



Kimberley Regional Group

Submission to the Aviation Green Paper, Towards 2050

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About the Kimberley Regional Group

The Kimberley Regional Group (KRG) of local governments is an alliance of the four Shires of the Kimberley in northern Western Australia, being the Shire of Broome, the Shire of Derby West Kimberley, the Shire of Halls Creek and the Shire of Wyndham East Kimberley.

Our Vision is to maintain and enhance the rich diversity and liveability of the Kimberley for its people and the world. Collaboratively the group seeks to drive positive impact across the region through improved social, economic and cultural outcomes.

Our region covers 427.5 square kilometres. The Kimberley is home to over 39,000 people, 40 percent of whom are Aboriginal and Torres Strait Islander people. The Kimberley has three regional centres, Broome, Kununurra and Derby, with smaller regional towns of Halls Creek, Fitzroy Crossing and Wyndham. There are over eighty remote communities across the region, some of which have populations up to 600 people. The Kimberley regions is a key contributor to Australia's wealth with an annual economic output of \$7.033 billion¹. Mining, agricultural production, construction, and tourism are major contributors to the region's diverse economy.

Airport infrastructure in the Kimberley

Kimberley Local Governments are a key provider of airport infrastructure across the Kimberley region. This includes local government ownership/management of the following airport assets:

Shire of Derby West Kimberley	3 airports
Shire of Wyndham East Kimberley	2 airports
Shire of Halls Creek	1 airport

The Shire of Broome is serviced by the Broome International Airport which is owned by Broome International Airport Pty Ltd. In addition to these airports there are airports owned and managed by remote Aboriginal communities and on pastoral stations.

The airports serve a mixture of scheduled passenger services, general aviation, and charter services. This includes the Royal Flying Doctor Service, tourism, mining, agricultural, government services, aquaculture and pearling. They perform a critical role in emergency management response and recovery efforts. The airports are critical to the attraction and retention of staff in our region by enabling them to remain connected to families and friends, and to access professional services. Also, they make FIFO (Fly-in, Fly-out) employment possible, make businesses more efficient and facilitate freight services. Due to vast distances and drives of up thirteen hours between them airports are a vital public transport service across the region.

¹ <https://app.remplan.com.au/kimberleyregion/economy/summary?state=grzqFNYpOlq9Mexua8nao9UVhYhY4q>



Response to questions

The Kimberley Regional Group have provided responses to key questions within the Green Paper. Whilst we have responded to some questions throughout the paper, the key focus for our response has centred on Chapter 4, Regional and Remote Aviation Services.

Chapter 2 – Likely future directions out to 2050

What emphasis should the Australian Government place on these trends to help guide the future of the sector? Are there any other trends the Australian Government could add?

Additional trends that the Australian Government could add to guide the future of the sector include:

- Develop new air routes from northwest Australia that link Australia to Asian markets as well as international destinations including for tourism, passengers and the import and export of goods and services. For example, some agricultural exports are highly dependent on aviation, with almost 80% of seafood (by value) exported by air (BITRE 2020). The flight distance between Perth to Kununurra is 2213 similar to the flight distance to between Kununurra and Jakarta of 2612 km.
- Support for critical interstate routes across the North – for example the Kimberley-Darwin is not government subsidized.
- National security imperatives in northwest Australia and the role of regional airports.
- The important passenger and freight interconnectivity across Northern Australia, net of flying through jurisdictional capital cities. For example, the flight distance between Kununurra in the East Kimberley region of WA to Perth is 2213km. The flight distance to Darwin is 441km.
- The important role of regional airports to health access such as the Royal Flying Doctor Service
- Climate change impacts and the important role of regional airports in emergency management response. For example, during the 2023 Kimberley Floods the Broome International Airport, the Fitzroy Crossing aerodrome, Kalumburu Airport and the East Kimberley Regional Airport were critical for the flood response and recovery, in particular the use of Australian Defense Force aircraft for the transport of goods and services.
- Advocate for a clear position on the economic benefit of airports in regional areas to be included in the future of statewide Airports State Planning Policy.

Chapter 3 – Airlines, airports and passengers – competition, consumer protection and disability access settings

What types of data and analysis should the Australian Government produce to support aviation competition outcomes?

- Access to air services in regional and remote WA
- On time services
- Cancelled services
- The cost of air travel in regional WA



- The air freight cost in regional WA

What should the Australian Government take into account in designing the terms of reference for the proposed Productivity Commission Inquiry?

- The social and economic impact of airports and airport services to regional and remote WA.
- Understanding the cost to local government of the provision of critical airport infrastructure, in particular in thin markets in the Kimberley region
- The cost of intrastate air travel in Western Australia
- The cost and benefits of regional communities having regular air services that are safe, affordable, efficient and effective.
- Changes to pricing policies that signal predatory and anti-competitive behaviour by airlines if a new competitor enters the market
- The additional costs of employing people to work in air services in regional WA – i.e., housing, wages etc.
- The regulatory costs of airport and air services in regional and remote Australia. For example, the Regional Capitals Alliance of WA have noted that Civil Aviation Safety Authority (CASA)'s regulatory imposts are higher for regional and remote airports, comprising 12 per cent of total expenditure, compared to about 4 per cent for major airports and major regional airports²

What further improvements can be made to the Disability Standards for Accessible Public Transport to accommodate the unique requirements of air travel?

