



Parliamentary Standing Committee on Public Works

REPORT

relating to the

FACILITIES FOR AN INCREASED ARMY PRESENCE IN THE NORTH

(Tenth Report of 1992)

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The Parliament of the Commonwealth of Australia
Parliamentary Standing Committee on Public Works



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TABLE OF CONTENTS

	Page
Members of the 30th Parliamentary Standing Committee on Public Works	vi
Extract from the Votes and Proceedings of the House of Representatives of 25 June 1992.	vii
THE REFERENCE	1
THE COMMITTEE'S INVESTIGATION	1
THE NEED	2
Committee's Conclusion	3
THE PROPOSAL	3
Naming of Barracks	5
Brigade Headquarters	6
Signals Squadron	6
Armoured Regiment	7
Field Ambulance	8
2nd Cavalry Regiment Expansion of Existing Facilities	8
Sick Quarters	9
Base Administrative Support Centre (BASC)	9
Training Group and Central Instruction Facility	10
Messing and Accommodation Strategy	10
Officers' Mess and Accommodation	11
Other Ranks Mess and Accommodation	12
Other Ranks Canteen	12
Recreation/Physical Fitness	12
Personnel Support Facilities	14
POL Point	14
Civil Engineering/Electrical Services	
Communication and Infrastructure	14
RAAF Base Darwin	15
Options Considered	15
Close Training Area	15
7 Logistic Company	16

MASTER PLANNING CONSIDERATIONS - BARRACKS AT PALMERSTON	16
BUILDING DESIGN, MATERIALS, ENGINEERING SERVICES AND LANDSCAPING	17
Proposed Barracks	17
Building Design	17
Structural Design	17
Materials	18
Mechanical Engineering Services	18
Airconditioning	18
Ventilation	18
Hot Water	18
Compressed Air	18
Electrical Engineering Services	19
Fire Protection	19
Committee's Recommendation	21
CIVIL ENGINEERING SERVICES AND ROADWORKS	21
General	21
Water Supply	21
Sewerage	22
Stormwater Drainage	22
Landscaping	22
Committee's Conclusion	23
Energy Conservation	23
Geology	23
RAAF Base Darwin	24
Mechanical/Electrical/Communication and Fire Protection	24
ENVIRONMENTAL CONSIDERATIONS	24
Environmental Protection	24
Natural Environment	25
Close Training Area	25
HERITAGE	25
Committee's Recommendation	26
ARCHAEOLOGICAL SURVEY	26
SOCIAL AND ECONOMIC EFFECTS	27

CONSULTATIONS	27
Tendering	28
FUTURE WORKS	28
RELATED PROPOSALS	29
Regional Training Area	29
Larrakeyah Barracks	29
FINANCIAL ASPECTS	30
Committee's Recommendation	30
CONCLUSIONS AND RECOMMENDATIONS	31
APPENDIXES	
Appendix A	- List of Witnesses
Appendix B	- Project Drawings
Appendix C	- Proposed Movement Plan

**MEMBERS OF THE PARLIAMENTARY STANDING COMMITTEE
ON PUBLIC WORKS**

(Thirtieth Committee)

Mr Colin Hollis MP (Chairman)

Mr William Leonard Taylor MP (Vice-Chairman)

Senate

Senator Bryant Robert Burns

Senator Paul Henry Calvert*

Senator John Robert Devereux

House of Representatives

Mr Ewen Colin Cameron MP

Mr Lloyd Reginald O'Neil MP

Mr Russell Neville Gorman MP

Mr Bruce Craig Scott MP

*Appointed on 24.8.90 following the retirement of Senator
Dr Glenister Sheil

Committee Secretary: Peter Roberts

Inquiry Secretary: Denise Denahy

Secretarial Support: Sue Whalan

EXTRACT FROM THE VOTES AND PROCEEDINGS OF
THE HOUSE OF REPRESENTATIVES

No. 136 dated Thursday, 25 June 1992

- 29 PUBLIC WORKS - PARLIAMENTARY STANDING
COMMITTEE - REFERENCE OF WORK - FACILITIES
FOR AN INCREASED ARMY PRESENCE IN THE
NORTH: Mr Bilney (Minister for Defence Science and
Personnel), for Mr Beddall (Minister representing the Minister
for Administrative Services), 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: Facilities for an Increased Army
presence in the north.

Mr Bilney presented plans in connection with the proposed work.

Debate ensued.

Question - put and passed.

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS
FACILITIES FOR AN INCREASED ARMY PRESENCE IN THE
NORTH

By resolution on 25 June 1992, the House of Representatives referred to the Parliamentary Standing Committee on Public Works for consideration and report the project for facilities for an increased Army presence in the North (APIN) Stage 1.

THE REFERENCE

1. The proposal relates to the Defence Force Structure Review announced by the Minister for Defence on 30 May 1991. One of the findings of the Force Structure Review determined that a regular Army Brigade be permanently based in Darwin by the end of the decade. This will be achieved by the staged relocation of southern based units to Darwin.

THE COMMITTEE'S INVESTIGATION

2. The Committee received a written submission from the Department of Defence (Defence) and evidence was taken from its representatives at a public hearing held at Palmerston NT on Wednesday 26 August 1992. Prior to the public hearing the Committee inspected facilities at 2nd Cavalry Regiment and the proposed site for the new work.

3. The following individuals and organisations also presented submissions and appeared before the Committee at the public hearing:

- . Defence Housing Authority (DHA)
- . Northern Territory Government
- . Mrs N Padgham-Purich, MLA for Nelson
- . Palmerston Town Council
- . Returned Services League - NT Division
- . Ms Kezia Purick.

Submissions and letters were also received from the following:

- . Litchfield Shire Council
- . Commonwealth Fire Board
- . Territory Construction Authority
- . Commonwealth Environment Protection Authority
- . Childcare at Work
- . ACROD NT Division
- . Australian Heritage Commission.
- . Returned Services League National Headquarters

A list of witnesses who gave evidence at the public hearing is at Appendix A. The Committee's proceedings will be presented as Minutes of Evidence.

THE NEED

4. The Government's Defence policy is stated in the Government's Policy Information Paper - the Defence of Australia 1987, tabled in the Parliament by the Minister for Defence on 19 March 1987. The paper states that 'The Government has directed that further detailed studies commence on the possible relocation of an Army brigade to the north'.

5. In 1989, 700 hectares of land at Palmerston, 20 km east of Darwin, were acquired for the relocation of 2nd Cavalry Regiment and the possible relocation of a brigade sized force. Australian Construction Services (ACS) was commissioned to assist Defence in the planning of the complete site and to prepare detailed designs for 2nd Cavalry Regiment. A zone plan was prepared by ACS, incorporating master planning principles for immediate and long term operational objectives. This formed a document for use by both ACS in design development and by Defence in formulating planning

principles for the APIN development. The construction of facilities for the 2nd Cavalry Regiment is nearing completion and a progressive relocation of personnel into the Barracks is programmed for the latter part of 1992. The 2nd Cavalry Regiment proposal was reported on by the Committee in July 1989 (Report 12/89).

6. On 30 May 1991 the Minister for Defence announced the details of the Defence Force Structure Review, which included the permanent basing of a Regular Army brigade in Darwin. In particular, the Minister stated that an armoured regiment of one Regular Army tank squadron, logistic support elements and an aviation squadron would relocate to Darwin by 1995, followed by an infantry battalion by 1998. Approximately 2 200 service personnel and 3 500 dependants will be relocated under Stages 1 and 2 which will take place between 1994 and 2001. APIN Stage 2 is discussed in further detail under 'Future Works'.

7. Army has developed plans for the move of appropriate supporting arms units to the north, to provide a balanced force to meet stated Government strategic objectives.

8. Between 1994 and 1997 approximately 665 servicemen and 1 500 dependants will be relocated to Darwin. A need therefore exists to provide suitable working, training and accommodation facilities for these personnel.

Committee's Conclusion

9. A need exists to provide suitable working, training and accommodation facilities for units being transferred to Darwin under the increased Army Presence in the North Stage 1.

THE PROPOSAL

10. The proposal is for the provision of facilities for units relocating to Darwin under APIN Stage 1. These facilities will mainly be constructed at Palmerston at the site of the new Army barracks currently under construction for 2nd Cavalry Regiment.

11. The Committee was advised by Defence that it believes the project will make a major contribution to the defence of Australia. The Army's strategy involves a combination of basing units in the north and the deployment of other units from the south for training and operational

purposes. Many of the units moving to the north will be vacating facilities which will then become available for other units.

12. The National Headquarters of the Returned Services League of Australia advised that it was opposed to the positioning of further Regular Army elements in the north on a permanent basis in peacetime, believing it was unwise to move large numbers of personnel away from family, education and support groups. The NT Division, however, advised the Committee that it is of the view that the increased Army presence is a sound concept supported by historical and strategic realities. The NT Division emphasised that living and training in the northern terrain and climate would provide ground orientation and health acclimatisation. It also stressed its support for the proposed move of personnel and dependants to the Northern Territory.

13. The following units will be relocated:

- . brigade headquarters
- . signals squadron
- . armoured regiment
- . 2nd Cavalry Regiment increases
- . field ambulance
- . sick quarters
- . training group
- . base administrative support centre (BASC)
- . aviation squadron (at RAAF Darwin).

14. The proposal consists of the following:

- . construction of new facilities on the Defence property near Palmerston for:
 - brigade headquarters

- signals squadron
 - armoured regiment
 - field ambulance
 - 2nd Cavalry Regiment increases
 - sick quarters
 - base administrative support centre
 - training group and central instruction facility
 - officers' mess and accommodation
 - other ranks mess and accommodation
 - recreation/physical fitness
 - work-based childcare
 - hobby centre
 - fuel point
 - civil engineering/electrical services/communications and infrastructure
- . construction of new facilities and refurbishment of existing facilities at RAAF Base Darwin for an aviation squadron
 - . acquisition and development of additional close training area
 - . the acquisition of a commercial property for logistics functions.

15. Related to this project is provision of an additional 350 married quarters by DFA, for which furniture is to be provided out of this proposal.

16. Provision of facilities for APIN will be in accordance with the Palmerston Barracks Zone Plan, a copy of which is provided at Appendix B.

Naming of Barracks

17. Concern was expressed by various groups over the name 'Palmerston Barracks' appearing on the Defence submission. Defence advised the Committee that the Barracks have been referred to colloquially as 'Palmerston Barracks' mainly for convenience, as Palmerston appears on most maps used by people living outside the area. Litchfield Shire, however, although appearing on local maps, is not shown on other maps. The Committee was advised that Defence guidelines on the naming of barracks required them to be named after soldiers, battles, campaigns or localities. Army is still in the process of deciding on a name for the Barracks.

Brigade Headquarters

18. The brigade headquarters is the command and control element of the brigade, and is responsible for the command and administration of brigade units in the field and in barracks.

19. When at full strength, the brigade headquarters will consist of 17 Officers, 18 Senior Non Commissioned Officers (SNCOs) and 10 Other Ranks (ORs). Nine armoured vehicles, 19 light vehicles (cars and landrovers) and 5 heavy vehicles (trucks) will be located at brigade headquarters.

20. It is proposed to construct a series of buildings to accommodate the command functions of a full brigade.

The major elements of the proposal include:

- headquarters
 - . command
 - . operations
 - . personnel/logistics
 - . administration
 - . headquarters company
 - . communications centre
- transport section
- technical support platoon
- carparking and siteworks

21. The operations room and communications centre of the headquarters building are designed to Post Disaster Category A (operational during and after a cyclone). This is achieved by the inclusion of a structural plywood debris shield under the roof and wall sheeting and debris screens and/or cyclone resistant glazing to doors and windows of these areas.

Signals Squadron

22. The signals squadron provides the communications network, within the brigade formation, when deployed in the field. Total strength is 94, consisting of 6 Officers, 12 SNCOs and 76 ORs. Major equipment consists of five armoured vehicles, 42 light vehicles and four heavy vehicles.

23. It is proposed to construct a series of buildings to accommodate the unit requirements of the signals squadron. The squadron headquarters facility is modelled on the 2nd Cavalry Regiment squadron headquarters whilst the Q store and compound buildings are similar to the technical facilities and vehicle shelters provided for 2nd Cavalry Regiment.

24. The technical facilities share a common compound with the Brigade Headquarters technical facilities due to the strong functional relationship which exists between the units. Provision for future expansion of vehicle shelters has been allowed in site planning.

25. Allowance has been included for extension to the base radio station provided within the 2nd Cavalry Regiment Project.

Armoured Regiment

26. The Armoured Regiment is a combat unit equipped with tanks. Its role is, in conjunction with the other combat arms, to fight the land battle. Total strength is 230, consisting of 21 Officers, 48 SNCOs and 161 ORs. Major equipment consists of 39 tanks, 45 armoured vehicles, 21 light vehicles and 26 heavy vehicles.

27. Facility planning is similar to the 2nd Cavalry Regiment Industrial Complex and responds to criteria for heavy vehicular movement. The building forms are based on that of 2nd Cavalry Regiment with appropriate adjustments.

The major elements of the proposal include:

- . regimental headquarters
- . squadron headquarters
- . Q store
- . technical support workshop
- . covered vehicle parking bays
- . covered vehicle servicing bays
- . training facilities
- . unit assembly area
- . siteworks and carparking
- . extension of 2nd Cavalry vehicle wash facilities.

Field Ambulance

28. The field ambulance provides medical support to brigade units both in barracks and in the field. Total strength is 50, consisting of 13 officers, 10 SNCOs and 27 ORs. Major equipment consists of 33 light vehicles and four heavy vehicles.

29. It is proposed to construct a series of buildings to accommodate the unit requirements of the field ambulance.

30. Command, administrative and clinical facilities have been grouped in a building similar to the 2nd Cavalry Regiment squadron headquarters. The building addresses the formation parade ground, and is in close proximity to the sick quarters to which field ambulance provides staff support. Logistics, transport and technical support facilities sit within a compound which is screened from the parade ground by the unit headquarters building. These facilities are similar to 2nd Cavalry Regiment technical facilities.

2nd Cavalry Regiment Expansion of Existing Facilities

31. 2nd Cavalry Regiment is a reconnaissance unit equipped with wheeled and tracked vehicles. The increase in personnel, and redistribution of existing personnel (and equipment), will enable the raising of a third squadron. Total increase is 96, consisting of three Officers, 12 SNCOs and 81 ORs. A single storey building will be constructed similar to the existing 2nd Cavalry Regiment squadron building situated adjacent to this facility. Certain existing facilities in the 2nd Cavalry Regiment are to have extensions.

32. A new headquarters is to be provided for a third squadron and will be similar to the existing building which accommodates A Squadron and B Squadron except that only half of the existing design is required to be built, the other half to be completed if another squadron is required. The building consists of two separate structures - one being office accommodation and the other general amenities, separated by a covered walkway.

33. The industrial zone attached to 2nd Cavalry Regiment has covered vehicle shelters and two of these buildings are to be extended to accommodate 12 vehicles.

42. The BASC is similar in form to the 2nd Cavalry Regiment Squadron Headquarters whilst the ground maintenance facility reflects the style of the 2nd Cavalry Regiment technical buildings, albeit on a smaller scale.

Training Group and Central Instruction Facility

43. The training group runs educational and promotional courses for the brigade and other Army units in the north. Total strength is 15, consisting of four Officers, seven SNCOs and four ORs. Major equipment consists of six light vehicles.

44. A facility will be constructed to provide accommodation for the training group and conference, lecture and instructional facilities for all units within the proposed Barracks.

45. The training group and central instruction facility (CIF) accommodation is similar in form to the 2nd Cavalry Regiment administrative facilities. This accommodation is provided in a series of building elements linked by a central circulation spine.

46. Amenities for both facilities are combined in a centrally located block adjacent to the main entry to permit independent operation of each element. An external compound is located between the Training Group wing and its adjacent vehicle shelter within which is located the Q store covered loading area.

47. The CIF model room and lecture theatre are tiered to suit the functional requirements of the brief. A screened outdoor area is provided on the south side of the building away from the main base access road.

Messing and Accommodation Strategy

48. The messing and living-in accommodation facilities proposed for APIN Stage 1 are an extraction from the overall messing strategy for the Barracks. This strategy was developed to meet the total requirements of all units relocating to Palmerston as part of the 2nd Cavalry Regiment relocation, APIN Stages 1 and 2.

34. The existing Q store attached to 2nd Cavalry Regiment has discrete Q stores for each squadron attached to the main Q store. A new Q store extension similar to existing squadron facilities will be added to the existing building, together with an external compound.

Sick Quarters

35. The sick quarters is an outpatient facility, manned by the field ambulance, for the provision of medical and dental support to brigade units at the proposed Barracks. The building is similar in form to the 2nd Cavalry Regiment administrative facilities and is designed as a series of wings connected by a central circulation spine.

36. Reception/waiting functions are located adjacent to the main entry with direct access to the medical and dental zones of the clinical wing. The Casualty Section (with ambulance access direct from Lighthorse Drive) is located within the medical zone.

37. Staff amenities and the physiotherapy unit are located in a second wing to the north.

38. Allowance has been made for future expansion to accommodate an inpatients wing and a wing containing kitchen, Q store and operating theatre. The inpatient wing will be located immediately north of the Stage 1 facility to minimise travel for visitors and to isolate the operating theatre function which will be in the northernmost wing.

39. The ambulance access road will be extended to permit service access to Q store and kitchen facilities.

Base Administrative Support Centre (BASC)

40. The BASC provides the administrative support and management functions of the proposed Barracks. Total strength is 12, consisting of two SNCOs, six ORs and four civilians. Major equipment consists of two light vehicles.

41. A facility will provide accommodation for administrative functions related to the running of the Barracks and storage of ground maintenance equipment.

