

Submission No. 1
(DSTO Scottsdale)
Date: 16/06/2011

Submission No 1



Australian Government
Department of Defence

**REINVESTMENT IN AUSTRALIAN DEFENCE FORCE
SPECIFIC NUTRITIONAL CAPABILITY – DEFENCE
SCIENCE AND TECHNOLOGY ORGANISATION**

SCOTTSDALE, TASMANIA

**STATEMENT OF EVIDENCE
TO THE
PARLIAMENTARY STANDING COMMITTEE
ON PUBLIC WORKS**

**DEPARTMENT OF DEFENCE
CANBERRA, ACT
May 2011**

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NEED FOR WORKS

Identified Need

1. The Defence Science and Technology Organisation (DSTO) establishment at Scottsdale accommodates personnel from the Human Protection and Performance Division of DSTO. The site is located at Scottsdale in north-east Tasmania.
2. DSTO Scottsdale conducts research and development seeking to achieve performance enhancement of Australian Defence Force (ADF) personnel through improved rations and rationing. The design and delivery of nutritionally balanced food and feeding systems provides a vital contribution to the ability of deployed Defence personnel to maintain their health and to effectively operate across a broad range of demanding tasks and challenging environments.
3. DSTO Scottsdale produces specialised food items for ADF ration packs and conducts tests, evaluations and investigations into different rationing systems and their impact on ADF health and performance. Furthermore, DSTO Scottsdale provides science and technology support to the Defence Material Organisation in the specification, procurement and in-service support of combat rations.
4. In the current facilities, personnel at DSTO Scottsdale are only partially able to meet their requirement to conduct research and development of Defence nutrition and food technology. This is largely due to:
 - a. the deteriorating condition of the facilities;
 - b. Occupational Health and Safety (OH&S) issues;
 - c. legacy design issues which have resulted in poor work flows and functionality; and
 - d. limiting site wide services which are aged and are at or nearing the end of their effective life.
5. DSTO requires purpose designed contemporary laboratory and working accommodation to enable it to provide the outcomes required by Defence, including a full Research and Development capability.

6. The project aims to address DSTO Scottsdale's current facilities shortcomings and to enhance capability by providing a new Cell Culture Laboratory. The Cell Culture Laboratory will enable DSTO to use 21st Century techniques to investigate the impact of nutrition on health and performance outcomes. It will open up opportunities in the field of nutrigenomics¹ and improve research and development into nutrition that is optimised to meet the specific needs of the ADF.

Options Considered for Meeting the Need

7. Three options were considered for this project:
- a. do nothing – this option was considered unsuitable as it did not allow DSTO to address Defence capability requirements;
 - b. minimal refurbishment – while this option could address the most serious issues with the site, it would require further investment in the long term to allow DSTO to address Defence capability requirements. It is likely that this would result in abortive costs; and
 - c. full refurbishment and rebuild - Defence has concluded that the best way forward is to fully refurbish/rebuild the facility on the existing site. This option will provide a purpose built facility that includes all the necessary laboratory and pilot food technology facilities required to meet Defence capability and provide staff with suitable working accommodation.

Historical Background

8. The DSTO Scottsdale facility was constructed in 1954, with an initial focus on the production of ration packs. The facility has provided the nutrition and food science capability for Defence for more than half a century.

9. In addition to the original Quonset Hut² facility, laboratories and other infrastructure were built on the site up until the 1980s to support DSTO's expanded research and development activities. Since then investment on site has been limited to maintenance of the facilities.

¹ Nutrigenomics is the study of how the interactions between nutrition and genetics affect human health

² A Quonset Hut is a lightweight prefabricated structure of corrugated galvanized steel having a semicircular cross section. The design was based on the Nissen hut developed by the British during World War I.

10. The site has been administered by various Government agencies until it formally became part of DSTO in 1975.

Heritage Impact

11. The DSTO Scottsdale site does not currently appear on any statutory or non-statutory heritage register or list, including the Tasmanian Heritage Cultural Act Register.

12. The site has a long and established link to the Scottsdale community. As such, the adaptive reuse of the original distinctive Quonset Hut structure was considered in the design options in order to maintain this link to the community. Through the development of the design, it was determined that adaptive reuse of the Quonset Hut would provide a facility with excellent natural amenity.

13. Aboriginal Heritage Tasmania has formally advised Defence that there are no Indigenous Heritage values attached to this site.

Environmental Impact

14. On 16 March 2010, an Environmental Impact Assessment report was prepared for the proposed development. The report identified that the siting and construction of the proposed works will have only minor and limited environmental impacts. To mitigate any potential environmental impacts, the proposed development will be managed in accordance with the Defence Environmental Management framework, including compliance with the applicable Environmental Management Systems. The Head Contractor's environmental procedures for construction activities will be required to comply with an approved Construction Environmental Management Plan and a Defence Environmental Clearance Certificate.

Key Legislation

15. The following key legislation and standards are relevant to this project:
- a. *Environment Protection and Biodiversity Conservation Act 1999*;
 - b. *Building and Construction Industry Improvement Act 2005*; and
 - c. Australian Government Standard, *Australian Quarantine and Inspection Service, Quarantine Approved Premises Criteria 5.2 for Quarantine Containment Level 2 (QC2) Facilities 2009*.

Impact on Local Communities

16. The project is expected to employ skilled construction workers from the northern Tasmania region over the construction period. This will provide a positive economic impact on small to medium enterprises in the region. It is possible that some specialist trades will come from the wider Tasmanian or interstate markets.

17. The majority of the permanent workforce at DSTO Scottsdale reside in or around Scottsdale. As this is a redevelopment project focused on providing a facilities outcome to maintain an existing capability with limited enhancement, the existing workforce will not change as a direct result of this project. The existing DSTO operational capacity and workforce will be maintained throughout the staged construction of the project.

Consultation with Stakeholders

18. Consultation has occurred, or will occur, with the list of stakeholders at Attachment 1.

19. Defence is aware of considerable local community interest regarding the impacts of construction activity at DSTO Scottsdale. Defence convened an initial public information session on 15 July 2010 at which no negative feedback was received. Defence conducted a further public meeting on 10 May 2011 to provide an update on the project to the local residents.

PURPOSE OF THE WORKS

Project Location

20. DSTO Scottsdale is located 65 kilometres north east of Launceston, Tasmania (see Attachment 2). The existing site layout and the proposed redevelopment site layout at DSTO Scottsdale are shown at Attachments 3 and 4 respectively.

Project Objectives

21. The key objectives of the project are to:
 - a. address the limitations to DSTO outcomes caused by the existing facilities including deteriorated infrastructure, poor work flows, and OH&S and functionality issues; and
 - b. provide a contemporary facility that enables DSTO to meet ADF directives and taskings in relation to nutrition and food science capabilities.

Project Description and Scope of Works

22. To meet the project objectives, the proposed redevelopment combines: adaptive re-use and refurbishment of some existing facilities; the demolition of some existing buildings to allow the construction of a complete new building; civil works, new and upgraded engineering services; and the provision of temporary facilities to enable the staged construction of permanent facilities.

23. The DSTO Scottsdale site will remain operational during the construction works. To facilitate this, the works will be staged and will require the use of enabling temporary facilities to maintain an operational capability.

24. The major elements of work proposed are as follows:

- a. **New Laboratory Building** – to facilitate the construction of the new Laboratory Building, the existing administration functions will be relocated to a temporary facility located on site. There will be a partial demolition of the existing brick administration and laboratory buildings (Building 2 and part of Building 5 at Attachment 3). A new Laboratory Building will be constructed (Building A at Attachment 4), to provide a pilot scale food processing plant, test kitchen and sensory evaluation, meeting room, constant temperature and humidity store rooms, various laboratory spaces and supporting rooms.

