



Australian Government

Civil Aviation Safety Authority

OFFICE OF AIRSPACE REGULATION

WORK PROGRAMME

**Including
Implementation Programme In Support Of
The Minister's Statement Of Expectation And
The Australian Airspace Policy Statement**

September 2007

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Office of Airspace Regulation Work Programme

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2 Change History

Changes to this document will be achieved by a re-issue of the entire document rather than by the amendment of individual pages.

Issue No	Date	Description	Edited by
Issue 0.1	20 September 2007	First draft for consultation	P Cromarty
Issue 0.2	27 September 2007	Second draft for internal consultation	P Cromarty
Issue 0.3	27 September 2007	Final draft	P Cromarty
Issue 1.0	27 September 2007	Issued Version for Minister Vaile	P Cromarty

3 Distribution List

Draft report (external):

S Sargent, DOTARS

Draft report (internal):

B Byron

OAR

Final report

Minister for Transport and Regional Services

4 Sponsor

Minister for Transport and Regional Services

5 Purpose

The purpose of this programme is to deliver a plan to address the Minister's Statement of Expectations to CASA and the Australian Airspace Policy Statement (AAPS¹) including an implementation programme of National Airspace System airspace reforms. This is a living document and will be used to direct the work of the OAR.

6 Introduction

- 6.1 The AAPS was made pursuant to part 2 of the Airspace Act 2007, which came into effect on 1 July 2007. It provided direction to the Office of Airspace Regulation (OAR) established within the Civil Aviation Safety Authority (CASA).
- 6.2 In accordance with his general powers under the *Civil Aviation Act 1988* the Minister issued a Statement of Expectations to CASA on 12 March 2007 which provides clarification of the broader Government policy framework for CASA.
- 6.3 Part 6 of the Australian Airspace Policy Statement details government priorities for CASA. The Government remains committed to the National Airspace System (NAS) reform objectives, particularly greater flexibility and the allocation of air traffic management services on the basis of risk.
- 6.4 The AAPS identifies a number of NAS airspace priorities that the Minister wishes CASA to pursue over the period 1 July 2007 to 31 December 2008.
- 6.5 The OAR is staffed jointly by CASA (10 permanent + 1 12-month contractor) and Defence (2 permanent and 2 part-time Reservists).

¹ A glossary of abbreviations is included at the end of the document

7 Programme Scope

7.1 The scope of the programme includes:

- Governance and relationships;
- Finance and Performance;
- Airspace Regulation;
- Operational Priorities;
- Regulatory Reform;
- International and;
- Industry and community engagement.

7.2 OAR is producing the programme, however, many goals of the AAPS will require input from other specialist areas within CASA such as the Air Transport Operations Group (ATOG) and the General Aviation Operations Group (GAOG).

7.3 Governance and Relationships

7.3.1 The OAR is a discrete office within CASA and the General Manager OAR reports directly to the Chief Executive Officer (CEO) of CASA. This direct reporting line to the CEO demonstrates CASA's high-level commitment to airspace matters and gives the CEO the proper engagement with the sensitivities surrounding certain areas of airspace as implemented in Australia.

7.3.2 Since its inception, the OAR has endeavoured to build and maintain effective working relationships with the other aviation portfolio bodies; the Department of Transport and Regional Services (especially the Airspace Policy Branch), Defence and Airservices Australia.

7.3.3 Relationships with Industry are described at paragraph 7.9.

7.3.4 The OAR is developing a regulatory management system which will be the means by which the OAR will govern management of its day-to-day business. This system will include the principles by which the office will work, process airspace changes, consult, and assess airspace design and environmental impact. It will comprise three broad areas: internal processes, external regulatory material and external guidance material.

7.3.5 Completion of the OAR regulatory management system incorporating the risk assessment and cost benefit analysis processes is crucial (see paragraph 7.7). Government expectation is that airspace change should not be determined until those processes are developed and put into effect.

7.3.6 The OAR will publish the decision making process on the CASA website. CASA will also provide written advice to the Minister of all decisions made with respect to airspace changes of major or potentially major nature.