49. In summary the Palmerston messing strategy consists of:

- . ORs' mess, with a capacity for 500 soldiers, in each of the three sectors
- . an Area Officers' mess, with a capacity for 120 officers, located in the central sector
- . a SNCO mess, with a capacity for 65 SNCOs, located in the southern sector, based on the 2nd Cavalry Regiment Officer /SNCO Mess
- . a SNCO mess, with a capacity for 70 SNCOs, located in the northern sector
- . an area soldiers' club/canteen in the central sector, with smaller canteens in the northern and southern sector.

50. The strategy rationalises the provision of messes through shared and area messes, to maximise efficiencies and achieve benefits in scale and staffing.

51. The accommodation strategy is derived from the Master Plan and provides discrete accommodation zones within each of the three sectors, as shown on the Zone Plan at Appendix B.

Officers' Mess and Accommodation

52. The Officers' Mess is an area facility which will provide kitchen, dining and recreational facilities for all Officers in the Barracks. The officer living-in accommodation will provide for 80 officers in Stage 1 and increase in capacity to 120 in Stage 2.

53. Living-in accommodation is provided for Senior and Junior unaccompanied Officers for all units within Palmerston Barracks. The accommodation units are all identical in form and are similar to the Officers' accommodation provided at the adjoining 2nd Cavalry Regiment Barracks.

Other Ranks' Mess and Accommodation

54. The Other Ranks' mess provides kitchen and dining facilities for living-in soldiers. The 2nd Cavalry Regiment ORs' mess (southern sector) will be expanded from its current capacity of 300 to 500 soldiers.

55. A 500 person ORs' mess will be constructed in the central sector.

56. Additional living-in accommodation will be constructed in the southern sector for 144 soldiers. Living-in accommodation will be constructed in the central sector for a further 208 soldiers.

57. The accommodation is similar to the existing buildings for 2nd Cavalry Regiment.

Other Ranks Canteen

58. The canteen in the southern sector will be expanded to accommodate the living-in soldiers. A new canteen will be constructed in the central sector for the soldiers residing in that area. The new facilities will be modelled on the existing 2nd Cavalry Regiment facilities.

59. The extensions are sympathetic to the existing forms of buildings. The planning of the canteen extension allows for additional bar facilities, amenities and a covered outdoor area.

Recreation/Physical Fitness

60. The proposal provides the following recreational and physical fitness facilities in accordance with Service Scales and Standards of Accommodation (SSSA): one Australian Rules size field, one rugby size field, one 50m swimming pool, one physical fitness centre (gym), two squash courts and six tennis courts.

61. The major elements of the proposals include physical fitness centres - southern and central.

62. Physical Fitness Centre - Southern

Provision of additional squash court

The existing building for the 2nd Cavalry Regiment was designed for the possible requirement of an additional squash court and a first floor viewing balcony to be provided off an existing corridor.

63. Physical Fitness Centre - Central

Separate buildings and structures to accommodate the following:

- . gymnasium/activity rooms/amenities
- . squash courts
- . change rooms
- . 50m x 9 lanes swimming pool with diving facilities
- . shadecloth structure to partially cover swimming pool
- . swimming pool plantroom
- . tennis court and shelters
- . rugby field
- . football oval
- . playing fields shelter.

64. Defence advised the Committee that the recreational facilities will be adjacent to the units and the living-in accommodation. This will allow the gymnasiums to be used by units for physical fitness training particularly during wet weather. Close proximity to the living-in accommodation will also encourage soldiers to use the sporting facilities.

65. The Committee inquired regarding the tennis court surfaces to be provided. Defence advised the Committee that it would consider the advantages and disadvantages of the various court surfaces for local conditions - including the wet season - before a final decision is made.

Personnel Support Facilities

66. The proposal provides a childcare facility (40 child capacity) in accordance with the standard design brief of the Child Services Bureau of the NT Department of Health and Community Services. The proposal also provides a hobby centre which provides facilities for photography, motor mechanics, fibreglass workshop and carpentry.

67. The Palmerston Town Council queried the need for an on-base childcare facility and advised the Committee that it presently runs three childcare centres and has \$500 000 in this year's Northern Territory Budget set aside for a childcare centre in the new suburb of Woodroffe. Another childcare centre in Palmerston is run by the Catholic Church.

68. Defence advised the Committee that it expected families to make use of community childcare facilities to a large extent. Defence sees the facility on the Base as being supplementary to the centres being run by the Council.

POL Point

69. The POL (Petrol, Oil, Lubricants) Point is similar to the facility provided for 2nd Cavalry Regiment and is required to cater for the increase in vehicle numbers in the Barracks development.

70. The form of the building is that of a fuel service station, servicing medium to heavy vehicles and providing diesel and ULP fuel from underground tanks. Above-ground bulk fuel storage is included for in the field fuel requirements.

Civil Engineering/Electrical Services/Communication and Infrastructure

71. The Palmerston site is a completely 'green field' site with no services infrastructure (ie. roads, stormwater, water, sewerage, electrical and telecommunications), except that provided to meet the 2nd Cavalry Regiment requirements. The proposal provides the services infrastructure both to the barracks and within the Barracks to meet the total APIN requirements (Stage 1 and Stage 2).

RAAF Base Darwin

72. The aviation squadron is to be located at RAAF Base Darwin, situated 7 km north-east of Darwin city. The unit will be located within the existing RAAF Base Darwin boundaries.

73. The aviation squadron headquarters, administration and flying operations functions will be provided through the refurbishment of an existing facility, currently occupied by the RAAF Base calibration centre. The logistic facility and the maintenance hangar/workshop will be new constructions. The aircraft storm shelter will be a refurbishment of an existing Strach Hangar. The aircraft tarmac will be provided through the use of an existing light aircraft tarmac.

Options Considered

74. The following options were considered for the siting of the Aviation Squadron:

- all new facilities at Palmerston
- all new facilities at RAAF Base Darwin
- several options involving a combination of new construction and use of existing facilities at RAAF Base Darwin.

75. The preferred option involves the use of an existing RAAF facility for the aviation squadron headquarters, administration and flying operations, and an existing light aircraft tarmac, thus significantly reducing the requirement for new construction. New construction will be required for the unit's logistic and workshop functions.

Close Training Area

76. A close training area (CTA), is required within close proximity to the brigade for the conduct of basic individual military skills training. Training includes fieldcraft and minor tactics training, deployment drills and physical and psychological development on obstacle and confidence courses. Training activities are primarily conducted on foot. However, the limited use of vehicles will be necessary for specific elements of the training.

77. The expansion of the military barracks at Palmerston will reduce the size of the existing local training area to the north, thus requiring the acquisition of additional land to the east.

78. Defence advised the Committee that this land to the east is currently zoned as extractive industry and leased to quarry operators by the Northern Territory Government. Defence has foreshadowed the acquisition of this land as additional CTA in consultation with the Northern Territory Planning Authority and has the option of first refusal with the Northern Territory Department of Lands and Housing.

7 Logistic Company

79. 7 Logistic Company currently occupies leased premises in the industrial suburb of Winnellie. Construction of new facilities at the proposed Barracks for the new second line logistic unit will not occur until APIN Stage 2. A cost-benefit analysis has been conducted which found that acquisition of the current leased premises at Winnellie is more cost effective than leasing them until new facilities are constructed at Palmerston. These facilities, or part thereof, would then be utilised by the fourth line logistic unit.

MASTER PLANNING CONSIDERATIONS - BARRACKS AT PALMERSTON

80. The Master Plan (Appendix B-3) has been prepared to show the proposed layout of that part of the Barracks at Palmerston which comprises the 2nd Cavalry Regiment development and APIN Stage 1. Sites for development beyond Stage 1 are identified on the Zone Plan (Appendix B-2).

81. This Zone Plan is the basis for the Master Plan which shows the internal planning of each zone and identifies both existing and proposed facilities and infrastructure.

82. The following design principles which evolved from those created for 2nd Cavalry Regiment have been instrumental in developing the detailed Master Plan:

- separation of accommodation (living) areas from industrial (work) areas

- accommodation areas to include messes to minimise walking distances
- provision of separate accommodation areas for Officers, SNCOs and ORs
- location of landscaped recreation areas and sports fields between central accommodation areas
- landscaping the industrial areas to create a suitable working environment and provide visual relief from the large expanses of hard paving
- provision for expansion of all units.

83. Defence advised the Committee that any feedback from the 2nd Cavalry Regiment soldiers, once they occupy the new 2nd Cavalry barracks, will be incorporated in the designs for subsequent stages of the proposal.

BUILDING DESIGN, MATERIALS, ENGINEERING SERVICES AND LANDSCAPING

Proposed Barracks

84. All facilities are characterised by the following general features.

Building Design

85. Generally building design reflects the design philosophy created for the facilities at 2nd Cavalry Regiment with regard to climate, selection of materials, form and colour, but with individual modification to include the technical and functional requirements outlined in the Functional Design Briefs.

Structural Design

86. Building structure is predominantly structural steel frame, and some load bearing masonry, with particular emphasis on withstanding cyclonic conditions and, in certain buildings, to providing a post disaster function.

Materials

87. Materials and finishes generally reflect those used in facilities for 2nd Cavalry Regiment, which recognised factors such as function, economy, ease of transportation to site and erection, durability and maintenance, together with consideration of the aesthetic requirements of an industrial/community/residential environment.

Mechanical Engineering Services

88. Generally mechanical services are provided to the various buildings in accordance with the requirements of their respective Functional Design Briefs and the design philosophy adopted for the 2nd Cavalry Regiment facilities.

Airconditioning

89. Packaged type airconditioning is provided to offices, messes, recreation spaces, accommodation and also some stores and workshops where specific temperature or humidity control is required.

Ventilation

90. Toilets, cleaners' rooms, battery rooms and some specific work and storage areas are mechanically ventilated.

Hot Water

91. Solar hot water with electric or gas boosted storage tank systems is supplied in areas of high demand; elsewhere, small electric units are provided.

Compressed Air

92. Compressed air is reticulated throughout all workshops and vehicle shelters.

Electrical Engineering Services

93. An underground reticulation system supplies the new facilities. Power to the site is supplied by the Northern Territory Power and Water Authority (PAWA).

94. Emergency power is reticulated to the physical fitness centre (cyclone shelter), operations room and communications centre of the brigade headquarters, POL point, sewerage and water pumping plant and the Other Ranks' mess kitchen. An emergency power generation plant is included in the brigade headquarters, power house and the POL point.

95. Special earthing and power supply filtering measures are included in specific areas to avoid interference with equipment at the adjacent Shoal Bay Naval Receiving Station.

96. A new PABX in the BASC interfacing with the existing PABX for 2nd Cavalry Regiment provides a monitoring telephone service to the complete development.

97. The existing central energy monitoring system for 2nd Cavalry Regiment has been extended to control and monitor power usage on the site.

98. Floodlighting to a sports field and tennis courts, street precinct and security lighting is included.

Fire Protection

99. It is proposed to create a fire safety system based on the requirements of Department of Defence 'Manual of Fire Protection Engineering' (FACMAN 2) but also encompasses:

- . The Building Code of Australia (BCA)
- . Special Requirements BCA Appendix Northern Territory
- . Commonwealth Fire Board Circulars
- . Relevant Australian Standards

- . National Fire Protection Association (USA)
- . Requirements of NT Fire Service
- . Requirements of NT Power and Water Authority

100. All design work that affects life safety will be based on FACMAN 2 and, where any item is not covered in that document, then the BCA or relevant Australian Standard is used, to ensure that there will be at least, the minimum life safety provision provided.

101. All Fire Safety Provisions relating to this project will be reviewed by the Australian Construction Services Regional Fire Safety Officer (ACSRFSO).

102. Any special fire and life safety provisions or design that have been specially developed for the project outside FACMAN 2 or BCA and relevant Australian Standards will be approved by the ACSRFSO before use.

103. Water is provided for fire services from the general site reticulation system. Buildings are protected by external hydrants and internal hose reels and extinguishers. A fire sprinkler system is included in large store areas.

104. The fire detection and alarm system for 2nd Cavalry Regiment is extended for the APIN development with monitoring equipment installed in the 2nd Cavalry Regiment guardroom.

105. Concern was expressed by various groups over fire management in the area. Defence assured the Committee that fire risks in the area should be reduced following the clearing of bush, controlled grasslands and the number of fire breaks which will be around the area. A large number of soldiers would also be equipped with hand firefighting appliances for the control of small fires. Defence advised that it does not believe that Army fire services units will be needed in the area. However, should this need arise, then unit personnel would be trained appropriately.

Committee's Recommendation

106. The Committee agrees that fire management is an important issue at Palmerston and recommends that Defence take all appropriate precautions to prevent fire risks in the area.

CIVIL ENGINEERING SERVICES AND ROADWORKS

General

107. Services and roadworks are in accordance with the design standards applicable to the 2nd Cavalry Regiment development.

108. *The Litchfield Shire Council expressed concern that the road system would not be able to cope with increased traffic which the development will generate. Defence advised the Committee that it has already made a significant contribution to the Shire by the upgrading of the access road to the Base from the Stuart Highway. Defence paid the major proportion of the cost while the Northern Territory Government made a lesser contribution. Defence believes that deterioration proportionate to Army usage should be compensated by the Army.*

Water Supply

109. All zones will be served by a common network of water reticulation mains designed to provide for all fire protection, domestic and landscape irrigation requirements. Standards of supply are generally consistent with that provided for the 2nd Cavalry Regiment project.

110. All areas are served by conventional gravity supply, supplemented by booster pumping, if required. Supply will be from two supply mains connected to the PAWA supply system.

111. The PAWA advised that it will be seeking a capital contribution from Defence to the increase in headworks to provide the increase in water, as there is a need to augment the existing water main from the rising main supplying the Palmerston area to the actual site.

112. Defence advised that headworks contributions for 2nd Cavalry Regiment were made on an agreed basis. At present negotiations are

proceeding for contributions to headworks for Stage 1. This funding has been included in the Defence budget.

113. The PAWA expressed concern over the capacity of the water supply system to cope with the rise in demand which would result from the increased Army presence. However, the Palmerston Town Council assured the Committee that the present water tower is designed to cater for at least 20 000 people. At present 8 300 people live in Palmerston itself.

114. The Council advised that the present cost of water, which is 42 cents per litre, will reduce to 12 cents per litre by the linking of bores in Palmerston. The parks in the town of Palmerston are presently watered with bore water.

Sewerage

115. Sewerage disposal is to the NT Power and Water Authority gravity collection system serving the Palmerston area to the south of the Base.

Stormwater Drainage

116. Natural drainage within the site is to the west, south and east. A significant portion of the site on the western boundary forms part of a significant flood storage for the estimated 1 in 100 year average recurrence interval flood. This area is planned to be retained in its natural state to reduce significant environmental impacts which would result if the area were to have existing drainage patterns altered.

117. The Northern Territory Department of Health and Community Services expressed concern over possible mosquito breeding grounds during the wet season. Defence assured the Committee that the Army has a malarial research unit and has the main source of expertise on malarial mosquito eradication in Australia. Should such a problem arise then Defence would take appropriate action.

Landscaping

118. Landscaping is similar to that provided for the 2nd Cavalry Regiment development, retaining existing vegetation where possible and with an in-ground irrigation system to playing fields and new areas of planting for trees and shrubs.

119. Planning provides for use of tropical species native to the area, extensive mulching designed to minimise irrigation water consumption and extensive use of dryland grassing to minimise maintenance requirements. The Committee noted on its inspection that the 2nd Cavalry Regiment landscaping included extensive grassed areas which require regular watering during the dry season.

120. Fire breaks are to be formed on the perimeter of the developed area. Landscaping will also include rehabilitation of natural areas affected by construction activities, particularly those associated with civil and electrical engineering services.

Committee's Conclusion

121. The Committee is of the opinion that large grassed areas should be kept to a minimum and replaced with native plants. This would reduce water consumption during the dry season.

Energy Conservation

122. A range of energy conserving practices will be adopted in the development of the proposed facilities.

123. Building orientation and material selection will minimise solar heat gain whilst optimising the potential for natural ventilation of working areas.

124. Airconditioning systems to living-in accommodation will be key operated to limit operation to periods of occupancy. Airconditioning generally will be time clock controlled to suit the operating requirements of particular facilities.

125. Solar hot water systems will be used extensively.

Geology

126. Generally soil conditions are similar to the 2nd Cavalry Regiment development excepting that:

- confirmation of ground conditions for ground anchors is required

- . effectively, deep excavation for sewer mains and associated works will not encounter bedrock especially on the eastern side of the site
- . confirmation of contract definition of rock on the site.

127. Generally, reinforced concrete ground slabs with attached footing beams and ground anchors to resist uplift as necessary will be used.

RAAF Base Darwin

128. The Aviation Squadron accommodation will be provided by adaptation of the former RAAF Base calibration centre for administrative functions, together with new facilities for the logistics and workshop functions and use of existing aircraft pavements. Building design for the new facilities will reflect the form of adjacent buildings of similar function.

129. New building structures will be designed to withstand cyclonic conditions. Materials and finishes recognise factors such as function, economy, durability and maintenance.

Mechanical/Electrical/Communication and Fire Protection

130. Services will generally be provided by extensions to the existing site infrastructure, to suit the particular needs of the Squadron, whilst remaining consistent with the philosophy for the provision of engineering services within RAAF Base Darwin.

ENVIRONMENTAL CONSIDERATIONS

Environmental Protection

131. Prior to the commencement of any development on the Palmerston site the Department of Defence prepared and lodged a Notice of Intention with the then Department of Arts, Sports, the Environment, Tourism and Territories.