- New and increased Commonwealth and State Government funding support for local governments to ensure regional and remote airport infrastructure are accessible to people with disabilities.
- Consideration of entry and exit points to the airport – i.e., carparks, footpaths, infrastructure outside the airport building.

What are the specific challenges faced by people with disability wishing to travel by air in regional and remote areas?

- Accessibility in and out of remote airport terminals
- Accessibility into remote airport buildings
- Getting into and out of small charter flights
- Staff support to assist people with disabilities as required

² Regional Capitals Australia Regional Airport Policy www.regionalcapitalsaustralia.org.



Chapter 4 – Regional and remote aviation services

As outlined in the Aviation Green Paper, aviation contributes strongly to regional development playing an important role in servicing the needs of regional and remote communities providing and maintain access to a range of essential services such as health care and education. Also performing a critical public transport service connecting people across Australia due to the vast population distances.

This chapter needs to more strongly acknowledge the critical role of airports in economic development. For example, in Kimberley airports and aviation services are core to transporting agricultural produce to national and international markets. Also, the chapter needs to more strongly acknowledge the importance of regional airports in driving population growth. Access to affordable air travel attracts people to a region. Affordable airfares increase passenger numbers delivering economies of scale. A key way that regions can grow our populations and make load factors on the aircraft higher is if airlines service the regions and airfares are affordable.

Due to vast geographic distances, air services across the Kimberley are effectively public transport routes. It can take up to 13 hours to drive to towns. For many communities there are no alternative public transport options such as buses. Also, the time factor to drive between towns does not support business. The role of regional aviation as a public transport, similar to the way people in metropolitan regions use trains and buses must be considered in the paper.

Also given the proximity of the Kimberley to Darwin, there is a need to support interstate routes from north Western Australia into the Northern Territory. For example, the Kimberley-Darwin is not government subsidised impacting on the growth potential of Northern Australia.

Question One - Where should the Australian Government focus its engagement in regional and remote aviation, including helping achieve Closing the Gap outcomes, noting established state, territory and local government responsibilities and programs?

The Australian Government should focus on new and increased investment in:

- Regional airport infrastructure:
 - Recurrent funding for the Regional Airport Fund to ensure that regional airports can be upgraded and maintained, and to guarantee the sustainability of the regional aviation network
 - Funding to be in line with local governments capacity to pay.
 - Upgrade the guidelines for the Regional Airport Fund to allow for landside developments to be considered
 - New and increased dedicated funding pool and support for remote Aboriginal community airports so that can develop asset management and maintenance plans, and access to funds for capital works programs.
- Master Planning
- Review the efficacy of Western Australia's Strategic Airport Asset and Financial Management Framework (as recommended by the Productivity Commission) to assess



the efficacy of the Framework and new investment to enable regional airports to develop Airport Asset Management and Financial Plans.

- Costs of regional airports to comply with aviation security requirements.
- Natural disaster resilience infrastructure - to ensure airport infrastructure is fit for purpose to support an emergency management disaster recovery and response effort.
- Activities to increase economic activity within regional airport precincts to support disaster management preparation, response and recovery – for example utilizing airport land and infrastructure to build community resilience such as food warehousing to ensure food security during a natural disaster.
- Services to support improved tourism and trade opportunities in Northern Australia, including the Kimberley, to enable the establishment of a permanent border agency presence at Broome and the East Kimberley Regional Airports. This will enable the airports to attract new services from international airlines, providing another international gateway for foreign tourists directly into Northern Australia.
- Driving a whole of government agenda - view airport infrastructure and investment as an enabler for strategic government policies – i.e., the Northern Australia, Closing the Gap, Tourism, Natural Disaster Resilience, Defense.
- Opportunities to better integrate northwest Australia with ASEAN trading partners and the region – i.e., Unlock the potential of air freight and market opportunities for passengers, tourists and high-value, perishable products from the Kimberley region of northwest Australia.
- Subsidized flight caps between jurisdictions in Northern Australia, including the route between Kununurra and Darwin.
- Alignment of Federal and State regional investment policy contexts and frameworks to reduce the administrative and compliance burden on seeking and applying for airport investment and grants.
- Support to develop communities of practice.

Financial Assistance Grants

Commonwealth Financial Assistance Grants (FAGS) are the major source of Federal Funding to Local Government. Over time, the roles and responsibilities of local governments have increased as a result of increasing community demand, cost shifting, and the need to address market failure, particularly in rural areas where it is commonly not financially viable for the private sector to provide essential goods and services such as airport infrastructure. While the roles and responsibilities of local government have grown significantly over time, its revenue base has not³. Financial Assistance Grants use to be 1 percent of Commonwealth tax revenue (CTR). They have declined by around 43% in relative terms, and now amount to approximately 0.55% of CTR severely impacting on local government finances. The outcome of FAGs not increasing with the costs of goods and service is that many local governments have insufficient revenue-raising capacity to maintain or upgrade their infrastructure or provide the level of services that their communities desire.

