



**JOINT LOGISTICS UNIT (VICTORIA)**

**WAREHOUSING FACILITIES**

**STATEMENT OF EVIDENCE**

**TO THE**

**PARLIMENTARY STANDING COMMITTEE**

**ON PUBLIC WORKS**

**DEPARTMENT OF DEFENCE**

**CANBERRA, ACT**

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## **JOINT LOGISTICS UNIT (VICTORIA) WAREHOUSING FACILITIES**

### **PART A – JUSTIFICATION**

#### **INTRODUCTION**

1. This evidence to the Parliamentary Standing Committee on Public Works presents a proposal to rationalise and centralise existing warehousing operations in the Albury/Wodonga Military Area (AWMA<sup>1</sup>). The current warehousing facilities at Gaza Ridge Barracks, North Bandiana, Victoria, are at the end of their economic life and are rapidly approaching the end of their usable life.
2. Subject to Parliamentary clearance of this project, construction is scheduled to commence by early 2009 with completion by mid 2010.

#### **PROJECT OBJECTIVES**

3. The main objective of this proposal is to provide Joint Logistic Unit (Victoria) with a modern purpose built facility to enhance operational capability and provide efficient logistical and warehousing support to Defence. The project will reduce Occupational, Health and Safety issues and operational inefficiencies associated with the existing facilities.
4. The proposal involves construction of a new purpose built soldier support warehouse at Wadsworth Barracks, East Bandiana, Victoria to address current deficiencies in the existing warehousing facilities at Gaza Ridge Barracks, North Bandiana, Victoria. The new soldier support warehouse will be dedicated to the storage of clothing and other soldier support items and will centralise soldier support stock into one building. The project will also provide a dedicated receipts and issues area for the existing Freight Distribution Centre, currently situated in the East Bandiana warehousing precinct. The balance of the project involves demolition of vacated and redundant North Bandiana warehouses as well as upgrade works to address Occupational, Health and Safety issues to remaining North Bandiana warehouses.

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<sup>1</sup> See Attachment 1 for List of Abbreviations

## BACKGROUND

5. The Joint Logistics Unit (Victoria)'s warehousing facilities in Bandiana provide both national and regional support for maintenance, storage and distribution of Defence items and is currently supporting a range of operational deployments. Joint Logistics Unit (Victoria) supports an inventory value of over \$1.368 billion located at East and North Bandiana and Wirlinga.

6. The main function of the warehousing facilities at Bandiana is to store combat clothing, personnel equipment, repair parts for armoured vehicles, artillery pieces, weapons systems, and wheeled vehicles, for the Australian forces deployed internationally. The warehousing facilities also provide logistic support to regional units.

7. The current warehousing facilities at Bandiana include the Freight Distribution Centre (20,000m<sup>2</sup> storage capacity) at East Bandiana, nineteen warehouses (63,900m<sup>2</sup> storage capacity) at North Bandiana, and seven warehouses (13,100m<sup>2</sup> storage capacity) at Wirlinga, located approximately ten kilometres from East Bandiana. There are no works required at Wirlinga as part of this project. The North Bandiana warehouses, built in the 1940s/1950s, are light timber-framed buildings that are in various states of disrepair. The Freight Distribution Centre at East Bandiana is a modern facility completed as part of the Bandiana Stage 1 Development in 1995/96 and is capable of storing 54,000 live stock items in multi-level racking and vertical storage carousels.

## NEED FOR THE WORKS

8. **Limitations of existing facilities.** Joint Logistic Unit (Victoria)'s output in support of its national, regional and operational responsibilities has increased significantly in the past ten years, but there has been no commensurate increase in facilities to cope with this increased output. As a result, there are significant constraints on Joint Logistic Unit (Victoria)'s ability to provide effective warehousing support to the Australian Defence Force, due to the age and the inefficient operational layouts of the existing warehousing facilities. The current warehouses at North Bandiana fall well short of modern warehousing standards and are not suitable for storing many of the highly technical stores and major equipments held in today's Defence inventory. These World War II warehouses do not cater well for movement of stock in, out or between the warehouses due to their design, construction and layout, and the warehouses no longer comply with current standards and practices.

9. **Benefits of expected improvements.** The consolidation and centralisation of a large portion of the warehousing operations at the East Bandiana warehousing precinct will result in significant reduction in resources, in particular materiel handling equipment duplications, travel times between warehouses, stock movements, faster distribution and transport costs. The proposed facilities will include modern storage techniques to automate and simplify stock handling processes. Vehicle and equipment spare and repair parts will be centralised in the existing Freight Distribution Centre within the East Bandiana warehousing precinct. Storage of clothing and associated line items for soldier support will be centralised in the new soldier support warehouse.

### THE PROPOSAL

10. **Location.** The site of the proposed infrastructure development outlined in this evidence is confined within the existing Wadsworth Barracks, East Bandiana, Victoria and Gaza Ridge Barracks, North Bandiana, Victoria. Bandiana is located approximately five and 15 kilometres away from the major townships of Wodonga (in Victoria) and Albury (in New South Wales), respectively. Bandiana is approximately 350 kilometres from Melbourne's central business district. A location map and the Albury Wodonga Military Area (AWMA) locality map is contained in Attachment 2.

11. **Work Elements.** The main elements are:

- a) **East Bandiana.** Rationalisation and enhancement of the new warehousing precinct by providing:
  - i) a new soldier support warehouse (15,000m<sup>2</sup>) dedicated to clothing and other soldier support items which will centralise soldier support stock into one building;
  - ii) materiel handling equipment for the new soldier support warehouse ;
  - iii) a new receipts and issues area (1,250m<sup>2</sup>) for the existing Freight Distribution Centre; and
  - iv) upgrade base infrastructure, including improvement to power, water, sewerage, fire ring main, information, communication and technology services, and improvement to the existing roads and security fencing for the new facilities.
- b) **North Bandiana.** Rationalisation of the existing warehouses by:

- i) relocation and rationalisation of stock from existing warehouses to facilitate the centralisation of soldier support items to the new soldier support warehouse;
- ii) demolition of up to eight vacated warehouses; and
- iii) completion of high priority occupational, health and safety related works in approximately ten remaining warehouses.

12. The consolidation and centralisation of warehousing operations to the new soldier support warehouse will rationalise current dispersed functions from separate sites (North Bandiana, East Bandiana and Wirlinga) onto a single site resulting in an overall reduction in warehousing facilities of approximately 25,000m<sup>2</sup> and thereby reducing operational costs and increasing operational efficiencies.

13. The provision of a new purpose built soldier support warehouse will:

- a) reduce Occupational Health and Safety issues and operational inefficiencies by the replacement of existing aged and unsuitable facilities with a new purpose built facility;
- b) Provide a safe work environment that is energy efficient, ecologically sustainable and designed to comply with relevant building codes and standards;
- c) Increase warehousing operational efficiencies by allowing for the consolidation and rationalisation of warehousing operations and personnel.
- d) Improve the level of security for stock stored or retained at the new soldier support warehouse; and
- e) Substantially free up large parts of North Bandiana for other uses; and

#### **OPTIONS CONSIDERED**

14. There were two main options considered during the development of the project.

15. **Option 1.** The first option was to maintain the current facilities across North Bandiana, East Bandiana and Wirlinga. Given the age and condition of the existing facilities, extensive refurbishment and Occupational, Health and Safety related improvements would be required under this option. This option was considered not feasible as it does not address the current deficiencies, nor does it provide a functionally efficient 'fit for purpose' solution due to the design and layout of

the current warehouses. This option does not provide an effective value for money solution and was not considered any further.

