supported by a network of fit-for-purpose training infrastructure is essential to ensure residents have the skills they need to secure a job and progress their careers.<sup>165</sup> Improving skills training and further education infrastructure may help increase participation amongst disengaged cohorts and bring about enhanced social and economic outcomes.
- The region is forecast to have significant population and employment growth, however workforce skills will need to ensure alignment with industries in need, otherwise this will constrain economic growth.<sup>166</sup>
- The Queensland Government offers free TAFE for residents under 25 to support training in high priority areas.<sup>167</sup>



### **Consultation feedback:**

During consultation, stakeholders noted that there is a lack of further education and training opportunities in the Ipswich and West Moreton region. Technology is expected to be a key driver for employment, greater industry diversification and growth of new industries.

Stakeholders explained that there is a challenge faced in growing local employment opportunities with a stable and skilled workforce. They stressed the fact the region can become, in their eyes, an economic powerhouse. However, this requires a sufficiently trained local workforce that is retained within the region.

	Sector:	Water
	Sub-sector:	_
	Infrastructure gap:	Water security

Water security is a key priority for the Ipswich and West Moreton region. Secure water supply is an essential requirement to unlocking further potential of the Lockyer Valley to support agricultural growth, including resilience from climate change impacts.<sup>168</sup> Groundwater is the dominant water source in the Lockyer Valley and Somerset local government areas, and is accessed through a series of private bores located on individual farms.<sup>169</sup> Data illustrates that increasing groundwater levels in the Lockyer Valley corresponded with uplift in agricultural production.<sup>170</sup> Water that is secure and reliable will allow irrigators to plan and plant with confidence and provides the greatest returns.<sup>171</sup>

Improving water security and reliability in the Scenic Rim is expected to provide opportunities to expand primary production and processing, with flow-on economic benefits to the wider community.<sup>172</sup> The Warrill and Fassifern Valleys have existing industries ready for further expansion, however the area is constrained by a lack of reliable water for irrigation. Long-term business investment in the area has reached a ceiling due to lack of confidence in consistent water supply for agricultural production.<sup>173</sup>

### **Key facts:**

#### A decrease of



in average annual rainfall to 2030 is projected for South East Queensland.<sup>174</sup>



An increase in evaporation of **6-16%** 

is anticipated in Ipswich (2016 to 2070).<sup>175</sup>



Historical rainfall records show Ipswich has experienced numerous extreme wet and dry periods, leading to severe droughts and floods.<sup>176</sup>



- Recycled water provides another mechanism for contributing to the quantity and security of water needed to boost the agricultural and horticultural output of the study area. Opinions vary widely about the quality of water required for different crops, priority areas to receive recycled water and means of storage and release.<sup>177</sup>
- A safe, secure and reliable urban water supply underpins the economy of South East Queensland. Without a secure water supply, economic growth will be constrained.<sup>178</sup>



#### **Consultation feedback:**

Stakeholders identified water security as being a pressing local issue for the region. Improved security of water resources is a necessity for allowing the region to thrive and grow. Investment in water infrastructure projects has the potential to bring economic benefits above and beyond those provided by a secure water supply.

The need for water for domestic and agricultural use was noted as being a key enabler of economic growth. Irrigation systems were noted as being a key factor in securing the longevity of the region's significant agricultural sector, particularly in light of the projected impacts of climate change. Stakeholders also noted concerns regarding the projected rate of population growth for the region and the corresponding impact on water security.

### 6.4.5 Logan and Redlands



The Logan and Redlands region is at the heart of growth in South East Queensland, bordering Brisbane, Gold Coast, Scenic Rim and Ipswich. The Logan and Redlands Regional Development Area (RDA) covers the two local government areas of Logan and Redlands. The region boasts a wealth of diverse natural environments with rivers, coastal wetlands and national parks. North Stradbroke, Macleay and Russell Islands also present significant environmental value and have the potential to drive a strong tourism economy.

The region has seen population growth, and experienced challenges in infrastructure provision to meet corresponding demands. A strong multicultural identity and multiple centres in the region has created unique communities within a distinct commercial landscape. However, the region has also struggled with a lack of transport and other essential infrastructure, which has contributed to socioeconomic issues.

Looking forward, the region is keen to develop a strong identity, provide better services and improved access to important telecommunications, transport, water and waste infrastructure to promote liveability and social outcomes for its residents. Continued place-based planning will assist in delivering vibrant and connected communities. The region is also looking to grow its tourism, advanced manufacturing, healthcare and social services sectors. Attracting businesses and industry through infrastructure and amenities is highlighted as an opportunity for the region.

# **Strengths**

Economic	Strategic location	The region is well-placed and connected in proximity to Brisbane, the Gold Coast and the fast-growing broader South East Qld region.
	Transport infrastructure	The region is connected via major road routes, with bus and rail connections to centres. While not optimised in parts, the network provides access to employment, services and recreation.
Natural	Natural environments	Ramsar wetlands, national parks and conservation areas, as well as North Stradbroke, Macleay and Russell Islands, enhance liveability and support a visitor economy. Minjerribah (North Stradbroke Island) is the world's second-largest sand island and is a significant tourism attraction for the area and the state.
Social	Education and research institutions	Griffith University Logan Campus, TAFE Queensland Loganlea and Alexandra Hills campuses offer local opportunities for education, research and industry collaboration. Griffith University Logan Campus is an active incubator for innovative partnerships and industry engagement. <sup>179</sup>
	Health infrastructure	Major health facilities in the region, including Logan Hospital and Redland Hospital, provide critical health, emergency and specialist services to the region and beyond.

#### Key existing assets

#### Key regional growth industries

#### Healthcare and social assistance Tourism

The region has experienced significant growth in the health and social services industry, now responsible for 13.1% of employment in Logan and 16.6% in Redlands (2016).<sup>180</sup>

Digital advancements and investment in health infrastructure has placed the region in a strong position to continue expanding.<sup>181,182</sup> Extensions to Logan Hospital<sup>183</sup> and Redland Hospital<sup>184</sup> will expand capacity to meet the growing needs of the community. The region's tourism industry benefits from its proximity to Brisbane and the Gold Coast, with the industry expected to account for over 3% of Gross Regional Product by 2041 in Redlands alone.<sup>185,186</sup>

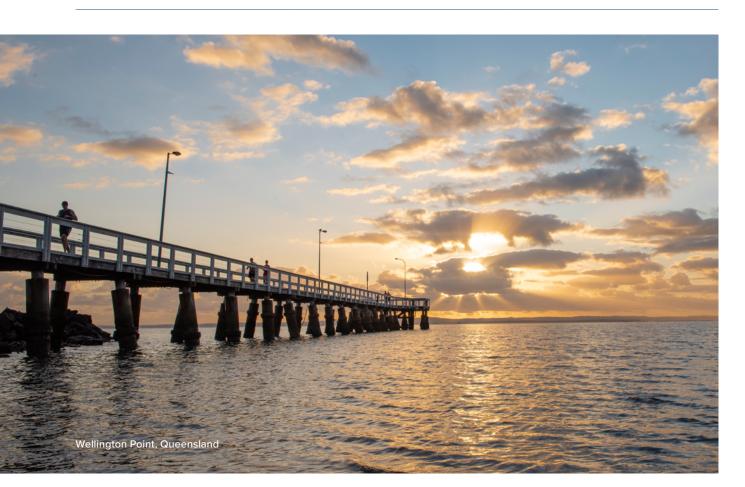
The region is well-placed to strengthen the tourism sector through leveraging diverse leisure, food and wine, and adventure tourism offerings.<sup>187</sup>

The Queensland Government is investing \$24.75 million to assist the economic transition of Minjerribah (North Stradbroke Island) from its traditional reliance on sand mining to a sustainable future as a globally recognised cultural and ecotourism destination, supported by expanded research and education activities.<sup>188</sup>

#### Manufacturing

The manufacturing sector is a major contributor to the region, generating over \$4.86 billion in output in 2019/20.<sup>189,190</sup>

The region's location and accessibility to major transport and supply chain infrastructure has enabled continual growth in the sector,<sup>191</sup> with significant opportunity to engage in advanced manufacturing to support health sector needs.<sup>192</sup>



### Infrastructure gaps

	Sector:	Social infrastructure
	Sub-sector:	Education (tertiary)
	Infrastructure gap:	Access to further education and skills training

Skilling and reskilling of the local workforce has been identified in the Logan and Redlands region as one of the means of meeting current and emerging industry needs.<sup>193</sup> Delivering education and skills development to develop a strong workforce has also been identified by the community as a key opportunity for innovation.<sup>194</sup> Identified regional priorities include continued work to ensure the region offers the right mix of education and training.<sup>195</sup>

Investments in enhancing the skills training facilities in the region has been identified as a way to meet industry growth demands expected as a result of population growth.<sup>196,197</sup> High quality training supported by a network of fit-for-purpose infrastructure is essential as jobs evolve in the region's growing industries. Collaboration between industry, training and education bodies, and government will also be important to addressing this challenge.<sup>198</sup> The region's existing infrastructure, in addition to the capacity of facilities in the broader South East Queensland region, provides a tangible opportunity for the Logan and Redlands region given its location.

Government and industry investment towards upgrading training facilities is underway through projects such as the Plumbing Industry Climate Action Centre in Beenleigh<sup>199</sup>. The Queensland Government has also delivered FamilyLinQ, a school-based hub combining high-quality early years learning and education with wrap-around health and community services from a single location in Kingston State School.<sup>200</sup> At FamilyLinQ, parents are also offered opportunities to engage in skills and training to build their qualifications. In partnership with The Bryan Foundation, this model exemplifies a place-based approach to social infrastructure planning, services and training delivery.

#### **Key facts:**

13% of residents region have a Bachelor or Higher degree, compared to 23% across Greater Brisbane. Whilst tertiary education attainment across the region is lower, there is a higher proportion of the population with a vocational qualification (24% compared to 19% in Greater Brisbane).<sup>201,202</sup>



# 36%

of the region's workforce live outside of the region (2016).<sup>203,204</sup>



Particular industries in need of skilled workers include construction, manufacturing, healthcare and social assistance, as well as professional, scientific and technical services.<sup>205,206</sup>



- Continued improvements to accessing industry-focused and equitable further education and training offering has the potential to reduce socioeconomic inequalities across the Logan and Redlands region.
- 15.5% of 15 to 24 year olds in Logan local government area were disengaged with employment and education, compared to 10.0% in South East Queensland. The lower rate of youth engagement can be affected by access to strong employment and education markets and is a measure of socio-economic status and the level of welfare dependency in an area.<sup>207</sup>
- Research suggests that in the longer term, young people who are not fully engaged in education or employment (or a combination of both) are at greater risk of unemployment, cycles of low pay and employment insecurity.<sup>208</sup>



#### **Consultation feedback:**

Stakeholders identified enhancing local employment and skilled labour through improving local upskilling opportunities to be a priority for the Logan and Redlands region. Delivering skills training which meets industry demand was recognised as being a crucial factor in addressing this challenge.

Workshop attendees noted that the Logan area in particular has a lower-skilled workforce as compared to the state average, whilst the Redland area has a higher proportion of unqualified or non-degree qualified local workers. Improving the access to skills training – and matching this offering with industry needs – was viewed by stakeholders as being one of the most pressing challenges facing the region.

	Sector:	Transport
	Sub-sector:	Public transport
	Infrastructure gap:	Capacity, connectivity and quality of public transport

Current public transport connectivity in the Logan and Redlands region is heavily concentrated along main thoroughfares.<sup>209</sup> Existing transport corridors have focused on passing through rather than getting around the region.<sup>210</sup> Despite the region's proximity to Brisbane, many outlying areas of the region are not accessible by public transport or have limited services available.

