

AIR 5428 Phase 1 – Pilot Training System Facilities Project

- 4.1 The Department of Defence (Defence) seeks approval from the Committee to conduct works at five Royal Australian Air Force (RAAF) Bases across Australia.
- 4.2 The main objective of the project is to deliver fit-for-purpose facilities to support a new pilot training system in a timeframe that enables the new pilot training system Capability Contractor to install and commission the required training devices in order to meet the Government endorsed In-Service-Date (ISD)¹ and Initial Operating Capability (IOC)² milestones.³
- 4.3 The estimated cost of the project is \$329.8 million, excluding GST.
- 4.4 The project was referred to the Committee on 17 March 2016.

Conduct of the inquiry

- 4.5 Following referral, the inquiry was publicised on the Committee's website and via media release.
- 4.6 The Committee received one submission, one supplementary submission and one confidential submission regarding the project costs and risk register from Defence and one submission from the Wellington Shire Council. A list of submissions can be found at Appendix A.

1 In correspondence to the secretariat, Defence has defined the ISD as the time when initial aircraft, simulator, learning environment components, support systems, facilities and flying instructors are in place to commence initial operational tests and evaluations for the new pilot training system.

2 In correspondence to the secretariat, Defence has defined the IOC as the time when there are sufficient aircraft, simulators, learning environment components, support systems, facilities and flying instructors to commence training.

3 Defence, submission 1, pp. 3, 13.

- 4.7 The Committee received a briefing from Defence and conducted public and in-camera hearings in Melbourne on 5 April 2016. A transcript of the public hearing and the public submissions to the inquiry are available on the Committee's website.⁴

Need for the works

- 4.8 In August 2015, the Commonwealth Government approved the replacement of existing Air Force, Navy and Army pilot training systems. The new training system will be based on the Pilatus PC-21 (PC-21) aircraft and will prepare Defence personnel for operating a number of other new and advanced aircraft.⁵
- 4.9 The following requirements have been identified to support the new pilot training system:
- unit facilities;
 - simulator and training devices;
 - information system;
 - logistics and maintenance systems;
 - aerodrome requirements; and
 - aircraft shelters;
 - satellite aerodrome;
 - living-in-accommodation; and
 - security requirements.⁶
- 4.10 The new facilities will be used by:
- Basic Flying Training School (BFTS), Pilot Selection Agency and Central Flying School at RAAF Base East Sale, Victoria
 - Number 2 Flight Training School (2FTS) at RAAF Bases Pearce and Gin Gin, Western Australia;
 - Air Warfare Centre (AWC) at RAAF Base Edinburgh, South Australia; and
 - No. 4 Squadron at RAAF Base Williamtown in New South Wales.⁷
- 4.11 At the public hearing, the Committee noted that some previous works for the Australian Defence Force have been influenced by training services offered to international forces. In response, Defence confirmed that the

4 <www.aph.gov.au/pwc>.

5 Defence, submission 1, p. 1.

6 Defence, submission 1, pp. 1-3.

7 Defence, submission 1, p. 1.

proposed works were being driven by domestic training requirements only.⁸

4.12 The Committee is satisfied that the need for the work exists.

Options considered

4.13 To ensure that the facilities achieve value for money and meet functional requirements, 14 planning options were included in the Master Planning and Feasibility Review Report. The options addressed adaptive re-use and new build solutions for meeting the project's functional requirements at RAAF Bases East Sale, Pearce and Gin Gin.⁹

4.14 In most cases, re-using existing facilities was not cost effective due to the extent of dilapidation, structural inadequacy, dysfunctional layout or inappropriate siting of the available facilities. Consequently, the majority of solutions developed for this project are proposed to be new construction. The exception to this is the 2FTS unit facilities component, which will be delivered as a combination of new build and adaptive reuse.¹⁰