- b. **Refurbished Quonset Hut** - The remaining section of the existing brick laboratory building (Building 5 at Attachment 3) will be demolished and the Quonset Hut (Building 1 at Attachment 4) will be refurbished to provide a new entry, foyer, reception and working accommodation zone that is directly linked to the adjacent new laboratory building.
 - c. **External Works and Infrastructure Upgrades** – the external works and infrastructure upgrades will comprise:
 - (i) **External Works** – landscaping, redesigned car park, new facilities entrance, fencing and civil works;
 - (ii) **Electrical** - new transformer, main electrical switchboard and distribution mains to all new and existing sub boards;
 - (iii) **Water** - new water main and sub mains to all buildings, filtration system and separate fire main;
 - (iv) **Storm water** - new storm water drainage and retention systems; and
 - (v) **Gas** – new bulk gas storage tank and distribution mains.
25. There will be minor alterations to the existing production facility (Building 6b at Attachment 3), including works at the entry points to facilitate better work flows in the final arrangement.

Site Selection

26. The selection of the site has been undertaken in accordance with the Defence Estate Planning Policy requirements. The Site Selection Board process addressed Defence policy including environmental, heritage and operational considerations.
27. Due to the relatively small site and the need to maintain operations during construction, the actual siting options are limited; however can be accommodated through the staging of construction activities.

Public Transport

28. The Scottsdale region has limited public transport options. It is serviced by a daily regional bus service to Launceston. The majority of the DSTO Scottsdale workforce relies on private transport to access the site. The proposed facilities will not change the numbers of personnel working at the DSTO Scottsdale site. The proposed works will provide onsite car parking for staff and visitors.

Local Road and Traffic Concerns

29. The proposed project is a redevelopment to maintain existing capability, with limited enhancement. Defence does not intend to change the number of personnel located at DSTO Scottsdale. As a result, Defence does not foresee any change in the current use or number of vehicles accessing the site.

30. The proposed civil works and car park remodeling will create a single entry point in the approximate location of the existing South Eastern entrance. The proposed redesigned car park, new landscaping and paths will provide better segregation of deliveries, dispatches and vehicle and pedestrian traffic.

31. During the construction of the facility, there may be an increased level of vehicle parking in the adjoining residential streets. To mitigate this, Defence expects that a formal arrangement will be made with an adjoining land owner to use their land for vehicle parking during the construction period.

Zoning, Approvals and Land Acquisition

32. DSTO Scottsdale is located on Commonwealth owned and Defence controlled land. Therefore, no civilian authority, zoning or development approvals are required.

33. There are no Native Title or Indigenous Land Use Agreement issues associated with this proposal.

34. The proposed project does not require acquisition of additional land or land disposal. There will be no change to existing land use conditions at the site.

35. During the development of the design solution, it was identified that sections of the DSTO site may be subject to inundation during extreme rainfall events. This is due to the natural overland water flow path being blocked by the buildup of land on the adjoining property to the north of the existing DSTO Scottsdale site. In

consultation with the adjoining land owner and Dorset Council the overland flow paths will be restored. A drainage easement will be created to ensure the historic overland flow path is restored and retained into the future.

Planning and Design Concepts

36. The proposed design provides a safe, efficient and healthy workplace. The proposed design provides the required functional requirements and offers economy in relation to floor area, construction techniques, buildability, and finishes. It also preserves the Quonset Hut which is a significant local building, with no recognised heritage value.

37. The proposed design has considered the impact of the materials, construction techniques, finishes, equipment and building systems on the life cycle cost of the facilities. Capital costs have been balanced against forecast operational and maintenance costs in the selection of building services and equipment. Particular consideration has been given to energy efficient solutions employing solar technologies and water conservation initiatives. Buildings have been sited and designed to ensure that future expansion is possible and improvements are being made to the in-ground services.

Structural Design

38. **Quonset Hut Refurbishment** – Under the proposed design, the existing original structural framing members of the Quonset Hut will be retained and strengthened where required, with the building re-clad externally. A new structural floor and joist system is proposed to be installed to provide a level flooring system internally.

39. The northern end of the Quonset Hut will be extended to accommodate a meeting space and plant room functions. The proposed extension will comprise a stiffened raft ground slab, with metal cladding over a steel frame. The internal walls of the plant room space will be concrete block work.

40. **New Laboratory Building** – The new Laboratory Building is proposed to have a stiffened raft ground slab with a suspended first floor metal form supported slab. The main support structure will be made of steel. Three of the external walls to the ground floor are proposed to be precast tilt up panels with the fourth being a lighter

weight metal clad wall. The first floor plant space will have steel framed metal clad walls. The metal form supported first floor slab to the plant spaces was selected as an appropriate means of minimising vibration and sound transmission to the lower level. The structural solution includes a braced frame, due to the first floor loading, and minimisation of external column and footing sizes.

Materials and Furnishings

41. The architectural expression of the proposed new and refurbished facilities is consistent with and reflects the historical existence of the Quonset building. The new laboratory building acts as a modern adjunct to the original building, which is a dominant streetscape element at DSTO Scottsdale. Generally, across both buildings, materials are of a robust and economic nature including high quality finish precast panels, lightweight metal wall and roof cladding, steel and glass. The finishes are intended to be low maintenance including hot dipped galvanised steel work, natural concrete and coated sheet metal products.

Mechanical Services

42. The mechanical services for each building have been designed according to the function and needs of each building. The purpose of the mechanical service systems is to provide mandatory ventilation, thermal comfort and air quality facilities in accordance with specific user needs and the requirements of the Building Code of Australia.

43. In addition to providing ventilation and thermal comfort, the mechanical systems in the new laboratory will include:

- a. fume cupboards complete with associated exhaust systems and services to meet Australian Standards;
- b. reticulated laboratory gases;
- c. a reticulated compressed air system; and
- d. temperature and humidity controllers to specific areas of the building.

44. The mechanical services have been designed to meet the requirement of a contemporary laboratory facility used for research and development in the field of nutrition.

Hydraulic Services

45. A new potable water supply network is proposed. It will be connected to the existing supply at the site boundary, with a new filtration system to condition the water prior to distribution in the new network. Back flow prevention devices will be installed in the laboratory areas to prevent possible contamination flowing back into the potable water system. Roof water will be collected and stored for toilet flush and other non-potable uses. The stored rainwater will have a separate distribution and filtration system to the main potable water system and will be monitored with a meter linked to the Building Management System (BMS).

46. A new sewerage network is proposed and will be connected to the existing main sewer.

47. DSTO has operational procedures in place to ensure that any chemical products in large quantities, or prescribed waste, are controlled and appropriately disposed of, if they are not suitable for discharge to the general sewer.

48. A new sub ground Liquid Petroleum Gas tank and reticulation network is proposed for the site. The tank will have sufficient capacity to accommodate the requirements for hot water supply and site heating. Liquid Petroleum Gas usage will be measured with a flow meter with pulse output attached to the BMS.

Electrical Services and Fire Protection

49. Lighting, power and fire detection will be provided in accordance with Australian Standards and Defence's engineering requirements.

50. Electrical infrastructure and switchboards will have minimum 25 per cent spare capacity to allow for future growth complying with Defence engineering requirements. Sub-metering will be included to each refurbished and new building. The meters will be monitored through a new BMS, which will support a management program on the site.

