



Australian Government

Department of Defence

FACILITIES FOR THE INTRODUCTION INTO SERVICE

of

LAND 121 VEHICLES

at

RAAF Base Amberley, Amberley, Qld

Damascus Barracks, Meeandah, Qld

Gaza Ridge Barracks, North Bandiana, Vic

Statement of Evidence

to the

Parliamentary Standing Committee

on Public Works

Canberra, ACT

1 November 2010

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Facilities for the Introduction into Service of Land 121 Vehicles

Introduction

1. This evidence to the Parliamentary Standing Committee on Public Works presents a proposal to provide new and upgraded facilities to enable vehicle conversion training for drivers and vehicle maintainers to support the introduction into service of the new fleet of wheeled vehicles to the Australian Defence Force. The proposed works in support of this capability will be located at three sites RAAF Base Amberley; Damascus Barracks, Meeandah; and Gaza Ridge Barracks, North Bandiana.

Need for Works

Identified need

2. The current military transport and logistics wheeled vehicle fleet has reached the end of its useful life. To support the future capability needs of the Australian Defence Force a new fleet of six to seven thousand vehicles will be acquired between the years 2011 and 2020. Government approved the vehicle acquisition in late 2007 under a project called Land 121-Project Overlander. The new fleet will include self contained loading systems, allowing a single vehicle to perform several functions via interchangeable modules. This fleet will replace the current Land Rover 110, Unimog, Mack and S-Line vehicles with a mix of unprotected and protected vehicles. The protected vehicles will provide increased personnel protection to reduce vulnerability to improvised explosive devices.
3. The introduction of a new vehicle fleet will have three distinct facilities requirements including:
 - a. the receipt, inspection, fitout and dispatch of vehicles;
 - b. the conversion training of military drivers to operate the new vehicles; and

- c. maintenance training to support the sustainment of the new fleet.

Options considered for meeting the need

4. In considering the need for Introduction into Service activities Defence has conducted cost modelling exercises to determine the most effective and efficient method of delivering the new vehicle fleet. These exercises considered the costs and risks associated with personnel, equipment, facilities, distribution and travel of trainees and trainers to the locations required. Options considered include the conduct of Introduction into Service activities centrally, regionally at sites accepting the bulk of the vehicles (these being Defence establishments in Queensland and the Northern Territory), and locally at all major delivery locations. The conclusion of this analysis was that centralised Introduction into Service activities represent lower total costs, allow flexibility in the schedule of vehicle deliveries to meet the changing capability needs of the Australian Defence Force, and reduce management risks associated with a task of this scale and complexity.
5. In determining a suitable location for centralised Introduction into Service activities, Defence considered the planned distribution of vehicles, effects of local climates on training activities, and the availability of a suitably skilled work force. The South East Queensland region will receive approximately 30% of the fleet and the North Queensland and the Northern Territory regions approximately 40%. The remainder of the fleet will be disbursed across other states. If training activities were to be undertaken in Darwin or Townsville the activities would have to be scheduled during the dry season. This would significantly restrict training and delay the Introduction into Service program. Therefore, South East Queensland was determined to be the most logical location for centralised distribution and training activities, with proximity to the city of Brisbane (as the major population base in the region) required to provide contract staff.
6. Sufficient suitable land under Defence control in proximity to Brisbane city could not be found to accommodate the Introduction into Service rollout activities, which involves the receipt, inspection, fitout and dispatch of large volumes of vehicles delivered by suppliers on commercial transport. A suitable site was identified on vacant land adjacent to Damascus Barracks, Meeandah, Brisbane on land previously owned by Defence prior to transfer to the Department of Immigration and Citizenship in 2005. A small portion of this

land had been used for a transit accommodation facility, with the majority remaining as it was at the time of transfer to Department of Immigration and Citizenship. The site had been identified as surplus to Department of Immigration and Citizenship requirements and a return transfer was agreed, allowing the reuse of the existing infrastructure for vehicle parking.

7. A site for a new operator training facility was identified at RAAF Base Amberley, where the availability of short term living in accommodation and other Base support services reduced project costs and provides an enduring benefit to the Base training precinct. The proposed facility provides for classroom training, static vehicle instruction and storage. Live vehicle instruction would occur at Greenbank Training Area utilising a Safe Driver Training Area being delivered under the Enhanced Land Force Stage 2 Project.
8. In the case of maintenance training, refurbishment costs exceeded those of new purpose built facilities and reuse of existing facilities for other Defence activities remained possible. Given the relatively small number of maintenance personnel to be trained annually and the intended ten year use of this facility for Introduction into Service activities, a new facility in South East Queensland, disparate from current maintenance training centres, was not considered viable. A site for this facility was subsequently located at the Army Logistics Training Centre, North Bandiana, Victoria allowing the facility to function as a sustainment training facility once Introduction into Service activities conclude in 2020.

Historical background to the facilities Sites

9. RAAF Base Amberley. RAAF Base Amberley has been used for military operations since 1938. The American Air Corps comprising of approximately 2,000 personnel were stationed at the Base during the 1940's. The site became a major RAAF bomber Base following World War II, with Lincoln bombers originally based at Amberley, followed by Canberra bombers. During the post war period, a major realignment of the main runways was undertaken, with Wirraway, Vampire and Meteor aircraft stationed on-site during the 1950's. Additional accommodation and working facilities, including a runway extension, were constructed in the late 1960's and early 1970's. From 1973 the base has been home to Australia's fleet of F-111 aircraft. Since the arrival of the F-111s, the construction and

upgrading of the facilities has been ongoing at the Base – including two major developments between 1999 and 2007.

10. Damascus Barracks, Meeandah. Camp Meeandah was originally developed by the United States of America during World War II as a Defence storage and warehouse facility. The site remains in use by the Australian Defence Force and is now known as Damascus Barracks. In 2005, part of the site was transferred to Department of Immigration and Citizenship. Damascus Barracks currently has 16 existing structures, providing warehousing, storage and administration capabilities. Currently Damascus Barracks is utilised by the Joint Logistics Unit (South Queensland) and a Defence contractor for the storage and supply of materiel.

11. Gaza Barracks, North Bandiana. The North Bandiana Warehouse Precinct, south of the proposed development site, is amongst the oldest and largest currently active military stores sites in Australia and has been in continuous use since World War II. There are 18 warehouses, the remains of the North Bandiana railway system (used to service the Army for the transport movements of troops and supplies between heavy industrial and port centres of Melbourne and Sydney), an extensive drainage system, network of roads and a small number of ancillary buildings located within the precinct. The Army Logistics Training Centre was formed in 1996 and consolidated the Army's trade, transport, health and chaplaincy schools into a single location in the Albury Wodonga Military Area. Development of Albury Wodonga Military Area sites since 1996 has seen the consolidation of vehicle maintenance training functions into the North Bandiana (Gaza Ridge Barracks) and Bonegilla (Latchford Barracks) sites through the construction of workshops and trade training facilities.

Heritage impacts

12. **Operator Training Facility, RAAF Base Amberley:** Part of RAAF Base Amberley is included on two Commonwealth heritage registers – the Register of the National Estate and the Commonwealth Heritage list. These registers recognise parts of RAAF Base Amberley as having highly significant heritage value because of the historic role of the Base in the Defence of the nation, from the eve of World War II to the present. RAAF Base Amberley is also recognised as having local heritage significance and is listed on the

Ipswich Heritage Register. The Bunker facility in the area known as “Frog's Hollow” is heritage listed and was originally considered for adaptive reuse as part of the project, but this was ultimately rejected, in favour of a brownfield site directly north of Frog’s Hollow on Attached Property One. No cultural or heritage items as defined by *Aboriginal Heritage Act 2006*, *Aboriginal Heritage Regulations 2007* or the *Queensland Aboriginal Cultural Heritage Act 2003* have been identified on site and consultation with the site’s Indigenous owners by Defence is ongoing.

13. **Vehicle Rollout Facility Damascus Barracks, Meeandah:** No cultural or heritage items as defined by the *Aboriginal Heritage Act 2003* or the *Queensland Heritage Act 1992* have been identified on the site. It is not anticipated that heritage items will be located on the proposed development site as no artifacts have been discovered during its prolonged use.
14. **Maintenance Training Facility, Gaza Ridge Barracks North Bandiana:** No cultural or heritage items as defined by *Aboriginal Heritage Act 2006*, *Aboriginal Heritage Regulations 2007* or *Victorian Heritage Act 1995* have been identified on the site. It is not anticipated that heritage items will be located on the proposed development site as no artifacts have been discovered during its prolonged use.

Key legislation

15. The following key legislation is relevant to this project:
 - a. *Environment Protection and Biodiversity Conservation Act 1999*; and
 - b. *Building and Construction Industry Improvement Act 2005*.

Environment aspects

16. Environmental Impact Assessment reports were prepared for the proposed developments, and indicate that the siting and construction of the proposed works will not have any significant environmental impacts. To mitigate any potential environmental impacts, the proposed developments will be managed in accordance with the Defence Environmental Management framework, including compliance with the applicable Environmental Management Systems. The Head Contractor’s environmental procedures for construction

activities will be required to comply with the approved Construction Environmental Management Plan. A Defence Environmental Clearance Certificate will be issued prior to construction activities commencing.

Impacts on local communities

17. The project will employ skilled construction workers in the Brisbane, Ipswich and the Albury Wodonga areas over the construction period. This will provide a positive economic impact to small and medium businesses in these regions.

