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(Enoggera Stage 1)

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Australian Government  
Department of Defence

**ENOGGERA REDEVELOPMENT STAGE ONE,  
GALLIPOLI BARRACKS, QUEENSLAND**

**STATEMENT OF EVIDENCE  
TO THE  
PARLIMENTARY WORKS COMMITTEE  
ON PUBLIC WORKS**

**DEPARTMENT OF DEFENCE  
CANBERRA, ACT  
MARCH 2008**

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## **PART A – JUSTIFICATION**

### **INTRODUCTION**

1. This evidence to the Parliamentary Joint Standing Committee on Public Works presents a proposal for the Redevelopment of Gallipoli Barracks Stage One, Enoggera, Queensland.
2. Gallipoli Barracks is the most significant Army barracks in South East Queensland. The land on which Gallipoli Barracks is situated was purchased in 1908 for the establishment and training of Defence units. Development during the period 1910-1921 included the construction of a rifle range, ordnance facilities, a school of musketry, artillery facilities, hospital, ammunition depot, depot for remount horses and camp facilities for citizen forces.
3. Further facilities were provided for an infantry battalion and construction squadron during the 1950s. An area transport company, supply depot, trade training centre and personnel depot were constructed in 1962. A regular Army task force was located at Gallipoli Barracks during the 1960s. A major development program was carried out in 1965-67 and a further major development program in the period 1979 to 1981 was the last time the Barracks received any substantial development.
4. Single Living Environment Accommodation Precinct (Single LEAP) Phase One is currently being delivered at Gallipoli Barracks with completion anticipated by March 2009. Project Single LEAP was established to address the worst deficiencies in permanent Living In Accommodation across Australia. Phase One will deliver 500 Level 5 Living In Accommodation facilities at Gallipoli Barracks, providing a level of amenity in line with community expectations. Completion of Single LEAP will bring the total Living In Accommodation at Gallipoli Barracks to 1722 units (500 level 5, 512 level 3 and 710 level 2 and 3).
5. The current role of Gallipoli Barracks is to provide a base for 7<sup>th</sup> Brigade, the Deployable Joint Force Headquarters, associated full time and Reserve land forces and training and logistic units. Gallipoli Barracks currently accommodates over 2600 regular uniformed personnel, 3000 Reservists and more than 200 civilian and contract personnel.

## **PROJECT OBJECTIVE**

6. The key aim of Enoggera Redevelopment Stage One is to rationalise the messing arrangements in line with moves to increase overall Defence efficiencies and reduce resources allocated to support functions. The existing messes at Gallipoli Barracks were originally located to serve individual units; each unit had separate messes for Officers, Senior Non Commissioned Officers and Other Ranks. Whilst a range of messing rationalisations has occurred at Gallipoli Barracks over time, a total of 10 messes still currently remain distributed across the Base. The project will reduce those existing 10 messes to a total of three mess facilities servicing Gallipoli Barracks. The new Combined Mess will accommodate 1050 personnel in one meal sitting and will be located in accordance with the Gallipoli Barracks zoning plan adjacent to the Single LEAP Phase One site.

7. Headquarters 7<sup>th</sup> Brigade and other minor units are currently located on the proposed site for the new Combined Messing facilities. As part of this project, new purpose built office accommodation will be constructed for Headquarters 7<sup>th</sup> Brigade and the other minor units.

8. The project will also improve the condition of existing engineering services to meet current demands and to meet the needs of this redevelopment project. This work will involve upgrading the high voltage network and improvements to stormwater, sewerage systems and the Defence communications network.

9. Decommissioning and demolition of the existing redundant messes and demolition of existing buildings that are in the location of the proposed redevelopment are also included in the proposal.

## **THE PROPOSAL**

10. Enoggera Redevelopment Stage One project includes:

- a. **Combined Messing Facility** - This element rationalises the total messing arrangement for the Base, achieving an operating cost reduction through economies of scale. The proposed Mess will consist of a central kitchen and separate wings for the Officers, Senior Non-Commissioned Officers and Other Ranks, combined with facilities for the preparation of field rations. The proposed Mess also provides for recreational, lounge and bar facilities. It will be sized to accommodate approximately 1050 military personnel (125 Officers, 125 Senior Non-commissioned Officers and 800 Other Ranks). The design of the kitchen and dining areas has allowed for future expansion. The

kitchen and dinning areas have been designed so that they can be augmented for future base population increases. The facility will be constructed adjacent to the new Single Living Environment Accommodation Precinct to create a central Living Environment Precinct.

- b. **Headquarters 7<sup>th</sup> Brigade** - This element provides purpose built office facilities to accommodate Headquarters 7<sup>th</sup> Brigade. The existing Headquarters facilities are in a poor state, contain asbestos and are located on the proposed site of the new Combined Mess. Consequently, Headquarters 7<sup>th</sup> Brigade will be relocated prior to construction of the new Combined Mess. The new facility will provide office accommodation to meet the current requirements of the Brigade. The zoning plan completed for Gallipoli Barracks in May 2007 proposes a new location for Headquarters 7<sup>th</sup> Brigade on the corner of Bugden Street and Murray Avenue.
- c. **Engineering Services and Demolition** – Improvements are proposed to the existing engineering services to meet current demands and the requirements of this project. The proposed works include major upgrading of the high voltage electrical supply and reticulation system to maintain supply reliability. The combined mess precinct is located adjacent to an open stormwater drain which will be modified as part of the design landscaping for parking and access to the mess. A portion of the sewer main will be upgraded and improvements will also be made to the communications network. The current facilities on the proposed mess and Headquarters 7<sup>th</sup> Brigade sites, all of which contain asbestos will be demolished. The existing messes to be decommissioned and demolished are Gallipoli Officers' Mess, Gallipoli Other Ranks' Mess, Long Tan Sergeants' Mess, ANZAC Officers' Mess, ANZAC Sergeants' Mess, ANZAC Other Ranks' Mess, 1<sup>st</sup> Div Officers' Mess and 1<sup>st</sup> Div Sergeants' Mess. Of these messes, the ANZAC Sergeants' Mess and the ANZAC Other Ranks' Mess have already been decommissioned and are being demolished as part of the Single LEAP Phase One project.
- d. **Temporary Facilities and Minor Units** - This element of the project includes provision for the decanting of units affected by the project into refurbished and demountable facilities until their permanent buildings are completed. The units affected by the works include the Australian Defence Force Investigative Services, Headquarters 7<sup>th</sup> Brigade,

8<sup>th</sup> Personnel Support Company, Deployable Force Cash Office and 139<sup>th</sup> Signals Squadron. Headquarters 7<sup>th</sup> Brigade, Australian Defence Force Investigative Services, 8<sup>th</sup> Personnel Support Company and Deployable Force Cash Office will be relocated into temporary accommodation in the form of existing facilities at Gallipoli Barracks and hired demountable accommodation until their new facilities are completed. 139<sup>th</sup> Signals Squadron will be relocated to vacant office accommodation identified in 139<sup>th</sup> Signal Squadron's existing facilities. The 139<sup>th</sup> Signal Squadrons radio room will be demolished and a new purpose built, secure radio room will be constructed for the units' training purposes. The existing aerials will be relocated from the proposed Combined Mess site and relocated adjacent to the new radio room.

