# WA RAPAC 2019-3

**Venue:** CASA Perth Office, Brearley Room, Fauntleroy Ave, Perth Airport  
**Start Time:** 0900  
**Finish Time:** 1110  
**Date:** Wednesday 13 November 2019

<table>
<thead>
<tr>
<th>Meeting Chair</th>
<th>Craig Peterson</th>
<th>Convenor</th>
<th>Alwyn Adkins</th>
</tr>
</thead>
</table>

## MINUTES

<table>
<thead>
<tr>
<th>Item No</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>OPENING</td>
</tr>
<tr>
<td>2.</td>
<td>REVIEW OF ACTION ITEMS</td>
</tr>
<tr>
<td>3.</td>
<td>REGIONAL SAFETY MATTERS</td>
</tr>
<tr>
<td>4.</td>
<td>CHANGE PROPOSALS</td>
</tr>
<tr>
<td>4.1</td>
<td>Proposal to add Restricted Airspace R169</td>
</tr>
<tr>
<td>5.</td>
<td>AGENCY BRIEFINGS AND UPDATES</td>
</tr>
<tr>
<td>5.1</td>
<td>Bureau of Meteorology</td>
</tr>
<tr>
<td>5.2</td>
<td>Airservices Australia</td>
</tr>
<tr>
<td>5.3</td>
<td>Defence</td>
</tr>
<tr>
<td>6.</td>
<td>OTHER BUSINESS</td>
</tr>
<tr>
<td>6.1</td>
<td>Kimberley Broadcast Area</td>
</tr>
<tr>
<td>6.2</td>
<td>Update on the Boolgeeda area</td>
</tr>
<tr>
<td>6.3</td>
<td>Bay-Number Advice on Clearance Request – Perth Airport</td>
</tr>
</tbody>
</table>
1. OPENING
The Chair thanked attendees for making their time available to attend the RAPAC meeting.

2. REVIEW OF ACTION ITEMS
The status of outstanding action items was reviewed, and comments are included in the attached table.

3. REGIONAL SAFETY MATTERS
There were no regional safety matters raised.

4. CHANGE PROPOSALS
4.1 Proposal to add Restricted Airspace R169
FLTLT Dave Farrell (Defence) outlined the proposal for the addition of Restricted Airspace R169. The RAPAC had several enquiries relating to: the potential changes to the VFR coastal lane; the potential impacts on the Perth VOR 9NM arc; the NOTAM activation procedures; community and local airspace user consultation; and, the options for managing the VFR lane. FLTLT Farrell advised the RAPAC that he will report back on these issues at the next meeting.

5. AGENCY BRIEFINGS AND UPDATES
5.1 Bureau of Meteorology
Ms Natasha Jacobson (Bureau of Meteorology) gave a presentation (attached) to the RAPAC to update the members on the Bureau’s activities.

5.2 Airservices Australia
Mr Tony Chudleigh and Mr Lance Dale (Airservices) provided an update to the RAPAC. The RAPAC was informed that the Jandakot runway and taxiway work is now complete. Additionally, the Perth Terminal Control Unit (TCU) and tower construction for OneSky has now commenced. They also informed the RAPAC that Airservices is undergoing another restructure and advised that this will be transparent to external stakeholders. Mr Chudleigh added that he has not yet received contact from Ms Maude Telfer (King Leopold Air) regarding the Broome Training Area.

5.3 Defence
SQNLDR Simon Ward informed the RAPAC that during the RAAF Christmas shutdown period, Restricted Areas will be deactivated unless the tower is needed. He advised the RAPAC to ensure pilots check NOTAMs to confirm. He also informed the RAPAC that at the training facility in Pearce, the students are beginning their PC21 operations, and noted that there will be some syllabus changes which includes more night flight (of up to 3 times per month). SQNLDR Ward also informed the RAPAC that Counter-RPAS systems have been fitted to Pearce tower.
6. OTHER BUSINESS

6.1 Kimberley Broadcast Area

Mr Dan Smith (CASA) informed the RAPAC that the West Kimberley Broadcast Area upper altitude adjustment was still undergoing consultation. He added that as part of the same proposal, the North Kimberley Broadcast Area will also have its upper altitude changed to 10,000 feet.

6.2 Update on the Boolgeeda area

Mr Darryl Evans (FMG) asked the RAPAC if there had been any further incident reports from the Boolgeeda area relating to CTAF use. Mr Glen Fuge (VARA) confirmed that there had been no further reports from VARA aircraft.

Mr Evans also advised the RAPAC of a new aerodrome being built West/North-West of Boolgeeda which is due to become operational in February or March 2020. He added that the name of the aerodrome is to be advised. The Convenor raised the issue of complicated aerodrome names, such as the recently published JACINTH AMBROSIA (YJAC), and suggested that names be kept simple to simplify pilot communication.