132. The Notice of Intention was prepared pursuant to the Administrative Procedures under the *Environment Protection (Impact of Proposals) Act 1974*. It addressed in detail the proposal to provide an increased Defence presence in northern Australia through the permanent basing of 2nd Cavalry

Regiment in Darwin and it foreshadowed the possible development of the site to brigade strength in the longer term.

133. The Notice of Intention for the total APIN proposal is currently under consideration by the Department of Arts, Sport, the Environment and Territories.

Natural Environment

Close Training Area

134. Acquisition of this land to the east will have a minimal impact on the natural environment. Defence believes that activities to be conducted in the CTA will have significantly less impact than the extractive industries that currently operate there. Land management plans will be implemented to ensure the CTA is maintained to ensure that it can support the planned range of training activities.

HERITAGE

135. A Sacred Site Avoidance Survey was carried out in February 1989 by consultant anthropologist Michael Southon. His research included consultations with, and visits to the site and surrounding areas with, Aboriginal people who are 'custodians of the Darwin area'. His report concludes:

There are no sacred sites, or other sites of significance, within the development area. There may be a Brinkin* ceremony ground on the southern bank of Milners Creek. If so, it lies just outside the development area. There should be no disturbance of the south bank of Milners Creek.

*Brinkin is a tribal race.

136. As Milners Creek is entirely outside the boundaries of the site and as the 'development site' referred to is the entire site owned by the Commonwealth Government for the 2nd Cavalry Regiment and subsequent associated development, no further action in relation to heritage issues is anticipated.

137. Heritage clearance is currently being obtained for the CTA as an extension to this survey.

138. Defence advised the Committee that consultations have taken place with the Aboriginal community. This community has no objection to the proposal.

Committee's Recommendation

139. The Committee noted that consultations have taken place with the Aboriginal Community and recommends that the Aboriginal Community be kept aware of any future proposed works at the Palmerston site.

ARCHAEOLOGICAL SURVEY

140. An archaeological survey was carried out in February 1989 by Tim Stone for National Heritage Studies. The aim of the survey was to:

- . locate and record archaeological sites, if any, within the site
- . recommend measures to mitigate any potential damage to archaeological sites
- . liaise with representatives of the local Aboriginal community to ascertain their views on the proposed development.

141. On-sites surveys, discussions with representatives of an Aboriginal community and discussions with anthropologist Michael Southon were undertaken. Two Aboriginal sites were located during the survey. Both were camp sites represented by some scatters of stone artefacts. The sites were inspected by Aboriginal representatives.

142. In the conclusion to the survey report, it states, in part:

The two archaeological sites located during this survey are small and in poor condition, and are probably well represented outside the base development area. Therefore, these sites are of minimal archaeological significance and their existence should not conflict with the development of the area as a military base. Furthermore no objections were raised to this development by the representatives of the local Aboriginal community.

It further states that,

...if the sites records are to be destroyed, written authorisation.... is required.

143. As the sites are adjacent to the western boundary north of the CTA (Zone 17) no development is master planned near the sites.

144. Archaeological clearance is currently being obtained for the CTA as an extension to this survey.

SOCIAL AND ECONOMIC EFFECTS

145. The social and economic effects of the proposal are the subject of a Notice of Intention currently being assessed by DASET.

146. Defence has engaged consultants to undertake several studies to identify the likely social and economic impacts of APIN on the Darwin community in particular. Defence has also developed a public relations strategy to inform local and wider community groups and the Defence community in general, of the details of the APIN proposal.

147. Personnel support facilities such as work-based child care, hobby centre and sporting facilities are included in the proposal as on base facilities in accordance with current Government policies. The use of local community support services will be co-ordinated through the Joint Consultative Committee (JCC).

CONSULTATIONS

148. The JCC, established for the relocation of 2nd Cavalry Regiment to Darwin, is being continued to address the essential planning requirements of APIN. The JCC comprises Commonwealth, Northern Territory and local government members. This is the main vehicle for consultation and through its working parties is considering essential services development and community services development.

149. Specific consultation has occurred with relevant authorities including:

Litchfield Shire Council

- . Aboriginal Areas Protection Authority
- . NT Power and Water Authority
- . NT Department of Transport and Works
- . Department of Transport and Communications
- . Department of Arts, Sports, the Environment, Tourism and Territories
- . NT Department of Health and Community Services - Children Services Bureau.

Tendering

150. The Committee queried the tender process to be used by Defence for the project. Defence advised that its policy is to call for expressions of interest from contractors. From these expressions of interest, short lists for selective tendering will be produced. The packages of work will be divided according to size and firms will be placed on the select tender list in accordance with their size and interest in the type of work. Defence assured the Committee that it will not restrict the number of firms being placed on each select tender list.

FUTURE WORKS

151. APIN Stage 2 consists of those units relocating to Darwin over the period 1998 to 2001, and represents 1041 servicemen and an estimated 2500 dependants. The units relocating as part of APIN Stage 2 are:

- . logistics unit
- . mechanised infantry battalion
- . combat engineer regiment
- . medium artillery battery.

152. The APIN Stage 2 facilities proposal will provide facilities for these units, and involves the construction of new facilities, over the period 1996

to 2001. The APIN Stage 2 facilities proposal involves the further development of the Palmerston site, for which the Palmerston Zone Plan makes appropriate allowance. This project will be referred to the Public Works Committee at a later date.

RELATED PROPOSALS

Regional Training Area

153. The relocation of a brigade size force to Darwin will create the requirement for a dedicated training area for brigade units. Mount Bunday Training Area is recognised as being incapable of meeting the training exercise requirements of a brigade, hence the need to secure a regional training area, or Brigade Manoeuvre Area (BMA). The actual size and terrain requirements of the BMA are currently being determined. The requirement for the BMA will not exist until the armoured regiment relocates in December 1995 and more significantly the infantry battalion relocates in December 1998. The proposal for the acquisition (or lease) of a BMA will be the subject of a Notice of Intention, once the above details are known.

154. In the interim period, Army intends to conduct training exercises in a manner similar to the Kangaroo series exercises, through the use of private land under permissive occupancy agreements.

Larrakeyah Barracks

155. The redevelopment of Larrakeyah Barracks, Darwin, is an Army proposal programmed to occur concurrently with APIN Stage 1. The proposals are related in that the Logistic Company and Training Group, previously located at Larrakeyah Barracks, will ultimately be located in the new barracks at Palmerston. Furthermore, the facility requirements for the increases to Land Component NORCOM and the formation of the Military Geographic Information Unit under APIN will be met through the Larrakeyah Barracks Redevelopment Project. Larrakeyah Barracks will be developed primarily as a headquarters precinct, with operational and administrative support elements (other than NORFORCE) being located at Palmerston and RAAF Base Darwin. As the duration of both projects is several years, coordination of the facility requirements of those elements relocating to Palmerston should not present any difficulties.

FINANCIAL ASPECTS

156. The estimated total project cost of the proposed scope of works, in outturn price, is \$199.74m, (this equates to \$173.95m at February 1992 prices). It is proposed that the Stage 1 works will be contracted with a number of separate contract packages of varied sizes to optimise local industry involvement. Subject to all necessary approvals current plans envisage the commencement of construction in January 1993 with completion by the end of 1997.


Committee's Recommendation

157. The Committee recommends the construction of facilities for an increased Army presence in the North at an estimated outturn cost of \$199.74m. This equates to \$173.95m at February 1992 prices.

CONCLUSIONS AND RECOMMENDATIONS

158. The conclusions and recommendations of the Committee and the page in the report to which each refers are set out below:

- | | Paragraph |
|--|-----------|
| 1. A need exists to provide suitable working, training and accommodation facilities for units being transferred to Darwin under the increased Army Presence in the North Stage 1. | 9 |
| 2. The Committee agrees that fire management is an important issue at Palmerston and recommends that Defence take all appropriate precautions to prevent fire risks in the area. | 106 |
| 3. The Committee is of the opinion that large grassed areas should be kept to a minimum and replaced with native plants. This will reduce water consumption during the dry season. | 121 |
| 4. The Committee noted that consultations have taken place with the Aboriginal Community and recommends that the Aboriginal Community be kept aware of any future proposed works at the Palmerston site. | 139 |
| 5. The Committee recommends the construction of facilities for an increased Army presence in the North at an estimated outturn cost of \$199.74m. This equates to \$173.95m at February 1992 prices. | 157 |



Colin Hollis
Chairman

3 November 1992

APPENDIX A

WITNESSES

BARRETT, Mr Michael, Chairman, NT Combined RSLs, C/- Darwin RSL, GPO Box 150, Darwin, NT, 0801

BECKINGHAM, Colonel Michael John, Director of Plans and Analysis—Army, General Staff Division, G-2-21, Army Office, Russell Offices, Canberra, ACT, 2600

BELLION, Mr William Gordon, State Manager Project Services, NT Region, Australian Construction Services, Locked Mail Bag 51, GPO Darwin, NT, 0801

BENNETT, Mr Stephen Charles, Town Clerk, Palmerston Town Council, 2 Chung Wah Avenue, Palmerston, NT

DIFLO, Mr Kevin Patrick, Mayor, Palmerston Town Council, 2 Chung Wah Avenue, Palmerston, NT

FLETCHER, Mr Peter Anthony, Capital Projects Manager, Defence Housing Authority, 3/10 Parap Place, Parap, NT, 0800

HELLYER, Brigadier Grahame Leslie, Director-General Accommodation and Works—Army, Department of Defence, K-2-43, Russell Offices, Canberra, ACT, 2600

HETHERINGTON, Mr Michael Stewart, General Manager, Regional Operations, Defence Housing Authority, 2 Brisbane Avenue, Barton, ACT, 2600

KELLY, Lieutenant-Colonel Garry Ross, Project Director for Director-General Accommodation and Works—Army, Department of Defence, K-2-03, Russell Offices, Canberra, ACT, 2600

PADGHAM-PURICH, Mrs Cecilia Noel, Member of the NT
Legislative Assembly for Nelson, c/- Post Office, Howard
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PINNOCK, Mr David John, Principal Architect, South Australia
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PURICK, Ms Kezia Dorcas Tibisay, PO Box 38514, Winnellie, NT,
0821

STRUTHERS, Mrs Margaret Alice, Senior Policy Analyst, NT
Department of Health and Community Services, 87 Mitchell
Street, Darwin, NT, 0800

APPENDIX B

PROJECT DRAWINGS

Location Plan	B-1
Zone Plan	B-2
Master Plan	B-3
Site Layout 1 Central Mess/Accommodation & Recreation Zones	B-4
Site Layout 2 Brigade Headquarters/104 Signals Squadron Garrison Support Zone	B-5
Site Layout 3 Mess/Accommodation (Officers)	B-6
Site Layout 4 Messes/Accommodation Zone (Southern)	B-7
Site Layout 6 1st Armoured Regiment Zone	B-8
Site Layout 7 2nd Cavalry Regiment Industrial Areas Increased Accommodation	B-9
RAAF Base Darwin 161 Recce Squadron	B-10
Brigade Headquarters	
Headquarters	B-11 - B-12
Technical Support Platoon	B-13
Transport Section	B-14 - B-15

104 Signals Squadron

Squadron Headquarters B-16

Q Store B-17

Compound Building/Vehicle Shelter B-18

Vehicle Shelter B-19

Vehicle Shelter B-20

1st Armoured Regiment

Regimental Headquarters B-21

Regimental Headquarters B-22

Squadron Headquarters B-23

Regimental Q Store B-24

Regimental Q Store B-25

Technical Support Workshop B-26

Technical Support Workshop B-27

Covered Tank Park & Talafit Trainer B-28

Covered vehicle bays
Parking bays B-29

Covered vehicle servicing bay B-30

7 Training Group

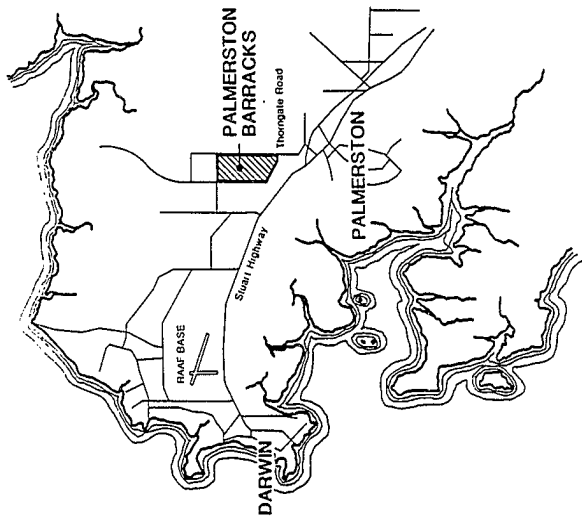
Central Instruction Facility B-31

Transport Section B-32

8 Field Ambulance

Headquarters	B-33
Logistics Section	B-34
Transport Section/Vehicle shelter	B-35
Vehicle shelter	B-36
Sick Quarters	
Sick Quarters	B-37
Base Administration Support Centre	
Base Administration Support Centre	B-38
Ground Maintenance	B-39
Personnel Support Facilities and POL Point	
Area Child Care Facilities	B-40
Hobby centre	B-41
Pol Point	B-42
2nd Cavalry Regiment Increase	
Squadron Headquarters	B-43
Q Store Additions	B-44
Vehicle Shelter Additions	B-45
Messes and Living In Accommodation	
Officers Accommodation - Central	B-46
Officers Mess - Central	B-47
ORS'Accommodation - Southern Central	B-48
ORS' Mess - Southern	B-49

ORS' Canteen - Southern	B-50
ORS' Mess - Central	B-51
ORS' Canteen - Central	B-52
Physical Fitness Centre - Central	B-53
Physical Fitness Centre - Central	B-54
Physical Fitness Centre Central - Squash Courts	B-55
Physical Fitness Centre Central - Assoc. Buildings	B-56



AUSTRALIAN
CONSTRUCTION
SERVICES

APIN STAGE 1

PALMERSTON
BARRACKS
LOCATION PLAN 1

Drawn By: APIN D.



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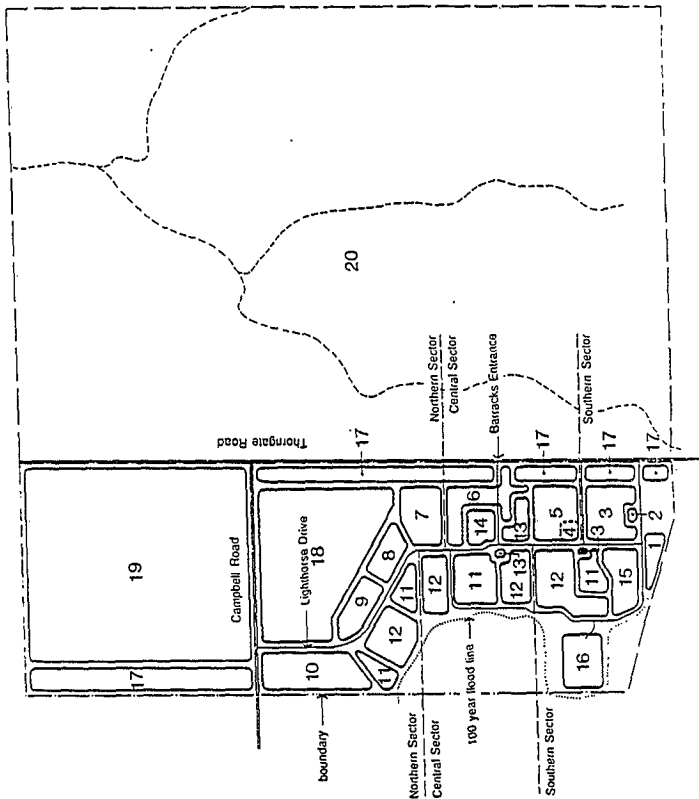
- 1 ANTENNA FARM
- 2 VEHICLE WASH
- 3 CAVALRY REGIMENT
- 4 SUPPORT BATTAL
- 5 LOGISTIC UNIT
- 6 GARRISON SUPPORT
- 7 MECHANICAL INFANTRY BATT
- 8 MEDIUM ARTILLERY BATTERY
- 9 MAJOR UNIT
- 10 TRANSIT CAMP
- 11 CAMP RECREATION
- 12 MESSSES & ACCOMMODATION
- 13 BRIGADE HQ & SIG SQDN
- 14 MAIN PARADE GROUND
- 15 ARMOURIED REGIMENT
- 16 COMBAT ENGINEER REGIMENT
- 17 BUFFER ZONE
- 18 CLOSE TRAINING AREA
- 19 PROPOSED ACQUISITION FOR CLOSE TRAINING
- 20 CLOSE TRAINING