7.4 Finance and Performance

- 7.4.1 The OAR is funded through an arrangement with Airservices Australia (AA) and fiscal control is exercised through the CASA budgetary system. Arrangements are in place with AA to adjust the OAR's income dependent upon workload of the office. Performance measures are included in the programme.
- 7.4.2 The Minister for Finance and Administration has approved the funding arrangements between AA and CASA.

7.5 Airspace Regulation

Airspace regulation is the core work of the OAR with the prime task being the regulation of all Australian-administered airspace. The satisfactory conduct of this task will depend largely on close working relationships with those parties that manage such airspace and related infrastructure. Such parties include AA, Defence, aerodrome operators, the security/emergency services and commercial operations eg mines.

7.6 Operational Priorities

- 7.6.1 The AAPS is very clear in that the safe operation of Passenger Transport services is the first priority in airspace administration². In any change to airspace both the safety risk and cost-benefit must be assessed. The following issues must also be taken into account:
- Efficient use of airspace;
 - Protection of the environment;
 - National security;
 - Access to airspace for all users is subject to safety and the three criteria listed above.
- 7.6.2 Prohibited, Restricted and Danger Areas (PRD) are required, for such events as major accidents or fires requiring emergency services protection, for aerial displays or major sporting events. The duration of the airspace activation is generally less than 14 days. Requests for temporary, short-notice airspace changes can be made at any time of the day or night and many require immediate action on the part of the OAR. To accommodate this requirement there is an OAR officer holding the appropriate airspace delegations on call at all times. Approximately two requests are received per day but not all result in promulgation of a Temporary PRD. All requests, however, necessitate a significant level of detailed and expeditious scrutiny by the OAR.
- 7.6.3 Major airspace changes, by their nature, cannot be implemented in a short period of time. Significant effort is required by the proponent of the change in preparing the necessary documentation. Such documentation must

² AAPS, Part 5, paragraph 5.1 Key General Principles for Airspace Administration

explicitly show the purpose of the change and that the change is necessary. It must also demonstrate that the impact of the change on the Key General Principles described in the AAPS has been considered (see also paragraph 8).

7.7 Regulatory Reform

- 7.7.1 The AAPS is explicit in its requirement that all major airspace changes, including future stages of the National Airspace System (NAS), are to “be implemented subject to the results of enhanced analytical process, including cost-benefit and the single common risk framework”³.
- 7.7.2 The Department of Transport and Regional Services (DOTARS) is the lead agency in the development of the Common Risk Management Framework (CRMF) which is an important tool in achieving consistency across the aviation agencies. This tool is being supplemented by the OAR with a more detailed airspace risk assessment process for day-to-day use and consultants have been engaged to produce this. The OAR will ensure that the process is consistent with the CRMF. The OAR has also engaged consultants to produce a cost-benefit analysis process. Both activities are included in this programme.

7.8 International

The Australian government is committed to alignment of its airspace system with world’s best practice and one that best ensures the development of our aviation industry. The Australian Government remains committed to aligning Australian Airspace management to the International Civil Aviation Organisation (ICAO) system and the NAS model.

7.9 Industry and community engagement

The Australian government “expects the decision making process to be characterised by openness”⁴. Effective stakeholder consultation is critical to the airspace change process to ensure that the case for change is rigorously tested prior to implementation. The OAR is firmly committed to stakeholder consultation via regional and national consultative forums. The forums will cover local and strategic issues which may be long or short-term, permanent or temporary. Formal consultation via the website is also carried out. The consultation process is managed under the RMS and is undertaken to a depth appropriate to the magnitude of the change.

³ AAPS, Part 5, paragraph 5.2 The National Airspace System (NAS)

⁴ AAPS, Part 5, paragraph 5.9 Decision-making practices of the OAR

8 Principles for Airspace Administration

- 8.1 The Key General Principles for Airspace Administration can be found in detail in the AAPS⁵ and are as follows:
- Safe operation of Passenger Transport operations are the first priority;
 - Efficient use of airspace is a benefit to the aviation sector and the Australian economy;
 - Protection of the environment from the effects of, and associated with, the operation and use of aircraft;
 - Airspace administration will take account of national security;
 - Access to airspace will be open to all users unless there are justifiable reasons to deny access in terms of safety, efficiency, environmental protection or national security.
- 8.2 The principles will be achieved by better analysis using an outcomes-based approach to airspace regulation, conduct of cost-benefit and risk analyses and enhanced stakeholder consultation.

