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The Parliament of the Commonwealth of Australia

# **Tactical Unmanned Aerial Vehicle Facilities Project, Gallipoli Barracks, Enoggera, Queensland**

Parliamentary Standing Committee on Public Works

August 2006  
Canberra

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## **Membership of the Committee**

**Chair** Hon Judi Moylan MP

**Deputy Chair** Mr Brendan O'Connor MP

**Members** Mr John Forrest MP

Senator Michael Forshaw

Mr Harry Jenkins MP

Senator Stephen Parry

Mr Bernie Ripoll MP

Senator the Hon Judith Troeth

Mr Barry Wakelin MP

## **Committee Secretariat**

**Secretary** Mrs Margaret Swieringa

**Inquiry Secretary** Mr Jason Sherd

**Senior Research Officer** Mr Raymond Knight

**Research Officer** Ms Penny Wijnberg

**Administrative Officers** Mr Peter Ratas



## List of Abbreviations

|         |  |
|---------|--|
| the Act | the <i>Public Works Committee Act 1969</i> |
| ADF     | Australian Defence Force                   |
| Defence | Department of Defence                      |
| DEH     | Department of Environment and Heritage     |
| ESD     | Ecologically Sustainable Development       |
| STA     | Surveillance and Target Acquisition        |
| TUAV    | Tactical Unmanned Aerial Vehicle           |



# **Extract from the Votes and Proceedings of the House of Representatives**

No. 92 dated Wednesday 29 March 2006

## **35 PUBLIC WORKS – PARLIAMENTARY STANDING COMMITTEE – REFERENCE OF WORK – TACTICAL UNMANNED AERIAL VEHICLE, FACILITIES PROJECT, ENOGGERA, QLD**

Mr Nairn (Special Minister of State), pursuant to notice, moved – That, in accordance with the provisions of the *Public Works Committee Act 1969*, the following proposed work be referred to the Parliamentary Standing Committee on Public Works for consideration and report: Tactical Unmanned Aerial Vehicle, Facilities Project, Enoggera, Qld.

Question – put and passed.



# List of Recommendations

## 3 Issues and Conclusions

### Recommendation 1

The Committee recommends that the proposed Tactical Unmanned Aerial Vehicles facilities project, Gallipoli Barracks, Enoggera, Queensland, proceed at the estimated cost of \$17.45 million.



## Introduction

### Referral of Work

- 1.1 On 29 March 2006, the proposal for the Tactical Unmanned Aerial Vehicle facilities project, Enoggera, Queensland was referred to the Public Works Committee for consideration and report in accordance with the provisions of the *Public Works Committee Act 1969* (the Act).<sup>1</sup> The proponent agency for this work is the Department of Defence (Defence).
- 1.2 The Hon Gary Nairn MP, Special Minister of State, advised the House that the estimated cost of the proposed works was \$17.45 million. Subject to parliamentary approval, the works would be committed late this year, for completion by October 2007.

### Background

#### Gallipoli Barracks, Enoggera

- 1.3 The land on which Gallipoli Barracks is situated was purchased in 1908 for the establishment and training of Defence units and to provide for rifle

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1 Extract from the *Votes and Proceedings of the House of Representatives*, No. 92, Wednesday 29 March 2006

range facilities. The current role of Gallipoli Barracks is to provide a base for 7<sup>th</sup> Brigade, the Deployable Joint Force Headquarters, associated full time and Reserve land forces and training and logistic units. Gallipoli Barracks accommodates over 2,600 regular uniformed personnel, 3,000 Reservists and more than 200 civilian and contract personnel.<sup>2</sup>

- 1.4 The proposed works is confined to Gallipoli Barracks, which is located in Enoggera approximately seven kilometres from Brisbane's central business district.<sup>3</sup> The site is Commonwealth owned and Defence controlled, and the proposed work does not require the acquisition of additional land.<sup>4</sup>

## Inquiry Process

- 1.5 The Committee is required by the Act to consider public works over \$6 million<sup>5</sup> and report to Parliament on:

- the purpose of the work and its suitability for that purpose;
- the need for, or the advisability of, carrying out the work;
- whether the money to be expended on the work is being spent in the most cost effective manner;
- the amount of revenue the work will generate for the Commonwealth, if that is its purpose; and
- the present and prospective public value of the work.<sup>6</sup>

- 1.6 The Committee called for submissions by advertising the inquiry in *The Courier Mail* on Saturday, 6 May 2006. The Committee also sought submissions from relevant government agencies, private organisations and individuals, who may be materially affected by, or have an interest in, the proposed work. The Committee subsequently placed submissions and other information relating to the inquiry on its web site in order to encourage further public participation.