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

Acoustics

52. The new and refurbished facilities will comply with the Building Code of Australia and Australian Standards for noise and acoustics. Acoustic separation has been considered between rooms, and walls are being designed to meet user requirements and building functions.

Landscaping

53. The Landscape design will be simple and appropriate to the location and site use. The Landscaping design will focus on a functional, low maintenance, water sensitive approach with the use of indigenous plants, and will use low cost practical materials wherever possible. The existing onsite monuments will be retained where possible and used in the final landscaping solution.

54. Precautions will be taken to avoid compromising environmental sensitivities by adopting landscaping practices in accordance with local environmental conditions and the Construction Environment Management Plan.

Water and Energy Conservation Measures

55. The Ecologically Sustainable Design (ESD) measures proposed to be incorporated in the project are balanced with other requirements for Defence buildings, including security, OH&S considerations and specialist functional requirements, to ensure that Defence's operational capability is not compromised.

56. To ensure that buildings operate efficiently with regards to energy consumption, all buildings have been designed and will be constructed in accordance with Section J of the BCA and the Defence Green Building Requirements Part 1.

57. Both the Quonset Hut and the Laboratory buildings will embrace the Defence ESD performance targets regarding waste, water and Green Star.

58. The Quonset Hut and the Laboratory buildings have been designed to achieve the targeted 4 Star equivalent; 'Best Practice' Green Star rating. The Green Star rating tool has been used on this project as a framework to guide design, in association with the Checklist of Building Energy Efficiency improvements, stated in the Energy Efficiency in Government Operations document.

59. The following conservation design considerations have been incorporated into the project:

- a. water collected from roof areas will be held in a tank for reuse in flush toilets and irrigation;
- b. low flow fittings will be used where appropriate;
- c. solar hot water collectors have been designed to supply part of the hot water heating load;
- d. energy efficient cooling and heating systems are included in the design; and
- e. the minimum energy efficiency rating of the mechanical equipment will be in accordance with BCA.

Demolition and Disposal of Existing Structures

60. Buildings 2 and 5 at DSTO Scottsdale are proposed to be demolished. The demolition will be managed to facilitate the staged construction of new works and refurbishment works. Demolition materials will be separated and recycled where possible.

Zone Planning

61. While there is no current Zone Plan for the DSTO Scottsdale site, the site is relatively small and the proposed redevelopment remains in the area currently utilised for the existing functions.

62. Facilities used by a cadet unit previously based at the site may be used to provide a temporary accommodation option to assist in the staging of the works. The cadet unit recently ceased operating at the site. This was not as a result of the project and does not affect the proposed design solution.

Provisions for People with Disabilities

63. Access and facilities for the disabled will be provided where necessary in accordance with the Building Code of Australia, Australian Standard AS1428 and Defence's policy Disabled Access and Other Facilities for Disabled Persons.

Childcare Provisions

64. There is no requirement for child care facilities as part of this project, as the project does not increase the site population.

Security Measures

65. The design of the facilities and perimeter fence will comply with the Defence Security Manual and specialist advice from the regional office of the Defence Security Agency.

Occupational Health and Safety Measures

66. The facilities provided in this project will comply with the Department of Defence Occupational Health and Safety policy, the Occupational Health and Safety (Commonwealth Employment) Act 1991, Occupational Health and Safety (Commonwealth Employment) (National Standards) Regulations and the Defence Occupational Health and Safety Manual.

67. In accordance with section 35(4) of the Building and Construction Industry Improvement Act 2005 (Commonwealth), 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.

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

69. A specific Occupational Health and Safety and Site Management Plan will be developed by the appointed Head Contractor and will cover site specific issues including staging and interfacing with existing operations on the site.

COST-EFFECTIVENESS AND PUBLIC VALUE

Outline of Project Costs

70. The proposed works at DSTO Scottsdale were previously notified to the Parliamentary Standing Committee on Public Works (PWC) as a medium works project on 11 June 2010. At that time, the cost estimate for the project was \$12.6 million, excluding Goods and Services Tax.

71. On 10 April 2010, the works were publicly tendered as a Head Contractor tender. The tender prices submitted exceeded the approved project budget due to the high demand and limited supply across all building trades in Tasmania, coupled with

the remote locality of Scottsdale. In accordance with Defence Procurement and Financial Management policy the tender process was formally cancelled.

72. A review of the project by Defence resulted in a revised out-turned project cost estimate of \$18.7 million, excluding Goods and Services Tax. The current cost estimate includes the delivery costs for management and design fees, construction costs, furniture, fittings and equipment, passive information and communication technology, contingencies and escalation provisions. The cost estimate is for the facilities solution. Excluded from this estimate is the relocation of the existing technical equipment to the new/refurbished facilities and the provision of active ICT equipment; which will be provided by DSTO.

73. Net Personnel and Operating Costs (NPOC) associated with the proposed redevelopment are projected to increase due to the additional facilities being provided. Operating costs will be re-assessed upon completion of construction so that changes through final design and construction of the facilities are captured.

Details of Project Delivery System

74. A Project Manager/Contract Administrator has been appointed by the Commonwealth to manage the proposed works and administration of the contracts for construction.

75. A Design Services Consultant has been appointed to fully design and document the facilities requirements.

76. Defence proposes to appoint a Head Contractor, using the Defence form of Head Contract to construct the works.

Construction Schedule

77. Subject to Parliamentary clearance of the proposed project, construction is expected to start early 2012 and will be delivered in four stages, with a planned completion date of mid 2014.

Public Value

78. The project will address the Occupational Health and Safety issues and the legacy design issues which have led to poor work flows and functionality of the

existing DSTO Scottsdale facilities. The project will also improve the existing site wide services which are aged and are at or nearing the end of their effective life.

79. In addressing these deficiencies, the project will contribute to Defence capability by providing DSTO Scottsdale with facilities that allow ongoing research and development for performance enhancement of the ADF, through nutrition and the development of improved rations and rationing.