9 Establishment the Office of Airspace Regulation

- 9.1 The Airspace Act 2007 empowered CASA to administer and regulate airspace from 1st July 2007. The Airspace Regulations 2007 and the AAPS were both came into effect on 1st July 2007. CASA exercises its airspace authority through the OAR. The OAR had a planned complement of ten CASA staff and two permanent Defence staff supplemented by two part-time Reservists. Eight of the ten civilian staff and two of the four Defence staff of the office commenced work in mid-June. CASA employed an additional individual on a 12 month contract to assist the office with the large workload being faced in the early stages of its establishment. AA have provided an experienced airspace specialist one afternoon per week to assist with background information, support and technical advice. The office expects to reach its full complement on 28 September 2007.
- 9.2 For the routine, short-notice airspace change requests there was a seamless transition from AA's Airspace and Environment Unit (AERU) to the OAR with three staff from AA transferring to CASA. AA management and staff co-operated fully in the transfer. These short-notice airspace change requests are a major priority of the OAR as they must be dealt with immediately they arise, on a 24 hour basis.
- 9.3 The second priority of the OAR is to put in place a robust system for appraising major airspace change proposals as the Minister, in his AAPS, explicitly states that all such changes, including future stages of the NAS, are to "be implemented subject to the results of enhanced analytical process, including cost-benefit and the single common risk framework". Furthermore, the government "expects the decision making process to be characterised by openness".

⁵ AAPS, Part 5, paragraph 5.1 Key General Principles for Airspace Administration

9.4 It follows, therefore, that significant airspace changes cannot be sanctioned until the decision-making and consultation processes have been developed and published. This formal process is to be set out in a Regulatory Management System being created by the OAR and its completion in a timely manner is crucial to the ongoing work of the Office.

9.5 The work of the OAR is divided into four broad project areas:

- Pre-requisite Projects completion of which will enable the OAR to conduct the other areas more effectively
- Routine Airspace Change Projects which are those short-notice airspace change requests which must be dealt with immediately they arise.
- AAPS Implementation Programme which comprises projects to discharge OAR responsibilities under the AAPS
- Special Projects which address tasks which have been allocated to OAR outside the strict terms of the AAPS.

10 Project Status Indicator

In the tables that follow there are 'traffic light' indicators against each project. These are reviewed regularly by the OAR Team and adjusted according to an assessment of urgency and importance. There is an element of relative priority between projects in the estimation process. The following matrix is used:

		IMPORTANCE		
		LOW	MEDIUM	HIGH
URGENCY	HIGH			
	MEDIUM			
	LOW			

11 Pre-requisite Projects

11.1 This work programme recognises that the Australian Government remains committed to airspace reform objectives, particularly greater flexibility and the allocation of air traffic management services on the basis of risk. To achieve the objectives of the programme, it was identified that an effective risk assessment tool was required.

11.2 Previously, AA had used a number of different risk tools for airspace change and CASA had used a societal risk based methodology.

11.3 DOTARS, CASA, Defence and AA have developed a CRMF based upon the Australian and New Zealand Standards. The Work Programme therefore, required an airspace change risk assessment methodology that was consistent with the CRMF and which was transparent to industry in order to deliver consistent and valid assessments.

- 11.4 The OAR Work Programme was developed in parallel with the cross agency work on the CRMF.
- 11.5 CASA also identified the need for a cost benefit methodology to apply to airspace change. This project was commenced prior to 1 July 2007 and the establishment of OAR, and is continued in the Pre-requisite Projects part of the programme.
- 11.6 The Airspace Policy Statement identified that major changes to airspace aimed at international best practice would include;
- Risk management analysis consistent with the CASA Risk Management System and the CRMF
 - An assessment of the potential costs and benefits of the proposed change
 - Inclusive consultation with stakeholders; and
 - Consistency with Government policy
- 11.7 The risk and cost/benefit methodologies need to be able to withstand rigorous scrutiny.
- 11.8 Pre-requisite Projects comprise eight key tasks that preferably should be completed prior to commencement of the AAPS Implementation Programme. However, due to time constraints some parts of the Pre-requisite Projects will be conducted concurrently with the AAPS Implementation Programme.

