<table>
<thead>
<tr>
<th>Item No</th>
<th>Item</th>
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<tbody>
<tr>
<td>1.</td>
<td>1. OPENING</td>
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<tr>
<td></td>
<td>1.1 Kununurra RAPAC Convenor nominations</td>
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<tr>
<td>2.</td>
<td>REVIEW OF ACTION ITEMS</td>
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<td>3.</td>
<td>REGIONAL SAFETY MATTERS</td>
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<td>4.</td>
<td>CHANGE PROPOSALS</td>
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<tr>
<td>5.</td>
<td>AGENCY BRIEFINGS AND UPDATES</td>
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<tr>
<td></td>
<td>5.1 Bureau of Meteorology</td>
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<tr>
<td></td>
<td>5.2 Airservices Australia</td>
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<td></td>
<td>5.3 Defence</td>
</tr>
<tr>
<td>6.</td>
<td>OTHER BUSINESS</td>
</tr>
<tr>
<td></td>
<td>6.1 Christmas Island VOR DME removal (Out of Session paper – 15 March 19)</td>
</tr>
</tbody>
</table>
1. OPENING
The Chair opened the meeting and thanked those in attendance. Minutes of previous meeting proposed by the Chair and accepted by the Convenor.

1.1 Kununurra RAPAC Convenor nominations
The Convenor, Mr James Bondfield, advised that he will be stepping down as Convenor, citing a significant workload increase. He advised that he has previously contacted the RAPAC Secretariat to inform them of this. The Convenor proposed Mr Nick Stielow (not present) as a candidate. The Chair advised that an enquiry about the role of RAPAC Convenor was made by Mr Vincent Stevens (Shoal Air) of which he declined nomination. Mr Stielow was dialed into the meeting and accepted the nomination.

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

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

4. CHANGE PROPOSALS

4.1 RNAV approach for Kalumburu
The RAPAC discussed the possibility of establishing an RNAV approach for Kalumburu and outlined the potential safety benefits associated with it. It was also highlighted that many flights departing Kununurra are destined for Kalumburu and would benefit Police and RFDS operations.

4.2 Reinstate TAF at Wyndham
The RAPAC discussed the possibility to reinstate the TAF at Wyndham. It was noted that there used to be a TAF operational at Wyndham and it is the alternate for Kununurra. Mr Travis King (BoM) advised that there is a cost to reinstate the TAF and noted that an Aviation Weather Station (AWS) is already established. He also informed the RAPAC of the procedure to request a TAF which is available from the BoM.

5. AGENCY BRIEFINGS AND UPDATES

5.1 Bureau of Meteorology
Mr Tristan King gave a presentation to the RAPAC (attached).
Mr Leigh Rawlings (Kimberly Air Tours) asked Mr King of the likelihood of late wet season cyclones and any other non-normal activity associated with the long and dry wet season currently being experienced. Mr King informed the RAPAC that the conditions are suitable for cyclones to form, but they just are not forming. He will have the BoM’s climatologist address this and will forward to Mr Peter Ball (CASA) for distribution to Kununurra Chief Pilot’s group.

5.2 Airservices Australia
There were no Airservices Australia representatives to provide an update at this meeting.

The Chair spoke to the presentation provided by Airservices in advance of the meeting (attached). The presentation outlined Airservices’ Airspace Modernisation Program which included discussion on virtual tower technology, airspace reviews, and the departure from procedural towers to visual.
5.3 **Defence**

There were no representatives from Defence to provide an update at this meeting.

The Chair provided an overview of Military Exercise Diamond Storm based on the presentation provided from Defence ahead of the meeting (attached). The RAPAC discussed the impact of the same Military Exercise from 2018 that were experienced at Kununurra.

6. **OTHER BUSINESS**

6.1 **Christmas Island VOR DME removal (Out of Session paper – 15 March 19)**

The Chair presented the paper for comment which was sent to RAPAC members out of session on 15 March 201. The Chair also noted that Mr Dave Hughes (Airservices Australia) is the contact for this.