## **COSTS**

11. The estimated out turned cost of this project is \$80.2 million plus GST. This cost estimate includes the construction costs, management and design fees, furniture, fittings and equipment, contingencies and an escalation allowance.

## **OPTIONS**

12. **Combined Mess Facility.** The new Combined Mess is the central feature of this project. The proposed mess facility will centralise messing in a single structure that will reduce operating costs. Refurbishment of an existing facility was not considered as a structure of suitable proportions does not exist at Gallipoli Barracks. Multi storey options were considered for the mess design, but were found to be less cost effective due to multiplication of preparation areas, increases in staffing levels and vertical transport of food, staff and military personnel. A single storey design was considered to be most cost effective solution for the mess.

13. **Headquarters 7<sup>th</sup> Brigade.** Refurbishment of the existing ANZAC Officers' Mess was considered for the Headquarters 7<sup>th</sup> Brigade as an alternative to a new building. Refurbishment was not adopted because of the presence of asbestos, the higher refurbishment costs, unsuitable existing building fabric for the proposed use, reduced ability to achieve ecologically sustainable design principles and reduced functionality. As a result, construction of a new office building was considered the most cost effective and functional solution for Headquarters 7<sup>th</sup> Brigade.

## **ECONOMIC IMPACTS**

14. This proposal will not produce revenue. The project will generate some short term

employment predominantly in the building, construction and unskilled labour markets. Significant numbers of personnel are expected to be directly employed on construction activities that would also generate some off site job opportunities from the manufacture and distribution of materials over the construction period. Defence anticipates that local building subcontractors would be employed on a large proportion of the construction works and infrastructure works.

## **ENVIRONMENTAL CONSIDERATIONS**

15. Defence has determined that the works in this proposal are unlikely to have a significant impact on the environment and therefore the project does not require referral to the Department of the Environment, Water, Heritage and the Arts under the *Environment Protection and Biodiversity Conservation Act 1999*.

16. An independent environmental consultant was engaged to undertake an environmental scoping study to assess the environmental impacts of the project. The key findings of the environmental scoping study included:

- a. **Organochloride and organophosphate pesticides.** As a result of historical construction practices for the prevention of termites and other pests it was common practice circa 1950 to 1980 to use organic pesticides during building construction. The process involved saturating the visqueen (underlay) with pesticides before pouring the concrete slab. This led to contamination of the concrete and underlying soil with organochloride and organophosphate. The buildings scheduled for demolition as part of this project were constructed during this period and contamination is likely to be present:
- b. **Adelotus Brevis (Tusked Frog).** During field inspections, two *Adelotus Brevis* (Tusked frog) was recorded within the storm water drain at the proposed Mess site. *Adelotus brevis* (Tusked Frog) is listed as vulnerable under the Queensland *Nature Conservation Act 1992*. The project will reshape the existing storm water drain to form a series of pools and riffles that when landscaped will be both visually attractive and provide habitat opportunities for the Tusked frog:

17. As a contractual obligation, the Managing Contactor will be required to develop a Construction Environmental Management Plan covering all the proposed works. Compliance with the procedures contained on the Construction Environmental Management Plan will be regularly audited by Defence's Project Manager.



18. Each project element has been assessed to achieve the best value solution whilst achieving Environmentally Sustainable Development (ESD) requirements. Construction materials, finishes and engineering services have been analysed against ESD criteria.

19. A project ESD workshop was held and the priorities established during the workshop for inclusion in the project are:

- a. enhancing thermal and acoustic comfort of internal spaces;
- b. effectively capturing storm water runoff from site;
- c. reducing waste to landfill during construction and operation;
- d. maximising provision of natural daylight and external views;
- e. selection of materials to reduce impact on natural resources, reduced toxins and off-gassing;
- f. enhancing indoor air quality and reducing internal pollutants; and
- g. maximising connectivity to outdoors.

20. Specific performance targets that have been set for the new Combined Mess and Headquarters 7<sup>th</sup> Brigade. These relate to:

- a. energy savings (achieving 4.5 Australian Building Greenhouse Rating);
- b. water reduction;
- c. waste reduction; and
- d. management of construction.

21. The targets and project performance requirements have been established based on Defence's Green Building Requirements Part One policy. As no specific Green Star rating tool applies to the mess facilities or infrastructure; best-practice Environmental Sustainable Development design will be implemented in regard to these elements in order to achieve the performance targets.

## **HERITAGE**

22. There are no areas of significant heritage value located at, or around, the proposed development sites for this project.

## **SOCIAL IMPACTS**

23. This project will have minimal impact on the local community either during or post construction. During the construction phase, some employment opportunities may become available for local tradespeople. There will be minimal impact on day to day activities at Gallipoli Barracks.

## **LONG TERM PLANNING**

24. The Single Living Environment Accommodation Precinct (Single LEAP) project is a separate initiative to improve living-in accommodation across Defence and is currently delivering living in accommodation under a private public partnership. This accommodation is being built adjacent to the proposed new Combined Mess site. The siting of the accommodation has been taken into account during the design of the mess.

25. The new Combined Mess facility has been designed to accommodate for future personnel growth at Gallipoli Barracks. Increases in the number of meals served by the new facility have been taken into consideration throughout the design process. The kitchen has been designed for supplementary cooking facilities to be installed in the future and the dining areas have been structured so that they can be easily augmented to accommodate up to an additional 450 meals in one sitting.

## **CONSULTATION**

26. During the development of the project, consultation has occurred with the users, unit representatives and with Army mess staff representatives. Additionally, military and civilian staff responsible for the ongoing maintenance and operation of the facilities have been involved in the development process and will continue to be involved through the remainder of the project.

27. Consultation will be held with relevant local government and council representatives as well as utilities such as Energex and the Queensland Fire and Rescue services. This consultation will continue throughout the construction period. An industry briefing was conducted in December 2006 to ensure the local construction market was provided with information relating to the scale, schedule and nature of the works required. Discussions are planned to be held with the Brisbane City Council and the Federal Member for Brisbane.

## **PART B – TECHNICAL INFORMATION**

### **PROJECT LOCATION**

28. All proposed works are located within Gallipoli Army Barracks, Enoggera, which is located approximately seven kilometres north west of Brisbane Central Business (Attachment 1). The site of the proposed works is Commonwealth owned and Defence controlled.

### **PROJECT SCOPE**

29. The proposed Enoggera Redevelopment Stage One project includes four distinct elements. Each project element is summarised below and detailed further in the proposed facilities layout plans (Attachment 2).

