Australian Government

Department of Defence

NORTH QUEENSLAND MID-TERM REFRESH PROGRAM: RAAF Base Townsville, Townsville Field Training Area and HMAS *Cairns*

STATEMENT OF EVIDENCE TO THE PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

DEPARTMENT OF DEFENCE
CANBERRA, ACT

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North Queensland Mid-Term Refresh Program: RAAF Base Townsville, Townsville Field Training Area and HMAS *Cairns*

1. The purpose of this Statement of Evidence is to provide information to the Australian public to comment on, and the Parliamentary Standing Committee on Public Works to enquire into, the proposed works under the North Queensland Mid-Term Refresh Program: RAAF Base Townsville (project element 1), Townsville Field Training Area (project element 2) and HMAS *Cairns* (project element 3) (the Project).

Purpose of the Works

Aim of the Project

2. The aim of the Project is to meet essential short-term base sustainment needs at three Defence Bases in North Queensland. It is proposed to achieve this by providing vital estate maintenance and upgrades to support capability at all three sites.

Location of the Project

3. The Project proposes to deliver works at:

   a. **RAAF Base Townsville**, located in the Townsville suburb of Garbutt, approximately six kilometres west of the Townsville central business district.

   b. **Townsville Field Training Area,** located 60 kilometres south-west of Townsville.

   c. **HMAS *Cairns***, located approximately two kilometres south of the Cairns central business district.

Need for the Project

4. These Bases are experiencing critical issues such as ageing and inadequate infrastructure, non-compliance with infrastructure standards and no longer meet all current work, health and safety requirements. Unless these are addressed, there is risk that the facilities and infrastructure will be increasingly less able to support current levels of capability.

5. **RAAF Base Townsville** is a forward deployment, operating and mounting base. It forms part of a chain of military airfields stretching across Northern Australia to RAAF Base Learmonth in the west, and is a forward operating and mounting base. Together with RAAF Base Scherger, RAAF Base Townsville provides air defence and surveillance capabilities, and supports Australian Defence Force and international military operations and exercises in northern Australia. It provides an air head for military air transport, and a base for fighter, strike, maritime and Army aviation operations.

6. The Defence airfield is shared with Townsville Airport Pty Ltd under a Joint User Deed.

7. The Base stations a number of Air Force operational support units, including the Combat Survival Training School, 27 (City of Townsville) Squadron, 452 Squadron (for air traffic control), 1 Expeditionary Health Squadron Detachment – Townsville, and is also the home of the Army's 5th Aviation Regiment. The Base's secondary role is provision of support to the Australian Defence Force and the wider Government, and supporting international engagement and diplomacy objectives through combined training activities with Foreign Forces.

8. In 2013, Defence assessed the condition, capacity and compliance of in-ground infrastructure. The findings, which in turn informed scope for critical infrastructure investment, recommended that the water, fire and electrical infrastructure be remediated.

9. RAAF Base Townsville underwent a Base Redevelopment during the early 2000s, including operational related works such as Ordnance Loading Aprons, upgraded messing and air movements, and provision of transit accommodation. However, much of its infrastructure remained untouched. The infrastructure is aged and non-compliant and needs to be upgraded to meet necessary building codes and the Australian Defence Force's capability demands.

10. The Base's ability to effectively support wider military operations, including assistance to the civil community, risks being compromised if the supporting infrastructure and capacity cannot be relied upon. Further, in its role as a forward deployment and mounting base, there is a significant shortfall in on-base transit accommodation. Current arrangements cannot cope with the regional demand surge during high tempo operations and training exercises.

11. **Townsville Field Training Area's** primary function is to support the conduct of Army collective training, such as field firing and manoeuvre exercises of most of Army capabilities. Secondary functions include support of joint training within the Australian Defence Force and the wider Government, and supporting international engagement and diplomacy objectives through combined training activities with Foreign Forces.

12. The Townsville Field Training Area totals 2437 square kilometres, including the Fanning Sector which was acquired by Defence in 2011, and occupies the east to north east sector of the Burdekin River catchment area

13. The lack of infrastructure investment, notably in the southern Fanning Sector since acquisition in 2011, has limited full use of the training area's capability. Acquisition of Fanning Sector makes the Flinders Highway-Dotswood/Mingela Road route a viable option to access the Townsville Field Training Area, if an access point can be provided.

14. Developing the Fanning Sector is critical to improve access control, manage environmental risks and remove training restrictions currently experienced. Delivering an access control facility where the Dotswood/Mingela Road enters the Fanning Sector will assist with safety and environmental controls of the southern portions of the training area. It will also alleviate the bottleneck that is occurring at the existing Range Control during major deployment activities.

15. Overall, the range camps spread across the Townsville Field Training Area are ageing and much of its older facilities and infrastructure is becoming increasingly unsustainable. This is reflected in the condition of its engineering services and in-ground infrastructure, much of which has deteriorated over time. Investing in the maintenance of base camp utilities will retain field training accommodation as fit for purpose and make it more readily available to meet Army's requirements.

16. **HMAS *Cairns*** is the northernmost naval base along the eastern seaboard, and plays a key strategic role in Australia's northern naval capability. The Base provides occasional support for Pacific Class patrol boats operated by neighbouring Papua New Guinea, Timor Leste and participating South West Pacific nations. It provides administrative, logistic and maintenance support to homeported vessels presently comprised of three patrol boats, two hydrographic ships and four survey motor launches.

HMAS *Cairns* also provides administrative and health support to local Australian Defence Force personnel.

17. HMAS *Cairns* comprises two allotments which have a combined area of 10.4 hectares. The main Base is positioned on the western side of Trinity Inlet on Commonwealth owned land (centred on Lot 183), with lease use of the adjacent Sugar Wharf to supplement berthing capacity. The second allotment (Lot 485) is currently leased to Defence from the Cairns Port Authority and is situated opposite the main Base, separated by Draper Street. A number of other sites in Cairns contribute to the HMAS *Cairns* mission, including two Living-In Accommodation facilities proximate to the Cairns Central Business District, and the Queerah Explosive Ordnance Depot, located approximately 11 kilometers from HMAS *Cairns*.

18. Following a Base redevelopment in 2009 for new command, administrative and fitness facilities (across both Lots 183 and 485), the key components of HMAS *Cairns* were in a more sustainable condition. However, in 2014, Defence undertook Base engineering assessments as part of a national assessment project, and findings supported the need to refresh primarily ageing services to improve capacity, reliability and compliance to support and sustain Defence capability at the Base. The emphasis of this Project is to sustain the Base through improvements to services and infrastructure.

19. This Project will focus on key infrastructure upgrades that are not within the scope of the HMAS *Cairns* component of the Navy Capability Infrastructure Sub-Program. Together, these projects will deliver important contributions to maintaining the Base's operational capability until the next major HMAS *Cairns* Base redevelopment.

Proposed Facilities Solution

Scope of Project Works

20. The Project proposes to deliver new and upgraded training capacity, living and working accommodation and infrastructure, using a mid-term refresh approach. The mid-term refresh is a sustainment approach that focusses on critical works necessary to address ageing infrastructure and compliance issues until full Base redevelopments are undertaken.

21. **Project Element 1 – RAAF Base Townsville**

a. **Services Works.** Upgrades are proposed for the following, in response to priority infrastructure assessments:

(1) **Firefighting Systems:** Install a 4.5 kilometre fire ring main and associated hydraulic infrastructure, separate from the potable water main, to enable fire response from a dedicated fire ring main. Separation of the potable water supply from the fire-fighting water supply is a compliance requirement;

(2) **Potable Water:** Upgrade inground pipework in the potable water network that has passed its useful life, removing redundant valves and replacing where required. As trench excavation will occur for the new Fire Ring Main, this represents an opportunity for optimising upgrade costs through shared use of the excavation where alignments can coincide;

(3) **Electrical Systems:** Limited remedial work to improve compliance and security of the existing electrical systems. This would include upgrading to the Central Emergency Power Station and to switching stations, upgrade to Substation 3 to meet distribution requirements, and realign/replace buried High Voltage cabling;

(4) **Fire Protection Building 192:** Remove or demolish redundant mechanical services and ductwork. Install sprinkler and detection systems to roof void and ceiling, for compliance and improved reliability; and

(5) **ICT**: Upgrade communications racks site-wide, and replace communications pits where required.

b. **Building Refurbishment Works**. Refurbish working accommodation for 65 Air Base Recovery Squadron to sustain unit operational effectiveness.

This work will focused on Buildings 207, 208 and 226, to improve open plan use, functionality and change/latrine facilities.

c. **New Infrastructure Works.** Construct additional Transit Living-In Accommodation. The existing capacity cannot meet urgent surge accommodation requirements during major ADF deployment periods.

The building is to accommodate up to 134 transiting personnel, situating it adjacent to the three existing 3-storey transit accommodation buildings.

The building will include shared clothes laundry facilities, shared shower and latrine facilities, community facilities, cleaners' rooms and first aid rooms on each floor. The rooms in the new facility will be fitted with furniture, closet storage, general storage space, block-out blinds and be sound attenuated.

Carparking for ten vehicles will be provided.

22. **Project Element 2 – Townsville Field Training Area**

a. **Services Works**. Upgrade engineering services and in-ground infrastructure at various facilities at the Townsville Field Training Area. Specifically, the works proposed would include:

(1) **Electrical:** Replacing eight low voltage distribution switchboards, provide four new emergency generators at the High Range bore, Range Control, Shanty Town, and at the 350 Person Camp which will also include an upgraded generator shed;

(2) **Hydraulic**: At Range Control, replace water meters, the existing reverse osmosis water treatment plant, and the existing fire pump and control system. Connect a second standby pump.

More broadly, replace existing fittings and pipework site wide to rectify water leaks, remove unserviceable tanks and address minor compliance issues;

(3) **Sewerage**: Also at Range Control, replace the existing wastewater treatment plant and install a 10,000L surge chamber, including a transfer pump.

More broadly, replace manholes and pipework across the sewer network, decommission and remove nine concrete septic tanks and replace with polyethylene septic tanks, and address minor compliance issues; and,

(4) **ICT and Stormwater:** Again at Range Control, install new fibre optic cabling and a new field cabinet, and repair or replace communications pits. Also replace a damaged culvert headwall to improve stormwater flow.

b. **New infrastructure Works**. Construct an entry point at the southern end of the Townsville Field Training Area, in the Fanning Sector. This will improve access control and establish environmental/de-seeding control infrastructure while facilitating better use and access into the wider Fanning Sector.

The proposed scope includes installing modular buildings, a road junction for access into and from the Fanning Sector, vehicle de-seeder points and services installation to support the entry point infrastructure.

23. **Project Element 3 – HMAS *Cairns***

a. **Services Works.** Upgrade works are proposed as follows:

(1) **Firefighting Systems:** Install a new fire ring main and associated hydraulic infrastructure to enable fire response from a dedicated fire ring main. Separation of the potable water supply from the fire-fighting water supply is a compliance requirement;

(2) **Potable Water**: Upgrade pipe work in the potable water network that has passed its useful life, remove redundant water valves and replace potable water valves and building connections on Base;

(3) **Sewerage**: Increase capacity of sewerage infrastructure pumps and sewer lines, and upgrade manhole covers to comply with safety, loading and site-wide standards; and

(4) **Stormwater:** Install gross pollutant infiltration baskets on stormwater inlet pits site wide to reduce stormwater pollution.

b. **Building Refurbishment Works.** Replace window air-conditioners with split system units to the Junior Sailors Living-In Accommodation block to improve comfort and efficiency in each residential room.