16. **Option 2.** The second option consists of a new soldier support warehouse and upgrade works to the existing Freight Distribution Centre, both at East Bandiana. It will require continued use of approximately half the existing 19 warehouses at North Bandiana. High priority upgrade works to address Occupational, Health and Safety issues will also be undertaken within the current funding availability.

### **PREFERRED OPTION**

17. The second option was preferred to address warehousing support shortcomings at North Bandiana. It will provide modern purposed built facilities to enhance operational capability and provide efficient logistical and warehousing support which complies with modern warehousing standards and practices. This option will also reduce Occupational Health and Safety issues and operational inefficiencies and limitations associated with the existing facilities.

### **ECONOMIC IMPACTS**

18. This project will not produce revenue. It will generate short-term employment opportunities predominantly in the building, construction and unskilled labour markets. 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 approximately twelve months. It is anticipated that local building contractors and regionally based tradesperson will be employed on a large proportion of the construction works. The new soldier support warehouse at East Bandiana will not provide any new additional employment opportunities for people living in the area. It is anticipated that existing warehouse staff will be relocated from North Bandiana.

### **ENVIRONMENTAL CONSIDERATIONS**

19. An Environmental Impact Assessment (EIA) has been completed and a determination has been made that there are no aspects of the project that has 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. Therefore referral to the Department of the Environment and Heritage under the EPBC Act is not required. The Environmental Impact Assessment report

did however recommend a number of measures to be implemented to mitigate any adverse environmental impacts which may arise during the construction phase or during subsequent operations of the facilities. The project will be managed in accordance with Defence's local base Environmental Management Plans and Environmental Management Systems. Construction will be undertaken with reference to a Construction Environmental Management Plan (CEMP) which will take into account the recommended mitigation measures. Construction will not commence until an Environmental Clearance Certificate has been issued.

### **HERITAGE IMPACTS**

20. There are no heritage implications for the proposed site at Wadsworth Barracks, East Bandiana. There are no archaeological heritage issues associated with this proposal. There are no issues associated with native title/indigenous land use agreement associated with this project. The warehouses at North Bandiana and Wirlinga have been recommended for nomination on the Commonwealth Heritage List. A Heritage Management Plan has been prepared by Defence to address key heritage considerations for the North Bandiana and Wirlinga precincts.

### **SOCIAL IMPACTS**

21. During the construction period, some employment opportunities may become available for local tradespeople. There are currently about 600 Joint Logistics Unit (Victoria) workforce personnel in Bandiana. It is anticipated that there will be no personnel reductions resulting from the demolition of up to eight warehouses at North Bandiana, with approximately ten warehouses remaining.

### **LONGER TERM PLANNING**

22. There remains a requirement for significant logistic and warehousing facilities in the Albury Wodonga Military Area. Bandiana is currently the single location for a substantial part of many stock line items and logistic supplies. Consolidation of logistic and warehousing facilities at East Bandiana is consistent with Force Disposition Review advice.



### **RELATED PROJECTS**

23. Subject to Government clearance, the Army Logistics Training Centre Supply Training Wing upgrade project at South Bandiana, at an out-turned cost of about \$9 million, is expected to commence construction by late 2008 and will be completed by late 2009.

### **CONSULTATION**

24. During the development of the project, consultation has occurred with Defence stakeholders. Community consultations has or will be held with relevant parties representing the electorate of the proposed works, in particular the local council of Indigo Shire, local government members and relevant Federal and State departments. Discussions will also be held with utility authorities and fire and rescue services. No local community or environmental groups have been identified that would be directly affected by the project. Letter drops to nearby residences on Military street north of the site and on the Murray Valley Highway west of the site, will be undertaken to inform residents of the project. Industry briefings will also be conducted to ensure that the local construction market is provided with information relating to the nature of the works, construction schedule and tendering processes for the project.

## **PART B – TECHNICAL INFORMATION**

### **SCOPE OF WORKS**

25. The proposed scope of works includes the following:

#### **New Facilities and Infrastructure - East Bandiana:**

- a) Construction of a new soldier support warehouse (15,000m<sup>2</sup>) dedicated to clothing and soldier support items. This building will include a:
  - i) pallet racking and block stacking area;
  - ii) restricted access storage area;
  - iii) suspense and dispatch consolidation areas;
  - iv) office administration;
  - v) materiel handling equipment charging area; and
  - vi) dedicated issues and receipts area.
- b) Provision of materiel handling equipment for the soldier support warehouse;
- c) Construction of an awning extension over and an upgrade of the existing receipts and issues area (1,250m<sup>2</sup>) for the existing Freight Distribution Centre; and
- d) Upgrade of existing infrastructure to support the additional facilities. The infrastructure work will involve:
  - i) an upgrade and modification/relocation of portions of the existing storm water and sewer services, including the existing sewer pumping station;
  - ii) separating the domestic and fire fighting water supplies to the new building to provide a dedicated fire service, as required by the Country Fire Authority (CFA);
  - iii) installing a new substation to meet the increased power demand;
  - iv) constructing roads to new buildings;
  - v) providing security fencing to the new facilities; and
  - vi) landscaping of the site.
- e) Relocation of items to the new soldier support warehouse.

**Other Works – North Bandiana:**

- a) Undertake stock rationalisation to consolidate remaining Defence items within existing warehouses;
- b) Up to eight soldier support warehouses (from existing 19 warehouses) will be demolished post the stock rationalisation; and
- c) Upgrading works to address high priority Occupational, Health and Safety issues identified in the ten remaining warehouses at North Bandiana;

**SITE SELECTION AND DESCRIPTION**

26. The proposed site for the new soldier support warehouse is the northwest corner of Wadsworth Barrack, East Bandiana within the Warehousing precinct. The proposed site is within Commonwealth owned and Defence controlled land at the junction of the Murray Valley Highway and Military Street. This site will allow for future expansion and staged development with minimal impact within the warehouse precinct. The site also provides minimal impact on existing operations and warehousing workflow during construction. The new soldier support warehouse would be located at a strategic point, adjacent to the existing Freight Distribution Centre warehouse, which improves operational capability between the warehouses. The proposed site is identified in Attachments 3, 4 and 5.

**ZONING, APPROVALS AND LAND ACQUISITION**

27. All of the facilities proposed in this project will be constructed within the boundaries of Wadsworth Barracks, East Bandiana on Commonwealth owned and Defence controlled land. 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 at East Bandiana.

**APPLICABLE CODES AND STANDARDS**

28. 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;
- c) Commonwealth and State legislation;
- d) Defence Manual Fire Protection Engineering;
- e) Defence Facilities Communications Cabling Standard; and
- f) Defence security publications.

29. A qualified and practising 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 Fire Protection Engineering and any additional State, Local Government and Defence policies.

30. The successful Construction Contractor will be required to 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 for construction and installation are to be maintained.

### **PLANNING AND DESIGN CONCEPTS**

31. The project will provide a safe, secure and efficient workplace specifically designed for the required function. During the preliminary design stage, consideration was given to the selection of materials, equipment and finishes, construction techniques and buildability, which will deliver economies and environmental sustainable efficiencies on a whole-of-life basis. Consideration was also given to achieving the necessary functional requirements, work flow patterns and work environment required to fulfil the warehousing and logistic functions of the space. In the selection of engineering services and associated equipment and energy systems, capital costs were assessed against the operational and maintenance costs. Operating cost comparisons will be included in a life cycle costing analysis during detailed design and prior to selection.

32. The design, structure, servicing and siting of the soldier support warehouse has been determined to ensure that future expansion is possible, with emphasis placed on sizing and terminating inground services for future flexibility.