#### **Project Element 1 - New Combined Messing facility**

30. The total messing arrangements for the Base is to be rationalised to reduce the resources allocated to support functions. The proposed Combined Mess facility will consist of a central kitchen and separate wings for the Officers, Senior Non Commissioned Officers and Other Ranks, combined with facilities for the preparation of field rations. New Other-Ranks recreation, lounge and bar facilities are also proposed to be constructed as part of the new Other Rank's mess.

31. The new Combined Mess facility will accommodate the following facilities:

- a. Officers' Mess to cater for 125 personnel;
- b. Senior Non-Commissioned Officers' Mess to cater for 125 personnel;
- c. Other Ranks' Mess and Club to cater for 800 personnel;
- d. Central Kitchen; and
- e. Field Ration preparation and dispatch facility.

32. The Officers' and Senior Non-Commissioned Officers' Messes will incorporate an anteroom, bar facilities and amenities. Similar facilities for Other Ranks will be provided by the Club. The new Combined Mess will comply with current occupational health and safety standards in both food preparation and catering.

### **Project Element 2 - New Headquarters 7<sup>th</sup> Brigade**

33. This element of the project provides a new two storey headquarters facility to meet the office accommodation requirements of the Brigade.

34. The building contains office and support spaces arranged so that fixed elements such as plant rooms and amenities are located separately from the office spaces. Flexibility in the planning arrangement allows for potential rearrangement of office areas without the need to alter the external fabric or service infrastructure of the building. Car parking for visitors and staff are situated in separate areas. The building also allows for future expansion.

### **Project Element 3 - Engineering Services and Demolition**

35. This element involves the upgrading of existing infrastructure and demolition of existing mess and office accommodation. Upgrades and refurbishment work will be conducted to improve the condition of existing engineering services, including high voltage power, sewer, storm water and communications, to meet current demands and the requirements of this project.

36. An increase in supply of high voltage to the base is proposed as the existing supply to the Base is at full capacity. This additional capacity will be required to allow for the demands of this proposal with spare capacity to accommodate future development of Gallipoli Barracks. The proposed works will include a major upgrade of the high voltage electrical supply for the base and a significant upgrading of the major elements of the internal electrical reticulation system. This upgrade will improve capacity for existing and future power demands and maintain supply reliability.

37. Assessment of the impact of both Single Living Environment Accommodation Precinct and Enoggera Redevelopment Stage One project sewerage demands has been undertaken. A portion of the sewer main will be upgraded as part of the project.

38. Connection of the sewer will be to existing and the new proposed site sewer infrastructure will comply with AS/NZS3500.0 National Plumbing and Drainage Code.

39. Existing storm water services are adequate. The new Combined Mess precinct is located adjacent to an open storm water channel. The storm water channel will be modified by enclosing approximately one third of the channel, which will provide for additional car parking and vehicle access to the site. The remainder will be revegetated with local and native species and a series of pools and riffles will be constructed to create a new habitat.

40. Communications for both the new Combined Mess and Headquarters 7<sup>th</sup> Brigade will be provided in accordance with Defence standards. A major communication node exists in the current Headquarters 7<sup>th</sup> Brigade building. This node will be relocated into a refurbished facility prior to the demolition of the building.

41. Demolition will be carried out on the existing office accommodation at both the proposed Combined Mess site, Headquarters 7<sup>th</sup> Brigade site and the messes decommissioned by the project. On the proposed new Combined Mess and Headquarters 7<sup>th</sup> Brigade sites five buildings and six temporary structures identified as containing asbestos will be demolished to allow the construction of the new facilities. Subsequent to successful handover of the new Combined Mess the redundant messes will be demolished. The messes to be demolished are the Gallipoli Officers' Mess, Gallipoli Other Ranks' Mess, Long Tan Sergeants' Mess, ANZAC Officers' Mess, 1st Div Officers' Mess and 1st Div Sergeants' Mess.

#### **Project Element 4 – Temporary Facilities and Minor Units**

42. This element of the project includes provision for the decanting of units affected by the project into temporary refurbished and demountable facilities whilst permanent facilities are constructed. The units affected by the works are Headquarters 7<sup>th</sup> Brigade, Australian Defence Force Investigative Services, 8<sup>th</sup> Personnel Support Company, Deployable Force Cash Office and 139<sup>th</sup> Signals Squadron.

43. Headquarters 7<sup>th</sup> Brigade will be relocated into temporary accommodation in the form of refurbished existing facilities and hired demountable accommodation until their new facility is constructed.

44. The Australian Defence Force Investigative Services is currently located in the old Dental Health building on the proposed new Headquarters 7<sup>th</sup> Brigade site. The Deployable Force Cash Office and their parent unit 8<sup>th</sup> Personnel Support Company are currently sharing facilities located on the proposed Combined Messing site. These units will be temporally decanted into demountable accommodation whilst a new purpose built facility is constructed.

45. 139<sup>th</sup> Signals Squadron currently utilise a radio room and antenna farm located on the proposed Combined Mess site for training purposes. A new purpose built, secure radio room will be constructed for the unit and the existing aerials will be relocated adjacent to the new radio room. The remaining 139<sup>th</sup> Signals Squadron personnel will be relocated into vacant space identified in

existing 139<sup>th</sup> Signal Squadron facilities. The works will include construction of partitioning system and installation of electrical and communications networks.

### **SITE SELECTION**

46. A basic planning framework for the Gallipoli Barracks Enoggera was established in the zoning plan study completed in 2005. During a zoning plan review in May 2007, siting options were considered for the new Headquarters 7<sup>th</sup> Brigade facility before the proposed site was selected. A similar siting options study was conducted for the new Combined Mess. Both siting studies addressed, environment, heritage and operational considerations.

### **SITE DESCRIPTION**

47. All project elements are located within the boundaries of Gallipoli Barracks, Enoggera. This property is Commonwealth owned and Defence controlled. The location of the project elements requires existing buildings to be demolished.

### **ZONING AND APPROVALS**

48. All works referred to in this evidence will be constructed within the designated boundaries of Gallipoli Army Barracks Enoggera. The land at Gallipoli Barracks, Enoggera, has been designated as “Defence Special Purposes”. No civilian authority design or construction approvals are required, although the works will comply with the relevant Standards and Regulations as applicable.

### **LAND ACQUISITION**

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

### **APPLICABLE CODES AND STANDARDS**

50. Where appropriate, the design and construction of the proposed works and services will conform to the relevant sections of the applicable Building Codes and Standards including the following:

- a. Building Code of Australia;
- b. Current Australian Standards and Codes;
- c. Commonwealth and State legislation;
- d. Defence Manual of Fire Protection Engineering;
- e. Relevant Defence Security Publications; and

- f. Occupational Health, Safety and Welfare legislation and the Defence Occupational Health and Safety Manual.

