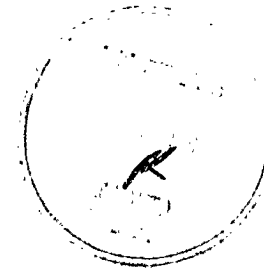

Parliamentary Standing Committee on Public Works

REPORT

relating to the

DEVELOPMENT OF 2ND FIELD HOSPITAL AT ENOGGERA, QLD

(Eleventh Report of 1994)

THE PARLIAMENT OF THE COMMONWEALTH OF AUSTRALIA
1994

The Parliament of the Commonwealth of Australia

Parliamentary Standing Committee on Public Works

Report Relating

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Development of 2nd Field Hospital at Enoggera, Qld

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Mr Colin Hollis MP (Chair)
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Senate	House of Representatives
Senator Bryant Robert Burns	Mr John Neil Andrew MP
Senator John Robert Devereux	Mr Raymond Allen Braithwaite MP
	Mr Russell Neville Gorman MP
	Mr Robert George Halverson OBE MP
	Hon. Benjamin Charles Humphreys MP

SECTIONAL COMMITTEE ON THE DEVELOPMENT OF 2 FIELD HOSPITAL AT ENOGGERA, QLD

Mr Colin Hollis MP (Chair)
Mr Russell Neville Gorman MP (Vice-Chair)
Mr Robert George Halverson OBE MP
Hon. Benjamin Charles Humphreys MP

Committee Secretary:	Peter Roberts
Inquiry Secretary:	Denise Denahy
Secretarial Support:	Sue Whalan

EXTRACT FROM THE VOTES AND PROCEEDINGS OF THE HOUSE OF REPRESENTATIVES

No. 82 dated Wednesday, 29 June 1994

8 **PUBLIC WORKS–PARLIAMENTARY STANDING COMMITTEE–REFERENCE OF WORK–DEVELOPMENT OF 2 FIELD HOSPITAL AT ENOGGERA, QLD**

Mr Walker (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: Development of 2 Field Hospital at Enoggera, Qld.

Question - put and passed.

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

DEVELOPMENT OF 2ND FIELD HOSPITAL AT ENOGGERA, QLD.

By resolution on 29 June 1994 the House of Representatives referred to the Parliamentary Standing Committee on Public Works for consideration and report the development of 2nd Field Hospital at Enoggera, Qld.

THE REFERENCE

1. The proposal is to provide a modern purpose-built field hospital facility at Enoggera, Brisbane, to replace the existing inadequate medical facilities of 1st Military Hospital at Yeronga, 2nd Field Hospital at Kelvin Grove and the Enoggera Medical Centre. The new hospital involves the amalgamation of the two existing hospitals into a single unit, to be known as 2nd Field Hospital.

2. The estimated cost of the proposal when referred to the Committee was $29.2m.

THE COMMITTEE'S INVESTIGATION

3. On 22 September 1994 the Committee appointed a Sectional Committee comprising Mr C Hollis MP, Mr R Gorman MP, Mr R Halverson MP and Mr B Humphreys MP to undertake this inquiry.

4. On Thursday 5 October 1994 the Sectional Committee inspected existing facilities at 1st Military Hospital at Yeronga, 2nd Field Hospital at Kelvin Grove and the Enoggera Medical Centre. 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 Enoggera on Thursday 6 October 1994.

5. A submission was received from ACROD Access and Mobility Committee and a representative appeared before the Committee.

6. Submissions and letters were also received from the following:

- National Trust - Queensland
- Commonwealth Department of Primary Industries and Energy
- Defence Housing Authority
- Australian Heritage Commission
- Gas Corporation of Queensland
- Australian Nature Conservation Agency
- Brisbane City Council
- Commonwealth Environment Protection Agency
- Commonwealth Fire Board (CFB)
- Queensland Department of Health
- Colonel John Pearn AM, RFD
- Queensland Department of Environment and Heritage.

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

BACKGROUND

8. In common with other developed nations, the Australian Defence Force (ADF) provides medical and dental treatment to serving members, with the intention of maintaining the highest standards of medical, dental and physical fitness. Such treatment is provided both in the field and in the barracks environment. This ensures members remain fit and available for operations. Field treatment for the Australian Army is provided by field hospitals such as 1st Field Hospital in Sydney and 2nd Field Hospital in Brisbane.

9. When in the barracks, the Australian Support Area (ASA) component of the field hospital provides medical care to ADF personnel in the geographic area of the hospital. This ensures that personnel return to full duty as soon as possible following treatment. This also allows Defence medical staff to practise and maintain the skills that are necessary for supporting field units during operations. Further details on the Army's field and ASA medical support elements may be found at Appendix C.

THE NEED

10. At Yeronga the 1st Military Hospital provides comprehensive hospital support to ADF personnel in southern Queensland. This includes a 75 bed in-patient capacity, two operating theatres, pathology, radiology, outpatient, physiotherapy and rehabilitation services. In addition, 1st Military Hospital is the venue for a number of health service trade-training courses. These courses are tri-Service based and often include Defence Cooperation Program students from regional countries.

11. The Yeronga property was acquired by Defence in February 1946. Facilities consist of structures ranging from the historic homestead 'Ryndarrah' (circa 1888) used as the officers' mess, an outpatients' building built as a drill hall in the First World War and a number of weatherboard and asbestos cement clad facilities formerly used as a hostel prior to the Second World War. During the Second World War the facilities were modified by US troops for use as a convalescent hospital.

12. Since then numerous modifications have taken place at Yeronga. A number of temporary Lysaght huts have been erected and a new intensive care facility (now the pathology facility) was built during the South Vietnam War. In 1981 three accommodation blocks were built for living-in personnel. The hospital is dispersed throughout the property in mostly substandard and some temporary facilities and is functionally disorganised and inefficient.

13. The existing hospital requires major works as existing structures have a limited residual life and do not meet current Occupational Health and Safety standards.

14. The Committee was impressed with the dedication and professionalism of the staff of the 1st Military Hospital at Yeronga, who were obviously working under trying conditions in substandard accommodation.

15. Kelvin Grove is the site of the 2nd Field Hospital. The Kelvin Grove facilities are similarly of the Second World War vintage and consist of primarily weatherboard or sheet iron clad temporary structures, with asbestos cement sheet roofing. A number of demountable buildings have been installed to cope with the increasing demand for work space and storage. There are no permanent medical or living-in accommodation facilities.

16. Field medical units need to periodically set up specialist tentage and International Standards Organisation (ISO) medical shelter systems for training, maintenance and particularly for pre-deployment preparation. Kelvin Grove has limited space for this purpose.

17. Although Kelvin Grove has some limited capacity to accommodate a General Reserve (GRes) field hospital, there is no scope for expansion and inadequate space to establish a dual role medical facility.

Committee's Conclusions

18. The Committee commends the dedication of the staff of the 1st Military Hospital, Yeronga and 2nd Field Hospital, Kelvin Grove who are presently working in old timber, metal and asbestos clad buildings which provide inadequate working conditions and lead to operational inefficiencies.

19. These substandard facilities should be replaced with a modern hospital capable of providing medical and dental services for personnel of the Australian Defence Forces.

THE PROPOSAL

20. It is proposed to build a modern purpose-built field hospital at Enoggera to replace existing inadequate medical facilities at 1st Military Hospital, Yeronga, 2nd Field Hospital, Kelvin Grove and the Enoggera Medical Centre. The new hospital involves the amalgamation of these two existing hospitals into a single unit, to be known as 2nd Field Hospital. The proposed hospital is required to support ADF operations during a contingency in accordance with the Department of Defence Policy Information Paper entitled "The Defence of Australia 1987." Provision of this facility will satisfy the recommendation in the Defence Report of the Working Party to Review the ADF Policy for the Provision of Hospital Care, dated 30 November 1990.

21. The role of the new 2nd Field Hospital will be to provide initial wound surgery in an area of operations, comprehensive medical support to southern Queensland units with tri-Service responsibilities and health service training on behalf of the ADF.

22. The Committee was advised that the proposed hospital will provide hospital care for about 10 500 regular Defence personnel located in the southern Queensland region, as well as reserve personnel and visiting overseas military forces. The hospital will consist of a Field component and an ASA component that will continue to service personnel who do not deploy when the field hospital deploys on operations. The facility is based on a two ward - 50 bed hospital.

23. A more readily deployable field hospital unit will be able to support a brigade sized formation of up to 5 000 personnel during operations. It will allow better utilisation of Defence resources and address the existing inadequate and operationally dysfunctional Army medical facilities in South East Queensland. It will also provide Defence personnel with medical treatment facilities comparable with those in the civilian community.

Civilian and Military Hospital Comparison

24. A field hospital is a unique Army unit with only partial resemblance to normal civilian hospitals. The main differences are the hospital's field equipment and its ability to deploy and operate anywhere in Australia or overseas in Australia's area of interest. The structure and equipment are designed to meet the specific medical needs of Defence members and operational requirements and the hospital is staffed accordingly. The staff receive medical training as well as the normal range of military training to allow them to survive in the field under operational conditions. Consequently, a civilian hospital cannot undertake the role of a field hospital in an operational environment.

25. Defence advised that it is therefore difficult to compare the costs of a field hospital with a civilian hospital. Nevertheless, Defence advised that it completed a cost-benefit analysis to compare the cost of providing medical services using military and civilian hospitals. The existing 1st Military Hospital statistics indicate that military hospitals are cost-effective when compared with civilian hospitals. While providing an operationally deployable unit, there is also the added benefit of providing cost-effective medical care to Defence members.

26. The Committee was advised that Defence provides medical services for everyday complaints common to serving personnel. However, certain conditions such as road accidents and acute emergencies are admitted to the nearest public or private hospital, depending on location of the casualty at the time. Defence then returns these personnel to its own hospital to convalesce. The Committee was advised that Defence does not have the staff or equipment to undertake procedures that require intensive post-operative care.

27. Defence advised the Committee that it provides intensive rehabilitation following surgery or injury. This is achievable through having low cost, low dependency beds and an on-site rehabilitation department. Absences from the workplace and reduction in productivity are therefore kept to a minimum.

