



Australian Government

Department of Defence

MOOREBANK UNITS RELOCATION

HOLSWORTHY, NEW SOUTH WALES

Statement of Evidence
to the
Parliamentary Standing Committee
on Public Works

Canberra, Australian Capital Territory

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MOOREBANK UNITS RELOCATION

Need for Works

Identified Need

1. The proposed Moorebank Units Relocation (MUR) project will relocate a number of Defence units and facilities from Moorebank, New South Wales (NSW), to the nearby Holsworthy Barracks, in order to facilitate the construction of the Moorebank Intermodal Freight Terminal (Moorebank IMT) announced by the Government in the 2012-13 Federal Budget. Under the MUR project it is also proposed to rationalise and consolidate a number of Defence activities at Holsworthy Barracks to provide long term efficiencies in Defence operations at Holsworthy.
2. The Moorebank IMT will be developed on a Commonwealth owned / Defence occupied site at Moorebank, that lies between Moorebank Avenue and the Georges River. This site is currently occupied by 13 Defence units and four Defence facilities, the largest of which is the School of Military Engineering (SME). In order to achieve the Government's objective of having the Moorebank IMT built and operating by 2017, the proposed IMT site must be vacated by Defence by the end of 2014.
3. In addition to the works proposed for the relocation of the Moorebank units, this project will incorporate planned program expenditure to provide a consolidated facilities solution in order to provide long term operational efficiencies to Holsworthy Barracks.
4. The project proposes to upgrade or replace existing engineering services, demolish obsolescent buildings and undertake some temporary relocation works at Holsworthy Barracks to enable the proposed works to proceed.
5. The work required for the relocation of Defence operations from Moorebank to Holsworthy Barracks will be complete by the end of 2014 with all remaining work completed by late 2015.

6. On 15 September 2004 a joint announcement was made by the then Minister for Defence, Senator the Hon Robert Hill, and Minister for Transport and Regional Services the Hon John Anderson MP, that the Defence land at Moorebank was to be considered as the site for a proposed IMT. In November 2004, the Government established an Inter-Departmental Committee comprising officials from the Departments of Infrastructure and Transport, Defence, and Finance and Deregulation to identify issues and options that would enable further consideration of the Moorebank IMT.

7. Subsequently, in May 2010, the Government allocated funds to the Department of Finance and Deregulation and the Department of Defence to progress planning activities related to the project, including, in relation to the Moorebank IMT, the preparation of a Scoping Study and Business Case.

8. On 23 April 2012 in announcing progression of the Moorebank IMT, the Government announced that the Moorebank Units Relocation project would relocate all Defence assets currently on the Moorebank IMT site to Holsworthy Barracks by December 2014.

9. In relocating units from the Moorebank site to Holsworthy Barracks, Defence is taking the opportunity to provide a contemporary facilities solution to replace the existing old and obsolescent buildings that are only marginally capable of supporting current training and operational outcomes. This project proposes to consolidate and rationalise multiple existing facilities from the current 198 hectare Moorebank site, to a deliberately planned, precinct based site of approximately 50 hectares at Holsworthy Barracks.

10. Complementing this consolidation and rationalisation, the project proposes to upgrade the Holsworthy Barracks access security, replace the existing gymnasium and pool, replace working accommodation for several units and sub-units of the 5th Brigade, and replace 11 existing Messes with a single Mess. In addition to improving the facilities, this proposal provides Defence with operating cost savings.

Options Considered to Fulfil the Identified Need

11. The Government decision to proceed with the IMT at Moorebank provides no option but for Defence to vacate the site by the end of 2014. As a

result, the options open to Defence were based primarily on siting of the relocated units; both geographically and internally within the chosen base.

12. The tenure of the units involved in the Moorebank Units Relocation project varies, but the SME has been on that site since 1940. In that period, the SME has developed a campus that is well matched to training selected soldiers, airmen and officers of the Army and Air Force in the knowledge and skills required to deliver military engineering capability.

13. The challenge in relocating this capability lies in finding a suitable external training environment, more so than providing the buildings and infrastructure to support the training.

14. The initial siting option considered for the SME was Puckapunyal, Victoria with the remainder of the Moorebank units proposed to relocate to Holsworthy, NSW. In 2009 the Government determined that relocation of the SME to Puckapunyal was not viable and directed the SME would be relocated to Holsworthy Barracks. The key concern with Puckapunyal was that the location was unable to adequately support the full range of training functions, including apprentice construction trade training, watermanship and bridging training. Additionally the Puckapunyal Training Area provided limited opportunities for larger scale demolition and explosive ordnance disposal training.

15. When considering the siting of the Moorebank units at Holsworthy, two broad options were considered:

- a. Green Field Option. Early development activities focussed on siting the majority of proposed works east of the current Holsworthy Barracks cantonment on undeveloped land with some elements located on a brown field site (Kapyong Lines) recently vacated by the relocation of the 3rd Battalion, Royal Australian Regiment (3 RAR) to Townsville, QLD. This siting option coordinated with existing unit locations particularly those of 17th Construction Squadron (17 CONST SQN) and 21st Construction Regiment (21 CONST REGT) to develop an 'Engineer Units Precinct'. However this option included the need to clear approximately 50 hectares of native bushland, giving rise to substantial risks to achieving environmental approval

- b. Brown Field Option. An alternative brown field option sites the majority of the proposed works in the existing Gallipoli Lines precinct of Holsworthy Barracks with supporting facilities located on the vacated 3 RAR Kapyong Lines site. The Gallipoli Lines site is currently occupied by 17 CONST SQN, 21 CONST REGT and four ADF Cadet units, and this option includes the temporary relocation of these units to interim facilities while new facilities are constructed under the project. Notwithstanding the additional development costs for demolition, decontamination and relocation of these affected units, the unmitigated environmental risks presented by the green field option can be more effectively managed under this option

Reasons for Adopting the Proposed Course of Action

16. Defence is currently developing a proposal for Government consideration for the relocation of 17 CONST SQN to RAAF Base Amberley, QLD, in accordance with wider Defence priorities. This planned relocation made the brown field option a feasible alternative to the green field proposal, with 17 CONST SQN proposed to move to Amberley from the interim facilities.

17. Accordingly, the project proposes to relocate all existing Defence units and allied facilities from Moorebank to Holsworthy Barracks. All necessary supporting facilities, infrastructure and local training areas are proposed to be delivered as part of the project. This option is considered the most efficient long term solution as the relocated elements, including the SME messes, gymnasium, instructional facilities for the Land Warfare Centre (LWC) and the Army Compliance and Assurance Agency (ACAA), can be shared on a multi-user basis with other Holsworthy based units.

18. In addition to the works to relocate the units from Moorebank, the proposed project includes the provision of new permanent facilities for some units and sub-units of the 5th Brigade, brought forward from the separate proposed Holsworthy Redevelopment Stage 2 project, thus further maximising the efficient use of consolidated facilities. Similarly, the urgent need to improve security access control to the Barracks and address existing traffic

congestion on Heathcote Road is proposed as part of this project and provides delivery efficiencies for Defence.

19. A more detailed description of the two siting options and the reasons for the chosen option is provided later under the *Details and Reasons for Site Selection* section.

Historical Background

20. Holsworthy Barracks is part of the Liverpool Military Area (LMA) and is located approximately 25km south west of the Sydney CBD in the local government areas of the City of Liverpool and the Sutherland Shire. The Barracks covers approximately 600 hectares and is serviced by public transport, with the Holsworthy Railway Station located within easy walking distance of the current front entrance. The site is also accessible by road, with frontages to Heathcote Road serving the Barracks main entrance (leading to Macarthur Avenue) and to Moorebank Avenue via the Barracks rear entrance.

21. The land that is now Holsworthy Barracks was acquired by the Army in 1913. During World War I it was home to a large internment camp for civilians of German and Austro-Hungarian backgrounds. The current Holsworthy Barracks layout was established in 1967 when facilities for the 10th Task Force were completed.

22. Holsworthy Barracks is currently the home to a significant proportion of Australia's Special Operations capability. Additionally a significant proportion of the Army's 5th Brigade (Army Reserve) including the Headquarters and several direct command units and sub-units are also located at Holsworthy Barracks, along with a number of other units and organisations.

23. Recently, works have been undertaken at the Barracks to provide facilities for Special Forces working and training activities. In late 2011 the 3rd Battalion, the Royal Australian Regiment, relocated from Holsworthy to Townsville as part of the Army's Enhanced Land Force initiative.

24. The equivalent fulltime population of Holsworthy Barracks exceeds 4,000 personnel, comprising 3,000 Regular Army and approximately 1,000 other Australian Defence Organisation (ADO) personnel, including contractors. This core population is supplemented by approximately 1,000

Army Reserve personnel who attend Holsworthy Barracks for training as well as approximately 2,750 trainees who transit through the Barracks every year.

25. Many of the buildings within the Barracks date from the 1960s and contain asbestos. Additionally, termite damage is widespread. In many cases, current facilities do not adequately accommodate the authorised establishments and current manning levels of the units they house. This is in part due to age, configuration and associated re-utilisation from their original designed and built purpose, changes in (for example) training technique or requirements, and simply being outgrown by Defence. These facility shortcomings impact on the Army's ability to meet stipulated operational preparedness objectives.

26. SME, the major unit proposed to be relocated, has occupied its' current site at Moorebank since 1941. In that time SME has undergone several partial redevelopments and upgrades, most recently in the late 1980's. The current facilities reflect the 'self help' redevelopment of facilities by SME internal resources in the course of training military engineers to meet current needs over 70 years. The current facilities range from contemporary buildings from the pre ICT-enabled training era that are in need of upgrading through to some older and significantly dilapidated facilities that are beyond economic life.

Heritage Considerations

27. Holsworthy Barracks and the adjoining Holsworthy Training Area bushland retain more than 500 significant Indigenous heritage sites including campsites, tool making sites and rock art. The art is protected under the Holsworthy Environmental Management Plan.

28. A Heritage Impact Assessment was prepared in 2009 for the new works at Holsworthy Barracks. The key aspects of the assessment report are:

- a. A section of the Old Illawarra Road is located in the vicinity of the works. The old sandstone kerbing is visible and considered to have heritage value. This section of road will not be impacted by the works; and
- b. The P1 huts located at the former Gallipoli Lines are considered to have heritage value. An example P1 Hut will be relocated into

the vicinity of the Military Engineering Heritage and Learning Centre and maintained for public viewing as part of the proposed project.

29. The SME is closely associated with the maintenance of the military heritage of the Royal Australian Engineers (RAE). The proposal includes provision to relocate the RAE Heritage Precinct from Moorebank to Holsworthy Barracks.

Environmental Impact Assessments

30. The Environmental Impact Assessment prepared in 2009 with additional reporting since that time identified the potential impact of the proposal on traffic management, soil contamination, noise, water quality, waste management, air quality, flora and fauna. The assessment concluded that minimal impact would occur as a result of the proposed works. A referral under the *Environment Protection and Biodiversity Conservation (EPBC) Act 1999 (Cwlth)* is not expected to be required.

31. The proposed works will be managed in accordance with the Defence Environmental Management Framework. The Managing Contractor's Construction Environment Management Plan (CEMP) for construction activities will be required to comply with the requirements of the project's Environment Assessment Report provided by the Defence Directorate of Environment Impact Management, and the associated Environment Clearance Certificate.

32. Ecology. Targeted surveys have been conducted for the following four threatened species potentially present in the vicinity of the development:

- a. Green and Golden Bell Frog (*Litoria aurea*);
- b. Swift Parrot (*Lathamus discolor*);
- c. Illawarra Greenhood Orchid (*Pterostylis gibbosa*); and
- d. Sydney Plains Greenhood (*Pterostylis saxicola*).

33. The proposed works have been assessed to not have a 'significant' impact on the threatened species. Mitigation measures to assure this outcome have been identified for incorporation into the CEMP prior to the commencement of construction.

34. Contamination. An Environment Site Assessment Report and Hazardous Materials Survey were completed for the proposed works site in March 2012 and a range of contaminants have been identified including:

- a. Total Petroleum Hydrocarbons;
- b. Polycyclic Aromatic Hydrocarbons;
- c. Benzene, Toluene, Ethyl benzene;
- d. Asbestos; and
- e. Poly Chlorinated Biphenyls.

35. An Environment Remediation Action Plan to appropriately deal with all known and found contaminants on the proposed works site will be implemented alongside the project CEMP.

Key Legislation

36. The following key legislation is relevant to this project:

- a. *Defence Act 1903 (Cwlth)*;
- b. *Native Title Act 1993 (Cwlth)*;
- c. *Environment Protection and Biodiversity Conservation (EPBC) Act 1999 (Cwlth)*; and
- d. *Building and Construction Industry Improvement Act 2005 (Cwlth)*.

37. The design of the proposed works will comply with all relevant and current Defence Standards, Australian Standards, Codes and Guidelines including the following:

- a. *National Construction Code - Building Code of Australia (NCC-BCA) 2012*;
- b. *Work Health and Safety Act 2011 (Cwlth)*;
- c. *Work Health and Safety Act 2011 (NSW)*;
- d. *Disability Discrimination Act 1992 (Cwlth)*;
- e. *Fair Work Act 2009 (Cwlth)*;
- f. Defence Manual of Fire Protection Engineering (MFPE); and
- g. Defence Infrastructure Management policies and processes.

Impact on the Local Community

38. The main entrance to Holsworthy Barracks currently shares its vehicular access via Macarthur Drive from Heathcote Road with a medium density residential subdivision, the Holsworthy railway station and a vacant commercial development site. Heathcote Road is a major traffic route linking Campbelltown and suburbs of the Liverpool area to the Sutherland Shire. Heathcote Road also provides access to the M5 Motorway.

39. The Heathcote Road and Macarthur Drive intersection experiences significant traffic congestion, particularly during the morning and afternoon peak travel periods when residential and railway station traffic can block base access. This impacts on traffic entering and exiting Holsworthy Barracks operations as well as the public accessing the Holsworthy railway station and nearby residential areas, and through traffic on Heathcote Road. A traffic study has concluded that the development of a new Heathcote Road entrance to Holsworthy Barracks is required to reduce the congestion on the existing intersection. The proposed new entrance arrangements are the subject of a separate Development Application placed with the Liverpool City Council

40. Although there will be an increase in permanent employment numbers at Holsworthy Barracks, there will be no overall change in personnel numbers in the wider LMA as a result of this proposal. A total of 850 personnel will relocate from the Moorebank area to Holsworthy Barracks. The on site construction workforce for the proposal will be anticipated to average around 2000 people and peak at around 3000. It is anticipated that trades people and allied construction industry employees from across the Sydney region will experience increased demand and employment opportunities as a direct consequence of the project.

Consultation with Stakeholders

41. Consultation has occurred, or will occur, with the following key stakeholders:

- a. All relevant Defence Stakeholders;
- b. Australian Greenhouse Office;

- c. Commonwealth Department of Sustainability, Environment, Water, Population and Communities;
 - d. NSW Office of Environment and Heritage;
 - e. NSW Office of Land and Property Information;
 - f. NSW Department of Planning and Infrastructure;
 - g. Service providers of Electricity, Gas, Water, Sewer and Stormwater;
 - h. Fire and Rescue NSW;
 - i. NSW Rural Fire Service;
 - j. Australian Communications and Media Authority;
 - k. Roads and Maritime Services NSW;
 - l. Commercial Telecommunications Agencies; and
 - m. Liverpool City Council.
42. Community consultation meetings have been undertaken and will continue to be undertaken during delivery of the proposed project.
43. The consultation undertaken by the project team to date is detailed in an attachment to this statement. No issues of concern have been raised with the project team during the consultation undertaken to date. A number of technical matters remain to be worked through as the project is further developed.

Purpose of the Works

Project Objectives

44. The aim of the project is to relocate to Holsworthy Barracks all Defence units and allied facilities currently occupying the site for the proposed Moorebank IMT. It also brings forward scope elements initially proposed in the Defence Major Capability Facility Program to be delivered by the yet to be approved Holsworthy Redevelopment Stage 2 project. The proposed works will enable the relocation of units from Moorebank, and along with all the associated consequential works, will deliver an optimum, consolidated and efficient facilities solution at Holsworthy Barracks.

Details and Reasons for Site Selection

45. The current proposal to relocate all Defence units from Moorebank to Holsworthy Barracks has considered two key siting options. In both options the location of the key supporting facilities, namely the combined mess and the physical fitness complex, is along the central north-south axis of the Barracks to optimise the ability for shared use. In both options the minor Units relocated from Moorebank are centrally located, close to the 5th Brigade facilities, to maximise the sharing of instructional and support facilities like Quartermaster (Q) Stores to provide an efficient footprint. The location of the SME varies in each option as follows:

- a. Option 1. A green field site south of the existing Gallipoli Lines.
- b. Option 2. The preferred option. A brown field site largely comprising the existing Gallipoli Lines.

46. Option 1 Green field Site. The Option 1 site proposed for the SME offered the opportunity, at the time of consideration, to consolidate an 'Engineer Precinct' at Holsworthy Barracks and achieve operational, training and support synergies between the Special Operations Engineer Regiment, 17 CONST SQN, 21 CONST REGT and the SME. A subsequent decision by Defence to seek Government approval of the relocation of 17 CONST SQN in order to concentrate 6 Engineer Support Regiment at RAAF Base Amberley QLD, reduces the advantages derived from Option 1.

47. Option 1 is located in wooded terrain to the east of the existing Holsworthy Barracks cantonment. The development would require clearing of approximately 50ha of native bushland which has been identified as critically endangered Cumberland Plain Woodland. This clearing would cause the project to be a "controlled action" under the *EPBC Act* requiring an environmental assessment to be undertaken. The time required for the controlled action assessment and subsequent environmental approval would not allow the project to achieve the critical requirement for all Defence assets to be clear of the Moorebank IMT site by the end of 2014. In addition to the program risk, a most likely stipulation of any environmental approval would have been the requirement to provide offsets to the loss of the Cumberland Plain Woodland. Finding appropriate offsets was expected to be extremely challenging, and risked non-approval of the proposal on environmental grounds.

48. Due to the extensive tree clearing requirement, undulating terrain and the distance from other Holsworthy Barracks facilities Option 1 also included greater civil and infrastructure costs. The distance factor in particular generated a need to provide for a separate SME Mess and Gymnasium and a less desirable living-in accommodation solution, from a training efficiency perspective.

49. Option 2 Brown field Site. The opportunity to undertake a brown field development for the SME on the existing Gallipoli Lines site arose when Defence decided to seek Government approval of a proposal to relocate 17 CONST SQN. The Gallipoli Lines option has the major advantage of moving the SME into a more central position within the Barracks, opening up potential for sharing facilities with the remainder of Holsworthy Barracks. The ability to maintain efficiency in training requires trainees being able to quickly move between venues, in particular their living-in accommodation, the Mess and training locations. Option 2 allows the siting of the proposed mess and physical fitness complex adjacent to existing Single LEAP accommodation and the proposed mess and physical fitness complex sites to achieve this objective.