33. The soldier support warehouse is a large portal frame steel clad building designed to provide best floor area economy with due consideration of the following criteria:

- a) Maximise the number of pallet places;
- b) Provide a floor area of approximately 15,000m<sup>2</sup>;
- c) Minimise the cost of fire egress systems;
- d) Minimise the cost of fire protection system;
- e) Provide an appropriate level of physical security and asset protection;
- f) Provide appropriate protection from the elements;
- g) Provide appropriate levels of resistance to physical damage;
- h) Provide appropriate levels of pest infestation resistance;
- i) Minimise the number of internal obstructions; and
- j) Facilitate optimum logistics and materials handling operations.

34. The administration/materiel handling equipment charging areas are located outside the perimeter of the main soldier support warehouse. This area is single storey and designed primarily as an office environment complete with toilet facilities.

35. The south side of the new soldier support warehouse consist of a canopy designed to provide weather protection for staff engaged in receipts and issues. The receipts and issues area has been deliberately located on the south side of the building away from the residential township of Killara to minimise environmental impact from noise and light.

36. The building works will be completed with all communications and office equipment, light fittings, partitions, floor treatments and furniture. The new soldier support warehouse will incorporate building management systems, metering and other provisions to measure and monitor energy use and to allow regular energy audits.

37. A copy of the new soldier support warehouse floor plan is contained in Attachment 6. A copy of the building's elevations and section is contained in Attachment 7.

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

38. **Ecologically Sustainable Development.** The Commonwealth is committed to Ecologically Sustainable Development (ESD) and the reduction of greenhouse gas emissions. This project has addressed this policy by adopting cost effective Ecologically Sustainable Development measures as a key objective in the design development and delivery of the new facilities. Selection of construction materials, finishes, engineering services and appropriate building design have been considered against Ecologically Sustainable Development criteria.

39. There are no comprehensive Ecologically Sustainable Development targets and performance requirements for warehouses, or similar types of building, established in the Defence Green Building Requirements Part 1. As the office area in the soldier support warehouse has a floor area of less than 2,000m<sup>2</sup> and does not comprise 100% of the total building area, the soldier support warehouse building and the new receipt and issues area for the existing Freight Distribution Centre will not be targeting 4.5 stars Australian Building Greenhouse Rating (ABGR) as required by Defence's Green building policy. However, the new facilities will be designed, constructed, operated and maintained to best-practice environmental sustainable principles.

40. Key Ecologically Sustainable Development initiatives for this project are summarised below:

- a) **Building Form and Fabric.** Energy use will be reduced by passive design features. The following features will be incorporated into the design of the soldier support warehouse:
  - i) Maximisation of natural lighting from the roof of the soldier support warehouse and minimal glazing at the walls of the soldier support warehouse in order to maximise the functionality of the warehouse spaces;
  - ii) A relatively large floor area to wall ratio in the warehouse spaces;
  - iii) Planting of indigenous trees to provide natural visual screen and shading;
  - iv) Enhance thermal and acoustic performance of internal spaces through choice of external building fabric materials; and
  - v) Maximising rainwater capture through the choice of material and design of the new roofs.

- b) **Energy Use Minimisation.** The design of the new facilities will consider and adopted the following measures to reduce energy consumption in a cost effective manner:
- i) Develop an energy management plan for the new facilities;
  - ii) Metering on energy usage;
  - iii) Building orientation to balance the maximum use of prevailing winds for natural ventilation and the sun for temperature control and natural lighting;
  - iv) Only the office spaces are air conditioned;
  - v) Use of insulation and weatherproofing seals;
  - vi) Use of energy efficient motion sensor lighting and lighting control systems;
  - vii) Use of energy efficient plant and equipment with occupancy sensing and after-hours automatic shut-off controls; and
  - viii) Providing the capability to control energy use by zones.
- c) **Water Use Reduction.** Adequate reticulated water supply is available. Existing stormwater and sewer services will be upgraded and modified, including the existing sewer pumping station. Rainwater harvesting of the new soldier support warehouse roof will be utilised for both toilets and urinal flushing. The design of the new soldier support warehouse will consider the adoption of the following measures to manage potable water consumption:
- i) Metering of water usage;
  - ii) Pressure limiting valves to limit pressure at all appliances;
  - iii) Water efficient four star taps, fittings, toilets and appliances;
  - iv) Drought tolerant indigenous plantings; and
  - v) The collection and storage of rainwater for non-potable water uses.
- 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. Segregation and

collection of recyclable wastes will be implemented during construction and by users of the building at completion.

- e) **Choice of Building Materials and Finishes.** Materials and finishes will be selected for their functionality, durability, and low maintenance and for their ecologically sustainable design properties to minimise impacts on the environment and to provide long term cost efficiencies. Materials will 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.

41. **Water and Energy Conservation.** Defence reports annually to Parliament on its energy management performance in accordance with the Energy Efficiency in Government Operations (EEGO) policy and on its progress in meeting the energy efficiency targets established by the government. Defence is committed to the implementation of policies and strategies in energy, water and waste management to improve natural resource efficiency and to support its commitment to the reduction of energy consumption, potable water consumption and waste diversion to landfill.

42. All new building works in this project will be designed, constructed, operated and maintained to ensure that they use energy efficiently. To achieve this, as a minimum, and as applicable to the building's classification, the new soldier support warehouse will comply with:

- a) Part I2 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 policy; and
- d) Defence Green Building Requirements;

43. The new soldier support warehouse will comply with the relevant energy efficiency provision in the Building Code of Australia, except where there are energy efficiency requirements imposed by Defence Green Building Requirements – Part 1 that are of a higher standard. In addition, the office area within the new soldier support warehouse will comply with the minimum energy performance standards in the EEGO policy for buildings with less than 2,000m<sup>2</sup> of office accommodation. An Energy Management Plan will be developed for implementation by Defence.



### **PROVISION FOR DISABLED ACCESS**

44. Dispensation has been sought from the requirements of the Building Code of Australia to provide disabled access and other facilities for disabled persons within the new soldier support warehouse, excluding the administration area. This dispensation has been sought on the basis that the new facility will be occupied only by Defence personnel, the nature of whose employment would preclude permanent disabilities. Access and facilities for the disabled will be provided for the administration area of the new soldier support warehouse and elsewhere as 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'*.

### **OCCUPATIONAL HEALTH AND SAFETY**

45. 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. The Warehousing operator is required to operate under an approved Health and Safety Plan. The site will be appropriately secured to prevent unauthorised public access during the construction period. The existing warehouse sites at North Bandiana will be appropriately secured to prevent unauthorised access during the warehouse demolition works. No special or unusual public safety risks have been identified.

### **STRUCTURAL DESIGN**

46. The structural solution adopted for the new soldier support warehouse consists of portal frames spanning 21 meters, at typically a regular grid of 9.6 meter centres. Internal columns have been adopted to produce an economical structural solution due to the size of the building. The spacing of the internal columns will integrate with the racking layout, as well as allowing for future flexibility of the floor space. The structure is braced for wind loading. The external walls are typically clad with pre-cast concrete panels to a height of three meters, and metal sheeting above. An internal full height 'fire-wall' consisting of pre-cast concrete panels is laterally supported at roof level. The proposed works for the new issue and receipt area of the existing Freight Distribution

Centre involve extending the existing receipts and issues canopy as identified in Attachments 8 and 9. The structural solution adopted uses the existing canopy structure as far as practical.