Consultation with stakeholders

18. Consultation has occurred, or will occur, with the list of stakeholders at Attachment 1.
19. Defence has consulted with the Department of Transport and Main Roads (Queensland) and Brisbane City Council regarding the proposed vehicle movements to and from sites at Damascus Barracks and RAAF Base Amberley. Traffic studies prepared in June 2010 will inform operational planning by Introduction into Service teams, restricting vehicle convoy sizes and movement times as appropriate to minimise disruption to public traffic, whilst maintaining the necessary throughput to support the introduction of the capability.
20. Defence has consulted with the Queensland Fire and Rescue Service Brisbane regarding fire systems to be provided at Damascus Barracks, and RAAF Amberley Base fire services regarding fire systems design at the RAAF Base Amberley site. Consultation with the Wodonga Urban Fire Brigade will occur during further design development for the Gaza Ridge Barracks site.

Purpose of Works

Project location

21. RAAF Base Amberley is located five kilometres south-west of the city of Ipswich, Queensland. The site proposed at RAAF Base Amberley is shown at Attachment 2.
22. Damascus Barracks is located immediately south of Brisbane Airport in the Eagle Farm industrial area, as shown at Attachment 3.

23. Gaza Ridge Barracks, North Bandiana is located two kilometres south-east of Wodonga, Victoria, as shown at Attachment 4.

Project objectives

24. The key objectives of the project are to:
 - a. facilitate the roll out of the military wheeled vehicle fleet, allowing delivery, inspection, fitout and dispatch within the required contract and capability driven timeframes;
 - b. facilitate the conversion training of approximately 10,000 military vehicle operators onto new and more sophisticated vehicle platforms; and
 - c. facilitate the conversion training of military vehicle mechanics onto new and more sophisticated vehicle systems.

Project description and scope of works

25. **Operator Training Facility, RAAF Base Amberley:** The proposed operator training facility will allow the classroom and static vehicle instruction of approximately 10,000 military wheeled vehicle operators. This training will upgrade currently held licenses to new vehicle variants, which will include more complex sub-systems such as integrated load handling. The major elements of the scope of works proposed at RAAF Base Amberley are as follows:
 - a. **Administration facilities** to accommodate the training team of 48 staff.
 - b. **Instruction facilities** including two 24 person classrooms, an undercover training area and inspection ramps for operator vehicle maintenance training.
 - c. **A vehicle compound** to accommodate the training fleet and 13 administrative support vehicles.
26. The proposed works include a new combined Administration and Instruction facility on Attached Property 1 at RAAF Base Amberley, including classrooms, offices and amenities for training staff and two concurrent courses of 24 students each. The facility

would also include storage for supplies and parts required for the training fleet. A third 24 student course would either be off site conducting live vehicle training or receiving static instruction in the adjacent vehicle compound, which will house a training fleet of up to 45 vehicles and 13 support vehicles on 12,896 square metres of hardstand. The vehicle compound would also incorporate an open portal frame structure to allow undercover instruction on basic vehicle maintenance and tyre changing, as well as two vehicle ramps to allow trainees to be familiarised with the characteristics, inspection and maintenance requirements of vehicle undercarriages. Plans of the facility are shown at Attachments 5 and 6.

27. The proposed facility will be constructed in the Base training precinct, directly adjoining the business precinct and can be readily reused for training activities or general logistics once the Project Overlander Introduction into Service has been completed.
28. **Vehicle Rollout Facility Damascus Barracks, Meeandah:** A receipt, inspection and minor fitout facility is proposed to be delivered to accommodate the batch delivery and distribution of the vehicle fleet.
29. The major elements of the scope of works proposed at Damascus Barracks are as follows:
 - a. **Administration facilities** and amenities for Introduction into Service Staff (Defence personnel augmented by contractors) consolidated with the **Fit-out facility** for asset registration and minor fitout of equipment on the vehicles prior to distribution to units.
 - b. **Inspection bays** for conducting receipt and quality assurance consolidated with **Rework bays** for vehicles that do not pass quality checks and can be repaired on site by the contractor using portable equipment.
 - c. **Parking hardstand** sufficient to hold the largest batch delivery of heavy vehicles (with an allowance for overflow) while rollout procedures are undertaken by Defence. Loading ramps to allow the loading and unloading of vehicles from civilian transports will also be provided.
 - d. **A Gatehouse** and new entry to Damascus Barracks for access to the facilities.
30. Land adjacent to Damascus Barracks, Meeandah will be transferred from the Department of Immigration and Citizenship to Defence at no cost. A parking and vehicle movement

area consisting of 32,950 square metres will be constructed and 12,000 square metres of existing concrete slabs will be reused. Generally, the vehicle parking hardstand will be unsealed, gravel type construction with areas of high movement formed from asphaltic concrete. A perimeter road and roundabout will allow the movement of commercial transports through the site, and access will be provided through a new entry to the existing Damascus Barracks. The new entry proposed will replace the existing Base entry, allowing vehicle turning to occur away from intersections of public roads and allow vehicle queuing to occur on Defence property, thus reducing disruption. In addition to the provision of a new gate house to control access to the site, upgrades of internal roads would be undertaken as required to facilitate the vehicle movements resulting from existing and future site use.

31. An open portal frame building is proposed to be provided for initial inspection and minor rework activities. Vehicles arriving on site will be subject to an inspection prior to Defence acceptance. The permissible timeframe for these inspections will be set out in delivery contracts making it important that the design of this facility permits these timeframes to be achieved. The facility will incorporate vehicle bays and a small office space to allow initial inspection of four vehicles and rework on three vehicles concurrently. If faults are found the vehicles will be rejected and moved to a quarantine parking area to await pick up by the supplier. If the faults identified are minor (e.g. damage incurred during transport) minor rework may be undertaken by the supplier or Defence contractors in this facility to ensure the process is not unduly delayed. Tool storage has been incorporated to accommodate this requirement. Vehicles that are accepted will be moved to parking areas to await fitout or move directly into the adjacent fit out facility.
32. A warehouse type facility is proposed to be provided for Defence fit out of vehicles post acceptance. The facility will incorporate 14 vehicle bays sized to accommodate medium rigid vehicles, and allow drive-through access by large vehicles with trailers attached and container forklifts for trailer and module fitout activities. The facility will include offices and amenities to provide for the site staffing and administrative requirements and storage for parts in standard pallet racking.

33. The proposed plans for the rollout facility site are shown at Attachment 7, with plans of the proposed buildings at Attachments 8, 9, 10 and 11.
34. **Maintenance Training Facility, Gaza Ridge Barracks North Bandiana:** A new maintenance training facility is proposed to be provided at Gaza Ridge Barracks for the Army Logistics Training Centre. Inspection of existing facilities used for maintenance training at Army Logistics Training Centre revealed that they are inadequate for the Land 121 vehicles due to vehicle size and the limits on engine access created by vehicle armour. Additionally the current trainee throughput will continue on the existing fleet of vehicles in parallel with the Introduction into Service of Land 121 vehicles. A purpose built facility at this location can transition to Army Logistics Training Centre control at the completion of Introduction into Service activities, providing an enduring benefit through its use for future maintenance training on the Land 121 fleet.
35. The major elements of the scope of works proposed at Gaza Ridge Barracks are as follows:
- a. **A vehicle workshop** comprising 11 double bays with gantry cranes and parts storage.
 - b. **Instruction facilities** comprising two 12 person classrooms with provisions for future network based training at Army Logistics Training Centre.
 - c. **Administration facilities** and amenities required by the training team, students and future Army Logistics Training Centre use of the facility.
36. The proposed facilities would include 11 vehicle workshop bays, each capable of housing a heavy vehicle with trailer or two smaller vehicles head to head, allowing sufficient on vehicle workshop instruction for two classes of 12 students throughout the staged acquisition of the fleet. The required classrooms, administration offices and amenities would be provided within the facility, with the classroom design allowing for adaptability for future Army Logistics Training Centre requirements, such as networked learning environments. Storage of parts, equipment and materials would be provided. Plans of the facility are shown at Attachments 12, 13, and 14.

Details and reasons for site selection

37. The decision to centralise all Introduction into Service facilities was an outcome of cost and risk modelling exercises undertaken by Defence. The intended national distribution of the vehicles to Defence establishments in northern Australia, with 30% intended for distribution to South East Queensland resulted in an Introduction into Service 'centre of gravity' in this region. Contracting of qualified personnel to assist in the operation of these sites in South East Queensland further restricts siting to major population centres, namely Brisbane and its surrounds. An exception is made for the maintenance training facility, with the lower throughput making consolidation with related facilities at the current trade training location for Army, the Army Logistics Training Centre at Bandiana, Victoria, a more viable option.
38. **Operator Training Facility, RAAF Base Amberley:** The facility was sited at RAAF Base Amberley due to its proximity to major Army units, training areas and to make use of current but out dated Living in Accommodation on site. This accommodation is not of the standard required for permanent occupation and has been retained by the Base as short term accommodation. Given the short duration of operator training courses (1 to 2 weeks), this accommodation is considered suitable for trainees, removing the requirement for this project to deliver additional Living in Accommodation.
39. Several sites were considered at RAAF Base Amberley, with consideration of current zone planning, costs and base traffic management resulting in the adoption of a new build solution on vacant land on Attached Property 1 adjacent to the Frog's Hollow training site. The existing training facility at Frog's Hollow was considered, however refurbishment costs and site constraints limiting vehicle pavement resulted in better value being achieved via a new build solution.
40. **Roll Out Facility, Damascus Barracks, Meeandah:** The site was selected due to the spatial requirement of the Roll-out Facility and the availability of suitable vacant land adjacent to a current Defence facility. The location of Damascus Barracks in a light industrial area and its current use as a logistics depot with frequent commercial freight traffic are compatible with the proposed use as a receipt and dispatch facility. The proximity of this site to the Port of Brisbane and major transport routes provides

flexibility in the delivery mechanisms utilised to maintain the roll-out schedule required by the Australian Defence Force.