Due to the dispersed development and employment patterns in the region, it is sometimes challenging for public transport travel time to be competitive with private vehicles.<sup>211</sup> However, strategic and integrated transport planning is needed, particularly with the significant growth projected in the outer suburbs and peri-urban edges of the region. Greater Flagstone Priority Development Area (PDA), Yarrabilba PDA and other expansion areas expecting residential growth increase demand for reliable public transport, active transport connections and improved roadways.<sup>212</sup> As identified through the development of a business case for Salisbury to Beaudesert Passenger Rail, without improvements to public transport, much of the associated growth in transport demand will need to be accommodated on a road network that will become progressively more congested.<sup>213</sup>

Beyond improving basic access to public transport, there is a need to improve the integration and utility of existing infrastructure. Better aligning feeder services with population densities and user needs, aspirations, origins and destinations is a key opportunity for the future passenger transport system.<sup>214,215</sup> Given the rapid nature of growth in the region and surrounds, there is also opportunity for the region to embrace emerging innovative solutions, such as rideshare and on-demand transport options which can provide improved outcomes without the long lead-in times incumbent of large-scale transport infrastructure projects.<sup>216</sup> The Queensland Government is trialling Demand Responsive Transport (DRT) in some suburbs around Logan.<sup>217</sup>

Strategic plans and strategies such as the Queensland Government's *Creating Better Connections* draft 10 year plan for Queensland passenger transport, *South East Queensland Regional Transport Plan* (Redland included in the Metropolitan region and Logan in the South Coast region), Logan City Council's *Way2Go* (2018) strategy and *Redlands Coast Transport Strategy 2020* look at addressing these challenges.

#### **Key facts:**

<sup>over</sup>**70%** 

of residents commute to work using a private vehicle (2016).<sup>218,219</sup>



# <sup>Over</sup>

of Logan residents face a commute of over 45 minutes (2016).<sup>220</sup>



Logan is expecting to grow by 227,700 people by 2041 (2.3% growth rate) and Redlands is expecting a growth of 35,600 people by 2041 (0.9% growth rate). ShapingSEQ indicates that the majority of dwellings required to accommodate the population growth projected is expected to be provided through consolidation.<sup>221,222</sup>

- The region's existing public transport network consists of train, bus, busway and ferry services. Enabling ease of mode-shift and integrating these modes of travel with active transport infrastructure will improve liveability for the region, which can have flow-on effects in economic development and social inclusion.
- Evidence suggests skilled migrants and innovative businesses are attracted to quality urban environments supported by multi-modal transport systems.<sup>223</sup>
- With limited dedicated bus priority infrastructure in Logan, buses mix with general traffic and are often caught in congestion. This can affect the ability of buses to maintain reliable travel times that are competitive with private vehicles.<sup>224</sup> Buses also compete for road space in Redland, resulting in poor travel time reliability.<sup>225</sup>



#### **Consultation feedback:**

Improved physical connectivity emerged as a consistent priority throughout consultation. Stakeholders highlighted the need for significant upgrades of public transport, with challenges lying in servicing public transport black spots in the region as well as improving the utility of existing infrastructure. Integrated active transport alongside public transport will also support growth areas. The projected growth of the region, most notably new residential developments in greenfield areas, was highlighted as being a likely exacerbator of existing poor connectivity as service demand increases in unserved areas. Consolidation and brownfield development is also placing increased pressure on established networks. Proactive transport planning to understand, manage and meet these new demands was noted as being a critical factor in enabling sustainable growth in the region.

	Sector:	Social infrastructure
	Sub-sector:	Green, blue and recreation
	Infrastructure gap:	Provision, quality and protection of green, blue and recreation infrastructure

The Logan and Redlands region has experienced substantial growth in recent decades. This growth is expected to continue in the years ahead and will require robust infrastructure to meet increased demand, including in delivery of green, blue and recreational infrastructure which enhances liveability and wellbeing for residents. Identified challenges in delivering community infrastructure include rapid population growth, outer-urban development, servicing new communities in greenfield areas, changing demographics, funding and maintaining an ageing stock of assets.<sup>226</sup> The region is diverse, with some parts more affluent and other pockets experiencing significant relative disadvantage; some areas are highly urbanised while others are rural or greenfield; and some areas are well-serviced, while others have no existing community infrastructure.<sup>227</sup>

Proposed infrastructure as part of the Toondah Harbour Priority Development Area (PDA) includes new foreshore parklands, lagoon, recreational boating facilities and walking and cycling trails.<sup>228</sup> Weinam Creek PDA is also proposed to deliver active transport connections, more open space and rejuvenated existing parkland.<sup>229</sup> Planning is also underway for sporting facilities to support venues for the Brisbane 2032 Olympic and Paralympic Games.<sup>230</sup> The Resilient Rivers initiative, launched in 2014 is a collaborative effort between local and state governments, water utilities and key non-government organisations, aims to improve the health and resilience of South East Queensland's rivers through a coordinated approach to catchment management.<sup>231</sup> Outcomes require a multi-pronged approach to addressing challenges such as stormwater management, sediment control and extreme weather events.<sup>232,233</sup>

#### Key facts:

# <sup>over</sup> 25,000

residents in Logan and Redlands need assistance with their daily needs due to disability (2016).<sup>234,235</sup> This was a percentage increase from 2011, demonstrating the importance of inclusive and accessible public spaces.



# Logan is expecting to grow by **227,700**

people by 2041 (2.3% growth rate) and Redlands is expecting a growth of 35,600 people by 2041 (0.9% growth rate).<sup>236,237</sup>



Building, operating and maintaining community infrastructure is a funding challenge, particularly with ageing stock of facilities.<sup>238</sup>



- With communities of varying demographics, needs, values and aspirations, infrastructure needs to be flexible and multipurpose to accommodate a broad range of uses, and with the ability to be repurposed over time to respond to the changing needs or life stages of a community.<sup>239</sup>
- Where needs are not adequately met, this can have a detrimental impact on broader community outcomes such as social cohesion and economic development, as well as place pressure on the facilities and services located in neighbouring communities.<sup>240</sup>
- Enhancing green, blue and recreation infrastructure in the region will enhance liveability, a factor which offers the co-benefit of improving the region's ability to attract and retain skilled workers, as well as better cater for the needs of its diverse population.<sup>241</sup>



#### **Consultation feedback:**

Place-based planning and uplift of community infrastructure were identified as being key priorities during consultation with stakeholders in the Logan and Redlands region. Stakeholders highlighted the importance of these considerations in planning for a sustainable and liveable region in the face of rapid current and projected growth. Many stakeholders noted that a focus on keeping-up with increasing housing and services demand had not been accompanied by a complimentary push to uplift existing community infrastructure assets and provide new infrastructure in growth areas.

Integrating high-quality spaces and places for the region's community into planning for residential and employment land provision was also viewed by workshop attendees as being a critical factor in ensuring the region could compete in South East Queensland and more broadly in terms of attracting and retaining a skilled and productive population.

### 6.4.6 Moreton Bay



Moreton Bay is a rapidly growing region due to its peri-urban location, affordability, coastal assets and hinterlands. The diverse natural landscapes offer an attractive lifestyle for residents and drive a strong economy. The Moreton Bay Regional Development Area (RDA) covers the one local government area of Moreton Bay. Moreton Bay is the 3rd largest local government area in Australia and the 5th fastest growing, with the population estimated to reach 700,000 by 2041.<sup>242</sup>

Population growth has placed pressure on infrastructure networks as well as provided businesses with a critical mass to build on, allowing the region diversify its economy with its agricultural industry, advanced manufacturing and growth of the knowledge sector. The region has also seen growth in its tourism industry with an increase to visitor numbers over the past decade. The region has capacity to accommodate further growth through identified growth areas, from future residential and industrial land, as well as areas for commercial and retail development.

While the region has 'room to grow', meeting population pressures in key locations within the region is a challenge in terms of balancing land purchase, infrastructure delivery and cost of construction. Protecting land for future infrastructure delivery, particularly in major expansion areas such as Caboolture West and North Harbour, offers a range of opportunities. Looking to the future, the region seeks to attract innovation and enable growth to further diversify and support emerging industries.

# **Strengths**

	Specialised precincts	The Mill Priority Development Area (PDA) at Petrie offers existing and under-development innovation and employment opportunities.
Economic	Transport infrastructure	The region is serviced by two major arterial roads, the Gateway Motorway and Bruce Highway, as well as the Redcliffe Peninsula Rail Link, Caboolture and Ferny Grove rail lines, connecting the region to Brisbane and the Sunshine Coast. The region is also less than 30 minutes to the Brisbane Airport and Port of Brisbane, providing gateways to regional and international markets and commuters.
	Strategic location	The position of the region as part of South East Queensland and proximity to Brisbane offers access to substantial and growing markets across traditional and emerging sectors.
Natural	Natural environments	The region covers an array of habitats - ocean beaches, mangroves, tidal creeks and rivers, marshlands, swamps, lagoons, grasslands, woodlands and forests. D'Aguilar National Park and Moreton, Redcliffe and Bribie Islands are significant assets for tourism and local amenity. Moreton Bay Marine Park and the Moreton Bay Ramsar site also protects a vast array of marine habitats, plants and animals.
Social	Education and research institutions	The growing University of Sunshine Coast (Moreton Bay campus), TAFE campuses and other training organisations offer education, research and industry innovation capacity.
	Health infrastructure	Two public hospitals (Caboolture Hospital and Redcliffe Hospital) and a number of private hospitals are located in the region, providing residents access to a full range of health services.

#### Key existing assets

#### Key regional growth industries

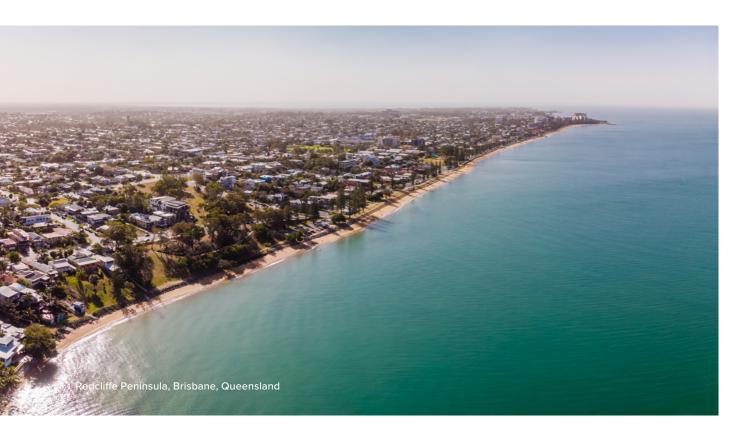
#### Agriculture, forestry and fishing Knowledge sector

The rich soils and a sub-tropical climate has contributed to the region's thriving agricultural industry, producing over \$800 million in agricultural products annually, with fruit and nuts forming the core of the region's agricultural output.243 The region is the largest strawberry producing area in Australia, contributing 55% of the state's total strawberry production.<sup>244</sup> The region also produces 32% of the state's pineapple's as well as prawns, bugs and crabs.<sup>245</sup> While there are opportunities to continue expanding in these areas, there are also new areas to explore including oyster and seaweed production, more intensive agriculture, further value-adding and processing opportunities, and production of a range of food and beverage products.<sup>246</sup> The adoption of new AgTech will also enable future growth for the industry.<sup>247</sup>

The region has Queensland's only aquaculture research facility at Bribie Island Research Centre. There are significant opportunities for growth in knowledge sector, especially following the establishment of The Mill PDA, an education, innovation and research precinct.<sup>248</sup> This precinct houses University of Sunshine Coast's Moreton Bay campus in Petrie and is expected to create an addition 2,200 jobs in the region and deliver education to 10,000 students within 10 years.<sup>249</sup>

#### Manufacturing

Moreton Bay's manufacturing sector is the region's largest export industry with \$1.3 billion exported annually and total output at \$3.6 billion.<sup>250</sup> Many local companies export products around the globe and are leaders in their respective fields and key areas include industrial engineering, fabrication, marine product manufacturing/repair/ maintenance, building materials and many unique and bespoke products.<sup>251</sup>Growth in this sector benefits from large industrial precincts and a proximity to major transport infrastructure and skilled workforce.