51. A qualified practising building surveyor will be required to certify that the design and finished construction of the proposed facilities meet the requirements of the Building Code of Australia, relevant Australian Standards and codes, Defence Manual on Fire Protection Engineering and any additional State, Local Government and Defence requirements.

52. The Managing Contractor will be required to maintain a Project Quality Plan. This plan will clearly show how the building codes, Australian Standards and any additional Defence requirements in relation to security, fire protection and fire safety will be met. The plan will also show how the required standards for construction and installation are to be maintained.

### **PLANNING AND DESIGN CONCEPTS**

53. The proposed designs provide a safe, efficient and pleasant workplace and represent value for money. The designs offer good economy in relation to floor area, construction techniques, build ability and finishes whilst achieving the necessary functional requirements, work flow patterns and work environment required by the function of the space.

54. The general philosophy adopted for the design of new facilities will include:

- a. Development of a facility that is fit for purpose;
- b. Compliance with all relevant building codes and construction standards;
- c. Use of conventional construction techniques;
- d. Design and construction that complies with all relevant security standards and security accreditation requirements;
- e. Design and construction appropriate for local climatic conditions;
- f. Design and construction that achieves positive whole of life cost benefits; and
- g. Design that is sympathetic to the existing built environment.

55. Designers have been required to consider the implications and estimates of costs for designs, materials, construction techniques, finishes, equipment and energy systems that will deliver economy on a life cycle costing basis.

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

57. The design, structure, servicing, and siting of buildings has been considered to ensure that future expansion is possible. Each sub-element of the project will have the capacity for future expansion. This is of particular importance in sizing and determining in-ground services.

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

59. This project will:

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

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



## **PROVISION FOR CHILD CARE**

61. There is no requirement for additional childcare facility, as this project does not increase the base population.

## **PROVISION FOR PEOPLE WITH DISABILITIES**

62. Access and facilities for the disabled will be provided in accordance with the Building Code of Australia, Australian Standards, and the Defence Estate Management Guide “Disabled Access and Other Facilities for Disabled Persons”.

## **OCCUPATIONAL HEALTH AND SAFETY**

63. The facilities to be provided will comply with Department of Defence Occupational Health and Safety policy, the Occupational Health and Safety (Commonwealth Employment) Act 1991, Occupational Health and Safety (Commonwealth Employment) (National Standards) Regulations and the Defence Occupational Health and Safety manual.

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

## **NOISE AND ACOUSTICS**

65. The facilities to be provided will comply with the Building Code of Australia and all applicable Australian Standards for noise and acoustics. Vibration isolation of mechanical plant and equipment is an essential design consideration and the Managing Contractor will be required to limit vibration levels to comply with those recommended in the Australian Standards.

## **STRUCTURE**

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

## **MATERIAL AND FINISHES**

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

## **MECHANICAL SERVICES**

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

## **ELECTRICAL SERVICES**

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

## **HYDRAULIC SERVICES**

70. The project aims to establish an effective and environmentally sustainable hydraulic service capable of supporting the new Mess, Headquarters 7<sup>th</sup> Brigade and adjacent facilities including the Single Living Environment Accommodation Precinct. Connection will be to existing site water main supply infrastructure, complete with isolation valves and sub-metering to each individual building.

## **CIVIL WORKS**

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

## **LANDSCAPING**

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

## **ECOLOGICALLY SUSTAINABLE DEVELOPMENT, WATER AND ENERGY CONSERVATION**

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

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

- a. Part 12 and Section J of Volume One of the Building Code of Australia;
- b. Part 3.12 of Volume Two of the Building Code of Australia;
- c. The Energy Efficiency in Government Operations (EEGO) policy; and
- d. Defence Green Building Requirements;

as applicable to the classification of each building.

75. All buildings will comply with the relevant energy efficiency provisions in the Building Code of Australia, except where there are additional energy efficiency requirements imposed by Defence Green Building Requirements – Part 1 that are of a higher standard. In this project, each building is subject to the higher standards of a 20% improvement on the minimum Building Code of Australia energy efficiency performance requirements.

76. In addition, the new Headquarters 7<sup>th</sup> Brigade building and Combined Mess facility will comply with the minimum energy performance standards in the Energy Efficiency in Government Operations policy.

77. Design of the new facilities will target a 4.5 star Australian Building Greenhouse Rating and separate digital on market status metering will be installed. An energy management plan will be developed for implementation by Defence. Where available, fit for purpose and cost-effective appliances will be US EPA 'Energy Star' compliant with power management features enabled at the time of supply.

78. Ecologically Sustainable Development targets and essential requirements for energy, water, materials and waste, and management have been incorporated in all design stages in accordance with *Defence Green Building Requirements Part 1* and the *National Packaging Covenant*. The ESD initiatives for this project are summarised below:

- a) **Building Form and Fabric.** Energy use will be reduced by passive design features. The following features were incorporated into the design of both the new Combined Mess and Headquarters 7<sup>th</sup> Brigade:
  - i. minimal glazing on East and West facades;
  - ii. maximisation of solar passive gains through orientation;
  - iii. maximisation of natural lighting;
  - iv. minimal glazing while providing daylight and external views;
  - v. large overhangs over glazing;
  - vi. external shading and internal blinds on vision glazing;
  - vii. a relatively large floor area to wall ratio;
  - viii. planting of trees to provide natural shading; and
  - ix. maximisation of thermal comfort through choice of external building fabric materials.
  
- b) **Energy Use Minimisation.** Energy use will be reduced by cost-effective design features. The energy consumption in the new Combined Messing facility will be reduced by:
  - i. heat recovery on air conditioning systems;
  - ii. variable speed drive motors in pump and fans in air conditioning systems;
  - iii. ceiling fans;
  - iv. mixed mode ventilation with automated windows;
  - v. automatic lighting in plant rooms and toilets;
  - vi. injector steaming units rather than boiler units; and
  - vii. materials sourced locally to reduce energy used for transport.

The energy consumption in the Headquarters 7<sup>th</sup> Brigade will be reduced by:

- viii. economy cycle on constant volume air conditioning systems;
- ix. heat recovery on variable air volume air conditioning systems;
- x. variable speed drive motors in air conditioning systems;
- xi. motion sensing for light in plant rooms and toilets;
- xii. daylight sensing for lighting in upper floor corridors;
- xiii. interior material selections of environmentally friendly materials produced using environmentally conscious methods;
- xiv. materials sourced locally to reduce energy used for transport; and
- xv. hot water systems to be solar powered with electric boost.

c) **Water Use Reduction.** Potable water use will be reduced by cost-effective design features. The design of the new Combined Mess is expected to achieve a 38% reduction and the design of the Headquarters 7<sup>th</sup> Brigade facility is expected to achieve a greater than 30% reduction of water consumption, compared to “business as usual”, as required by *Defence Green Building Requirements Part 1*. Potable water consumption will be reduced by the following measures:

- i. roof water storage tanks (400,000L on Mess site and 120,000L on Headquarters 7<sup>th</sup> Brigade site);
- ii. car park surface water collection (400,000L on Mess site);
- iii. rainwater used for toilet flushing and irrigation;
- iv. low flow fixtures, toilets and urinals;
- v. air cooled chiller rather than water cooled;
- vi. metering on water usage; and
- vii. drought tolerant native plantings.

d) **Waste Minimisation.** Waste diversion to landfill will be minimised by adhering to waste targets given in *Defence Green Building Requirements Part 1* and the *National Packaging Covenant*. A 70% diversion of waste from landfill has been targeted for the

project and will be monitored throughout the construction period. Space has been provided in each building to allow for the segregation and collection of recyclable waste.

