LAND ENGINEERING AGENCY

TEST SERVICES RELOCATION

STATEMENT OF EVIDENCE
TO THE
PARLIMENTARY STANDING COMMITTEE
ON PUBLIC WORKS

DEPARTMENT OF DEFENCE
CANBERRA, ACT
May 2007

INDEX

ATTACHMENTS

LAND ENGINEERING AGENCY TEST SERVICES RELOCATION

PART A – JUSTIFICATION

INTRODUCTION

1. This evidence to the Parliamentary Standing Committee of Public Works (PWC) presents a proposal for the relocation of Land Engineering Agency (LEA) Test Services from Defence Site Maribyrnong (DSM) to Monegeetta Proving Ground (Monegeetta). The proposal aims to gain advantages arising from the new basing arrangements, for an estimated outturn cost of $35.9 million (excluding GST).

Background

2. The DSM site has been identified as surplus to Defence and Commonwealth Government requirements and is to be disposed of accordingly. Post June 2007, LEA Test Services will be the sole tenant at DSM, occupying approximately 12 hectares of the 127 hectare site.

3. The existing test and evaluation capacity provided by LEA Test Services is required for the continued support of Defence and Army outputs. Analysis in the development of this project included a study to test possible alternative means of providing the testing capability. The study concluded that alternative facilities to support the full range of Defence's test and evaluation requirements do not exist elsewhere within Australia.

4. Given the complimentary nature of its existing operations and its proximity to LEA Headquarters in Melbourne, Monegeetta Proving Ground has been selected as the ideal basing option for LEA Test Services infrastructure development.

5. Monegeetta has been identified for long term retention within the Strategic Plan for the Defence Estate.

OBJECTIVES

6. The existing LEA test and evaluation capability needs to be retained to provide continued support to Defence. The capability is provided at ageing facilities across two sites, one at DSM and the other at Monegeeta. This causes operational difficulties and inefficiencies for LEA.

7. The objective of this proposal is to gain advantages arising from collocation of LEA Test Services with its existing operations at Monegeetta and to allow the disposal of the DSM property.

Date of Completion

8. Subject to Parliamentary clearance of this project, construction is scheduled to commence in early 2008 with completion anticipated by mid 2009.

THE PROPOSAL

Background

9. LEA is one of the four main business units of Land Systems Division (LSD) within the Defence Materiel Organisation (DMO), and has a formal responsibility to ensure the technical integrity of land materiel. This responsibility relates to the need to assure compliance with 'safe to use' and 'fit for purpose' criteria for land materiel.

10. LEA testing and evaluation activities at Maribyrnong are conducted by two operational divisions:

a. Land Combat Systems (LCS); and

b. Accredited Test Services (ATS).

Land Combat Systems

11. LCS provides a test and evaluation capability for small arms and ammunition including safety assessment, acquisition support, reports on defective or unserviceable materiel and provision of technical advice.

12. LCS has technical and engineering expertise in the core technologies associated with Fire Support Systems including:

a. large calibre weapons systems;

b. small arms weapons systems;

c. ballistic performance and range safety; and

d. explosive ordnance systems.

13. Test and evaluation of these weapons systems and ordnance is an integral function of the LCS. These test services are currently conducted at the Explosives Development Facility (EDF) and the Enclosed Light Armament Facility (ELAF) at Maribyrnong. The test capability provided by ELAF will be replaced at Monegeetta. EDF test capabilities will not be replaced at Monegeetta, but will be undertaken utilising existing Defence facilities at Graytown.

Accredited Test Services

14. Accredited Test Services (ATS) provides test and evaluation capability for electronic, mechanical, and environmental evaluation of large scale land materiel. It also supports LCS activities with test measurement. ATS also currently undertakes testing activities at Monegeetta, at its Automotive and Electrical Performance Laboratory (AEPL).

15. ATS is responsible for providing performance measurement and environmental testing encompassing communications, electrical, electro-optics, electromagnetic environmental effects, mechanical tests, environmental and vehicle tests. ATS activities currently undertaken at Maribyrnong are organised within two broad business units:

a. Electronics and Communications Laboratory (ECL); and
b. Mechanical and Environmental Laboratory (MEL).

Detailed Requirements

16. The proposal seeks to construct a new purpose-built facility at Monegeetta, as well as modifications and upgrades to existing buildings. The project comprises the following works:

a. construction of a new Enclosed Light Armaments Facility (ELAF) to accommodate LCS functions;
b. construction of a new Laboratories/Workshop/Administration building to support ATS functions;
c. construction of a new Petrols, Oils and Lubricants (POL) store;
d. modifications to the existing headquarters building; and
e. the provision of supporting infrastructure.

Location

17. The site of the proposed infrastructure development outlined in this evidence is confined to the existing Defence site (Monegeetta Proving Grounds) at Monegeetta Victoria, which is located in the Macedon Ranges Shire approximately 55 kilometres from Melbourne's central business district.

Property Aspects

18. There are no issues associated with land purchase, property disposal or leasing requirements. The proposed work will not conflict with existing Native Title or Indigenous Land Use Agreement issues. Adjacent landholders will not be impacted by the new works.

19. The disposal of the DSM property is not part of this project.

Benefits Expected from Relocation

20. The relocation of LEA Test Services from DSM to the Monegeetta site will allow the following benefits to be realised:

a. New, cost-effective facilities to replace the ageing facilities at DSM.

b. Vacation of DSM, allowing the Commonwealth to dispose of the property, which is surplus to requirement.

c. Integration of the new facilities with the LEA's existing laboratory at Monegeetta, improving operational efficiencies through more effective command and control, knowledge and resource sharing.

d. Provision of a flexible and responsive testing capability at a location close to LEA's Headquarters in Melbourne.

e. Provision of a safe and work environment that is energy efficient, ecologically sustainable and designed to current building codes and standards; and

f. A Test Services facility designed with consideration to Defence's future expansion requirements, at a site which will allow for future infrastructure and capability development.

COSTS

Cost Estimate

21. The estimated outturn cost of this project is $35.9 million excluding GST. The cost estimate includes construction costs with professional fees, furniture and fittings and a contingency sum.

Operating Costs

22. The Net Personnel and Operating Cost (NPOC) savings as a result of relocating LEA'S Maribyrnong Test Facilities into rationalised new facilities at Monegeetta will be approximately $110,000 annually.

OPTIONS

23. Alternate methods of providing the capability requirements for each project scope element were considered in a study – '*Alternative Methods of Providing Capability Requirements'*.

24. The study concluded that there are no adequate alternate methods available of providing the main elements of the capability. The adopted outcome was continuing to provide the Defence Capability through LEA Test Service facilities, in an alternate location.

ECONOMIC, ENVIRONMENTAL, AND SOCIAL IMPACTS

Economic Impacts

25. This proposal will not produce revenue.

26. An average of 70 personnel are expected to be directly employed on construction activities. The project will also generate some off-site job opportunities from the manufacture and distribution of construction-related materials over the anticipated construction period of eighteen months. It is anticipated that local Melbourne building contractors and some regionally based tradesperson will be employed on a large proportion of the construction works.

27. The location of the facilities at Monegeetta is expected to provide some longer term employment opportunities for people living the area.