### Infrastructure gaps

	Sector:	Transport
	Sub-sector:	Road infrastructure
	Infrastructure gap:	Capacity, connectivity and quality of road infrastructure

The Moreton Bay region is serviced by the Gateway Motorway and Bruce Highway, which connect the region to Brisbane and the Sunshine Coast.<sup>252</sup> The Bruce Highway is the major route for transporting agricultural products from production regions to export markets and beyond via Brisbane Airport and Port of Brisbane.<sup>253</sup> Demand on these major routes, along with Gympie Arterial Road, is expected to increase by 50% by 2041.<sup>254</sup> Without additional capacity from future upgrades these vital section will be heavily congested for longer periods and planning for an integrated approach for upgrades is underway by the Queensland Government.<sup>255</sup> The Queensland Government has also commenced planning to investigate a future Bruce Highway Western Alternative (BHWA), a new corridor through the north Brisbane and Moreton Bay regions between Beerburrum and north Brisbane.<sup>256</sup>

The region's future expansion areas, which includes five emerging communities (Caboolture West, Morayfield South, Narangba East, Burpengary South, Joyner South), is projected to result in new population centres that, in some cases, will be twice the size of Gladstone.<sup>257</sup> Road congestion has a negative impact on the economy, with the majority of the congestion experienced in the broader region recurring congestion.<sup>258</sup> The provision of transport infrastructure to keep up with population growth and reduce traffic congestion remains a major priority for Moreton Bay Regional Council, as is the creation of local jobs in value-adding industries to reduce pressure on residents to seek employment elsewhere.<sup>259</sup>

Leaders in the region note that the task to upgrade existing road transport infrastructure to accommodate expected population growth in Moreton Bay will require investment from the three levels of government.<sup>260</sup> Road infrastructure, which maintains the safety of road users in the region, will also support community and economic activity.<sup>261</sup> Strategic plans and strategies such as the Queensland Government's *South East Queensland Regional Transport Plan* (Moreton Bay included in the North Coast region) look at addressing these challenges.

#### Key facts:



46.7%

of working residents commute outside of the region to work (2016).<sup>263</sup>

# 71%

of workers living in the region travel to work in a private car (2016).<sup>264</sup>



- Travelling longer commuting distances has tended to increase reliance on private vehicles across the North Coast region, with resulting congestion, potential environmental degradation and capacity constraints in peak periods.<sup>265</sup>
- Growing congestion in the region reduces liveability and amenity for workers.<sup>266,267</sup>
- Supporting the region's corridors is expected to relieve congestion, improve safety outcomes and improve flood resilience.<sup>268</sup>



#### **Consultation feedback:**

Stakeholders noted that due to population growth, road infrastructure has come particularly under strain. It was also noted that multiple development fronts are contributing to the challenge of a coherent and staged network expansion.

Pressure is placed on existing infrastructure in the form of congestion and delays, due to the challenges of urban sprawl and growth. The importance of ensuring the safety of the region's residents and visitors was highlighted, as well as the quality of life and amenity impacts from poor road infrastructure. Impacts of congestion on the region's productivity and liveability was also noted.

	Sector:	Transport
	Sub-sector:	Public transport
	Infrastructure gap:	Capacity, connectivity and quality of public transport

Moreton Bay is within commuting distance of Brisbane City to the south. The dispersed settlement patterns in the region impact greatly on the affordability of providing transport infrastructure and services, meaning that some traditional scheduled public transport services are costly to operate, leading to low service frequencies.<sup>269</sup> Public transport options are concentrated in the more densely settled locations.<sup>270</sup>

With major movements to northern Brisbane and Brisbane City, the bus network is focussed on meeting customer demand between Caboolture, Morayfield, Redcliffe, North Lakes and Strathpine.<sup>271</sup> However, it is noted that bus journey times within the region generally are not comparable to private vehicles.<sup>272</sup> Trips to work are predominately and increasingly via private transport.<sup>273</sup> Moreton Bay is serviced by the Redcliffe Peninsula Rail Link, and the Caboolture and Ferny Grove lines, however in 2018 daily user trips are below initial forecasts for the Redcliffe Peninsula link.<sup>274</sup>

Substantial growth forecast for the region, including expansion areas (Caboolture West, Morayfield South, Narangba East, Burpengary South, Joyner South)<sup>275</sup>, highlights the importance of continued integrated planning which considers public transport provision. Strategic plans and strategies such as the Queensland Government's *Creating Better Connections* draft 10 year plan for Queensland passenger transport and *South East Queensland Regional Transport Plan* (Moreton Bay included in the North Coast region) look at addressing these challenges. Investment in public transport has been identified as a priority in the *Moreton Bay Regional Council's Public Transport Strategy*.<sup>276</sup>

#### Key facts:

7.8%

of residents commute to work via public transport (2016).<sup>277</sup>



# A decline

in public transport trips and an increase in persons travelling by car to work (2011–2016).<sup>278</sup>



Moreton Bay's population is expected to grow

50%

over 25 years by 2041.279



- Current employment patterns reinforce the importance of strong inter-regional passenger transport
  connections and enhancing capacity on the rail network during the peaks for people who travel into the
  Brisbane Metropolitan region for work. While there is a regional planning focus on future employment
  growth along key passenger transport corridors and in areas with better access to public transport,
  transport planning should also consider residents' choice to access employment opportunities across the
  wider South East Queensland region.<sup>280</sup>
- While private vehicles can sometimes be more time competitive for longer journeys, encouraging increased use of public and active transport can also help in reducing recurring congestion.<sup>281</sup>
- Moreton Bay Regional Council recognises public transport infrastructure as a strategic tool in reducing carbon emissions, as well as having social equity and amenity outcomes for the region.<sup>282</sup>



#### **Consultation feedback:**

Stakeholders noted that the region needed improvements to physical connectivity, with a key concern around a need for improved public transport. Stakeholders noted that without improvements, the public transport infrastructure system is not a viable option for the region to mitigate congestion on the road network.

Stakeholders shared a desire to shift reliance on private vehicles to public transport to reduce carbon emissions. Improvement to public transport accessibility, connectivity and frequency were priorities to deliver a higher quality connection within the region. Improved provision of public transport alongside other levers such as land-use and self-containment were seen as supporting the region's population growth.

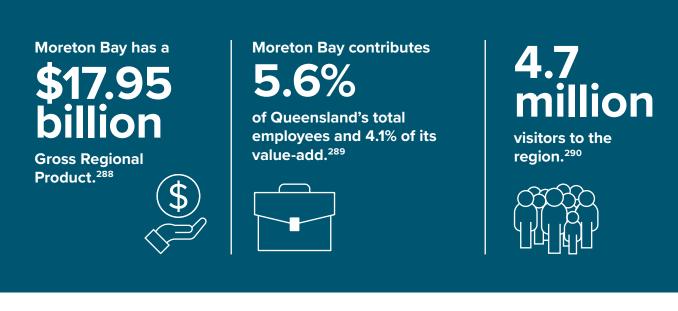


Over the last decade, the Moreton Bay region has experienced extensive population-driven economic growth.<sup>283</sup> Developing supporting infrastructure, which enables local industries to realise their growth potential, will be key in supporting sustainable economic growth.

Encouraging innovation is seen as a key focus area. For example, the Mill at Moreton Bay Priority Development Area was established to stimulate economic growth and innovation,<sup>284</sup> particularly thorough collaboration with the University of the Sunshine Coast's Moreton Bay campus.<sup>285</sup> Additional infrastructure such as innovation spaces or hubs and a range of support mechanisms may assist with the growth and expansion of the existing culture of innovation and entrepreneurship <sup>286</sup> and have the potential to add significant value and enhance resilience in other sectors of the local economy.

The Moreton Bay region also has an opportunity to capitalise on its growing tourism industry, particularly with the approaching Brisbane 2032 Olympic and Paralympic Games. The region's natural tourism assets and strategic location provides opportunities to further grow tourism with increased investment, including increased events, new visitor experiences and products, and attracting further investment.<sup>287</sup>

#### Key facts:



- Investments in infrastructure supporting the diversification of the economy with more value-adding industries and innovation centres could improve the resilience of the economy and support Gross Regional Product and jobs growth.<sup>291</sup>
- The tourism industry is a major focus for the region. The region is well-situated to take advantage of growing tourism opportunities stemming from the Brisbane 2032 Olympic and Paralympic Games.<sup>292</sup>



#### **Consultation feedback**

Stakeholders noted that the region has seen significant population growth, which has been an economic driver for the region, however employment and business growth have not kept the same pace. The region's employment self-containment rate is also low. Transitioning from a reliance on population growth as a driver of regional economic growth to value-adding, export-focused industries has been identified through promoting opportunities in advanced manufacturing; food and agribusiness; tourism, sport and major events; knowledge, innovation and entrepreneurship.

Stakeholders highlighted tourism growth as a key opportunity and challenge for the region, with growth already occurring. However, stakeholders noted that infrastructure and amenities to support tourism could be enhanced. Investment in infrastructure to support tourism growth in the region is critical for the liveability of local residents and will enable the region to capitalise on further growth from the Brisbane 2032 Olympic and Paralympic Games.

Diversification of the region's economy was also highlighted as a necessity to support further growth and innovation. Stakeholders were receptive to The Mill development and University of the Sunshine Coast Moreton Bay campus as being key drivers of innovation in the region.

### 6.4.7 Greater Whitsundays

The Greater Whitsundays Regional Development Area (RDA) covers the three local government areas of Mackay, Isaac and Whitsunday. The region has access to the Great Barrier Reef and is home to productive agricultural lands and significant resources.

With an established mining sector, the region has also diversified with growth in tourism, aquaculture and biofutures sector which includes bioprocessing, bioproducts and biofuels. The community has also developed itself as an innovator in advanced manufacturing and Mining, Equipment, Technology and Services (METS) sectors. The region's METS industries remain highly significant however there is an increasing focus on opportunities leveraging the environment and sustainability.

As it looks to the future, the region hopes to strengthen its connection with global markets and economies, create shorter and more efficient supply chains and limit the impacts of climate change and become more sustainable. It will continue to grow its biofutures sector, sustainable agriculture and eco and agrotourism offerings.



# **Strengths**

#### Key existing assets

	Gateway ports	Mackay, Whitsunday Coast and Moranbah airports enhance connectivity. The Ports of Mackay, Hay Point and Abbott Point facilitate trade, including through Dalrymple Bay Coal Terminal.
Economic	Specialised precincts	Mackay is the centre of one of Australia's most developed Mining Equipment, Technology and Service (METS) industries.
	Transport infrastructure	The region is supported by a number of national roads, including the Bruce Highway and the Peak Downs Highway, as well as an extensive network of strategic state and district roads. Rail lines also provide significant freight capacity and connection to ports.
Natural	Natural resources	The region's mining and resource activity includes underground and opencut thermal and metallurgical coal, minerals and coal seam gas (CSG). The dominant minerals commodity is coal and comes from the Bowen Basin and Galilee Basin regions
	Natural environments	The Great Barrier Reef is a significant tourism and biodiversity asset for the region. The region also includes coastline, rivers, gorges, national parks and tropical islands.
Social	Education and research institutions	James Cook University, CQUniversity Mackay and TAFE Queensland campuses offer education, research and innovation opportunities.

