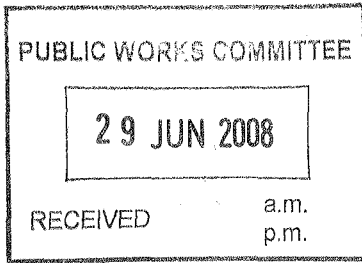


*M.R. 29/08/08*



**Australian Government**  
**Department of Defence**

**PUCKAPUNYAL REDEVELOPMENT**  
**PUCKAPUNYAL VICTORIA**

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

**DEPARTMENT OF DEFENCE**

**CANBERRA, ACT**

**AUGUST 2008**

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## PUCKAPUNYAL REDEVELOPMENT PROJECT

### PART A – IDENTIFICATION OF THE NEED

#### INTRODUCTION

1. This evidence to the Parliamentary Standing Committee on Public Works (PWC) presents a proposal to address shortcomings in existing instructional and base support facilities at the Puckapunyal Military Area ('the base'). Abbreviations used in the document are at Attachment 1.

#### PROJECT OBJECTIVES

2. The objective of this proposal is to provide flexible, modern purpose-built facilities to meet the Army's changing training requirements. This proposal also responds to the need for improved base access.

#### BACKGROUND

3. The Puckapunyal Redevelopment Project will provide the first major capital works at the base since 1995. The project comprises eight project elements addressing discrete unit and base specific requirements. Several of these elements are new requirements with the balance addressing the requirements of existing aging facilities to meet the developing role of the base.

4. Puckapunyal is the primary training centre for the Army's combat schools and a significant component of the Army's logistics training. The redevelopment project is required to address a number of identified shortcomings both in existing unit training and base support facilities.

5. The major units based at Puckapunyal are the Combined Arms Training Centre (CATC), Land Warfare Development Centre (LWDC) and the Road Transport Wing of the Army Logistic Training Centre (ALTC) schools together with supporting units and organisations.

#### NEED FOR THE WORKS

6. The redevelopment project will support Defence capability by addressing the following needs at the Puckapunyal Base associated with Army Units and their training capability:

- a. **Road Transport Wing, ALTC:** The Road Transport Wing need is for office and instructional facilities to provide the command, working, training and administrative functions for the unit. Currently, these functions are undertaken in

a mixture of old adapted storage facilities and temporary demountable buildings that have evolved over time. They are in poor condition and not suitable for long term use for the purpose of instruction and office accommodation.

- b. **Safe Driver Training Area (SDTA):** The existing SDTA provides initial driver training for soldiers to operate heavy vehicles in a controlled and safe environment. Currently this facility is limited in overall throughput capacity and cannot meet the increasing demand for drivers. Driver training for large vehicle hill starts, and high speed (80km per hour) driving and braking is unable to be undertaken within the facility.
- c. **School of Armour - Combat Officer Advanced Course (COAC):** The School of Armour conducts training to prepare individuals for employment within Army Units that operate Armoured Fighting Vehicles, Combat Communications and as Combat Team Leaders (Major rank, Sub-Unit Commanders) within the Combat Arms. Future Combat Team Leaders are prepared for their role through completion of COAC. Currently, there is no training facility on the base seating more than 50 personnel. COAC in particular requires a tiered theatre training facility to accommodate 120 people, along with supporting breakout rooms to conduct smaller group training and exercises. A physical 'model' area is required within the theatre to allow tactical exercises to be communicated to trainees.
- d. **Headquarters (HQ) CATC:** HQ CATC commands the Combat Arms Training Schools (Schools of Armour, Artillery, Infantry and Military Engineering). The total HQ CATC staff is 97 personnel. Currently 18 personnel are accommodated in a temporary building. Permanent facilities are required to accommodate HQ CATC.
- e. **Battle Simulation Centre Puckapunyal (BSC-P):** This facility provides a warfighting simulation capability to the Army particularly for the conduct of LWDC, experimental and analytical activities. Building 855 in which this is located has been progressively refurbished from its original use as the Army Catering School. The need within this building is for minor works to upgrade lighting, heating, cooling and IT services in several existing rooms that are currently used as training spaces.

7. Further needs identified are associated with the broader base community and its operation. Addressing these will enhance the overall base amenity, functionality and operating efficiency.

These include :

- a. **Chapels:** Currently the base has three small Chapels. Each of these is in poor condition and at the end of their lifespan. The base requires a larger new Multi-Denominational Chapel to meet the needs of all faiths within the Puckapunyal community.
- b. **Entrance Precinct:** The base Entrance Precinct on Blamey Avenue is a basic single lane boom gate access, consisting of limited signage, temporary buildings and shelters. The need is to provide an improved Entrance Precinct that facilitates effective 24 hours a day security operations, controlling access for high volumes of Defence personnel, contractors, a significant base civilian population, visitors and delivery vehicles.
- c. **Range Control:** The Range Control is responsible for managing the use of the live fire manoeuvre range on a daily basis with the main function of co-ordinating activities on the range to ensure safety for all users. A need exists to brief personnel who enter the range on a daily basis. Briefings of up to 40 people must be accommodated utilising maps and various visual aids. There is no facility at Range Control that can accommodate this requirement at present. The existing range control building also requires minor internal refurbishment.

#### **OPTIONS CONSIDERED**

8. Defence considered the viability of re-using or refurbishing existing buildings to meet a number of the projects requirements. When comparing adaptive reuse versus new construction, considerations for assessment included:

- a. capital expenditure and lifecycle costs of the adaptive reuse versus the new construction;
- b. operational functionality, considerations for the facilities purpose and flexibility;

- c. ecologically sustainable development (ESD) initiatives such as building orientation, footprint and fabric and how effectively these can be incorporated within the constraints of an existing structure for adaptive reuse; and
  - d. the design life of the structural, services and aesthetic components of adaptive reuse versus a new building.
9. Having considered the assessment factors listed it was determined that the 26 Transport Workshop Building, Range Control and the Battle Simulation Centre facilities were determined to be suitable for adaptive reuse.

### PROPOSAL DESCRIPTION

10. This proposal comprises eight discrete elements:
- a. **Project Element 1 - Road Transport Wing:** the major refurbishment of existing facilities for use as a training building and the construction of a new purpose built headquarters building.
  - b. **Project Element 2 - Safe Driver Training Area:** the extension of the existing Safe Driver Training Area facility.
  - c. **Project Element 3 - School of Armour:** the construction of a new lecture facility to be primarily used by the School of Armour which will also be available to other base users.
  - d. **Project Element 4 - Battle Simulation Centre - Puckapunyal:** the refurbishment of existing classrooms and battle laboratories.
  - e. **Project Element 5 - Multi-denominational Chapel:** construction of a new multi-denominational chapel to replace three existing chapels. The existing chapels will be demolished.
  - f. **Project Element 6 - Entrance Precinct:** construction of a new Entrance precinct to improve traffic flow, staff amenity and security arrangements.
  - g. **Project Element 7 - Combined Arms Training Centre:** provision of new office accommodation to replace the existing demountable buildings.
  - h. **Project Element 8 - Range Control:** construction of a briefing room and refurbishment of existing office accommodation.

### ECONOMIC IMPACTS

11. This project will not produce revenue or additional ongoing employment opportunities.

The project will generate short-term employment opportunities predominantly in the building, construction and unskilled labour markets during construction. It will also generate some off-site job opportunities from the manufacture and distribution of construction related materials over a period of approximately 18 months. It is anticipated that local regional building contractors and regionally based tradespersons will be employed on a large proportion of the construction works.

## **ENVIRONMENTAL CONSIDERATIONS**

12. The concept design for the base redevelopment project has been developed in consultation with the Defence Regional Environmental Officer (REO). An Environmental and Heritage Impact Assessment has been undertaken to identify potential environmental impacts of the project and to suggest appropriate mitigation measures.

13. The Directorate of Environmental Impact Management (DEIM) has reviewed all relevant environmental documentation and concluded that the environmental impacts of the project are unlikely to have a significant impact on the environment as defined under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The project will continue to be managed through internal Defence processes. There is no requirement to seek further consideration or approval by the Minister for the Environment, Heritage and the Arts.

## **HERITAGE IMPACTS**

14. The Base Heritage Management Plan (HMP) identifies that while the three chapels have heritage value, their retention is not essential to maintain the heritage listing of the cantonment. Retention of the three chapels is not required and photographic evidence is considered sufficient. There are no heritage implications associated with other existing buildings or proposed new buildings to be reused or constructed by the project on the base.

15. There are no Native Title or Indigenous Land Use Agreements on the base.



## **SOCIAL AND COMMUNITY IMPACTS**

16. This project will likely employ skilled construction workers from the Goulburn Valley and adjoining regions providing a positive economic impact to small and medium businesses.

17. The contractor will be required to provide traffic, environmental and site management plans for approval of Defence to minimise disruption to the local and base communities during the construction period.

## **CHILDCARE PROVISION**

18. There is no requirement for any additional childcare facilities as a result of this project, as this project will not increase the base population. A multi-function Childcare Centre currently serves the base.

## **LONGER TERM PLANNING / RELATED PROJECTS**

19. Other projects being considered for the base are as follows:

- a. **Single LEAP Project – Phase Two.** This is a national Living in Accommodation (LIA) project. The sites chosen for the Single LEAP Phase Two project do not impact on this project; and
- b. **The Enhanced Land Force (ELF) Project.** ELF is a project to increase the combatant force within the Army. At Puckapunyal this will increase the facilities at the School of Armour and School of Artillery to train additional personnel employing Armoured Fighting Vehicles, Protected Mobility Vehicles and Combat Communications. Subject to receipt of the necessary Departmental approvals this project may be referred to the PWC in early 2009.

20. These facilities will not duplicate the proposed facilities to be provided as part of the base redevelopment project.