Environmental Impacts

28. The proposed construction works at Monegeetta Proving Ground will require expansion beyond existing building and road footprints.

29. An environmental assessment and conservation survey of Monegeetta Proving Ground was undertaken to determine the potential impacts of the development on heritage, flora, fauna, site contamination and storm water management at the site. The assessment for Monegeetta Proving Ground did not identify any direct impact to matters protected under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act), or any significant impacts on the environment in general.

30. Adequate reticulated water supply is available. Sewerage demands will be met through minor expansion of existing on-site treatment plant infrastructure. Storm water runoff from pavements will be discharged to existing dams located within the Proving Ground.

31. Environmentally Sustainable Design (ESD) principles have been applied as part of the overall Laboratory building design.

32. While environmental impacts associated with the proposed development are not considered significant, the requirements of the Defence Environmental Management System have been implemented at Monegeetta to guide development and operational activities. For construction activities, the Head Contractor will develop an agreed Construction Environmental Management Plan covering all the proposed works. A Defence Environmental Clearance Certificate (ECC) will be issued before the commencement of construction, in accordance with Defence's Environmental Management Policy. The procedures contained in the Construction Environmental Management Plan will be audited by Defence's Project Manager to ensure the requirements of the ECC are complied with.

33. Based on the environmental assessment undertaken, Defence has determined that the works in this proposal are unlikely to have a significant impact on the environment and that the project does not require referral to the Department of the Environment and Heritage under the EPBC Act.

Energy Efficiency

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

a. Part I2 and Section J of Volume One of the Building Code of Australia (BCA);

b. Part 3.12 of Volume Two of the BCA;

c. the Energy Efficiency in Government Operations (EEGO) policy; and

d. Defence Green Building Requirements.

35. All buildings will comply with the relevant energy efficiency provisions in the BCA, except where there are energy efficiency requirements imposed by Defence Green Building Requirements - Part 1 that are of a higher standard. In this instance, there are no Defence energy efficiency requirements of a higher standard than the BCA.

36. In addition to the above, all new offices will comply with the minimum energy performance standards in the EEGO policy for buildings with less than 2000 m^2 of office accommodation. Separate digital on market status metering will be installed and office lighting will not exceed 10 W/m^2. 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.

Heritage

37. The Environment and Heritage Assessment for Monegeetta Proving Ground identified that several buildings are attributed to the early stage of development of Defence related activities at this site. The assessment notes that the buildings are not of individual significance, but are of contributory significance to the site. The proposed works do not require modification or demolition of any of these buildings.

Social Impacts

38. The project will have minimal impact on the local community either during or post construction. There would be little noticeable difference in day-to-day activities in Monegeetta or adjoining rural properties.

39. There will be an increase of 23 personnel at Monegeetta after the relocation.

LONGER TERM PLANNING

40. The proposed new facilities have been located to be in accordance within the existing draft Masterplan and have been planned to provide flexibility to cater for future increased laboratory capability with space to expand to the north of the facility.

41. The new proposed laboratories and the ELAF facilities have been located near the northern boundary of the site to enable other existing facilities at Monegeetta to expand or other new facilities to be constructed in the precinct.

CONSULTATION

42. Discussions have been held with the local council, Macedon Ranges Shire. Discussions have been held, or are planned to be held, with Federal and State Government members whose electorate the proposed works are in. No local community or environmental groups have been identified that would be materially affected by the project.

PART B – TECHNICAL INFORMATION

SCOPE OF WORKS

43. The approved scope of works includes the following:

New Facilities

a. Construction of a new Enclosed Light Armaments Facility (ELAF) to accommodate LCS functions. The ELAF (Building B) will provide floorspace of approximately 920m^2, including:
   i. a magazine and armoury;
   ii. two fully enclosed firing tunnels (25m long and 100m long)

b. Construction of a new Laboratories/Workshop/Administration building (Building A) of approximately 4,730m^2 to support ATS functions. This building will include:
   i. an Electronics and Communications Laboratory (ECL) providing:
      – Electro-Optics capability
      – Electro-Magnetic Compatibility chambers
      – Electrical Testing and Calibration
   ii. a Mechanical and Environmental Laboratory (MEL) providing:
      – Large Climatic Chamber
      – Large Cold Chamber
      – Small Climatic Chambers
      – Mechanical Calibration Facility
      – Heavy Vibration Test Facility
      – Static and Dynamic Displacement and Force Measurement testing facility
      – Driving Rain Simulation Facility

c. Construction of a new Petrols, Oils and Lubricants (POL) store.

Refurbishment of Existing Facility

d. Modifications to the existing headquarters building will:
   i. accommodate new Communications and Security facilities, and
   ii. provide disabled access through construction of a new ramp and entry.

Site Infrastructure Upgrade

e. The existing site infrastructure requires upgrade to support the additional facilities. The infrastructure work will involve:

i. a minor upgrade of the storm water and sewer services,

ii. separating the domestic water supply to provide a dedicated fire service as required by the Country Fire Authority,

iii. installing a new substation to meet the increased power demand,

iv. constructing roads to new buildings, and

v. landscaping.

Site Planning, Selection and Description

44. All the proposed works are within the existing site at Monegeetta, and are sited in accordance with the existing Monegeetta Draft Masterplan. The new Laboratory/Workshop Building is to be located to the north and west of the existing Headquarters/Administration building (Building 1), and will be oriented generally on an east-west alignment. The new Enclosed Light Armaments Facility is to be located to the north-west of the proposed Laboratory/Workshop Building.

Zoning and Approvals

45. No zoning or development approvals are required. All of the facilities proposed in this project have been designed and will be constructed within the boundaries of the existing Department of Defence site at Monegeetta. All proposed design and construction had been developed in consultation with and thus complies with all relevant Australian and Defence Standards.

Codes and Standards

46. Where appropriate, the design and construction of the proposed works and services will conform to the relevant sections of the following:

a. Building Code of Australia;

b. Australian Standards;

c. Commonwealth and State legislation;

d. Defence Manual of Fire Protection Engineering;

e. Defence Facilities Communications Cabling Standard;

f. Defence security publications; and

g. Defence Infrastructure Management (IM) internet/intranet site.

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

48. The successful Construction Contractor will produce a Project Management 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 will be maintained.

Provision for Disabled Access

49. Access and facilities for the disabled will be provided where necessary in accordance with the Building Code of Australia, Australian Standards, and Defence's policy – 'Requirements for the Provision of Disabled Access and other Facilities for Disabled Persons in Defence Facilities'. The project scope includes modification to the existing Headquarters/Administration building to provide disabled access.

Occupational Health and Safety

50. The proposed facilities will comply with the requirements of the Occupational Health and Safety Act. The Department of Defence Occupational Health and Safety Manual and relevant Victorian Government occupational Health and Safety legislation, and operate in accordance with an approved Occupational Health and Safety Plan.

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

Ecologically Sustainable Development and Energy Conservation Measures

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

53. The proposed design has been based on the Defence Green Building Requirements and the 'ESD Design Guide for Australian Government Buildings'. A four star Green Star Office Design has been used.

54. An integrated design approach has been used which considered a building's design, structure and systems as a whole, and optimises their interaction for economic and environmental benefits. ESD initiatives have been integrated into the design process to achieve occupant satisfaction and operating performance.

