



*Parliamentary Standing Committee on Public Works*

## **REPORT**

relating to the proposed

**ROYAL MALAYSIAN AIR FORCE  
BASE BUTTERWORTH, MALAYSIA**

**AUSTRALIAN DEFENCE FORCE  
FACILITIES RATIONALISATION**

(Seventh Report of 2007)

THE PARLIAMENT OF THE COMMONWEALTH OF AUSTRALIA  
2007

---

The Parliament of the Commonwealth of Australia

# **Royal Malaysian Air Force Base Butterworth, Malaysia**

## **Australian Defence Force Facilities Rationalisation**

Parliamentary Standing Committee on Public Works

August 2007  
Canberra

---

© Commonwealth of Australia 2007

ISBN 978-0-642-78978-5 (printed version)

ISBN 978-0-642-78979-2 (HTML version)



# Contents

Membership of the Committee .....	v
List of acronyms .....	vi
Extract from the Votes and Proceedings of the House of Representatives .....	vii
List of recommendations .....	viii

## REPORT

<b>1 Introduction .....</b>	<b>1</b>
Referral of Work .....	1
Background .....	1
Site .....	3
Options Considered .....	3
Inquiry Process .....	4
Inspection and Hearing .....	5
<b>2 The Proposed Works .....</b>	<b>7</b>
Purpose.....	7
Need .....	8
Scope .....	8
Project Delivery .....	10
Cost .....	10

<b>3</b>	<b>Issues and Conclusions .....</b>	<b>13</b>
	<b>The Role of RMAF Butterworth .....</b>	<b>13</b>
	<b>Rationalisation of Facilities .....</b>	<b>14</b>
	<b>Transit Accommodation .....</b>	<b>15</b>
	<b>Infrastructure Works .....</b>	<b>16</b>
	Sewerage Works .....	16
	Water and Energy .....	17
	Water Supply .....	17
	<b>Maintenance .....</b>	<b>18</b>
	<b>Removal of Hazardous Materials .....</b>	<b>19</b>
	Heritage .....	19
	Cost .....	20

## **APPENDICES**

	<b>Appendix A – List of Submissions and Exhibits .....</b>	<b>23</b>
	<b>Appendix B – List of Witnesses .....</b>	<b>25</b>
	<b>Appendix C – Submission No. 1 from the Department of Defence .....</b>	<b>27</b>
	<b>Appendix D – Official Transcript of Evidence .....</b>	<b>71</b>



## **Membership of the Committee**

**Chair** Hon Judi Moylan MP

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

**Members** Mr John Forrest MP

Senator Annette Hurley

Mr Harry Jenkins MP

Senator Stephen Parry

Mr Bernie Ripoll MP

Senator the Hon Judith Troeth

Mr Barry Wakelin MP

## **Committee Secretariat**

**Secretary** Mr Stephen Boyd

**Inquiry Secretary** Mr John Fuhrman

**Senior Research Officer** Mr Raymond Knight

**Research Officer** Ms Penny Wijnberg

**Administrative Officers** Mr Peter Ratas

Ms Jessica Butler



## List of acronyms

ADF	Australian Defence Force
BCA	Building Code of Australia
Defence	Department of Defence
FPDA	Five Power Defence Arrangements
GST/VAT	Goods and Services Tax / Value Added Tax
OH&S	Occupational Health and Safety
RMAF	Royal Malaysian Air Force
the Act	<i>Public Works Committee Act, 1969</i>



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

No. 167 dated Thursday, 10 May 2007

8 PUBLIC WORKS--PARLIAMENTARY STANDING COMMITTEE--REFERENCE  
OF WORK – RATIONALISATION OF ADF FACILITIES AT RMAF  
BUTTERWORTH, MALAYSIA

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: Rationalisation of ADF facilities at RMAF Butterworth, Malaysia.

Question – put and passed.





# List of recommendations

## 3 Issues and Conclusions

### Recommendation 1

The Committee recommends the proposed Royal Malaysian Air Force Base Butterworth, Malaysia - Australian Defence Force Facilities Rationalisation proceed at an estimated cost of \$A23.6 million.

## Introduction

### Referral of Work

- 1.1 On 10 May 2007, the proposed Rationalisation of Facilities at RMAF Butterworth, Malaysia was referred to the Public Works Committee for consideration and report to Parliament 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, informed the House that the estimated out-turn cost of the proposal is \$23.6 million, and that subject to parliamentary approval and further design works, construction will start in early 2008 for completion in late 2009.

### Background

- 1.3 The Government's White Paper on Defence, *Defence 2000: Our Future Defence Force*, describes the basis for Australia's defence relationship with Malaysia in the following terms:

---

<sup>1</sup> Extract from the *Votes and Proceedings of the House of Representatives*, No. 167, 10 May 2007.

5.37 Australia and Malaysia have a long history of military cooperation, demonstrated over the years by Australia's support of the territorial integrity of Malaysia in earlier crises and through the ongoing ADF presence at Butterworth. A wide range of practical bilateral cooperation underlines the durability of our shared interests in regional security.

5.38 Australia's membership of the Five Power Defence Arrangements (FPDA) commits Australia, along with New Zealand and the United Kingdom, to assist Malaysia and Singapore against external aggression. Membership of the FPDA serves enduring Australian interests in the security of maritime Southeast Asia, and complements our bilateral relationships in the region.<sup>2</sup>

- 1.4 The presence of the ADF at RMAF Butterworth is reflective of Australia's support of the FPDA. The arrangements provide a forum for policy, planning and operations between each of its parties as well as providing an important training opportunity for members of the Singaporean and Malaysian armed forces. Initially the arrangements were conceived as a transitional agreement to provide for the defence of Malaysia and Singapore in the event of an external threat. Against the background of 9/11, combined with the probability of conventional state-on-state conflict being low, there has been a policy shift from direct threat scenarios to a focus on non-conventional challenges such as global terrorism, piracy, protection of exclusive economic zones, disaster relief and smuggling of illicit drugs.<sup>3</sup>
- 1.5 Established in 1992, the Malaysia-Australia Joint Defence Program provides a framework for defence activities from high-level policy talks to individual training programs. A Status of Forces Agreement, which took effect in 1999, set up standard conditions for the presence of visiting forces of either country on issues such as jurisdiction, claims, immigration, and customs.<sup>4</sup>
- 1.6 The Defence International Engagement Plan 2006-2009 reaffirms Australia's commitment to the FPDA and underpins a commitment to a continuing ADF presence at RMAF Butterworth at the current level of manning.<sup>5</sup>

---

2 *Defence 2000: Our Future Defence Force*, Commonwealth of Australia, 2000.

3 Appendix C, Submission No. 1, paragraph 6.

4 *ibid.*, paragraph 7.

5 *ibid.*, paragraph 8.

- 1.7 The arrangement for the ADF's use of facilities at RMAF Butterworth is set out in a 1988 exchange of letters between the Malaysian and Australian Ministers for Defence. The essential features of the agreement are:
- the nomination of facilities to be made available for ADF;
  - the arrangements for payment by Australia for use of the facilities, repairs, maintenance and refurbishments;
  - the requirement to seek consent from the Malaysian Government for the construction of new facilities or the altering of existing facilities used by the ADF;
  - the arrangement of payment for the provision of infrastructure services; and
  - the agreement to transfer all ADF facilities to the Malaysian Government when the ADF withdraws from the base.<sup>6</sup>

## Site

- 1.8 RMAF Butterworth is on the North West coast of Malaysia, opposite the island of Penang. The primary runway runs north-south, parallel to the shoreline, and the western boundary of the base is only some two hundred metres from the shoreline. The main built up area of the base, including the ADF facilities, lies between the main runway and the western boundary.<sup>7</sup>

## Options Considered

- 1.9 The ADF is committed to a continuing presence at RMAF Butterworth at the current levels of personnel in order to sustain operational requirements. The options considered for the provision of appropriate facilities to support that commitment were to either replace all facilities or adopt a mix of replacement and refurbishment.<sup>8</sup>
- 1.10 Defence concluded that of the two options a mix of replacement and refurbishment was the most viable and cost effective. New construction

---

6 *ibid.*, paragraph 15.

7 *ibid.*, paragraph 49.

8 *ibid.*, paragraph 36.

would be restricted to the replacement of facilities that have been condemned, are uneconomical to upgrade or extend, or pose health risks to ADF personnel. For the remaining facilities, refurbishment was considered to be suitable. The decision to adopt a mix of replacement buildings and refurbishment was also believed to be an option that would keep the ADF facilities in proportion to its presence at RMAF Butterworth while meeting the disparate needs of the units.<sup>9</sup>

- 1.11 Defence considered but rejected the collocation of all administrative and headquarters elements on one site on the basis that:
- a single large headquarters building accommodating all ADF requirements on one site would be inconsistent with the heritage and landscaping of the precinct. It would dominate other nearby buildings and was considered to be inappropriate given ADF's role and status on the base;
  - the existing arrangement of three headquarters buildings would retain the operating advantages inherent with 92 Wing Detachment A and Army elements being close to their functional areas, i.e. Hangar 51, Hangar 50, the Quartermaster stores and armoury respectively;
  - the poor condition of the existing administrative buildings meant that there would be little difference in cost between refurbishment and replacement; and
  - the refurbishment of existing administrative buildings would limit the functionality of outcomes, in view of the shape, size and layout of existing buildings.<sup>10</sup>

## **Inquiry Process**

- 1.12 The Committee is required by the Act to consider public works over \$15 million<sup>11</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;

---

9 *loc.cit.* See also paragraph 39.

10 *ibid.*, paragraphs 37 – 38.

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

- 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>12</sup>
- 1.13 The Committee called for submissions by advertising the inquiry in *The Weekend Australian* and *The Canberra Times* on Saturday, 19 May 2007. The Committee also sought submissions from relevant government agencies, local government, 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.

## Inspection and Hearing

- 1.14 Under the terms of the Act, the Committee may not convene at any place outside Australia and its external Territories. Where a public work is to be carried out outside Australian and its external Territories, the Committee:
- ...shall consider the work on the basis of plans, models and statements placed before it and of evidence (if any) taken by it.<sup>13</sup>
- 1.15 On Friday 15 June 2007 the Committee conducted a confidential hearing attended by officials of the Department of Defence on the costs of the proposed works to be undertaken at RMAF Butterworth followed by a public hearing, both of which were held at Parliament House, Canberra.<sup>14</sup>

---

12 *ibid.*, Section 17.

13 *ibid.*, Section 18B.

14 See Appendix D for the official Hansard transcript of the evidence taken by the Committee at the public hearing on Friday 15 June 2007 at Parliament House, Canberra.



## The Proposed Works

### Purpose

- 2.1 Defence describes the purpose of the proposed works in the following terms:
- to provide fit for purpose working and living accommodation for ADF personnel by addressing the current deficiencies in ADF working and transit living accommodation, in terms of compliance with legislative requirements, for example Occupational Health and Safety (OH&S) and the Building Code of Australia (BCA), thereby improving the ADF's capacity to meet its responsibilities to its personnel; and
  - to rationalise ADF facilities on the base, improve the functionality and security of the facilities the ADF is to use into the future, and provide the opportunity to return some facilities to the RMAF.<sup>1</sup>
- 2.2 Defence also states that these works will improve the capacity of the resident ADF units to provide the support required by other ADF

---

<sup>1</sup> Appendix C, Submission No.1, paragraph 18.



elements deployed to and operating from or through RMAF Butterworth.<sup>2</sup>

## Need

- 2.3 The facilities allocated to the ADF under the 1988 arrangements were built in the 1940's and 1950's. Some of them, in particular the flight-line aircraft hangars and the recently upgraded fuel farm, are in good condition, and are suitable for continued use under normal maintenance arrangements.<sup>3</sup>
- 2.4 According to Defence, buildings servicing administrative, logistic, and domestic support have deteriorated over the years to inefficient, insecure, and in some cases unsafe levels. Materials are not appropriately fire rated in some cases; asbestos roofing is in use on some buildings, and from time to time sewer drains overflow inside accommodation ablution blocks.<sup>4</sup>
- 2.5 While a range of repairs and improvements have been carried out over the years in attempts to comply with Australian OH&S and BCA standards, significant improvements are now required to meet those standards. Some facilities have had to be abandoned because of the level of deterioration, and alternative temporary accommodation found on base.<sup>5</sup>
- 2.6 In addition, Defence states that the 1988 building allocations to a variety of buildings within RMAF Butterworth have resulted in an inefficient dispersal of RAAF administrative functions.<sup>6</sup>

## Scope

- 2.7 The proposed works encompass the following elements:
- **324 Combat Support Squadron Headquarters.** Demolition of two existing buildings and the construction of new facilities co-located on

---

2 *ibid.*, paragraph 19.

3 *ibid.*, paragraph 20.

4 *ibid.*, paragraph 21.

5 *loc. cit.*

6 *id.*

that site. The development of three adjacent structures on that site include:

- ⇒ a Health Services facility (630m<sup>2</sup>), which requires particular construction and safety standards;
  - ⇒ the main administration building, which will collocate the Headquarters, Personnel Services and Information Services functions (1,310m<sup>2</sup>); and
  - ⇒ Security Police amenities facilities (385m<sup>2</sup>).
- **92 Wing Detachment A Headquarters.** Demolition of two existing buildings and the construction of a new facility of some 638m<sup>2</sup> on the same site. The site is immediately to the west of the hangar and parking apron which accommodates deployed aircraft. It will provide facilities for operations, intelligence, photography and mission preparation, as well as administration functions.
  - **Land Command Liaison Section and Rifle Company Butterworth Headquarters.** Demolition of an existing building and construction of a new facility of some 1,408m<sup>2</sup> on the same site. The new building will accommodate the functions carried out by the resident Liaison Section and the Rifle Company. It will provide facilities for training, briefing, planning, communications and administration.
  - **Army Quartermaster Stores.** Upgrading of two existing buildings to provide improved storage, receipt and dispatch arrangements.
  - **Armoury.** Construction of a new facility of some 128m<sup>2</sup>, to be integrated with the upgraded Army Quartermaster-stores. The new armoury will consolidate the storage and management of all ADF small arms on the base.
  - **Vehicle Compound.** Upgrading lighting, power, ventilation, fire detection and protection in the workshop area, the filling-in of servicing pits, provision of new concrete floors to workshop areas, installation of a new 2-tonne vehicle hoist and the remediation of an area of oil contaminated ground. Asbestos roofs will be replaced with 'Colorbond' metal roofing and the office and amenities areas will be refurbished.
  - **All-Ranks Mess.** Work includes additions and alterations to the existing mess to provide a new ration store, bedding store, female ablutions and garbage handling arrangements. The old ration store will be refurbished to increase surge dining capacity.

- **Transit Accommodation.** Additions and alterations to existing accommodation buildings to improve amenity and standards for up to 332 transit personnel.
- **Sewage Treatment Plant.** Installation of a 750 person package sewage treatment plant which services ADF accommodation, messing and vehicle compound facilities is proposed.
- **Gymnasium.** The scope of work includes re-roofing and reconfiguration of two buildings to provide adequate physical fitness facilities and toilets. Enclosure of part of the veranda of one building for storage of sporting equipment will also be undertaken.
- **Outdoor Fitness Training Shelters.** Work includes the construction of seven open shelters adjacent to the transit accommodation, to provide an area suitable for all weather fitness training.<sup>7</sup>

## Project Delivery

- 2.8 Defence proposes that a Managing Contractor form of delivery be used for this project. The department states that following a consideration of alternative delivery methods this is the preferred method of developing and managing the risks associated with an overseas project of this type.<sup>8</sup>
- 2.9 Subject to Parliamentary approval, a Managing Contractor is expected to be appointed in late 2007 following a two stage tender process. Commencement of construction is anticipated in early 2008. The new building elements of the project will be phased to allow for the temporary relocation of some functions during the demolition and reconstruction period. It is expected that the refurbishment elements of the project could be undertaken concurrently. Completion of works is anticipated by December 2009. Works will be scheduled to minimise the impact of construction activity on both ADF and RMAF operations.<sup>9</sup>

## Cost

- 2.10 The estimated out-turn project cost is A\$23.6m. This includes:

---

7 *ibid.*, paragraph 47.

8 *ibid.*, paragraph 90.

9 *ibid.*, paragraph 91.

- design and construction costs;
- Managing Contractor and consultant fees and charges;
- an escalation factor through to anticipated project completion; and
- project contingency.<sup>10</sup>

---

<sup>10</sup> *ibid.*, paragraph 87.



## Issues and Conclusions

### The Role of RMAF Butterworth

- 3.1 The ADF participates in and supports a range of operational activity from RMAF Butterworth, including the rotational deployments of Rifle Company Butterworth, regular deployments of Maritime Patrol Aircraft, and involvement in several multinational exercises each year.<sup>1</sup>
- 3.2 In addition to exercising its formal obligations associated with the FPDA, the Australian presence at RMAF Butterworth demonstrated the important role of the ADF in providing logistical support to unforeseeable events including natural disasters, as in the recent tsunami.
- 3.3 A total number of 166 ADF members are permanently deployed to RMAF Butterworth comprising 40 RAAF personnel and 120 Army personnel attached to Rifle Company Butterworth.<sup>2</sup>

---

1 Appendix C, Submission No. 1, paragraph 10.

2 *ibid.*, see Table 1, paragraph 13.