### **MECHANICAL SERVICES**

47. The new soldier support warehouse will be served by a number of systems, such as air conditioning, natural ventilation, and radiant heating to minimise energy usage and suit the various functions within the new soldier support warehouse. The pallet racking area will be provided with natural ventilation and air conditioning. Mechanical ventilation will also be used for smoke exhaust for the new soldier support warehouse. Smoke exhaust will be in accordance with the requirements of the Building Code of Australia. Gas fired radiant heating will be provided in the dispatch processing and receipts area of the new soldier support warehouse. Only the office spaces will be provided with ducted reverse cycle air conditioning units with economy cycles that utilise outside air for economy cycles when conditions are appropriate. Smaller individual offices will be provided with stand alone wall mounted or cassette split systems. A Building Management System and metering will be provided to the new soldier support warehouse for monitoring, control and measuring energy use and allow regular energy audits where practicable.

### **HYDRAULIC SERVICES**

48. The new soldier support warehouse will be connected to the existing sewer service via a sewerage pumping station. The design provides a new underground line extending to all proposed fittings in the building. Adequate reticulated water supply is available. Storm water runoff from pavements will be discharged into existing dams located within the proving ground. Rainwater will be harvested from the new soldier support warehouse roof and will be utilised for both toilet and urinal flushing. A minimum of two separate rainwater storage tanks at approximately 20,000 litres each will be provided at either side of the building. Solar hot water will be used for hot water requirements. Metering will be provided for monitoring, control and measuring water consumption use and allow regular audits.

### **ELECTRICAL SERVICES**

49. The design for the new soldier support warehouse has embraced energy efficient design initiatives to enable optimum performance at minimum possible energy consumption. As the main power source usage in the soldier support warehouse will be lighting, energy efficient lighting

(utilising T5 lamps) and room motion sensors will be included in the final design. The existing electrical utilities supply to East Bandiana is not adequate to supply the increased load required for the new soldier support warehouse. A new electrical sub-station will be required to cater for the increased electrical demand. Lighting, power, lightning protection and fire detection will be provided in accordance with the relevant Australian Standards and any additional Defence policy. Electrical infrastructure and switchboards will have modest spare capacity to allow for future growth or demand. Fire detection systems, indication panels, emergency and exit lightings will be provided to the new facilities in accordance with the Australian Standards.

50. The electrical system includes the following:

- a) General and emergency lighting;
- b) Lighting control systems;
- c) General and special purpose power;
- d) Earthing installations;
- e) Automatic fire detection and alarm systems; and
- f) Emergency Warning System to function in conjunction with the fire alarm system and as a Public Announcement system.

51. Lamps will be high efficiency fittings and include sensor controlled lighting to intermittently occupied areas. Metering will be provided for monitoring, control and measuring energy consumption use and allow regular audits.

## **FIRE PROTECTION**

52. All construction and fire protection requirements will, as a minimum, be in accordance with the provisions of the Building Code of Australia, 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. The levels of fire protection specified are above Building Code of Australia requirements and have been determined by a risk assessment and risk management approach to fire protection. Defence will require certification from a suitably qualified and accredited building surveyor, that the design and construction meet the requirements of the Defence Manual of Fire

Protection and Engineering. The Victorian CFA 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. Any recommended departures from the Building Code of Australia and the Defence Manual of Fire Protection and Engineering requirements 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.

### **CIVIL WORKS**

53. Geotechnical surveys were carried out during the early design stage and indicate that the site conditions do not present any major civil engineering issue, but each will be the subject of further survey and geotechnical investigation during the detailed design phase.

54. The project will provide the following:

- a) A heavy duty concrete pavement one way ring road constructed along the south side of the new soldier support warehouse and extending eastward as heavy duty asphalt pavement to connect to the existing road network;
- b) An all weather crushed rock emergency vehicle access road encircling the new soldier support warehouse;
- c) Upgrading of the existing hardstand pavement to the south of existing Freight Distribution Centre for improved vehicular access and operations;
- d) Pedestrian access paths will be constructed around the buildings at all entry points; and
- e) Separation of clean and dirty stormwater reticulation systems.

### **LANDSCAPING**

55. Landscaping works would be directed toward the restoration of areas disturbed during construction and general improvement of the built environment. Precautions will be taken to avoid compromising existing environmental sensitivities by adopting landscaping practices in keeping with local environmental conditions. This proposal will not cause any substantial change in the essential landscape character of the site. The proposed landscaping will markedly improve the

aesthetics of the site and complement the new buildings. Landscaping works are confined to areas adjacent to the new soldier support warehouse and around the proposed pedestrian walkways and paved areas.

56. The soft landscape areas will consist of native plants and mulch that have been selected to minimise water requirements for the garden areas. Many of the species are indigenous to the local area and they will encourage native fauna and insect life. The selection of species will avoid 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. The project will adopt landscaping practices in keeping with the local environment conditions and water conservation measures. Accordingly, there will be no irrigation system installed as part of the landscape works. Swales have been incorporated into the design to harvest and store rainwater within the landscape.

### **SECURITY**

57. 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. The security threat assessment will be reviewed during the detailed design phase and the new facilities would be secured as appropriate to the classification level required for activities conducted. Appropriate security protection will be provided in accordance with the Defence Security Manual and specific project requirements.

### **NOISE AND ACOUSTICS**

58. The major noise sources from the current warehousing operations include steady state noise (i.e. air conditioning noise) and time varying noise (i.e. traffic movement, human behavioural noises, delivery trucks and forklifts). The Noise Assessment completed at East Bandiana identified that noise levels at the existing Killara dwellings adjacent to the new soldier support warehouse will not exceed the acceptable noise limit criterion stipulated by the Victorian Environmental Protection Authority. The new soldier support warehouse will not pose an impediment for the adjacent Killara residences as appropriate noise control measures will be incorporated into the final design.

59. The Noise Assessment results indicate that an appropriately designed acoustic fence of at least 1.8 meters in height built along the alignment of the northern boundary of the new soldier support

warehouse will help to reduce the potential impact on the adjacent residences during construction. The current design incorporates a number of other acoustic treatments. This consists of a generous setback from the adjacent Killara residents, a three meter high pre-cast wall on the north eastern façade facing the Killara residents, and the positioning of the issues and receipts area on the south side of the building. It is anticipated that the new soldier support warehouse will not increase noise output than the current Freight Distribution Centre.

### **INFORMATION COMMUNICATION AND TECHNOLOGY**

60. 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 soldier support warehouse. Upgrading of the capacity of the network to supply the new soldier support warehouse will not be required.

61. The new soldier support warehouse will house both current and future generations of soldier support materials. A separate project is currently under development by Joint Logistics Unit (Victoria) for the introduction of a Warehouse Management System (WMS). The implementation of the required Defence Technologies (i.e. Radio Frequency Identification) will also be delivered separately from this project by Defence Materiel Organisation's Defence Technology Upgrade Project.

### **CHILDCARE PROVISION**

62. There is no requirement for additional childcare facility, as this project does not increase the base population. There is an occasional care facility available and located within the neighbourhood house at North Bandiana. Other child care facilities available are located off base and privately operated.

### **COMMUNITY IMPACT**

63. This project will employ skilled construction workers mainly from the Albury Wodonga region. Some interest may also come from nearby regional town centres such as Wagga Wagga and Bendigo, as well as from the city of Melbourne. The project will provide a positive economic impact to small and medium businesses mainly in the region. Construction traffic routes, in

particular access from the Murray Valley Highway, will be managed to minimise any disruption to the local communities during the construction period.

64. There would be little difference in day-to-day activities during or after construction at the warehouse precinct site as the new soldier support warehouse will be located adjacent to the existing Freight Distribution Centre warehouse and vehicular workshops. Residences are familiar with warehousing activities and movements of logistic vehicles emanating from current warehouse operations from the Freight Distribution Centre. It is envisaged that the new soldier support warehouse will not have any significant impact on residents adjacent to the site.