**CONSULTATION**

21. During the development of the project, consultation has occurred with Defence stakeholders. Community consultations will be conducted to inform the electorate on the proposed works. Discussions with the various statutory bodies governing water catchment, power and emergency services are in this instance regarded as unnecessary as a consequence of there being no impact of the project beyond the Puckapunyal Military Area. No local community or other interest groups have been identified that would be affected by the project.

22. The following individuals and organisations have or will be consulted about the project:

- a. The Federal Member for McEwan, the Hon Fran Bailey MP (Liberal).
- b. The State Member for Seymour, MR Ben Hardman MLA (Labor).
- c. The Mayor of Mitchell Shire, Councilor (MR) Bob Humm.
- d. The Country Fire Authority, Victoria.
- e. The Goulburn and Broken River Catchments Authority.
- f. VicRoads.
- g. Victoria Police.
- h. SP AusNet Limited (Powercor).

**REVENUE**

23. No revenue will be derived from this proposal.

## PART B – TECHNICAL INFORMATION

### PROJECT LOCATION

24. All of the project elements are within the existing base, located at Puckapunyal, Victoria. Puckapunyal is approximately 5 km from the town of Seymour and 120 km from Melbourne's central business district as shown in Attachment 2. Attachment 3 is a base locality map. Attachment 4 describes the relative location of project elements.

### PROJECT SCOPE

25. The Puckapunyal Redevelopment comprises eight project elements:

- a. **Project Element 1 - Road Transport Wing - Office and Instructional Accommodation:** Refer Attachment 5 to 7 for site plans. This element will include:
  - (1) provision of a new purpose built headquarter facility for Road Transport Wing of 1,954m<sup>2</sup>;
  - (2) refurbishment of an existing workshop building to provide flexible teaching facilities including classrooms and theatres of 1,291m<sup>2</sup>; and
  - (3) demolition and removal of any redundant facilities.
  
- b. **Project Element 2 - Safe Driver Training Area (SDTA):** Refer Attachment 8 for the site plan. This element will include:
  - (1) provision of an additional 1.1 km straight section of roadway to allow heavy vehicles to be accelerated up to 80 km/hr and then safely braked;
  - (2) a new outdoor training shelter facility of 49m<sup>2</sup>; and
  - (3) provision of a 600m extension to the hill start area located away from the main circuit to enable trainees to safely carry out hill starts training.

c. **Project Element 3 - School of Armour – COAC / Base Instructional Facility:**  
Refer Attachment 9 for the site plan. This Base Instructional Facility of 1,600m<sup>2</sup> will include:

- (1) a 120 person lecture theatre;
- (2) eight, ten person syndicate rooms;
- (3) associated breakout space, storage and utility areas; and
- (4) carparking and bus turnaround area.

d. **Project Element 4 – Battle Simulation Centre – Puckapunyal (BSC-P)**  
**Facilities:** Upgrade Building 855 for the provision of facilities for the BSC-P.  
Refer Attachment 10 for the site plan. This element will include:

- (1) refurbishment works on the ground floor to provide three new multi-purpose training rooms of 440m<sup>2</sup>; and
- (2) installation of mechanical services and minor upgrade and repair work to Battle Laboratory facilities.

e. **Project Element 5 - Multi Denominational Chapel.** Refer Attachment 11 for the site plan. This element of 785m<sup>2</sup> will include:

- (1) a shared 100 person congregational area;
- (2) dedicated vestry/sacristy for multi-denominational services; and
- (3) associated supporting spaces, storage and utility areas.

f. **Project Element 6 - Entrance Precinct.** Refer Attachment 12 and 13 for site plans. This element will include:

- (1) provision of a new secure Blamey Avenue entrance;
- (2) provision of a guard booth and associated ablutions;
- (3) slip lanes for document checking and vehicle inspection;
- (4) boom gates and associated landscaping; and
- (5) carparking and vehicle turn around area.

- g. **Project Element 7 – HQ CATC.** Refer Attachment 14 for element plans. This element of 319m<sup>2</sup> will include:
- (1) provision of new office accommodation for the CATC Headquarters to accommodate staff currently occupying temporary office accommodation; and
  - (2) provision of associated utility spaces and ablutions to cater for the new facility.
- h. **Project Element 8 - Range Control:** Refer Attachment 15 for a site plan. This element will include:
- (1) provision of a new dedicated 40 person briefing room and associated storage requirements of 213m<sup>2</sup>; and
  - (2) refurbishment of the existing office accommodation to accommodate the Range Control staff appropriately.

#### **SITE SELECTION AND DESCRIPTION**

26. The proposed sites for each of the project elements are shown on the Project Elements Location Plan at Attachment 4. All sites are contained within the base on Commonwealth owned land accessed from the Seymour/Tooborac Road via the Hume Highway. The selection of the sites for each project element has been undertaken in accordance with the Defence Estate Planning Policy requirements. A technical site selection process was conducted for each element, addressing Defence policy including environment, heritage and operational considerations.

#### **ZONING AND APPROVALS**

27. The facilities proposed in this project will be constructed on Commonwealth owned and Defence controlled land therefore no civilian authority, zoning or development approvals are required. This proposal does not require the acquisition of additional land or involve land disposal aspects. There will be no change to existing land use conditions on the base.

28. The project elements are consistent with the base Zone Plan.

## **APPLICABLE CODES AND STANDARDS**

29. Where appropriate, the design and construction of the proposed works and services will comply with the relevant sections of the following Standards and Regulations:

- a. Building Code of Australia;
- b. Australian Standards and Codes;
- c. Commonwealth and State legislation;
- d. Defence Manual of Fire Protection Engineering;
- e. Defence Facilities Communications Cabling Standard;
- f. Defence Security Publications, and
- g. Occupational health, safety and welfare and the Defence Occupational Health and Safety Manual

30. A qualified and practicing building certifier will certify that the design and the finished construction of the facilities meet the requirements of the Building Code of Australia, Australian Standards, the Defence Manual and Fire Protection Engineering and any additional State, Local Government and Defence policies.

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

## **PLANNING AND DESIGN CONCEPTS**

32. The project will provide safe, secure and efficient work and training facilities designed to meet the function of each project element. During the preliminary design stage, consideration was given to the selection of materials, equipment, finishes, construction techniques and buildability. All were considered for an ability to deliver economies and environmentally sustainable efficiencies on a whole-of-life basis. Consideration was given to achieving the necessary functional requirements, work flow patterns and work environment required to fulfill the project design criteria. The selection of engineering services and associated equipment and energy systems, capital costs were assessed against the operational and maintenance costs.

33. The design team consultants undertook precinct and site planning studies on each of the project elements. The studies considered many planning issues including:

- a. the capacity of the each site to accommodate the proposed facilities as proposed; and
- b. the development of suitable functional and interconnected relationships between each site, the site precinct and the base.

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

34. The Commonwealth is committed to Ecologically Sustainable Development (ESD) and the reduction of greenhouse gas emissions. Defence reports annually to Parliament on its energy management performance in accordance with the Energy Efficiency in Government Operations Policy and on its progress in meeting the energy efficiency targets established by the government as part of its commitment to improve ESD. Defence also implements policies and strategies in energy, water and waste management to improve natural resource efficiency and to support its commitment to reducing energy consumption, potable water consumption and waste diversion to landfill. This project has addressed these requirements by adopting cost effective ESD as a key objective in the design development and delivery of new facilities and refurbishments.

35. The ESD targets and measures for the project have been balanced with other requirements for Defence buildings (e.g. security, heritage considerations, Occupation Health and Safety) to ensure that Defence's operational capability is not compromised. All buildings included in this project will be designed, constructed, operated and maintained to ensure that they use energy efficiently. Where applicable, the use of the Green Star and NABERS Energy design rating tool has been adopted. In addition, as applicable to the classification of each building, the following policies will be complied with:

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

36. An environment and heritage impact assessment has been undertaken addressing:
- a. **Ecological Sustainable Development (ESD) Principles: Electricity, gas, hydrocarbons, water.** The project is expected to improve the water and energy consumption relative to current baseline levels. This will be achieved by incorporating ESD principles, such as building orientation, stormwater harvesting and energy efficient appliances into the design and complying with the *Defence Green Building Requirements*.
  - b. **Stormwater management.** There is potential for construction activities such as excavation to expose soil which can infiltrate stormwater. The construction of roofed facilities and hardstand areas has the potential to increase ongoing stormwater flows. However, mitigation measures will be undertaken such as capture, storage and reuse of rainwater from roofed areas, design of stormwater drainage systems in accordance with applicable standards and establishment of vegetation.
  - c. **Flora and fauna.** The majority of the redevelopment sites are brown field sites with no significant flora, fauna, vegetation communities or aboriginal heritage sites. Planting of landscape features and re-vegetation will be undertaken as a component of the Redevelopment Project. The Entrance Precinct and the SDTA were found to have flora, fauna and fauna habitat which were acknowledged in the designed solutions.
  - d. **Soil and groundwater contamination.** The environment and heritage review has identified the potential for some localised contamination at each of the sites due to their location within established areas of the base. Preliminary contamination sampling has been undertaken at all development sites. The project has allowed for localised treatments being undertaken at each site.
37. A Construction Environmental Management Plan (CEMP) is to be developed and endorsed prior to construction commencing addressing any construction conditions detailed in the environmental assessment documentation. Environmental Clearance Certificates (ECCs) will also be required for each element of the project.



## **PROVISION FOR PEOPLE WITH DISABILITIES**

38. Access and facilities to all new buildings will be provided in accordance with the Building Code of Australia (BCA), Australian Standards and Defence's policy – 'Requirement for the Provision of Disabled Access and other Facilities for Disabled Persons in Defence Facilities'.

39. In the case of the existing range control building, dispensation will be sought from the Building Code of Australia as it is not practical to provide internal wheelchair access without undertaking major renovations.

## **OCCUPATIONAL HEALTH AND SAFETY**

40. The proposed facilities will comply with the requirements of the Occupational Health and Safety Act, the Department of Defence Health and Safety Manual and relevant Victorian Government Health and Safety legislation. The construction contractor will be required to develop and implement an approved Health and Safety Plan incorporating compliance with Defence's Health and Safety policies.

