



VERTIPOINT ASAP TECHNICAL WORKING GROUP TASKING INSTRUCTIONS and **FIRST REPORT**

9 May 2024

The Vertiport Design and Operation Technical Working Group (TWG) was established to operate and report to the Aviation Safety Advisory Panel (ASAP) in accordance with the Terms of Reference of the ASAP dated November 2021.

BACKGROUND/CONTEXT

The impending introduction of the Advanced Air Mobility (AAM) industry is foreshadowed in the RPAS and AAM Strategic Regulatory Roadmap (the roadmap). The roadmap identified six regulatory areas, of which vertiports fall within the infrastructure area. Through the Roadmap, CASA has committed to 'develop guidance material, design requirements and regulations for vertiports and other infrastructure required to support AAM operations. To enable potential vertiport operators to identify and procure landing sites, obtain necessary planning approvals, and design and construct vertiports in time for the estimated mid 2025 deployment of commercial AAM operations suitable aviation safety guidance is required in a timely manner. Industry has indicated a sense of urgency for CASA to provide guidance for vertiport design.

CASA has established the Non-conventional Aerodrome Regulatory Framework Working Group (NCARFWG) to develop introductory Advisory Circulars (AC) to support the introduction of vertiports. The NCARFWG is a CASA internal working group, with terms of reference that includes the delivery of a regulatory framework concept.

The first of 2 vertiport ACs, focused on vertiport design, was published July last year. AC139.V-01 v1.0 Guidelines for Vertiport Design was published following a three-month consultation period which received 36 submissions. This feedback has been used to inform technical working groups and CASA.

In 2024, additional ACs for the operation, and for the maintenance, of vertiports should be considered and developed upon advice from the NCARFWG and VDOTWG. The compressed timeframe available to meet these requirements means it is likely that the ACs will be promulgated prior to complementary information being published by the International Civil Aviation Organisation (ICAO).

Whether to require vertiports to obtain full certification or adopt a lighter-touch approach is a critical CASA policy issue requiring early consideration. As the potential to certify vertiports has been identified as an industry desire, a key regulatory outcome is to deliver a proposed regulatory framework that will support certification in those cases where it is required. Work undertaken by the NCARFWG will also be considered by the TWG to help inform policy and regulatory materials.

PURPOSE

The VDOTWG will advise on options for regulatory oversight of vertiports that will provide a satisfactorily safe environment for AAM aircraft.

The VDOTWG will:

- Provide industry sector insight and understanding of future needs and challenges
- provide current, relevant technical expertise for the development, analysis and review of legislative and non-legislative solutions to identified issues
- provide industry sector insight and understanding of cost structure, industry viability and risk controls and control effectiveness

- assist with the development and review of draft regulations, guidance materials and other supporting materials
- provide endorsement and/or conditional endorsement of draft regulations, guidance materials and other supporting materials for consideration by the ASAP and CASA.

SPECIFIC OBJECTIVES

- The TWG is to evaluate whether options for regulatory oversight of vertiports will provide a satisfactorily safe environment for AAM aircraft achieve the identified policy intent and are implementable by the Australian aviation industry.
- To advise the ASAP whether to endorse the draft concept regulatory framework.
- To provide further recommendations or advice to the ASAP as required.

TWG MEETINGS

- 6 April 2023
- 18 May 2023
- 19 July 2023
- 30 January 2024
- 9 May 2024 – First report provided to the ASAP

ROLES AND RESPONSIBILITIES

CASA	TWG Members
<ul style="list-style-type: none"> • Organise meetings and workshops, and produce agendas, papers and supporting materials • Facilitate meetings and workshops • Record insights and findings • Communicate openly and consistently with TWG members about project status and issues • Respect the time of all TWG members by minimising work required to achieve outcomes 	<ul style="list-style-type: none"> • Commit to supporting the project objectives and timeline • Engage and collaborate constructively at all times • Prepare for working group activities by reviewing agendas, papers and supporting materials • Provide timely and considered advice in meetings, and between meetings as required • Respond to requests for feedback on draft materials within agreed timeframes

CONSENSUS

A key aim of the TWG is that a consensus be reached, wherever possible, in the finalisation and preparation of advice for the ASAP.

The TWG will be guided by the ASAP Terms of Reference (Section 6 - attached) with respect to determining and documenting consensus.

MEMBERSHIP

Members of the TWG have been appointed by the ASAP Chair, following ASAP processes.

The Vertiport TWG consists of the following members:

- Clem Newton-Brown
- Abdulghani Mohamed
- Brett Eaton
- Christopher Ormandy

- Rich Eva
- Julieana Simunic-Rocks
- Mark Roots
- Robert Weaver
- Suzanne Walker
- Amanda Meys*
- David Penny*
- Colin Weir*
- Simon Whalley*
- Dan Parsons*

The TWG CASA Leads are Joe Hain and Liam Smith.

The ASAP Secretariat was represented by Angela Pearman and Chace Eldridge.