### Key regional growth industries

Agriculture, forestry and fishing	Tourism	Mining
The region has established itself as a leading bio-commodity producer, supported by their strong sugar industry which produces 28% of Australia's sugar cane. <sup>293</sup> Emerging agribusiness activities and biotechnology developments present significant opportunities for future growth and development of a biofutures industry where industrial technologies convert agricultural waste to bioproducts. <sup>294</sup>	Home to the Whitsunday Islands and the Great Barrier Reef, the region has a thriving tourism industry that brings over \$1.5 billion to the regional economy. <sup>295</sup> Popular marine and nature-based activities will continue to attract visitors. <sup>296</sup>	The region has some of Australia's largest coal mining operations in Bowen and Galilee Basin, as well as the Paget Industrial Estate, a major mining support services hub. <sup>297</sup> With the well-established METS sector, the region is predicted for growth as global demand for natural resources increase. <sup>298,299</sup> The Mackay Resource Centre of Excellence opened in 2020 and will drive research and innovation, increase export opportunities and provide accelerated training options. <sup>300</sup>

### Infrastructure gaps

	Sector:	Energy
	Sub-sector:	Electricity and gas
	Infrastructure gap:	Distribution, transmission and generation of energy

The Great Whitsundays region faces both challenges and opportunities in the future of its energy network and energy generation, particularly with the presence of energy-reliant agriculture, mining and manufacturing industries in the region. The Greater Whitsunday Alliance identifies reliable, secure and affordable energy as a key enabler to growth in priority sectors.<sup>301</sup> A regional priority is also the development of a regional energy security plan that outlines how to secure base-load power and how to develop renewable energy projects in the best interests of users and taxpayers.<sup>302</sup>

Continuing investment into renewable energy infrastructure will improve energy security and assist in meeting the Queensland Government's energy mix targets.<sup>303</sup> Wind, solar, hydro and biofuel energy infrastructure are options to reduce energy costs, increase energy exports and improve reliability through localised generation and storage.<sup>304,305,306,307,308</sup> Local energy production and distribution is particularly valuable to improving the resilience of local communities, infrastructure assets and networks.<sup>309,310,311,312</sup>

#### Key facts:

The Northern Queensland Renewable Energy Zone (QREZ) spans from Far North Queensland down to Mackay and as far west as Barcaldine.<sup>313</sup>



22%

of dwellings in the region have a residential solar system.<sup>314</sup>



\$4.07 billion

invested in solar and wind projects.<sup>315</sup>



- Solar farms in the region are capable of generating more electricity per kilowatt than the international average, in one instance over 35% more.<sup>316</sup> Renewable energy infrastructure would help the region lessen its production of green house gases.<sup>317</sup>
- The Northern QREZ's long-term development is dependent on affordable, secure and reliable energy. The system will require significant planning to ensure it can meet these objectives while integrating more renewable energy, and assisting Australian Government, and state and territories to meet their emission's aims. Network investment should be coordinated to attract private sector investment. This will reduce the total system cost and drive down electricity prices for users.<sup>318</sup>



#### **Consultation feedback:**

Stakeholders emphasised the value of diversified economies to improve economic resilience and stability in the region. Stakeholders identified that as the region's energy supply diversifies and transitions towards renewable energy, there are opportunities to increase sustainability, resilience and grow the bio-commodities sector.

Stakeholders noted potential opportunities to supply gas to regional areas to the east of Bowen/Gallie Basins, southern states or for export. Other opportunities also raised by stakeholders included organic material for biomethane production, conversion of gas to hydrogen, upgrades to bio generation capacity to supply power to micro grids and leveraging available port facilities.

	Sector:	Social infrastructure
	Sub-sector:	Housing
	Infrastructure gap:	Availability, diversity and affordability of housing

Housing in the region is predominantly single detached houses on large allotments.<sup>319</sup> The region's local governments have recognised this has created issues due to insufficient diversity.<sup>320,321,322</sup> Current housing does not support smaller household sizes, or community members that value proximity to the centre of townships.<sup>323</sup> Limited availability of unconstrained land to develop is further impacting housing supply.

Key regional growth industries for the region, including tourism, agriculture and mining, also create housing infrastructure challenges. Tourism and agriculture are cyclical and result in a transient workforce during peak seasons.<sup>324</sup> Mining operations facilitate the movement of non-resident workers in the community. The region needs to supply sufficient residential and short-stay worker accommodation to manage the variable workforce in the community.<sup>325</sup> The region has not been able to effectively plan and deliver new housing to support regional growth with housing investment variable with commodity prices.<sup>326</sup> Local councils and community organisations provide much needed social housing in the region, including organisations such as the Isaac Affordability Housing Trust which provides housing in Clermont, Dysart and Moranbah.

#### Key facts:

persons throughout the region live in public housing (2016).327



There were over

requests for social housing (June 2021).328



Isaac has a non-resident population of

# 0,40

placing increased pressure on housing through creating temporary accommodation demand.329

- Changes to household structure and a reduction in average household size will mean the percentage of growth in housing demand will continue to be higher than the population growth rate, highlighting the importance of a diverse housing supply, affordability and the efficient use of available land for urban development.<sup>330</sup>
- Growth in the mining industry coupled with the region's housing shortages has caused rent to increase.
   Local residents may be displaced as housing becomes unaffordable due to the rise in demand from non-resident workers.<sup>331</sup>
- Lack of short-stay accommodation can limit the production of the region's industries. Tourism growth is
  currently being curtailed by a lack of short-stay accommodation for visitors as well as skilled workers.<sup>332</sup>



#### **Consultation feedback:**

Stakeholders raised that housing availability and affordability is a key challenge for the region. It was noted that this issue was caused in part by a growing population in the region. The COVID-19 pandemic has also resulted in more people moving to the region, impacting the availability of housing. The drivers of the housing challenge varies within the region. In the Whitsundays, long term rental availability has been affected by dwellings use for short-term accommodation.

Stakeholders also expressed concerns regarding the impact the mining sector on the housing market in Isaac and Mackay, with distorted regional income metrics and a large proportion of workers not being residents of the region, thus creating difficulty in understanding the demand for affordable housing. Stakeholders also noted the need for balance in housing diversity and supporting the delivery of housing stock which aligns to the reasons why people move to regional Australia.

It was noted that the housing challenge is complex and involves multiple issues and stakeholders, requiring a whole of government and industry program and discussion to derive a series of solutions to address supply, cost and seasonal demand.



Investing in industry-enabling infrastructure will support the long-term prosperity of the Greater Whitsundays region, particularly opportunities to capitalise on already established resources and agricultural industries.

High quality transport and telecommunications infrastructure underpins the implementation of new technologies in agribusinesses that improve the region's competitive advantage and provide further agritourism opportunities.<sup>333,334</sup> The emerging bio-industry may also provide new opportunities for the region, supporting other industries through a cost-efficient power supply.<sup>335,336</sup> Infrastructure to support the processing and transmission of this emerging power source will be required to support its feasibility and uptake. Continued investment in high-quality digital infrastructure, and well-equipped science, technology, engineering and mathematics (STEM) training facilities, will support the productivity and growth of specialised mining equipment and technology services (METS) businesses.<sup>337</sup>

Good transport connectivity will attract more investment for both established and new industries, with the *Mackay Isaac Whitsunday Regional Transport Plan (2018)* identifying opportunities such as increased rail usage, port capacity, intermodal and multi-modal facilities to assist in bringing significant benefits to the region.<sup>338</sup>

The Greater Whitsunday Alliance has identified challenges and opportunities in supplying water at the right time and scale to meet new demand in the region, including to support high value irrigated cropping, agricultural jobs, aquaculture production and mining.<sup>339</sup>

#### Key facts:

# 766

new mining and METS jobs expected in the region by 2025.<sup>340</sup>



#### The biofuels industry has an expected value of

# \$1 billion

in Queensland.<sup>341</sup>



# Uptake of agricultural technology (AgTech) may bring about



in cost savings over the next five years.<sup>342</sup>



- Biofuels support localised energy production in the region, reducing energy costs.<sup>343</sup> Lower energy costs may improve productivity in multiple industries.
- Growth in the METS sectors will help diversify the mining industry and mitigate changes in commodity demands.<sup>344</sup>
- The transport system can help support the diversification of economic and employment opportunities by better understanding and responding to industry needs for operation, expansion and growth.<sup>345</sup>



#### **Consultation feedback:**

Local stakeholders involved in consultation noted the importance of diversifying the region's economy to enable growth and innovation. In the past, the Greater Whitsundays region has seen the mining sector dominate the local economy, however tourism and bio-commodities are now at the forefront of change. With these changes comes the need for improved connection with global markets.

Opportunities raised by stakeholders as being enabled by a diversified economy included greater economic resilience, an outcome highly valued by participants and seen as likely to enhance the wellbeing and health of the region. Sustainable agriculture, eco-tourism and bio-commodities led the way as contributors to future diversified economies. Infrastructure enablers such as water security, transport infrastructure and digital connectivity were keen as priorities in facilitating industry growth and diversification.

### 6.4.8 Sunshine Coast

The Sunshine Coast Regional Development Area (RDA) covers the two local government areas of Sunshine Coast and Noosa. The region is known internationally for its significant coastal assets and high quality of life. The region's foreshore precincts and access to services and facilities provide high levels of liveability for the region and opportunities to further leverage potential for placemaking initiatives.

The Sunshine Coast has experienced major economic diversification with growth in healthcare, education and technology in addition to its traditional tourism, agriculture and retail industries. Rapid population growth and growth of small to medium enterprises have also assisted in creating a thriving region. However, striking a balance between growth and environmental sustainability is a priority for the region.

Looking ahead, the region understands future economic growth will require a skilled workforce and improved digital connectivity to encourage innovation and support for research and development. The region is also looking to address current pressing issues affecting liveability with a need for greater housing availability and affordability, reducing congestion through improved connectivity, the provision of public transport and ensuring green, blue and recreation infrastructure is sufficient for thriving communities.

# **Strengths**

#### Key existing assets

Economic	Specialised precincts	Distinctive foreshore precincts combine access to services and natural amenity, benefiting both locals and visitors.
	Transport infrastructure	The Bruce Highway, Nicklin Way and Sunshine Motorway are key arterials connecting north and south. The region also has rail, bus and ferry terminals.
	Gateway ports	The Sunshine Coast Airport provides connectivity to international and domestic locations including Sydney, Melbourne, Adelaide and Auckland.
Natural	Natural environments	The region's coastline and national parks, such as Noosa National Park, Noosa Biosphere Reserve, Ramsar Wetlands, Glass House Mountains, enhance liveability and wellbeing and act as tourism drawcards.
Social	Health infrastructure	Multiple major hospitals, as well as smaller specialised facilities, provide high-quality services to the region and beyond.
	Education and research institutions	The University of Sunshine Coast, TAFE campuses and other training organisations provide significant education, research and innovation opportunities.