41. **Maintenance Training Facility, Gaza Ridge Barracks North Bandiana:** Five siting options at the Albury Wodonga Military Area were considered. The final location was chosen because it allowed the opportunity to re-use an existing brownfield site and consolidate the facility with similar existing training workshops. The use of this site will require the demolition of an existing structure which has been declared structurally unsound and vacated. The site selected is relatively level due to the existing building platform. Living in Accommodation is available at South Bandiana for trainees.

Public transport

42. None of the sites proposed are currently directly serviced by public transport and thus have a high reliance on private motor vehicles. The proposed facilities will not significantly increase the personnel working on Base and, where training activities are to be undertaken, trainees will be accommodated in existing Living in Accommodation for the duration of their stay.

Local road and traffic concerns

43. **Operator Training Facility, RAAF Base Amberley:** The Base is bounded by Rosewood Road, Behms Steet and Haigslea Amberley Road. Access and egress to the site is primarily served by Southern Amberley Road, which is an approved B-double route and as such will be suitable for heavy training vehicles. Traffic planning for this site has been conducted in consultation with the Department of Transport and Main Roads, Queensland and will inform the operation planning of training vehicle movements in and out of the site to minimise disruption.
44. **Roll Out Facility, Damascus Barracks, Meeandah:** The site has dual street frontage to Lomandra Drive, which is controlled by Brisbane Airport Corporation, and Sugarmill Road, which is controlled by Brisbane City Council.
45. Consultation has been undertaken with both controlling entities and no issues have been raised in relation to the current design. The proposed new site entry and Gatehouse allows

off-road queuing space for vehicles waiting to enter the Base and parking for visitors requiring passes.

46. **Maintenance Training Facility, Gaza Ridge Barracks North Bandiana:** The maintenance training to be conducted on this site will involve very little external traffic movement, with vehicles being delivered for use for the duration of training activities, then removed for use elsewhere.

Zoning, local approvals and land acquisition

47. Both RAAF Base Amberley and Gaza Ridge Barracks are on Commonwealth owned and Defence controlled land. Access routes to these sites will be via existing Base roads and approvals from roads authorities will not be required. The access route from Southern Amberley Road at RAAF Base Amberley will be upgraded to accept heavy vehicle traffic, but will not change in alignment.
48. Damascus Barracks, Meeandah is on Commonwealth owned and Defence controlled land. Transfer of additional land to Defence from the Department of Immigration and Citizenship will be required for construction of the Vehicle Rollout Facility. This transfer has been agreed and will be finalised in December 2010, with no costs associated with the transfer of land between Commonwealth agencies. The Department of Finance and Deregulation has agreed to the land transfer, which will occur without a transfer of funds. Brisbane City Council approval of the proposed connection to Sugarmill Road will be required and the Council has been consulted throughout the design process.

Planning and design concepts

49. The proposed designs provide a safe, efficient and pleasant workplace. The proposed designs provide the required functional requirements and also offer economy in relation to floor area, construction techniques, buildability, and finishes. The proposed designs have considered the impact of the materials, construction techniques, finishes, equipment and building systems on the life cycle cost of the facilities.
50. Capital costs have been balanced against forecast operational and maintenance costs in the selection of building services and equipment. Particular consideration has been given to

energy efficient solutions employing passive solar and water conservation initiatives. Buildings have been sited to ensure that future expansion is possible and improvements are being made to the in-ground services. The proposed new mechanical plant is modular to ensure long-term flexibility.

Structural design

51. **Operator Training Facility – Undercover Training Area, RAAF Base Amberley:** The structural framing for the proposed under cover training area provides large open areas that permit vehicles to transit the building on reinforced concrete floor slabs. The superstructure comprises portalised I-beams and columns.
52. **Operator Training Facility – Administration and Training Building, RAAF Base Amberley:** The administration area is proposed to be constructed generally of full height steel framing with a combination of metal sheet cladding, glazing and fibre cement sheeting.
53. **Roll Out Facility – Fitout/Administration Building, Damascus Barracks, Meeandah:** The structural framing for the proposed fitout area provides large open areas that permit vehicles to transit the building on reinforced concrete floor slabs. The superstructure comprises portalised I-beam steel frames, with columns located at the building's perimeter.
54. The proposed building is in two distinct parts, with a fire separation wall between the high bay warehouse/fitout area and the single storey office space and associated staff amenities. The external structure consists of steel framing with a combination of concrete masonry veneer, glazing and metal sheet cladding. The building's superstructure is supported on piles due to the extent of controlled engineered fill required to create a building platform at the desired level.
55. **Roll Out Facility – Inspection/Rework Bays , Damascus Barracks, Meeandah:** The proposed structural framing provides large open areas that permit vehicles to transit the building on reinforced concrete floor slabs. The superstructure comprises portalised I-beam steel frames, with columns located at the building's perimeter.
56. The central bay of the facility houses a work area, brew area, amenities and store/workshop and is constructed of full height steel framing with a combination of concrete masonry

vener, glazing and metal sheet cladding. The building's superstructure is supported on piles due to the extent of controlled engineered fill required to create a building platform at the desired level.

57. **Roll Out Facility – Gatehouse , Damascus Barracks, Meeandah:** The external structure consists of steel framing with a combination of concrete masonry veneer, glazing and metal sheet cladding. The facility houses a work area, brew area, amenities and an external sentry point for access control at the site entry.
58. **Maintenance Training Facility, Gaza Ridge Barracks, North Bandiana:** The structural framing provides large open areas that permit vehicles to transit the building on floor slabs capable of supporting heavy military vehicles. The superstructure comprises portalised I-beam steel frames, with columns located at the building's perimeter.
59. A central column has been introduced between the perimeter columns to support two gantry crane runway beams. The building frame will be designed to support the loads imposed on it by the two gantry cranes working in tandem or individually along the length of the building, allowing maximum flexibility for vehicle lifting requirements.
60. The building's superstructure is supported on piles due to the extent of controlled engineered fill required to create a building platform at the desired level and the sensitivity of possible differential settlements that may affect crane motions.

Materials and furnishings

61. The architectural expression of the proposed new facilities is consistent with adjacent 'industrial character' working accommodation and commercial facilities. The Operator Training Facility has been designed in accordance with the guidelines of the Amberley Master Design Manual. The overall architectural character is one of consistency, orderliness and restraint in keeping with predominant use of lightweight metal cladding with judicious use of translucent sky lights.

Mechanical services

62. The mechanical services for each building have been designed according to the function and needs of each building. The purpose of the mechanical service systems is to provide

mandatory ventilation, thermal comfort and air quality facilities in accordance with specific user needs and the requirements of the Building Code of Australia.

63. **Operator Training Facility, RAAF Base Amberley:** No mechanical services are required for the undercover training area. The Administration building will be cooled using air conditioning. The amenities areas will be mechanically exhausted to roof mounted cowls.
64. **Roll Out Facility, Damascus Barracks:** Vehicle facilities will be naturally ventilated, with administrative work areas cooled using split-system air conditioning. Amenities will be mechanically exhausted to roof mounted cowls.
65. **Maintenance Training Facility, Gaza Ridge Barracks, North Bandiana:** The workshop will be naturally ventilated with supplementary heating via radiant heaters. Vehicle exhaust extraction systems will be provided to improve the internal conditions of the Workshop and to remove the harmful gases associated with vehicle exhausts. The offices will be cooled using air conditioning.

Hydraulic services

66. A new hydraulic and sewer network is proposed for each site. Potable water will be connected to the existing supply, with roof water collected and stored for toilet flush and other non-potable uses. The sewer will utilise the existing sewer network.
67. Preliminary investigations of trunk services for all proposed development sites were conducted during the Concept Design development with the following findings:
 - a. **RAAF Base Amberley Water.** New water services supplies will extend from the existing water main at Southern Amberley Road.
 - b. **RAAF Base Amberley Sewerage.** New sewer drains, including a rising main and pump system, will be extended from the proposed fixtures and connected into the site's existing sewer drainage systems at the existing sewer pump station.
 - c. **Damascus Barracks Water.** New water services supplies will extend from the existing water main surrounding the site, which remains from previous site occupation

by Defence, and serve the proposed sanitary fixtures complete with adequate valving to allow shut down of the system for maintenance. The current fire water main servicing Damascus Barracks is on land that will remain under Department of Immigration and Citizenship control and will be decommissioned, capped and reinstated on Defence controlled property as part of the land transfer. This will allow either party to dispose of land in future without affect on the other.

- d. **Damascus Barracks Sewerage.** New sewer drains with appropriate grading will be extended from the proposed fixtures and connected into the site's existing sewer drainage systems.
- e. **Gaza Ridge Barracks Water.** Domestic water mains within the proposed compound boundaries will be realigned to un-encumber the site for the new facility. Site investigations with regards to the domestic water pressure and flow testing undertaken have indicated that the piping is in suitable condition for commercial purposes. The water meter will be able to be connected to the site Base Management System.
- f. **Gaza Ridge Barracks Sewerage.** Sanitary drainage from all fixtures located within the new facility will be drained directly through a new gravity sanitary drainage system and connected to the existing gravity sewer main. Trade waste will be separately drained to a centrally located drain and treated above ground with an above ground coalescing plate separator. Water from drains on the floors of the workshop and storage areas will be treated to the standard required by Defence's trade waste agreement prior to discharging to sewer. Waste oil will be stored on site for appropriate disposal. Vents and drainage pipes shall be constructed with consideration to provide flexibility of future building requirements and fixture reconfigurations. All vent pipes will be extended throughout the building to discharge to atmosphere.