Options Considered

28. Three options were considered - to rebuild at Yeronga, to rebuild at Kelvin Grove and to provide new facilities at Enoggera. All three locations are Defence-owned properties and are within acceptable distances to the majority of Defence personnel who will use the facility.

Yeronga

29. 1st Military Hospital occupies a sloping five ha site next to the Brisbane River, with the lower section being subject to flooding. To enable the site to be suitable for an ASA hospital and to provide field hospital training and storage areas, costly major site redevelopment would be required.

30. Maintaining Yeronga would mean that the Enoggera Medical Centre would continue to operate and patients would have to travel to Yeronga for specialist services. The current duplication of facilities and medical staff, with lost productivity and inefficiencies, would remain. Additionally, reconstruction at Yeronga would cause disruption to hospital services and incur additional costs in the vicinity of $3m-$5m through referral of patients to civilian facilities during the rebuilding program. Yeronga, however, has sufficient living-in accommodation and messing facilities that can be refurbished at minimal cost. The site is on a prime river front residential zone and contains the homestead, 'Ryndarrah', a heritage listed dwelling.

Once vacated, the Yeronga site is to be sold and the revenue used to offset the cost of new facilities.

31. The Committee was advised that the number of patients at Yeronga averages 30 during the year. However, at certain times of the year this figure can peak to the extent that almost all beds are occupied.

Kelvin Grove

32. Kelvin Grove is the site of the existing 2nd Field Hospital. Facilities for field stores and equipment are old and need replacing. There is insufficient space at Kelvin Grove for the construction of new hospital facilities, without redevelopment of the site and dislocation of 7th Brigade units. Kelvin Grove is on the fringe of the Brisbane Central Business District and is difficult to access in peak hour traffic. The Enoggera Medical Centre would need to be maintained and Enoggera-based patients would have to travel to Kelvin Grove for specialist services. Although difficult to quantify, this is significant in terms of lost productivity and transportation costs. Kelvin Grove offers no advantages over the Yeronga site.

33. The Committee was informed that the 2nd Field Hospital does not have hospital beds, as it is simply a field unit with field equipment.

Enoggera

34. A site exists at Enoggera with sufficient area for the proposed facility. The site places the facility in close proximity to a significant part of the hospital's dependency, which is predominantly derived from Enoggera-based units. In addition, the proposed site will avoid the unnecessary cost of site redevelopment, disruption to hospital services during construction and limitations imposed by attempting to design facilities around existing buildings. The Enoggera Medical Centre would be closed and the old timber building demolished. Additional living-in accommodation will be required at Enoggera. This will involve expansion of existing accommodation or construction of new facilities. In addition, Enoggera provides a location which, both in terms of travelling time and frequency of travel, is central to the demographic distribution and the dependency.

35. On the basis of the above, Enoggera is the preferred location. It provides a site that places the hospital in close proximity to the major dependency, with little impact on outlying units. Enoggera has sufficient

space for a new facility and the relatively clear site avoids the disruption and costs of constructing new facilities on sites that are currently in use. Moreover, the sale of the Yeronga property will offset part of the construction costs. Building the new hospital as soon as possible will also save the impending cost of a major refurbishment of the Yeronga hospital.

36. Defence believes that having the hospital at Enoggera in close proximity to the units that it will support in the field, will allow more efficient and effective liaison than would be the case if the hospital was located elsewhere. This is considered highly desirable, as it will meet the operational and primary role of the hospital which is to provide a deployable unit capable of providing initial wound surgery to Army units in the field. There will be a slight increase in travelling time between other dependencies and the new hospital site. However, the need for transport between Enoggera and Yeronga will be eliminated.

37. The close proximity of Enoggera to the Brisbane CBD allows easier and quicker access for the medical specialists, both GRes and civilians, upon whom the hospital relies to a considerable extent. This is a significant consideration as it provides the hospital with access to skilled specialists, which may not be the case if specialists had to travel long distances from the location of their day-time practice.

38. There is sufficient space at Enoggera to provide a relatively clear site. Development costs can be offset by the sale of the Yeronga property which should generate $4m-$5m.

Committee's Conclusion

39. Construction of new facilities at Gallipoli Barracks, Enoggera is the preferred option for the 2nd Field Hospital.

Options within Enoggera

40. Enoggera has no existing facilities that could be utilised as the basis of the new hospital. Except for a few Second World War timber buildings, all the facilities at Enoggera have been purpose built, the majority within the last 15 years.

41. The existing Enoggera Medical Centre, which is part of 1st Military Hospital, occupies a small timber building in a closely built up area of the base. There is insufficient vacant land to build a hospital adjacent to the Enoggera Medical Centre. Further, to consider this option would require a number of units and functions to be relocated, thus increasing rather than decreasing the overall project cost. Therefore, a completely new hospital facility is required on suitable vacant land within the base.

Justification

42. Defence advised that it commissioned a health planning consultant to critically analyse and develop the requirement and produce a Health Planning Brief to determine the necessary facilities. The consultant's report was produced in conjunction with Defence personnel, including the Surgeon-General and his staff, Army hospital commanders and staff, Land Command, Logistics Command and Facilities and Property staff.

43. Key reasons justifying the facility included the following:

- provision of facilities to meet modern standards that will replace old timber, metal and asbestos clad buildings at Yeronga and Kelvin Grove. This will also serve to eliminate OH&S problems currently in existence at the two present hospital sites and provide a standard of patient care equivalent to that available to the community at large

- elimination of the need to refurbish the facilities at Yeronga at a cost of $7m, without improving the generally poor layout or location deficiencies. The Yeronga refurbishment has already been postponed a number of times and is now overdue

- elimination of inadequate medical practices, such as movement between buildings in the open, which have a detrimental effect on fragile and expensive medical equipment. The movement of patients in the open between buildings is also not conducive to effective patient care

- reduction in maintenance and operating costs as a result of providing more efficient and modern purpose built facilities

- elimination of transport costs to individuals and units currently travelling between Enoggera and Yeronga, without any significant increase to other hospital users

- provision of better security and storage of expensive and fragile medical equipment, including the hospital shelters, currently on issue to 2nd Field Hospital

- provision of an operationally ready field hospital unit as a result of having suitable facilities that enable the proper setting up of the field shelters and the provision of effective and realistic training

- the resultant savings in manpower positions as a result of amalgamating two units to form a single unit will release some personnel, who will provide elements of a medical company and a Mobile Field Surgical Team (MFST). These personnel savings are comprehended in Army's Force Structure Review implementation program.

Proposed Capability

44. The Health Planning Report concluded that the need exists for the following:

Hospital Headquarters

- administrative company

- hospital office

- duty office

Hospital Complex

- HQ medical company

- wards

- in-patients/day-patients

. casualty/outpatients

. rehabilitation/physiotherapy

. operating theatre and sterilising services/high dependency care

. medical imaging/x-ray

. pathology

. pharmacy/medical logistics

Field Component

. set up area/collective training area

Logistics Complex

. HQ logistics platoon

. general stores section/Q store/field store/armoury

. technical support section

. health section

. catering

. laundry section

. transport

Instructional Facilities.

Living-in Accommodation

45. Justification for a 50 bed hospital is based on current usage of 1st Military Hospital with allowances for expected changes in the dependency. The proposed number of beds correlates well with the average provision rate in Australia of 4.9 beds per 1 000 of population, as advised in a Social Health Atlas of Australia dated September 1992.

The Site

46. The proposed hospital site is within Gallipoli Barracks at Enoggera, Brisbane. It is on the southern boundary of the camp site adjacent to the entrance gate from Frasers Road. Land use will remain unchanged from its current military use zoning.

47. The site is approximately 33 000m^2 offering sufficient area for the proposed field hospital including future growth. The site is elevated on a gently sloping ridge with minimum earthworks involved. Lavarack Parade, the main distributor road in the barracks, adjoins the site on the east, providing good access.

48. A detailed site selection study was carried out and five potential sites were identified by Defence's consultant architect. Each site was analysed and addressed issues such as site development costs involving earthworks and environmental impact as well as access and the special requirements of the hospital site. The Committee was advised that the preferred site involves minimal removal of mature trees, while meeting access and hospital requirements. The topography suits the proposed building form by allowing service areas to be located on a lower level, with all patient care and medical functions situated on a single upper level.

49. The site offers an excellent environment for the hospital with dense vegetation and trees on the southern and eastern boundaries. These will screen the development from the Marist Brothers School playing fields to the south and the recently built married quarters to the west. O'Connell Drive will be re-routed to the south of the site to maintain access to the new married quarters' area. Eight older style, timber-clad and metal-roofed married quarters occupy part of the site. These residences are below current scales and standards and will be removed to make way for the hospital.

50. An existing transport depot immediately east of the site offers opportunities to accommodate the Transport Section of the Field Hospital and maximum use will be made of this depot to reduce project costs.

51. The heritage-listed old ammunition storage sheds to the north of the site will remain unaffected, with the hospital complex being beyond the preferred 75m distance from the nearest building.

Committee's Conclusion

52. The proposed site at Gallipoli Barracks, Enoggera, will allow the 2nd Field Hospital to be in close proximity to the units which it will support as well as being in a location convenient for visiting civilian medical specialists.

Scope of Work

53. The scope of works includes:

Hospital Building

- HQ Medical Company including training area
- in-patient accommodation (50 beds)
- day surgery
- accident, emergency and outpatients
- rehabilitation including 20 self care beds
- two operating theatres
- radiology, including training area
- pathology
- pharmacy
- catering
- Q-stores and plant

Living-in Accommodation

- New buildings located with existing messes for 15 officers (plus a Commanding Officer's flat), five senior non commissioned officers and 40 other ranks, staff and students

Field Hospital Components

- field set up area adjacent to hospital
- field compound stores
- field transport depot.

54. Site Works include access roads, carparking, landscaping and a new access road to existing residential quarters.

Further details on the scope and capacity of the proposed hospital may be found at Appendix D.

Benefits of the Proposed Facility

55. The new facility will continue to provide comprehensive hospital services to southern Queensland-based Defence units, on a scale equivalent to the current facility at Yeronga. To ensure maximum utilisation of hospital beds, the number of ASA beds is being reduced from 75 to 50. In addition to providing ASA facilities, the project will provide the necessary facilities for a field hospital with a readiness status to meet operational and other contingencies. To maintain the necessary skill levels, the conduct of trade training courses will continue on a comparable scale and frequency with existing commitments.