## Rationalisation of Facilities

- 3.4 According to the title of the department's Statement of Evidence, the objectives of the proposed works are to rationalise facilities for the Australian Defence Force presence at RMAF Butterworth.
- 3.5 However, it was not clear to the Committee what specific facilities were intended to be 'rationalised'. The department stated that an objective of the current proposal is to:
- ...rationalise ADF facilities on the base, improve the functionality and security of the facilities the ADF is to use in the future, and provide the opportunity to return some facilities to the RMAF.<sup>3</sup>
- 3.6 Arguably the reference to a rationalisation of facilities is misleading. The one, and apparently only, opportunity documented in the department's Statement of Evidence for rationalisation is the collocation of all administrative and headquarters elements on one site.<sup>4</sup>
- 3.7 Defence informed the Committee that although the functional design brief for the project included an option for one headquarters building, the department opted for the *status quo* for the reason that the ADF facilities are integrated and adjacent to Malaysian facilities. The decision to demolish and rebuild the current headquarters buildings on the same sites would allow for building architecture and style to be harmonised with existing Malaysian buildings.<sup>5</sup>
- 3.8 According to Defence, to provide all headquarters facilities at one single site would place pressure on available land, and require a multistorey building the costs of which, principally due to infrastructure costs, would exceed the current budget.<sup>6</sup>
- 3.9 The Committee concurred with the department's explanation in favour of demolishing the existing three headquarters buildings, and providing three new buildings.

---

3 *ibid.*, paragraph 18.

4 *ibid.*, paragraph 37.

5 Appendix D, Official Transcript of Evidence, page 3.

6 *loc.cit.*

## Transit Accommodation

- 3.10 Part of the current proposal involves additions and alterations to existing transit accommodation to improve amenities and standards for transit personnel. According to the department's main submission the standard of transit accommodation is such that some non-commissioned officers and officers have had to be located outside the secure perimeters of the base. The proposed upgrade will provide improved facilities to accommodate these personnel on base and provide an integrated accommodation solution to meet the needs of ADF members.<sup>7</sup>
- 3.11 The Committee sought an explanation as to why the existing accommodation arrangements could not be retained.<sup>8</sup>
- 3.12 Defence responded that the transit accommodation on base was currently being used. However, that accommodation had a number of issues including; ceilings that are not fire rated and untreated water supplies to ablution facilities. The proposed upgrades will address these deficiencies. Further Defence informed the Committee that concern for the security of members accommodated outside the secure perimeter of the base was an issue of priority that the proposed works would address.<sup>9</sup>
- 3.13 In terms of the numbers of occupants the Committee queried how Defence had arrived at the number of transit personnel, quoted in the main submission as 332.<sup>10</sup>
- 3.14 Defence explained that the number of 332 was calculated as the normal number of personnel accommodated in each of the rooms. However according to Defence in the event of an accommodation surge, for example during operational exercises, this number could be increased by additional beds provided in each room, so that a two person room could become a four person room for the duration of the operation, and so on.<sup>11</sup>
- 3.15 The Committee was also interested in how often transit accommodation was fully utilised.<sup>12</sup>
- 3.16 Defence informed the Committee that transit accommodation was usually fully occupied when exercises were being held. According to Defence:

---

7 Appendix C, paragraphs 30 and 47.

8 Appendix D, page 5.

9 loc.cit.

10 loc.cit.

11 loc.cit.

12 Appendix D, page 6.



We have two exercises a year, normally in April, May or September...the last exercise...Bersama Shield, which was run in April-May this year...had in excess of 450 people accommodated on base.<sup>13</sup>

- 3.17 The Committee also sought clarification as to whether the nature of transit accommodation is suitable for the expected life of the buildings in the new project.<sup>14</sup>
- 3.18 Defence responded that it was satisfied that the current proposal relating to the proposed upgrades to transit accommodation was the better option compared to the building of additional transit accommodation.<sup>15</sup>

## **Infrastructure Works**

### **Sewerage Works**

- 3.19 In its Statement of Evidence, Defence refers to the failure of the existing sewerage treatment plant at RMAF Butterworth. According to the evidence, the plant is inoperative leading to sewerage overflows inside the accommodation ablution area, creating a health hazard and inconvenience to those affected. Upgrading of the base system with is the responsibility of the RMAF is not planned for the near future.<sup>16</sup>
- 3.20 During the Inquiry, the Committee expressed its concerns that the upgrade of the existing treatment plant may fall to the Commonwealth by default. In response, Defence advised that as part of the current development, a packaged sewerage treatment plant solely for the benefit of ADF members on-base would be installed.<sup>17</sup>
- 3.21 Defence stated in its Statement of Evidence that the installation of the new plant would involve cutting and sealing existing sewer lines and the installation of new mains. According to Defence the new plant would be designed around a 750 person capacity including aeration modules, pumps and dosing system to meet its requirements.<sup>18</sup>

---

13 loc.cit.

14 loc.cit.

15 loc.cit.

16 Appendix C, paragraph 31.

17 Appendix D, page 4.

18 Appendix C, paragraph 59.

- 3.22 The new plant had the advantage of the possibility of disposal and recouping some expense to the Commonwealth at a time when the base system is restored and upgraded.<sup>19</sup>

## Water and Energy

- 3.23 Defence informed the Committee that water conservation measures would include the goal of reducing stormwater and sewerage outflows.<sup>20</sup>
- 3.24 According to evidence provided by Defence, the measures proposed to be adopted include the use of triple-A rated taps and the collection, treatment and recycling of water from showers, toilets and ablutions for use in landscaping irrigation.<sup>21</sup>
- 3.25 With regard to energy targets, Defence informed the Committee that it would be seeking a 20 percent reduction on the minimum standards described in the BCA through the application of a variety of measures, including:
- an increased temperature set-point of 26 degrees for air-conditioned areas;
  - passive roof ventilation in all of the new buildings;
  - 10 millimetre *Suncool* single glazed windows;
  - low absorption roof colours; and
  - time-based controls for lighting and other plant and equipment, including air-conditioning.<sup>22</sup>

## Water Supply

- 3.26 Defence stated in its Statement of Evidence that the existing water supply system on the base is below Australian potable water standards. It is proposed that reverse osmosis water treatment will be used to purify water for personal use. New filtration and purification systems will be installed in the sleeping accommodation area and hot water will be supplied from roof mounted solar systems. As noted above, untreated

---

19 Appendix D, loc.cit.

20 Appendix C, paragraph 66.

21 Appendix D, page 8.

22 loc.cit.

water will be used for toilet flushing, mechanical plant and garden watering.<sup>23</sup>

## Maintenance

3.27 In previous Inquiries, the Committee has been concerned with the quality of maintenance provided by the department in sustaining the Defence Estate. In the context of the current project the department stated in its Statement of Evidence that:

Earlier ADF works have largely been repairs and maintenance. Recently, an upgrading of the aviation fuel farm has been undertaken, and a range of repair and rehabilitation works have been carried out on accommodation buildings and the combined mess. These works were predominantly related to the age and condition of the facilities, and in the case of the combined mess, followed its partial closure following OH&S concerns.<sup>24</sup>

3.28 The Committee sought an elaboration of the department's commitment to the post-construction maintenance of the current project, seeking details as to what warranties the contractor will be subject to in terms of assurances that the buildings operate properly and are consistent with specifications. The Committee also sought details of any building maintenance schedules initiated by Defence that would ensure the life of the buildings.<sup>25</sup>

3.29 In addressing the matter of maintenance in the immediate post-construction period, Defence explained that all of its contracts include warranty periods up to three years on all new plant and equipment, as well as a defects liability period which is of the order of 12 to 18 months on all new construction. According to Defence:

...the managing contractor will be required to have a presence and come back to rectify anything that occurs during the defects liability period...In addition all of the subcontractors who will perform the work will be Malaysian subcontractors and they would be around to be able to be brought back to remedy defects.<sup>26</sup>

3.30 On the specific issue as to whether Defence had an ongoing maintenance program for RMAF Butterworth, including the new works, it was explained that:

---

23 Appendix C, paragraph 58. See also paragraph 3.15 above.

24 *ibid.*, paragraph 68.

25 Appendix D, page 8.

26 *loc.cit.*

...there is an allocation of funds each year for the ADF elements at Butterworth to undertake facilities operations and maintenance. [We] do not expect any increase in these costs as a result of the works. The base commander utilises a mixture of local labour and local contractors to undertake any routine maintenance that is required. The other point to make is that [we] will be using technology which will be able to be repaired and maintained by the capabilities of the construction industry in the area, so [we] are quite confident that we are not creating something that will be unsustainable.<sup>27</sup>

## Removal of Hazardous Materials

- 3.31 The Committee sought assurances from Defence that the removal of any hazardous material would be in compliance with both Australian and local standards and regulations.
- 3.32 Defence informed the Committee that there existed a Malaysian regulatory regime that imposed obligations on local licensed contractors to safely remove and dispose of asbestos. Defence indicated that it had used these services in the past, and a similar practice will be followed for the current works. The managing contractor will be required to supervise the works and ensure they are conducted in accordance with Malaysian and Australian standards to the satisfaction of the independent project management contract administrator.<sup>28</sup>
- 3.33 Defence elaborated on the removal of a small area of hydrocarbon contamination expressing confidence that, because it was confined to a concrete slab, the affected material could be removed with little difficulty.<sup>29</sup>

## Heritage

- 3.34 The Department states in its main submission that a Heritage Impact Assessment in relation to the proposed new headquarters buildings was undertaken in 2005. It concluded that the proposed demolition of the

---

27 loc.cit.

28 *ibid.*, page 9.

29 loc.cit.

existing structures would not fundamentally affect any of the identified Commonwealth heritage values of RMAF Butterworth and recommended that a photographic record be taken during the course of the project. The proposed new structures are being designed in sympathy with the historic and aesthetic values of the site. Extensions of existing facilities will be designed and constructed so as to match the style and finish of existing buildings.<sup>30</sup>

- 3.35 The Committee sought clarification as to the heritage value of the site, and whether that value refers to an Australian standard or an equivalent Malaysian standard.<sup>31</sup>
- 3.36 In responding, Defence referred to its Statement of Evidence, and the requirement of the Heritage Impact Report for buildings that are to be demolished to be photographed and recorded prior to demolition so that there is a permanent record of those. As to whether the Malaysian Government may have concerns with the demolition of some buildings on base for heritage reasons, Defence advised the Committee that the Malaysian Government had no issues with the replacement of old facilities with new facilities.<sup>32</sup>

## Cost

- 3.37 The Committee is asked to approve an estimated out turn cost for this project of \$A23.6 million. This cost includes:
- design and construction costs;
  - Managing Contractor and consultant fees and charges;
  - an escalation factor through to anticipated project completion; and,
  - project contingency.<sup>33</sup>
- 3.38 GST/VAT taxes do not currently apply to construction projects in Malaysia.<sup>34</sup>

---

30 Appendix C, paragraph 41.

31 Appendix D page 6.

32 loc.cit.

33 Appendix C, paragraph 87.

34 loc.cit.

**Recommendation 1**

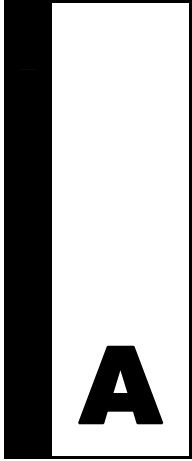
**The Committee recommends the proposed Royal Malaysian Air Force Base Butterworth, Malaysia - Australian Defence Force Facilities Rationalisation proceed at an estimated cost of \$A23.6 million.**

**Hon Judi Moylan MP**

Chair

9 August 2007





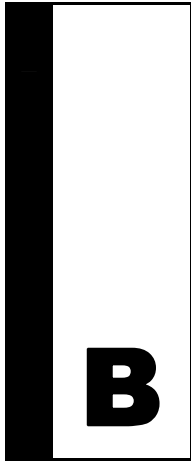
## **Appendix A – List of Submissions and Exhibits**

### **Submissions**

1. Department of Defence







## **Appendix B – List of Witnesses**

Brigadier William Grice, Director General, Infrastructure Asset Development,  
Department of Defence

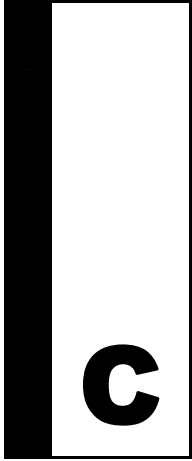
Wing Commander Francis Grigson, Commanding Officer, 324 Combat  
Support Squadron, Royal Australian Air Force, Department of Defence

Mr William Ross, Contractor, Department of Defence

Group Captain David Stockdale, Director, Project Development and Delivery  
(North West), Department of Defence

Mr Brian Woods, Director, South ASEAN, Department of Defence





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





**ROYAL MALAYSIAN AIR FORCE BASE  
BUTTERWORTH, MALAYSIA**

**AUSTRALIAN DEFENCE FORCE  
FACILITIES RATIONALISATION**

**STATEMENT OF EVIDENCE  
TO THE  
PARLIAMENTARY STANDING COMMITTEE  
ON PUBLIC WORKS**

**DEPARTMENT OF DEFENCE  
CANBERRA ACT  
May 2007**



## TABLE OF CONTENTS

<b>THE ADF PRESENCE AT RMAF BUTTERWORTH.....</b>	<b>1</b>
Location and History .....	1
Australia’s Defence Objectives .....	1
Operations and Deployments .....	2
Roles of ADF Units at RMAF Butterworth .....	3
Facilities Allocated to the ADF.....	3
Planning for ADF Facilities.....	4
<b>IDENTIFICATION OF THE NEED .....</b>	<b>5</b>
Project Objectives.....	5
The Need for the Work.....	5
Administrative Facilities .....	6
Logistic Facilities .....	6
Domestic Facilities .....	7
Training and Physical Fitness Facilities.....	8
Description of Proposal .....	9
Options and Reasons for Adopting the Proposed Course of Action .....	9
Environmental Impact Assessment .....	10
Heritage Considerations .....	10
Consultation with Stakeholders.....	11
Revenue .....	11
<b>TECHNICAL INFORMATION .....</b>	<b>12</b>
Project Location.....	12
Project Scope .....	12
Details of Site Selection .....	13
Site Description .....	14
Zoning and Approvals .....	14
Land Acquisition .....	14
Applicable Codes and Standards .....	14
Planning and Design Issues. ....	14
Acoustics .....	16
Water and Energy Conservation Measures .....	17
Master Planning.....	17
Earlier and Future Works. ....	18
Access for the Disabled .....	18
Child Care.....	18
Fire Protection .....	18
Security.....	19
Communications.....	19
Occupational, Health and Safety .....	20
Landscaping.....	20
Asbestos and Contamination Removal.....	20
Furniture and Fittings .....	20
Consultation with Relevant Authorities. ....	21
Impact on Local Community .....	21
Project Costs.....	21



Project Delivery System .....	22
Project Schedule .....	22

**ANNEXES**

- A. Regional Location Plan
- B. ADF Facilities Development Plan
- C. Facilities Allocated to the ADF
- D. Sketch Plans of Proposed Works

## **THE ADF PRESENCE AT RMAF BUTTERWORTH**

### **Location and History**

1. Royal Malaysian Air Force Base Butterworth (RMAF Butterworth) is located on the north-west coast of Malaysia, adjacent to the island of Penang (see Location Plan at Annex A). The base has been of strategic importance since World War II, during which it was initially occupied by Royal Air Force (RAF) and Royal Australian Air Force (RAAF) units, and subsequently by Japanese forces. RMAF Butterworth was used for RAF and RAAF activity against the Communist insurgency between 1950 and 1963 and was placed under RAAF control in 1958 as part of the Commonwealth Strategic Reserve. No 3 and No 77 Squadrons were based there during the 1960s period of confrontation with Indonesia, providing a vital level of security.
2. The base was formally transferred to the Malaysian Government in 1970 following Malaysian independence. As the RMAF was in its infancy and not in a position to fully take over an air defence role, two RAAF fighter squadrons were based at RMAF Butterworth until 1988.
3. An Australian Army Rifle Company has been stationed at RMAF Butterworth on a rotational basis since the early 1970s. While it's initial focus was protection of the base, its emphasis has shifted to training and bilateral exercises in Malaysia, Singapore and Thailand.
4. RMAF Butterworth routinely supports deployments of aircraft from the RAAF's Air Combat, Air Lift and Aerospace Operational Support Group.

### **Australia's Defence Objectives**

5. The Government's White Paper on Defence, *Defence 2000: Our Future Defence Force*, outlines the basis for Australia's defence relationship with Malaysia. The guidance in that document remains current:

*"5.37 Australia and Malaysia have a long history of military cooperation, demonstrated over the years by Australia's support of the territorial integrity of Malaysia in earlier crises and through the ongoing ADF presence at Butterworth.*

*A wide range of practical bilateral cooperation underlines the durability of our shared interests in regional security.*

*5.38 Australia's membership of the Five Power Defence Arrangements (FPDA) commits Australia, along with New Zealand and the United Kingdom, to assist Malaysia and Singapore against external aggression. Membership of the FPDA serves enduring Australian interests in the security of maritime Southeast Asia, and complements our bilateral relationships in the region.....”*

6. The ADF presence and level of operational activity at RMAF Butterworth is a consequence of the FPDA. The Arrangements provided a basis for planning a response to an attack on either Malaysia or Singapore, but has increasingly provided a framework within which to advance the interoperability of member countries' armed forces. The FPDA has recently expanded its activities to counter non-conventional threats, initially focusing on maritime security. In 2006, the Ministers agreed that the FPDA would explore avenues for regional humanitarian assistance and disaster relief.