#### Key regional growth industries

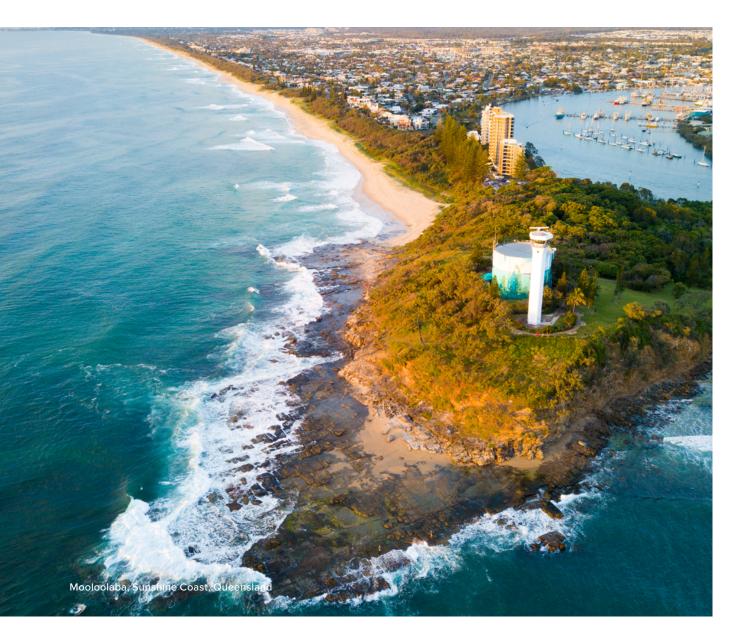
#### Healthcare and social assistance Knowledge sector

The Sunshine Coast health and social services sector contributes \$2.2 billion of gross value add to the region and is the largest employing industry.<sup>346</sup> Regional investments, such as the Sunshine Coast University Hospital, Health Institute, and Health and Medical Precinct have cemented the region's innovative medical capabilities to drive future growth.<sup>347</sup>

The knowledge sector is becoming one of the Sunshine Coast's fastest growing sectors, enabling the diversification into high-value industries such as health and technology.<sup>348</sup> Investments into the expansion of the University of Sunshine Coast has supported regional education and training, a sector which is expected to become one of the top employing industries by 2033.<sup>349,350</sup>

#### Aerospace

Sunshine Coast has significant growth opportunities in the aerospace sector, with an estimated \$100 million gross value add by the aviation industry.<sup>351</sup> The Caloundra Aerodrome and expansion of the Sunshine Coast Airport will present opportunities for greater passenger travel, maintenance, repair and operations (MRO) capabilities and technology to support emerging space and defence sub-sectors.<sup>352</sup>



### Infrastructure gaps

	Sector:	Transport
	Sub-sector:	Public transport
	Infrastructure gap:	Capacity, connectivity and quality of public transport

Public transport connectivity and accessibility has been identified as a key gap in accommodating the region's growing population.

The Sunshine Coast Council Integrated Transport Strategy outlines the Council's predicted challenges and opportunities for the transport system over the next period of population growth for the region. Through implementation of the strategy, the Council aims for the region to be 'Australia's most sustainable region – healthy, smart, creative' and acknowledges that an efficient and accessible public transport network will play a key role in delivering these outcomes.<sup>353</sup>

There are long-term opportunities to fill this gap, with the Queensland Government developing a detailed public transport business case on the Sunshine Coast in partnership with Sunshine Coast Regional Council, with the consideration of mass transit solutions.<sup>354,355</sup> Strategic plans and strategies such as the Queensland Government's *Creating Better Connections* draft 10 year plan for Queensland passenger transport and *South East Queensland Regional Transport Plan* (Sunshine Coast and Noosa included in the North Coast region) look at addressing these challenges.

#### Key facts:

Noosa is expecting to grow by 9,600 people by 2041 (0.7% growth rate) and Sunshine Coast is expecting a growth of 198,100 people by 2041 (2.1% growth rate). *ShapingSEQ* indicates that the majority of dwellings required to accommodate the population growth projected is expected to be provided through consolidation.<sup>356</sup> 80% of Noosa residents and 85% of Sunshine Coast residents travel via private vehicle.<sup>357</sup>



The Sunshine Coast and Noosa local government areas face peak weekend and holiday transport challenges which provides an opportunity for exploring initiatives to achieve modal shift during these periods.<sup>358</sup>

- Noosa and the Sunshine Coast have higher proportions of seniors than other North Coast councils at 25% and 20% respectively. Senior residents can be transport disadvantaged as they may be less inclined, or able, to drive or have mobility limitations. They are particularly at risk of social isolation as a result of constrained transport options.<sup>359</sup>
- Continued private vehicle use will negatively affect the Sunshine Coast's lifestyle as the population continues to grow through increased congestion and other amenity impacts.<sup>360</sup>
- The implementation of the *Sunshine Coast Council Integrated Transport Strategy* will reduce adverse environmental impacts through a lower carbon transport system.<sup>361</sup>



#### **Consultation feedback:**

Stakeholders raised the importance of transport infrastructure to support the movement of people across the region and ensure population growth is supported. Challenges noted included greenfield development putting pressure to expand a network with existing efficiency issues, with long-term rail infrastructure under investigation but not yet funded.

It was noted that as the region's population grows, there will be pressure on development of services and mobility hubs. Integrated infrastructure, including airports, ports, rail, roads, and logistics hubs, must encourage and enable accessible, attractive and efficient modes of transport for residents, visitors and businesses. Emphasis was placed on improving the public transport network and connective intraregional transport. Stakeholders also expressed the need for a better quality rail connection to South East Queensland to support residents, services, and the movement of freight.

	Sector:	Social infrastructure
	Sub-sector:	Education (tertiary)
	Infrastructure gap:	Access to further education and skills training

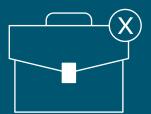
The Sunshine Coast region houses a range of educational and training institutions, offering diverse training opportunities. Notable institutions include the University of the Sunshine Coast and TAFE Queensland campuses at Mooloolaba and Nambour. Within the Sunshine Coast Council local government area, top growth industries include healthcare and social assistance, education and training as well as professional services<sup>362</sup>. The knowledge sector is expected to become one of the area's top employing sectors and has the potential to drive industry growth and innovation in the region, particularly for health and technology businesses.<sup>363</sup>

Aligning the population's skill profile with regional growth industries will be critical to supporting employment and sustained economic growth. Supporting and investing in educational and training facilities which offer specialised and industry-relevant training is a key infrastructure opportunity for the region.<sup>364</sup> Growth in key industries will require meeting their demand for a highly skilled workforce. The development of additional industry-linked educational infrastructure which supports upskilling and re-training in these areas, as well as ensuring existing facilities have adequate infrastructure to deliver technology-based training, is key to supporting current and emerging growth industries.<sup>365</sup>

#### **Key facts:**

# 36%

of residents aged 15+ in the Sunshine Coast region were not in the labour force in 2016, compared with 32% in Queensland.<sup>366</sup>



Between 2014/15 and 2019/20, local workers in the fields of construction, healthcare and social assistance, education and training and professional, scientific and technical services collectively grew by

51%

of the residents aged 15+ held educational qualifications in 2016.<sup>368</sup>



- The importance of study choices for the Noosa community are recognised, as they provide links to industry and developing pathways to home grown employment opportunities, particularly around jobs to support future focussed industry development. Noosa Council is currently exploring options for increased learning and education in the region by undertaking research to understand local education and training needs.<sup>369</sup>
- The region would benefit from a focus on developing and attracting a workforce with the expertise and adequate skills to meet the demands of the new economy.<sup>370</sup>
- Collaboration and partnership to promote existing opportunities and identify new opportunities for people to build skills and pathways to education, employment and business opportunities is identified in the Sunshine Coast Community Strategy 2019-2041: Action Plan.<sup>371</sup>



#### **Consultation feedback:**

Participants in the Sunshine Coast regional workshop highlighted the importance of research and development in areas including technology-based industries and education for regional development. Workshop participants contended that infrastructure to support new and emerging industries would assist the Sunshine Coast in attracting and developing an educated workforce.

Workshop attendees stressed their interest in skills development and training, allowing the local population the opportunity to engage with new and innovative industries through education, training and skills development.

Attendees expressed concerns that population growth may hinder local youth opportunities in the region without the adequate provision of supporting education and training infrastructure.

	Sector:	Social infrastructure
	Sub-sector:	Housing
	Infrastructure gap:	Availability, diversity and affordability of housing

Housing diversity, affordability, and availability are key issues for the Sunshine Coast region which are expected to be compounded by additional population growth, increased seasonal and temporary accommodation requirements from a growing tourism industry, and changing population demographics.<sup>372</sup> Increased demand for housing will increase affordability and availability pressures, requiring adequate provision of social and affordable housing options and supporting infrastructure for communities.

In 2017, the Sunshine Coast Council produced the *Housing Benchmark 2017* report as a reference to monitor and measure progress in achieving improved housing solutions for all residents of the region.<sup>373</sup> The report noted that with over 90,000 new dwellings to be delivered in the next 25 years, the shape and form of housing and the supporting infrastructure are major challenges and opportunities for the region.

Addressing homelessness is another priority for the region. The *Sunshine Coast Community Strategy 2019-2041* noted the raise of homelessness and a shortage of emergency accommodation as being key areas of concern for the community.<sup>374</sup> Collaborative action on housing across the spectrum, from emergency, social and affordable housing to private market availability, is critical to supporting the wellbeing of existing residents and supporting growth for the region in the decades ahead.<sup>375</sup> Noosa Council also notes a growing number of residents impacted by the housing crisis, struggling to secure a lease in their local area and are at risk of homelessness.<sup>376</sup> Noosa Council is seeking to undertake a review into Noosa's housing situation, including the collation of data in order to conduct further analysis.<sup>377</sup>

#### Key facts:

# 894

people in the region are experiencing homelessness on any given day.<sup>378</sup>



# 2.3%

of residents in the Sunshine Coast local government area live in social housing.<sup>379</sup>



Private rental vacancy rates are

0.5%

in the Sunshine Coast and

in Noosa (2020).380

Vacancy

287

- Low availability of social housing may play a significant role in increasing levels of homelessness and is currently not aligned with population growth.<sup>381</sup>
- The Covid-19 pandemic increased migration from cities to regions across Australia. Rapid increases in demand have led to rent price increases on the Sunshine Coast.<sup>382</sup>



#### **Consultation feedback:**

Consultation with local stakeholders highlighted significant rises in rental and housing costs over the past decade as being a pressing issue, which has been further compounded by the effects of the Covid-19 pandemic. It was noted that there is a need to ensure sufficient supply of affordable housing stock to sustainably accommodate future demand. It was also noted that additional social and affordable housing is required to better manage existing levels of homelessness and housing stress.

Participants identified population growth and increased migration to the Sunshine Coast will increase pressure on existing housing and supporting infrastructure.

### 6.4.9 Townsville and North West

The Townsville and North West Regional Development Area (RDA) covers 15 local government areas of Boulia, Burdekin, Burke, Carpentaria, Charters Towers, Cloncurry, Doomadgee, Flinders, Hinchinbrook, McKinlay, Mornington, Mount Isa, Palm Island, Richmond and Townsville. The region covers a diversity of landscapes stretching from Palm Island to Mount Isa and hosts a range of sacred cultural sites, national parks and World



Heritage listed areas, including the Great Barrier Reef, the Wet Tropics, Girrigun National Park and Riversleigh World Heritage Fossil Site which act as significant tourism assets for the region.

Existing alongside the region's natural assets are centres of productivity and diverse industry specialisation in agribusiness, mining, energy generation and transmission, manufacturing and defence. The North West Minerals Province provides significant opportunities for minerals production, logistics, refining and processing. With capacity for supplying the minerals needed to produce renewable energy systems as well as having scope for greater renewable energy production, the region is well positioned to play a role in meeting the needs of the local and international clean energy transition.

