



Parliamentary Standing Committee on Public Works

REPORT

relating to the proposed

C-17 HEAVY AIR LIFT INFRASTRUCTURE PROJECT

(Twelfth Report of 2007)

THE PARLIAMENT OF THE COMMONWEALTH OF AUSTRALIA
2007

The Parliament of the Commonwealth of Australia

C-17 Heavy Air Lift Infrastructure Project

Parliamentary Standing Committee on Public Works

September 2007
Canberra

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Membership of the Committee

Chair Hon Judi Moylan MP

Deputy Chair Mr Brendan O'Connor MP

Members Mr John Forrest MP

Senator 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
Defence	Department of Defence
MRTT	Multi Role Transport Tanks
The Act	<i>Public Works Committee Act 1969</i>



Extract from the Votes and Proceedings of the House of Representatives

No 175 dated Thursday, 31 May 2007

PUBLIC WORKS—PARLIAMENTARY STANDING COMMITTEE—
REFERENCE OF WORK — C-17 HEAVY AIR LIFT
INFRASTRUCTURE PROJECT

Mr Lindsay (Parliamentary Secretary to the Minister for Defence), 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: C-17 heavy air lift infrastructure project.

Question—put and passed.



List of recommendations

3 Issues and Conclusions

Recommendation 1

The Committee recommends that, in response to the views of the Ipswich City Council that RAAF Base Amberley connect to the community water supply, Defence consider the feasibility of this proposal, and maintain dialogue with the Council on this issue.

Recommendation 2

The Committee recommends that the C-17 Heavy Airlift Infrastructure project at RAAF Base Amberley, Queensland; RAAF Base Darwin, Northern Territory; RAAF Base Edinburgh, South Australia; RAAF Base Pearce, Western Australia; and RAAF Base Townsville, Queensland proceed at an estimated cost of \$268.2 million.

Introduction

Referral of Work

- 1.1 On 31 May 2007 the proposal for the C-17 Heavy Air Lift Infrastructure Project 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).¹ The proponent agency for this work is the Department of Defence (Defence).
- 1.2 The Honourable Peter Lindsay MP Parliamentary Secretary to the Minister for Defence informed the House that the expected out turn cost of the proposal is \$268.2 million, plus GST. Subject to Parliamentary approval, construction will commence in early 2008 and be completed by 2011.

Background

- 1.3 In March 2006, the Minister for Defence announced the Australian Defence Force's acquisition of four Boeing C-17 Globemaster III aircraft and

¹ Extract from the *Votes and Proceedings of the House of Representatives*, No. 175, Thursday 31 May 2007.

associated equipment. The aircraft will provide a responsive global, heavy air lift capability for the Australian Defence Force. In December 2006 the first C-17 aircraft arrived with the three remaining aircraft due to arrive in May 2007, February and March 2008 respectively.

- 1.4 RAAF Base Amberley has been selected as the 'home-base' for the C-17 aircraft, and will be operated by No. 36 Squadron which relocated to RAAF Base Amberley in November 2006 from RAAF Base Richmond, NSW.
- 1.5 RAAF Base Amberley was first established in 1940 and has been in continuous service as a major Australian air base since this time. The base has traditionally been home to the F-111 strike capability; however, more recently the base has become a centre for Air Lift activities. Amberley is also the home base for the KC-30B Multi-Role Tanker Transport as well as for the C-17 aircraft.²

Site of the Proposed Works

- 1.6 The proposed works will be undertaken at the following sites:
 - RAAF Base Amberley which is located approximately 8 km west of the City of Ipswich, at the western edge of the Brisbane Metropolitan Area;
 - RAAF Base Darwin which is located approximately 6½ km north-east of Darwin's central business district;
 - RAAF Base Edinburgh, located approximately 30 km north of Adelaide in the Edinburgh Defence Precinct;
 - RAAF Base Pearce is located adjacent to the town of Bullsbrook, north of Perth; and,
 - RAAF Base Townsville is located approximately 7 km from Townsville's Central Business District.
- 1.7 All of the works associated with this project will be undertaken within the perimeters of these bases.

2 Appendix C, Submission No. 1, paragraph 5. See also the Parliamentary Standing Committee on Public Works, *RAAF Base Amberley Redevelopment Stage 2, Queensland*, Eighteenth Report of 2005, paragraph 2.2.

Inquiry Process

- 1.8 The Committee is required by the Act to consider public works over \$15 million³ and report to Parliament on:
- the purpose of the work and its suitability for that purpose;
 - the need for, or the advisability of, carrying out the work;
 - whether the money to be expended on the work is being spent in the most cost effective manner;
 - the amount of revenue the work will generate for the Commonwealth, if that is its purpose; and
 - the present and prospective public value of the work.⁴
- 1.9 The Committee called for submissions by advertising the inquiry in *The Weekend Australian* and *The Courier Mail* on Saturday, 9 June 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

- 1.10 On 14 June 2007, the Minister for Defence, The Hon Dr Brendan Nelson wrote to the Committee seeking agreement for the C-17 Heavy Air Lift Infrastructure works at RAAF Base Amberley, RAAF Base Darwin, RAAF Base Edinburgh, RAAF Base Pearce, and RAAF Base Townsville to be considered as 'repetitive works'. On 21 June, the Committee replied to the Minister agreeing to his request. In accordance with Section 18(8A) of the Act, it is expected that a notification of 'repetitive works' will be promulgated in the *Government Notices Gazette* No. GN 35 of 5 September 2007.
- 1.11 On Tuesday, 24 July 2007, the Committee inspected the site works proposed for RAAF Base Amberley as part of the overall C-17 Heavy Air Lift Infrastructure project. This was followed by a confidential hearing

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

4 *ibid*, Section 17.

and a public hearing attended by officials of the Department of Defence, both of which were held at the Ipswich International Hotel, Ipswich, Queensland.⁵

5 See Appendix D for the official Hansard transcript of the evidence taken by the Committee at the public hearing on Tuesday, 24 July 2007 at Ipswich International Hotel, Ipswich, Queensland.

The Proposed Works

Purpose

- 2.1 The purpose of the proposed works is to provide facilities and infrastructure to support the introduction of four Boeing C-17 Globemaster III heavy airlift aircraft, the acquisition of which was announced by the Minister for Defence in March 2006. The aircraft will be based at RAAF Base Amberley (Qld), with support facilities being provided at RAAF Base Darwin (NT), RAAF Base Edinburgh (SA), RAAF Base Pearce (WA) and RAAF Base Townsville (Qld).¹

Need

- 2.2 This project is being undertaken in response to a Government initiative associated with the acquisition of new C-17 heavy lift aircraft that will enhance the heavy air lift requirements of the Australian Defence Force (ADF). The increased aircraft weight, dimensions, fuel and cargo capacity requires an investment in airfield infrastructure and cargo preparation and

¹ Appendix C, Submission No.1, paragraph 2.

handling facilities principally at RAAF Base Amberley with other infrastructure modifications to be undertaken at bases elsewhere.²

Scope of works

- 2.3 No. 36 Squadron, recently deployed from RAAF Base Richmond to RAAF Base Amberley, will operate the aircraft.³
- 2.4 The proposed works at RAAF Base Amberley will include the provision of:
- a newly constructed combined headquarters, and a maintenance and logistics building for No. 36 Squadron;
 - a new air movements terminal and cargo hanger;
 - a C-17 simulator for flight crew, loadmaster and maintenance crew training;
 - a new warehouse for C-17 spare parts and shelters for the C-17 and air movements ground support equipment;
 - new and refurbished workshop space for C-17 specialist support equipment and aircraft maintenance; and
 - field pavement work, including:
 - ⇒ the construction of a new combined C-17 and air movements aircraft parking apron with hydrant refuelling;
 - ⇒ widening and strengthening of taxiways; and
 - ⇒ a new apron for loading explosive ordnance cargo.⁴

Options considered

- 2.5 At RAAF Base Amberley, Defence considered opportunities to re-use or expand existing facilities, as opposed to the construction of new facilities. The existing Air Movement terminals at RAAF Base Amberley is over 30 years old and has no residual economic value, and although the building is in generally good condition, there is limited scope for expansion.

2 *ibid.*, paragraph 7. See paragraph 2.1 above.

3 *ibid.*, paragraph 4.

4 *ibid.*, paragraph 11.

Consequently it was concluded that the most viable and cost effective option is to construct new facilities.

- 2.6 In terms of siting facilities at RAAF Base Amberley the department considered a number of options that involved either the reconstruction of the air movements terminal separate to No. 36 Squadron facilities, or the development of an air lift precinct meeting the air movement requirements of No. 36 Squadron and No. 33 Squadron.
- 2.7 The preferred option is to provide a new air lift precinct based around the No. 33 Squadron hangar and apron currently under construction. It co-locates similar functions, which rationalises the pavement for aircraft parking, reduces the number of aircraft movements from their squadron apron to air movements and allows space for future expansion for either additional aircraft or any other relocated elements from the Air Lift Group.⁵

Project Delivery

- 2.8 The proposed delivery system for RAAF Base Amberley will be by way of a Managing Contractor. This methodology has been selected on the basis of the scope, the risk of disrupting base activities, the value of the works and any interdependencies with other concurrent projects. A single Project Manager has been engaged to represent Defence and to act as Contract Administrator for the whole of the project.⁶

Cost

- 2.9 The estimated out-turn cost of this project is \$268.2 million across five bases. This includes:
- construction costs;
 - management and design fees;
 - furniture, fittings and equipment; and
 - contingencies and escalation.⁷

5 *ibid.*, paragraphs 13 and 14.

6 *ibid.*, paragraph 80.

7 *ibid.*, paragraph 77.

Issues and Conclusions

Amendment to the Statement of Evidence

- 3.1 At the commencement of the Inquiry, Defence proposed the following amendment to its Statement of Evidence:

Delete Paragraph 23, and insert new Paragraph 23 to read as follows:-

The location of the proposed works is within the existing base boundaries of RAAF Base Amberley in Queensland, RAAF Base Darwin in the Northern Territory, RAAF Base Edinburgh in South Australia, RAAF Base Pearce in Western Australia and RAAF Base Townsville in Queensland. RAAF Base Amberley is located approximately eight kilometres west of the city of Ipswich at the western edge of the Brisbane metropolitan area. RAAF Base Darwin is located approximately 6½ kilometres north-east of Darwin's central business district. RAAF Base Edinburgh is located approximately 30 kilometres north of Adelaide, in the Edinburgh Defence Precinct. RAAF Base Pearce is located adjacent to the town of Bullsbrook, north of Perth. RAAF Base Townsville is located approximately seven kilometres from Townsville's central business district. The location plans for each base are shown in the evidence at attachment 1 for RAAF Base Amberley,

attachment 15 for RAAF Base Darwin, attachment 20 for RAAF Base Edinburgh, attachment 26 for RAAF Base Pearce and attachment 31 for RAAF Base Townsville.¹

Background

- 3.2 Defence explained that the purpose of the proposed project was to develop essential infrastructure and facilities to support the introduction and operation of C-17 heavy lift aircraft in Australia. Its scope will include related infrastructure works at RAAF Base Amberley and a number of other bases – RAAF Base Darwin, RAAF Base Pearce, RAAF Base Edinburgh, and RAAF Base Townsville.
- 3.3 RAAF Base Amberley had been selected as the principal domicile for the new aircraft, with the other bases nominated deployment of the C-17 when required.
- 3.4 The need for the works have arisen from a government initiative to provide the Australian Defence Forces with a new heavy lift aircraft capability to support national and international operations and major disasters, rescue and relief efforts.²
- 3.5 In its submission, Defence informed the Committee that the Minister for Defence announced the acquisition of four new Boeing C-17 Globemaster III aircraft and associated equipment in March 2006. The first of these aircraft arrived in Australia in December 2006; the second aircraft arrived in May 2007 with the remaining two aircraft due to arrive in February and March 2008.³

The Nature of the Proposed Works

- 3.6 As Defence explained during the inquiry, the proposed works in support of the C-17 project were developed within a twelve month time frame largely because of the decision by government to rapidly acquire the aircraft. For Defence, this meant providing interim facilities at RAAF Base Amberley to support the relocation of No. 36 Squadron from RAAF Base Richmond New South Wales, together with other temporary

1 Appendix D, Official Transcript of Evidence, page 2.

2 loc.cit.

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

arrangements, followed by the development of the current proposal to provide permanent facilities to adequately support the new capabilities.⁴

- 3.7 The bulk of the work has to do with the provision of infrastructure to each of the five sites mentioned that includes the construction of new strengthened airfield pavements, strengthened aircraft parking aprons and the widening and strengthening of taxiways to accommodate a heavier aircraft that is capable of carrying a heavier payload than the RAAF C-130 Hercules aircraft.⁵
- 3.8 The remainder of the works will involve the construction of a new Headquarters building for No. 36 Squadron at RAAF Base Amberley and modifications and new terminal and cargo handling facilities at each site.⁶
- 3.9 The Committee questioned the need for there to be a separate headquarters building for No. 36 Squadron, suggesting that if it were relocated to an existing headquarters building on site potential savings to the Commonwealth might be available.
- 3.10 In responding Defence explained that currently the headquarters function for No. 36 Squadron was spread across fifteen other buildings on the base, and shared with other units. These arrangements were interim, and the units were unconnected to the operational role of the Squadron. The decision to rationalise all of the headquarters functions of the Squadron into one single building was the most desirable outcome.⁷

Site Selection

- 3.11 The Committee was interested in whether other sites had been looked at as an alternative to the location of the C-17 hub at Amberley.
- 3.12 The Defence witness stated that the reason for the selection of RAAF Base Amberley as the home base for the operations of C-17 was based on the facilities previously provided following on from the decision to locate the Multi-Role Transport Tanker (MRTT) at Amberley. The new facilities and improvements to the existing infrastructure to support the KC -30B Multi-Role Transport Tanker has allowed the opportunity for both aircraft to co-use a hanger being constructed under the RAAF Base Amberley

4 Appendix D, page 5.

5 *ibid.*, pages 2 and 3.

6 *ibid.*, page 2.

7 *ibid.*, page 9.

redevelopment project stage 2 for the MRTT. According to the witness, to locate the home base for C-17 elsewhere would have required the outlay of Commonwealth funds for a new hanger, whereas the decision to use RAAF Base Amberley would potentially realise savings to the Commonwealth.

- 3.13 Defence also explained that the weight of the aircraft combined with the heavy payload it was able to carry meant that runways at an alternative site not equipped to handle heavy aircraft would need significant works to make them longer and stronger. Defence also mentioned that geographically the choice of Amberley was also the best location, since the bulk of stores for both Defence and the government are located on the eastern sea-board it is easier and more economical to collect and transport cargo to other parts of Australia or overseas.⁸

Infrastructure Impacts

- 3.14 The Committee asked Defence to comment on any likely impacts the proposed development for C-17 might have on infrastructure services that would be required to service the completed works.
- 3.15 In responding, Defence informed the Committee that works associated with the implementation of RAAF Base Amberley redevelopment stage 2 were designed to accommodate C-17, as well as providing spare capacity for future developments over the life of the project. Defence was confident that there would be no requirement for additional base-wide infrastructure to support the C-17 project. This also applied to the provision of power.⁹
- 3.16 The Committee also received evidence from the Mayor of Ipswich on infrastructure issues. The Mayor informed the Committee that following a recent meeting with the Queensland Premier and Deputy Premier, he had been advised that a proposed pipeline between the Bundamba water treatment plant to Swanbank would be commissioned to increase the water supply to Ipswich City. This initiative has been combined with other conservation measures including the use of rainwater tanks on all new housing.¹⁰
- 3.17 The Mayor expressed the view that Council would like to see the water infrastructure at RAAF Base Amberley linked to the community supply

8 *ibid.*, page 3.

9 *ibid.*, pages 3 and 4.

10 *ibid.*, page 14.

rather than being separate. According to the Mayor the approach being followed by the Government of Queensland was the amalgamation of water supply irrespective of from where it was derived so as to minimise wastage, and to provide some certainty that all communities were unified in ensuring the best outcome for water sustainability.¹¹

Recommendation 1

The Committee recommends that, in response to the views of the Ipswich City Council that RAAF Base Amberley connect to the community water supply, Defence consider the feasibility of this proposal, and maintain dialogue with the Council on this issue.

Facility Modifications

- 3.18 The Committee referred to the earlier comments made by Defence on the co-use of hanger facilities for both heavy lift aircraft types, and asked whether there were any modifications that needed to be made to this facility.
- 3.19 Defence responded to the effect that a number of small changes will be required prior to the hanger being commissioned at little cost to the Commonwealth. These changes currently in the design phase are being made to the docking system – a scaffold arrangement that permits maintenance of the below-wing mechanicals on the MRTT. In its original form the docking structure for the MRTT was a permanent structure, but has been redesigned to be moveable so as to allow hanger access for the C-17 at an estimated cost of \$75,000.¹²
- 3.20 In responding to a question from the Committee relating to the possible need for an additional hanger, Defence stated that the extensions proposed to the existing MRTT apron parking space would, consistent with the Master Plan for RAAF Base Amberley, free-up some additional airside real estate that could be used for any purpose that might be required in the future including an additional hanger. Fuel lines and the provision of fuel

11 loc.cit.

12 ibid., page 4.

hydrants could also be installed to any new hanger facility with little difficulty and in a way that would allow their removal if needed.¹³

Tender Arrangements

3.21 In the context of Amberley, the Committee asked whether the C-17 project and the works associated with RAAF Base Amberley Redevelopment Stage 3¹⁴ project could be addressed by one tender rather than the current two, in order to achieve efficiencies in the delivery of both projects.

3.22 In its response, Defence drew a distinction between the two projects. The proposed stage 3 works would be undertaken in an area of the base remote from the sensitive area of the flight line, whereas the C-17 project facilities are on the flight line and will entail major construction works on the active airfield, including taxiways and parking aprons. According to Defence, both projects were distinctive, involving a different scope of works for each and that:

To try ... and rationalise the number of consultants [engaged on two projects] would have increased Defence's risk profile exponentially with regard to the quality of documentation. So this was the lowest-risk approach for us.¹⁵

Adequacy of Existing Facilities

3.23 The Committee was interested in the extent to which the current operations of a heavy aircraft would impact on the existing taxiway aprons and runways, and whether any assessment of that had been made by Defence.

3.24 Defence stated that under stage 2 of the Amberley redevelopment project some strengthening of the main taxiway had been undertaken, and that C-17 aircraft were currently using that section of the taxiway. The department informed the Committee that over the previous six months aircraft had been operating from a number of airfields in Australia - primarily future deployment bases - using a variety of cargo weights, and

13 *ibid.*, page 5.

14 See Parliamentary Standing Committee on Public Works, RAAF Base Amberley Redevelopment Stage 3, Queensland, Eleventh Report of 2007

15 *ibid.*, page 6.

that it was working with engineers in determining what weights the aircraft can be taken up to on those runways. Runway strengths were tested at Amberley, Pearce, Darwin, Townsville and Edinburgh under maximum weights. Testing at Edinburgh concluded that only lower weights could be carried until the runway had been strengthened as foreshadowed under the current project.¹⁶

- 3.25 Defence added it was confident that because of the similarities between the MRTT and C-17, temporary arrangements that have been implemented are adequate for the time being until the new works associated with further strengthening of taxiways at all sites has been completed.

Master Planning

- 3.26 The Committee sought assurances from Defence that a Master Plan was in place to ensure that works currently proposed and the expenditure on those works would not need to be repeated at some stage in the near future as a consequence of inadequate planning.¹⁷
- 3.27 Defence informed the Committee that in developing the Master Plan for RAAF Base Amberley in 2006 there were indications that the operational role of the base might be enhanced. Before the plans had been finalised, the department undertook a major revision of the draft version including consideration of the Defence Capability Plan to ascertain the potential capabilities that might come on line, and that might operate out of Amberley or be domiciled at Amberley over the next 30 years. This included a consideration of the possibility of a new heavy lift aircraft being acquired. As a result of this review the base Master Plan for Amberley was finalised and approved in November 2006. The plan has a life span until 2036. Similar planning processes were undertaken at each of the other C-17 deployment bases.¹⁸

16 *ibid*, page 7.

17 *ibid.*, page 9.

18 *loc.cit.*

Project Costs

3.28 As previously described in Chapter 2 above, the Committee is being asked to consider an estimated out-turn cost for this project of \$268.2 million across five bases. This includes:

- construction costs;
- management and design fees;
- furniture, fittings and equipment; and
- contingencies and escalation.¹⁹

Recommendation 2

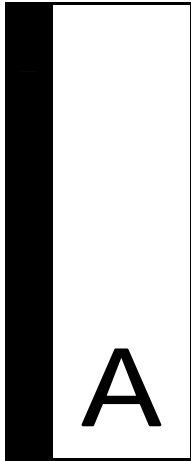
The Committee recommends that the C-17 Heavy Airlift Infrastructure project at RAAF Base Amberley, Queensland; RAAF Base Darwin, Northern Territory; RAAF Base Edinburgh, South Australia; RAAF Base Pearce, Western Australia; and RAAF Base Townsville, Queensland proceed at an estimated cost of \$268.2 million.

Hon Judi Moylan MP

Chair

13 September 2007

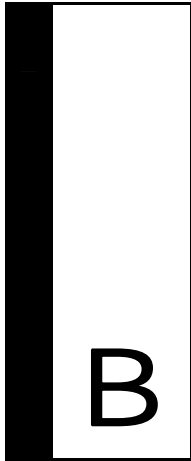
¹⁹ Appendix C, paragraph 77.



Appendix A – List of Submissions and Exhibits

Submissions

1. Department of Defence
2. Mayor of Ipswich, Councillor Paul Pisasale
3. Councillor Charlie Pisasale
4. Bullsbrook and Chittering Chamber of Commerce Inc.
5. City of Swan
6. Department of Defence (Supplementary submission)
7. Department of Defence (Supplementary submission)
8. Department of Defence (Supplementary submission)
9. Department of Defence (Supplementary submission)
10. Department of Defence (Supplementary submission)



Appendix B – List of Witnesses

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

Group Captain Gary Martin, Director C-17 Transition Team, Department of Defence.

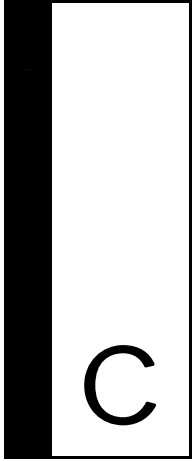
Mr Benjamin Olesen, Project Director, Infrastructure Asset Development Branch, Department of Defence.

Councillor Charlie Pisasale, Ipswich City Council

Councillor Paul Pisasale, Mayor of the City of Ipswich

Mr Michael Rinaudo, Project Director, GHD Pty Ltd.

Group Captain John Ward, Base Redevelopment Project Officer, Royal Australian Air Force.



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



Australian Government
Department of Defence

C-17 HEAVY AIR LIFT INFRASTRUCTURE

RAAF BASE AMBERLEY, QUEENSLAND
RAAF BASE DARWIN, NORTHERN TERRITORY
RAAF BASE EDINBURGH, SOUTH AUSTRALIA
RAAF BASE PEARCE, WESTERN AUSTRALIA
RAAF BASE TOWNSVILLE, QUEENSLAND

STATEMENT OF EVIDENCE
TO THE
PARLIAMENTARY STANDING COMMITTEE
ON PUBLIC WORKS

DEPARTMENT OF DEFENCE
CANBERRA, ACT
MAY 2007

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PART A - IDENTIFICATION OF THE NEED

INTRODUCTION

1. The C-17 Heavy Air Lift capability will allow the Australian Defence Force to rapidly deploy troops, combat vehicles, heavy equipment and helicopters within continental Australia, the region and globally. The fleet of four C-17 aircraft will give Australia a new responsive global air-lift capability which will significantly enhance the Australian Defence Force's ability to support national and international operations, and major disaster rescue and relief efforts.

PROJECT OBJECTIVES

2. The objective of this proposal is to provide the necessary facilities and infrastructure to support the introduction of the heavy airlift aircraft - C-17. This will be at the home base, RAAF Base Amberley (QLD), and supporting deployment bases at RAAF Base Darwin (NT), RAAF Base Edinburgh (SA), RAAF Base Pearce (WA) and RAAF Base Townsville (QLD).

BACKGROUND

3. In March 2006, the Minister for Defence announced the Australian Defence Force's acquisition of four Boeing C-17 Globemaster III aircraft and associated equipment. This aircraft will provide a responsive, global, heavy air lift capability for the Australian Defence Force. The C-17 aircraft has four times the carrying capacity of the RAAF C-130 Hercules. The first C-17 aircraft arrived in December 2006 and the three remaining aircraft are due to arrive in May 2007, February and March 2008 respectively.

4. No. 36 Squadron will operate the C-17 aircraft from the home base at RAAF Base Amberley. The Squadron relocated to RAAF Base Amberley in November 2006 to support the arrival of the first aircraft in December 2006. No. 36 Squadron is currently accommodated in interim facilities at RAAF Base Amberley.

5. RAAF Base Amberley was selected as the home base for this aircraft. RAAF Base Amberley was first established in 1940 and has been in continuous service as a major Australian Air Base since this time. The base has traditionally been home to the F-111 strike capability; however, recent ADF decisions has the base becoming a focus for Air Lift activities. It is the home base for the KC-30B Multi-Role Tanker Transport and also for the C-17 aircraft. The facilities to support the introduction of the KC-30B and the relocation of No. 33 Squadron from RAAF Base Richmond to RAAF Base Amberley are currently under construction at the north-western edge of the existing flight line development. This project proposes the creation of a consolidated 'Air Lift' precinct at

RAAF Base Amberley, building upon the No. 33 Squadron hangar and apron due for completion in December 2007.

6. The concept of operation of the C-17 requires that they can operate to service their major customer Army, from the key deployment bases of RAAF Base Edinburgh, RAAF Base Darwin, RAAF Base Pearce and RAAF Base Townsville where there are large concentrations of Army personnel and equipment.

NEED FOR THE WORK

7. The facilities and infrastructure works are required to support the introduction of the C-17 aircraft, and to significantly enhance Australian Defence Forces heavy airlift capability. The increased aircraft weight, dimensions, fuel and cargo capacity requires an investment in airfield infrastructure and cargo preparation and handling facilities.

8. No. 36 Squadron relocated to RAAF Base Amberley in December 2006 and is currently accommodated in temporary facilities which are not suitable for permanent working accommodation. The squadron requires permanent headquarters, maintenance and logistics working accommodation and a warehouse for spare parts to effectively support the operation of the aircraft.

9. The existing cargo facilities at the home base and supporting deployment bases were designed primarily to support the RAAF's C-130 and has insufficient capacity to handle the increased loads to be carried by the C-17, which has four times the C-130 cargo capacity. These existing facilities also lack the specialist packing and loading equipment necessary to support the aircraft. Expanded cargo facilities, associated office accommodation and hardstand for both aircraft parking and vehicle preparation and storage are required.

10. To supply the necessary fuel quantity and pressure required for effective operation of the C-17 aircraft, installation of apron hydrant refuelling is required at RAAF Bases Amberley, Darwin, Townsville and Edinburgh.

DESCRIPTION OF THE PROPOSAL

RAAF Base Amberley

11. The home basing of the C-17 aircraft and the associated relocation of No. 36 Squadron to RAAF Base Amberley requires new permanent on-base facilities and airfield works. The proposed building works include the construction of a combined Headquarters, Maintenance and Logistics building for No. 36 Squadron, new Air Movements Terminal and Cargo hangar, a C-17 Simulator

for flight crew, load master and maintenance crew training, a new warehouse for C-17 spare-parts and shelters for the C-17 and Air Movements Ground Support Equipment. The project proposes to provide new and refurbished workshop space for C-17 specialist support equipment and aircraft maintenance. The airfield pavement work will include the construction of a new combined C-17 and Air Movements aircraft parking apron with hydrant refuelling; widening and strengthening of taxiways; and a new apron for loading explosive ordnance cargo.