7. Established in 1992, the Malaysia-Australia Joint Defence Program provides a framework for defence activities from high-level policy talks to individual training programs. A Status of Forces Agreement, which took effect in 1999, set up standard conditions for the presence of visiting forces of either country on issues such as jurisdiction, claims, immigration, and customs.

8. The Defence International Engagement Plan 2006-2009 reaffirms Australia's commitment to the FPDA and underpins a commitment to a continuing ADF presence at RMAF Butterworth at the current level of manning.

9. More information on Australia's relations with Malaysia is contained in Defence's submission to the Inquiry into Australia's Relations with Malaysia by the Joint Standing Committee on Foreign Affairs, Defence and Trade, held in October 2006.

### **Operations and Deployments**

10. The ADF participates in and supports a range of operational activity from RMAF Butterworth, including the rotational deployments of Rifle Company Butterworth, regular deployments of Maritime Patrol Aircraft, and involvement in several multinational exercises each year.

11. Unscheduled peaks in aircraft activity generate heavy demands on cargo handling, meals and accommodation at RMAF Butterworth, such as occurred after the 2004 tsunami.

12. While future ADF activities at RMAF Butterworth are likely to be influenced by unforeseeable events such as the tsunami of 2004, planning must ensure a capacity to respond to credible contingencies.

### **Roles of ADF Units at RMAF Butterworth**

13. The ADF elements based at RMAF Butterworth are shown in Table 1.

**Table 1**

<b>ADF Unit</b>	<b>Role</b>	<b>Composition</b>
324 Combat Support Squadron	Provides administrative, health, domestic, information, logistic and security police services to ADF personnel based at deployed to, and transiting RMAF Butterworth.	34 RAAF, 1 Australian Public Service and 75 locally employed civilians
92 Wing Detachment A	Provides operational planning, execution and review support for RAAF Surveillance and Response Group deployments.	6 RAAF personnel
Land Command Liaison Section	Provides domestic, administrative and logistic support and continuity to the rotations of Rifle Company Butterworth.	6 Australian Army personnel
Rifle Company Butterworth	Training and exercises with Malaysian and Singaporean armies.	120 Australian Army personnel

14. The number of ADF personnel deployed, on exercises, or transiting through RMAF Butterworth can total up to 700.

### **Facilities Allocated to the ADF**

15. The arrangement for the ADF's use of facilities at RMAF Butterworth is set out in a 1988 exchange of letters between the Malaysian and Australian Ministers for Defence. The essential features of the agreement are:

- the nomination of facilities to be made available for ADF;
- the arrangements for payment by Australia for use of the facilities, repairs, maintenance and refurbishments;
- the requirement to seek consent from the Malaysian Government for the construction of new facilities or the altering existing facilities used by the ADF;

- the arrangement for payment for the provision of infrastructure services; and
- the agreement to transfer all ADF facilities to the Malaysian Government when the ADF withdraws from the base.

### **Planning for ADF Facilities**

16. The RMAF has not developed a master plan for the base. It has carried out a number of redevelopment works based largely on the extant zoning of existing facilities and there is no indication that the RMAF will seek to vary the sites allocated to the ADF under the 1988 agreement.

17. Based on the expectation that there will be no change in the current level of ADF activity at RMAF Butterworth, Defence has prepared a Development Plan for the ADF facilities. This plan is at Annex B. The key features of this plan are that it:

- confirms the appropriateness of the location of the key flight line, administrative, logistic and domestic facilities currently in use;
- distinguishes between those facilities suitable for retention, those which require refurbishment, and those needing replacement; and
- identifies those facilities which, subject to approval of this proposal, may be returned to the RMAF.

## **IDENTIFICATION OF THE NEED**

### **Project Objectives**

18. This statement of evidence presents a proposal for the replacement and refurbishment of ADF facilities at RMAF Butterworth. The project has two principal objectives:

- to provide fit for purpose working and living accommodation for ADF personnel by addressing the current deficiencies in ADF working and transit living accommodation, in terms of compliance with legislative requirements, eg Occupational Health and Safety (OH&S) and the Building Code of Australia, thereby improving the ADF's capacity to meet its responsibilities to its personnel; and
- to rationalise ADF facilities on the base, improve the functionality and security of the facilities the ADF is to use into the future, and provide the opportunity to return some facilities to the RMAF.

19. Collectively, the works proposed will improve the capacity of the resident ADF units to provide the support required by ADF elements deployed to and operating from or through RMAF Butterworth.

### **The Need for the Work**

20. The facilities allocated to the ADF under the 1988 arrangements and their functions are listed at Annex C and identified on the plan at Annex B. These facilities were built in the 1940s and 1950s. Some of them, in particular the flight-line aircraft hangars and the recently upgraded fuel farm, are in good condition, and are suitable for continued use under normal maintenance arrangements.

21. Facilities in the administrative, logistic, domestic and domestic support categories however, have deteriorated over the years to inefficient, insecure, and in some cases unsafe levels. Some facilities have been abandoned and temporary accommodation arrangements have been made. The initial building allocations have resulted in an inefficient dispersal of RAAF administrative functions among a variety of buildings. Materials are not appropriately fire rated in some cases, asbestos roofing is in use on some buildings, and from time to time sewer drains overflow inside accommodation

ablution blocks. While a range of repairs and improvements have been carried out over the years in attempts to comply with Australian OH&S and Building Code standards, significant improvements are now required to meet those standards. In the case of the administrative buildings, replacement is proposed.

### **Administrative Facilities**

22. **324 Combat Support Squadron Headquarters.** The headquarters is currently operating from temporary accommodation in an aircraft hangar (Hangar 50). Relocation was required following the structural failure of the former headquarters (Building 57), as a consequence of age, the prevailing tropical conditions and a significant termite problem. The dispersal of the health services, communications centre and Private Automatic Branch Exchange (PABX) functions in buildings away from the headquarters generates inefficiencies. The collocation of these functions would facilitate the return of Buildings 58E and 54 (part) to the RMAF.

23. **Land Command Liaison Section and Rifle Company (LCLS) Butterworth.** The partial structural failure of the current LCLS headquarters (Building 55) has reduced the office and lecture room capacity in the building.

24. **92 Wing Detachment A.** The Detachment currently uses Building 56, which is suffering from structural deficiencies and, in common with the other facilities of its age on the base, has inadequate environmental control, lighting, data services and acoustic insulation.

### **Logistic Facilities**

25. **Army Quartermaster Stores.** These buildings, Building 55E and 55F, have deteriorated over the years. They do not provide suitable office accommodation, nor adequate and efficient racking and shelving for stores. A weatherproof "Receipts and Issues" area, improved and expanded pallet racking areas, and some increase in air conditioned office spaces is needed.

26. While the building fabric is in poor condition, and the asbestos roofing requires replacement, the buildings are structurally sound, and can be cost effectively upgraded to meet requirements.

27. **Armoury.** The RAAF and Army currently have separate weapons storage arrangements. Army's armoury requires a compliance waiver and permanent guarding of the weapons which is an inefficient use of scarce personnel. A new armoury is required which is designed to meet ADF small arms security standards and consolidates the storage and management of small arms for all ADF elements on the base.

28. **Vehicle Compound.** Most ADF vehicles on the base are commercial vehicles which are serviced by local contractors. The on-base facilities used for this purpose and the repair of other military vehicles have significant deficiencies against the Building Code of Australia and OH&S standards. The main needs are the:

- replacement of asbestos and other roofing;
- installation of improved lighting, power, ventilation and fire protection;
- replacement of in-ground service pits with a vehicle hoist;
- laying of new concrete flooring;
- provision of improved office, stores, amenities and battery charging facilities;  
and
- remediation of an area contaminated with waste lubricants.

### **Domestic Facilities**

29. **All-Ranks Mess.** The existing facility (Building 40) is in reasonable condition, and a number of improvements have been carried out to upgrade the kitchen and dining room functionality and to comply with OH&S requirements. The following additional requirements have been identified to address demand, functionality and Defence standards:

- an improved capacity to handle surge dining requirements;
- a larger, more effective ration and bedding storage;
- an appropriate garbage storage facilities;
- a new female toilet facility;
- a new water filtration system; and
- other general refurbishments, including, relocation of ancillary equipment and re-painting.



30. **Transit Accommodation.** Permanent ADF staff at RMAF Butterworth live at Georgetown on Penang Island while deployed personnel, including the members of Rifle Company Butterworth, live in transit accommodation on the base. Some improvements have been carried out to the transit accommodation in recent years (mainly air conditioning, and re-roofing). The on-base accommodation requires fire rated ceilings with extensions and reconfiguration changes to meet OH&S requirements. Additional accommodation is provided for Officers and Senior Non-Commissioned Officers. There are security and safety risks arising from the use of the Non-Commissioned Officers' and Officers' accommodation which are located outside the secure perimeter of the base. The changes will allow for the accommodation of Officers and Senior Non-Commissioned Officers within the base secure area and provide an integrated accommodation solution to meet the needs of the Rifle Company.

31. **Sewage Treatment.** The RMAF Butterworth sewage treatment plant is inoperative. From time to time, sewerage over-flows inside the accommodation ablution area creating a health hazard and unnecessary inconvenience for those affected. Upgrading of the base system is planned by the RMAF, but the timing and extent of work has not been confirmed.

### **Training and Physical Fitness Facilities**

32. **Gymnasium.** Personnel based at or deployed to RMAF Butterworth currently use a storage shed in the vehicle compound as a gymnasium. It can accommodate only some of the usual gymnasium functions. Because of its location, the building would be more effectively used to meet transport administration requirements.

33. The gymnasium requirements range from small areas for cardio and weights training to facilities to allow undercover unit exercising and training. A capacity to handle groups of up to 30 (i.e. a platoon) is desirable.

34. **Outdoor Fitness Training.** There is a requirement for outdoor, all-weather training facilities, preferably close to the Army and RAAF allocated transit accommodation buildings.

## **Description of Proposal**

35. To address the deficiencies identified in the ADF facilities at RMAF Butterworth, Defence has examined options for each functional category and has developed preferred solutions, which are outlined as follows:

- the provision of three new headquarters buildings for RAAF and Australian Army elements based at RMAF Butterworth, to meet current standards of functionality, security, and OH&S, and to increase the operational effectiveness of the units concerned;
  - three existing buildings will be demolished to enable the construction of three new headquarters buildings on the existing building sites. These sites are identified at Annex B.
- the refurbishment and upgrading of existing transit accommodation, messing buildings, stores, vehicle workshops and ancillary facilities, to ensure compliance with building codes and OH&S requirements, to increase capability, and replace non-functional services;
  - the preferred solution involves a range of renovations, improvements to services, some building extensions, a new package sewage treatment plant, and general repairs and repainting.
- the construction of a new combined armoury adjoining the Rifle Company Butterworth (RCB) Quartermaster Store (Building 55F).

## **Options and Reasons for Adopting the Proposed Course of Action**

36. The ADF is committed to a continuing presence at RMAF Butterworth at the current levels of manning and operational activity. The feasible options for the provision of appropriate facilities to support that commitment reduce to either, replacing all facilities or a mix of replacement and refurbishment. After careful consideration of the options, a mix of replacement and refurbishment was considered to be the most viable and cost effective. New construction has been restricted to the replacement of facilities which have been condemned, are uneconomical to upgrade or extend, or pose health risks to ADF personnel. For the remaining facilities, refurbishment was considered to be suitable.

37. Collocation of all administrative and Headquarters elements on one site was considered in view of the economies that may be accrued. While this may be feasible on the largest site, (Site A), issues which were taken into account were:

- A single large building accommodating all ADF requirements on one site would be inconsistent with the heritage and landscaping of the precinct. It would dominate other nearby buildings and was considered to be inappropriate given ADF's role and status on the base.
- The operating advantages inherent with 92 Wing Detachment A and Army elements being close to their functional areas, i.e. Hangar 51, Hangar 50, the Quartermaster stores and armoury respectively.

38. Refurbishment of the existing administrative buildings was considered but rejected because:

- the poor condition of the existing structures meant that there would be little difference in cost between refurbishment and replacement;
- refurbishment would limit the functionality of outcomes, in view of the shape, size and layout of existing buildings.

39. The conclusion from this consideration was that the optimum approach would be to construct new facilities on each of the three available sites. This option would keep the ADF facilities in proportion to its presence within RMAF Butterworth while meeting the disparate needs of the units.

### **Environmental Impact Assessment**

40. An environmental assessment of the project has determined that there are no environmental impacts which would require referral under the "Environment Protection and Biodiversity Conservation Act 1999". An Environmental Clearance Certificate has been issued by Defence and the project will be managed according to a Construction Environment Management Plan which will be required of the construction contractor.

### **Heritage Considerations**

41. A Heritage Impact Assessment in relation to the proposed new headquarters buildings was undertaken in 2005. It concluded that the proposed demolition of the existing structures would not fundamentally affect any of the identified Commonwealth heritage values of RMAF Butterworth and recommended that a photographic record be

taken during the course of the project. The proposed new structures are being designed in sympathy with the historic and aesthetic values of the site. Extensions of existing facilities will be designed and constructed so as to match the style and finish of existing buildings.

### **Consultation with Stakeholders**

42. The 1988 Ministerial agreement for ADF use of facilities at RMAF Butterworth requires Malaysian Government consent before the construction of new facilities or the alteration of existing facilities. Consent was provided on the 28<sup>th</sup> March 2007.

43. Authorities consulted included the:

- Malaysian Secretary General of Defence;
- Malaysian Ministry of Defence officials;
- Malaysian Military representatives on RMAF Butterworth;
- Malaysian Defence Attaché, Malaysian High Commission, Canberra;
- Australian Department of Foreign Affairs and Trade;
- Australian High Commission to Malaysia;
- Malaysian Industry Development Authority (Malaysian Consulate, Sydney); and
- Australian Greenhouse Office.

### **Revenue**

44. As the proposed facilities will be constructed for use by the ADF, there are no revenue implications associated with this project.

## TECHNICAL INFORMATION

### Project Location

45. The work proposed in this submission will be carried out on the RMAF Base at Butterworth which is located on the north western coast of Malaysia. See Location Plan at Annex A.

### Project Scope

46. The locations of the proposed work are identified on the ADF Facilities Development Plan at Annex B. Floor plans, typical elevations and sections of the proposed new facilities and representative sketches of the proposed refurbishments are at Annex D.

47. The following works are proposed to meet the needs of the sponsors:

- **324 Combat Support Squadron Headquarters – Site A.** Demolition of existing Buildings 57 and 57A and the construction of new facilities co-located on that site. The development of three adjacent structures on that site include: a Health Services facility (630m<sup>2</sup>), which requires particular construction and safety standards, the main administration building, which will collocate the Headquarters, Personnel Services and Information Services functions (1,310m<sup>2</sup>), and a Security Police amenities facilities (385m<sup>2</sup>).
- **92 Wing Detachment A Headquarters – Site B.** Demolition of existing Buildings 56 and 56A and the construction of a new facility of some 638m<sup>2</sup> on that site. The site is immediately to the west of the hangar and parking apron which accommodates deployed aircraft. It will provide facilities for operations, intelligence, photography and mission preparation, as well as administration functions.
- **Land Command Liaison Section and Rifle Company Butterworth Headquarters – Site C.** Demolition of existing Building 55 and construction of a new facility of some 1,408m<sup>2</sup> on that site. The new building will accommodate the functions carried out by the resident Liaison Section and the Rifle Company. It will provide facilities for training, briefing, planning, communications and administration.

- **Army Quartermaster Stores.** Upgrading of existing Buildings 55E and 55F to provide improved storage, receipt and dispatch arrangements.
- **Armoury.** Construction of a new facility of some 128m<sup>2</sup>, to be integrated with the upgraded Army Quartermaster-stores. The new armoury will consolidate the storage and management of all ADF small arms on the base.
- **Vehicle Compound.** The scope includes upgrading lighting, power, ventilation, fire detection and protection in the workshop area, the filling-in of servicing pits, provision of new concrete floors to workshop areas, installation of a new 2-tonne vehicle hoist and the remediation of an area of oil contaminated ground. Asbestos roofs will be replaced with colorbond metal roofing and the office and amenities areas will be refurbished.
- **All-Ranks Mess.** Work includes additions and alterations to the existing mess to provide a new ration store, bedding store, female ablutions and garbage handling arrangements. The old ration store will be refurbished to increase surge dining capacity.
- **Transit Accommodation.** Additions and alterations to existing accommodation buildings to improve amenity and standards for up to 332 transit personnel.
- **Sewage Treatment Plant.** Installation of a 750 person package sewage treatment plant which services ADF accommodation, messing and vehicle compound facilities is proposed.
- **Gymnasium.** The scope of work includes re-roofing and reconfiguration of Buildings 41 and 42F to provide adequate physical fitness facilities and toilets. Enclosure of part of the veranda of Building 41 for storage of sporting equipment will also be undertaken.
- **Outdoor Fitness Training Shelters.** Work includes the construction of seven open shelters adjacent to the transit accommodation, to provide an area suitable for all weather fitness training.

### **Details of Site Selection**

48. The siting of ADF facilities is specified in arrangements agreed in 1988. The proposed facilities will be located on existing ADF building sites.

### **Site Description**

49. RMAF Butterworth is on the North West coast of Malaysia, opposite the island of Penang. The primary runway runs north-south, parallel to the shoreline, and the western boundary of the base is only some two hundred metres from the shoreline. The main built up area of the base, including the ADF facilities, lies between the main runway and the western boundary. The topography is generally flat, with a slight grading towards the sea.