6.3 Bay-Number Advice on Clearance Request – Perth Airport

The Convenor informed the representatives from Airservices and the RAPAC that he has noticed that clearance delivery controllers are asking for bay numbers, despite crews already including this information in their initial call. Mr Chudleigh will take this comment back to the relevant controllers.
## ATTENDANCE LIST

<table>
<thead>
<tr>
<th>Name</th>
<th>Organisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Craig Peterson (Chair)</td>
<td>CASA</td>
</tr>
<tr>
<td>Alwyn Adkins</td>
<td>WA RAPAC Convenor</td>
</tr>
<tr>
<td>Mike Evans</td>
<td>Maroomba Airlines</td>
</tr>
<tr>
<td>Darryl Evans</td>
<td>FMG</td>
</tr>
<tr>
<td>Jarod Rowe</td>
<td>RACWA</td>
</tr>
<tr>
<td>Simon Ward</td>
<td>Defence</td>
</tr>
<tr>
<td>Lance Dale</td>
<td>Airservices</td>
</tr>
<tr>
<td>Tony Chudleigh</td>
<td>Airservices</td>
</tr>
<tr>
<td>Glen Fuge</td>
<td>Virgin Australia Regional Airlines (VARA)</td>
</tr>
<tr>
<td>David Farrell</td>
<td>Defence</td>
</tr>
<tr>
<td>Natasha Jacobson</td>
<td>Bureau of Meteorology</td>
</tr>
<tr>
<td>Rodolfo Tomasoni</td>
<td>Network Aviation</td>
</tr>
<tr>
<td>Matt Angelucci</td>
<td>Virgin Australia Regional Airlines</td>
</tr>
<tr>
<td>Daniel Smith</td>
<td>CASA</td>
</tr>
<tr>
<td>Edward Morris</td>
<td>CASA</td>
</tr>
</tbody>
</table>

### Apologies

<table>
<thead>
<tr>
<th>Name</th>
<th>Organisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hilary Serman</td>
<td>Cobham</td>
</tr>
</tbody>
</table>
## Action Register - WA RAPAC

**Last Updated:** 10 January 2020

<table>
<thead>
<tr>
<th>Reference</th>
<th>Action</th>
<th>Responsible</th>
<th>Due Date</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019-2/2</td>
<td>Daniel Smith (CASA/OAR) to provide the Convenor with advice on the development of an AIP SUP to promulgate the Pilbara TAC.</td>
<td>Mr Smith (CASA/OAR)</td>
<td>Out of session</td>
<td><strong>Closed.</strong> RAPAC was updated at the 2019-3 meeting.</td>
</tr>
</tbody>
</table>

**Items Transferred from NWA RAPAC 2018 actions**

<table>
<thead>
<tr>
<th>Reference</th>
<th>Action</th>
<th>Responsible</th>
<th>Due Date</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018-1/1</td>
<td>Proposals for amending the western CTAF (upper limit), inclusion of the training area, and procedures for the horizontal waterfalls to be circulated to local operators to gauge interest in pursuing.</td>
<td>Ms Telfer</td>
<td>Out of Session</td>
<td><strong>Closed.</strong> Special procedures for Horizontal Waterfalls will be published in the May AIRAC cycle.</td>
</tr>
</tbody>
</table>
**Background**

The ADF has, over the past few years acquired Military off the Shelf (MOTS) UAS. These MOTS are flown in a tactical role and flight profiles beyond the normal CASA Standard Scenarios which propose a risk to manned aircraft (fixed and rotary), thus the requirement to operate MOTS UAS in Restricted airspace is mandated by Defence Aviation Safety Airworthiness Manuals. By placing a relatively small Restricted airspace over Swanbourne the ADF is able to safely separate MOTS UAS from manned aircraft. D169 would still remain, so as to bring attention to aviators of the dangers of live fire activity.

**Airspace Boundary and Confines**

The initial design was done with consultation from flying schools and operators at Jandakot both fixed and rotary wing. The vertical extent will be SFC-1000ft. This height is to allow civilian traffic to pass over the top at 1500ft. Consultation has determined this height would prevent inexperienced pilots and those under training who are not familiar with the lateral airspace boundaries to pass over the top and reduce the number or airspace infringements. The lateral boundaries are (Please refer to the attached map);

- The Western edge will be the mean high tide mark
- Southern boundary, intersection of W Coast HWY and Seaward Ave to the Coast
- Eastern boundary, intersection of W Coast HWY and Seaward Ave north to Rochdale Rd
- Northern Boundary, intersection of W Coast HWY and Rochdale Rd diagonally to the coast remaining clear of Challenger Pde.