4.15 The reasons for adopting the preferred design solutions at each site are so that each facility:

- provides value for money solutions that address the current facilities deficiencies to fully support the new pilot training system;
- creates effective and streamlined interaction between like functions, which will improve the efficiency of a new training curriculum;
- meets current compliance legislation and other statutory requirements;
- maximises opportunities to achieve optimised ecologically sustainable design and green building outcomes;
- maximises opportunities to integrate similar functions to achieve construction economies of scale and facility performance efficiencies post construction;
- minimises the requirement for temporary facilities and decanting, which in turn minimises disruption to ongoing training and operations; and
- minimises whole of life costs.¹¹

8 Group Captain Christopher Hake, Defence, transcript of evidence, 5 April 2016, p. 6.

9 Defence, submission 1, p. 5.

10 Defence, submission 1, p. 4.

11 Defence, submission 1, p. 5. Further information on options considered for each location can be found on pages 5-8 of Defence's submission.

- 4.16 The Committee found that Defence has considered multiple options to deliver the project and has selected the most suitable option.

Scope of the works

- 4.17 Due to time imperatives, the proposed works will be phased as follows:
- ISD works will support initial learning environment activities, and allow Defence instructors the opportunity to convert training activities onto the new PC-21 platform. These works will be required at RAAF Base East Sale by April 2017. To achieve this, Defence proposes the following interim solutions:
 - minor works in Hangar 373 for interim aircraft maintenance;
 - install deployable hangars to act as interim aircraft storage;
 - interim use of the B300 flightline for Aviation Life Support Equipment;
 - minor works in Building 106 to act as an interim learning environment;
 - interim/partial use of existing shelters for new PC-21 aircraft; and
 - partial construction of the combined pilot training system facility to house the first two Flight Training Devices (FTDs).¹²
 - IOC works are all remaining works at RAAF Bases East Sale, Pearce and Gin Gin. These are programmed to be delivered by July 2018.¹³
 - A number of project deliverables will be defined as stages in the Delivery Phase so as to ensure the 'ramp up' of facilities required between the ISD and IOC deliverables align with the capability programme requirements.¹⁴

4.18 RAAF Base East Sale

In addition to the ISD works, the main works proposed at RAAF Base East Sale include:

- new flightline shelters for 28 PC-21 aircraft;
- new aprons and taxiway to service PC-21 aircraft;
- new aircraft storage hangar;
- new maintenance facilities for five aircraft, flightline office, aviation life support equipment;

12 Defence, submission 1, p. 14.

13 Defence, submission 1, p. 14.

14 Defence, submission 1, p. 14.

- refurbished paint shop to meet compliance and PC-21 aircraft requirements;
- new classrooms, working accommodation and briefing rooms;
- new FTD facilities;
- Training Aircraft Systems Project Office facilities, working accommodation and briefing rooms;
- Live-in-accommodation for 105 students;
- new aircraft wash facility;
- new engine run-up facility;
- minor extension to the existing medical facility;
- trunk infrastructure works to service the proposed new facilities;
- associated demolitions, landscaping and car parking; and
- works required for decanting existing functions if they are currently operating in any facilities considered for adaptive reuse.¹⁵

4.19 **RAAF Base Pearce.**

The works proposed for RAAF Base Pearce include:

- refurbished flightline shelters for 20 aircraft;
- new aprons and taxiway to service PC-21 aircraft;
- new maintenance facilities for five aircraft, flightline office, aviation life support equipment and aircraft storage;
- 2FTS classrooms, FTD facilities, working accommodation and briefing rooms;
- new aircraft wash facility;
- new engine run-up facility;
- trunk infrastructure upgrades works to service the proposed new facilities;
- associated demolitions, landscaping and car parking; and
- works required for decanting existing functions if they are currently operating in any facilities considered for adaptive reuse.¹⁶

4.20 **RAAF Base Gin Gin.**

The proposed works for the RAAF Base Gin Gin satellite aerodrome include:

- new and refurbished flightline shelters for 12 aircraft;

15 Defence, submission 1, pp. 14-15.

16 Defence, submission 1, p. 15. Additional corrections to the scope were provided by Brigadier Noel Beutel, Defence, transcript of evidence, 5 April 2016, p. 1.

