



## **Freight and Logistics**

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**Map of the Kimberley Region**



**Legend**

- Sealed major road
- Sealed minor road
- Unsealed road
- 4WD track
- 4WD track only
- T National highway
- N National route
- Marine park boundary
- Reef
- Conservation park
- Marine park
- National park
- ✈ Airport
- Local Government Area boundary

**Approximate driving distances (km)**

	Perth GNH	Perth NWCH	Broome	Derby	Fitzroy Crossing	Halls Creek	Wyndham	Kununurra	Darwin
Perth GNH	—	—	2237	2391	2565	2843	3197	3202	4039
Perth NWCH	—	—	2374	2528	2701	2990	3345	3349	4176
Broome	2237	2374	—	221	395	683	1037	1042	1869
Derby	2391	2528	221	—	259	547	894	899	1733
Fitzroy Crossing	2565	2701	395	259	—	289	642	647	1474
Halls Creek	2843	2990	683	547	289	—	354	359	1186
Wyndham	3197	3345	1037	894	642	354	—	100	929
Kununurra	3202	3349	1042	899	647	359	100	—	829
Darwin	4039	4176	1869	1733	1474	1186	929	829	—

GNH = Great Northern Highway, NWCH = North West Coastal Highway

## Executive Summary

*This regional brief outlines the state of the Freight and Logistic industries, its opportunities, and its challenges and highlights recommendations to enable long term sustainable growth of the sector for the benefit the of Kimberley and its people.*

Efficient and reliable logistics is one of the most critical factors in determining the competitiveness of any region. The freight and logistics industry contribute approx. \$555.3M per annum or 10.78% of gross revenue and employs 6.5% of the Kimberley work force.

The Kimberley freight task is characterised by low volumes over vast distances with most bulk products freighted by via road or shipping and very little air freight. Significant projects from mining, agriculture, and aquaculture industries will increase the aggregate scale of commodities and freight and logistic requirements in the medium to long term. Infrastructure must be able to meet this growing demand.

The region is serviced by key roads linking north-south Great Northern Highway and north-east by Victoria Highway. These key freight paths can become cut off during seasonal events of fire, flood or cyclones. Urgent upgrades to ensure weather resilience and upgrading of single-lane bridges is required. Roads linking east-west Tanami Road and Buntine Highway are not fit for purpose and timely upgrades to these roads are critical.

Shipping is via three regional ports in Broome, Derby, and Wyndham and lesser ports in Yampi Sound. Current infrastructure lacks adequate bulk handling or cool storage facilities. The region is missing a critical shipping line

service of cargo containers for import and export of small-scale commodities. There are proposed developments for a Kimberley Marine Supply Base along with container cargo facilities to ease this burden.

Two main regional airports along with smaller airports service the region. However, airfreight is highly constricted by lack of facilities and low aggregate commodity volumes. It requires development or extension to existing infrastructure to include air cargo carrier access and airside facilities. Consideration should be given to best use of the RAAF Curtin airbase, which has the second largest runway in Australia and capacity for cool storage development.

### RDAK Recommendation:

- Australian Government investment in a ensuring all bridges on National Highway One (Great Northern Highway) are dual lane and that a new bridge over the Ord River is constructed to remove freight impediments, and freight from the Kununurra Diversion Dam wall, with this new bridge becoming part if the national highway grid.
- Australian Government undertake a review of the use of Curtin Air Base, so it contributes more positively to the economic development of the Kimberley region.
- Australian Government proactively seek to authorise Western Australian Government officials based in the region to undertake Commonwealth required inspections at Ports.



## The Snapshot



\$555.3M per annum or 10.78% GRP



Employs 6.5% of workforce



Low volumes over vast distances



Freight predominately via road or ship



Key roads need upgrades



Airfreight is constricted by lack of facilities



Significant projects from diverse sectors will increase logistic demand

## Industry Overview

Efficient and reliable logistics is one of the most critical factors in determining the competitiveness of a region, as inefficient and or unreliable logistics adds cost and causes delays in the delivery of goods and services to and from an area, thereby decreasing competitiveness<sup>1</sup>.