41. All sites will be secured to prevent unauthorised public access during the construction period including demolition works. No special or unusual public safety risks have been identified.

## **STRUCTURAL DESIGN**

42. Structural design will take into account the soils and weather conditions encountered in the Puckapunyal area. Proposed new facilities will primarily be steel framed structures with concrete floor slabs, brick faces or equivalent external walls, and a metal roof appropriate to the environment. Internal walls would be non-load bearing frames lined with plasterboard to provide for maximum flexibility in future floor layouts.

## **MATERIALS AND FINISHES**

43. Materials and finishes will be selected from those readily available locally for their functionality, durability, low maintenance and Ecologically Sustainable Development properties. Commonwealth Government policy requires that Australian or New Zealand goods, materials

and associated services will be sought and assessed in terms of value for money before seeking any overseas supply.

### **MECHANICAL SERVICES**

44. New facilities will be primarily air-conditioned and the selection of building services and associated equipment would be required to achieve an economic balance between capital cost and operation and maintenance costs. Areas such as amenities will utilise exhaust fans and natural ventilation. Selection will be based upon a life cycle costing analysis and particular consideration will be given to energy efficient design solutions employing passive solar energy. New facilities will incorporate building management systems, metering and other provisions to measure and monitor energy use and to allow regular energy audits where practicable. Mechanical plant will incorporate a modular system to ensure flexibility.

### **HYDRAULIC SERVICES**

45. Domestic water supply and sanitary drainage from fixtures located within the new and refurbished buildings will be via new connections to the existing base services infrastructure. The existing infrastructure system has been determined to be sufficient to accommodate these new facilities.

46. New stormwater drainage pipelines will be provided where necessary to collect stormwater runoff and direct it into the existing infrastructure system. Rainwater from building roofs will be collected and fed into rainwater storage tanks to be utilised for toilet flushing within each building where practicable to do so.

47. Domestic water heating will be provided to each facility by either gas fired instantaneous hot water units or electric heaters where gas supply is not available. The design will be considered for each building dependant on demand requirements and energy efficiencies.

### **ELECTRICAL SERVICES**

48. The Base is supplied electricity from the Seymour zone substation which connects to the on base substation. This supply is sufficient to meet the small increased load requirement to accommodate the new and refurbished project elements within the base.

49. Lighting, power, lightening protection and fire protection will be provided to buildings in accordance with the Defence Infrastructure Manual and relevant Australian Standards. Electrical infrastructure and switchboards will have modest spare capacity to allow for future growth or increased demand.

#### **FIRE PROTECTION**

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

#### **CIVIL WORKS**

51. Geotechnical surveys were carried out during the early design stage at each element's new site location. There were no site conditions identified that pose any major civil engineering requirements however, each site will be the subject of further survey and geotechnical investigation during detailed design.

52. Roadways will be constructed of concrete which is deemed the most cost effective and appropriate pavement solution for this project. Due to heavy vehicle use a rigid concrete pavement system will be utilised on the SDTA track and at intersections and areas where manoeuvring of large vehicles will occur.

53. The Entrance Precinct is to be located at the current entry point on Blamey Avenue. This location provides the best solution combining cost, functionality, visibility, safety, security and a level roadway allowing large vehicles to stop or park safely. The area is subject to minor short term flooding in extreme weather. To mitigate any adverse effects to the building structures the foundations will be raised and the surrounding landscape will be modified to collect and redirect high stormwater levels away from the building and access roadway.

## **LANDSCAPING**

54. Landscaping works will focus on the restoration of areas disturbed during construction. The landscape design is functional with low maintenance a high priority. A water sensitive design approach has been adopted with plants selected that are indigenous to the base.

## **SECURITY**

55. In accordance with Government initiatives to improve physical security arrangements across Government Departments, advice from designated security authorities will be incorporated into the design solutions for the proposed facilities as appropriate. The security threat assessment will be reviewed during the detailed design phase and the new facilities will be secured as appropriate to the classification level required for the activities to be conducted. Appropriate security protection will be provided in accordance with the Defence Security Manual (DSM), Defence Security Construction Reference Manual (DSCRM) and specific project requirements.

## **NOISE AND ACOUSTICS**

56. The acoustic performance within the facilities will comply with the Building Code of Australia (BCA), relevant Australian Standards, Worksafe National Standard for Occupational Noise (NOHSC:1007(2000)), National Code of Practice for Noise Management and Protection of Hearing at Work (NOHSC:2009(2000)) and the EPA Noise Policy.

57. It is not envisaged that these facilities will increase noise output and therefore will not adversely affect the surrounding environments. Externally located mechanical plant will be appropriately selected and treated to minimise noise impact on the environment within a suitable internal and external noise range.

## **INFORMATION COMMUNICATION AND TECHNOLOGY**

58. Passive and active information communication and technology infrastructure works will be provided for this project. The existing site communications fibre optic cable and cable infrastructure will be extended to support the anticipated information, communication and technology services required for the new and refurbished buildings.

## **PROJECT COSTS**

59. The estimated out-turned cost of this project is \$41.650 million (excluding GST). This cost estimate includes the construction costs, professional fees, furniture, fittings and equipment, IT infrastructure and equipment, demolition and relocation works, contingencies and an escalation allowance.

60. A modest increase in net operating costs is expected due to the construction of the new facilities and the associated increases in facilities maintenance, cleaning and utilities expenses.

## **PROJECT DELIVERY SYSTEM**

61. A Head Contract delivery system is proposed for this project. This form of delivery is well suited to projects where the scope is well defined, with simple structures and where works are unhindered by operational or decanting constraints. A Head Contract delivery system is preferred in this instance to ensure one point of contact for each of the eight elements, consistency of workmanship and programming of the works as a whole to increase efficiencies.

## **PROJECT SCHEDULE**

62. Subject to Parliamentary clearance of the project, construction of all elements of the Puckapunyal Redevelopment project is expected to commence mid 2009 and be completed late 2010.

**ATTACHMENTS**

**Attachment 1: List of Abbreviations**

**Attachment 2: Location Map**

**Attachment 3: Puckapunyal Locality Map**

**Attachment 4: Project Elements Location Plan**

**Attachment 5: Army Logistics Training Centre (ALTC) Site Plan**

**Attachment 6: New ALTC Office Floor Plan**

**Attachment 7: New ALTC Training Facility Floor Plan**

**Attachment 8: Extended Safe Driver Training Area (SDTA) Plan**

**Attachment 9: New School of Armour Training Facility Floor Plan**

**Attachment 10: Refurbished Battle Simulation Centre – Puckapunyal Level 1 Floor Plan**

**Attachment 11: New Multi Denominational Chapel Floor Plan**

**Attachment 12: New Entrance Precinct Site Plan**

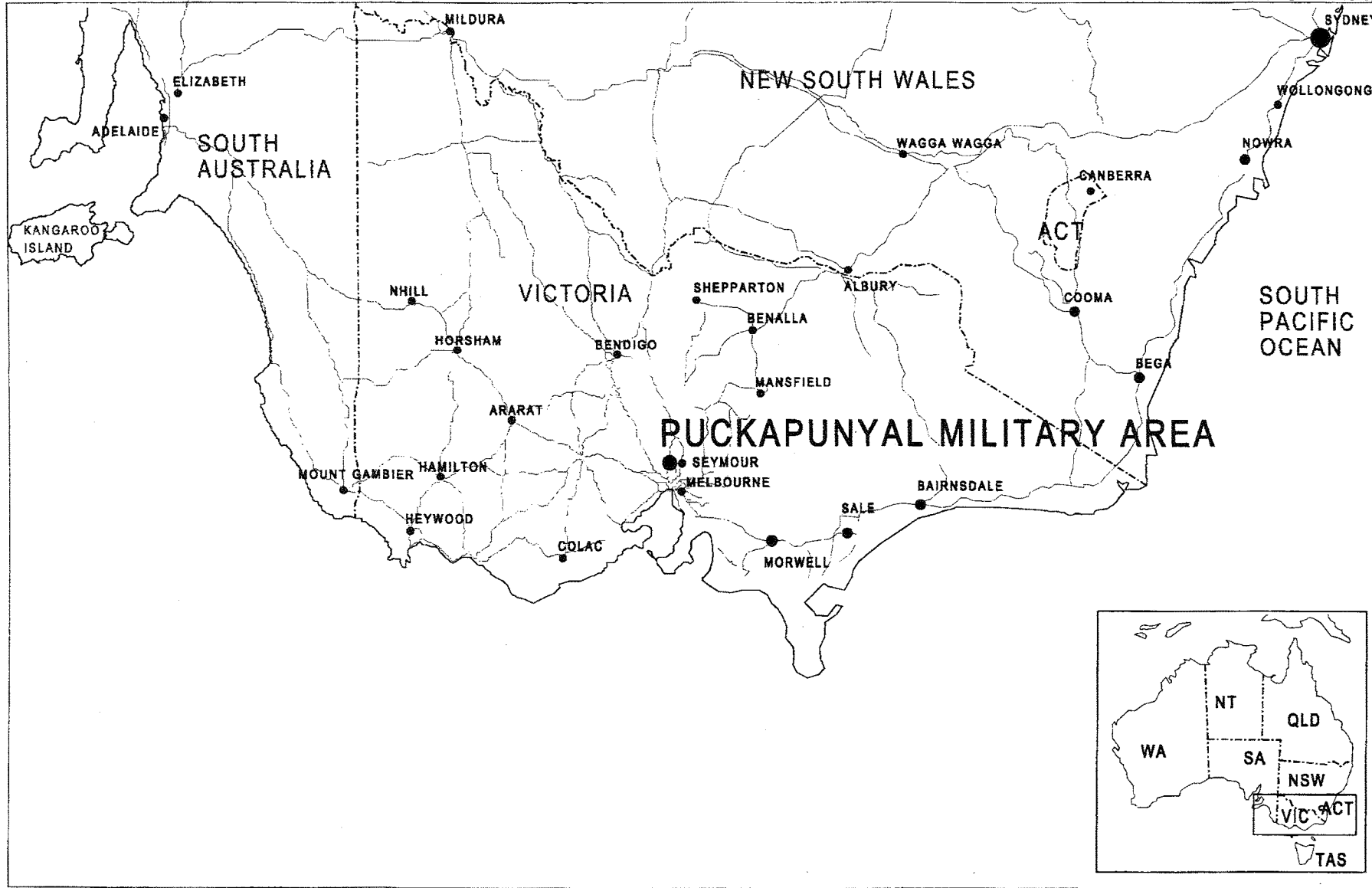
**Attachment 13: New Guard Booth Floor Plan**

