Aeria Management Group

AERIA Bankstown Airport Camden Airport

30 November 2023

Kai Everist
Assistant Secretary
Aviation White Paper Taskforce
Department of Infrastructure, Transport, Regional Development, Communications and the Arts
GPO Box 594
Canberra ACT 2601

Sent by email to: aviationgreenpaper@infrastructure.gov.au

Dear Mr Everist,

Re: Submission to the Aviation Green Paper

Aeria Management Group (AMG) welcomes the opportunity to make this submission on the Commonwealth Government's *Aviation Green Paper: Towards 2050* (the "Green Paper").

AMG is the Airport Lessee Company for Bankstown Airport and Camden Airport, in South-West Sydney, and is owned by Aware Super, one of Australia's largest superannuation funds, with $150 billion under management and more than 1.1 million members.

With $450 million invested in our general aviation airport precincts over the past 10 years and a further $200 million in the forward investment pipeline, AMG is committed to the continued sustainable growth and evolution of Bankstown Airport and Camden Airport to meet current and future aviation needs.

We endorse the statements in the Green Paper that general aviation underpins the delivery of critical education and health services, emergency response services and economically important activities, such as flight training. Similarly, we welcome the Green Paper's findings regarding the opportunities for general aviation to facilitate and drive the transition of Australia's aviation sector towards emerging aviation technologies and net zero.

Our submission contains a range of practical recommendations to realise such opportunities and to support more broadly the aims of the Green Paper to evolve Australian aviation towards 2050.

Kind regards,

Daniel Jarosch
Chief Executive Officer
Aeria Management Group

AVIATION GREEN PAPER
AERIA MANAGEMENT GROUP SUBMISSION

TABLE OF CONTENTS

Executive Summary 3
Detailed Responses 7
Building the essential role of general aviation airports 7
Statewide economic ecosystem supported by Bankstown Airport and Camden Airport 7
Need for whole-of-airspace review of Greater Sydney and other key capital cities 8
Preparing for the expansion of general aviation operations 9
Recommendations 10
Airport development planning processes and consultation mechanisms 13
Noise and noise sharing 13
Land use planning on-site at airports 14
Improvement of planning triggers 15
Role and functions of the Airport Building Controller 16
Environmental regulation and contamination 17
Recommendations 17
Emerging Aviation Technologies and maximising aviation's contribution to net zero 20
Bankstown Airport as an innovation incubator 20
Recommendations 22
Future Workforce 26
Recommendations 26
Conclusion 29

Appendix 1 – General Aviation economic ecosystem 31
Appendix 2 – Case studies 32

EXECUTIVE SUMMARY

The Bankstown Airport and Camden Airport precincts provide significant enabling infrastructure and facilities to support general aviation and innovation across Sydney, NSW and Australia.

These assets are co-located with key manufacturing centres, emerging technology hubs, skilled workforce populations, and customer and community services that provide a launchpad for current operations and future growth, aligning them clearly with the strategic directions outlined in the Green Paper.

Combined, Bankstown Airport and Camden Airport:

- Activate an estimated $2.6 billion in turnover through onsite airside and landside operations.
- Have a dynamic economic ecosystem and provide enabling infrastructure that supports a diverse range of airside and landside businesses and activities (see Appendix 1).
- Support an estimated 4550 direct, on-site jobs across landside and airside operations and a further 4150 jobs through the related supply chain, totalling almost 9000 jobs (REMPLAN, 2023).
- Generate an estimated $1.51 billion in annual value-added benefit to the NSW economy (REMPLAN 2023).

This submission provides feedback and recommendations on several key aspects of the Green Paper:

General aviation (Green Paper 7)

- The Green Paper rightly positions general aviation as the launchpad of sustainable aviation and Advanced Air Mobility (AAM) and as essential to ensuring pilot and engineer pipelines to meet the evolving needs of the sector. Building innovation hubs for such technologies at metro general aviation airports will drive the aviation sector's role in the national transition to net zero. Innovation hubs at metro general aviation airports will also enhance regional connectivity and collaboration with regional airports.

  Metro general aviation airports have the unique mix of factors that best suit start up and scale up aeronautical operations, including lower cost space, complementary landside operations, strategic flexibility, prime locations and smaller aircraft fleets. Adding government support to this mix would help enable and facilitate such innovation hubs and realise Australia's potential to be a leader in emerging aviation technologies.

- The Green Paper's forecast increase in aircraft movements from 3 million to 8-9 million by 2040-50 – largely driven by emerging aviation technologies – will substantially increase airspace congestion and related safety risks and hazards for all aviation operators in key capital cities. In Greater Sydney, impending airspace restrictions related to the commencement of Western Sydney International (WSI) Airport, in 2026, further highlight the urgent need for a comprehensive airspace review to ensure safe and equitable aircraft movements, including for AAM aircraft.

We recommend:

1. Greater recognition of the key role of general aviation airports in underpinning essential services and emerging aviation technologies, including their critical contribution to enhancing regional connectivity and driving the national transition to net zero.

2. Government funding and/or financial incentives to establish innovation and decarbonisation infrastructure hubs at metro general aviation airports. Such investment would drive the evolution of Australia's aviation sector and national transition to net zero. The critical role of general aviation airports should be similarly recognised in the Commonwealth Government's Transport and Infrastructure Net Zero Roadmap and Action Plan.

3. A whole-of-airspace review of key capital city markets, starting with Greater Sydney. The review should encompass the full range of current and emerging AAM aircraft, including drones, and full suite of airspace, including Australian Defence Force airspace boundaries and restrictions. We support, in principle, similar recommendations within the Green Paper submissions by the General Aviation Advisory Network (GAAN) and Australian Airports Association (AAA), while also noting that the review should adopt global best practice approaches to airspace management. This includes the need to minimise safety risks and hazards amid increasingly congested airspace corridors in major capital cities.

4. Adoption of global best practice and regulations in determining safe and equitable flight paths, including future use of AAM aircraft and remote piloted aircraft.

Airport development planning process and consultation mechanisms (Green Paper Chapter 6)

- AMG's investment of $450 million in our airport precincts over the past decade and a further $200 million in the forward investment pipeline underline our commitment to long-term sustainable growth. However, such investment has occurred largely *despite,* not because of, current planning processes, timeframes and expenses.

- The Green Paper's forecast of a significant increase in aircraft movements, driven by emerging aviation technologies, heightens the need for an effective balance between the economic, employment and transport benefits of such growth and potential community concerns about aircraft noise and privacy. AMG has a strong commitment to engaging and consulting with the community and all levels of government to minimise such concerns. But governments must be more proactive and consistent in informing and educating the community about airports and aircraft movements, including the benefits of an expanded aviation sector. A clear and consistent measure of noise impacts and the development of an outcomes-based framework for emerging aviation technologies will be critical to the growth of the sector.

- As recommended in the Green Paper, the current regulatory framework under the Airports Act must be modernised to deliver productivity, investment and efficiency. The significant cost and time to produce and progress a Major Development Plan (MDP) is a brake on the capacity of airports to invest in economically significant infrastructure and facilities and to deliver substantial projects for the benefit of the aviation industry and broader community. A review of planning processes should include MDP thresholds, the role and function of the Airport Building Controller (ABC) and approval timeframes for minor developments.

We recommend:

1. Increased obligations on local councils and authorities to inform residents living under or in proximity to flight paths about airport infrastructure, aircraft movements and aircraft noise – including the positive economic and social benefits of aviation. Any such community information and education program should extend beyond existing planning policy frameworks, including airport Master Plans and MDPs.

2. Introduction of measures to ensure effective land use planning that minimise the encroachment of sensitive land uses on airports.
3. Development of clear and consistent strategies and processes for the application of the National Airports Safeguarding Framework (NASF) in state and commonwealth planning systems, to improve the certainty of planning outcomes.
4. Increased monetary threshold for airport MDPs to $50m for non-aviation developments and $100m for aviation-related developments. This reform should form part of a wholesale review of MDP triggers to enhance investment, efficiency and productivity, including the need for exemptions or streamlining for developments with minimal environmental impacts and for innovation projects that support emerging aviation technologies and AAM.
5. Review of the role and functions of the ABC against planning and building assessment compliance processes in other jurisdictions. The review should be designed to improve ABC processes and accelerate building approval timeframes, to bring them closer in line with off-airport processes.
6. Adoption of consistent practical and risk-based frameworks for the interpretation and application of the Airports (Environment Protection) regulations 1997, to permit certain developments without the need to undertake detailed investigations or remediation of specific sites.

Emerging aviation technologies and maximising aviation's contribution to net zero (Green Paper Chapters 5 & 9)

- As noted in the Green Paper, general aviation airports are strongly positioned to be the launching pad for emerging aviation technologies and the transition to net zero. Metro general aviation airports, in particular, offer significant aviation infrastructure, appropriate planning overlays, diverse aviation ecosystems, access to a large skilled workforce and complementary onsite operations, such as manufacturing and logistics businesses.

  Compared with Australia's major airports, metro general aviation airports' advantages of appropriately sized leasable hangars, lower rental costs, operational flexibility and agility and diversity of complementary land-side businesses and supply chains make them the ideal base for developing and testing new technologies. Already, Bankstown Airport is emerging as a key innovation hub for AAM, with multiple airport operators developing electric and hydrogen propulsion technologies and drones for essential uses, such as emergency medical care, patient transfers, search-and-rescue missions and freight.

- AMG endorses the Green Paper's statement that Australia is positioning itself to become a leader in the uptake and development of emerging aviation technologies. Such technologies will also play an important role in the transition to net zero. Government support will be critical to realising the opportunities presented by emerging aviation technologies for Australia's aviation sector and the nation.