### **Zoning and Approvals**

50. The site is an RMAF base. Zoning and approval issues will be addressed between the ADF and Malaysian Governments.

### **Land Acquisition**

51. No land acquisition is required.

### **Applicable Codes and Standards**

52. Subject to the limitations imposed by the designs of the existing structures which are to be refurbished, it is intended that the design of both new and upgraded facilities will conform to the relevant sections of appropriate codes and standards, including:

- the Building Code of Australia,
- the Defence Manual of Fire Protection Engineering,
- the Defence Safety Manuals,
- applicable OH&S standards,
- ADF standards for physical and electronic security, and
- relevant Malaysian building statutes, codes and standards.

### **Planning and Design Issues.**

53. **Design Philosophy.** The design philosophy adopted for the new buildings ensures that the:

- buildings operate in a manner reflecting the purposes for which they were designed;

- designs provide flexibility by using steel framed structural systems and lightweight internal partitions in suitable areas to provide open office spaces and the flexibility to rearrange the offices at minimal cost;
- designs are sympathetic with the colonial style used in tropical climates, a style which has been commonly used on the base;
- designs respond to local climatic conditions;
- siting, design, structure, and servicing will provide the flexibility for future expansion (noting that no future expansion is anticipated or planned);
- selection of materials takes life cycle costs into account; and
- design incorporates environmentally sustainable features where practicable.

54. **Architectural.** The architectural style of the new buildings will be a reflection of the current building style and fabric used on the base, and has been selected for its simplicity in construction. Buildings will be in rendered block work with metal clad roofing and aluminium framed windows.

55. New buildings will be low-rise, braced steel-framed structures with reinforced concrete floor slabs. Existing and past endemic termite infestation has influenced the choice of materials, which avoids the use of timber. Perimeter walls will generally be solid masonry or masonry veneer construction for enhanced security. Areas which perform functions requiring extra security will be enclosed with reinforced concrete floors, walls and ceilings.

56. The structural form of buildings being refurbished will not be changed. Existing corrugated asbestos and tiled roofing will be replaced with pre-coloured zinc/aluminium steel sheeting, with insulation and vapour barrier treatment where air conditioning is to be installed.

57. **Mechanical.** The new buildings will be served by air-cooled direct expansion refrigeration packaged air conditioning units or split systems. Telephone switching, uninterruptible power supply and high security server areas will be provided with individual wall mounted split, packaged units for 24 hours operation. For secure network server areas, wall mounted units will be provided, with each unit capable of meeting 75% of the total cooling requirements as backup. Small, split systems will be used in the accommodation buildings.



58. **Water Supply.** Water from the existing supply system on the base is below Australian potable water standards. Reverse osmosis water treatment will be used to purify water for personal use. New filtration and purification systems will be installed in the sleeping accommodation area and hot water will be supplied from roof mounted solar systems. Untreated water will be used for toilet flushing, mechanical plant and garden watering.

59. **Sewerage.** The precinct is served by a network of sewer drainage systems with ejector pumps used as a means of conveying sewage across the base. The new headquarters buildings will be connected by gravity feed sewer lines to collection pits and pumping to ejector stations. To optimise integration of new ADF sewage work with the proposed RMAF base upgrade close liaison will occur between the ADF and Malaysian authorities. Installation of the new ADF treatment system to serve the messing and accommodation area will involve cutting and sealing existing sewer lines, installation of new mains and, the supply and installation of a packaged 750 person capacity sewer effluent treatment plant including aeration modules, pumps and dosing system.

60. **Electrical.** New underground mains power will be provided to each of the new headquarters. Surge protection will be provided on the main switchboards to mitigate the effects of lightning strikes.

61. Standby emergency power generators and an uninterrupted power supply will be provided for the Defence Restricted, Secret and Top Secret Network communications rooms.

62. **Lightning Protection.** An integrated Faraday Cage utilising the buildings' structural elements will provide lightning protection for new buildings.

### **Acoustics**

63. Construction of the new buildings will accord with the indoor design sound levels appropriate to aircraft noise, detailed within AS2021-2000. Building plant and services noise and road traffic noise will be within the requirements of the applicable Australian Standards.

64. The 2004 Australia Noise Exposure Forecast for RMAF Butterworth shows that the transit living accommodation facilities are in the 20 to 30 zonal band. Occupation will be of short duration (less than one month continuous) by personnel transiting RMAF Butterworth. Attenuation will be provided based on AS2021-2000 and current industry best practices.

### **Water and Energy Conservation Measures**

65. The proposed design complies with the Commonwealth Energy Policy - Energy Efficiency in Government Operations (EEGO) Policy. Following consultation with the Australian Greenhouse Office, the design of the new buildings will aim to achieve a 20% improvement on the minimum energy efficiency performance requirements for a Class 5 building using either one of the Verification Methods described in Volume One of the BCA. Design criteria will also reflect:

- a maximum lighting intensity of 10 W/m<sup>2</sup>;
- the use of zoned lighting controls with zones every 100 m<sup>2</sup>; and
- separate digital metering of tenancy, central services and computer centres.

66. Environmentally sustainable design features which have been considered in the design of the new facilities include:

- decreasing energy usage through passive design, energy efficient building systems and lighting, smart equipment selection, and alternative energy sources, with consequent reductions in greenhouse gas emissions;
- conserving water and reducing stormwater/sewage outflows through efficient tap ware selection and swales;
- selection of materials to minimise off-gassing, reduce natural resource consumption and minimise waste; and
- maximising the potential for day lighting to improve indoor environment quality, and providing user control and management of the indoor environment.

### **Master Planning**

67. In the absence of a RMAF master plan for the base, an ADF Facilities Development Plan has been prepared which is the basis for the rationalisation of ADF

facilities proposed in this submission. This plan is at Annex B. Discussion at paragraphs 16 and 17 also refer to master planning issues at RMAF Butterworth.

### **Earlier and Future Works.**

68. Earlier ADF works have largely been repairs and maintenance. Recently, an upgrading of the aviation fuel farm has been undertaken, and a range of repair and rehabilitation works have been carried out on accommodation buildings and the combined mess. These works were predominantly related to the age and condition of the facilities, and in the case of the combined mess, followed its partial closure following OH&S concerns.

69. Resurfacing of the aircraft hard standing used by the ADF is planned during 2007. This is expected to cost in the order of A\$1m. This work is required by the RAAF to be completed before the commencement of this project. No other major works are planned.

### **Access for the Disabled**

70. Access and facilities for disabled persons will be provided in the new headquarters buildings in accordance with the Building Code of Australia. It is impracticable to meet these standards in the existing messing and sleeping quarters. Personnel using the mess and accommodation quarters are members of the ADF and due to the condition of their employment, disabled persons access is not required.

### **Child Care**

71. Permanent staff reside off-base in the Penang area. Families of ADF members make their own arrangements for child care on Penang Island. There is no change to personnel numbers relating to this project.

### **Fire Protection**

72. All construction and fire protection requirements will, as a minimum, be in accordance with the provisions of the Building Code of Australia (BCA), the Defence Manual of Fire Protection Engineering (MFPE) and all other applicable Codes and Standards. The MFPE details Defence fire protection policy for asset protection and building function protection.

73. Defence will require certification from a suitably qualified and accredited building surveyor that the design and construction meet the requirements of the BCA, the MFPE, relevant codes and standards and any additional State or Local Government and Malaysian requirements.

74. The local Malaysian Fire Brigade will be invited to comment on the project, visit the site and offer comment throughout the construction phase to ensure that the brigade's operational requirements are met.

75. Any recommended departures from the BCA requirements in relation to the project will be technically assessed by Defence specialist fire protection staff and where the scope of the departure warrants, by a suitably qualified and experienced fire engineer. Agreed departures (ensuring an equivalent or higher level of protection requirements than BCA requirements) will require written approval from the Defence delegate.

76. Successful tenderers will be required to produce a Quality Assurance Plan to clearly show how BCA, Australian Standards, Defence and any additional Malaysian Defence requirements in relation to fire protection/fire safety will be met and the required standards for construction/installation maintained.

### **Security**

77. New buildings will be constructed to a physical security level agreed with ASIO to avoid the need for perimeter fences around each site. Security will incorporate fixed glazing, solid doors, external walls in masonry/brick veneer to underside of roof, metal roof sheeting with secure fixing, and F81 mesh below to provide additional intruder delay. No external unsecured openings will be incorporated in the design. The main headquarters buildings will be provided with an appropriate high security intruder alarm system and a card based electronic access control system. Close Circuit Television monitoring of the hangars will be undertaken from the new Communications and Information Systems Centre.

### **Communications.**

78. The communications objective is to provide a secure system to new buildings to a physical security level of "Secret". The existing Communications and Information Systems Centre in the Control Tower will be relocated to the new 324 Combat Support

Squadron Headquarters, along with the relocated ADF PABX. Within buildings, data services will be provided to work stations for secure network services.

79. Microwave connections from the Control Tower to several remote locations will be relocated to the central communications building.

### **Occupational, Health and Safety**

80. A key requirement of the project is to redress current OH&S deficiencies. New construction will remedy the structural deficiencies in the administrative areas. Hazardous electrical wiring in the workshops will be replaced, inadequately fire rated materials in sleeping quarters will be upgraded, asbestos roofing will be replaced, and provision will be made for the augmentation of the sub-standard sewage and drainage system in the accommodation and messing zone.

### **Landscaping**

81. A limited planting of shade trees and other landscaping in the vicinity of the transit accommodation will be undertaken. The sewage treatment plant will include a 90,000 litre tank for holding treated water before leaving the plant. It is proposed to utilise this suitably conditioned water for the irrigation of these plantings.

### **Asbestos and Contamination Removal**

82. Contaminated soil in the vehicle compound will be removed and disposed of as directed by local authorities and in keeping with Australian and Malaysian requirements. The asbestos roofing materials in the Army Quartermaster stores and vehicle workshops will be removed and disposed of in accordance with the regulations of either the Northern Territory of Australia or Malaysia, whichever is the higher.

### **Furniture and Fittings**

83. For the new buildings, and for the refurbished facilities where required, workstations, tables, chairs and the normal range of furniture and fittings, including for tea preparation and amenity areas will be included in the project. Much of the existing furniture is in sound condition, and where possible will be reused. Telephone, computing, printing, and other Information Communication Technology equipment in current use will be reused.

**Consultation with Relevant Authorities.**

84. A Managing Contractor form of delivery is planned for this project. The majority of any liaison necessary with Malaysian authorities external to the base is anticipated to be undertaken by Defence's Managing Contractor, with the Malaysian Ministry of Defence offering assistance or guidance as required.

**Impact on Local Community**

85. As the proposed work will be conducted on the RMAF Butterworth base, it is unlikely that there will be any adverse impact on the local community. The Managing Contractor will be responsible for ensuring compliance with local authority requirements – such as controls over construction traffic – which the project might generate in the vicinity of the base. The Managing Contractor will be required to reflect these concerns and their mitigating processes within their Construction Environmental Management Plan.

86. The proposed work is expected to benefit the local Malaysian economy through employment of construction workers and the supply of goods and services. It is estimated that up to 100 local workers will be employed over the course of the project.

**Project Costs**

87. **Capital Cost.** The estimated out-turn cost of the works is A\$23.6m. This includes design and construction costs, Managing Contractor and consultant fees and charges, an escalation factor through to anticipated project completion, and project contingency. GST/VAT taxes do not currently apply to construction projects in Malaysia.

88. **Operating Cost.** Under the agreement for ADF use of facilities at RMAF Butterworth, the ADF pays site lease and building rental charges. Utilities and garrison support services are charged as a share of total base costs. Repairs and maintenance for dedicated facilities are funded directly by the ADF. Operating costs are not expected to change as a result of the proposed developments.

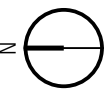
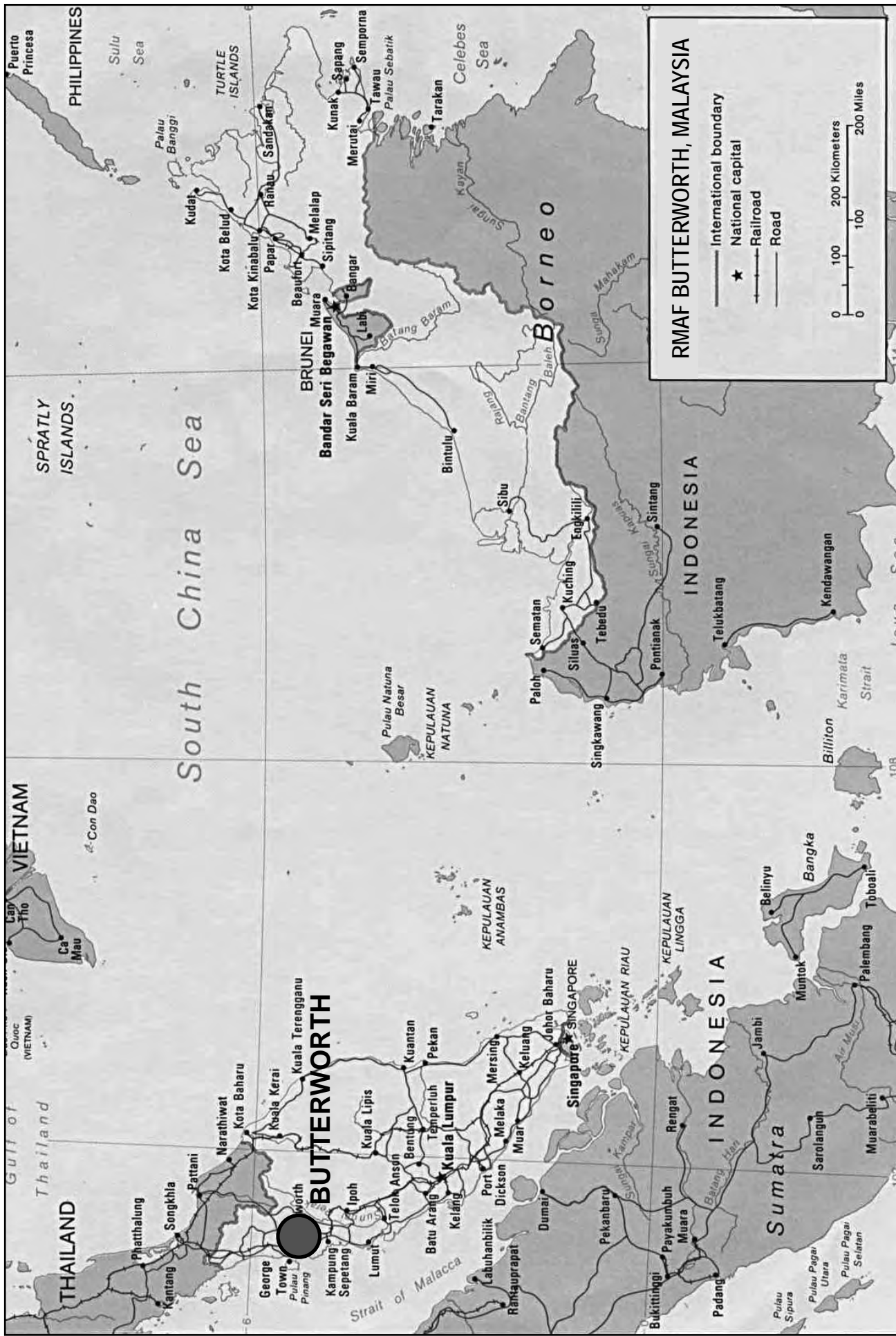
89. The facilities affected by the project will be under the exclusive control of the ADF.

**Project Delivery System**

90. A Managing Contractor form of delivery is currently proposed for this project. Consideration of the various delivery methods indicates that this is the preferred method of developing and managing the risks associated with an overseas project of this type. An independent on-site Project Manager is to be appointed to oversee the project, particularly with respect to cost, quality and schedule.

**Project Schedule**

91. Subject to Parliamentary clearance, a Managing Contractor is expected to be appointed in late 2007 following a two stage tender process. Commencement of construction is anticipated in early 2008. The new build elements of the project will be phased to allow for the temporary relocation of some functions during the demolition and reconstruction period. It is expected that the refurbishment elements of the project could be undertaken concurrently. Completion of works is anticipated by December 2009. Works will be scheduled to minimise the impact of construction activity on both the ADF and RMAF operations.