**Attachment 14: New Combined Arms Training Centre (CATC) Headquarters Plan**

**Attachment 15: New Range Control Briefing Room and Refurbished Headquarters Building**

**ATTACHMENT 1 – LIST OF ABBREVIATIONS**

ALTC	Army Logistic Training Centre
BSC-P	Battle Simulation Centre - Puckapunyal
CEMP	Construction Environmental Management Plan
CATC	Combined Arms Training Centre
CDR	Concept Design Report
COAC	Combat Officer Advanced Course
DBC	Detailed Business Case
DISC	Defence Infrastructure Sub Committee
DSG	Defence Support Group
ECC	Environmental Clearance Certificate
EMP	Environmental Management Plan
EPBC	The Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)
ESD	Ecologically Sustainable Development
FACOPS	Facilities Operations
HMP	Heritage Management Plan
IAD	Infrastructure Asset Development Branch
ICT	Information & Communications Technology
LWDC	Land Warfare Development Centre
NPOC	Net Personnel and Operating Costs
OH&S	Occupational Health and Safety
PWC	Parliamentary Standing Committee on Public Works
RTW	Road Transport Wing
SBC	Strategic Business Case
SDTA	Safe Driver Training Area
SOA	School of Armour

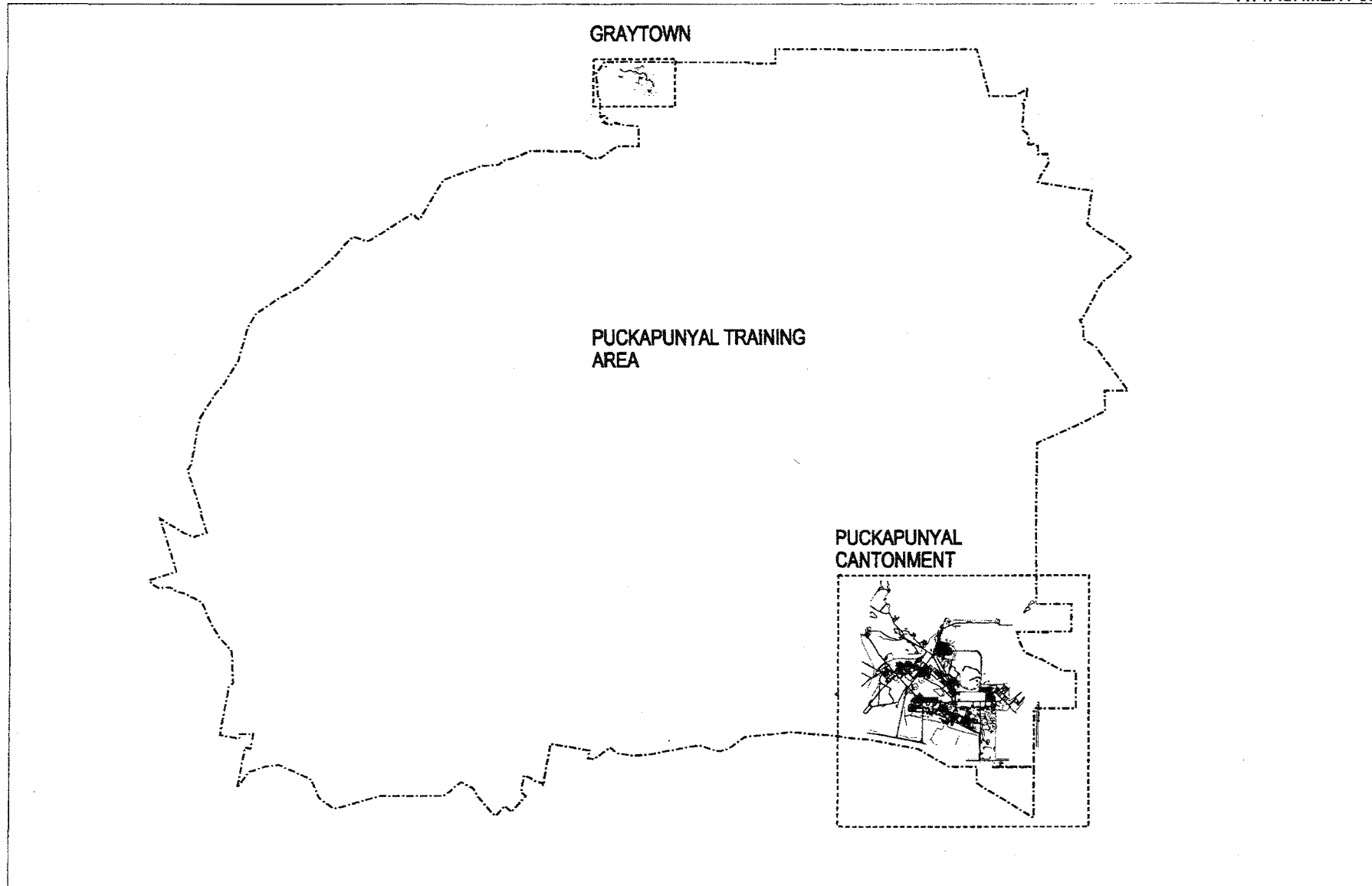


**PUCKAPUNYAL REDEVELOPMENT  
LOCATION MAP**

NOT TO SCALE

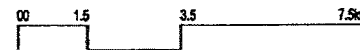
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**PUCKAPUNYAL REDEVELOPMENT**  
**PUCKAPUNYAL MILITARY AREA LOCALITY MAP**