We recommend:

1. The Commonwealth Government establish an Aviation Infrastructure Fund for metro general aviation airports, designed to facilitate, develop and support emerging aviation technologies, AAM and net zero operations.
2. The Commonwealth Government establish an Aviation Innovation Fund targeted towards the adoption of emerging aviation technologies by aviation operators, to help drive the take-up of such technologies and the related evolution of the aviation sector.

3. Exemptions from MDP processes and requirements or streamlining for innovation projects that support emerging aviation technologies and AAM and have minimal impacts on the environment or community.
4. Representation by metro general aviation airports on the Commonwealth Government's Advanced Air Mobility Consultative Committee and/or National Emerging Aviation Technologies Consultative Committee, to assist in the development of an Advanced Air Mobility Strategy.
5. Representation by metro general aviation airports and/or emerging aviation technology or AAM operators on the Australian Jet Zero Council.

Future workforce (Green Paper Chapter 10)

- As noted in the Green Paper, Australia is experiencing an immediate, persistent and growing challenge to attract a range of key aviation personnel, such as pilots and aircraft engineers. This shortfall is due to factors such as the Covid-19 pandemic, tight labour market, rising education costs and the lack of consistency in training or recognition of education pathways across the industry.
- In the absence of reforms, the scale of this challenge and related skills gaps will grow in line with the forecast increase in aircraft movements over coming decades.
- A strong skills pipeline supporting current and future industry needs is critical to the successful evolution of Australia's aviation sector. Metro general aviation airports are well placed to support that skills pipeline, given their diverse aviation ecosystems and proximity to large populations. We agree with the GAAN's position that ineffective pathways are a primary challenge that the White Paper should seek to overcome. Reforms to skills and licensing pathways are necessary to ensure training is suitable, uniform, affordable and efficient, no matter where it is undertaken.

We recommend:

1. Alignment of the objectives, training and qualification pathways of the Australian Skills Quality Authority (ASQA) and Civil Aviation Safety Authority (CASA) with the Australian Qualifications Framework, to reduce barriers to career progression and movement.
2. Introduction of fee-free study or fee concessions for training, education and qualifications related to emerging aviation technologies and AAM, including for pilots and aircraft engineers.

DETAILED RESPONSES

BUILDING THE ESSENTIAL ROLE OF GENERAL AVIATION AIRPORTS (GREEN PAPER CHAPTERS 4-7 & 9)

Statewide economic ecosystem supported by Bankstown Airport and Camden Airport

As the general aviation airports servicing Greater Sydney, Bankstown Airport and Camden Airport play a unique and high-value role in supporting essential goods and services via airside and landside assets. Appendix 1 maps the ecosystem of operations at these airports and the interdependencies between the provision of such goods, services and operations.

Bankstown Airport and Camden Airport benefit from their general aviation operations and interplay between landside and airside infrastructure and services, which deliver value to the aviation sector, community, industry and economy. Notably, this contribution includes:

- Managing and working with more than 180 tenants across Bankstown Airport and Camden Airport (AMG, 2023).
- Employing 15 per cent of Greater Sydney's Aircraft Maintenance Engineers (AMEs) and Licensed Aircraft Engineers (LAMEs) and 12 per cent of Air Transport Professionals (ABS, 2021).
- Eight aviation businesses involved in emergency services across NSW, with fire services alone maintaining and operating more than $41 million of assets on-site (Urbis, 2023).
- Facilitating emergency services and patient transfers for communities in regional and remote areas – across NSW, the ACT and Queensland – via Bankstown Airport and Camden Airport operators such as the Royal Flying Doctor Service, Rural Fire Service and Little Wings, which provides free medical transfers for seriously ill children.
- Facilitating the transportation of an estimated 250 bodily organs and critical medical supplies each year and 1500 annual flights transporting blood and plasma products, as well as housing 75 per cent of the Newborn and Paediatric Emergency Transport Service's (NETS) retrieval ambulances (AMG, 2023).

As noted in the Green Paper, general aviation is vital for pilot and engineer training, emergency services, patient and medical transfers, regional connectivity and innovation and sustainability. The success and ongoing growth of services and operations at Bankstown Airport and Camden Airport are strategically and economically important to the Australian economy, employment and community. The location of these airports in the geographic centre of Greater Sydney has played a key role in delivering continued growth across core services, such as:

- Pilot and engineer training.
- Emergency services and training.
- Regional connectivity and services, including medical flights, chartered flights and freight services.

- Emerging aviation technologies, innovation and sustainable technology.

As highlighted in the case study on AAM firm AMSL Aero (Appendix 2), which is based at Bankstown Airport, the location of aerospace businesses in Australia is vital. Bankstown Airport and Camden Airport are competitively priced, conveniently located and infrastructure enabled airports for businesses and essential services.

In considering their customers' supply chain, AMSL Aero estimates 28 per cent of regional airports are in some way connected directly to Bankstown Airport. Regional airports in NSW require some level of access to Greater Sydney but Sydney Airport and the future WSI Airport are not viable nor accessible options for smaller craft and operations.

The Greater Sydney Basin provides access to the broadest and most diverse talent, capital and industry pool in NSW. The Western Parkland City (Western Sydney) is projected to reach a population of 1.67 million by 2050 (TfNSW 2023, ABS 2023). This represents an increase of more than 50 per cent from 2022 and an average annual population increase of 1.5 per cent – higher than the forecast growth for Greater Sydney at 1.1 per cent for the same period.

This growth not only places Bankstown Airport and Camden Airport at the centre of the future population boom but confirms that Greater Sydney will be the natural source from which businesses and training schools will draw future pipelines of workers and where innovative solutions and partnerships will continue to be forged.

The co-location of emergency services, air and land freight, flight and engineering schools and charter services at Bankstown Airport and Camden Airport has created an innovative and thriving general aviation industry within Sydney. That ecosystem supports not only Sydneysiders but regional airports and regional communities, including through the provision of emergency services, medical services, and enhanced regional connectivity.

It will be vital that the Aviation White Paper specifically recommends policies to support the continued development of general aviation operations and services, such as those at Bankstown Airport and Camden Airport, for the enhancement of metropolitan and regional economies and communities.

Need for whole-of-airspace review of Greater Sydney and other key capital cities

The Green Paper notes that airspace is expected to become increasingly congested because of the significant uptake of emerging aviation technologies and AAM aircraft, such as eVTOLs and drones (2023: 140). In Greater Sydney, the commencement of WSI Airport from 2026 will also see a significant rise in aircraft movements along increasingly narrow corridors, resulting in additional airspace congestion. As stated in the WSI Airport Draft Environmental Statement (EIS), released in October 2023, this change will potentially result in increased safety risks and hazards for all aircraft in Greater Sydney, including emergency services.

The estimated threefold increase in aircraft movements over coming decades, outlined in the Green Paper, coupled with the impacts of WSI Airport, create an urgent need for a comprehensive airspace review of the Greater Sydney Basin. The review should encompass traditional and AAM aircraft and prioritise the need to ensure safe and equitable passage for all aircraft operators, including a review of Australian Defence Force airspace boundaries and restrictions.

As recommended in the Green Paper submissions of the AAAA and GAAN, the nation's other key capital city networks will similarly require a comprehensive airspace review to facilitate emerging technologies and minimise safety risks and hazards. AMG endorses, in principle, the recommendation for a national airspace review of key capital cities, starting with Greater Sydney.

As detailed in Appendix 2, the United Kingdom and Tri-State Area in the United States – which have some of the busiest airspace in the world – have recently undertaken comprehensive assessments of their respective airspace and management processes for aeronautical activity. Such markets should be looked to as a guide for evolving and modernising airspace management.

The need to set cohesive and comprehensive policies and approaches for traditional aircraft alongside AAM aircraft, including drones and eVTOL aircraft, is pressing. A national airspace review should consider all aspects that impact airspace use, including noise, safety, boundaries between in-air aircraft and interactions between piloted and remotely piloted aircraft. To optimise airspace use in line with net zero targets, the review should seek to facilitate increasing numbers and diversity of aircraft in a way that minimises time in air and fuel burn. Further, the review should consider how ground operations might be better coordinated across all airports within an airspace.

The recent release of WSI Airport flight paths and airspace highlight the urgent and growing need for such a review in Greater Sydney. As outlined in the WSI Airport Draft EIS, airspace currently used for flight training from Bankstown Airport will be significantly reduced and/or lost, forcing operators to travel greater distances at significantly increased costs – estimated in the Draft EIS as approximately $15 million a year in 2026 and increasing by 1 per cent a year (WSI Airport Flight Path EIS, October 2023).

These impacts will undermine the Green Paper's objective to promote the ongoing growth of flight schools and training. Bankstown Airport flight schools will see an increase in flight time for pilot training from the industry-standard 1 hour start-up to shutdown sortie length, to 1.2 hours for recreational pilot licences and 1.1 hours for private pilot licences. In turn, this will increase the marginal per-lesson cost by $91.80 and $50.60, respectively (WSI Airport EIS, 19-11). Bankstown Airport operators report that these increases will significantly impact their businesses and force some to reduce or stop operations.

This outcome jeopardises the future of flight schools and other training pathways supported at Bankstown Airport and Camden Airport. This will have a substantial impact on Greater Sydney and NSW, given that 15 per cent of AMEs and LAMEs and 12 per cent of Air Transport Professionals in Greater Sydney currently work within these general aviation catchments (ABS, 2021). This result comes amid global shortages of pilots and engineers and the growing challenge, noted in the Green Paper, to provide the workforce needed to facilitate increased aviation demand.

Given such challenges and safety concerns, AMG recommends a comprehensive national assessment and review of airspace across key capital cities, starting with Greater Sydney. This review should account for current and projected aircraft operations, including the growing need for flight training schools, and the future growth of AAM aircraft to support the evolution of Australia's aviation sector towards 2050.