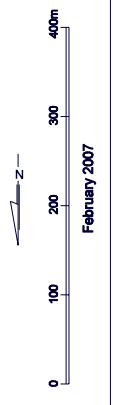
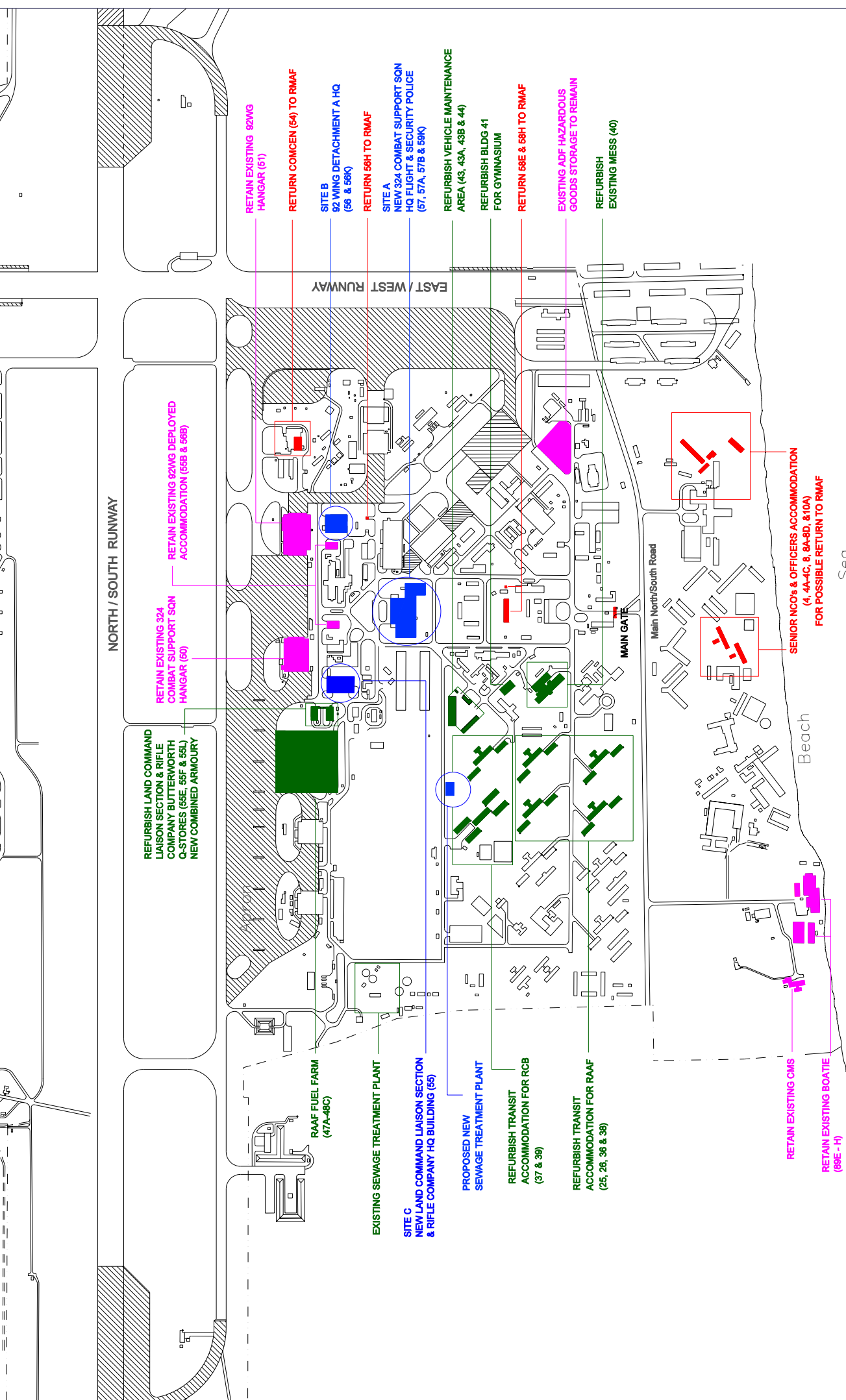


ADF Facilities Rationalisation  
 RMAF Butterworth, Malaysia  
 February 2007

LOCATION PLAN







ADF Facilities  
Development Plan

RMAF Butterworth - Malaysia

**RMAF Butterworth Facilities in Current Use by the ADF**

Function	Facilities
Flightline	<p>Hangars 50 and 51 and associated aircraft parking aprons. Hangar 51 is predominantly used by the regular deployments of maritime patrol aircraft, and by 92 Wing Detachment A, which supports these deployments.</p> <p>Hangar 50 is normally used by other deployed and transiting aircraft but is currently also providing temporary administrative accommodation for 324 Combat Support Squadron.</p> <p>Both hangars are suitable for continued use.</p>
Administrative	<p>Site A. Buildings 57, 57A – 324 Combat Support Squadron headquarters and administrative functions; abandoned due to roof collapse.</p> <p>Site B Buildings 56, 56B – 92 Wing Detachment A administrative, briefing functions; 324 Combat Support Squadron medical and security police.</p> <p>Buildings 54, 58E – 324 Combat Support Squadron communications centre (collocated with RMAF), PABX equipment.</p> <p>Site C Building 55 – Land Command Liaison Section and Rifle Company Butterworth headquarters, administration, training, briefing and security police functions; termite infestation has resulted in structural failures which have reduced office and lecture room capacity.</p>
Logistic	<p>Buildings 55E, 55F, 55L – Army Quartermaster stores and battery store.</p> <p>Buildings 43, 43A, 43B, 44 – vehicle maintenance functions.</p> <p>Building 41 – bedding store.</p> <p>Buildings 47A to 48C – Aviation Fuel Farm – recently upgraded.</p> <p>ADF hazardous goods storage.</p> <p>Communications Maintenance Section.</p>
Domestic	<p>Building 40 – all ranks kitchen and dining facility.</p> <p>Buildings 25, 26, 36, 37, 38, 39 – Army and RAAF transit accommodation.</p> <p>Buildings 4 to 4C and 8 to 8C, off-base buildings used for Officer and Senior NCO transit accommodation.</p> <p>Buildings 89E to 89H - ADF recreation facilities.</p> <p>The sewage treatment plant servicing domestic zone is in poor condition.</p>
Training and Physical Fitness	<p>Building 55 – includes lecture rooms for Rifle Company Butterworth.</p> <p>Building 43 – storage building in vehicle maintenance compound converted to provide limited gym facilities.</p>

**RMAF BUTTERWORTH – FLOOR PLANS AND ELEVATIONS**

<b>Drawing</b>	<b>Title</b>
A-1	Floor Plan – 324 Combat Support Squadron Headquarters
A-2	Elevation – 324 Combat Support Squadron Headquarters
B-1	Floor Plan – 92 Wing Detachment A Headquarters
B-2	Elevation – 92 Wing Detachment A Headquarters
C-1	Floor Plan – Land Command Liaison Section/Rifle Company Butterworth Headquarters
C-2	Elevation – Land Command Liaison Section/Rifle Company Butterworth Headquarters
R1	Floor Plan – Accommodation Building 39
R2	Floor Plan – Building 40
R3	Floor Plan – Buildings 43A and 43B
R4	Site Plan – Buildings 43A and 43B
R5	Floor Plan – Building 55E and 55F
R6	Floor Plan – Building 41



ADF Facilities Rationalisation  
RMAF Butterworth, Malaysia  
April 2007

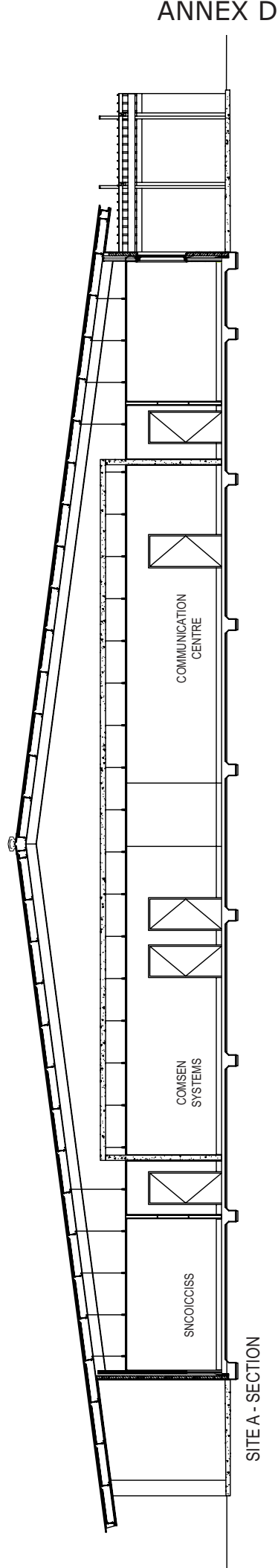
SITE A - PLAN





SITE A - ELEVATION A

SITE A - ELEVATION B



SITE A - SECTION

ANNEX D

SITE A  
DRAWING A-2  
324 COMBAT SUPPORT SQUADRON HEADQUARTERS,  
HEALTH SERVICES FACILITIES + SECURE POLICE BUILDS

ADF Facilities Rationalisation  
RMAF Butterworth, Malaysia  
April 2007

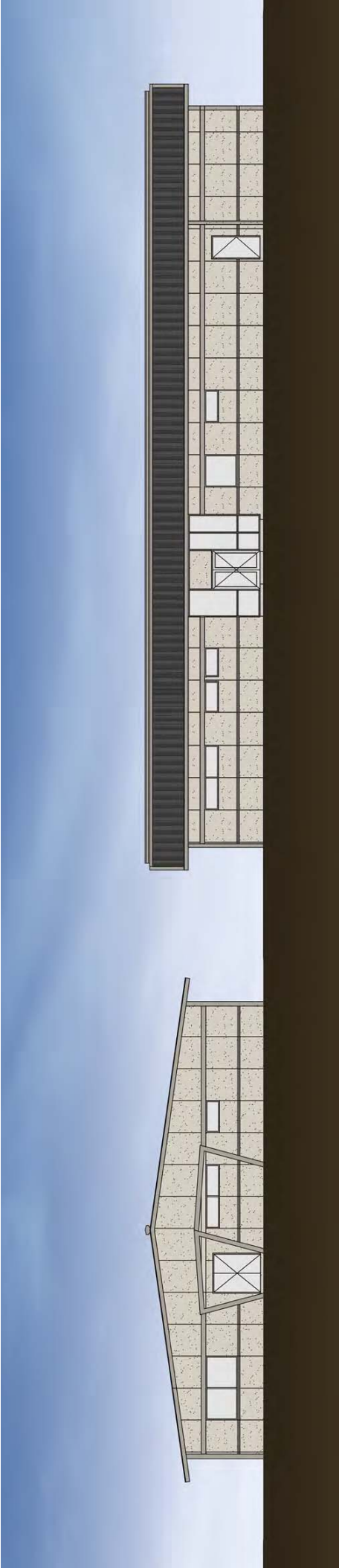


- HEADQUARTERS
1. ADMINISTRATION
  2. SECURE BRIEF
  3. PLANT
  4. CREW ROOM
  5. MISSION PREPARATION #1
  6. MISSION PREPARATION #2
  7. OPSO / INTEL COMP ROOM
  8. OPSO / INTEL COMP ROOM



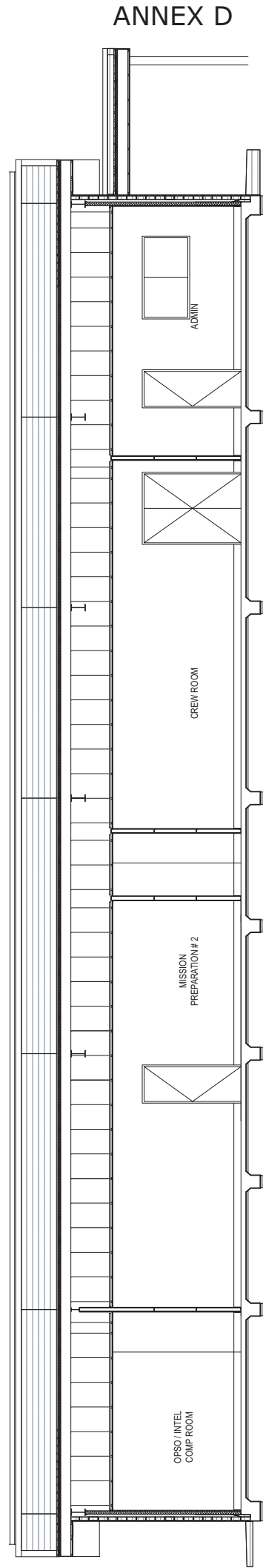
SITE B - PLAN

ADF Facilities Rationalisation  
RMAF Butterworth, Malaysia  
April 2007



SITE B - ELEVATION A

SITE B - ELEVATION B



SITE B - SECTION



ADF Facilities Rationalisation  
RMAF Butterworth, Malaysia  
April 2007

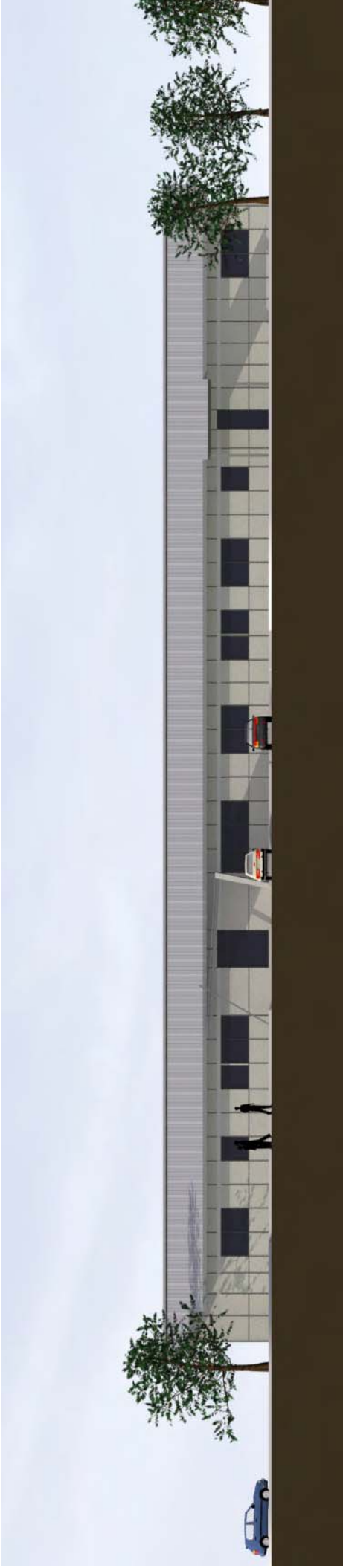
- HEADQUARTERS
1. OPS CONFERENCE / BRIEFING
  2. OC OFFICE
  3. MP DET OFFICE
  4. OP-S/WO OFFICE
  5. MP SIB OFFICE
  6. ORDERLY ROOM
  7. STATIONARY STORE
  8. BREW ROOM
  9. LIBRARY
  10. SIB INTERVIEW ROOM
  11. REPO ROOM
  12. SECURE COMMS ROOM
  13. SIB EVIDENCE STORE
  14. LOBBY
  15. MALE
  16. FEMALE
  17. SIB FOUND PROP STORE
  18. ORDERLY OFFICE
  19. CORRIDOR
  20. PLANT
  21. 2IC OFFICE
  22. OC OFFICE
  23. SYNDICATE OFFICE 1
  24. TRG CELLS / PLANS OFFICE
  25. CSM OFFICE
  26. SYNDICATE OFFICE 2
  27. SECTION PREP OFFICE
  28. PLATOON OFFICE 1
  29. PLATOON OFFICE 2
  30. PLATOON OFFICE 3
  31. SYNDICATE OFFICE 3
  32. STORE
  33. TREATMENT ROOM
  34. MEDICS OFFICE
  35. GUARD DUTY ROOM
  36. OBSERVATION ROOM
  37. PLANT