50. The Option 2 site requires the relocation of the units that currently occupy the existing Gallipoli Lines and demolition of their existing facilities to make way for the development. The current units that will be relocated are:

- a. 17 CONST SQN (some components have previously re-located within Holsworthy Barracks, this re-location refers only to those components currently located within Gallipoli Lines, namely the Workshop and Plant Troop, into temporary accommodation);
- b. 21 CONST REGT; and
- c. the ADF Cadet Units:
 - (1) Training Ship (TS) Kanimbla;
 - (2) 23 Battalion Army Cadet Unit (ACU);
 - (3) 22/29 ACU; and
 - (4) the Australian Army Cadet Band (AACB) - Sydney.

51. The assessed advantages of Option 2 significantly outweigh the advantages of Option 1. Further, the risks presented by Option 1 in relation to environmental clearance for the proposed works do not affect Option 2. Consequently the detailed design development has considered Option 2 for the SME precinct.

52. The proposed option, Option 2, was approved via a Defence Site Selection Board process.

Detailed Description of the Proposed Scope of Works

53. The proposed works will be delivered in five functionally distinct precincts consistent with the Defence Liverpool Military Area Siting and Zone Options Plan.

54. The precincts are defined functionally as follows:

- a. Holsworthy Barracks Entry Precinct;
- b. The SME Precinct;
- c. Holsworthy Barracks Mess Precinct;
- d. Holsworthy Barracks Physical Fitness Complex Precinct; and
- e. Training Precinct.

Holsworthy Barracks Entry Precinct

55. The Entry Precinct is located at the front of the Barracks providing ready access to those elements requiring a public or semi-public interface. This location allows the precinct to be separate from the security sensitive functions performed elsewhere in the Barracks. The Entry Precinct includes the following facilities:

- a. Heathcote Road New Barracks Entry - A new Barracks Entry is proposed to provide a new secure entry point and road network off Heathcote road, including a new signalised intersection. As part of the works, the entry point will be upgraded in accordance with the Base Security Improvement Program (BSIP).
- b. Holsworthy Chapel – This facility is proposed to be a Multi Denominational Chapel designed to seat a congregation of 200 people, with an additional multi-purpose room for 100 people. The design will enable reconfiguration to accommodate a total of 300 people for large events such as weddings, christenings, funerals and ecumenical services.
- c. Military Engineering Heritage and Learning Centre – This facility is required to support the instruction of SME on the technical development of military engineering techniques and technology as well as to house the military engineering heritage collection. Office space for four people including one individual office is proposed along with administrative, conservation, archive, and research areas, a workshop and storage areas for sensitive display items as well as a number of larger items including large plant equipment and vehicles.
- d. Commercial Offices for Defence Support (DS) – The proposed Defence Support operations facility is designed to be a shared use building for 91 personnel comprising workstations for 41 Defence Support personnel, 40 Defence Support contractors and ten multi-user hot desks. A two storey building is proposed providing segmented areas for three individual offices, two meeting rooms, one training room, one conference room and amenities.

- e. Defence Community Organisation (DCO) – This proposed facility provides support services to Australian Defence Force families to balance the demands of military service with personal and family commitments. The facility is proposed to support a total of 17 personnel from the Defence Community Organisation and Australian Defence Force Transitions and Housing Relocation team. 14 individual offices are proposed in addition to one conference room, a children’s play room and toy library, and amenities.
- f. Working accommodation for ADF Cadets: TS Kanimbla, 23 Battalion ACU, 22/29 ACU and the AACB-Sydney – This combined cadets facility is proposed to support a maximum training number of 80 personnel including instructional staff and cadets. The use of the facility is shared between the four cadet units with different cadet groups parading on separate nights. The proposed shared facilities include four individual offices, six workstations, an orderly room, one meeting room, one lecture room, a band room, storage and amenities.
- g. DS Transport Yard including the Chief Information Officer Group (CIOG) Store and LMA Quartermaster Store – This is proposed as a shared facility that includes a secure vehicle compound providing standing and light maintenance space, waste management, graphics, reprographics services, deliveries and mail sorting. A combined Q store facility for DS, CIOG and Contractor Stores is also proposed that includes accommodation for 12 personnel and amenities.
- h. Entry Precinct Security Infrastructure – This scope proposes the inclusion of a Pass Office, Security Guard House and a 100 vehicle car park located adjacent to the Pass Office for visitor overflow car parking.
- i. The Liverpool Military Area (LMA) Clothing Store – This facility is proposed to provide clothing and uniforms distribution to the LMA. It is proposed to be relocated into the former 3RAR Quartermaster Store with minor modifications to accommodate a

retail area, bulk store, unisex fitting rooms, tailors room, office facilities and sales point. It will accommodate seven personnel including the need for two individual offices.

- j. Australian Defence Credit Union (ADCU)¹ and Defence Bank (formerly DEFCREDIT) – The proposed relocation of the existing ADCU tenancy requires some additional area to accommodate requirements currently located at Moorebank. The works propose providing additional space in Building K050 ‘the Maxwell Club’ to be fitted out by ADCU. Defence Bank facilities at Holsworthy are sufficient with the exception of the proposal to provide a small kitchenette in the existing facilities as currently exist at Moorebank but not at Holsworthy.

SME Precinct

56. The SME Precinct is proposed to provide a ‘TAFE style’ campus development for military engineering training within the Australian Army. The SME Precinct includes:

- a. Headquarters (HQ) SME - This facility is proposed to accommodate the SME HQ as well as the Duty Room which provides a number of the security related functions of the School. This proposed facility is designed to accommodate 37 personnel including eight individual offices, one meeting room, one conference room, guard room for four personnel, sleeping accommodation, stores and amenities. External areas include parade ground, flag station and memorial.
- b. SME Central Instructional Facility and Working Accommodation for the Engineer Tactics, Combat Engineering and Geospatial Engineering Wings – This facility is proposed to be a double storey building designed to accommodate 74 personnel including 24 individual offices, two conference rooms, eight syndicate rooms, nine classrooms, two training simulator rooms, a model room, a computer room and common amenities. It

¹ These facilities are functionally part of the Holsworthy Barracks Entry Precinct but are located elsewhere.

provides centralised classroom and working accommodation for each of the SME's training Wings.

- c. Initial Employment Training Wing – This facility is proposed to accommodate 32 personnel including 13 individual offices, one conference room, three classrooms, two undercover wet weather classrooms and amenities. A stand alone building is required as it provides basic combat engineer training to 'ab-initio' trainees undergoing 'induction' training. This training routinely involves very high transition rates from classroom to 'on tools' activities, not appropriate or easily accommodated within a central facility without significant training program disruption and inefficiency.
- d. Construction Engineering Wing including the Watermanship and Bridging Section of Combat Engineering Wing – This facility is proposed to be a double storey building designed to accommodate 50 personnel including nine individual offices, one conference room, one model room, four classrooms, one external teaching area and amenities. It provides centralised classroom and working accommodation for the Construction Engineering Wing and Combat Engineering Wing. The training undertaken from this facility exhibits a high transition rate from classroom to on-construction plant, construction trades tools or bridging equipment activities. In these activities, the machines, tools and equipment are unsuitable due to size, operational requirements, noise and dust hazards to be accommodated in proximity to a central facility.
- e. Facilities for Explosive Detection Dog Section – This facility is proposed for the training of working dogs and their handlers including dog husbandry. It includes office space for five personnel, a vet classroom, one meeting room and amenities. Additionally there are 36 kennels and four isolation kennels including a dog wash area. External training areas for mobile dog agility and obedience training are also provided.

- f. A Multi-Function Facility – This facility is proposed to provide a number of recreational training and welfare based functions to the SME’s personnel and trainees and includes the SME First Aid Post, a publications and manuals library, breakout spaces for trainees, two Psychologists offices, the Salvation Army Officer (including Red Shield Room), the Chaplain’s office and prayer room, reading room and amenities.
- g. SME Quartermasters Store – This facility is proposed to provide a centralised store for the SME’s training wings. The store is managed by a contractor and is segregated into stores for each of the wings. The proposed facilities also include open plan accommodation for 20 personnel, one individual office and an armoury.
- h. Workshops including Heavy ‘C’ (construction) Vehicle Maintenance Facilities for the Defence National Storage and Distribution Centre (DNSDC) – This proposed facility is managed by DNSDC for vehicles that are owned by DNSDC but utilised by SME. This vehicle workshop is located within the SME Plant Yard which has four repair bays, two DNSDC repair bays, as well as five external 50 tonne ramps for repairs and maintenance. The facility is also utilised during the training of Plant Operators in courses of up to 20 trainees by the SME. The facility includes office accommodation for four personnel.
- i. Permanent and Trainee Level 1 living in accommodation (LIA) for staff and students – The proposed Permanent LIA facilities include 49 Permanent LIA units, including three disabled person accessible units, in three separate three storey buildings including circulation spaces, balconies and undercover car parking. The proposed Trainee LIA facilities include 288 Trainee Level 1 LIA units including 48 with ensuites in six separate three storey buildings.
- j. External Training Infrastructure. The project proposes to provide special purpose external training infrastructure for the SME including equipment bridging training areas, plant training

area, close training areas, bunkers, search houses, saw mill training facilities, minefield training facilities, bridging yard, aerial ropeway and Initial Employment Training demonstration yard.

Holsworthy Physical Fitness Complex Precinct

57. The Holsworthy Physical Fitness Complex is proposed to provide facilities for physical training and specialist training for the Defence personnel on the Barracks; both for units being relocated from Moorebank as well as for the units currently located at Holsworthy. The facility is proposed to include the following specific areas:

- a. Office accommodation for twelve personnel;
- b. A 50m Indoor Pool;
- c. Multi Purpose Courts (within the space required for two basket ball courts);
- d. A Weights Room;
- e. A Cardio Fitness Room;
- f. A Close Quarter Combat Training Room;
- g. A Spin Room;
- h. Two Squash Courts; and
- i. Circulation, amenities, plant and equipment requirements.

58. The fitness complex proposal includes special purpose enhancements to enable Special Operations Command personnel training in various aviation emplane/deplane, parachute, waterborne operations, diving and close quarter combat techniques.

59. The proposal also includes a number of external training facilities including:

- a. Combined Cricket / Australian Rules field including 600m running track;
- b. Run, Dodge, Jump Course;
- c. Rope Training Facility;
- d. Heave Beam;
- e. Two Crickets Nets;
- f. Two Beach Volleyball Courts;
- g. Four Tennis Courts; and

- h. Upgrade of two existing rectangular sports fields including amenities.

Holsworthy Mess Precinct

60. The Holsworthy Mess provides a combined Mess for the non-Special Forces (SF) Defence personnel on the Barracks including absorbing the RAE Officer's Mess, RAE Sergeant's Mess and 'Peeler Club' (SME Other Ranks Club). The Mess will cater for a design population of 1,100 with a seating capacity for 750, having a central kitchen and stores with separate dining rooms and ante rooms for Officers, Senior Non-Commissioned Officers and Other Ranks.

Training Precinct

61. The Training Precinct provides a second campus style precinct for the remaining minor units relocated from Moorebank, 21 CONST REGT and the consolidation of 5th Brigade units and sub-units into common multi-use facilities. The Precinct provides working and instructional facilities to be shared between the regular and reserve components. The Training Precinct includes:

- a. LWC Regional Education Centre;
- b. Army Logistics Training Centre (ALTC) detachment;
- c. Army Financial Services Unit (AFSU - now part of the Army Compliance and Assurance Agency (ACAA));
- d. Maintenance Advisory Service (MAS now ACAA);
- e. Liverpool Military Area Library;
- f. Headquarters New South Wales Australian Army Cadet Corps Brigade (HQ NSW AAC Brigade);
- g. 5th Brigade Common User Facilities; and
- h. 21 CONST REGT.

62. These units and sub-units are consolidated into the following efficient facilities solution:

- a. Multipurpose Instructional Facility (MIF) - This facility is proposed to provide a range of training and office facilities for HQ NSW AAC Brigade, LWC Regional Education Centre, ALTC,

ACAA, the Sydney University Regiment Soldier Training Company (a unit of 5th Brigade), and the LMA Library. It is designed to provide working accommodation for 103 staff including 11 individual offices. It also provides for common use facilities including three interview / meeting rooms, one conference room, 15 classrooms of varying sizes and a 250 seat lecture theatre, a library, and amenities which achieve the efficiency of shared use between business hours and after hours use by Regular and Reserve units.

- b. 5th Brigade Units Combined HQ - 5th Brigade is a combined arms formation of the Australian Army Reserve, located broadly across the southern half of New South Wales. The combined HQ proposes facilities to accommodate the 5th Combat Support Services Battalion (5 CSSB) and its sub-units, 21 CONST REGT and its sub-units, 10th Field Battery of the 23rd Field Regiment, 142 Signals Squadron, D Company of the 4th/3rd Battalion, Royal New South Wales Regiment and the 5th Brigade Reserve Response Force. The proposed facility is a double storey building with working accommodation for 227 personnel including 28 individual offices, two meeting rooms, three conference rooms and amenities.
- c. 5th Brigade Combined Quartermaster Store - This facility is proposed to provide a combined store for 5 CSSB and its sub-units. It incorporates individual storage bays for the 10th Field Battery, D Company and the Reserve Response Force. It is designed to include working accommodation for 33 personnel including six individual offices, the stores area, an armoury, and amenities.
- d. 5 CSSB Workshops and Transport Company - This facility is proposed to provide a combined workshop and transport facilities for 5 CSSB and its sub-units. It includes working accommodation for 64 personnel including nine individual offices, and a driver ready room for 30 drivers. It also includes a workshop with nine bays comprising six maintenance bays, one

marine equipment bay, one general engineering bay and one welding bay, stores and amenities.

- e. 21 CONST REGT Quartermaster Store and Workshops - This facility is proposed to provide a combined store and workshop facility. The stores will include the unit's Regimental and Squadron Stores, Construction Troop, Civil Troop and Plant Troop Stores. It includes working accommodation for 29 personnel including 3 individual offices, a briefing room for 30 personnel, stores area and amenities.
- f. HQ NSW AAC Brigade Quartermaster Store - This facility is proposed to provide a store for HQ NSW AAC Brigade. It includes working accommodation, a stores area and amenities. There is also an external hardstand for 24 vehicles and ten shipping containers.
- g. 5th Brigade Combined Amenities Building - This facility is proposed to provide a central shared use facility for all 5th Brigade units for training, unit briefings and ablutions. It includes working accommodation for twelve personnel, a training room to accommodate up to 200 personnel, 'DP1' (individual combat equipment) storage for 800 personnel, ablutions and amenities.
- h. 142 Signals Squadron Store - This facility is proposed to provide a separate secure storage for communications equipment associated with the Squadron and includes working accommodation for four personnel, a deployable server room, stores and amenities. The facility is also proposed to include 18 secure vehicle bays.

Additional Works

63. In addition to the proposed precinct works, the project is proposed to include provision for the upgrade or replacement of existing services, demolition of obsolescent buildings and the temporary relocation of units from the current Gallipoli Lines to Jordan Lines to enable the proposed works to proceed. The demolition works include:

- a. 125 buildings located at the former Gallipoli Lines (proposed SME Precinct);
 - b. 56 buildings at the former Kapyong Lines (proposed Holsworthy Physical Fitness Complex and Training Precincts); and
 - c. Seven former messes located at various locations across Holsworthy Barracks, including three at the former Kapyong Lines (replaced by new Holsworthy Mess) and one each at Coral Lines, Jordan Lines, Malaya Lines and Old Holsworthy.
64. Those elements requiring temporary relocation from the former Gallipoli Lines during construction of the proposed works include:
- a. 21 CONST REGT;
 - b. 17 CONST SQN (Workshops and Transport Troop component);
and
 - c. ADF Cadets.
65. The temporary facilities proposed to be established at Jordan Lines include:
- a. 21 CONST REGT – Temporary facilities including working accommodation, a classroom and lecture facility, a warehouse, and amenities. 17 standard shipping containers are provided for additional storage. Vehicle hard standing for seven vehicles is provided.
 - b. 17 CONST SQN (Workshops and Transport Troop component) – A temporary workshop including working accommodation, a small conference room, twelve workshop bays including eight maintenance bays, three engineering bays and one electrical and generator bay as well as stores and amenities. The Transport Troop component includes working accommodation for twelve personnel including three individual offices, a small conference room, a warehouse, shelters, and amenities. 17 standard shipping containers are provided for additional storage. Vehicle hard standing for 83 vehicles is provided.
 - c. ADF Cadets – Temporary facilities including working accommodation, classroom and lecture facilities, a warehouse

and amenities. Nine standard shipping containers are provided for additional storage.

66. All temporary facilities will be removed from Holsworthy Barracks at the completion of the project.

67. The proposed temporary facilities enable the vacation of the former Gallipoli Lines and commencement of main construction works for the proposed SME Precinct. Early completion of the temporary works will be essential to meet the project construction program.

Options Considered

68. A wide range of development options were considered to minimise the cost of the proposal. These included:

- a. Replicating the existing Moorebank facilities. This approach would lead to a proliferation of standalone buildings with limited connectivity, very little shared functionality and a large additional services infrastructure overhead. This approach was rejected after initial consideration as being inefficient, not in keeping with the principle of seeking to consolidate facilities, and through the effect of massing and modernising, to improve the function and efficiency of the facilities.
- b. Consolidating like functions to allow for higher utilisation of fewer areas including:
 - (1) Offices;
 - (2) Ablutions/ DP1 storage (for soldier's individual combat equipment);
 - (3) Instructional facilities;
 - (4) Quartermaster stores;
 - (5) Plant/transport yards; and
 - (6) Car parks.
- c. Maximising the use of external training areas immediately adjacent to 'training and instruction' focussed buildings to maximise training program effectiveness where there is a high transition rate from 'classroom' to 'on tools' activity. The following buildings exhibit this feature:

- (1) Central Instructional Facility, Initial Employment Training Wing and Construction Engineering Wing of SME.
 - (2) The Multipurpose Instructional Facility in the Training Precinct; and
 - (3) The Holsworthy Physical Fitness Complex.
- d. For selected buildings incorporate an ability to utilise external spaces for 'surge' activities involving larger than usual numbers of personnel. The following buildings exhibit this feature:
- (1) The Holsworthy Chapel;
 - (2) The Military Engineering Heritage and Learning Centre; and
 - (3) The Holsworthy Mess.
- e. Developing the design around common building forms to reduce the cost and to introduce efficiency in the fabrication of components off-site and into the construction on-site.
- f. Re-use of existing facilities where possible with or without modification:
- (1) Living In Accommodation previously delivered by the 'Single LEAP' Defence infrastructure project;
 - (2) Defence Bank;
 - (3) ADCU;
 - (4) LMA Clothing Store; and
 - (5) Temporary facilities.

Public Transport

69. The Holsworthy railway station is located on the south of Heathcote Road and within 100m of the existing Holsworthy Barracks entrance. The station is on the East Hills Passenger Line which links Campbelltown to the City of Sydney via Mascot Airport. Additionally the railway station is serviced by the local bus public transport service network and by taxis.