56. The new field hospital will be established as an integrated unit capable of providing a deployable hospital and an ASA component concurrently. When the field component deploys, the ASA component will continue to operate at a reduced capability. This allows for optimum utilisation of Regular, Reserve and civilian staff. 2nd Field Hospital's personnel establishment will allow the field hospital to deploy, while leaving a staff capable of maintaining essential services in the ASA hospital.

57. In its ASA function the hospital will employ civilians to supplement uniformed medical staff. These civilians, along with some military personnel, will continue to provide support to the personnel dependency remaining in barracks during hospital deployments. During field deployment the work load of the ASA component can be reduced by rescheduling of non-urgent medical treatment.

58. When not deployed, field hospital staff continue to provide medical support to ADF personnel. This ensures maximum continuation training and maintenance of clinical skills that are required in the field. Such dual tasking of field medical units has been successfully employed at the Sydney based 1st Field Hospital since 1989.

Savings

59. Due to increased operational and administrative efficiency and more appropriate storage facilities, savings will result. Increased efficiency and effectiveness in the work environment will enhance the provision of medical services and standards of medical care. Equipment will be preserved due to better storage facilities, especially for field medical equipment such as shelters and associated equipment. More efficient and secure storage of medical stores will allow better access. It is anticipated that there will be an increase in the morale of staff, patients and students in line with the increased amenity and improved working conditions, with a resultant increase in training standards.

SITE PLANNING

60. The proposed facility provides for modular design buildings, part single storey and part two storey, placed in an elevated position on the northern portion of the site. This takes advantage of the fall in the land to the east to present a two storey elevation to Lavarack Parade. The main access to the building for patients, visitors, staff and emergency vehicles is to the north, off Lavarack Parade and a new road going west from Lavarack Parade.

61. Service access is to the south-east corner of the building on the lower floor level, which accommodates Q-Stores. The Field Hospital set-up area and Field Q-Stores are located beside the service entrance and share the access from Lavarack Parade.

62. The Field Transport elements will be located in a designated section of the existing Transport Depot opposite the proposed entrance to the Field set-up area.

Building Plans

Level 1

63. Administration and staff training facilities together with Q-Stores and Plant are located on the lower level. Stair and lift access is provided to the upper level.

Level 2

64. The upper level includes all in-patient, outpatient and clinical areas. The plan form is modular with enclosed corridors linking modules across internal courtyards. Separate entrances are provided for patients and visitors, rehabilitation and staff, ambulant outpatients and emergencies and ambulances.

65. The Departments included on this level are:

- accident and emergency
- outpatients
- duty and hospital office
- pathology
- pharmacy
- rehabilitation, including 20 bed self-care accommodation
- operating suite
- central sterilising department
- radiology
- catering
- in-patient wards (50 beds)
- day unit.

BUILDING WORKS AND SERVICES

Materials and Finishes

66. As the design is developed, alternative options in the selection of materials and finishes will be considered, with functional and environmental performance balanced against cost-effectiveness. Design details and required construction techniques will be kept simple, straightforward and readily buildable. At this stage the following materials and finishes are being considered:

- external walls - brick veneer
- roof - prefabricated timber framed roof system with metal deck or tile finish and appropriate thermal insulation
- floors - concrete slab generally with tiles, welded vinyl sheet or carpet finishes as appropriate
- windows - aluminium frames generally single glazed but double glazed where appropriate cost-benefits are obtained
- internal walls - plasterboard on steel stud with appropriate acoustic performance and impact protection
- doors - steel frames with solid core doors protected where appropriate from trolley damage
- ceilings - generally acoustic or plaster tiles set into an exposed ceiling grid; sheet plasterboard to be used in areas requiring especially smooth finishes
- joinery - good quality joinery and hardware to withstand heavy use - joinery units to be modular with good quality durable finishes
- sanitary fittings - selected to ensure value for money in terms of function, cleanliness, maintenance and cost.

67. Defence advised the Committee that traditional Queensland features such as covered verandahs, hoods over particular windows and north and south orientation of the windows will assist occupants of the hospital in coping with the heat of Queensland summers.

Lifts

68. The hospital will have two lifts. A goods lift will operate between the lower and upper floors to handle food services and hospital stores. The second lift will be a personnel lift for rehabilitation patients and will be suitable for stretchers, handicapped persons and wheelchair access.

Fire Protection

69. The Field Hospital will be provided with an Automatic Fire Alarm Detection and Emergency Warning and Intercommunication Systems (EWIS), with fire alarm detection only in the Field Store and Transport Facilities. Fire protection is to meet the requirements of the Building Code of Australia (BCA) and Facilities Manual 2.

70. Alarm systems will utilise thermal and smoke detectors, manual call points, alarm bells and smoke detectors associated with the air handling plant. Fire Indicator Panels (FIP) will be linked to an appropriate Main Fire Alarm Panel.

71. The EWIS main panel will be located directly adjacent the FIP and will be linked to provide automatic initiation of alert and evacuation tones in the event of a fire alarm. Remote activation and voice from the Base Guard House will be investigated further.

72. The Commonwealth Fire Board advised that fire separation of the three blocks, one from the other and of the catering section from the remainder of its block would be appropriate. The CFB also suggested that smoke separation of the three segments in each block might be appropriate. Defence advised the Committee that issues raised by the CFB will be passed on to the design consultants to ensure the building complies with CFB requirements.

Provision for People with Disabilities

73. The nature of the facility as a hospital particularly specialising in rehabilitation, requires barrier free planning and all necessary provisions for the disabled.

74. The representative of the ACROD Access and Mobility Committee stressed that lack of independent access requires a higher staffing component. This does not promote independence of the client using the facility. It was also stated that the building should comply with all parts of Australian Standards 1428 and 1735 (part 12), all relevant parts of that lift code, as well as both State and Commonwealth anti-discrimination Acts.

75. Defence advised the Committee that it is willing to liaise with the ACROD Access and Mobility Committee and will continue discussions during periodic design review meetings.

Committee's Recommendation

76. The Committee recommends that the Department of Defence continues discussions with ACROD Access and Mobility Committee concerning access provisions at the 2nd Field Hospital.

STRUCTURE

77. In the development of the design, various options will be examined in order to select the most cost-effective structural system. The principles on which these structural systems will be based are:

- flexibility - confining the structural supports to a minimum to allow maximum flexibility in future alterations to internal spaces

- standardisation - where possible adopting a rationalised and repetitive structural system, suited to the modular design and likely to be most cost-effective

- services integration - adopting a structural system that provides for integration of services both in installation and maintenance.

78. It is likely that single storey sections will comprise a timber or metal roof truss supported on load-bearing external walls. In the two storey sections the choices may be between double storey steel frames and double storey load bearing masonry.

79. The Committee queried the earthquake rating of the site. Defence advised that the site is in Earthquake Category C. The building classification is Type 3 which is a building which must survive a major catastrophe.

MECHANICAL SERVICES

Airconditioning

80. The hospital will be airconditioned throughout all occupied areas, with ventilation only provided to parts of the Q Store, plant rooms and service areas. Airconditioning will be by central chilled water plant, utilising multiple modular air-cooled reciprocating chillers. Refrigerant will be non-CFC type, R123 or similar. Air handling plant will generally consist of variable volume or multi-zone type.

81. Separate air handling plant will be provided for each of the operating rooms. Fabricated ducting will run in the ceilings, with tees to flexible duct and ceiling registers. Return air will be ducted, with transfer ducts and door grilles utilised where noise criteria make it appropriate. Additional silencers will be required in some areas.

82. Heating will be by modular staged electric heating elements in the ductwork. Exhaust ventilation will be provided to all toilets and staff change rooms, dirty linen, waste and bin rooms, plant and service areas. The kitchen cooking areas will be fitted with stainless steel exhaust canopies.

Building Management and Control System (BMCS)

83. A BMCS will be installed to control and monitor air handling and other plant. It will be fully distributed with stand-alone distributed processing units located at strategic locations throughout the buildings linked on a high-speed Local Area Network (LAN) with user interface. The system will time schedule plant, optimise chiller selection, operate economy cycle, pre-cooling and morning flush cycles where applicable and control energy consumption as well as monitoring alarms and faults.

Sterilising

84. Autoclaves and sterilisers will be supplied as integrated units with built in electric steam generation.

Medical Gases

85. Medical gases will include reticulated medical compressed air for both medical air supply and Venturi suction, oxygen supply, nitrous oxide supply pipework, medical gas panels and outlets and alarm systems monitored by the BMCS. Bulk oxygen supply tank and a medical gas bottle store will be incorporated in a protected external compound, adjacent to the transport compound, to enable tanker and gas bottle deliveries.

HYDRAULIC SERVICES

86. Water reticulation will be taken from the Council main in Frasers Road. Internal upgrading may be required to meet fire requirements, but at this stage it is not anticipated that any upgrading of the external system will be required.

87. The hospital's drainage system will utilise the sewerage reticulation system in place for the existing houses. In addition, a new gravity system will be provided with both systems discharging into the council's sewer in Frasers Road.

CIVIL WORKS

Earthworks

88. Cut and fill earthworks are required to establish the building platform. This has been minimised by the planning of a two storey eastern section of the building.

Stormwater

89. The open, wet-weather drain passing through the carparking area in the north eastern corner of the site will be piped to discharge into the open drain adjacent to Lavarack Parade.

90. The Brisbane City Council - Gap Ward Office raised the question of stormwater runoff in relation to the building as well as stormwater drainage for the roadworks for the new entry to the O'Connell Place married quarters. Defence advised that the District Works Engineer from the Brisbane City Council has indicated that the two per cent increase in stormwater runoff from the roof area can be accommodated by the existing stormwater system. The design of the roadworks for the married quarter entry will include consideration of the existing natural waterways and any additional underground drainage requirements.

Roads

91. Access to carparks, transport facilities and Field Hospital set-up areas will be directly from Lavarack Parade and will be designed for large military vehicles. A new internal road will be provided to the main and ambulance entrances. O'Connell Place will be re-routed along the Fraser's Road easement to remove local traffic from the site.