SCALE 1:7000@A2

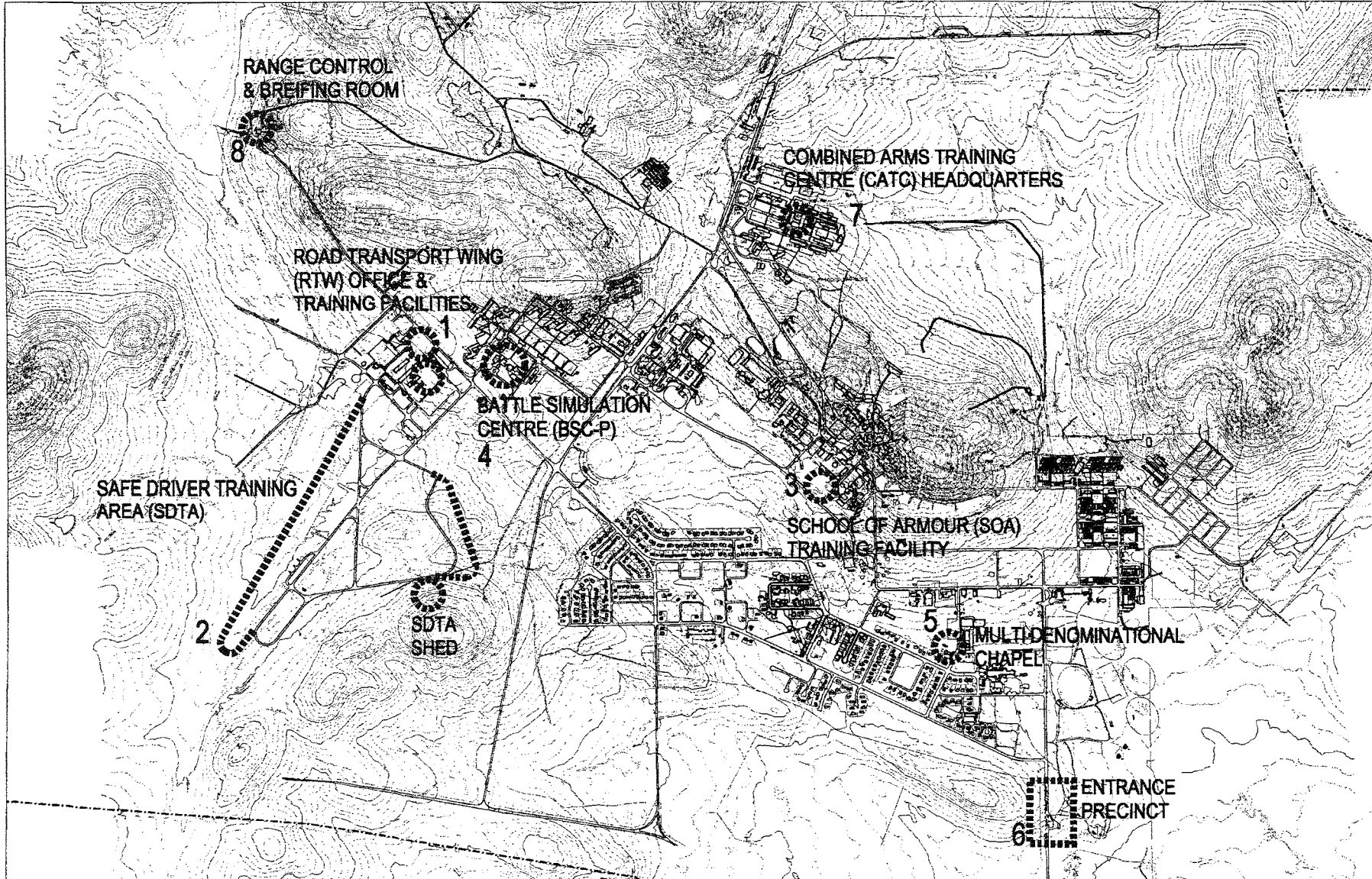


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PUCKAPUNYAL REDEVELOPMENT  
PROJECT ELEMENTS LOCATION PLAN

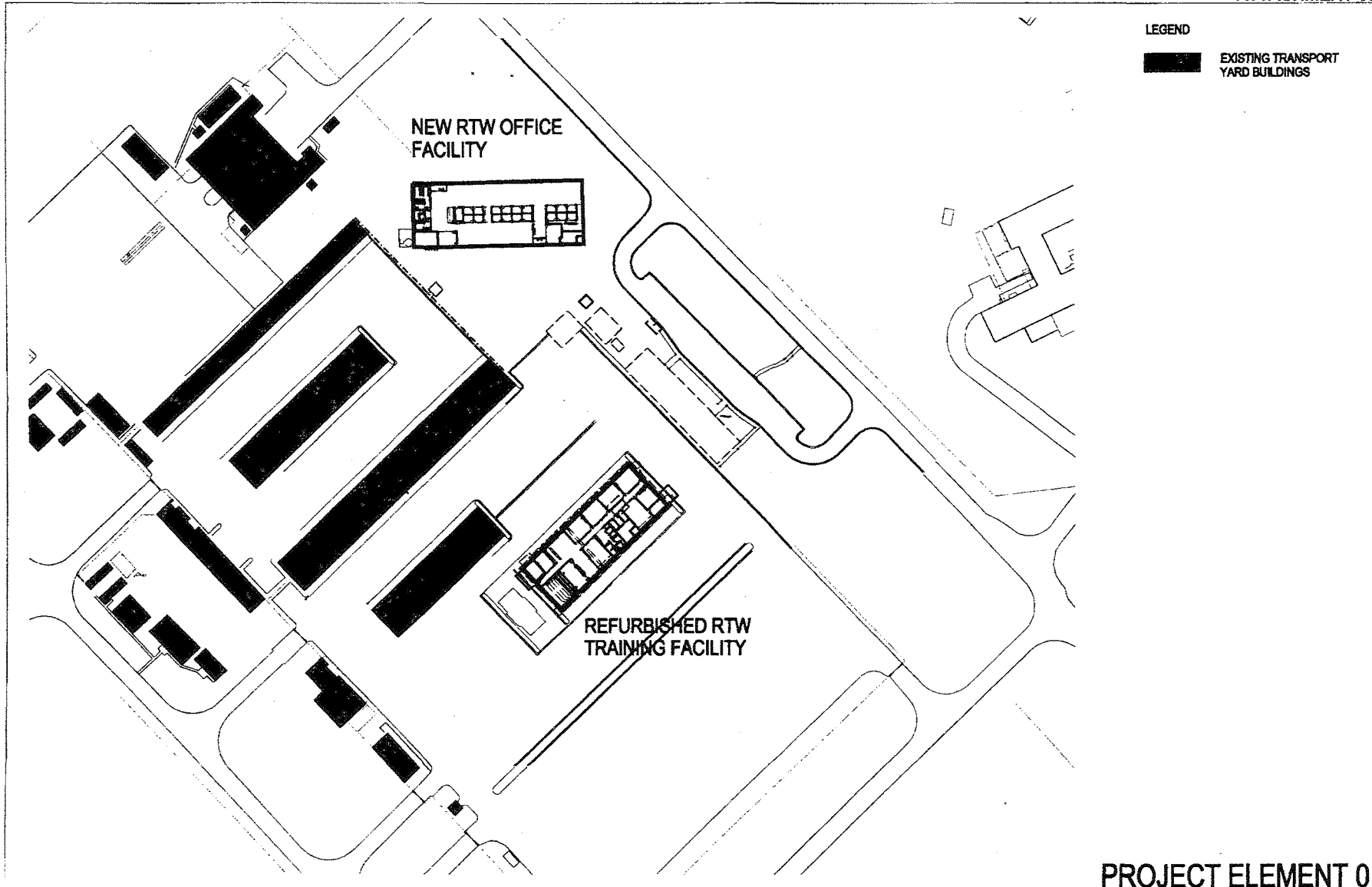
NOT TO SCALE

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PROJECT ELEMENT 01



PUCKAPUNYAL REDEVELOPMENT  
ROAD TRANSPORT WING (RTW) NEW & REFURBISHED  
FACILITIES SITE PLAN

NOT TO SCALE

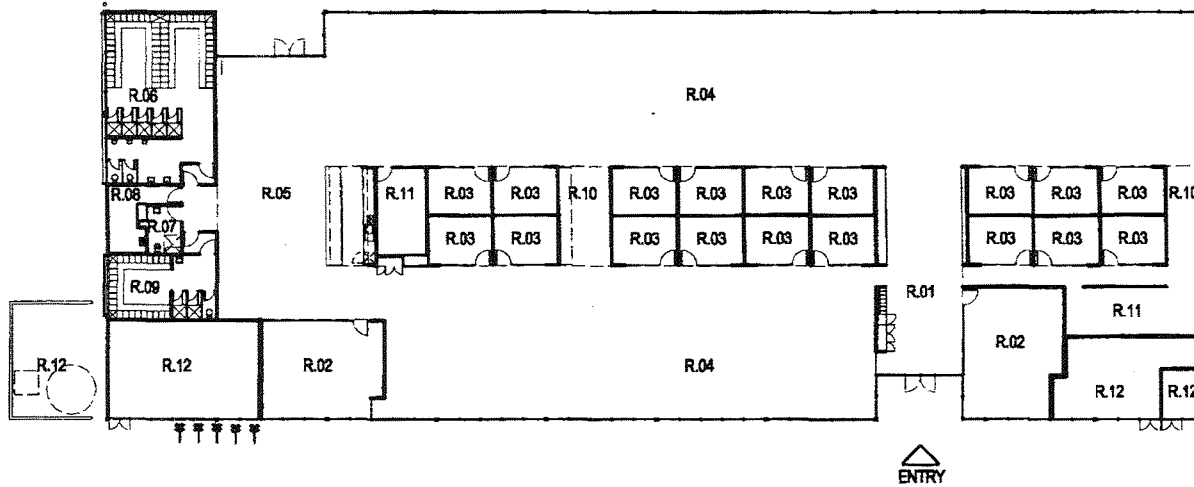
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ROOM LEGEND

- R.01 MAIN ENTRY/WAITING
- R.02 MEETING ROOM
- R.03 OFFICE
- R.04 OPEN PLAN WORK AREA
- R.05 BREW AREA
- R.06 MALE WC & CHANGE
- R.07 ACCESSIBLE WC & CHANGE
- R.08 CLEANER
- R.09 FEMALE WC & CHANGE
- R.10 UTILITY SPACE
- R.11 ARCHIVE
- R.12 BUILDING SERVICES/PLANT

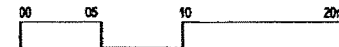


PROJECT ELEMENT 01



PUCKAPUNYAL REDEVELOPMENT  
NEW RTW OFFICE FLOOR PLAN

SCALE 1:200@A2



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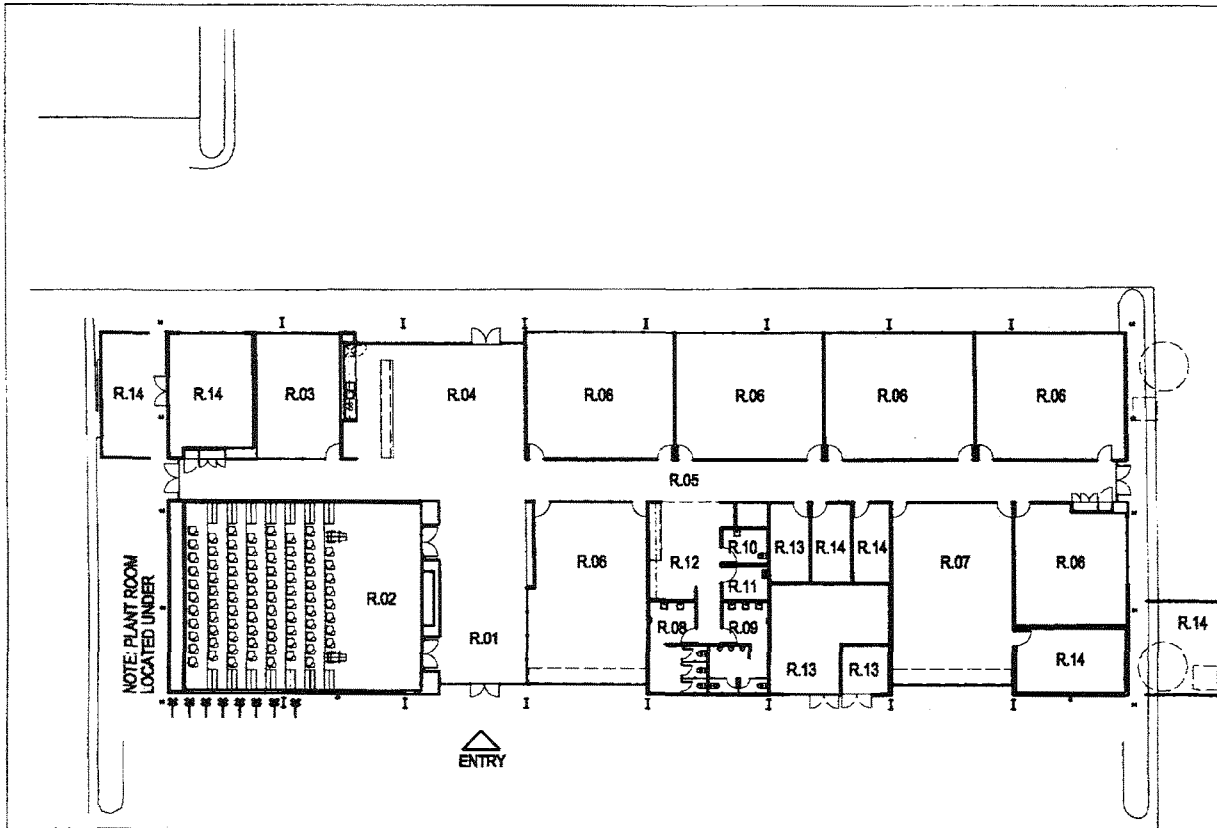
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ROOM LEGEND