- new aprons and taxiway to service PC-21 aircraft; and
- 2FTS working accommodation and operations, flight line office and aviation life support equipment, storage and car parking.¹⁷

4.21 **RAAF Base Edinburgh.**

The scope of works for at RAAF Base Edinburgh includes internal works to adaptively re-use the existing flightline maintenance facility and working accommodation to support AWC operations.¹⁸

4.22 **RAAF Base Williamtown.**

The scope of works at RAAF Base Williamtown includes a communications room and a minor additional ICT works to support No.4 Squadron operations.¹⁹

4.23 At the public hearing, the Committee sought clarification on the proposed upgrades to aircraft aprons. Representatives for Defence responded:

[RAAF Base] East Sale has a net increase in aircraft coming as a part of the [pilot training scheme] project. The...basic flight training school, will see those aircraft at the base. The base currently does not have that capacity and does not have that capability, so the increase in the aprons at East Sale in particular is due to the arrival of new aircraft.

In addition at East Sale, there are some taxiway upgrades. There was a study done – we engaged expert engineers to do some studies – of the airfield capacities. As a result of that study, there is some congestion on the taxiways and there is a proposal for a new taxiway to relieve some of that congestion.

There are also a number of run-up bays. Again, as a result of the increase in aircraft at East Sale, there are a number of run-up bays that will be provided as part of this project to enable the aircraft to undertake safety checks and also maintenance run-ups.

At RAAF Base Pearce, largely, the apron areas will remain untouched. There is currently no net increase in aircraft at RAAF Base Pearce, so there are some minor refurbishment works where the project will be constructing within the apron zones. So there are some minor tie-ins and apron works at RAAF Base Pearce.²⁰

17 Defence, submission 1, pp. 15-16. Additional corrections to the scope were provided by Brigadier Noel Beutel, Defence, transcript of evidence, 5 April 2016, p. 1.

18 Defence, submission 1, p. 16.

19 Defence, submission 1, p. 16. Additional corrections to the scope were provided by Brigadier Noel Beutel, Defence, transcript of evidence, 5 April 2016, p. 1.

20 Mr Craig Simpson, Laing O'Rourke Australia, transcript of evidence, 5 April 2016, p. 5.

- 4.24 Further to this, Defence confirmed that all works are being driven by the new training system, which is based on the PC-21 aircraft:
- ...the facility requirements that we have developed as part of the proposed solution are based on the requirements for the new PC-21 aircraft and the mission systems, the simulation systems and the various support systems that are required. It is being driven purely by the PC-21.²¹
- 4.25 Subject to Parliamentary approval of the project, construction is expected to commence in mid 2016 for ISD works at RAAF Base East Sale and be completed by mid 2017.²²
- 4.26 The IOC works are planned to commence in mid to late 2016 at RAAF Bases East Sale, Pearce and Gin Gin, and be completed by mid 2018. The construction program has been developed to ensure ISD and IOC milestones are met, which include a range of concurrent activities and establishment of multiple work fronts at RAAF Bases East Sale, Pearce and Gin Gin.²³
- 4.27 The proposed works at RAAF Bases Edinburgh and Williamtown are not time critical and will be delivered in 2019.²⁴
- 4.28 The Committee finds that the proposed scope of works is suitable for the works to meet its purpose.

Heritage considerations

Indigenous heritage

- 4.29 An Environmental Report has identified only limited potential for Indigenous heritage in the selected sites. Nevertheless, mitigation measures will be in place, including consultation with local Indigenous groups.²⁵

Built heritage

- 4.30 A number of redundant Bellman Hangars with moderate heritage significance are scheduled for demolition at RAAF Base East Sale. The impact from demolition has been assessed as low.²⁶