Preparing for the expansion of general aviation operations

General aviation is at the centre of broader changes and trends occurring across the entire aviation industry, as detailed within the Green Paper (Section 7).

The new air fleet

In line with the transition to decarbonisation, there will be a gradual shift from the existing Cessna fleet to aircraft such as the composite fibre Diamond or Cirrus aircraft and carbon fibre aircraft with hydrogen and/or electric engines. In preparation for this new fleet, additional investments will be needed to ensure efficient, carbon-neutral refuelling, potentially through provision of liquid nitrogen on site at metro general aviation airports.

As noted in the Green Paper, general aviation aircraft are typically old and not necessarily compatible with emerging Sustainable Aviation Fuel (SAF). General aviation operators, many of

whom are small businesses or recreational in nature, will need government support and incentives to facilitate the transition to modern, low carbon emissions aircraft.

The return of international student cohorts

Prior to the Covid-19 pandemic, flight school students at Bankstown Airport and Camden Airport were primarily drawn from international markets. International student numbers are growing but yet to return to these levels. Further, the impact of Covid-19 highlighted ongoing vulnerabilities in Australia's flight training sector.

To minimise such fragility, the Commonwealth Government should invest in and support enabling infrastructure for flight schools at general aviation airports, such as upgraded facilities, onsite student accommodation and other amenities Such measures would help to ensure students are engaged in study and practical training full-time, while also positioning Australian flight schools as premium offerings for students domestically and from overseas.

Recommendations

1. Greater recognition of the key role of general aviation airports in underpinning essential services and emerging aviation technologies, including their critical contribution to enhancing regional connectivity and driving the national transition to net zero.
2. Government funding and/or financial incentives to establish innovation and decarbonisation infrastructure hubs at metro general aviation airports. Such investment would drive the evolution of Australia's aviation sector and national transition to net zero. The critical role of general aviation airports should be similarly recognised in the Commonwealth Government's Transport and Infrastructure Net Zero Roadmap and Action Plan.
3. A whole-of-airspace review of key capital city markets, starting with Greater Sydney. The review should encompass the full range of current and emerging AAM aircraft, including drones, and full suite of airspace, including Australian Defence Force airspace boundaries and restrictions. We support, in principle, similar recommendations within the Green Paper submissions by the General Aviation Advisory Network (GAAN) and Australian Airports Association (AAA), while also noting that the review should adopt global best practice approaches to airspace management. This includes the need to minimise safety risks and hazards amid increasingly congested airspace corridors in major capital cities.
4. Adoption of global best practice and regulations in determining safe and equitable flight paths, including future use of AAM aircraft and remote piloted aircraft.

Direct responses to Green Paper questions:

Question	AMG Response
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? (Chapter 2)	The trends identified in the Green Paper are broadly consistent with the needs of general aviation airports such as Bankstown Airport and Camden Airport. Additional considerations should include ways to better accommodate and attract international intakes of flight training and aircraft engineer students at general aviation airports.
Do policy and regulatory settings adequately facilitate the general	No. Airspace regulation and planning reforms are required to support the evolution of Australian aviation. A whole-of-airspace review for Greater Sydney and

Question	AMG Response
aviation sector's evolving role in Australian aviation? (Chapter 7)	other key capital city markets is required to accommodate emerging aviation technologies and AAM aircraft, reduce safety risks and adopt global best-practice approaches to airspace management. Separately, as detailed below, regulatory reforms are required to development settings, such as the application and operation of MDP processes.
Are there any changes to policy and regulatory settings that might facilitate the general aviation sector's evolving role in Australian aviation, including through protections at general aviation airports and supporting the transition to a sustainable, net zero general aviation sector? (Chapter 7)	Yes. The crucial role of metropolitan general aviation airports, including in enhancing regional connectivity, must be better reflected in government incentives and funding. Investments in enabling infrastructure at federally-leased metro general aviation airports – which have the benefits of access to large skilled workforces, economies of scale and an underlying national framework – will support regional airports in transitioning to net zero and enhance regional connectivity.
How can the flight path design principles be improved? (Chapter 6)	Australia should adopt global best practice and regulations to improve its flight path design principles. Markets such as the UK and US treat airspace as a "natural resource" and optimise airspace, based on a multifaceted ecosystem approach that considers the unique roles played by aircraft of all sizes and types. In line with this approach, policies to enable the safe and equitable sharing of airspace between traditional and AAM aircraft, including remote piloted aircraft, should be proactively adopted to improve the adoption and upscale of emerging aviation technologies. Further, given the conical nature of Australian airspace constraints, shared airspace should be transitioned to a cylindrical calibration to facilitate increased aircraft movements.
What should be included in relation to aviation in the Australian Government's Transport and Infrastructure Net Zero Roadmap and Action Plan (including for sectors, such as general aviation and airports)? (Chapter 5)	The vital role of general aviation airports in driving the transition towards net zero should be affirmed and endorsed in the roadmap and action plan. Metro general aviation airports, in particular, will be the launching pad of new, sustainable aircraft that will play a key role in the transition to net zero. Government support for enabling infrastructure at those airports will ensure Australia plays a leading role in the development of such technologies and innovation ecosystems.

Question	AMG Response
Given there are a number of measures that industry and government could pursue to help achieve net zero by 2050 in aviation, are there specific measures that more emphasis and support should be given to? (Chapter 5)	Governments should establish or expand infrastructure funding targeted at innovation and decarbonisation at general aviation airports, such as liquid hydrogen synthesis or improved grid connectivity to support battery-powered aircraft and VertiPorts. Further, an emphasis on aeronautical enterprise funding across the whole supply chain should become part of existing business research and innovation grant funds, potentially with a defined annual pool of funding to ensure consistent annual investment. Separately, a whole-of-airspace review of key capital city markets that encompasses AAM aircraft is needed to facilitate the evolution of Australia's aviation sector.
How could the Australian Government create an environment that fosters private investment in emerging aviation technologies? (Chapter 9)	The Commonwealth Government should incentivise investment in emerging aviation technologies through tax breaks or related policy or funding programs, as outlined above. Similarly, providing development planning exemptions or streamlining for innovation infrastructure would foster investment by private equity and superannuation funds in Australian-operating technology developers and operators.
As competition for access to airspace is expected to increase, how can government ensure fair and equitable access while maintaining safety and efficiency of this public use asset? How could a safe, open, competitive and commercial Uncrewed Aircraft System Traffic Management (UTM) market operate? (Chapter 9)	As outlined above, a whole-of-airspace review of key capital city markets that adopts global best practice and encompasses traditional and AAM aircraft is necessary to ensure fair and equitable access, while maintaining safety and efficiency. The unique and essential role of AAM aircraft in facilitating last-mile fulfilment, connecting regional Australia, supporting enhanced emergency and medical services and the transition to net zero should be factored into this review. To ensure a successful outcome, special attention should be paid to any operational changes that may artificially increase emissions.
What opportunities do emerging aviation technologies present for regional and remote Australia? (Chapter 4)	Emerging aviation technologies present a unique opportunity to drive decarbonisation, improve profitability and increase connectivity between regional areas and metro general aviation airports. Such opportunities will be realised through greater coordination and collaboration between metro general aviation and regional airports, supported by government investment in innovation infrastructure at metro general aviation airports.

AIRPORT DEVELOPMENT PLANNING PROCESSES AND CONSULTATION MECHANISMS

(GREEN PAPER CHAPTER 6)

Noise and noise sharing

AMG recognises that community concerns about aircraft noise will always exist for airports in urban areas, such as south-west Sydney, where there are a high concentration of residents and sensitive land uses in proximity to airports. However, it is critical for the evolution and growth of Australia's aviation sector that effective land use planning is employed to minimise the encroachment of sensitive land uses on metro airports.

AMG has a strong commitment to working with the community and governments at all levels to manage and minimise the impacts of aircraft noise, as well as highlight the benefits of increased aircraft movements and AAM aircraft – including provision of emergency services, freight and passenger traffic and reduced carbon emissions. This commitment includes the adoption and rollout to our airport operators of the voluntary "Fly Neighbourly" program, to minimise the impacts of aircraft noise on residents and the broader community.

National Airports Safeguarding Framework

AMG supports the continued commitment to the implementation of the NASF. Guideline A of the NASF is clear on the need for controls and consistency to manage developments and the encroachment of sensitive land uses on airports, via rezoning of "brownfield areas" and/or development applications. NASF recommendations include:

- Balancing the need to provide housing against the operational needs of airports.
- Consideration of measures to manage the implications of noise (e.g. requirements for construction).
- Consideration of other tools, such as limiting noise sensitive land uses within 20 Australian Noise Exposure Forecast (ANEF), where long-range noise modelling indicates higher levels of aircraft movements at certain decibels and consideration of night time movements.

In NSW, requirements for rezoning land near regulated airfields are set by Local Planning Directions under section 9.1 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act 1979). These Directions do not specifically require consideration of the NASF, preferring to reference the Australian Standard (AS2021-2015), and have only adopted the more stringent NASF requirements for residential development within 20 ANEF for WSI Airport.

The *Greater Sydney Region Plan* 2018 (and former Greater Sydney/Cities Commission (GSC/GCC)) is clear in its support for the statewide implementation of the NASF guidelines relating to managing the impacts of aircraft noise. However, this has not occurred outside of its application to the land around WSI Airport and subject to Chapter 4 of *State Environmental Planning Policy (Precincts – Western Parkland City) 2021.*

The *Canterbury Bankstown Local Environmental Plan 2023* includes a standard provision relating to meeting AS 2021-2015. This means that the current planning framework is inconsistent with Guideline A of the NASF.