The lateral boundaries have given consideration to the VFR lanes, the Western lane will not be affected, the Eastern lane will need small adjustments approx. 250 meters east to fit around the new eastern boundary but key landmarks and features have been chosen so pilots can easily identify them during low light and low visibility conditions. This new route will be just under 2km away from the C Class airspace of Perth at its closest point.

You will see the Eastern VFR lane would follow from the Fremantle Golf course > Cottesloe VFR point > Creswell Park > Cottesloe Golf Club > intersection of W Coast HWY and Rochdale Rd > then as currently drawn.

**R169** will be;

- 9 NM from Jandakot’s ARP
- 10 NM from Perth’s ARP and 2.4 nm from the approach to RW06 using waypoint LENNY at 10.2 nm on the approach. Aircraft would be at NB 2800 on the RNAV-Z (GNSS) RWY06 and NB 2500 for
VOR RWY 06, thus 1500ft minimum clearance from commercial traffic.

- 10NM from Rottnest Island ARP.

We are still in discussion with the Civil Airspace Designers regarding the height limit we would be allowed to operate the MOTS inside R169. We would like 1000ft AMSL but if separation is an issue then we can limit ourselves to 500ft AMSL to provide vertical separation as much as possible.

This change proposal will be presented to the RAPAC Members, however I invite feedback or comments to david.farrell2@defence.gov.au.

The next step in this airspace request once a design has been agreed upon will be to submit the ACP 1284 Form through the ADF Airspace representatives who request this change on our behalf as per a civilian request.
Proposed Restricted Airspace R169 RA2
Key Information

The ADF has, over the past few years acquired Military off the Shelf (MOTS) UAS below 2kgs. These MOTS are flown in a tactical role and flight profiles beyond the normal CASA Standard Scenarios which propose a risk to manned aircraft (fixed and rotary).

Defence Aviation Safety Airworthiness Manuals require MOTS to be flown in Restricted Airspace D169 would remain to bring attention to aviators of the dangers of live fire activity at Swanbourne

This Airspace Change Proposal is to safely separate MOTS UAS and manned aircraft with little to no impact to civilian operators
Defence UAS

From the Defence Aviation Safety Manual;

MOTS UAS are approved to operate beyond the CASA Standard Scenarios only in Restricted or Prohibited airspace, the differences between CASA and ADF include but are not limited to;

(1) flight above 400ft AGL by day and night;

(2) Infra-red (IR) strobe light used in lieu of the position/navigation lights when operating under tactical conditions;

(3) Launched and recovered in fog with conditions specified in the respective Authority to Operate;

(4) Permitted to operate beyond visual line of sight, but not beyond ELOS.
Engagements and Consults

The initial design of proposed R169 was sent to the following for their feedback and recommendations;

Air Australia International
Jandakot Flight Center
Minnovation
University Flying Club
WA Aviation College
RFDS
Royal Aero Club WA
Heliwest
Airservices Australia - Perth ATC
CASA Airspace Project Specialist
453SQN RAAF Pearce ATC
Engagements and Consults

The feedback and recommendations received shaped the design of the restricted area presented today and has considered;

- The VFR lanes;

- Flights during low visibility and considerations for ATC in managing VFR separations;

- Vertical extent SFC-1000 to allow traffic to pass overhead and not hinder civil traffic that would need to pass over or inadvertently encroach laterally if the upper limit was to be 1500ft which was the original design;

- Rotary wing Charter flights that require land to be within auto rotation gliding distance;

- Easy to identify land features marking the proposed R169 boundary.
Engagements and Consults

We have taken into consideration AC 10101 specifically Para 5.2.2.4 which states;

"The OAR may have to declare a permanent or temporary restricted or danger area for the operations. In considering a request for such restrictions, the OAR must take into account, among other things, the impact of the proposed flights on the operations of other aircraft with respect to access to airspace. The OAR is unlikely to approve a request for restricted areas where it would significantly limit the ability of other operators to use the airspace."

This Airspace Change Proposal is to safely separate MOTS UAS and manned aircraft with little to no impact to civilian operators
Topics

- Aviation Space Weather Advisory Service
- Aviation Meteorological Services Transformation Update
- TAF Review
- Trend (TTF) Review
- Use of PCA locations in SIGMETs
- Change in AWIS phone numbers
Space Weather Impacts on Aviation

- Affects communication system (HF and SAT COM)
- Affects satellite-based Navigation system (GNSS)
- Radiation impacts
Global Space Weather Service for Aviation

Aviation User Requirements

Concept of Operations for Space Weather

Draft Standards and Recommended Practices (SARPs)


Draft updated ICAO documentation (Annexes)