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2 Appendix C, Submission No. 1, paragraph 4

3 *ibid*, paragraph 10

4 *ibid*, paragraph 29

5 *Public Works Committee Act 1969*, Part III, Section 18 (8)

6 *Public Works Committee Act 1969*, Part III, Section 17

## **Inspection and Public Hearing**

- 1.7 On 29 June 2006 the Committee visited Gallipoli Barracks, Enoggera and inspected the site and environs of the proposed works. A confidential briefing from the Department of Defence and a public hearing were held at Gallipoli Barracks later that day.<sup>7</sup>

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<sup>7</sup> See Appendix D for the official Hansard transcript of the evidence taken by the Committee at the public hearing on Thursday, 29 June 2006 at Gallipoli Barracks, Enoggera, Qld

## The Proposed Works

### Purpose

- 2.1 The purpose of the proposed works is to support the introduction of the new Tactical Unmanned Aerial Vehicle (TUAV) capability and the establishment of the 20<sup>th</sup> Surveillance and Tactical Acquisition (STA) Regiment at Gallipoli Barracks, Enoggera, Queensland.
- 2.2 The TUAVs will be tailored for local area surveillance and enhance Australian Defence Force (ADF) aerial surveillance capabilities for land operations and selected maritime operations.<sup>1</sup>

### Need

- 2.3 The ADF will acquire twelve TUAVs, the first of which is expected to be in operational service in 2008.<sup>2</sup> The 20<sup>th</sup> Surveillance and Target Acquisition Regiment will operate the TUAVs, and facilities required for the air-vehicles will be located at Gallipoli Barracks.<sup>3</sup>

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1 Appendix C, Submission No. 1, paragraph 5

2 *ibid*, paragraph 6

3 *ibid*, paragraph 7

- 2.4 New construction as part of the proposed works will be limited to providing purpose-built facilities for TUAV maintenance and training requirements and the Regiment's radar storage requirement. There are no existing Defence facilities suitable for re-use for the aforementioned functions.<sup>4</sup>

## Scope

- 2.5 The proposed scope for the TUAV project will involve:
- the construction of three new purpose-built buildings and the refurbishment of one existing building to support the introduction and operation of the new TUAV;
  - the refurbishment of eleven existing buildings and construction of one new building to support the establishment of the 20<sup>th</sup> STA Regiment, including the existing 131<sup>st</sup> STA Battery; and
  - the refurbishment and extension of ten existing facilities to support the 25<sup>th</sup>/49<sup>th</sup> Battalion Royal Queensland Regiment.<sup>5</sup>

## Project Delivery

- 2.6 A traditional head contract delivery system is proposed for the project. Defence selected this project delivery method as it believes that a head contract delivery system suits projects where the scope is well-defined and can be constructed unhindered by operational constraints.<sup>6</sup> Subject to parliamentary approval, construction will commence in late 2006, for completion by October 2007.<sup>7</sup> This completion date was amended at the public hearing to early 2008.<sup>8</sup>

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4 Appendix C, Submission No. 1, paragraph 15

5 *ibid*, paragraph 9 a-c

6 *ibid*, paragraph 56

7 *ibid*, paragraph 8

8 Appendix D, Official Transcript of Evidence, page 2

## Cost

2.7 The estimated cost of the proposed works is \$17.45 million excluding GST. This figure includes:

- construction costs with fit-out;
- professional fees;
- furniture and fittings;
- information technology equipment; and
- a contingency sum.<sup>9</sup>

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<sup>9</sup> Appendix C, Submission No. 1, paragraph 13

## Issues and Conclusions

### Project Delivery

- 3.1 Defence stated in its main submission that the expected completion date for the TUAV project as October 2007.<sup>1</sup> Based on advice from Defence project managers and design consultants, Defence amended its date of completion to read as follows:

Subject to parliamentary clearance of this project, construction will commence in late 2006 with completion by early 2008.<sup>2</sup>

### Options Considered

- 3.2 In its main submission, Defence explained that the options considered for the TUAV facilities at Gallipoli Barracks at Enoggera were a Greenfield site; and the re-use, refurbishment and some construction of purpose built facilities.<sup>3</sup> The Committee sought more information regarding the options Defence considered for the proposed works.