Local Road and Traffic Concerns

70. Heathcote Road to the north of the Barracks is a significant arterial road that links Campbelltown and suburbs of the Liverpool area to the

Sutherland Shire. The road currently experiences heavy traffic congestion in both morning and afternoon peaks, with the greatest impact at the roundabout intersection with Macarthur Drive leading into Holsworthy Barracks. This intersection shares traffic flow to the Holsworthy railway station, nearby housing estate and future commercial development zone.

71. The project proposes to reduce traffic flows turning off the Heathcote Road roundabout intersection by providing a dedicated fully signalised intersection and new Barracks entry point approximately 800m to the east of the existing roundabout intersection. The project proposes to upgrade approximately 500m of single carriageway each way to dual carriageway along Heathcote Road. This component of the proposal is the subject of a separate Development Application made to Liverpool City Council under Part 4 of the NSW Planning and Assessment Act.

72. While there will be an initial increase in base population at Holsworthy as a result of this project, there will be no net increase in base population from 2011 to anticipated project completion in 2015 accessing the Barracks. This takes into account the relocation of the 3 RAR to Townsville, QLD in 2011, Defence plans (subject to Government and Parliamentary approval) to relocate 17 CONST SQN to RAAF Base Amberley, QLD in 2015, and the relocation of 850 full-time equivalent personnel from Moorebank to Holsworthy Barracks as proposed by this project.

73. The project is expected to have no adverse traffic impacts along the Defence owned Moorebank and Cambridge Avenues from the rear entry to Holsworthy Barracks.

74. Traffic within the Barracks will be catered for with improved car parking and enhancements to the road network designed to improve vehicular and pedestrian safety.

75. There is expected to be a net increase in population accessing the Barracks site during the proposed construction works from late 2012 through to mid 2015. The delivery plan envisages an excised Managing Contractor's construction zone that does not require vehicles or personnel to enter the Barracks. Nonetheless an increase in vehicle movements associated with construction of around 2,000 per working day is anticipated.

76. To alleviate the impact of extra traffic on Holsworthy Barracks establishments and surrounding neighbourhoods, a Construction Traffic Management Plan will be prepared and implemented. Heavy machinery used during construction is expected to have minimal impact on the local road network as it is expected to remain on site for prolonged periods of time.

Zoning and Local Approvals

77. The project proposes to undertake modifications to the Heathcote Road entrance to Holsworthy Barracks to meet the Base Security Improvement Program (BSIP) specification and afford improved Barracks access for personnel by creating a direct access road from Heathcote Road. Since the Heathcote Road intersection is largely not on Defence land, a development application has been made to Liverpool City Council under Part 4 of the NSW Planning and Assessment Act. The development application is intended to satisfy the requirements of the Liverpool City Council guidelines and is complete with all the necessary information. A Statement of Environmental Effects is included with the development application.

Master and Site Planning

78. The proposal conforms to the approved LMA Strategic Analysis and Zone Options Plan and has been sited in accordance with Defence site selection procedures.

79. The proposal includes allowance for the future growth and expansion of the units to be relocated as part of the Moorebank Units Relocation project, as well as for future development of Holsworthy Barracks.

Planning and Design Concepts

80. The project will provide safe, functional, and cost effective facilities of energy efficient design suitable for the local climate, and of a style consistent with the character of Holsworthy Barracks.

81. Buildings have been planned in such a manner as to allow ease of adaptability of internal spaces over time, and a standardized approach has been adopted for the design of working and training accommodation. Buildings have also been designed and sited to allow for future expansion if required.

82. The design has adopted construction techniques and materials that are sustainable, robust, and address whole of life costs, and which are consistent with the capacity and capability of the local construction industry.

83. Siting has considered site constraints, security requirements, the established zone plan, functional relationships to existing facilities and operational requirements. Infrastructure services planning and structure design has been developed to maximise future flexibility.

Structural Design

84. The structural design for the buildings takes into account the local geotechnical conditions encountered on the site. The proposed new structures are steel framed construction, incorporating structural precast walls and/or steel cross bracing for overall stability. Suspended floors to multi-storey buildings will be composite slab construction, incorporating reinforced concrete and steel profile structural formwork. Internal walls will where practical be non-load bearing frames, lined with plasterboard to provide maximum flexibility in future layouts.

Materials and Furnishings

85. Materials have been selected on the basis of robustness, low maintenance requirements, low life cycle costs, ease of replacement and repair, and, where possible, suitability for off-site pre-fabrication and modular assembly.

86. External walls for new buildings will be a mixture of pre-cast concrete panels, pre-finished metal cladding, and full height external glazing. Where required, metal louvre sun shading systems will be installed to reduce heat gain and solar glare.

87. The maximising of off site pre-fabrication is critical to meeting the demanding construction program to vacate the Moorebank site by the end of 2014.

Mechanical Services

88. The mechanical services for the buildings have been designed according to the functional and user requirements of each building. The purpose of the systems is to provide mandatory ventilation, thermal comfort

and air quality facilities in accordance with specific user requirement and the National Construction Code - Building Code of Australia. Selection of mechanical systems is based on the requirement to achieve an economic balance between capital cost and operational costs and where practical include natural ventilation.

Hydraulic Services

89. Hydraulic services are provided to comply with the requirements of the Defence Estate Quality Management System and Australian Standards. Natural gas, sewer drainage, stormwater drainage and potable water will be supplied to all new buildings.

90. Rainwater will be harvested within the base wide rainwater catchment system, treated and then supplied to each new building through a dedicated non potable water network for toilet flushing and landscape irrigation.

Electrical Services

91. The project interfaces with the LMA High Voltage Upgrade project, which, subject to PWC consideration and Parliamentary approval, proposes to provide increased trunk electricity capacity to the Barracks for future growth. Electrical infrastructure will be upgraded to service the new facilities to be constructed on site.

92. The new electrical infrastructure will meet Australian Standards, Defence requirements and provide adequate spare capacity for future growth.

93. The electrical power and lighting installation in the buildings will meet the functional requirements of the project and all regulatory requirements including the National Construction Code - Building Code of Australia, Australian Standards and the Service and Installation Rules of New South Wales. Electrical metering shall be provided to allow the energy reporting as required by the Defence Building Energy Performance Manual. Emergency and exit lighting shall be provided to meet Australian Standards.

Fire Protection

94. Fire and Rescue New South Wales has been consulted in developing this proposal. Fire hydrant, fire detection, fire sprinkler systems

and first attack fire systems such as extinguishers and fire hose reels are proposed to be provided in accordance with the requirements of the Defence Manual of Fire Protection Engineering and National Construction Code - Building Code of Australia.

95. Bushfire protection will be provided by building all structures to the higher standard specified by either 'Planning for Bushfire Protection' (Rural Fire Service 2006-10) or Australian Standard AS 3959 – 2009 'Construction of buildings in bushfire prone areas'. The exposure to bushfire was determined by reference to standard tables of vegetation type and slope for specified weather conditions, and a level of construction selected in compliance with the National Construction Code - Building Code of Australia approved methodology to suit the setback distance from unmanaged vegetation.

96. The design includes the installation of automatic fire alarm and detection systems as required by the Defence Manual of Fire Protection Engineering. The fire indicator panel in each of these buildings will be monitored centrally.

Acoustics

97. Noise emissions from onsite activities including plant, vehicle movements, the Explosive Detection Dog facility and the heavy plant training facility have been assessed. Noise emissions from site activities can have impacts both internal to the development and external to the development. Noise criteria, for buildings internal to the development, are specified in Australian Standard AS/NZ2107:2000. For noise external to the development, i.e. residential and commercial property, this is specified by NSW Industrial Noise Policy and Office of Environment and Heritage sleep disturbance requirements. The proposed facilities, their intended future use and the effects of consequential site operations are such that the magnitude of source noise combined with distance and topography between source and receiver will be within the specified criteria, including Australian Standards and the NSW Industrial Noise Policy and Office of Environment and Heritage sleep disturbance requirements. No adverse impacts due to noise as a result of the development are envisaged.

98. A detailed noise impact assessment of the proposed new Heathcote Road intersection as part of revised Holsworthy Barracks access arrangements is currently underway.. Preliminary analysis indicates that the combined effects of traffic volumes, distance and topography between the road and residential receivers will not require the installation of any control measures such as noise barriers.

Landscaping

99. Appropriate landscape treatment will be provided to support functional requirements of buildings & facilities. Shared pathways between all major facilities and the railway station will encourage walking and cycling. Landscape treatment will offer shade and amenity in breakout areas, along pathways, around buildings and in car parks. Native trees and plant species have been selected for planting because of their proven performance, amenity, and low maintenance and water requirements. Removed trees and vegetation will be replaced with new trees and purposeful and appropriate landscape finishes.

Other Civil Works

100. Civil grading works are proposed to minimise import and export of soil and rock off site. Material won on-site will be used where ever possible for engineered preparation for building earthworks pads and roadways.

101. Civil engineering including grading and stormwater piped drainage and run off is designed to comply with the requirements of the Defence Estate Quality Management System and the Australian Rainfall and Runoff Manual, Volume 1 and Volume 2.

102. Roadways have been designed to provide for all required Defence vehicular movements including new vehicles provided by the Defence Capability Project - Land 121 fleet of tactical vehicles.

103. Pedestrian pathways provide for disability access to all required areas.

Environmental Sustainability of the Project

104. The Commonwealth is committed to Ecologically Sustainable Development (ESD) and the reduction of greenhouse gas emissions. Defence

reports annually to Parliament on its energy management performance and on its progress in meeting the energy efficiency targets established by the government as part of its commitment to improve ESD. Defence also implements policies and strategies in energy, water and waste to improve natural resource efficiency and to support its commitment to the reduction of energy consumption, potable water consumption and waste diversion to landfill. This project has addressed this policy by adopting cost-effective and ecologically sustainable development as a key objective in the design development and delivery of new facilities.

105. The ESD targets and requirements for Defence projects shall comply with the Defence Building Energy Performance Manual (BEPM).

106. The following general ESD directions form the basis of the sustainable design features of the project and will be implemented:

- a. Recycling of construction and demolition waste;
- b. Use of paints, flooring, carpets, adhesives and sealants with low Volatile Organic Compound emissions;
- c. Include engineered timber products with low or zero formaldehyde emissions;
- d. Use thermal insulation and refrigerant products with zero Ozone Depletion Potential;
- e. Use of water efficient fixtures, toilets and appliances;
- f. Supply all toilet and urinal flushing with rainwater;
- g. Solar hot water systems with gas boost to provide domestic hot water;
- h. Lighting controls with time clocks, motion sensors and daylight sensors to minimise wasted energy;
- i. External lighting to reduce light pollution and be energy efficient with time clocks and daylight sensing controls;
- j. Plant species to be low water use, indigenous and drought resistant. Preference given to plant species that are native to the Holsworthy area;
- k. Mixed mode operation available to building users through indicator panels to alert when building operates in natural ventilation mode; and

- I. Provision of metering and sub metering to capture the energy and water consumption of each building with greater detail and monitor against predicted consumption.

Energy Targets

107. All new buildings over 2,000m² with an office area component will comply with the minimum energy performance standards in the Energy Efficiency in Government Operations (EEGO) policy and are designed to achieve a 4.5 Star National Australian Built Environment Rating System (NABERS) rating.

Measures to Reduce Energy and Water Use

108. Passive design features have been embedded in building design throughout the project including:
- a. Orientation of buildings, shading, thermal mass, insulation and glazing have been optimised to reduce energy consumed by active heating and cooling through appropriate use of solar gains throughout the year;
 - b. Natural light has been maximised within all buildings and artificial lights are linked with daylight sensors to limit energy use;
 - c. In order to reduce the amount of potable water consumption, storm water and rain water captured on site will be used for flushing the majority of toilets and landscaping. This water is stored in a series of detention ponds that will be linked as part of the existing water management strategy on site;
 - d. All taps and toilets will be water efficient and rated as at least 4 Star Water Efficiency Labelling and Standards (WELS) and showerheads rated as 3 Star WELS;
 - e. “Energy Star” compliant appliances and equipment will be installed where available;
 - f. Solar Hot Water systems with gas boost will provide preheating for domestic hot water;

- g. Artificial lighting in the building will utilize low energy lamps and incorporate lighting control systems such as daylight sensing, occupancy sensors and time switches to minimise energy usage. The power usage of the lighting shall comply with the levels prescribed in the National Construction Code – Building Code of Australia; and
- h. Energy metering will be installed to separately monitor regulated and unregulated energy usage of each building and all the main loads as required by the Defence Building Energy Performance Manual, November 2011. Metering will be linked back to the Building Management System to allow monitoring of energy consumption.

Details of Compliance with Local, State/Territory and Commonwealth Water and Energy Policies

109. All buildings will be designed, constructed, operated and maintained in order to use energy and water as efficiently as possible and comply with the following statutory and Defence requirements:
- a. Parts J1 – J8 of Section J of the National Construction Code – Building Code of Australia 2012;
 - b. Building Energy Performance Manual (BEPM), November 2011;
 - c. The Energy Efficiency in Government Operations (EEGO) policy;
 - d. National Australian Built Environment Rating System (NABERS) Energy rating system;
 - e. Defence Energy Policy; and
 - f. Department of Defence Water Management Strategy.
110. Lighting control, metering and power densities are in accordance with Defence Manual of Infrastructure Engineering Electrical and National Construction Code – Building Code of Australia.

Re-Use of Existing Structures

111. The following structures are proposed to be re-used by the project:

- a. Building K084 the former 3 RAR Quartermaster Store as the LMA Clothing Store as it is a relatively new building of suitable area able to be easily retrofitted to accommodate the new function and a very cost effective option; and
- b. Part of Building K050 the 'Maxwell Club' for ADCO and Defence Bank business facilities relocated from Moorebank and required to be co-located with existing facilities at Holsworthy.

Demolition and Disposal of Existing Structures

112. Demolition works include existing facilities at the former Kapyong Lines (the proposed location of the Holsworthy Physical Fitness Complex and Training Precincts), the former Gallipoli Lines (the proposed location of the SME Precinct), and seven messes across Holsworthy Barracks no longer required following the construction of the proposed Holsworthy Mess. Due to the age and nature of these facilities, they are not suitable for adaptive re-use by the project.

Provisions for People with Disabilities

113. All new buildings are being designed to comply with the requirements of the Disability (Access to Premises – Buildings) Standards 2010 and National Construction Code – Building Code of Australia. These are the applicable reference documents for all new building work, and in turn reference relevant Australian Standards for Access & Mobility. In addition, in line with Defence's policy 'Disabled Access and Other Facilities for Disabled Persons', disabled access to all buildings is required, unless otherwise covered under a dispensation under the Defence Manual of Fire Protection Engineering.

114. Access to, and connections between buildings and facilities on the site, including car parking, will also be designed in accordance with relevant access standards.

Childcare Provisions

115. An existing Childcare Centre providing childcare placements to service the LMA dependency is located on MacArthur Avenue in Holsworthy

Barracks and is retained in its current facilities to the immediate north-west of the proposed Training Precinct. No additional childcare facilities are proposed.

Workplace Health and Safety Measures

116. The facilities to be provided under this project will comply with Department of Defence Work Health and Safety policy, the *Work Health and Safety Act 2011 (Cwlth)*, the *Work Health and Safety Regulations 2011 (Cwlth)*, the *Work Health and Safety Act 2011 (NSW)*, the *Work Health and Safety Regulations 2011 (NSW)* (as applicable) and the Defence Safety Manual.

117. In accordance with Section 35(4) of the *Building and Construction Industry Improvement Act 2005 (Cwlth)*, contractors will be required to 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 access during the construction period. No special or unusual public safety risks have been identified.

118. The Managing Contractor will be authorised and engaged to have management control of the workplace (and the site) as the Principal Contractor under the *Work Health and Safety Regulations 2011 (Cwlth)* and *Work Health and Safety Regulations 2011 (NSW)*.

119. A safety in design management process following the NSW Work Cover guidelines will be undertaken as part of the construction phase for this project. The safety in design risk register identifies any risks and hazards then records mitigation treatments (elimination or control measures) necessary to reduce any construction or operational risks and hazards.

120. The building design incorporates measures to reduce occupational noise to below the limits identified in the Australian Standards and the National Construction Code – Building Code of Australia.

Cost Effectiveness and Public Value

Project Budget

121. The total estimated cost of this project is \$870.0 million excluding Goods and Services Tax. This cost includes works to support the relocation of units from Moorebank and additional works undertaken at Holsworthy to meet other Defence objectives. The cost includes all delivery costs for management and design fees, construction costs, information communication technology, furniture, fittings and equipment, contingencies, and an allowance for escalation.

122. The funding sources for the delivery of the project are as follows:

- a. Nation-Building Funds Program \$517.1 million; and
- b. Defence Major Capital Facilities Program \$352.9 million.

123. The funding allocation recognises the Government requirement for Defence to vacate the Moorebank site in favour of the Moorebank IMT. It also recognises that Defence derives a benefit through relocation in the form of new facilities at Holsworthy Barracks for the relocated units and existing Holsworthy Barracks functions, and that re-investment in the Moorebank site would otherwise have been needed in the near term.

124. The Net Personnel and Operating Costs for the completed facilities are anticipated to be \$11.0 million per annum at mature state.

Details of Project Delivery System

125. A Project Manager/ Contract Administrator has been appointed by the Commonwealth to manage the project works and the associated administration of contracts in the planning phase. A Managing Contractor has been appointed using the Department of Defence – Managing Contractor Form of Contract, to manage design development to meet the needs of Defence user groups and overall project constraints in the Planning Phase. Subject to Parliamentary approval of the project, satisfactory performance of the Managing Contractor in the Planning Phase, and reaching agreement on the Delivery Phase costs and program, the Managing Contractor may be further engaged to procure trade based work packages and construct the proposed works. The Managing Contractor will provide the Commonwealth

with professional engineering advice on buildability efficiencies and provide facilities fit for purpose with associated warranties for the project works in accordance with the Contract Brief.

126. The Managing Contractor will actively promote the engagement of small to medium enterprises in design and construction trade packages and by segregating the delivery of the project works via specialist delivery teams; the Managing Contractor will offer the Commonwealth certainty in delivery.

127. The Managing Contractor will deliver the project works in accordance with, but not limited to; all current National Code of Practice guidelines, Commonwealth Procurement Rules, National Construction Code – Building Code of Australia, Australian Standards, and Workplace Health and Safety legislation.