Pavements

92. Road pavements generally will be flexible except for areas where there will be a high degree of manoeuvring by large vehicles. These latter areas will include ambulance bays, transport area and Field Hospital set-up areas. For these areas segmental or rigid pavement will be considered.

ELECTRICAL SERVICES

Power Supply

93. The Enoggera site is supplied with high voltage from the South East Queensland Electricity Board network. The existing overhead reticulation on the hospital site will be replaced with underground 11kV reticulation, with a new substation at the hospital. The base utilises an energy BMCS, which will be adapted to the new facility.

94. The main switchboard will be fitted with a bus tie between the two transformers, to enable the whole of the load to be fed from one transformer should a failure occur or to allow for maintenance. An automatic transfer switch will provide switching to a diesel alternator emergency supply, as a second means of backup. The plant will be located in an acoustically-treated plant room with fuel storage tanks.

95. Submains will run on cable trays in dedicated risers, in accessible ceiling spaces and in conduit underground to distribution switchboards located in each modular building, as well as to each plant area.

Patient Treatment Areas Medical Panels

96. Power outlets to patient treatment areas will be protected by circuit breakers controlling sub-circuits on the local distribution board. Where required by medical or dental procedures, in accordance with Australian Standard 3003 and the specific requirements of the room, body and/or cardiac protected outlets will be provided, with earth leakage circuit breakers located on medical panels in the room.

Lighting

97. Lighting will be installed to provide illumination in accordance with the recommendations of Australian Standard 1680 1 and 2 to meet the needs of the various functional areas. Maintenance factors will be based on annual cleaning and bulk re-lamping every 24 months, if cost-effective.

98. To reduce energy consumption, lighting will be controlled overall by photo-electric switches, time-switch schedules and BMCS schedules. This will include provision of personnel sensor controlled lighting to amenities and other intermittently occupied areas. Lamps will be high efficiency fluorescent, compact fluorescent or discharge type. Control gear will be low-loss high power factor type with electronic starters to enhance lamp life.

99. Specialist medical and dental areas, including operating theatres, will require shadowless examination and or surgical lighting. These will be ceiling mounted on articulated arms in accordance with Australian Standard 2501 Surgical Luminaries, appropriate to the use of the space.

100. The Field Hospital will be served by a central direct current battery system, incorporating two-hour supply to the surgical luminaries. Field and transport area buildings will be fitted with a system of single point battery backed emergency and exit luminaries.

Lightning Protection

101. A system of lightning protection, in accordance with Australian Standard 1768 will be provided to each structure, utilising the framed steel

and reinforcing steel in the concrete structure as down conductors and the steel in the footings and piers as earthing points. Surge protection will be provided to protect sensitive electronic equipment.

ENGINEERING INVESTIGATIONS

Traffic Study

102. Defence commissioned a consultant to undertake a traffic study to assess the likely impact of traffic generated by the proposed 2nd Field Hospital. The study concluded that hospital traffic will not significantly impact on the local area or result in any adverse reaction.

Geotechnical Investigation

103. A geotechnical investigation has been commissioned and will examine the following:

- earthworks
- foundations
- construction recommendations
- pavement recommendation
- site management recommendations.

COMMUNICATIONS

Telephone Services

104. The voice services will be connected through base fibre optic cabling to the central base building enclosing the base's PABX. This PABX will be augmented by the addition of a remote Line Interface Module (LIM) to be located in the Field Hospital. Telecommunication cupboards will be located throughout the hospital complex and in each of the buildings. Telephone handsets, digital or analogue will be provided as required.

Data

105. It is proposed that external data cabling from the computing services node located in the central building will be provided over the external fibre optic street cable, to the communications room of the hospital. Communication closets in each of the buildings will be connected via the fibre optic network. The horizontal sub-systems will be integrated with all communications and will be designed to meet the Army Facilities' Cabling Manual. Army will provide active equipment such as LAN repeaters, hubs, bridges, active switches etc.

Nurse Call

106. A nurse call system will be provided throughout patient areas. The system will be a simple monitored microprocessor-based system. Services provided will include nurse presence, nurse call, nurse assist, toilet and bathroom alarms with monitoring by VDUs, LED and enunciator panels, over-door lamps and audible buzzers. Call points will be simple wall mounted call buttons with call indication lamp, reassurance light and cancel.

Public Address (PA)

107. Provision for a PA system is included as part of the EWIS. This can be adapted to provide for general purpose public address and the muster siren.

TV and Radio

108. TV and AM/FM radio reticulation is proposed. This will include in-house educational, training and public broadcast channels and would be in keeping with current practice in civilian hospitals.

SECURITY

Electronic

109. Electronic Intruder Detection Security (EIDS) will be provided to parts of the facility not in 24 hour use. The system will include door alarm switches and detectors together with controlled entry and egress points. The system will be monitored at a central control desk within the hospital and remotely annunciated to the EIDS master alarm in the Guard House.

Where required by the specific room requirements, additional staff duress security buttons and drug cupboard alarms will be installed with 24 hour activation of the alarms.

Closed Circuit Television (CCTV)

110. A CCTV security system is proposed to allow monitoring from a central desk of after hours entry and egress and of the Field Hospital compound.

LANDSCAPING

111. Defence advised that landscaping is recognised as an important element in the design. The low rise building allows good physical and visual access to outside spaces by patients and staff. Courtyards and the areas surrounding the buildings will be landscaped and planted with appropriate local species. The buffer areas of trees and natural undergrowth to the south and west of the site will be retained and strengthened by additional planting.

112. The Committee was assured that Defence intends to retain as much of the existing vegetation as possible. One of the prime objectives of the landscaping will be to retain some well-established trees and an undergrowth between the proposed site and existing residential areas.

ENERGY CONSERVATION MEASURES

113. Energy consumption is being minimised through optimised design of the building envelope and the engineering plant. This will also require building users to apply proper energy management and housekeeping procedures. The main aspects of building design that have been considered in energy conservation are:

- building orientation to minimise heat gain during summer months - long axis east-west
- incorporation of external shading by provision of verandahs and shading devices
- consideration of thermally efficient glazing and internal shading devices

- application of insulation and heat reflective surfaces.

114. Energy conservation measures in the design of services systems includes:

- use of simple plant with minimum distribution networks as a consequence of low rise modular design

- use of equipment with integral steam generation rather than central steam supply systems

- airconditioning systems which incorporate facilities for the utilisation of outdoor air for cooling of indoor space when the ambient conditions are suitable and maximum recirculation of conditioned air

- use of multiple airconditioning units and modular chillers with variable volume and economy cycle, controlled by a digital Building Control and Management System (BCMS)

- use of solar water heating where cost-effectiveness can be demonstrated

- maximum use of natural lighting together with selective switching, BCMS controls and energy efficient artificial lighting including energy efficient fluorescent, compact fluorescent and discharge lamps with low loss control gear.

115. The Committee queried the possible use of solar heating for the project. Defence advised that it proposes to use solar heating for the hydrotherapy pool in the form of a boosted heat pump system. However, there are problems with using solar energy for the remainder of the hospital in terms of the large number of solar panels which would be required. The large number presents positioning and piping problems and necessitates protecting the solar panels from any sort of damage from hail. Defence advised that the option of solar heating of hot water does not appear to be cost-effective at the moment. However, further investigations will continue to be conducted.

ENVIRONMENTAL IMPACT

116. Selection of the preferred site takes account of existing flora and construction will have minimal effect on trees, with most remaining as a buffer surrounding the hospital. The project will not result in any known adverse environmental impacts and landscaping will receive detailed attention to enhance the hospital precinct. A certificate of environmental compliance has been issued by Defence.

117. The Australian Nature Conservation Agency expressed concern that an endangered plant, *Sophora fraseri* may occur on the site. This species is listed as vulnerable under the *Endangered Species Protection Act 1992.* Defence advised that the environmental officer for the Enoggera reserve has been consulted on this matter. The environmental officer has taken advice from the Queensland Herbarium Society (part of the Queensland Department of the Environment and Heritage) who have confirmed that the listed species does not occur within the vicinity of the site. Defence does not intend to carry out any further investigation on this matter.

Heritage Considerations

118. Apart from some nearby heritage listed ammunition storage sheds, there are no heritage implications associated with this proposal. The hospital complex will be beyond the desirable 75 metre distance from the heritage listed storage sheds and will not impact on them. A road will separate the sheds from the hospital site.

119. The Committee was advised that, following discussions with the Australian Heritage Commission, Defence will undertake a conservation study of the area of the magazine complex. This study will be co-ordinated by the Department's environmental officer for southern Queensland. The study will be undertaken by a qualified heritage consultant.

CONSULTATIONS

120. The following authorities have been consulted and/or advised by Defence during the planning stage:

- National Trust of Queensland
- Australian Public Sector and Broadcasting Union

- Marist Brothers College, Ashgrove
- Department of Administrative Services
- Mr A Bevis MP, Federal Member of Brisbane
- Mr J Fouras MLA, State Member for Ashgrove
- Alderman B G Mellifont - Enoggera Ward, Brisbane City Council
- Alderman B J Hallinan - The Gap Ward, Brisbane City Council
- Queensland Health Department
- Queensland Department of Environment and Heritage
- Queensland Department of Housing, Local Government and Planning
- South East Queensland Electricity Board (SEQEB)
- Queensland Electricity Commission
- Telecom Australia
- Gas Corporation of Queensland
- Australian Heritage Commission
- Australian Property Group
- Australian Surveying and Land Information Group
- Defence Housing Authority
- Austel
- Brisbane City Council
    - Department of Development and Planning

- Department of Works
- Department of Water Supply and Sewerage

. Emergency Services

- Queensland Ambulance Service
- Police
- Fire
- State Emergency Services.

LONGER TERM PLANNING

Master Planning

121. The master plan for Enoggera makes provision for a hospital facility in the barracks. The master plan will be updated in conjunction with this project to reflect the final hospital design. Possible future expansion of the hospital is being incorporated into the hospital master plan. This includes master planning provision for an additional 25 bed ward, should the need arise in future. Construction of the additional ward, however, is not programmed as part of this or any other project.