Deployment Bases (Darwin, Edinburgh, Pearce & Townsville)

12. Each of the deployment bases requires upgraded facilities and infrastructure to provide sufficient operating surfaces (runway thresholds, taxiway and aprons) and air movements and cargo facilities to support the long term operations of the C-17 aircrafts at these airfields.

OPTIONS CONSIDERED

13. At each base, Defence considered and compared the re-use or expansion potential of any existing facilities, with the construction of a new facility. The existing Air Movement terminals at RAAF Base Amberley and RAAF Base Edinburgh are each over 30 years old and have no residual economic value. Although the buildings are both in generally good condition, they have limited capacity for expansion. In the case of Amberley and Edinburgh, the only viable and cost effective option is to construct new facilities. The existing Air Movements terminals at RAAF Bases Darwin and Townsville are each less than 10 years old, are in good condition and can be cost-effectively expanded to meet the C-17 requirement.

14. The siting of the facilities at RAAF Base Amberley considered a number of options, primarily involving either the reconstruction of Air Movements separate to the No. 36 Squadron facilities, or the development of an Air Lift precinct meeting the requires of Air Movements, No. 36 Squadron and No. 33 Squadron. A new Air Lift precinct based around the new No. 33 Squadron hangar and apron currently under construction is the preferred option as it co-locates similar functions, which rationalises the pavement for aircraft parking, reduces the number of aircraft movements from their squadron apron to air movements and allows space for future expansion for either additional aircraft or any other relocated elements from Air Lift Group.

ECONOMIC IMPACTS

15. This project will generate a significant amount of short-term employment opportunities predominantly in the building, construction and unskilled labour markets. Significant numbers of personnel are expected to be directly employed on construction activities that would also generate some off-site job opportunities from the manufacture and distribution of materials over the anticipated construction period. Defence anticipates that local building sub-contractors would be employed on a large proportion of the construction works.

ENVIRONMENTAL IMPACTS

16. Environmental investigations have identified that only the RAAF Base Pearce works could present a potential environmental impact associated with this project. RAAF Base Pearce contains Threatened Ecological Communities and Declared Rare Flora that are listed under the *Environmental Protection and Biodiversity Conservation Act 1999*. Any proposed developments that may pose a significant impact on Threatened Ecological Communities and Declared Rare Flora listed in the *Environmental Protection and Biodiversity Conservation Act 1999* are subject to Environmental Impact Assessment by both Commonwealth and State environmental approval processes in accordance with the *Environmental Protection and Biodiversity Conservation Act 1999*. An Environmental Impact Assessment has been conducted and a preliminary Environmental Management Plan has been prepared for C-17 facilities at RAAF Base Pearce, where a known flora species exists adjacent to the apron expansion site. The Environmental Impact Assessment has determined that there will be no significant impact on flora and fauna at RAAF Base Pearce. A referral to the Department of the Environment and Heritage under the *Environmental Protection and Biodiversity Conservation Act, 1999* is not required.

17. As no significant environmental impacts have been identified on the other Bases, as a result of this proposal, the project will be managed in accordance with the local Base Environmental Management Plans or Environmental Management Systems. Environmental Clearance Certificates will be sought prior to any construction activities on site. Each Contractor will develop and comply with a project specific Construction Environmental Management Plan. Contractor compliance with this plan will be periodically audited during the construction period.

HERITAGE CONSIDERATIONS

18. No cultural heritage issues have been identified as being associated with any element of this project.

RELATED PROJECTS

19. The RAAF Base Amberley Redevelopment Stage 2 project currently under construction and due for completion by December 2007 will provide the facilities and infrastructure required to support No. 33 Squadron and the new Multi Role Tanker Transport aircraft (KC-30B) at RAAF Base Amberley. The site for this proposal is immediately north of the No. 33 Squadron facilities and apron. This proposal will create an Air Lift precinct at RAAF Base Amberley, based around the new No. 33 Squadron Facilities with sufficient space for any future expansion. C-17 maintenance will be conducted in the new No. 33 Squadron hangar as necessary.

20. The RAAF Base Pearce Redevelopment Stage One project proposes to refurbish and extend the existing Air Movements Terminal at RAAF Base Pearce and remove the demountable accommodation from within the existing cargo hangar. This complements the redevelopment project by increasing the cargo handling facilities and office accommodation to support the increased loads which will be transported by the C-17 aircraft. The C-17 facilities and infrastructure at RAAF Base Pearce has been designed in consultation with the RAAF Base Pearce Redevelopment Stage One project's management team and Managing Contractor. Subject to Parliamentary clearance of both proposals, the works will be delivered concurrently by the RAAF Base Pearce Redevelopment Stage One project's Managing Contractor, to gain efficiencies and economies of scale benefits for the Commonwealth.

21. Subject to Parliamentary clearance, the RAAF Base Amberley Redevelopment Stage Three project and the RAAF Base Darwin Redevelopment Stage Two project will be delivered in similar timeframes to this proposal. These redevelopments will be separately referred to the Committee. While the projects have no direct linkages to the C-17 Infrastructure project, considerable consultation has occurred between the Defence project teams to ensure that works are consistent with long term base planning and do not cause undue disruption to base activities.

STAKEHOLDER CONSULTATION

22. Discussions have been held, or are planned to be held with the following organisations:

- a. Australian Quarantine Inspection Service (AQIS);
- b. Australian Customs Service;
- c. Australian Greenhouse Office;
- d. Ipswich City Council;

- e. Federal Member for Blair,
- f. Federal Member for Herbert,
- g. Federal Member for Pearce,
- h. Federal Member for Solomon and
- i. Federal Member for Wakefield.

PART B - TECHNICAL INFORMATION

PROJECT LOCATION

23. The location of the proposed works is within the existing base boundaries of RAAF Base Amberley (QLD), RAAF Base Darwin (NT), RAAF Base Edinburgh (SA), RAAF Base Pearce (WA) and RAAF Base Townsville (QLD). Location plans for each base are at Attachments 1 (RAAF Amberley), 15 (RAAF Darwin), 20 (RAAF Edinburgh), 26 (RAAF Pearce) and 31 (RAAF Townsville).

PROJECT SCOPE OF WORKS

RAAF Base Amberley

24. The proposed RAAF Base Amberley works comprises five major project elements, including working accommodation for No. 36 Squadron, Air Movements for Passengers and Cargo preparation and handling, Warehousing (C-17 Globemaster III Sustainment Partnership), C-17 Simulator Facilities, and airfield pavements for the C-17 fleet. The proposed works (with the exception of the simulator) are located immediately north of the new No. 33 Squadron facilities and apron and will create an Air Lift precinct at RAAF Base Amberley. The simulator will be sited adjacent to the new Multi-Role Tanker Transport (KC-30B) simulator to create a new Simulator precinct. A site plan of the proposed works is at Attachment 2.

25. The proposed works for the home base, RAAF Amberley includes:

- a. Working Accommodation. Construction of a new combined headquarters building for No. 36 Squadron personnel (including aircrew, administration, operations and maintenance personnel) and office accommodation for the C-17 logistic management unit and the Contract Management Office – C-17 Global Support Program; new and refurbished specialist equipment and aircraft workshop and Squadron storage space; new shelters for the

C-17 and Air Movements Ground Support Equipment

- b. Air Movements and Cargo Preparation. Construction of a new Air Movements Terminal and cargo hangar including office accommodation, passenger lounges, specialist cargo preparation equipment and cargo storage and a new vehicle wash bay compliant with Australian Quarantine Inspection Service (AQIS) standards to wash vehicles returning from overseas deployment;
- c. Warehousing. Construction of a new warehouse for storage and distribution of C-17 aircraft spares and equipment;
- d. C-17 Simulator. Construction of a new C-17 Simulator facility to accommodate a full motion flight simulator, technical training devices, office accommodation for Boeing staff, maintenance areas and training class rooms;
- e. Aircraft Pavements. A new aircraft parking apron capable of supporting four C-17 aircraft is proposed. The apron will provide for taxi-through parking and hydrant refuelling. Widened taxiways are required to allow the C-17 aircraft to transit the airfield without backtracking on the runway. A new apron and supporting taxiway extension to allow loading of explosive ordnance cargo is also proposed.

26. Drawings of the proposed home base works at RAAF Base Amberley are at Attachments 3 - 14.

RAAF Base Darwin

27. The proposed works for RAAF Base Darwin includes:

- a. extension of the existing Air Movements building including additional working accommodation to provide a substantial increase in cargo handling capacity;
- b. expansion and relocation of the Ground Support Equipment shelter;
- c. upgrading the existing Military Hard Stand by replacing the existing pavement with new high strength rigid concrete pavement for C-17 aircraft parking;
- d. installation of hydrant refuelling into the new apron;
- e. a new vehicle wash bay compliant to Australian Quarantine Inspection Service (AQIS) standards to wash vehicles returning from overseas deployment; and
- f. minor widening of the Bomber Replenishment Apron to allow C-17 aircraft to transit the

apron.

28. A site plan of the proposed works is at Attachment 16. Drawings for each of the Darwin elements are at Attachments 17 - 19.

RAAF Base Edinburgh

29. The proposed works for RAAF Base Edinburgh includes:

- a. a new Air Movements Terminal and cargo hangar including office accommodation, passenger lounges, specialist cargo preparation equipment and cargo storage to replace the existing, undersized facilities which were unsuitable for reuse or expansion;
- b. construction of a Ground Support Equipment shelter;
- c. expansion of the existing Air Movement apron to provide an additional C-17 capable parking position, and the installation of hydrant refuelling; and
- d. a new C-17 capable Explosive Ordnance Apron.

30. A site plan of the proposed works is at Attachment 21. Drawings for each of the Edinburgh elements are at Attachments 22 - 25.

RAAF Base Pearce

31. The proposed works for RAAF Base Pearce includes:

- a. expansion of the refurbished Air Movements terminal (being provided as part of the RAAF Base Pearce Redevelopment Stage One project) to provide additional working accommodation and cargo preparation and storage facilities for C-17 operations;
- b. expansion of the existing Ground Support Equipment shelter;
- c. expansion of the existing Air Movements Apron to allow two C-17 aircraft to operate at Air Movements;
- d. a new vehicle wash bay compliant with Australian Quarantine Inspection Service (AQIS) standards to wash vehicles returning from overseas deployment; and
- e. pavement widening and strengthening works to allow the C-17 to transit from the runway to the existing Explosive Ordnance Apron and Air Movements Apron.

32. A site plan of the proposed works is at Attachment 26. Drawings for each of the Pearce elements are at Attachments 27 - 30.

RAAF Base Townsville

33. The proposed works for RAAF Base Townsville include:

- a. expansion of the existing Air Movements terminal to provide additional cargo handling and preparation facilities to support the increased C-17 loads;
- b. upgrade of the existing wash bay compliant with Australian Quarantine Inspection Service (AQIS) standards to wash vehicles returning from overseas deployment;
- c. relocation and expansion of the existing Ground Support Equipment shelter;
- d. installation of hydrant refuelling to the Military Apron to support C-17 refuelling; and
- e. airfield pavement works including taxiway widening to allow the C-17 to transit to the existing Explosive Ordnance Apron.

34. A site plan of the proposed works is at Attachment 32. Drawings for each of the Townsville elements are at Attachments 33 - 34.

SITE SELECTION AND DESCRIPTION

35. All elements of this project are sited within the existing boundaries of RAAF Bases Amberley, Darwin, Edinburgh, Pearce and Townsville. This property is Commonwealth owned and Defence controlled. Site selection for this proposal has been undertaken in accordance with Defence policy and takes into consideration the applicable current base Master Plan or Zone and Precinct plan.

ZONING AND APPROVALS

36. All works referred to in this evidence are, or would be constructed, within the designated boundaries of each Base, which is designated "Defence Special Purposes". No civilian authority design or construction approvals are required, although works will comply with relevant Standards and Regulations as applicable.

LAND ACQUISITION

37. This proposal does not require the acquisition of additional land.

APPLICABLE CODES AND STANDARDS

38. Where appropriate, design and construction of the proposed works and services will conform to the relevant sections of applicable Building Codes and Standards including the following:
- a. Building Code of Australia;
 - b. relevant Australian Standards and Codes;
 - c. Commonwealth and State legislation;
 - d. Defence Manual of Fire Protection Engineering;
 - e. Defence Facilities Communications Cabling Standard;
 - f. relevant Defence Security Publications; and
 - g. occupational health, safety and welfare legislation and the Defence Occupational Health and Safety Manual.
39. A qualified and practising certifier will be required to certify that the design and finished construction of the proposed facilities meet the requirements of the Building Code of Australia, relevant Codes and Standards, the Defence Manual of Fire Protection Engineering and any additional State, Local Government and Defence requirements.
40. Successful tenderers will be required to produce a Project Quality Plan. This plan will clearly show how building codes, Australian standards and any additional Defence requirements in relation to security, fire protection and fire safety will be met and how the required standards for construction and installation are to be maintained.

PLANNING AND DESIGN

41. The designs provide a safe, efficient and pleasant workplace and also represent value for money. The designs offer good economy in relation to floor area, construction techniques, buildability and finishes, whilst achieving the necessary functional requirements, work flow patterns and work environment required to fulfil the function of the space.
42. Designers have been required to consider, during the preliminary design stage, the implications and estimates of costs for designs, materials, construction techniques, finishes, equipment and energy systems which will deliver economy on a life cycle costing basis.

43. In the selection of services and associated equipment, the capital cost is balanced against operational and maintenance costs. Operating costs comparisons will be included in a life cycle costing analysis during detailed design and prior to selection. Particular consideration has been given to energy efficient design solutions employing passive solar energy and water re-use initiatives.

44. The design, structure, servicing, and siting of buildings has been determined to ensure that future expansion is possible. Each sub-element of the facility will have the capacity for future expansion. This is of particular importance in sizing and terminating in-ground services. New mechanical plants will be modular to ensure flexibility.

45. Maximum flexibility is required for most internal office accommodation facilities. Except where the need for security or noise reduction dictates otherwise, minimum use is to be made of structural internal walls or columns. In general terms, internal walls in office areas will be of demountable partition or workstation type to facilitate economic rearrangement. Building services will be compatible with this requirement.

46. This project will:

- a. maximise the use of existing infrastructure to minimise capital facilities costs;
- b. adopt conventional construction techniques and materials, commonly used by the construction industry in regional Australia, with due regard given to climatic conditions;
and
- c. utilise readily available and durable materials that combine long life with minimum maintenance and are sympathetic with the existing buildings, landscaping and precinct.

47. The building works and services will be fully fitted out, with all communications and office equipment, light fittings, partitions, floor treatments and furniture. Facilities will incorporate building management systems, metering and other provisions to measure and monitor energy use and to allow regular energy audits.

STRUCTURE

48. Proposed new facilities will generally be steel framed or concrete framed structures with concrete floor slabs and a metal roof. Internal walls are generally non-load bearing frames lined with plasterboard to provide for maximum flexibility in future floor layout. External Walls will respond to the environmental requirements of the site. In particular, structural design will take into

account the highly reactive soils encountered in the Amberley area and the cyclonic wind conditions in Darwin and Townsville.

MATERIALS AND FINISHES

49. Materials and finishes will be selected from those readily available locally for their functionality, durability, and low maintenance and for their ecologically sustainable design properties.

MECHANICAL SERVICES

50. The mechanical services works involve a number of systems. Air-conditioning will be provided to areas where climate and usage dictates a need. The selection of building services and associated equipment to new air-conditioned facilities will be required to achieve an economic balance between capital cost and operation and maintenance costs. Selection would be based on a life cycle costing analysis and particular consideration would be given to energy efficient design solutions employing passive solar energy. New facilities will incorporate building management systems, metering and other provisions to measure and monitor energy use and to allow regular energy audits where practicable. Mechanical plant will incorporate a modular system to ensure flexibility. Mechanical services to existing workshops at RAAF Base Amberley will be upgraded to meet current occupational health and safety requirements.

HYDRAULIC SERVICES

51. Hydraulic services for water supply, sewerage, and storm water within each precinct involve extension of infrastructure and building services to suit.

ELECTRICAL SERVICES

52. Lighting, power, lightning protection and fire detection will be provided in accordance with the relevant Australian Standards and any additional Defence requirements. Electrical infrastructure and switchboards will have modest spare capacity to allow for any future growth or demand. Fire detection systems, indication panels, emergency and exit lighting will be provided to suit the existing site systems.

CIVIL WORKS

53. None of the proposed sites for the new facilities present any particular civil engineering problems, but each will be the subject of further survey and geotechnical investigation during the design phase.

ACOUSTICS

54. Airbases are particularly noisy environments, especially near the aircraft flight line. In these areas, building sound attenuation will be provided through construction techniques and materials and will generally be supplemented by personal aural protection when personnel are outside. Sound attenuation is particularly important in classrooms and working accommodation and specific levels, as specified within Australian Standards, will be met.

55. The steady noise level in an occupied room generated by all components of the air conditioning and ventilation plant shall not exceed the maximum levels recommended by Australian Standard 2107. Short term noise intrusion into occupied spaces from occasional but regular sources shall not exceed a noise level 5 dB below the maximum level recommended in Australian Standard 2107 for the particular area. Vibration isolation of mechanical plant and equipment will limit vibration levels in the building to comply with the recommended vibration levels as set out in Australian Standard 2670.2 and Australian Standard 2763 and any additional Defence requirements.

56. The external building fabric will restrict noise transmission ingress as per the relevant Australian Standards with respect to aircraft noise, road traffic noise and externally located building services plant.

WATER AND ENERGY CONSERVATION MEASURES

57. The Commonwealth is committed to Ecologically Sustainable Development (ESD) and the reduction of greenhouse gas emissions. Defence reports annually to Parliament on its energy management performance and on its progress in meeting the energy efficiency targets established by the government as part of its commitment to improve ESD. This project has addressed this policy by adopting cost effective ESD, as a key objective in the design development and delivery of new facilities.

58. All buildings included in this project will be designed, constructed, operated and maintained to ensure that they use energy efficiently. To achieve this, as a minimum, the buildings will comply with:

- a. Part I2 and Section J of Volume One of the Building Code of Australia;
- b. Part 3.12 of Volume Two of the Building Code of Australia;
- c. The Energy Efficiency in Government Operations (EEGO) policy; and
- d. Defence Green Building Requirements Part 1;

as applicable to the classification of each building.

59. All buildings will comply with the relevant energy efficiency provisions in the Building Code of Australia, except where there are energy efficiency requirements imposed by Defence that are of a higher standard. In this project, each building is subject to the higher standards of the Defence Green Building Requirements Part 1 which requires a 20% improvement on the Building Code of Australia minimum energy efficiency performance requirements. In addition, the new Working Accommodation building for No 36 Squadron will comply with the minimum energy performance standards in the EEGO policy.

60. For those office buildings that have a floor area of greater than 2000 m², and that comprise 100% of the total building area, which includes the new Working Accommodation building for No 36 Squadron, the building will target 4.5 stars ABGR and separate digital on market status metering will be installed. An energy management plan will be developed for implementation by Defence. Where available, fit for purpose and cost-effective appliances will be US EPA 'Energy Star' compliant with power management features enabled at the time of supply.

61. For all other mixed-use buildings that have office floor area of less than 2000m², separate digital on market status metering will be installed and office lighting will not exceed 10 W/m². Where available, fit for purpose and cost-effective appliances will be US EPA 'Energy Star' compliant with power management features enabled at the time of supply.

62. Each new building will be modelled to determine the predicted energy consumption and design targets will be determined for each building, depending on the building classification. Energy management is a key aspect in the design of the new facilities and the initiatives which will be included are:

- a. orientating the buildings to minimise east and west solar gain;
- b. installing a Building Management System in each building, linked to the site wide Regional Utilities Management System where available;
- c. in-building load control devices such as motion sensors where practical;
- d. natural ventilation and mixed mode systems wherever possible;
- e. installation of ceiling fans in selected areas to enhance comfort without the use of air conditioning;
- f. separate digital energy metering for tenanted areas, central services and computer (data) centres;
- g. energy efficient lighting (T5 fluorescent light fittings in office areas) supplemented by

energy efficiency techniques such as occupancy sensing and after-hours automatic shut-off controls; and

h. energy efficient appliances.

63. Efficient water use is a key aspect of the design. Key water saving measures will include:

- a. all tapware and fittings compliant with the Water Efficiency Labelling Standards (WELS) scheme to provide a minimum of a 3 Star water conservation rating;
- b. pressure limiting valves to limit pressure at all appliances;
- c. provision for separate internal and external reticulation of cold water to all toilets and urinal flushing for future connection to non-potable water supply infrastructure;
- d. sub-metering of all major water supplies to each new building; and
- e. rainwater harvesting from all roof areas complete with storage tanks and pressure pumping to supply localised landscaping, wash down areas and toilet flushing.

64. The Australian Greenhouse Office, in the Department of the Environment and Water Resources, has been consulted with respect to these energy efficiency requirements.

MASTER PLANNING AND FUTURE DEVELOPMENT

65. This proposal is consistent with the relevant Base Zone and Precinct Plan, or Base Master Plan depending on the site. Master Planning at RAAF Base Amberley is consistent with the planning for the proposed RAAF Base Amberley Redevelopment Stage Three project. The works at RAAF Base Amberley will create new Air Lift and Simulator precincts. Each of the sites will allow for future expansion.

PROVISIONS FOR PEOPLE WITH DISABILITIES

66. Access and facilities for the disabled will be provided in accordance with the Defence Infrastructure Manual Disabled Access and Other Facilities for Disabled Persons, the Building Code of Australia and relevant Australia Standards.

HERITAGE ISSUES

67. No heritage issues have been identified for this proposal and none of the works impacts on any facilities or precincts which are identified as having a heritage significance. Archival recording of the existing Air Movements Terminal at RAAF Base Edinburgh will be completed prior to the demolition of the facilities.

CHILDCARE PROVISIONS

68. Childcare to support the relocation of No 36 Squadron to RAAF Base Amberley will be

provided by the ABC Learning Centre located on the base. This childcare centre has adequate capacity to accommodate the minor increase in base personnel.

FIRE PROTECTION

69. All construction and fire protection requirements will, as a minimum, be in accordance with the provisions of the Building Codes of Australia (BCA), the Defence Manual of Fire Protection Engineering and all other applicable Codes and Standards.

SECURITY

70. In accordance with Government initiatives to improve physical security arrangements across Government Departments, advice from designated security authorities will be incorporated in the design solutions for the proposed facilities as appropriate. The security threat assessment will be reviewed during the detailed design phase and the facilities would be secured as appropriate to the classification level required for activities conducted.

71. Security protection will be provided in accordance with the Defence Security Manual. This requires high levels of base physical security including full wire enclosures / compounds, remote sensor systems and security guards, including dogs. The physical security of aircraft and uninstalled sub-systems (software and hardware) also has facilities implications, including the requirements for secure storage and maintenance areas.

OCCUPATIONAL HEALTH AND SAFETY

72. The proposed facilities will comply with the requirements of the Occupational Health and Safety (CE) Act 1991, the Department of Defence Occupational Health and Safety Manual and relevant State Occupational Health and Safety legislation and operate in accordance with an approved Occupational Health and Safety Plan.

73. All construction sites will be appropriately secured to prevent public access during the construction period. No special or unusual public safety risks have been identified.

LANDSCAPING

74. Landscaping works would be directed toward the restoration of areas disturbed during construction and general improvement of the built environment. Precautions would be taken to avoid compromising existing environmental sensitivities by adopting landscaping practices in keeping with local environmental conditions.

75. To reduce water consumption, native type vegetation will be planted which are more robust to dryer climatic conditions, with lower water requirements. Irrigation controllers, such as rainwater sensors and moisture detectors may be installed. Irrigation timers will be included to ensure over watering does not occur, and also limiting watering to evening periods of low evaporation rates.

COMMUNITY IMPACT

76. This project will employ skilled construction workers in the Darwin, Townsville, Adelaide, Perth and Brisbane areas over the construction period. This will provide a positive economic impact to small and medium businesses in the regions. Construction traffic routes will be managed to minimise any disruption to the local communities during the construction period. Each of the sites is located well within the base boundaries and construction activities on site will not cause any disruption to residents adjacent to any of the bases.

PROJECT COSTS

77. The estimated out-turn cost of this project is \$268.2 million. This cost estimate includes the construction costs, management and design fees, furniture, fittings and equipment, contingencies and escalation.

78. An increase in net personnel and operating costs is expected as this project includes the construction of new and the extension of existing facilities and infrastructure and will include increases to facilities maintenance, cleaning and utilities expenses.

79. No revenue will be derived from this proposal.

PROJECT DELIVERY SYSTEM

80. The proposed delivery system is a combination of Managing Contractors at RAAF Base Amberley and RAAF Base Pearce and Head Contractors at RAAF Base Darwin, RAAF Base Edinburgh and RAAF Base Townsville. The project delivery system for each base has been selected on the basis of the scope, the risk of disrupting base activities, the value of the works and any interdependencies with other concurrent projects. A single Project Manager has been engaged to represent Defence and to act as Contract Administrator for the whole of the project.

PROJECT SCHEDULE

81. Subject to Parliamentary clearance of this project, construction is expected to commence early 2008 and be complete in 2011.

