

## OneSKY Equipment Rooms Project in Melbourne and Brisbane

- 4.1 Airservices Australia (Airservices) seeks approval from the Committee to construct specialised equipment rooms at air traffic service centres in Melbourne and Brisbane. The equipment rooms will house computer and communications equipment systems for a new national air traffic management system.<sup>1</sup>
- 4.2 Airservices' current air traffic management system, the Australian Advanced Air Traffic System (TAAATS), has been operational since the late 1990s and is approaching end of life. Defence's air traffic management system, the Australian Defence Air Traffic System (ADATS), is also at end of life. Consequently, Airservices and Defence have partnered to develop OneSKY, a single civil-military air traffic management system.<sup>2</sup>
- 4.3 Australian airspace is currently divided into a Northern Flight Information Region (FIR), controlled from Brisbane and a Southern FIR, controlled from Melbourne. This division of the flight regions is reflective of 1990s technology capability. Under the OneSKY program, Australian airspace becomes a single FIR which provides further air traffic control capability with flexibility and resilience. OneSKY will be run in tandem with the current system for a four year period before it becomes fully operational.<sup>3</sup>
- 4.4 Airservices and Defence are each responsible for readying their relevant infrastructure to accept the OneSKY joint acquisition over the next few years. For Airservices, this will include a number of construction projects which are at varying stages of planning and development.<sup>4</sup>

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1 Airservices, submission 1, p. 9.

2 Airservices, submission 1, pp. 4-5.

3 Airservices, submission 1, pp. 5-6.

4 Airservices, submission 1, p. 5.

- 4.5 The estimated cost of the project currently before the Committee is \$35.4 million, excluding GST.
- 4.6 The project was referred to the Committee on 17 June 2015.

### Conduct of the inquiry

- 4.7 Following referral, the inquiry was publicised on the Committee's website and via media release.
- 4.8 The Committee received one submission and one supplementary submission from Airservices. A list of submissions can be found at Appendix A.
- 4.9 The Committee received a briefing from Airservices and conducted an inspection of the proposed site and public and in-camera hearings in Melbourne on 25 August 2015. A transcript of the public hearing and the public submissions to the inquiry are available on the Committee's website.<sup>5</sup>

### Need for the works

- 4.10 The existing equipment rooms in Melbourne and Brisbane are nearing the end of their design life and do not have sufficient power, cooling, floor space and availability to accommodate both OneSKY and TAAATS.<sup>6</sup>
- 4.11 For this reason, Airservices proposes to construct specialised equipment rooms in Melbourne and Brisbane. These facilities must meet stringent reliability and security requirements in order to adequately support air traffic control. The equipment rooms will comply with the requirements of 'Protected' status as stated in the *Australian Government physical security management guidelines* and have a 25 year lifespan.<sup>7</sup>
- 4.12 During the inspection in Melbourne, the Committee saw the ageing equipment rooms currently used to house TAAATS and at the public hearing, noted the varying ages of server banks themselves.<sup>8</sup>
- 4.13 The Committee is satisfied that the need for the work exists.

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5 <[www.aph.gov.au/pwc](http://www.aph.gov.au/pwc)>

6 Airservices, submission 1, p. 6.

7 Airservices, submission 1, p. 6.

8 Senator Alex Gallacher, transcript of evidence, 25 August 2015, p. 3.

## Options considered

4.14 Airservices considered three options:

4.15 *1 - Refurbishment of Existing Facilities*

The option to refurbish the existing equipment rooms was considered a high risk option due to:

- the high risk of interruption to the existing air traffic management services caused by refurbishment works such as excessive dust, noise, building vibration, disruption to power and cooling services and the risk involved in moving operational TAAATS computer servers and equipment to make space for OneSKY equipment; and
- the complexity involved in refurbishing existing equipment rooms to meet the latest industry data centre standards for equipment room design, efficiency, power, cooling and security requirements.<sup>9</sup>

4.16 *2- Outsourcing the Equipment Rooms to a Third Party*

The option to outsource to a data centre provider was discounted due to:

- the risk of interruption if the data centres were located outside Airservices facilities. The air traffic management system incorporates in its design a complex, multiple back-up and degraded mode provision of service. Achieving diversified cable paths from an external data centre is difficult to establish and further complicated as it would require multiple telecommunications providers;
- bandwidth provision and time of delivery of messages and data - the Air Traffic Management System relies on real time data being displayed to the controllers, and any delay in telecommunications would adversely impact on efficiency of the system. Locating a data centre offsite at some distance from the controllers' consoles introduces the risk of delayed transmission of critical data to the consoles; and
- the provision of Air Traffic Management and operation and maintenance of specialised hardware and software being a core Airservices function and the requirement for frequent interaction between operational and technical specialists.<sup>10</sup>

4.17 *3 - Constructing New Equipment Rooms*

4.18 Airservices has chosen to construct new equipment rooms as this provides the lowest risk and is least disruptive to air traffic service delivery and safety.<sup>11</sup>

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9 Airservices, submission 1, p. 7.