AMG is concerned that the Green Paper reports inconsistent application and knowledge of the NASF by local planning authorities. The limited adoption or incorporation of NASF into local

planning controls and the attention on increasing housing density around metropolitan centres will shift policy focus away from protecting the essential operations of general aviation airports, in favour of addressing housing shortages. Any increase in sensitive land uses near airports could place current operations at risk and threaten the ongoing economic and employment contributions of airports such as Bankstown Airport and its surrounding area, through the potential introduction of curfews and/or flight path changes.

As stated in the current Bankstown Airport Master Plan, released in 2019, AMG consider the NASF and control developments occurring on airport land only. It is critical for governments to develop a clear strategy to drive consistent application of the NASF in the planning system, for developments occurring on and off airport land. This strategy could include financial incentives, adoption of NASF into Commonwealth legislation and greater education for land use planners on NASF. This consistency will improve certainty of planning outcomes for metro general aviation airports and nearby communities and facilitate ongoing investment in sustainable growth.

Explaining noise through development processes

AMG is supportive of a review of how noise impacts are assessed and communicated to the public, to ensure they are informed and educated about aircraft noise and the essential contribution of Australia's aviation sector, including provision of emergency services, freight and passenger movements.

Noise metrics other than the ANEF are needed to ensure the community has accurate and easy-to-understand information about noise impacts. The Bankstown Airport Master Plan, for example, also includes 'Number above' (N-contour) maps, in addition to a selection of typical sound level equivalents, to aid general comprehension about noise impacts.

The need for clear and consistent measures of noise impacts and the related development of an outcomes-based framework will grow in line with emerging aviation technologies, such as drones, and the forecast increase in aircraft movements. It is essential that such frameworks are adopted into local planning controls, which will require consistent and proactive commitments from all levels of government.

AMG is committed to working closely and collaboratively with local councils in relation to the application of land use planning controls surrounding our assets. However, communications by councils to residents of potential aircraft noise impacts are limited to current planning controls, which reference the ANEF but do not reflect the NASF.

AMG supports a greater role for local authorities and councils to advise residents about aircraft noise beyond existing planning policy frameworks, to ensure residents are educated and informed. Such reforms would include adoption of the NASF, which requires all levels of government and airport operators to support effective disclosures about aircraft noise to prospective residents.

Additional reforms might include a requirement for councils to provide up-to-date information online relating to nearby airport operations and aircraft noise, along with copies of the relevant Airport Master Plan and details of other noise specific policies and programs, such as the "Fly Neighbourly" program.

Land use planning on-site at airports

AMG supports the recommendation in the Green Paper section 6.3 to modernise the regulatory framework under the Airports Act, to promote productivity, investment and efficiency. In particular, AMG welcomes the review of MDP thresholds and environmental regulations, to facilitate the evolution and growth of Australia's aviation sector.

Additional reforms are required to ensure the regulatory framework under the Airports Act remains "fit for purpose". This includes the need to streamline the role, scope and functions of the ABC and to introduce more expedient approval timeframes for minor developments. These necessary reforms are discussed in more detail below.

AMG also broadly supports enhanced environmental regulation and associated reforms to establish National Environmental Standards, along with reforms to environmental laws under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The current referral and approval system under the Act is complex and causes significant additional costs and time. It is critical that these reforms streamline the environmental assessment process rather than create additional layers of administrative referrals and approvals.

Improvement of planning triggers

AMG agrees with statements in the Green Paper that the MDP process is "out of step" and in some instances more "onerous" than local development pathways. We support reforms to this process to facilitate the delivery of enhanced airport precinct infrastructure and facilities, in a timely, productive and cost-effective manner.

This includes our support for increasing the monetary threshold to trigger an MDP from $25 million to $50 million, as detailed below.

However, the monetary threshold is only one of several triggers for an MDP under the Airports Act, including whether the development would be likely to have significant environmental or ecological impacts or a significant impact on the local or regional community.

The significant cost and time to produce and process an MDP is a brake on the ability of Australia's federally leased airports to progress projects and ensure the ongoing enhancement of essential airport precincts and related economic and employment benefits. This is particularly relevant when the development is consistent with the airport's approved Master Plan, resulting in repetitive community consultation requirements.

Typically, the cost and timeframe to prepare an MDP is more than double that for non-MDP developments. The process requires a significant volume of complex expert inputs. As noted in the AAA's Green Paper submission, four separate versions of an MDP are required over the five separate stages of the MDP process, which can take up to 18 months. Such timeframes make it challenging for an airport to commit to pre-leasing with prospective tenants.

These substantial imposts constrain AMG's ability to compete with non-federally leased airports in delivering positive investment and employment outcomes.

The low monetary threshold to trigger an MDP also means that relatively minor developments, such as new hangers, face the same time and money costs as a substantially larger development, such as a new terminal or runway, which have a significantly higher capital investment value. These costs make minor developments unfeasible in some cases.

It is critical that the Commonwealth Government undertakes a wholesale review of MDP triggers and processes, to facilitate the necessary investment to enable the evolution of Australia's aviation sector. Such a review should include the need to:

- Provide a simple and clear set of MDP triggers to provide clarity to the aviation sector and private investors.
- Increase the MDP monetary threshold to at least $50 million for non-aviation developments and $100 million for aviation-related developments, indexed annually based on CPI.

- Provide thresholds based on the type of development in each case, similar to the NSW State Significant Development Process.
- Consider whether several major airport developments within the same precinct can be combined and assessed together to streamline the MDP process.
- Provide MDP exemptions or streamlining for listed aviation-related developments that are considered to have minimal environmental or community impacts. These exemptions would remove barriers to the critical improvement of infrastructure that supports the primary functions and operations of airports. Alternatively, the Minister's powers could be expanded to exempt specific development types on application by the airport.
- Provide MDP exemptions or streamlining for innovation projects, as detailed above, which are considered to have minimal environmental or community impacts. This would facilitate the emergence of metro general aviation airports, such as Bankstown Airport and Camden Airport, as innovation hubs to support emerging aviation technologies.
- Consider a parallel assessment under the *Airports Act* and EPBC Act to streamline the approvals process and timeframes.
- Consider another tier of planning instrument processes for projects that are more detailed than a traditional building activity approval but below the level for an MDP. This change could achieve optimal planning outcomes without the time and financial imposts of an MDP.

Role and functions of the Airport Building Controller

As noted above, AMG supports the review of land use planning on site at airports. To ensure effective, efficient and productive planning processes, this review should extend to the role, scope and function of the ABC under the *Airports (Building Control) Regulations 1996*, which are due to sunset on 1 April 2025.

AMG reiterates the matters raised in its submissions – dated 3 May and 13 July 2023 – on cost recovery reforms of the regulations and recommends the following:

- Link any move to cost recovery with an improved level of service and reduction in assessment timeframes. Fees payable to the ABC continue to be orders of magnitude higher than similar building assessment activities undertaken off-airport, thereby disregarding notions of competitive neutrality.
- Undertake a comparative review of the ABC role, scope and processes against planning and building assessment compliance processes in other jurisdictions, to improve the overall ABC/Building Approval process and accelerate approval timeframes. These improvements could include:
    - Moving away from the single supplier model. This approach could include a panel of accredited ABC providers or a system such as the NSW Private Certifier model.
    - Reducing the onerous requirements for significant upfront technical information for building and works approvals/permits. This level of information would be ordinarily required post approval in the NSW Planning System and assessed by a private certifier (building surveyor).
    - Reducing the technical assessment requirements for specific types of minor developments. This could include identifying categories of development that may be either exempt or comply with a set of specific standards, similar to the Exempt and Complying Development requirements in the NSW system. This would allow federally leased airports to adapt and respond quickly to market needs.

  - Incorporating performance metrics and service agreements to improve ABC service and performance, enabling a more efficient building control and development process.
- Consider amendments to the regulations to build in flexibility for building activity approvals, where change is required to address a specific regulatory requirement.

Environmental regulation and contamination

AMG welcomes the review/remake of the *Airports (Environment Protection) Regulations 1997*, due to sunset in April 2025, and any additional opportunities to comment on the effectiveness of existing environment regulatory frameworks.

AMG generally supports the current risk-based framework. However, we note inconsistencies in the application of this approach across all Airport Environment Officers (AEO).

Given the role of AEOs in the Building Control process, a consistent interpretation of the regulations is essential to ensure minor developments are not unreasonably delayed due to contamination or remediation requirements.

AMG supports the adoption of a consistent, practical and risk-based framework in such matters. This approach would provide some flexibility to permit certain developments without the need to undertake detailed investigations/remediation on sites that may be on the Environmental Site Register. Such developments could be clearly categorised for minor alterations and additions or redevelopment, where there is unlikely to be significant ground disturbance.

AMG also supports a national approach, outlined in the Green Paper, to identify the extent and nature of legacy PFAS contamination. However, it is unrealistic to reduce PFAS to zero given its pervasive presence in the environment. As such, the outcome of a national approach should not restrict nor delay the ability to undertake minor redevelopment of existing assets.

Recommendations

1. Increased obligations on local councils and authorities to inform residents living under or in proximity to flight paths about airport infrastructure, aircraft movements and aircraft noise – including the positive economic and social benefits of aviation. Any such community information and education program should extend beyond existing planning policy frameworks, including airport Master Plans and MDPs.
2. Introduction of measures to ensure effective land use planning that minimise the encroachment of sensitive land uses on airports.
3. Development of clear and consistent strategies and processes for the application of NASF in state and commonwealth planning systems, to improve the certainty of planning outcomes.
4. Increased monetary threshold for airport MDPs to $50m for non-aviation developments and $100m for aviation-related developments. This reform should form part of a wholesale review of MDP triggers to enhance investment, efficiency and productivity, including the need for exemptions or streamlining for developments with minimal environmental impacts and for innovation projects that support emerging aviation technologies and AAM.
5. Review of the role and functions of the ABC against planning and building assessment compliance processes in other jurisdictions. The review should be designed to improve ABC processes and accelerate approval timeframes, to bring them closer to off-airport processes.
6. Adoption of consistent practical and risk-based frameworks for the interpretation and application of the Airports (Environment Protection) regulations 1997, to permit certain developments without the need to undertake detailed investigations or remediation of sites.