Construction Program

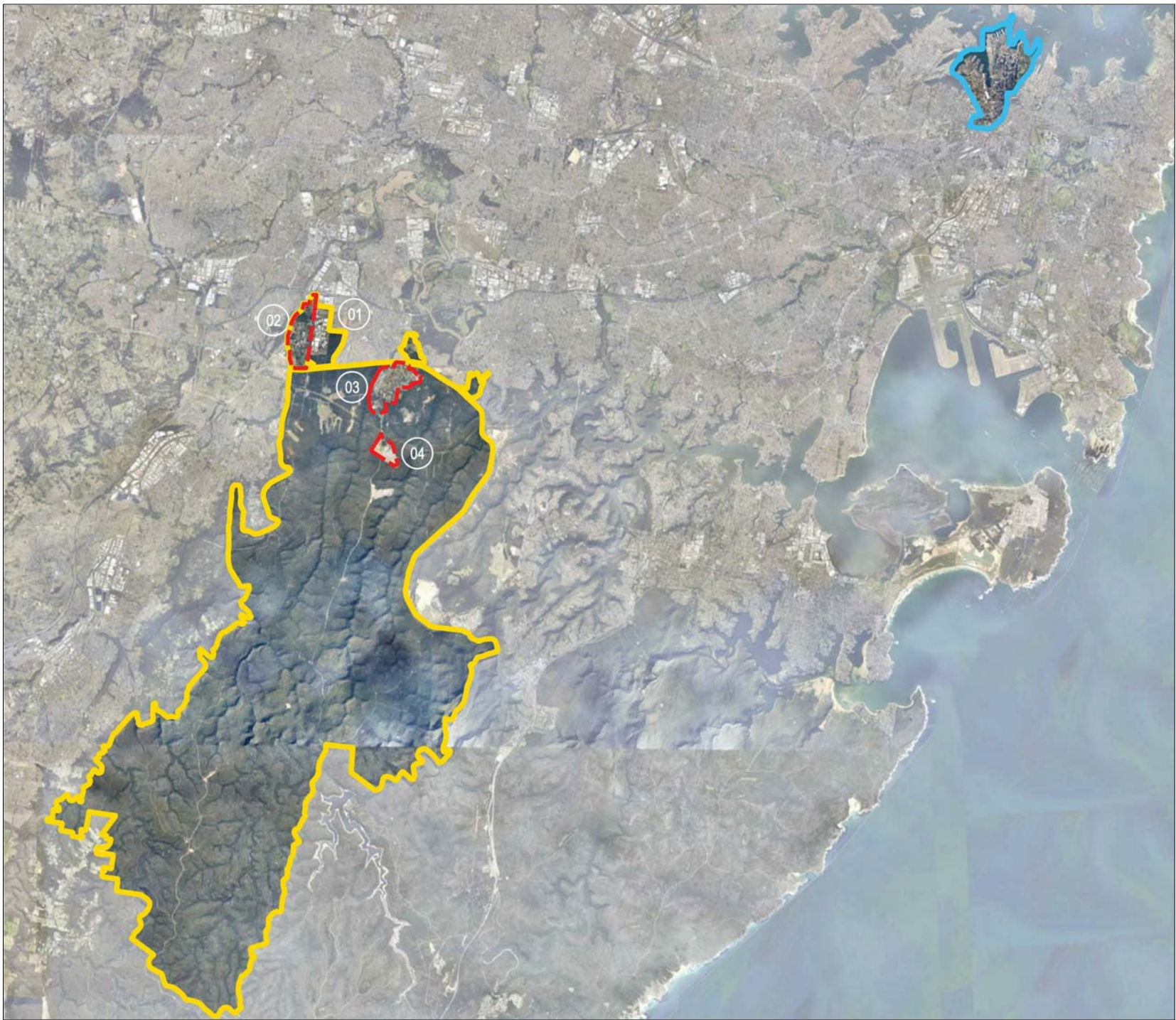
128. Subject to Parliamentary approval of the project, construction is expected to begin in January 2013 with staged handover and occupation of all Precincts being completed by October 2015. Works to permit relocation of the Moorebank units will be completed by the end of 2014 to meet the IMT development milestone.

Public Value

129. The proposal secures a long term commitment by Defence to maintain a significant and key Defence base in south-west Sydney with the benefits to the local community that will accrue. Additionally through the delivery and operation of the proposed works a more consolidated and efficient Defence operation in south-west Sydney will result.

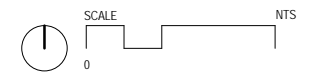
Revenue

130. No revenue will be derived from this project



SITE PLAN LEGEND

- LIVERPOOL MILITARY AREA BOUNDARY
- SYDNEY CBD
- 01 MOOREBANK
- 02 STEELE BARRACKS
- 03 HOLSWORTHY CANTONMENT AREA
- 04 LUSCOMBE AIRFIELD





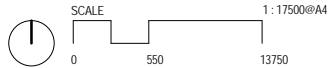
SITE PLAN LEGEND

- LIVERPOOL MILITARY AREA BOUNDARY
- 01 MOOREBANK
- 02 STEELE BARRACKS
- 03 HOLSWORTHY CANTONMENT AREA
- 04 LUSCOMBE AIRFIELD
- 05 OLD HOLSWORTHY CAMP
- 06 OPEN SPACE ZONE



SITE PLAN LEGEND

- 01 EXISTING ENTRY GATE
- 02 GALLIPOLI LINES
- 03 KAPYONG LINES
- 04 TOBRUK LINES
- 05 CORAL LINES
- 06 MALAYA LINES
- 07 JORDAN LINES
- 08 OLD HOLSWORTHY CAMP

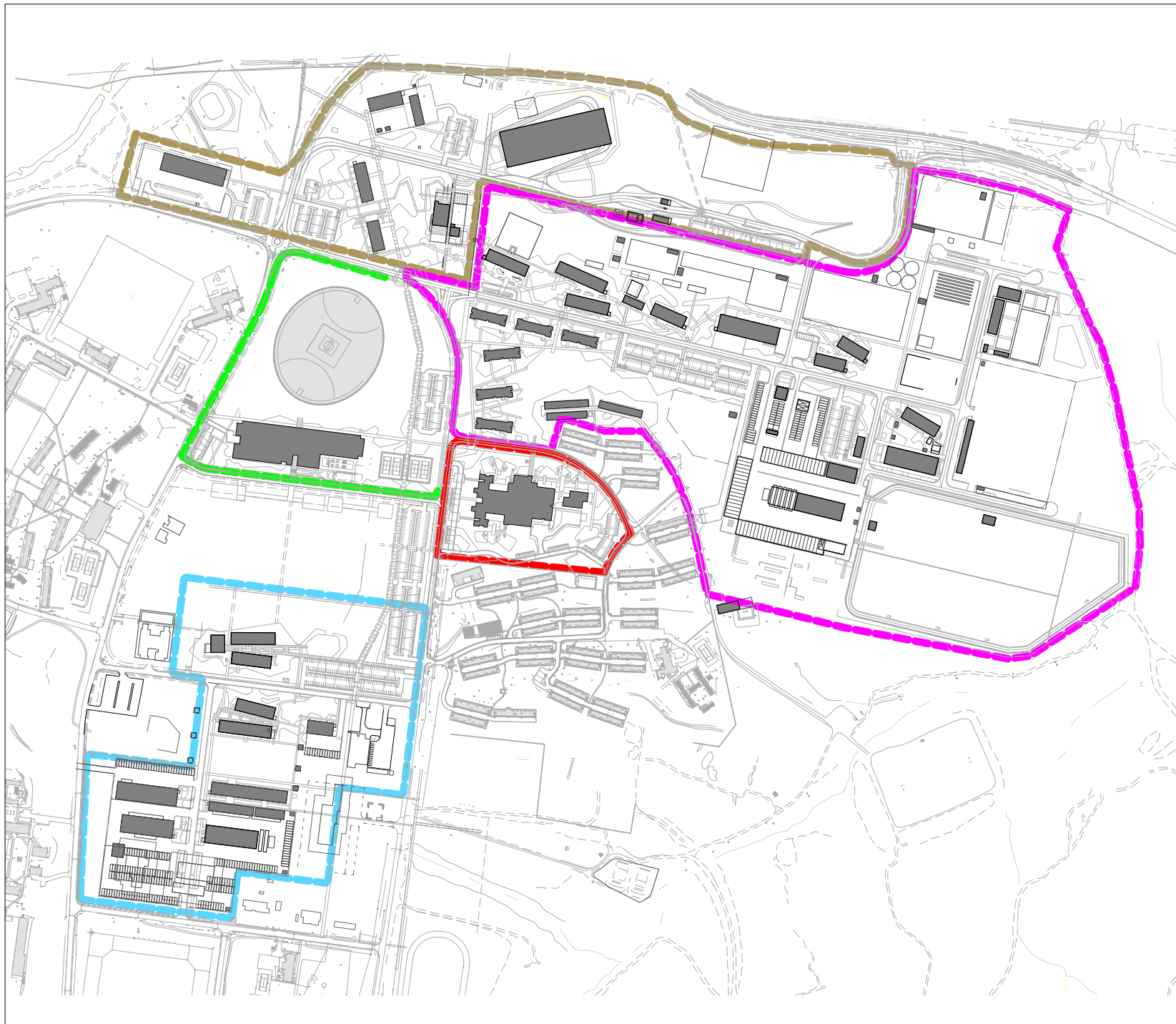




COLOR LEGEND

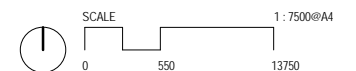
- LIVERPOOL MILITARY AREA BOUNDARY
- HOLSWORTHY BARRACKS ENTRY PRECINCT
- SCHOOL OF MILITARY ENGINEERING PRECINCT
- HOLSWORTHY MESS PRECINCT
- HOLSWORTHY PHYSICAL FITNESS COMPLEX PRECINCT
- TRAINING PRECINCT
- TEMPORARY WORKS

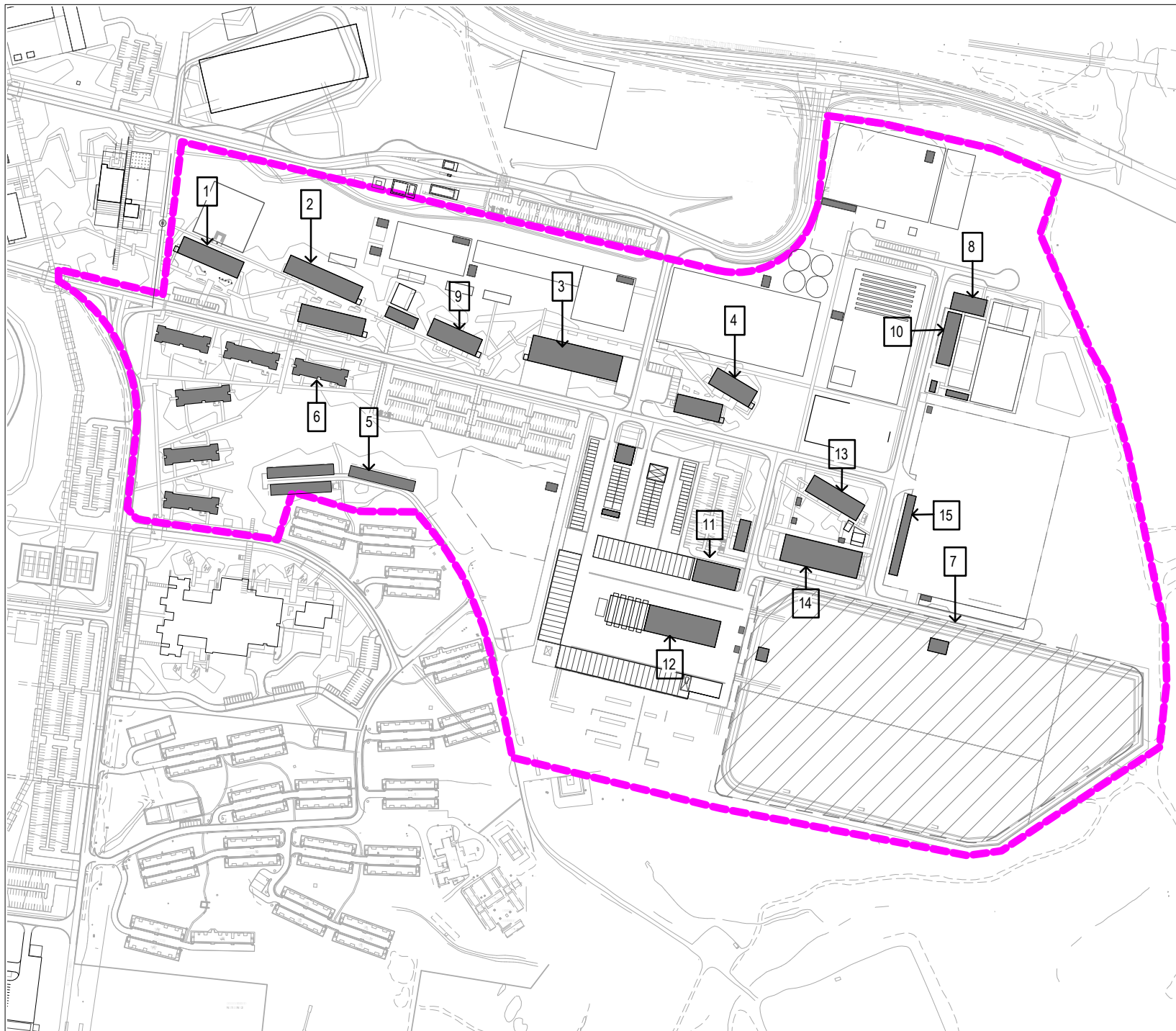




COLOR LEGEND

- HOLSWORTHY BARRACKS ENTRY PRECINCT
- SCHOOL OF MILITARY ENGINEERING PRECINCT
- HOLSWORTHY MESS PRECINCT
- HOLSWORTHY PHYSICAL FITNESS COMPLEX PRECINCT
- TRAINING PRECINCT



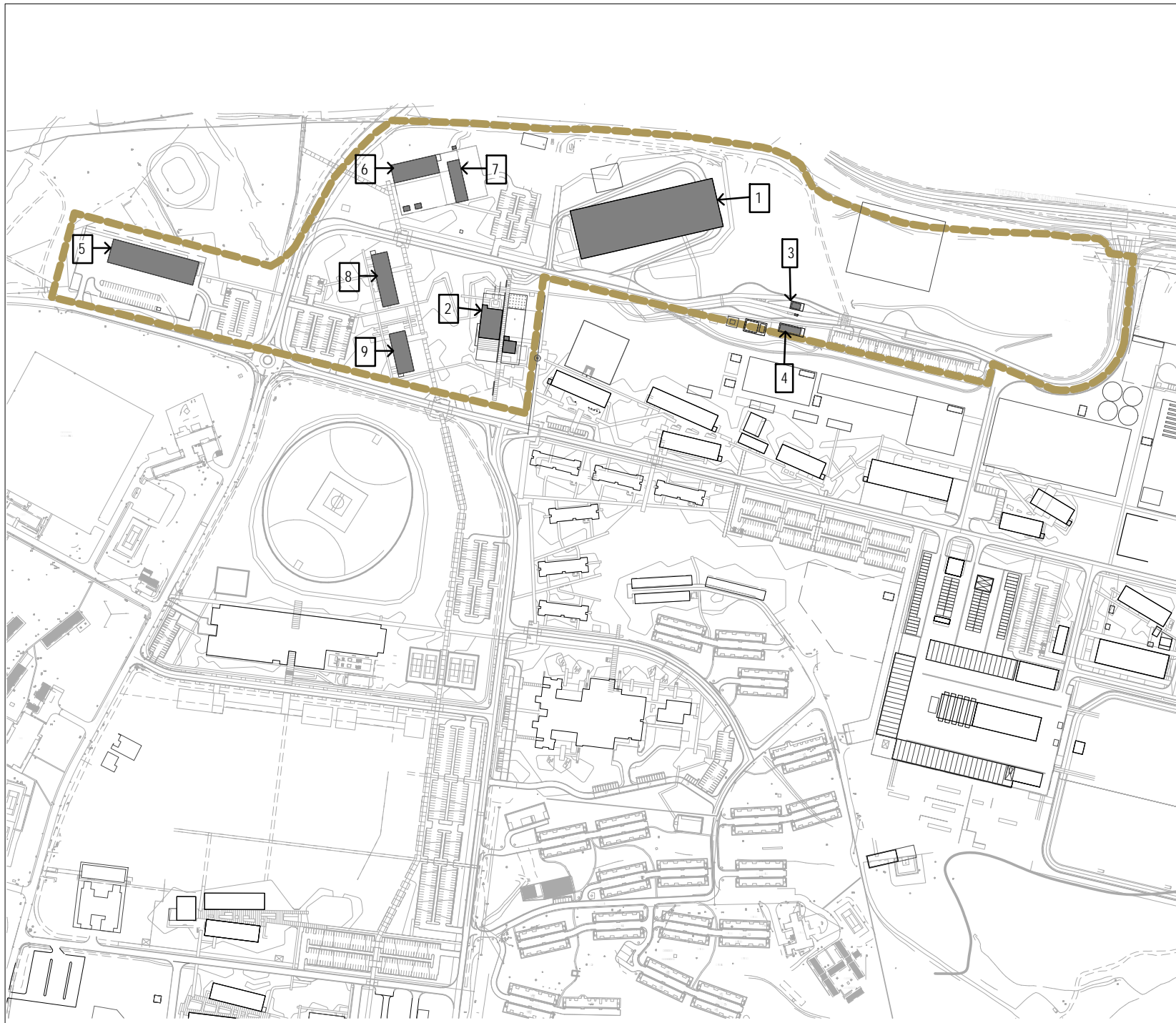


BUILDINGS SHOWN IN DETAIL
(REFER TO ATTACHMENTS 12 TO 18)

- 1 SME HEADQUARTERS
- 2 CENTRAL INSTRUCTIONAL FACILITY
- 3 MAIN Q (QUARTERMASTER) STORE
- 4 INITIAL EMPLOYMENT TRAINING WING
- 5 TYPICAL PERMANENT LIA
- 6 TYPICAL TRAINEE LEVEL 1 LIA
- 7 PLANT TRAINING AREA
- 8 EXPLOSIVE DETECTION DOGS

OTHER BUILDINGS

- 9 MULTI FUNCTION FACILITY
- 10 KENNELS
- 11 CES (COMPLETE EQUIPMENT SCHEDULE) STORES
- 12 VEHICLE WORKSHOP
- 13 OFFICES AND CLASSROOM BUILDING
- 14 TRADE WORKSHOP
- 15 BOAT STORE



BUILDINGS SHOWN IN DETAIL
(REFER TO ATTACHMENTS 20 TO 22)