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1 Appendix C, Submission No. 1, paragraph 8

2 Appendix D, Official Transcript of Evidence, page 2

3 Appendix C, Submission No. 1, paragraph 15

3.3 At the public hearing Defence further supported its decision to base the TUAV at Enoggera by explaining that the TUAV

...capability is to support and provide intelligence information to the commander of the Deployable Joint Force Headquarters.<sup>4</sup>

Defence added that as the existing 131<sup>st</sup> STA Battery is already in this role, it decided to co-locate TUAV at Enoggera and form a new regiment, 20<sup>th</sup> STA Regiment, where it is able to make use of some existing facilities and procedures.<sup>5</sup>

3.4 Defence continued that within Enoggera, it considered two options for the location of TUAV facilities and 20<sup>th</sup> STA Regiment:

- the first option was the construction of new facilities on Greenfield sites adjacent to the existing 131<sup>st</sup> STA Battery lines; and
- the second option was to re-use existing facilities, to be vacated by another regiment, and minimise the amount of new construction.

3.5 Defence progressed the first option to 15 percent design solution where it was deemed cost prohibitive. The second, and preferred, option was determined to be a more cost-effective as explained by Defence:

The cost estimate for the Greenfield site was of the order of \$30 million. The current project is \$17.45 million and provides us [Defence] a better fit for those units in the existing facilities and provides maximum re-use of facilities...<sup>6</sup>

## Location

### Relation to Shoalwater Bay Training Area

3.6 Defence stated in its main submission that the TUAVs will not be flown from Gallipoli Barracks, but will use existing Defence training areas.<sup>7</sup> At the public hearing, the Committee raised the issue of TUAVs being housed at Enoggera yet launched and operated out of the Shoalwater Bay Training Area, and the associated issues with these elements not being co-located.

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4 Appendix D, Official Transcript of Evidence, page 4

5 ibid

6 ibid

7 Appendix C, Submission No. 1, paragraph 20



3.7 Defence explained that there are two parts to the TUAV capability:

- the actual flying of the aircraft; and
- the procedures for provision and integration of information.<sup>8</sup>

A flight simulator, located in Building Q112, will be amongst TUAV facilities provided at Enoggera where most of the flight training of operators will be undertaken. Actual flight of the TUAVs will be conducted in a military training environment such as the Shoalwater Bay training area. Defence assured the Committee that there will be no loss of efficiency by having the TUAV facilities in Enoggera and the launching and deployment at Shoalwater Bay.<sup>9</sup>

3.8 Defence added that the training location for “actual flight hours” will be Shoalwater Bay; however “actual flight hours” are not required for the training of the operators.

Time spent on the simulator system exactly equates to time spent flying the aircraft because the operators are ground based and they are using the same deployable system that they would take to the field.<sup>10</sup>

## TUAV Operation

### Number of Vehicles

3.9 Defence stated in its main submission that the system will consist of four air-vehicles.<sup>11</sup> The Committee sought clarification on the actual number of TUAVs that will be based at Enoggera.

3.10 Defence responded that the Army requirement is four air-vehicles per troop. The 132 Unmanned Aerial Vehicle Battery consists of two troops which equates to a requirement of eight air-vehicles. Furthermore,

The Department of Defence as part of the project approval directed that the acquisition cost cover any attrition air-vehicles, as such, the project will procure another four air-vehicles that will be

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8 Appendix D, Official Transcript of Evidence, page 5

9 *ibid*

10 *ibid*, page 6

11 Appendix C, Submission No. 1, paragraph 6

kept in storage here at Enoggera. So the total procurement of aerial vehicles...is 12.<sup>12</sup>

Defence assured the Committee that this facilities project will adequately accommodate the 12 TUAVs with regard to workshop area and storage.

## Deployment

- 3.11 During the public hearing Defence showed a short audio visual presentation on the deployment of TUAVs. As the TUAVs will be operated out of Shoalwater Bay, the Committee sought further information on the procedures of the deployment of the TUAVs, and whether any additional facilities were required at Shoalwater Bay.
- 3.12 Defence explained that there is an Unmanned Aerial Vehicle runway at Shoalwater Bay and that the operating battery would deploy with its own tenting and messing facilities. However TUAVs can be launched by catapult and recovered into an unprepared area. Defence assured the Committee that there is no requirement for additional facilities at the Shoalwater Bay training area to facilitate the operation of the TUAVs.<sup>13</sup>
- 3.13 Defence informed the Committee that it expects that there will be nine TUAV deployments per year in accordance with the overall Army training program.