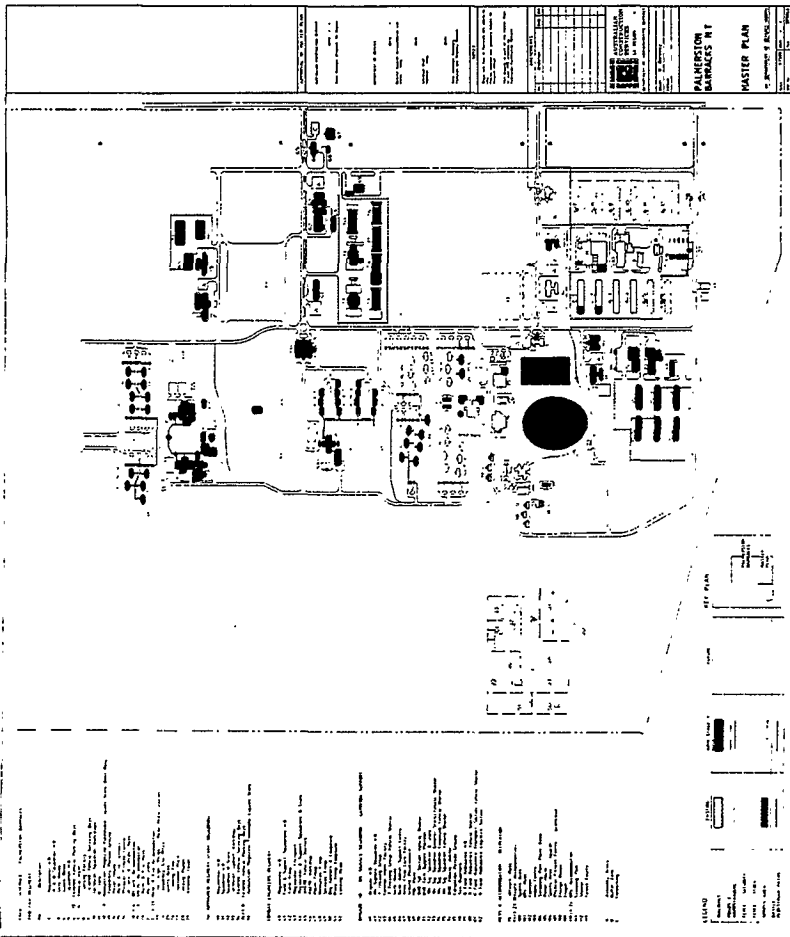


AUSTRALIAN
CONSTRUCTION
SERVICES

APIN STAGE 1

PALMERSTON
BARRACKS
ZONE PLAN






LEGEND

- 1 RUGBY FIELD
- 2 SHELTER
- 3 FOOTBALL OVAL
- 4 TENNIS COURTS
- 5 CHANGEROOMS
- 6 PHYSICAL FITNESS CENTER
- 7 GYMNASIUM
- 8 SQUASH
- 9 SWIMMING POOL
- 10 SWIMMING POOL PLANTROOM
- 11 POWER HOUSE
- 12 HOBBY CENTRE
- 13 DR PRESS
- 14 CAFE/TEA
- 15 CAR PARK
- 16 DMS* ACCOMMODATION
- 17 FUTURE DMS* ACCOMMODATION
- 18 CARPORTS/BOX ROOMS
- 19 FUTURE CHAPEL



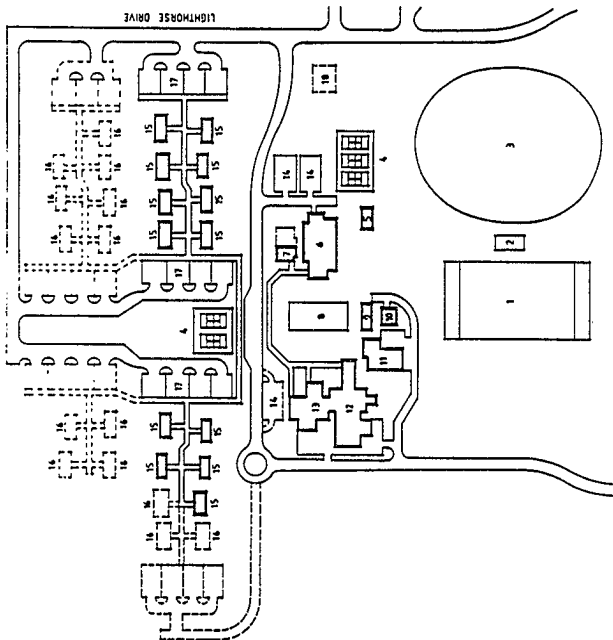

**AUSTRALIAN
 CONSTRUCTION
 SERVICES**

APIN STAGE 1

SITE LAYOUT 1

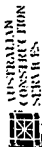
Central Mess/
 Accommodation and
 Recreation Zones

Dwg No AP'SL 1/A
 February 1992



LEGEND

- 1 BRIGADE HEADQUARTERS
- 2 BMO TECH SUPP PLANT
- 3 BMO IPT SECTION/
VEHICLE SHELTER
- 4 BMO VEHICLE SHELTER
- 5 M4 SIG SODM MO
- 6 M4 SIG SODM O STGM
- 7 M4 SIG SODM GENERAL STORE/
VEHICLE SHELTER
- 8 M4 SIG SODM COMPOUND/
BUILDING/
VEHICLE SHELTER
- 9 M4 SIG SODM VEHICLE SHELTER
- 10 TRAINING GROUP
- 11 CENTRAL INSTN FACILITY
- 12 LONG COP VEHICLE
- 13 BASE ADMIN SUPPORT
- 14 GROUND MAINTENANCE AREA/
CHILD CARE FACILITY
- 15 FUTURE GATE HOUSE
- 16 POL POINT
- 18 FILLD AMMUNITION WK
- 19 BFA LOGISTICS SECTION
- 20 BFA TRANS SECTION/
VEHICLE SHELTER
- 21 BFA VEHICLE SHELTER
- 22 SCK QUARTERS
- 23 SCK QUARTERS EXPANSH
- 24 FORMATION PARADE GR
- 25 FUTURE CHAPEL
- 26 UNIT ASSEMBLY AREA
- 27 CAR PARK
- 28 BUFFER ZONE

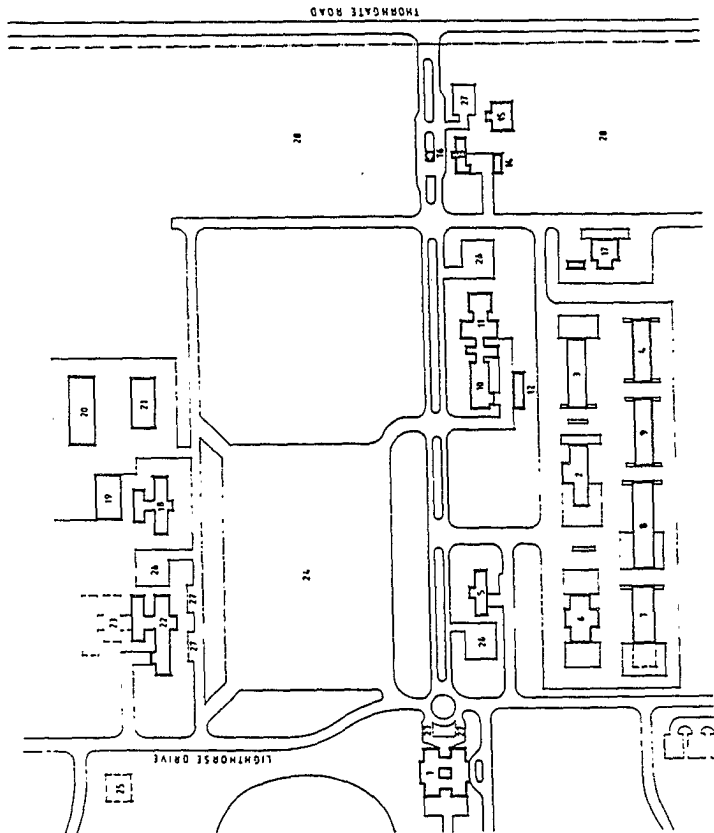


APIN STAGE

SITE LAYOUT 2

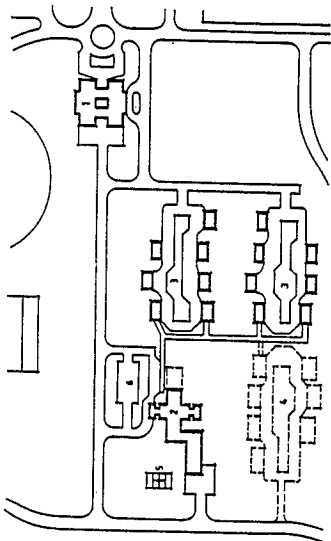
Brigade Headquarters
104 Signals Squadron
Garrison Support ZONE

Drawn by: APIN 27



LEGEND

- 1 BRIGADE HEADQUARTERS
- 2 OFFICERS' MESS
- 3 OFFICERS' ACCOMM. (OH)
- 4 OFFICERS' ACCOMM. (EK)
- 5 TENNIS COURT
- 6 CAR PARK



**AUSTRALIAN
CONSTRUCTION
SERVICES**

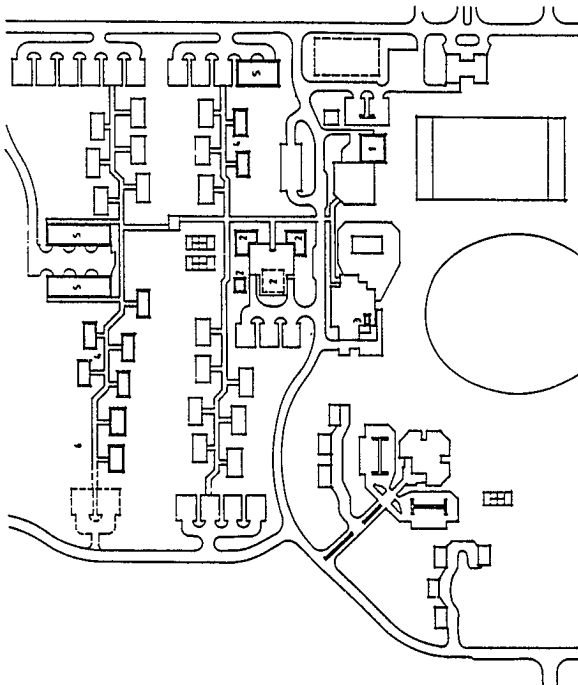
APIN STAGE

SITE LAYOUT 3

Mess/ Accommodation
(Officers)

LEGEND

- 1 OMS: CAMITEEN EXTENSION
- 2 OMS: MESS EXTENSION
- 3 SQUASH COURT
- 4 OMS: ACCOMMODATION
- 5 GARAGES
- 6 FUTURE EXPANSION



**AUSTRALIAN
CONSTRUCTION
SERVICES**

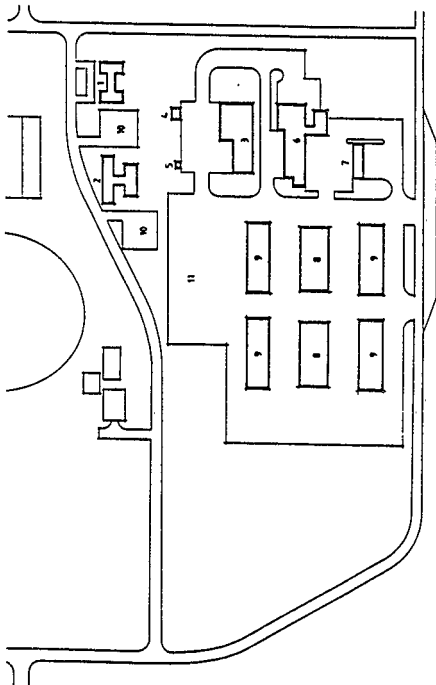
APIN STAGE

SITE LAYOUT 4

Messes/Accommod
Zone (Southern)

LEGEND

- 1 REGIMENTAL HQ
- 2 SQUADROOM HQ
- 3 SQUADROOM 0-STORY
- 4 SMALL ALPHAS ARMOURY
- 5 MAGAZINE
- 6 FLAMMABLE LIQUIDS:-
TECHNICAL SUPPORT
- 7 COVERED VEHICLE
SERVICING BAYS
- 8 COVERED TRAILER
PARK
- 9 COVERED VEHICLE
PARKING BAYS
- 10 UNIT ASSEMBLY AREA
- 11 TRAILER PARK



AUSTRALIAN
CONSTRUCTION
SERVICES

APIN STAGE

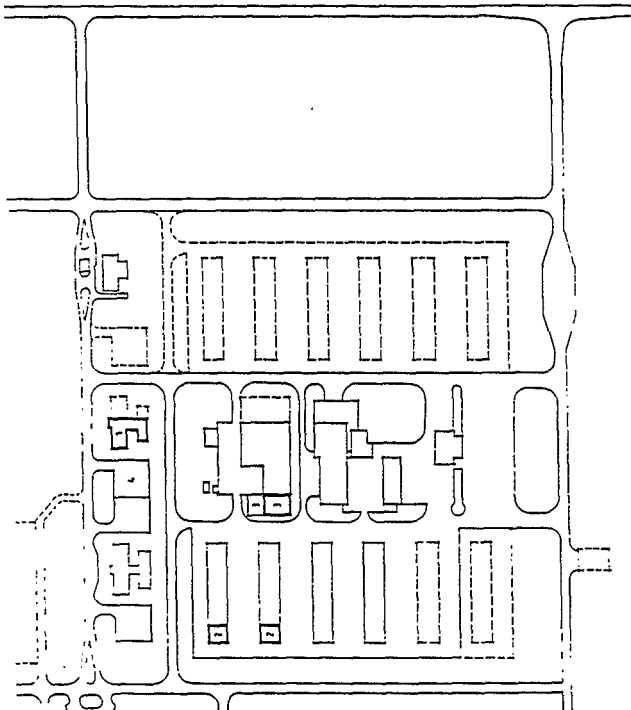
SITE LAYOUT 6

1st Armoured
Regiment Zone

D-9 No AFSL 6/A

LEGEND

- 1 SQUADRON HQ
- 2 VEHICLE SHELTERS H
- 3 SQUADRON D STORE
- 4 COMPOND EXTENSION
- 5 ASSEMBLY AREA



AUSTRALIAN
CONSTRUCTORS
SERVICES

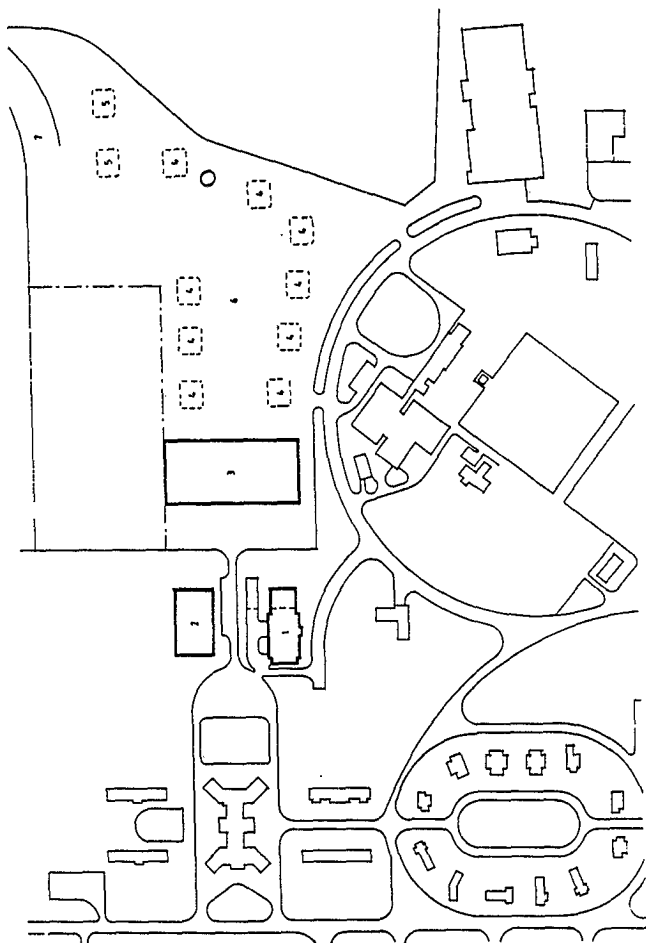
APIN STAGE 7

SITE LAYOUT 7
2nd Cavalry Rgmt
Industrial Areas
Increased Accommodation

Drawn By: APTG 77

LEGEND

- 1 HQ/ADMIN - EITING OP:
- 2 LOGISTICS BUILDING
- 3 WORKSHOPS/WORKAR
- 4 BONA PARKING
- 5 WORLD PARKING
- 6 SQUADRON APRON
- 7 TAXI-WAY



AUSTRALIAN
CONSTRUCTORS
SERVICES

APIN STAGE

RAAF BASE DARWIN
161 FENCE SQUADRON

SITE LAYOUT



LEGEND

- 581 OC HQ COT
- 582 CSB HQ COT
- 583 ORDERLY ROOM
- 584 PAY OFFICE
- 585 O-STORE
- a CONS/LEADER
- b RECEIPTS & ISSUES
- c ARMOURY
- d GENERAL STORE
- 586 DUTY ROOM
- 587 CPL MECK ROOM
- 588 MEDICAL STORE
- 481 TEA ROOM
- 602 SHOWER/CHANGE ROOM
- 603 TOILET
- 484 ELEANER
- 485 CIVILIAN LUNCH ROOM
- 793 COMD COVERED PARK
- 1101 PLANT ROOM
- 1102 GENERATOR
- 1103 FOTER
- 1104 COVERED UNLOADING
- 1105 COURT/YARD