The Freight and Logistics industries in the Kimberley generates a Gross Revenue of approximately \$555.32<sup>2</sup> million dollars per annum. It employs around 987 people, or 6.5%<sup>3</sup> of jobs in the region.

The Kimberley is one-sixth of Western Australia's landmass spanning 419,558 km<sup>2</sup> - twice the size of Victoria. It has a population of 36,014<sup>4</sup> and is one of the least peopled places on earth. The closest capital to the region is Darwin located 880kms east, and Perth located 2200km south.

Compared to its size, the economic driver industries of the Kimberley have limited scale. Except for iron ore from Koolan and Cockatoo Islands, the extractive resource sectors have historically been dominated by low volume, high value, commodities such as gold and diamonds. Irrigated agriculture, aquaculture, and the pastoral sectors have significant potential but are not currently operating at scale.

Due to its relative isolation and size and the aggregate scale of production, the freight task in the Kimberley region is characterised by low volumes over vast distances.

Inbound freight of bulk commodities and specialised parts for industries such as fertilisers, feed, and fodder are freighted by road, adding significantly to the business input costs. Fresh produce and other supplies for consumers is transported via road from the south.

Key road infrastructure within the region is subject to seasonal closures, limiting productivity and security to the community. Upgrading key roads is essential for reliable supply chains, reducing freight costs, strengthening links to markets, and reducing inbound freight costs for the handling of bulk products and consumer commodities.

There is currently limited common use infrastructure of processing facilities, cold storage facilities, or refrigerated air freight in the region. Due to many constraints, food and fibre and mining operations in the region are not operating to a scale that justifies the significant investment required for the development of these freight and logistic infrastructures.

<sup>1</sup> Guner, S. and Coskun, E. 'Comparison of impacts of economic and social factors on countries' logistics performances: a study with 26 OECD countries, Research in Logistics and Production

<sup>2</sup> Kimberley Development Commission Regional Overview

<sup>3</sup> See ref 1

<sup>4</sup> Australian Bureau of Statistics - Quick Stats Kimberley Region

## Industry Overview continued

However, secured and proposed projects to increase the aggregate scale of regional production include:

- Sheffield's mineral sands project between 800,000 tonnes and 1.7 million tonnes per annum within ten years
- Agrimin's sulphate of potash project between 400,000 tonnes and 800,000 tonnes per annum in ten years
- Other mining including copper, gold, zinc, lead cobalt and graphite increasing from a few thousand tonnes per annum to over 200,000 tonnes per annum<sup>5</sup>
- Buru Energy's increasing production lift from the Ungani Oil Fields
- Cone Bay Barramundi's production increased output by 20,000 tonnes

- Seafarms' Project Seadragon proposed 10,000 hectares of prawn production ponds
- Continued expansion of the Ord Irrigation district (50% increase in area since 2013)

A recent pre-feasibility study for a West Kimberley Supply Chain & Logistics Hub found 'Quantitative analysis of volumes and in-depth interviews with producers indicate that, without some form of intervention to facilitate producers affordably reaching export markets, there will be little development or investment and no opportunity to build scale in the region<sup>6</sup>.

## Infrastructure

### Roads

Key road access from the Northern Territory is via the national Victoria Highway into Kununurra. This connects to the sealed Great Northern Highway to Broome in the west and beyond into the Pilbara. These roads can become compromised and temporarily cut off by fire, seasonal and cyclonic flooding, or vehicle accidents.

Within the Kimberley region, the Great Northern Highway has 13 bridges, four flood ways and poor-quality surfaces in some areas, which are exacerbated by seasonal weather events. The highway suffers from pinch points at the Kununurra Diversion Dam and single-lane bridges, particularly on sections from Broome to Willare and Halls Creek to Kununurra. The Kimberley is one of the few areas in the country that still has a national highway with single-lane bridges.