**Denotes members not present in this meeting.*

MEETING SUMMARY

- The purpose of this meeting was to make the TWG aware of the 'Guide to Vertiport Design' document to be soon published, as well as discuss AAM activity at existing aviation facilities and emerging research on rotor downwash.
- It was noted that there may soon be requests to change the TWG membership, and that any changes will be directed through the ASAP. This may include a Land Use Planning representative.
- The 'Guide to Vertiport Design' publication has been developed separately from the Advisory Circular to give a plain English version that more clearly communicates the information for people from non-technical backgrounds. Overall, the TWG provided positive feedback to the new document and supported it being published. The TWG also provided some suggestions, including:
 - ensure equitable representation of different aircraft types and their expected utility, without expressing opinion
 - improvements to the accessibility and certain design choices, as well as consistency in terminology and acronym usage. For example, whether the term AAM or VCA was more appropriate was discussed. It was identified that Australia would also adopt internationally recognised or standardised terms once these are available
 - further guidance on items like STOLports when it becomes available.
- In addition to standalone infrastructure, the need to effectively integrate vertiports within existing aerodromes was identified. Further discussion is required to determine possible measures to assist existing facilities manage the integration of AAM aircraft.
- Management and ownership of the risk associated with rotorcraft and future AAM activities was discussed. Specifically, the TWG members felt consideration from appropriate specialists was needed to define and then determine the extent of problems associated with downwash and rotor wash in movements to or from landing sites, particularly those in urban areas.
- The TWG intend to meet again in August.

TWG SUMMARY OF OUTCOMES – First TWG Report, 9 May 2024

Topic 1 – Does the TWG endorse the ‘Guide to Vertiport Design’ being published?

FULL CONSENSUS / GENERAL CONSENSUS / DISSENT

Comments:

The TWG members were in full consensus that the newly developed ‘Guide to Vertiport Design’ should be published. The TWG members noted that the document would be a useful resource for those without a technical background.

However, the TWG members also suggested areas that could be improved in future iterations of the document (as listed in the meeting summary above). Some members also offered to more comprehensively review the document and would appreciate the opportunity to do so before future versions or similar documents are published.

Topic 2 – Does the TWG recommend CASA engage relevant experts to define and then decipher the issues surrounding rotor downwash on approach and departure from landing sites?

FULL CONSENSUS / GENERAL CONSENSUS / DISSENT

Comments:

The TWG members acknowledged that the emerging issues from the rotor downwash discussion were outside of their scope and expertise. Subsequently, it was recommended that CASA engage with experts to define the problem and the work through solutions with all affected parties, continued wider industry involvement throughout this process would also be beneficial.

CASA Lead Summary

Joe Hain

Comment:

CASA thanks the TWG members for their ongoing efforts to progress this work. CASA acknowledges the positive impact TWG members had in ensuring the Guide achieves the intent and provides safe and practical outcomes for the industry.

Appendices

1. Extract from ASAP Terms of Reference

Appendix 1

ASAP and TWG Terms of Reference regarding Consensus (Extract)

- 6.1 A key aim of the ASAP is that a consensus be reached, wherever possible, in the finalisation and preparation of advice to the CEO/DAS.
- 6.2 For present purposes, 'consensus' is understood to mean agreement by all parties that a specific course of action is acceptable.
- 6.3 Achieving consensus may require debate and deliberation between divergent segments of the aviation community and individual members of the ASAP or its Technical Working Groups.
- 6.4 Consensus does not mean that the 'majority rules'. Consensus can be unanimous or near unanimous. Consensual outcomes include:
 - 6.4.1 **Full consensus**, where all members agree fully in context and principle and fully support the specific course of action.
 - 6.4.2 **General consensus**, where there may well be disagreement, but the group has heard, recognised, acknowledged and reconciled the concerns or objections to the general acceptance of the group. Although not every member may fully agree in context and principle, all members support the overall position and agree not to object to the proposed recommendation.
 - 6.4.3 **Dissent**, where differing in opinions about the specific course of action are maintained. There may be times when one, some, or all members do not agree with the recommendation or cannot reach agreement on a recommendation.

Determining and Documenting Consensus

- 6.5 The ASAP (and Technical Working Groups) should establish a process by which it determines if consensus has been reached. The way in which the level of consensus is to be measured should be determined before substantive matters are considered. This may be by way of voting or by polling members. Consensus is desirable, but where it is not possible, it is important that information and analysis that supports differing perspectives is presented.
- 6.6 Where there is full consensus, the report, recommendation or advice should expressly state that every member of the ASAP (or Technical Working Group) was in full agreement with the advice.
- 6.7 Where there is general consensus, the nature and reasons for any concern by members that do not fully agree with the majority recommendation should be included with the advice.
- 6.8 Where there is dissent, the advice should explain the issues and concerns and why an agreement was not reached. If a member does not concur with one or more of the recommendations, that person's dissenting position should be clearly reflected.
- 6.9 If there is an opportunity to do so, the ASAP (or Technical Working Group) should re-consider the report or advice, along with any dissenting views, to see if there might be scope for further reconciliation, on which basis some, if not all, disagreements may be resolved by compromise.