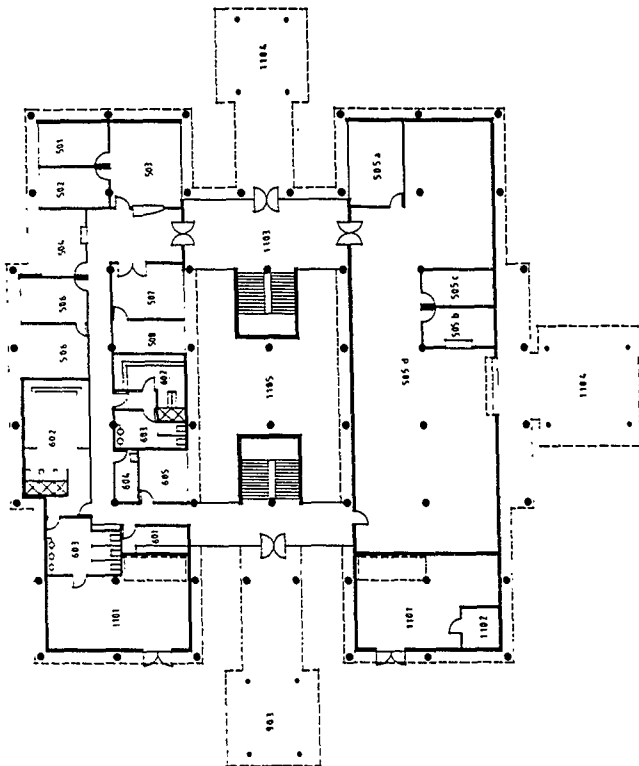


AUSTRALIAN
CONSTRUCTION
SERVICES

APIN STAGE 1

HEADQUARTERS
1st BRIGADE

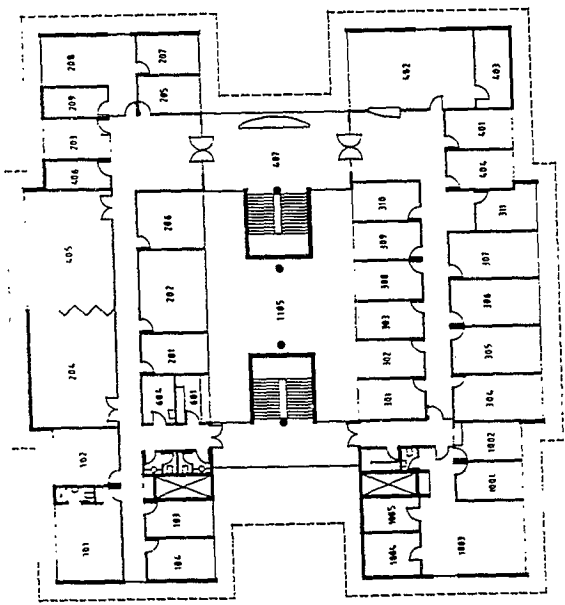
Headquarters





LEGEND

- 401 CHIEF CLERK OFFICE
- 402 REGISTRY
- 403 STORE
- 404 MP SEC OFFICE
- 405 CONFERENCE ROOM
- 406 PRODUCTION ROOM/STORE
- 407 FOTER
- 408 TEA ROOM
- 409 SHOWER/CHANGE ROOM
- 410 TOILET
- 411 CLEANER
- 412 COMMUNICATIONS CENTRE
- 413 SUPERVISOR
- 414 REGISTRY
- 415 CONCERN WORK AREA
- 416 VAULT
- 417 STORE
- 418 COURTYARD
- 901 COMD OFFICE
- 902 COMD PAJLON OFFICE
- 903 RSH OFFICE
- 904 DC BAA OFFICE
- 905 BN OFFICE
- 906 503 OPSD OFFICE
- 907 OPS ORDRLY ROOM
- 908 OPS ROOM
- 909 BALD OFFICE PM OFFICE
- 910 503 BLD OFFICE
- 911 503 INT OFFICE
- 912 INT CELL OFFICE
- 913 INT STORE
- 914 DATA & DRW OFFICE
- 915 503 LOG OFFICE
- 916 503 PERS OFFICE
- 917 503 SUPP/SUP 503 OFFICE
- 918 503 SUPP/SUP 503 ADMIN/PRINT OFFICE
- 919 503 TP/TPP 501 OFFICE
- 920 PERS/LOG ORDRLY ROOM
- 921 PRINC CHAM/PLAN OFFICE
- 922 LEGAL OFFICE
- 923 RESOURCE MNGR OFFICER
- 924 CIVIL ADMIN OFFICER



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**AUSTRALIAN
 CONSTRUCTION
 SERVICES**

APIN STAGE 1

**HEADQUARTERS
 1st BRIGADE**
 Headquarters

Draw No. BHO V2/D
 February 1997



LEGEND

- 801 ASH OFFICE
- 802 PRODUCTION OFFICE
- 803 ERE OPS
- 804 LUNCH ROOM
- 805 SHOWER/CHANGE ROOM
- 804 TOILET
- 807 B1 STORE
- 808 B2 STORE
- 809 WORKSHOP
- 810 VEHICLE REPAIR BAY
- 811 VEHICLE SERVICING BAY
- 812 GENERAL ENGINEERING BAY
- 813 ELECTRICAL BAY
- 814 TELS BAY
- 815 BATTERY CHARGING AREA
- 816 FLAMMABLE LIQUIDS STORE
- 811 GAS STORE
- 812 STEEL STORE
- 813 CLEANER
- 814 PLANT ROOM

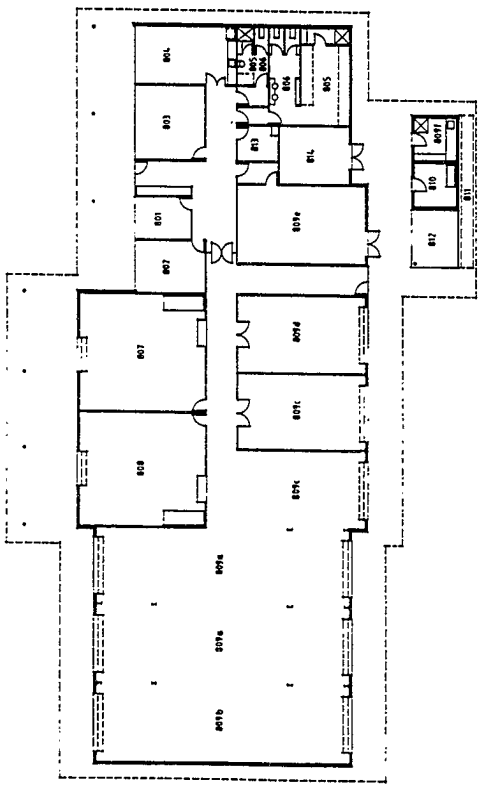


**AUSTRALIAN
CONSTRUCTION
SERVICES**

APIN STAGE 1

**HEADQUARTERS
1st BRIGADE**
Tech Support
Platoon

Draw No (BHD) 27A





LEGEND

- 701. IP1/A VEH OFFICE
- 702. IP1 STORE
- 703. POW/FLAMMABLE
- 704. MOUND STORE
- 705. VEHICLE SHELLERS
- 706. LUNCH ROOM
- 707. SHOWER/CHANGE ROOM
- 708. TOILET
- 709. CES LAGES

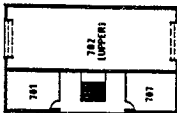


AUSTRALIAN
CONSTRUCTION
SERVICES

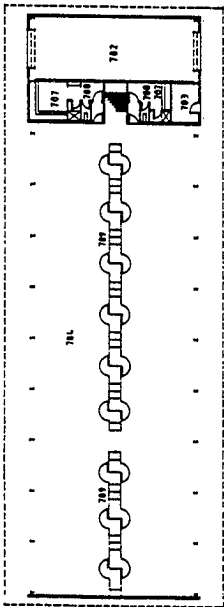
APIN STAGE 1

HEADQUARTERS
1st BRIGADE
Transport Section

D-11 No (HQ) 3/A



FIRST FLOOR



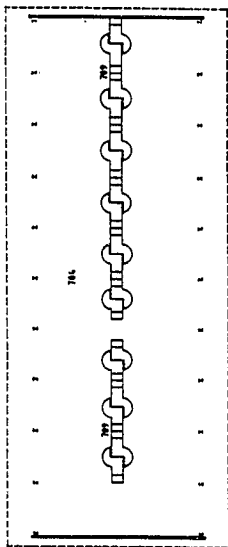
GROUND FLOOR



LEGEND

704 VEHICLE SHELTER

709 CES CAGES



AUSTRALIAN
CONSTRUCTION
SERVICES

APIN STAGE 1

HEADQUARTERS

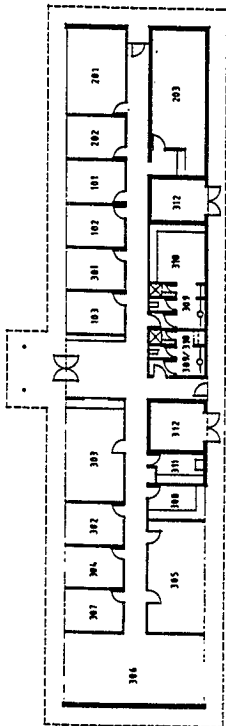
1st BRIGADE

Transport Section



LEGEND

- 101 DC OFFICE
- 102 2K OFFICE
- 103 55H OFFICE
- 201 OPS CELL
- 202 SOT/AMP CPL
- 203 EGYPTIO VAULT
- 301 AD OFFICE
- 302 (M/EF CLERK OFFICE
- 303 ORDERLY ROOM
- 304 STORE
- 305 CONFERENCE ROOM
- 306 CLASSROOM
- 307 LIBRARY
- 308 TLA ROOM
- 309 SHOWER/CHANGE ROOM
- 310 TOILETS
- 311 CLEANER
- 312 PLANT ROOM



AUSTRALIAN
CONSTRUCTION
SERVICES

APIN STAGE 1

104 SIGNALS
SQUADRON

Squadron
Headquarters

Draw No. SC 1/B
REVISED 1972



LEGEND

- 481 SIGNALS OFFICE
- 482 LEDGER OFFICE
- 483 Q-STORE
- 484 REPAIR & MAINTENANCE
- 485 REPAIR & ISSUES
- 486 RADIO STORE
- 487 BOARD OF SURVEY
- 488 GENERAL STORE
- 489 ARMOURY
- 490 TENT/CAMP STORE
- 491 LOOKS STORE
- 492 COVERED UNLOADING
- 493 CLEANER

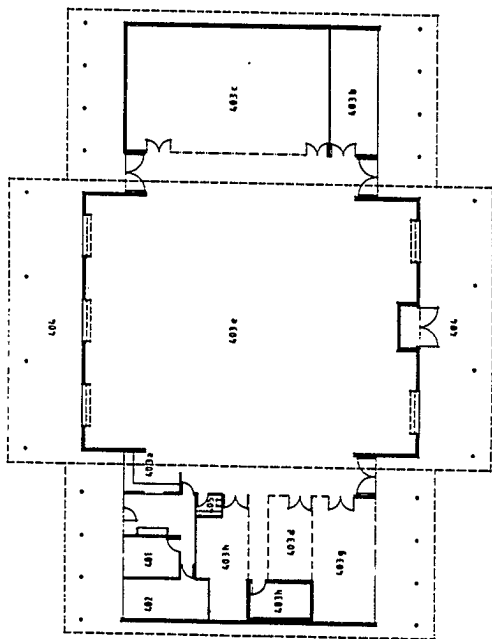


AUSTRALIAN
CONSTRUCTION
SERVICES

APIN STAGE 1

104 SIGNALS
SQUADRON
Q-Store

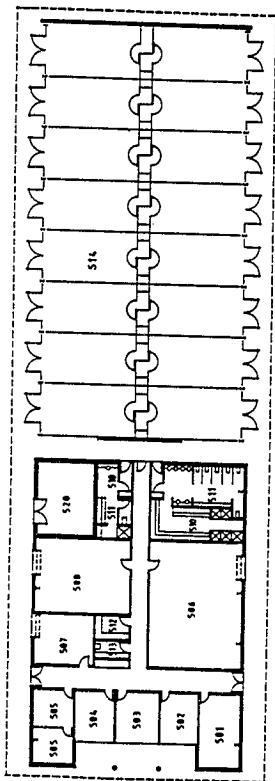
Dwg No 583 2/A





LEGEND

- 581 TP1 SUPER OFFICE
- 582 RADIO TROOP OFFICE
- 583 COXEN TROOP OFFICE
- 584 SYSTEMS TROOP OFFICE
- 585 DUTY ROOM
- 586 TECH MAINTENANCE WORKSHOP
- 587 UPPER WORKSHOP
- 588 BATTERY STORE
- 589 TONKETS
- 511 SHOWER/CHANGE ROOM
- 512 TEA ROOM
- 513 CLEANERS
- 514 SECURE VEHICLE SHELTERS
- 519 PLANTROOM



AUSTRALIAN
CONSTRUCTION
SERVICES

APIN STAGE 1

104 SIGNALS
SQUADRON

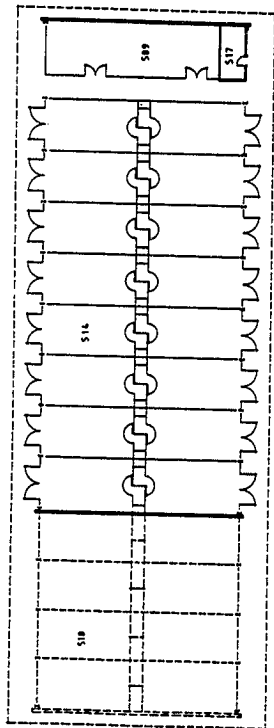
Compound Building/
Vehicle Shelter

Draw No. SCS 3/A
February 1992



LEGEND

- SPP GENERATOR STORE
- S14 SECURE VEHICLE SHELTERS
- S17 POL STORE
- S18 VEHICLE SHELTER EXPANSION



AUSTRALIAN
CONSTRUCTION
SERVICES

APN STAGE 1

104 SIGNALS
SQUADRON
Vehicle Shelter

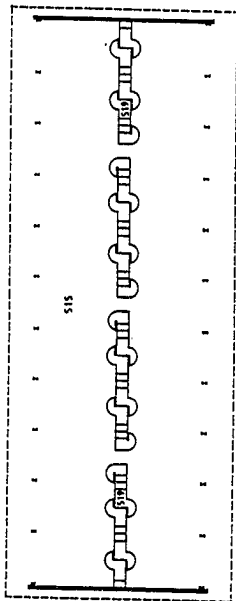
Doc No SG 4/A
E:\Projects\104Sigs\104Sigs.dwg



LEGEND

518 VEHICLE SHELTER

519 CES GAZES



AUSTRALIAN
CONSTRUCTION
SERVICES



APIN STAGE 1

104 SIGNALS
SQUADRON

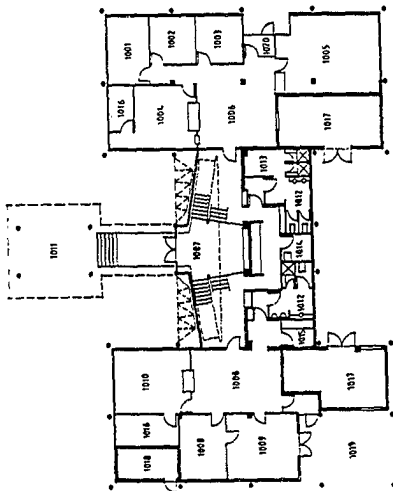
Vehicle Shelter

Dwg No SKG 5/A



LEGEND

- M41 OX OFFICE
- M42 ZK OFFICE
- M43 SSJ OFFICE
- M44 ORDERLY ROOM
- M45 TRAINING AREA
- M46 WAITING AREA
- M47 FOTER
- M48 HQ OFFICE
- M49 TREATMENT ROOM
- M50 RECOPIES
- M51 UNDERCOVER DROP-OFF
- M52 TOILETS
- M53 SHOWER/CHANGE ROOM
- M54 CLEANER
- M55 UTILITY
- M56 STORE
- M57 PLANT ROOM
- M58 AIRLOCK PARK
- M59 AIR LOCK



GROUND FLOOR



AUSTRALIAN
CONSTRUCTION
SERVICES

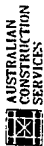
APIN STAGE 1

1st ARMOURD
REGIMENT
Regimental
Headquarters



LEGEND

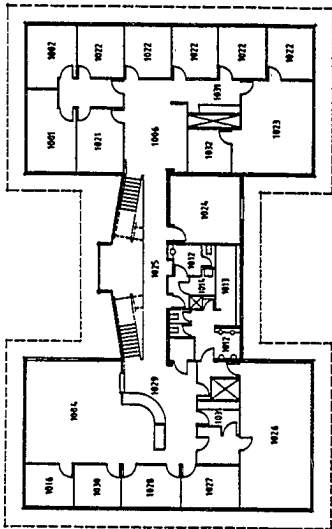
- W01 OC OFFICE
- W02 2A OFFICE
- W04 ORDERLY ROOM
- W06 WAITING AREA
- W12 TOILETS
- W13 SHOWER/CHANGE ROOM
- W14 CLEANER
- W16 STORE
- W21 RSH OFFICE
- W22 HWB OFFICE
- W23 INTELLIGENCE
- W24 RSD OFFICE
- W25 BALCONY
- W26 CONFERENCE ROOM
- W28 CC OFFICE
- W29 ENCLURT
- W30 PARK
- W31 TEA ROOM
- W32 PLAN ROOM



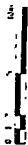
APIN STAGE 1

1ST ARMOURD
REGIMENT
Regimental
Headquarters

Draw No AG 1/2

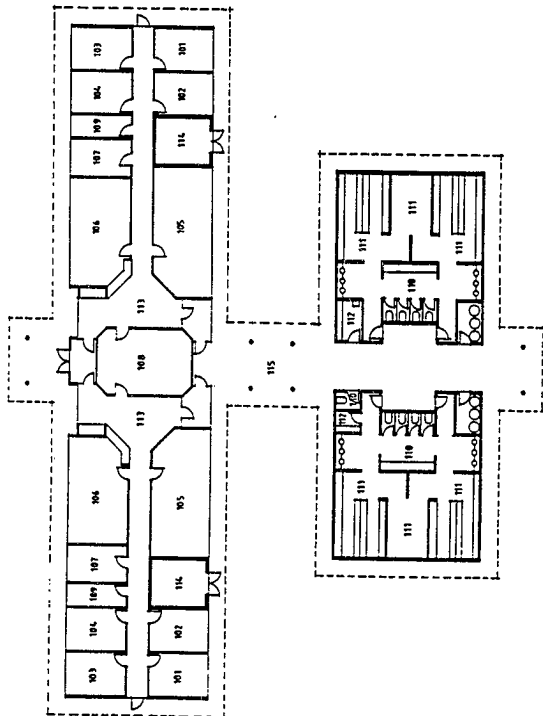


FIRST FLOOR



LEGEND

- W1 DC OFFICE
- W2 ZC OFFICE
- W3 SSH OFFICE
- W4 LO OFFICE
- W5 TP LEADER'S OFFICE
- W6 ORDERLY ROOM
- W7 STORE ROOM
- W8 CONFERENCE ROOM
- W9 TCA ROOM
- 1W TOILETS
- 111 SHOWER/CHANGE ROOM
- 112 CLEANER
- 113 FODDER
- 114 PLANT ROOM
- 115 COVERED WAT