Proj	Description	Lead	Start	End	Comment
1	Develop cost benefit methodology to support airspace decision making	OAR	Jul 2007	Sep 2007	
2	Develop risk assessment tools compatible with cost/benefit methodology and CRMF	OAR	Jul 2007	Nov 2007	
3	Recruit staff to support the OAR Work Programme	OAR	Jul 2007	Nov 2007	
4	Establish financial arrangements - fund OAR and pre-requisite activity	OAR & Finance	Jul 2007	Oct 2007	
5	Implement consultation process with Industry consistent with AAPS	OAR	Jul 2007	Sep 2007	
6	Establish close working relationship with other agencies and departments (Airservices Australia, DOTARS, Defence)	OAR	Jul 2007	Sep 2007	
7	Develop a regulatory management system for airspace change within CASA and the OAR	OAR	Jul 2007	Dec 2007	

8	Establish office accommodation, IT and administrative support including secure office space for Defence	OAR	May 2007	Dec 2007	
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12 Routine Airspace Change Projects

Routine Airspace Change Projects which are those short-notice airspace change requests which must be dealt with immediately they arise. These projects are not individually itemised here because, generally, they have such a short life they commence and complete within updates to this programme.

13 AAPS Implementation Programme

This part of the Work Programme addresses the priority issues identified in Part 6 of the Australian Airspace Policy Statement. It consists of five projects.

13.1 Project 9 – Implemented NAS Characteristics

Proj	Description	Lead*	Start	End	Comment
9.1	CASA to monitor and review compliance with implemented NAS characteristics	OAR*	Oct 2007	Mar 2008	
9.2	CASA to determine and implement appropriate further education and training to promote airspace safety and efficiency with respect to current NAS characteristics	OAR PLET* Industry	Jan 2008	Jul 2008	
9.3	CASA to work with DOTARS to complete PIR of NAS 2 (C) - Ops at non-towered aerodromes	OAR* DOTARS	Jul 2007	Nov 2007	
9.4	CASA to work with DOTARS to implement the agreed regulatory changes	OAR* Legal PLET	Jul 2007	Jun 2008	
9.5	Put in place the criteria for establishment and dis-establishment of CTAF(R) aerodromes OR other means of compliance in place by November 2007	OAR* & A&A	Jul 2007	Nov 2007	

13.2 Project 10 – NAS Characteristics (NAS Stage 3)

Proj	Description	Lead*	Start	End	Comment
10.1	CASA is to undertake by June 2008 the assessment of the NAS 3(b) characteristics 25, 44, 23 (see Table 1)	OAR*	Mar 2008	Jun 2008	
10.2	CASA to determine an implementation programme according to the outcome of the analytical and consultative process outlined in Part 5 of the Australian Airspace Policy Statement (Characteristics)	OAR*	Jul 2008	Nov 2008	
10.3	CASA, in consultation with Airservices Australia, is to ensure that an assessment is made of extending air traffic control services to areas that are served by radar but in which no air traffic control service is currently provided.	OAR* & AA	Jul 2007	Jun 2008	

Table 1:

Characteristic 25	Low level Class E corridors (where required 1200ft AGL and above 8500ft AGL)
Characteristic 44	Non-radar Class E to base of FL145 (in less dense airspace, Class E could be lowered to FL145)
Characteristic 23	Class E Terminal Airspace (To be introduced at specific locations)

13.3 Project 11 – Class D – Regional aerodrome aeronautical study programme

Proj	Description	Lead*	Start	End	Comment
11.1	Conduct a review of the air traffic services and facilities and airspace classifications over ten regional aerodromes (see Table 2). Oversight of the review report by AA may require further study by OAR at individual aerodromes.	AA* OAR	Ongoing	Mar 2009	Schedule for any further study that may be required is unknown at this time. If any safety concerns are identified expeditious action will be taken.
11.2	Joint work with AA to assess the airspace classifications above ten identified aerodromes. CASA assessment should be done against the Government commitment to NAS objective of introducing US model Class E airspace over Class D locations. Assessment to include Characteristics 7, 16, 17 and 18 (see Table 3)	OAR*	Ongoing	Mar 2009	

Table 2:

Albury	Alice Springs	Coffs Harbour	Hamilton Island	Hobart
Launceston	Mackay	Maroochydore	Rockhampton	Tamworth