7. **ATTENDANCE LIST**

<table>
<thead>
<tr>
<th>Name</th>
<th>Organisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>James Bondfield</td>
<td>RAPAC Convenor</td>
</tr>
<tr>
<td>Rob Walker (Chair)</td>
<td>CASA</td>
</tr>
<tr>
<td>Peter Ball</td>
<td>CASA</td>
</tr>
<tr>
<td>Leigh Rawlings</td>
<td>Kimberly Air Tours</td>
</tr>
<tr>
<td>Tristan King</td>
<td>Bureau of Meteorology</td>
</tr>
</tbody>
</table>

**Apologies**

<table>
<thead>
<tr>
<th>Name</th>
<th>Organisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Damien Onofaro</td>
<td>Shoal Air</td>
</tr>
<tr>
<td>Scott Lefevre</td>
<td>Defence</td>
</tr>
<tr>
<td>Reference</td>
<td>Action</td>
</tr>
<tr>
<td>-----------</td>
<td>--------</td>
</tr>
<tr>
<td>2017-1/1</td>
<td>Follow up North Kimberly Broadcast Area changes to boundary and addition of information box.</td>
</tr>
<tr>
<td>2017-1/3</td>
<td>Chief Pilots to review and consider proposals raised to raise altitude of Broadcast Areas to 10,000 feet and advice out of session.</td>
</tr>
<tr>
<td>2018-1/2</td>
<td>Provide diagram of Karajini National Park outlining 'No Fly areas’ to the OAR for further investigation.</td>
</tr>
</tbody>
</table>
Airspace Modernisation Program

Class E Airspace at Ayers Rock

Air Navigation Services and Customer Service Enhancement
February 2019
Destination ATM 2025

Enhanced Long Haul Airspace Services
- Enhanced Domestic Surveillance (Satellite ADS-B)
- Long Range Air Traffic Flow Management
- Route Optimization (Blind Flown Routes) / Dynamic Airborne Termination Procedures
- Single Flight Information Resolution

Modernized Air Traffic Control Environment
- Configuration Flexibility
- Consistent and informed Supervision
- Intelligent Pre-Shift Briefing
- Mobile Operational Information
- Co-located Defence/Civilian Workforce
- Integrated Defence/Civilian ATM platform
- Full Contingency Capability
- Performance Based Endorsement
- Dynamic Sectorisation
- Voice Switch Capacity
- Enhanced Airspace and Aircraft Conflict Detection
- Workload Forecasting and Management
- Nationally Standardised Procedures

Enhanced High Density Airspace Environment
- Continuous Descent Approach
- Integrated Departure/Arrival Management
- Wake Turbulence Re-categorization and Alerting

Enhanced Regional Airspace Environment
- Airspace reform aligned to enhanced services
- Increased low altitude ADS-B surveillance (Terrestrial and Satellite)
- Flexible Use of Airspace

Enhanced Aerodrome Environment
- Digital Aerodrome Services Delivery
- Airport Collaborative Decision Making
- New Parallel Runways at Brisbane and Melbourne
Airspace in the ATM context

Airspace Management
- Setting the platform for effective Air Traffic Management

Air Traffic Control
- Delivering safe and efficient services

Air Traffic Flow Management
- Enabling a predictable air transport network
Changing ATM Environment

- Changes to technology (e.g., Performance-based navigation)
- Mandated avionics (e.g., IFR ADS-B mandate)
- Changes to the ATM platform capability (e.g., CMATS)
- General aviation expectations (e.g., VFR access)
- New airspace users (e.g., Drones, RPAS)
- Changed government expectations (e.g., Airspace Policy Paper)
- Differing international practice (e.g., FAA airspace)
- Emerging airports (e.g., Western Sydney)
- Emerging services (e.g., Ballina)
- New runways (e.g., Brisbane and Melbourne)
- New service offerings (e.g., Digital Aerodrome Services)
- Enhanced surveillance (e.g., Satellite ADS-B)
- Modernised communications (e.g., SATCOM)
- New aircraft capability (e.g., increased velocity, altitude, range)