Options Considered

24. Between 2015 and 2017, Defence undertook comprehensive Project site investigations, stakeholder consultation, whole-of-life cost analysis, and design development at all three Bases. The purpose was to identify the capital facilities and infrastructure works required to address each need.

25. Defence then developed options in two stages; iterative design, and value management:

a. **Iterative Design**. Using this method, the user requirements were initially developed to create an optimum and best value solution to meet full functional requirements. This process developed the full scope option for each project element.

b. **Value Management**. Once each element was developed to a concept design, all scope elements were then considered together and in conjunction with the budget allocation. This process developed two separate listings for each project element; firstly entire scope elements were prioritised, and secondly the design solutions were rationalised at all three project sites.

26. Defence has developed the following four options based on the iterative and value management approach:

a. **Option 1 – Do Nothing**. Doing nothing will significantly impact on Defence's ability to train personnel, provide assistance regionally and to civil communities (during natural disasters, humanitarian support or national emergencies, support operations). It will increase future maintenance costs.

Failing to address ageing infrastructure will result in further non-compliances and work health safety risks.

Option 1 is not viable option.

b. **Option 2 - Full Scope**. This would deliver the essential maintenance and essential sustainment requirements necessary to address compliance and capability needs, at all three sites.

It would also replace existing facilities at RAAF Base Townsville for 65 Air Base Recovery Squadron and provide additional transit living-in accommodation suitable for longer term regional occupancy use. It would also provide for new works at the Townsville Field Training Area Fanning Sector for improved access into the southern end of the training area.

Option 2 improves the RAAF Base Townsville and Townsville Field Training Area capability and sustains HMAS *Cairns*. However, the extent of new works for Option 2 for RAAF Townsville's 65 Air Base Recovery Squadron would require that it occur in the context of a major Base investment for optimal investment, consistent with a base redevelopment project.

c. **Option 3 - Minimum Priority Scope**. This option focusses strictly on priority maintenance sustainment matters to achieve compliance with relevant building codes.

While this Option addresses essential compliance requirements at HMAS *Cairns* and at RAAF Base Townsville, Option 3 does not sustain capability. Notably it does not include improving the access to, and use of, the Townsville Field Training Area Fanning Sector for collective training and would not enable optimal use of the asset.

Nor does it address the inadequate transit accommodation capacity at RAAF Base Townsville.

d. **Option 4 – Priority Maintenance and Capability Enhancement.** This option is affordable and addresses relevant high priority maintenance matters, including ICT and fire protection works, and the higher priority capability requirements. This option addresses the essential requirements to best sustain existing capability until all three Bases can be fully redeveloped and best aligns with Australian Defence Force Joint Operational and training requirements.

Option 4 is the preferred option.

Planning and Design Concepts

27. The general philosophy for the design of the proposed works is based on:

a. providing cost-effective, functional, low maintenance, energy efficient design options compatible with proposed functions and existing aesthetics;

b. where possible, adopting conventional construction techniques and materials commonly used by the local construction industry and consistent with those already used;

c. applying appropriate durability measures to reduce ongoing maintenance and achieve the proposed design life; and

d. providing upgraded infrastructure to accommodate an appropriate level of demand.

Relevant Legislation, Codes and Standards

28. The following legislation, standards, codes and guidelines are applicable:

a. *Environmental Protection and Biodiversity Conservation Act 1999 (Cth);*

b. *Fair Work (Building Industry) Act 2012 (Cth);*

c. *Work Health and Safety Act 2011 (Cth);*

d. *Disability Discrimination Act 1992 (Cth);*

e. *Fair Work Act 2009 (Cth);*

f. National Construction Code - Building Code of Australia;

g. Manual for Infrastructure Engineering Electrical;

h. Smart Infrastructure Manual;

i. Defence Estate Quality Management System; and

j. Defence Manual of Fire Protection Engineering.

29. An accredited Building Certifier will certify the compliance of the design and the completed works.

Land and Zoning

30. The proposed works are consistent with uses prescribed in relevant Defence zoning instruments and development planning, including conformance with the Defence Estate Principles of Development.

31. The Project has been reviewed under internal Defence site selection boards to ensure that the proposed works will not compromise future Base development.

32. Works will be contained within the existing Commonwealth and leased boundaries with the exception of a fire main pipeline that is beneath the road that splits HMAS *Cairns*.

33. More specifically, at:

a. **RAAF Base Townsville (Project Element 1)**: The works proposed are consistent with the existing Base Zone Plan and take account of incoming capability, operational and training needs.

   The fire water tank storage is opposite Ingham Road from the main Base and also on Commonwealth property. There is no requirement for boring beneath or other works on the road as the existing underneath pipe network can accommodate the forecast flow rate.

b. **Townsville Field Training Area (Project Element 2)**. All works are being undertaken to refresh existing training facilities. The only exception is for the southern range works at the Fanning Sector which will provide an expanded accessible training area.

   This approach is consistent with training development planning where investment in the Fanning Sector would assist to accommodate increases in training space requirements.

c. **HMAS *Cairns* (Project Element 3):** The proposed Base Project scope has been developed mainly on base wide services and the living-in accommodation environment. It does not conflict in scope with the Navy Capability Infrastructure Sub-Program (Committee Report 6/2019 of November 2019 refers), this focused on specific capability acquisition requirements.

Constructing the fire ring main as the primary base wide service will require boring beneath Draper Road (the road that presently divides the Commonwealth owned main operating Base area from the Base's leased area) to connect to the new fire water tank storage in the leased area.

Structure

34. The proposed Transit Accommodation structure at RAAF Base Townsville has been designed according to the local geotechnical profile to have a piled foundation supporting reinforced concrete beams with suspended floor slabs.

35. The proposed three-storey structure will comprise internal and external load bearing reinforced concrete block walls and steel roof framing, designed in accordance with Australian Standards to resist regional wind loads. Internal light framed partitioned walls are non-load bearing.

36. New internal walls in the refurbished 65 Air Base Recovery Squadron facilities will be a light weight steel frame or concrete block walls, with masonry infill to external walls.

Mechanical Services

37. The mechanical services have been designed according to the function and needs of each new and upgraded building at each site.

38. The mechanical services being proposed will meet specific user needs, relevant ventilation, thermal comfort and air quality requirements and the mandatory requirements of the National Construction Code.

39. The Transit Accommodation will be air conditioned in bedrooms, common rooms and corridors. Aged and deteriorated room air-conditioners in 65 Air Base Recovery Squadron will not be re-used.

40. Split system air-conditioning will replace the existing window mounted units in the HMAS *Cairns* Las Palmas Living-In Accommodation. Split system air-conditioning will be installed the new Fanning Sector main building.

Hydraulic Services

41. The RAAF Base Townsville water supply service is at or is approaching the end of its economic life, giving rise to the requirement to replace all or sections of the existing reticulation.

42. As excavation for the fire water main is to occur for the domestic side of the Base, opportunity has arisen to use the same trenching to replace sections of the existing main potable water supply reticulation.

43. In the new transit accommodation facility, roof water will be collected and stored for use in landscape irrigation, and all potable water used will be sub-metered.

44. Works at the Fanning Sector include access to bore water for vehicle de-seeding and fire protection, and storage for potable water.

45. Bore yields in the vicinity of the Fanning Sector have been assessed to confirm that draw-down remains limited to aquifer recovery rates. Controlled pumping to storage tanks will meet vehicle deseed requirements.

46. Potable water will be delivered to this remote site when exercise requirements are known. The water treatment equipment will be replaced at the Range Control, as will the tanks and pumps supporting the Range Control building.

Electrical Services

47. Lighting, power and lightning protection will be provided in accordance with Australian Standards and Defence engineering requirements.

48. Electrical infrastructure and switchboards installed during new and major upgrade works will have spare capacity to allow for future growth, with a number of minor works across the Townsville Field Training Area to replace older and less reliable generators and Low Voltage switchboard installations.

49. At the Fanning Sector (Townsville Field Training Area), the main building will be supported on mains power through a one kilometre extension of the Mingela No 2 line. A generator supply will support the de-seeder pumps.

50. Upgrades to electrical infrastructure are proposed at RAAF Base Townsville. This will include realigning the High Voltage reticulation, re-cabling between the Central Emergency Power Station and substations, and a new substation and switchboard (housed within a new masonry block building).

Fire Protection

51. Fire Protection in new and upgraded facilities will comply with the Defence Manual of Fire Protection Engineering and the National Construction Code.

52. The Project scope will improve fire protection compliance at HMAS *Cairns* and RAAF Base Townsville. Compliance with bushfire attack resilience and protection measures are to be provided at the proposed Fanning Sector development in the Townsville Field Training Area.

53. The Manual of Fire Protection Engineering requires that the fire ring main be separated from the potable water supply main. Compliance will be achieved at completion at HMAS *Cairns*, and in the domestic area of RAAF Base Townsville.

54. Additionally, a fire water reservoir will be established at HMAS *Cairns*. RAAF Base Townsville itself possesses a sufficient fire water reservoir that was constructed around 2011.

Security Measures

55. The Project will ensure the new living-in accommodation facility, and the facilities subject to major upgrade effort, conform to the Defence Security Framework, in keeping with any security risk assessment and Commonwealth business impact level information.

56. At RAAF Base Townsville, this involves ensuring physical security compliance of 65 Air Base Recovery Squadron facilities to the required security zone specifications, provision of electronic access and retaining the appropriate setback distance from the Base boundaries. Works will be consistent with the existing Transit Accommodation security standards.

57. At the Fanning Sector, the facilities will need to be set back from the main road to lessen chance sighting. Each facility and main access gate will be padlocked using security approved devices.

Acoustics

58. New facilities will comply with the National Construction Code and Australian Standards for noise and acoustics. As the proposed scope of work includes living-in accommodation at RAAF Base Townsville, Australian Standard 2021 (Acoustic – Aircraft Noise intrusion – Building Siting and Construction) is particularly relevant. Noise assessments conducted at the Base have provided the design basis for acoustic treatment.

59. Externally located mechanical plant and acoustic fabrics will be selected and treated to minimise noise impact on the environment and facilities, to remain within a suitable internal and external noise range.

Work Health and Safety

60. The Project will comply with the *Work Health and Safety (WHS) Act 2011 (Cth)*, Work Health and Safety (Commonwealth Employment – National Standards) Regulations, and relevant Defence policies.

61. Under the Australian Government Building and Construction Work Health and Safety Accreditation Scheme, project contractors will be required to hold full work health and safety accreditation from the Office of the Federal Safety Commissioner. This requirement is in accordance with Section 35 (4) of the *Building and Construction Industry Improvement Act 2005 (Cth).*

62. Safety aspects of the Project have been addressed during the design development process and documented in a Safety in Design Report.