Table 3:

Characteristic 7	Introduce VFR implied clearance into Class D
Characteristic 16	Establish North American model Class D at non-radar towers
Characteristic 17	Redesignate GAAP as Class D aerodromes
Characteristic 18	Amend Class D airspace dimensions

13.4 Project 12 – Proactive Ongoing Assessment

Proj	Description	Lead*	Start	End	Comment
12.1	CASA to draw up and implement a ongoing Programme of Aeronautical Studies to meet obligations of Section 13 of the Airspace Act 2007. Establish a priority order for airspace requiring an assessment of aviation activity to determine the appropriate airspace classifications, service and facilities.	OAR* & A&A	Jan 2008	Ongoing	
12.2	Establish effective plans to address unacceptable risks where identified	OAR*	Jan 2008	On-going	

13.5 Project 13 – NAS Characteristics – Special Use Airspace

Proj	Description	Lead*	Start	End	Comment
13.1	CASA to establish a joint programme with Defence to assess and consider implementation of NAS Characteristics 36, 37, 38, 39, 40 & 48 (see Table 4)	OAR* & ADF	Jan 2008	Dec 2008	OAR resources do permit this to be addressed in short term.
13.2	CASA to explore other means of achieving enhanced flexibility in the use of Australian airspace where proposals are not likely to pass cost/benefit or risk analysis tests by reference to the ICAO Operational Concepts and other jurisdictions approaches to flexible airspace.	OAR* ADF DOTARS	Jan 2008	Jun 2009	OAR resources do permit this to be addressed in short term. Assessment of existing AA and ADF work may enable end date to be brought forward

Table 4:

Characteristic 36	Change from Danger to Alert areas
Characteristic 37	Rationalisation of Military Restricted airspace
Characteristic 38	Warning areas replace Restricted Areas
Characteristic 39	Establishment of Military Operating Areas
Characteristic 40	Military Training Routes
Characteristic 48	Introduction of Controlled Firing Areas

13.6 Project 14 – Introduction of systems and technologies that enhance the safety and performance of Australia’s airspace system

Proj	Description	Lead*	Start	End	Comment
14.1	Build research and development capability within OAR	OAR*	Jan 2008	Jun 2009	
14.2	Conduct examination and implementation of technologies that can deliver safer and more efficient use of Australian administered airspace (ADS_B, GNSS, GWAAS GBAAS)	OAR* ATOG GAOG DOTARS AA	Jan 2008	Jun 2009	
14.3	Assessment of further integration of civil and military airspace functions including Integrated Operating Concept (IOC)	ADF* & AA* + OAR	Jan 2008	Jun 2008	Dates subject to co-ord with AA & ADF
14.4	Implementation of airspace management tools including development of Flexible Use Airspace	OAR*	Ongoing	Ongoing	

14 Special Projects

Part 3 of the OAR Work Programme addresses tasks which have been allocated to OAR outside the strict terms of the AAPS. They may include items which would have been part of other projects but, for particular reasons, have been allocated a higher priority and identified as separate projects.

Proj	Description	Lead*	Start	End	Comment
15	Williamstown Aeronautical Study	OAR*	Ongoing	Nov 2007	Recommendation made 31 Aug 2007. Delivery date subject to acquisition of valid data, completion of CBA and Risk Assessment by contractors.
16	Avalon Aeronautical Study	OAR*	Ongoing	Jun 2008	Initial review reported to Minister 28 Sep 2007

15 Glossary of Abbreviations

A&A	Airways and Aerodromes Department (CASA)
AA	Airservices Australia
AAPS	Australian Airspace Policy Statement
ADF	Defence
AGL	Above ground level
ATOG	Air Transport Operations Group
CASA	Civil Aviation Safety Authority
CEO	Chief Executive Officer
CRMF	Common Risk Management Framework
DOTARS	Department of Transport and Regional Services
FL	Flight level
GAAP	General Aviation Airport Procedures
GAOG	General Aviation Operations Group
ICAO	International Civil Aviation Organisation
NAS	National Airspace System
OAR	Office of Airspace Regulation
PLET	Personnel Licensing, Education and Training Department (CASA)
PRD	Prohibited, Restricted and Danger Areas

END