- e) **Choice of building materials.** Materials will be selected for their functionality, durability, ease of maintenance and for their ESD properties (e.g. high recycled content, low toxic emissions, low embodied energy, low embodied water, eco-certified products) to minimise impacts on environment. The following requirements have been implemented with regard to material selection for the new Combined Mess and Headquarters 7<sup>th</sup> Brigade:
- i. all refrigerants and all insulation will have an Ozone Depletion Potential (ODP) of zero;
  - ii. all timber will be sourced from either post consumer reused timber or from plantation complying with the Australian Forestry Standard and timber will be Forest Stewardship Council certified where possible;
  - iii. all internal paint and carpet will be low - volatile organic compounds in accordance with Green Star performance requirements; and
  - iv. no polyvinyl chloride (PVC) products will be used in floor coverings.
- f) **Alternative Transport.** The use of alternative transport will be encouraged by providing cyclist facilities in both the new Mess and Headquarters 7<sup>th</sup> Brigade.

## **HERITAGE ISSUES**

79. There are no areas of heritage value located at, or around, the proposed development sites for this project.

## **SECURITY**

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

81. Security protection will be provided in accordance with the Defence Security Manual. This requires high levels of base physical security including full wire enclosures and compounds, remote sensor systems and security guards.

### **PROJECT COSTS**

82. The estimated out turned cost of this project is \$80.2 million plus GST. This cost estimate includes the construction costs, management and design fees, furniture, fittings and equipment, contingencies and an escalation allowance.

### **COMMUNITY IMPACT**

83. This project will employ skilled construction workers in the Brisbane area over the construction period. This will provide a positive economic impact to small and medium businesses in the region. Construction traffic routes will be managed to minimise any disruption to the local communities during the construction period. Each of the sites is located well within the base boundaries and construction activities on site will not cause any disruption to residents adjacent to Gallipoli Barracks.

### **PROJECT DELIVERY SYSTEM**

84. The delivery system proposed for the project is a Managing Contractor. A Project Manager/Contract Administrator will also be appointed. The Managing Contractor arrangement will provide the benefit of a large construction firm managing design and construction, while promoting access for local small to medium enterprises through sub contract design and construction trade packages. Additionally, this arrangement would permit closer coordination of a number of construction activities to minimise disruption to the Army units located at Gallipoli Barracks.

### **PROJECT SCHEDULE**

85. Subject to Parliamentary clearance of the project, construction is expected to commence in 2008. All major works are expected to be complete by 2011.

## **ATTACHMENTS**

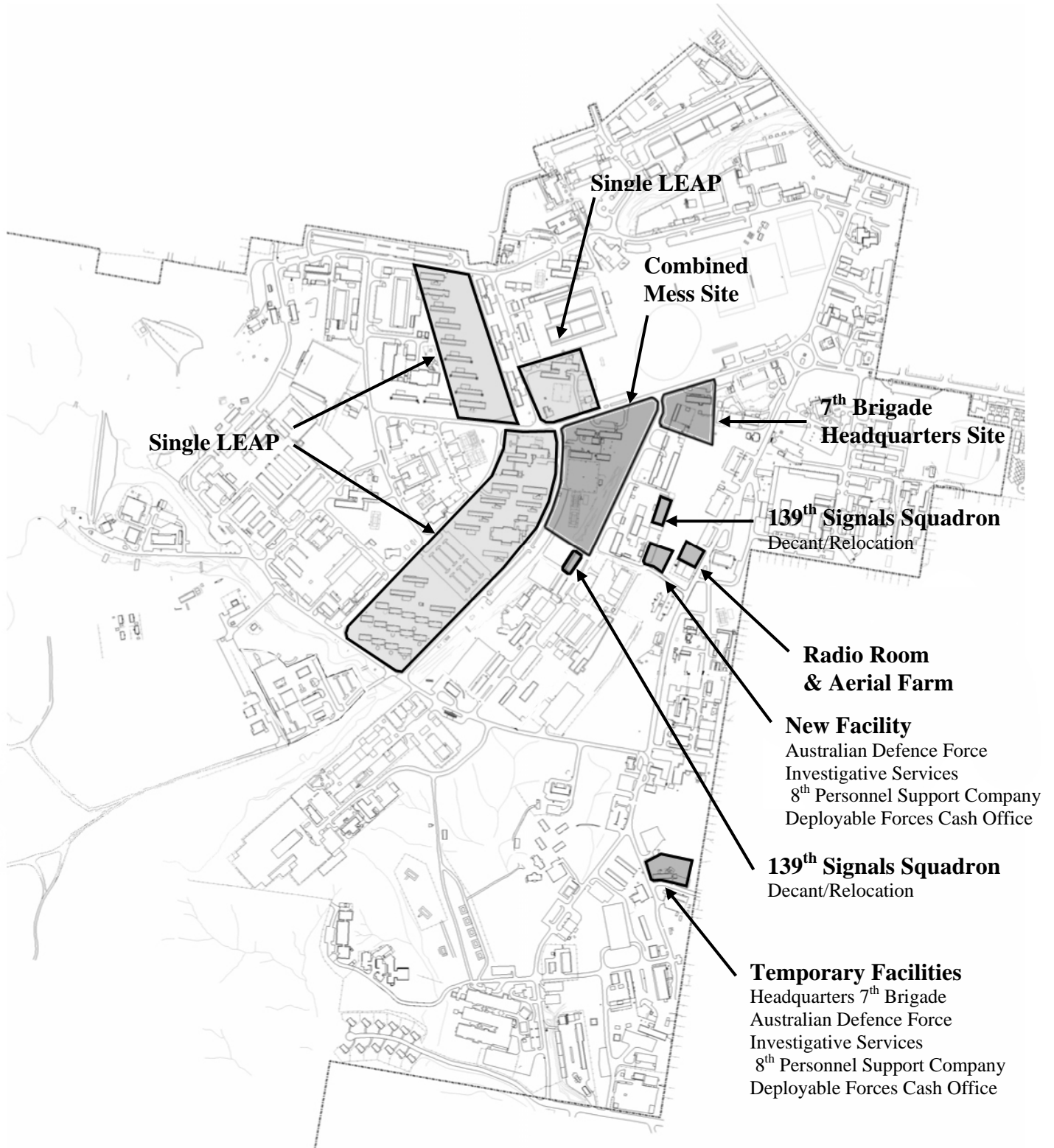
1. Base Location Plan
2. Redevelopment of Gallipoli Barracks – Base Plan
3. Combined Messing Facility Site Plan
4. Combined Messing Facility Floor Plans
5. Headquarters 7<sup>th</sup> Brigade Site Plan
6. Headquarters 7<sup>th</sup> Brigade Ground Floor Plan
7. Headquarters 7<sup>th</sup> Brigade First Floor Plan