³ <https://alga.com.au/policy-centre/financial-sustainability/background-on-local-government-funding/>



Kimberley Context

Local Governments across the Kimberley own and manage critical airport infrastructure. The Kimberley Regional Group echo the findings of the WA Aviation Strategy 2020 which outlined the key issues facing Western Australia's small to medium sized regional RPT airports. These were identified as:

- low annual passenger movements;
- limited opportunities for diversified revenue streams;
- limited capacity to borrow funds;
- limited ability to attract and retain highly qualified staff;
- ageing airport infrastructure;
- high operational costs for aviation security screening;
- high cost of doing business due to remoteness⁴.

In addition, remoteness and weather conditions, means that the window to undertake capital works programs at airports is small.

It is a challenge for the smaller Kimberley airports to operate in a financially sustainable way. Councils subsidise airports because of the economic and social value of having air service to their town. Insufficient economies of scale make it difficult for Councils to effectively fund and manage current and future operational, asset renewal and upgrade costs.

Kimberley Councils have significant challenges in upgrading facilities to meet future aviation needs and regular shortfalls in funds to maintain and operate this critical infrastructure.

It has been noted by the Regional Capitals Australia that the Civil Aviation Safety Authority (CASA)'s regulatory imposts are higher for regional and remote airports, comprising 12 per cent of total expenditure, compared to about 4 per cent for major airports and major regional airports⁵. Also, that almost 40 per cent of regional airports expect persistent budget deficits over the next 10 years.

The following is a summary of the major airports in each Shire and the key challenges and opportunities faced by the local governments.

⁴ https://www.transport.wa.gov.au/mediaFiles/aviation/AV_P_WAAS_Supporting_Papers_WA_Airports.pdf. Page 34.

⁵ Regional Capitals Australia Regional Airport Policy www.regionalcapitalsaustralia.org.



Overview of key Kimberley Airports and their key challenges and opportunities

Local government area	Airport	Type	Owner	Financial	Key Challenges	Key Opportunities	Initiatives to assist
Shire of Broome	Broome International Airport ⁶	<p>400,000+ passengers per year 30,000 aircraft movements per year 13 carriers 1500 flights per week</p> <p>Passenger profile: 60% tourism 20% FIFO 10% general</p> <p>Airport uses: 75% passengers 10% health 10% emergency management 4% defence 1% freight</p> <p>RPT service Perth, Derby, Fitzroy Crossing, Halls Creek, Kununurra</p>	Broome International Airport Pty Ltd	NA	<p>Regulation costs (including security) contribute significantly to the general operating costs of the airport as well as capital upgrades required to meet safety and regulatory standards;</p> <p>Insufficient resources in the foreseeable future to undertake significant but essential upgrades to the facilities and infrastructure at the airport.</p>	<p>Expand airfreight services to export agriculture and aquaculture products from the region; and</p> <p>Drive domestic and international tourism to the region with additional direct flights to major metro capitals and international destinations</p>	Resources to undertake essential capital upgrades and to manage increasing regulatory and operating costs.

⁶ Information on Broome International Airport is sourced from Regional Capitals Australia, Regional Airports Policy 2023.



		Seasonal direct flights to Eastern States Southern hemisphere's largest heliport. Regulated route					
Shire of Wyndham East Kimberley	East Kimberley Regional Airport	88,400 passengers per year (average) 30 flights per week (average) 3 carriers Passenger profile: 40% tourism, 50% general 10% FIFO Airport uses: 85% passengers 10% health 2.5% defence 2.5% other Regulated route RPT service Broome, Fitzroy Crossing, Halls Creek, Balgo, Kalumburu RPT service Perth and Darwin Seasonal direct flights to Eastern States	Shire of Wyndham East Kimberley	The airport does not run at a loss at this time.	Funding capital upgrades Security costs Maintaining staffing levels High operating costs Reliance on government funding	Tourism Mining Agricultural Indigenous business development Freight	Higher level of co-funding within grant applications



	Wyndham Airport	Charter and private flight operations.	Shire of Wyndham East Kimberley	TBC		TBC	
Shire of Derby West Kimberley	Derby Airport (owned freehold)	47 carriers 96 flights per week RPT service Broome Regulated route	Shire of Derby West Kimberley	All airports operate at a loss. Annual operating expenses of \$2.5m (includes \$1.5m in depreciation) annual income of \$640,000.	Funding airport asset management requirements. Low volumes of aircraft make for an ongoing loss situation. It is particularly challenging to fund their asset management requirements. Staff training and retention	A supportive Department of Transport Defence expansion that could bring greater aircraft traffic	Contributions to asset management to be aligned with local government's capacity to pay and in keeping with the local community service obligation to maintain the airstrip. Contributions towards airstrip maintenance costs to ensure airstrip can be kept to a good standard.
	Fitzroy Crossing Airport (Crown Land Management Order)	27 carriers 68 flights per week RPT service Broome and Kununurra Regulated route					
	Curtin Civilian Airport leased (Commonwealth Government/ Defense)	0 carriers 0 flights per week					
Shire of Halls Creek	Halls Creek Airport	10,000 passengers per year (average) 18 weekly aircraft movements (RPT) 95-100 aircraft movements per week 5 carriers	Shire of Halls Creek	Annual expenses exceed the airport's annual income leading to an unsustainable	Financial challenges Limited ability to manage assets as per asset management plan to ensure quality assets at the site	increase plane traffic more business ventures and leasing of hangars for tourism operators	Ongoing operational and significant capital upgrade funding