### **PROJECT COSTS**

65. **Cost Estimate.** The estimated outturn cost of this project is \$36.369 million. The cost estimate includes construction costs, professional fees, furniture and fittings, materiel handling equipment, relocation, stock rationalisation, demolition works of vacated warehouses at North Bandiana, minor upgrade works to remaining warehouses at North Bandiana, and a contingency sum.

### **PROJECT DELIVERY SYSTEM**

66. 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, with simple structures and where works can be constructed unhindered by operational or decanting constraints.

### **PROJECT SCHEDULE**

67. Subject to Parliamentary clearance of the project, construction on the new soldier support warehouse is expected to commence by early 2009 and be completed by mid 2010.

## ATTACHMENTS

<b>Attachment 1 - List of Abbreviations.....</b>	<b>23</b>
<b>Attachment 2 - Global Location Map .....</b>	<b>24</b>
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**Attachment 1 - List of Abbreviations**

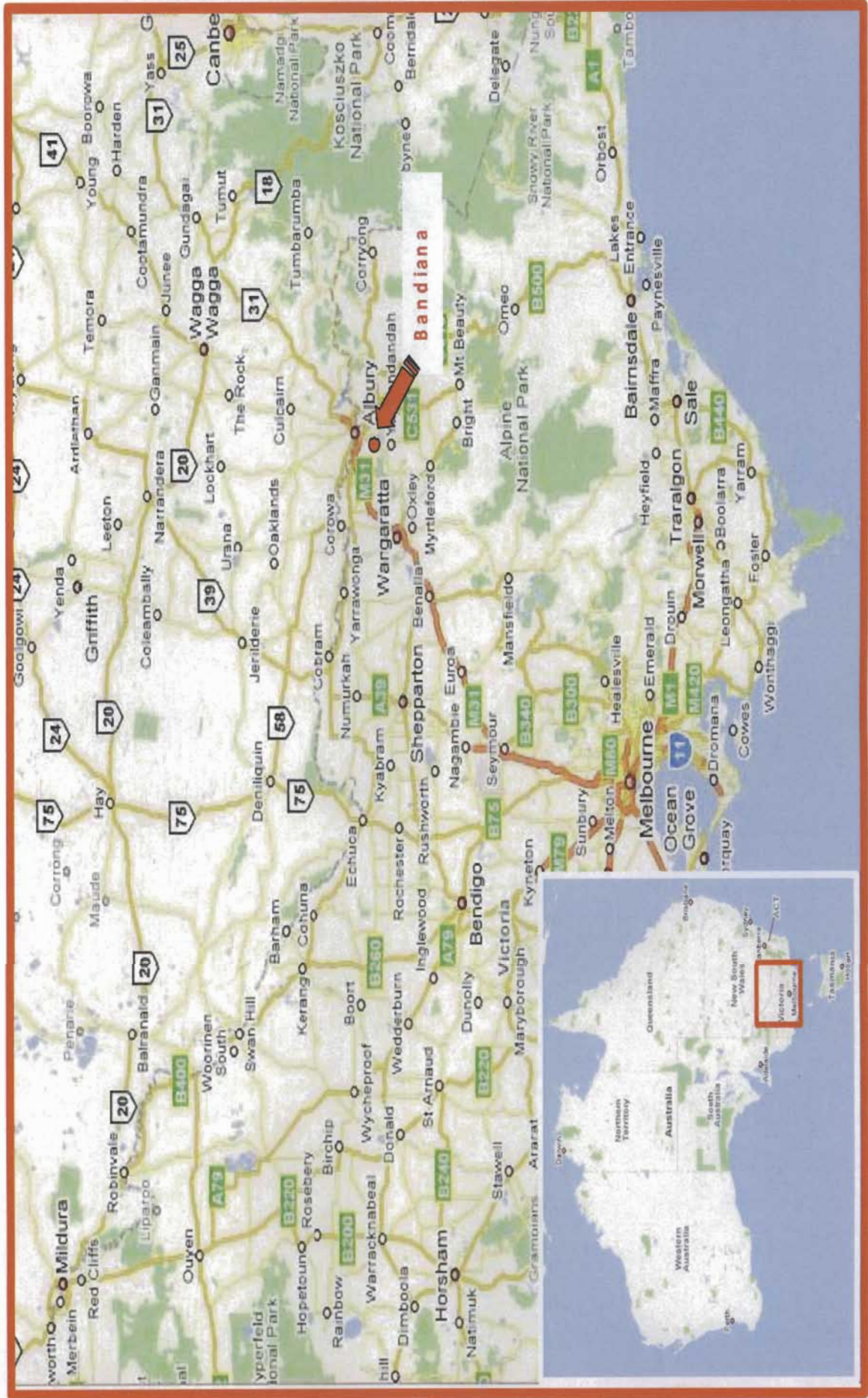
## Attachment 1 – List of Abbreviations

<b>Abbreviation</b>	<b>Description</b>
ADF	Australian Defence Force
AWMA	Albury Wodonga Military Area
BCA	Building Code of Australia
CEMP	Construction Environmental Management Plan
DISC	Defence Infrastructure Sub-Committee
ECC	Environmental Clearance Certificate
EEGO	Energy Efficiency in Government Operations
EIA	Environmental Impact Assessment
EPBC	The Environmental Protection and Diversity Conservation Act 1999 (EBCA Act)
ESD	Ecologically Sustainable Development
GST	Goods and Services Tax
ICT	Information Communications Technology
MFPE	Manual Fire Protection Engineering
MHE	Manual Handling Equipment
NPOC	Net Personnel and Operating Costs
OH&S	Occupational Health and Safety
PFI	Public Finance Initiative
WMS	Warehouse Management System