10 Airservices, submission 1, p. 7.

11 Airservices, submission 1, p. 7.

- 4.19 At the public hearing, the Committee sought further detail on this option. Airservices commented:

We looked at a number of options when we were looking at this particular project. One of the key considerations here is that we need to keep both the current and new air traffic control systems running in parallel for a number of years. That is to make sure that the new one is performing safely before we cut over. It allows then for a staged cut-over as we move through from west to east as we introduce the new system.

The ability to use our existing facilities is quite constrained with that consideration in mind. There are multiple reasons for that. You looked at the equipment room this morning where we had the various racks of equipment in place. Putting the same amount of new equipment into that existing room is not really feasible. To then maintain the power and cooling to double that facility demand is not possible under the current infrastructure that is in place. We also have floor loading limitations that limit the amount of equipment that we can put into that current room. For those reasons, and for the key reason to not interrupt or risk interruption to the current air traffic control system, the decision was made to construct new facilities right next to the existing ones.<sup>12</sup>

- 4.20 At the public hearing, the Committee queried the level of risk to the current air traffic control system, given that construction of the new facilities will be conducted close-by. Airservices responded:

There is always some level of risk, but we make sure that we have mitigations in place to manage those risks – for example, understanding where all the cabling is before we start digging and making sure that we have mitigations in place for things like noisy works. We have worked with the controllers on site, in particular, on how we would manage these works to make sure that air traffic control is not interrupted at all.<sup>13</sup>

- 4.21 Airservices reassured the Committee that continuing to manage the equipment rooms internally, as opposed to outsourcing them to a third party, reduces the risk of the air traffic management systems failing.<sup>14</sup>

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12 Mr Mark Rodwell, Airservices, transcript of evidence, 25 August 2015, pp. 3-4.

13 Mr Mark Rodwell, Airservices, transcript of evidence, 25 August 2015, p. 4.

14 Mr Mark Rodwell, Airservices, transcript of evidence, 25 August 2015, p. 2.

- 4.22 Further, Airservices confirmed the proposed equipment rooms would provide the same level of security as a professional outsourced data facility.<sup>15</sup>
- 4.23 The Committee found that Airservices has considered all options available to deliver the project and has selected the most suitable option.

### Scope of the works

- 4.24 The works will include site preparation, demolition, construction works and fit-out.<sup>16</sup>
- 4.25 The rooms are designed to house:
- 94 medium density specialty IT equipment racks;
  - 45 high density specialty IT equipment racks;
  - voice recording equipment;
  - a joint development and testing facility;
  - rooms for voice recorders and voice replays; and
  - communications equipment.<sup>17</sup>
- 4.26 The rooms will be built in accordance with Australian legislation and Airservices' specific requirements. A minimum floor loading of 1224 kg/m<sup>2</sup> is required.<sup>18</sup>
- 4.27 The equipment rooms will be constructed at appropriate distances from the existing air traffic service centre facilities at both sites to maximise operational effectiveness and efficiency and to allow for the integration of data, voice, power and cooling between facilities.<sup>19</sup>
- 4.28 Noting that the equipment rooms will have a lifespan of 25 years, the Committee sought reassurance that they would meet future requirements arising from the OneSKY system, and therefore provide good value for money. Airservices responded:

The OneSKY system itself will be designed to meet not only current requirements but future requirements. It will have the ability to be upgraded through the life of the air traffic control system itself. I would need to check the requirement specification to see what that design life is, but it would be something in the

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15 Mr Mark Rodwell, Airservices, transcript of evidence, 25 August 2015, p. 6.

16 Airservices, submission 1, p. 10.

17 Airservices, submission 1, p. 10.

18 Airservices, submission 1, p. 10.

19 Airservices, submission 1, p. 10.

order of about 20 years, with the ability to then continue to upgrade.<sup>20</sup>

4.29 Airservices continued:

Regarding the value for money proposition, we actually have run a procurement process, which sought first of all a request for quotation – that was back in about 2010-11 – to get an indicator of what the new air traffic control system was likely to cost us. From there, we went through a requirement specification development process, and then went out to an open-market approach, where we had a number of respondents from around the world who responded through the tender. We then went through a tender process; that tender process has resulted in a preferred supplier; and we are in commercial negotiations now with that preferred supplier for the new air traffic control system.<sup>21</sup>

4.30 At the public hearing, Airservices commented on current leasing arrangements:

In the case of our Brisbane facility, the current lease expires around 2033. We are currently negotiating that lease to extend it out to 2048, with a 10-year option over and above that. In the case of Melbourne, the current lease is due to expire around 2047.<sup>22</sup>

4.31 Airservices commented on how they plan to use space that will become available as a result of the proposed works:

With regard to Melbourne and Brisbane, we will be re-using the facilities that become available once the existing system is decommissioned. For Melbourne, we had been intending to build a new training facility. In the approach that we are taking now we will not need to construct a new training facility. We will use the space in Melbourne following the decommissioning of the system to house that training facility. With regard to Brisbane, we currently have a leased facility on the other side of the airport which houses administrative staff. In Brisbane, we intend to move those people back from that lease facility at the end of the lease and put them into our facility in Brisbane.<sup>23</sup>

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20 Mr Mark Rodwell, Airservices, transcript of evidence, 25 August 2015, p. 5.