.....airspace hasn’t kept up
Features of our current airspace architecture

- Inconsistent regional terminal airspace
  - Differing local ATC procedures & handoffs
  - Differing airspace classification
- Inconsistent capital city tower airspace
  - C in Australia, B in several other countries
- Under utilised surveillance capability
  - Procedural separation where surveillance exists
- Unnecessary restrictions on VFR access
  - Class A where C is suitable
- Traffic service where separation services are appropriate
  - Class G where E is appropriate in both enroute airspace and outside of tower operating hours

<table>
<thead>
<tr>
<th>Class</th>
<th>Controlled</th>
<th>IFR</th>
<th>SVFR</th>
<th>VFR</th>
<th>ATC Clearance</th>
<th>Separation</th>
<th>Traffic Information</th>
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<tbody>
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<td>A</td>
<td>Controlled</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Required</td>
<td>Provided for all flights</td>
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<tr>
<td>B</td>
<td>Controlled</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Required</td>
<td>Provided for all flights</td>
<td>N/A</td>
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<tr>
<td>C</td>
<td>Controlled</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Required</td>
<td>Provided for all IFR/SVFR to IFR/SVFR/VFR</td>
<td>Provided for all VFR</td>
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<td>D</td>
<td>Controlled</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Required</td>
<td>Provided for IFR/SVFR to other IFR/SVFR</td>
<td>Provided for all IFR and VFR</td>
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<tr>
<td>E</td>
<td>Controlled</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Required for IFR and SVFR</td>
<td>Provided for IFR/SVFR to other IFR/SVFR</td>
<td>Provided for all IFR and VFR flights where possible</td>
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<tr>
<td>F</td>
<td>Uncontrolled</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Advisory only</td>
<td>Provided for IFR/SVFR to other IFR/SVFR where possible</td>
<td>Provided where possible if requested</td>
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<td>G</td>
<td>Uncontrolled</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Not provided</td>
<td>Not provided</td>
<td>Provided where possible if requested</td>
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</table>
Prioritised changes

1. **5 Tower’s Transfer of Airspace to Enroute**
   - Hobart, Albury, Launceston, Alice Springs and Tamworth Towers transfer of airspace 4,500 feet AMSL and above to Enroute Surveillance Controllers – *increasing airspace within which surveillance services are provided*
   - May 2019

2. **Increased Enroute Class E and Class C Airspace**
   - Replacement of uncontrolled airspace with controlled airspace above 12,500 feet - *increasing airspace in which separation service is provided*
   - Increasing access to airspace for aircraft operating under visual flight rules above 18,500 feet
   - November 2019

2.1 **Non towered airport Class E trial**
   - Replacement of uncontrolled airspace with controlled airspace at Ayers Rock Aerodrome for terminal airspace from 5,500 feet AMSL
   - November 2019
Changes map

Service Outcomes

SO1. Ensure the safety of air navigation is the most important consideration while fostering and promoting civil aviation.

SO2. Provide a predictable, efficient and effective service to the aviation industry.

SO3. Innovate for airspace user value aligned with global industry expectations.

Change Principles

CP1. The class of airspace should be commensurate with the service level required to appropriately manage the assessed level of risk.

CP2. There should be national consistency and standardisation of airspace and procedures to reduce complexity for air traffic controllers and pilots and enhance service resilience.

CP3. The class of airspace should leverage the implementation of air traffic management technologies (such as ADS-B surveillance) to improve safety, mitigate risk and enhance access to airspace for all airspace users.