**Attachment 2 - Location Map**

**- Albury Wodonga Military Area (AWMA) Locality Map**

**GLOBAL LOCATION MAP**  
**JLU(V) WAREHOUSING FACILITIES, BANDIANA, VICTORIA**





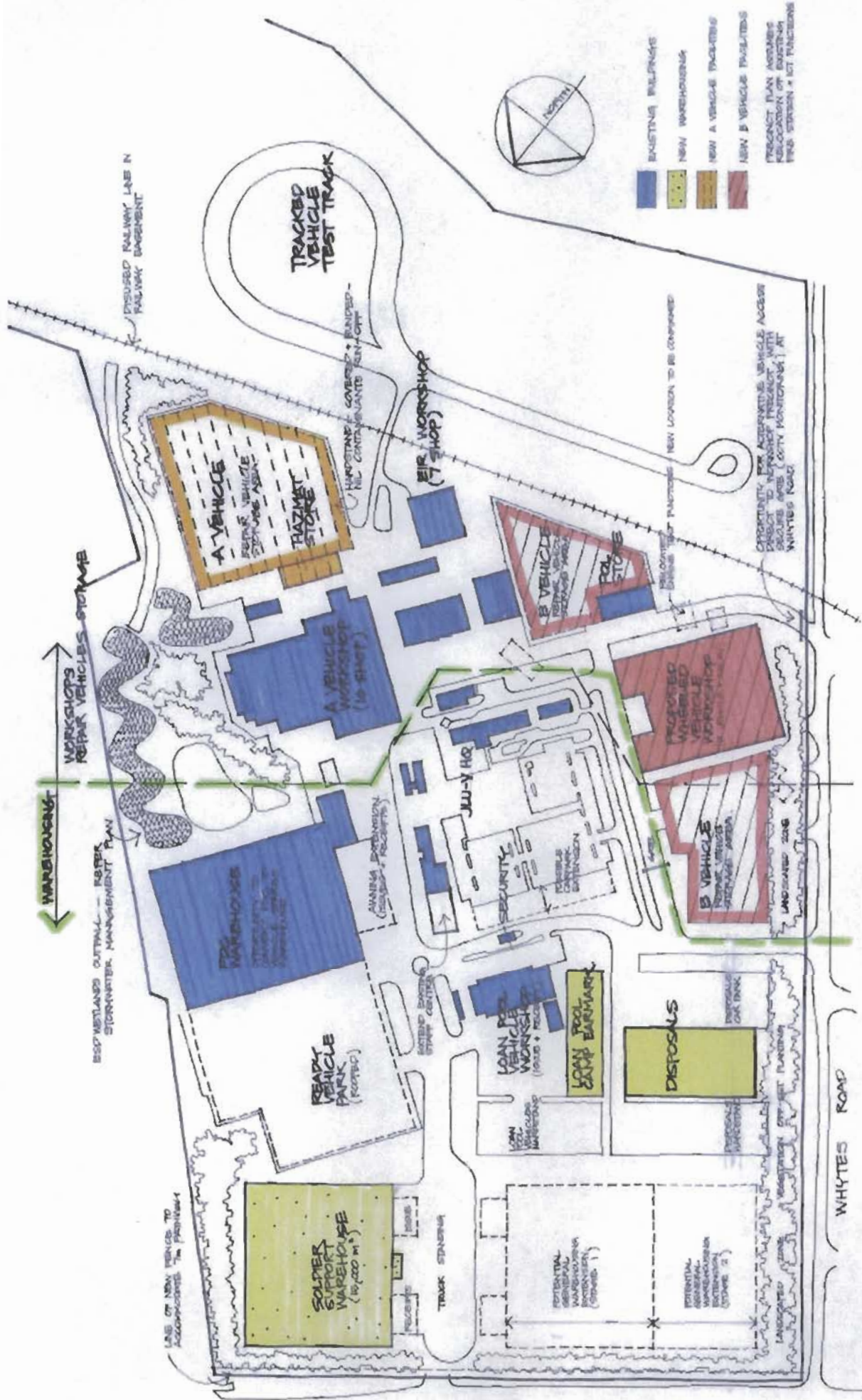
AWMA Locality Plan

**Attachment 3 - East Bandiana Warehousing Facilities, Precinct Plan**

PRECINCT PLAN

JULY-EBB  
EAST BANDANA WAREHOUSING FACILITIES  
PRECINCT PLAN - REVISION A - MAY 2007

MURRAY VALLEY HIGHWAY



WAREHOUSING

WORKSHOPS REPAIR VEHICLES STORAGE

ESP METAL AND OUTFALL - RASPER STORMWATER MANAGEMENT PLAN

LAISSE OF NEW VEHICLES TO ACCOMMODATE THE PREVIOUS

REPAIR VEHICLE PARK (PROTECT)

DISUSED RAILWAY LINES IN RAILWAY EMBANKMENT

TRAILED VEHICLE TEST TRACK

A VEHICLE REPAIR STORAGE AREA

A VEHICLE WORKSHOP (NO SHOPS)

WAREHOUSE

SECURITY

DISPOSALS

JULY HQ

LOAN VEHICLE WORKSHOP (NO SHOPS)

AIR WORKSHOP (NO SHOPS)

B VEHICLE REPAIR STORAGE AREA

PROTECTED WHARFED VEHICLE REPAIR WORKSHOP

B VEHICLE REPAIR STORAGE AREA

SECURITY

LOAN VEHICLE WORKSHOP (NO SHOPS)

DISPOSALS

JULY HQ

REPAIR VEHICLE STORAGE AREA

- EXISTING BUILDINGS
- NEW WAREHOUSES
- NEW A VEHICLE FACILITIES
- NEW B VEHICLE FACILITIES

PROJECT PLAN ASSUMES RELOCATION OF EXISTING BLDG SHOPS + CT FUNCTIONS

OPPORTUNITY FOR ALTERNATE VEHICLE ACCESS POINT TO NEAREST PUBLIC WITH SECURE AREA (CITY MONITORING) AT WHITES ROAD

LANDED ZONE

LANDED ZONE

LANDED ZONE

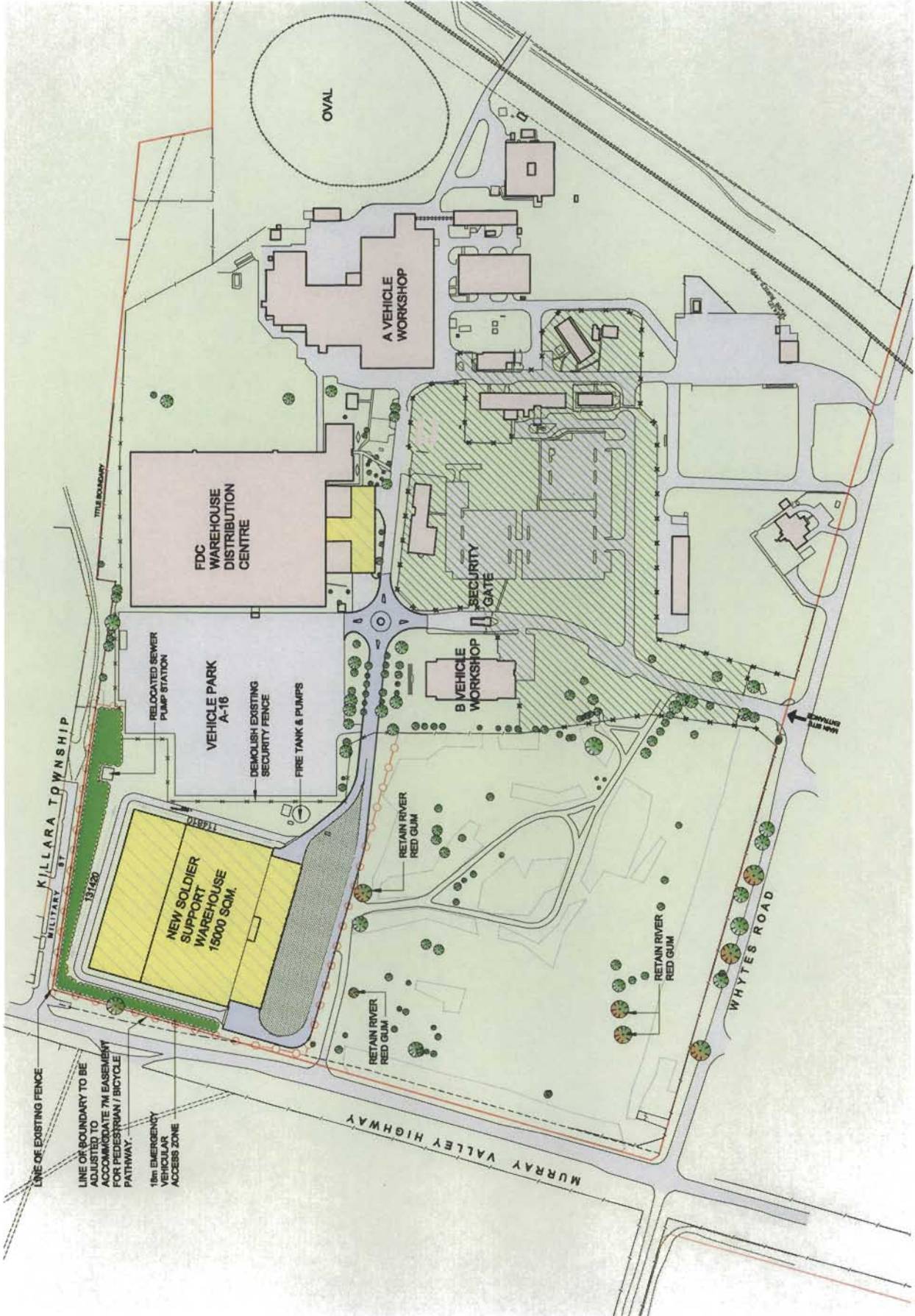
WHITES ROAD

**Attachment 4 - East Bandiana Warehousing Precinct Aerial Perspective**





**Attachment 5 - Site Plan**



- new security fence
- title boundary
- existing security fence
- existing fence
- existing trees
- river red gum to remain
- 16m emergency vehicular access zone
- concrete handland
- existing building
- proposed building work
- existing roads
- proposed roads / paths
- landscaping (existing)
- landscaping (new)
- vegetation buffer
- non secure zone