Electrical services and fire protection

- 68. Lighting, power, lightning protection and fire detection will be provided in accordance with Australian Standards and Defence engineering requirements. Electrical infrastructure and switchboards will have modest spare capacity for any future growth or demand.

69. Fire detection systems, indication panels, emergency and exit lighting will be provided to the new facilities in accordance with Australian Standards, with connection to new and existing indicator panels. All construction and fire protection requirements will be in accordance with the Building Code of Australia, the Defence Manual of Fire Protection Engineering and all other applicable Codes and Standards.

Acoustics

70. The new facilities will comply with the Building Code of Australia and Australian Standards for noise and acoustics. Where required, acoustic separation has been considered between rooms to ensure they meet user requirements and building functions. Facilities at both RAAF Base Amberley and Damascus Barracks, Meeandah have been considered for specific compliance with the acoustic requirements generated by their proximity to airfields.

Landscaping

71. This proposal will not cause any substantial change in the essential landscape character of the sites. Landscaping works will restore areas disturbed during construction and provide general improvement to the built environment. Precautions will be taken to avoid compromising environment sensitivities by adopting landscaping practices in accord with local environmental conditions.

Water and energy conservation measures

72. The ecologically sustainable measures for the project are balanced with other requirements for Defence buildings, including security, heritage and occupational health and safety considerations, to ensure that Defence's operational capability is not compromised.
73. All buildings are designed and will be constructed, operated and maintained to ensure that they use energy efficiently. To achieve this the buildings will comply with:
- a. Part I.2 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 Policy.
74. In addition to the above, all new offices and offices subject to major refurbishment will comply with the minimum energy performance standards in the Energy Efficiency in Government Operations policy.
75. The following design inclusions have been incorporated into the RAAF Base Amberley Operator Training Facility:
- a. Water harvesting from the roof of the training facility will be collected in tanks for the flushing of toilets;
 - b. Extended awnings on training/office facilities will reduce solar load and decrease the need for air conditioning;
 - c. Use of natural ventilation in amenities areas, reducing the requirement for mechanical systems, and ceiling fans to increase air movement in naturally ventilated shared space;
 - d. Use of recycled and recyclable components in asphalt and pathways; and
 - e. Use of double glazing to reduce thermal loss and noise propagation, thus reducing heating requirements and improving occupant quality of life.
76. Defence policy is to incorporate best practice Ecologically Sustainable Development principles, where possible, on all projects. In this instance the conduct of Ecologically Sustainable Development workshops through Concept Design has determined the following design inclusions for the Damascus Barracks Rollout Facility:
- a. Water harvesting from the roof of the fitout facility will be collected in tanks for toilet flushing;
 - b. Extended awnings on office facilities will reduce solar load and decrease the need for air conditioning;

- c. Use of natural ventilation in amenities areas, reducing the requirement for mechanical systems, and ceiling fans to increase air movement in naturally ventilated shared space;
 - d. Use of recycled and recyclable components in asphalt and walkways; and
 - e. Reuse of existing slabs on site without alteration to reduce the embodied energy requirement of the development.
77. The following design inclusions have been incorporated into the Maintenance Training Facility:
- a. Use of natural ventilation and building orientation to maintain reasonable working temperatures in the workshop area. The need to mechanically cool this area (via evaporating fans or similar) will be considered upon completion of a temperature modelling exercise;
 - b. Rainwater harvesting from the facilities roof for use in toilets;
 - c. Extended awnings on training/office facilities will reduce solar load and decrease the need for air conditioning;
 - d. Use of natural ventilation in amenities areas, reducing the requirement for mechanical systems, and ceiling fans to increase air movement in naturally ventilated shared space;
 - e. Use recycled and recyclable components in asphalt;
 - f. Connection of the Building Management System to the site wide Base Management System for monitoring and control of energy and water usage; and
 - g. Other measures to offset the potable water consumption of the facility to comply to the extent possible with the Albury Wodonga Military Area policy of zero net increase in potable water consumption resulting from development.
78. All buildings affected by the project will have separate digital metering installed and office lighting will not exceed 10 W/m². Office accommodation will achieve not less than

4.5 stars Australian Green House Building Rating. The Australian Green House Building rating tool will be used as a framework to guide design for facilities where no specific Australian Green House Building Rating category exists. This will be confirmed with energy modelling during the detailed design process. 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.

79. The Australian Greenhouse Office, in the Department of the Environment and Water Resources, will be consulted with respect to the energy efficiency measures applied.

Demolition and disposal of existing structures

80. Building 105 and surrounding supporting infrastructure at Gaza Ridge Barracks will be demolished. The building has been declared structurally unsound and has been vacated. Demolished materials will be separated and recycled where possible.
81. An existing toilet block at Damascus Barracks will be demolished. The structure is on land currently controlled by Department of Immigration and Citizenship and has not been used or maintained since Defence vacated the site. As this is a small structure it is anticipated the recycling of materials would not be economically viable.
82. Existing vacant farm structures at Frog's Hollow at Amberley will be demolished. Due to the age of these structures it is anticipated the recycling of materials would not be economically viable.

Zone planning

83. **Operator Training Facility, RAAF Base Amberley:** The proposed facility is to be constructed within the Training Precinct nominated on the RAAF Base Amberley Zone and Precinct Plan 2007. The Air Point of Departure training facility, planned to the east of the development will share the access road to be constructed from the current Frog's Hollow access point on Southern Amberley Drive. The continuation of this access route to the Air Point of Departure site has been allowed for in the design of the facilities.

84. **Roll Out Facility, Damascus Barracks Meeandah:** No Zone or Precinct Plan exists for Damascus Barracks, Meeandah and as such the design has followed established industrial patterns and scales appropriate to the area.
85. **Maintenance Training Facility Gaza Ridge Barracks North Bandiana:** The proposed facility is to be constructed within the Operational Support Zone detailed in the Draft Albury Wodonga Military Area Zone Plan.

Provisions for people with disabilities

86. Access and facilities for the disabled will be provided where necessary in accordance with the Building Code of Australia, Australian Standard AS1428 and Defence's policy 'Disabled Access and Other Facilities for Disabled Persons'.
87. Dispensations will be sought where operational requirements are inconsistent with Building Code of Australia requirements. The nature of some facilities occupied by military personnel can preclude disabled access.

Childcare provisions

88. As this project will not permanently increase the Base population and training course durations are short, not requiring the long term posting of individuals to any of the Bases, there is no requirement for additional childcare facilities.

Occupational health and safety measures

89. The facilities to be provided under this project will comply with Department of Defence Occupational Health and Safety policy, the *Occupational Health and Safety (Commonwealth Employment) Act 1991*, *Occupational Health and Safety (Commonwealth Employment) (National Standards) Regulations* and the Defence Occupational Health and Safety manual.
90. In accordance with Section 35(4) of the *Building and Construction Industry Improvement Act 2005 (Commonwealth)*, contractors will hold full occupational health and safety accreditation from the Office of the Federal Safety Commissioner under the Australian Government Building and Construction Occupational Health and Safety Accreditation

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

Cost-effectiveness and public value

Outline of project costs

91. The estimated cost of this project is \$50.291 million, excluding Goods and Services Tax. This cost estimate includes all management and design fees, construction costs, furniture, fittings and equipment, contingencies and an allowance for escalation.
92. Net operating costs associated with the proposed redevelopment are projected to increase due to the construction of new and re-used facilities containing more technical and environmentally compliant equipment.

Details of project delivery system

93. A Project Manager/Contract Administrator will be appointed by the Commonwealth to manage the proposed works and administration of the contracts for construction. Design Services Consultants have been appointed to fully design and document the requirements in each location. Head Contractors will be appointed using the Defence form of Head Contract to construct the proposed works in each region.

Construction schedule

94. Subject to Parliamentary clearance of the proposed redevelopment, construction is expected to commence in early 2011 and be complete by early 2012.

Public value

95. The proposed development contributes significantly to Defence capability by providing effective new facilities at RAAF Base Amberley, Damascus Barracks, Meeandah and Gaza Ridge Barracks, Bandiana for the Introduction into Service of the new range of vehicles.

Revenue

96. No revenue will be derived from this proposal.

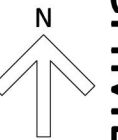
ATTACHMENT 1
Consultation list

1. Consultation has occurred, or will occur, with the following stakeholders:
 - a. Australian Greenhouse Office;
 - b. Brisbane Airport Corporation;
 - c. Brisbane City Council;
 - d. Federal Member for Blair;
 - e. Federal Member for Lilley;
 - f. Federal Member for Indi;
 - g. Queensland Department of Transport and Main Roads;
 - h. Queensland Fire and Rescue Service;
 - i. State Member for Benambra;
 - j. State Member for Ipswich West;
 - k. State Member for Clayfield.
 - l. Urban Utilities (Brisbane); and
 - m. Wodonga Urban Fire Brigade.