- R.01 MAIN FOYER
- R.02 LECTURE THEATRE
- R.03 COMPUTER ROOM
- R.04 STUDENT BREW AREA
- R.05 CORRIDOR
- R.06 CLASSROOM
- R.07 MODEL ROOM
- R.08 FEMALE WC
- R.09 MALE WC
- R.10 ACCESS WC
- R.11 CLEANER
- R.12 UTILITY AREA
- R.13 STORE
- R.14 BUILDING SERVICES/PLANT

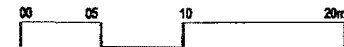


PROJECT ELEMENT 01



PUCKAPUNYAL REDEVELOPMENT  
REFURBISHED RTW TRAINING FACILITY FLOOR PLAN

SCALE 1:200@A2

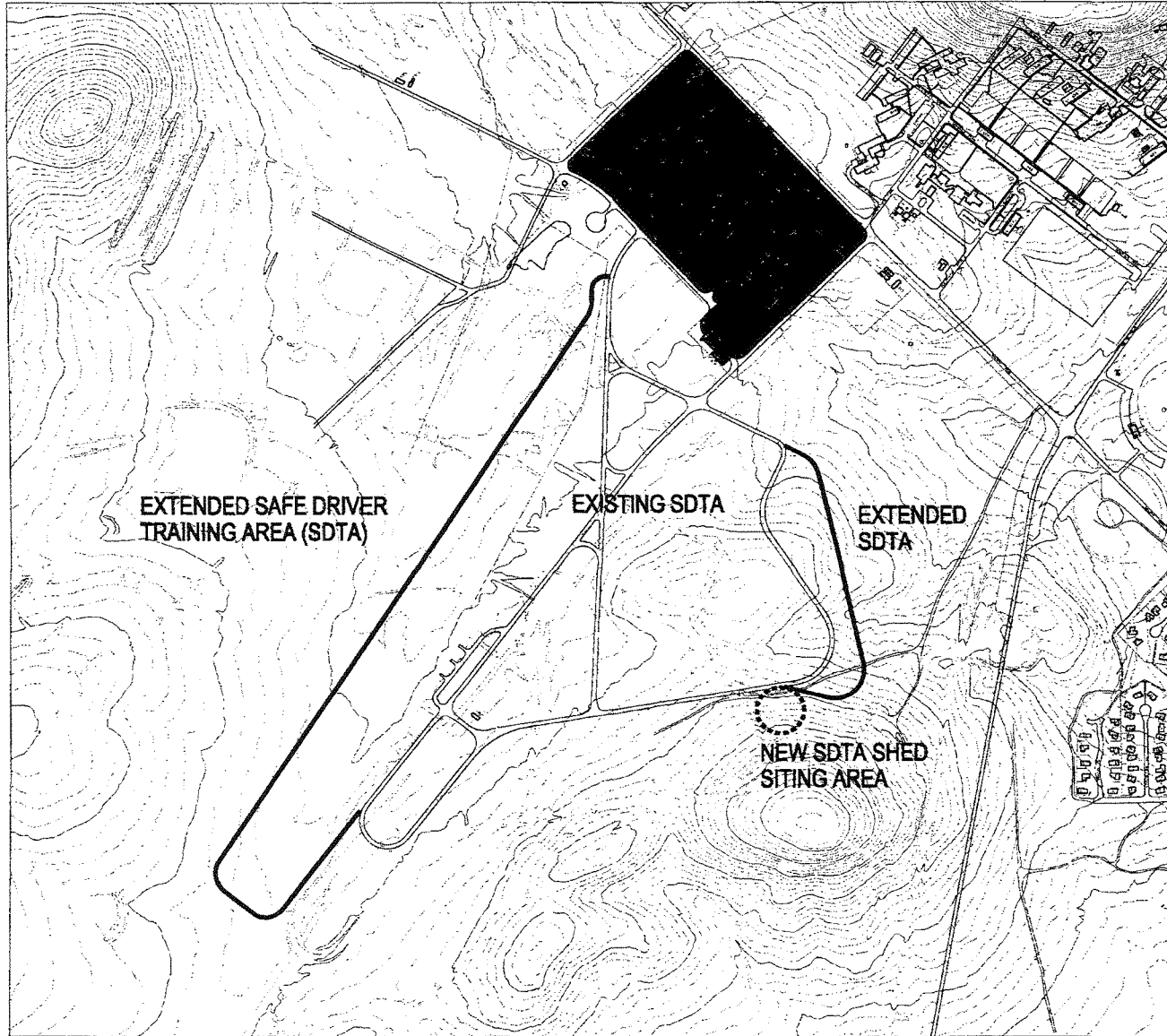


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LEGEND



RTW PRECINCT

EXTENDED SAFE DRIVER  
TRAINING AREA (SDTA)

EXISTING SDTA

EXTENDED  
SDTA

NEW SDTA SHED  
SITING AREA

PROJECT ELEMENT 02



PUCKAPUNYAL REDEVELOPMENT  
EXTENDED SAFE DRIVER TRAINING AREA (SDTA) PLAN

NOT TO SCALE

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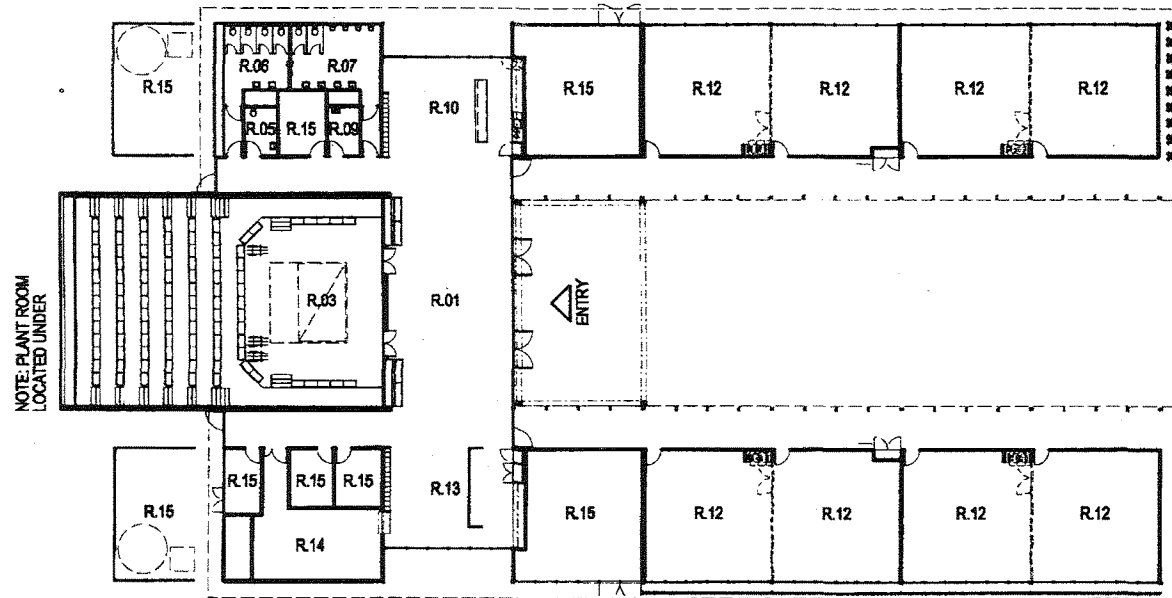
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ROOM LEGEND

- R.01 ENTRY
- R.02 COMBINED FOYER/ANTE  
SPACE & BREAKOUT
- R.03 LECTURE THEATRE
- R.04 CORRIDOR
- R.05 ACCESS WC
- R.06 FEMALE WC
- R.07 MALE WC
- R.09 CLEANER
- R.10 STUDENT BREW
- R.12 SYNDICATE ROOM
- R.13 UTILITY AREA
- R.14 STORE
- R.15 BUILDING SERVICES/PLANT



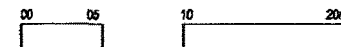
PROJECT ELEMENT 03



PUCKAPUNYAL REDEVELOPMENT

NEW SCHOOL OF ARMOUR (SOA) TRAINING FACILITY FLOOR PLAN

SCALE 1:200@A2



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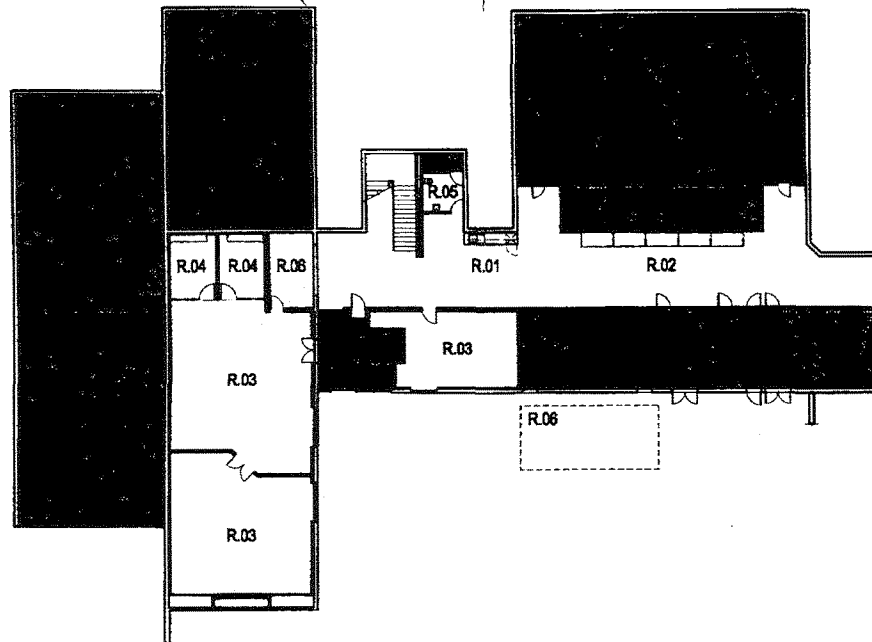
NORTH