REVENUE

80. No revenue will be derived from this proposal.

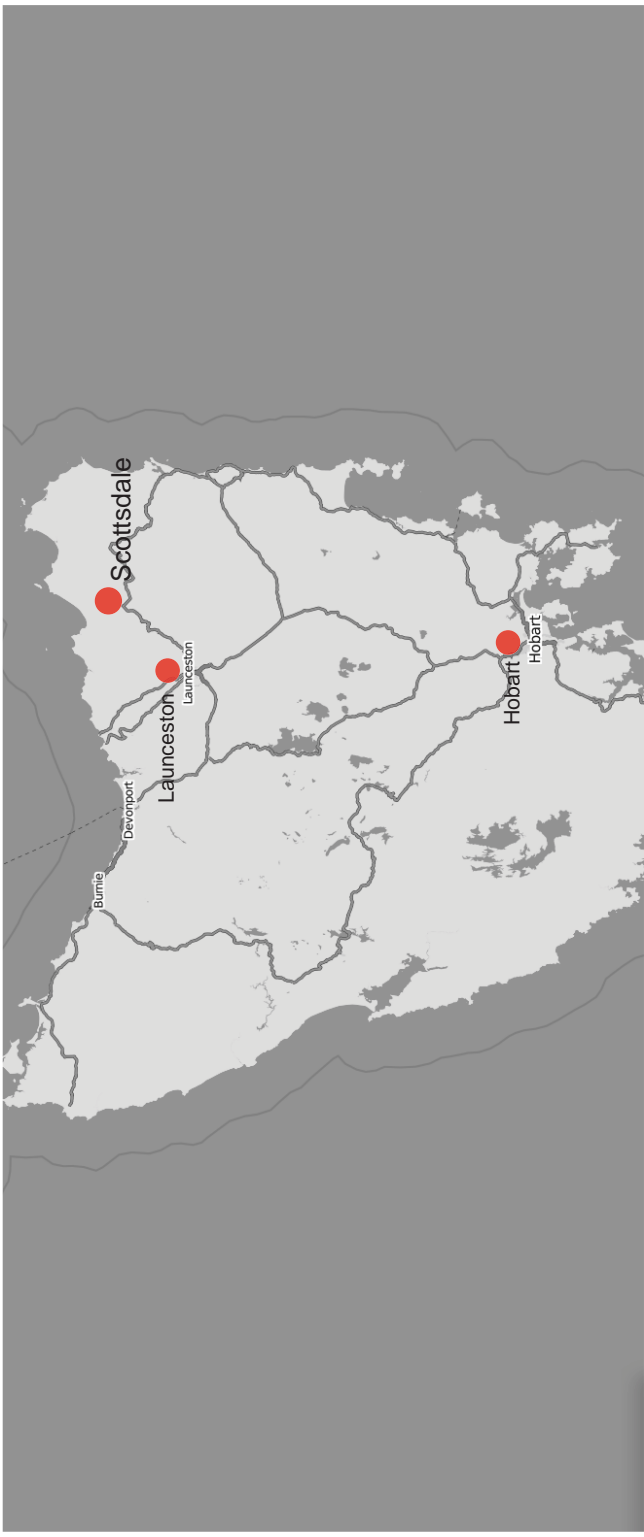
Attachments

1. Stakeholder List
2. Location Plans, Scottsdale, Tasmania and DSTO Scottsdale Site, Scottsdale
3. Existing Site Plan
4. Proposed Site Plan
5. Site Plan, Stage 1
6. Site Plan, Stage 2
7. Site Plan, Stage 3
8. Site Plan, Stage 4
9. Floor Layout Building A&1
10. External Elevations New Laboratory (Building A)
11. External Elevations New Office Accommodation (Building 1 Refurbished Quonset Hut)
12. External Perspective Aerial View 1
13. External Perspective Aerial View 1
14. External Perspective George Street View

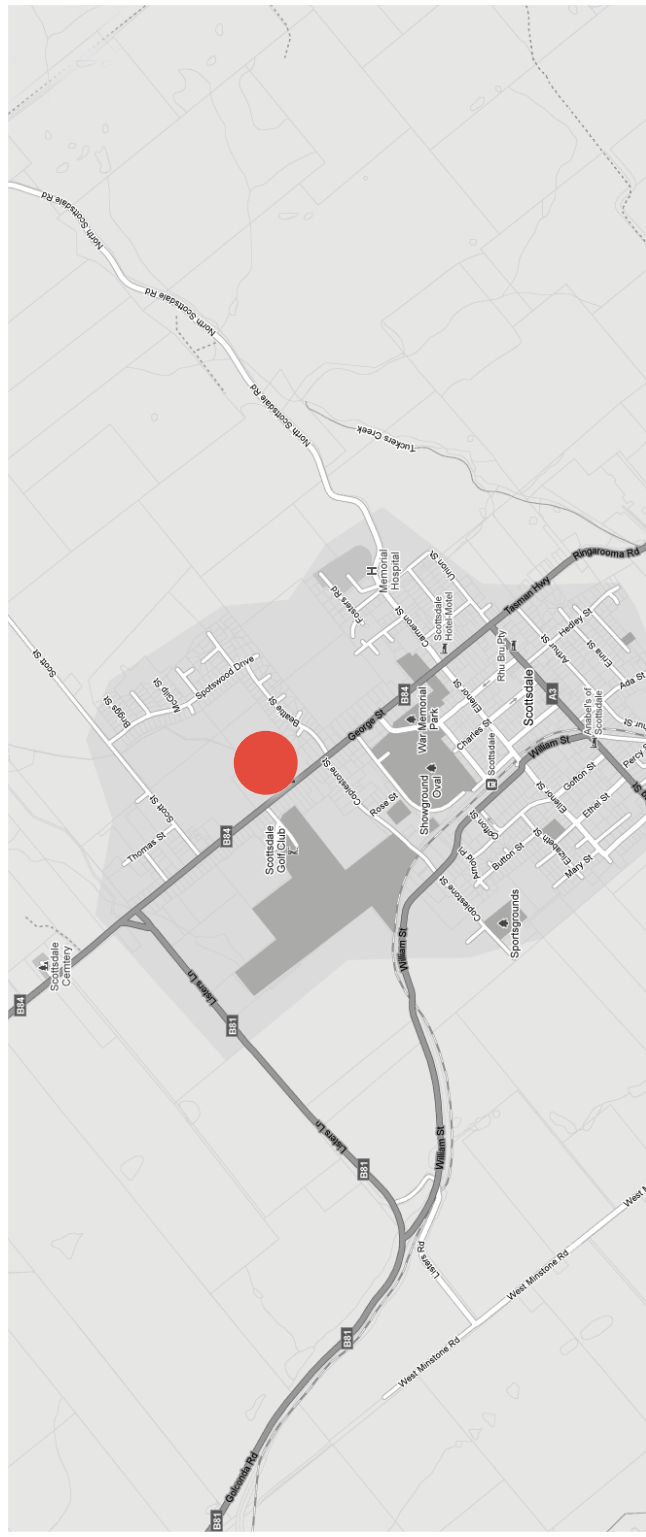
Attachment 1 – Stakeholder List

1. Consultation has occurred or will occur with:
 - a. Federal Member for Bass The Honourable Geoff Lyons MP;
 - b. Tasmanian State Member for Bass Kim Booth MP;
 - c. Tasmanian State Member for Bass Michael Ferguson MP;
 - d. Tasmanian State Member for Bass Peter Gutwin MP;
 - e. Tasmanian State Member for Bass The Honourable Michelle O’Bryan MP;
 - f. Tasmanian State Member for Bass Brian Wightman MP;
 - g. Dorset Council, Tasmania;
 - h. Tasmania Fire Service;
 - i. Ben Lomond Water, Tasmania;
 - j. Aurora Energy, Tasmania;
 - k. Origin Energy; and
 - l. Department of Infrastructure Energy and Resources, Tasmania.