## Environmental Considerations

### Ecologically Sustainable Development

- 3.14 Defence states in its main submission that it is committed to Ecologically Sustainable Development (ESD) and the reduction of greenhouse emissions.<sup>14</sup> Some of Defence's ESD initiatives were discussed during the confidential briefing, and due to time constraints could not be further explored during the public hearing. With Defence's consent, its response provided during the confidential briefing was incorporated into the public hearing transcript.

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12 Appendix D, Official Transcript of Evidence, page 6

13 *ibid*, page 5

14 Appendix C, Submission No. 1, paragraph 38

- 3.15 Defence submitted that the new TUAV facilities include a range of practical, environmentally sustainable design initiatives to both minimise and measure water and energy consumption. Key environmentally sustainable design initiatives include:
- energy efficient lighting utilising high-efficiency T5 fluorescent lighting;
  - motion sensor light switching for amenities and meeting rooms;
  - building management systems to control office lighting;
  - energy meters on all major energy sources;
  - water metres on all major water sources;
  - air-conditioning units with zone management systems;
  - specified water efficient fittings, including AAA rated taps on toilets and showers; and
  - shading on the building façade.<sup>15</sup>

- 3.16 Defence added that much of the project is the refurbishment of existing buildings. In this regard,

The project did consider ESD measures...however we [Defence] did not adopt these because the whole-of-life cost analysis did not demonstrate value for money.<sup>16</sup>

Further, Defence anticipated that implementing ESD initiatives in the refurbished buildings involved a capital expense that will not be recouped in reduced operating costs for the life of the building.

## Building Works

- 3.17 Given the number of facilities proposed for refurbishment; re-use; construction; and demolition, the Committee requested clarification on whether works would have occurred regardless of the TUAV project. Defence confirmed for the Committee that if it were not for the TUAV facilities project at Gallipoli Barracks, none of the proposed works would have been progressed.<sup>17</sup>

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15 Appendix D, Official Transcript of Evidence, page 11

16 *ibid*

17 *ibid*, page 9

## Building Q26

- 3.18 In its main submission Defence indicated that part of Building Q26 will be used for warehousing space for the Prime TUAV Equipment Contractor, Boeing Australia.<sup>18</sup> The Committee sought clarification on what Defence was to provide for the Equipment Contractor in Building Q26. Defence responded that it will provide the base building and the prime contractor will be responsible for the fit-out. Defence will rectify Occupational Health and Safety (OH&S) issues, and ensure the building is suitable for use as the TUAV Contractor Warehouse.<sup>19</sup>
- 3.19 Defence also mentioned that it will provide space in the facility and Boeing, under its contract, will provide the installations.<sup>20</sup>

## Building Q27

- 3.20 Defence stated in its main submission that Building Q27 is proposed for demolition to clear the site for the new TUAV facility.<sup>21</sup> The Committee enquired whether there would be any requirement for removal of hazardous materials as a result of the building demolition.
- 3.21 Defence responded that the Building Q27 was the only building proposed for demolition as part of this project. Building Q27 is a steel portal frame storage consisting mainly of steel, metal cladding and concrete, and contains no interior fit-out. According to Defence, there are no hazardous materials in Building Q27.<sup>22</sup>
- 3.22 Defence submitted that the only hazardous material discovered on site is some asbestos sheeting in the existing 131<sup>st</sup> STA Battery area and that
- ...is being assessed and audited by a specialist company to give us [Defence] a report on how to contain it and remove it and certify the area is free of asbestos...<sup>23</sup>

## Building Design

- 3.23 In its main submission, Defence indicated that the structural design of buildings will provide control of cracking of concrete and incorporate
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18 Appendix C, Submission No. 1, paragraph 26d

19 Appendix D, Official Transcript of Evidence, page 8

20 *ibid*, page 6

21 Appendix C, Submission No.1, paragraph 26f

22 Appendix D, Official Transcript of Evidence, page 8

23 *ibid*

structural tolerances for long-term settlement.<sup>24</sup> The Committee expressed concern that the cracking of concrete may have been an ongoing issue, and was interested to see how Defence had addressed the problem.