**AUSTRALIAN
CONSTRUCTION
SERVICES**

APIN STAGE 1

**1st ARMOURD
REGIMENT**

Squadron
Headquarters

Dwg No AR 2



LEGEND

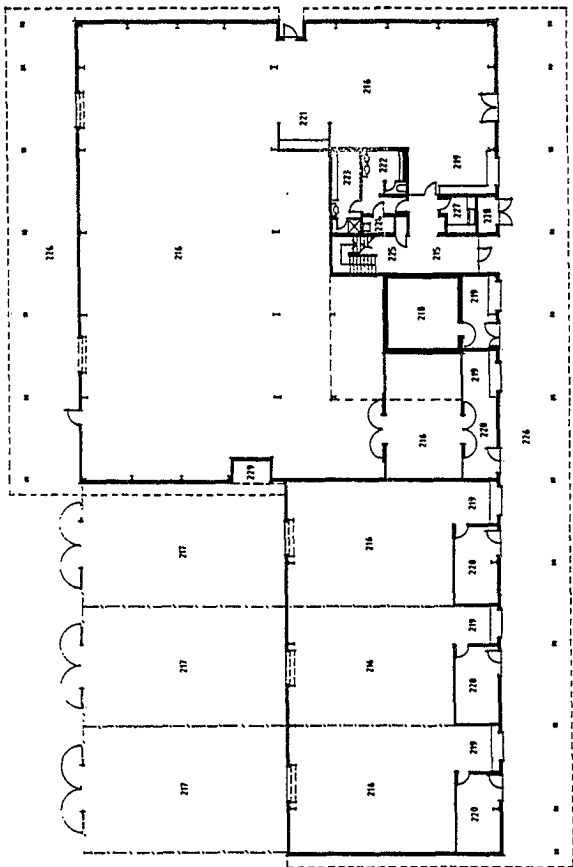
- 215 Foyer
- 216 STORE
- 217 COMPOUND
- 218 ARMOURY
- 219 RECEIPT/ISSUE
- 220 OFFICE
- 221 WORK STATION
- 222 TOILETS
- 223 SHOWER/CHANGE ROOM
- 224 CLEANER
- 225 STAIR
- 226 VERANDAH
- 227 TEA ROOM
- 228 FIRE BOOSTER
- 229 PLANT ROOM



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**AUSTRALIAN
 CONSTRUCTION
 SERVICES**

APIN STAGE

- 1st ARMOURED
 REGIMENT
- Regimental
 Q-Store



GROUND FLOOR



LEGEND

- 215 FOTER
- 216 STONE
- 218 CRACK
- 225 STAIRS
- 229 FLAMMABLE LIQUIDS
- 231 SMALL ARMS AMMUNITION



**AUSTRALIAN
CONSTRUCTION
SERVICES**

APIN STAGE

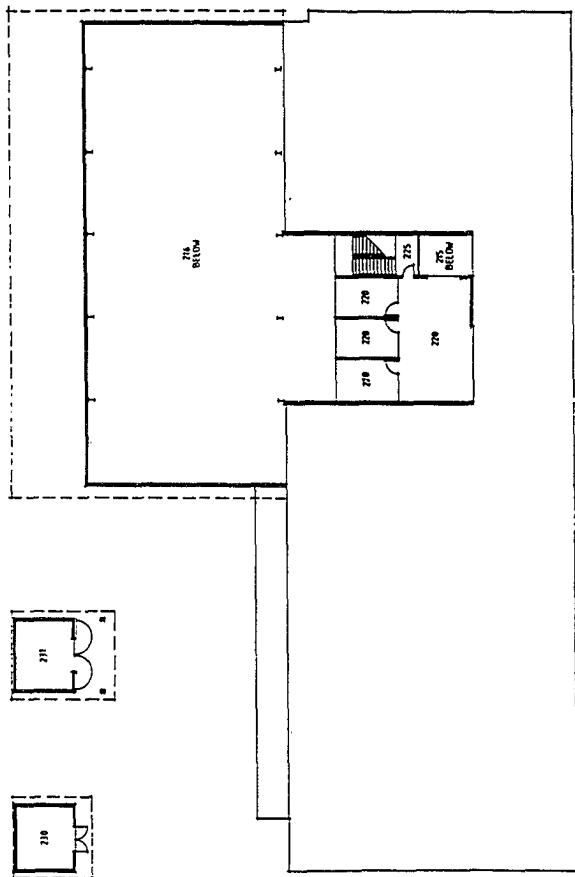
1st ARMOURD

REGIMENT

Regimental

Q-Store

Drawn: 100 100 100

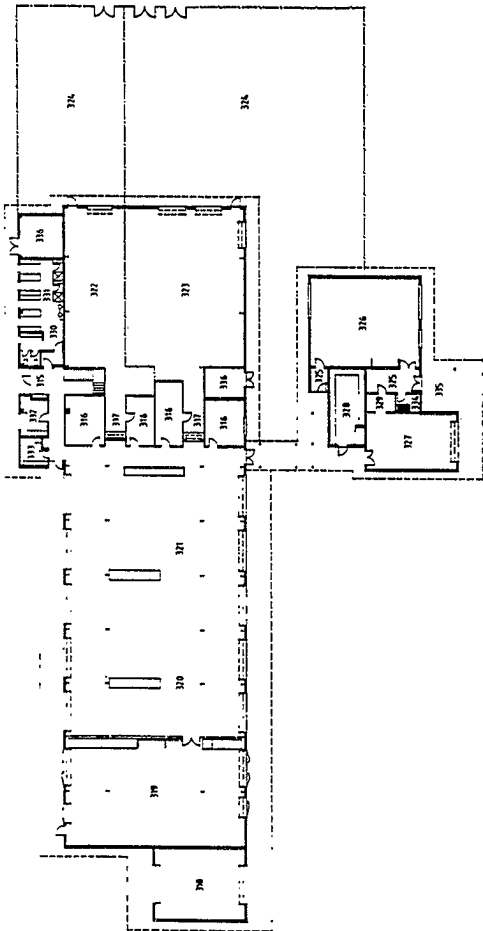


FIRST FLOOR



LEGEND

- 315 LOBBY
- 316 OFFICE
- 317 RECEIPT/ISSUE
- 318 POWER PALK
- 319 GENERAL ENGINEERING
- 320 VEHICLE REPAIR
- 321 VEHICLE REPAIR
- 322 B1 STORE
- 323 B1 STORE
- 324 COMPOUND
- 325 AIR LOCK
- 326 ELECTRICAL WORKSHOP
- 327 ELECTRICAL REPAIR BAY
- 328 BATTERY CHARGE
- 329 WORKSTATION
- 330 TOLETS
- 331 SHOWER/CHANGE
- 332 TEA ROOM
- 333 CLEANER
- 334 STAIR
- 335 VERANDAH
- 336 PLANT ROOM



GROUND FLOOR



AUSTRALIAN
CONSTRUCTION
SERVICES

APIN STAGE

1st ARMOURD
REGIMENT
Technical Support
Workshop

Dwg No. AR 4/1



LEGEND

- 314 OFFICE
- 327 ELECTRICAL REPAIR BAY
- 334 STAIR
- 334 PLANT ROOM
- 337 ORDERLY ROOM
- 338 STORE

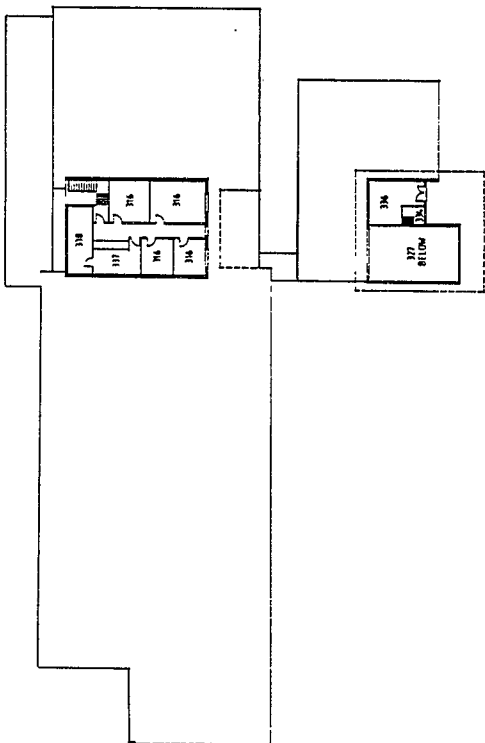


AUSTRALIAN
CONSTRUCTION
SERVICES

APIN STAGE 1

1st ARMOURD
REGIMENT
Technical Support
Workshop

Project No. 475 4176

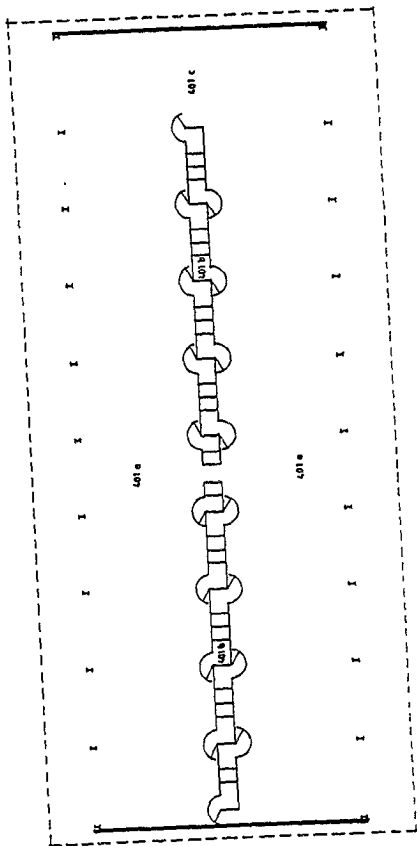
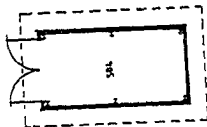


FIRST FLOOR



LEGEND

- 401 a PARKING BAYS
- b CES CAGES
- c BRIDGE LAYER
- 504 TALAFIT TRAINERS



AUSTRALIAN
CONSTRUCTIVE
SERVICES

APIN STAGE

1st ARMOURD
REGIMENT

Covered Tank Pa
& Talafit Trainer

Draw No AR 5

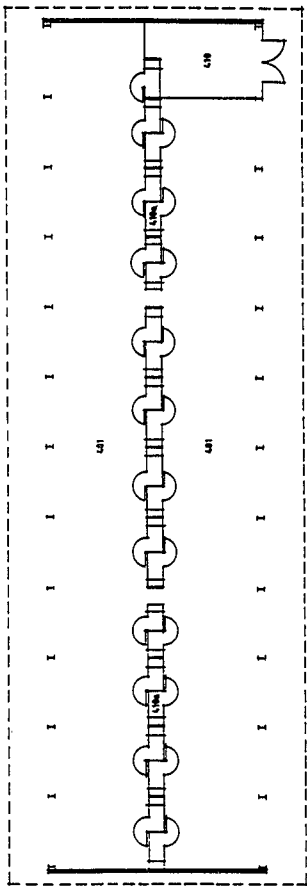


LEGEND

☐ 401 PARKING BAYS

● 401 CEE'S CAGES

410 STORE



**AUSTRALIAN
CONSTRUCTION
SERVICES**

APIN STAGE

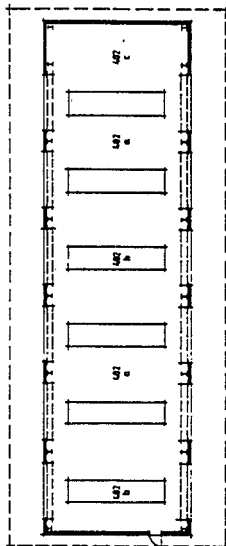
1st ARMOURD
REGIMENT

Covered Vehicle
Parking Bays



LEGEND

- 402 a SERVING BAYS
- b SERVING PIT
- c STORE



AUSTRALIAN
CONSTRUCTION
SERVICES

APIN STAGE 1

1st ARMOURD
REGIMENT

Covered Vehicle
Servicing Bays

Dwg No. AR 7



LEGEND

- W1 OFFICER COMMANDING
- W2 A. CONDO/SO2 OPS
- W3 OPS
- Z01 SENIOR INSTRUCTOR
- OR TRAINING WING
- Z42 INSTRUCTORS
- 301 SENIOR INSTRUCTOR
- SURVIVAL WING
- 302 INSTRUCTORS
- 401 SENIOR INSTRUCTOR
- OFFER TRAINING WING
- 402 INSTRUCTORS
- 501 EDUCATION OFFICERS
- 403 IDC, SO2/PO2
- 402 ORDERLY ROOM
- 403 REPRODUCTION ROOM
- 404 (C) TOUGH/PHIC
- 701 OHS/LEADER OFFICE
- 702 O-S STORE
- RECEIPTS & ISSUES
 - a
 - b
 - c
 - GENERAL STORE
- 801 TEA ROOM
- 802 TOILETS
- 803 SHOWER/CHANGE ROOM
- 804 CLEANER
- 805 COVERED UNLOADING



AUSTRALIAN
CONSTRUCTION
SERVICES

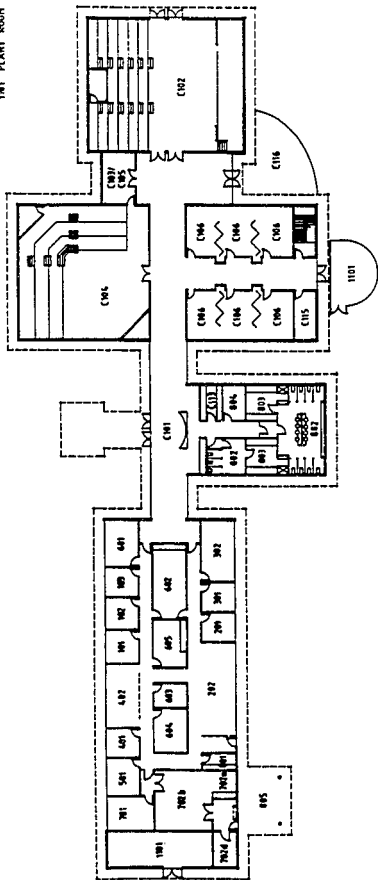
APIN STAGE 1

7 TRAINING
GROUP

Central Instruction
Facility

Draw No. CF 1/A

- CW1 FOTER
- CW2 LECTURE THEATRE
- CW3 THEATRE STORE
- CW4 MODEL ROOM
- CW5 MODEL STORE
- CW6 SYMPODATE ROOM
- CW7 TEA ROOM
- CW8 STORE
- CW9 OUTDOOR AREA
- 1001 PLANT ROOM

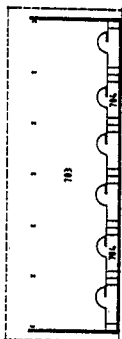




LEGEND

703 VEHICLE SHELTER

704 CCS CAGES



AUSTRALIAN
CONSTRUCTION
SERVICES

APIN STAGE 1

7 TRAINING
GROUP

Transport Section

Drawn: Mrs. C. M. O. J.