The proposed CopperString 2.0 project, a high-voltage transmission network, is seen as potentially presenting a growth opportunity for the region, by providing access to more competitive electricity pricing, and serving as a catalyst for new mining, agricultural and renewable energy projects.<sup>383</sup>

The Australian Government has committed to the development of Master Plans to accelerate Regions of Growth and grow the Northern Australian Economy. Master Plans within the Townsville and North West region include the Mount Isa to Townsville growth corridor, as well as a potential additional Master Plan along the eastern coast.<sup>384</sup>



# **Strengths**

#### Key existing assets

	Defence assets	The region is home to Lavarack Barracks, Townsville High Range Training Area, and Royal Australian Air Force Base Townsville.
Economic	Water infrastructure	Burdekin Dam and Big Rock Weir (funding committed) offer water storage capacity to support industry and residents.
	Gateway ports	The Port of Townsville provides significant import and export capacity whilst multiple airports enable connectivity for passengers and cargo.
Natural	Natural environments	Access to the Great Barrier Reef, Magnetic Island National Park, Girrigun National Park, the Riversleigh World Heritage Fossil Site, the Wet Tropics and many other national parks and cultural heritage sites offer significant tourism and amenity value.
	Natural resources	The region holds deposits including gold, amorphous silica, scandium, vanadium, copper, cobalt, zinc and other new economy minerals.
Social	Education and research institutions	A number of higher learning and skilled-based institutions have a presence in the region, including James Cook University, Central Queensland University and TAFE Queensland. The region is also home to the Australian Institute of Marine Science and the Great Barrier Reef Marine Park Authority. There are opportunities for industry and research collaboration, particularly with the development of the Tropical Health and Knowledge precinct (TropIQ). <sup>385</sup>

#### Key regional growth industries

Agriculture, forestry and fishing	Defence	Manufacturing	Mining
Agriculture is a major sector within the local economy, contributing 5.1% to the local GRP in 2018-19 and supporting over 7,600 jobs. Sugarcane and beef cattle are key commodities and the region is also known for diversified broadacre cropping, high value horticulture and a growing aquaculture sector. <sup>386</sup>	Townsville has many defence capabilities and assets with an established Australian Defence Force presence, RAAF Base Townsville, Greenvale and Townsville Field Training Areas for the Australia-Singapore Military Training Initiative, Lavarack Barracks and Port of Townsville. <sup>387</sup> Further defence growth is supported by the high number of defence force personnel, at 15,000, <sup>388</sup> in the region and new facilities and expansion projects. <sup>389</sup>	The manufacturing sector has potential for growth, with over 200 additional jobs expected by 2022 in Townsville alone as the region's industry transitions into technologically advanced production. <sup>390</sup> Activities such as minerals processing and manufacturing for renewable energy equipment will present value-adding opportunities to the region and support the ongoing growth of the industry. <sup>391</sup>	With abundant mineral resources and capabilities, the region's mining sector has substantial growth potential due to the demand for minerals in new technologies, renewable energy systems and advanced manufacturing. The North West Minerals Province centred around Mount Isa and Cloncurry is one of the world's richest mineral producing areas with an estimated \$740 billion of known in- ground resources <sup>392, 393</sup>

## Infrastructure gaps

	Sector:	Energy
	Sub-sector:	Electricity and gas
	Infrastructure gap:	Distribution, transmission and generation of energy

The Townsville and North West Queensland region faces both challenges and opportunities in the future of its energy network. Due to its remote geographic location, the cost of delivering energy is much higher. In the North West Minerals Province (NWMP), where electricity is principally supplied through the North West Power System large commercial and industrial customers pay a higher delivered cost of electricity than similar energy users connected to the Natural Electricity Market (NEM).<sup>394</sup> This has implications for the region's capacity to attract investment and the growth of its mining industry, which requires access to affordable, secure and reliable energy.<sup>395</sup>

The region also has significant natural renewable energy assets in the form of co-located wind and solar resources.<sup>396</sup> As part of the Northern Queensland Renewable Energy Zone (QREZ) the region has significant potential in developing its renewable energy capacity to improve energy security and affordability. The Queensland Government has committed to deliver upgrades to the Townsville to Cairns transmission network to unlock an additional 500 MW of renewable capacity.<sup>397</sup>

A high-voltage transmission network has been proposed for the region that will connect the people and communities of Mount Isa and the NWMP to the National Electricity Grid. CopperString 2.0 has been identified to deliver lower electricity prices, improve reliability of energy supply and provide opportunities for new renewable energy connectivity.<sup>398, 399</sup>

Further development to support renewable energy in the Northern QREZ could facilitate numerous sustainable development opportunities, including new economy minerals extraction and processing, hydrogen production and export, biofuels, food processing and manufacturing, and battery manufacturing. Renewable energy generation also presents an opportunity for delivering bespoke, collaborative and innovative energy solutions to remote communities. Such interventions can improve access to and capacity of energy for businesses, pastoralists and First Nations communities in these remote areas.<sup>400</sup>

#### **Key facts:**

# 53 projects

registered interest in the Northern QREZ representing over \$23 billion of potential investment.<sup>401</sup>



The energy-intensive industries of mining and manufacturing account for almost



of the region's Gross Regional Product.<sup>402</sup>



The North West Minerals Province is estimated to have approximately

**\$740** billion

of known in-ground resources.<sup>403</sup>

- There are potential future opportunities for the region to leverage growth in renewable energy generation to develop as a green hydrogen exporter if accompanying infrastructure in transport links and water security are delivered.<sup>404</sup>
- The North West Mineral Province is rich in commodities which will serve renewable energy and lithium-ion battery production, further cementing the potential of the Townsville and North West region to grow as a renewable energy powerhouse.<sup>405</sup>
- Through the Community Service Obligation (CSO) payment, the Queensland Government provides a subsidy to meet the additional costs involved in supply electricity to regional Queensland.<sup>406, 407</sup>



#### **Consultation feedback:**

Stakeholders in the region expressed the view that whilst progress has been made in renewable generation capacity in recent years, there has been little change in a lack of power affordability and high energy transmission costs. Workshop participants noted that the region's competitive advantages in rare earth mineral resources and solar, wind and bio-energy assets positioned the Townsville and North West region well to develop as a key player in renewable energy in Australia over coming decades.

In prioritising the key infrastructure challenges and opportunities facing their region, workshop participants rated energy security – particularly transmission infrastructure – as being the most pressing infrastructure gap in the Townsville and North West Queensland region.

	Sector:	Social infrastructure
	Sub-sector:	Education (tertiary)
	Infrastructure gap:	Access to further education and skills training

Key regional industries of manufacturing, transport, healthcare and professional services are likely to offer strong employment prospects in the Townsville and North West region in coming decades, however both face a cumulative skills shortage of over 4,000 workers.<sup>408</sup> The region's current vocational education and training ecosystem would benefit from support in enhancing capacity to meet this demand.<sup>409</sup>

Particular challenges for the region lie in enabling access to further education and skills training for its young people and First Nations peoples.<sup>410</sup> To improve training access and engagement in the latter of these groups, the planning and delivery of skills training policies and infrastructure would benefit from the active involvement of First Nations stakeholders.<sup>411</sup> Examples of progress to date include the establishment of the boys and girls campuses of the NRL Cowboys House close to the Pimlico TAFE site in Townsville.<sup>412,413</sup>

Increasing availability of specialised skills training facilities and further education capacity in science, technology, engineering and mathematics (STEM) fields will also be important for the region as it recovers from impacts of the COVID-19 pandemic. This event was detrimental to the available pipeline of suitably qualified and educated workers in fields like engineering to support high-value industries such as mining, advanced manufacturing or professional services.<sup>414</sup> Upgrades to the TAFE Queensland Bohle campus are planned to support emerging renewable energy and hydrogen training opportunities for the region.<sup>415</sup>

#### **Key facts:**

#### Youth unemployment in the Townsville region was

17%

in 2019, with the rate in outback Queensland at 24%.<sup>416</sup>



The region has IOWEI rates

of Diploma, Bachelor or Post-Graduate qualifications than the Queensland average.<sup>417</sup>



The COVID-19 pandemic has had implications for local workforce participation rates, with a fall of



between March 2020 and January 2021.418



- The presence of a number of tertiary institution campuses in the region provides significant opportunity for collaboration in improving the capacity and capability of the region's skills training ecosystem.<sup>419</sup>
- Poor digital connectivity infrastructure inhibits access to remote education opportunities in rural and remote areas, whilst limited access to public transport is a barrier to accessing skills training facilities in Townsville, particularly in the outer suburbs.<sup>420</sup>
- Commitments to major infrastructure projects in the region provide opportunity for employment and economic opportunity if appropriate skills training is in place. Collaboration with local workforce development and skills training facilities, including First Nations-led organisations, could serve to improve skills capacity of the local population.<sup>421</sup>



#### **Consultation feedback:**

During consultation, stakeholders noted the importance of improving the skills base of the region's workforce to enable innovation and economic development. Key existing industries such as agriculture and mining were raised by workshop attendees as being areas of need in terms of attracting and retaining skilled workers.

In addition to a need to improve skills training infrastructure and programs, regional stakeholders expressed the view that essential enabling infrastructure, such as highquality digital connectivity, needed to have the capacity to support an improved skills training system.

	Sector:	Water
	Sub-sector:	_
	Infrastructure gap:	Water security

The Townsville and North West region faces a challenge in sustaining a growing population whilst parts of its water supply network remain reliant upon ageing infrastructure, including pipes, water mains and uncovered canals which are critical in ensuring potable water is of a fit-for-purpose quality.<sup>422</sup> As well as meeting demand for town water, a secure and reliable water supply is critical for sustaining economic productivity in the region, particularly given the contribution of the resource-intensive mining industry to the region's economy.<sup>423</sup>

Water supply, storage and quality issues are particularly challenging in rural and remote areas, an issue which disproportionately effects First Nations communities.<sup>424</sup> In these areas, periods of drought can quickly deplete supplies in limited water storage infrastructure and bring about poor water quality as the result of algal blooms if filtration infrastructure is not proactively maintained and upgraded.<sup>425</sup> In parts of the region recycled water could potentially reduce demand on stretched water supply sources for uses such as the irrigation of parks, gardens and sporting fields.<sup>426</sup>

#### **Key facts:**

Poor quality infrastructure in remote communities can place already scarce water supplies under increased pressure, with leaks accounting for

11%

of household water use in some remote communities.<sup>427</sup> 53%

of households in remote communities rely on rainwater tanks for drinking water due to a lack of connection to safe, high-quality reticulated water.<sup>428</sup>



Annual average potential evaporation is four times the annual average rainfall, leading to depletion of soil moisture.<sup>429</sup>



- In some instances, the region's water supply network relies upon pipelines which were designed as an emergency measure only. A failure of the existing emergency pipeline or pumps may bring about significant risks to the region's water supply security, particularly during extended dry periods.<sup>430</sup>
- Investment in smaller-scale infrastructure interventions such as water meters within the region's reticulation system may improve water security through allowing for detection and reduction of water losses.<sup>431</sup>
- Agriculture is the main land use in the North West Queensland area with extensive beef cattle grazing across the region, and increasing use of supplementary irrigation for higher value fattening and finishing.<sup>432,433</sup>



#### **Consultation feedback:**

Consultation revealed water security to be a significant issue by stakeholders. Workshop participants noted that availability of water resources have increased in parts of the region over the past two decades, however participants were in agreement on the importance of further investment in water infrastructure to meet projected population growth and resultant increased demand. Ensuring improved water security benefited the region equitably was also a key concern for stakeholders.

The need to appropriately maintain key regional water supply assets was also raised by stakeholders as being an important consideration for the region moving forward, particularly as a means of enabling capacity for growth and innovation in waterintensive industries.

## 6.4.10 Tropical North

The Tropical North Regional Development Area (RDA) covers 21 local government areas of Aurukun, Cairns, Cassowary Coast, Cook, Croydon, Douglas, Etheridge, Hope Vale, Kowanyama, Lockhart River, Mapoon, Mareeba, Napranum, Northern Peninsula Area, Pormpuraaw, Tablelands, Torres, Torres Strait Island, Weipa, Wujal Wujal and Yarrabah. The Tropical North region has an abundance of natural assets including national parks, state forests, the Great Barrier Reef and the Wet Tropics. In addition, the region draws tourism revenue and social capital from a wealth of sacred cultural and World Heritage sites.