Direct responses to Green Paper questions:

Question	AMG Response
What are appropriate modern noise metrics that should be used to communicate aircraft noise impacts? (Chapter 6)	AMG is supportive of a review of how noise impacts are assessed and communicated to the public. Noise metrics other than the ANEF are needed to ensure the community has accurate and clear information about noise impacts. The Bankstown Airport Master Plan, for example, also includes 'Number above' (N-contour) maps, in addition to a selection of typical sound level equivalents, to aid general comprehension about noise impacts.
How can government better communicate with potential purchasers or properties which will be affected by aircraft noise in the future? (Chapter 6)	AMG is committed to working with local councils to improve how noise impacts are communicated. The government must commit to working with state and local authorities to adopt the NASF, which requires effective disclosures about aircraft noise to prospective residents.
How can new and different types of noise impacts from projected growth in drone use best be managed? (Chapter 6)	The need for clear and consistent measures of noise impacts and the development of an outcomes-based framework will grow in line with emerging technologies, such as drones, and the related increase in aircraft movements. It is essential that such frameworks are adopted into local planning controls, which will require consistent and proactive commitments from all levels of government.
What can be done to proactively mitigate noise impacts by better informing residents and land-use planners? (Chapter 6)	All local councils/authorities should have a positive obligation to inform residents, including renters, living under or in proximity to flight paths that they are living close to significant airport infrastructure and will be impacted by noise. This approach is already taken in the Camden LGA in NSW.
What can be done to facilitate increased adoption and implementation of the NASF principles for land planning to optimise land-use activity and reduce community impacts? (Chapter 6)	The Commonwealth must commit to develop and implement a clear national strategy to mandate the adoption of NASF into local planning frameworks.

Is a monetary threshold still an appropriate mechanism for determining a "major airport development" requiring a Major Development Plan (MDP)? What other significance tests could the Australian Government consider? (Chapter 6)	A monetary threshold is still one of several appropriate mechanisms for determining a "major airport development". However, the threshold should be increased to a minimum of $50 million (non-aviation related) and $100 million (aviation-related), indexed annually based on CPI. A simple and clear set of MDP triggers should be developed to provide clarity to the aviation sector and private investors. Other "triggers" that should be considered include: - Providing different monetary thresholds based on the type of development - Exemptions or streamlining for listed aviation related developments, innovation projects and other types of development considered to have minimal environmental or community impacts - Expanding the Minister's powers to consider exemptions upon application by the airport.
How could the Australian Government improve regulation to facilitate efficient planning and development, while preventing environmental harm and ensuring continued access for aviation users? (Chapter 6)	AMG supports improvements to land use planning regulations. Additional reforms are required to ensure the regulatory framework under the Airports Act remains "fit for purpose". This includes the need to streamline the role, scope and functions of the ABC and introduction of more expedient approval timeframes for minor developments. AMG supports the continued refinement of a consistent, practical and risk-based framework to address contamination. This approach would provide some flexibility to permit certain types of development without the need to undertake detailed investigations/remediation on sites that may be on the Environmental Site Register. AMG also supports a national approach, outlined in the Green Paper, to identify the extent and nature of legacy PFAS contamination. However, it is unrealistic to reduce PFAS to zero given its pervasive presence in the environment. As such, the outcome of a national approach should not restrict or delay the ability to undertake minor redevelopment of existing assets.
Do the current master planning processes support all airport users, including general aviation? (Chapter 6)	AMG remains supportive of the eight-year Master Plan approval cycle for Bankstown Airport and Camden Airport.

EMERGING AVIATION TECHNOLOGIES AND MAXIMISING AVIATION'S CONTRIBUTION TO NET ZERO

(GREEN PAPER CHAPTERS 4-5, 8-9)

As identified in the Green Paper, general aviation is a testbed and training ground for emerging technologies and skills and an early adopter of such technologies. The development of innovative propulsion technologies and processes, such as AAM aircraft, is essential to the successful evolution of Australia's aviation sector.

AMG endorses the Green Paper's support for emerging aviation technologies. This section of our submission provides additional recommendations aligned with the key role of general aviation airports in facilitating and developing such technologies.

Bankstown Airport as an innovation incubator

AMG supports the Green Paper's statement that Australia can take a leadership role in emerging aviation technologies. As the airport lessee company of the two leading general aviation airports in NSW, AMG is already supporting and enabling such innovation at its facilities and recommends government funding and support to scale up these initiatives.

The key locations and operations at Bankstown Airport and Camden Airport provide the necessary elements to develop an emerging aviation technology sector, including planning overlay, physical infrastructure, co-location with other aviation tenants, complementary manufacturing and other uses, and access to workforce skills and markets.

As noted in the Green Paper, general aviation airports are also perfectly positioned to foster emerging aviation technologies and AAM aircraft, given the current technological constraints in the size of appropriate aircraft and the distances they can travel. Similarly, the relative cost, size, economic ecosystem and locations of metro general aviation airports is appropriate for start-up and scale up businesses in the aeronautical space, as compared with major airports. This is highlighted in the success of AMSL Aero and why Bankstown Airport continues to be the chosen airport to base their operations (Appendix 2).

We have taken practical steps to support current and future aviation needs at Bankstown Airport and Camden Airport, such as providing subsidised or below-market rent to tenants, brokering relationships between aviation sector innovators and potential partners and end users, investing in infrastructure and facilities and enabling access to specific assets and inputs required for successful innovation – such as fuel, hangar space, runways and demonstration/simulation hubs.

With proximity to major population bases and skilled workers, Bankstown Airport and Camden Airport have the critical mass required to ensure emerging technologies are feasible and commercially viable.

Bankstown Airport has significant opportunities to build upon its logistical infrastructure – across landside and airside – as an innovation hub for aviation verti-modal and micro-logistics systems. The accessibility of a large and diverse talent pool, operational flexibility and agility and collaboration opportunities between airport operators, also provide additional benefits in supporting emerging aviation technologies and research and development.

Several tenants at Bankstown Airport are already playing a leading role in the development of such technologies, such as AMSL Aero (see Appendix 2) and Sydney Seaplanes/Dovetail Electric Aviation, which is developing technology to convert traditional aircraft to renewable fuels.

With government support, there is significant opportunity to scale up such work and to realise the opportunity, outlined in the Green Paper, for Australia to be a leader in emerging aviation technologies.

Metro general aviation airports, such as Bankstown Airport and Camden Airport, are well placed to facilitate further opportunities for innovation. To enable this, AMG supports the potential investment sources outlined in the Green Paper (2023: 135). We also recommend the establishment of an Aviation Innovation Infrastructure Fund, to identify, seed, prototype, test and scale initiatives and enabling infrastructure at airports that have broad benefits for the evolution and growth of the aviation sector and national transition to net zero.

The fund should borrow from global best-practice and be open to all aspects of the supply chain. This might include upgrades to electricity infrastructure, electric charging bays for heavy and passenger vehicles or the development of green hydrogen plants or vertiports for on-site use.

Notably, there are opportunities to utilise green financing vehicles in this space, similar to those implemented in the UK, Canada and US. Such a fund would further accelerate the rollout and upscaling of decarbonisation and net zero enabling infrastructure at general aviation airports, driving the evolution of the aviation sector from individual, disparate operators to the development of airport innovation hubs.

As outlined above, AMG also recommends modifications to the MDP and broader development planning processes to support and fast-track innovation-related infrastructure and facilities. Minimising the cost and timeframe for such developments would enable metro general aviation airports to emerge as national innovation hubs, to support the development of emerging aviation technologies and transition to decarbonisation.

In January 2023, the Australian Government established the Advanced Air Mobility Consultative Committee to develop an Advanced Air Mobility Strategy. In line with the need to focus AAM developments on key innovation hubs, a metro general aviation airport should be included on this committee and/or National Emerging Aviation Technologies Consultative Committee to represent this essential sector.

Future proofing the aviation sector

The unpredictable and often rapid nature of innovation means that strict regulatory requirements may undermine the evolution and ongoing health of the aviation sector. Broadly speaking, governments must allow for greater flexibility in the application and operation of developments and related requirements and processes to facilitate the crucial growth of emerging aviation technologies to meet future economic and decarbonisation needs.

Supporting operators

Aligned with the need for an Aviation Innovation Infrastructure Fund, aviation operators also need greater support to develop the scope and scale of such emerging technologies. We support the Green Paper's assertion that Australia is positioning itself to become a leader in the uptake and development of aviation technologies (2023: p.12). But realising this opportunity is only feasible if all components of the aviation sector, including airports, aircraft operators and workers, are in alignment in their readiness for such transformation.

To enable the successful evolution of Australia's aviation sector, AMG recommends the introduction of an Aviation Innovation Fund to support companies in this sector and provide

incentives more broadly for aviation operators to future proof their businesses and operations. Such financial support would enable airport operators to evolve in line with the Green Paper's directions, potentially including funding and incentives for the purchase of new equipment and assets or training in emerging technologies and AAM.

Bankstown Airport and Camden Airport host a range of critical services for aviation and the broader economy, including emergency and medical services, flight training and aircraft maintenance. It is essential that all types of aviation operators are incentivised to evolve their businesses to adopt and incorporate emerging technologies.

The proposed Aviation Innovation Fund would follow similar models such as the Business Research and Innovation Initiative – further, the Aviation Innovation Fund could potentially feature as an individual stream of this existing fund to ensure consistent and adequate annual investment.