		<p>Several helicopter carriers</p> <p>Passenger profile: 45% tourism 45% general 20% FIFO plus gov charters, RFDS</p> <p>Airport use: 55% passengers 10% health 10% freight 25% other</p> <p>RPT service Broome, Kununurra, Balgo Regulated route</p>		financial burden	Limited staff availability from Shire		
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Despite being critical social and economic infrastructure, Councils, are required to identify, plan and source funding, often without the staff, resources and in house expertise. Also, funding is often through competitive grant rounds where funding requests outstrip the available funds.

Airport fees and charges are one way to recouping infrastructure costs, but it is a balancing act of understanding the impact of fees and charges, on passengers and airlines. Councils subsidise airports because the economic and social value of having air service to their town.

The Local Government Act 1995 (the LG Act) allows for a local government to impose and recover a fee or charge for any goods or service it provides, including admission to any facility owned, controlled or managed by the local government (Section 6.16 of the LG Act).

Fees and charges for regional airports are required to take into consideration the cost to provide the service, importance of the service to the community, and the price at which an alternate service may be provided (Section 6.17 of the LG Act). For many small to medium sized regional airports, the ability to pass on costs through airport fees and charges is curtailed by the risk of losing RPT air services if costs are too high. The challenges of isolation, harsh weather conditions, constrained local government salary packages, and the high cost of living in remote areas, are limitations to attracting and retaining qualified airport staff at small to medium sized regional RPT airports. The role of airport fees and charges need to be considered in light of this and the other higher costs of airport operations in the Kimberley – i.e., staffing, construction costs.

Remote Aboriginal Community Airport Infrastructure

Investment in critical remote airport infrastructure to keep communities connected and to manage risk should not be subject to a competitive grant funding rounds and the ability of remote Aboriginal community councils to develop funding application to ensure that they have appropriate airport infrastructure to reduce the risk to Aboriginal people. There needs to be a dedicated funding pool for remote Aboriginal airport infrastructure. This includes funding for asset management and maintenance plans, and capital works program to ensure airports are fit for purpose for RFDS evacuations and resilient to the impact of natural disasters such as cyclones and floods. Also, the airports need to be considered within broader transport infrastructure - i.e., transport to and from the airport is just as critical as the airport infrastructure itself. Also, there is a need to ensure that flights remain affordable through regulated and subsidised routes. The following case studies a number of key issues.

Case Study Kalumburu Airport

Kalumburu is the northern most settlement in Western Australia. It is over 550km from Kununurra by road, with the journey taking over 8 hours due to unsealed road conditions. Up to 450 people live at Kalumburu.

Kalumburu can only be accessed by air during the wet season as roads into Kalumburu are flooded for up to 5 months of the year. The airport is critical for the transport of goods and services and for emergency response and recovery efforts.



Kalumburu has a twice weekly Regular Passenger Transport service. The airport is critical for health and other professionals to visit the community and for community members to travel. Also, for emergency evacuation such as the RFDS.

The airport has a 1117m all-weather sealed airstrip, complete with lighting for night operations. There is no fuel storage at the airport. If needed eight drums of aviation fuel are contained on a trailer which can be towed to the airport.

An airport inspection in September 2022 indicated that the airstrip, runway, taxiway and apron need resealing on the pavement area. The bitumen is becoming brittle. Whilst a program of patching and enrichment is addressing this, in the long term a reseal is needed, along with new aerodrome line marking. This will ensure that the airport continues to operate all year round providing the community with access to goods and services. It will enable safe operations during an emergency, supporting a more effective emergency response.

To get these capital works done, Kalumburu needs to apply for state and federal funding support through a competitive grant round. This means that staff and resources, which are often stretched, need to set aside time to develop funding applications, with no guarantee of a positive outcome.

The remoteness and weather conditions provide a small window of opportunity to undertake capital works. This is often not factored into consideration by grant funding bodies, meaning that the ability to undertake works can be delayed by over a year if grants are successful.

Case Study Shire of Wyndham East Kimberley Airports

The Shire of Wyndham East Kimberley manages two airports located at Wyndham and Kununurra.