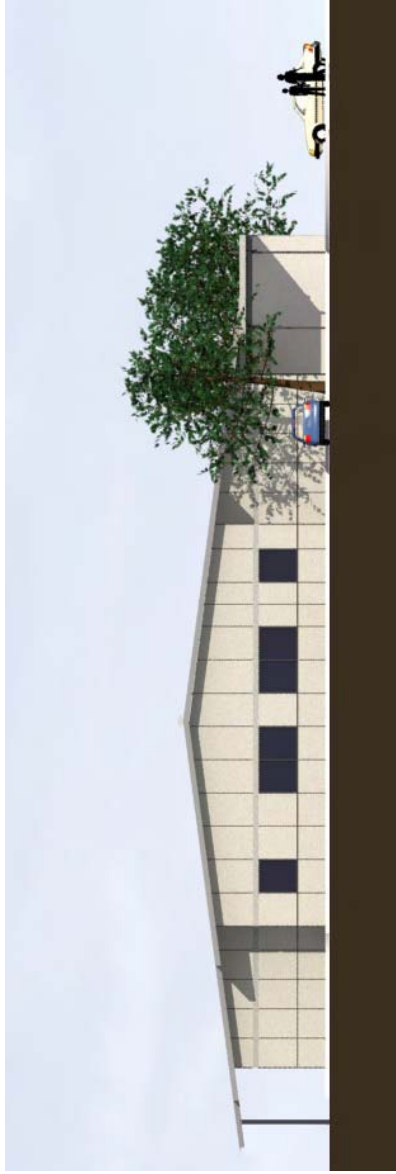
HEADQUARTERS

SITE C - PLAN



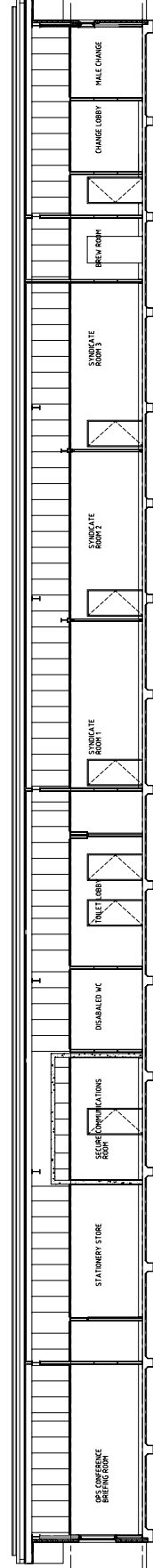


SITE C - ELEVATION A



SITE C - ELEVATION B

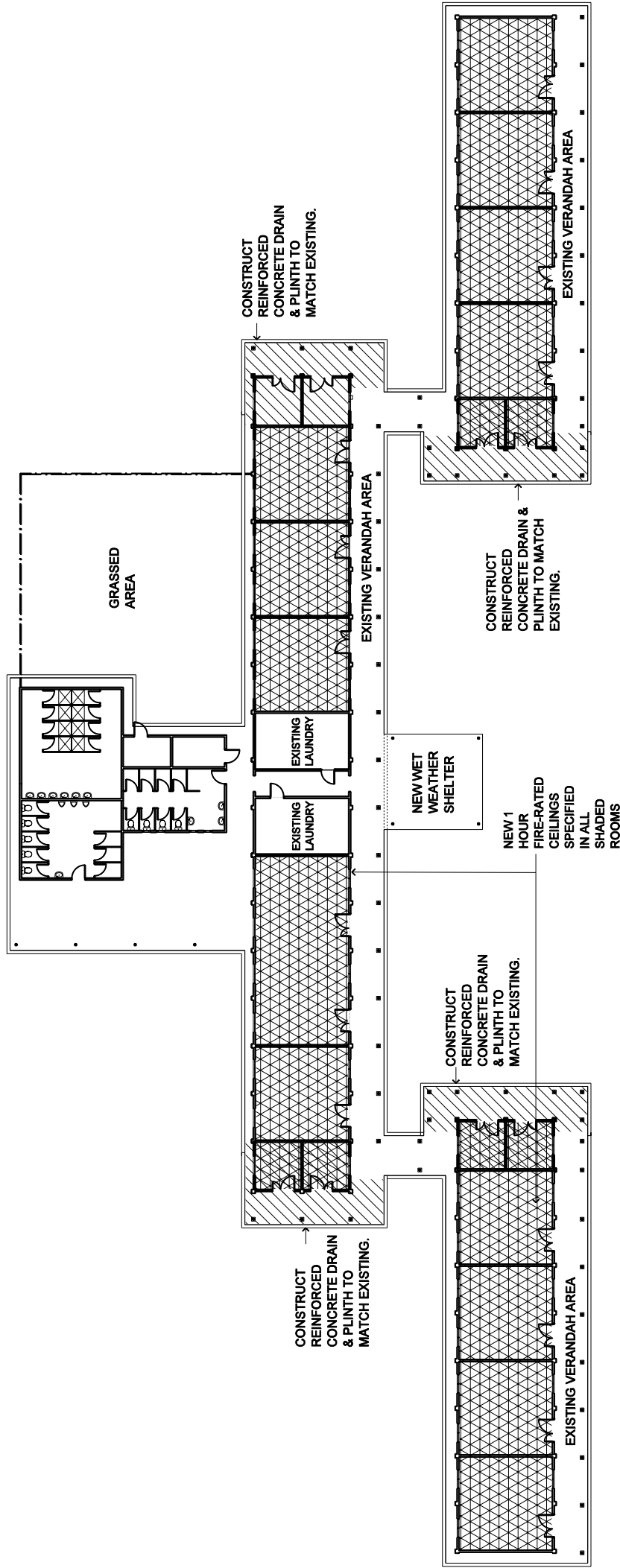
ANNEX D



SITE C - SECTION

SITE C  
DRAWING C-2  
LAND COMMAND LIAISON SECTION  
RIFLE COMPANY BUTTERWORTH HEADQUARTERS

ADF Facilities Rationalisation  
RMAF Butterworth, Malaysia  
April 2007



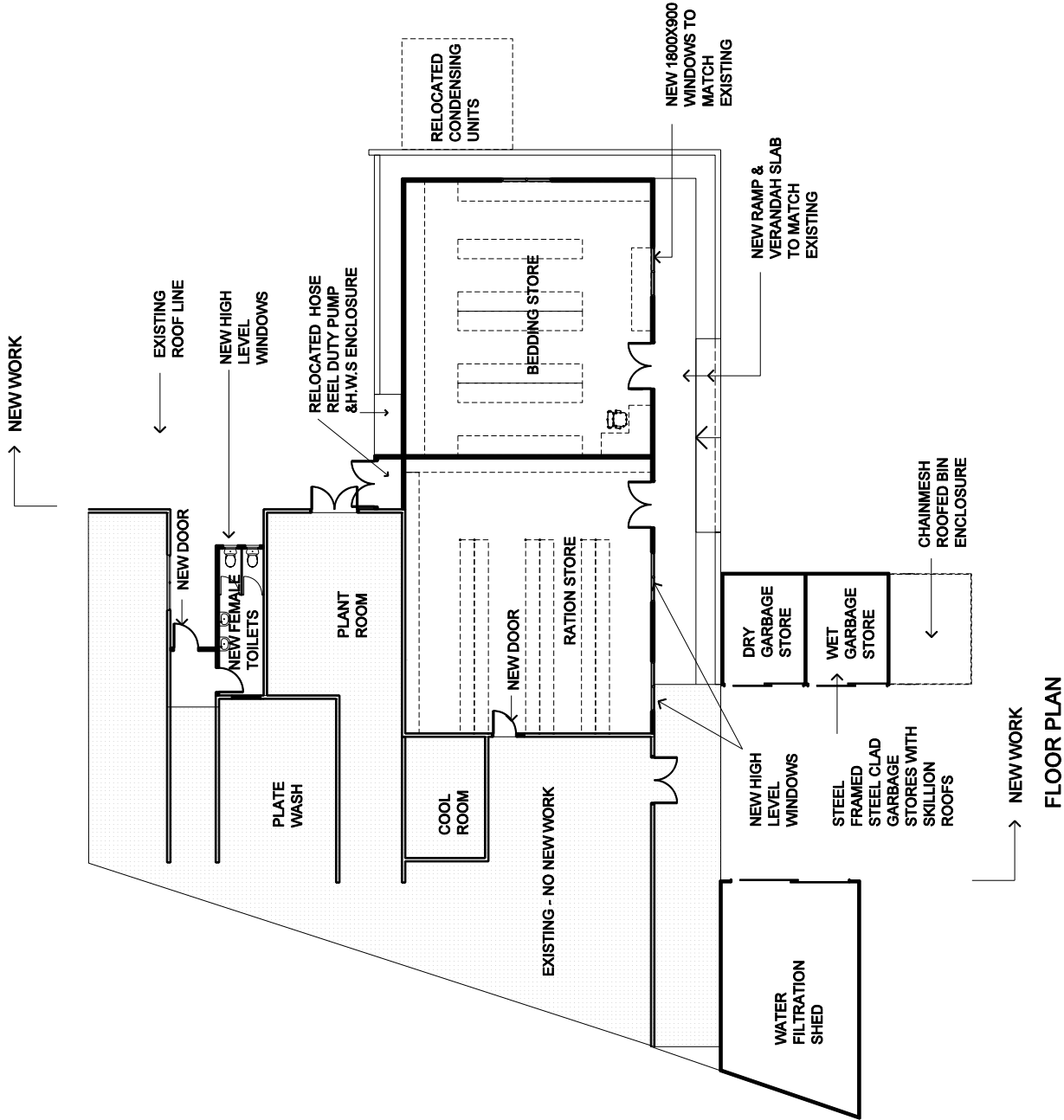
TYPICAL ACCOMMODATION PLAN

LEGEND

-  NEW FIRE RATED CEILINGS
-  BUILDING EXTENSION

ADF Headquarters Rationalisation  
 RMAF Butterworth Malaysia  
 February 2007

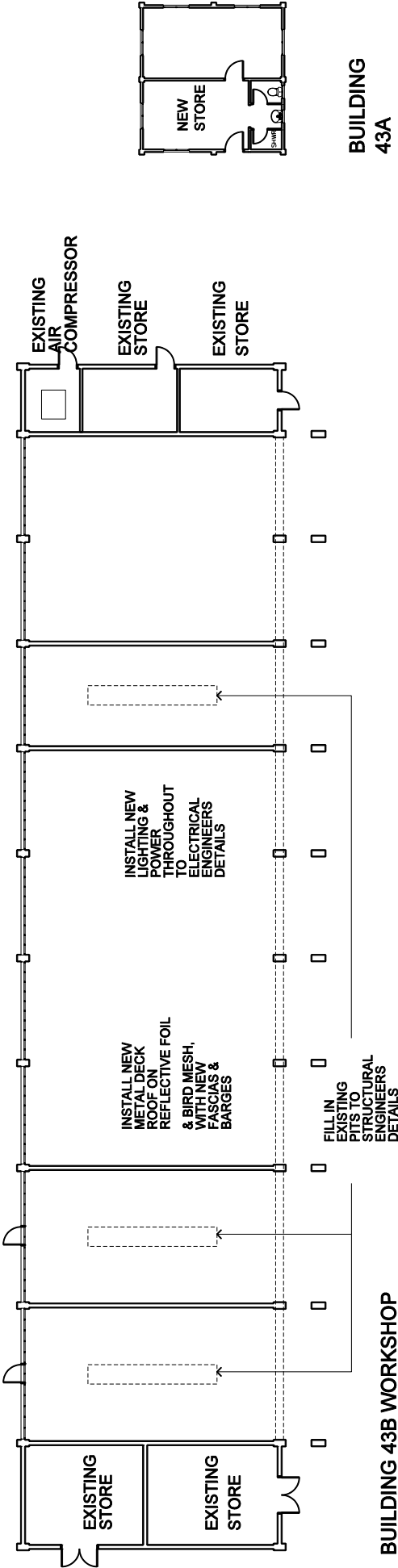
ACCOMMODATION R1  
 FLOOR PLAN  
 BUILDING 39