Increasing freight on the Kununurra Diversion Dam wall has the potential to diminish the life of that key infrastructure. It is key priority to establish a new bridge over the Ord River as part of the national road network. The Australian Government has already completed engineering and land corridor work through a \$10m investment to get this project 'shovel' ready.

Key roads linking the region to markets on the east coast are not all fit for purpose. Upgrading and sealing the Tanami Road, which connects the Kimberley to Alice Springs and beyond, is critical. It would reduce travel distances to southern markets by 1,000km. Considerable funding has been allocated to the major project, and work is scheduled to start in 2020.

The Duncan Road/Buntine Highway links Katherine NT with Halls Creek is currently highly constrained due to the poor state of the road; however, State funding commitments should result in improvements providing an alternative link to the Northern Territory.

Making all these strategic roads fit for purpose is vital to:

- improve connectivity between people with jobs and services, and goods with markets
- improve road safety
- improve freight efficiency, connectivity and travel time
- improve economic productivity



<sup>5</sup> ATEA Consulting Kimberley Snapshot 2020

<sup>6</sup> DIRPD West Kimberley Supply Chain & Logistics Hub Pre-feasibility study

## Airports

The privately-owned, Broome International Airport delivers commercial air services and limited air freight services to the West Kimberley. It has a 2500-metre runway capable of accommodating a range of air cargo carriers. However, it lacks provision for extensive airside facilities.

The East Kimberley Regional Airport currently delivers commercial air services, but limited air freight. Existing runway infrastructure restricts the size of aircraft and precludes large commercial or air freight cargo carriers. A proposal is under development for runway extensions to allow for significantly increased air freight capacity. This would allow for the development of the area's considerable pastoral, irrigated agriculture, tourism, and developing aquaculture industries. Additionally, increasing inbound freight to lessen the costs of essential consumer commodities for the East Kimberley community.

The newly refurbished Derby Airport currently does not have any RPT commercial flights or air freight operating from the facility. However, there are significant air facilities at Curtin airbase – a joint-use defence force and civil airbase located near Derby. The Shire of Derby West Kimberley has negotiated a civil airside lease with the Australian Defence Force providing 60 hectares of space that could be utilised for cool storage and other airside logistics. The Curtin Airbase is the second-longest airstrip in Australia, able to land the largest aircraft in the world. A review of the Curtin Air Base and its land asset is recommended to achieve the dual goals of meeting its defence purpose but also of contributing more purposefully to the development of the Kimberley region. It is a question of what the best national interest is – use of Curtin Air Base as it is, or some different mix of use that can fulfill multiple objectives.

## Ports

Shipping access into the Kimberley is via the main ports of Broome, Derby, and Wyndham and the lesser Yampi Sound Ports of Cockatoo and Koolan Islands. The Kimberley has one of the largest tidal ranges in the world, and access to some ports can be subject to these tidal conditions.

The multi-user Port of Broome can accommodate vessels up to 50,000 tonnes berthing displacement. The Port of Broome reports exported 158,549 tonnes, and imported of