High rainfall alongside available fertile land holds significant potential for agricultural growth and the region's location is also highly beneficial for exports, tourism and the defence sector. However, the region has struggled with climate change impacts as extreme weather events have become more frequent and water security has become a concern.

Looking forward, the Tropical North hopes to realise further growth, especially for the agriculture, defence, tourism and education sectors. The region also aims to improve water security and digital connectivity and strengthen its social infrastructure assets to support liveability outcomes and attract a younger population.

# **Strengths**

#### Key existing assets

Economic	Gateway ports	Multiple sea ports provide import/export capacity for the region, including the Port of Weipa which operates through the Gulf of Carpentaria, whilst Cairns and regional airports provide tourist, resident and cargo access.
	Defence assets	The region is home to multiple defence bases – inclusive of an Army, Navy and Air Force presence – alongside several patrol bases spread through Cape York.
Natural	Natural environmentsThe region benefits from an abundant and diverse range of natural assets and landscapes, including the Great Barrier Reef, the Wet Tropics national parks, rainforests, mountain ranges, river and mangrove system bushland and outback terrains.	
Social	Education and research institutions	Tertiary education campuses, inter-regional research collaborations and industry-specific training facilities offer education and innovation opportunities.
	Cultural heritage	Many significant First Nations cultural sites provide cultural and social value for the region, alongside offering potential for cultural tourism (where appropriate).
	Health infrastructure	The Tropical Public Health Services and other providers including Aboriginal Community Controlled Health Services provide vital access to healthcare for remote communities in some parts of the region.

#### Key regional growth industries

#### Agriculture, forestry and fishing Defence

The Tropical North region benefits from a strong agricultural sector, with considerable outputs in a diverse range of fruits, vegetables, dairy, horticulture and livestock.<sup>434</sup> Growing international demand for seafood and aquaculture is expected to support the expansion of local fishing businesses,<sup>435</sup> with the establishment of a Regional Trade Distribution Centre in Cairns to boost access to international markets for the region's seafood and agricultural produce.<sup>436</sup> The region is home to growing aviation and maritime building and support industries. Significant defence assets such as the HMAS Cairns, RAAF Base Scherger, and a number of patrol bases throughout Cape York provide a major opportunity for defence growth. With investments from government at Port of Cairns for a Cairns Marine Precinct, the region will support the Royal Australian Navy as a Pacific hub for navel maintenance.<sup>437, 438</sup>

#### Tourism

The region's natural beauty – ranging from the World Heritage-listed Great Barrier Reef, the Atherton Tablelands, Wet Tropics, Savannah Way - and rich First Nations culture bring significant opportunities for tourism growth.<sup>439</sup> Its strategic location also provides potential to capitalise on Asia-Pacific markets.<sup>440</sup> As of 2018, tourism contributed around 18% of Tropical North Queensland's gross regional product and supported one in five jobs.<sup>441</sup>



## Infrastructure gaps

	Sector:	Water
	Sub-sector:	_
	Infrastructure gap:	Water security

The issue of water security in the Tropical North region encompasses water supply for both towns and industries such as agriculture, mining and manufacturing. In urban areas such as Cairns, as well as smaller towns throughout the region, population growth, the expansion of industries and increased visitation has placed pressure on local water sources.<sup>442</sup> Ensuring water security is a key priority for Cairns Regional Council.<sup>443</sup>

The region is a significant producer of both cattle and horticultural crops.<sup>444</sup> Atherton Tablelands, driven by the Mareeba Dimbulah Water Supply Scheme (MDWSS) has seen expansion in high-value crops such as avocados, bananas, berries, and sugarcane. Water is 100% allocated and 80% used, whilst growing demand for water for agriculture has caused water purchase prices to more than triple from 2011-21.<sup>445</sup>

In November 2021 it was announced that funding has been allocated to three Northern Australian universities for research into water securing in Northern Australia. The research seeks to address water resource allocation governance, agricultural diversification, and water service delivery to remote and regional areas, including First Nations communities.<sup>446</sup>

#### Key facts:

The primary water source for the Cairns Regional Council area, Copperlode Dam, has a current water supply capacity of 0.19ML per person. Cairns Regional Council notes that without investment in additional supply, Cairns faces the possibly of drinking water shortages by

2026.447



Water demand management in Cairns has already delivered significant gains (per capita water use is down by



in the last 15 years).448



In the Torres Strait, climate change

is expected to result in longer dry seasons and increasing overall variability.<sup>449</sup>



- Infrastructure to provide for improved water security must go beyond increased supply and distribution capacity to include enabling smart water infrastructure which facilitates water sensitive practices amongst key industries.<sup>450</sup>
- Remote communities in the Torres Strait face significant issues with water quality and security. Diminishing
  freshwater resources coupled with ageing water infrastructure threatens the sustainability of water supply
  for communities in this area.<sup>451</sup>
- The ability to meet increased demand for fresh Australian food from North Queensland is at risk due to the lack of a long-term water implementation strategy.<sup>452</sup>



#### **Consultation feedback:**

Consultation in the region revealed water security to be a key area of concern, with stakeholders expressing the view that current water sources are under stress and potentially facing continued strain if not managed proactively. This was raised as being a particularly pressing issue in the face of increasing demand as a result of current and projected population growth. Stakeholders also considered securing water supplies to be of great importance to support growth in key industries such as agriculture.

Participants in the region's First Nations stakeholder workshop also raised water security as being an urgent issue for communities throughout the region. Workshop attendees emphasised challenges facing the community due to ageing and poorquality water infrastructure.

	Sector:	Transport
	Sub-sector:	Freight
	Infrastructure gap:	Capacity, connectivity and quality of freight infrastructure

Freight network connectivity, quality and capacity is a significant economic and safety issue for communities in the Tropical North region. The region's road network has limited ability to support high productivity freight vehicles, with constraints including poor vertical and horizontal alignment, narrow pavement widths, poor flood immunity, road surface roughness and bridge load capacity.<sup>453</sup>

Provision of inefficient and non-resilient infrastructure are also a concern in the region's road freight network. Flooding of major connective routes is a recurring and costly challenge which can result in the closure of routes and damage to carriageways.<sup>454</sup> Key arterial routes also remain as undivided two-lane roads in some sections, increasing collision risk and potential for road closure.<sup>455</sup>

Beyond current constraints, there is a need to undertake proactive planning for increasing freight demands brought about by future growth in the resources and agricultural sectors.<sup>456</sup> This includes corridor protection for key strategic connections, as well as infrastructure delivery to meet access and movement requirements for oversize, over-mass and high productivity vehicles, improve intermodal connectivity and enable efficient first and last mile links.<sup>457</sup>

#### Key facts:

## An estimated \$839 million

in capital and maintenance expenditure is needed over the next 20 years to address deficiencies in the road freight capacity of areas overseen by the Far North Queensland Regional Organisation of Councils, which includes the Tropical North region.<sup>458</sup>



of Cape York cannot be accessed by landbased transport during the wet season due to flooding and lack of alternative routes.<sup>459</sup>



Forecast population increase of around

80,000

people over the next 20 years will require the efficient movement of goods. The expected growth of industrial activity in southern Cairns is also expected to increase the local freight

task.460



- The region has four major ports offering the capacity to connect the resources and agricultural sectors to growing international markets.<sup>461</sup>Effective infrastructure will support the productivity of these facilities.
- Some of the region's road freight network remains unsealed, presenting a significant impediment to freight
  productivity, road safety and regional export capacity. Progressive sealing of roads in the region could
  result in significant cost savings by providing more resilient infrastructure, reducing maintenance costs, and
  deliver various social and economic benefits.<sup>462</sup>
- Improving rail freight capacity offers potential to alleviate pressure on the region's road freight network. Whilst the Brisbane to Northern and Far North Queensland corridor is one of the three highest-use nonbulk rail freight corridors in the nation,<sup>463</sup> efficiency limitations exist as a result of level crossings, short passing loops, and infrastructure prone to flooding.<sup>464</sup>



#### **Consultation feedback:**

Key stakeholders in the region identified poor road freight network connectivity and efficiency as being key challenges for the Tropical North region. Workshop participants expressed concerns over the economic implications of infrastructure deficiencies. Workshop participants noted that the region's close strategic location with respect to South East Asian markets presented export opportunities for the region if key freight links could be improved.

Participants in the Tropical North First Nations stakeholder workshop also expressed concerns over the impact of increasing heavy vehicle use on already poor-quality roads. Stakeholders emphasised poor quality infrastructure had safety and wellbeing implications for the region's population.

	Sector:	Energy
	Sub-sector:	Electricity and gas
	Infrastructure gap:	Distribution, transmission and generation of energy

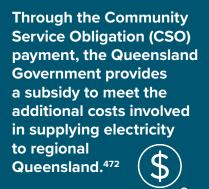
The Tropical North region has significant potential to develop as a renewable energy powerhouse. Existing large-scale renewable energy initiatives such as hydro, solar, wind and bio-energy projects have not only improved energy security for the region but also support a substantial number of jobs in the construction, maintenance and operation of these assets.<sup>465</sup>

Investment opportunities derived from further initiatives such as the Northern Queensland Renewable Energy Zone (QREZ) present significant opportunities to further develop the region's renewable energy capacity and improve affordability, security and reliability.<sup>466</sup> The Northern QREZ foundation project, Neoen Australia's Kaban Green Power Hub, will complement the existing solar generation in the north, helping to balance reliability of the system while the transmission upgrades will increase resilience and security of the network for Cairns.<sup>467</sup> The committed transmission upgrades in the Northern QREZ will also help to deliver greater security of supply to Cairns, making the region's network more resilient to cyclones, storms and lightning strikes.<sup>468</sup> Looking ahead, there may also be opportunity to leverage the region's strategic location relevant to South East Asian markets to develop an export market for green energy.<sup>469</sup>

Renewable energy also presents an opportunity to address unmet basic energy access requirements in remote communities in the region, including communities in Cape York and the Torres Strait. These areas have natural advantages in renewable energy capacity, including opportunities for wind, solar and tidal power generation.<sup>470</sup>

#### Key facts:

Tropical North Queensland has natural energy resources including solar, wind and biomass. Investment in network upgrades can help support the connection of new projects and unlock further renewable energy potential for the region.<sup>471</sup>



The Queensland renewable energy target (QRET) requires that



of Queensland's electricity

consumption is sourced from renewables by **2030**.<sup>473</sup>

- Remote communities in the region many of which are home to a high proportion of First Nations peoples

   rely upon diesel generators for power. This method produces high levels of local pollutants and is far more costly than energy supplied by traditional networks.<sup>474</sup>
- Improvements to transmission infrastructure made through the Northern QREZ is expected to grow the region's security of energy supply.<sup>475</sup>
- The occurrence of heatwaves and natural disasters are predicted to increase. Energy infrastructure in the region must have capacity to meet more intense periods of peak energy demand and resilience in the face of major events.<sup>476</sup>



#### **Consultation feedback:**

Regional stakeholders noted that robust enabling infrastructure, including adequate and affordable power supply, was necessary to support desired industry growth and economic diversification in the region. The resilience of this infrastructure in the face of a changing climate was also raised as being crucial to sustainable development and resilience in the region.

Stakeholders present at the Tropical North First Nations stakeholder workshop also raised energy security as being a challenge facing remote communities throughout the region. Participants expressed the view that poor access to affordable and reliable energy – amongst other essential services infrastructure – was a contributing factor in further entrenching First Nations disadvantage and inhibiting economic development in remote communities. Workshop participants also noted that delivery of improved energy infrastructure with meaningful engagement from First Nation communities offers potential for capacity-building through providing skills development and employment opportunities.