21 Brigadier Noel Buetel, Defence, transcript of evidence, 5 April 2016, p. 6.

22 Defence, submission 1, p. 25.

23 Defence, submission 1, p. 25.

24 Defence, submission 1, p. 25.

25 Defence, submission 1, pp. 8-9.

26 Defence, submission 1, p. 9.

- 4.31 'Hangar 95', located at RAAF Base Pearce, will be adaptively reused as this has higher heritage significance.²⁷
- 4.32 Heritage risk with proposed works at RAAF Bases Gin Gin, Edinburgh and Williamtown has been assessed as low.²⁸

Community consultation

- 4.33 In accordance with its community consultation and communications strategy, Defence undertook the following consultative activities:
- detailed email correspondence with local groups and State and Federal members, with individual briefings conducted where requested;
 - notices in the local newspapers providing information on opportunities for the public to comment on issues relating to the project; and
 - two public consultation sessions, one held on 23 March 2016 in Sale, Victoria and the other on 24 March 2016 in Bullsbrook, Western Australia.²⁹
- 4.34 At both sessions, Defence responded to a number of issues, including opportunities for local businesses. Defence advised attendees that further information for businesses would be available as the procurement process progressed.³⁰ The Committee notes that the Wellington Shire Council has written in support of the proposed works, particularly in relation to potential opportunities for local businesses.³¹
- 4.35 The issue of aircraft noise was raised at both sessions. Further information on this matter is addressed below.³²

Environmental considerations

Aircraft noise

- 4.36 Because the BFTS has been relocated from Tamworth, NSW to RAAF Base East Sale, aircraft noise to surrounding communities is likely to increase. Defence plan to conduct an Australian Noise Exposure Forecast (ANEF) to capture planned aircraft movements until 2035. This will be finalised and followed by a further public consultation session.³³
- 4.37 Defence commented on this at the public hearing:

27 Defence, submission 1, p. 9.

28 Defence, submission 1, p. 9.

29 Defence, submission 1.2, pp. 1-12.

30 Defence, submission 1.2, pp. 13-14.

31 Wellington Shire Council, submission 2, p. 2.

32 Defence, submission 1.2, pp. 13-14.

33 Defence, submission 1, pp. 9-10.

The modelling to support the ANEF will continue through this process and it will culminate in public consultation. Part of the legislative requirements for ANEFs is that there will be a formal public consultation process where those outcomes are provided to the community. Again, we are looking to have that public consultation conducted later this year. Once the public consultation is conducted, we will be looking to mitigate the issues. If the noise modelling creates any issues or concerns for the community, we will look to mitigate those risks where we can before finalising the ANEF.

In relation to the risk of an increase in noise, you are exactly correct – the decibel level is not considered to be greatly different from what already exists, but it is the rate of effort. With the throughput of 22 new aircraft at RAAF Base East Sale and the throughput of pilots, there will be an increased rate of effort. So that is the aspect in the modelling.³⁴

- 4.38 Although Defence anticipated that there would be no increase to aircraft noise at RAAF Base Peace, the increased frequency of aircraft movements at RAAF Base East Sale might impact local residents.³⁵

Contamination, water quality and flooding

- 4.39 Quantities of perfluorooctanesulfonic acid (PFOS) and perfluorooctanoic acid (PFOA) have been identified at RAAF Base East Sale, as a result of the historical use of Aqueous Film Forming Foam (AFFF). Therefore, the proposed works at RAAF Base East Sale will result in the generation of potentially contaminated spoil material.³⁶
- 4.40 A plan for managing the contaminated spoil will be established and maintained and will form part of the Construction Environmental Management Plan. Defence is conducting further investigations to inform the plan, including:
- additional testing to further assess the contamination and assist with managing the risk associated with the potentially contaminated spoil material during construction;
 - sampling of potentially contaminated soil prior to construction to characterise the material for landfill disposal; and,