The East Kimberley Regional Airport (also known as Kununurra Airport or EKRA) is the main facility and used by domestic and international passengers travelling for recreation, business, to visit family and friends; medical and community service providers; freight; emergency medical evacuations and firefighting. The airport caters for regular passenger transport (RPT) air services as well as charter and private flight operations

EKRA has RPT services to Broome, Darwin and Perth. These services were operated by Fokker 100 and Embraer 170 aircraft due to constraints on the ability to operate larger aircraft. However, Virgin is servicing direct Perth to Kununurra direct flights by Boeing 737-800 aircraft, albeit under very strict pavement concessions due to airport infrastructure constraints

The Airport Master Plan⁷ provides strategic directions over a minimum 20-year development framework and identifies the following main aeronautical and non-aeronautical developments to be undertaken during the 20-year planning horizon:

- Expand the existing 1,829 metres x 30 metres runway, which is in a 12/30 orientation, to 2,430 metres x 45 metres;
- Increase the size of the passenger terminal to accommodate multiple Code 4C aircraft during the high-growth scenario;

⁷ Shire of Wyndham East Kimberley, 2017, East Kimberley Regional Airport Masterplan.
https://www.swek.wa.gov.au/profiles/swek/assets/clientdata/final_ekra_master_plan_aug2017.pdf.



- Develop a solar power plant to feed into the electricity grid of the passenger terminal;
- Acquire land, largely north of the runway, for purposes of airport safeguarding;
- Facilitate additional commercial development of airport land to encourage synergies, provide additional revenue sources and support economic development; and
- Investigate adjoining land acquisition as required.

The Shire is progressing Stage 1 of the Masterplan which is improvements to the Taxiways (excluding Foxtrot), a new parking bay and associated infrastructure which includes lighting, drainage and other electrical works. The Shire has submitted an EOI under the 2023 Growing Regions Round 1 Funding Stream for Stage 2 (\$23.6M) which consists of extending the runway to 2350m to allow Code C aircraft to land and includes other associated Infrastructure.

A significant outcome of Stage 2 of the Airport Master Plan will be the ability to accommodate Code 4C aircraft operations without current restrictions due to the runway length. It will also allow an airfreight operation to develop. Also, a warehousing and freight hub. This will allow for a more comprehensive emergency service and defence response which is essential for the delivery of essential and government services, supplies, medical support, and to preserve social and cultural connectedness.

Case Study – Halls Creek Airport

Halls Creek has a RPT route between Kununurra and Broome. Aerodrome Management Services Pty Ltd (AMS) AMS have operated the airport since 2011 for a fee paid by the Shire. The Shire receives revenue from the landing fees. Landing fees were discounted to encourage more visitation. The airport is a lossmaker. The Shire needs support to develop a long term financial and asset management plan. Also access to increased funding to support airport infrastructure. The Shire relies on the Regional Airports Development Scheme (RADS) to fund improvements. This is a competitive funding round where funds are not guaranteed, making it difficult to manage and implement critical upgrades. Halls Creek RADS funding has totalled \$337,735. This funding equates to 2.89% of RADS funding across 29 airports.

Question 2 Traditionally, subsidies for intra-state aviation services have been carried by state and territory governments. Does this remain the best structure?

It is critical that in thin markets that there are subsidies for intra state aviation services as air services perform a core public transport role, support health and emergency management needs and drive economic and social development.

The WA Government's Regional Zone Airfare Cap, a joint initiative between the State Government and six airlines: Airnorth, Nexus, Qantas, Regional Express (Rex), Skippers Aviation and Virgin⁸, has been a game changer in providing more affordable airfares for residents of regional WA by reducing their maximum resident fare prices to the Zone Cap fare of \$199 or \$299.

⁸ <https://www.transport.wa.gov.au/aviation/regional-airfare-zone-cap.asp>.



The continuation of regulated passenger transport routes is important to make air services possible in and out of, and across the Kimberley region. The WA State Government's intrastate Regular Public Transport (RPT) air routes are critical to improve the liveability of regional towns, support tourism development and industry.

The WA State government has a supported Inter Regional Flight Network. This network was expanded in July 2023 with local governments contributing funds, in partnership with the State Government to support an increased intra-regional service. Case study Nexus Airlines – Local Government contributing to regional air services

Nexus Airlines is a new regional carrier which began flying between Broome, Kununurra and Darwin in July 2023. Nexus connects regional communities including, Geraldton, Perth, Karratha, Port Hedland, Broome, Kununurra and Darwin. Nexus is backed by Aviair, a Kimberley based company with over 38 years of aviation experience Nexus Airlines has an exclusive agreement with the WA Government to operate the Inter-Regional Flight Network (IRFN) until June 2027. This agreement outlines the requirements to operate the route, including providing appropriate service levels and fares.

The financial contribution of local government has contributed to the development of this expanded regional service. Operating through the WA State government supported Inter Regional Flight Network, the extension of the network to Geraldton was achieved with a \$4.05 million injection from the state government, and a similar combined contribution from local governments City of Greater Geraldton, City of Karratha, Town of Port Hedland, and the Shire of Broome. In return, Nexus will put a cap on ticket prices for residents of these local government areas. This investment has allowed Nexus Airlines to invest in a higher capacity 76-seat aircraft, which in turn will reduce airfares and increase overall passenger experience on the aircraft⁹. There is an ongoing role for government to ensure that initiatives lie this remain sustainable.