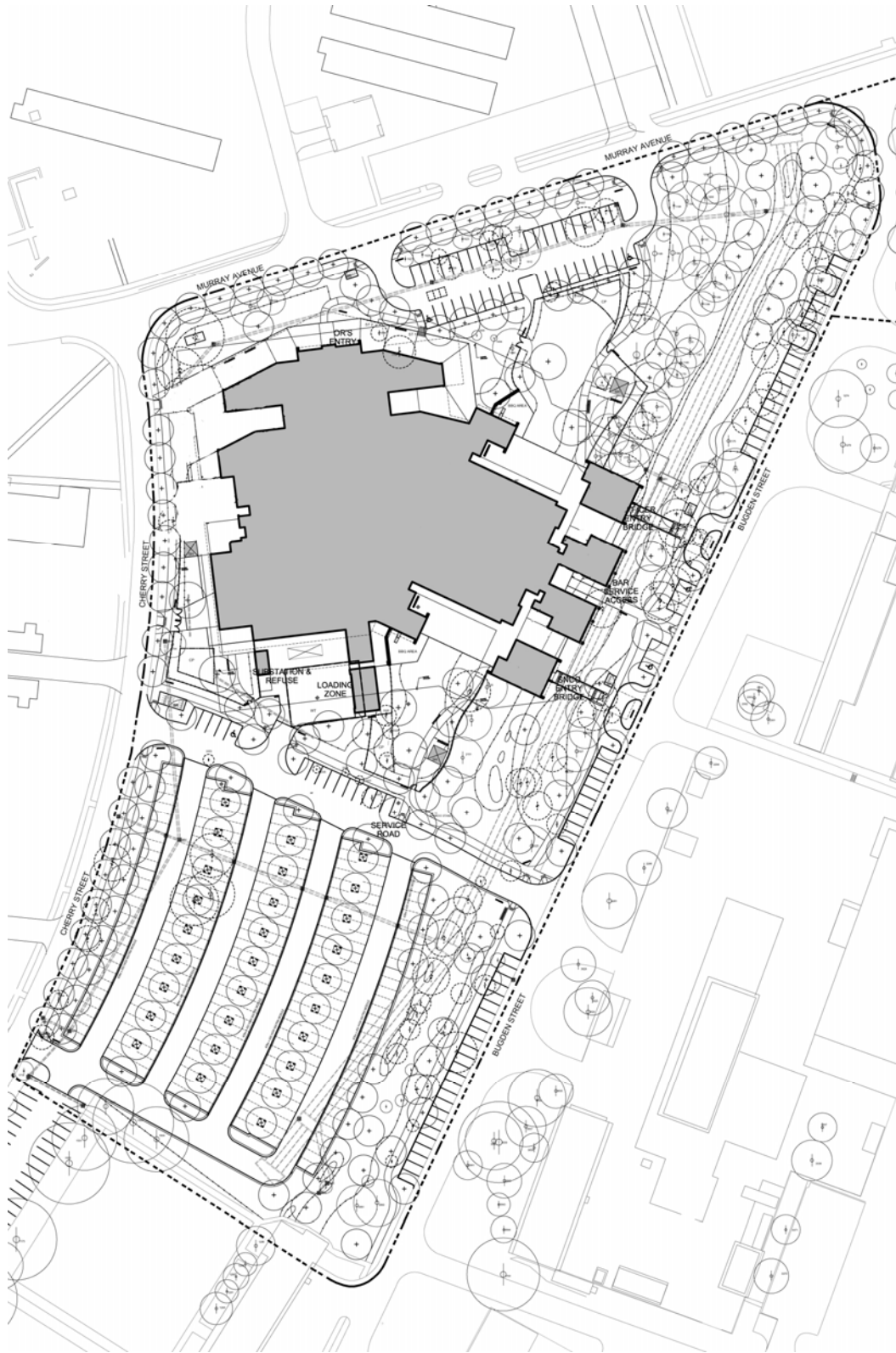
**GALLIPOLI BARRACKS, ENOGGERA, QUEENSLAND**