63. A Work Health Safety Plan will be developed for the construction phase prior commencing any construction activities.

Materials and Furnishings

64. External walls for all new buildings will be a mixture of concrete panels and metal cladding with curtain wall glazing (heavy duty glazing for noise attenuation, with structural capacity to meet cyclonic conditions).

65. A pre-finished profile metal deck roof system will be used for new roofs. The refurbished buildings will use masonry infill to external walls, to improve internal office comfort and noise attenuation.

Landscaping

66. The new landscape works propose to complement and enhance the character of each site. The landscape design will focus on a functional, low maintenance, water sensitive approach with the use of indigenous plants.

67. For vegetation disturbed along the fire main path, reseeding will occur progressively to limit weed invasion and erosion.

68. Precautions will be taken to avoid compromising environmental sensitivities by adopting landscaping practices in accordance with local environmental conditions, as well as the Project Contractor's approved Construction Environmental Management Plan.

Childcare Provisions

69. As there is no increase to Base populations associated with this Project, there is no requirement for additional childcare facilities.

Provisions for people with disabilities

70. Access for people with disabilities will be provided in accordance with the National Construction Code and the *Disability and Discrimination Act 1992 (Cth).*

Environmental Sustainability

71. Defence is committed to Ecologically Sustainable Development and reducing greenhouse gas emissions. As such, the Project has adopted cost effective measures as a key objective in the design and development of the proposed works.

72. These Ecologically Sustainable Development measures include:

a. **Energy targets:** The general target requirement in new Defence buildings is as defined in Section J of the National Construction Code.

b. **Measures to reduce energy and water use:** Appliances and equipment are specified to achieve minimum energy Australian Appliance Star Ratings and energy efficient lighting.

Minimum four and five star water efficiency ratings for fittings and fixtures are also required.

This matter is particularly relevant to Living-In Accommodation upgrade at HMAS *Cairns* and new Transit accommodation at RAAF Base Townsville. At these two Bases, all meters are to be connected to the Defence utility metering system, with zone smart metering applied to the new water supply lines.

Project scope also provides for improved water monitoring at the Townsville Field Training Area.

c. **Re-use of existing structures:** As a mid-term refresh project, maximising re-use of existing facilities will extend the existing asset life until a Redevelopment Project is programmed.

At RAAF Base Townsville, re-use of the existing 65 Air Base Recovery Squadron buildings and Building 192 is intended.

d. **Demolition and disposal of existing facilities:** The only demolition that is proposed to occur will be where replacement is planned, and the former asset becomes redundant or impedes planned works. The intention is to minimise waste.

e. **Waste Minimisation:** 70% of all construction waste (by weight) will be recycled (diverted from landfill) or reused (on site or at a licensed facility). This will be in accordance with State regulations. The 70% target excludes such material as hazardous waste and/or soil containing contamination.

This Project will consider the use of local materials in the design to minimize transportation, materials that enable adaptability (for minimal waste to site), flexibility in future use, and avoidance of material containing Volatile Organic Compounds and Ozone Depleting Material.

Potential Impacts

73. Defence has conducted rigorous assessments to identify potential environmental and local community impacts, and propose suitable mitigation measures. These include:

a. **Visual Impacts:** As much of the Project scope addresses maintenance and upgrading for compliance, there is no material visual impact.

Architectural concepts include contextually aligning with existing facilities. Hence, the primary new development of RAAF Base Townsville transit accommodation will maintain a level of exterior consistency with the existing transit facilities. This will lessen the visual impact to nearby neighbourhood housing.

b. **Noise Impacts:** The design of the proposed transit living-in accommodation will require attenuation to meet prescribed Australian Standards to provide for rest and sleep. There is no noise impact during normal operations otherwise.

c. **Heritage Impacts:** The contractor will develop environmental and heritage plans before site work. The plans will provide for surveillance and investigation during works, on a chance-find protocol basis.

The plans will take account of Indigenous Heritage sites that may exist at Townsville Field Training Area and RAAF Base Townsville, as sites may be disturbed during roadworks, clearance and trenching,

Although initial assessments and consultations were conducted in the Townsville Field Training Area Fanning Sector, improved visibility of potential disturbance will be evident during initial construction clearance. The chance-find protocol basis will therefore provide for clearance to the extent required to complete site inspections.

European Heritage impact is considered unlikely at any of the three Project locations. An impact assessment may be required if the likelihood may be realised.

d. **Traffic, Transportation and Road Impacts:** The overall populations will remain unchanged as a result of the Project. Other than constructing a road intersection for the Fanning Sector connection to the Dotswood Mingela Road (with localised pavement strengthening), there is no overall net impact on traffic, transportation and roads resulting from the Project.

   During construction, there will be limited localised increases in traffic supplying and removing material to and from each site.

e. **Relevant Local Facilities:** The Project scope does not generate any increase or change to the Defence population at any of the three project sites.

   Defence does not anticipate an increased dependency on local facilities and amenities within the Base boundaries or into the local community.

f. **Contamination Remediation:** The possibility exists that trenching for the proposed fire ring mains at HMAS *Cairns* and RAAF Base Townsville will disturb soils or groundwater with concentrations of polyfluoroalkyl substances (PFAS).

   Before excavating, Defence will establish a Project PFAS management approach in accordance with the Defence PFAS framework and Base management plans. The purpose will be to identify actions in encounters and in management in re-use or disposal of PFAS contaminated excavated spoil under different contaminant concentrations.

   Whilst the likelihood exists of encounters with some asbestos, pesticide and heavy metal contamination, sampling during design did not indicate the presence of such contamination that could represent a risk to human health or the environment.

74. Defence has determined that the Project will not have a significant impact on existing environmental and heritage values, and is not required to be referred to the Minister of Environment and Energy under the *Environmental Protection and Biodiversity Conservation Act 1999 (Cth).*

Related Projects

75. **RAAF Base Townsville.** Related works are as follows:

    a. **JOINT 0105 Joint Health Facilities.** Reviewed by the Committee (Report 1/2018), this project provided for establishment or upgrade of joint user garrison health centres at 13 different sites nationally. RAAF Base Townsville is hosting one of those centres, with works anticipated to be complete by mid-2021.

    b. **LAND 4502 Facilities to Support additional CH-47F Helicopters for 5th Aviation Regiment.** This project is approaching completion. Although scope is not directly related to the Project, its site selection activity has identified a location for residual material from excavations (including the fire main trenching).

76. **Townsville Field Training Area**. Related works are as follows:

    a. **Australian Singapore Military Training Initiative Project.** Activity centres on Greenvale which is north west of the training area, separate from the training area. It has heightened building industry activity in the area.

    b. **LAND 121 Field Vehicles and LAND 400 Land Combat Vehicle System Programs.** The known specifications for the Army vehicles have been considered in the design development for the Fanning Sector entry.

    c. **EST 03715 – Townsville Field Training Area Civil Works Project.** EST03715 is developing the Main Supply Route through the Fanning Sector for improved vehicular access. The Fanning Sector entry scope under the mid – term refresh has provided allowances for the Main Supply Route to link into the entry point. Works anticipated to be complete by December 2021.

77. **HMAS *Cairns***. Related works, both current and prospective, are as follows:

    a. **Navy Capability Infrastructure Sub-Program: Facilities and Infrastructure to Support New Navy Capabilities**. Reviewed by the Committee (Report 6/2019), this national project provides for facilities at *HMAS Cairns* to support berthing of the larger Arafura Class Offshore Patrol Vessel. The Project has deconflicted works and will provide additional capacity to support the new facilities being proposed under that project.

Consultation with Key Stakeholders

78. Defence has developed a community consultation and communications strategy. This strategy recognises the importance of providing local residents and other interested stakeholders an opportunity to comment on the proposed works.

79. Defence has engaged with a variety of internal and external stakeholders during project development to date. Further consultation will be conducted to support the Parliamentary Standing Committee on Public Works' inquiry into the works being proposed.

80. The external stakeholders consulted, or to be consulted, include:

a. For RAAF Base Townsville:
   (1) Federal Member for Herbert, Hon Phillip Thompson OAM MP;
   (2) State Member for Townsville, Mr Scott Stewart;
   (3) City of Townsville, Councillor Jenny Hill, Mayor;
   (4) Local and effected utility authorities including Origin Energy and Townsville Water; and,
   (5) Local community, business groups and businesses including the Master Builders Queensland.

b. For Townsville Field Training Area:
   (1) Federal Member for Kennedy, Hon Bob Katter MP;
   (2) State Member for Traeger, Mr Robert Katter
   (3) City of Townsville, Councillor Jenny Hill, Mayor;
   (4) Charters Towers Regional Council, Councillor Frank Beveridge, Mayor (within which most of the training area is located);
   (5) Local and effected utility authorities (including Ergon Energy); and,
   (6) Local community, business groups and businesses including the Master Builders Queensland.

c. For HMAS *Cairns*:
   (1) Federal Member for Leichhardt, Hon Warren Entsch MP;
   (2) State Member for Cairns, Mr Michael Healy;

(3) City of Cairns, Councillor Bob Manning OAM, Mayor;

(4) Local and effected utility authorities (including the Cairns Port Authority and Cairns Regional Council); and,

(5) Local community, business groups and businesses including:

i. Master Builders Queensland, and,

ii. Ports North.

d. Local Business Chamber: Local industry briefings were conducted on 30 September 2020 with local Townsville regional industry (sponsored by the Queensland Department of State Development, Tourism and Innovation).

In addition, industry and Townsville Council briefings have occurred in conjunction with area briefings for the Australia Singapore Military Training Initiative project (sometimes referred to as the ASMTI project). Even though a separate project, this helps to maintain information flow to local contractors. Additional community consultation sessions, relevant to this Project, will also be conducted at Cairns and Charters Towers, for community awareness and to promote local industry engagement.

Cost Effectiveness and Public Value

Project Costs

81. The estimated total capital out-turned cost of the Program is $111.2 million (excluding Goods and Services Tax) over the three Project sites. This includes management and design fees, construction costs, information and communications technology, furniture, fittings, equipment, contingencies and a provision for escalation.

Project Delivery System

82. A Project Manager/Contract Administrator will be appointed to manage the final design and delivery of the works.

83. A Managing Contractor form of contract is planned to deliver the Project, and to complete design development, procure trade contractors, and manage the construction of the works.

84. The Managing Contractor form of delivery provides the Commonwealth with buildability input into the design while promoting opportunities for small to medium enterprises by sub-contracting design and construction trade packages.

Construction Program

85. Design activities are expected to be completed before late 2021. Construction is expected to commence from late 2021 and be completed by late-2023.

Public Value

86. Defence has comprehensively assessed public value, opportunities and benefit to the community as a result of the proposed works. The opportunities and benefits include:

a. **Meeting capability needs:** This Project will facilitate sustainment of the capacity of the Bases and the Training Area to support the ADF.

b. **Employment opportunities:** Up to 120 people are expected to be employed during the construction period. There will be no net impact on employment post construction.

c. **Economic impacts:** Up to 80% of the trade works by $ value is expected to be awarded to local sub-contractors.

d. **Local industry and Indigenous business involvement opportunities:** The Managing Contractor has been engaging with the local business community throughout the design process to ensure that the works are compatible with the capability and capacity of the local subcontracting market.