ATTACHMENTS:

RAAF BASE AMBERLEY

- Attachment 1. Base Location Plan – RAAF Base Amberley
- Attachment 2. Site Plan – RAAF Base Amberley
- Attachment 3. No 36 Squadron Headquarters Ground Floor Plan
- Attachment 4. No 36 Squadron Headquarters First Floor Plan
- Attachment 5. No 36 Squadron Headquarters Elevations
- Attachment 6. RAAF Amberley Air Movements Ground Floor Plan
- Attachment 7. RAAF Amberley Air Movements First Floor Plan
- Attachment 8. RAAF Amberley Air Movements Elevation
- Attachment 9. RAAF Amberley C-17 Warehouse Plan
- Attachment 10. RAAF Amberley C-17 Warehouse Elevations
- Attachment 11. C-17 Simulator Ground Floor Plan
- Attachment 12. C-17 Simulator First Floor Plan
- Attachment 13. C-17 Simulator Elevations
- Attachment 14. RAAF Amberley C-17 Pavements

RAAF BASE DARWIN

- Attachment 15. Base Location Plan – RAAF Base Darwin
- Attachment 16. Site Plan – RAAF Base Darwin
- Attachment 17. RAAF Darwin Air Movements Facilities Plan
- Attachment 18. RAAF Darwin Air Movements Facilities Elevations
- Attachment 19. RAAF Darwin Military Hard Stand

RAAF BASE EDINBURGH

- Attachment 20. Base Location Plan – RAAF Base Edinburgh
- Attachment 21. Site Plan – RAAF Base Edinburgh
- Attachment 22. RAAF Edinburgh Air Movements Facilities Plan
- Attachment 23. RAAF Edinburgh Air Movements Facilities Elevations
- Attachment 24. RAAF Edinburgh Air Movements Apron
- Attachment 25. RAAF Edinburgh Explosive Ordnance Apron

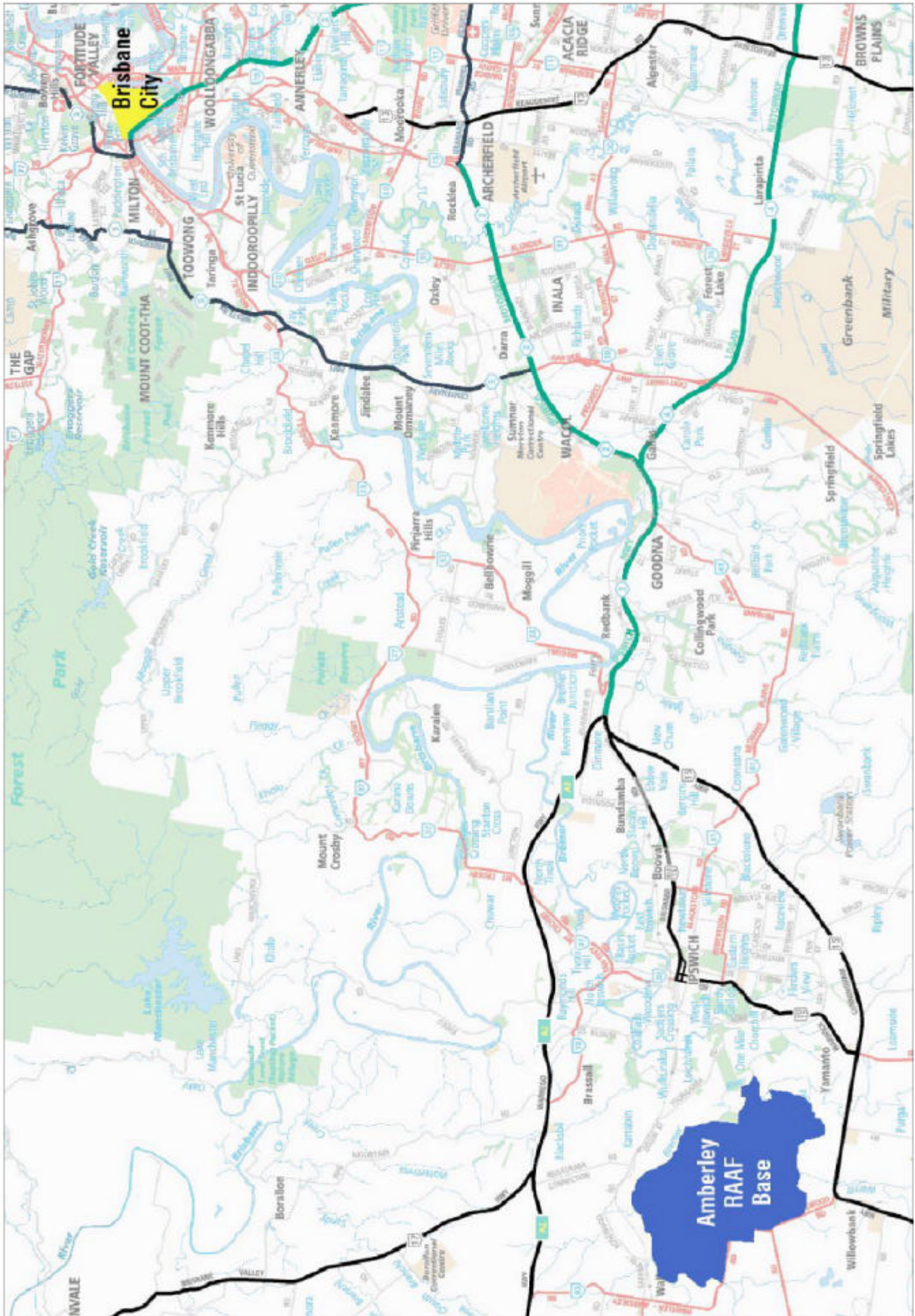
RAAF BASE PEARCE

- Attachment 26. Base Location Plan – RAAF Base Pearce
- Attachment 27. Site Plan – RAAF Base Pearce
- Attachment 28. RAAF Pearce Air Movements Plan
- Attachment 29. RAAF Pearce Air Movements Elevations
- Attachment 30. RAAF Pearce Air Movements Apron

RAAF BASE TOWNSVILLE

- Attachment 31. Base Location Plan – RAAF Base Townsville
- Attachment 32. Site Plan – RAAF Base Townsville
- Attachment 33. RAAF Townsville Air Movements Facilities Plan
- Attachment 34. RAAF Townsville Air Movements Facilities Elevations

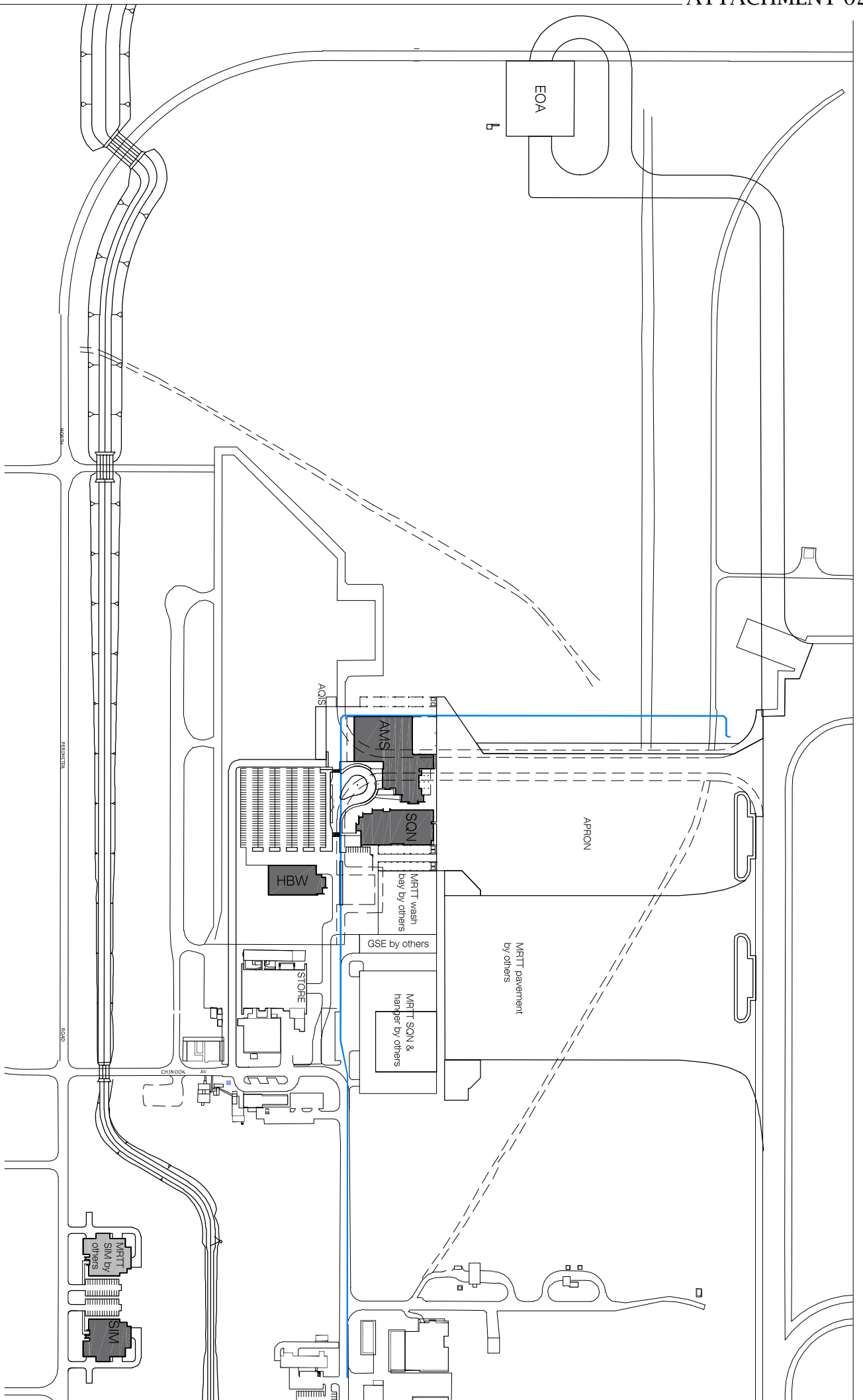
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GLOBAL
LOCATION PLAN

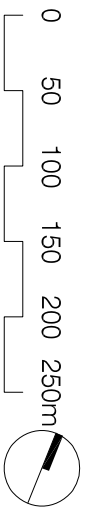


RAAF BASE AMBERLEY
C-17 FACILITIES

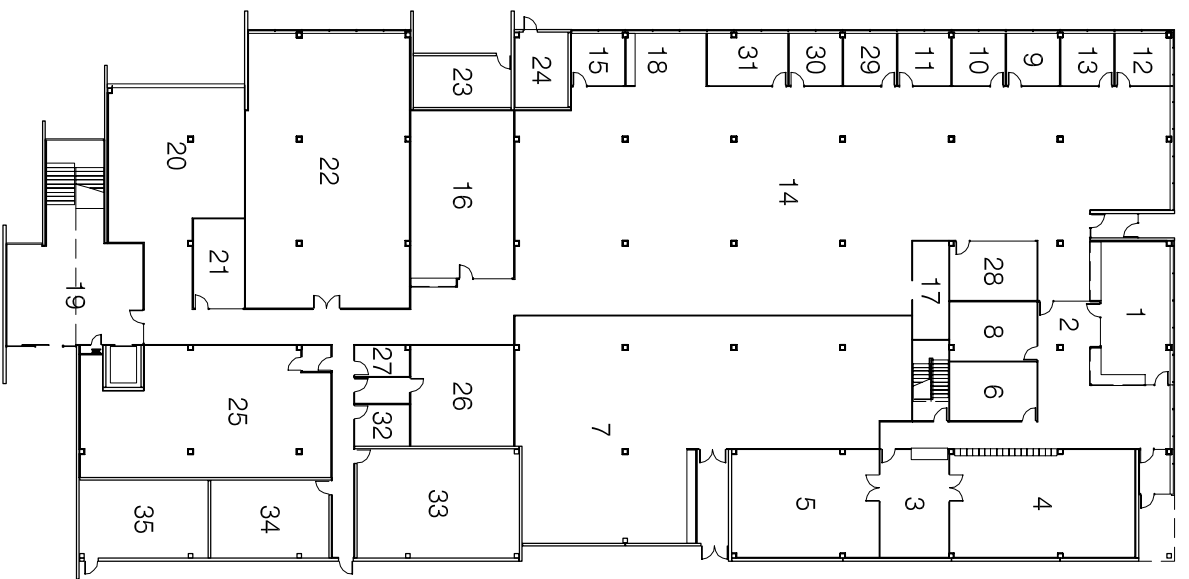


RAAF BASE AMBERLEY

C-17 FACILITIES



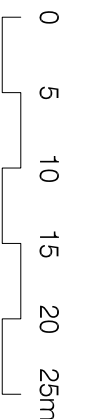
GLOBAL SITE PLAN



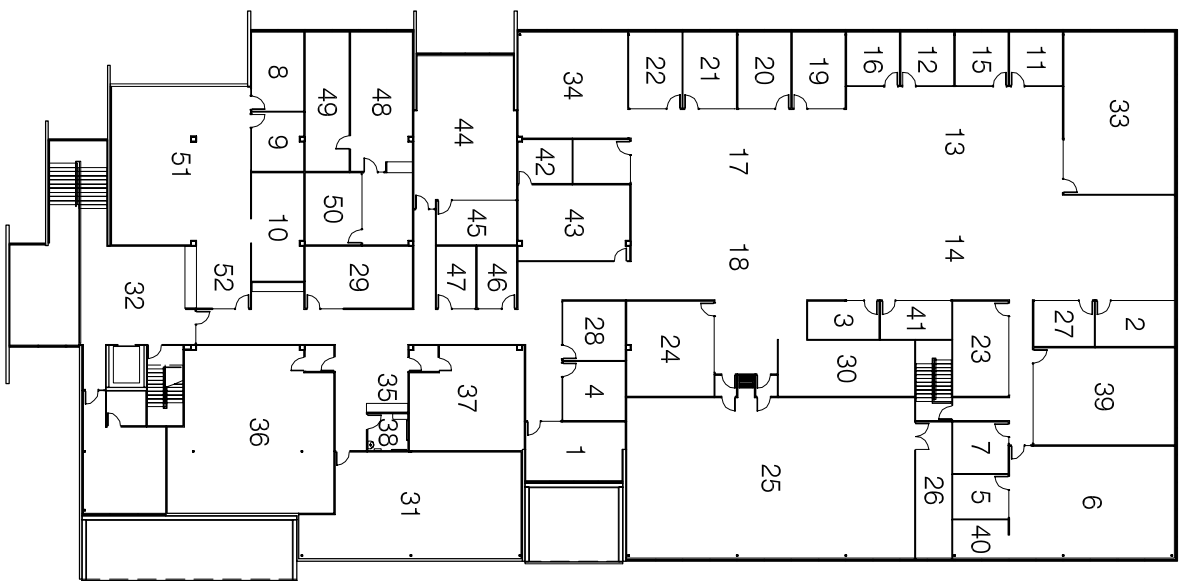
- LEGEND:
1. SIGN OFF
 2. TOOL BOARDS
 3. LIFE SUPPORT
 4. TEST EQUIP. DRY
 5. TEST EQUIP. WET
 6. LIFE SUPPORT STORE
 7. TOOL STORE
 8. SECURE STORE
 9. WOFF F/L
 10. WOFF MAINTENANCE
 11. MAINTENANCE CO-ORD
 12. FLMO
 13. FLSMO
 14. GENERAL OFFICE
 15. MCS OIC
 16. MCS
 17. UTILITY
 18. BREW
 19. FOYER
 20. LIBRARY
 21. MEETING
 22. CREW/MEETING
 23. ADF COMMS
 24. BOEING COMMS
 25. MALE AMENITIES
 26. FEMALE AMENITIES
 27. PWD AMENITIES
 28. BRIEFING ROOM
 29. SAFETY
 30. TRAINING
 31. AMO
 32. SICK ROOM
 33. HYDRAULICS
 34. AVIONICS
 35. OXY

RAAF BASE AMBERLEY

C-17 FACILITIES

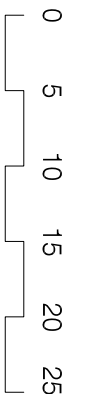


36 SQUADRON HEADQUARTERS
GROUND FLOOR PLAN

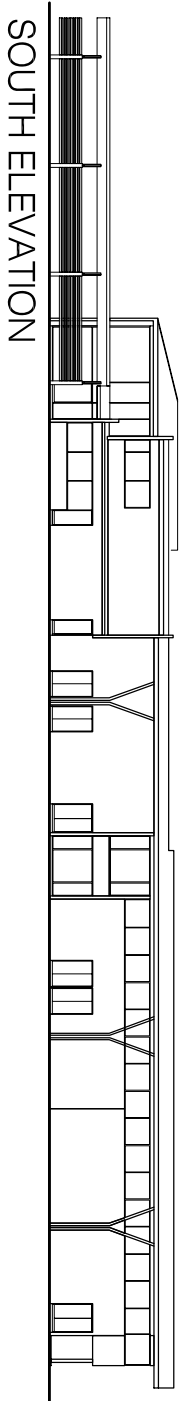


- LEGEND:
- | | |
|--------------------------|---------------------|
| 1. CO OFFICE | 41. SENGO |
| 2. XO OFFICE | 42. OFFICE |
| 3. BOEING | 43. EQUIP. GOV |
| 4. SQN W/O | 44. DMO |
| 5. OFFICE | 45. OFFICE |
| 6. OPERATIONS | 46. VISITORS OFFICE |
| 7. GROUND LIASON OFF. | 47. VISITORS OFFICE |
| 8. OFFICE | 48. DEMANDS |
| 9. OFFICE | 49. SMI STORE |
| 10. UTILITY | 50. EQUIPO |
| 11. SQN LEADER | 51. ADMINISTRATION |
| 12. WOFF LOADM | 52. RECEPTION |
| 13. A FLIGHT | |
| 14. A FLIGHT | |
| 15. SQN LEADER | |
| 16. WOFF LOADM | |
| 17. B FLIGHT | |
| 18. B FLIGHT | |
| 19. PILOT INSTRUCTOR | |
| 20. PILOT INSTRUCTOR | |
| 21. LOADM INSTRUCTOR | |
| 22. LOADM INSTRUCTOR | |
| 23. BRIEFING ROOM | |
| 24. BRIEFING ROOM | |
| 25. LARGE BRIEFING ROOM | |
| 26. CHAIR STORE | |
| 27. QUIET ROOM | |
| 28. QUIET ROOM | |
| 29. MEETING/BRIEFING | |
| 30. UTILITY | |
| 31. ARCHIVE/EQUIP. STORE | |
| 32. FOYER | |
| 33. CREW ROOM | |
| 34. LIBRARY | |
| 35. BREW | |
| 36. MALE AMENITIES | |
| 37. FEMALE AMENITIES | |
| 38. PWD AMENITIES | |
| 39. MISSION PLANNING | |
| 40. UTILITY | |

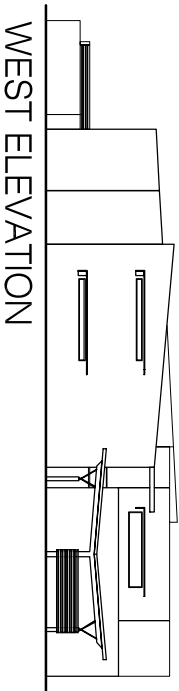
RAAF BASE AMBERLEY
C-17 FACILITIES



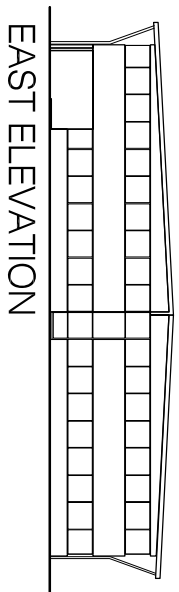
36 SQUADRON HEADQUARTERS
FIRST FLOOR PLAN



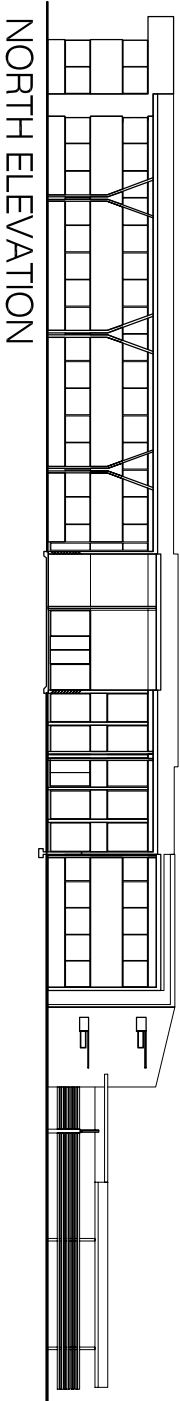
SOUTH ELEVATION



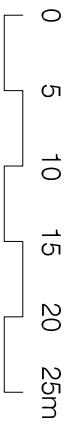
WEST ELEVATION



EAST ELEVATION

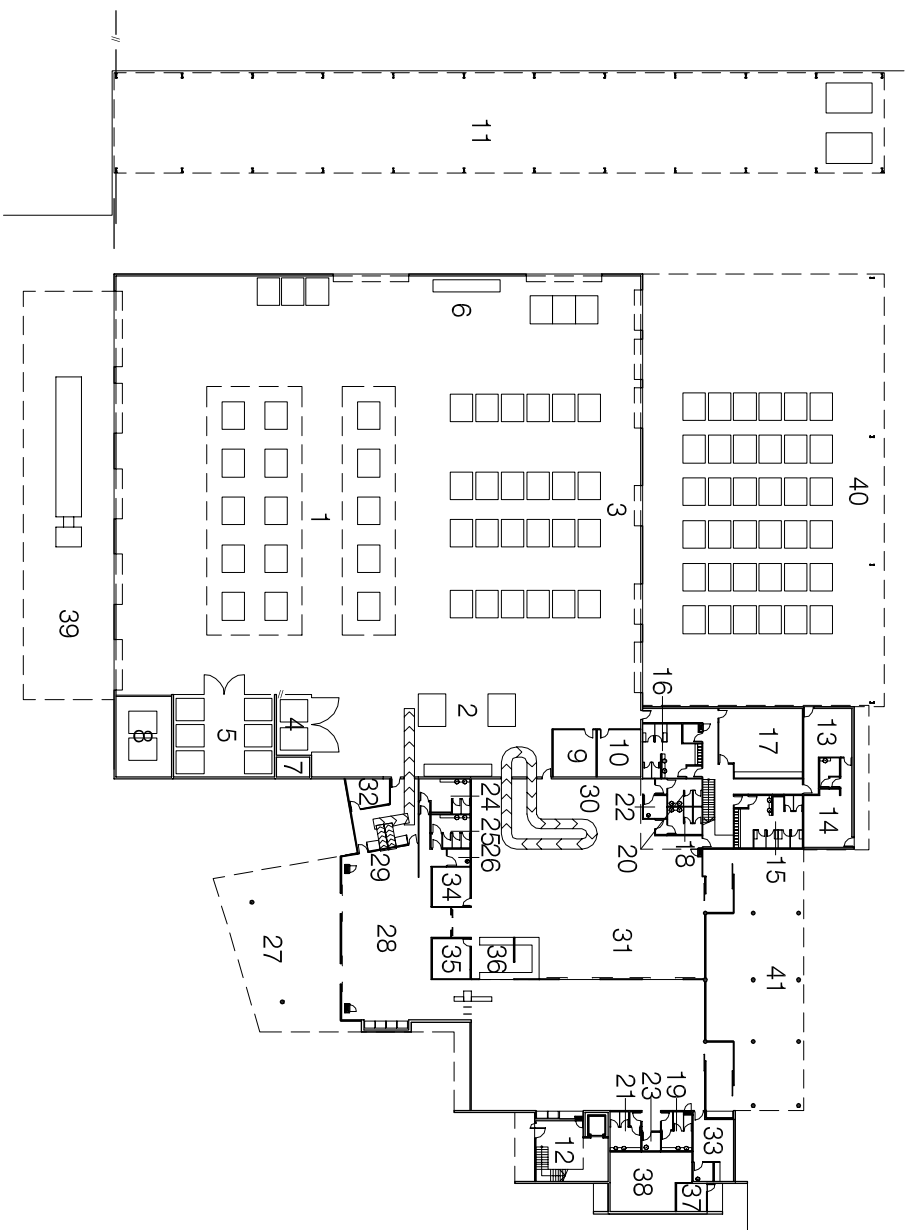


NORTH ELEVATION



RAAF BASE AMBERLEY
C-17 FACILITIES

36 SQUADRON HEADQUARTERS
ELEVATIONS



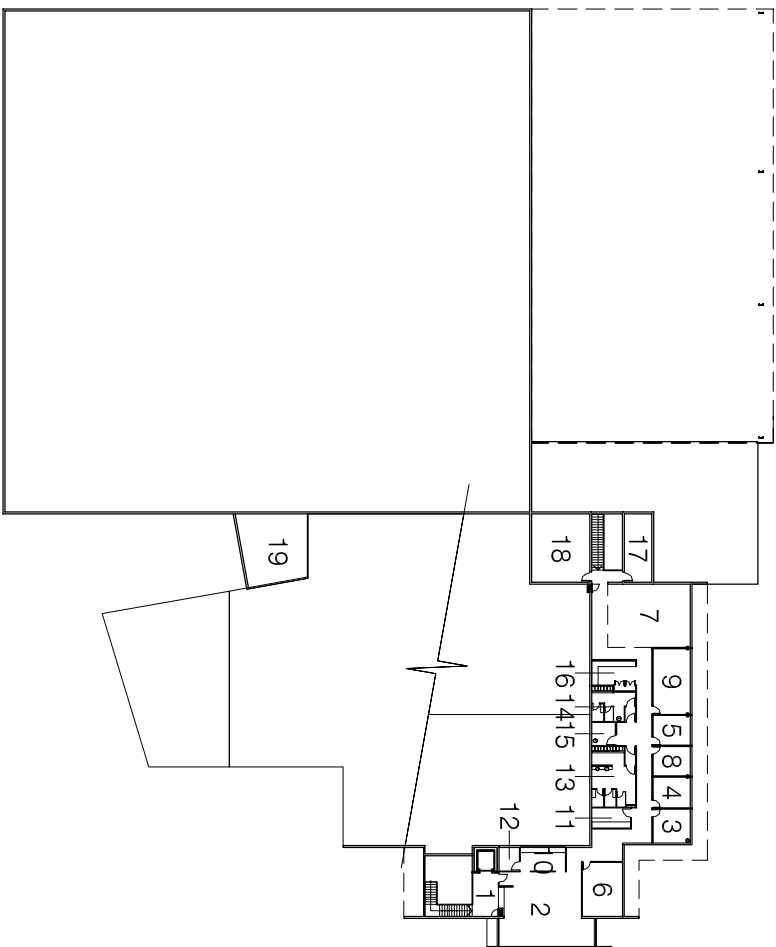
LEGEND:

- 1. BULK STORAGE/RECEIPT
- 2. PIT/ASSEMBLY
- 3. BLOCK STACKING
- 4. V & A STORE
- 5. BOND STORE
- 6. EQUIPMENT RACKING
- 7. SECURE STORE
- 8. BUNDED AREA
- 9. SUPERVISOR'S OFFICE
- 10. MANIFEST
- 11. G.S.E.
- 12. ADMIN. FOYER
- 13. LOAD CONTROL
- 14. FLIGHT PLANNING
- 15. MALE AMENITIES
- 16. FEMALE AMENITIES
- 17. CREW ROOM
- 18. MALE AMENITIES
- 19. MALE AMENITIES
- 20. FEMALE AMENITIES
- 21. FEMALE AMENITIES
- 22. PWD AMENITIES
- 23. PWD AMENITIES
- 24. MALE AMENITIES
- 25. FEMALE AMENITIES
- 26. PWD AMENITIES
- 27. COVERED ENTRY
- 28. FOYER
- 29. CHECK IN
- 30. LUGGAGE COLLECTION
- 31. ARRIVALS LOUNGE
- 32. SECURITY
- 33. VIP LOUNGE
- 34. CUSTOMS OFFICE
- 35. AQIS
- 36. AQIS/CUSTOMS
- 37. COMMS
- 38. PLANT ROOM
- 39. COVERED DELIVERY
- 40. COVERED PALLET STGE.
- 41. COVERED ARRIVALS

RAAF BASE AMBERLEY
C-17 FACILITIES

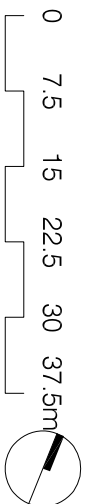


AIR MOVEMENTS SECTION
GROUND FLOOR PLAN

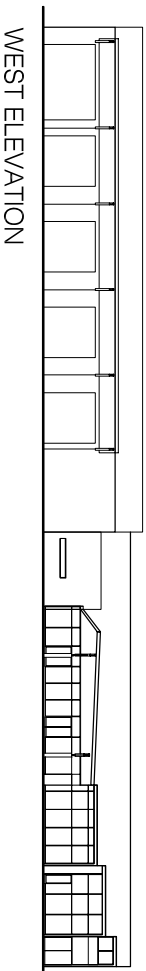


- LEGEND:
1. RECEPTION
 2. GENERAL OFFICE
 3. SNOO OFFICE
 4. 2 I/O OFFICE
 5. WO OFFICE
 6. MEETING/VISITOR OFF.
 7. HOT DESK/DUTY CREW
 8. MOVVO OFFICE
 9. TRAINING ROOM
 10. UTILITY
 11. STORE
 12. RADIO ROOM
 13. MALE AMENITIES
 14. FEMALE AMENITIES
 15. PWD AMENITIES
 16. BREW/UTILITY
 17. HOT WATER/PLANT
 18. PLANT ROOM
 19. PLANT AREA