The application of the Aviation Innovation Fund should be structured to support all elements of the aviation ecosystem to contribute to innovation, including opportunities to expand and upskill the aviation workforce. This could include opportunities to co-locate AAM educational facilities with metro general aviation airports to create a campus-style environment that maximises innovation and collaboration.

The fund should also incorporate best-practice green financing processes to better align private and public capital investment in companies seeking to advance air mobility and decarbonise air travel. Additional to this, tax incentives for the financing of Australian-owned and/or operated companies would place Australia in line with other jurisdictions currently pursuing aerospace innovation, such as the US and some European Union nations.

This structure of the fund should incorporate global best practices by incorporating clean transportation into a green bond instrument/framework, as has been adopted in Canada and the UK. AMG notes that a similar call has been made by the Regional Aviation Association of Australia in its submission to the Green Paper. AMG contends that metro and regional general aviation airports should have equal access and consideration to such a green financing scheme.

The Commonwealth Government should look to examples such as the government-backed Future Mobility Campus at Shannon Airport, Ireland, which demonstrates the benefits of co-locating businesses within existing aviation infrastructure, systems and support and a ready and large talent pool.

Similarly, the Government should prioritise emerging aviation technologies, alongside SAF, in any consideration of the sector's transition to net zero. Representation by metro general aviation airports and/or AAM operators on the Australian Jet Zero Council is essential to the provision of comprehensive and coordinated advice to the Government on all viable measures for delivering net zero aviation.

Recommendations

1. The Commonwealth Government establish an Aviation Infrastructure Fund for metro general aviation airports, designed to facilitate, develop and support emerging aviation technologies, AAM and net zero operations.
2. The Commonwealth Government establish an Aviation Innovation Fund targeted towards the adoption of emerging aviation technologies by aviation operators, to help drive the take-up of such technologies and the related evolution of the aviation sector.
3. Exemptions from MDP processes and requirements or streamlining for innovation projects that support emerging aviation technologies and AAM and have minimal impacts on the environment or community.

4. Representation by metro general aviation airports on the Commonwealth Government's Advanced Air Mobility Consultative Committee and/or National Emerging Aviation Technologies Consultative Committee, to assist in the development of an Advanced Air Mobility Strategy.
5. Representation by metro general aviation airports and/or emerging aviation technology or AAM operators on the Australian Jet Zero Council.

Direct responses to Green Paper questions:

Question	AMG Response
How do we achieve a balance between mitigating the negative impacts of drones and Advanced Air Mobility (AAM) while realising the potential benefits? (Chapter 9)	A whole-of-airspace review of key capital city markets, such as Greater Sydney, would help to navigate future airspace requirements and any related community concerns. The social licence for aircraft movements already in place at metropolitan general aviation airports will help to minimise community concerns. At the same time, clear and consistent information and education programs provided by local councils/authorities, airport operators and governments about the positive benefits of AAM aircraft and services – including greater sustainability, connectivity and economic and employment opportunities – will help to achieve a healthy balance.
What skills are needed for the emerging aviation technology sector workforce? (Chapter 9)	A skills mapping process is needed to understand and detail future needs and the skills and education and training programs required to support them. For example, skills in engineering and manufacturing will become more important as domestic green aviation manufacturing becomes a viable proposition in the regional and metro general aviation markets. Pilots, AMEs and LAMEs should receive incentives, such as fee relief, to upskill in new technologies, with such education programs fast tracked to meet emerging aviation needs.
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? (Chapter 8)	Cargo movements through metropolitan general aviation airports will require the cooperation of businesses, residents, airport operators and airspace regulators to match service demand to infrastructure, as well as the measures needed to make AAM cargo safe and socially acceptable. The whole-of-airspace review, outlined above, will also help to achieve this outcome.

Question	AMG Response
How do local governments and aerodrome operators consider climate resilience when managing their aviation assets? (Chapter 4)	AMG is already considering climate risk and resilience measures at Bankstown Airport and Camden Airport, including the prospect of increased flooding and fire events. This assessment of risks and mitigation measures is ongoing. Separately, governments should take into account that emergency services activity at general aviation airports is expected to increase, in line with climate-related extreme weather events.
How can Government work with industry to ensure a strong and sustainable aviation sector that supports emissions reduction targets while growing jobs and innovation? (Chapter 5)	Emissions reduction measures present an opportunity to drive economic growth, jobs and innovation for Australia's aviation sector. AMSL Aero, based at Bankstown Airport, is a strong example of the essential role of metro general aviation airports in promoting and supporting innovation. Government support for such operators, including the establishment of aviation innovation funds to support enabling airport infrastructure and operations, will help to develop and scale such innovation for the benefit of the broader economy and national transition to net zero.
How can policy and regulatory settings support research and development and subsequent investment in emerging low and zero emission technologies and related infrastructure? (Chapter 5)	Defined funding should be made available to airport asset owners to deliver the enabling infrastructure for zero emission and emerging aviation technologies, as well as the training environments and facilities required to operate such technology. Defined funding should also be made available to businesses seeking to use general aviation airports and their infrastructure to develop new technologies that reduce emissions and transform the efficiency and productivity of services, such as light to medium freight, health and emergency services and regional and metropolitan passenger services.
Do Government policies and regulations need to change to better support growth in emerging aviation technology manufacturing? (Chapter 9)	Yes. CASA should continue to promote a "sandpit environment" to support emerging aviation technologies across general aviation airports, including the allocation of greater resources to fast track the licensing and approvals process for AAM aircraft. Separately, the national and international synthesis of accreditation for AMEs and LAMEs will help to fill skills gaps and facilitate the growth of emerging technologies.

Question	AMG Response
Given there are a number of measures that industry and government could pursue to help achieve net zero by 2050 in aviation, are there specific measures that more emphasis and support should be given to? (Chapter 5)	Governments should establish or expand infrastructure funding targeted at innovation and decarbonisation at general aviation airports, such as liquid hydrogen synthesis or improved grid connectivity to support battery-powered aircraft and vertiports. Further, an emphasis on aeronautical enterprise funding across the whole supply chain should become part of existing business research and innovation grant funds, potentially with a defined annual pool of funding to ensure consistent annual investment. Separately, a whole-of-airspace review of key capital city markets that encompasses AAM aircraft is needed to facilitate the evolution of Australia's aviation sector.
How could the Australian Government create an environment that fosters private investment in emerging aviation technologies? (Chapter 9)	The Commonwealth Government should incentivise investment in emerging aviation technologies through tax breaks or related policy or funding programs, as outlined above. Similarly, providing development planning exemptions or streamlining for innovation infrastructure would foster investment by private equity and superannuation funds in Australian-operating technology developers and operators.
What opportunities do emerging aviation technologies present for regional and remote Australia? (Chapter 4)	Emerging aviation technologies present a unique opportunity to drive decarbonisation, improve profitability and increase connectivity between regional areas and metro general aviation airports. Such opportunities will be realised through greater coordination and collaboration between metro general aviation and regional airports, supported by government investment in innovation infrastructure at metro general aviation airports.
What should be included in relation to aviation in the Australian Government's Transport and Infrastructure Net Zero Roadmap and Action Plan (including for sectors, such as general aviation and airports)? (Chapter 5)	The vital role of general aviation airports in driving the transition towards net zero should be affirmed and endorsed in the roadmap and action plan. Metro general aviation airports, in particular, will be the launching pad of new, sustainable aircraft that will play a key role in the transition to net zero. Government support for enabling infrastructure at those airports will ensure Australia plays a leading role in the development of such technologies and innovation ecosystems.

FUTURE WORKFORCE
(GREEN PAPER CHAPTER 10)

Equipping aviation operators with the tools to enable their staff obtain necessary training and skills addresses only one aspect of ensuring a future-ready industry workforce. There are various other levers that could contribute to a more cohesive, national aviation workforce.

Consideration of the skills and expertise required to support the evolution of the aviation sector should not be limited to pilots but also encompass other key roles, such as electrical, hydroelectric and mechanical trades, control systems and manufacturing.

Access to suitable training pathways remains a critical issue for the general aviation sector, which is highly dependent on skilled personnel such as pilots and engineers. As noted by the GAAN in its submission to the Green Paper, the industry is unable to source the skills it needs and those aspiring to an aircraft maintenance career, for example, are confronted by inconsistencies between course funding rules and CASA requirements.

AMG recognises that a strong skills pipeline is critical to ensuring successful transformation across any industry. Within aviation, there is a clear current and growing need to streamline training and qualification pathways for essential roles, such as AMEs and LAMEs.

Lack of continuity and recognition of training across Australian states and jurisdictions has created significant skills and workforce gaps and inhibited the growth and evolution of the aviation sector. Critical reforms to address these issues include the alignment of the objectives of ASQA and CASA with the Australian Qualifications Framework. A focus on ensuring training is suitable and uniform, no matter where or how it is undertaken, will help to rectify barriers to new industry entrants as well as career progression and movement.

Skills training programs and processes should be matched to facilitate the growth of emerging aviation technologies and the broader evolution of the sector. The Commonwealth Government should consider measures to encourage the upskilling of current workers and new entrants in these areas. Such measures should include the provision of fee-free training for remote piloted aircraft, as recommended by the AAA in its submission to the Green Paper.

The Commonwealth Government should be prepared and proactive in developing and accepting micro-credentialing, to ensure skills in the industry evolve and are recognised in line with the development of new technology. Such courses will help ensure the safe operations of new technology, alongside encouraging continuous career progression within the industry – which will increase the attractiveness of the sector to graduates.

Recommendations

1. Alignment of the objectives, training and qualification pathways of ASQA and CASA with the Australian Qualifications Framework, to reduce barriers to career progression and movement.
2. Introduction of fee-free study or fee concessions for training, education and qualifications related to emerging aviation technologies and AAM, including for pilots and aircraft engineers.