Attachments 2 - 14 – PDF of plans, layouts and perspectives attached



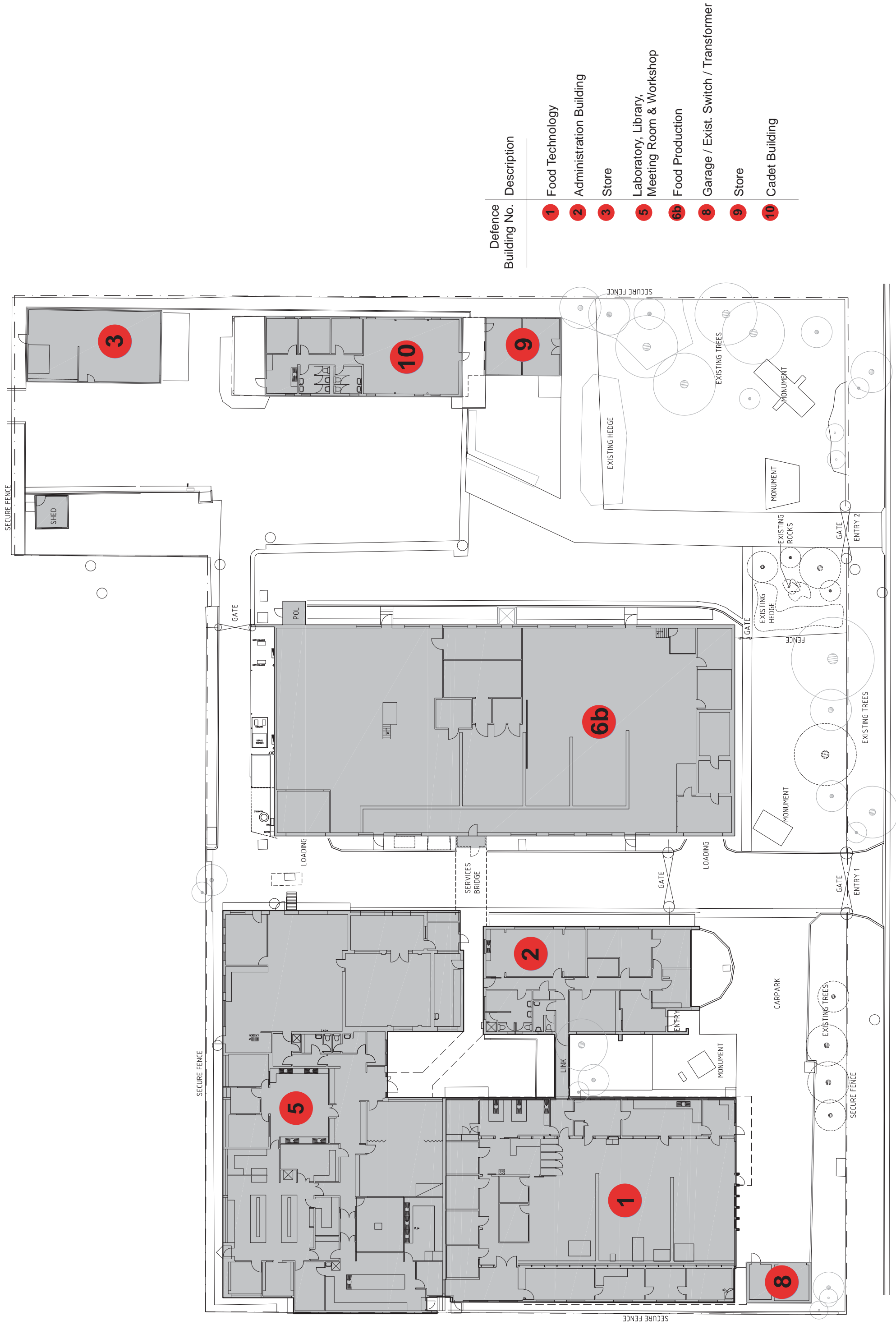
Scottsdale, Tasmania



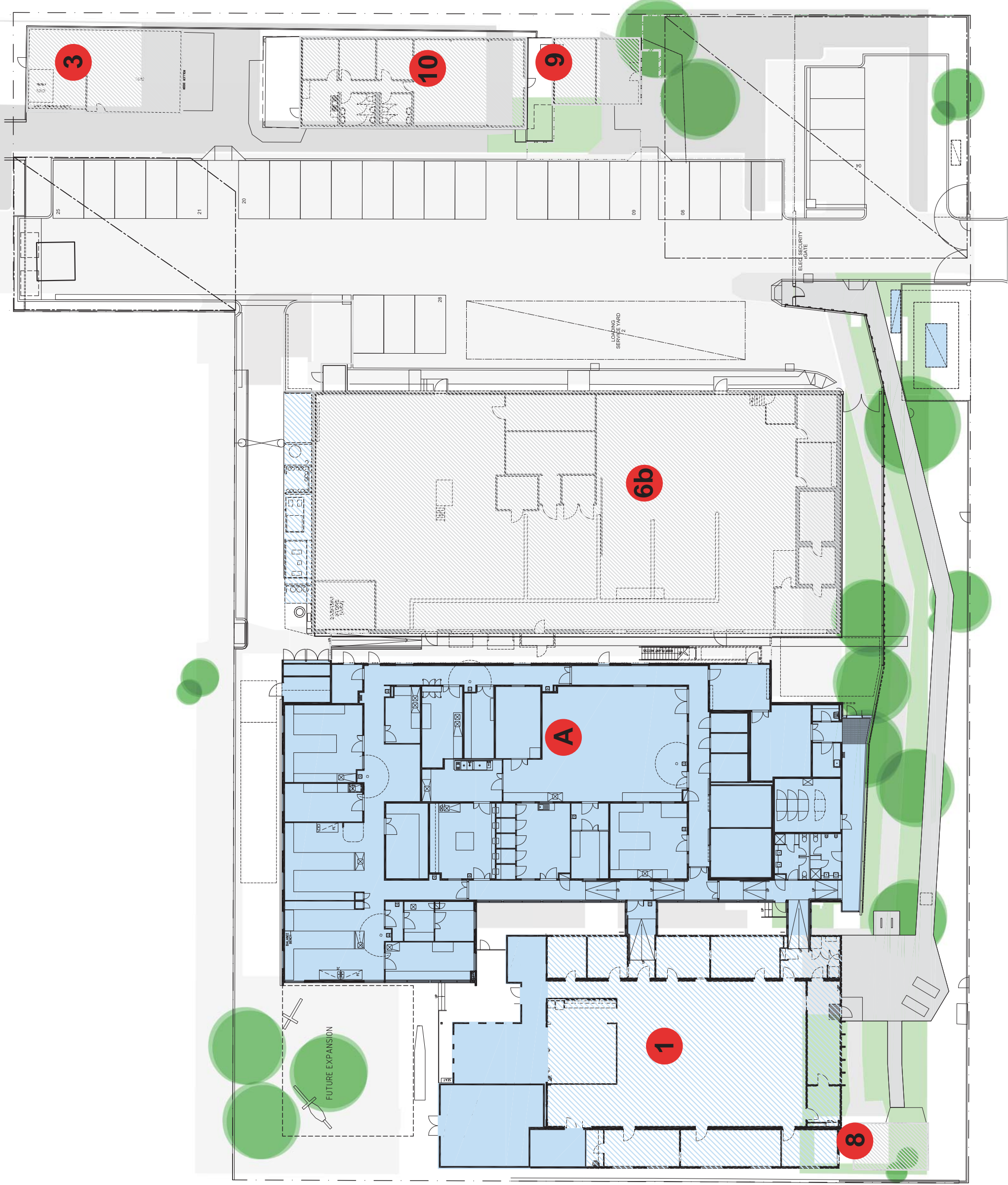
DSTO Scottsdale Site, Scottsdale



Defence Science & Technology Organisation,
George Street, Scottsdale

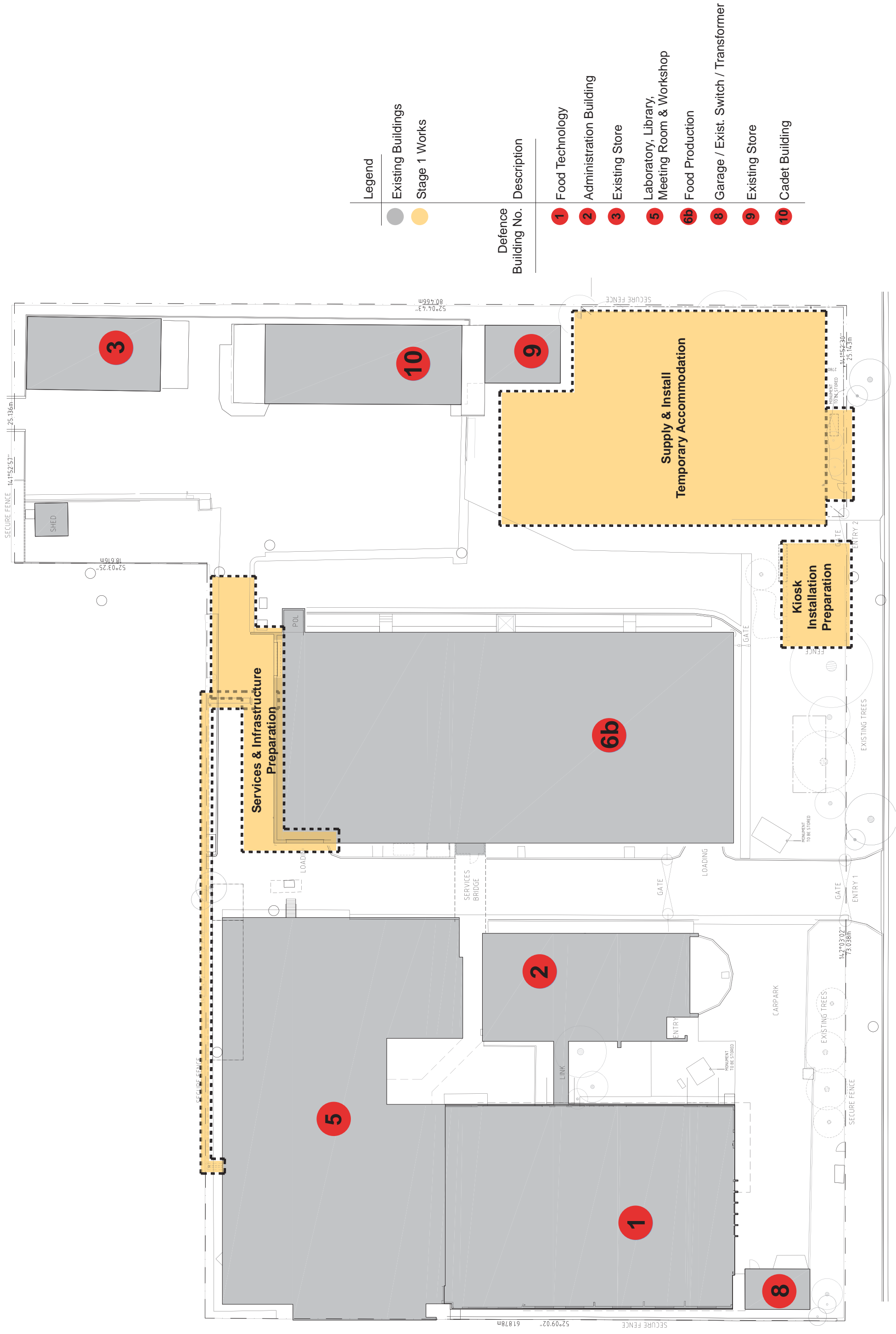


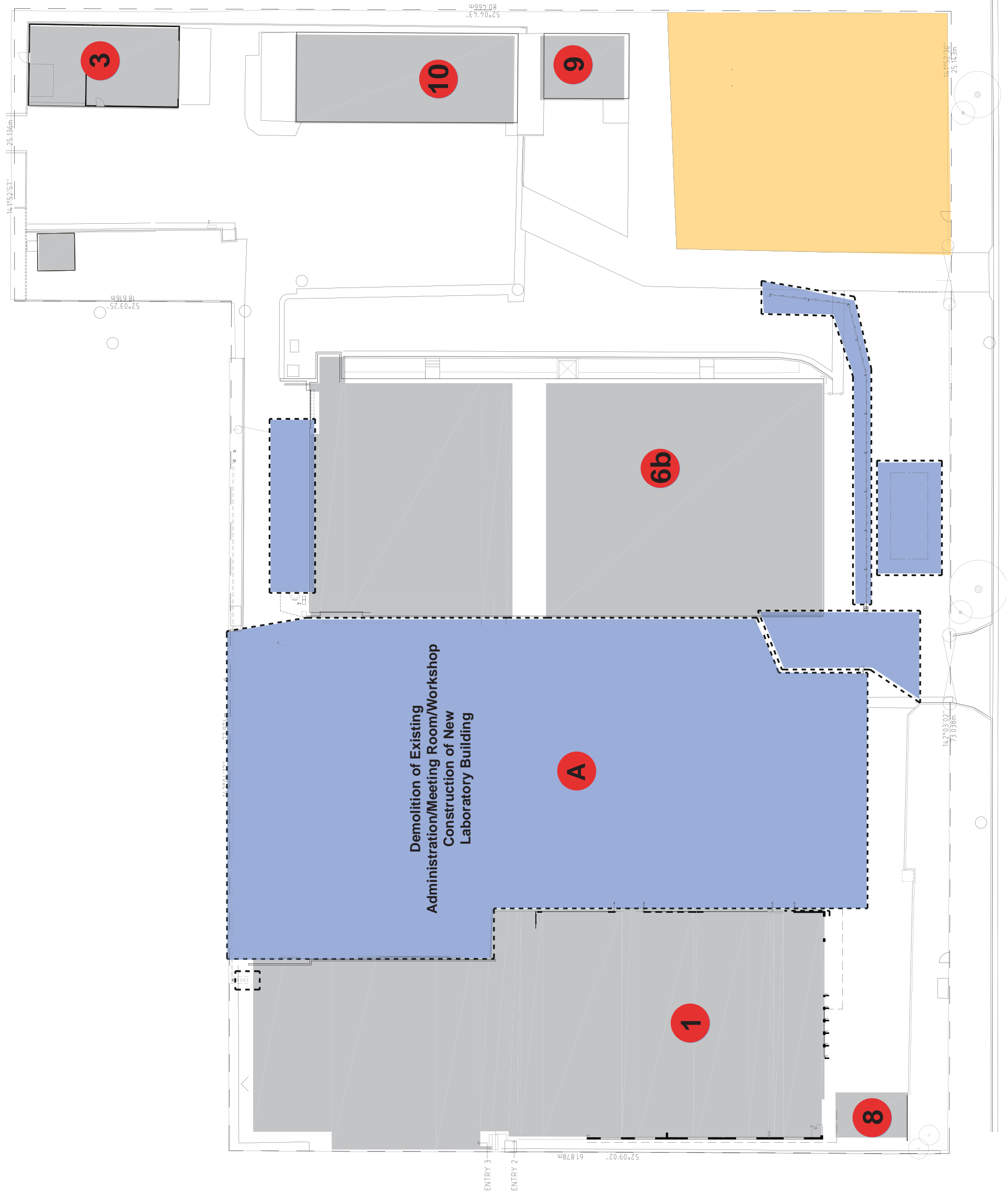
Defence Building No.	Description
1	Food Technology
2	Administration Building
3	Store
5	Laboratory, Library, Meeting Room & Workshop
6b	Food Production
8	Garage / Exist. Switch / Transformer
9	Store
10	Cadet Building



Legend	
	Existing Buildings (Retained)
	New Works
	Refurbished Works

Defence Building No.	Description
3	Existing Buildings Store
6b	Existing Buildings Food Production
8	Existing Buildings Garage / Transformer
9	Existing Buildings Store
10	Existing Buildings Cadets
1	New & Refurbished Buildings Refurbished and Extended Quonset Hut
A	New & Refurbished Buildings New Laboratory