5 Tower’s Transfer of Airspace to Enroute
- May 2019
- CP2
- SO2

Increased Enroute Class E and Class C Airspace
- November 2019
- CP1, CP2, CP3
- SO1

Non towered airpport Class E trial
- November 2019
- CP1, CP2, CP3
- SO1
# Airspace Change Process

<table>
<thead>
<tr>
<th>Initiation</th>
<th>Gate 1</th>
<th>Prioritisation and Resource Allocation</th>
<th>Change Preparation</th>
<th>Gate 2</th>
<th>Consultation and Change Process</th>
<th>Gate 3</th>
<th>Implementation and PIR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Submit proposal (6.2.2.4)</td>
<td>Gate 1 review (6.2.4)</td>
<td>Service Manager - Assign prioritisation (6.2.5.1)</td>
<td>Assign change coordinator (6.2.6.1)</td>
<td>Gate 2 review (5.2.7)</td>
<td>Execute SEP (6.2.8.1)</td>
<td>Gate 3 review (6.2.9)</td>
<td>Regulatory Performance - ACP to CASA</td>
</tr>
<tr>
<td>Commence EIA as per A-NOS-ENV-2.100 (6.2.3.5)</td>
<td>FPG approval</td>
<td>AT3 Change - Allocate resources (6.2.5.2)</td>
<td>Create NRFC (6.2.6.3)</td>
<td>a) Initial screening with no targeted EA accepted or b) Targeted EA and SEP accepted</td>
<td>GSCE - Report on engagement outcomes</td>
<td>NRFC authorised</td>
<td>ATM Data Services - Publication</td>
</tr>
<tr>
<td>Note: b) For MNP errors, see 6.3.1.7</td>
<td>Further information requested (resubmit to Gate 1)</td>
<td>ATM Network Services - Flight path modeling and analysis</td>
<td>ATM Network Services - Flight path modeling and analysis</td>
<td>Further information requested (resubmit to Gate 2)</td>
<td>CASA consultation (see Note at 6.2.8.1)</td>
<td>Further information requested (resubmit to Gate 3)</td>
<td>Note: Changes subject to an ACP must await CASA approval (6.2.10.1)</td>
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<td>FPD - Design</td>
<td>Review Initial design (6.2.6.3)</td>
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<td>Implementation activity (6.2.10.2)</td>
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<tr>
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<td>Cancel</td>
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<td>Record risk (6.2.6.4)</td>
<td></td>
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<td>Complete training</td>
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<td></td>
<td></td>
<td></td>
<td>PIR (6.2.10.3)</td>
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</table>
### Current
- Tower (ADC) provides approach procedural separation in Class C airspace A085 – A045 and in Class D airspace from A045 to ground
- Enroute provide control services down to A085

### Concept
- Tower provides approach procedural separation in Class D airspace A045 to ground
- Enroute provide separation in Class C airspace down to A045
Current

- Class A airspace does not have a standardised base and restricts airspace access for VFR aircraft to not above FL180 in medium and high density areas.
- Class E airspace in continental (low density) areas has a lower limit FL180. There is under utilised surveillance capabilities in Class G airspace below FL180.
- Mildura, Dubbo and Bass Straight areas have Class E Corridors LL F125.

Concept

- Class A airspace is raised to FL245 across the Australian FIR. This will standardise the airspace and provide increased airspace access for VFR aircraft.
- Over continental (low density) areas, class E airspace is lowered to FL125.
- Class E FL125 will provide enhanced services (separation) for IFR aircraft whilst retaining unrestricted airspace access for VFR aircraft.
- Mildura, Dubbo and Bass Straight Class E corridors will blend in with continental Class E facilitating standardisation of airspace over the continent.
Current

- IFR aircraft leave class E airspace passing FL180 and enter class G on decent to Ayers Rock. ATC separation services are terminated and replaced by FIS and DTI with known aircraft.
- All aircraft self separate in class G airspace
- Surveillance capability to the ground is under utilised

Concept

- IFR remain in class E airspace down to A055
- IFR aircraft receive ATC separation services with other IFR aircraft down to 5,500ft AMSL
- Surveillance capability is utilised for separation services for IFR aircraft down to A055 whilst facilitating continued airspace access for VFR aircraft
- VFR self separate in class E and G airspace
Ayers Rock Proposal Consultation