   The Managing Contractor will also develop a Local Industry Capability Plan and an Indigenous Participation Plan to maximise local industry involvement and indigenous participation, with the intention of raising local engagement.

e. **Existing infrastructure services:** The Project seeks to improve infrastructure capacity, improve access to less-utilised training areas, and improve on-Base compliance with current standards.

   The Project will reduce the Defence reliance on regional fire response support. It will also reduce Defence's use of, and improve public safety along, the Hervey Range Road into the Townsville Field Training Area.

Below the Line Items

87. In the event that savings can be achieved through competitive tendering and retired risk provisions, Defence proposes to utilise the savings to enhancements that are consistent with the approved Project scope. Notably, this may include the unfunded additional ablutions facilities at the Townsville Field Training Area, to support Army's increased usage of the Urban Operations Training Facility.

Revenue

88. No revenue is expected to be derived from this project.

Attachments

1. National Map – Location Plan
2. Site Location – RAAF Base Townsville
3. Site Location – Townsville Field Training Area (TFTA) with Fanning Sector
4. Site Location – HMAS *Cairns*
5. RAAF Base Townsville Base Plan
6. RAAF Base Townsville 65 Air Base Recovery Squadron (65ABRS) Site Plan
7. RAAF Base Townsville Transit Living-In Accommodation (LIA) Site Plan
8. RAAF Base Townsville Transit LIA Perspective Views
9. RAAF Base Townsville Transit LIA Building Elevations
10. RAAF Base Townsville Transit LIA Ground Floor Plan
11. TFTA Fanning Sector Entry Site Plan
12. TFTA Fanning Sector Entry Building and Pump House Plan
13. TFTA Fanning Sector Entry Building and Pump House Perspective Views
14. HMAS *Cairns* Stormwater Intercept
15. HMAS *Cairns* Sewer Pump Station (SPS) Upgrades
16. HMAS *Cairns* Las Palmas Living-In Accommodation – Air Conditioning Upgrade

NORTH QUEENSLAND MID TERM REFRESH PROGRAM

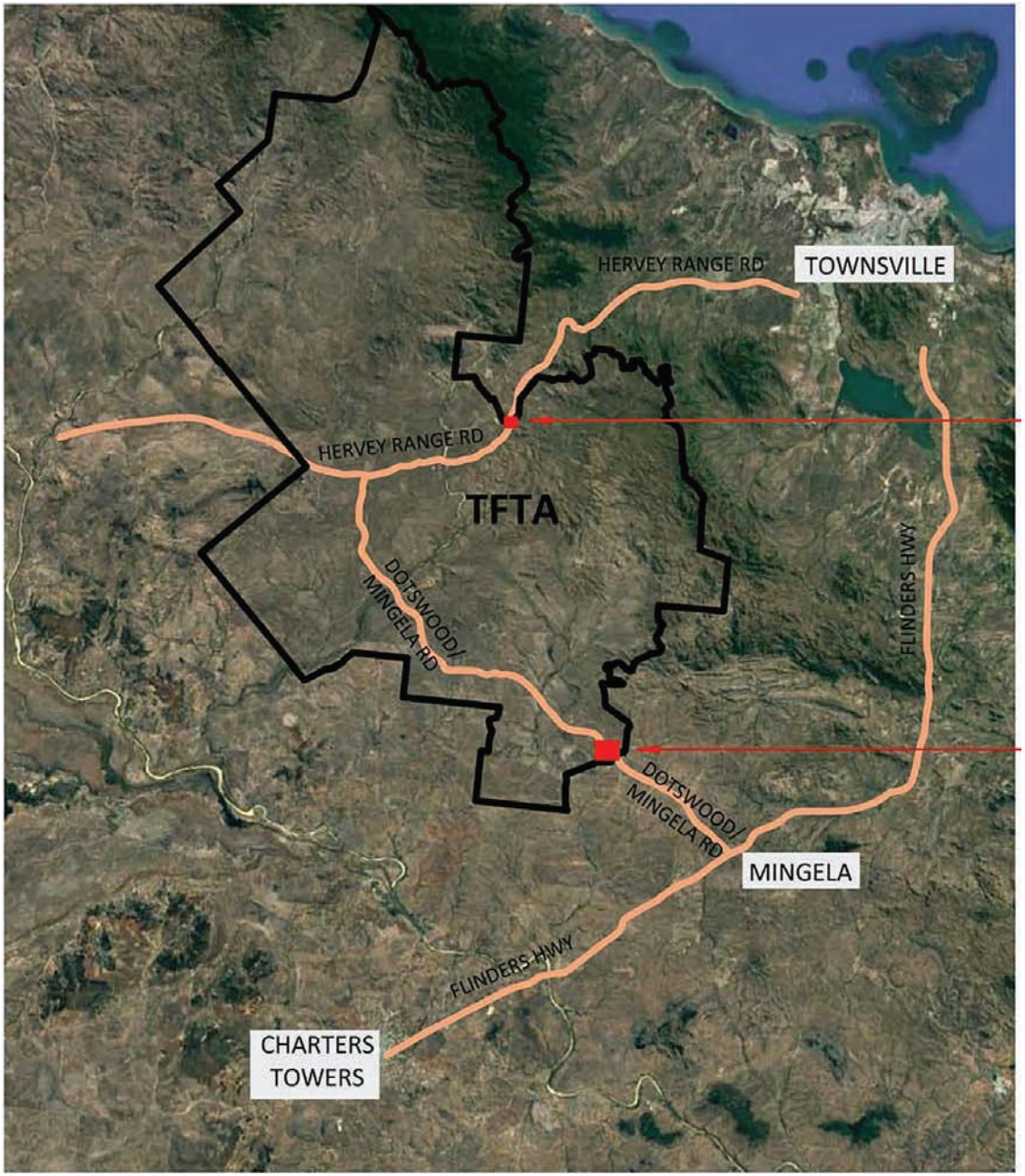
NATIONAL MAP

LOCATION PLAN

ATTACHMENT 01

RAAF BASE TOWNSVILLE
PROJECT SITE LOCATIONS

ATTACHMENT 02



EXISTING RANGE CONTROL

- REPLACE WATER PURIFICATION PLANT
- UPGRADE WASTEWATER TREATMENT
- UPGRADE EMERGENCY POWER

FANNING SECTOR ENTRY

- DEVELOP FANNING SECTOR FACILITY
- CONNECTION TO DOTSWOOD/MINGELA ROAD
- DE-SEEDING POINT

TOWNSVILLE FIELD TRAINING AREA (TFTA)
OVERALL BASE SITE PLAN

ATTACHMENT 03

HMAS *CAIRNS*

PROJECT SITE
LOCATIONS

ATTACHMENT 04

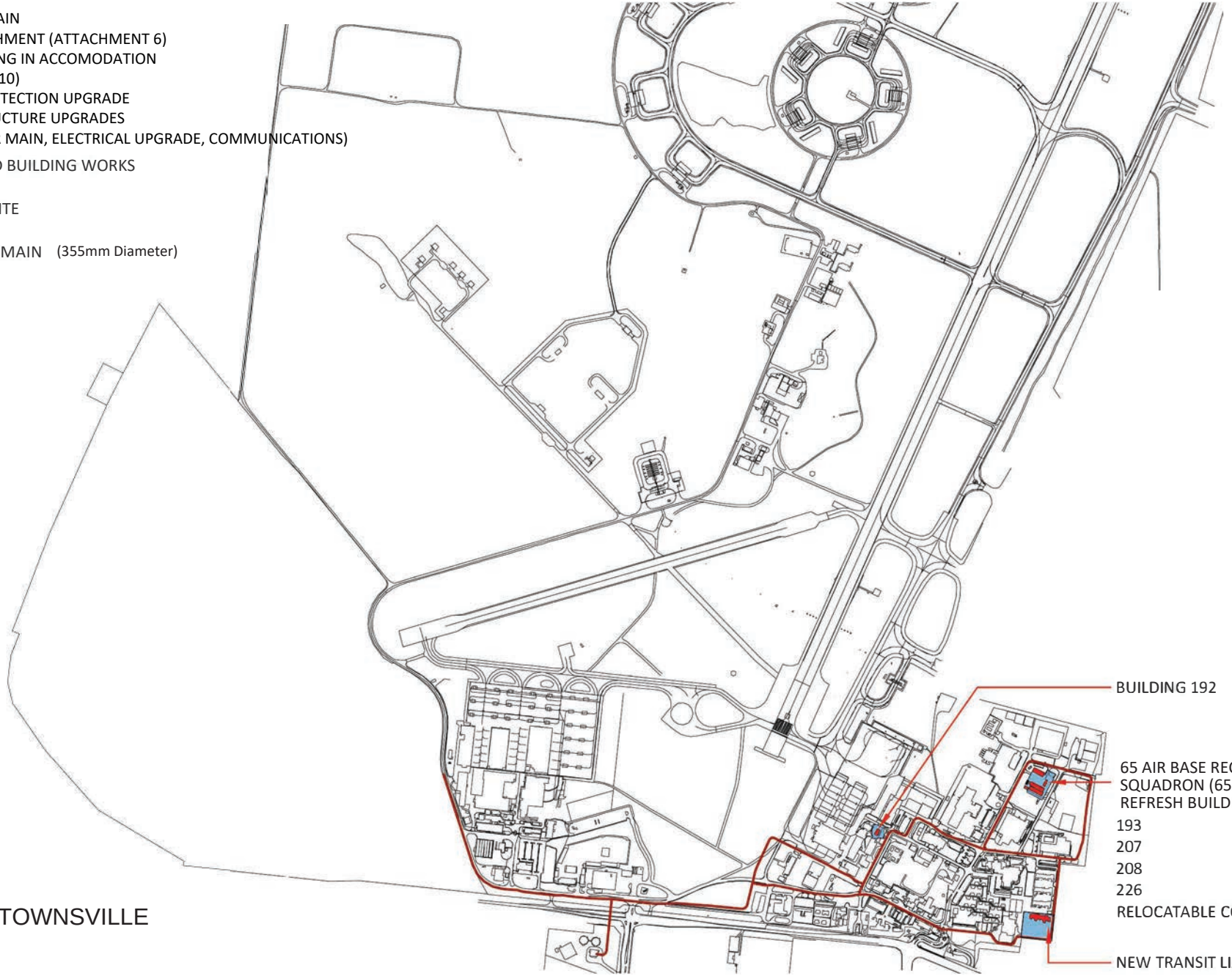
SCOPE

- BASE FIRE RING MAIN
- 65ABRS REFURBISHMENT (ATTACHMENT 6)
- NEW TRANSIT LIVING IN ACCOMODATION (ATTACHMENTS 7-10)
- BUILDING 192 PROTECTION UPGRADE
- MINOR INFRASTRUCTURE UPGRADES
- (PORTABLE WATER MAIN, ELECTRICAL UPGRADE, COMMUNICATIONS)

PROPOSED BUILDING WORKS

PROJECT SITE

NEW FIRE MAIN (355mm Diameter)