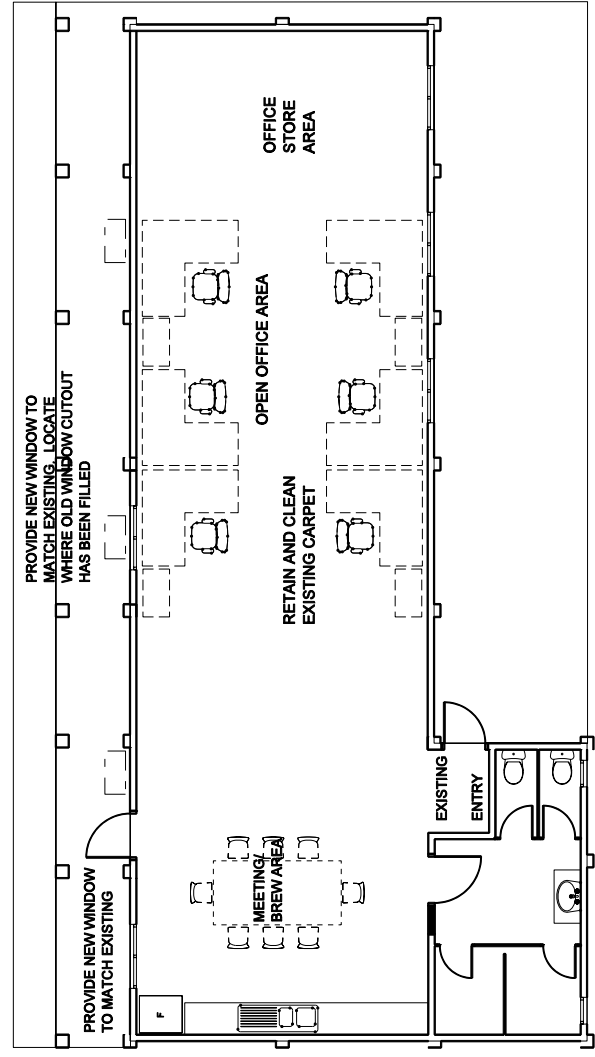
FLOOR PLAN

ADF Headquarters Rationalisation  
RMAF Butterworth Malaysia  
February 2007

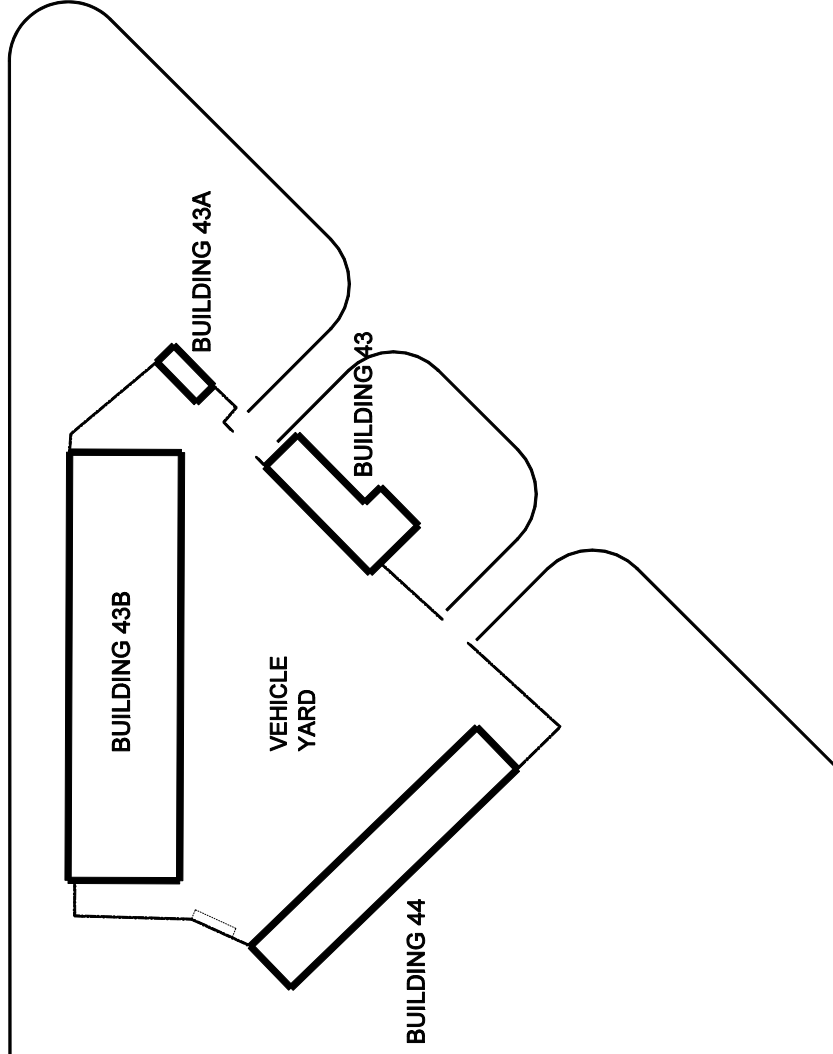




**BUILDING 43B WORKSHOP**



**BUILDING 43 - OFFICE WORKSHOPS PLAN**

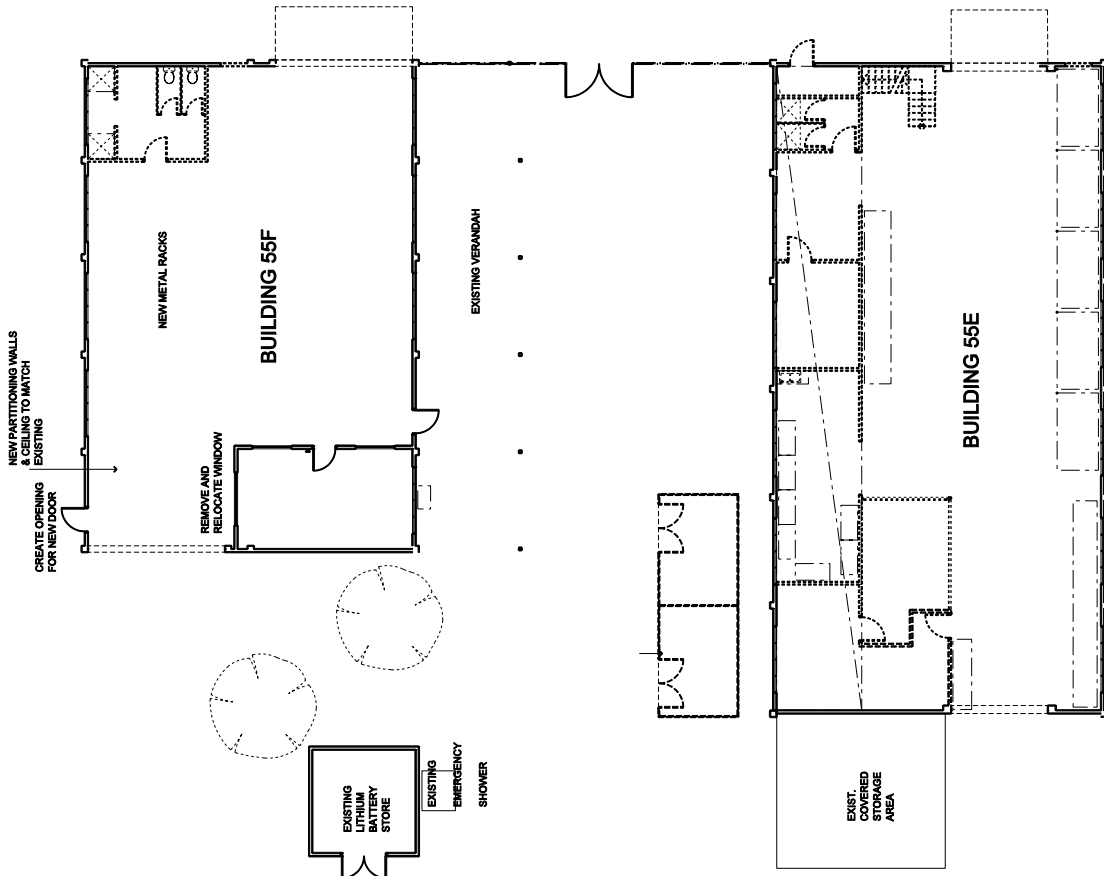
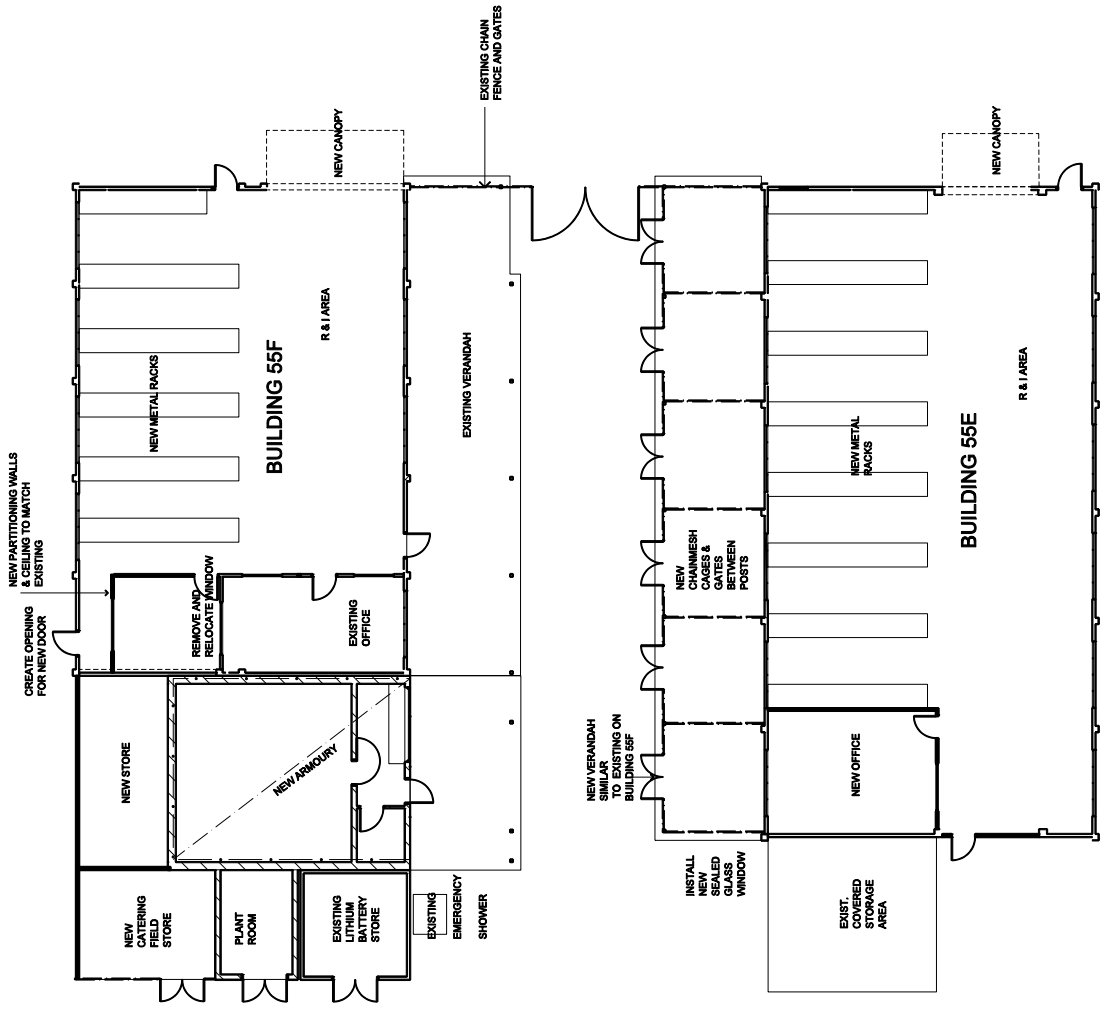


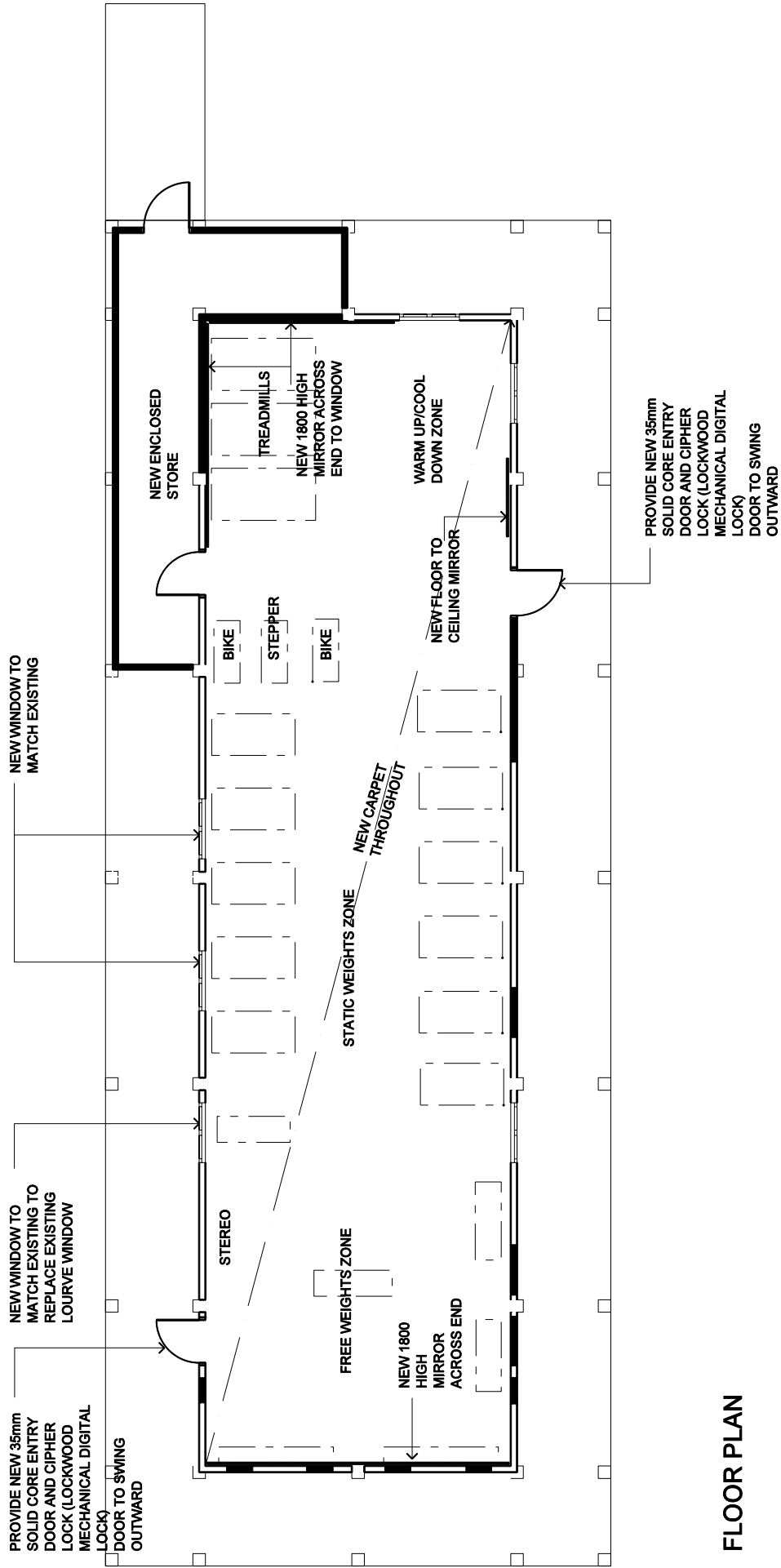
**SITE PLAN**

WORKSHOPS R4  
SITE PLAN  
BUILDINGS 43 A+B



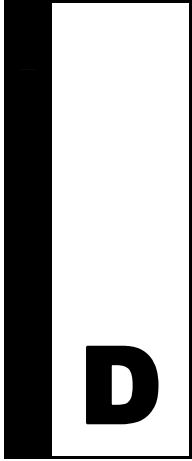
ADF Headquarters Rationalisation  
RMAF Butterworth Malaysia  
February 2007





FLOOR PLAN

ADF Headquarters Rationalisation  
RMAF Butterworth Malaysia  
February 2007



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







COMMONWEALTH OF AUSTRALIA

# Official Committee Hansard

JOINT COMMITTEE ON PUBLIC WORKS

**Reference: Rationalisation of Australian Defence Force facilities at RMAF Butterworth, Malaysia**

FRIDAY, 15 JUNE 2007

CANBERRA

BY AUTHORITY OF THE SENATE

**JOINT STATUTORY COMMITTEE ON  
PUBLIC WORKS**

**Friday, 15 June 2007**

**Members:** Mrs Moylan (*Chair*), Mr Brendan O'Connor (*Deputy Chair*), Senators Hurley, Parry and Troeth and Mr Forrest, Mr Jenkins, Mr Ripoll and Mr Wakelin

**Members in attendance:** Senators Hurley and Troeth and Mr Brendan O'Connor

**Terms of reference for the inquiry:**

To inquire into and report on:

[Rationalisation of Australian Defence Force facilities at RMAF Butterworth, Malaysia](#)

**WITNESSES**

**Grice, Brigadier William Alfred, Director General, Infrastructure Asset Development,  
Department of Defence..... 1**

**Grigson, Wing Commander Francis Frederick, Commanding Officer, 324 Combat Support  
Squadron, Royal Australian Air Force, Department of Defence..... 1**

**Ross, Mr William John, Contractor, Department of Defence ..... 1**

**Stockdale, Group Captain David Russell, Director, Project Development and Delivery (North  
West), Department of Defence ..... 1**

**Woods, Mr Brian Patrick, Director, South ASEAN, Department of Defence..... 1**



**Subcommittee met at 1.50 pm**

**Grice, Brigadier William Alfred, Director General, Infrastructure Asset Development, Department of Defence**

**Grigson, Wing Commander Francis Frederick, Commanding Officer, 324 Combat Support Squadron, Royal Australian Air Force, Department of Defence**

**Ross, Mr William John, Contractor, Department of Defence**

**Stockdale, Group Captain David Russell, Director, Project Development and Delivery (North West), Department of Defence**

**Woods, Mr Brian Patrick, Director, South ASEAN, Department of Defence**

**ACTING CHAIR (Mr Brendan O'Connor)**—I declare open this public hearing into the proposed provision of facilities for the proposed rationalisation of ADF facilities at RMAF Butterworth, Malaysia. This project was referred to the Public Works Committee on 10 May 2007 for consideration and report to parliament in accordance with subsection 17(3) of the Public Works Committee Act 1969:

- (3) In considering and reporting on a public work, the Committee shall have regard to —
- (a) the stated purpose of the work and its suitability for that purpose;
  - (b) the necessity for, or the advisability of, carrying out the work;
  - (c) the most effective use that can be made, in the carrying out of the work, of the moneys to be expended on the work;
  - (d) where the work purports to be of a revenue-producing character, the amount of revenue that it may reasonably be expected to produce; and
  - (e) the present and prospective public value of the work.

Earlier the committee received a confidential briefing from the Department of Defence. The committee will now hear evidence from the Department of Defence. I remind officers that they are still sworn. Welcome. Thank you for meeting with us today, Brigadier. The committee has received the statement of evidence from Defence. This will be made available in the volume of submissions for the inquiry and is also available on the committee's website. Does Defence wish to propose amendments to the submission it has made to the committee?

**Brig. Grice**—There are no amendments.

**ACTING CHAIR**—I now invite a representative of the Department of Defence to make a brief opening statement, after which we will proceed to questions.

**Brig. Grice**—I would just like to start by acknowledging the presence of Brigadier Peter Hutchinson (Retired) in the gallery, my predecessor in this appointment.

**ACTING CHAIR**—We have not seen him out of uniform before. Welcome. No wonder I did not recognise him—he is camouflaged.

**Brig. Grice**—Since this project was his during development, maybe we should swear him in!

**ACTING CHAIR**—I think he had enough of that when he was in your shoes.

**Brig. Grice**—This proposal seeks endorsement of the costs to rationalise the ADF dedicated facilities at RMAF Butterworth, Malaysia. RMAF Butterworth contributes to the defence of Australia's regional interests within the Five Power Defence Arrangements by accommodating Air Force and Army units which support Australian Defence Force deployments in South-East Asia and routinely assist Australian Defence Force exercises and visiting units. International policy division has confirmed the ongoing nature of Australia's defence interest in maintaining a presence at RMAF Butterworth and the long-term requirement for ADF facilities at Butterworth.

The aim of this project is to address a number of deficiencies within the ADF working and living accommodation on the base. Due to their age, the type of construction and the prevailing tropical conditions, the buildings suffer from a range of deficiencies such as structural defects, termite infestation, asbestos and substandard ablutions, all of which pose a risk to occupational health and safety and security of Australian personnel. A program with a mix of refurbishment, adaptive re-use and replacing old with new buildings is proposed. The project will include the construction of three new headquarter buildings, a combined armoury, installation of a sewage treatment plant, and refurbishment of accommodation and support facilities. The total estimated out-turn cost of this proposal is \$A23.6 million. With respect to the future net personnel and operating costs, this project is expected to be cost neutral. There is no increase in staff numbers or functions from this project.

Ecologically sustainable development requirements have been incorporated into the design to the extent possible. Initial environment and heritage assessments have indicated that the proposed new works comply with our international obligations under the Environment Protection and Biodiversity Conservation Act 1999. An internal environmental clearance certificate has been issued by Defence's environment, heritage and risk branch and has been obtained for the project. The Australian Greenhouse Office was consulted during the development of the submission and, subject to parliamentary clearance, Defence intends to commence the works in early 2008, with completion by late 2009. The Malaysian government's consent to this project was received in March 2007.

**ACTING CHAIR**—Thank you, Brigadier. We heard in the confidential briefing about the economics behind the decision not to rationalise the facilities into one building. Can you, for the record—without going into any particulars or costings—outline the reasons why you thought it was best to undertake it the way it is proposed, as opposed to finding one particular building, please?

**Brig. Grice**—Certainly. The functional design brief for the project included an option for a single headquarters building and the option which we have selected for building new

headquarters dispersed within the areas allocated to the Australian Defence Force. Australian Defence Force facilities are integrated and adjacent to Malaysian facilities. The new buildings that we are proposing are of similar design and construction to the existing Malaysian buildings. If we were to collocate all of these three headquarters on a single site—for example, at the current 324 Combat Support Squadron headquarters site—there would be insufficient land available to provide all of the facilities in a single-storey building. A multistorey structure would have been required. This was not considered appropriate due to the surrounding single-storey environment and the Australian Defence Force's desire not to be seen to have facilities larger than its host. This was keeping in mind our status on the base as guests of the Malaysian government.

If we had proceeded with the option to build a two-storey building, there would have been a slight increase in costs due to the requirement for additional circulation areas, stairwells and emergency exits in a two-storey building, as well as the requirement for an elevator in a multistorey building for access by disabled personnel. So it was not practical or possible to do it on the site available without expending more funds. There are also functional benefits to Defence by going with three separate headquarters, because it means the functional elements will be collocated with the remainder of the facilities and the operations that they undertake. For example, 92 Wing Detachment will be located adjacent to the flight line where they are responsible for the conduct of flight operations, and the Rifle Company Butterworth headquarters will be located adjacent to its Q store, armoury and other administrative facilities. So there are functional efficiencies in going through separate buildings.

**ACTING CHAIR**—Thank you. So it would be financially and operationally preferred that we undertake this process rather than having it all relocated.

**Brig. Grice**—That is correct.

**ACTING CHAIR**—I was just trying to concisely encapsulate what you were putting. I think it is also important to explain for the record, firstly, the need for the proposed sewerage plant. I also think it is important that we have on the public record the reasons why there is a dire need for improvements to the current sewerage arrangements. We also need to explain how that is applied and who it applies to, because there was a concern of the committee that this would be an expenditure outlaid by the Commonwealth but it would possibly be used by other personnel. That is not the case. Could you explain that, please, Brigadier?

**Brig. Grice**—I am showing you a photograph of the current sewerage treatment plant at the base, which is maintained as a responsibility of the Malaysian government. It is barely functioning and outflows into an open drain off the base area. There are other issues that arise because it is not functioning correctly: pipes can block up and sewage can back up and flow into the buildings which we occupy. So this was not a good thing for several reasons, one of which is that, under our responsibilities internationally under the EPBC Act, we have to act in a responsible manner with regard to sewerage. Also this is not sufficient for the occupational health and safety of our soldiers and airmen.

The Malaysian government is intending to replace the sewerage plant at some time but we are unaware of when that may be, and it may be many years before that is undertaken. What we are proposing to do is to install a packaged sewerage treatment plant which would collect and treat



all of the sewage effluent which comes from the living-in accommodation occupied by the Australian forces, and treat the effluent that we produce on the base. The treated water and effluent would be recycled and the grey water would be re-used to water plantings and sports fields on the base. Since the Malaysians on the base will not receive any benefit from the sewerage package treatment plant that we are going to put in, there will be no cost-sharing arrangement. We propose that Australia will pay for the treatment of the effluent produced by our service people.