Future Development

122. The unapproved Capital Facilities Program includes provision for construction of other facilities at Enoggera including working accommodation for the Ready Reserve, 6th Brigade Administrative Support Battalion and Project Bushranger which provides mobility to the 6th Brigade. Master planning takes into account the proposed hospital and other known future development.

CONSTRUCTION PROGRAM

123. Defence advised that the low rise modular construction proposed is suited to a rapid construction program. At this stage of the design the following time scale is proposed:

- construction - 18 - 24 months
- commissioning - 3 months.

Time Frame

124. It is proposed to have the 2nd Field Hospital facility operational by late 1996 or early 1997. This will allow the project to be delivered in a timely manner, save maintenance costs on existing facilities and minimise the time members have to remain in their current inadequate and inefficient hospital accommodation. Therefore, the sooner the facility is completed, the greater are the returns to Defence and the sooner a better service can be provided to serving ADF members.

Future Development

125. The hospital is being planned to allow for future extensions to the south and west. The modular nature of the design facilitates future expansion and plans are being prepared with open-ended circulation systems to allow for future extensions, should they be required.

ESTIMATE OF COST

126. The estimated cost of the project when referred to the Committee was $29.2m. The sale of Yeronga should generate $4m-$5m. This will reduce the net cost of the project to about $22m-$23m.

127. The above cost estimate includes construction costs, professional fees and charges, furniture and fittings and a contingency. The estimate does not include specialist medical equipment that is already on issue to the hospitals and which will be relocated to the new facility.

Committee's Recommendation

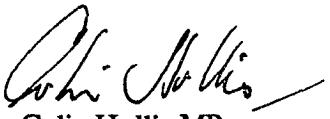
128. The Committee recommends the development of 2nd Field Hospital at Enoggera, Qld at an estimated cost of $29.2m.

CONCLUSIONS AND RECOMMENDATIONS

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

		Paragraph
1.	**The Committee commends the dedication of the staff of the 1st Military Hospital, Yeronga and 2nd Field Hospital, Kelvin Grove who are presently working in old timber, metal and asbestos clad buildings which provide inadequate working conditions and lead to operational inefficiencies.**	18
2.	**These substandard facilities should be replaced with a modern hospital capable of providing medical and dental services for personnel of the Australian Defence Forces.**	19
3.	**Construction of new facilities at Gallipoli Barracks, Enoggera is the preferred option for the 2nd Field Hospital.**	39
4.	**The proposed site at Gallipoli Barracks, Enoggera, will allow the 2nd Field Hospital to be in close proximity to the units which it will support as well as being in a location convenient for visiting civilian medical specialists.**	52
5.	**The Committee recommends that the Department of Defence continues discussions with ACROD Access and Mobility Committee concerning access provisions at the 2nd Field Hospital.**	76

6. **The Committee recommends the development of 2nd Field Hospital at Enoggera, Qld at an estimated cost of $29.2m.** 128



Colin Hollis MP
Chair

8 November 1994

APPENDIX A

WITNESSES

FLETCHER, Mr Glynne, Director, Peddle Thorp Architects (Brisbane), Consultants to the Defence Force, 29th Floor, AMP Building, 10 Eagle Street, Brisbane, QLD, 4000

JONES, Mr Robert Edward, Access Consultant, ACROD Access and Mobility Committee, 61 Nankoor Street, Chapel Hill, Brisbane, QLD, 4069

McCANN, Brigadier Raymond Leslie, Director General, Accommodation and Works - Army, Department of Defence, Queen Victoria Terrace, Campbell Park Offices (3-2-17), Canberra, ACT, 2600

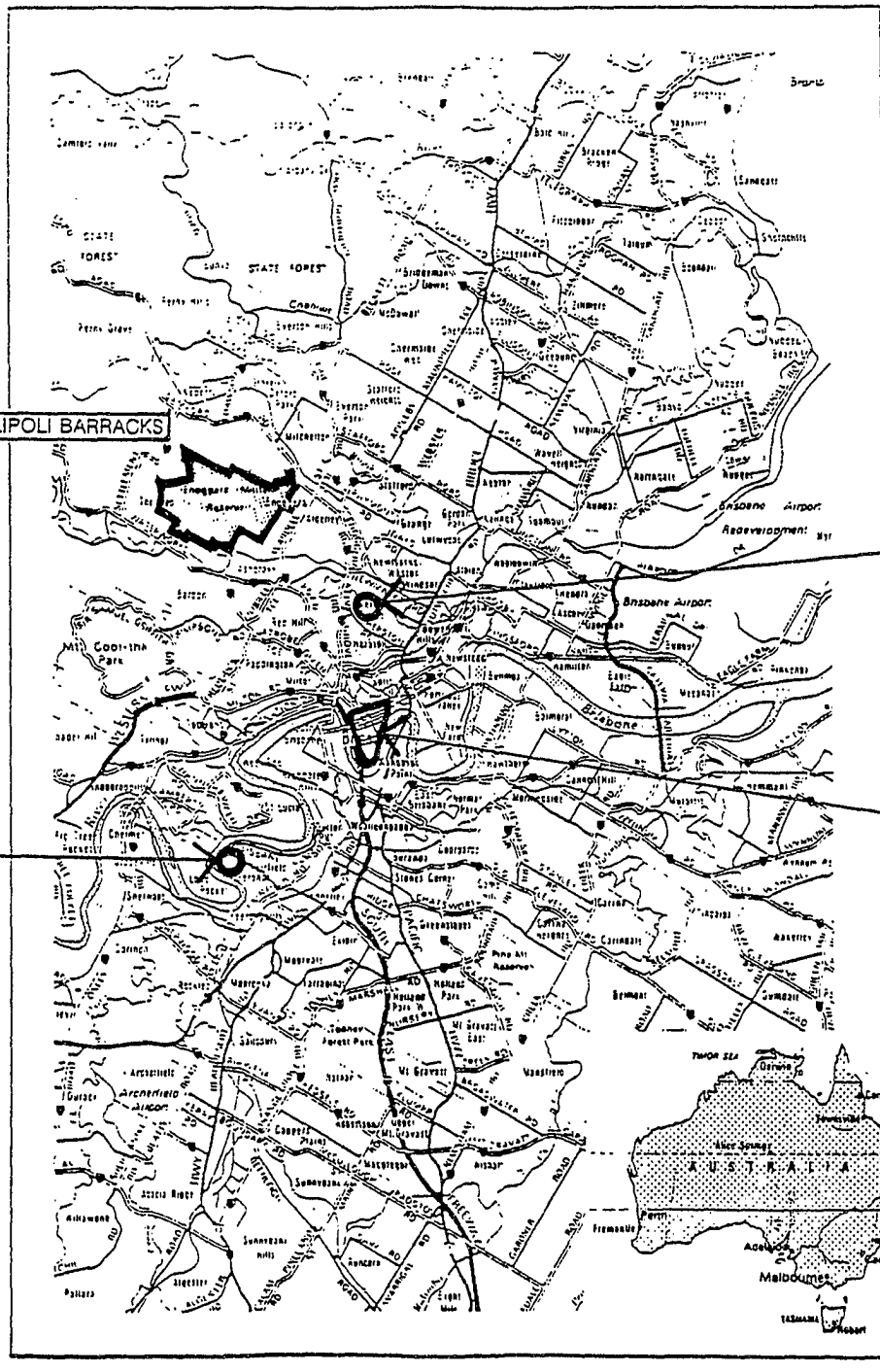
MILLAR, Lieutenant Colonel Robert Gerard, Commanding Officer, 1st Military Hospital, Kadumba Street, Yeronga, QLD, 4103

MOSTAFA, Lieutenant Colonel Ahmad, Project Director, Director-General, Accommodation and Works - Army, Department of Defence, Queen Victoria Terrace, Campbell Park Offices (3-2-17), Canberra, ACT, 2600

ROSSI, Major General David Glen, Surgeon General, Australian Defence Force, Department of Defence, Queen Victoria Terrace, Campbell Park Offices, (4-6-46), Canberra, ACT, 2600