• Consultation with RPT Operators (Qantas, Virgin, Jetstar, Cobham, Alliance and RFDS)
• Consultation with GA Operators (Ayers Rock based and frequent Ayers Rock airspace users as well as airport operator)
• Consultation with industry bodies (RAPAC, RAAA, RAAus, AusALPA, ASTRA, AOPA and APF)
• Consultation with Government (Defence, DIRD and CASA OAR)
• Engagement through mixture of face to face briefings and electronic communication
Ayers Rock Proposal Consultation

- Initial proposal was to introduce Class E airspace from 1,200ft (AGL)

- Following feedback from stakeholders (GA, RAPAC, airlines) proposal was changed to introduce Class E from 5,500ft (AMSL)

- Consultation on this proposal was crucial to producing an airspace design that is safe and efficient for both airspace users and air traffic control
Exercise Diamond Storm 2019
29 Apr - 28 May

Headquarters Air Command

AIR FORCE
Mission First, Safety Always
Airspace & Activity

- Temporary RAs/DAs established for the exercise will predominantly replicate those established for Pitch Black 18
- AIP SUP H20/19 (replaced 17/20)
- Aircraft based out of Darwin & Tindal
- Wide range of aircraft activity including fast jet and fast jet support
- Two waves per day/night
- No weekend flying planned
Contact Details

- SQNLDR Ross Mitchell
  - Flight Commander 452 Squadron Darwin Flight
  - E-mail: 452sqndar.fltcdrt@defence.gov.au

- SQNLDR Michael Small
  - Flight Commander 452 Squadron Tindal Flight
  - E-mail: 452sqntdlfltl.fltcdr@defence.gov.au

- FLTTLT Matthew Brown (Airspace enquiries)
  - Staff Officer Airspace Plans (HQJOC-AOC-JACC)
  - Tel: (02) 6128 4852
  - E-mail: adf.airspace@defence.gov.au
**TITLE**  
CHRISTMAS ISLAND VOR/DME

**SUBMITTED BY**  
Airservices Australia

**PURPOSE**  
To inform RAPAC of the proposal to remove the Christmas Island VOR/DME for a period of 8 weeks in August/September 2019

**KEY ISSUES**  
- VOR/DME are now 28 years and required refurbishment to extend their life
- A VOR/DME service outage is required lasting about 8 weeks.
- The outage is proposed to commence on 7th August 2019.
- Feedback is requested on proposed timing of the service outage

**ATTACHMENTS**  
Nil

**BACKGROUND**

The VOR and DME on Christmas Island are ageing assets, installed in 1990 and now 28 years old. Both the Navaids are in the Australian Backup Navigation Network (BNN) and their ownership was transferred from the Australian Government to Airservices Australia about six years ago.

The island environment is corrosive, with persistent salt laden winds from the south east. The VOR/DME antenna system is corroded with structure failures impacting system performance likely within two years.

As the two Navaids are expected to be required as part of the Australian Backup Navigation Network to least 2025, it is proposed extend their life to about 2030.

It is proposed to remove the DVOR and DME from service for a period of 8 weeks from 7th August 2019 in order to replace the VOR/DME antenna system. Some of the transmitter equipment will also be replaced and the building housing the navaid transmitters at the site will be refurbished. Prior to returning the VOR/DME to service, the system will need to be flight tested and the system recommissioned.

Works have been scheduled to occur in the dry season and require some months preliminary planning.

Christmas Island is serviced by LNAV/VNAV GNSS approaches to both runway ends, which have the same or lower weather minima to that provided by the VOR/DME.

Airservices is seeking feedback on the proposed timing of the outage and any potential impacts. Please provide feedback by 12 April 2019.

Contact for feedback at Airservices Australia is as follows:

Dave Hughes  
Team Leader - Infrastructure Asset Service - Perth, Darwin, Adelaide  
Air Navigation Services | Maintenance & Service  
Mob: 0447441527 | Tel: 08 9476 8820 | Fax: 08 9476 8504  
E-mail: dave.hughes@airservicesaustralia.com