21 Mr Mark Rodwell, Airservices, transcript of evidence, 25 August 2015, p. 5.

22 Mr Paul Logan, Airservices, transcript of evidence, 25 August 2015, p. 5.

23 Mr Mark Rodwell, Airservices, transcript of evidence, 25 August 2015, p. 7.

## Public consultation

4.32 All federally-leased airports are required to submit a Major Development Plan (MDP) for major airport developments on the airport site. This must undergo public consultation before being submitted to the Minister for Infrastructure and Regional Development.<sup>24</sup>

4.33 Airservices is currently undertaking this process<sup>25</sup> and at the public hearing provided information on what it involves:

The process is that the airports produce a master plan for the airport, which looks out well into the future. That is updated on a five-yearly basis. That provides high-level information about what facilities and infrastructure are at the airport, whether it be our equipment facilities or the airport's facilities themselves. When any development activity takes place at the airport that is considered to be a major development – in the case of the facilities we are talking about here today, they fall under that major development requirement – we work with the airport to prepare a submission, which is called an MDP, a major development plan. That goes through a public consultation period before the Minister [for Infrastructure and Regional Development] then makes a decision to approve, or otherwise, the MDP.<sup>26</sup>

4.34 Airservices commented on stakeholders connected to the proposed works:

We work closely with the airport in the preparation of the MDP documents, firstly, so that the airport understands exactly what we intend to do and how we intend to go about it. That document is then made public. The public have an opportunity to comment on the content of that document. We need to address any comments that come back before the document goes to the minister to then be able to provide a yes or no decision.<sup>27</sup>

4.35 Subject to Parliamentary approval of the project, work is expected to commence in late 2015 and be completed in late 2016.<sup>28</sup> Transition to OneSKY will take place in stages between 2018 and 2021.<sup>29</sup>

4.36 The Committee finds that the proposed scope of works is suitable for the works to meet its purpose.

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24 Airservices, submission 1, p. 8.

25 Airservices, submission 1, p. 8.

26 Mr Mark Rodwell, Airservices, transcript of evidence, 25 August 2015, p. 4.

27 Mr Mark Rodwell, Airservices, transcript of evidence, 25 August 2015, p. 4.

28 Airservices, submission 1, p. 13.

29 Airservices, submission 1, p. 6.

## Cost of the works

- 4.37 The estimated cost of the project is \$35.4 million, excluding GST.
- 4.38 At the public hearing, Airservices confirmed that the full cost of the project is being funded through costs charged to airlines and aircraft operators for use of its services.<sup>30</sup>
- 4.39 Airservices provided further detail on the project costs in the confidential submission and during the in-camera hearing.
- 4.40 The Committee considers that the cost estimates for the project have been adequately assessed by Airservices and is satisfied that the proposed expenditure is cost effective. As the project will not be revenue generating the Committee makes no comment in relation to this matter.

## Committee comments

- 4.41 The Committee did not identify any issues of concern with Airservices' proposal and is satisfied that the project has merit in terms of need, scope and cost.
- 4.42 Noting however that the MDP and associated public consultation are still in progress, the Committee requires Airservices to report back on the outcomes. The report will identify issues raised through the consultation and detail how Airservices' has responded to address the issues. The Committee should also be advised when the Minister for Infrastructure and Regional Development has reached a decision with regard to the MDP.
- 4.43 Proponent agencies must notify the Committee of any changes to the project scope, time, cost, function or design. The Committee also requires that a post-implementation report be provided within three months of completion of the project. A report template can be found on the Committee's website.
- 4.44 Having regard to its role and responsibilities contained in the *Public Works Committee Act 1969*, the Committee is of the view that this project signifies value for money for the Commonwealth and constitutes a project which is fit for purpose, having regard to the established need.

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30 Mr Paul Logan, Airservices, transcript of evidence, 25 August 2015, p. 5.



**Recommendation 3**

4.45 The Committee requires Airservices Australia to report back on any issues arising through the Major Development Plan public consultation processes that relate to OneSKY Equipment Rooms Project in Melbourne and Brisbane, including information provided by Airservices Australia in response to issues raised.

The Committee also requires Airservices Australia to provide advice on any decisions made by the Minister for Infrastructure and Regional Development with regard to the Major Development Plan that may affect these projects.

**Recommendation 4**

4.46 The Committee recommends that the House of Representatives resolve, pursuant to Section 18(7) of the *Public Works Committee Act 1969*, that it is expedient to carry out the following proposed work: Airservices Australia OneSKY Equipment Rooms Project in Melbourne and Brisbane.

Senator Dean Smith

Chair

10 September 2015