APPENDIX B

PROJECT DRAWINGS

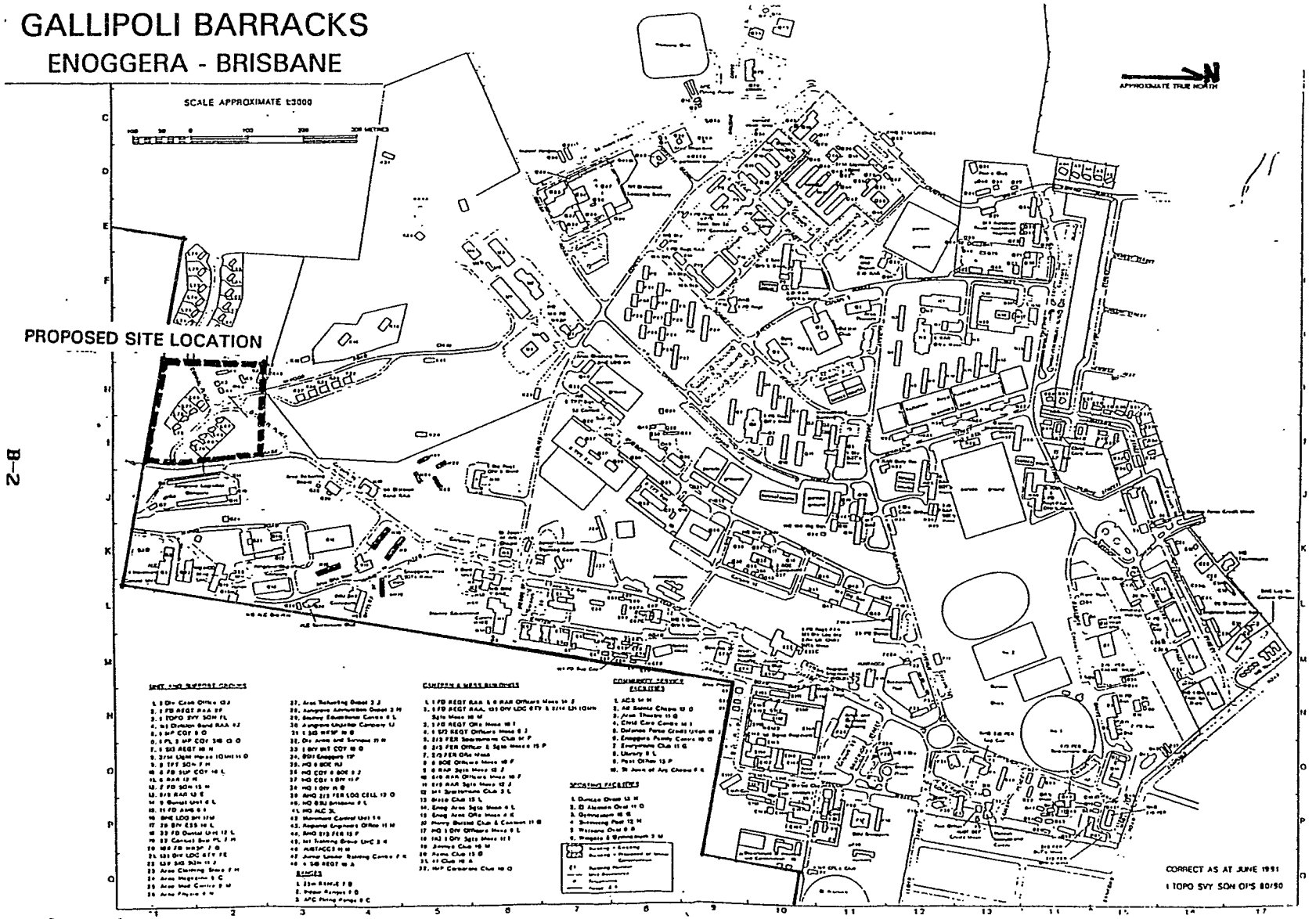


BRISBANE

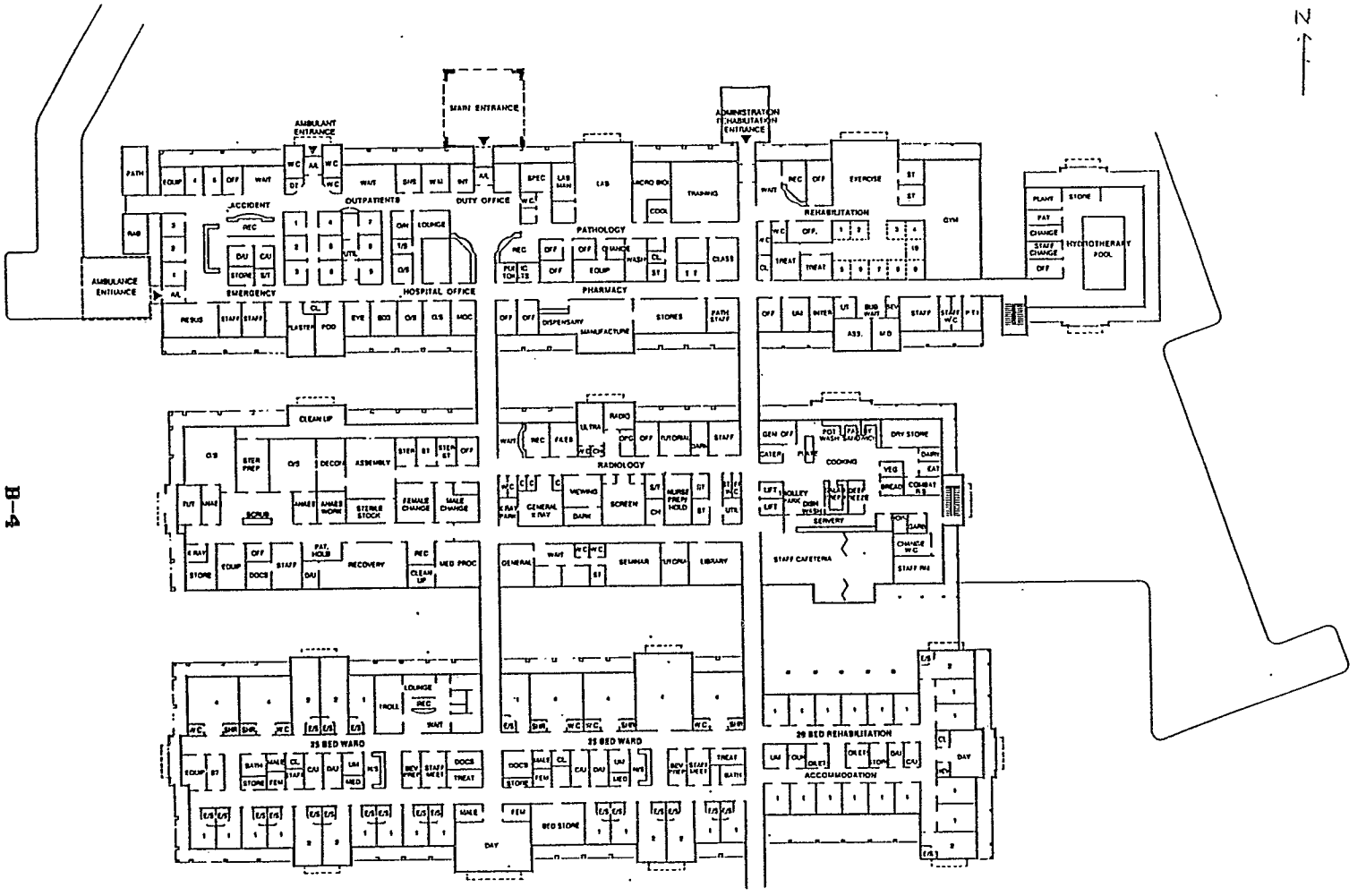
ENOGGERA 2ND FIELD HOSPITAL
LOCATION PLAN

GALLIPOLI BARRACKS

ENOGGERA - BRISBANE




ENOGGERA 2ND FIELD HOSPITAL
MASTERPLAN - SITE PLAN
SK 11
HOSPITAL TRANSPORT DEPOT
EXISTING CAMP TRANSPORT DEPOT
HYDRO THERAPY TRAINING
FIELD COMPOUND STORES
STORE PORT
ADMINISTRATION
CATERING
ROOF DECK
REHABILITATION WARD
PATHOLOGY
PHARMACY
RADIOLOGY
ACCIDENT & EMERGENCY
OUTPATIENTS
OPERATING THEATRES
C.S.S.D.
32 BED WARD
DAY PROCEDURES
NEW ROAD



PEDDLE THORP ARCHITECTS

HEALTH SCIENCE PLANNING CONSULTANTS

ENOGGERA 2ND FIELD HOSPITAL
MASTERPLAN - LEVEL 2

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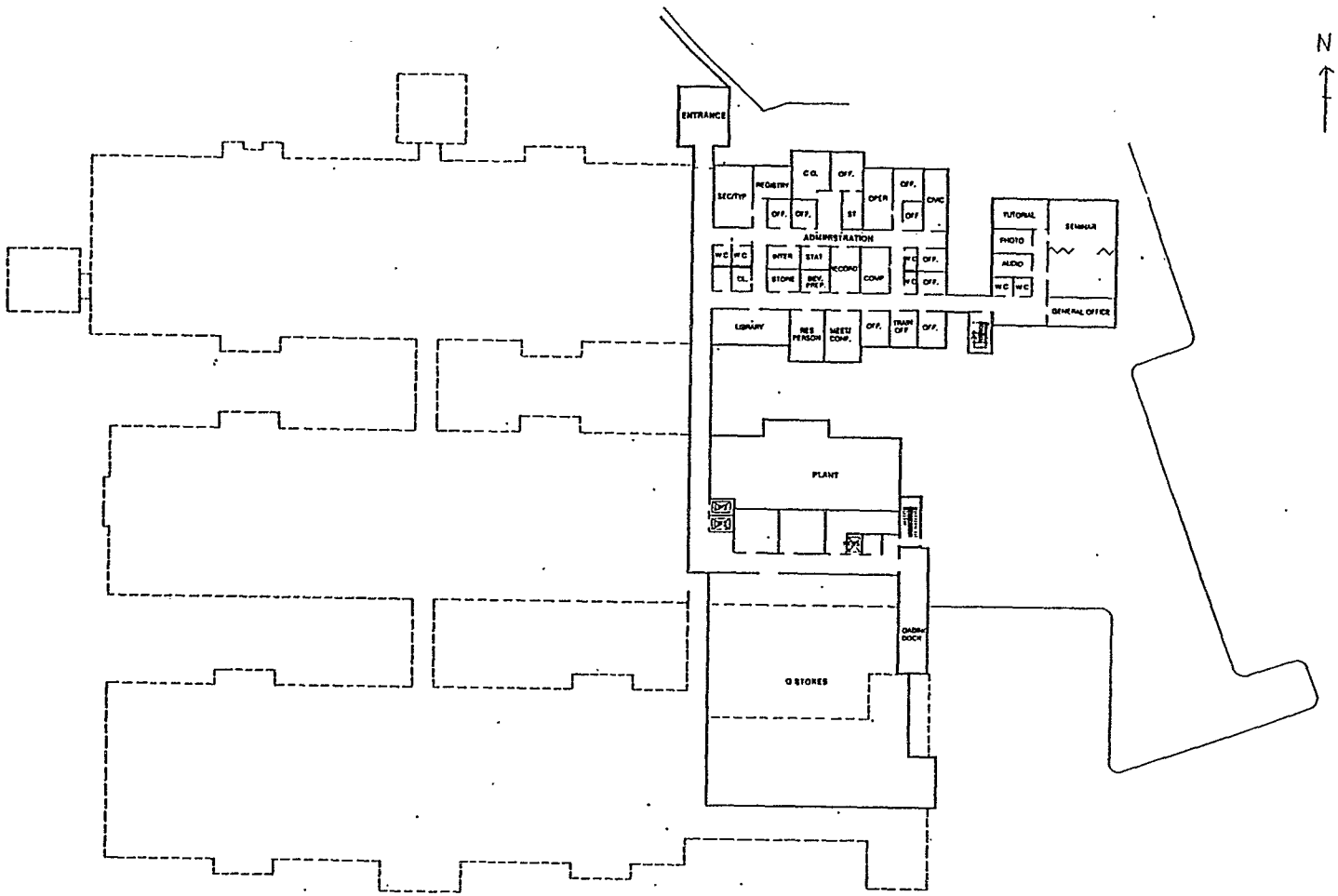