LEGEND

EXISTING ROOM/FACILITY

ROOM LEGEND

- R.01 BREW
- R.02 JOINERY STORAGE UNIT
- R.03 MULTIPURPOSE TRAINING AREA
- R.04 OFFICE
- R.05 ACCESS WC
- R.06 BUILDING SERVICES/PLANT



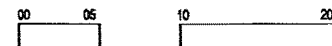
PROJECT ELEMENT 04



PUCKAPUNYAL REDEVELOPMENT

REFURBISHED BATTLE SIMULATION CENTRE (BSC-P) -  
LEVEL 1 FLOOR PLAN

SCALE 1:200@A2



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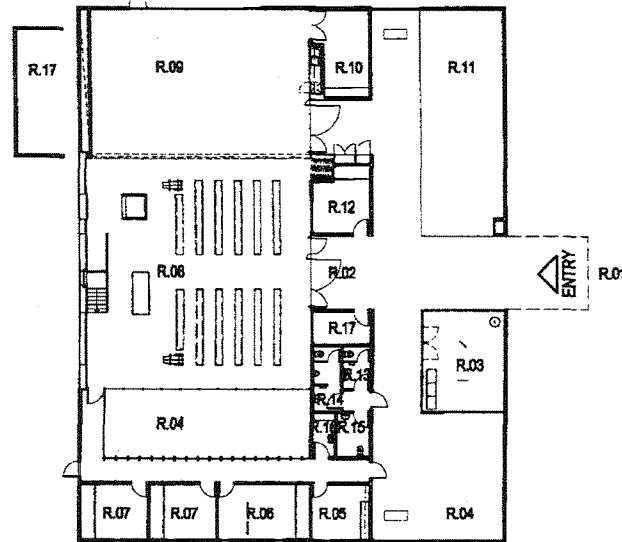


NORTH



ROOM LEGEND

- R.01 DROP OFF AREA
- R.02 VESTIBULE
- R.03 PRAYER ROOM
- R.04 COURTYARD
- R.05 OFFICE
- R.06 SACRISTY
- R.07 VESTRY
- R.08 NAVE & SANCTUARY
- R.08 MULTI PURPOSE ROOM
- R.10 STORE ROOM
- R.11 MULTI PURPOSE OUTDOOR RECREATION SPACE
- R.12 CRYING ROOM
- R.13 FEMALE WC
- R.14 MALE WC
- R.15 ACCESS WC
- R.16 CLEANER
- R.17 BUILDING SERVICES/PLANT

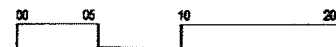


PROJECT ELEMENT 05



PUCKAPUNYAL REDEVELOPMENT  
 NEW MULTI DENOMINATIONAL CHAPEL FLOOR PLAN

SCALE 1:200@A2

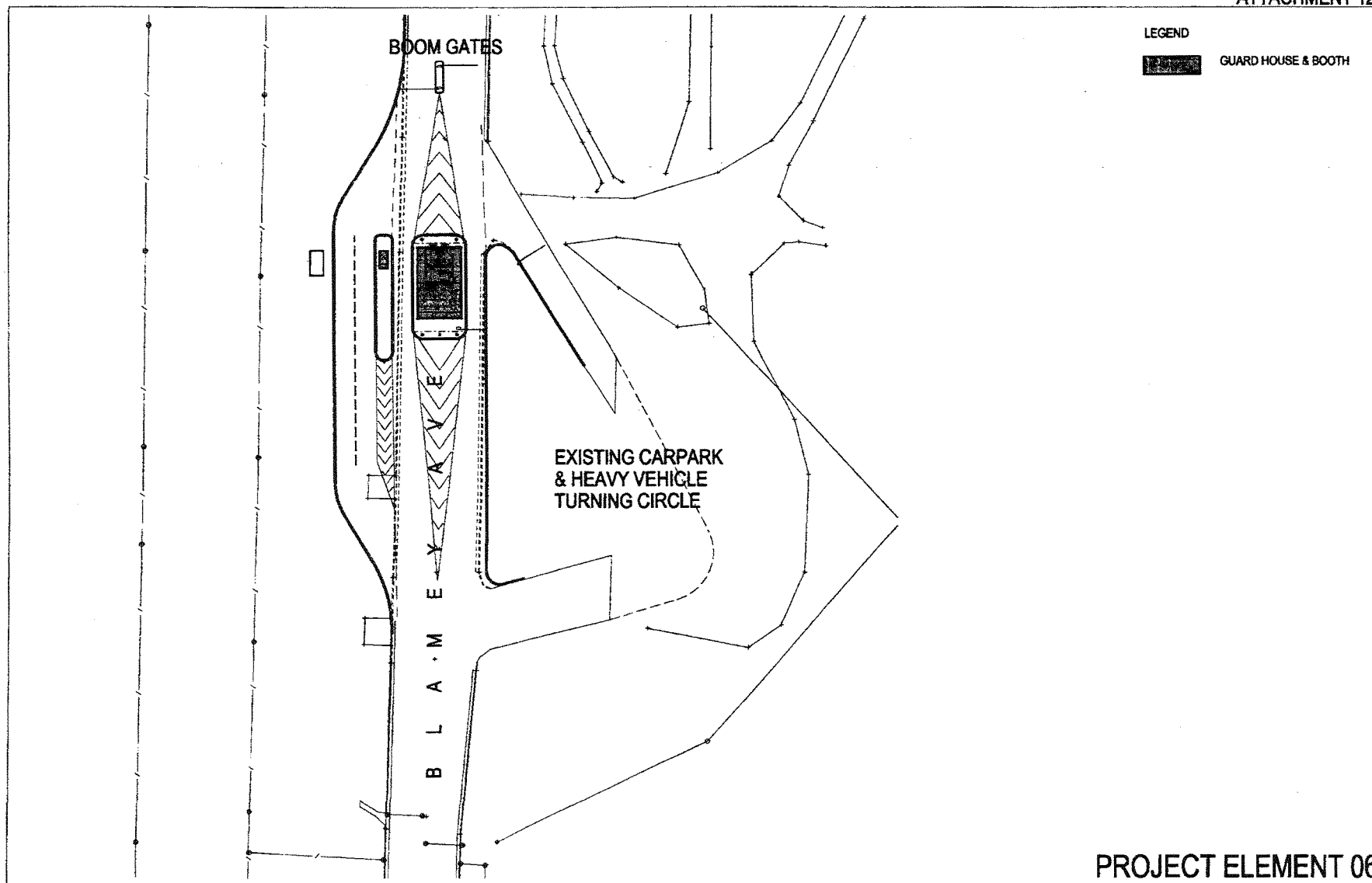


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PROJECT ELEMENT 06



PUCKAPUNYAL REDEVELOPMENT  
NEW ENTRANCE PRECINCT SITE PLAN

NOT TO SCALE

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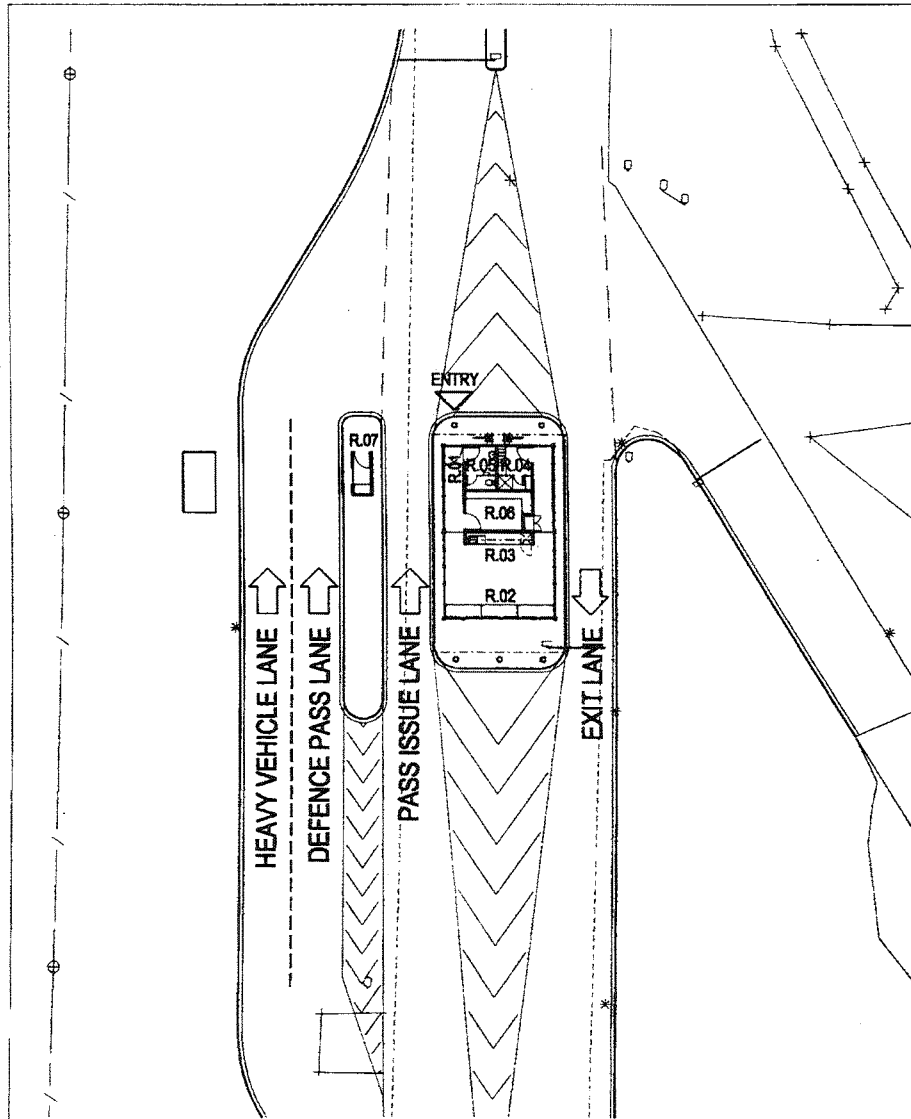
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ROOM LEGEND