LEGEND

- 101 CO OFFICE
- 102 ADJT OFFICE
- 103 RSM OFFICE
- 104 HEALTH OFFICER
- 200 ADMIN OFFICER HQ Coy
- 201 OPERATOR ROOM
- 202 STORE ROOM
- 203 PAY OFFICE
- 205 CONFERENCE ROOM
- 206 TOILET
- 207 SHOWER/CHANGE ROOM
- 208 TEA ROOM
- 209 CLEANER
- 401 RC OFFICE MED Coy
- 402 ESH OFFICE
- 403 TREATMENT SECTION
- HO/NO OFFICE
- 404 TREATMENT SECTION
- GEN OFFICE
- 405 MED TRG STORE
- 404 LIBRARY
- 409 PLANT ROOM
- 670 COVERED WAY

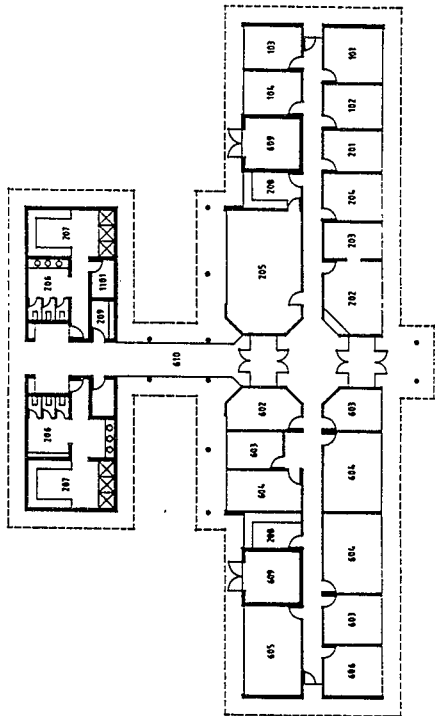


AUSTRALIAN
CONSTRUCTION
SERVICES

APIN STAGE 1

8 FIELD
AMBULANCE
Headquarters

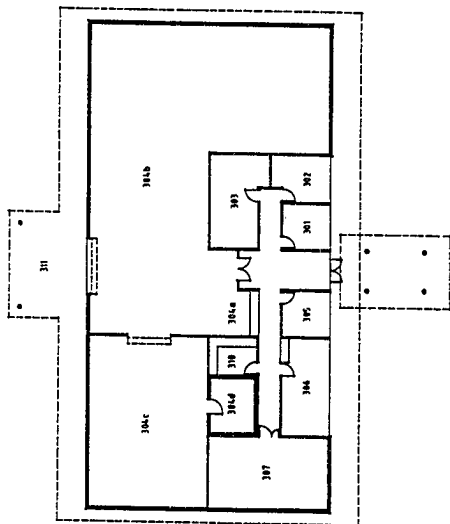
Dwg No. FA 1/A





LEGEND

- 301 OH OFFICE
- 302 OHS OFFICE
- 303 LEDGER OFFICE
- 304 D-STORE
 - a RECEIPTS & ISSUES
 - b GENERAL STORE
 - c TECH STORE
 - d ARMOURY
- 305 PHARMACIST OFFICE
- 306 PHARMACY DISPENSARY
- 307 PHARMACY BULK STORE
- 308 TEA ROOM
- 311 COVERED UNLOADING



AUSTRALIAN
CONSTRUCTION
SERVICES

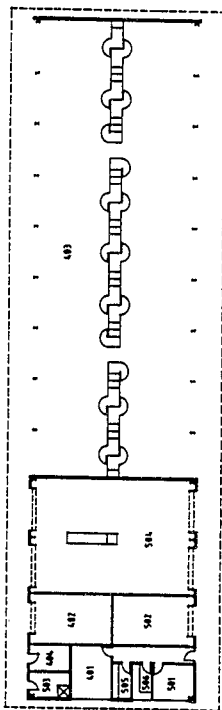
APIN STAGE 1

8. FIELD
AMBULANCE
Logistics Section



LEGEND

- 601 IPT OFFICE
- 602 IPT STORE
- 603 VEHICLE SHELTERS
- 604 POB STORE
- 501 TECH SPT OFFICE
- 502 TECH SPT STORE
- 503 BATTERY CHARGING
- 504 VEHICLE SERVICING/REPAIR BAYS
- 505 TEA ROOM
- 506 CLEANER



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**AUSTRALIAN
 CONSTRUCTION
 SERVICES**

APIN STAGE 1

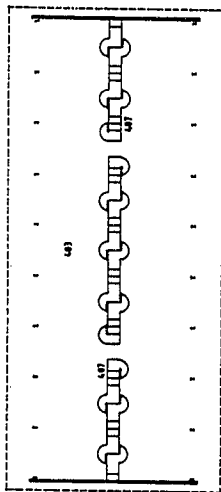
- 8 FIELD
 AMBULANCE
 Transport Section/
 Vehicle Shelter

Draw No. FA 3/A



LEGEND

400 VEHICLE SHELTER
407 CES CRIGS



AUSTRALIAN
CONSTRUCTION
SERVICES

APIN STAGE

8 FIELD
AMBULANCE

Vehicle Shelter

Draw No EA 47-
14



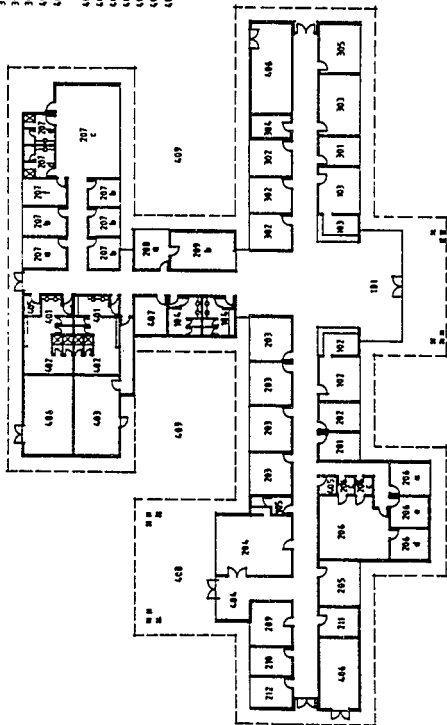
LEGEND

- | | |
|---------------------------|-----------------------------|
| 216 OPTICAL/AUDIO TESTING | 101 ENTRANCE/WAITING |
| 211 LINEN STORE | 102 MEDICAL RECEPTION/ADMIN |
| 212 MEDICAL STORE | 103 DENTAL RECEPTION/ADMIN |
| 301 DC DENTAL OFFICE | 104 PATIENT TOILETS |
| 302 DENTAL SURGERY | 105 SPECIMEN ROOM |
| 303 LABORATORY | 106 X-RAY |
| 304 DARK ROOM | 107 MEDICAL OFFICE |
| 305 DENTAL STORE | 108 X-RAY OFFICE |
| 401 STAFF TOILETS | 109 CONSULTING ROOM |
| 402 STAFF | 110 TREATMENT/CASUALTY |
| 403 SWIMMER/CHANGE | 116 PLASTER ROOM |
| 407 STAFF LINEN ROOM | 118 RADIOGRAPHY |
| 404 WAITING AREA | 119 RADIOGRAPHY OFFICE |
| 405 PLASTER ROOM | 120 RADIOLOGIC ROOM |
| 406 PLANT ROOM | 121 CHANGE LOCKER |
| 407 STORE | 122 DARK ROOM |
| 408 AMBULANCE PARK | 123 RADIOGRAPHY STORE |
| 409 LANDSCAPED COURTYARD | 127 PHYSIOTHERAPY |
| | 128 PHYSIO OFFICE |
| | 129 TREATMENT CUMBLE |
| | 130 EXERCISE AREA |
| | 131 PATIENTS' |
| | 132 TOILET/CHANGE |
| | 133 PHYSIO STORE |
| | 134 PHARMACY |
| | 135 PHARMALISTS' OFFICE |
| | 136 DISPENSARY |
| | 137 LABORATORY |



AUSTRALIAN
CONSTRUCTION
SERVICES

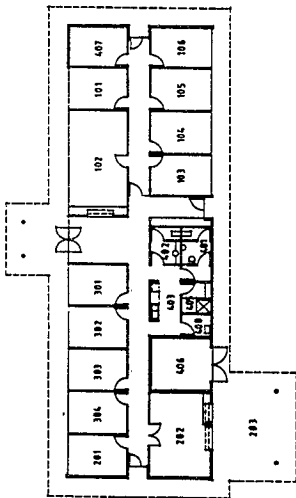
APIN STAGE 1 SICK QUARTERS





LEGEND

- 101 DC OFFICE
- 102 OFFICE
- 103 OFFICE
- 104 OFFICE
- 105 BARBERS SHK
- 106 POWERPLANT CLERK
- 107 OFFICE
- 108 STORE
- 281 COVERED UNLOADING
- 301 V.D. EDUCATION
- 302 V.D. LEGAL/SIB
- 303 V.D. A/S/CHAPLANS
- 401 V.D. PSYCH
- 401 MALE TOILET
- 402 FEMALE TOILET
- 403 TEA ROOM
- 405 UNIFORM SHOWER/CHANGEROOM
- 406 PLANT ROOM
- 407 PABX
- 408 CLEANER



**AUSTRALIAN
CONSTRUCTION
SERVICES**

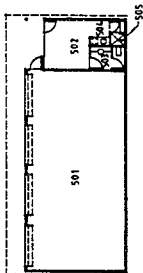
APIN STAGE 1

**BASE ADMINST.
SUPPORT CENTRE**



LEGEND

- 501 IMPACTOR SHED
- 502 OFFICE
- 503 TOILET
- 504 ICA STRIP
- 505 SHOWER



AUSTRALIAN
CONSTRUCTION
SERVICES

APIN STAGE 1

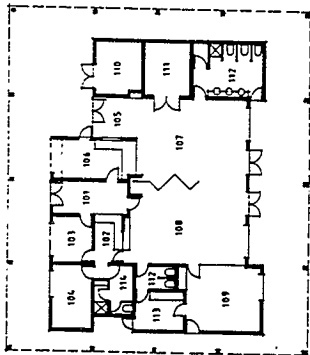
BASE ADMINST.
SUPPORT CENTRE
Ground Maintenance

Draw No. BASC 2/A



LEGEND

- 101 ERRITV
- 102 RECEPTION
- 103 OFFICE
- 104 NOLTERS/STAFF ROOM
- 105 Foyer
- 106 KITCHEN
- 107 ACTIVITY AREA 1
- 108 ACTIVITY AREA 2
- 109 NURSERY
- 110 OUTDOOR STORE
- 111 INDOOR STORE
- 112 TOILETS
- 113 LAUNDRY
- 114 STAFF TOILETS



AUSTRALIAN
CONSTRUCTION
SERVICES

APIN STAGE 1

PERSONNEL SUPPORT
FACILITIES

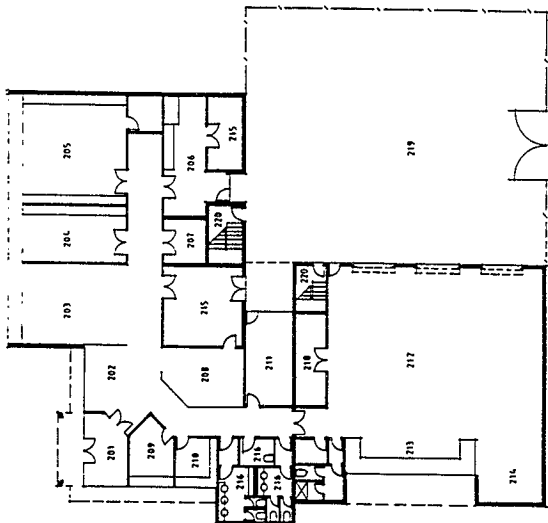
Area Child
Care Facilities


PLANS NO. 1000 1/2



LEGEND

- 201 FOYER
- 202 LOBBY
- 203 DISPLAY/LECTURE
- 204 POTTERY
- 205 CERAMICS
- 206 POURING ROOM
- 207 KILN
- 208 SHOP
- 209 OFFICE
- 210 LAPIDARY
- 211 FRAME SHOP
- 212 WORKSHOP
- 213 WORK STATION
- 214 MACHINE SHOP
- 215 STORE
- 216 TOILETS
- 217 SHOWER/CHANGE
- 218 TOOLS
- 219 SERVICE YARD
- 220 PLANT ROOM ACCESS




**AUSTRALIAN
CONSTRUCTION
SERVICES**

APIN STAGE 1

**PERSONNEL SUPPORT
FACILITIES**
 Hobby Centre



LEGEND

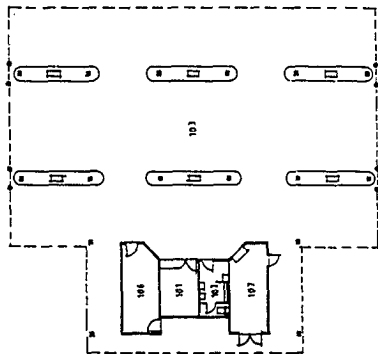
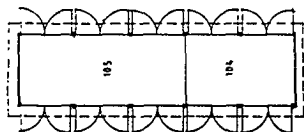
- 101 COMMONS OFFICE
- 103 TOILET
- 103 RESELLING POINT
- 104 POL STORE
- 105 DIMMERED FUEL COMPOUNT
- 104 STORE
- 107 GENERATOR



AUSTRALIAN
CONSTRUCTION
SERVICES

APIN STAGE 1

POL POINT





LEGEND

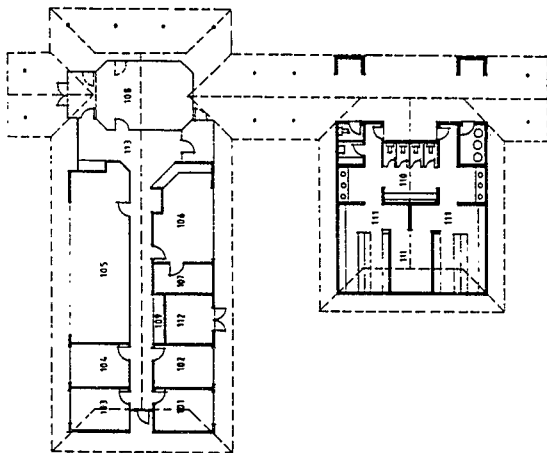
- 101 OX OFFICE
- 102 2K OFFICE
- 103 55M OFFICE
- 104 LO OFFICE
- 105 TROOP LEADER
- 106 ORDERLY'S ROOM
- 107 STORE
- 108 EMERGENCY
- 109 TEA/COFFEE MAKING
- 110 TOILETS
- 111 SHOWERS/LOCKERS
- 112 PLANT ROOM
- 113 Foyer



AUSTRALIAN
CONSTRUCTION
SERVICES

APIN STAGE 1

2ND CAVALRY
REGIMENT INCREASE
Squadron
Headquarters





LEGEND

- 301 SQUADROOM & STORE
- 302 COMPOUND
- 303 EXISTING FACILITY



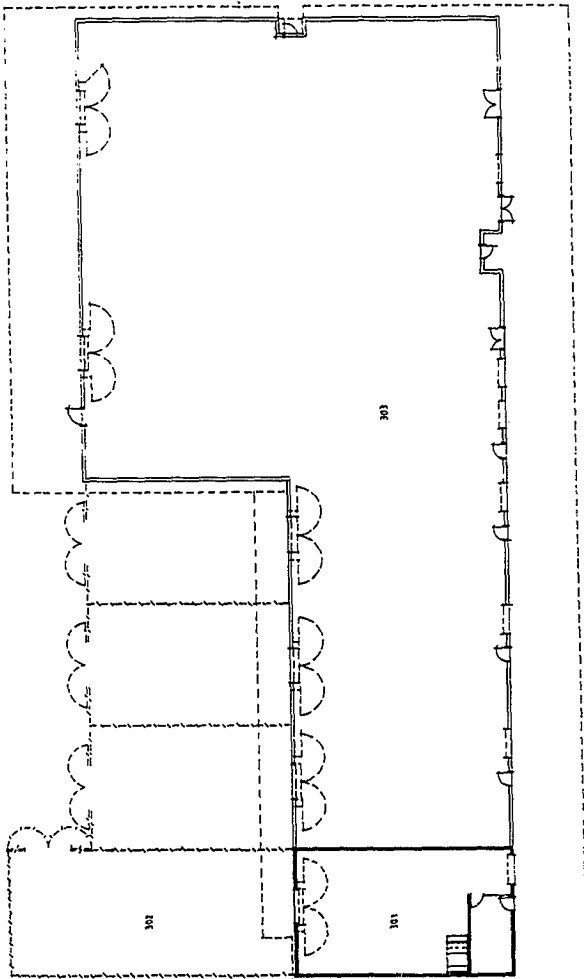
AUSTRALIAN
CONSTRUCTORS
SERVICES

APIN STAGE

2ND CAVALRY
REGIMENT INCREAS

- O Store
- Additions

Sheet No. 20/REG 2/-

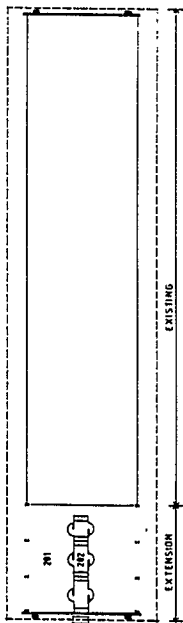


B-44



LEGEND

201 VEHICLE PARK BAYS
202 TOOLS CAGES



AUSTRALIAN
CONSTRUCTION
SERVICES

APIN STAGE

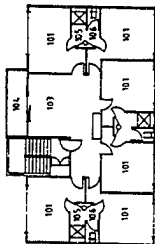
2ND CAVALRY
REGIMENT INCREASE
Vehicle Shelter
Additions

PLAN NO. 200002 07.