PEDDLE THORP ARCHITECTS

HEALTH SCIENCE PLANNING CONSULTANTS

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MASTERPLAN - LEVEL 1
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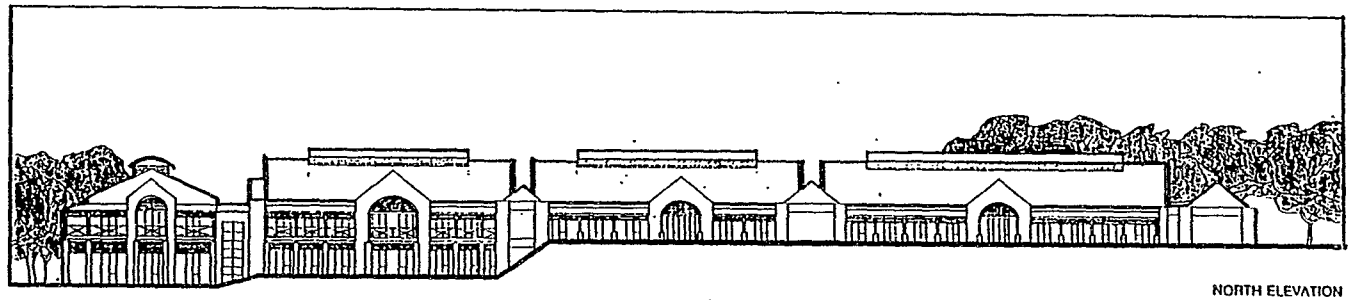
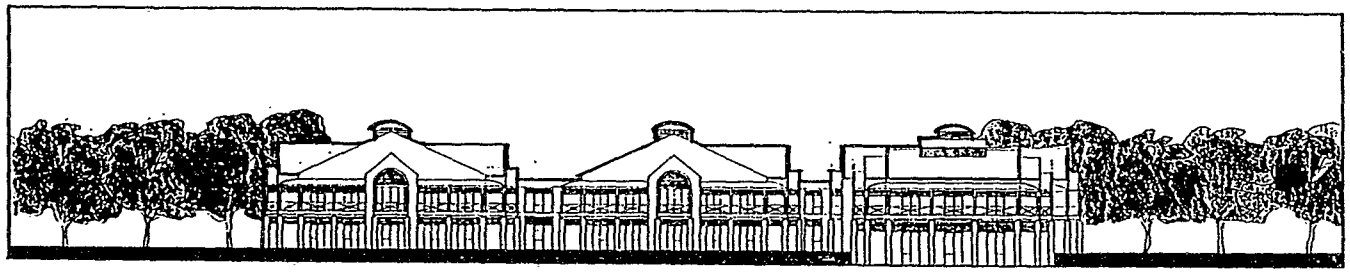
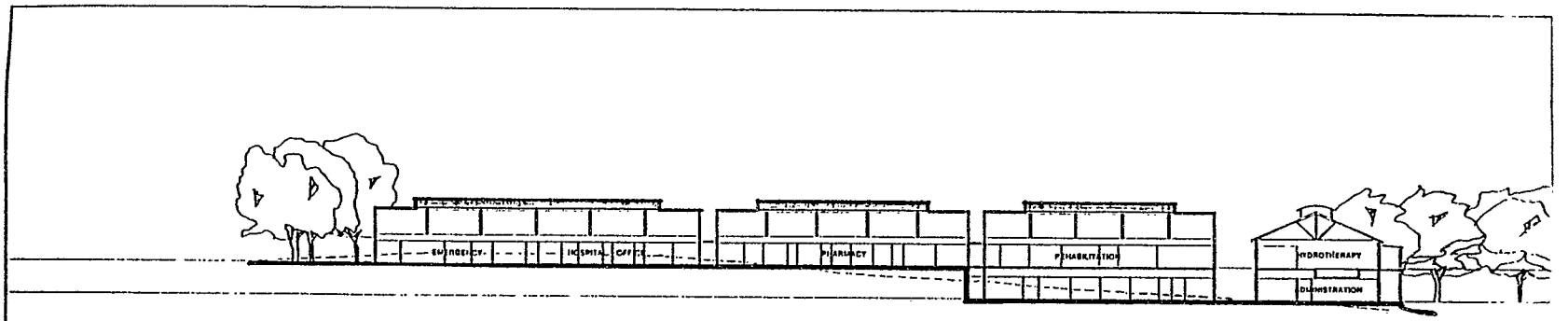


NORTH ELEVATION



EAST ELEVATION

ENOGGERA 2ND FIELD HOSPITAL
ELEVATIONS
SCALE 1:200 MARCH 1994 JOB NO 2819



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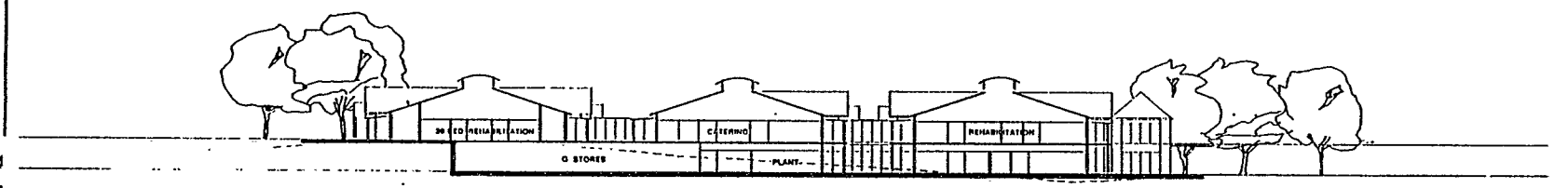
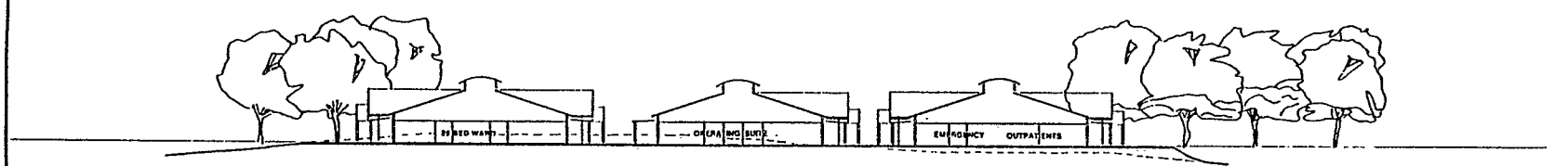


SECTION B B



SECTION A A

ENOGGERA 2ND FIELD HOSPITAL
SECTIONS
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B-7

ARMY MEDICAL SUPPORT ELEMENTS

Field Medical Elements (FME)

FME deploy with land forces to an area of operations to provide operational medical support to those forces. They are staffed by both Australian Regular Army (ARA) and General Reserve (GRes) personnel. When not deployed, ARA medical support elements also meet the day-to-day medical needs of the units or formations to which they belong and/or with which they are based.

They are grouped within Land Command and include:

Regimental Aid Posts (RAPs). RAPs support infantry battalions and similar sized land force manoeuvre units of 500 to 800 personnel - provide first aid for battle and non battle casualties, primary medical care and preventive medicine support to that unit - includes a general practitioner medical officer, several paramedical assistants and environmental health assistant. This is known as Level One care.

- **Brigade Administrative Support Battalion (BASB) Medical Companies.** A Medical Company supports a land force manoeuvre brigade of some 3 000 to 5 000 personnel and provides a higher level of medical care than RAPs. They collect and sort casualties requiring evacuation from RAPs. They provide emergency resuscitation, medical and nursing care, short term holding of casualties not requiring surgery, basic x-ray and pathology. They include several general practitioner medical officers and nursing officers, medical assistants and diagnostic technicians. This is known as Level Two care.

- **Field Hospitals.** These are discrete medical units that provide initial wound surgery and hospitalisation for casualties from one or more land force manoeuvre brigades. Actual allocation of field hospitals will depend on the disposition of supported land forces, casualty projections and the means of casualty evacuation available (if casualties do not receive initial wound surgery within three hours of wounding, mortality increases significantly). Capability includes resuscitation, operating theatres, 55 to 110 hospital beds, post-

operative care, mid and high intensity nursing, radiography, pathology and pharmacy. The unit can close, redeploy by road, rail, sea or air and re-establish itself in five to seven days. Army has two field hospitals. These may be deployed independently on widely dispersed operations, in remote areas of Northern Australia lacking in civilian health infrastructure. When not deployed, they provide hospital services to ADF personnel in the areas in which they are based. They provide Level Three care.

- **Forward General Hospital.** This is a discrete medical unit that provides comprehensive specialist medical and surgical services to all ADF personnel in an area of operations. Unlike the life-saving initial wound surgery performed at a field hospital, the specialised surgery performed in a forward general hospital is designed to restore function. Once treated, casualties are either returned to duty or prepared for evacuation to the Australian Support Area (ASA). Once deployed to an area of operations, it is relatively immobile and not easily re-deployed. Wherever practicable, the General Hospital utilises existing fixed facilities in major population centres - Army has only one such unit (GRes unit based in Adelaide).

Australian Support Area (ASA) Medical Elements:

These provide day-to-day medical services from fixed facilities in support of Army logistics, training and headquarters elements not deployed to an area of operations. In some cases, they also provide health services to RAN and RAAF elements. They are manned by a mixture of ARA personnel, civilian employees and civilian contractors. The more significant ASA elements include:

- 1st Military Hospital, Yeronga, Brisbane (this will close when amalgamated with 2nd Field Hospital)

- Puckapunyal Health Centre - provides outpatient and limited inpatient services to Army training elements at Puckapunyal (contract staff are provided under the Commercial Support Program)

- Kapooka Health Centre - provides outpatient and limited inpatient services to Army recruit training at Kapooka and to RAAF Wagga

- Latchford Barracks Medical Centre, Bonegilla - provides outpatient and limited inpatient services to Army training and logistics installations in the Albury/Wodonga area

- Lavarack Barracks Medical Centre, Townsville - provides outpatient and limited inpatient services to Army and RAAF elements in Townsville

- Canberra Area Medical Unit - provides outpatient and limited inpatient services to all ADF personnel in Canberra

- Randwick Barracks Medical Centre - provides outpatient services for Army headquarters and logistics elements in Eastern Sydney

- School of Army Health, Portsea - conducts individual health training courses for the ADF.