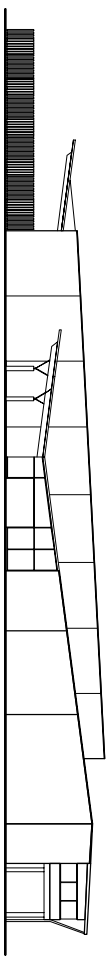
RAAF BASE AMBERLEY
C-17 FACILITIES



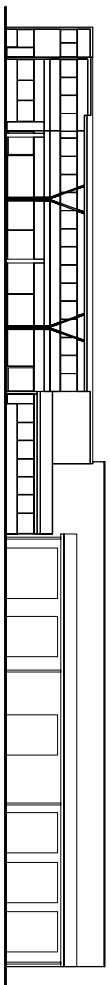
AIR MOVEMENTS SECTION
FIRST FLOOR PLAN



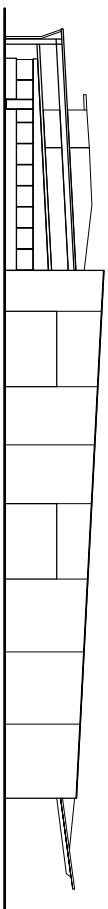
WEST ELEVATION



SOUTH ELEVATION

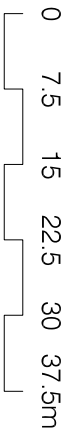


EAST ELEVATION

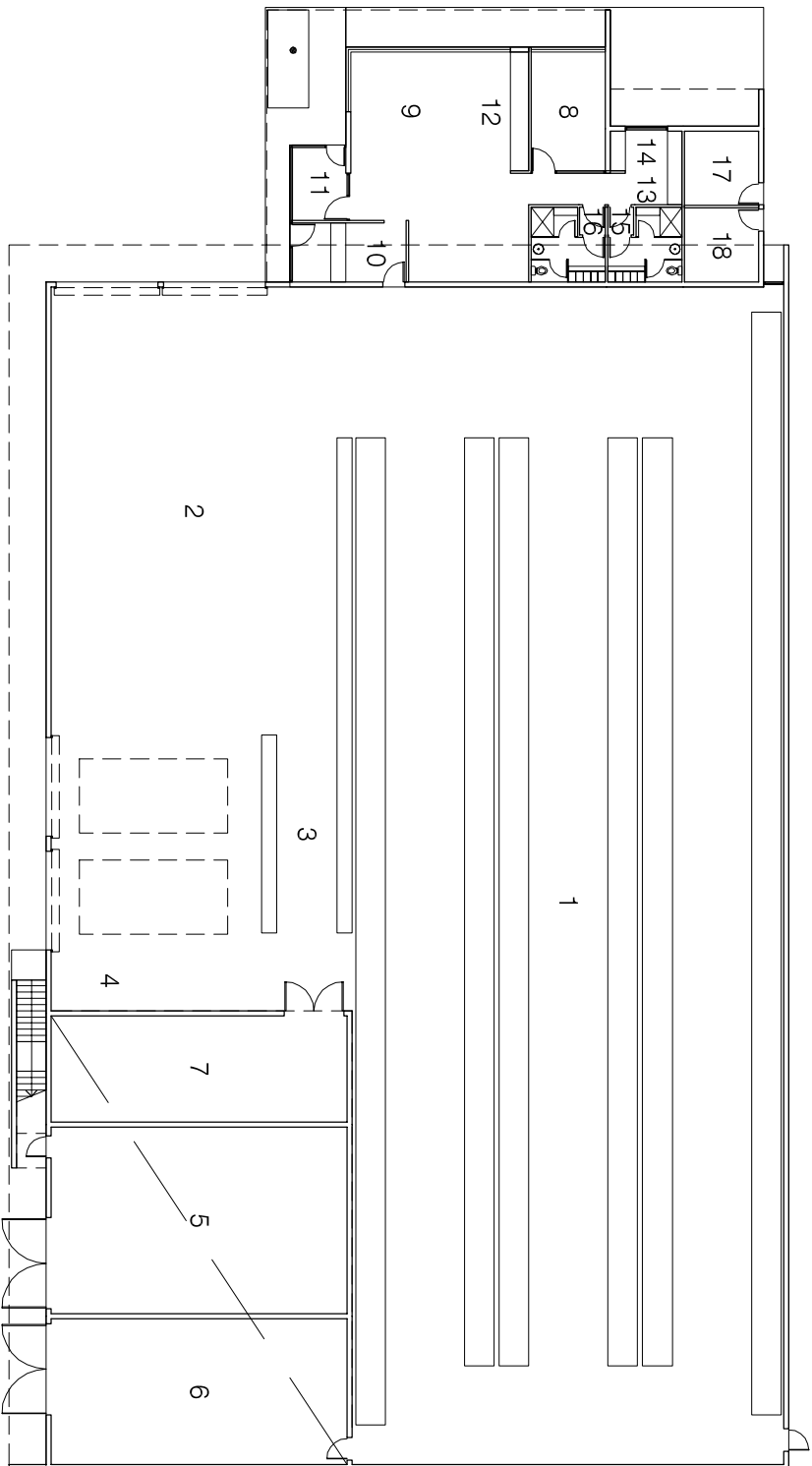


NORTH ELEVATION

RAAF BASE AMBERLEY
C-17 FACILITIES

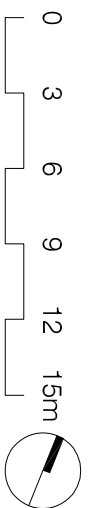


AIR MOVEMENTS SECTION
ELEVATIONS

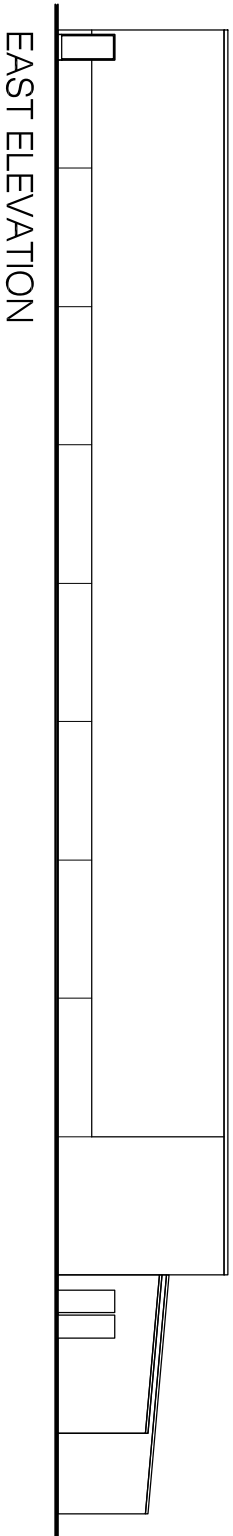
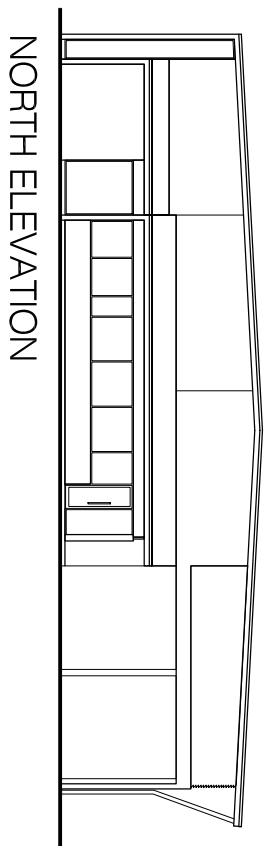
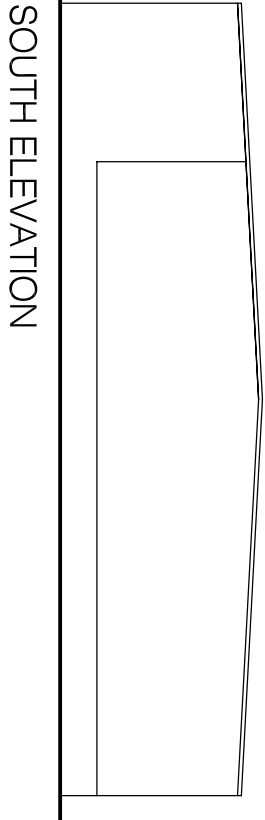
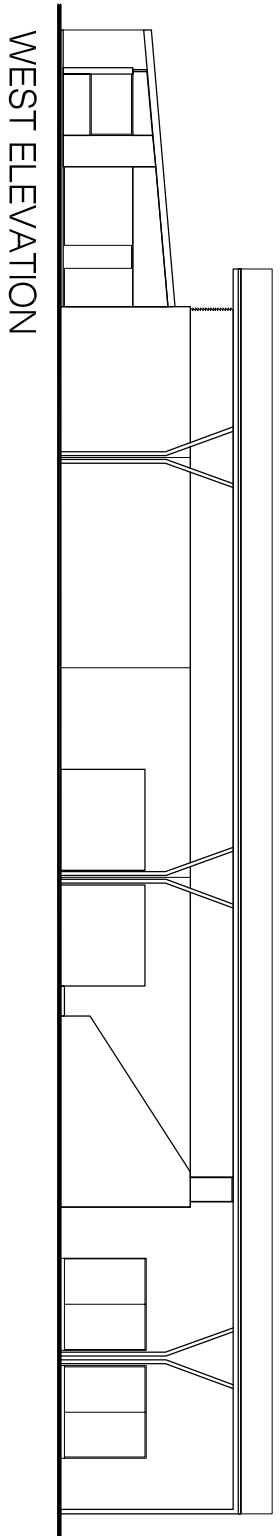


- LEGEND:
- 1. RACKING
 - 2. BULK STACKING
 - 3. SMALL GOODS PACKAG.
 - 4. ENGINE STORE
 - 5. SEATING PALLETS
 - 6. COMFORT PALLETS
 - 7. CRYPTO STORE
 - 8. MEETING ROOM
 - 9. GENERAL OFFICE
 - 10. ISSUE OFFICE
 - 11. FOYER
 - 12. UTILITY
 - 13. BREW
 - 14. BREW
 - 15. MALE AMENITIES
 - 16. FEMALE AMENITIES
 - 17. COMMS
 - 18. COMMS

RAAF BASE AMBERLEY
C-17 FACILITIES



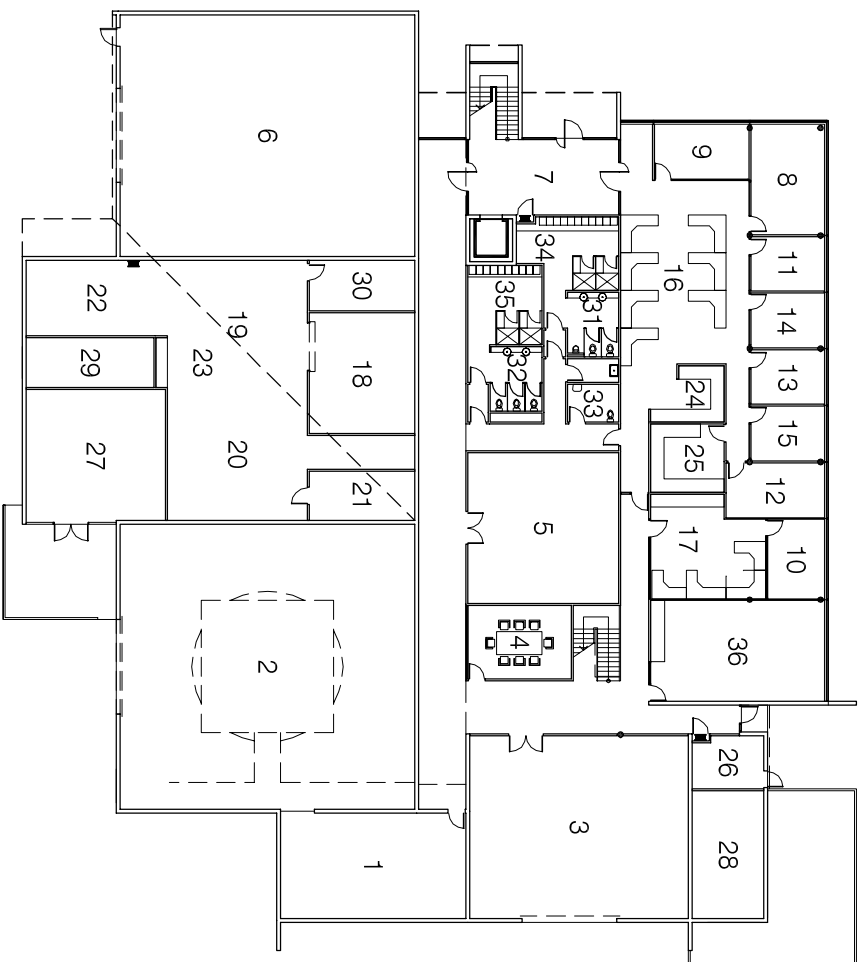
HOME BASE WAREHOUSE
GROUND FLOOR PLAN



RAAF BASE AMBERLEY
C-17 FACILITIES



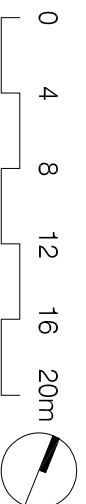
HOME BASE WAREHOUSE
ELEVATIONS



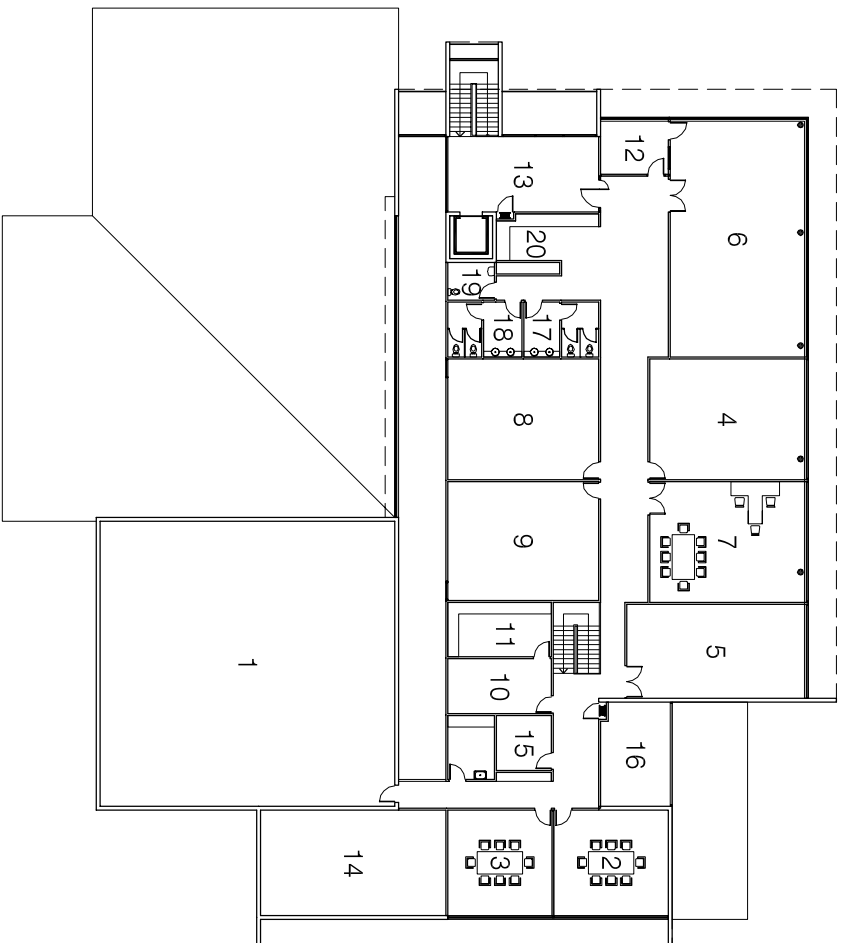
- LEGEND:
1. W.S.T. I.T.
 2. W.S.T. BAY
 3. LOADMASTER STATION
 4. LOAD MASTER BRIEFING
 5. LOAD PLANNING ROOM
 6. TEPATS SIMULATOR
 7. Foyer
 8. SITE MANAGER
 9. ADMIN. OFFICE
 10. ADF REPRESENTATIVE
 11. MAINTENANCE
 12. SCHEDULING
 13. WST INSTRUCTOR
 14. LS INSTRUCTOR
 15. TEPATS INSTRUCTOR
 16. INSTRUCTORS
 17. RAAF INSTRUCTOR
 18. MAINTENANCE STORE
 19. DIRTY MAINTENANCE
 20. CLEAN MAINTENANCE
 21. HIGH VALUE STORE
 22. DESPATCH/RECEIVING
 23. BREW
 24. UTILITY
 25. STORE
 26. COMMS ROOM
 27. MECHANICAL PLANT
 28. PLANT ROOM
 29. ELECTRICAL
 30. HOT WATER PLANT
 31. MALE AMENITIES
 32. FEMALE AMENITIES
 33. PWD AMENITIES
 34. MALE CHANGE
 35. FEMALE CHANGE
 36. CREW ROOM

RAAF BASE AMBERLEY

C-17 FACILITIES

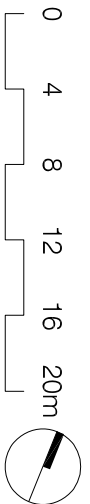


SIMULATOR FACILITY
GROUND FLOOR PLAN

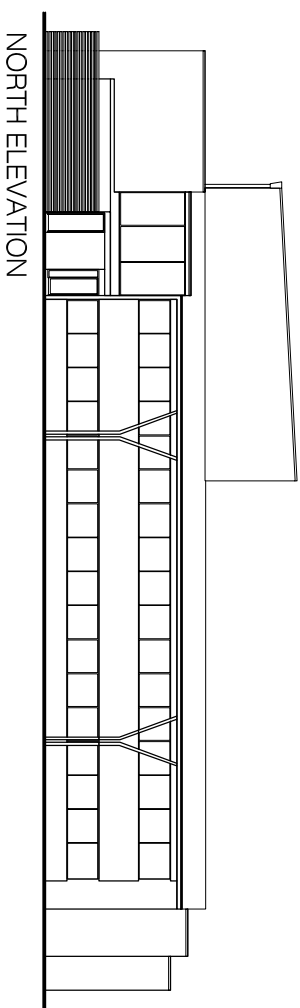
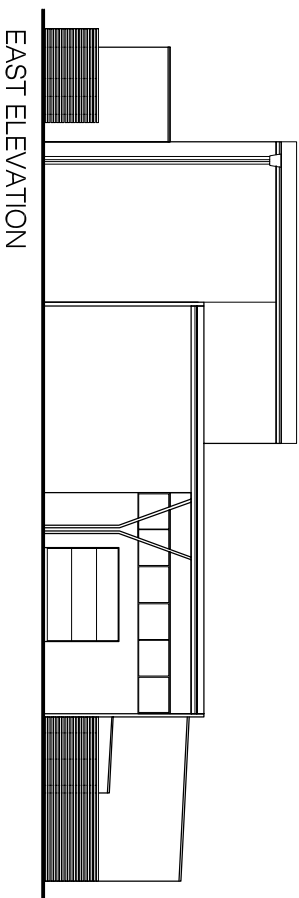
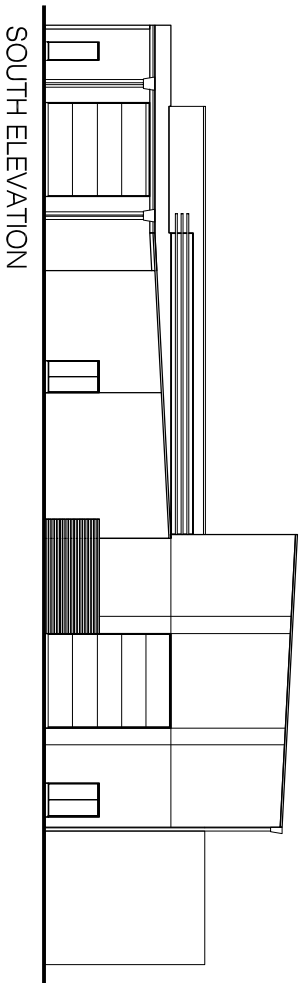
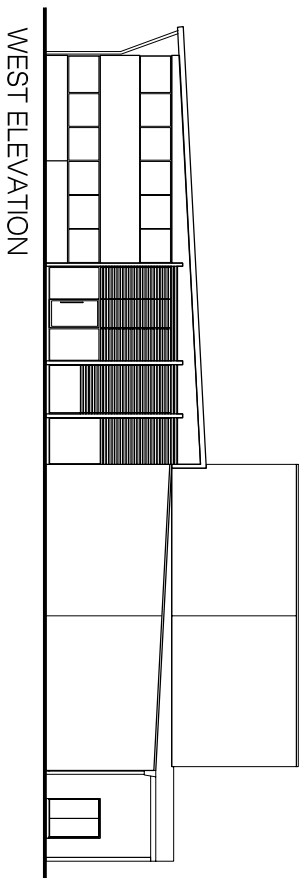


- LEGEND:
1. W.S.T. BAY
 2. W.S.T. BRIEFING
 3. W.S.T. BRIEFING
 4. CIP
 5. VTRAT
 6. CBT
 7. RDS
 8. GENERAL CLASSROOM
 9. GENERAL CLASSROOM
 10. CLS VIEW
 11. CLS STORE
 12. SUPERVISOR'S OFFICE
 13. FOYER
 14. FAN ROOM
 15. CER ROOM
 16. PLANT ROOM
 17. MALE AMENITIES
 18. FEMALE AMENITIES
 19. PWD AMENITIES
 20. BREW

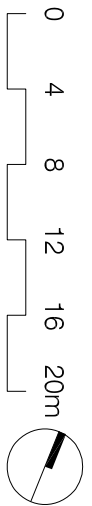
RAAF BASE AMBERLEY
C-17 FACILITIES



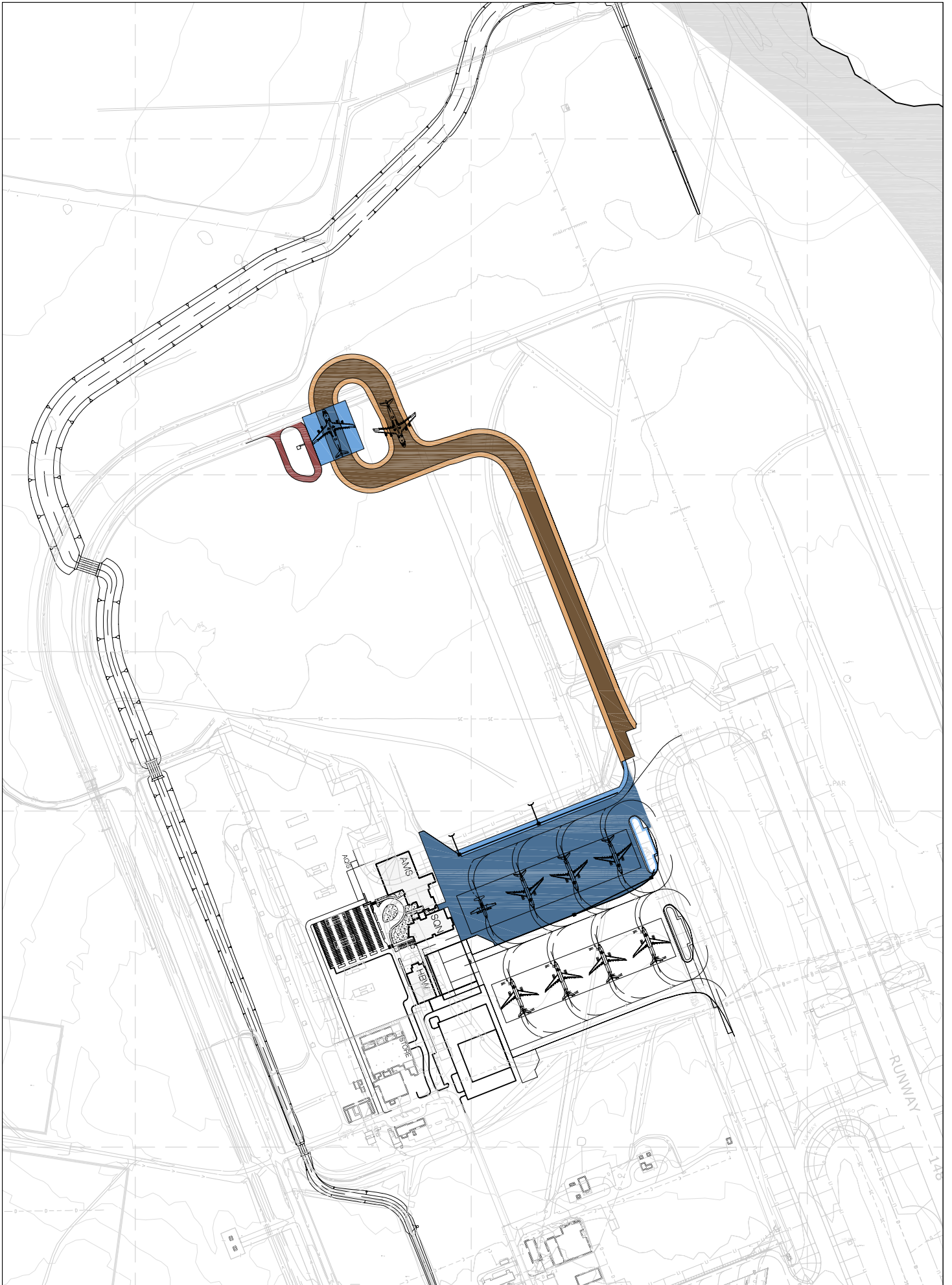
SIMULATOR FACILITY
FIRST FLOOR PLAN



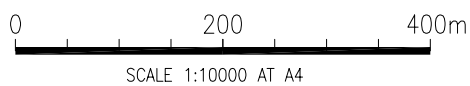
RAAF BASE AMBERLEY
C-17 FACILITIES



SIMULATOR FACILITY
ELEVATIONS



RAAF BASE AMBERLEY
C-17 FACILITIES



EOA & C17 PARKING APRON
SITE PLAN



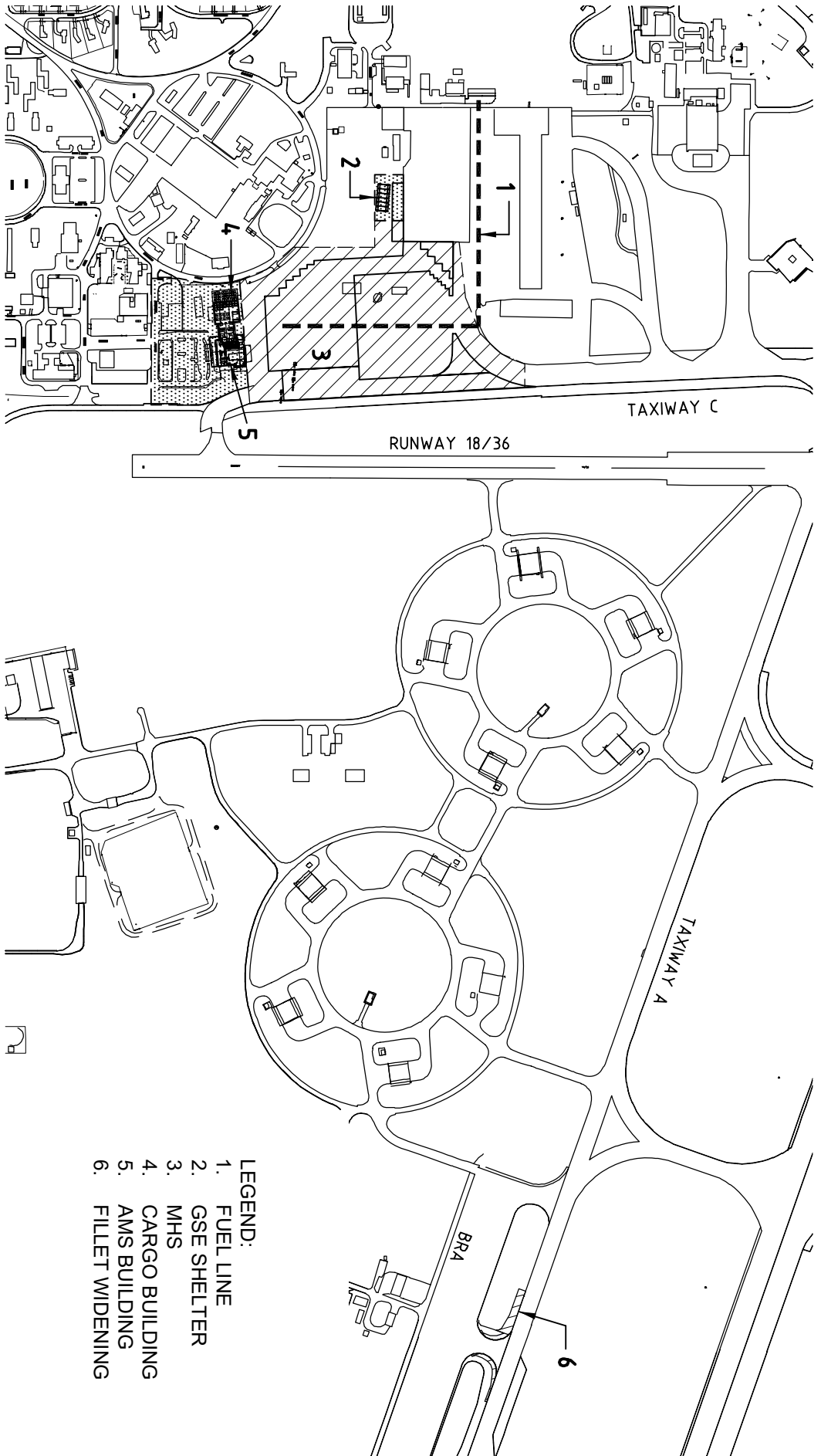
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C-17 FACILITIES