**LOCATION PLAN**



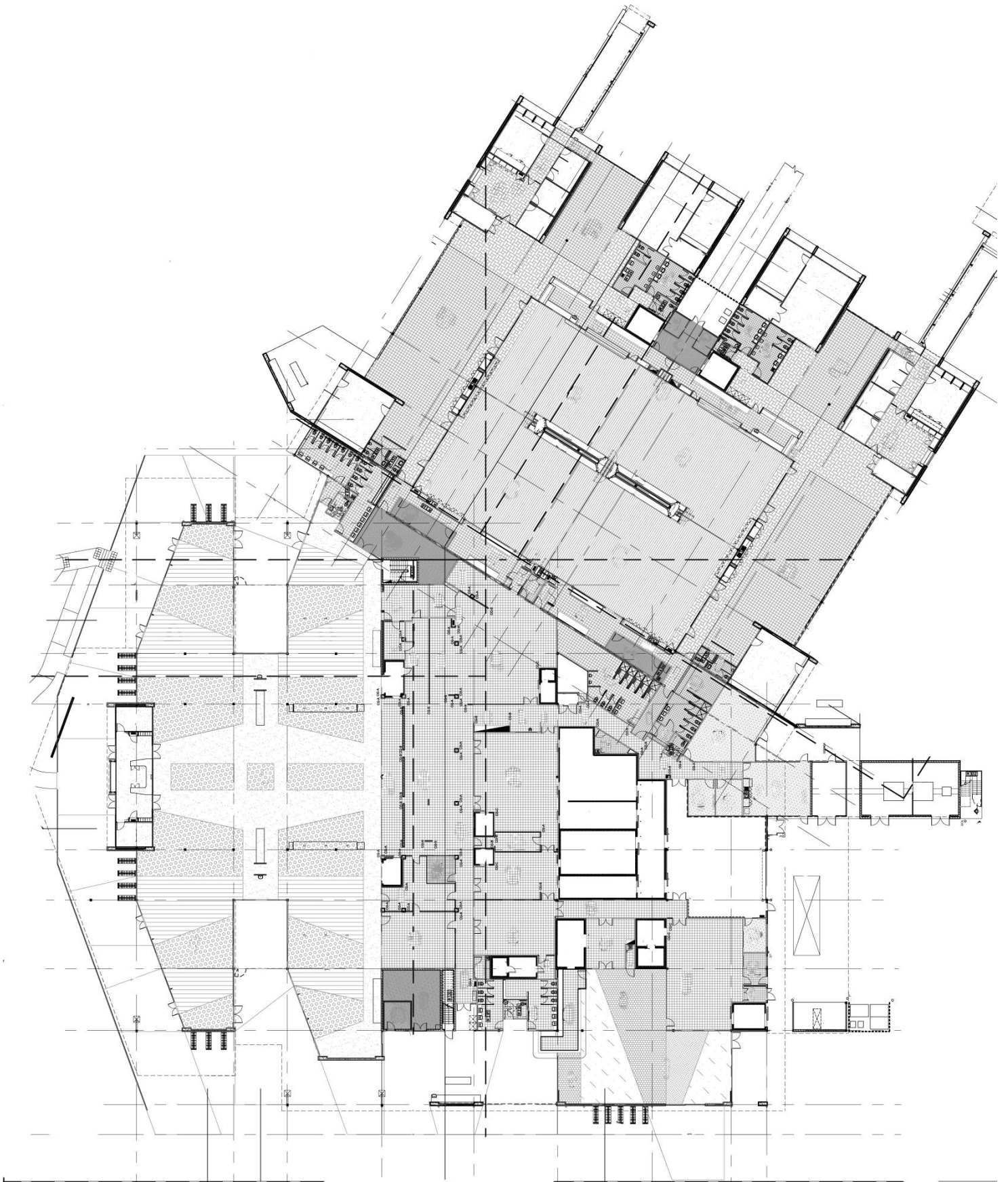
**GALLIPOLI BARRACKS**

**SITE PLAN**



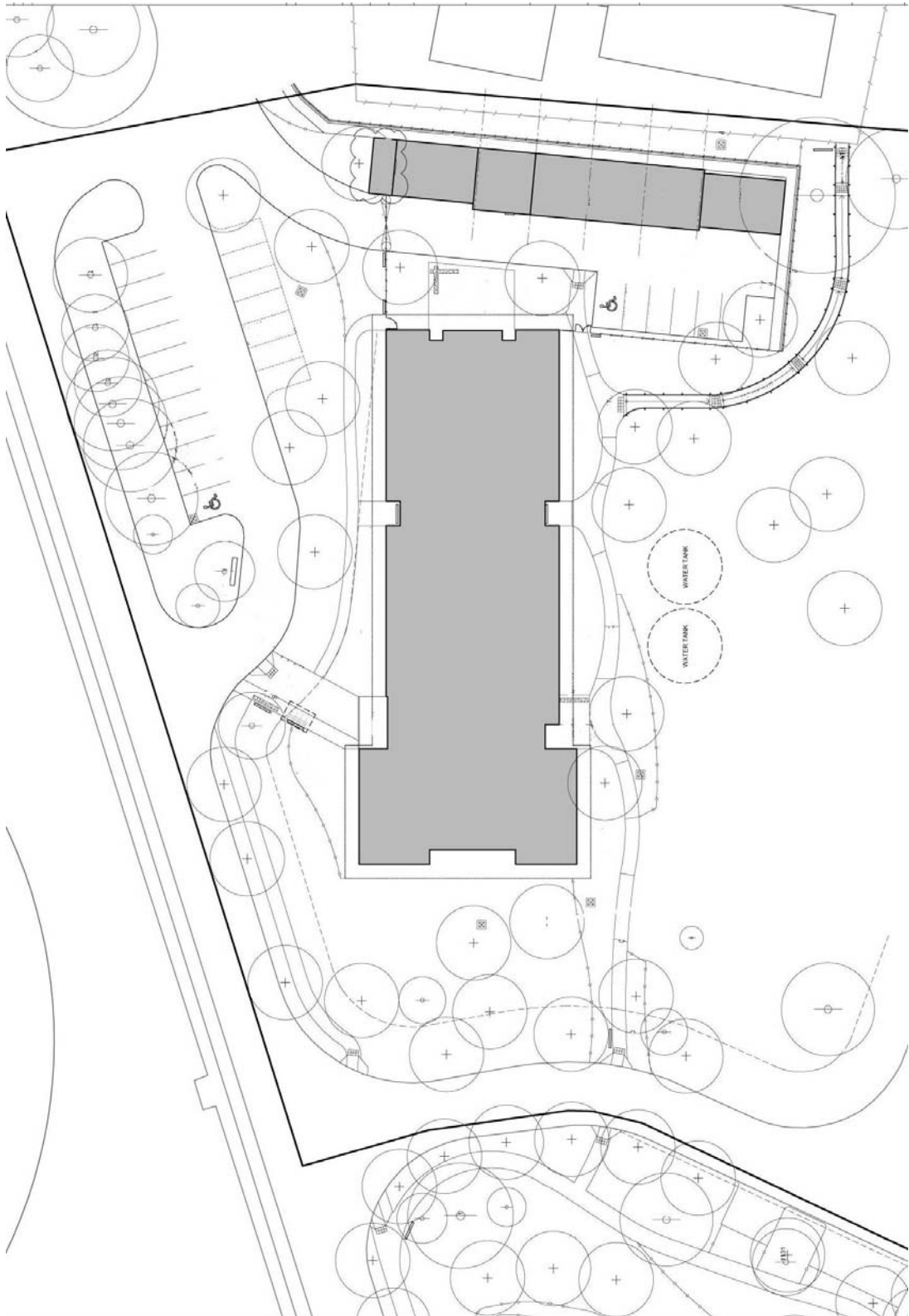
**COMBINED MESS**

**SITE PLAN**



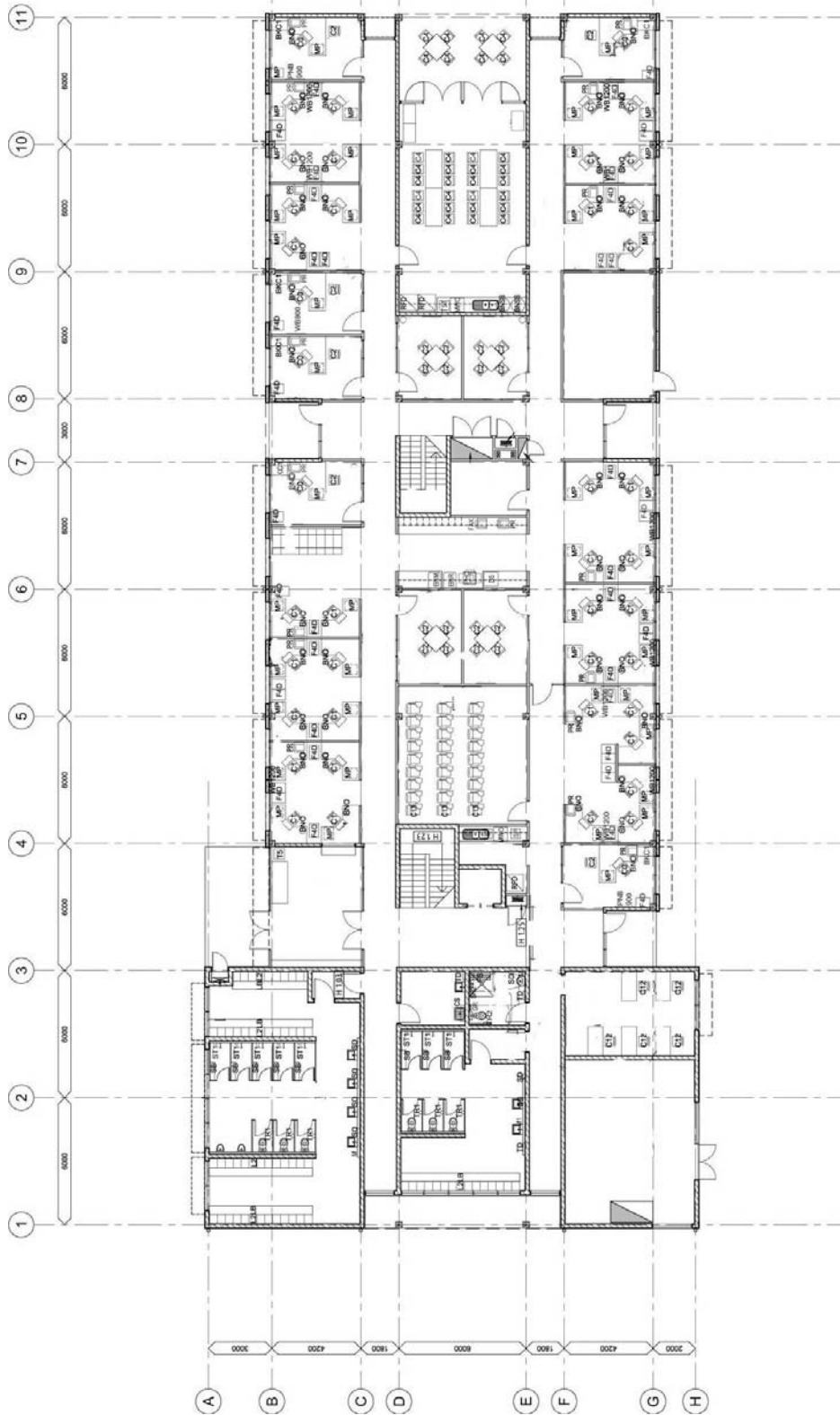