Connecting Northern Australia

Given the proximity of the Kimberley to the Northern Territory, and the growing synergies across Northern Australia as outlined by the Federal Government in the Our North Our Future, White Paper on Northern Australia¹⁰ consideration of regulated routes that will economic growth opportunities across the northern Australia region are needed in the Aviation Green Paper. A recommendation from the Northern Australia White Paper is to establish a business stakeholder group to develop a plan for improving aviation and surface transport connections in northern Australia¹¹. This should be considered in national aviation policy. For example, the Kimberley-Darwin route competing on is not government subsidised. If that changed it would devolve positive social and economic benefits to the region. More affordable airfares will increase passenger numbers, which will in turn make the routes more financially sustainable.

⁹ <https://www.kdc.wa.gov.au/nexus-airlines-takes-flight-in-the-kimberley-region>.

¹⁰ <https://www.infrastructure.gov.au/sites/default/files/documents/nawp-fullreport.pdf>.

¹¹ <https://www.infrastructure.gov.au/sites/default/files/documents/nawp-fullreport.pdf>. P 13.



Case study Broome – Kununurra – Darwin Route

Airnorth has had a monopoly on the Darwin-Kununurra-Broome passenger route, which allows people from the Kimberley's two main hubs to connect with the closest capital city. Nexus airlines entered this market in 2023. An outcome of this competition is that Airnorth's Kimberley fares have dropped significantly; by well over a third in many instances¹². "Whilst lower prices are good for our region, there is a need to ensure that they are financially sustainable and not predatory with the effect or likely effect of causing a rival to leave the market. This shows a role for government in ensuring that intrastate routes provide the region with affordable airfares which are for our region in the long term.

Question 3 - What opportunities do emerging aviation technologies present for regional and remote Australia?

Given the large geographic area, sparse and dispersed populations and number of remote Aboriginal communities across the Kimberley the use of unmanned aerial vehicles (UAV), more commonly known as drones, may provide a new measure to support community resilience and recovery. Research into the use of drones and emergency technology may provide information that could assist recovery of impacted communities during floods and cyclones in the Kimberley region.

Drones are defined as a "powered, aerial vehicle that does not carry a human operator, uses aerodynamic forces to provide vehicle lift, can fly autonomously or be piloted remotely, can be expendable or recoverable, and can carry a lethal or nonlethal payload. A drone has its flight controlled either autonomously by on-board computers or by the remote control of a pilot on the ground or in another vehicle¹³.

As drones can cover large areas of land quickly, and data collected through aerial imaging can provide critical information, they are increasingly being used in a natural disaster situation. The Commonwealth Department of Infrastructure, Transport, Communications and the Arts has developed a number of case studies on how drones are being used for disaster relief. They showcase the work of Disaster Relief Australia (DRA), a volunteer organisation comprising military veterans and first responders who are certified by the Civil Aviation Safety Authority to conduct aerial mapping and damage assessments using drones to provide rapid response to disasters¹⁴.

DRA advise that over the last three years they have carried out over 889 post-disaster flights using drones across Australia and the Asia-Pacific. The drones are used for thermal imagery, landslip topography, imagery analysis, debris and moisture calculation. This is done to provide an immediate disaster response and to complement the work of emergency service agencies and affected communities. In 2022, DRA provided assistance during the Queensland and New South Wales flood recovery by using 218 drone flights to map and assess damage. This

¹² <https://www.abc.net.au/news/2023-11-08/nexus-airnorth-outback-airline-price-fight/103071532>.

¹³ <https://rmas.fad.harvard.edu/unmanned-aircraft-systems-drones>

¹⁴ <https://www.drones.gov.au/drones-australia/how-are-drones-being-used-australia/disaster-relief>



helped prioritise relief efforts and identified where debris needed to be cleared to provide access.

The Australian National University-Optus Bushfire Research Centre of Excellence is in the process of developing an integrated, hi-tech solution for early bushfire detection. Along with the use of long endurance uncrewed vehicles (drones), they are combining different remote sensing platforms including satellites, cameras on fire towers and ground sensors in the Australian Capital Territory. They are evaluating the different methods and technologies to determine under which scenarios each technology is most effective and the extent to which they outperform or complement current practices¹⁵.

At an international level, the United Nations International Children's Emergency Fund (UNICEF) is exploring how drones can be used in emergency situations and incorporated into their logistics systems¹⁶.

Question 4 - What are specific issues experienced by the regional and remote aviation sector in the context of decarbonisation? What elements should the Transport and Infrastructure Net Zero Roadmap and Action Plan include to recognise the specific circumstances of the regional and remote aviation sector?

Decarbonisation needs to consider the economics of the broader benefits of the decarbonisation of regional aviation to reducing the impact of global warming and natural disasters.

Many regional local governments do not have the knowledge and skills to support them to transition to net zero. A dedicated regional team within government, and new funding, is needed to provide information and guidance to support net zero transition in the context of emerging technologies. The right policy and regulatory settings will need to be in place at a State and Federal level to support local government airport owners.