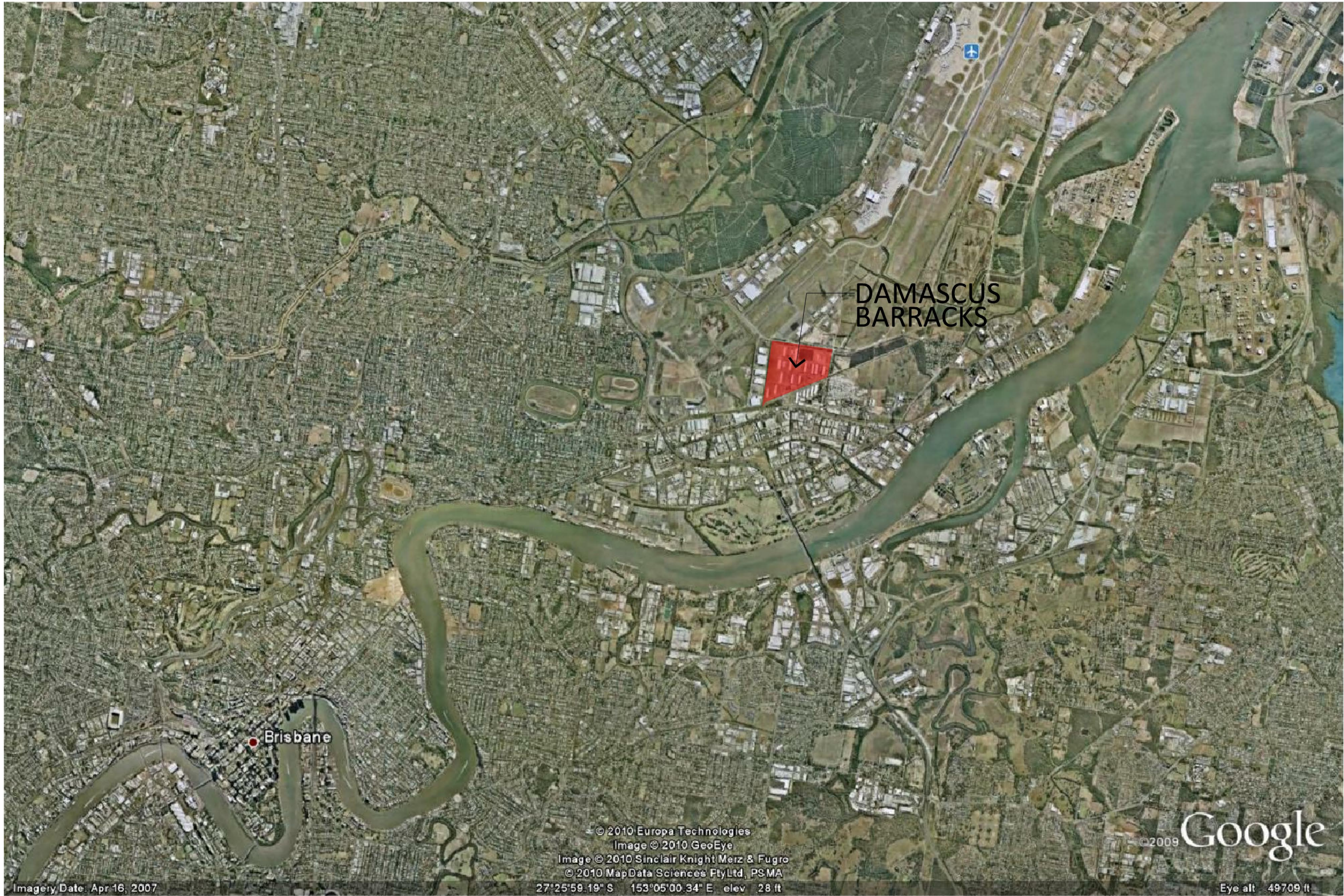


AREA OF WORKS

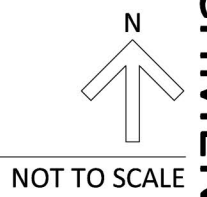
**SITE LOCALITY PLAN
OPERATOR TRAINING FACILITY RAAF BASE AMBERLEY**



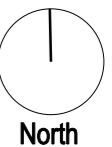
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SITE LOCALITY PLAN
VEHICLE ROLL OUT FACILITY DAMASCUS BARRACKS MEEANDAH

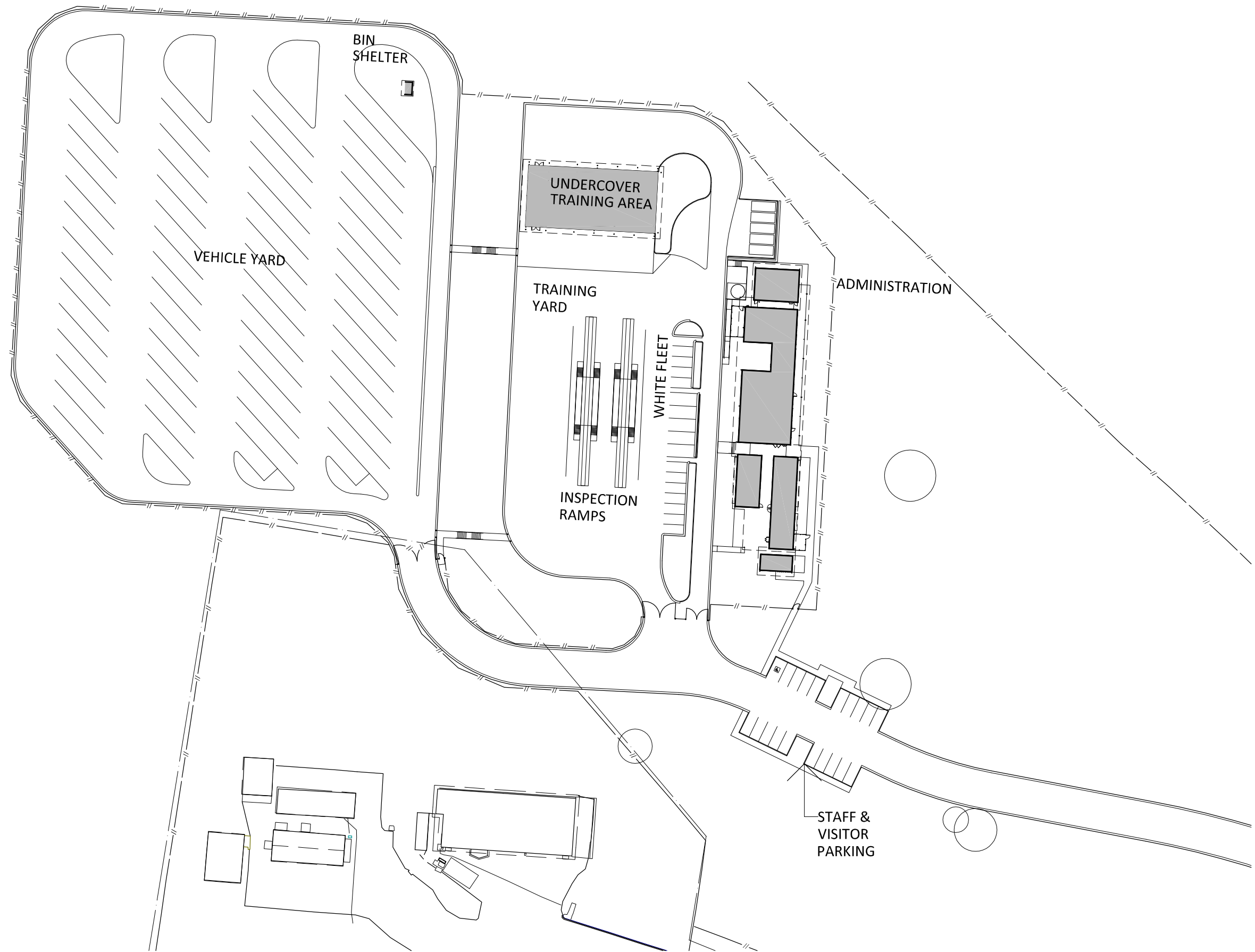


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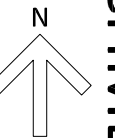


Gaza Ridge Barracks, North Bandiana, Victoria - Locality Plan

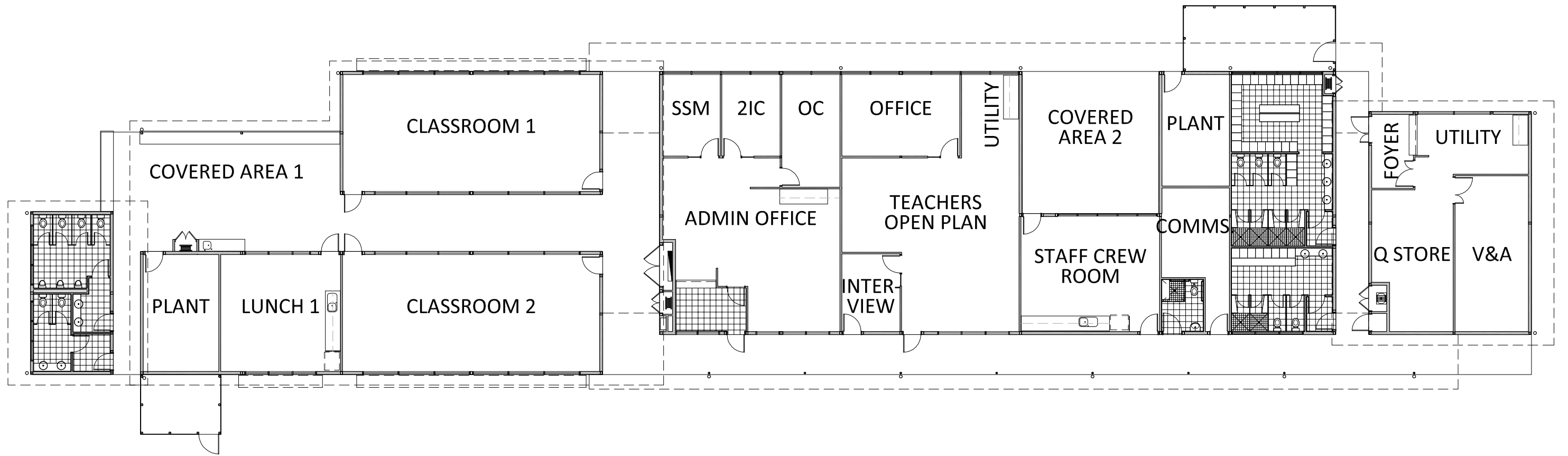
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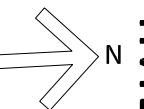
OVERALL SITE PLAN
OPERATOR TRAINING FACILITY RAAF BASE AMBERLEY