- R.01 MAIN ENTRY
- R.02 OPEN PLAN WORK AREA
- R.03 BREW AREA
- R.04 UNISEX CHANGE
- R.05 UNISEX WC
- R.06 STORE ROOM
- R.07 GUARD BOOTH

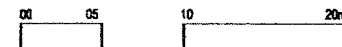


PROJECT ELEMENT 06



PUCKAPUNYAL REDEVELOPMENT  
NEW GUARD BOOTH FLOOR PLAN

SCALE 1:200@A2

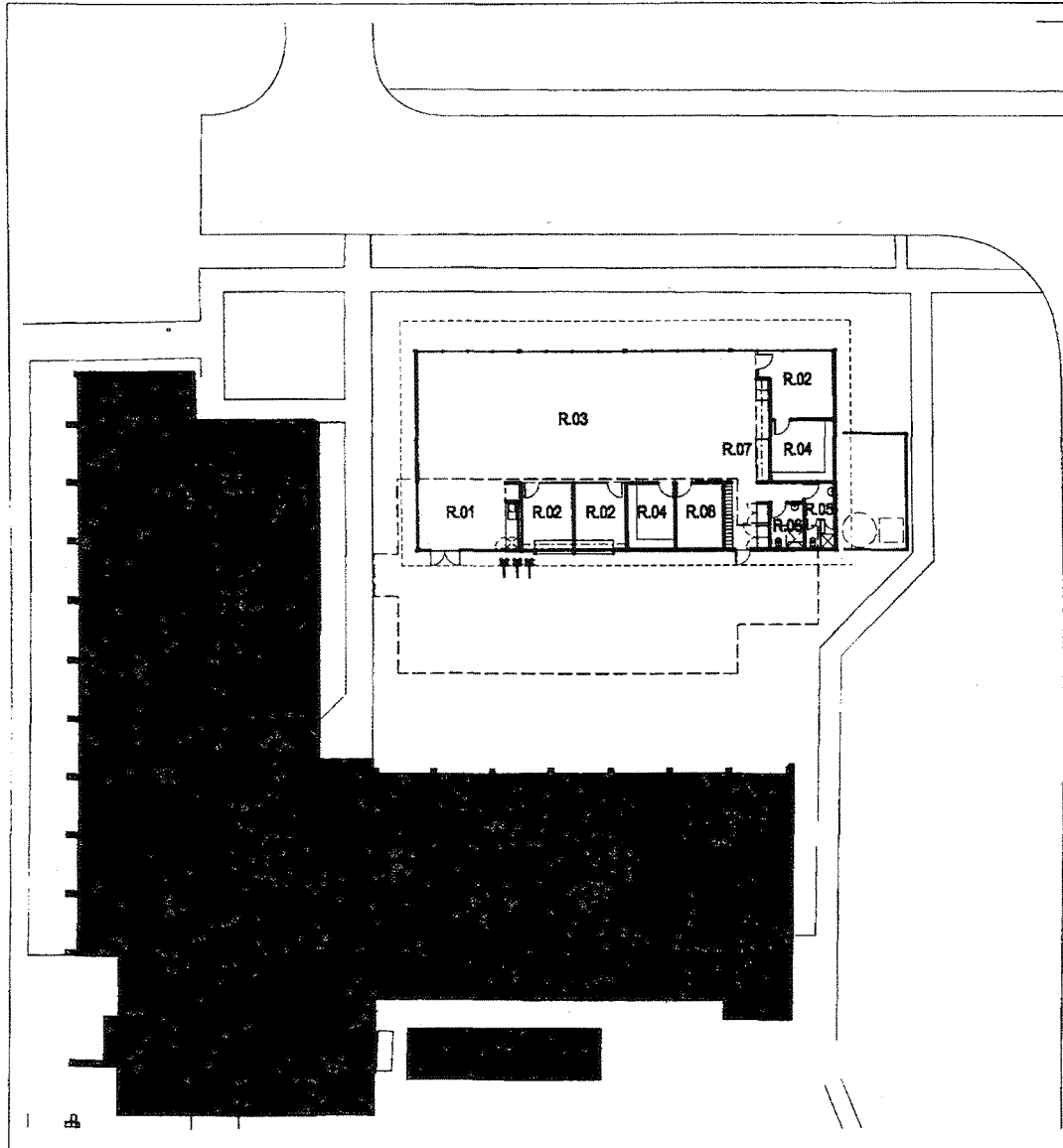


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LEGEND

 EXISTING CATC BUILDING

ROOM LEGEND

- R.01 BREWENTRY
- R.02 OFFICE
- R.03 OPEN PLAN WORK AREA
- R.04 STORE ROOM
- R.05 UNISEX WC & CHANGE
- R.06 ACCESS WC & CHANGE
- R.07 UTILITY AREA
- R.08 BUILDING SERVICES/PLANT

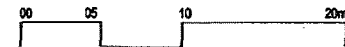
PROJECT ELEMENT 07



PUCKAPUNYAL REDEVELOPMENT.

NEW COMBINED ARMS TRAINING CENTRE (CATC)  
HEADQUARTERS PLAN

SCALE 1:200@A2

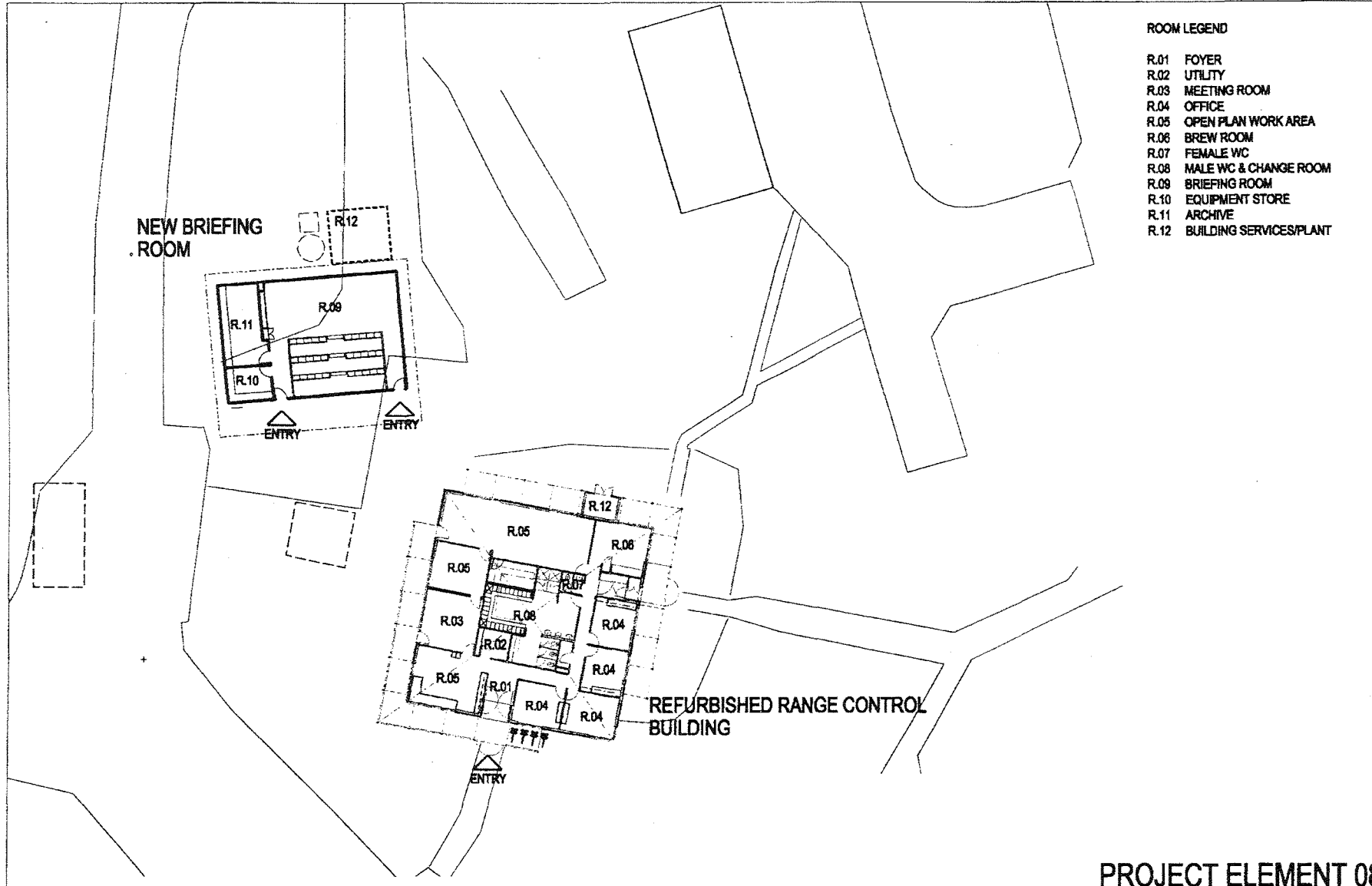


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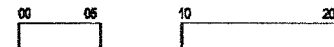
PROJECT ELEMENT 08



PUCKAPUNYAL REDEVELOPMENT

REFURBISHED RANGE CONTROL & NEW BRIEFING ROOM PLAN

SCALE 1:200@A2



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