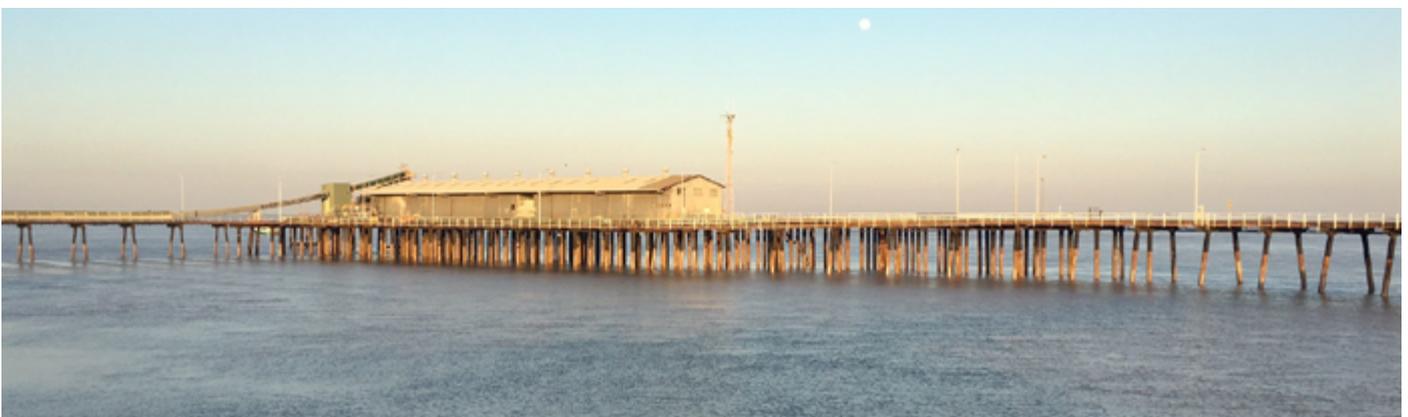
198,780 tonnes in 2019, (121,780 head of cattle exported), and had 847 vessel visits. The main imports are fuel, and the main export is live cattle. In 2019, a Channel Optimisation Project was undertaken to ensure all-tide access to the port all for cruise boats and shipping vessels. A private enterprise proposal is under consideration to build a \$119 million Kimberley Marine Support Base in Broome. This would comprise a floating wharf, along with associated onshore terminal facilities for maritime trade and tourism.

Derby Port has a 150-meter wharf and limited associated infrastructure of wharf storage and hardstand compound. Currently, it is not used to export of any goods but supplies for Mt Gibson Mine are imported and it is an inbound hub for fresh fish from Cone Bay Barramundi, which connects to market via refrigerated road freight from the port.

Wyndham Port is the only deep-water port between Broome and Darwin, and it is a vital link within Northern Australia's primary and secondary industries' supply chains. It serviced 95 supply and tourist vessels in 2019<sup>7</sup>. Imports include bulk fuel, general cargo, ammonium nitrate for mine use, and fertilisers. Main exports are live cattle, ore, crude oil, and produce from the Ord River irrigation area.

Shipping in the region is currently missing a key line of service as it has limited containerised cargo opportunities for imports or exports. The Port of Broome is working with industry to develop containerised cargo facilities for small scale export of mining and agri-food goods and import of industry and consumer commodities. Longer-term plans include the development of First Point of Entry facilities of quarantine and customs for international container freight.

A key issue for those seeking to import and export from the ports is accessing accredited and required regulatory inspections for consignments. Often this means exporters or importers having to fly accredited regulatory staff from elsewhere in Australia to the ports for inspections, because local regionally based staff are not authorised to do the inspections. This adds cost and time to the supply chain and should be easily overcome by jurisdictions cross authorising locally based staff. The recommendation to cross authorise inspectorial staff has been raised for decades, and it seems for every step forward in achieving it there is one step backwards.



<sup>7</sup> Cambridge Gulf Limited

# FREIGHT AND LOGISTIC ANALYSIS

## STRENGTHS

- Population creates baseline for services
- Government contracts create baseline for services

## OPPORTUNITY

- Development of infrastructure to assist logistic supply chain
- Increasing output of mining, agriculture and horticulture industries will drive development

## BARRIERS

- Seasonality effects labour requirements profitability
- The high cost of business inputs

## RISKS

- Contraction in population
- Retraction in core industries affecting demand
- Stalled delivery of government works or private investment projects
- Changes in regulatory environment

## Industry Opportunity

### Increased Economic Drivers

Proposed and scheduled economic developments are emerging in offshore oil & gas, onshore mining, agricultural and aquaculture sectors that will drive the development of the industry in the medium to long term.