34 Brigadier Noel Buetel, Defence, transcript of evidence, 5 April 2016, p. 7.

35 Brigadier Noel Buetel, Defence, transcript of evidence, 5 April 2016, p. 7; Defence, submission 1.2, pp. 13-14.

36 Defence, submission 1, p. 10.

- balancing cut and fill across the sites by re-using material that is below Defence's adopted screening guidelines for residential use.³⁷
- 4.41 According to Defence's submission the proposed works are unlikely to interfere with water quality. Soil in project areas will be tested prior to construction to determine any potential risks to surface or ground-water quality.³⁸
- 4.42 The project facilities design has considered engineered design solutions, which include storm water and drainage management, as well as prevention of ground water contamination in the case of a flood event. Mitigation measures include the introduction of triple interceptor pits for excess catchment, and bunding to fuel and chemical handling and areas for containment of substances in the event of spillage.³⁹
- 4.43 While the issues of contamination and water quality were not raised during the public consultation sessions, Defence commented on these at the public hearing, with a specific focus on its intention to mitigate impacts to local communities:
- We are actually moving to undertake some more environmental investigations at both East Sale and Pearce within the next few weeks....We have had local meetings with the council recently to explain what our activities for East Sale will be. We are working quite collegiately with our stakeholders in those areas. As we move to site we plan to undertake some detailed community engagement activities, as we have done at our other sites at Oakey and Williamtown. We will work with the community so they understand what we are doing. We will share the information we have to hand and work with them to allay any concerns that they may have about this emerging contaminant. As you know, we are in an emerging space. The science around PFOS and PFOA contamination domestically and internationally is quite new. It is evolving. We are working very carefully and closely with our communities, our local and state authorities, our Commonwealth colleagues and our international partners to understand what this actually means.⁴⁰
- 4.44 The Committee noted that recent instances of contamination at RAAF Base Williamtown (featured in the Committee's second report of 2016) were

37 Defence, submission 1, p. 10.

38 Defence, submission 1, p. 10.

39 Defence, submission 1, p. 11.

40 Ms Stacey Hannon, Defence, transcript of evidence, 5 April 2016, p. 8.

exacerbated due to watercourse issues. Defence confirmed that the proposed works would not be faced with those considerations:

We are not faced at [RAAF Bases] East Sale or Pearce with the sand aquifer situation and high watertable that we had [at RAAF Base Williamtown]. Yes, there are still watertables at each base. I also point out that at Williamtown we have Tilligerry Creek and Fullerton Cove very close to the base. There are concerns and issues in relation to the off base contamination in those areas and impact on the community. We do not have that situation for Pearce or East Sale but I do note – and I think we have advised this in the statement of evidence – the Ramsar wetlands aspect of it in the Gippsland area. Again the project team are well and truly aware of that.⁴¹

- 4.45 Nevertheless, the Committee requires Defence to keep it updated on contamination issues at all sites, especially if contamination levels increase.

Cost of the works

- 4.46 The estimated cost of the project is \$329.8 million, excluding GST.
- 4.47 Defence provided further detail on the project costs in the confidential submission and during the in-camera hearing.
- 4.48 The Committee considers that the cost estimates for the project have been adequately assessed by Defence and the Committee 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

- 4.49 The Committee did not identify any issues of concern with Defence's proposal and is satisfied that the project has merit in terms of need, scope and cost.
- 4.50 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.

41 Brigadier Noel Buetel, Defence, transcript of evidence, 5 April 2016, p. 9.

Recommendation 3

- 4.51 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: AIR 5428 Phase 1 – Pilot Training System Facilities Project.

Recommendation 4

- 4.52 The Committee requires that the Department of Defence provide it with updates if significant findings in relation to contamination levels are detected at any sites associated with the AIR 5428 Phase 1 – Pilot Training System Facilities Project. An update is to be provided as soon as the information is available.

Recommendation 5

- 4.53 The Committee requires that the Department of Defence provide it with an update on the outcomes of the Australian Noise Exposure Forecast conducted at RAAF Base East Sale for the AIR 5428 Phase 1 – Pilot Training System Facilities Project. The update must include information on any identified impacts for the local community and the mitigation measures to be implemented by the Department of Defence. This update should be provided as soon as the information is available.
- 4.54 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 project completion. A report template can be found on the Committee's website.