RAAF BASE DARWIN



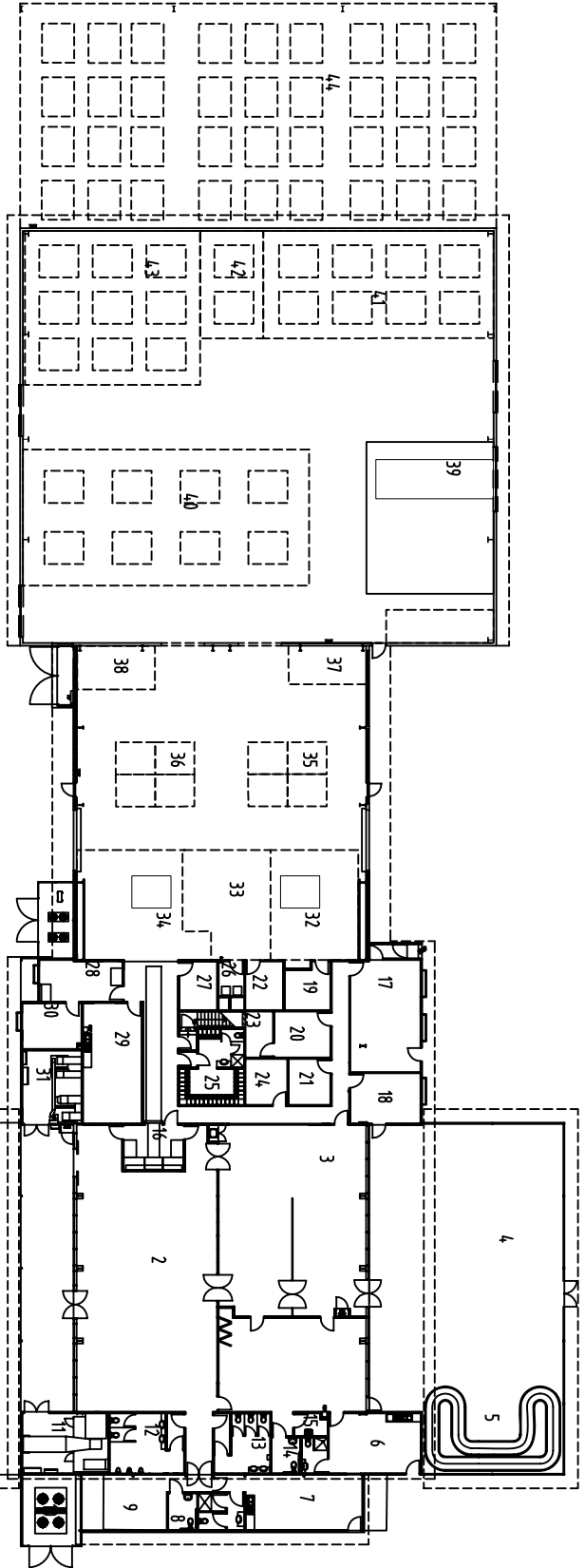


RAAF BASE DARWIN
C17-AIRLIFT FACILITIES

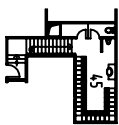


AIR MOVEMENTS FACILITIES
PRECINCT PLAN

GROUND FLOOR PLAN



MEZZANINE PLAN



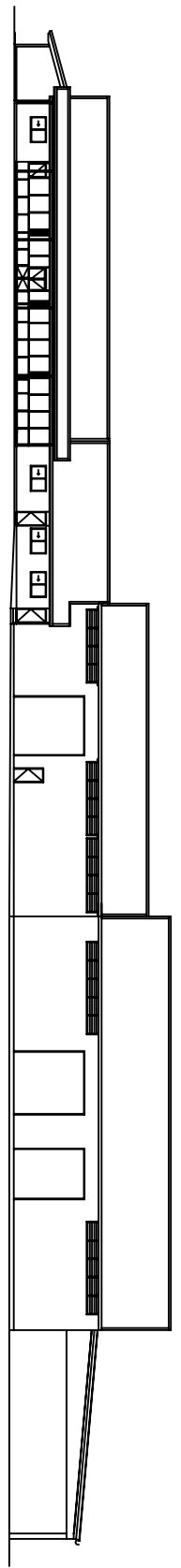
LEGEND:

- 1. NEW COVERED LANDSIDE AREA
- 2. EXISTING NON SECURE LOUNGE
- 3. EXISTING SECURE LOUNGE
- 4. NEW COVERED AIRSIDE AREA
- 5. LOCATION FOR FUTURE RECLAIM BAGGAGE CONVEYER
- 6. EXISTING VIP
- 7. NEW FLIGHT PLANNING
- 8. NEW PWD
- 9. EXISTING DESIGNATED SMOKING AREA
- 10. EXISTING PLANT
- 11. EXISTING PLANT
- 12. EXG MALE TOILET
- 13. EXG FEMALE TOILET
- 14. EXISTING PWD
- 15. EXG CLNR
- 16. EXISTING CHECKIN
- 17. LOAD CONTROL
- 18. OIC
- 19. W/O OPS.
- 20. ZIC
- 21. ACS
- 22. DAND
- 23. STORAGE
- 24. AIDS
- 25. FEMALE LOCKER
- 26. LAUNDRY
- 27. EXG COMMS
- 28. STORE RECEIPT ADMIN
- 29. LUNCHROOM/TRAINING
- 30. TRAINING
- 31. EXISTING PLANT
- 32. PALLET PIT
- 33. BAGGAGE HANDLING
- 34. PALLET PIT
- 35. STORE RECEIPT BREAK DOWN
- 36. STORE RECEIPT BREAK DOWN
- 37. PALLET STORE
- 38. PERSONAL DEPLOYMENT KIT
- 39. TRIPLE BUILD PALLET STAND
- 40. PALLET BUILD/BREAKDOWN
- 41. BOND STORE
- 42. V&A STORAGE
- 43. INTERNAL BUILT PALLET STORAGE
- 44. EXTERNAL COVERED BUILT PALLET STORAGE
- 45. MALE LOCKER (ABOVE STORE(23)&AIDS(24))

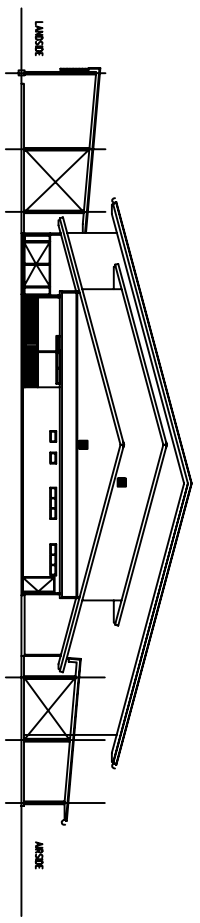
RAAF BASE DARWIN
C17-AIRLIFT FACILITIES



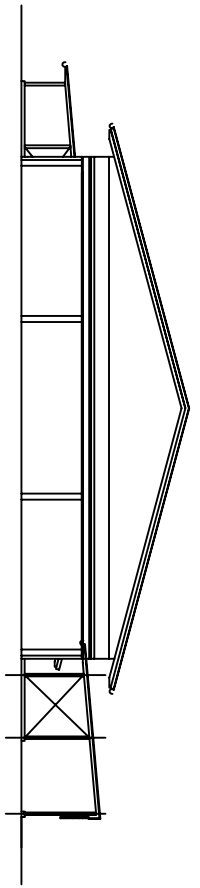
AIR MOVEMENTS FACILITIES
PLAN



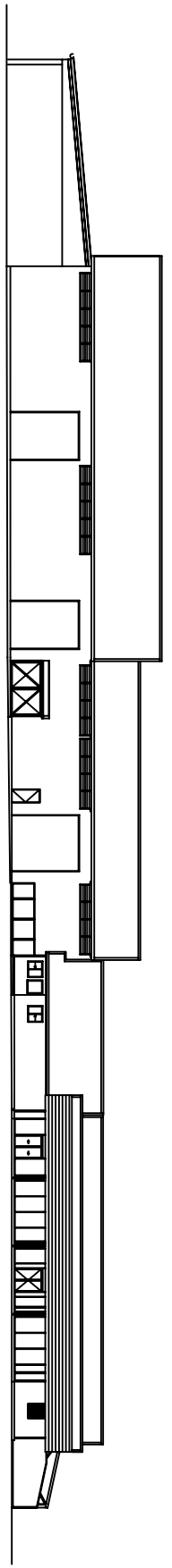
NORTH ELEVATION



EAST ELEVATION

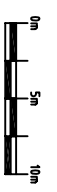


WEST ELEVATION

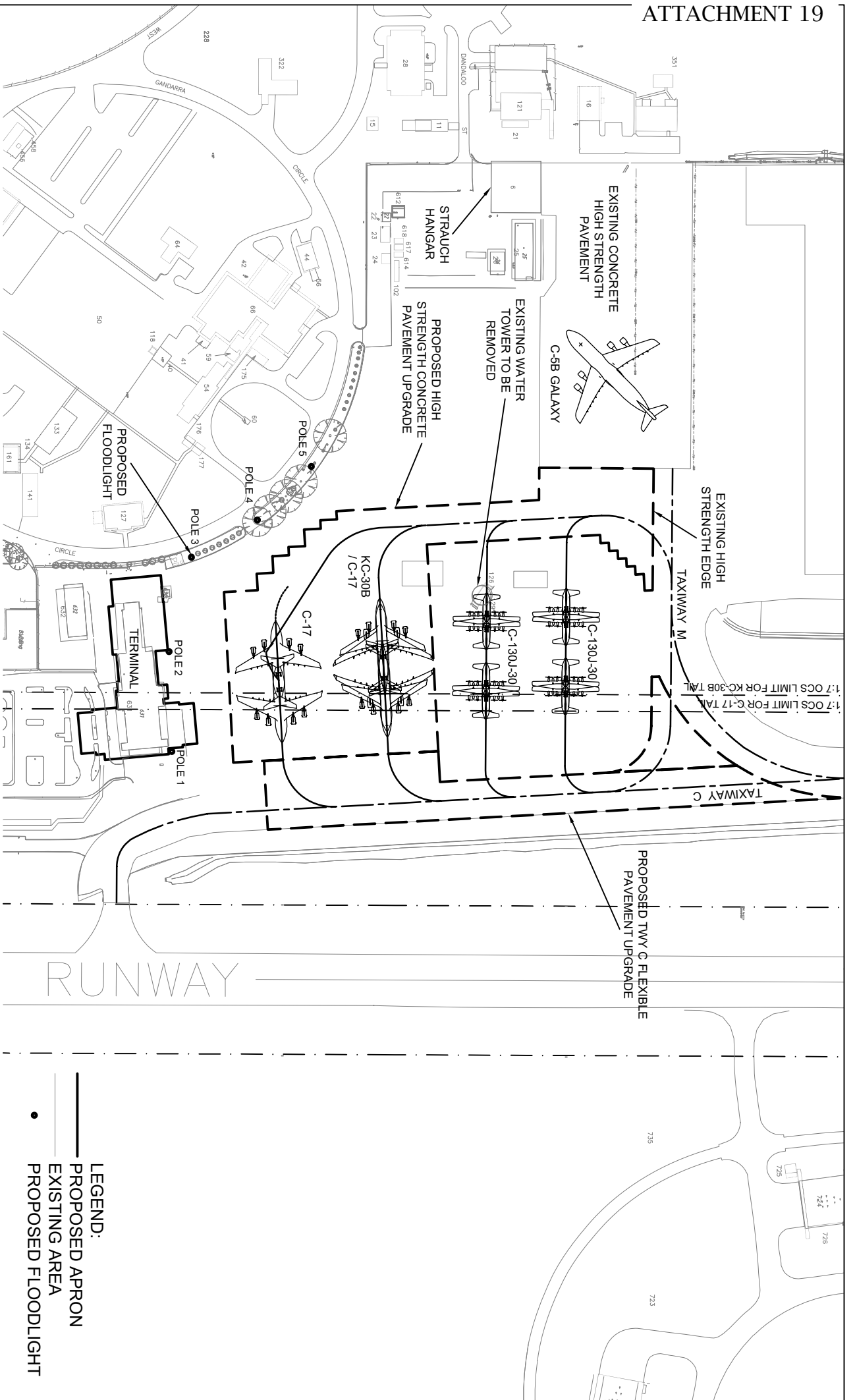


SOUTH ELEVATION

RAAF BASE DARWIN
C17-AIRLIFT FACILITIES



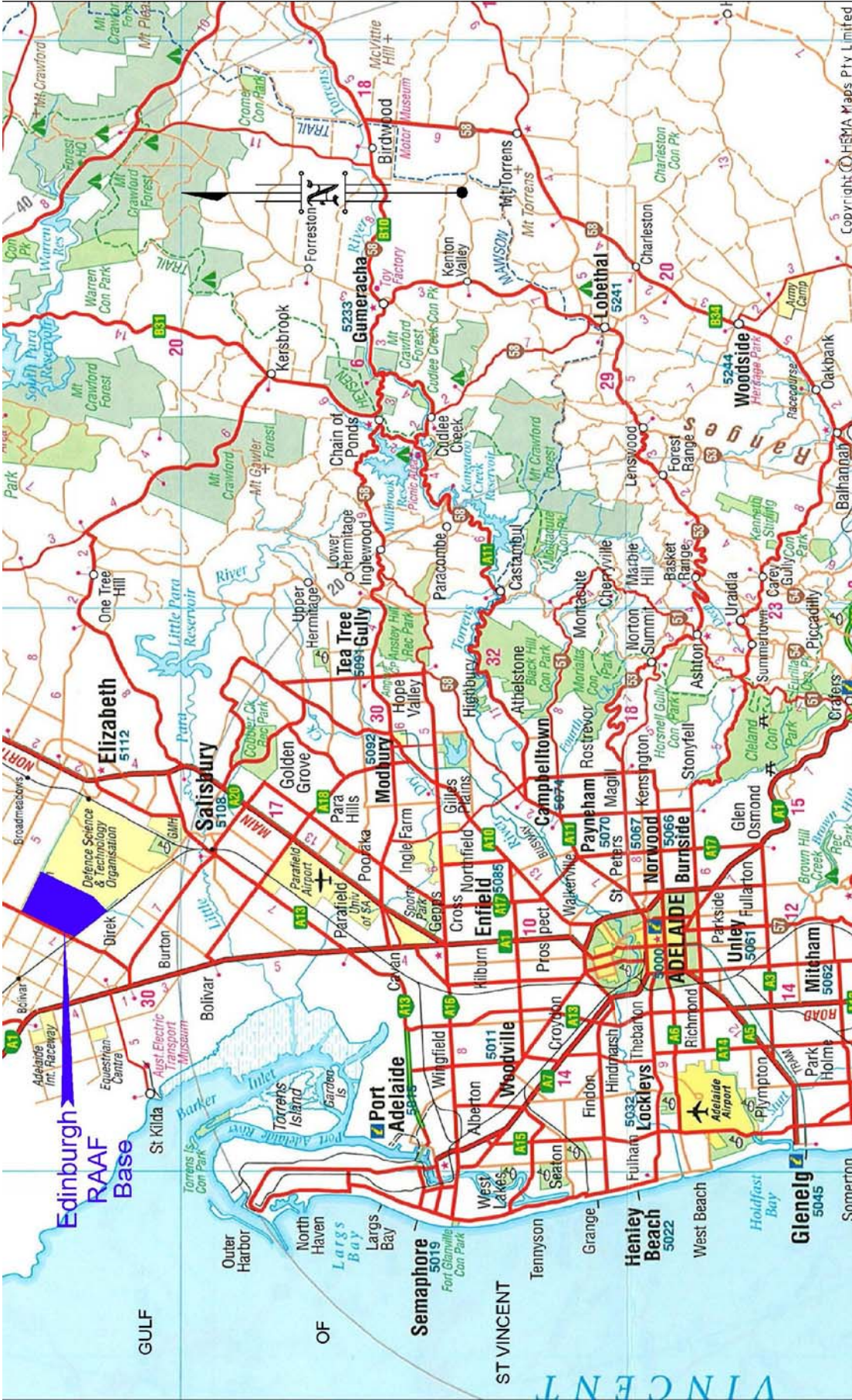
AIR MOVEMENTS FACILITIES
ELEVATIONS



- LEGEND:**
- PROPOSED APRON
 - EXISTING AREA
 - PROPOSED FLOODLIGHT

RAAF BASE DARWIN
C17 - AIRLIFT FACILITIES

MILITARY HARDSTAND (MHS) APRON
PROPOSED AIRCRAFT PARKING LAYOUT



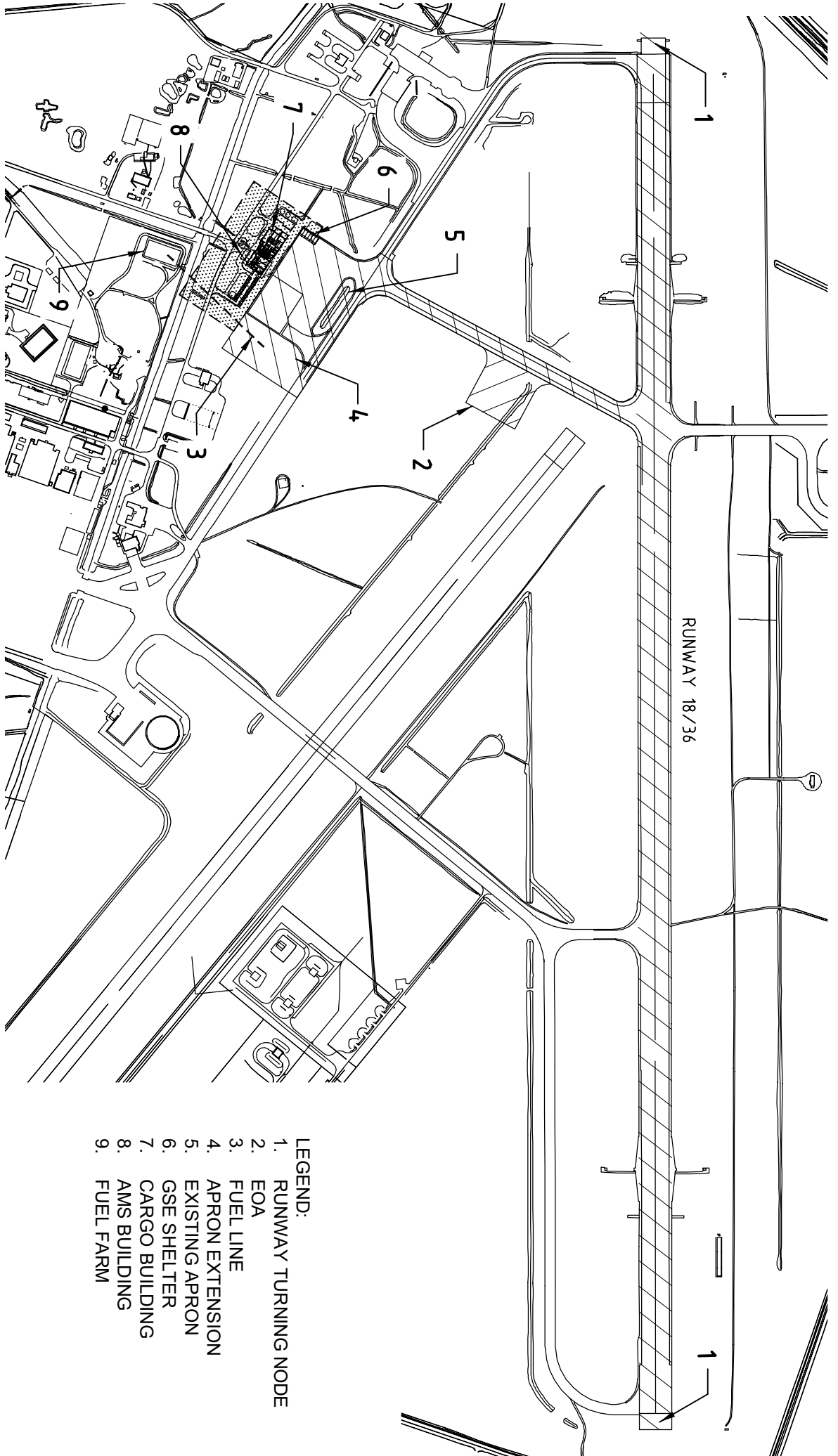
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C-17 FACILITIES

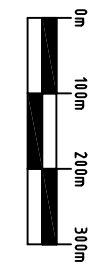
RAAF BASE EDINBURGH





- LEGEND:
- 1. RUNWAY TURNING NODE
 - 2. EOA
 - 3. FUEL LINE
 - 4. APRON EXTENSION
 - 5. EXISTING APRON
 - 6. GSE SHELTER
 - 7. CARGO BUILDING
 - 8. AMS BUILDING
 - 9. FUEL FARM

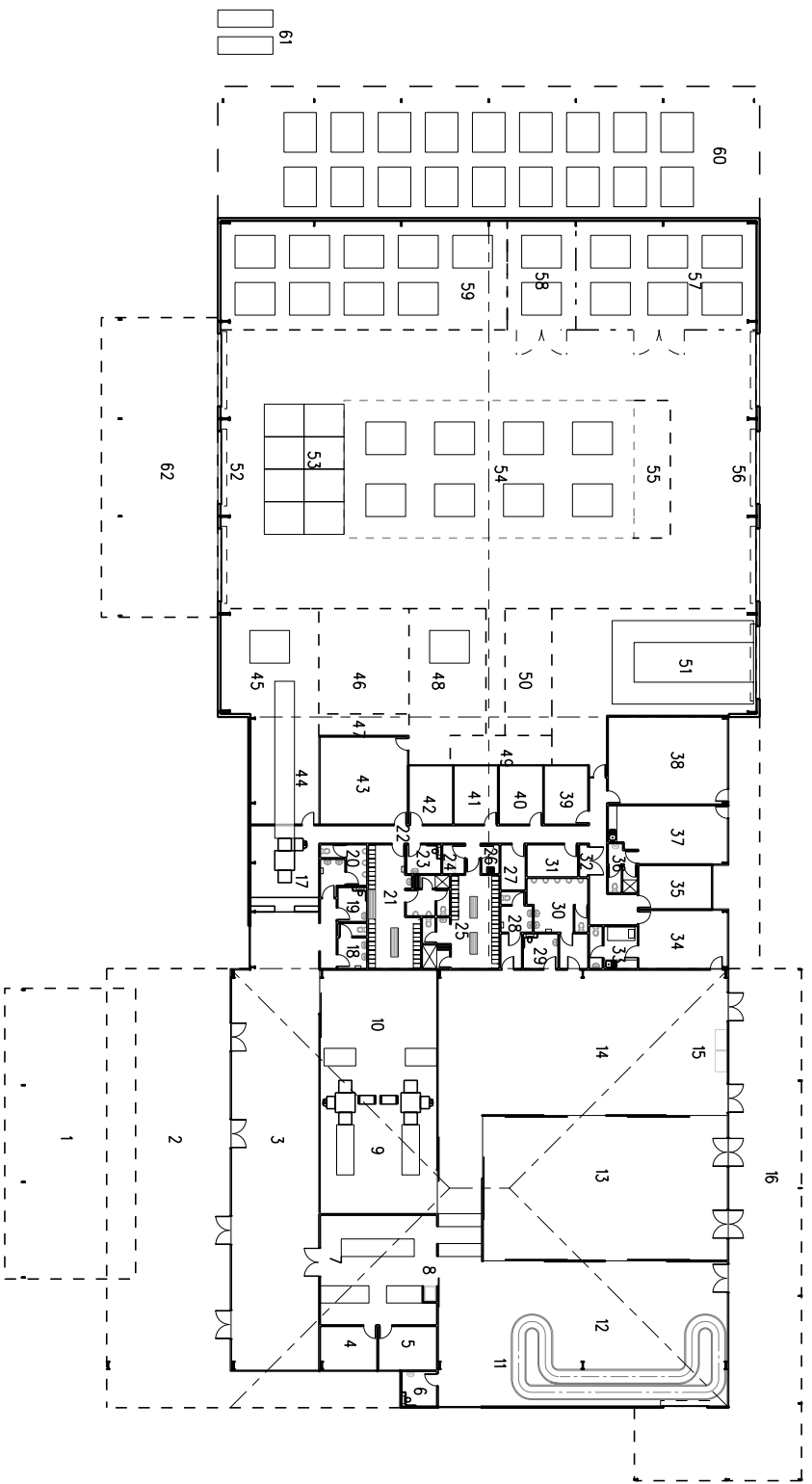
RAAF BASE EDINBURGH
C17-AIRLIFT FACILITIES



AIR MOVEMENTS FACILITIES
PRECINCT PLAN

LEGEND

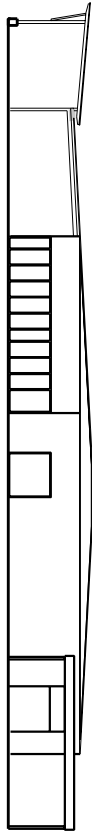
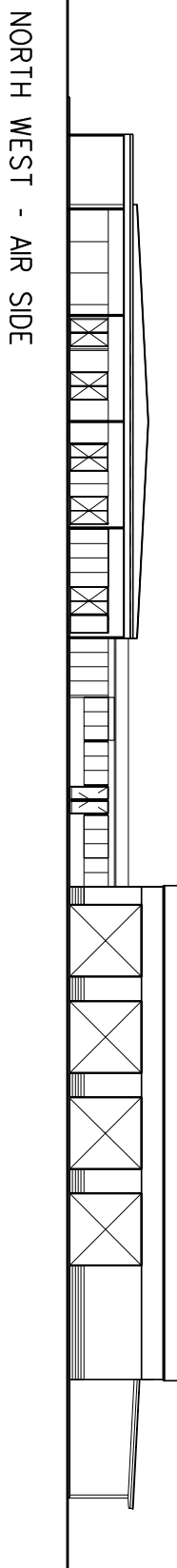
- 1. DROP OFF SHELTER
- 2. UNSECURE SHELTER
- 3. UNSECURE AREA
- 4. AOS
- 5. ACS
- 6. SECURE PWD
- 7. PROCESSING
- 8. BOOT WASH
- 9. PAY SECURITY
- 10. SECURITY CHECK
- 11. BAGGAGE RECLAIM
- 12. SECURE ARRIVALS
- 13. MULTIFUNCTION AREA
- 14. SECURE DEPARTURES
- 15. IN-FLIGHT MEALS
- 16. ARRIVAL SHELTER
- 17. CHECK IN
- 18. UNSECURE FEMALE AMENITIES
- 19. UNSECURE PWD
- 20. UNSECURE MALE AMENITIES
- 21. OFFICE / CARGO FEMALE AMENITIES
- 22. CORRIDOR
- 23. OFFICE / CARGO PWD
- 24. LAUNDRY
- 25. OFFICE / CARGO MALE AMENITIES
- 26. CLEANER
- 27. STORE
- 28. SECURE FEMALE AMENITIES
- 29. SECURE PWD
- 30. SECURE MALE AMENITIES
- 31. COMMS
- 32. ELECTRICAL
- 33. VIP AMENITIES
- 34. VIP / MEETING
- 35. OIC
- 36. FLIGHT PLANNING AMENITIES
- 37. FLIGHT PLANNING
- 38. LOAD CONTROL
- 39. W/O OPS
- 40. ZIC
- 41. DAMO
- 42. TRAINING
- 43. TRAINING / LUNCH
- 44. BAGGAGE CONVEYOR
- 45. PALLET PIT
- 46. BAGGAGE HANDLING
- 47. EQUIPMENT
- 48. PALLET PIT
- 49. EQUIPMENT
- 50. PERSONAL DEPLOYMENT KIT
- 51. TRIPLE MARRIED PALLET STAND
- 52. CARGO TRACKING LAND SIDE
- 53. STORES RECEIPT / BREAKDOWN
- 54. PALLET'S BEING BUILT
- 55. PALLET STORE
- 56. CARGO TRACKING AIR SIDE
- 57. BOND STORE
- 58. V & A STORE
- 59. BUILT PALLET STORE
- 60. EXTERNAL STORAGE
- 61. NEW AXLE WEIGH BRIDGE
- 62. COVERED UNLOADING AREA