55. The proposed design complies with the Commonwealth Energy Policy – Energy Efficiency in Government Operations (EEGO) Policy.

56. The preliminary design of the new facilities has considered and adopted the following measures to reduce potable water consumption:

a. water efficient 4 star taps, fittings and toilets and appliances; and

b. the collection and storage of rainwater from the laboratory/workshop roof area, for non-potable water uses.

57. The preliminary design of the new facilities has considered and adopted the following measures to reduce energy consumption in a cost effective manner:

a. the building is sited to make maximum use of prevailing winds and the sun for temperature control and lighting;

b. use of insulation and weatherproofing seals;

c. use of energy efficient lighting and lighting control systems;

d. use of energy efficient plant and equipment; and

e. providing the capability to control energy use by zones within the facility.

Planning and Design

58. The project provides a safe, secure and efficient workplace specifically designed for the required function. Due consideration has been given during the preliminary design stage to the selection of materials, construction techniques, finishes, and equipment which will deliver economies on a whole-of-life basis.

59. Capital, operational and maintenance costs have been considered in the selection of services and associated equipment.

60. The building form of the proposed Laboratory/Workshop facility reflects the spaces required in each area within the facility. The areas on the south side are all workshops which are generally large spaces with high ceilings. The areas on the north side are offices, laboratories and storage areas requiring lower height ceilings.

61. The new Enclosed Light Armaments Facility provides office and operational spaces, maintenance workshops, magazine, armoury, and two fully enclosed firing tunnels.

Structural Design

62. The Laboratory/Workshop Building structure generally comprises single storey steel frames on reinforced concrete raft floor slabs on ground. Some suspended floor areas are provided for plant and control rooms.

63. The structure of the ELAF building comprises reinforced concrete walls, and roof on a reinforced concrete raft slab. The firing tunnels will be constructed from pre-cast concrete units on concrete raft slabs.

Materials and Finishes

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

65. Materials should be sourced from sustainable resources, using ecologically sustainable manufacturing processes including recycled and recyclable materials where whole of life impacts of the product are minimised.

Mechanical Services

66. With the exception of large workshop areas, new facilities will generally be air-conditioned, and the selection of building services and associated equipment will achieve an economic balance between capital cost and operation and maintenance cost. Selection of systems and equipment has been based on a life cycle costing analysis to reduce energy consumption. To achieve this, a number of independent air conditioning systems have been provided for in the design, and these will only operate when the rooms are occupied.

67. Air conditioning systems serving large spaces or multiple rooms will be ducted systems using economy cycles that utilise outside fresh air when outside temperatures are appropriate.

68. Dedicated split air conditioning systems with wall mounted fan coil units are provided for other small rooms. Refrigerants and insulation will have zero Ozone Depletion Potential. Evaporative cooling will be used to reduce room temperatures in rooms with large internal heat sources (e.g. vehicles/test laboratories/workshops).

69. The new facilities will incorporate building management systems to provide full automatic control of the Mechanical services and allow for audits and monitoring where required.

Hydraulic Services

70. The new facilities will be connected to the existing Monegeetta Defence Base internal property sewer drain via a sewerage pumping station. The design provides a new under ground drain extending to all proposed fittings in each building.

Electrical Services

71. The design has embraced energy efficient design initiatives to enable optimum performance at minimum possible energy consumption.

72. The existing Monegeetta site is currently supplied from a single pole mounted, 300kVA transformer which has insufficient capacity to supply the required power demand for the new facilities. A new substantially larger substation will be provided by the Power Supply Authority as part of the proposed works.

73. The electrical systems include the following:

a. Low voltage power distribution.

b. General and emergency lighting.

c. Lighting control systems

d. General and special purpose power.

e. Earthing installations.

f. CCTV for target surveillance in ELAF Facility

g. Automatic fire detection and alarm systems.

h. Emergency Warning System (EWS) to function in conjunction with the fire alarm system and as a PA system.

74. Lamps will be high efficiency fittings and include sensor controlled lighting to intermittently occupied areas.

Fire Protection

75. 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 Engineering (MFPE) and all other applicable Codes and Standards. The MFPE details Defence fire protection policy for asset protection and building function protection. The levels of fire protection specified are above BCA requirements and have been determined by a risk assessment and risk management approach to fire protection.

76. Defence will require certification from a suitably qualified and accredited building surveyor, that the design and construction meet the requirements of the BCA, the MFPE, relevant Codes and Standards and any additional State, Local Government and Defence requirements.

77. The Victorian Country Fire Authority will be invited to comment on the project, visit the site and offer comment throughout the construction phase to ensure that its operational requirements are met.

78. Any recommended departures from BCA requirements in relation to the project will be assessed by Defence specialist fire protection staff and where warranted by the scope of the departure, a suitably qualified and experienced fire engineer will also be consulted. Agreed departures (ensuring an equivalent or higher level of protection than BCA requirements) will require written approval from the Defence fire safety authority.

79. Successful tenderers will be required to produce a Quality Assurance Plan to clearly show how BCA, Australian Standards and any additional Defence requirements in relation to fire protection/fire safety, will be met and the required standards for construction/installation maintained.

Security

80. Appropriate security protection will be provided in accordance with the Defence Security Manual and specific project requirements.

Civil Works

81. Geotechnical surveys been carried out during the early design stage and indicate that the site conditions do not present any major civil engineering issue.

82. The project will provide the following;

a. A heavy duty concrete and asphalt road constructed along the south side of the proposed new Laboratory/Workshop Building. Roads and hard standing areas will be constructed for heavy wheeled and tracked vehicles.

b. Areas where vehicles turn or manoeuvre will be constructed in concrete pavement, and elsewhere flexible asphalt surfaced pavements.

c. A new medium duty road will be constructed for the access of delivery vehicles to the ELAF site.

d. Pedestrian access paths will be constructed around the building at all entry points.

e. New visitor and accessible parking for the disabled will be provided adjacent to the refurbished entry to the existing Administration Building.

Landscaping

83. This proposal will not cause any substantial change in the essential landscape character of the site. Landscaping works are confined to areas adjacent to the proposed new Laboratory/Workshop Building, and the new Enclosed Light Armaments Facility and are concentrated in the immediate vicinity of each building, and around the proposed pedestrian walkways and paved areas.

84. Soft planting shall generally consist of native plants and grasses indigenous to the local area, to encourage native fauna and insect life. The selection of species has avoided plants likely to become invasive. Hard paving to pedestrian walkways shall generally be concrete, with feature paving immediately in the vicinity of main entry doors and the external staff areas.

85. The project will adopt landscaping practices in keeping with the local environment conditions and water conservation measures.

PROJECT DELIVERY SYSTEM

86. A Head Contract delivery system is proposed for this project. This form of delivery is particularly well suited to projects where the scope is well defined and works can be

constructed unhindered by operational constraints. Specialist sub contractors will be identified for the supply of specialised equipment.

87. A Project Manager has been appointed to represent Defence and act as Contractor Administrator for development of the project.

88. A Designer has been appointed to prepare designs and subject to Parliamentary clearance of the project will finalise the design documentation and undertake inspection services during the construction phase.