Commodity	Projected increase in production <sup>8</sup>
Mineral Sands	800, 000-1.7 million tonnes per annum
Sulphate of potash	400, 000 -800,000 tonnes per annum
Other mining – copper, gold, zinc, graphite, lead cobalt	200,000 tonnes per annum
Oil	20,000 barrels per day
Farmed Barramundi	20,000 tonnes per annum
Farmed Prawns	5,000 – 100,000 tonnes per annum <sup>9</sup>
Food and Fibre from Ord Irrigation Area	15,000 tonnes per annum

### Population Base

A renewal and expansion of industries will see an increased baseline population that drives demand for freight of goods to and from the Kimberley region.

<sup>8</sup> Kimberley Development Commission

<sup>9</sup> Seafarms Australia

## Industry Barriers

### Labour

There is a national skills shortage in the transport and logistics sector, which is reflected locally. Training and retaining a skilled local workforce is critical as the industry expands due to increased demand from mining and food and fibre sectors. Engagement of Indigenous people who make up 50% of the Kimberley population is a vital component of labour force development.

## Industry Risks

Any delay in government spending to develop or improve the infrastructure of roads poses a risk to an efficient logistics and freight network.

Bridges on the national highway network are a particular risk, even though progressive replacement program has been occurring. The height and width restrictions on the Kununurra Diversion Dam wall mean that some loads must traverse the south of Australia to get to the Pilbara mining region. This is inefficient a drain in industry. Freight on the Diversion Dam wall risk increased depreciation of that critical infrastructure which is now 58 years old.

Delay or non-proceeding of large-scale developments in agriculture, mining and aquaculture poses a threat to the freight and logistics in the region because scale is impeded.

## Report Recommendations

### Recommendation One

Australian Government investment in a ensuring all bridges on National Highway one (Great Northern Highway) are dual lane and that a new bridge over the Ord River is constructed to remove freight impediments, and freight from the Kununurra Diversion Dam wall, with this new bridge becoming part if the national highway grid.

### Recommendation Two

Australian Government undertake a review of the future of Curtin Air Base with a view that it continues to play the role it needs to for defence purposes, but also contributes more positively to the economic development of the Kimberley region.

### Recommendation Three

Australian Government proactively seek to authorise Western Australian Government officials based in the Kimberley region to undertake Commonwealth required inspections at Ports, so that the cost of flying in inspectors from elsewhere in Australia for regulatory inspections is removed.