Direct responses to Green Paper questions:

Question	AMG Response
Can alignment of training with regulatory and licencing requirements be improved? (Chapter 10)	Yes. Reforms to skills and licensing pathways are necessary to ensure training is suitable, uniform, affordable and efficient, no matter where it is undertaken. This includes alignment of the objectives, training and qualification pathways of the Australian Skills Quality Authority (ASQA) and Civil Aviation Safety Authority (CASA) with the Australian Qualifications Framework, to reduce barriers to career progression and movement. All qualification pathways should be synthesised at the national and international levels, in line with the approach in countries such as New Zealand, the US and the UK, to allow for ease of employment mobility and to attract new workers to the industry.
How can government policy enable industry to support the net zero economy and the future skills, training, and workforce needs that it entails (including future fuels)? (Chapter 10)	Government policy should be aimed at enabling the industry to support the net zero economy, through infrastructure funding, innovation funding and streamlined processes for related developments. Incentives to facilitate the development of a viable green liquid hydrogen supply at general aviation airports such as Bankstown Airport and Camden Airport should also be considered. Training and skills will evolve rapidly. Governments should consider how CASA or other regulators might support micro-credentials and training at general aviation airports, beyond current multi-year qualifications. All qualification pathways should be synthesised at the national and international levels, in line with the approach in countries such as New Zealand, the US and the UK, to allow for ease of employment mobility and to attract new workers to the industry.
Would an analysis of future skills and workforce needs help position the aviation industry to pre-emptively respond to emerging needs? (Chapter 10)	Yes. A skills mapping process is needed to understand and detail future needs and the skills and education and training programs required to support them. For example, skills in engineering and manufacturing will become more important as domestic green aviation manufacturing becomes a viable proposition in the regional and metro general aviation markets. Pilots, AMEs and LAMEs should receive incentives, such as fee relief, to upskill in new technologies, with

Question	AMG Response
	such education programs fast tracked to meet emerging aviation needs.
How should governments and industry prepare Australian workers for the new skills required for the technological transition and net zero fuels? (Chapter 10)	Potential measures might include incentives for pilots, AMEs and LAME, such as fee relief, to upskill in new technologies, with such education programs fast tracked to meet emerging aviation needs.
Are there opportunities to improve recognition of overseas training qualifications? (Chapter 10)	Yes. All qualification pathways should be synthesised at the national and international levels, in line with the approach in countries such as New Zealand, the US and the UK, to allow for ease of employment mobility and to attract new workers to the industry.

CONCLUSION

Bankstown Airport and Camden Airport – the premier metro general aviation airports servicing Greater Sydney and regional and remote NSW – play a fundamental role in supporting aviation, industry and community. These airports support current essential aviation operations, such as emergency services, medical and patient transfers, law enforcement, community and private charters, pilot and engineer training and maintenance.

These key national assets are also well placed to support the evolution of Australia's aviation sector, by driving innovation, emerging technologies and the transition to net zero.

As suggested in the Green Paper, metro general aviation airports will be the launchpad of sustainable aviation, emerging aviation technologies and AAM, as well as an essential incubator of the future pilot and engineer pipeline.

Already, Bankstown Airport supports leading AAM companies, which are harnessing the benefits of the airport's planning overlay, physical infrastructure, operational flexibility and agility, proximity to a large skilled workforce and prospects for collaboration within its diverse aviation ecosystem to develop the sustainable future of Australian aviation.

AMG supports the Green Paper's statement that Australia can take a leadership role in emerging aviation technologies. However, government support is needed to realise this opportunity.

We recommend the establishment of an Aviation Innovation Infrastructure Fund, to help airports build enabling infrastructure to support and upscale emerging technologies. Such infrastructure will have broad benefits for the evolution and growth of the aviation sector and national transition to net zero.

We also recommend the introduction of an Aviation Innovation Fund to support companies in this sector and provide incentives more broadly for aviation operators to future-proof their operations, including transitioning to new low or zero emissions equipment and assets or training for pilots and engineers in emerging technologies and AAM.

Alongside such critical government funding, we also recommend modifications to the MDP and broader development planning processes to support and fast-track innovation-related infrastructure and facilities.

Government funding for essential infrastructure and operations, along with reforms to streamline innovation development approvals, would enable metro general aviation airports to become national innovation hubs – harnessing the power of their prime location, operational agility and capacity for growth to drive the development of emerging aviation technologies and transition to decarbonisation.

Our recommendations align directly with the strategic vision outlined in the Green Paper, to:

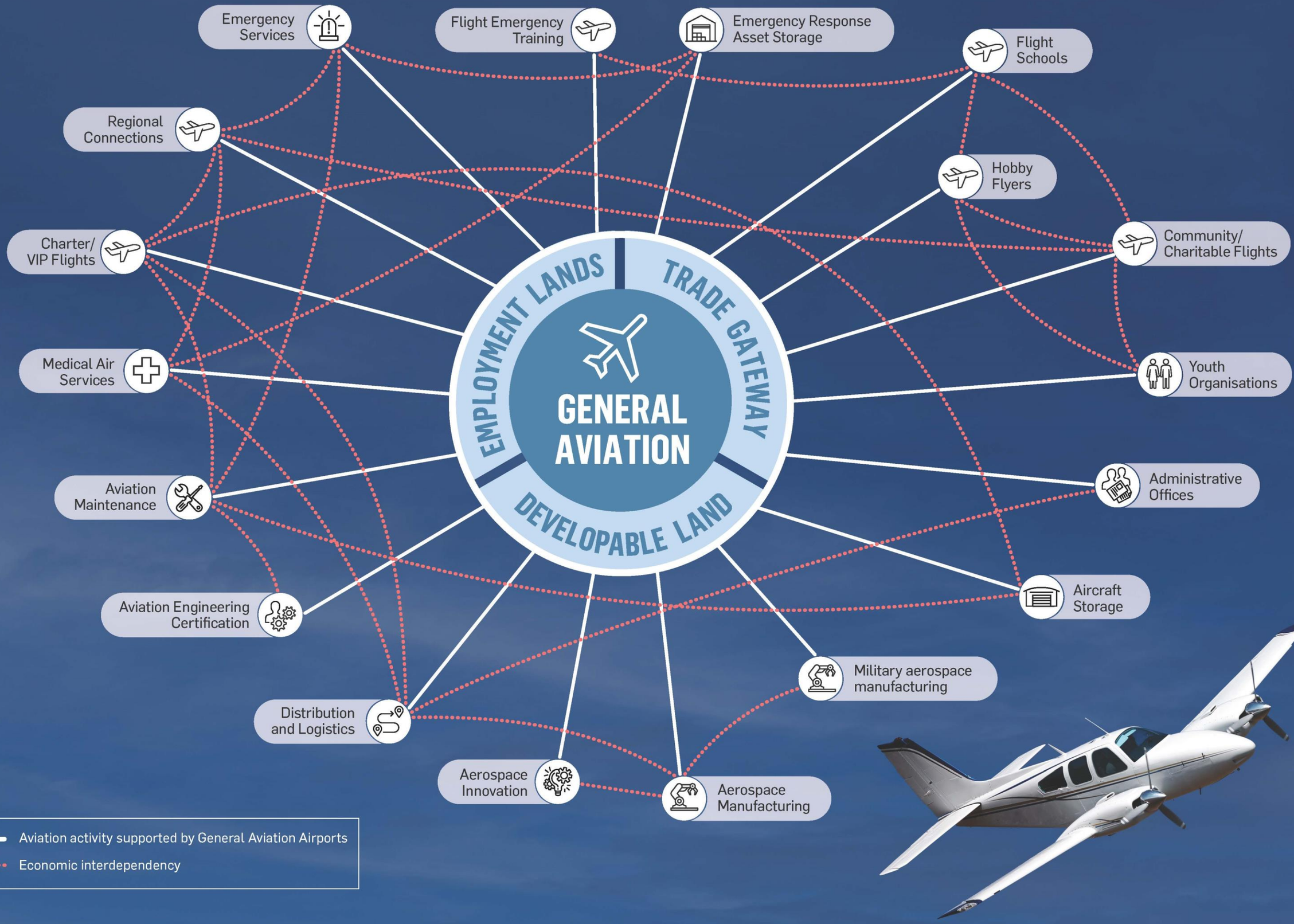
- Establish an aviation industry that operates in the most commercially, socially and environmentally efficient manner possible
- Improve the pipeline of skills across the industry, especially for pilots and aircraft engineers
- Accelerate innovation and the transition to net zero
- Develop, test and adopt new AAM aircraft
- Improve outcomes for regional airports.

Adopting our recommendations would benefit not only metro general aviation and their operators but regional and remote aviation services and the national aviation sector, moving it from a "hard to abate sector" to a leader in decarbonisation and ensuring the essential supply of pilots and engineers.

The alternative would be to allow Australia's aviation sector to fall behind the rest of the world in the development of emerging technologies and transition to decarbonisation and the provision of a skilled pipeline of workers to meet growing aviation needs.

We welcome the opportunity to work with the Commonwealth Government and our general aviation peers in progressing these recommendations to evolve Australia's aviation sector to 2050 and beyond.

APPENDIX 1 - GENERAL AVIATION ECONOMIC ECOSYSTEM



APPENDIX 2 – CASE STUDIES

International examples of airspace reviews

United Kingdom

In 2018, the UK's Civil Aviation Authority (CAA) released the *Airspace Modernisation Strategy*, outlining initiatives to update airspace design and policy to December 2024.[1] The existing airspace design was found to be antiquated, with flightpaths dating back to the 1960s that reduced efficiencies and led to higher than necessary carbon emissions.

Without modernisation, growing capacity constraints were estimated to cause delays of more than 30 minutes in one-third of all UK flights by 2030. The strategy also found that existing military airspace was no longer fit for purpose for new generations of aircraft. The report recommended the creation of an independent body of stakeholders, including the CAA, Ministry of Defence, commercial operators and community groups, to guide the modernisation strategy.