1 MILITARY ENGINEERING HERITAGE
AND LEARNING CENTRE

2 HOLSWORTHY CHAPEL

3 GUARD HOUSE

4 PASS OFFICE

OTHER BUILDINGS

5 DEFENCE SUPPORT
TRANSPORT YARD

6 ADF CADETS OFFICE/CLASSROOMS

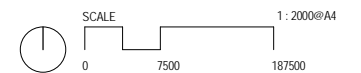
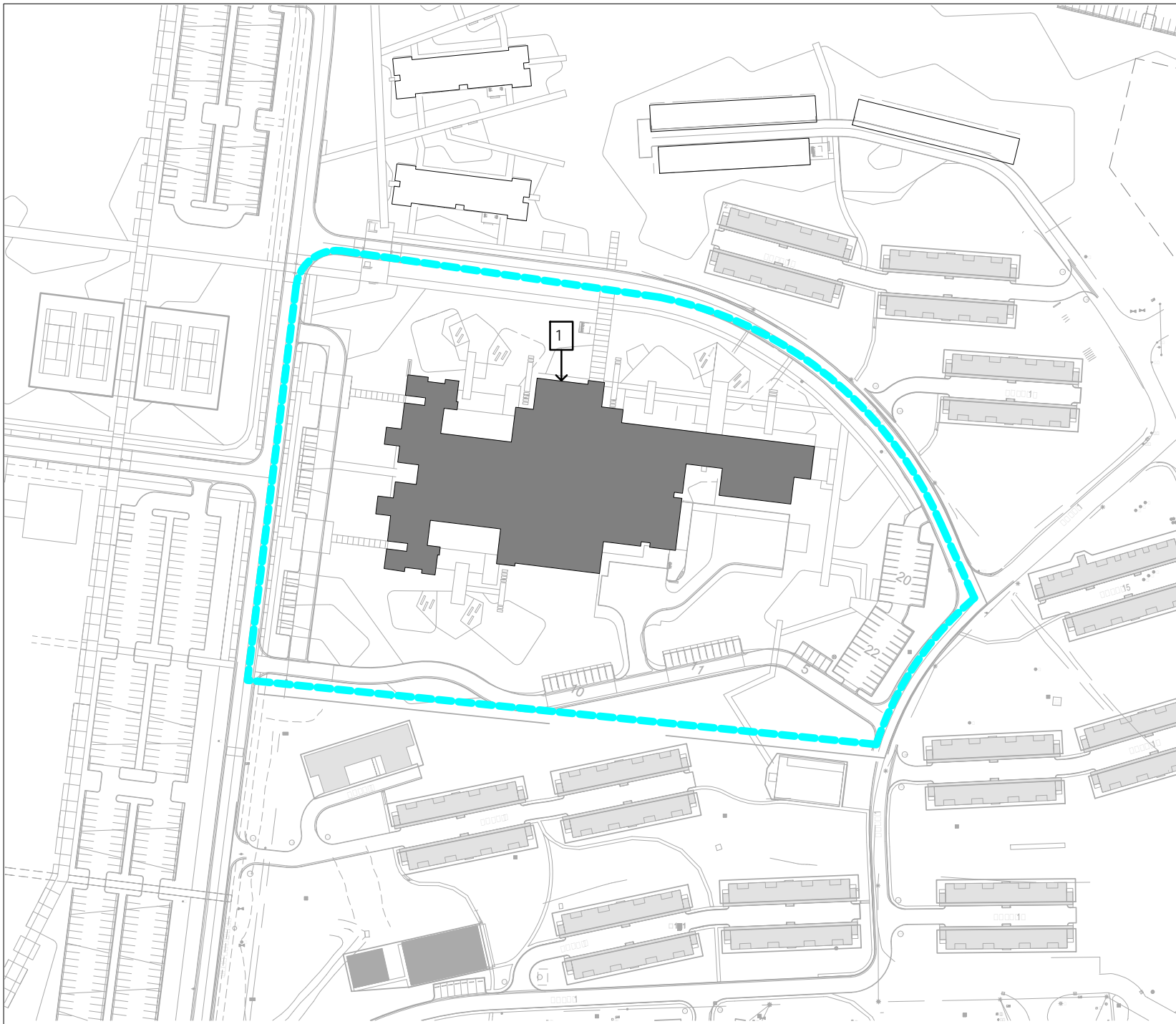
7 ADF CADETS COMBINED Q STORE

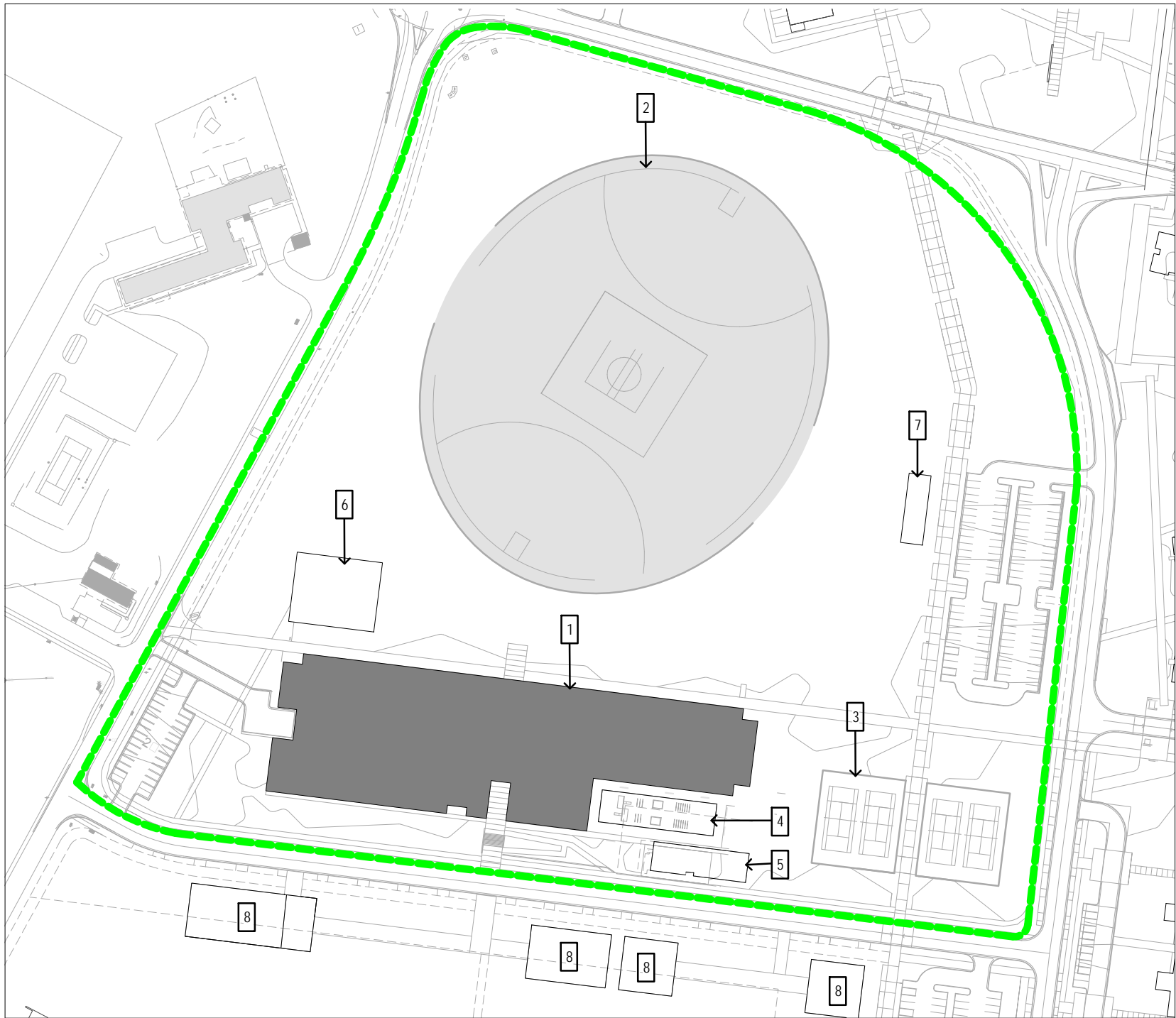
8 DEFENCE SUPPORT OFFICE

9 DEFENCE COMMUNITY
ORGANISATIONS

LEGEND

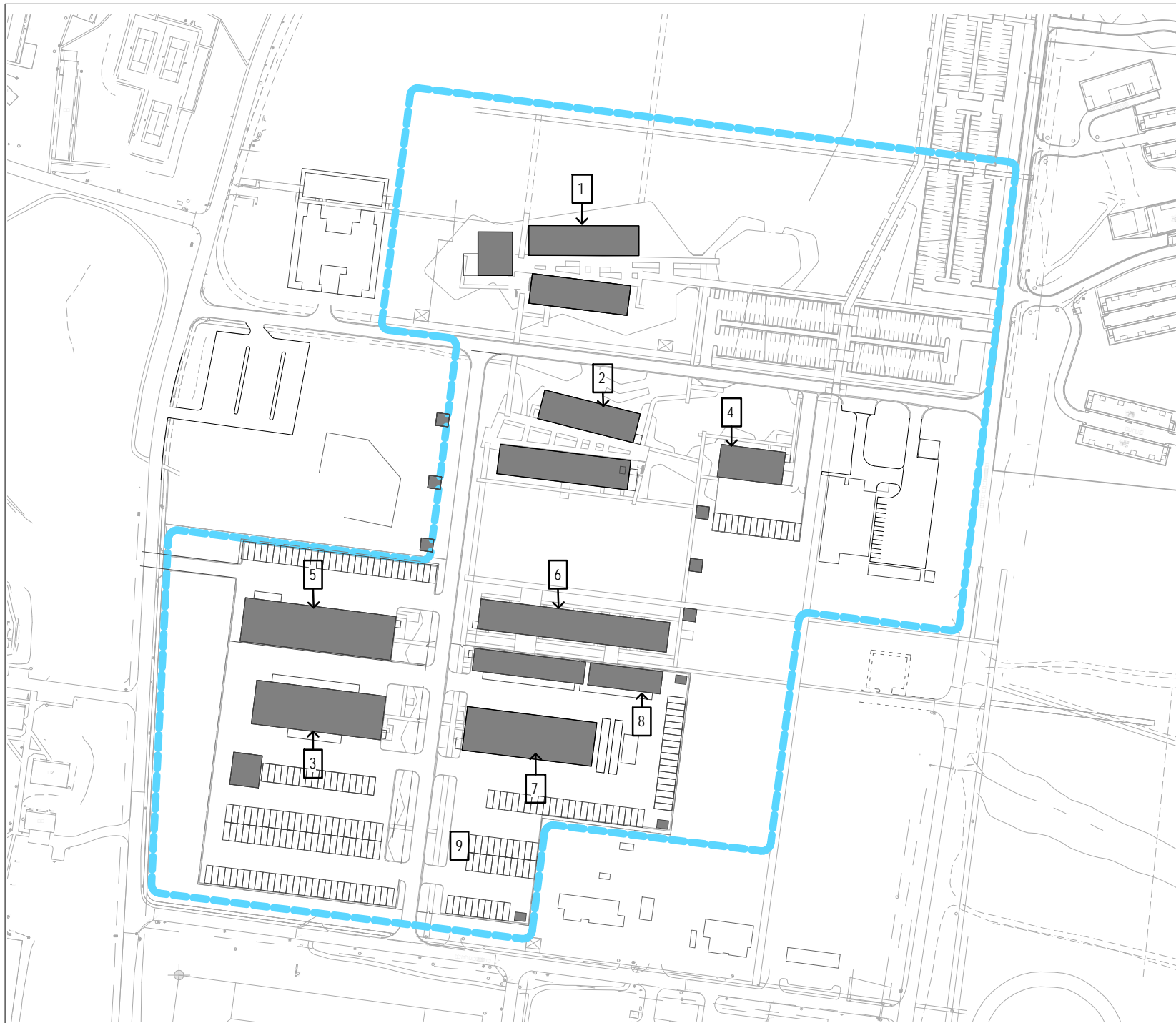
1 HOLSWORTHY MESS





LEGEND

- 1 GYMNASIUM/POOL
- 2 PLAYING OVAL
- 3 TENNIS COURTS
- 4 RUN, DODGE, JUMP COURSE
- 5 HEAVE BEAMS
- 6 BEACH VOLLEY BALL COURTS
- 7 CRICKET NETS
- 8 SPECIALIST TRAINING AREA

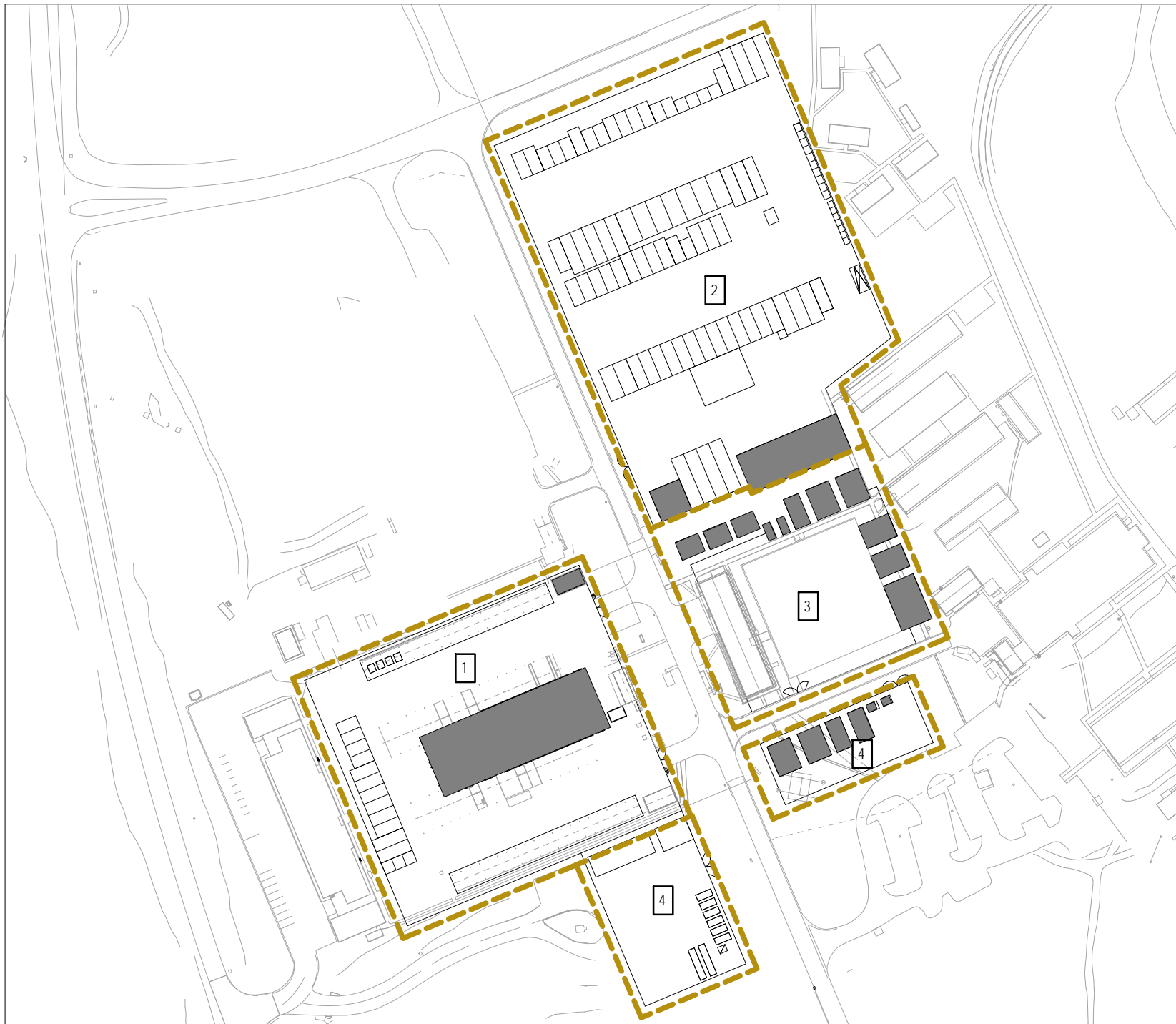


BUILDINGS SHOWN IN DETAIL
(REFER TO ATTACHMENTS 25 TO 27)

- 1 MAIN INSTRUCTIONAL FACILITY
- 2 5TH BRIGADE COMBINED HEADQUARTERS BUILDING
- 3 5TH BRIGADE CSSB VEHICLE WORKSHOP AND TRANSPORT COMPANY

OTHER BUILDINGS

- 4 HQ AAC BRIGADE QUARTERMASTER STORE
- 5 5TH BRIGADE COMBINED QUARTERMASTER STORE
- 6 SHARED ABLUTIONS AND OFFICES
- 7 21 CONSTRUCTION REGT COMBINED Q (QUARTERMASTER) STORE AND WORKSHOPS
- 8 142 SIGNALS SQUADRON TROOP STORES
- 9 VEHICLE COMPOUND



BUILDINGS

- 1 17 CONSTRUCTION SQUADRON WORKSHOP
TROOP COMPOUND/AREA
- 2 17 CONSTRUCTION SQUADRON TRANSPORT
TROOP COMPOUND/AREA
- 3 21 CONSTRUCTION REGT
COMPOUND/AREA
- 4 ADF CADETS
COMPOUND/AREA



PARADE GROUND

ILLAWARRA RD

COLOR LEGEND

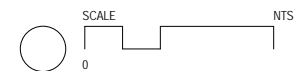
- OFFICE
- WET AREAS
- PLANT/SERVICES

ROOM DESCRIPTION

- 1 ENTRY
- 2 AMENITIES
- 3 OPEN PLAN OFFICE AREA
- 4 SINGLE OFFICE
- 5 CONFERENCE/MEETING ROOMS
- 6 UTILITY/SUPPORT
- 7 PLANT/SERVICES



ATTACHMENT12b | SCHOOL OF MILITARY ENGINEERING HEADQUARTERS - PERSPECTIVE VIEW





COLOR LEGEND

- OFFICE
- CLASSROOM
- WET AREAS
- PLANT/SERVICES

ROOM DESCRIPTION

- 1 ENTRY
- 2 AMENITIES
- 3 OPEN PLAN OFFICE AREA
- 4 SINGLE OFFICE
- 5 CLASSROOM/TRAINING ROOM
- 6 CONFERENCE/MEETING ROOM
- 7 UTILITY/SUPPORT
- 8 PLANT/SERVICES

ATTACHMENT 13a | SME COMBINED WINGS BUILDING - GROUND FLOOR PLAN



COLOR LEGEND

- OFFICE
- CLASSROOM
- WET AREAS
- PLANT/SERVICES

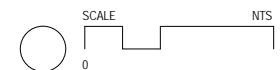
ROOM DESCRIPTION

- 1 ENTRY
- 2 AMENITIES
- 3 OPEN PLAN OFFICE AREA
- 4 SINGLE OFFICE
- 5 CLASSROOM/TRAINING ROOM
- 6 CONFERENCE/MEETING ROOM
- 7 UTILITY/SUPPORT
- 8 PLANT/SERVICES





ATTACHMENT13c | SME COMBINED WINGS BUILDING - PERSPECTIVE VIEW





COLOR LEGEND

- OFFICE
- CLASSROOM
- WET AREAS
- PLANT/SERVICES

ROOM DESCRIPTION

- 1 ENTRY
- 2 AMENITIES
- 3 OPEN PLAN OFFICE AREA
- 4 SINGLE OFFICE
- 5 CLASSROOM/TRAINING ROOM
- 6 CONFERENCE/MEETING ROOM
- 7 UTILITY/SUPPORT
- 8 PLANT/SERVICES