ATTACHMENTS

Attachment 1 – List of Abbreviations

Attachment 2 – Monegeetta & Maribyrnong Locations

Attachment 3 – Monegeetta Base Location

Attachment 4 – Monegeetta Proposed Works – Site Plan

Attachment 5 – Proposed Works – Floor Plan – Building A

Attachment 6 – Proposed Works – Equipment Layout Floor Plan – Building A

Attachment 7 – Elevations – Building A

Attachment 8 – Proposed Refurbishment – Floor Plan – Building 1

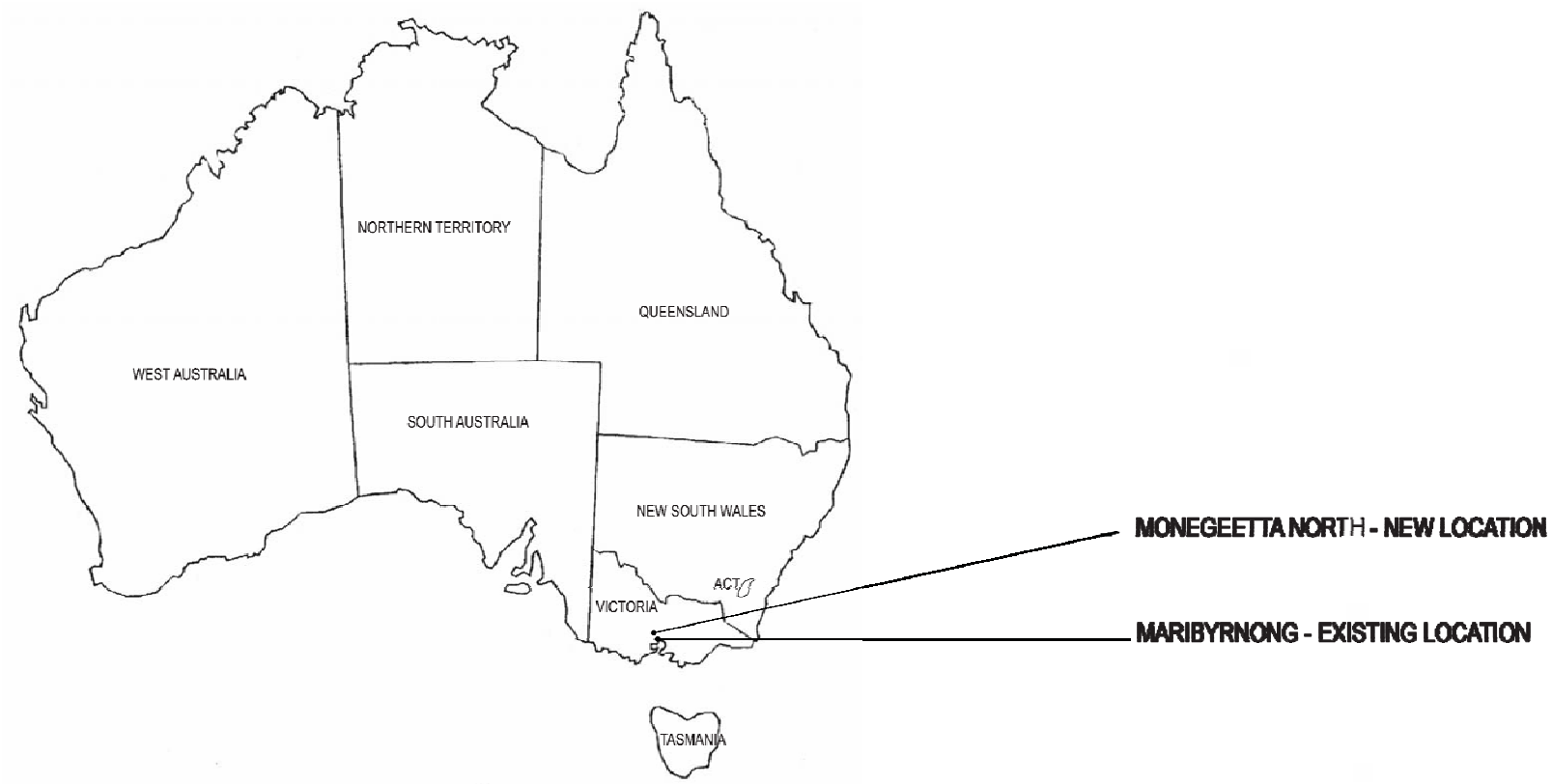
Attachment 9 – Proposed ELAF – Building B

Attachment 10 – Proposed POL Store – Building C

Attachment 1 – List of Abbreviations

Abbreviation	Description
AEPL	Automotive and Electrical Performance Laboratory
ADF	Australian Defence Force
ATS	Accredited Test Services
BCA	Building Code of Australia
CCTV	Closed Circuit Television
DEH	Department of Environment and Heritage
DISC	Defence Infrastructure Sub-Committee
DMO	Defence Materiel Organisation
DPM	Defence Plaza Melbourne
DSM	Defence Site Maribyrnong
ECC	Environmental Clearance Certificates
ECL	Electronics and Communications Laboratory
EDF	Explosives Development Facility (an element of FSS)
ELAF	Enclosed Light Armaments Facility (an element of FSS)
EMP	Environment Management Plan
ESD	Ecologically Sustainable Development
EWS	Emergency Warning System
FSS	Fire Support Systems
GST	Goods and Services Tax
HVTF	Heavy Vibration Test Equipment
IAD	Infrastructure Asset Development
ID	Infrastructure Division
LCS	Land Combat Systems (an element of LEA)
LEA	Land Engineering Agency (an element of DMO)
LSD	Land Systems Division (a division of DMO)
MEL	Mechanical and Environmental Laboratory
MFPE	Defence Manual of Fire Protection Engineering
OH&S	Occupational Health and Safety
OHS&E	Occupational Health and Safety and Environment
POL	Petrol Oil and Lubricant
PWC	Public Works Committee
SPO	Systems Programme Offices
TRF	Army Technical Regulatory Framework