Among the policies adopted from the strategy is a rebate scheme on eligible purchases of electronic conspicuity devices, introduced in December 2022. Such devices allow an aircraft to be remotely detected by other aircraft and air traffic services, thereby reducing the risk of collision and assisting the safe integration of unmanned aircraft.

The strategy was followed in 2022 with a concept report of future integrated aircraft operations in London, from the CAA Future Mobility Regulation Sandbox.[2] The report envisions urban air mobility (UAM) in London, featuring a full integration of eVTOL, general aircraft, remotely piloted aircraft, airports, heliports and vertiports.

Four distinct phases of UAM operations are envisioned, including an initial trial period, operation within current air traffic management (ATM), a period when current ATM systems are insufficient and the introduction of new ATM systems specifically designed for UAM operations. Specific policies recommended to allow large-scale UAM operations to integrate seamlessly within London's airspace include accommodative airspace design, flight planning, flow management, dynamic airspace management and monitoring to ensure all aircraft adhere to their designated flight path.

The concept report provides a best practice example of future airspace planning that allows for the incorporation of innovative technologies alongside existing air transport infrastructure.

The Tri-State Area (United States of America)

In 2007, the Federal Aviation Administration (FAA) launched a review of the New York - New Jersey - Philadelphia metropolitan airspace.[3] The New York area is the world's second busiest airspace after London and home to three major airports within 10 miles (16 kilometres): John. F Kennedy International Airport, LaGuardia Airport, and Newark Liberty International Airport.

[1] Civil Aviation Authority. (2023). CAP1711: Airspace Modernisation Strategy 2023–2040 Part 1: Strategic objectives and enablers. https://www.caa.co.uk/CAP1711a

[2] UK Air Mobility Consortium. (March 2022). Urban air mobility concept of operations for the London environment. https://eveairmobility.com/wp-content/uploads/2022/03/UK_Air_Mobility_Consortium_CONOPS.pdf

[3] Federal Aviation Administration (2020). Written re-evaluation and record of decision for the New York/New Jersey/Philadelphia metropolitan area airspace redesign: Final environmental impact statement. https://www.faa.gov/sites/faa.gov/files/air_traffic/nas/nynjphl_redesign/documentation/written_re-evaluation_12-22-20.pdf

Despite a rapid increase in the volume of air traffic flightpaths in the New York area, its airspace had not been updated since the 1960s. Notably, the ELIOT departure route that funnelled aircraft in a queue from New York's four largest airports into a single airway, was found to create a significant bottleneck under peak demand. The ELIOT route was subsequently split in two to reduce bottlenecking and delays.

A 2013 paper found an integrated departure system – combining weather forecasts and flight data to dynamically allocate take-offs – could save an additional 239 minutes a day, compared with a simple queue system.[4] A new high-altitude airway Q42 was also created following the review, stretching from New York-Philadelphia to Kirksville, Missouri. Rather than using the J80 jet airway intended for west coast flights, short-haul flights to destinations such as Indiana and Ohio could use the Q42 and avoid delays waiting for long-haul flights, which were subject to more stringent traffic management.

The FAA has also made strides to update airspace regulation and management to accommodate the use of uncrewed aircraft, through the 2017 launch of its Unmanned Traffic Management Pilot Program.[5] The program operates three test sites to assess the performance of drones under current air traffic management systems and consider new monitoring technology.

Among the largest areas of work by the program is the development of remote identification technologies – a small module installed in a drone to broadcast its position to ground traffic management systems or other drones in flight. This technology allows unmanned aircraft to better avoid inflight collisions.

Following the findings of the pilot program and FAA recommendations, the United States Congress passed a law in September 2021 banning all drone operation outside specified areas without a remote identification module. The new requirements commenced in September 2023. At the time of writing, the program is looking to engage with stakeholders to incorporate remote identification data into air traffic management systems, paving the way for drone operations in high density urban environments.

Creating Advanced Air Mobility Hubs

In April 2022, Urban-Air Port opened Air-One, the world's first eVTOL and drone hub in Coventry, UK. The 1700 sqm prefabricated vertiport provides a 17m diameter take-off and landing platform for eVTOL aircraft and cargo drone loading facilities, alongside electric charging facilities. Skyfarer, a subscription-based drone service provider, and West Midlands police are among the first to announce flights from Air-One. Urban-Air Port has announced plans to open further vertiports in Australia, alongside the UK, US, Europe, South Korea and South-East Asia.

In November 2023, Chinese eVTOL producer EHang Holdings opened the Urban Air Mobility (UAM) Centre within the Lleida-Alguaire International Airport, near Barcelona. This milestone stemmed from a 2021 agreement with state-owned Aeroports de Catalunya to promote zero-emissions, uncrewed air travel in Europe. The centre features a vertiport and is designed to fully operate within existing Spanish air travel regulations and infrastructure. EHang has also announced partnerships with two Chinese municipal governments to open UAM hubs in Hefei and Shenzhen. The Shenzen hub will primarily focus on aerial tourism, while the Hefei hub will serve as regional headquarters for Eastern China and provide additional logistics, firefighting and search and rescue operations.

[4] DeArmon, J.S., Taber, N.J., Bateman, H., Song, L., Maşek, T., & Gilani, D. (2013). Benefits Analysis of a Departure Management Prototype for the New York Area. https://www.mitre.org/sites/default/files/pdf/13_0046.pdf

[5] https://www.faa.gov/uas/advanced_operations/traffic_management

Opened in July 2022, the €5.5m Future Mobility Campus Ireland (FMCI), located next to Shannon Airport, Ireland, provides testing facilities to co-locate and connect autonomous, shared and electric vehicle developers. The campus provides office space, a data centre, workshops and laboratories, alongside a drone port and public road for vehicle testing. FMCI has partnered with Avtrain and Skyports to establish a larger passenger and cargo vertiport at the campus. FMCI has also received European Union approval to develop aerial uncrewed traffic management systems.

AMSL Aero – a leading Australian aviation innovator

AMSL Aero is an Australian owned and operated electric and hydrogen-powered aircraft engineering firm, based at Bankstown Airport. The company is funded through a mixture of private equity, government grants and commercial revenue and has secured approximately $50 million of investment, to date, to develop cutting-edge aircraft for general aviation and emergency service uses.

The company's Vertiia aircraft is the world's first eVTOL designed to be powered by hydrogen. The innovative, net-zero aircraft uses less energy per seat than a high-speed train. It will save lives as an air ambulance and emergency response vehicle. It will revolutionise passenger and cargo transit in regional and urban areas across Australia.

AMSL Aero offers a strong case study into how metro general aviation airports are and will continue to be, the optimal testbed environment for emerging aviation technology and the transition to decarbonisation.

The location of AMSL Aero at Bankstown Airport, in the heart of Greater Sydney, plays a key role in its success. The benefits of operating at a metro general aviation airport include ease of planning approvals, operational benefits – including for research and development – access to a large skilled workforce and opportunities to collaborate within a vibrant aviation ecosystem.

The company noted that Bankstown Airport's location has been crucial to its operations and success. This includes:

- Proximity to a large and diverse talent pool and an established manufacturing workforce
- Competitive rent on appropriately sized hangars, allowing for the lower-cost environment required by start-up companies
- Working in the geographic centre of the industrial powerhouse of Sydney – the south-west and western suburbs – which had capacity for assembly and for sourcing domestic materials
- Greater Sydney is the ideal location for the future provision of advanced urban air mobility.

Notably, AMSL Aero has a standing partnership with Wellington/Bodangora Airport to test its prototype aircraft. This illustrates the interconnectedness and collaboration between general aviation airports in metropolitan and regional areas. Further, up to 28 per cent of the AMSL Aero market already has a connection or presence to Bankstown airport as the primary port in the Greater Sydney Basin.

Bankstown Airport and AMG have provided enabling infrastructure and services to support AMSL Aero's asset requirements, along with the collaboration opportunities and interconnectedness that are drivers for innovation.

AMSL Aero has formed strong partnerships with other firms located at Bankstown Airport. In the words of AMSL Aero, Bankstown Airport is not only an airport but an ecosystem that provides the land, infrastructure, facilities, business opportunities and available talent and workforce to enable innovation.

As stated by AMSL Aero representatives: "Bankstown is more than airport, it is an ecosystem… we don't even use the runway. It is all about being co-located with the manufacturing infrastructure and workforce."

Some parts for AMSL Aero's aircraft are made by the Bankstown Airport-based manufacturing company Quickstep. Bankstown Airport also provides direct connections with end users of such aviation technologies, with AMSL Aero and CareFlight recently forming a partnership to develop an advanced electric flying vehicle that will help emergency and health air services in regional and remote areas to operate on a net zero basis.

The opportunities for AMSL Aero are strong, given the crucial role of metro general aviation airports in fostering emerging aviation technologies and decarbonisation. Delivering such opportunities would put Bankstown Airport and Australia in the pilot's seat in leading net zero aviation.

As stated by AMSL Aero: "If [liquid hydrogen] was available at Bankstown Airport this would turn it into an international centre for hydrogen aircraft… That's the 'boom moment' for Australia's aviation industry to lead the world."

However, government support is needed to overcome challenges faced by this innovative Australian company, including:

- The need for a sufficient pipeline of skills and a workforce in electrical and aerospace engineering, followed by local manufacturing to deliver new aircraft
- Access to, and the development of, liquid hydrogen provision on-site at Bankstown airport
- Airspace congestion in the Greater Sydney basin and the need for a whole-of-airspace review as new technologies come to market
- Access to finance and funding to support domestic innovation and to realise the opportunity stated in the Green Paper for Australia to be a leader in emerging aviation technologies.