**This bibliography includes references for the full Business in the Kimberley Report.**

1. ABARES Value of agricultural production and land use, Kimberley region
2. ABC News Australian Government's ban on live exports to Indonesia 'irrational', cattle farmers tell court. 2017
3. ABS 2016 Highest Year of School Completed by Indigenous Status by Sex
4. ABS Census 2001-2016
5. ATEA Consulting Kimberley Snapshots 2020 Volumes 1-10
6. Austrade/ Tourism Research Australia 2018
7. Australian Bureau of Statistics – Quick Stats Kimberley Region
8. Australian Bureau of Statistics 2016, 'Kimberley' (SA3), Community Profile'
9. Australian Bureau of Statistics Census Quick Stats 2001 & 2016
10. Australian Bureau of Statistics, Socio – Economics Indexes for Areas Kimberley 2018
11. Bain & Company Understanding Southeast Asia's Emerging Middle-Class Report 2019
12. Budget Direct – Average Holiday Costs Statistics 2019
13. Cambridge Gulf Limited
14. Centre for Indigenous Economic Policy Research, ANU (2014): 'Indigenous employment and businesses: Whose business is it?'
15. Comparison of impacts of economic and social factors on countries' logistics performances: a study with 26 OECD countries, Research in Logistics and Production Guner, S. and Coskun, E.
16. CRCNA – Aquaculture Industry Situational Analysis (AISA) – Key Findings & Recommendations Summary
17. CRCNA Preparing the way for growth in aquaculture in Northern Australia: Industry priorities and vision 2028
18. CSIRO Northern Australia Water Resource Assessment Fact Sheet
19. Department Foreign Affairs and Trade – Indigenous Tourism Surge 2019
20. Department of Primary Industries and Regional Development – Status of The Western Australian Pastoral Rangelands 2018
21. Department of Primary Industries and Regional Development AGRIC Report 2019
22. Department of Primary Industries and Regional Development Regional Price Index Report 2019
23. Department of Prime Minister and Cabinet 'The Indigenous Business Sector Strategy: Supercharging Indigenous Business Start-Up and Growth 2018-2028'
24. Department of Prime Minister and Cabinet – Closing the Gap Refresh 2019
25. Department of Prime Minister and Cabinet – Closing the Gap Report 2018
26. Department Primary Industries and Regional Development – Boosting aquaculture in WA
27. Department Primary Industries and Regional Development – Status Report of the Fisheries and Aquatic Resources North Coast Bioregion 2016-17
28. DFAT Indigenous Tourism Surge 2019
29. Hexagon Resources
30. Housing Western Australian – Aboriginal Employment Plan Kimberley Pilbara
31. How to employ indigenous workers?' Charles Sturt University and University of Technology Sydney 'Determining the factors influencing the success of private and community-owned indigenous businesses across remote, regional and urban Australia'
32. Inquiry into Opportunities for Expanding Aquaculture in Northern Australia
33. Interview Ian McKenna, Owner, East Kimberley Construction
34. Interview Jon Condon Beef Central Magazine 2018
35. Interview Mr Alfred Nagaiya, Shire Wyndham East Kimberley Economic Development Advisor
36. Interview Mr Jack Burton CEO Kimberley Meat Works
37. Interview Ms Susan Murphy, CEO, Winun Ngari Indigenous Corporation
38. Kimberley Development Commission – Aquaculture 2019
39. Kimberley Development Commission Economic Snapshot 2019
40. Kimberley Development Commission Regional Overview
41. Kimberley Development Commission Website & Kimberley Regional Overview 2019
42. Kimberley Ports Website
43. Kimberley workforce development plan 2014-2017 – Kimberley Workforce Development Alliance
44. Mercado – Value analysis of the Australian live cattle trade – key highlights November 2018
45. Mt Gibson Iron
46. National Indigenous Australians Agency – Indigenous Rangers – Working on Country
47. Northern Beef Development Project – Mosaic agriculture
48. Ongoing growth in the number of Indigenous Australians in business – Shirodkar, S & Hunter, B & Foley, D
49. Parliament of Australia Indigenous Employment – the positives.
50. Parliament of Australia, House Standing Committee on Aboriginal and Torres Strait Islander Affairs Indigenous Employment
51. Perth Convention Bureau High Yield Delegate Research 2018
52. Pro and Associates – Regulatory costs in the red meat and livestock industries final report 2016
53. PWC Pre-Feasibility Study – West Kimberley Supply Chain and Logistics Hubs
54. Rangelands NRM WA Website
55. REMPLAN – Kimberley Economic Profile 2019
56. Research Gate – Regional Branding: Building Brand Value
57. Rio Tinto Argyle – Diamond Mine
58. State Aviation Strategy 2015, Current perceptions future directions study – TNS 2016
59. State Fisheries Report 2018
60. State Government of Western Australia – Who Buys What and How 2019
61. State Housing Western Australia – Aboriginal Employment Plan Kimberley and Pilbara
62. State Water Strategy – Irrigated Agriculture in Western Australia
63. Status Report of the Fisheries and Aquatic Resources 2016-17 North Coast Bio Region
64. Supply Nation – Building Indigenous Growth Report
65. Supply Nation – The Sleeping Giant A Social Return on Investment Report on Supply Nation Certified Suppliers
66. The Australian Government Competition Policy Review Final Report 2015 – Harper Review
67. Tourism Investment and Regulation Review Final Report – Austrade 2012
68. Tourism Research Australia 2018
69. Tourism WA Destinations Perceptions 2018
70. Tourism WA Visitor Fact Sheet 2018
71. WA Cattle Summary 2019 – Pilbara Kimberley Cattleman's Association
72. Webjet web search January 2020
73. Winters, T. Media Release: Indigenous Australia to Play Greater Role.
74. Worldometer Website February 2020



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