RAAF BASE TOWNSVILLE
BASE PLAN

375 750 1:15,000@A4

ATTACHMENT 05

SCOPE

65ABRS BUILDING 193 REFURBISHMENT
- INTERNAL UPGRADE

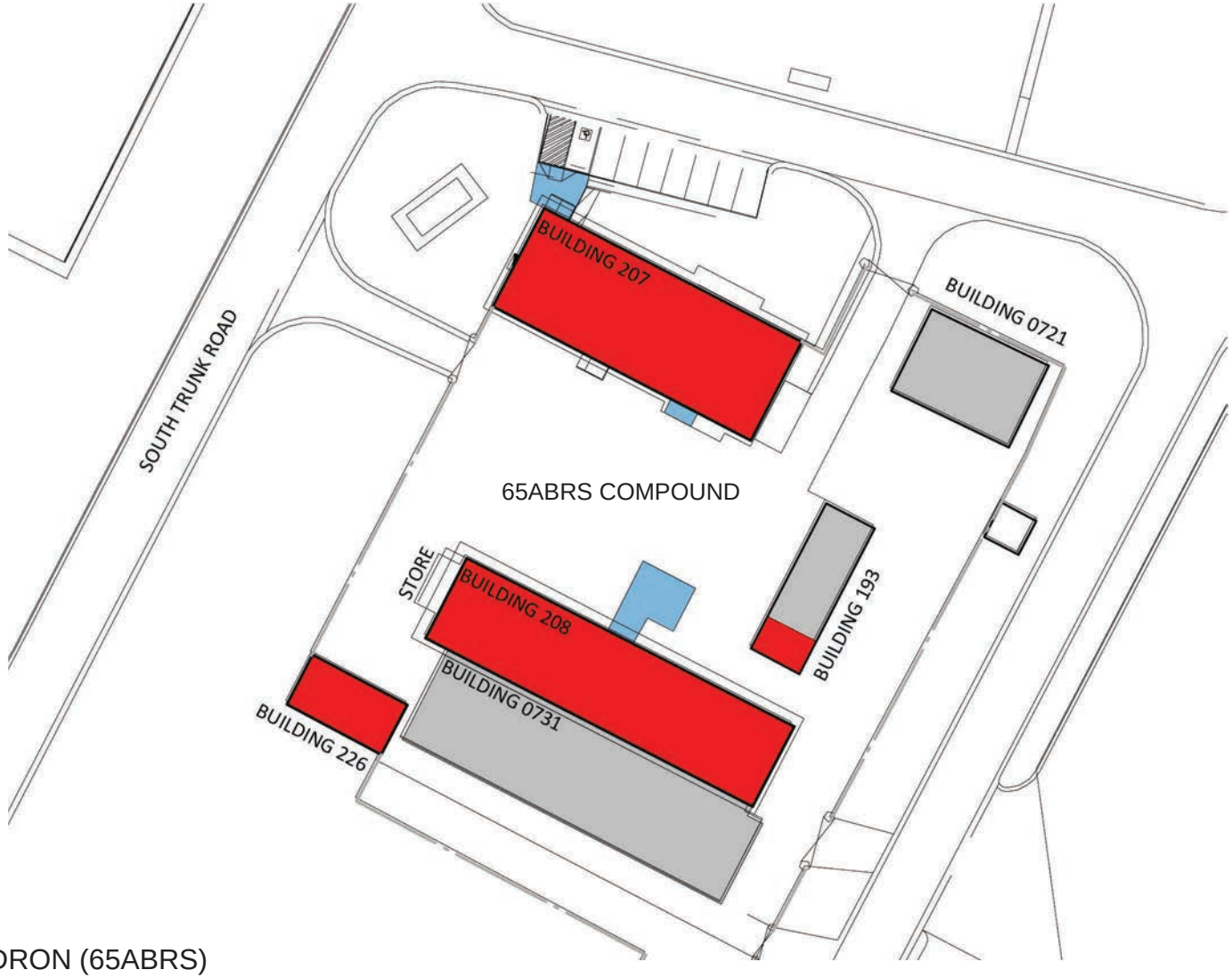
65ABRS BUILDING 207 REFURBISHMENT
- INTERNAL UPGRADE OF THE FACILITIES TO EXTEND WOL

65ABRS BUILDING 207 REFURBISHMENT
- INTERNAL UPGRADE OF THE TRADE WORKING ACCOMODATION TO EXTEND WOL

BUILDING WORKS

SITE WORKS

NO WORKS



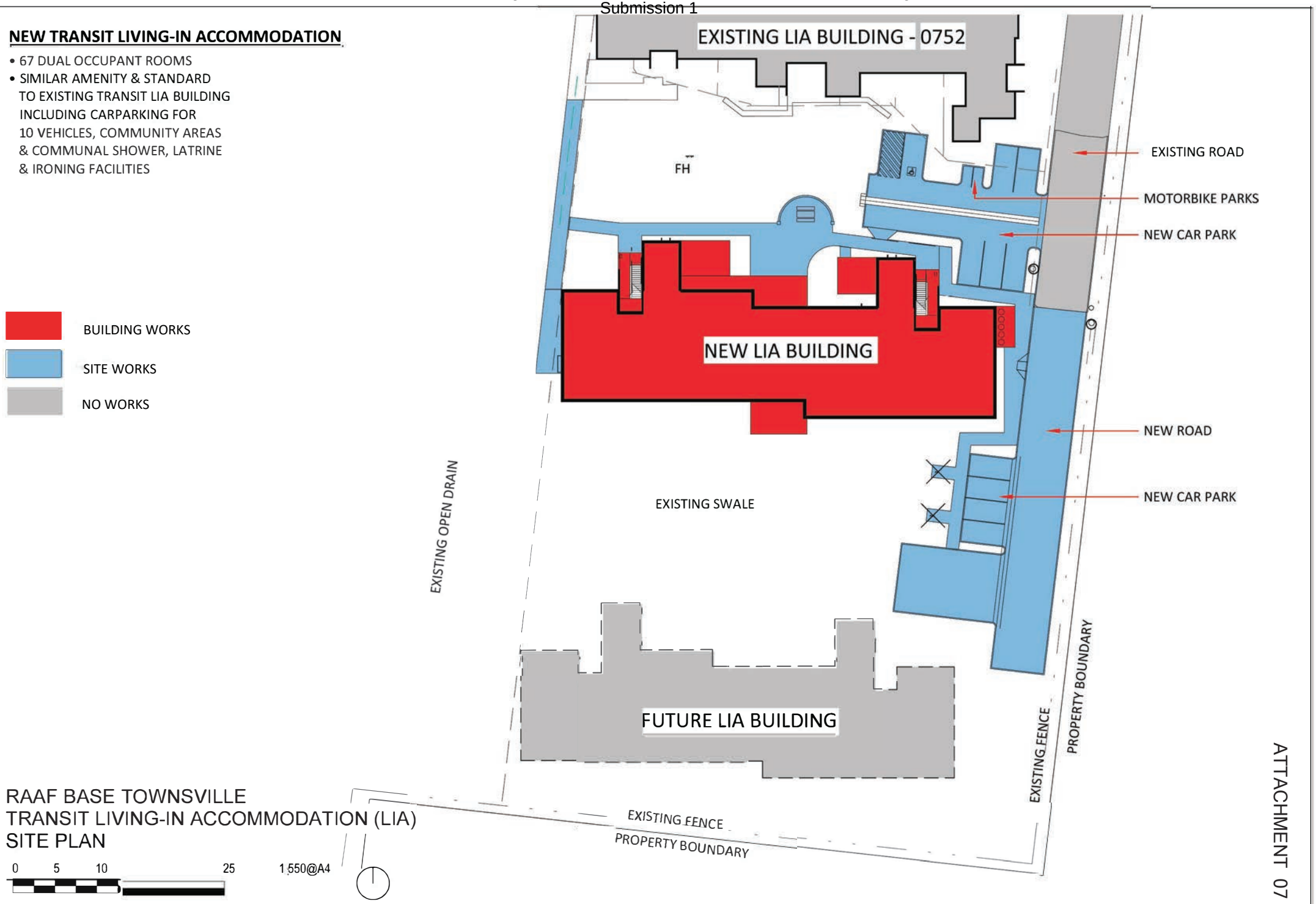
65 AIR BASE RECOVERY SQUADRON (65ABRS) SITE PLAN

7.5 15 22.5 30 37.5 1:750@A4

ATTACHMENT 06

NEW TRANSIT LIVING-IN ACCOMMODATION

- 67 DUAL OCCUPANT ROOMS
- SIMILAR AMENITY & STANDARD TO EXISTING TRANSIT LIA BUILDING INCLUDING CARPARKING FOR 10 VEHICLES, COMMUNITY AREAS & COMMUNAL SHOWER, LATRINE & IRONING FACILITIES