BUILDING

1 VIEWING PLATFORM

2 EXCAVATOR AREA

3 DOZER AREA

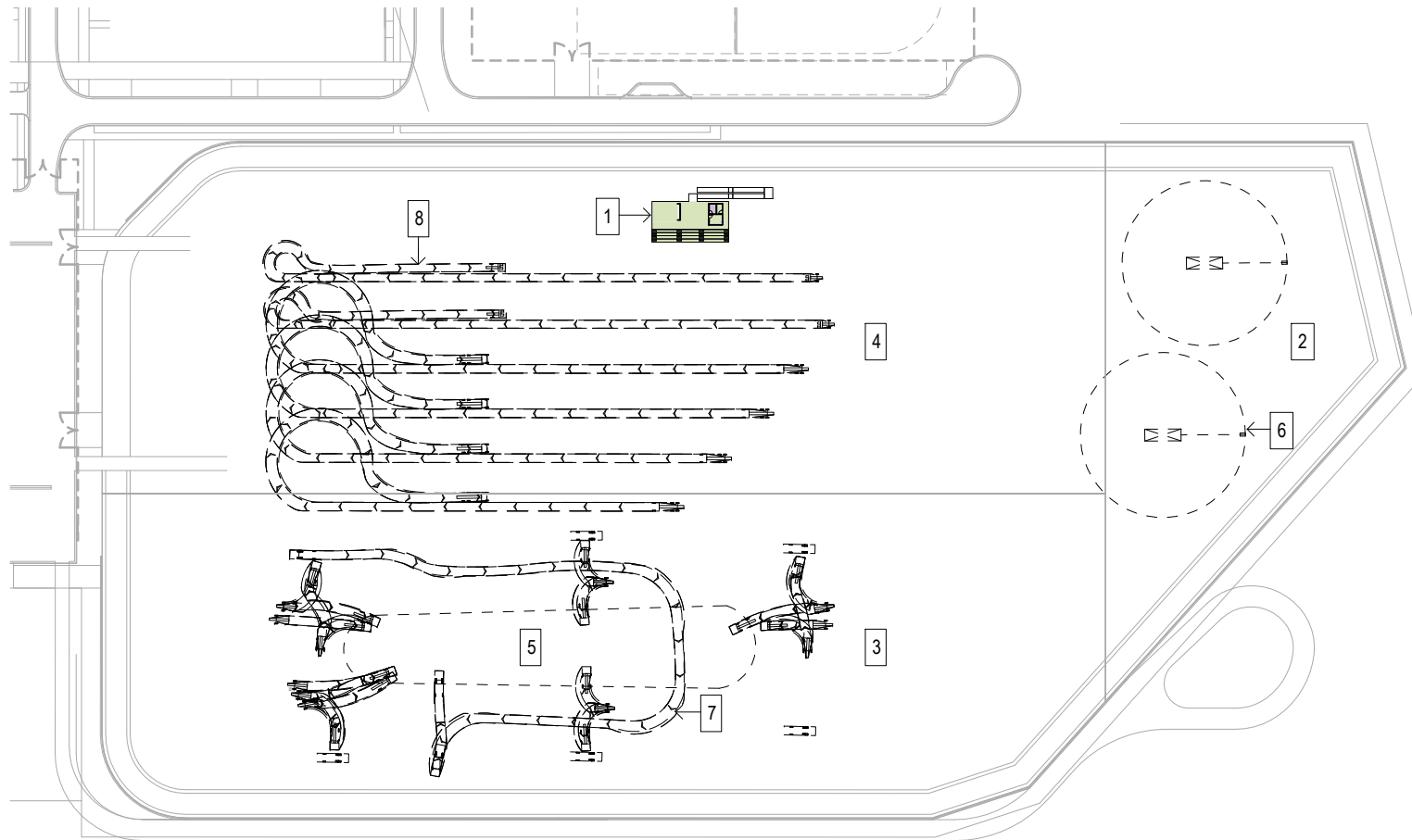
4 GRADER AREA

5 STOCKPILE AREA (DOTTED)

6 EXCAVATOR OPERATIONAL PATH

7 DOZER OPERATIONAL PATH

8 GRADER OPERATIONAL PATH





COLOR LEGEND

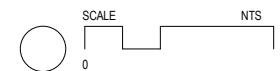
- OFFICE
- CLASSROOM
- WET AREAS
- PLANT/SERVICES

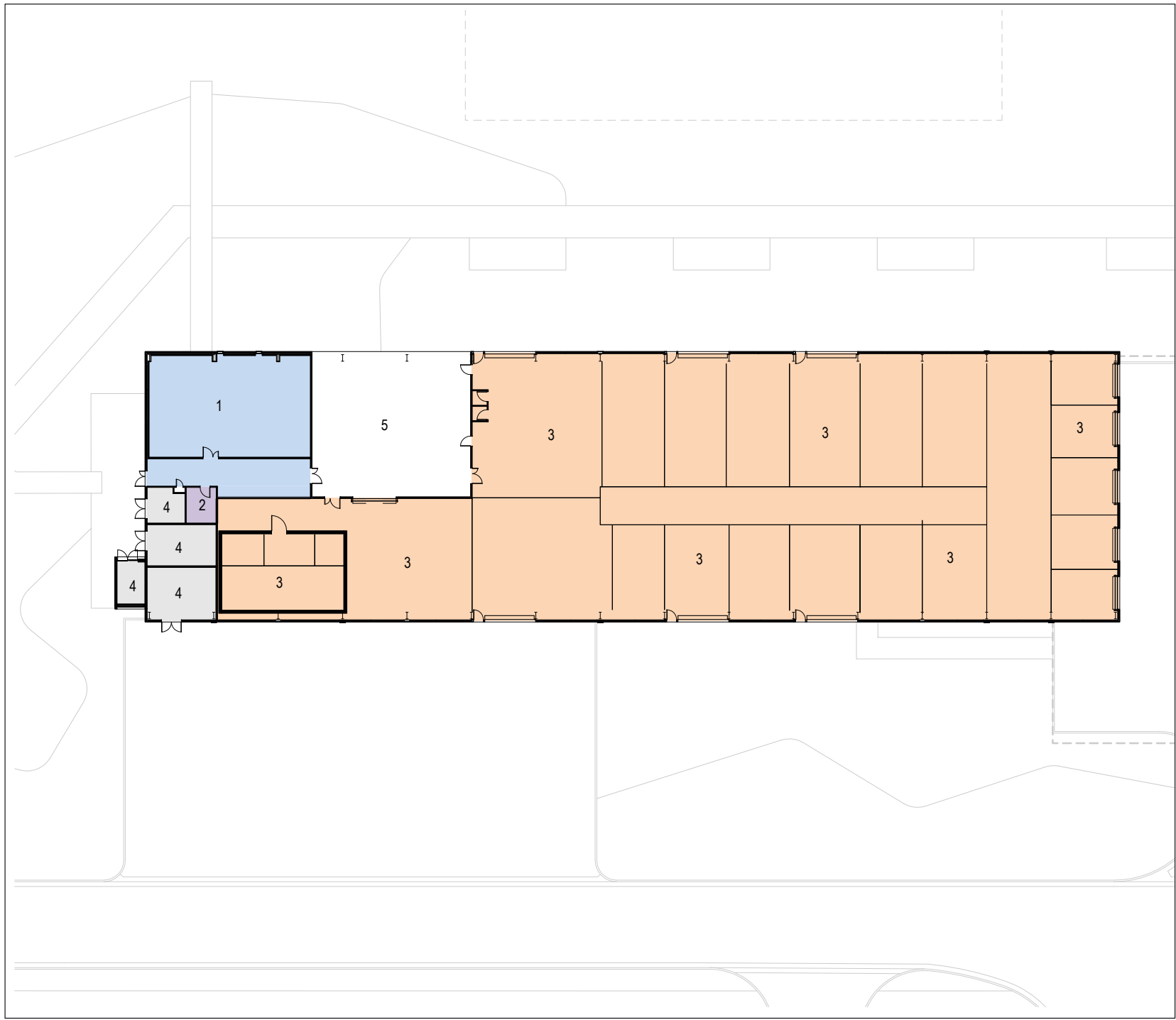
ROOM DESCRIPTION

- 1 OFFICES
- 2 TRAINING
- 3 ABLUTIONS
- 4 PLANT/SERVICES
- 5 KENNELS
- 6 EXTERNAL TRAINING AREAS
- 7 CONFERENCE/MEETING ROOM



ATTACHMENT 16b | SME EXPLOSIVE DETECTION DOG SECTION - PERSPECTIVE VIEW





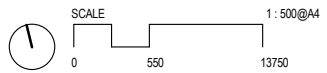
COLOR LEGEND

- OFFICE
- WET AREAS
- PLANT/SERVICES
- Q STORE/WORKSHOP

ROOM DESCRIPTION

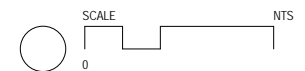
- 1 OPEN PLAN OFFICE AREA
- 2 AMENITIES
- 3 STORE
- 4 PLANT/SERVICES
- 5 EXTERNAL UNDERCOVER ISSUE AREA