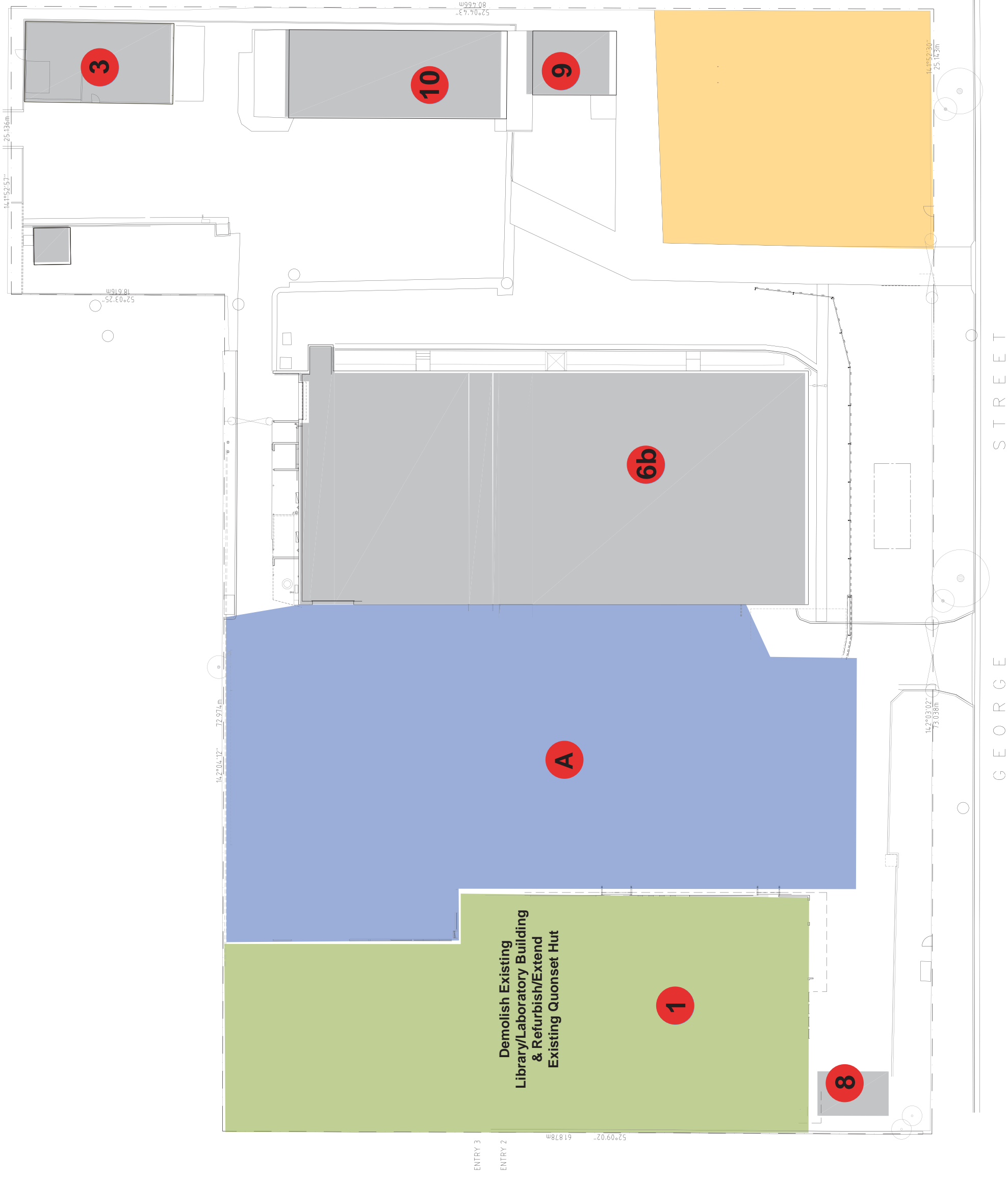


Legend

- Existing Buildings
- Stage 1 Works
- Stage 2 Demolition & Works

Defence Building No. Description

- 1** Food Technology
- A** New Laboratory
- 3** Existing Store
- 6b** Food Production
- 8** Garage / Exist. Switch / Transformer
- 9** Existing Store
- 10** Cadet Building

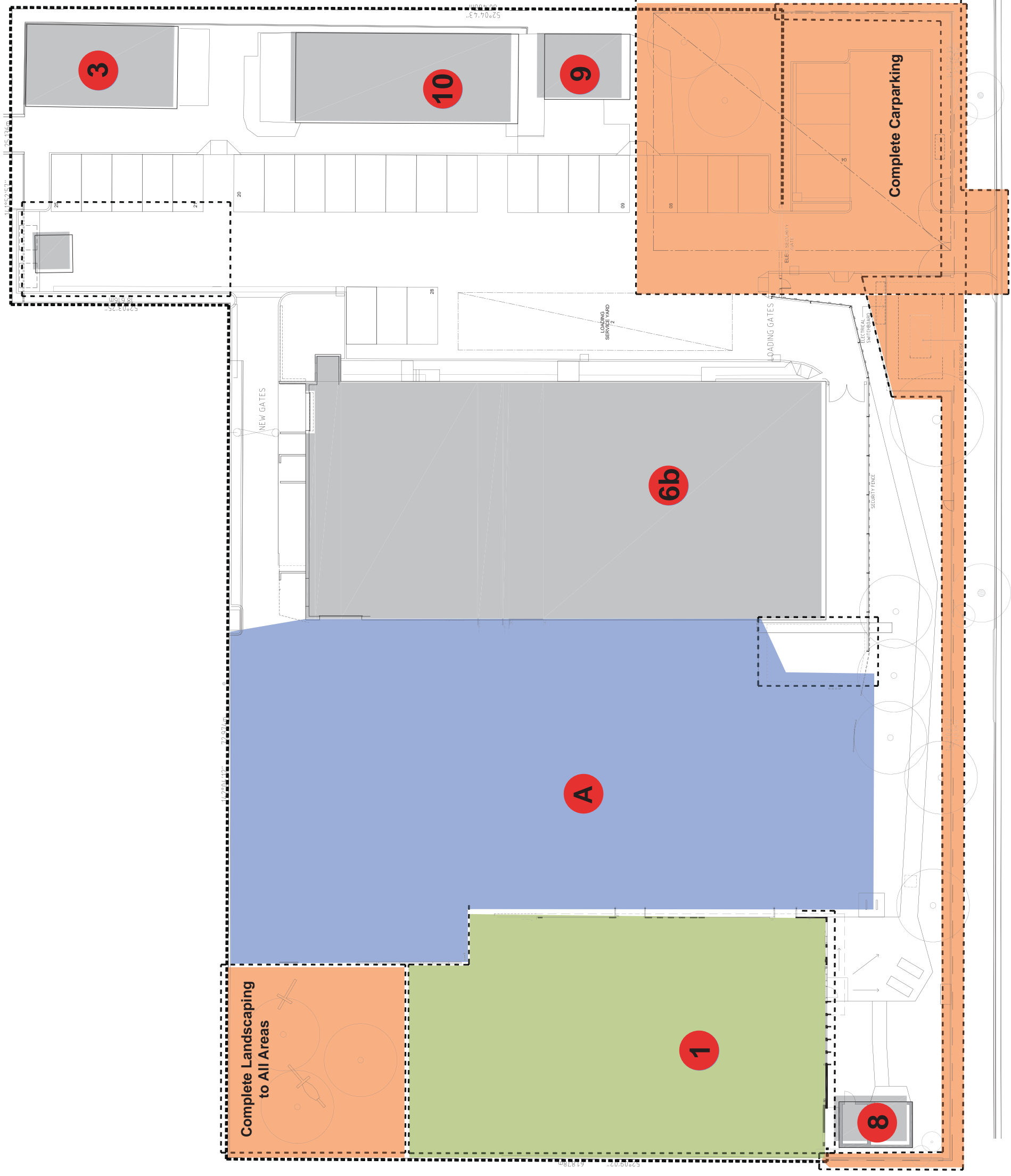


Legend

- Existing Buildings
- Stage 1 Works
- Stage 2 Works
- Stage 3 Demolition & Works