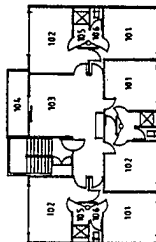


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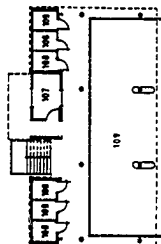
- 101 BEDROOM
- 102 LOUNGE
- 103 COMMON ROOM
- 104 BALCONY
- 105 SHOWER
- 104 TOILET
- 107 LAUNDRY
- 108 BIKES
- 109 CARPARKING



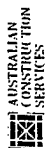
FIRST FLOOR - JUNIOR OFFICERS



FIRST FLOOR - SENIOR OFFICERS



GROUND FLOOR



APIN STAGE 1
OFFICERS
ACCOMMODATION
Central



LEGEND

- 91 ENTRY
- 92 DYKE
- 93 CLOAK/HALL ROOM
- 94 PHONES
- 95 MALE AMENITIES
- 96 FEMALE AMENITIES
- 97 DINING ROOM
- 98 READING ROOM
- 99 ANTE ROOM
- 100 T.V. ROOM
- 101 GARDEN ROOM
- 102 BAR STORE
- 103 COOL ROOM
- 104 GARDEN STORE
- 105 TOILET
- 106 A/C PLANT
- 107 AUTOM. & AMENITIES
- 108 OFFICE
- 109 OUTDOOR DINING
- 110 OUTDOOR BAR

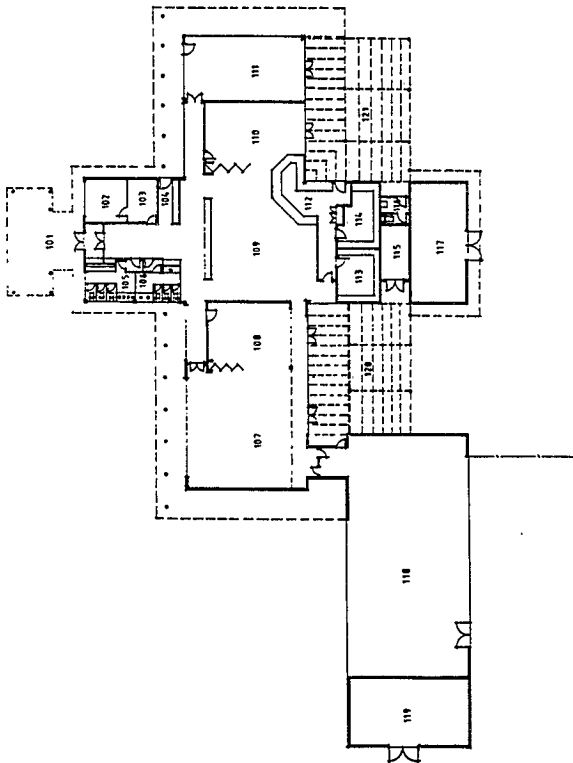


©
**AUSTRALIAN
 CONSTRUCTION
 SERVICES**

APIN STAGE OFFICERS MESS

Central

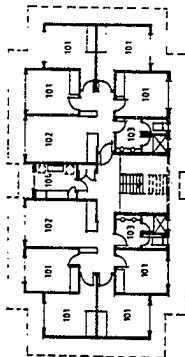
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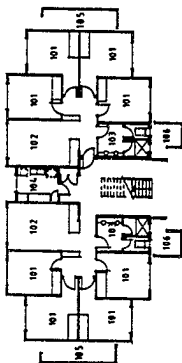


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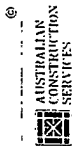
- 101 BEDROOM
- 102 COMMON ROOM
- 103 BATHROOM
- 104 LAUNDRY
- 105 PLANT
- 106 DRYING YARD



FIRST FLOOR PLAN



GROUND FLOOR PLAN



AUSTRALIAN
CONSTRUCTION
SERVICES

APIN STAGE 1

OTHER RANKS
ACCOMMODATION
Southern
Central



LEGEND

- W1 ENTRY
- W2 FOYER
- 103 EXISTING DINING ROOM
- 104 EXISTING DINING ROOM
- W5 SERVICE
- 106 EXISTING KITCHEN
- 107 EXISTING BATHROOMS
- W7 COURTYARD
- 108 SWILL



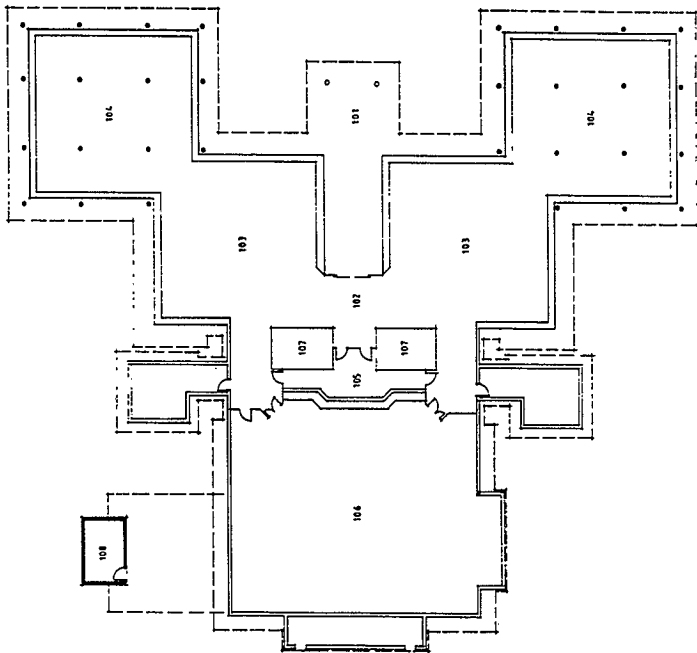
©
**AUSTRALIAN
 CONSTRUCTION
 SERVICES**

APIN STAGE

**OTHERS RANKS'
 MESS**

Southern

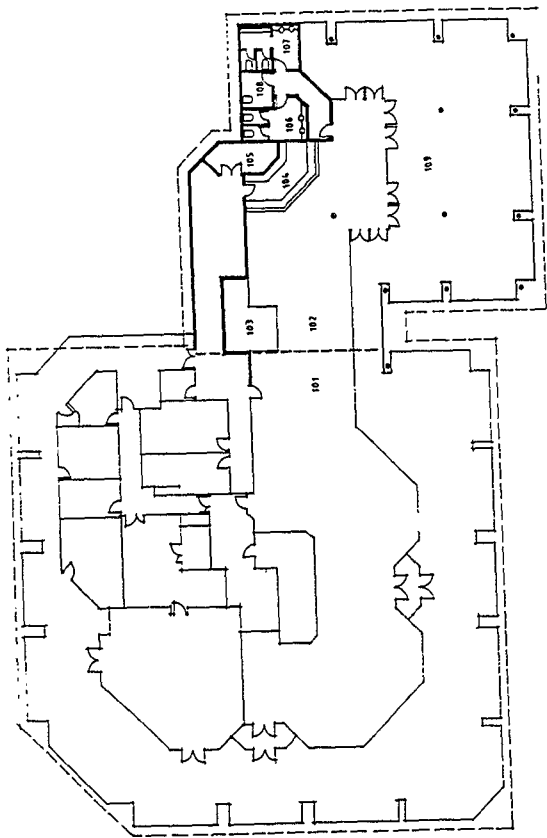
Dwg No:ORAMS1





LEGEND

- 101 EXISTING FACILITY
- 102 W/1 CANTINE
- 103 COURTYARD
- 104 BAR
- 105 COLD ROOM
- 106 TEPALTI APERTURES
- 107 HALL APERTURES
- 108 DISABLED TOILET
- 109 VERANDAH



AUSTRALIAN
CONSTITUTIVE
SERVICES

APIN STAGE
OTHER RANKS
CANTINE
Southern



LEGEND

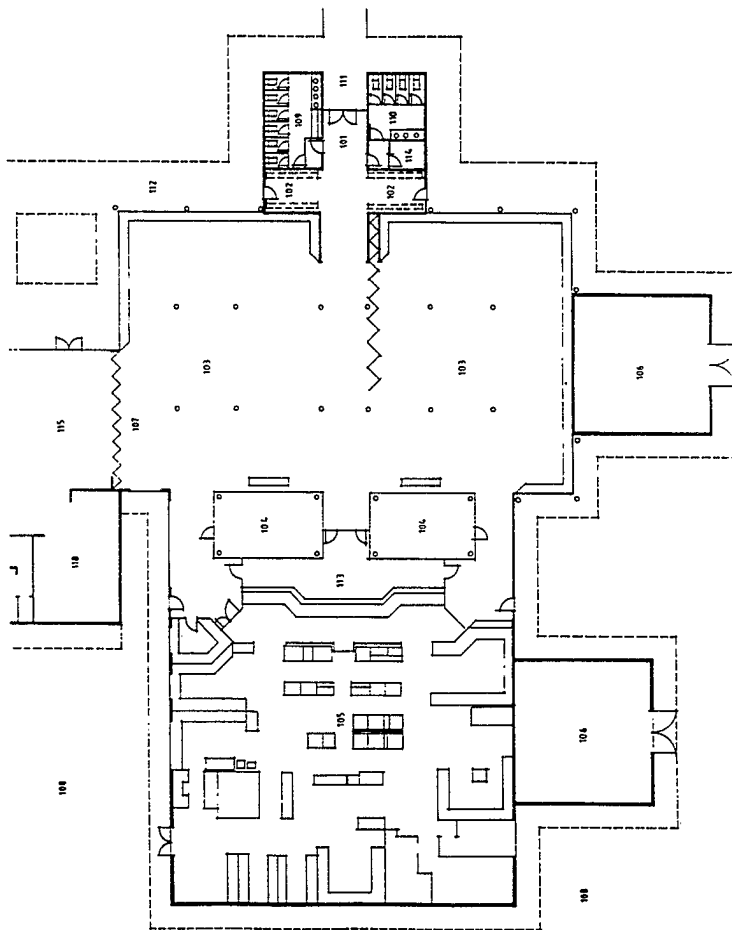
- 101 ENTRY
- 102 FOYER
- 103 DINING ROOM
- 104 COURTYARD
- 105 KITCHEN
- 106 PLANT ROOM
- 107 LINK TO CANTEEN/PAVERN
- 108 SERVICE YARD
- 109 PAILE TOILETS
- 110 COVERED WALKWAYS
- 111 VERANDAH
- 112 SERVICE
- 113 CLEANS
- 114 CLEANS
- 115 CANTEEN/PAVERN



**AUSTRALIAN
CONSTRUCTION
SERVICES**

APIN STAGE 1

OTHER RANKS
MESS
Central





LEGEND

- 101 TAVERN
- 102 CANTINEEN/COFFEE SHOP
- 103 SERVICE
- 104 CONCESSION
- 105 BARBER
- 106 TOLLE STORE
- 107 OFFICE
- 108 STAFF AMENITIES
- 109 OFFICE
- 110 CONCESSION
- 111 GOLD ROOM
- 112 WET STORE
- 113 MALE AMENITIES/
- 114 FEMALE AMENITIES/
- 115 CLOAK ROOM
- 116 GAMES ROOM
- 117 LINK TO PRESS
- 118 ENTRY
- 119 OUTDOOR EATING
- 120 COVERED WAY
- 121 FUEL PETROL
- 122 STATION
- 125 SERVICE YARD



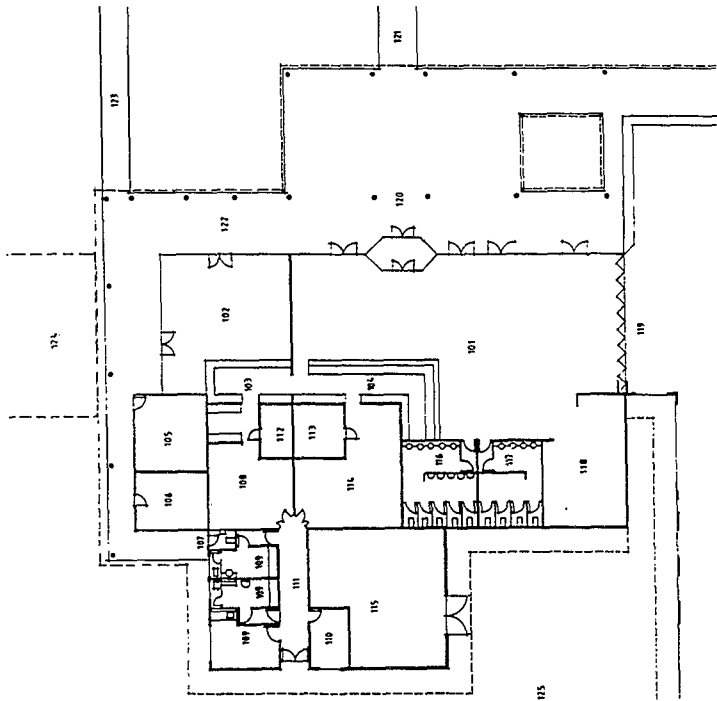
AUSTRALIAN
CONSTRUCTION
SERVICES

APIN STAGE 1

OTHER RANKS
CANTEEN

Central

Drawn 14th August 1971





LEGEND

- 101 GYMNASIUM
- 102 OFFICE
- 103 RECEPTION
- 104 CHANGE ROOMS
- 105 ACTIVITY
- 107 EQUIPMENT STORE
- 108 MEN'S TOILET
- 109 FEMALE TOILET
- 110 UNIPRE
- 111 DISABLED TOILET
- 112 SHOWER
- 113 FIELD SPORTS STORE

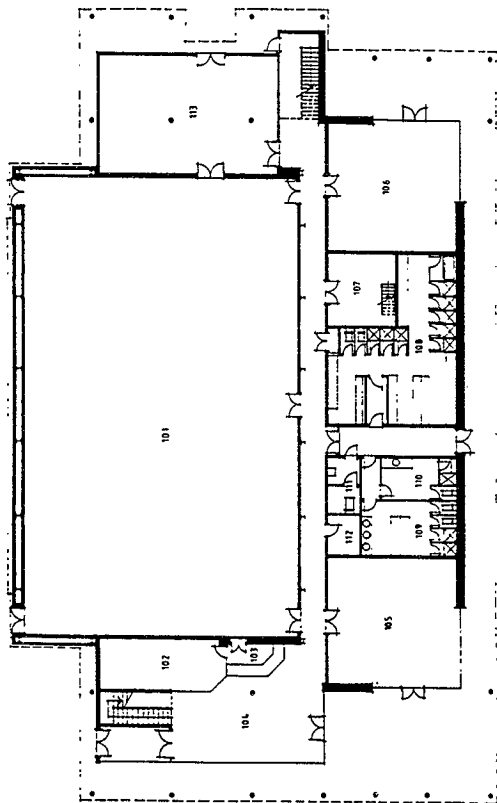


**AUSTRALIAN
CONSTRUCTION
SERVICES**

APIN STAGE 1

**PHYSICAL FITNESS
CENTRE**

Central



GROUND FLOOR PLAN



LEGEND

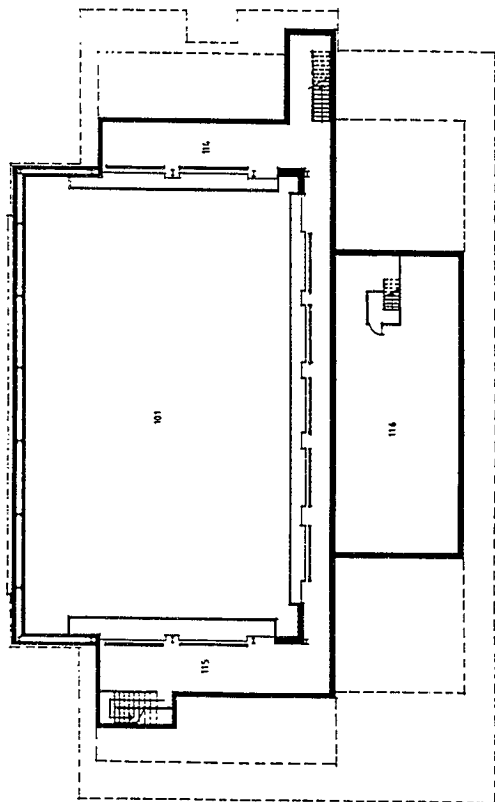
- 101 GYMNASIUM
- 114 GALLERY
- 115 GALLERY
- 116 PLANT ROOM



**AUSTRALIAN
CONSTRUCTION
SERVICES**

APIN STAGE 1

**PHYSICAL FITNESS
CENTRE
Central**




FIRST FLOOR PLAN



LEGEND

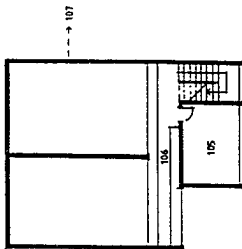
- 101 SQUASH COURT 1
- 102 SQUASH COURT 2
- 103 PLANT ROOM
- 104 TOILET
- 105 MEETING ROOM
- 106 GALLERY
- 107 EXPANSION



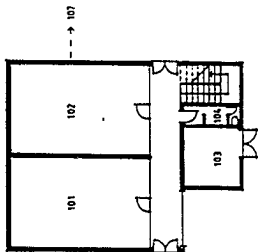

 AUSTRALIAN
 CONSTRUCTION
 SERVICES

APIN STAGE

PHYSICAL FITNESS
 CENTRE
 Central
 Squash Courts



FIRST FLOOR

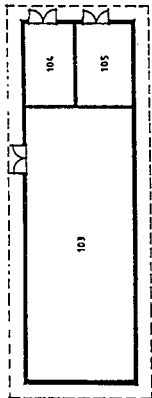


GROUND FLOOR



LEGEND

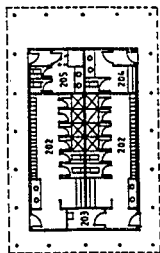
- 103 POOL PLANT STORE
- 104 POOL STORE
- 105 MECHANICAL STORE
- 202 CHANGE ROOM
- 203 CHANGE ROOM
- 204 PUBLIC MALE TOILET
- 205 PUBLIC FEMALE TOILET



SWIMMING POOL PLANTROOM



**PLAYING FIELDS
SHELTER**



CHANGE ROOMS



**AUSTRALIAN
CONSTRUCTION
SERVICES**

APIN STAGE 1

**PHYSICAL FITNESS
CENTRE
Central**
Associated Buildings

APPENDIX C

PROPOSED MOVEMENT PLAN FOR
INCREASED ARMY PRESENCE IN NORTHERN AUSTRALIA

FY	UNITS MOVING TO THE NORTH	APPROX ARA NUMBERS	TOTALS BY FY	PROGRESSIVE TOTAL
91/92	7 Log Coy DSU NA (ACS elm) HQ LCN	38 1 8	47	47
92/93	2 Cav Regt 7 Log Coy	410 33	443	490
93/94	Tk Tp 1 Armd Regt 7 Log Coy 7 Trg Gp HQ LCN 7 Int Coy	26 42 5 6 4	83	573
94/95	2 Cav Regt 161 Recce Sqn 7 Log Coy	52 107 50	209	782
95/96	2 Cav Regt 1 Armd Regt (-) DSU NA (ACS elm) 104 Sig Sqn	44 204 2 30	280	1062
96/97	HQ 1 Bde/HQ LCN 104 Sig Sqn	30 30	60	1122
97/98	HQ 1 Bde 104 Sig Sqn	25 34	59	1181
97/98	Log Unit	146	146	1327
98/99	5/7 RAR (Mech)	540	540	1867
99/00	1 CER	220	220	2087
00/01	103 Mdm Bty	135	135	2222
TOTAL				2222