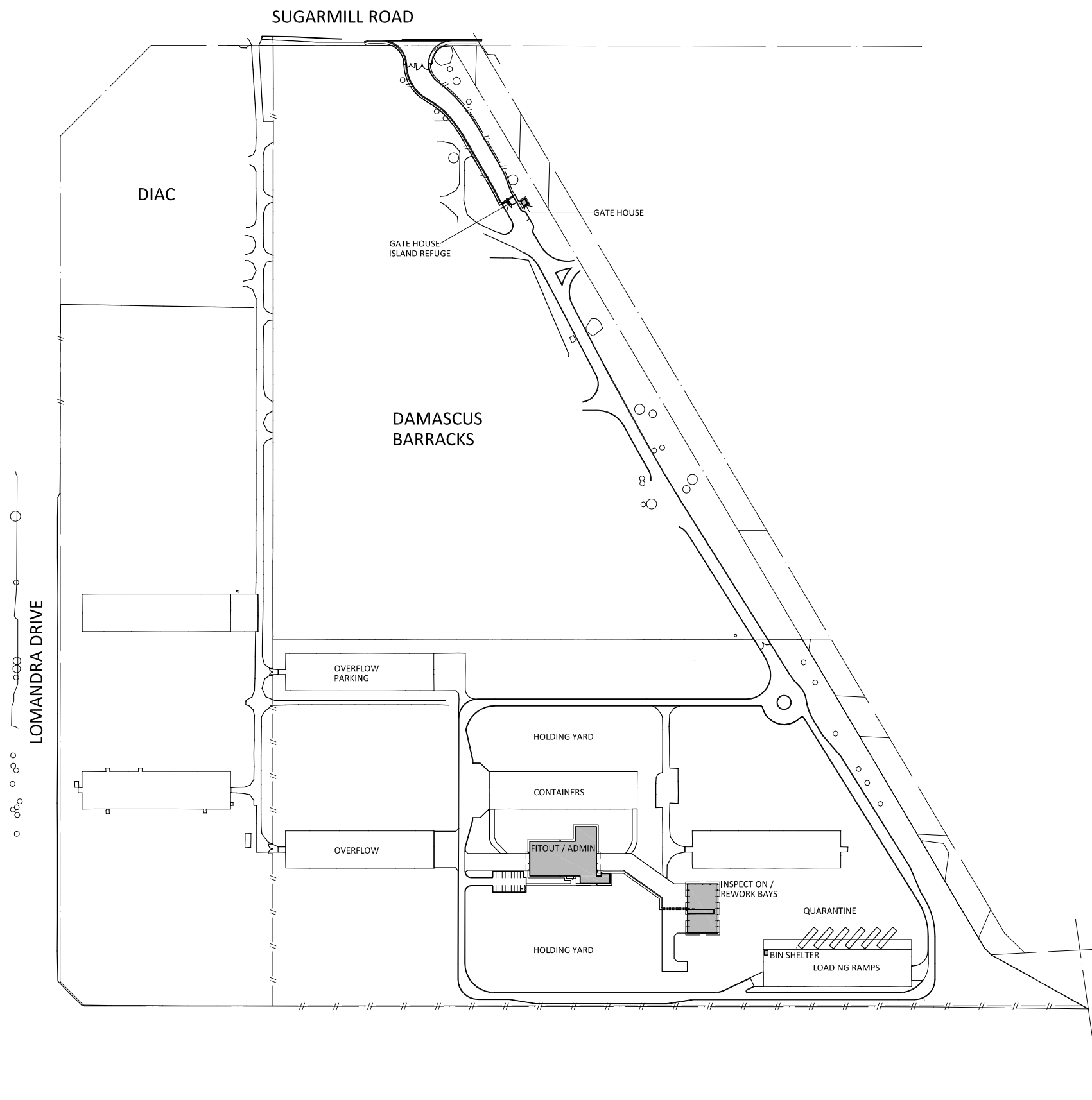
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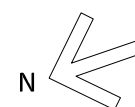
ADMINISTRATION BUILDING - PLAN
 OPERATOR TRAINING FACILITY RAAF BASE AMBERLEY



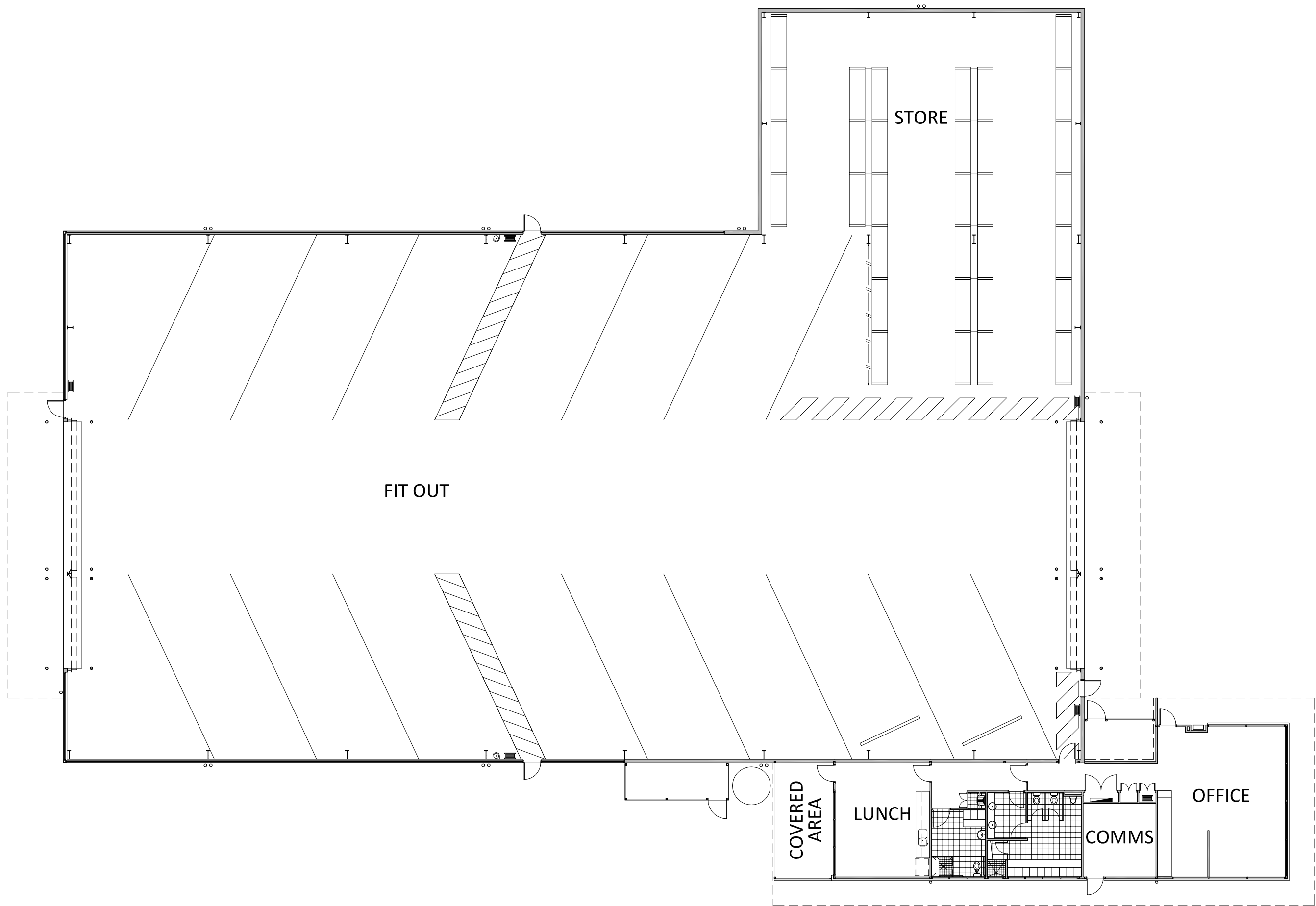
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OVERALL SITE PLAN
 VEHICLE ROLL OUT FACILITY DAMASCUS BARRACKS MEEANDAH