SK 101  
REV. E



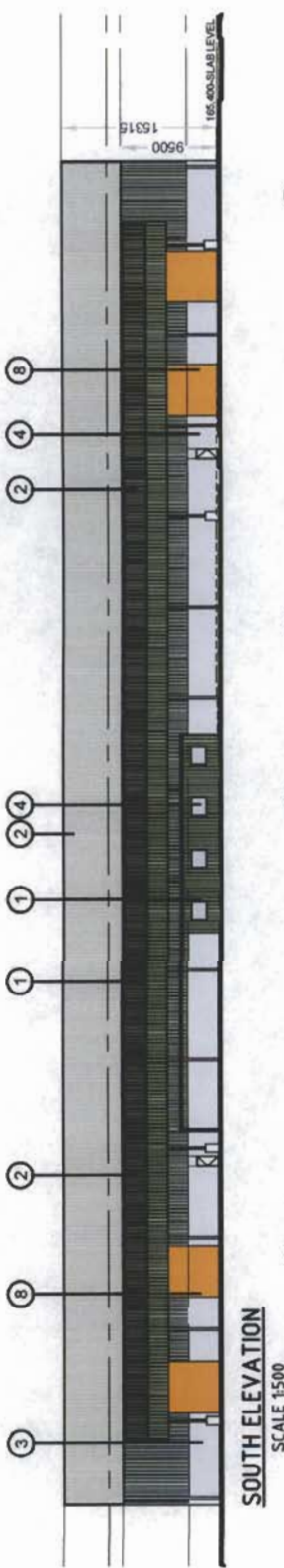
JOB NO. 310400  
28 Mar 07  
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DEPARTMENT OF DEFENCE - C8838 JL(V) WAREHOUSING FACILITIES BANDIANA  
site plan - east bandiana - warehouse precinct

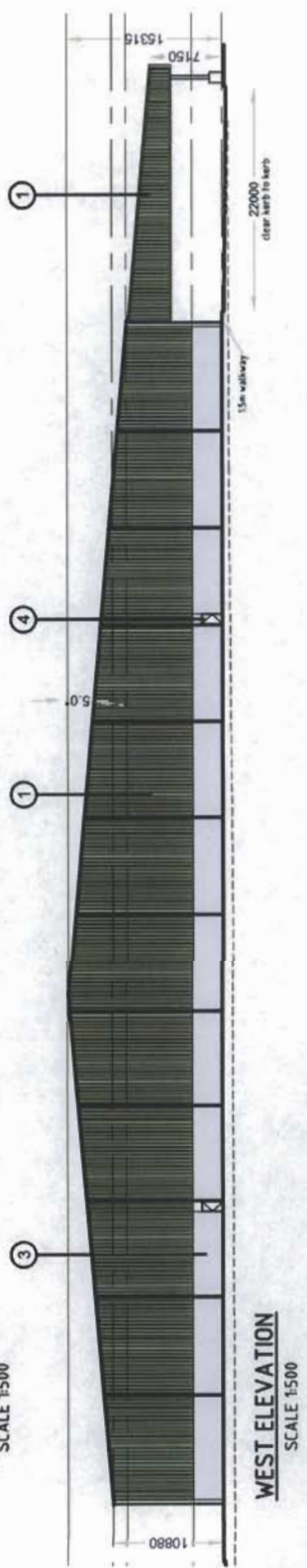
**Attachment 6 - Soldier Support Warehouse, Floor Plan**



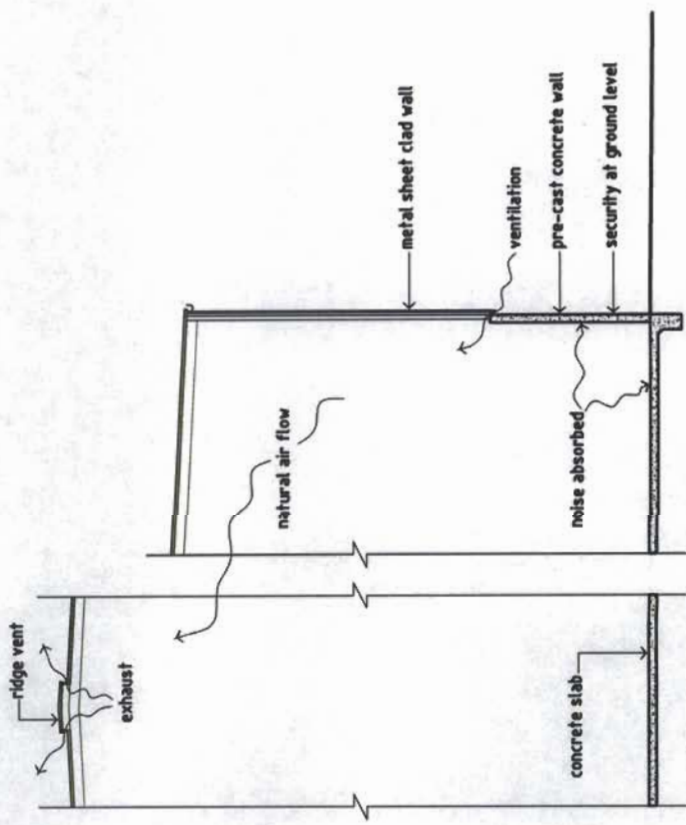
**Attachment 7 - Soldier Support Warehouse, Elevations and Section**