RAAF BASE TOWNSVILLE
TRANSIT LIVING-IN ACCOMMODATION (LIA)
SITE PLAN

0 5 10 25 1:550@A4

ATTACHMENT 07

RAAF BASE TOWNSVILLE

TRANSIT LIVING-IN ACCOMMODATION (LIA) PERSPECTIVE VIEWS

ATTACHMENT 08

NORTH ELEVATION

SOUTH ELEVATION

RAAF BASE TOWNSVILLE

TRANSIT LIVING-IN ACCOMMODATION (LIA) BUILDING ELEVATIONS

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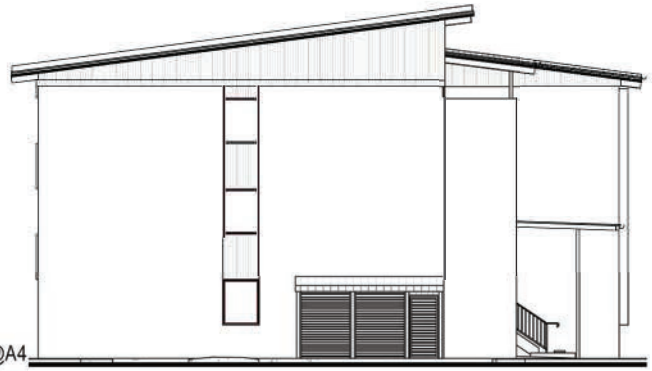
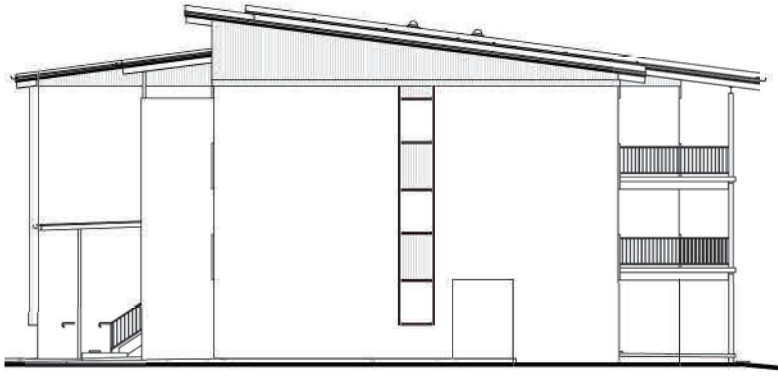
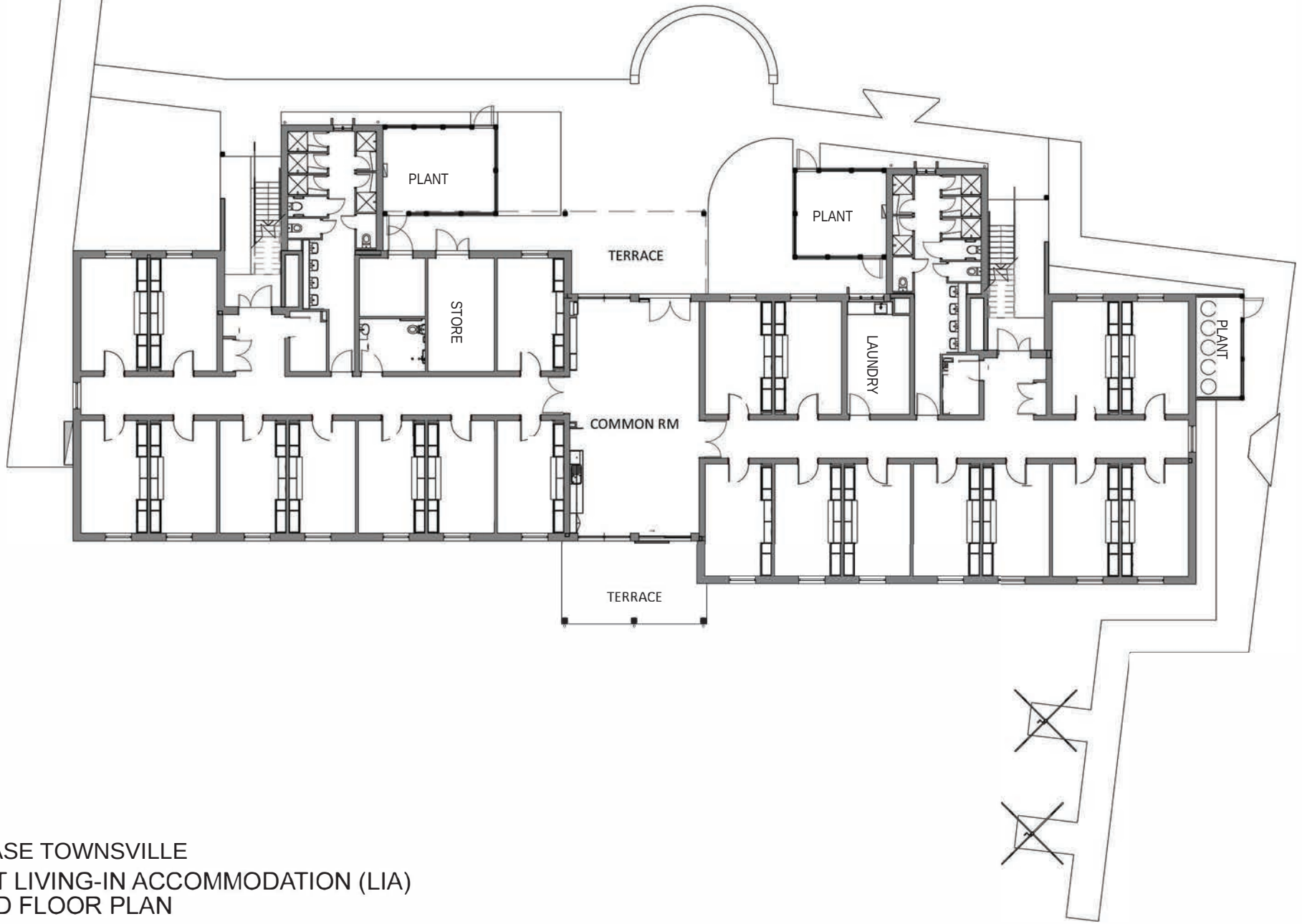


EAST ELEVATION



WEST ELEVATION

ATTACHMENT 09



RAAF BASE TOWNSVILLE

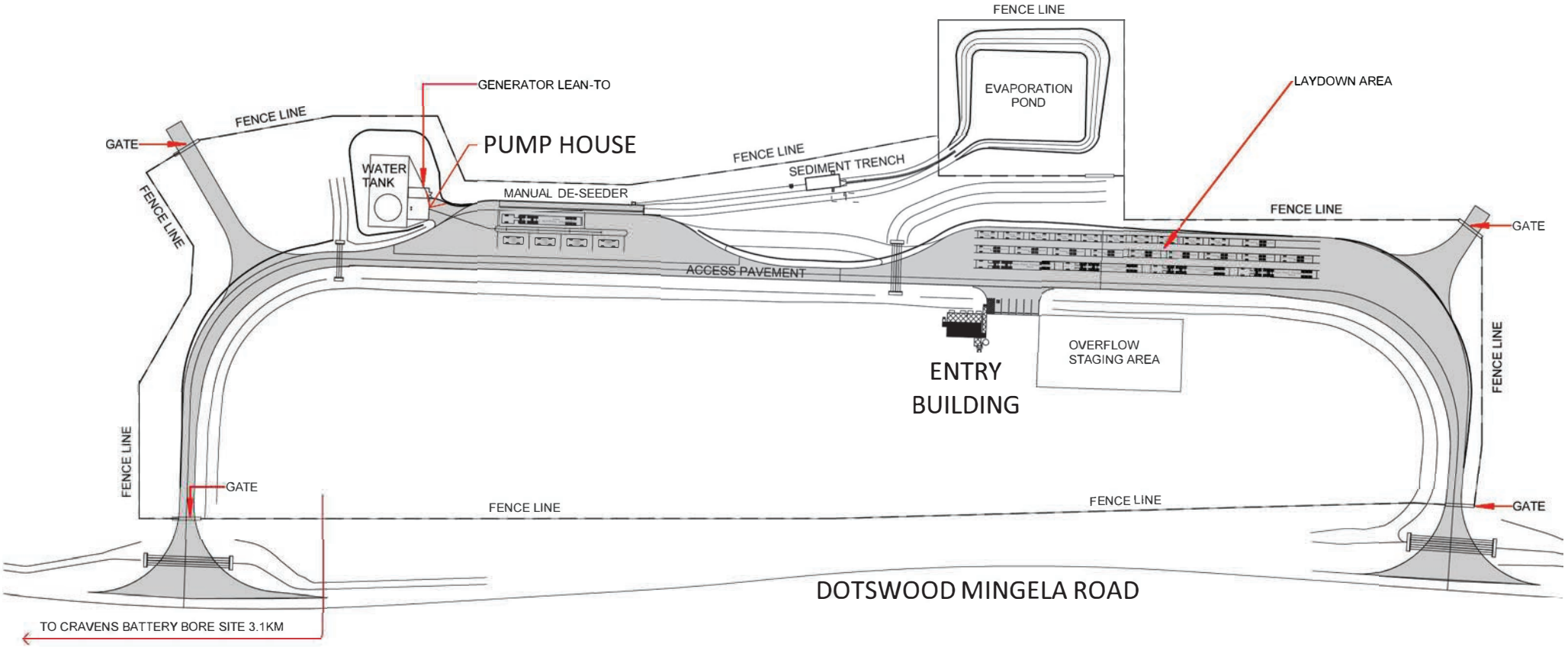
TRANSIT LIVING-IN ACCOMMODATION (LIA)
GROUND FLOOR PLAN

0 2.5 5 12.5 1:250@A4

ATTACHMENT 10

NEW FANNING SECTOR ENTRY POINT

OFFICE,BRIEFING & CONTROL POINT BUILDING WITH LATRINE FACILITEIS
CONNECTED BY EXTERNAL DOCK
FIVE(5) MANUAL VEHICLE DESEEDERS
LAYDOWN AREA

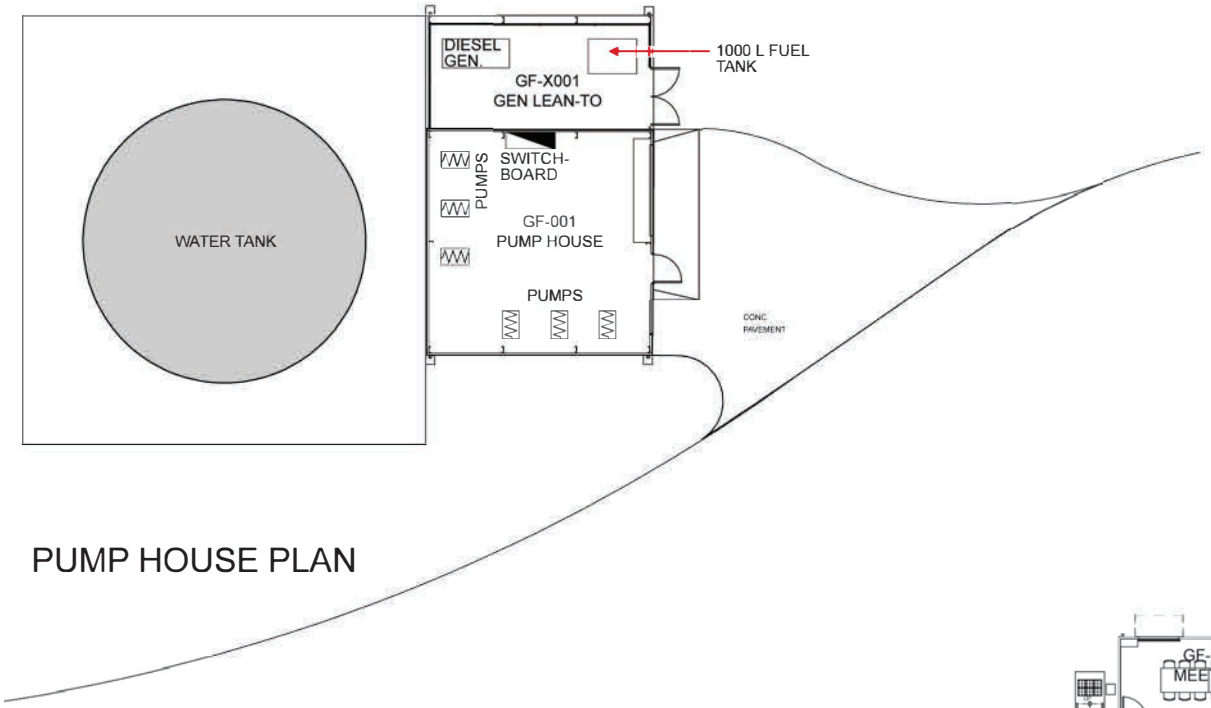


TOWNSVILLE FIELD TRAINING AREA (TFTA)