RAAF BASE EDINBURGH
C17-AIRLIFT FACILITIES

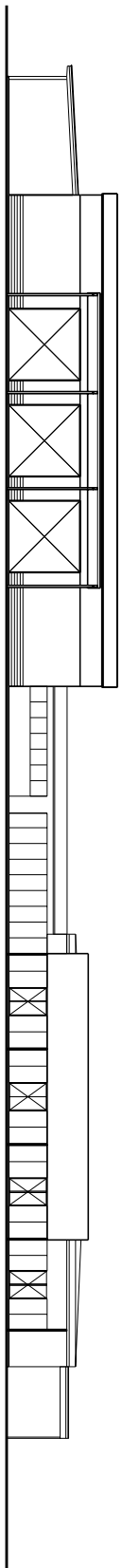


AIR MOVEMENTS FACILITIES
PLAN

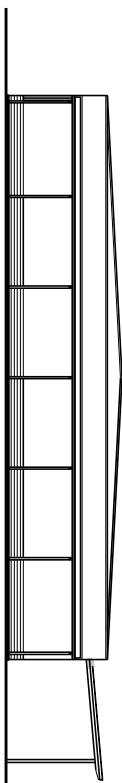


NORTH EAST - LAND SIDE

SOUTH WEST - LAND SIDE

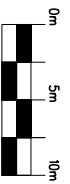


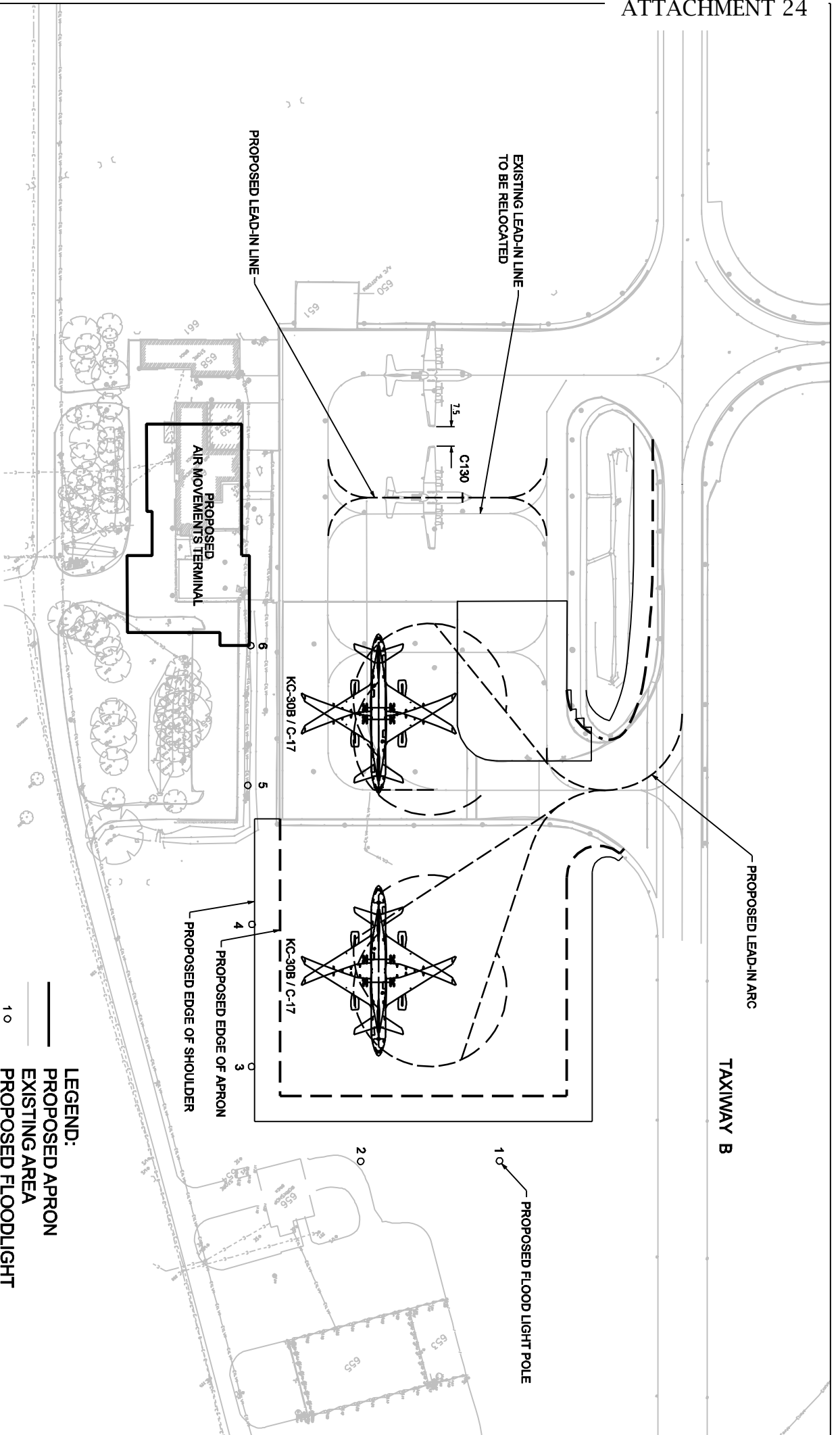
SOUTH EAST - LAND SIDE



RAAF BASE EDINBURGH
C17-AIRLIFT FACILITIES

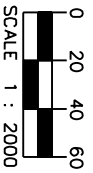
AIR MOVEMENTS FACILITIES
ELEVATIONS





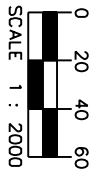
- LEGEND:**
- PROPOSED APRON
 - EXISTING AREA
 - 1 ○ PROPOSED FLOODLIGHT

RAAF BASE EDINBURGH
C17 - AIRLIFT FACILITIES

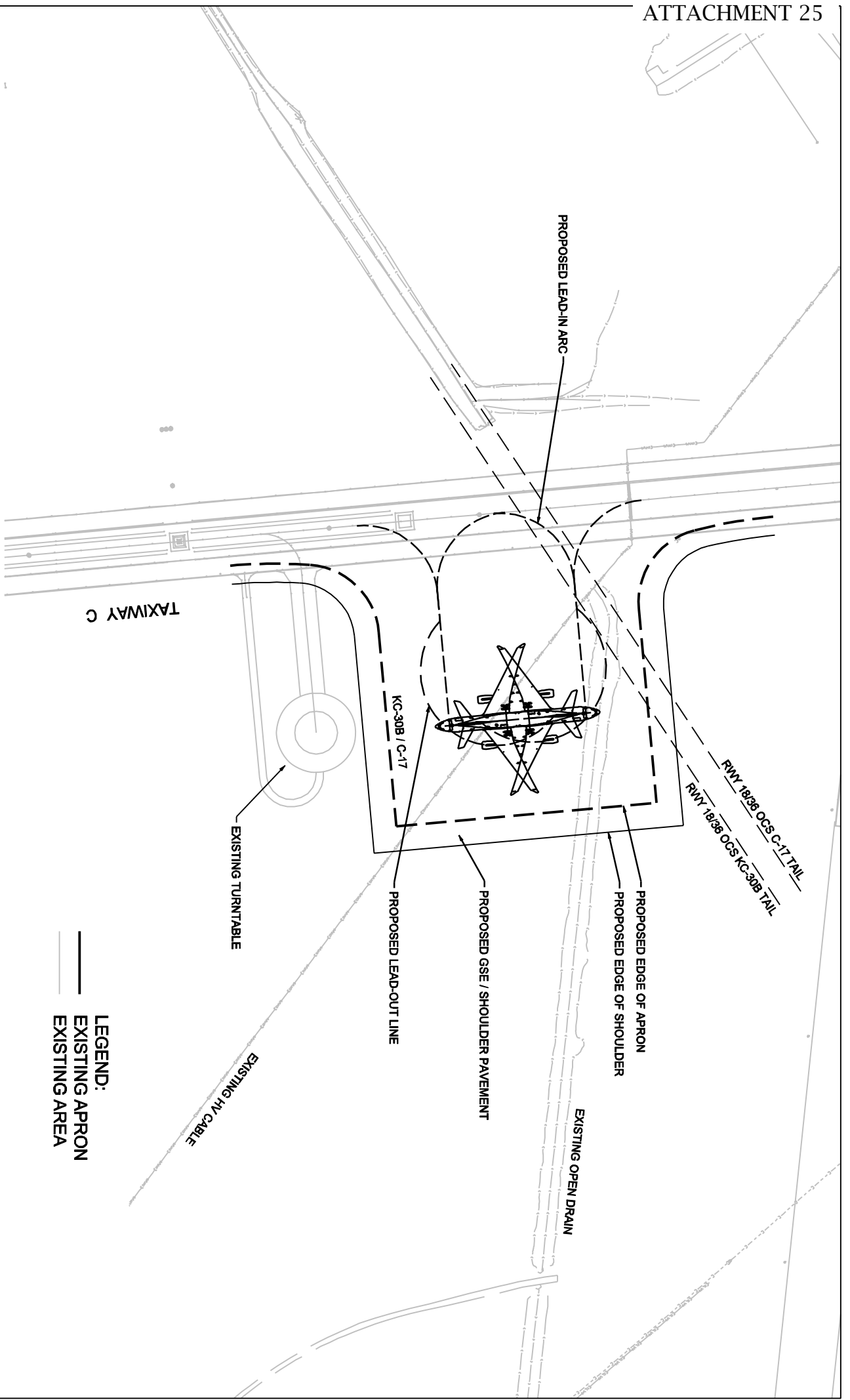


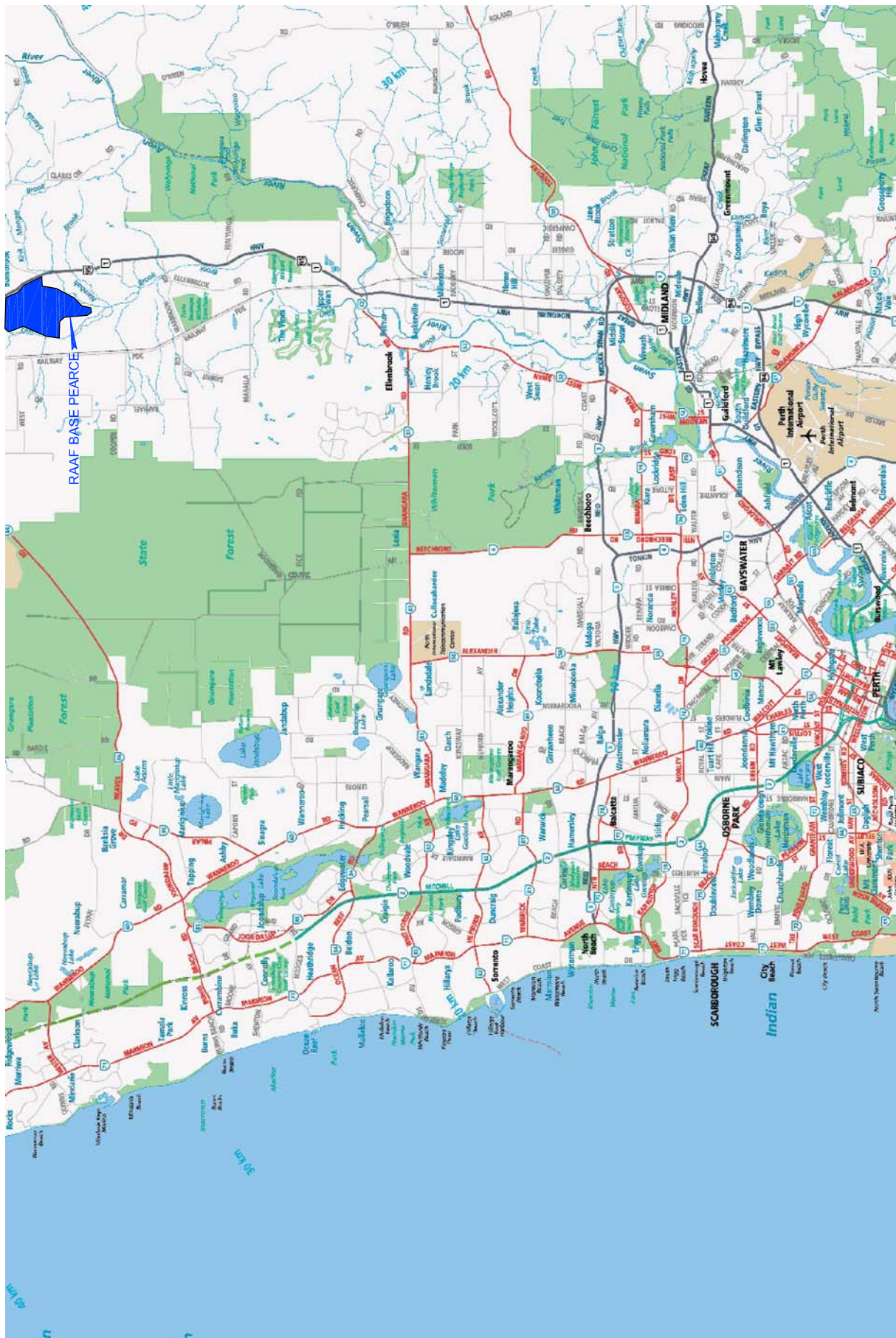
AIR MOVEMENTS SECTION (AMS) APRON
PROPOSED AIRCRAFT PARKING LAYOUT

RAAF BASE EDINBURGH C-17 - AIRLIFT FACILITIES



EXPLOSIVE ORDNANCE APRON (EOA) PROPOSED AIRCRAFT PARKING LAYOUT





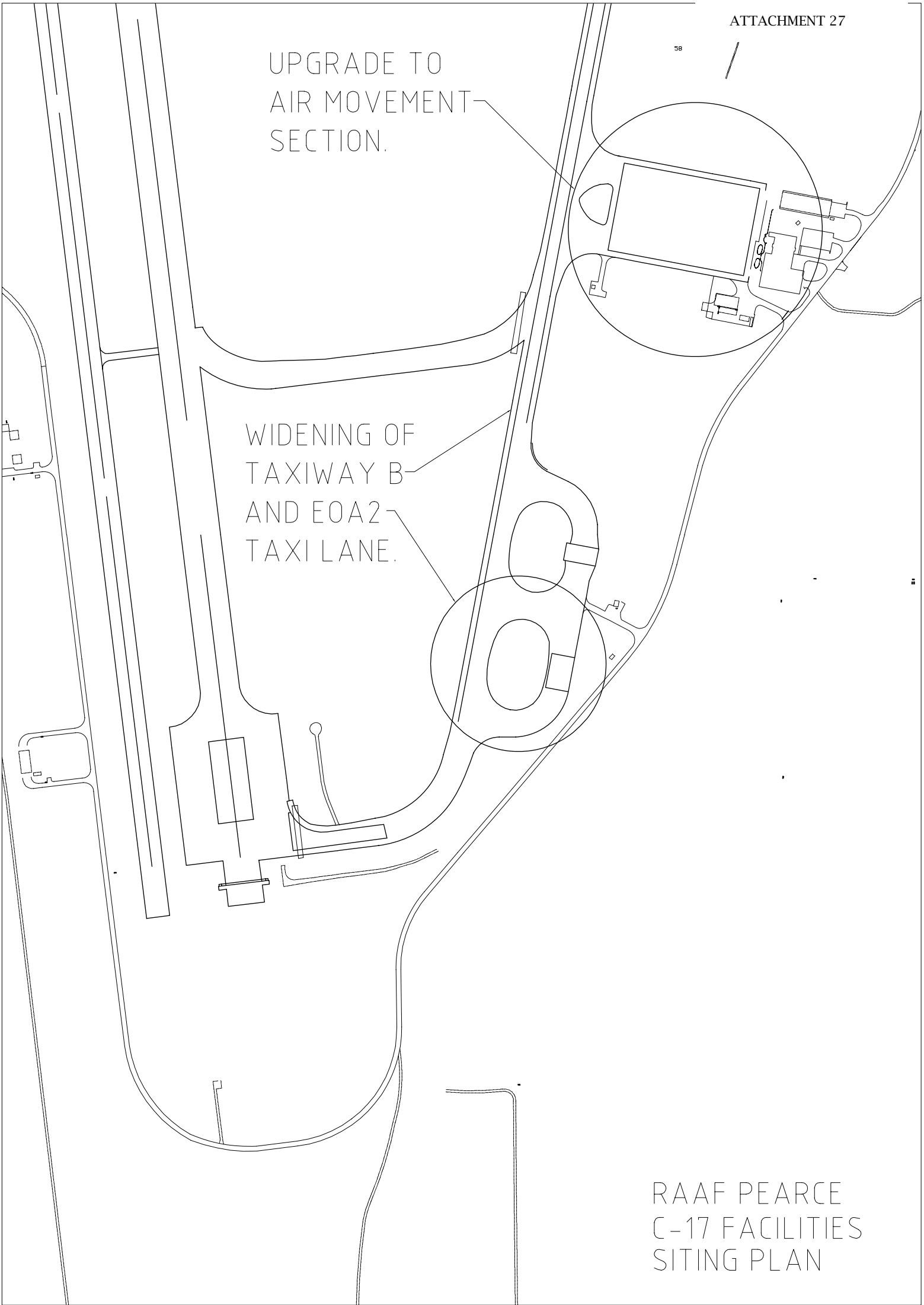
C-17 FACILITIES

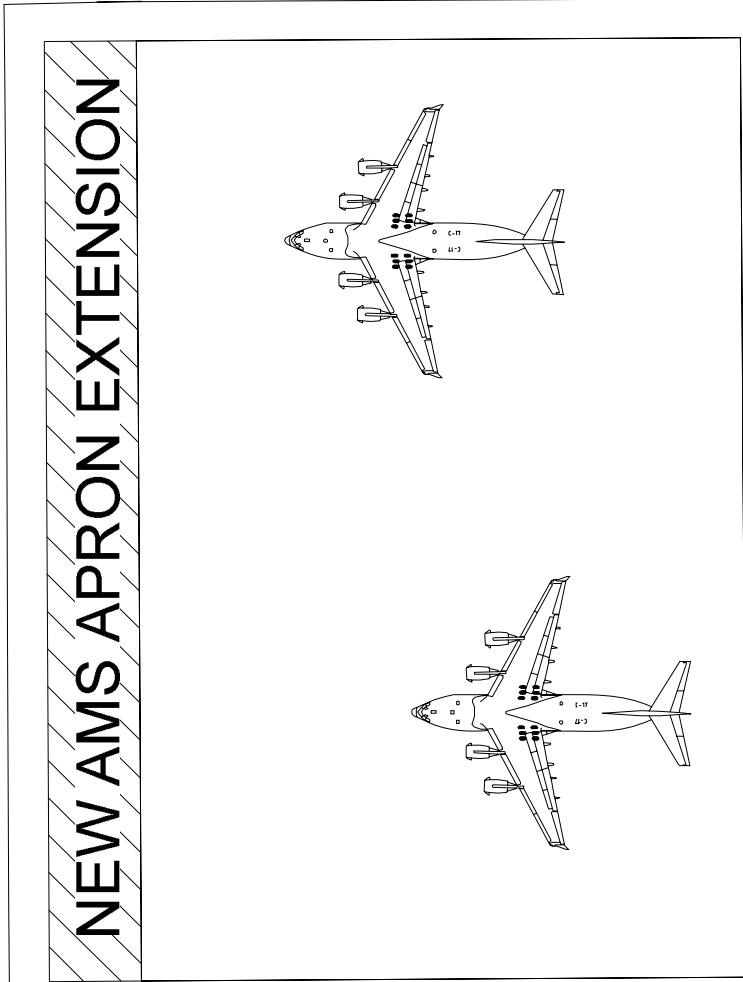
RAAF BASE PEARCE

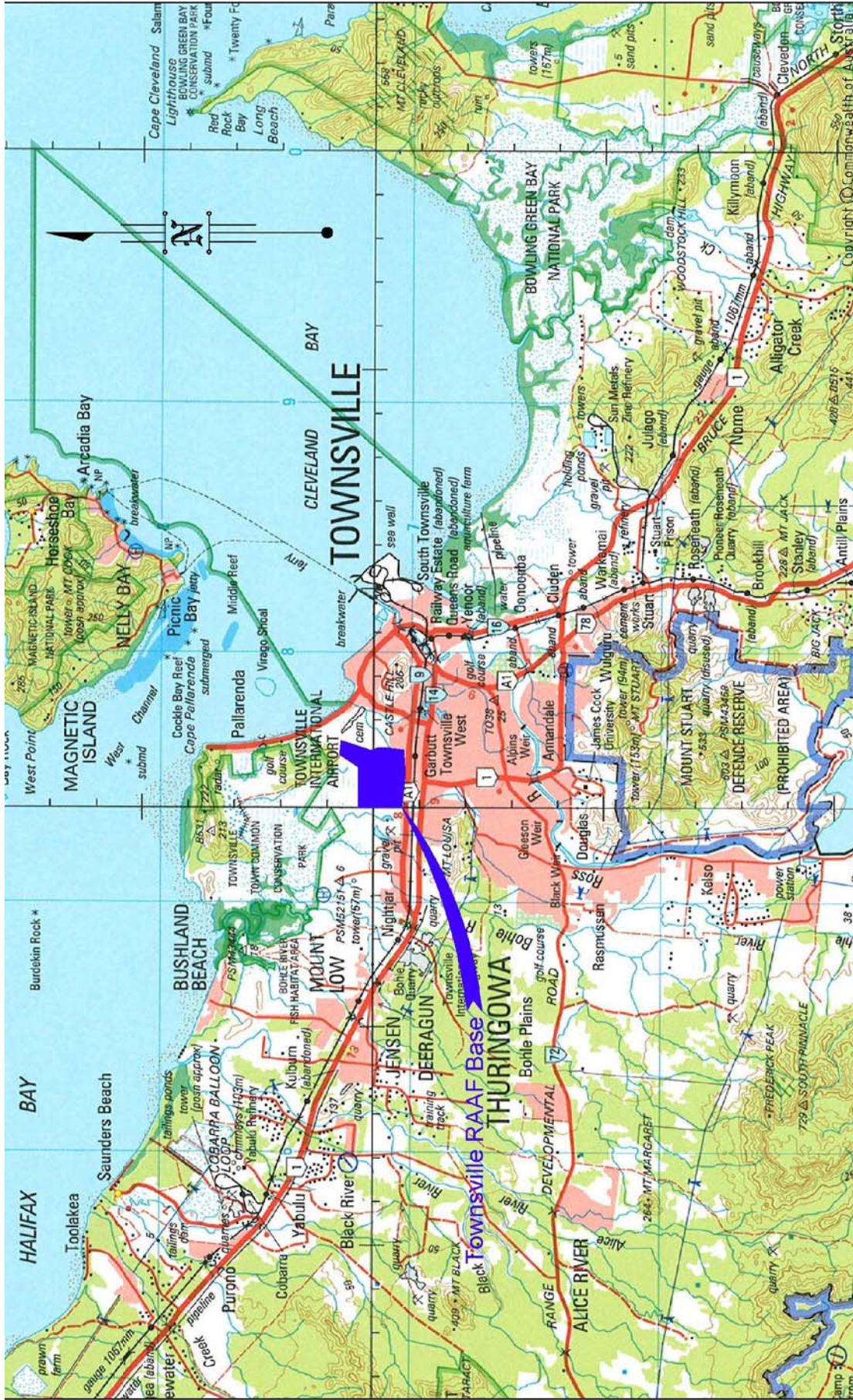
UPGRADE TO
AIR MOVEMENT
SECTION.

WIDENING OF
TAXIWAY B
AND EOA2
TAXI LANE.