**SOUTH ELEVATION**  
SCALE 1:500



**WEST ELEVATION**  
SCALE 1:500



**TYPICAL SECTION**  
SCALE 1:50



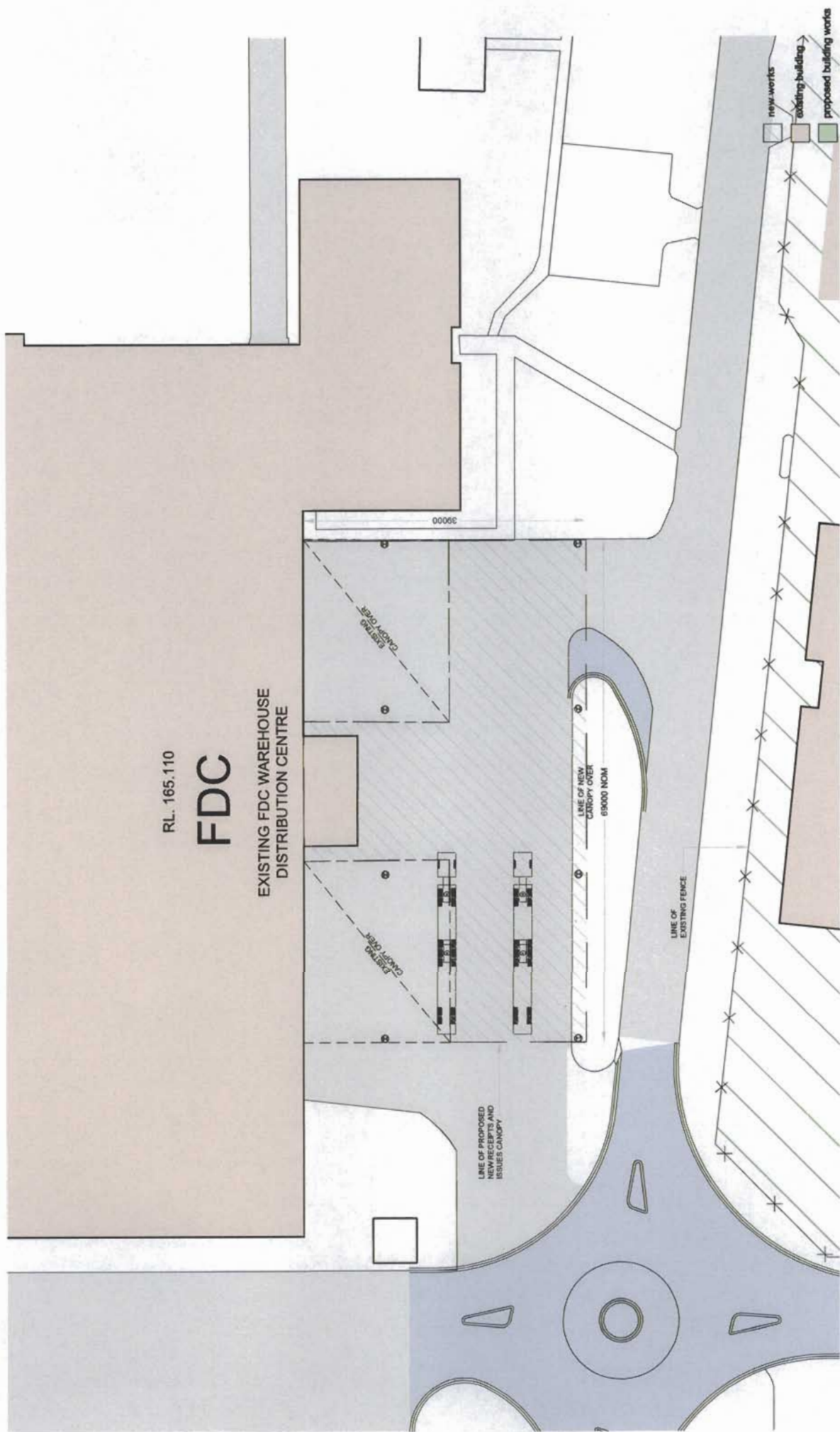
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**SK 110**  
REV B



DEPARTMENT OF DEFENCE - C6838 (L) (V) WAREHOUSING FACILITIES BANDIANA  
**new soldier support warehouse - proposed elevations & section**

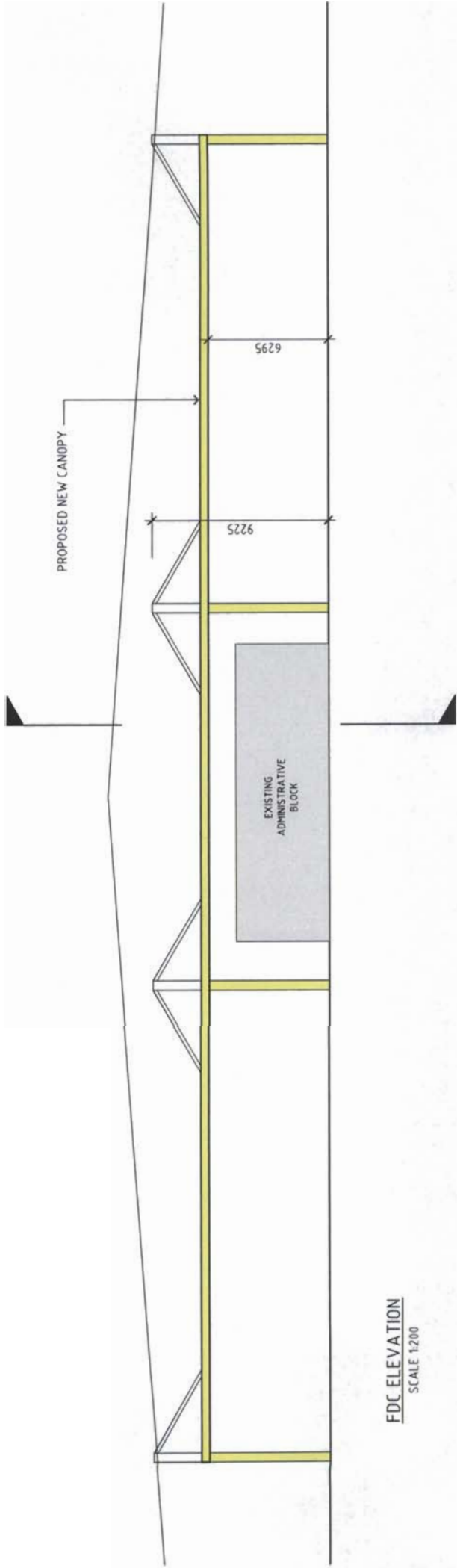
**Attachment 8 – FDC Upgrade, Floor Plan**



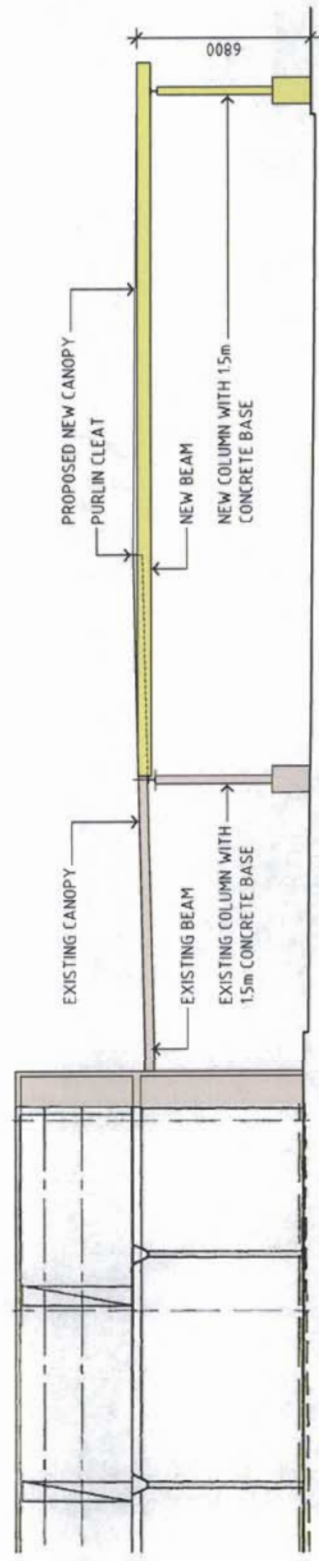


Sketch Design: DEPARTMENT OF DEFENCE - C838 JLU(V) WAREHOUSING FACILITIES BANDIANA  
**fdc - alterations to receipts & issues canopy - floor plan**  
 Job No: 210045 28 Mar 07  
 Scale: 1:500 @ A3  
 0 5 10 20 30 40m  
 SK 106 rev. C  
 GHD  
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 Perth WA 27 June 2007 - 12:11 PM

**Attachment 9 – FDC Upgrade, Elevations and Section**



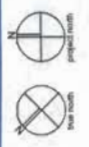
**FDC ELEVATION**  
SCALE 1:200



**FDC SECTION**  
SCALE 1:200



SK 111  
REV A



DEPARTMENT OF DEFENCE - C8838-JLU(V) WAREHOUSING FACILITIES BANDIANA  
fdc - receipts & issues canopy upgrade - plan, elevation & section