Local government airport owners will need new investment in regional airport infrastructure to support an aviation sector that supports emissions reduction targets while growing jobs and innovation. Specific measures will include new investment for developing net zero reduction plans for the airports, and new investment to implement these plans. This could include investment into renewable technologies. Also, there will need to be investment to support regional airports to work together to plan for the supply chains and the storage of sustainable aviation fuel (SAF).

Nexus CEO Michael McConachy has been quoted as stating that more fuel-efficient planes may make the economics of regional aviation work. Mr McConachy stated, "One of the challenges in Western Australia is you've got very large distances and relatively small population bases," he says. "We've looked at bringing in an aircraft that's not necessarily as

¹⁵ <https://knowledge.aidr.org.au/resources/ajem-october-2022-towards-an-integrated-hi-tech-solution-to-detect-small-fires/>

¹⁶ <https://www.unicef.org/innovation/stories/disaster-relief-drones-provide-life-saving-aid>



big as some of the others that have been used in the area. It's a next-generation aircraft. They're very fuel efficient, so we burn about 30 to 40 per cent less fuel ... as a similar-sized jet aircraft¹⁷." To support this, regional airports will need new investment to upgrade infrastructure in the context of a decarbonisation agenda. This includes support for new fuel, fuel storage facilities and transport. Also, staff will need to become skilled in the use of new technologies.

Question 5 - What opportunities are there to develop domestic bioenergy feedstock production and collection in Australia's regions, and what policy settings from Government would support this?

A focus on the opportunities that Northern Australia, in particular the Kimberley region can provide for the development of bioenergy feedstock production to support the development of a diversified portfolio of feedstocks for domestic Sustainable Aviation Fuel products. Policy settings that would support this include building and consolidating on the opportunities across the Kimberley to develop domestic bioenergy feedstock production and collection. This would include:

- Targeted support for research and trial sites in the Ord River Irrigation Scheme
- Diversification of crops on pastoral leases
- Utilisation of transport infrastructure and agricultural supply chain routes across the Kimberley including the Kimberley ports of Broome and Wyndham
- Using this opportunity to close the gap in Aboriginal employment and business development in the Kimberley working in partnership with Kimberley Aboriginal organisations and businesses.

Question 6 - What are the challenges faced by regional and remote aviation and airports posed by our changing climate?

The challenge is an increased reliance on air services and airports as part of the natural disaster emergency planning, response and recovery process, and the need for new investment to ensure that they are fit for purpose.

An increase in natural disasters such as tropical lows and cyclones leading to an increase in floods. In our region this means that roads will be closed for longer periods. Airport infrastructure needs to be fit for purpose to support and emergency management response and recovery. This includes adequate airport infrastructure for emergency management planes. Local governments do not have the resources to do this work without support from State and Federal Government.

The paper needs to more strongly recognize the critical role of regional and remote airports in emergency management and natural disaster planning, preparation, response and recovery. Airports are critical transport infrastructure and often provide the only reliable transport mode

¹⁷ <https://www.afr.com/companies/transport/the-economics-of-regional-aviation-are-struggling-to-stack-up-20230713-p5do59>,



during natural disasters such as cyclones and floods when roads are often cut off, not just for remote Aboriginal communities but for regional towns. The following case study of the 2023 Kimberley Floods highlights the critical role of regional airports and the need for regional airport infrastructure is adequate for an emergency response and recovery efforts. Investment in capital infrastructure should not be contingent on local government resources to apply to competitive grant funding rounds for capital upgrades. This investment needs to be prioritised by State and Federal governments as a matter of urgency.

Also, there is a limited window of opportunity in northwest Australia of undertaking capital works program due to weather events. The changing climate will make capital works delivery more challenging. The following case study of the 2023 Fitzroy Crossing floods highlights these challenges.

Case Study – 2023 Kimberley Floods

The 2023 Kimberley Floods highlighted the critical importance of airports to support the flood response and recovery efforts and save lives.

The Kimberley floods occurred between the Christmas and New Year holiday period. The Kimberley region of Western Australia is prone to tropical cyclones. Also, to tropical lows which are a damaging weather system and a major cause of flooding.

The town of Fitzroy Crossing in the Shire of Derby West Kimberley is 2,372.0 km northeast of Perth. It is located on the Great Northern Highway 300km west of Halls Creek, 260 km east of Derby and 396 km east of Broome.

The destruction of the Great Northern Highway bridge over the Fitzroy (Martuwarra) River at Fitzroy Crossing, along with destruction of a 10-kilometre section of Great Northern Highway at Willare Crossing (between Broome and Derby), severed road transport between the East Kimberley and Perth, across the East and West Kimberley and between Broome and Derby via road. These road closures led to supply chain disruption and food insecurity across the Kimberley region. With the destruction of the bridge, temporary access was provided to Class 3 vehicles to deliver goods into the Kimberley via the Northern Territory and South Australia. Freight costs increased by 75-100 percent. Residents of the East Kimberley faced a near-5,000-kilometre road trip to travel home from Perth. In February 2023 the closure of the Victoria Highway west of Kununurra due to flooding in the Northern Territory, effectively made the East Kimberley an Island, cut off from Perth and Darwin.