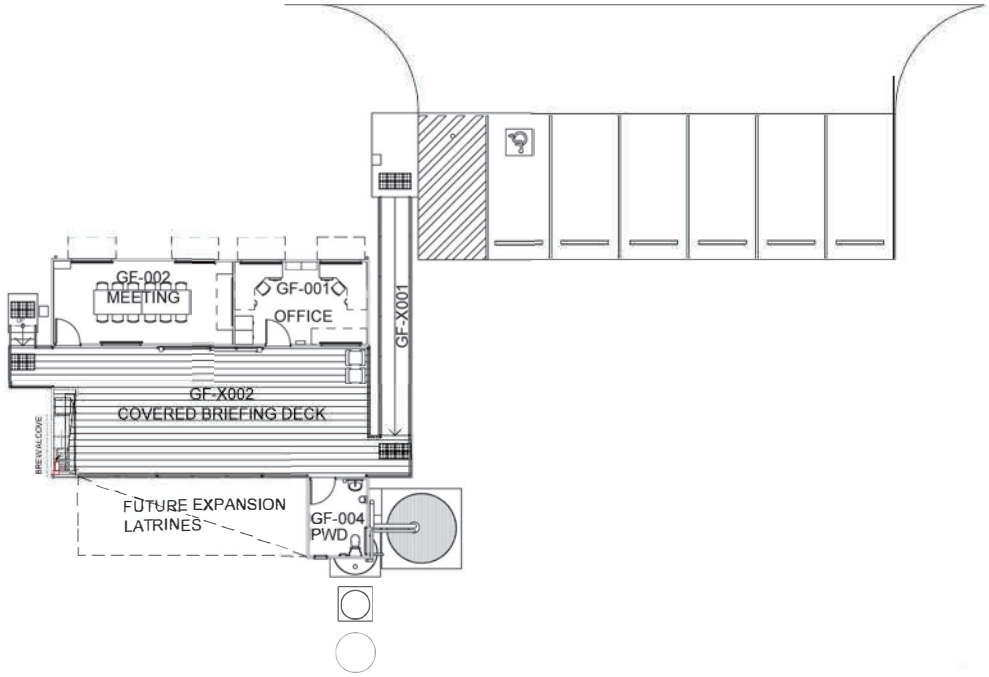
FANNING SECTOR ENTRY SITE PLAN

0 20 40 100 1:2000@A4

ATTACHMENT 11



PUMP HOUSE PLAN

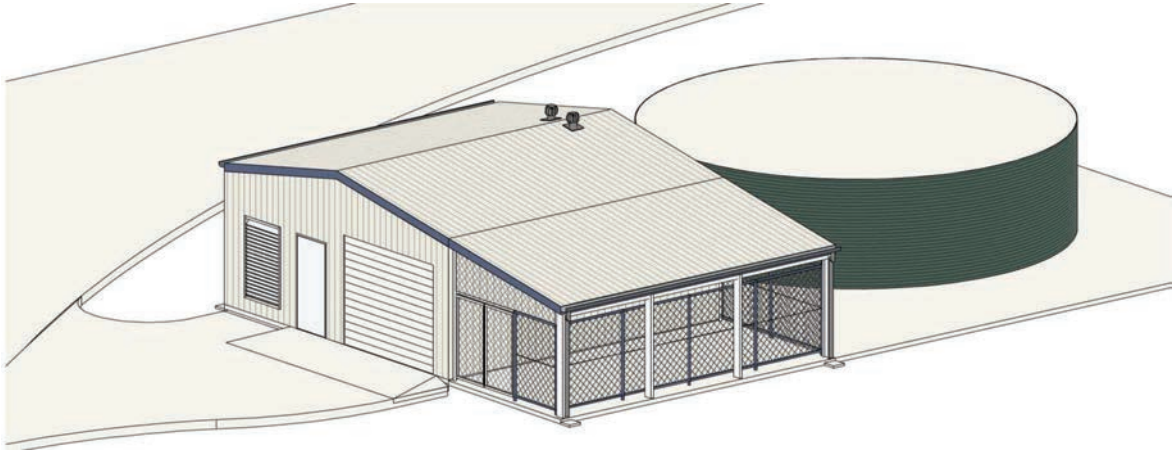


ENTRY BUILDING PLAN

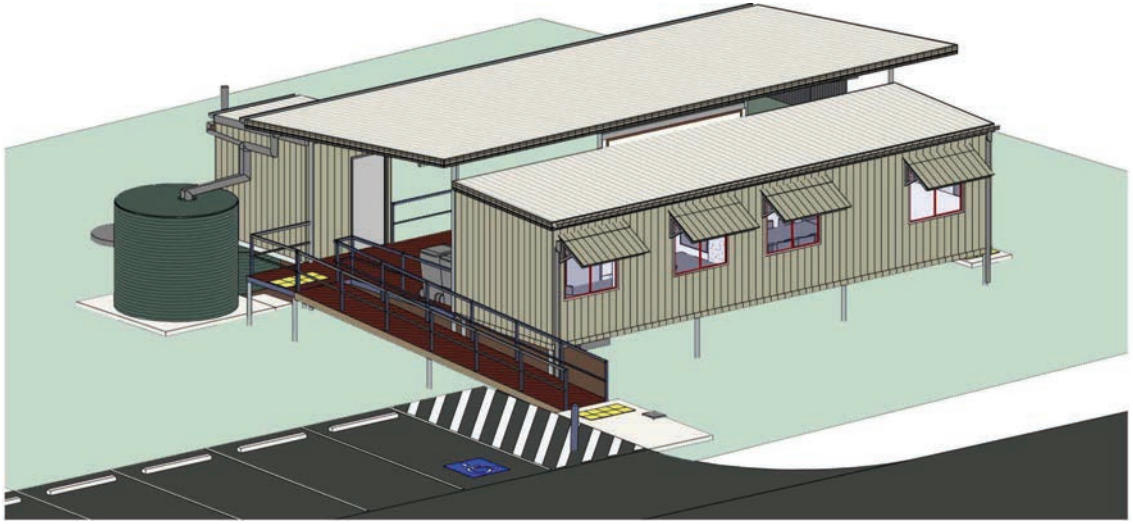
TOWNSVILLE FIELD TRAINING AREA (TFTA)
FANNING SECTOR ENTRY BUILDING & PUMP HOUSE PLAN

0 2.5 5 12.5 1:250@A4

ATTACHMENT 12



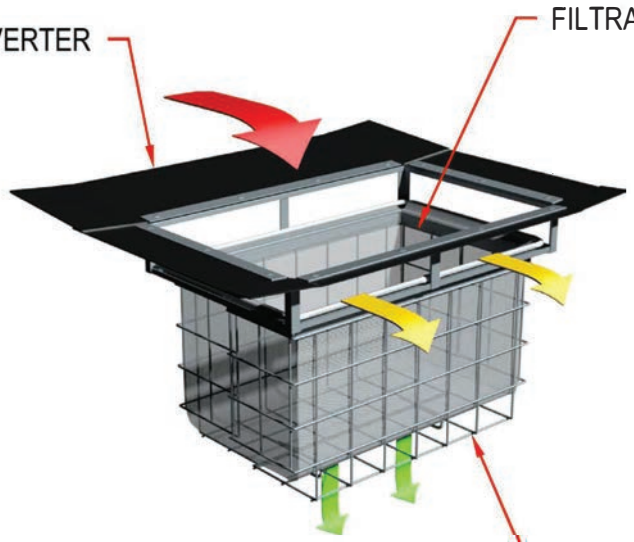
PUMP HOUSE



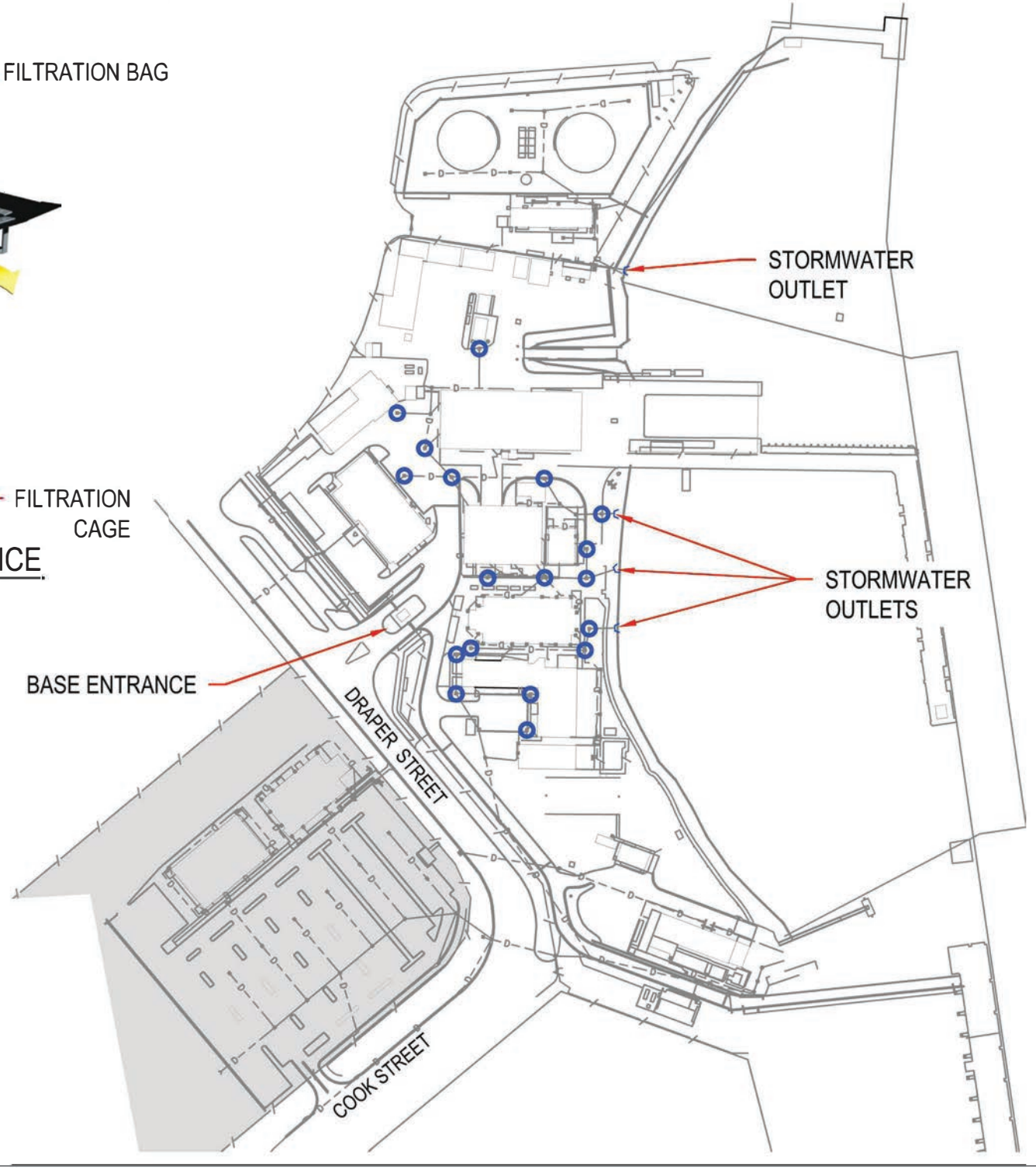
ENTRY BUILDING

TOWNSVILLE FIELD TRAINING AREA (TFTA)