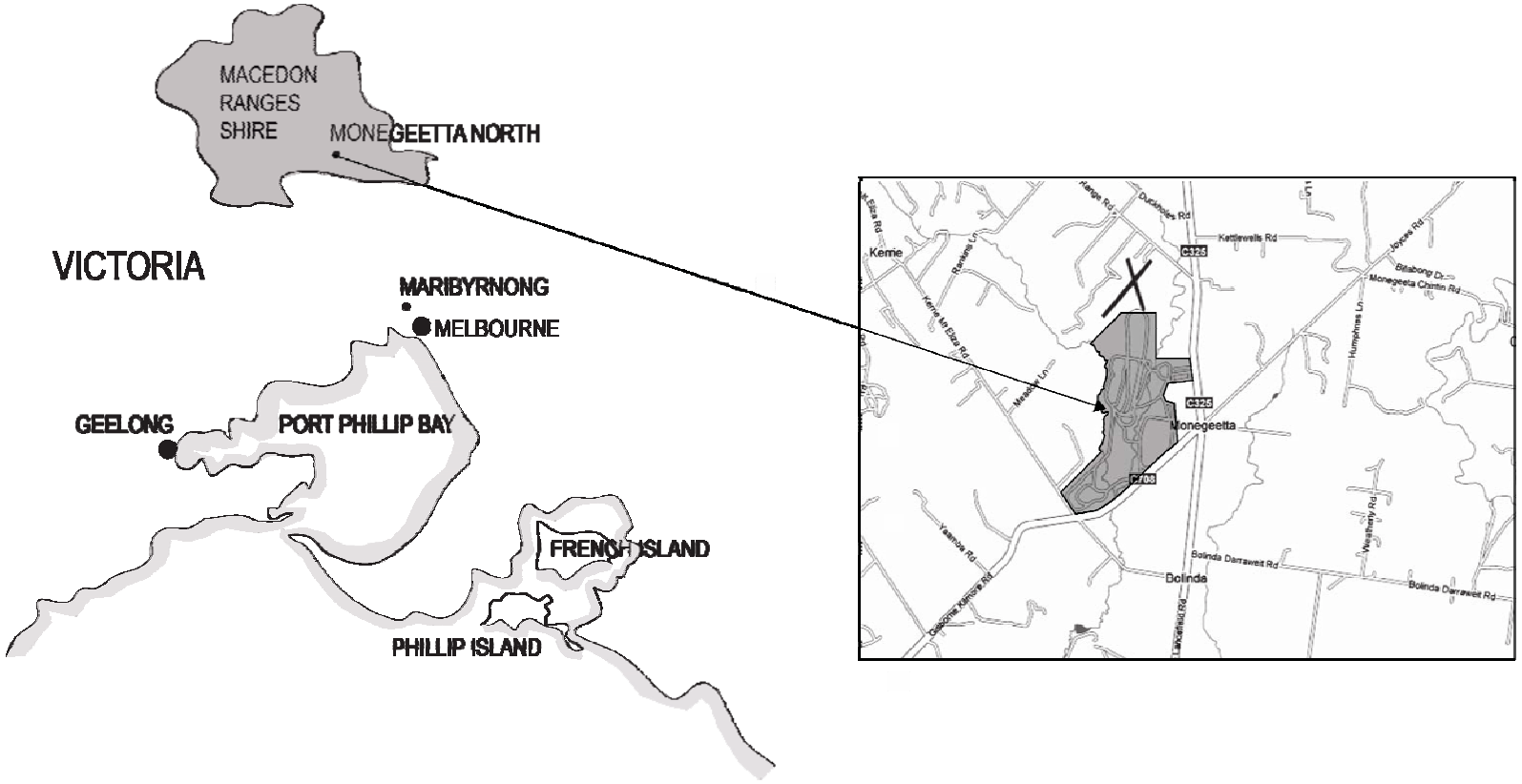
Attachment 2 – Monegeetta & Maribyrnong Locations