**COMBINED MESS**

**FLOOR PLAN**



**HEADQUARTERS 7<sup>th</sup> BRIGADE**

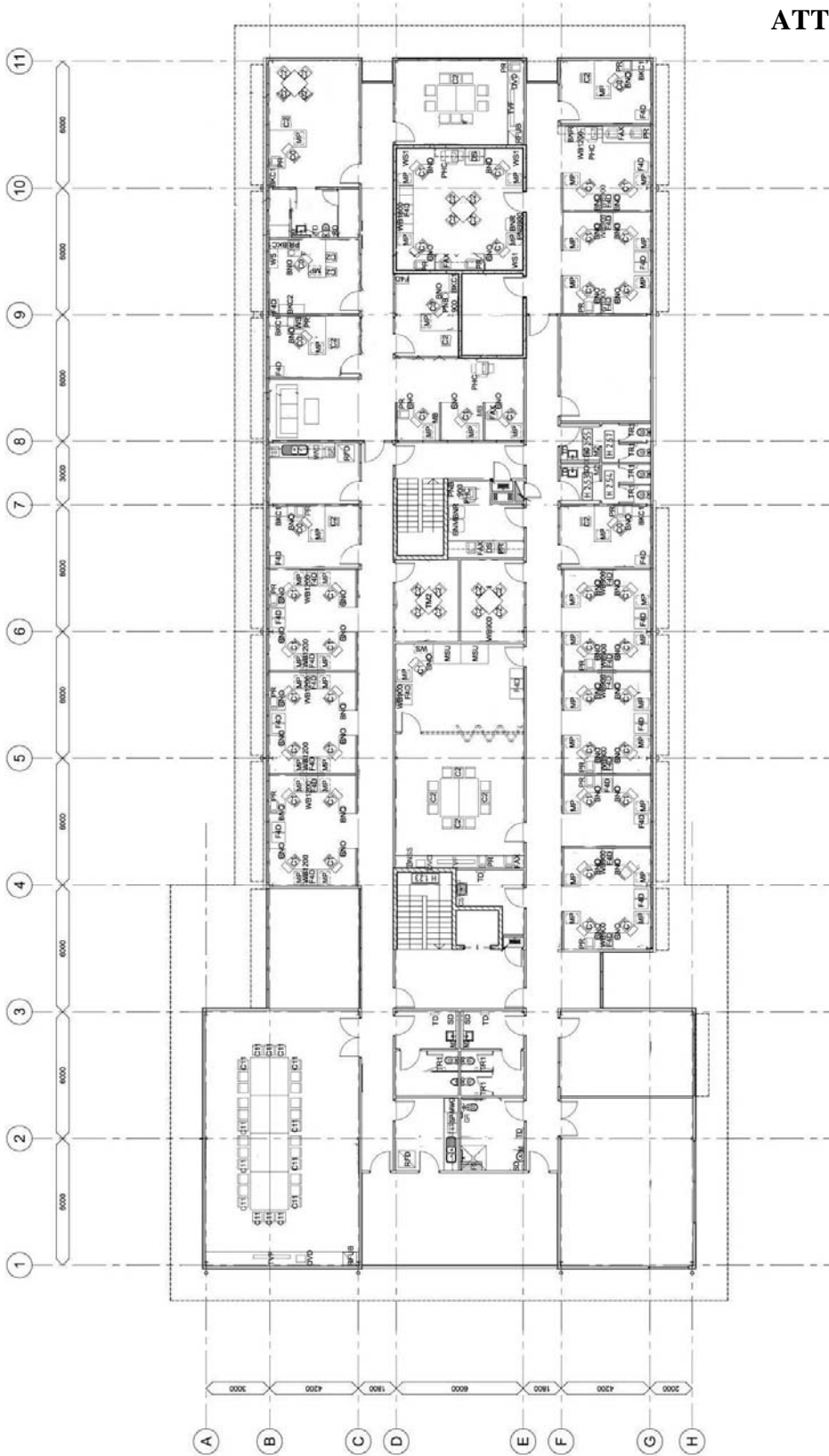
**SITE PLAN**



**HEADQUARTERS 7<sup>th</sup> BRIGADE**

**GROUND FLOOR PLAN**





**HEADQUARTERS 7<sup>th</sup> BRIGADE**

**FIRST FLOOR PLAN**