RAAF PEARCE
C-17 FACILITIES
SITING PLAN

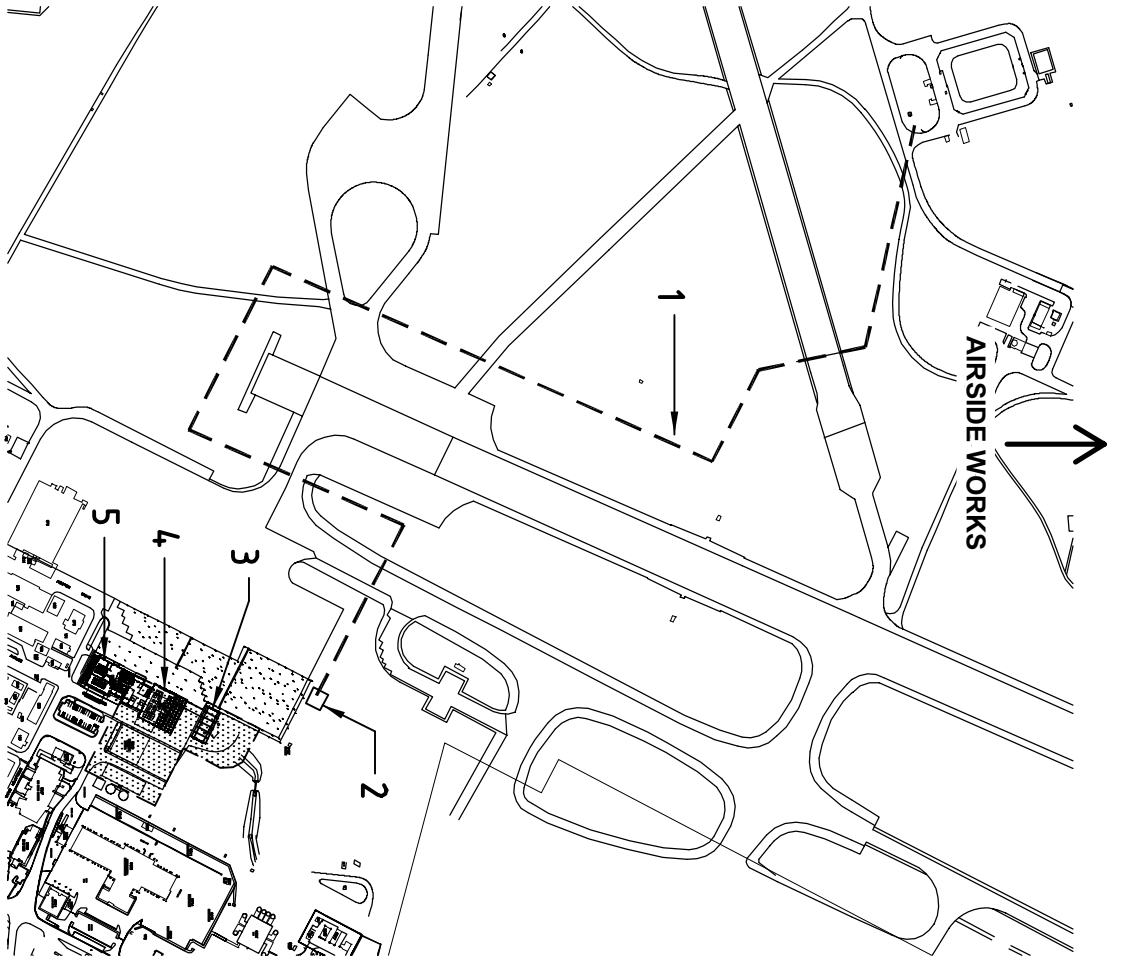






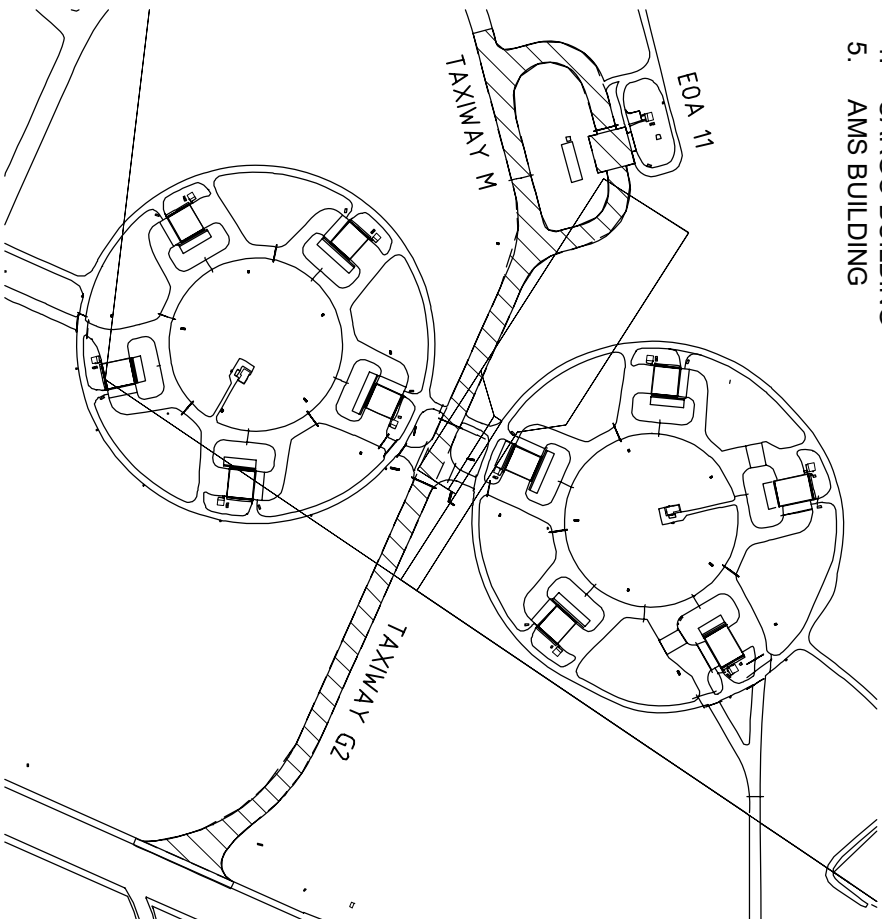
C-17 FACILITIES

RAAF BASE TOWNSVILLE



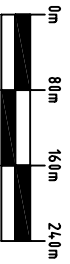
NON-AIRSIDE WORKS

- LEGEND:
1. FUEL LINE
 2. VALVE PIT
 3. GSE SHELTER
 4. CARGO BUILDING
 5. AMS BUILDING

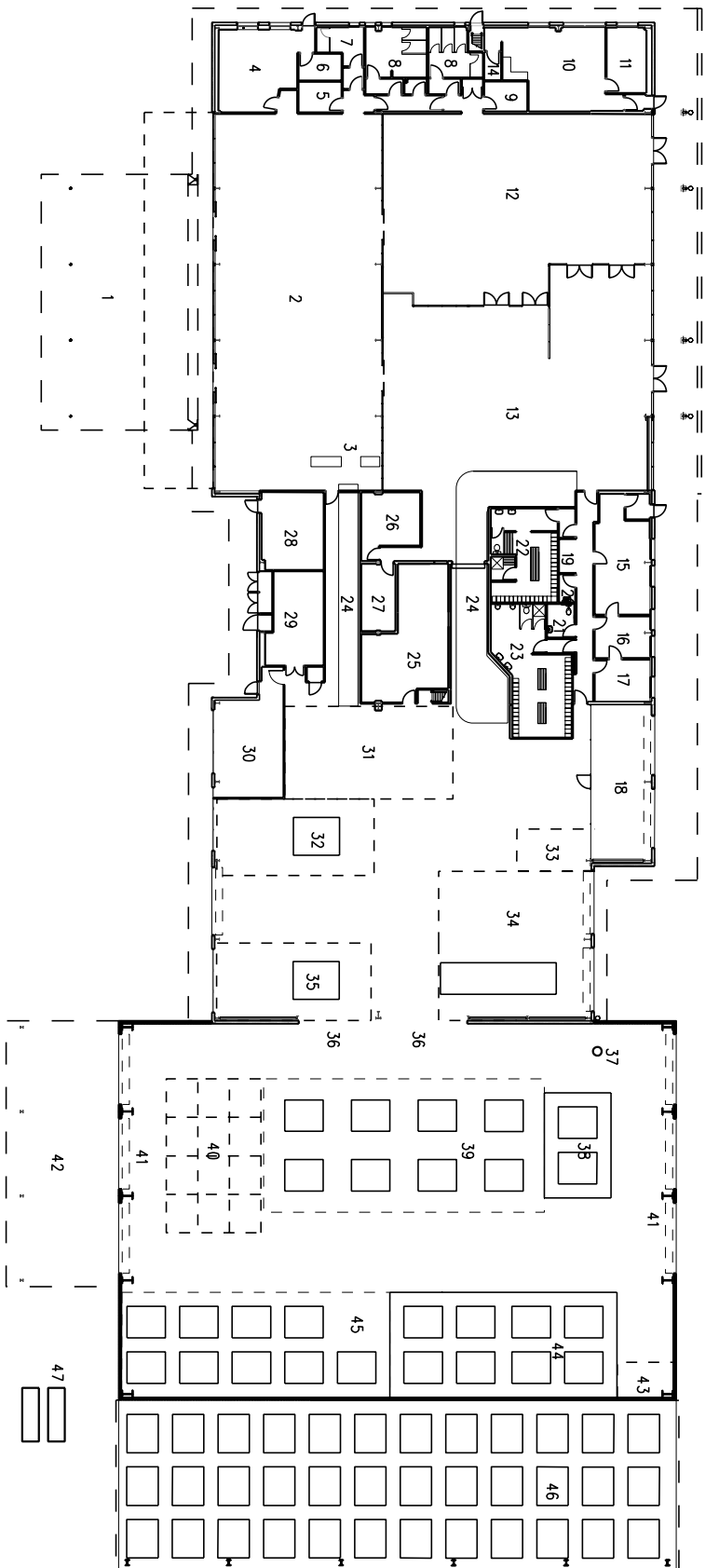


AIRSIDE WORKS

RAAF BASE TOWNSVILLE
C17- AIRLIFT FACILITIES



AIR MOVEMENTS FACILITIES
PRECINCT PLAN



LEGEND

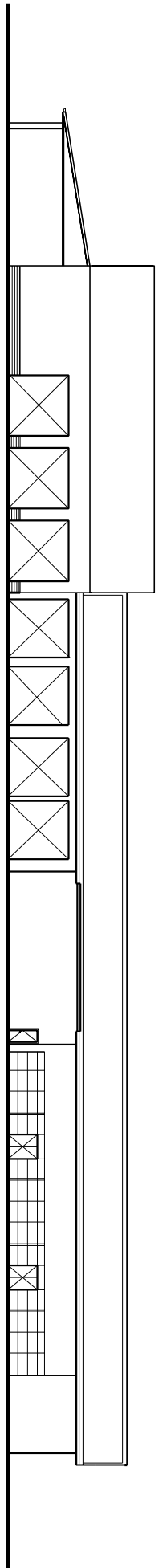
- 1. DROP OFF SHELTER
- 2. EXISTING UNSECURE AREA
- 3. EXISTING CHECK IN COUNTER
- 4. EXISTING VIP
- 5. EXISTING UNSECURE PWD
- 6. EXISTING VIP AMENITIES
- 7. EXISTING UNSECURE AMENITIES
- 8. EXISTING SECURE AMENITIES
- 9. EXISTING SECURE PWD
- 10. EXISTING FLIGHT PLANNING
- 11. EXISTING CREW
- 12. EXISTING SECURE DEPARTURES
- 13. EXISTING SECURE ARRIVALS
- 14. EXISTING WC
- 15. EXISTING OPS TRAINING
- 16. EXISTING 2IC
- 17. EXISTING OIC
- 18. PERSONAL DEPLOYMENT KIT
- 19. LAUNDRY
- 20. CLEANER
- 21. OFFICE / CARGO PWD
- 22. NEW OFFICE / CARGO FEMALE AMENITIES
- 23. NEW OFFICE / CARGO MALE AMENITIES
- 24. EXISTING BAGGAGE
- 25. NEW LOAD CONTROL
- 26. CUSTOMS
- 27. AOIS
- 28. COMMS ROOM
- 29. EXISTING E2 KIT ROOM
- 30. NEW LUNCH ROOM
- 31. BAGGAGE HANDLING
- 32. NEW PALLET PIT
- 33. NEW PALLET STORE
- 34. EXISTING TRIPLE MARRIED PALLET STAND
- 35. EXISTING PALLET PIT
- 36. NEW OPENING
- 37. NEW SLIDING DOOR
- 38. V & A
- 39. PALLET BUILD BREAKDOWN
- 40. 2IC
- 41. CARGO TRACKING
- 42. NEW CARGO SHELTER
- 43. EQUIPMENT
- 44. BOND STORE
- 45. BUILT PALLET STORAGE
- 46. NEW COVERED EXTERNAL STORAGE
- 47. AXLE WEIGHBRIDGE

RAAF BASE TOWNSVILLE
C17-AIRLIFT FACILITIES

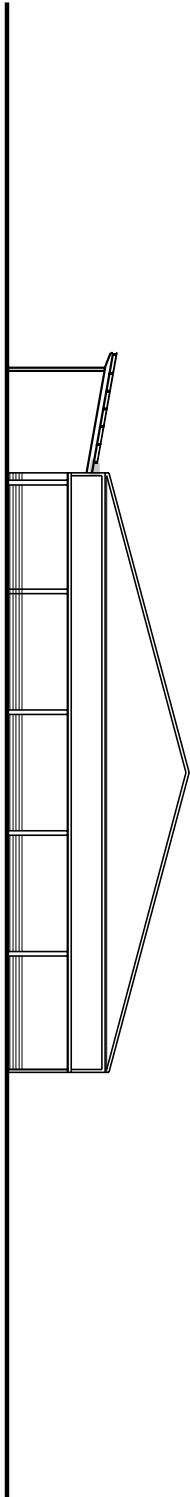


AIR MOVEMENTS FACILITIES
PLAN

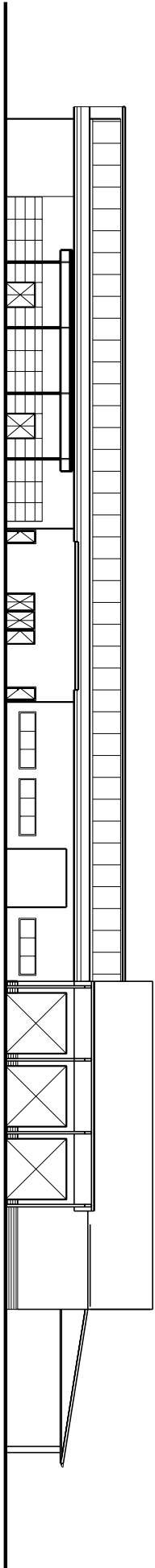
NORTH - AIR SIDE



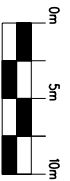
WEST - LAND SIDE



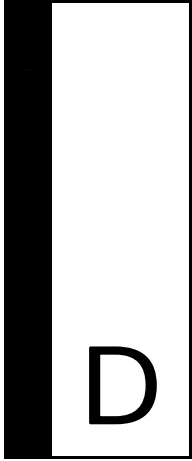
SOUTH - LAND SIDE



RAAF BASE TOWNSVILLE
C17-AIRLIFT FACILITIES



AIR MOVEMENTS FACILITIES
ELEVATIONS



Appendix D – Official Transcript of
Evidence



COMMONWEALTH OF AUSTRALIA

Official Committee Hansard

JOINT COMMITTEE ON PUBLIC WORKS

Reference: C17 heavy airlift infrastructure project

TUESDAY, 24 JULY 2007

IPSWICH

BY AUTHORITY OF THE PARLIAMENT

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The Internet address is: **<http://www.aph.gov.au/hansard>**

To search the parliamentary database, go to:
<http://parlinfoweb.aph.gov.au>

**JOINT STATUTORY COMMITTEE ON
PUBLIC WORKS**

Tuesday, 24 July 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: Senator Parry, Mr Forrest and Mrs Moylan

Terms of reference for the inquiry:

To inquire into and report on:

C-17 Heavy Air Lift Infrastructure Project

WITNESSES

**GRICE, Brigadier William Alfred, Director General, Infrastructure Asset Development Branch,
Department of Defence 1**

**MARTIN, Group Captain Gary James, Director, C17 Transition Team, Airlift Group,
Department of Defence 1**

MUNDT, Mr Laurie Edward, Business Development Manager, Ipswich City Council 12

**OLESEN, Mr Benjamin Peter, Project Director, Infrastructure Asset Development Branch,
Department of Defence 1**

**PISASALE, Councillor Charlie, Councillor, Division 8 and Chair, Arts, Community and
Cultural Services, Ipswich City Council 12**

PISASALE, Councillor Paul John, Mayor of the City of Ipswich, Ipswich City Council..... 12

**RINAUDO, Mr Michael Aubrey, Business Group Manager and Project Director for Project
Manager/Contract Administrator, C17 Project, GHD Pty Ltd..... 1**

WARD, Group Captain John, Base Redevelopment Project Officer, Royal Australian Air Force 1

Committee met at 2.55 pm

GRICE, Brigadier William Alfred, Director General, Infrastructure Asset Development Branch, Department of Defence

MARTIN, Group Captain Gary James, Director, C17 Transition Team, Airlift Group, Department of Defence

OLESEN, Mr Benjamin Peter, Project Director, Infrastructure Asset Development Branch, Department of Defence

RINAUDO, Mr Michael Aubrey, Business Group Manager and Project Director for Project Manager/Contract Administrator, C17 Project, GHD Pty Ltd

WARD, Group Captain John, Base Redevelopment Project Officer, Royal Australian Air Force

CHAIR (Mrs Moylan)—I declare open this public hearing into the proposed C17 heavy airlift infrastructure project. This project was referred to the Public Works Committee on 31 May 2007 for consideration and report to parliament. In accordance with subsection 17(3) of the Public Works Committee Act 1969, which concerns the examination 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 and evidence from the Department of Defence, and the committee will now hear evidence from the Department of Defence and from the Shire of Ipswich—we will hear from both Councillor Pisasale and Mayor Pisasale—related to RAAF Base Amberley redevelopment stage 3.

I now call on representatives of the Department of Defence. I remind the officers that you have all been sworn in at the private hearing and that that continues; I do not think there are any new witnesses to be sworn in. So welcome, and thank you once again for meeting with us today and for facilitating the committee's inspection of the site. Is there anything any of you would like to add about the capacity in which you appear today?

Group Capt. Ward—I am the representative for Base Commander, Amberley.

CHAIR—Thank you. The committee has received a statement of evidence and five supplementary submissions from Defence. These will be made available in a volume of submissions for the inquiry and they will also be available on the committee's website. I understand Defence has a small amendment to make to its original submission. Would you read that into the *Hansard* record, Brigadier Grice.

Brig. Grice—Thank you. It is with regard to paragraph 23 in the evidence, with respect to the project location. I think we need to be a bit more specific about the project locations in that, so we would like the existing paragraph 23 to be deleted and replaced with the following text.

The location of the proposed works is within the existing base boundaries of RAAF Base Amberley in Queensland, RAAF Base Darwin in the Northern Territory, RAAF Base Edinburgh in South Australia, RAAF Base Pearce in Western Australia and RAAF Base Townsville in Queensland. RAAF Base Amberley is located approximately eight kilometres west of the city of Ipswich at the western edge of the Brisbane metropolitan area. RAAF Base Darwin is located approximately 6½ kilometres north-east of Darwin's central business district. RAAF Base Edinburgh is located approximately 30 kilometres north of Adelaide, in the Edinburgh Defence Precinct. RAAF Base Pearce is located adjacent to the town of Bullsbrook, north of Perth. RAAF Base Townsville is located approximately seven kilometres from Townsville's central business district. The location plans for each base are shown in the evidence at attachment 1 for RAAF Base Amberley, attachment 15 for RAAF Base Darwin, attachment 20 for RAAF Base Edinburgh, attachment 26 for RAAF Base Pearce and attachment 31 for RAAF Base Townsville.

CHAIR—Thank you. I will now invite you, Brigadier Grice, to make a brief opening statement before we go to questions.

Brig. Grice—Thank you, Madam Chair. The new C17 aircraft provide Australia with a new global airlift capability, which will significantly enhance the Australian Defence Force's ability to support national and international operations and major disaster, rescue and relief efforts. This proposal seeks approval of the essential facilities and infrastructure required to support the introduction and operation of the C17 heavy airlift aircraft in Australia. This proposal includes facilities, airfield pavements and infrastructure at the home base, RAAF Base Amberley, and deployment bases in Darwin, Edinburgh, Pearce and Townsville. No. 36 Squadron operate the C17 aircraft and they relocated to Amberley from RAAF Base Richmond in late 2006 prior to the arrival of the first aircraft in December 2006. The second aircraft arrived in May 2007 and the remaining two aircraft are due in February and March 2008. No. 36 Squadron are currently operating out of interim facilities at Amberley which are not suitable for permanent working accommodation. This project will construct the necessary working, logistics, training and maintenance accommodation at RAAF Base Amberley to enable the squadron to effectively support the ongoing operation of the aircraft.

The existing cargo facilities at the home base and supporting deployment bases were designed primarily to support the RAAF C130 Hercules aircraft and they have insufficient capacity to handle the increased loads to be carried by the C17. This project proposes to either construct new or expand the capacity of existing terminals and cargo preparation facilities at each of the five sites. The increased aircraft weight, dimensions and fuel and cargo capacity require an

investment in airfield pavements at Amberley and the four deployment bases. This project will construct the necessary new airfield pavements, including aircraft parking aprons and the widening and strengthening of taxiways and explosive ordinance aprons to allow effective operation of the aircraft at each of the five airfields.

The estimated out-turn cost of this proposal is \$268.2 million and this includes the construction cost, management and design fees, furniture, fittings and equipment, and contingency and escalation allowances. Subject to parliamentary clearance, Defence intends to commence construction works in early 2008 and complete the works by 2011. That completes the opening statement and we are ready to answer questions from members of the committee.

Senator PARRY—Brigadier, you indicated that options were looked at for potentially expanding each of the five bases. Was any other greenfield site looked at as an alternative to Amberley?

Brig. Grice—No other greenfield site was looked at. RAAF Base Amberley was chosen as the home base. Group Captain Gary Martin might be able to provide a little bit more information on that. There is substantial infrastructure in place at Amberley which led to a decision to base the aircraft here. That included the prior decision to base the home base of the Multi-Role Transport Tanker aircraft here, which gave us the opportunity for both airframes to co-use a hangar which was being built under Amberley stage 2 for the MRTT aircraft. If we had located the home base elsewhere we would have been up for the expense of a hangar at that home base, so there were substantial savings to the Commonwealth through basing the aircraft here at RAAF Base Amberley. Group Captain Martin, would you like to add anything to that?

Group Capt. Martin—Yes. Further to the fact of not having to add a hangar to our facilities was the fact that the aircraft obviously, with the weights that it is taking out, requires longer runways than is available at Richmond, because of the airspace, and there is an inability to extend the facilities at Richmond. As such, Amberley was behoved to be the best place that we could go and, because stores for the Department of Defence and government are stored across the east coast of Australia, it would not put the aircraft too far north in places such as Townsville or Darwin, which would make the collection of items that it is carrying for the customers another cost driver as against a cost saver.

Senator PARRY—We noted in evidence earlier today for the stage 3 development, which is separate to this, that infrastructure issues were met with local authorities. Are there any additional infrastructure issues that the C17 facility has which impact upon the external reticulated water or sewerage?

Brig. Grice—The engineering services—no. The trunk services that were proposed and have been put in place as a result of the Amberley stage 2 project were designed to provide capacity to cope with the C17 and also provide spare capacity for future developments over the 30-year life of the infrastructure put in place under Amberley stage 2, should it be required. So no additional base-wide infrastructure will be required to support the C17, apart from the connection of the new facilities to the trunking services in the area of the flight-line precinct.

Senator PARRY—As it is unique that we are doing two hearings in one day concerning infrastructure in particular, does the same situation apply to power? I asked this question this morning, but I would like to get it on the record in this particular hearing.

Brig. Grice—Yes, it applies to power as well as water, communications, infrastructure, sewerage—the whole range of engineering services.

Senator PARRY—As far as the actual hangar that will be utilised as part of an existing public works approved project is concerned, are any modifications required for this project?

Brig. Grice—I will ask Mr Olesen to provide a more detailed answer. Prior to construction of the hangar, we were able to make a small number of changes to the design of some of the elements of the MRTT hangar at very limited cost. Those changes were made prior to the construction of the hangar, so that has resulted in very little additional cost to the Commonwealth.

Mr Olesen—Essentially, the docking situation for the KC30B, or the MRTT, aircraft was a fixed solution. We got in very early in the piece. The docking was one of the last things to be installed. It is not yet in the hangar; it is still being designed. We switched that to an underwing removable system that swings down and out of the way, so that the low-slung wings come over the top. That was the only change. There was very little to do. We moved a few services in the floor, again, during the design phase, rather than physically going out and ripping up the new concrete. It is hard for us to put an exact price on it, but we would say that there is an upper estimate of maybe \$75,000, with very small implications, for cost or program.

Brig. Grice—The removable stands are there to get access to the aircraft when it comes in for maintenance. The original design for the MRTT would mean that they would be in there permanently and that the aircraft would come in and go up to them. The redesign means that they are not fixed but can be moved out of the way so that the C17 aircraft can come into the hangar without hitting them.

Mr FORREST—Will the tail fit?

Brig. Grice—Yes.

Mr FORREST—I remember the helicopters.

Senator PARRY—In relation to future development on the site, if you end up with, say, double the number of aircraft that are currently proposed, would that require an additional hangar? If so, has design on the base sufficiently provided for an additional hangar in the future?

Brig. Grice—I will ask Mr Olesen to talk about the aircraft parking arrangements and maintenance.

Mr Olesen—We are extending the existing MRTT apron. It is a direct extension. It has saved us a considerable amount of pavement because we will use one common taxi lane between the eight parking positions. Realistically, that is as big as the apron can get without a break. We need to put in some lighting, power and services. There is master planned space to provide additional

apron parking positions. With the additional concrete apron parking positions come sufficient airside real estate for any particular structure you might want to put in place.

Senator PARRY—Which could include another hangar.

Mr Olesen—And regarding apron hydrant refuelling, we took a conservative approach to running a separate hydrant line back to the fuel farm, so we have two independent loops, and that allows us to extend that hydrant at very little cost in due course. We put the isolation valves outside the concrete. It would be a simple exercise to come back later and move them if we need to.

Senator PARRY—That is good. We are keen to see future planning taken into account rather than coming back seeking large sums of money all the time for these expansions.

CHAIR—As Senator Perry has just said, we canvassed a lot of the important issues with regard to ongoing developments, at Amberley in particular, earlier today in the hearing with regard to the stage 3 redevelopment of Amberley base, and they included of course some of the water issues, environmental issues, energy use and so on. I think that most of those apply to the C17 project that we are looking at this afternoon. I suppose that brings me to the question of why you would not have presented these as one project rather than two. I am sure there is a good answer, but I think that we should have that answer on the public record.

Brig. Grice—It is to do with the timing of the proposals. Amberley redevelopment stage 3 has been in development for about 2½ years. This project was programmed in the major capital facilities program seven or eight years ago and its development has occurred as a matter of course. The rapid acquisition of the C17—the decision by government announced in March 2006 to rapidly acquire the four C17 aircraft—meant that Infrastructure Asset Development Branch were given a hot potato. We were given a situation where we had to develop this project in a short time so that we could expedite the delivery of first the interim and then the permanent facilities to adequately support the new capabilities. So it was a matter of timing. Two-and-a-half years ago, when we started Amberley stage 3, we did not know that this project would come along, and we have reacted in a 12-month time frame, from being given this project in May 2006 until referral to the committee in May 2007 and this subsequent hearing. We were able to catch up and expedite our development so that we could refer the C17 project at the same time as we referred the Amberley stage 3 redevelopment project so that we could at least take advantage of having you in the one spot on the one day and reduce your travel.

CHAIR—Has this precluded you from perhaps making efficiencies by appointing one tenderer and so on? Can you explain how that is going to work and the efficiency of the project in the way that you have structured it?

Brig. Grice—I will pass to Mr Olesen to give a bit more detail, but first I will say this. Because the majority of the elements in the Amberley stage 3 redevelopment project are in greenfield sites away from the sensitive area of the flight line, we have been able to design those elements and they will be delivered as a series of head contracts. The C17 facilities are on the flight line and their construction includes major construction on the active airfield with taxiways and parking aprons. This meant that the appropriate method of development delivery for that, so that we did not interfere with the ongoing operation of the airstrip, was for us to take a managing

contractor approach. So the project methodology that we used for the Amberley stage 3 redevelopment was not ideal or optimal for the delivery of this project. There would have been very limited economies to be made if we had done both at the same time. They were different projects and different delivery methods were optimal.