TEST SERVICES LOCATIONS

LEA MARIBYRNONG TEST SERVICES RELOCATION
MONEGEETTA NORTH, VICTORIA, AUSTRALIA

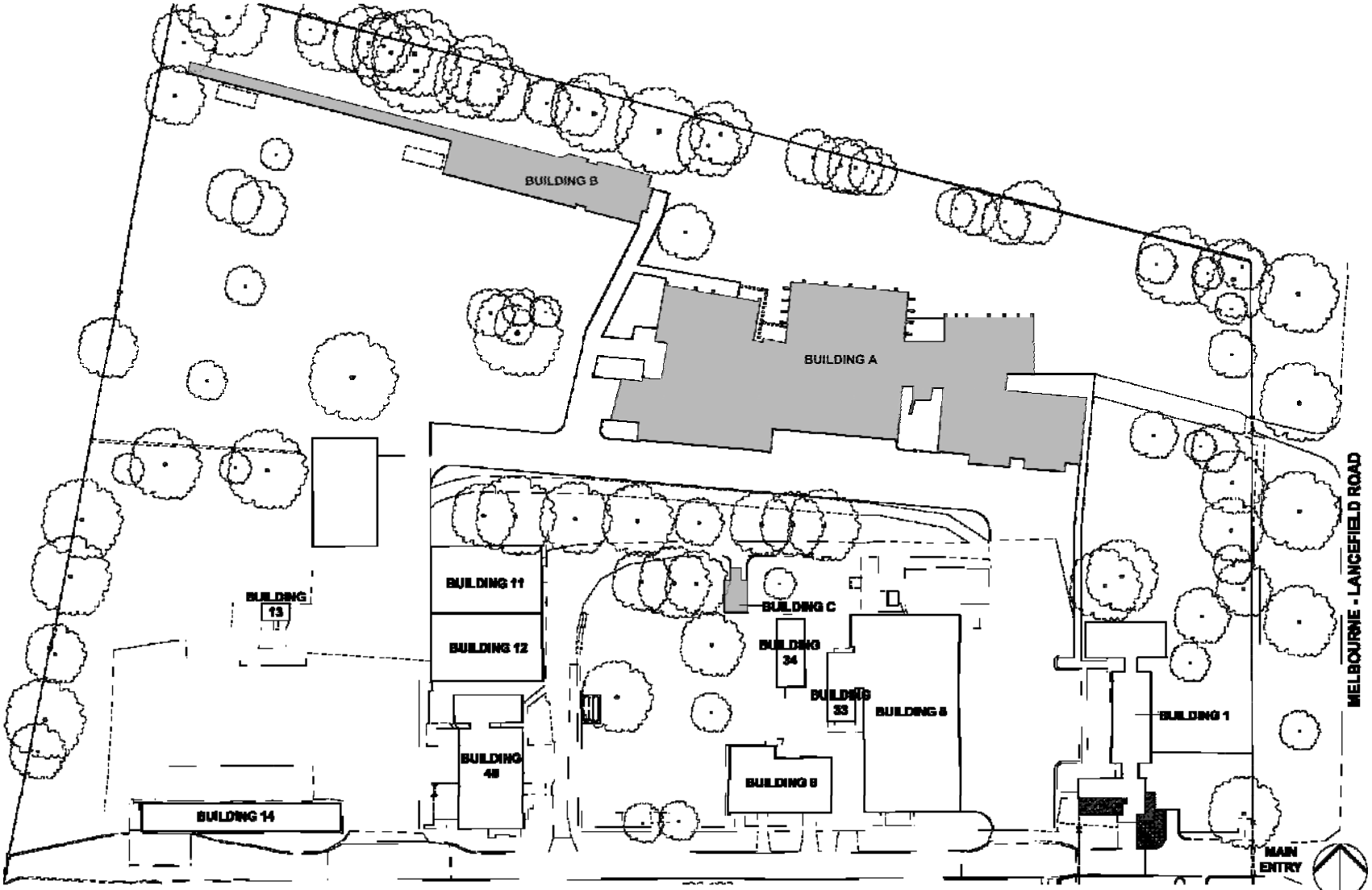
Attachment 3 – Monegeetta Base Location



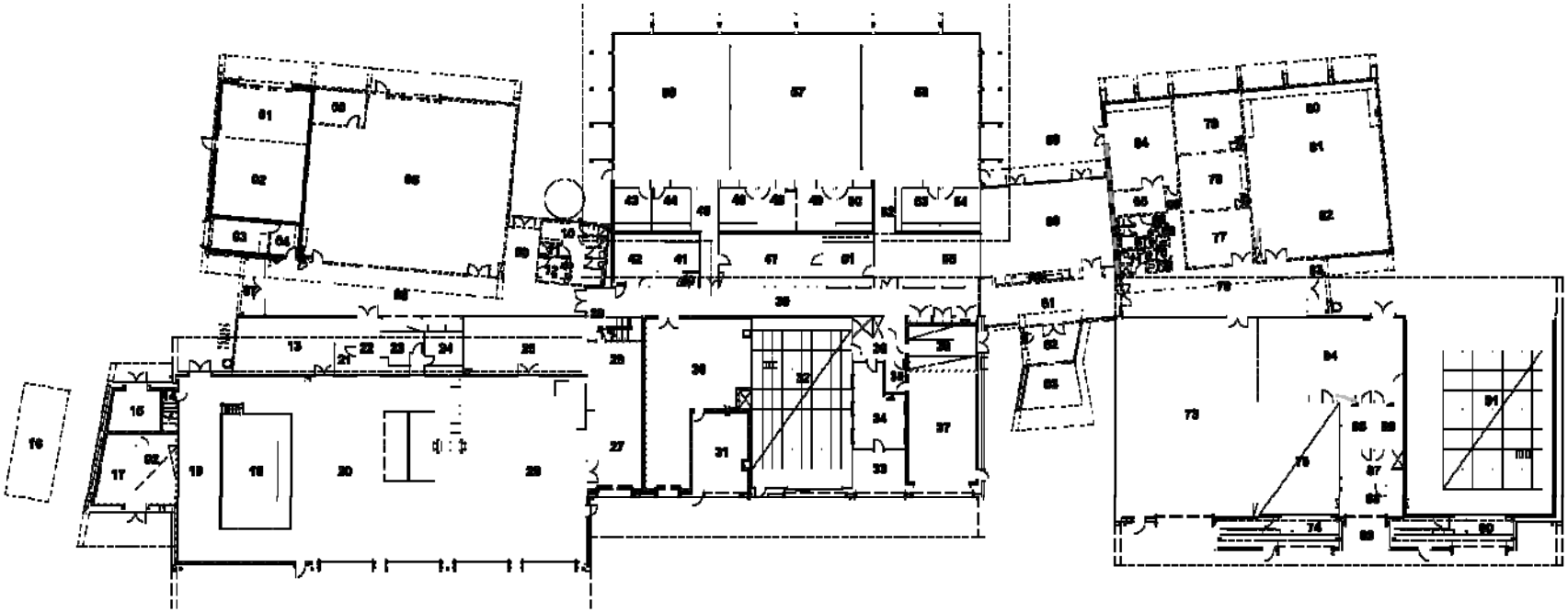
TEST SERVICES LOCATIONS

LEA MARIBYRNONG TEST SERVICES RELOCATION
MONEGEETTA NORTH, VICTORIA, AUSTRALIA

Attachment 4– Monegeetta Proposed Works – Site Plan



Attachment 5 – Proposed Works – Floor Plan – Building A



ROOM LEGEND

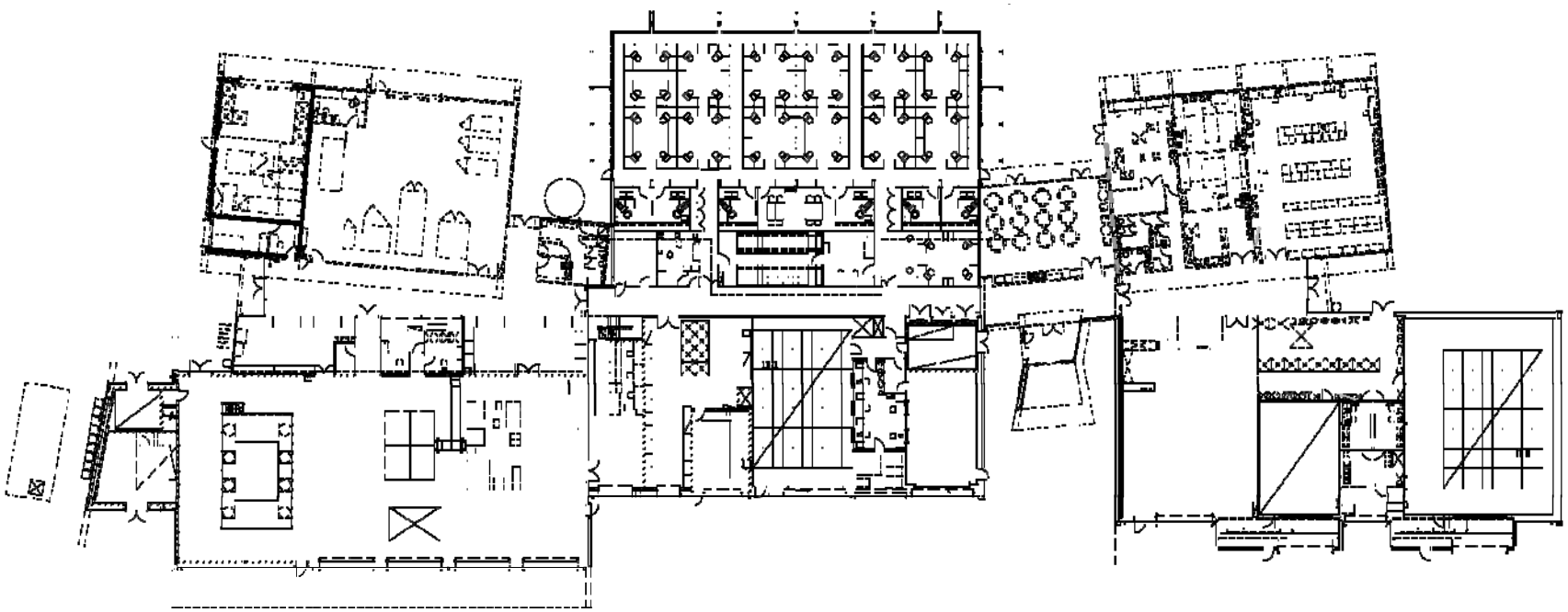
01	HIGH TEMPERATURE TESTING	14	STAIR 2	27	SADL WORK AREA	40	AIRLOCK	53	OFFICE 5	66	AIRLOCK	79	IMAGE INTENSIFIER TEST ROOM
02	SALT & DUST TESTING	15	COOLING PUMP POWER	28	SADL STORE	41	DATA STORAGE ROOM	54	OFFICE 4	67	MALE TOILETS	80	E&M TEST
03	BATTERY TESTING	16	RAIN SPRAY TEST AREA	29	STAIR 1	42	IT SERVICES	55	ADMINISTRATION WORKSTATIONS	68	CLEANER'S ROOM	81	E&M CALIBRATION
04	BATTERY OFFICE	17	HYDRAULIC POWER	30	COMMON STORE	43	OFFICE 1	56	WORKSTATION ACCOMMODATION	69	CORRIDOR	82	E&M TEST AND CALIBRATION STORAGE
05	SMALL CLIMATIC CHAMBERS OFFICE	18	VIBRATION ROOM	31	STEAM GENERATION	44	OFFICE 2	57	WORKSTATION ACCOMMODATION	70	AIRLOCK	83	ENTRY
06	SMALL CLIMATIC CHAMBERS	19	VIBRATION TABLE	32	ENVIRONMENTAL CHAMBER	45	CORRIDOR	58	WORKSTATION ACCOMMODATION	71	DISABLED TOILETS	84	STORE
07	ENTRY	20	HARD STAND AREA	33	EUT EXERCISE ROOM	46	OFFICE 3	59	COURTYARD	72	FEMALE TOILETS	85	CONTROL ROOM
08	CORRIDOR	21	SLING ROOM	34	CONTROL ROOMS	47	CALIBRATION ARCHIVE	60	LUNCH ROOM	73	UNSCREENED ROOM	86	CONTROL ROOM
09	ENTRY	22	CORRIDOR	35	AIRLOCK	48	MEETING ROOM 1	61	CORRIDOR	74	SHIELD DOOR HOUSING	87	AMPLIFIER ROOM
10	WC/SHOWERS/LOCKERS	23	CLEAN ROOM	36	AIRLOCK	49	MEETING ROOM 2	62	MAIN ENTRY	75	SMALL CHAMBER	88	CUT EXERCISE ROOM
11	AIRLOCK	24	HARD STAND CONTROL ROOM	37	COLD CHAMBER	50	OFFICE 6	63	ENTRY COURTYARD	76	CORRIDOR	89	ALCOVE
12	CLEANER'S ROOM	25	STORE ROOM 2	38	SWITCH ROOM	51	RESOURCE ROOM	64	INSTRON TEST AREA	77	STORE	90	SHIELD DOOR HOUSING
13	STORE ROOM 1	26	WORK AREA	39	CORRIDOR	52	CORRIDOR	65	PUMP ROOM	78	THERMAL TEST BENCH ROOM	91	LARGE CHAMBER
												92	CONTROL ROOM (ABOVE)