ATTACHMENT17a | SME MAIN STORES BUILDING - GROUND FLOOR PLAN





ATTACHMENT 17b | SME MAIN STORES BUILDING - PERSPECTIVE VIEW



COLOR LEGEND

DOMESTIC AREAS

WET AREAS

PLANT/SERVICES

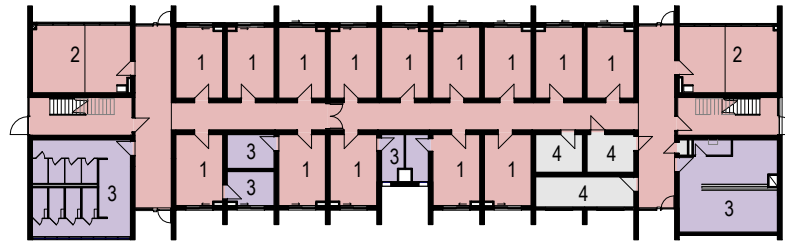
ROOM DESCRIPTION

1 BEDROOM

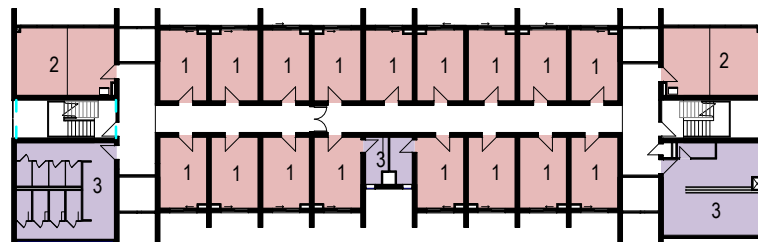
2 COMMON ROOM

3 ABLUTIONS

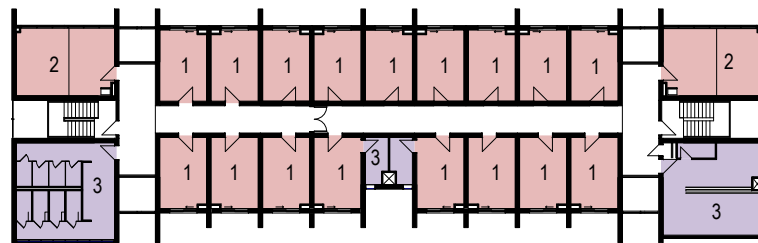
4 PLANT/SERVICES



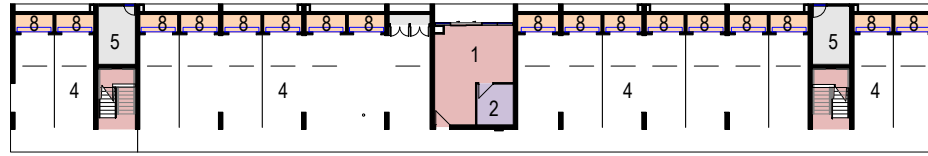
GROUND FLOOR



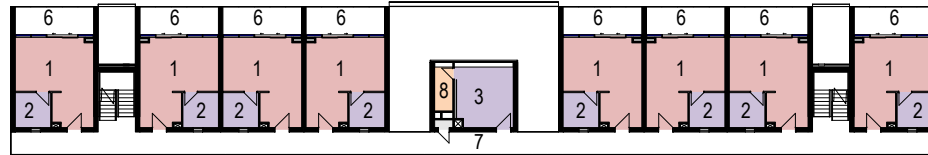
FIRST FLOOR



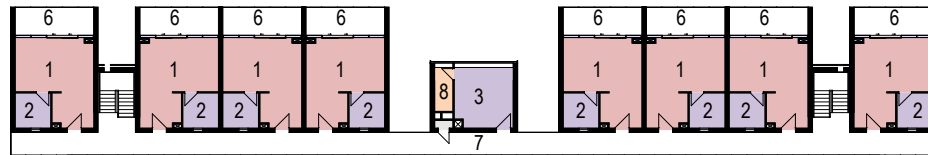
SECOND FLOOR



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□□□□□□□□□□□□□□N



□□□□N□□□□□□□□□□N

COLOR LEGEND

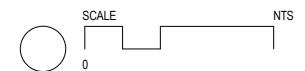
- DOMESTIC AREAS
- WET AREAS
- PLANT/SERVICES
- STORE

RbOOM DESCRIPTION

- 1 BEDROOM
- 2 BATHROOM
- 3 LAUNDRY
- 4 CAR PARKING
- 5 PLANT/SERVICES
- 6 BALCONY
- 7 ACCESS WALKWAY
- 8 STORAGE

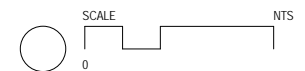


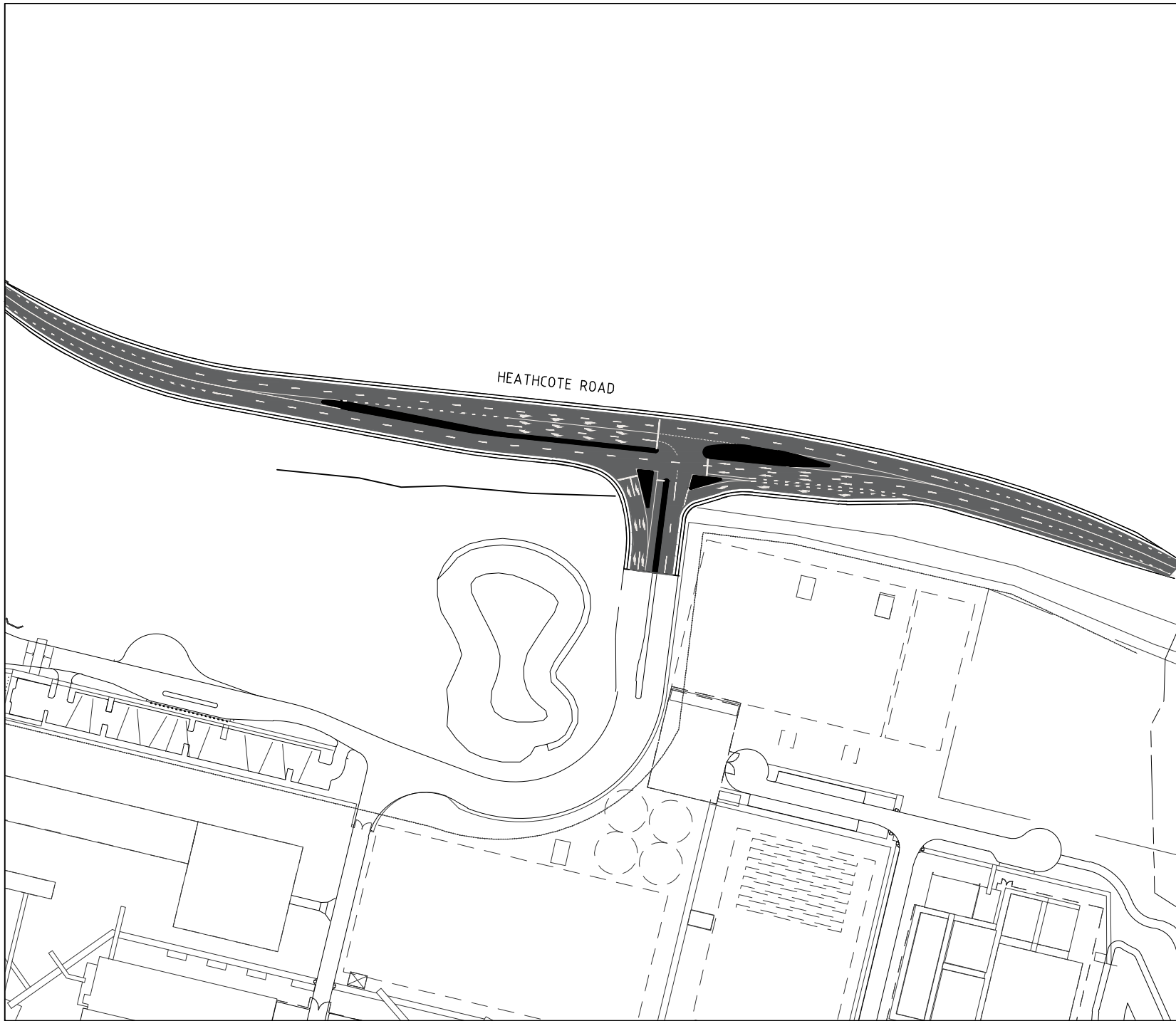
ATTACHMENT18c | SME LIVING IN ACCOMMODATION TRAINEE LEVEL 1 - PERSPECTIVE VIEW



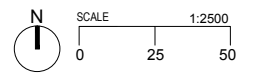


ATTACHMENT 18d | SME LIVING IN ACCOMMODATION PERMANENT - PERSPECTIVE VIEW





ATTACHMENT 19 | HEATHCOTE ROAD INTERSECTION

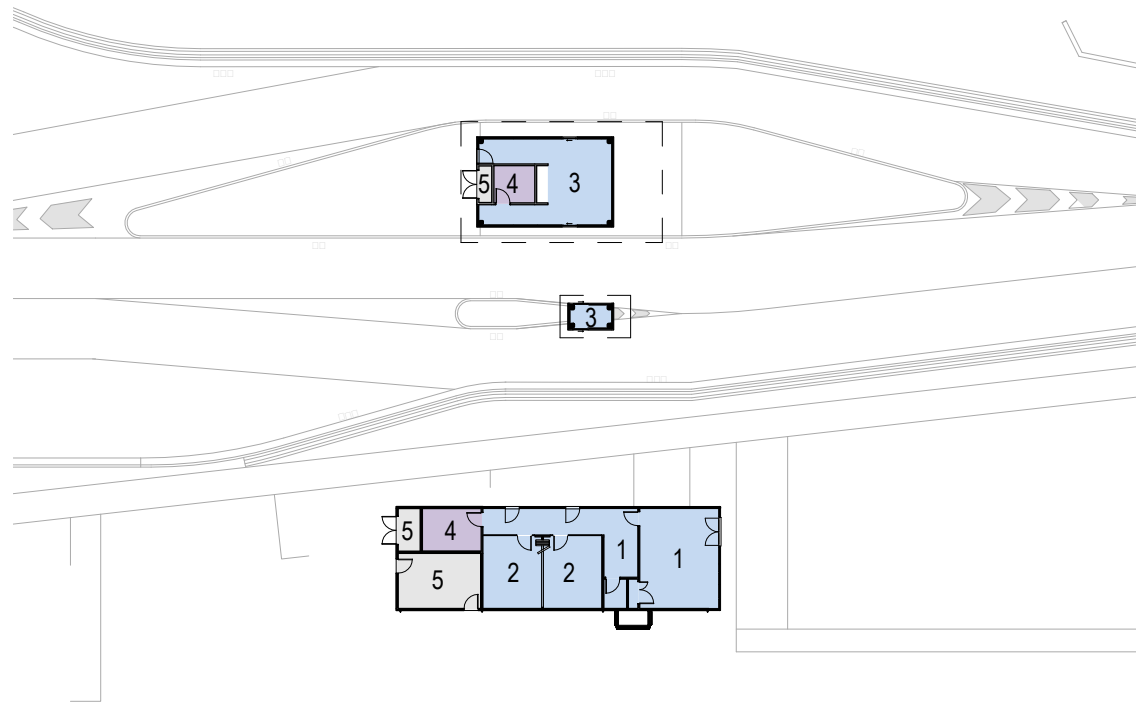


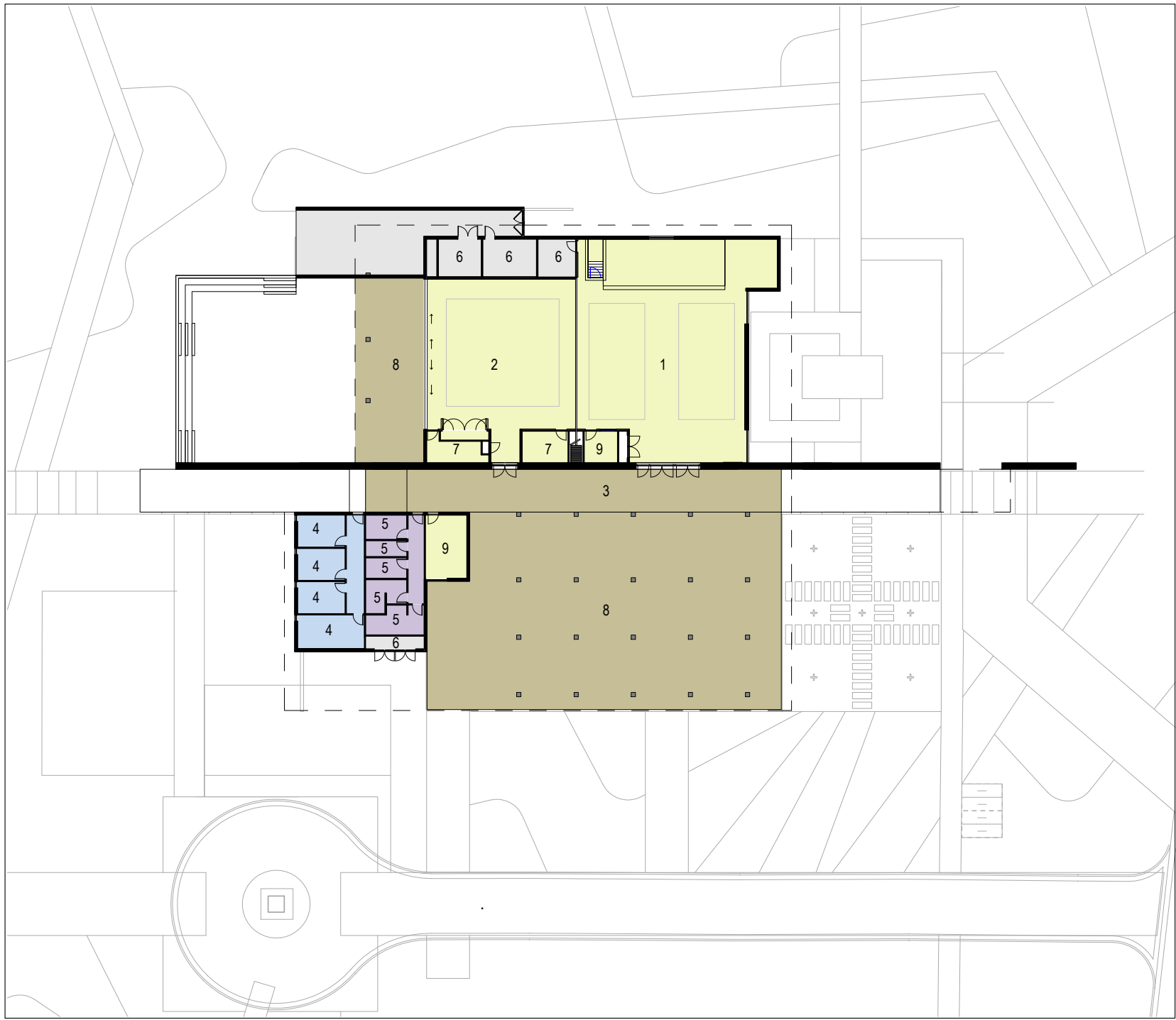
COLOR LEGEND

- OFFICE
- WET AREAS
- PLANT/SERVICES

ROOM DESCRIPTION

- 1 PASS OFFICE
- 2 MEETING ROOMS
- 3 GUARDHOUSE
- 4 ABLUTIONS
- 5 PLANT/SERVICES





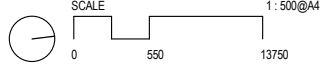
COLOR LEGEND

- OFFICE
- WET AREAS
- PLANT/SERVICES
- FOH UNDERCOVER AREA
- FOH FULLY ENCLOSED U/COVER AREA

ROOM DESCRIPTION

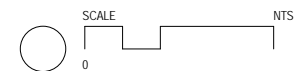
- 1 CHAPEL
- 2 MULTIPURPOSE SPACE
- 3 MEMORIAL WALL
- 4 OFFICE
- 5 ABLUTIONS
- 6 PLANT/SERVICES
- 7 UTILITY/STORE
- 8 EXTERNAL UNDERCOVER SPACE
- 9 PRAYER ROOM

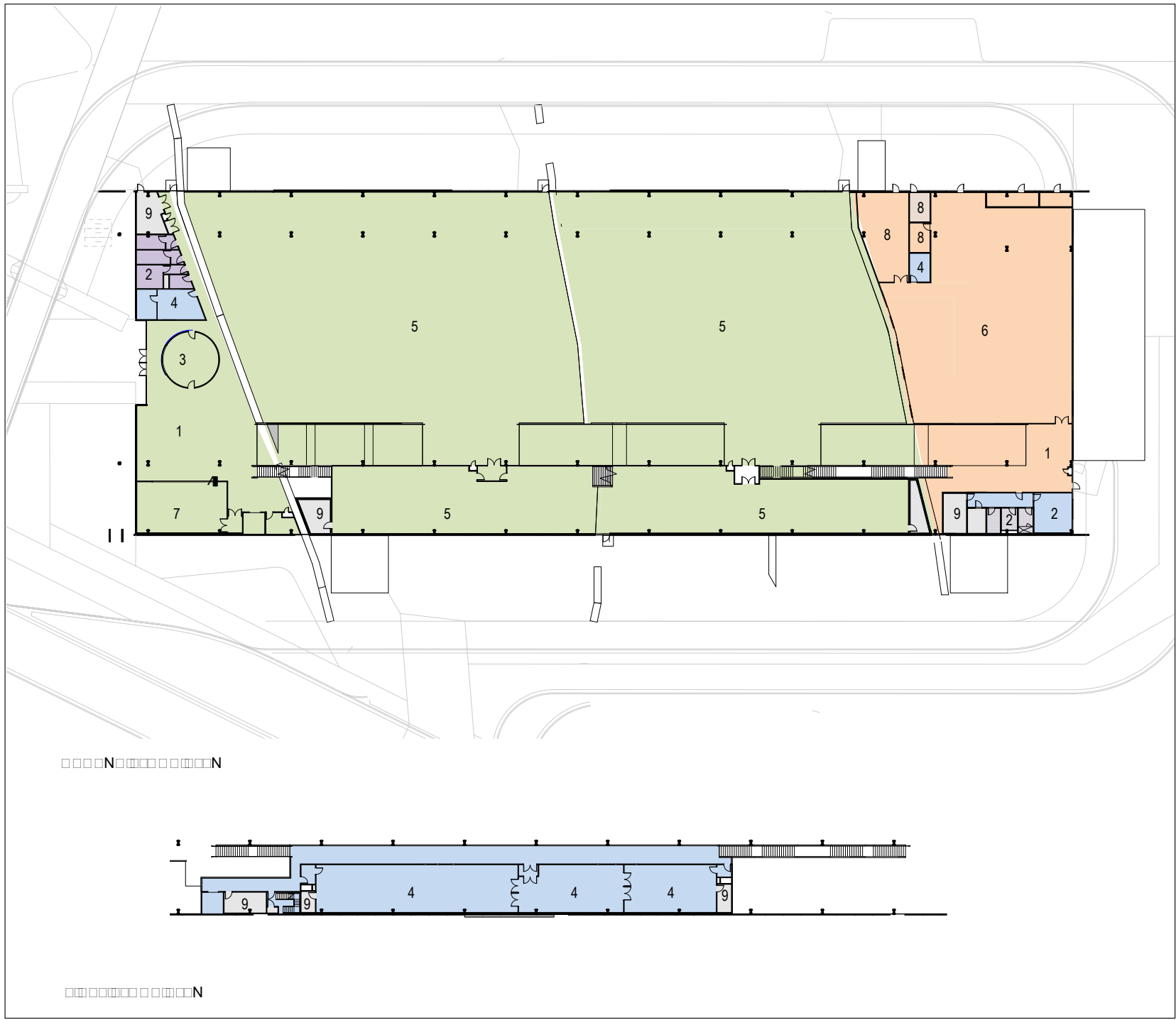
ATTACHMENT21a | HOLSWORTHY CHAPEL - GROUND FLOOR PLAN





ATTACHMENT 21b | HOLSWORTHY CHAPEL - PERSPECTIVE VIEW





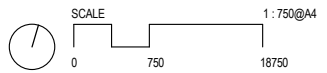
- COLOR LEGEND**
- OFFICE
 - CLASSROOM
 - WET AREAS
 - PLANT/SERVICES
 - Q STORE/WORKSHOP

- ROOM DESCRIPTION**
- 1 ENTRY
 - 2 AMENITIES
 - 3 RETAIL
 - 4 OFFICE
 - 5 EXHIBITION SPACE
 - 6 WORKSHOP
 - 7 CONFERENCE ROOM
 - 8 UTILITY/SUPPORT
 - 9 PLANT/SERVICES

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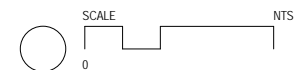
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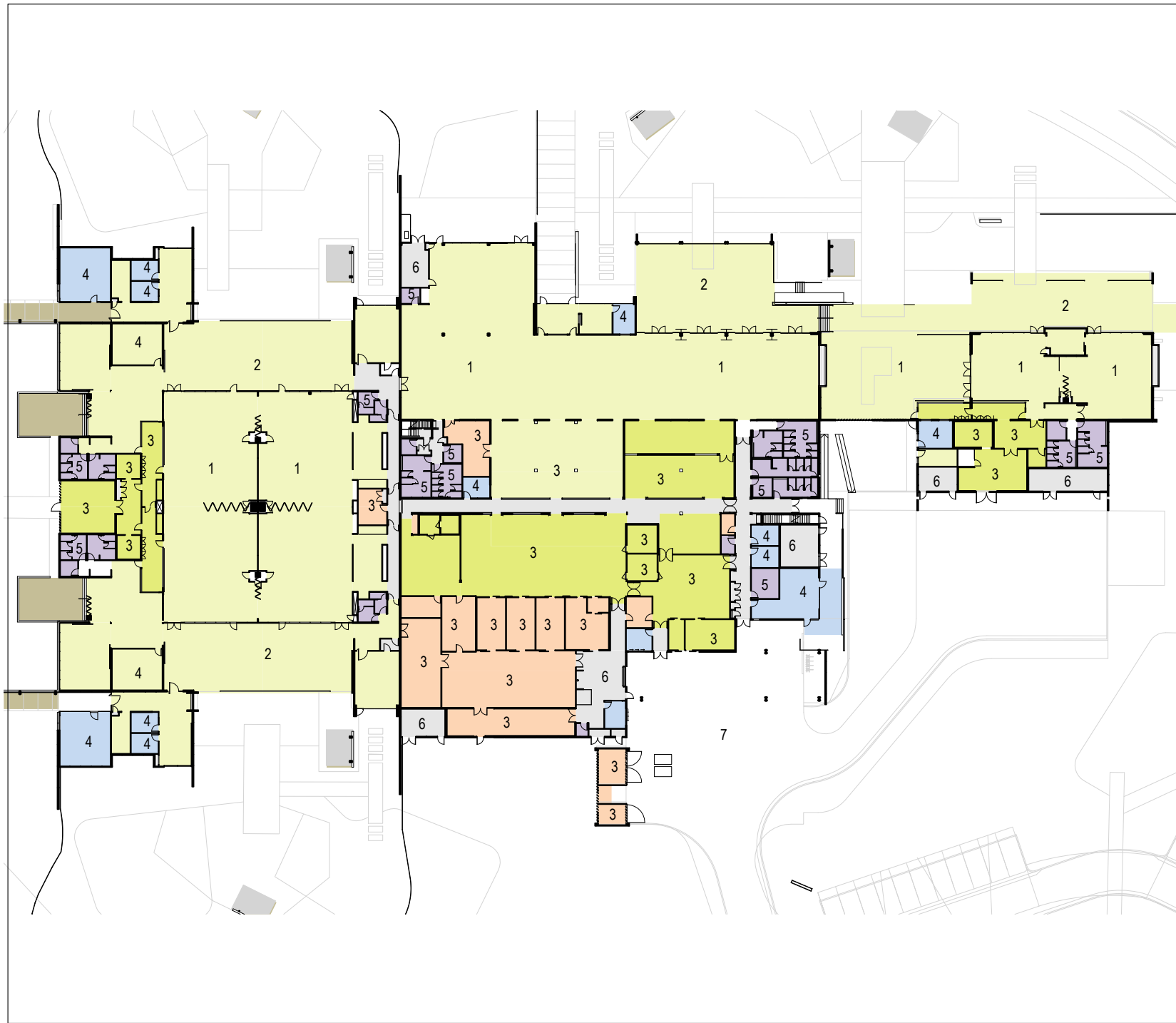
ATTACHMENT 22a | MILITARY ENGINEERING HERITAGE AND LEARNING CENTRE - FLOOR PLANS





ATTACHMENT 22b | MILITARY ENGINEERING HERITAGE AND LEARNING CENTRE - PERSPECTIVE VIEW





COLOR LEGEND

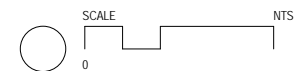
- OFFICE
- WET AREAS
- PLANT/SERVICES
- FOH UNDERCOVER AREA
- FOH FULLY ENCLOSED U/COVER AREA
- FOOD PREPARATION
- STORE

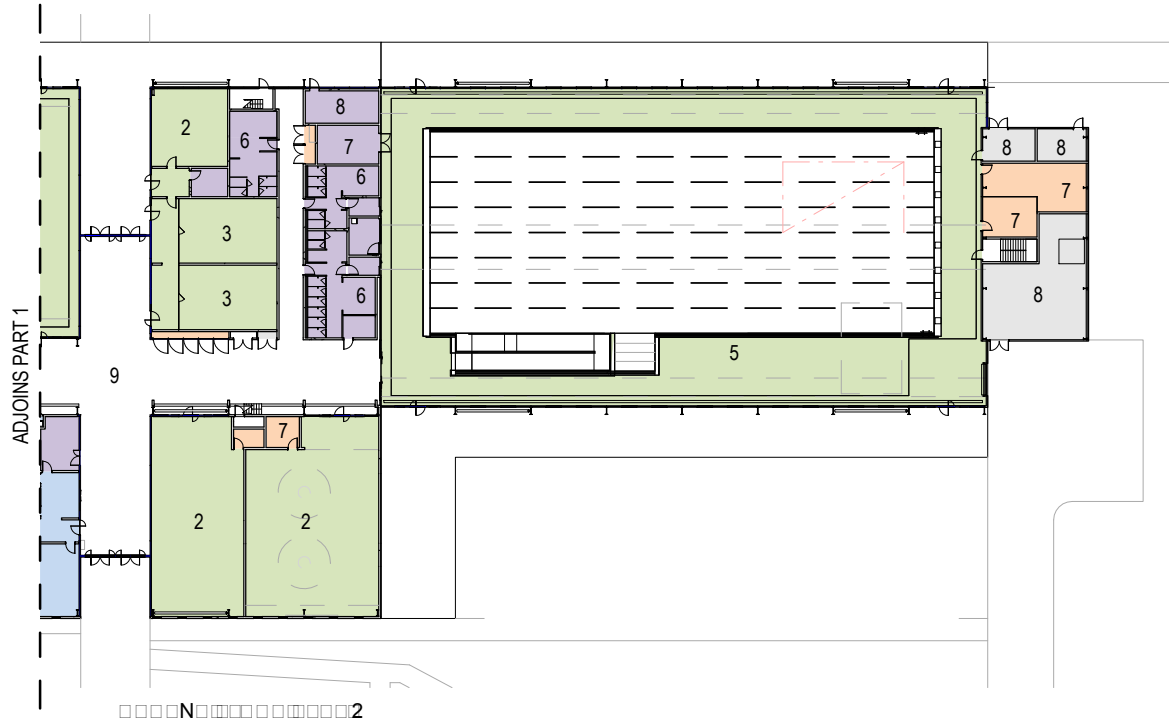
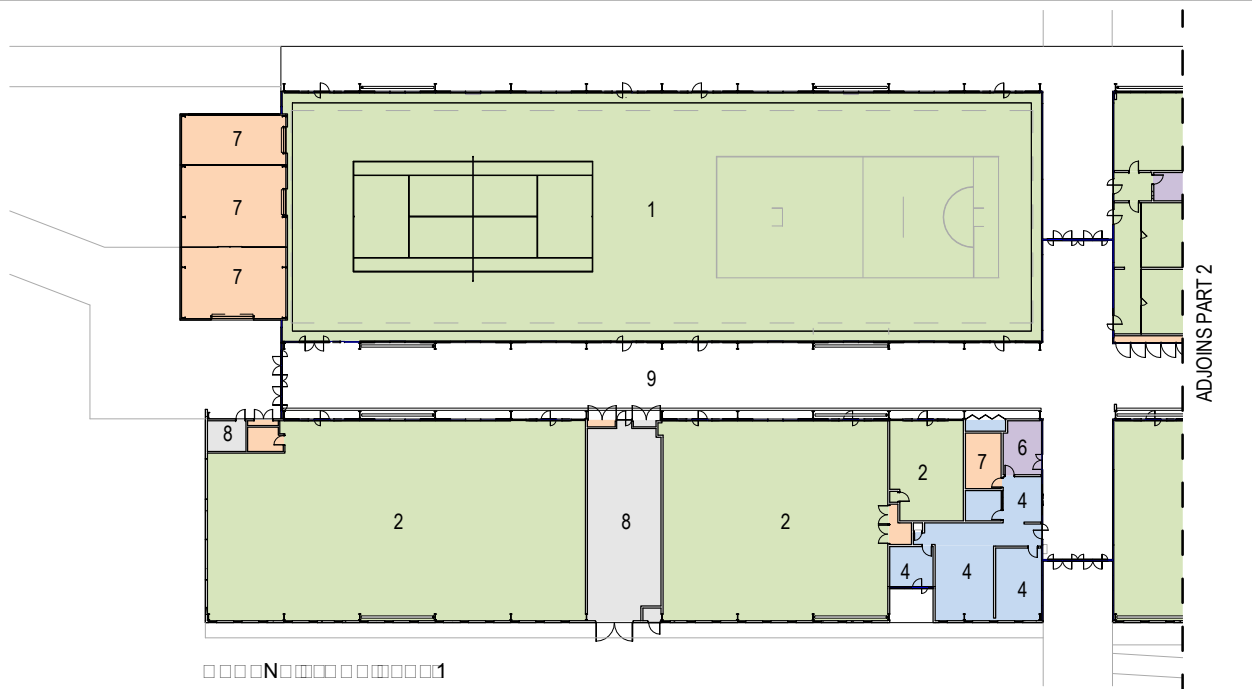
ROOM DESCRIPTION