CHAIR—Can you therefore see any problems in delivering these projects concurrently?

Brig. Grice—No. Maybe Mr Olesen could talk about the expenditure we expect to achieve and our prior experience with Amberley stage 2.

Mr Olesen—Sure. Last year on Amberley stage 2 we spent in the order of \$155 million in the financial year in running three separate projects, essentially, under one umbrella. We do not expect next year or the year after to be any different.

The site tour today may have been confusing, given the extent of works we had to look at, but the C17 scope of works is distinctly separate from the remaining stage 3 scope and has a distinctly different risk profile to the Amberley stage 3 scope. Notwithstanding that, this was \$600 million worth of work into one market, and one series of design consultants for 12 months, and it has been documented very quickly. It has all the biggest guys in town and their whole office involved. To try to put that down and rationalise the number of consultants would have increased Defence's risk profile exponentially with regard to the quality of the documentation. So this is the lowest-risk approach for us.

CHAIR—I am sure that other committee members will join me in thanking you for the way in which the inspection was structured today because it did make our job easier. As I say, we have three days of hearings on three entirely different projects of some complexity, so we appreciate the assistance that has been given to help the committee get across the important details in this particular project, given its complexities. Mr Forrest?

Mr FORREST—With the two projects today, that is half a billion dollars, and if you add stage 2 for Amberley, which I think you said was worth \$665 million. How much of that gets into the community here at Ipswich?

Mr Olesen—It is difficult to measure that. We look at the local Ipswich area and the Brisbane area, and the Gold Coast market, which gets involved as well. We have some numbers which managing contractors looked at for involvement, and we suspect that within the 30-kilometre radius you would get most of the expenditure back into the market. We get a range—from very small through to very large national subcontractors. It is quite a large mix. Maybe Brigadier Grice would like to say more?

Brig. Grice—No.

Mr FORREST—I want to ask some questions about the integrity of the base until these works are done. I am a bit concerned because this is a heavier aircraft and I am wondering about the capacity of the existing taxiway pavements, and the runway itself, to bear its weight. Have you been able to make an assessment of that? And I hope that any such contingencies are included in the estimates.

Brig. Grice—I might pass to Gary after this, but you will recall that, in Amberley stage 2, with the Multi-Role Tanker Transport aircraft, there was some strengthening of a section of the main taxiway. We are using that section of the taxiway at the moment for the C17 to exit the runway into a very confined area to park the aircraft. Gary, you may want to talk about that operation. So Amberley stage 2 and the works for MRTT provided some work to enable us to commence operations and get the aircraft off the runway onto the apron. Gary?

Group Capt. Martin—Thanks, Brigadier. During the last six months we have been operating the aircraft out of a variety of airfields here in Australia—primarily its home base and its future deployment bases which it will be taking its main customers from—through a variety of weights, and working with the engineering analysis people as to what we can take the aircraft up to on those runways. Various findings have been made. We have been operating at normal C17 maximum all-up operating weights at Amberley, Darwin, Pearce and Townsville, and we have assessed the strength at Edinburgh where we know we will have to use a lower weight until that airfield is improved by the Air 7000 project in turn, which is what they are planning for an aircraft replacement for the P3. That is just on the runways.

As to the taxiways: again, what we have included in the taxiway developments in between Amberley and the deployment bases takes care of the C17 and also the KC30B; it actually allows a KC30B to operate both on a civil and on a military side. Previously, the KC30B aircraft was restricted in some airfields operating on the civilian side. We have now made that a much easier operation, including with that underground hydrant refuelling as well. So, overall, our concept is to provide facilities and, because the KC30B and the C17 are very similar in their loading patterns, although the C17 is slightly lighter on its wheels in comparison, we have been able to structure the airfield accordingly, to support our heavy airlift and all other aircraft underneath at all of the airfields.

Mr FORREST—What if an aircraft is returning from a deployment somewhere and it is excessively loaded but it has to go to a base—in the interim, until you have strengthened everything?

Group Capt. Martin—At this stage, if, for instance, we are doing a redeployment of Australian forces from overseas, the way that AQIS and Customs are handling those forces is that we bring them into the main airfields—primarily Darwin, to the north, which is structured for 747 capability—and we Customs-clear them there, et cetera. Then we fly, with a relevant fuel load in the aircraft to get us down to a minor base, as it is now, to offload that equipment and again take off out of there in a light configuration. It is the same for a deployment, just using the reverse sequence. We will go out heavy with equipment but, again, balance that with a lower fuel weight; we will position ourselves at a northern airfield, where we can load the aircraft up with a fuel load to go internationally, and then conduct our activities further on.

Mr FORREST—There has to be a bit of management in the interim; are pilots well-briefed on where they are allowed to taxi and where they are not?

Group Capt. Martin—Yes. We already have charts out there. We have worked with the engineering infrastructure division on this, and our tasking authorities are well aware of it. It goes right back into the paperwork planning of deployment moves for our forces or if we have to do relief aid at very short notice. We have already got that advertised out at our tasking

agencies—the maximum weights that we can accept with an aircraft empty; fuel loads for ranges, and then balancing it out with loads. We have put that in place in the last six months.

Mr FORREST—I am asking the question because I had the Deputy Prime Minister fly into one of my electorate airports and I leant on the airport engineer. He has never forgiven me; it left ruts in the bitumen pavement! I have a couple of questions and, again, I am catching up because I did not attend the inspection and missed most of the earlier hearing, so this might be just my own ignorance at not being better briefed. The working accommodation housing No. 36 Squadron is not suitable for its purpose. Is this going to be included in stage 3? I forget which part of the evidence it comes from.

Brig. Grice—Are we talking about the interim accommodation?

Mr FORREST—Yes.

Brig. Grice—No. 36 Squadron were flying C130s out of Richmond and then were redesignated to fly the C17 and came to Amberley in about October or November last year. In order to accommodate them, we did an early works package of about \$5.9 million to provide some ground support equipment shelters, flight line tool storage and that type of thing. We refurbished an existing heritage building in the flight line to provide accommodation for the administrative and logistics staffs. We squeezed into No. 6 Squadron a portion of their facility, where we renovated and housed the command and operational planning elements. It was all done on an interim basis so that the aircraft and the squadron—at reduced capacity with reduced numbers, because not all the aircraft are in yet—could operate in the interim until we built the new facilities. They are in substandard facilities but able to operate the aircraft. We are on a tight time line to deliver the permanent facilities so that, after all of the aircraft arrive and the squadron builds up to its full capacity, it is able to provide the full capability.

Mr FORREST—Is that included in stage 3?

Brig. Grice—No. All of the facilities for 36 Squadron are included in this proposal, except for the interim, which we delivered last year.

Mr FORREST—I am just anxious that we approved expenditure and we may well have wasted it because it could have been done a different way.

Brig. Grice—We try not to do that, Mr Forrest.

Mr FORREST—It is a similar thing with the proposed headquarters building. If there were only one building, would this not deliver economies of scale? Why isn't it being tackled that way?

Brig. Grice—Are you talking about the interim accommodation?

Mr FORREST—No, I am talking about the headquarters facility.

CHAIR—If I can clarify, there are two: one is element 6, the new headquarters combat support group, and then there is the C17A aircraft maintenance and logistics. I think that is what Mr Forrest was referring to.

Brig. Grice—They are separate units.

Mr Olesen—Combat support group provides expeditionary airfields, health and security type capabilities. That is in stage 3. It is a completely separate group to the C17 No. 36 Squadron people. We have rationalised 36 Squadron's requirements as best as possible to get them into very large building footprints rather than having 15 small buildings around the site. That is seen in the design as to where we are at the moment. We have co-located warehousing and maintenance functions—they have a similar roofline and work well together in a building. The office accommodation building has all their maintainers, flight crews, headquarters and tool store, again all under the same roof.

Mr FORREST—My last question is about master planning. Your job must be a nightmare given that you have already stated that there was not a lot of notice for the deployment of this new aircraft. I am looking for some assurances that not just for Amberley but for all of our bases there is some sort of master plan and we do not go and spend a whole lot of money and three or four years later have to rip it up or replace it or make it stronger. How on earth do you do your master planning and still come in here and say, 'We weren't ready for the deployment of this aircraft'?

Brig. Grice—Last year we were in the process of developing the master plan for Amberley. There was an inkling that something might be happening, so during our process we started looking forward. We looked into the Defence Capability Plan and looked at all of the capabilities that may come online for aircraft that may operate out of Amberley or be home based at Amberley for the next 30 years that are being procured over the life of the 2007 to 2017 Defence Capability Plan.

Then we got together with people from the capability development executive, the Defence Materiel Organisation, the Air Force—the people who operate the airframes—the people who maintain the base here at Amberley, the defence support regional representatives and landlords who are responsible for these facilities, and all of the users of all of the units that are currently on base. We held a series of master planning meetings over a five or six month period to come up with the base master plan—a zone precinct plan—for Amberley for the next 30 years. That plan was approved in November last year by the defence infrastructure subcommittee and is extant on Amberley at the moment. Once we became aware of the C17, we injected it into our planning. We are confident that the zone and precinct master plan that we have for Amberley is suitable for what we envisage happening here in the next 30 years. For each of the other deployment bases, the project conducted a similar exercise. On some of those bases there is a current master plan. On some of them there is a master plan in draft form that is being updated. The works that we are providing at the deployment bases reflect the intent of the plans that are in place.

Mr FORREST—If it is for 30 years you must be building some strength capacity into those taxiways beyond what is needed for this aircraft, because obviously in 30 years they are going to be bigger and better.

Brig. Grice—The life of this type of aircraft is 20 to 30 years, so the upgrades that we are making now—the airframes that are being purchased now—will be in service for the next 20 to 30 years. The design that we have to cope with the airframes that we know will be coming here will be able to provide us with the facilities we need as we go forward.

Mr FORREST—How would you liken the capacity of the taxiway to its capacity to take a 747? How does it rate?

Brig. Grice—We might let Mr Rinaudo talk about that, but the MRTT—the Multi-Role Tanker Transport—is basically an A380, which is a commercial aircraft. Mr Rinaudo may want to give more information about the pavement strengths.

Mr Rinaudo—Each airfield has a plan of the strengths of each of the pieces of pavement, whether it be the runway, the taxiways or the aprons. That is under a pavement classification number system. Amberley has different zones with capability for aircraft, and the runway is capable up to a code E aircraft. Not only does the KC30B aircraft fit within that; so does the 747 aircraft. So there are two bits. The first piece is on pavement strength. This plan shows areas where they can go or where they can go with some dispensation—for example, ‘so many operations in a year’—but there are also the physical wing-tip clearance constraints or physical requirements as well. Amberley meets the physical requirements also.

Mr FORREST—Is that for 30 years? That is what they said about Tullamarine, but they have just added another four metres on either side.

Mr Rinaudo—The most important piece of an airfield is the airside-landside interface—the line that exists so that you can construct in certain areas and not constrain the operation of your airfield. That is what has happened at Amberley and what generally happens on all airport master plans.

CHAIR—Brigadier Grice, just as we concluded the hearing into redevelopment stage 3, a couple of members of the public approached myself and the secretary about the facilities that have in the past been shared between Defence and the community such as kindergarten facilities, which I think are attached to the existing school, and the shared use of the post office. Would you like to make a comment about that? Although it is not specific to this hearing, I think that it covers the overall redevelopment on the base.

Brig. Grice—Those facilities are facilities where there is a lease in place between the entity and the Defence Support Group. They are managed by the south-east Queensland region of the Defence Support Group. Defence base and regional representatives have had initial consultations with some of those groups, and the indication from Defence is that, by the time the Amberley redevelopment project is complete, they should make arrangements to go into facilities off base. I spoke to the ladies from the kindergarten myself and they were very concerned about the lack of information. I undertook to get back to the head of the national operations division and inform her of the concerns. If she and her people arrange a series of briefings for those three or four small groups that use those facilities on a lease basis to give them a common understanding of the development project and what the future might be for them, the project made a commitment that we would come along and brief as well.

It is a change from the way business has been conducted in the past. The situation has changed in the last several years, but I am sure Defence will look at each situation on its merits and be is flexible as possible to be able to help with any transition that occurs.

CHAIR—I understand our next witnesses have arrived. We may recall Defence.

[3.32 pm]

MUNDT, Mr Laurie Edward, Business Development Manager, Ipswich City Council

PISASALE, Councillor Charlie, Councillor, Division 8 and Chair, Arts, Community and Cultural Services, Ipswich City Council

PISASALE, Councillor Paul John, Mayor of the City of Ipswich, Ipswich City Council

Witnesses were sworn or affirmed—

CHAIR—We welcome you to this hearing and thank you for taking the time to make a submission to the committee. Do you have any comments to make on the capacity in which you appear?

Councillor P Pisasale—I am the mayor of the city and am appearing on behalf of the community and acknowledging our support for the development of the base.

CHAIR—The committee has received two submissions—one from Mayor Paul Pisasale and one from Councillor Charlie Pisasale—to the proposed C17 heavy airlift infrastructure project. Do you wish to make any amendments to the submissions?

Councillor P Pisasale—Just a further statement, Madam Chair, if I may.

CHAIR—Yes, please. We invite you to make a brief statement, and then we will go to questions.

Councillor P Pisasale—Thank you for the opportunity to come here. On behalf of the city, I think it is a crucial. The City of Ipswich and our family friends at RAAF Base Amberley have always played a vital role in working together. We have always seen the base as a vital part of the city, but we also see it as a vital part of the defence of Australia. As mayor, I cannot remember the last time I had a complaint about the RAAF base. We have developed a really good relationship. We see it as more than flying aeroplanes; we see it as part of our P&Cs and sporting organisations, and something that plays an active role in our community. On Thursday I will be flying to Townsville, like I did at Puckapunyal and Randwick, and I would like to table the information that we are giving to all the defence people who have been visiting our city and who will be coming to make sure they feel part of our community. It is important for the personnel to feel part of a community before coming here.

Our point of view is to acknowledge not only the economic role but, as I stated, the social role. We acknowledge the town-planning commitment we have made as a city with regard to the five-kilometre buffer zone to protect the investment by the Commonwealth in the base. We understand that sometimes noise and people do not mix and that unless we get the proper zoning around the defence base it will be no good for either party. So we have put those things in place. It is also important to acknowledge that we are developing industries around the defence base which relate to aerospace.

The other thing is that we acknowledge the support that we put into the families that are coming—the spouses and the children—to make sure they feel welcome as well. We understand the upheavals that are caused when a family has to uproot itself on a regular basis, so as a city we have an affinity and want to develop that relationship. I think it is important, as the mayor, to recognise that and, as I stated to the committee, to recognise our commitment to working in partnership with not only the contractors but also the families that are coming and the existing families.

I am happy to take any questions. I did bring along some gifts from the city to say welcome. It is a pin on which we acknowledge the partnership of the base. It has the Ipswich flag flying and the Australian flag, which commemorates the Defence Force. We call it our ‘pride pin’, which shows the pride we have in our country and the pride we have as a city. It is not really a gift.

CHAIR—I am sure the committee members will be pleased to receive the pride pin of the Ipswich City Council. Thank you. Councillor, did you want to make some comments?

Councillor C Pisasale—Yes, thank you. Again, thank you for this opportunity to express our support. I certainly support what the mayor said. I mentioned before that I am the councillor for division 8, which takes in Base Amberley, and I am very proud to say that. I also have an electoral office, which is located in Leichhardt and is geographically right next door to RAAF Base Amberley—overlooking the base, actually. As well as living there for 39 years, my electoral office is in Leichhardt as well, so I am basically next door and can handle face-on the alleged complaints that one may get about aircraft noise. Luckily, as the mayor touched on, they are very few and far between. So when you look at it city-wise, you will see it is certainly not an issue as far as we are concerned.

I will expand on that a little bit further. The mayor touched on the support for and relationships we have with Base Amberley. They are very strong. It breaks down the so-called wall between defence and the city. We integrate really well with base personnel. We are kept informed and we keep them informed of what is happening—it is a two-way street. It is a great relationship in which we share information, and that is critical in building that relationship up. Again, we recognise that we are not talking just about people in uniforms. We know that they are people with families and that they have kids who need to have education, as well as everything else they need. We are totally supportive of that city-wide. I am trying to say that we totally support this development at Base Amberley. I hope that is helpful.

CHAIR—I am sure that my colleagues would join with me in saying how pleased we are to hear about the good relationship. I come from an electorate that has the Pearce airbase within it and, from personal experience, we know that Defence not only do a good job in defending the country but also play a role in the community. We have similar experiences and our council is also very supportive, so we are pleased to hear about the good relationship here.

Councillor P Pisasale—Could I put on record that they are not just my and Councillor Charlie Pisasale’s views but the views of the entire council that we bring here today, and they are very aware that we are here. It is the unanimous view of council.

CHAIR—We appreciate you letting us know that. It is good to see that both parties take pride in good relations with the community.

Councillor P Pisasale—Last week, Defence Housing had a conference and I was their guest speaker. We and all the other parts of Defence make sure of a smooth transition, especially with getting housing right and getting the viability for the families right. We have come to work very closely with the Defence family. We know what they go through and the pressures they are under, especially with overseas deployment. While the spouse is away, we have to support the spouse that is left here. We are very aware of the support we have to supply.

CHAIR—I am sure that Defence appreciates that and that the Commonwealth appreciates the attitude of council. Thank you. There is an issue that we have discussed in depth during these hearings, particularly in the earlier hearing on the stage 3 development. We flew here and we could see that the country is very dry. Clearly, we are aware of a lot of publicity about water issues in Queensland, as there has been in other parts of the country. Committee members would be particularly interested to hear from you on whether you feel that the arrangements that have been made are satisfactory and that all that can be done is being done to make sure that there is maximum conservation and retention of water for use on the base, perhaps taking some of the pressure off. We heard from Ipswich Water. They seemed to be satisfied, but it would be good to hear from council on that.

Councillor P Pisasale—That is a good question and it has been asked at an appropriate time because this morning I was with the Premier and the Deputy Premier—

CHAIR—It is nice to see the rain.

Councillor P Pisasale—Yes. I was with the Premier and the Deputy Premier, and today we put together the final stages for the link that will go from the Bundamba water treatment plant to Swanbank. That link that will be commissioned in the next four weeks will actually use 20 million megalitres of water, which is really the usage for the city—and that is about four weeks in advance. The infrastructure that the state government has put in with regard to pressure on the use of recycled water has been tremendous, plus our own conservation measures that we built within the community here, such as rainwater tanks, are in place. The second thing is the desalination plant. All those things are on-line. I spoke to the Premier this morning and he has no problem with regard to what we are feeling. The only other thing that we would like to see, regarding some of the infrastructure that is built at the base, is that it links in with the community rather than having separate infrastructure. I know that there are some discussions with regard to the sewage treatment plants—

CHAIR—Yes, we understand that to be the case.

Councillor P Pisasale—and the water. We are very keen to work together. I also know that the Premier has taken over some of the control especially on water. He spoke to me about it this morning. He wants to make sure that we are unified so that there is no wastage. Rather than having Ipswich water, Noosa water and Caboolture water, there will be a more combined amalgamation of the resources of water; it will not be mine and yours. Whether you are Defence or a local authority, it will be everybody working together in the best interests of south-east Queensland.

Mr FORREST—You said 20 million megalitres. Did you mean 20 megalitres?

Councillor P Pisasale—Yes, 20 megalitres; not 20 million megalitres.

CHAIR—I was pleased to see that Defence have taken measures to save somewhere around 10 per cent of the water used on the base through recapturing water and are putting in water tanks and reservoirs.

Councillor P Pisasale—Also, some of the work with regard to the infrastructure that the base is putting in, in working with water, will mean that some of the infrastructure capital works that council wants to put in in some of those areas will assist council and help to assist the community, so there will be a better partnership all round and that will save everybody some money.

CHAIR—Good. Thank you.

Councillor C Pisasale—On that point, we are also working with projects on site, where they do not have to use the potable water. We are utilising, say, recycled water for some of the road projects and what have you. So we are already doing that on the base.

Senator PARRY—What was the main purpose for wanting the base to link in more with Ipswich Water? What is the main benefit to council?

Councillor P Pisasale—The main benefit to council is that if you guys are building some infrastructure out there and we have to build infrastructure in the Walloon area then it is better to link in together as it will save both of us money. It means that we can accelerate some of our housing projects, which means that we can work with Defence Housing. The needs of Defence Housing in this area are going to grow and grow. We want to make sure that that housing is not all in the same pocket. We want to make sure that it is integrated throughout the whole community—that is the feeling that we are getting from defence families—and also for investment properties. I think we need to work in partnership rather than separately.

Mr FORREST—It is always encouraging to hear evidence of a good working relationship with Defence. We appreciate that. I want to tease out what the key is to that. Obviously it has taken a lot of work from both sides, but are there any special things that you have been able to do?

Councillor P Pisasale—Look at some of the ads that we have been running—we were the first to take out ads. When I first got elected in 1991 there were a lot of complaints coming in and we started a program called ‘Defence: more than flying planes’. People did not realise that the base was out there and Ipswich was here. It was like there was a picket fence between the two areas. The first thing we did to take away the picket fence was to start some awards. They were not for the ranking officers but the junior officers who played a role in the community. So we had our yearly awards.

We came up with a \$10 note with what looked like an F111 on it to show people that the sound of freedom also has an economic benefit of \$70 million to the community—so people could see that flow of dollars. We have family day welcomes where we invite the whole community. We portray the whole family so that it is not us and them anymore—it is Ipswich family. It is really funny now: occasionally you will see a person write a letter to the paper

complaining about the noise. I do not have to do anything, because there is such a blast from the whole community that the bloke nearly has to leave town. They do not miss them, and people are not game to complain.

I did suggest to somebody who had only been in town for two months and complained about the noise—that was about three years ago—that they should shift. The base has been there for a significant time. What we have done is as simple as this: you work with the silent majority rather than the vocal minority. Sometimes the vocal minority gets a say that really snowballs. We have been able to educate the community. We have had freedom of the city here. We support a lot of the young people in the air cadets, the naval cadets and the army cadets. The young people play a vital role. Both I and Councillor Charlie Pisasale get involved in all of those things. We make financial contributions to those cadets. We help them with flagpoles and days out. We also help the young kids in the 2 Wing Band to fly to Japan and represent the city. They are the sorts of cultural things. It is more than planes. Now the aerospace industry, with the University of Queensland, has proven to be a vital job link. People like Boeing and the contractors are providing vital jobs for our community. A city that was once know for its value as a coal mining city now has an aerospace industry, and that has happened in 10 years.

Mr FORREST—You also mentioned the buffer zone. Can you explain what activities are permitted in the buffer zone, because that is a fairly sizeable chunk of your—

Councillor P Pisasale—Yes, we can get you the details of that, but the most important thing is residential encroachment on the buffer zone—the height levels and ensuring that the base is a third party to any development, that they can discuss that with council.

Mr FORREST—So some development is permitted, but—

Councillor P Pisasale—It is industrial sheds, such as for the aerospace industry, and things that are complementary to the base. We do not want to block development, but I think you have to have a common-sense approach. The last thing you want at the back gate of Amberley is a residential development that is going to hinder the investment by the Commonwealth and also the country.

Mr FORREST—So that is a planning scheme regulation you have put in place, but there would be private owners of that land.

Councillor P Pisasale—Yes, but overarching that is that we have had that adopted by the south-east Queensland government regional plan. Laurie, do you want to comment on that?

Mr Mundt—There are height limits as well, and also the issues of bird strikes and that sort of thing. So it protects against activities which impede the activity of the air base. So it does allow some development, as long as that development does not impede the activities of the air base.

Councillor P Pisasale—The base is a third party to any development. When Collex wanted to develop, it went on for about 12 months because they had to do studies in regard to bird activities and some of the things that the base needed to understand. The last thing we wanted to do was to have a development out there that was going to impinge on the safety of the planes.

Mr FORREST—Who is the umpire if, say, I am a private owner and there is some development that I would like to pursue, and I put in an application for planning permission or a development application and council refuses it because it does not comply? Who becomes the umpire if I have the view that it is compatible?

Councillor P Pisasale—In that case, we have knocked it back anyway. The only thing you could do is appeal against it under IPA and go through the Planning and Environment Court. But the rules are in place. The Planning and Environment Court is going to look at the rules. If the rules have all been met then we could lose the case, but we have it so airtight in regard to the base that it would be very difficult for people to change it. I would like to send you that part of the act, if I may, because I think it is important for other air bases to look at that. The other thing we have protected is the motor sport precinct. We have worked out that noise and people do not mix very well.

CHAIR—It is important also in regard to airport development. I wish there was more common sense applied to that issue. Perhaps you should spread the word.

Councillor P Pisasale—It is amazing. You get the small subdivisions and you can say, ‘It is only 20 people,’ but 20 people are enough to start a petition—and you know what politicians are like when they get their petitions!

CHAIR—We are well acquainted, yes!

Mr FORREST—I have only one other point to make—

Councillor C Pisasale—If I could interrupt, both Willowbank and Amberley integrate those noise zones, so they interlock.

Mr FORREST—My driver had enormous difficulty finding this hotel and, given its attraction and importance to the city, I am wondering if you could give some consideration, Mr Mundt, to this street being a one-way street. I wasted 20 minutes trying to find out how to get into the place!

CHAIR—Mr Forrest, I think that is outside the scope of this hearing and that you should direct a letter to the mayor.

Councillor P Pisasale—That is actually a very good question, because right next door we are going to have an inquiry which will help the base as well. Next door there will be an inquiry by design. The council has booked out the hotel and, over the next seven days, we will be bringing in experts from all over the world. We are designing the infrastructure of the CBD traffic management and all of those issues that you have just brought up. Rather than—as you were talking about then—developing a CBD by saying, ‘Change this one-way street,’ or, ‘Plant a tree here and fix a pothole,’ we are looking at a long-term vision. We are bringing in representatives from all over the world and from different state agencies. On Saturday, after working around the clock for seven days on the thing called ‘inquiry by design’, we will come up with a structure for the size of our CBD and how it integrates with the rest of the city.

CHAIR—You do not want to migrate to the west, do you?

Councillor P Pisasale—It is called common sense!

CHAIR—Thank you very much. We appreciate your contribution. Mr Forrest, do you require Defence to be recalled?

Mr FORREST—No.

CHAIR—As the committee does not require Defence to be recalled, I thank all the witnesses who have appeared before the committee today and at the private hearing earlier.

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

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.

Committee adjourned at 3.55 pm



Appendix E – Gazettal Notice for “Repetitive Work”



Public Works Committee Act 1969

Notice under sub-section 18(8a)

I, Richard Mansell Colbeck, Parliamentary Secretary to the Minister for Finance and Administration, being satisfied that the works described in the Schedule are:

- (a) Substantially similar to other works that have been carried out, are being carried out or are likely to be carried out from time to time by the Commonwealth, or by or for an authority of the Commonwealth to which the *Public Works Committee Act 1969* applies, to be within sub-section 18(8A) of that Act;

hereby declare those works to be repetitive work for the purposes of sub-section 18(8A) of that Act.

SCHEDULED

C-17 Heavy Air Lift Infrastructure works at the aircraft deployment bases, RAAF Bases Darwin, Edinburgh, Pearce and Townsville

Dated this 23RD day of August 2007

Richard Colbeck
Parliamentary Secretary to the Minister for Finance and Administration