BUILDING A - PROPOSED FLOOR PLAN

0 2 6 10 20 40 m

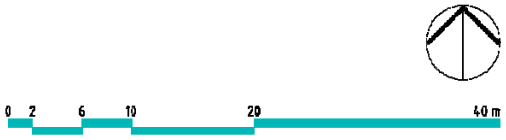
LEA MARIBYRNONG TEST SERVICES RELOCATION
MONEGEETTA NORTH, VIC, AUSTRALIA

Attachment 6 – Proposed Works – Equipment Layout Floor Plan – Building A

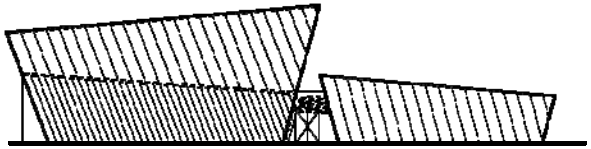


BUILDING A - PROPOSED EQUIPMENT LAYOUT PLAN

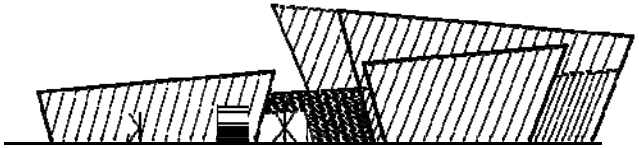
LEA MARIBYRNONG TEST SERVICES RELOCATION
MONEGEETTA NORTH, VIC, AUSTRALIA



Attachment 7 – Elevations – Building A

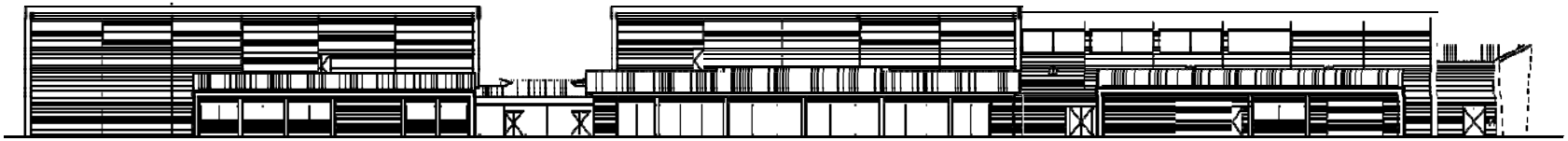


EAST ELEVATION



WEST ELEVATION

SOUTH ELEVATION



NORTH ELEVATION

BUILDING A - PROPOSED ELEVATIONS

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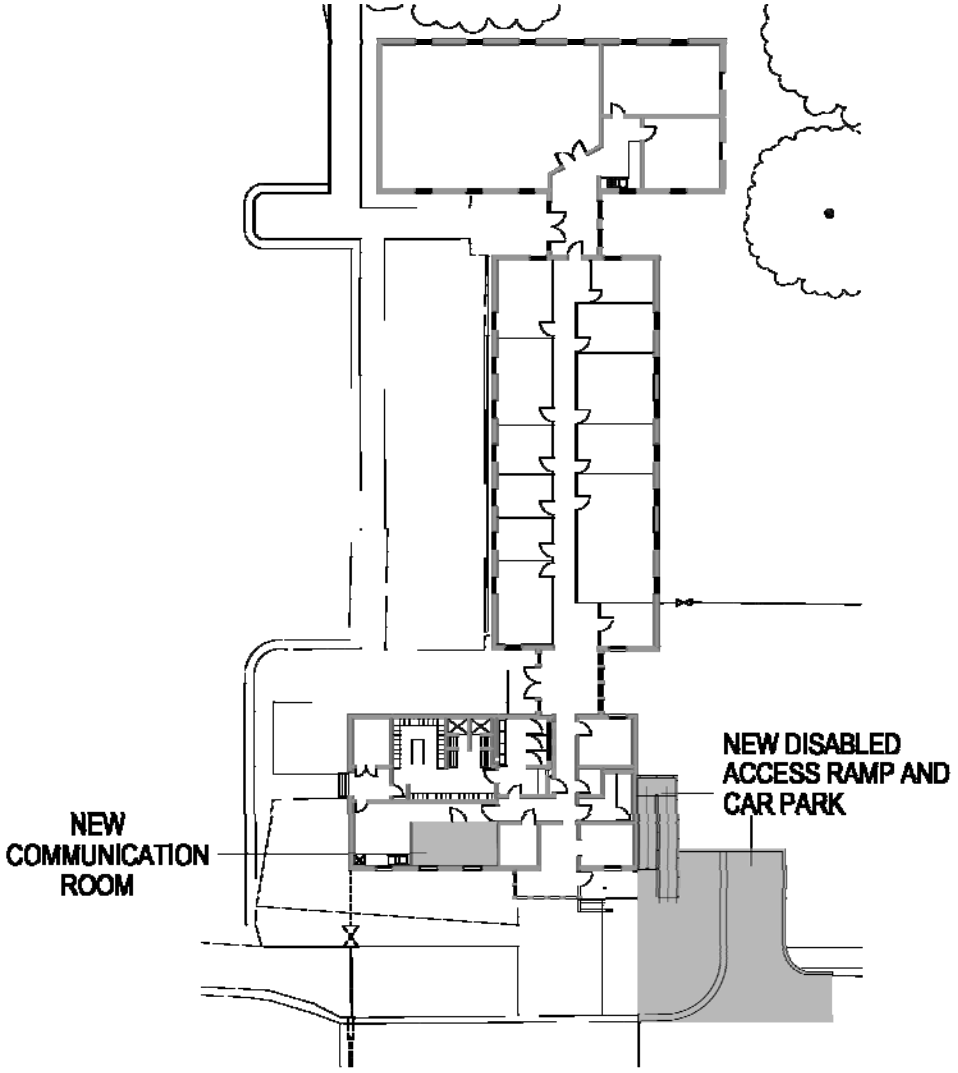
Attachment 8 –Proposed Refurbishment – Floor Plan – Building 1