ENTRY BUILDING & PUMP HOUSE
FANNING SECTOR
PERSPECTIVE VIEWS



TYPICAL DETAIL
STORMWATER QUALITY DEVICE



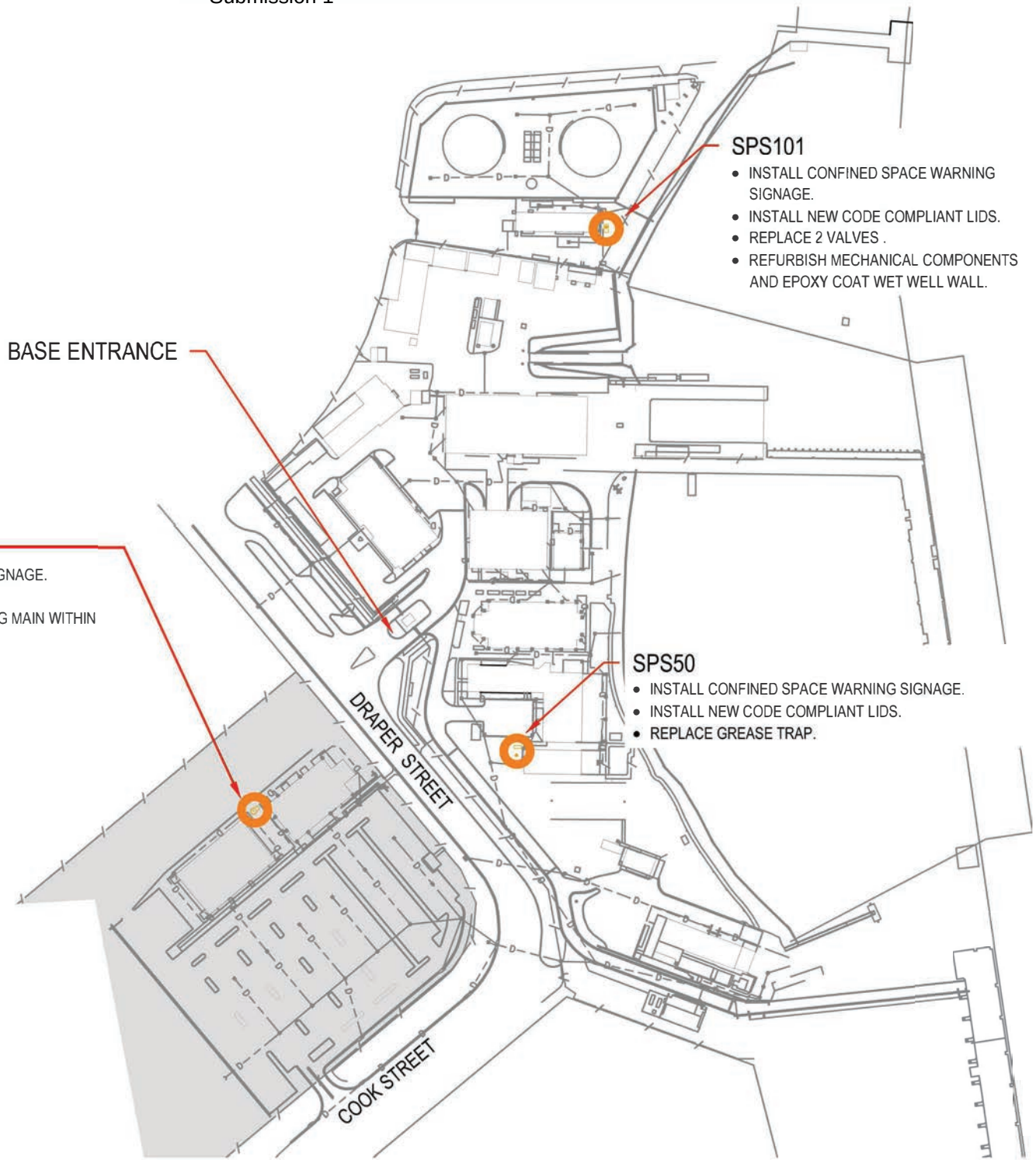
LEGEND

- EXISTING PIT MODIFIED WITH STORMWATER QUALITY DEVICE
- EXISTING OUTLET HEADWALL
- LOT 485

HMAS *CAIRNS* - STORMWATER INTERCEPT

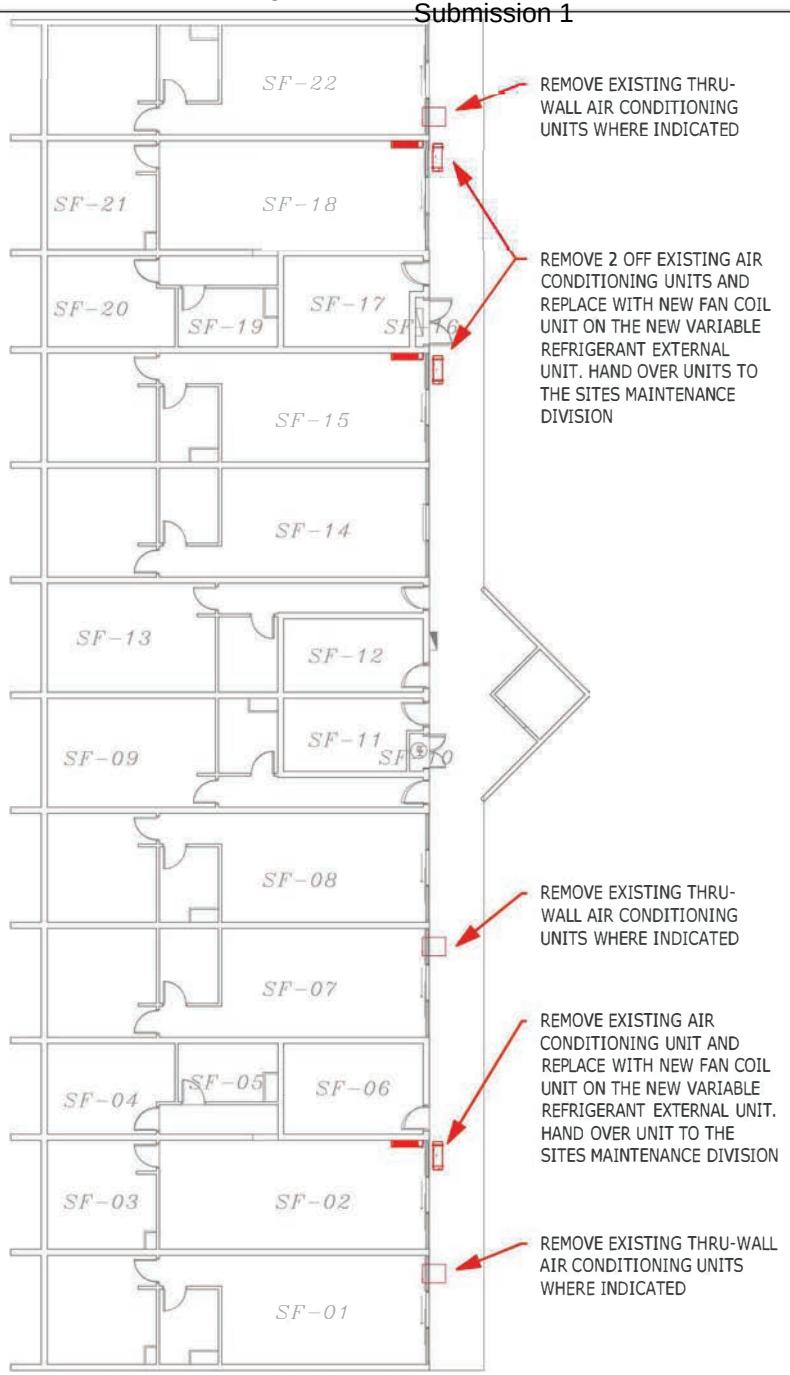
0 50 100 1:2500@A4

ATTACHMENT 14

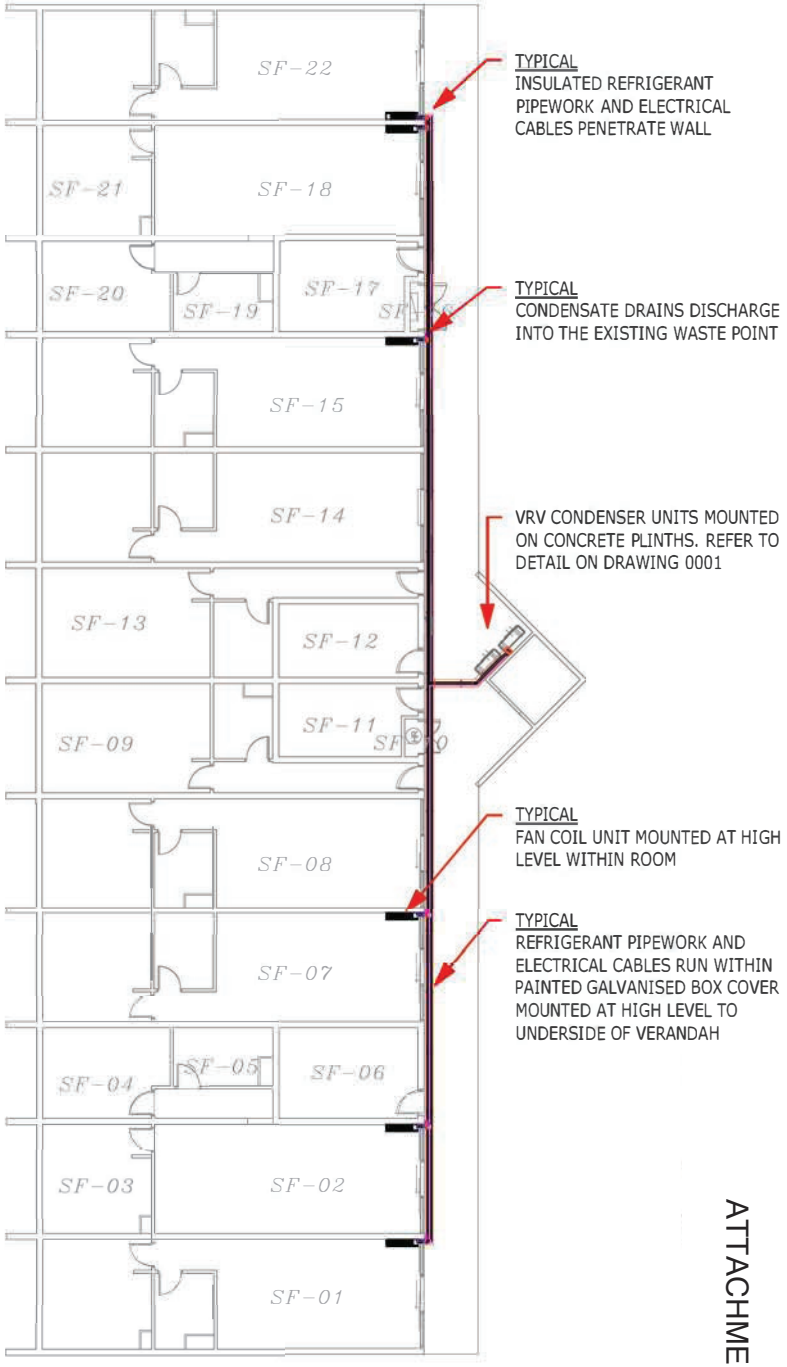


ATTACHMENT 15

HMAS *CAIRNS*
LAS PALMAS
LIVING-IN ACCOMMODATION
AIR-CONDITIONING UPGRADE



REMOVAL OF EXISTING SYSTEMS



PROPOSED REPLACEMENT CONCEPT

0 2.5 5 12.5 1:250@A4

ATTACHMENT 16