SCOPE AND CAPACITY OF THE PROPOSED HOSPITAL

1. This Appendix will address the purpose and capacity of the proposed key facilities for 2nd Field Hospital.

Hospital Headquarters

2. A headquarters area, either as a separate building or part of the hospital complex is required. The facility will house the Commanding Officer, his support staff and the Administration Company. The facility will provide office accommodation and amenities for about 25 personnel.

Hospital

3. The hospital will house all the conventional elements of a hospital complex. The hospital will be staffed and structured to allow continuous operation when the field elements are absent on deployments, albeit at a reduced capacity.

4. **HQ Medical Company.** This HQ manages the hospital complex and is responsible for staff training, courses and operation of the hospital. The HQ is also responsible for field training of hospital personnel, in particular to familiarise the staff, both ARA and GRes with field equipment.

5. **Wards.** In the ASA hospital complex there will be two discrete 25 bed wards providing 24 hour, 7 days a week care. One ward is required for surgical and one for medical cases. Surgical cases need to be separated from medical cases to ensure that there is no transfer of infection or disease to surgical patients who are at high risk of infection. Key elements of the wards are subtended:

a. **Surgical Ward.** The surgical ward is required for patients undergoing surgery, predominantly orthopaedic. These comprise approximately 50% of patients treated by the hospital. It is proposed that the ward be divided into a number of single rooms and four bed bays, all to be self contained. The surgery ward would be responsible for caring for 25 patients, including up to four high dependency patients.

b. **High Dependency.** As part of the surgical ward, it is proposed to provide one four-bed high dependency bay for very seriously ill patients. After an operation, either planned or in an emergency, it is sometimes necessary to retain patients in a high level care environment for a period of time. This may be from one to several days.

c. **Medical Ward.** The medical ward would be similarly divided into a number of single rooms and four bed bays, all to be self contained to provide 25 patient beds, including four Infectious Disease beds. The majority of the patients in this ward would normally suffer from infections or disease.

d. **Infectious Disease.** As part of the medical ward there is a need for four separate single rooms for the isolation of infectious diseases.

e. **Day Surgery.** A Day Surgery recovery bay is required to support the short term surgery patients. The bay is part of the responsibility of the Medical Ward. Mobile trolley beds/lounge chairs are required rather than the full bed and support systems as provided in the other bays. The stay averages three to six hours and after recovery the patients are discharged. It is intended that the Day Surgery patients' operations be performed in the casualty procedures room.

6. **Casualty.** The clinical services personnel that are responsible for the patient care in the wards are also responsible for the casualty area. Casualty provides a triage, diagnostic and minor treatment of injuries. It also provides resuscitation, emergency treatment and minor surgery. This department requires a reception and waiting area, a diagnostic treatment area and surgery area. A plaster room for immobilising bone injuries is also required.

7. **Patient Amenities.** There is a need for recreation rooms in the vicinity of the ward areas. This is particularly necessary to relieve boredom, especially for those rehabilitation patients who can move about.

8. **Outpatients.** The Outpatients area is where all medical specialists review their patients. It is proposed that four general purpose doctor's consulting rooms be provided. A further three specialist consulting rooms for ear, nose and throat ophthalmology and podiatry are required to be permanently equipped. A general reception, office area and a patients' waiting area are required. During their visit to hospital, visiting specialists also review any patients who are still recovering from an operation.

9. **Physiotherapy and Rehabilitation.** There is a requirement for a physiotherapy room with equipment to enable simultaneous therapy and supervision of personnel. It is proposed that the rehabilitation area have a hydrotherapy pool, approximately 1 metre deep with a sloping entry and exit ramp. Hydrotherapy is the acceptable standard for treating many of the types of injuries suffered by ADF personnel.

10. **Rehabilitation Accommodation.** Those patients who have recovered from their operation but who have long term rehabilitation injuries are transferred to the rehabilitation accommodation. There is need for 20 bed spaces for rehabilitation patients. This ward would essentially provide living-in-accommodation for those members who cannot be sent home or rejoin their unit.

11. **Operating Theatres.** It is more economical for Defence to have visiting specialists operate in the hospital on a periodic basis than to send Defence patients to a civilian hospital and theatre for care and surgery. On the basis of the number of operations performed, the hospital needs two operating theatres. There are times when an operating theatre has to be set-up for a particular specialist surgery. This then restricts the use of that theatre for general theatre surgery. The second theatre is required to ensure that at least one theatre is available at all times. Additionally, there is a need for a minor procedure, colonoscopy and an endoscopy room.

12. **Radiology.** To meet the requirement of the hospital including the specialists at outpatients, there is need for a general radiography and tomography room, a fluoroscopy room, an OPG room and an Ultrasound room. In the preceding 12 months period to Dec 93, over 21 700 exposures were carried out on patients, an increase on the previous year. Walls in this area will need special treatment to protect staff and patients against radiation.

13. **Radiology Training.** Because Army trains field radiologists, there is need for a separate radiology training room. To cater for the specific Defence needs, this training is different than that which is provided in civilian establishments. The existing X-ray department is an Accredited Training Establishment for radiographers sanctioned by the Conjoint Board of College of Radiologists and Australian Institute of Radiology. It is proposed to retain the accreditation to continue to maintain a professional level of care.

14. **Pathology.** The Pathology section will continue to function as it does currently, providing continuous clinical diagnostic support to the hospital. The section will also continue to carry out tests for all medical centres and RAPs in South Queensland. It is intended to retain the accreditation with the National Association of Testing Authorities of Australia (NATA) Category 3. The department carried out over 33 500 tests in the preceding 12 month period to Dec 93. This figure has steadily increased over the previous years and is unlikely to decrease, especially in respect to infectious diseases and screening of personnel before and after overseas deployments.

15. **Pathology Training.** The department conducts courses for Defence personnel. A separate training laboratory duplicating the equipment and functions of the testing laboratories is required. The department has NATA accreditation.

16. **Pharmacy.** The pharmacy will cater to all hospital departments as well as visiting patients at outpatients and casualty.

Field Component

17. The field hospital requires an area adjacent to the fixed hospital to set up the 'Centaur' field shelters and ward tents for close training of ARA and GRes personnel. The set-up area needs to be level and allow access by crane to load and unload the shelters for field deployments. Access to the logistics area is also required to allow easy access to the necessary stores.

Logistics Complex

18. Logistic functions are separate from the medical functions and should be located separately from, but close to, the hospital complex.

19. **General Stores Section.** There is need for storage, a loading and unloading area and office accommodation. The storage area will require an air conditioned store for unstable medical supplies as a controlled temperature environment will prolong the life of many drugs. The type of stores held include the medical field equipment, tents, field operating theatre shelters and wards.

20. **Technical Support Section.** Technical maintenance staff maintain the field equipment and a variety of medical equipment held by hospital. A small workshop is proposed.

21. **Health Section.** The health staff are responsible for the hygiene standards of the hospital whilst on base and in the field. They will need an office and small store for chemicals and hygiene equipment.

22. **Catering.** A kitchen and rations store are necessary to provide meals to patients and duty staff. Associated with the requirement for a kitchen is a dining area, where ambulant patients and staff can eat their meals.

23. **Laundry Section.** The laundry personnel are responsible for hospital linen whilst on base and when deployed in the field. They need an office and a store, as well as access to a dispatch area. When on base, civilian contractors will be used for laundry and when in the field the hospital will generally do its own laundry using the mobile field laundry shelter.

24. **Transport.** A need exists for a small office within a transport compound. The compound will need to park about 44 vehicles and trailers, including specialist field medical vehicles. A need also exists for a minor maintenance facility to allow drivers and vehicle maintenance personnel to carry out minor maintenance and repairs.

Instructional Facilities

25. 2nd Field Hospital is required to conduct training courses ranging from nine months long, to refresher first aid courses a few days long. Each specialist training area has been addressed separately and needs to be located within the appropriate functional area. The unit also conducts GRes training. To maximise classroom usage and minimise their number, classrooms will be provided as a centrally managed facility.

Living-in Accommodation (LIA)

26. **Staff and Student LIA.** Enoggera does not have sufficient LIA and new accommodation will be necessary. To minimise costs it is proposed that extra rooms be built in the vicinity of existing messes at Enoggera, rather than build new messes. Rooms are required for 15 officers, five senior non commissioned officers and 40 other ranks staff and students.

27. **Visitors Accommodation.** The Defence - Australian Dangerously Ill List - (AUSDIL) Scheme requires Defence to transport and accommodate members' Next of Kin (NOK) at Defence expense, when deemed necessary for them to be close to very seriously ill patients. To reduce anxiety, trauma and the need for transport, two small 'bed-sitter' modules are proposed as part of the project to cater for the NOK whilst staying in Brisbane. When

not required by NOK, the rooms can be used by short term staff visitors or low dependency short term patients in time of high demand for hospital beds.

Additional Items

28. The items discussed above are necessary to establish a fully integrated field hospital catering to Defence needs and the needs of an Army field unit. Accordingly, none of the works can be postponed without affecting the concept of integrated hospital care. These items are part of the agreed scope of works that can be provided within the approved cost cap.

29. Other lower priority, but desirable, items that have not been listed, include the provision of an additional level area to set up the remaining five Centaur shelters (ie pathology, X-ray, two wards and pharmacy) rather than only the five required as a minimum (ie the theatre complex: pre-op, theatre, post-op, intensive care and central sterilising). Overhead cover is desirable for the field set up area in the form of shade cloth or similar material to provide weather protection for the field shelters and the expensive medical equipment. The provision of a small, 3-4m jet-stream pool is another desirable item to allow for light rehabilitation by swimming. These lower priority items are proposed in the event that savings are achieved during construction.