**Senator TROETH**—That would give you the ability to have it as you want?

**Brig. Grice**—Correct.

**Senator TROETH**—To specify it.

**Brig. Grice**—To our requirements. It also gives us the utility in the future, once the base infrastructure has been upgraded, of decommissioning, selling, re-using and recouping some expense to the Commonwealth.

**ACTING CHAIR**—Is there any evidence that the current arrangement is a health and safety risk? On the face of it it would appear to me that that could lead to some sufficient risks for people located there. Have there been any examples of that?

**Brig. Grice**—I might pass that question to the base commander, Wing Commander Grigson.

**Wing Cmdr Grigson**—Just after we got there we had what I would categorise as a catastrophic blockage to the sewerage system, affecting other lines. We had to take steps ourselves to remedy that—to unblock it and start the free flow again.

**ACTING CHAIR**—Were there a lot of volunteers for that?

**Wing Cmdr Grigson**—Yes, quite a few.

**ACTING CHAIR**—Volunteers, army style?

**Wing Cmdr Grigson**—It is a problem. What we try and do at the moment is keep our eyes on the ejector stations and make sure that they do not get blocked up. If they start to show signs of being blocked up, we bring a contractor on and empty them at the points that need to be emptied.

**ACTING CHAIR**—I thought that it would be possible for people to get sick from the fact that the current sewerage is an open sewerage channel. There has been no evidence of that to date?

**Wing Cmdr Grigson**—There is no evidence. There are the usual gastro type illnesses that people get as a part of eating and drinking, but there is no evidence that directly links it.

**ACTING CHAIR**—I certainly think it is good that you are attending to that particular matter.

**Senator HURLEY**—You say in your submission that the transit accommodation is being arranged for elsewhere at the moment because it cannot be done currently at Butterworth. What is that accommodation and can it not continue to be used?

**Brig. Grice**—The transit accommodation on the base is currently being used. However, there are OH&S issues. For one, the ceilings are not fire rated, so there is an issue there. The water which is used in those buildings is not treated or filtered, so the defence personnel use bottled water to clean their teeth and that type of thing. We will be eliminating those risks by installing a filtration and purification system in each of the buildings to treat the water as it comes into the building. We will be undertaking other refurbishment works to replace the ceiling with a fire-rated ceiling so that it complies with the BCA requirements.

If you look at the chart behind me, you will see at the bottom of the master plan some senior NCOs' and officers' accommodation, which is at the other side of the road and outside the secure perimeter of the air base. We are concerned for the security of our personnel, we want to move them onto the base proper—inside the secure perimeter—and we are providing some individual and double rooms in the existing transit accommodation to allow the officers and senior NCOs to relocate away from those facilities onto the secure perimeter of the base.

**Senator HURLEY**—Are you saying that you will be doubling people up in future, or is that the current situation?

**Brig. Grice**—No, we will not be doubling them up. There will be some rooms that will be there for officers and senior NCOs. What we have done is made sure that each room has double the number of beds that are required for the usual population. A four-person room is fitted with four sets of double bunk beds so that during operational activities, such as in Operation Tsunami Assist, the response to Aceh, we had the opportunity to surge people through there and hold up to 700 people instead of 340-odd, which is the normal distribution of people within those transit accommodation buildings.

**Senator HURLEY**—Quoted in your submission was a figure of 332 transit personnel; is that right?

**Brig. Grice**—That is correct.

**Senator HURLEY**—How is that figure calculated?

**Brig. Grice**—That is calculated by the normal number of people that we would put in each of the rooms. Some of the rooms are normally for occupation by a single person, be it an officer or a senior NCO; by two people; or by four people in the other ranks and soldiers. However, in a room that was designed for an officer there is a set of bunk beds so that, when there is an operational surge, that one-person room could become a two-person room for the period of the operation. Similarly, a two-person room can hold four people for short periods of time as people deploy or redeploy on operations or other training activities, and a four-person room can become an eight-person room. Currently those beds exist. What we are doing is enhancing the level of amenity of those buildings by painting them and increasing their compliance with occupational health and safety and the Building Code of Australia by rectifying those issues that are non-compliant with those codes at the moment.

**Senator HURLEY**—So how often would you operate at full or almost full transit capacity?

**Brig. Grice**—I will pass that to Wing Commander Grigson to give you an indication.

**Wing Cmdr Grigson**—We have two exercises a year, normally in April, May or September. If I use the last exercise as an example, Bersama Shield, which was run in April-May this year, we had in excess of 450 people accommodated on base. That included the rifle company, which rotates every three months.

**Senator HURLEY**—And the transit personnel are a mixture of officers and NCOs?

**Wing Cmdr Grigson**—And airmen.

**Senator HURLEY**—And they are catered for in the general mix of accommodation?

**Wing Cmdr Grigson**—Yes, they are.

**Brig. Grice**—Senator, if you look at the drawing in the top left corner on the board, you will see that at the very left of the drawing there are four rooms that are large and two rooms that are small.

**ACTING CHAIR**—It is also in annexure D of the submission.

**Brig. Grice**—So the large rooms are normal four-person rooms which during requirements for operations or for short periods could hold eight people. The smaller rooms are one-person rooms for a section commander, senior NCO or officer, which would normally hold one person but, when required, two people could occupy those rooms.

**Senator HURLEY**—And you feel that that kind of accommodation arrangement is suitable for the expected life of the buildings in the new project?

**Brig. Grice**—Yes, we think it is appropriate, given the transitory nature of those activities. We do not think it would be in our best interests to build another 300 rooms to cater for what are operational and short-term requirements where, by definition, you use what you have got.

**Senator HURLEY**—I have a question about the heritage aspect. You say in your submission that it complies with the Commonwealth heritage values. Does that refer to the Australian standard? Is there any equivalent Malaysian standard?

**Brig. Grice**—We have conducted a heritage impact assessment. Our advice is that there are no significant heritage elements on the site. However, the report notes that any buildings we demolish should be recorded and photographed prior to demolition so that we have a permanent record of those. The Malaysian government has no issues with the replacement of these old facilities with new facilities. The EPBC Act applies worldwide, so our investigations into environmental and heritage concerns have been done to meet the strict provisions of the EPBC Act.

**ACTING CHAIR**—I want to refer Defence to paragraph 88 of its submission, which covers a number of things, including the requirement for ADF to pay site lease and building rental charges. I want to get an idea of what those charges are and what they are for, given that we are building the building. Is the rental more like a local tax or is it renting the property—leasing the land upon which the building is constructed? Is that what the building rental charge would be for?

**Brig. Grice**—The letter of agreement between Australia and Malaysia which was signed in 1998 sets out these issues. Under that agreement, Australia operates some 100 buildings—about 37,000 square metres of space—and maybe another 50,000 or 60,000 square metres of aircraft parking apron and that type of thing. The basis for the agreement was that Australia would pay the Malaysian government a fee for the use of the facilities and for utilities, and that fee would be based on the Malaysian valuation of the facilities.

**ACTING CHAIR**—The original buildings were their buildings. In this instance, clearly there are still site lease requirements, but would there still be rental on buildings that have been demolished?

**Brig. Grice**—The rent that we pay is of the order of some \$500,000 a year for some 37,000 square metres of facilities, which, if you do a calculation, is a token amount.

**ACTING CHAIR**—Yes.

**Brig. Grice**—Since 1998, there has been no revaluation of the facilities by the Malaysian government, and our rent has not increased.

**ACTING CHAIR**—‘Don’t mention it!’—is that what you are saying?

**Brig. Grice**—That is right! Under the letter of agreement, Australia can build new facilities if it wants to, but it is at Australia’s cost, and if and when we ever vacate the facilities, they would revert to the control and ownership of the Malaysian government. So, at the moment—and Mr Woods may want to add something—Defence is not looking at renegotiating the provisions or seeking to have a revaluation occur.

**Mr Woods**—I can only concur with what Brigadier Grice has said. We do not want to renegotiate the agreement at this stage, because we believe that the agreement is best for us.

**ACTING CHAIR**—Yes. I could have left that one alone, obviously—I will whistle and move on. You have also mentioned water usage and the fact that you are looking at improving water and energy conservation. It is in the submission, but I thought it would be useful to place a few words on the record about the proposed design and how it will comply with the current Commonwealth energy policy. Would you like to outline the benefits in this particular area—an area which is under more scrutiny today than it has been for many years? It is in paragraph 65 of the submission.

**Brig. Grice**—We discussed the requirements with the Australian Greenhouse Office, and the buildings have been designed with an aim to achieve a 20 per cent improvement in energy efficiency. With regard to water usage, we will be using the standard AAA low-flow fittings and

that type of thing to reduce water consumption. The other major thing that we are doing is we are collecting, treating and re-using water from showers, toilets and ablutions, which will be used for irrigation, so there will be a substantial reduction there.

With regard to the energy targets, the 20 per cent improvement or the minimum requirements of the BCA will be achieved through a variety of measures, including an increased temperature set point of 26 degrees for air-conditioned areas, passive roof ventilation in all of the new buildings and 10-millimetre Suncool single-glazed windows. We will be using low-absorption roof colours and time based control of lights and other plant and equipment, including air conditioners. We will also be incorporating passive thermal design into the works. Control of external solar loads for hot and humid climates is extremely important. All buildings have been designed with the cost-effective control of heat gains in mind. Key features of the design approach include: shading of windows and external walls using eaves; correct orientation; low-absorption reflective roofs; ventilation of roof spaces; a foil-backed insulation blanket attached to the underside of the roof with consideration of thermal bridging from steel pylons; insulated ceiling tiles with reflective foil backing, creating a reflective air space within the roof spaces; and high levels of wall insulation, with a rating of R1.5.

**Senator HURLEY**—You have enumerated that the building design is going to take into account local conditions and so on. Is there any provision for the contractor to be around for any period after the building takes place to make sure that it all functions properly and is working according to plan? What kind of maintenance schedule do you have in place?

**Brig. Grice**—All of Defence's contracts include warranty periods of up to three years on all plant and equipment that are provided, as well as a defects liability period, which is of the order of 12 to 18 months on all new construction. The managing contractor will be required to have a presence and to come back to rectify anything that occurs during the defects liability period. We anticipate that, through the tendering process, the managing contractor will be one who already has an office in Malaysia and would retain this presence in the country at no additional cost to us. In addition, all of the subcontractors who will perform the work will be Malaysian subcontractors and they would still be around to be able to be brought back to rectify defects.

**Senator HURLEY**—And could you outline the ongoing maintenance of the buildings to ensure the least deterioration possible?

**Brig. Grice**—There is an allocation of funds each year for the ADF elements at Butterworth to undertake facilities operations and maintenance. We do not expect any increase in these costs as a result of the works. The base commander utilises a mixture of local labour and local contractors to undertake any routine maintenance that is required. The other point to make is that we will be using technology which will be able to be repaired and maintained by the capabilities of the construction industry in the area, so we are quite confident that we are not creating something that will be unsustainable.

**ACTING CHAIR**—Again, this is a matter that was raised in confidential briefings, but it is important that we express publicly what you are doing regarding the removal of hazardous material. As you indicated to us privately, it is complying with Australian standards and local standards, but can you outline to us your earlier assurance that it is being dealt with properly?

**Brig. Grice**—Yes. As I stated earlier, the base commander and his staff have had experience locally with the removal of asbestos in buildings. There is a Malaysian regulatory regime which local licensed contractors are required to follow for the safe removal and disposal of asbestos, and we have successfully undertaken that in the past. In addition, the managing contractor will be required to supervise the works and ensure that they are conducted in accordance with Malaysian and Australian standards to the satisfaction of our independent project management contract administrator. The other very small indication of contamination that I spoke about during the earlier briefing was around a waste oil collection point which is currently on a bunded concrete slab. This will be demolished, removed and upgraded with a more substantial structure.

**ACTING CHAIR**—Thanks very much, Brigadier. What consultation has taken place to date with the Malaysian department of defence and any other local authorities, and what needs to be further undertaken in the form of consultation in order for this project to go ahead unimpeded?

**Brig. Grice**—During the course of the project we have consulted with the Malaysian secretary-general of defence, officials of the Malaysian Ministry of Defence, Malaysian military representatives on RMAF Butterworth, the Malaysian Defence Attaché and the Malaysian High Commission in Canberra, the Australian Department of Foreign Affairs and Trade, the Australian High Commission in Malaysia, the Malaysian Industrial Development Authority, the Malaysian consulate in Sydney, and the Australian Greenhouse Office. In March this year, Malaysian government approval for the works was received. We do not anticipate any further approvals to be required from the Malaysian government prior to commencement of the works. When we come to connecting—

**ACTING CHAIR**—You say you do not need further approvals?

**Brig. Grice**—We do not believe so; we believe we have the approvals required.

**ACTING CHAIR**—What then, for example, if the Royal Malaysian Air Force had a different view to yours with respect to some part of the project? How would that be reconciled?

**Brig. Grice**—During the development and consultation process we have thoroughly briefed the Malaysian airport. They are onboard and agree with all aspects of the project. Perhaps Wing Commander Grigson would like to add to that.

**Wing Cmdr Grigson**—The RMAF base commander is kept abreast of everything that goes on. I will go back and brief him on these hearings; he knows I am here today. I link in with him and talk to him about some of the issues we may deal with, such as contractor entry onto base, security and things like that. So, as the brigadier said, they are fully onboard, they understand the complexities of the project and they are more than happy for us to go ahead and develop as per the submission in front of you.

**Brig. Grice**—In the unlikely event that there was a disagreement, we would act in good faith and negotiate in good faith in order to resolve it in the best interests of the Commonwealth.

**ACTING CHAIR**—Going back to that 1988 letter of agreement between the two countries, was that open ended so there is an indefinite time frame?

**Brig. Grice**—That is correct.

**Mr Woods**—It is an open-ended document. It requires either us or the Malaysians to give six months notice if we want to renegotiate or pull out of that agreement.

**ACTING CHAIR**—So it has no maturation as such?

**Mr Woods**—No.

**ACTING CHAIR**—But it does allow parties to withdraw with notice?

**Mr Woods**—That is correct.

**ACTING CHAIR**—And it does not look as if that is likely?

**Mr Woods**—Certainly not with our defence relationship with Malaysia at the moment. If you think back to some of the bad days when Dr Mahathir was the Prime Minister of Malaysia, the defence relationship was still very strong in those periods as well.

**ACTING CHAIR**—Despite some recalcitrance.

**Mr Woods**—Well, possibly, but—

**ACTING CHAIR**—I think the Malaysian is a character—they both are. We did not really touch on this at any length in the confidential briefing, but I think it is important that we note the security measures being undertaken. You would think there would be a sufficient level of security now, but if there are any new arrangements, could you outline those to us? Can you assure us that you are satisfied the site will be secure during the construction and, of course, after the construction of the project, if it was approved?

**Brig. Grice**—There are a couple of issues here. There is the design of the facilities, access to the base, and the relocation of our sergeants and officers from across the road to within the secure perimeter of the base. I might cover a couple of these issues, then I will pass to Wing Commander Grigson to provide supplementary information. The facilities will comply with the requirements of the defence security manual. The armoury and the headquarters have been designed in accordance with Defence and ASIO security specifications. We and ASIO are quite happy with the design standards which have been put in place, including access control to the headquarters building, intruder alarms, and closed circuit TV monitoring of other areas where we undertake operations. During construction the managing contractors will be handed sites as and when they require access to them. The sites will be fenced, and access onto the sites will be controlled. I will pass now to Wing Commander Grigson to talk about access of subcontractors onto the base and what the requirements are for the induction of those people onto the site.

**Wing Cmdr Grigson**—The standard method that applies to visitors and contractors coming onto the base is that we have to provide the RMAF base commander at Butterworth with names and other information about those people six weeks before they enter the base. On arrival at the front gate, contractors and contractors' labourers have to hand over their identification cards to the Handau—the RMAF security police. They are then handed visitors passes, at which time

they are allowed onto the base. They are briefed about where they can go and where they cannot go. I have not had any security problems with contractors since I have been there, and I have been there for just over 12 months.

**ACTING CHAIR**—I guess there would be a greater proportion of non-personnel during a construction period, and I think you would want to be satisfied that there was sufficient screening of non-personnel—that is, contractors, labourers and the like—so that there was a reduced risk of anything happening or any threat to Australian defence personnel.

**Wing Cmdr Grigson**—We do it in two ways. Firstly, the Malaysians undertake a check, which is why we have to give them that amount of time, so they are satisfied that they are bona fide people who can come onto the base, because a lot of their labour force are migrants. They are very—if I can use the word—anal about their approach to security in relation to Indonesian workers. And, secondly, we take our own steps. We brief our people about contractors being on base. They need to wear a very specific colour of pass, and we take steps to ensure that they do not intrude into areas where they should not be.

**Brig. Grice**—Measures include a designated route from the base entry to the area where they work, the area where they would be working being fenced, and simple things such as people who are outside of that area for no particular reason having their employment terminated.

**ACTING CHAIR**—Right. It is pretty sensitive stuff. I understand that. Before closing, I thank the witnesses today, especially the brigadier, who had to shoulder most of the questions. Thank you for the private briefing also. It has been a very well prepared submission, always made less complicated by the fact that there were no other objectors or other parties involved. I do thank you for the very extensive costings. It makes our job easier when we get most, if not all, of the information that is relevant to the proposal.

Resolved (on motion by **Senator Hurley**):

That, pursuant to the power conferred by section 2(2) of the Parliamentary Papers Act 1908, this committee authorises publication of the evidence given before it and submissions presented at public hearing this day.

**Subcommittee adjourned at 2.30 pm**