### 6.4.11 Wide Bay Burnett

The Wide Bay Burnett Regional Development Area (RDA) covers six local government

areas of Bundaberg, Cherbourg, Fraser Coast, Gympie, North Burnett and South Burnett. The region extends from the fertile Burnett hinterlands through to a coastline which is home to renowned world heritage sites including the Great Barrier Reef and K'gari (Fraser Island).

The region has experienced significant population growth in recent years, as remote workers, enabled by digital connectivity, relocate and seek a relaxed coastal lifestyle. Over the years, the region has leveraged its natural coastal and hinterland assets to develop a thriving tourism industry. The region's agribusiness has also undergone changes with a shift to higher-value crops and the growth of corporate farms.

Looking to the future, the region hopes to facilitate sustainable growth, further improve digital connectivity and address concerns around water security to support its industries. The region is also cognisant of its workforce shortages and hopes to address them in-part by increasing housing availability and affordability. However, there is also a need to deliver better social infrastructure and address growing socioeconomic disparity to enable the region's development as a connected and thriving community.

The impacts of climate change, from drought and flood to coastal inundation, are of concern across the region.



## **Strengths**

### Key existing assets

	Gateway ports	The Port of Bundaberg offers strategic import and export capacity for the region whilst Hervey Bay, Kingaroy, Maryborough, and Bundaberg airports offer passenger connectivity and cargo capacity.
Economic	Transport infrastructure	The Bruce Highway provides critical linkages between North and South Burnett and the major regional centres of Gympie, Fraser Coast, and Bundaberg.
	Water infrastructure	The region's many natural water resources and built water infrastructure are vital assets which contribute to agricultural productivity, tourism and liveability outcomes.
Natural	Natural environments	The region is home to the World Heritage-listed K'gari (Fraser Island), the RAMSAR-listed Great Sandy Strait Ramsar Wetlands site, the southern portion of the Great Barrier Reef and numerous national parks, which deliver amenity and tourism value.
	Natural resources	The region currently produces gold, coal, silica sand, limestone, siltstone, bentonite, kaolin and diatomite and has prospects in many other mineral resources.
	Climate and topography	Abundant fertile land underpins the region's agricultural industry which accounts for around 10% of the state's agricultural production.
Social	Cultural heritage	The region is home to historic towns such as Eidsvold and Gayndah, as well as sacred First Nations sites such as Ban Ban Springs. The Ration Shed Museum located in Cherbourg provides historical information to the public and serves as a cultural hub for the local First Nations community.
	Education and research institutions	Universities and training-based institutions which have a presence in the region include the University of Southern Queensland, Central Queensland University, the University of the Sunshine Coast and TAFE Queensland.

#### Key regional growth industries

#### Agriculture, forestry and fishing Tourism

The Wide Bay Burnett region traditionally specialises in agriculture and forestry activity, with local timber production responsible for two-thirds of the state's softwood plantation resources.<sup>477</sup> While these continue to be important, the gradual shift towards horticulture, aquaculture, and high-value food processing activities provides a significant opportunity for future growth.<sup>478</sup> Established tourism destinations and activities in the region, such as whale watching, provide a strong foundation for continued growth.<sup>479</sup> K'gari (Fraser Island) and the Great Barrier Reef are globally recognised areas with significant potential to increase international visitation,<sup>480</sup> while regional offerings present many opportunities for ecotourism and agritourism activities.<sup>481</sup>

#### Manufacturing

The region has an extensive manufacturing industry, with processes in heavy manufacturing, transport equipment and manufacturing, machinery and equipment, rail manufacturing and food and beverage products.<sup>482</sup>The sector contributed \$3.3 billion of Wide Bay Burnett's regional output in 2019/20483 and has substantial opportunities to continue growing, especially if supported by investment into local businesses targeted at increasing advanced manufacturing activity.484

	Sector:	Telecommunications
	Sub-sector:	-
	Infrastructure gap:	Broadband and mobile connectivity

The region's broadband and mobile connectivity is varied, with higher density coastal areas being reasonably well serviced whilst mobile network black spots remain in inland areas.<sup>485</sup> The region's six local government areas averaged a 2021 Australian Digital Inclusion Index (ADII) score of of 63.3, ranging from 61 to 66 and lower than the Queensland average.<sup>486</sup>

The region is looking to improve current telecommunications and digital connectivity infrastructure to prepare for future trends and enable the adoption of new technologies. Improvements to the region's existing broadband infrastructure are expected to be needed by 2030 as smart infrastructure and an increasing prevalence of the Internet of Things (IoT) becomes more commonplace.<sup>487</sup> Digital connectivity will also be of paramount concern for the region's industries, as technological adoption presents a significant opportunity to make major cost savings for industry.<sup>488</sup>

#### **Key facts:**

Submissions from Bundaberg Regional Council and Fraser Coast Council to the 2021 Regional Telecommunications Review identifies digital connectivity challenges in those local government areas in the region. This includes impacts to telehealth services in the regional Gin Gin Hospital and community raised concerns on intermittent

services on K'gari (Fraser Island) during extreme weather events.<sup>489,490</sup>



The region averaged a 2021 ADII score of

63.3 (Queensland



The volume of data demanded by households in the region grew



during the COVID-19 pandemic.<sup>492</sup>

- Digital connectivity is essential for liveability outcomes, economic growth and safety. Currently, limited digital connectivity is contributing to isolation and social disadvantage. In addition, reliable telecommunications are essential during times of disaster or emergency.<sup>493</sup>
- The capability and capacity of the current network is not sufficient to enable small to medium enterprises to compete and thrive in a rapidly evolving digital economy. Deficiencies also inhibit the region's ability to attract technology-reliant businesses to Wide Bay Burnett.<sup>494</sup>
- Digital connectivity has limited the ability of industries to innovate. Innovation is essential to helping businesses, institutions, and communities to improve their resilience, competitiveness, and selfsufficiency.<sup>495</sup>



#### **Consultation feedback:**

Stakeholders identified telecommunications and digital connectivity as being a priority challenge for the region. Mobile black spots still exist with unused dark fibre within the region. Addressing these issues offers the potential to deliver enhanced amenity and access to services for residents and tourists, as well as improved business efficiency.

Stakeholders also recognised the demand for fast and reliable digital connectivity has increased, a circumstance which largely attributed to increased remote working and innovation and technological adoption in agriculture, manufacturing, and advanced industries. Better digital connectivity is expected to enable greater uptake of new technologies and unlock inland potential.

	Sector:	Water
	Sub-sector:	_
	Infrastructure gap:	Water security

The region's produce accounts for 10% of Queensland's agricultural production with sugarcane and horticultural crops such as macadamias, avocadoes, mangoes, tomatoes, and pineapples (to name a few) being major irrigated industries.<sup>496</sup> Securing water for the future will be vital to enabling economic growth for the region, in addition to mitigating the effects of climate change.<sup>497</sup> Key factors impacting on water security in the region include increased demand from projected population growth, supply reliability, higher rates of utilisation, pricing, quality, capital expenditure on infrastructure and decreasing rainfall.<sup>498</sup>

The region also has the largest population outside of South East Queensland, with a population of over 400,000 expected in the next 20 years.<sup>499</sup> Currently, the region's local governments manage over \$1.4 billion or 61% of publicly owned water infrastructure in the region, and to maintain this infrastructure to current standards, an extra \$2.9 billion in investments could be required over the next 30 years to maintain the current level of investment.<sup>500</sup>

#### **Key facts:**

Produces

21% of the state's irrigated produce.<sup>501</sup>



Annual evaporation predicted to increase **5-6%** by 2050.<sup>502</sup>

Irrigation productivity averages \$9,800 per hectare (highest in Queensland).<sup>503</sup>

- High water prices for irrigation reduce the region's irrigated produce competitiveness which contributes to 21% of the state's irrigated produce.<sup>504</sup> It can also act as a deterrent for further growth and investments.
- Increased temperatures and frequency of hot days due to climate change are expected to present challenges to supplying sufficient water to meet agricultural demand.<sup>505</sup> Lower rainfall and increasing evaporation will also cause more frequent depletion of soil moisture leading to reduced groundwater and surface water supplies.<sup>506</sup>
- If continued investments are not made to maintain current water infrastructure, this could pose water security issues for the region and decrease the region's liveability, as well as affect agricultural capacity.



#### **Consultation feedback:**

Stakeholders identified a change in water policy and long-term water infrastructure investment as being a key future challenge for the region, noting that this will be needed to protect water security and cater to the water demands of industry, agriculture and a growing population.

Beyond these concerns with the existing water network, stakeholders noted that increasing demands and climate change impacts are expected to put pressure on current water infrastructure. Workshop attendees expressed the view that to cater to these future demands, the region will require greater potable water supplies in the coming decades.

	Sector:	Social infrastructure
	Sub-sector:	Housing
	Infrastructure gap:	Availability, diversity and affordability of housing

Projections indicate that demand for housing in the Wide Bay Burnett region will increase by 56,000 households from 2016-2036, with the occupancy mix expected to vary from the region's current profile with higher proportions of lone and older person households as well as couples without children.<sup>507</sup> Greater housing diversity will thus be required to better accommodate these changing demographics.

Another major issue is housing availability, with high demand for housing in the region and the lowest vacancy rates across regional Queensland - Fraser Coast's Maryborough's rate is at 0.2%, Bundaberg at 0.5%, and Gympie at 0.4%.<sup>508</sup> Although the region has the fourth-largest housing construction market in Queensland, behind only the major metropolitan areas, market unaffordability and a lack of housing diversity remain to be critical issues.<sup>509</sup> The level of housing affordability in the region (households able to afford the median purchase price) is significantly lower than metropolitan Brisbane, at around a third.<sup>510</sup> This in combination with extremely low social and affordable housing levels in the region, with most social housing built over 30 years ago and only 56 new social homes added over the past five years, is contributing to social inequality.<sup>511</sup>

#### Key facts:

# 1,798

applications on the waitlist for social housing in the region.<sup>512</sup>





of the region's population live in social housing.<sup>513</sup>



# Housing affordability

in the region is poor, particularly for a regional area, with affordability considered to be lower than Greater Brisbane metropolitan area.<sup>514</sup>

- Wide Bay Burnett is one of the least affordable regions in terms of rent and house prices in comparison to income. This often places younger people and lower-income earners in rental stress.<sup>515</sup>
- Housing investment yields in the region remain significantly higher than metropolitan averages, however, this can be detrimental to delivering housing that is suitable for those in low-income brackets as Wide Bay Burnett already has one of the lowest levels of housing affordability.<sup>516</sup>
- Lack of quality housing and affordability can impact on quality of life with potential consequences including poor health outcomes and social degradation. In addition, poorly matched housing diversity and supply can affect the spatial structure and functioning of a region, including limiting access to services and amenities.<sup>517</sup>



#### **Consultation feedback:**

Consultation with regional stakeholders identified greater housing diversity and density as being a key need for the region. Workshop attendees noted that changing demographics in the region have already brought about a need for increased housing diversity. A particular need for greater housing affordability for singles and the older population was identified.

Improved strategic planning relating to residential development was also noted as being a key future challenge meeting housing needs whilst ensuring land use is optimised to balance demand across land for housing, industrial, and agricultural purposes. Stakeholders also identified a current impediment to planning and development being regulatory requirements around culture, heritage and environmental protection. Whilst important, workshop attendees believe that these regulatory limitations need to be adaptable to changing community needs.

The entire region is also said to be experiencing housing availability issues as current supply is unable to meet demand. The region also has insufficient affordable housing and some of the state's lowest vacancy rates which creates a highly inaccessible rental and accommodation market.

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