- 1 DINING
- 2 EXTERNAL UNDERCOVER AREA
- 3 KITCHEN /BACK OF HOUSE/STORES
- 4 OFFICES/MEETING
- 5 ABLUTIONS
- 6 PLANT/SERVICES
- 7 LOADING AREA/YARD



ATTACHMENT 23b | HOLSWORTHY MESS - PERSPECTIVE VIEW





COLOR LEGEND

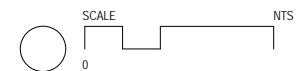
- OFFICE
- CLASSROOM
- WET AREAS
- PLANT/SERVICES
- STORE

ROOM DESCRIPTION

- 1 MAIN SPORTS HALL
- 2 EXERCISE ROOMS
- 3 SQUASH COURTS
- 4 OFFICES
- 5 SWIMMING POOL
- 6 ABLUTIONS/CHANGE
- 7 STORES/UTILITY
- 8 PLANT/SERVICES
- 9 EXTERNAL UNDERCOVER AREA



ATTACHMENT 24b | HOLSWORTHY PHYSICAL FITNESS COMPLEX - PERSPECTIVE VIEW



COLOR LEGEND

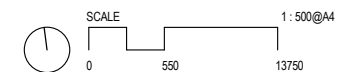
- OFFICE
- CLASSROOM
- WET AREAS
- PLANT/SERVICES

ROOM DESCRIPTION

- 1 ENTRY
- 2 AMENITIES
- 3 OPEN PLAN OFFICE AREA
- 4 SINGLE OFFICE
- 5 CLASSROOM/TRAINING ROOM
- 6 CONFERENCE/MEETING ROOM
- 7 UTILITY/SUPPORT
- 8 PLANT/SERVICES



ATTACHMENT25a | MAIN INSTRUCTIONAL FACILITY (TRAINING PRECINCT) - GROUND FLOOR PLAN

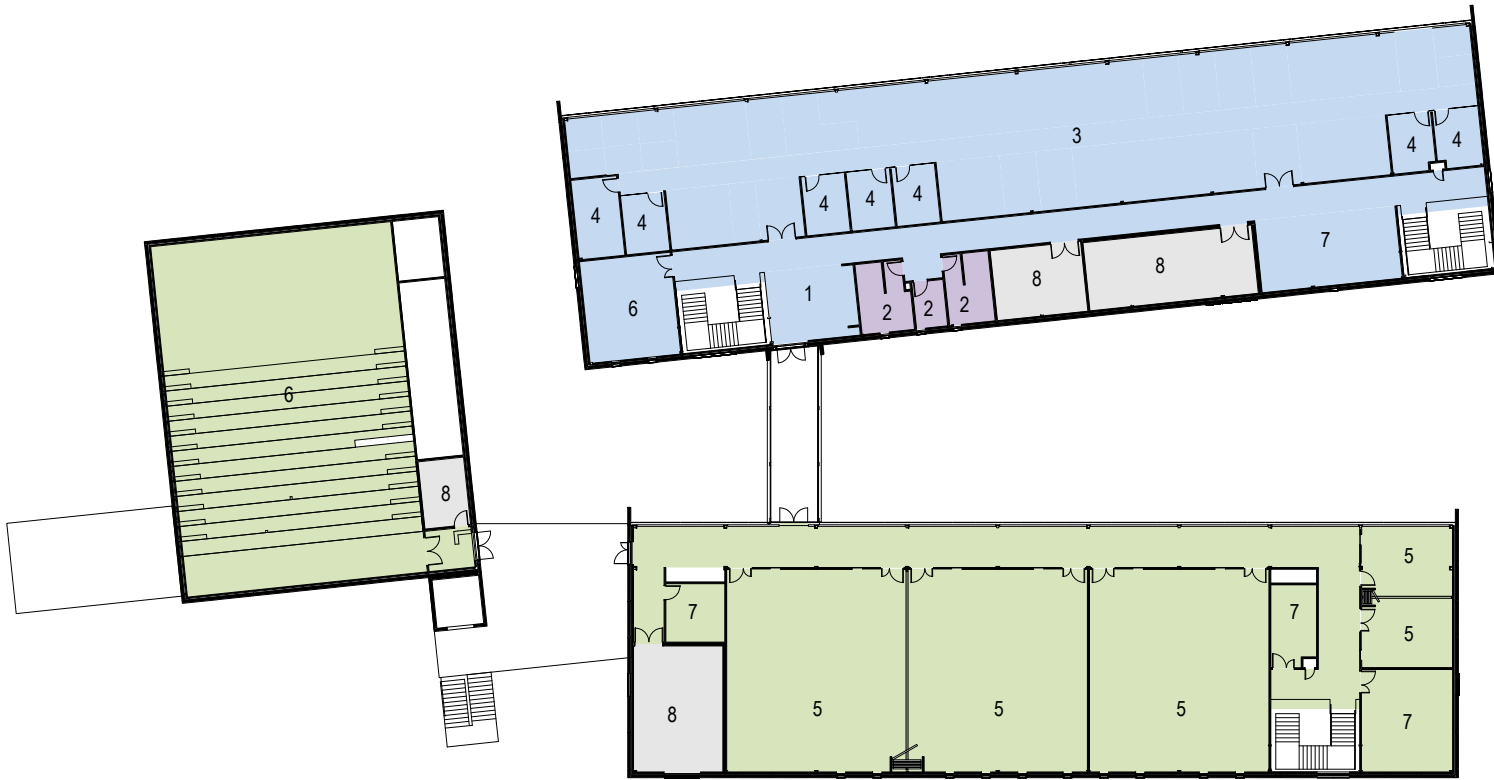


COLOR LEGEND

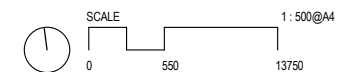
- OFFICE
- CLASSROOM
- WET AREAS
- PLANT/SERVICES

ROOM DESCRIPTION

- 1 ENTRY
- 2 AMENITIES
- 3 OPEN PLAN OFFICE AREA
- 4 SINGLE OFFICE
- 5 CLASSROOM/TRAINING ROOM
- 6 CONFERENCE/MEETING ROOM
- 7 UTILITY/SUPPORT
- 8 PLANT/SERVICES



ATTACHMENT 25b | MAIN INSTRUCTIONAL FACILITY (TRAINING PRECINCT) - FIRST FLOOR PLAN



COLOR LEGEND

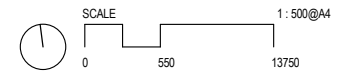
- OFFICE
- CLASSROOM
- WET AREAS
- PLANT/SERVICES

ROOM DESCRIPTION

- 1 ENTRY
- 2 AMENITIES
- 3 OPEN PLAN OFFICE AREA
- 4 SINGLE OFFICE
- 5 CLASSROOM/TRAINING ROOM
- 6 CONFERENCE/MEETING ROOM
- 7 UTILITY/SUPPORT
- 8 PLANT/SERVICES



ATTACHMENT 26a | 5TH BRIGADE COMBINED HEADQUARTERS BUILDING (TRAINING PRECINCT) - GROUND FLOOR PLAN

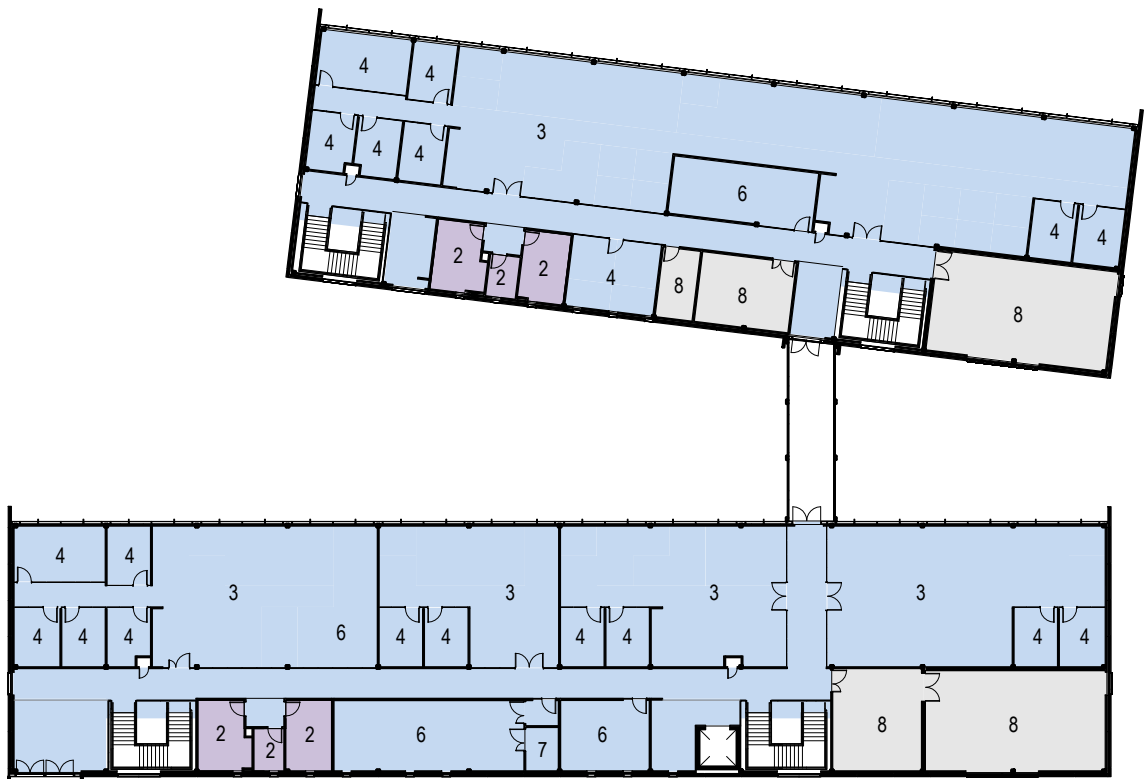


COLOR LEGEND

- OFFICE
- CLASSROOM
- WET AREAS
- PLANT/SERVICES

ROOM DESCRIPTION

- 1 ENTRY
- 2 AMENITIES
- 3 OPEN PLAN OFFICE AREA
- 4 SINGLE OFFICE
- 5 CLASSROOM/TRAINING ROOM
- 6 CONFERENCE/MEETING ROOM
- 7 UTILITY/SUPPORT
- 8 PLANT/SERVICES

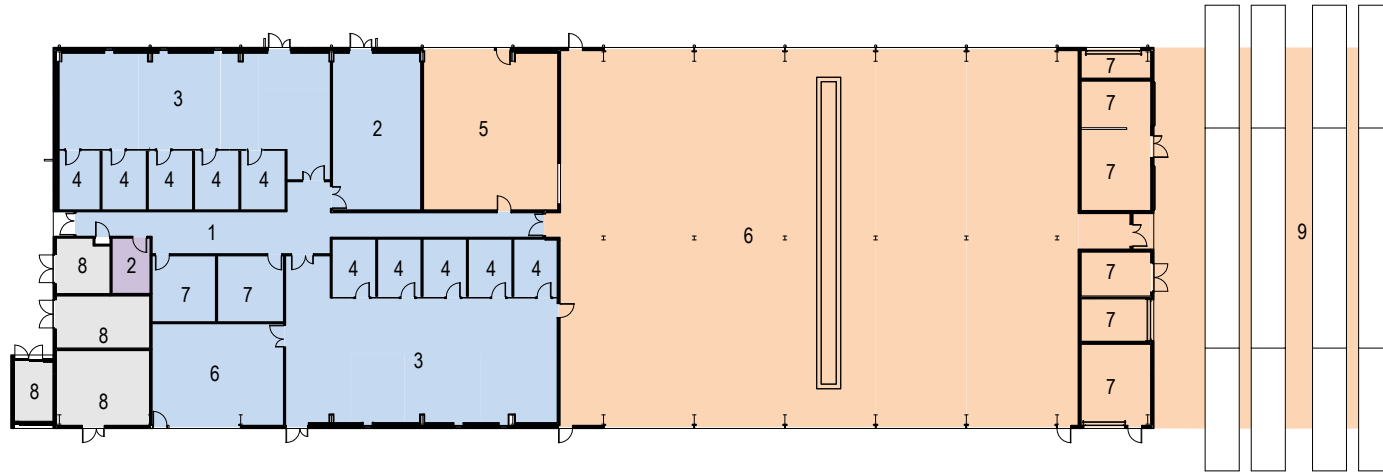


COLOR LEGEND

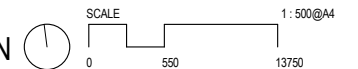
- OFFICE
- WET AREAS
- PLANT/SERVICES
- Q STORE/WORKSHOP

ROOM DESCRIPTION

- 1 ENTRY
- 2 AMENITIES
- 3 OPEN PLAN OFFICE AREA
- 4 SINGLE OFFICE
- 5 STORE
- 6 WORKSHOP
- 7 UTILITY/SUPPORT
- 8 PLANT/SERVICES
- 9 MAINTENANCE RAMPS

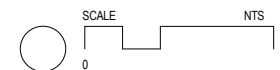


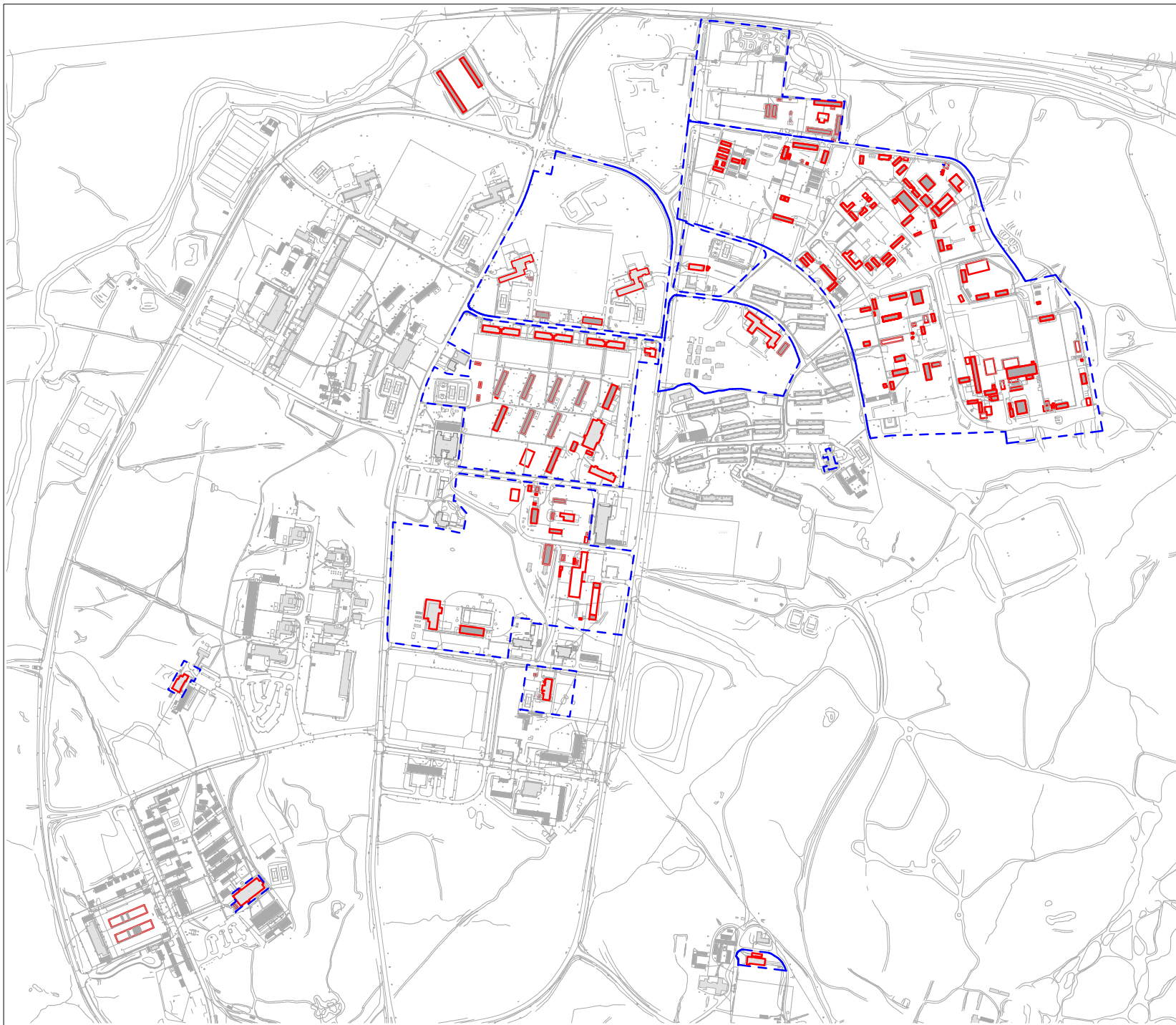
ATTACHMENT 27a | 5TH BRIGADE COMBAT SERVICE SUPPORT BATTALION WORKSHOP (TRAINING PRECINCT) - GROUND FLOOR PLAN





ATTACHMENT 27b | 5TH BRIGADE COMBAT SERVICE SUPPORT BATTALION WORKSHOP (TRAINING PRECINCT) - PERSPECTIVE VIEW





COLOR LEGEND

— EXTENT OF ALL EXTERNAL
STRUCTURES, PATHS/ PAVING/
& ALIKE TO BE DEMOLISHED

— EXTENT OF BUILDING
STRUCTURES TO BE
DEMOLISHED