BUILDING 1 - PROPOSED FLOOR PLAN

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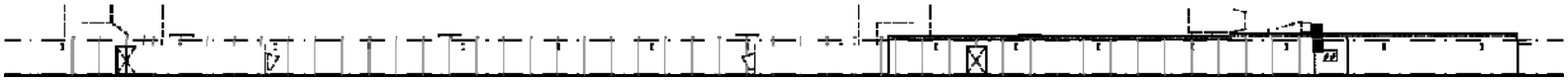
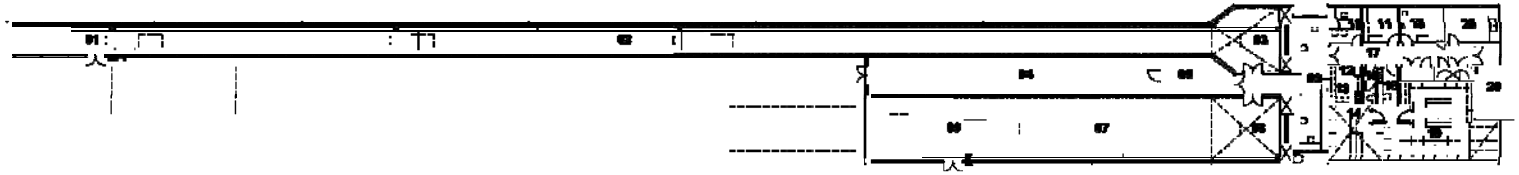
0 1 3 5 10 30 m

ATTACHMENT 9 – Proposed ELAF – Building B

NORTH ELEVATION



SOUTH ELEVATION



FLOOR PLAN

ROOM LEGEND

01	TARGET BAY	08	FIRING BAY	15	WC
02	100M FIRING TUNNEL	09	CONTROL ROOM	16	ISSUE
03	FIRING BAY	10	RANGE MANAGER	17	CORRIDOR
04	GENERAL STORE	11	CLEAN ROOM	18	DIRTY ROOM
05	CONDITIONING ROOM	12	KITCHEN	19	ARMOURY
06	TARGET BAY	13	BRIEFING AREA	20	WORKSHOP
07	25M FIRING TUNNEL	14	MAGAZINE	21	LOADING BAY

BUILDING B - PROPOSED FLOOR PLAN & ELEVATIONS

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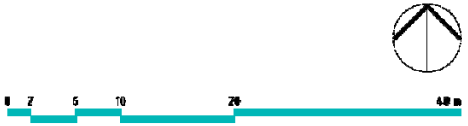
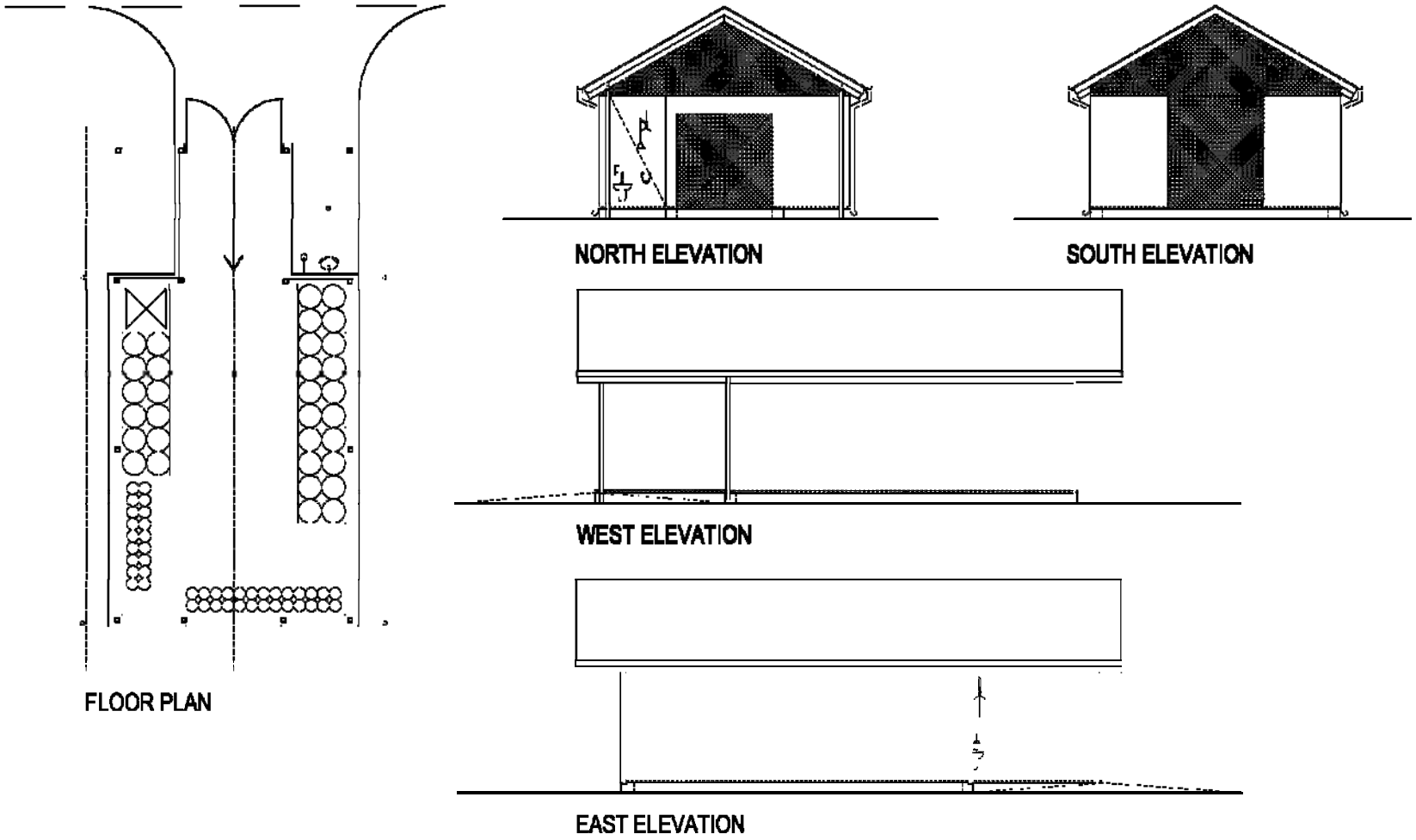


Attachment 10 – Proposed POL Store – Building C



BUILDING C - PROPOSED FLOOR PLAN AND ELEVATIONS

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