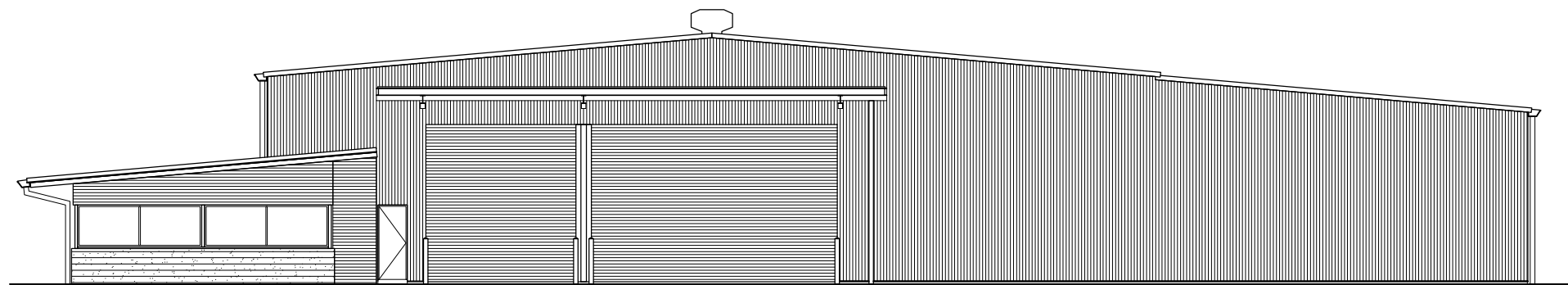
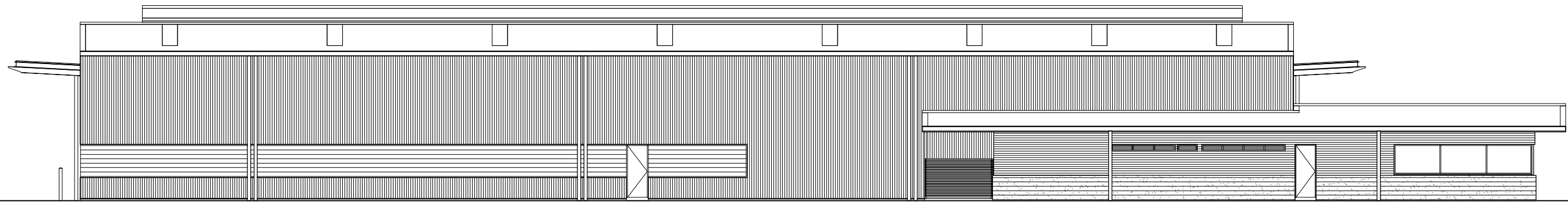


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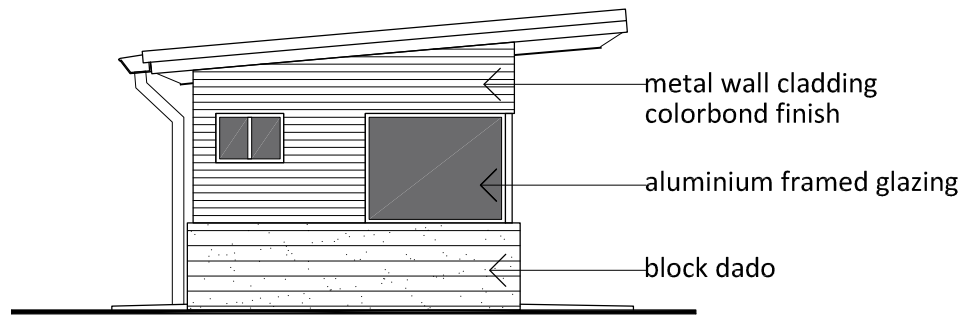
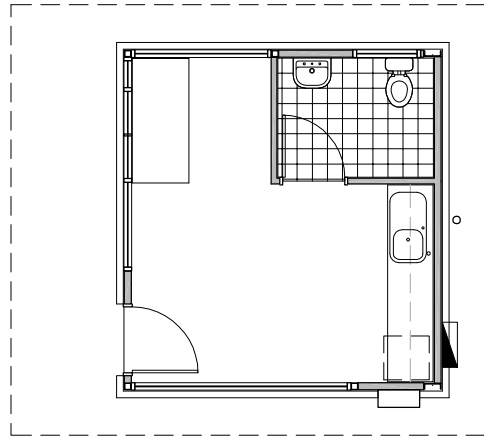
FIT OUT/ADMIN - PLAN
 VEHICLE ROLL OUT FACILITY DAMASCUS BARRACKS MEEANDAH

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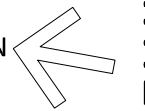


FIT OUT/ADMIN - ELEVATIONS
VEHICLE ROLL OUT FACILITY DAMASCUS BARRACKS MEEANDAH

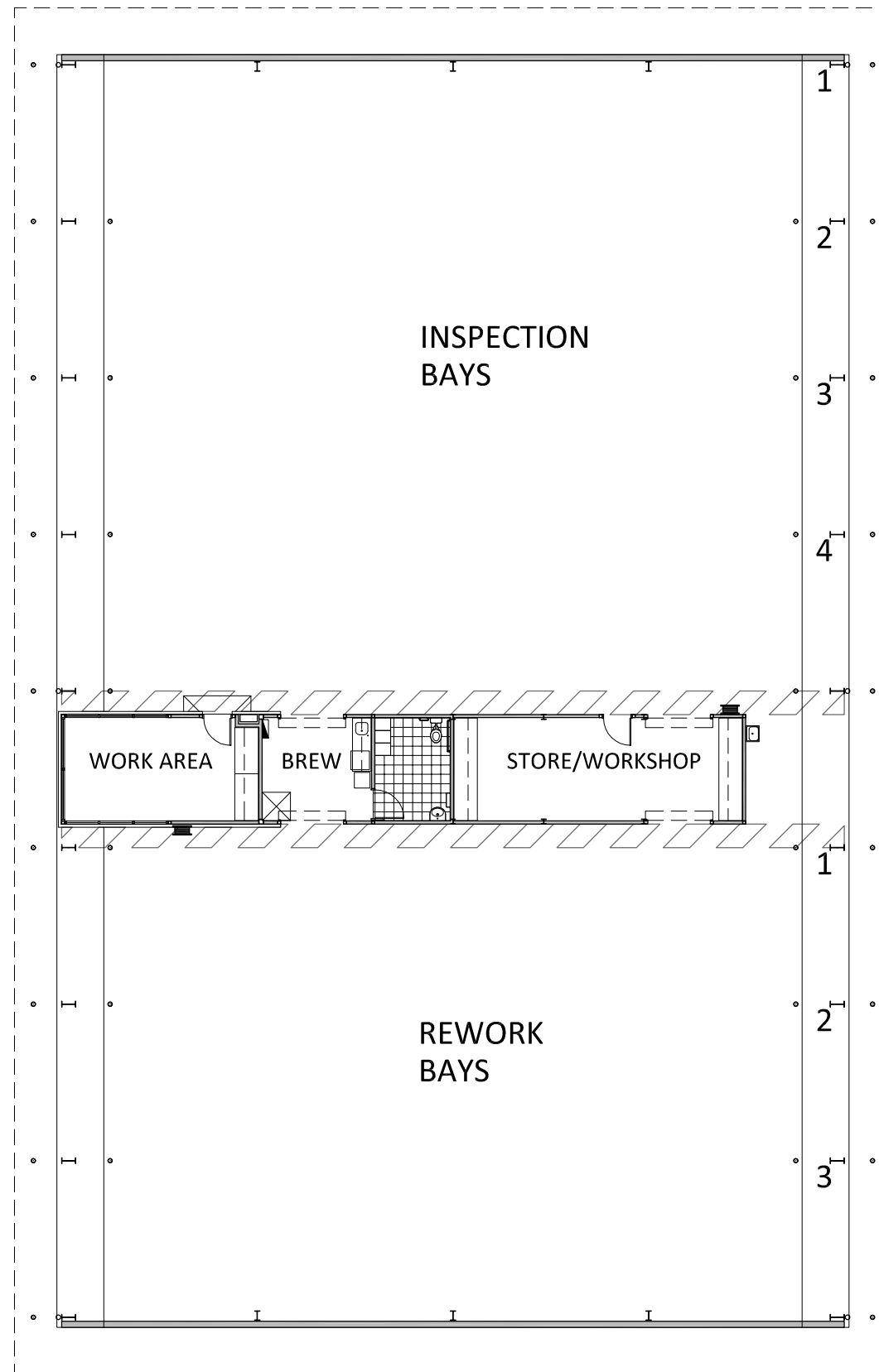
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GATE HOUSE - PLAN
VEHICLE ROLL OUT FACILITY DAMASCUS BARRACKS MEEANDAH