- 3.24 Defence answered that an extensive geological report had been undertaken and concluded that there were no major problems in the area. Defence proposes to establish a structural system that will allow the workshop space to not have any joints in the concrete ensuring a level floor; and the use of post-tension concrete slabs to minimise cracking.<sup>25</sup>

## **Building Services**

### **Air-conditioning**

- 3.25 Part of the proposed works include the installation of air-conditioning units into some of the buildings. The Committee was interested in the details of air-conditioning systems being proposed by Defence.
- 3.26 Defence informed the Committee that the proposed air-conditioning systems were “up-to-date energy efficient split systems” and would not make use of cooling towers. Defence were confident that the proposed air-conditioning systems were of the highest grade of energy efficiency available.<sup>26</sup>

## **Defence Forward Planning**

- 3.27 In its main submission, Defence indicated that the TUAV facilities project aligns with the draft Master Plan for Gallipoli Barracks.<sup>27</sup> Given that some existing facilities are proposed for demolition as part of this project, the Committee enquired as to whether facilities approved as part of this proposal may be demolished in the future.
- 3.28 Defence assured the Committee that

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24 Appendix C, Submission No. 1, paragraph 47

25 Appendix D, Official Transcript of Evidence, page 12

26 *ibid*, page 8

27 Appendix C, Submission No. 1, paragraph 30

The draft master plan does include these facilities and units remaining in their locations and there is no plan to demolish any of these in the future.<sup>28</sup>

## Office Configuration

- 3.29 Part of the proposed works is the provision and reconfiguration of workstations, and in its main submission Defence mentioned that internal office design will be configured for maximum flexibility.<sup>29</sup> The Committee sought further detail on the workstations, and the flexible office configurations.
- 3.30 Defence stated that its standard manual for office accommodation provides workstations for troops and other support personnel. The standard workstation fit-out includes a 1,800 by 1,800 centimetre workstation with laminate finish; gas lift chairs; and computer terminals. Defence continued that office accommodation will be open plan, with demountable and relocatable workstations. The new TUAV facilities will be in steel, clear-span, portal frame building with removable internal partitioning allowing for future internal churn, or change in operational requirements at minimal cost.<sup>30</sup>

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### Recommendation 1

**The Committee recommends that the proposed Tactical Unmanned Aerial Vehicles facilities project, Gallipoli Barracks, Enoggera, Queensland, proceed at the estimated cost of \$17.45 million.**

**Hon Judi Moylan MP**

Chair

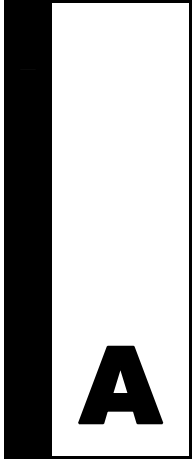
16 August 2006

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28 Appendix D, Official Transcript of Evidence, page 9

29 Appendix C, Submission No. 1, paragraph 44

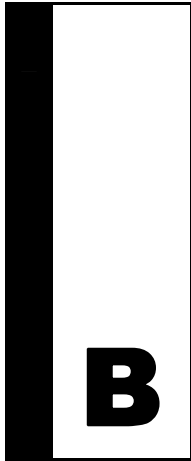
30 Appendix D, Official Transcript of Evidence, page 10



## **Appendix A – List of Submissions**

### **Submissions**

1. Department of Defence



## **Appendix B – List of Witnesses**

Wing Commander Michael Brown, Project Director, Joint Project 129, Defence Materiel Organisation, Department of Defence

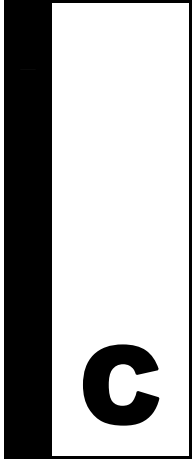
Colonel William Grice, Acting Director General Infrastructure Asset Development, Department of Defence

Mr Ray Saunders, Project Manager, GHD Pty Ltd

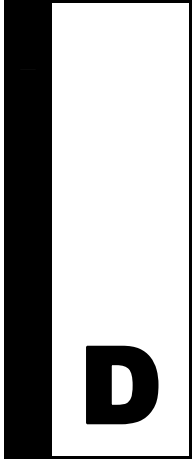
Mr Bob Sheppard, Project Director, Infrastructure Asset Development, Department of Defence

Mr Greg Wheeldon, Design Consultant, Mandikos Wheeldon Architects





**Appendix C – Submission No. 1 from the  
Department of Defence**



## **Appendix D – Official Transcript of Evidence**