ICAO Space Weather Advisory Centre (SWXC) operational requirements

ICAO SWXC nominations / audits

SWXC selection

Global Service Model

Operational service 07 Nov 2019
Global Space Weather Service for Aviation

US Space Weather Prediction Center (SWPC)

European PECASUS

ICAO

Australia, Canada, France and Japan (ACFJ)
Amendment 78 contained new SARPs for Space Weather Advisories, addressing four distinct categories:

- HF radio communications advisories (HF COM)
- GNSS navigation and surveillance advisories (GNSS)
- Satellite communications advisories (SATCOM)
- Advisories for elevated radiation dose rates (RADIATION).
User Education and Publications

Bureau of Meteorology Publications

Information Brochures -

- Space Weather Hazard
- Space Weather Advisories

AIP (update Nov 2019)

Aeronautical Information Circular (AIC) [pending]
Transformation of Aviation Meteorological Services
Case for Change

Current operations
• Forecasters are generalists
• Forecasting delivered from 11 different offices

Key issues:
• Service improvements are difficult/slow to implement
• Workload managed within offices
• Experienced forecasters specialise, but there is no aviation option.

Future service demands
• Industry trends
  – Growth in air movements
  – Global operations and sourcing
  – Multinational weather corporations

• Future services
  – Digital and graphical met information, in cockpit
  – Air Traffic Flow Management, OneSky
  – Regional Hazardous Weather Advisory Centres (VAAC, TCAC)
Transformation Blueprint

Quality
- Dedicated aviation specialists with a deep understanding of the industry

Responsive
- Service improvements faster due to consolidation of people and ICT

Resilient
- Two aviation centres underpin continuity; structured training and smart technologies to strengthen and deepen local aviation knowledge

Flexible
- Operations that efficiently scale to tactical loads and accommodate service expansion, including new and expanded services
• Operating environment:
  – simpler, swifter, robust

• Improved Tools
  – Flexible workload
  – Intelligent alerts
  – Situational awareness

• Training / Learning
  – Knowledge-base
  – Immersive simulator
Timeline

- **Jul 19**: Brisbane Aviation Forecasting Centre operational
- **Aug 19**: Brisbane systems installed
- **Nov 19**: Melbourne systems installed
- **May 20**: Melbourne Aviation Forecasting Centre operational
- **Jun 20**: Program close & handover
More information:

Aviation Weather Services

Contact us on:
Aviation_Transformation@bom.gov.au
TAF Review

- **Purpose:**
  - Determine the current and future needs of the aviation industry.
  - Make recommendations relating to the provision and categorisations of TAFs.
  - Quality management.

- **TAF Review Executive Committee and Technical Working Group,** consisting of members from Bureau, Airservices, CASA and Department of infrastructure to met in June and July.

- **Draft report expected to be released for industry comment late 2019 or early 2020. Implementation of changes expected 2020.**

- **More information**
Following a comprehensive review of the Trend Forecast (TTF) service and thorough consultation with industry, it was recommended the TTF be replaced by a three-hourly aerodrome forecast known as a TAF3.

A TAF3 Implementation working group (TIWG) was established on 30 April 2019 consisting of a broad representation from industry and government agencies.

The proposed implementation date for the TAF3 service is 21 May 2020 (date pending industry consultation and feedback through CASA's Summary of Proposed Change process).

Further information, including a detailed trend review report and FAQs can be found on the Bureau’s Aviation webpage - http://www.bom.gov.au/aviation/trend-review
Use of PCA locations in SIGMETs

• Australian SIGMETs currently include PCA locations and/or geographical coordinates for describing the location of phenomena.

• ICAO Annex 3 only allows the use of geographical coordinates to describe the locations of phenomena.

• Examples

Mix of coordinates and PCA locations

YMMM SIGMET P01 VALID 032330/040200 YPRM - YMMM MELBOURNE FIR SEV TURB FCST WI CAJE - YMLF - BURR - S2930 E13930 - S3030 E13800 - S3530 E13800 SFC/5000FT STNR WKN
RMK: ME NEW=
• Currently, Australia has registered a difference to Annex 3 with respect to this.

• However, use of PCAs is posing more significant issues as we are moving towards machine to machine ingestion of Operational Meteorological (OPMET) Information (XML format).

• Exchange of OPMET data in XML format will become an ICAO standard from 2020.

• To comply with ICAO requirements, the Bureau is planning to use only geographical coordinates in all Australian SIGMETs, likely from **Feb 2020** (AIRAC date).
**AWIS Number Changes**

- The AWIS phone numbers changed from 15 August 2019.


- Feedback or comments??
Questions and comments

Ashwin Naidu
Email: Ashwin.naidu@bom.gov.au
Tel: 0434076585