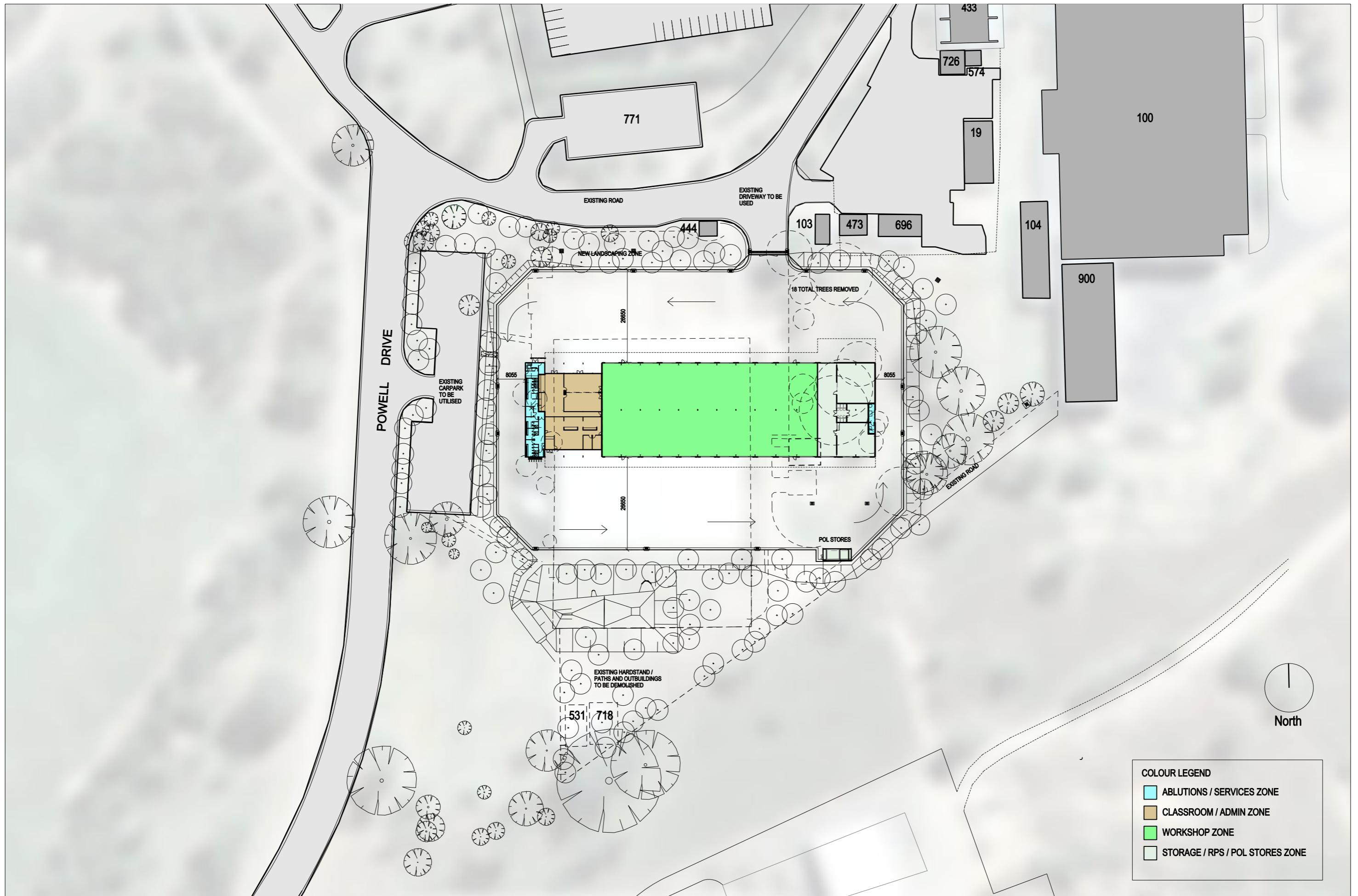
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INSPECTION/REWORK BAYS - PLAN
 VEHICLE ROLL OUT FACILITY DAMASCUS BARRACKS MEEANDAH



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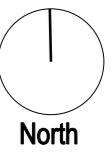
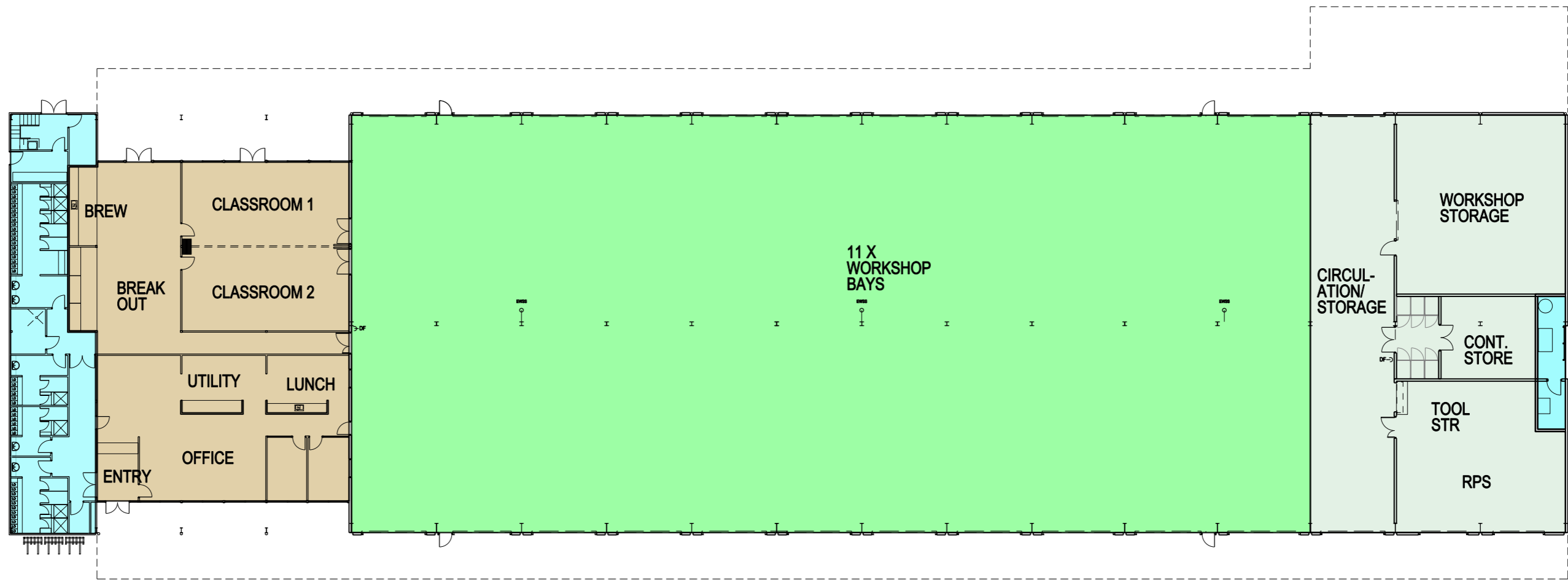
COLOUR LEGEND

■	ABLUTIONS / SERVICES ZONE
■	CLASSROOM / ADMIN ZONE
■	WORKSHOP ZONE
■	STORAGE / RPS / POL STORES ZONE

SITE PLAN

COLOUR LEGEND

- ABLUTIONS / SERVICES ZONE
- CLASSROOM / ADMIN ZONE
- WORKSHOP ZONE
- STORAGE / RPS / POL STORES ZONE



Maintainer Training Facility

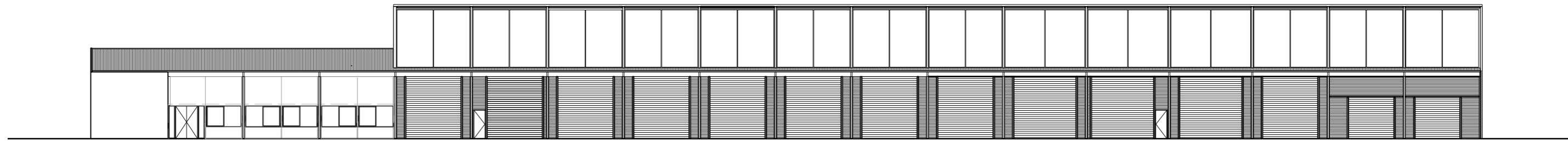
Gaza Ridge Barracks, North Bandiana

Ground Floor Plan

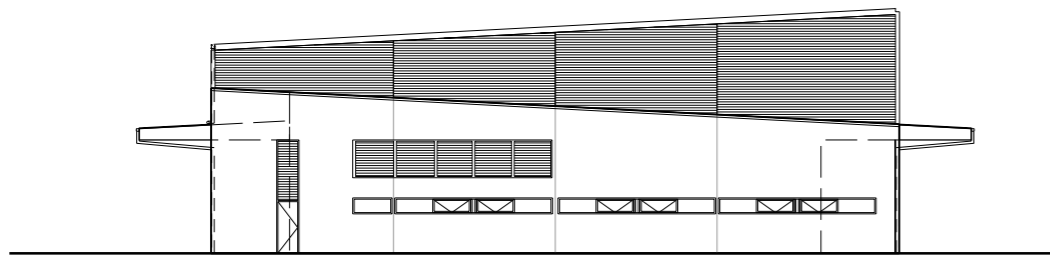
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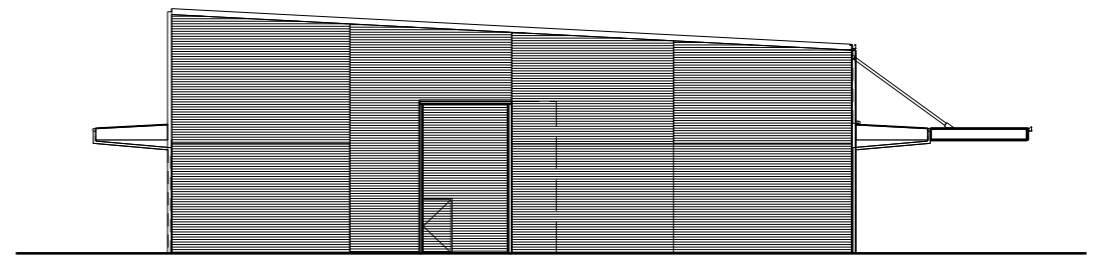
North Elevation



South Elevation



West Elevation



East Elevation

Maintainer Training Facility

Gaza Ridge Barracks, North Bandiana

Elevations

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