Road closures had significant impact on flood response and recovery efforts. Regional airports such as Broome, Derby, Fitzroy Crossing, Kalumburu and the East Kimberley Regional Airport became critical to emergency management efforts. People from surrounding remote Aboriginal communities were evacuated by helicopter into Fitzroy Crossing then onto Broome and to Derby.

Fitzroy Crossing Airport

A fleet of rescue helicopters were used to carry out emergency evacuations. The Australian Defence Force (ADF) deployed C-27J Spartans, C-130J Hercules, MRH-90 Taipans and CH-47 Chinooks to Broome to evacuate residents and to transport supplies. The ADF states that C-130 Hercules and C-27 Spartan aircraft are well suited to working in remote regions. The



Hercules is particularly well suited because it can carry quite a lot of personnel and equipment and we can also get into short airfields and remote communities that other commercial aircraft or larger airlift aircraft would not get into¹⁸.

Findings – Fitzroy Crossing Airport

- ADF planes couldn't land at Fitzroy Crossing with the airstrip underwater. There were issues around the subsoil of the runway pavement, given the size and weight of the ADF aircraft. This led to delays before the ADF planes could land at Fitzroy Crossing.

East Kimberley Airports

The Shire of Wyndham East Kimberley Natural Disaster Impact Community Resilience Study, 2023, funded by the National Emergency Management Agency (NEMA) and undertaken by NAJA Business Consulting put forward a number of recommendations to improve disaster resilience for the East Kimberley Regional Airport and the Wyndham and Kalumburu Airports. The following are the findings for the key airports in the Shire of Wyndham East Kimberley.

Findings – East Kimberley Regional Airport

The East Kimberley Regional Airport was critical for goods and services to be flown into Kununurra. C130s and Spartan 124s flew in over 3 days. Food was quarantined in Darwin then the planes flew into Kununurra. Also, medical supplies were flown in via general freight. The Resilience Study recommended bringing forward components of the airport Masterplan¹⁹. Key findings:

- The length of the airport runway limits the airport to Code 3C aircraft – a runway extension to accommodate Code 4C aircraft to support better emergency response and recovery.
- Development of a freight hub or facilities for the storage of cold and dry foods at the airport to support an emergency response and recovery and ensure food security
- Upgrade of the airport access road is not sufficient to enable road trains to drive through to receive freight²⁰.

Findings - Wyndham Airport

- The runway does not have large turning nodes for C130s or Spartan aircraft. It needs to be extended to enable these aircraft to land to support emergency response and recovery.
- The runway requires an upgrade to support emergency response and recovery²¹

Findings Kalumburu Airport

- The airstrip, runway, taxiway and apron pavements are not fit for purpose for an emergency response and require resealing

¹⁸ <https://www.defence.gov.au/news-events/news/2023-01-08/raaf-moves-emergency-teams-kimberley-0>

¹⁹ Shire of Wyndham East Kimberley, 2017, East Kimberley Regional Airport Masterplan.

https://www.swek.wa.gov.au/profiles/swek/assets/clientdata/final_ekra_master_plan_aug2017.pdf.

²⁰ Shire of Wyndham East Kimberley Natural Disaster Impact and Community Resilience Study, Shire of Wyndham East Kimberley 2023, Unpublished

²¹ Op cit



- There is no aircraft fuel storage on site to support an emergency response and recovery effort²².

Question 7 How do local governments and aerodrome operators consider climate resilience when managing their aviation assets?

As outlined in question 6 the impact of the 2023 Kimberley floods across the region has made climate resilience a critical factor in the management of aviation assets. For example, a key challenge for WA regional airport owners in considering climate resilience is that the Disaster Relief Funding Arrangements WA (DRFWA) does not fund betterment. If infrastructure is damaged DRFWA will not fund assets to be built back better. There is a need to integrate this more broadly into a zero-emissions reduction framework.

Chapter 8 – Fit-for-purpose agencies and regulations

Are there any specific initiatives that should be supported globally, regionally and nationally to continue improvement in international passenger facilitation?

The increased use of the East Kimberley Regional Airport and Broome International Airport as international airports to facilitate tourism and business traffic to Northern Australia and to enable outbound resident and tourism travel.

How can Government optimise partnerships with industry to streamline the movement of passengers and modernise the border, while also enhancing security?

Increased biosecurity presence at major Kimberley airports to facilitate international passengers and international and domestic cargo.

In the air cargo environment, how could industry and Government better work together to leverage advances in technology as well as industry investments in infrastructure and technology to streamline movement of cargo?

Increased investment for regional airport infrastructure and services.

Chapter 10 – Future industry workforce

Would an analysis of future skills and workforce needs help position the aviation industry to pre-emptively respond to emerging needs?

- Yes, an analysis of future skills and workforce needs help position the aviation industry to pre-emptively respond to emerging needs
- This analysis should look at the current and future workforce needs of regional airports.

²² Op cit