Defence Building No. Description

- 1** New Office Accommodation
- A** New Laboratory
- 3** Existing Store
- 6b** Food Production
- 8** Garage / Exist. Switch / Transformer
- 9** Existing Store
- 10** Cadet Building



Legend	
● (Grey)	Existing Buildings
● (Blue)	Stage 2 Works
● (Green)	Stage 3 Works
● (Orange)	Stage 4 Works

Defence Building No.	Description
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- (Red circle with 1) New Office Accommodation
- (Red circle with A) New Laboratory
- (Red circle with 3) Existing Store
- (Red circle with 6b) Food Production
- (Red circle with 8) Garage / Exist. Switch / Transformer
- (Red circle with 9) Existing Store
- (Red circle with 10) Cadet Building

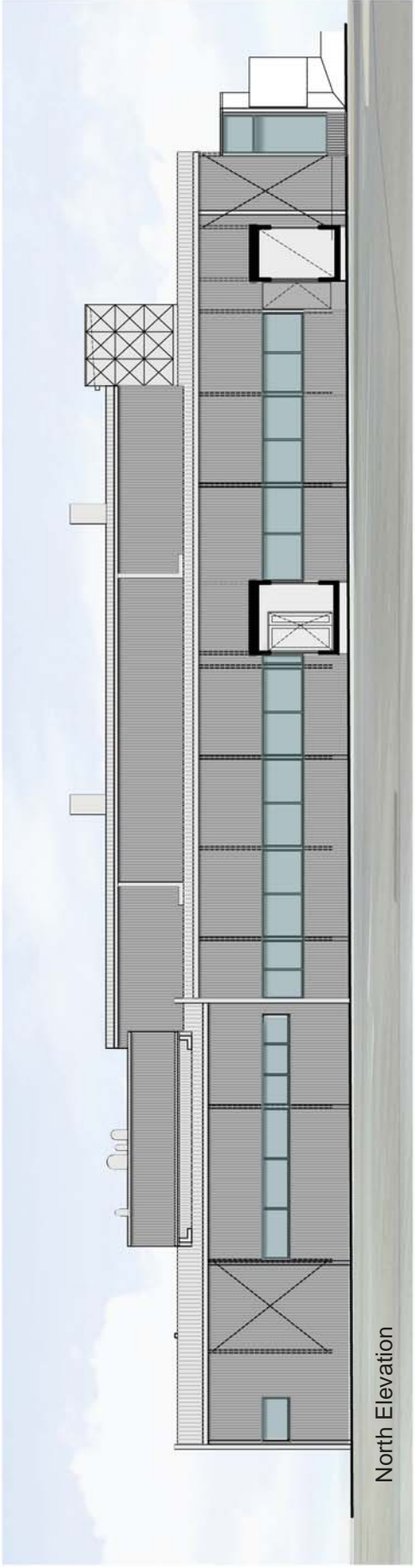


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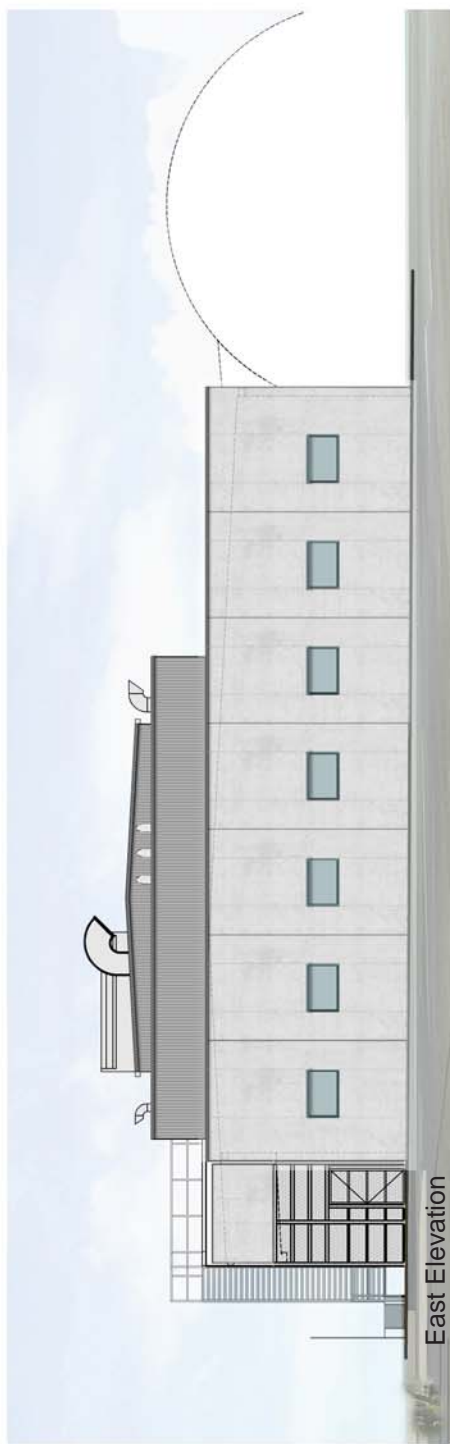
- Stage 2 Works
- Stage 3 Demolition & Works

Defence Building No. Description

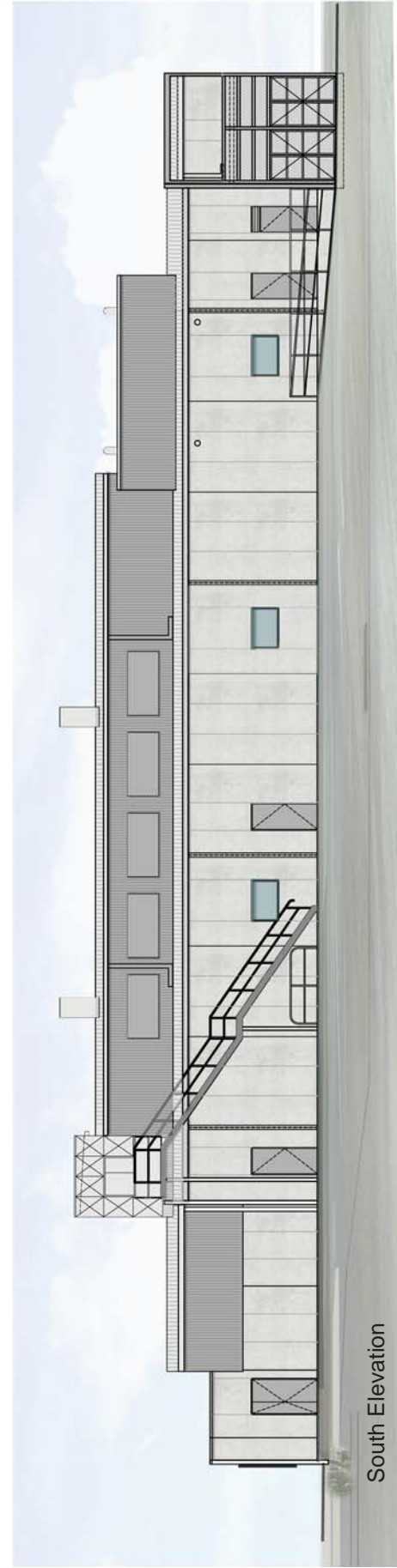
- 1 New Office Accommodation
- A New Laboratory



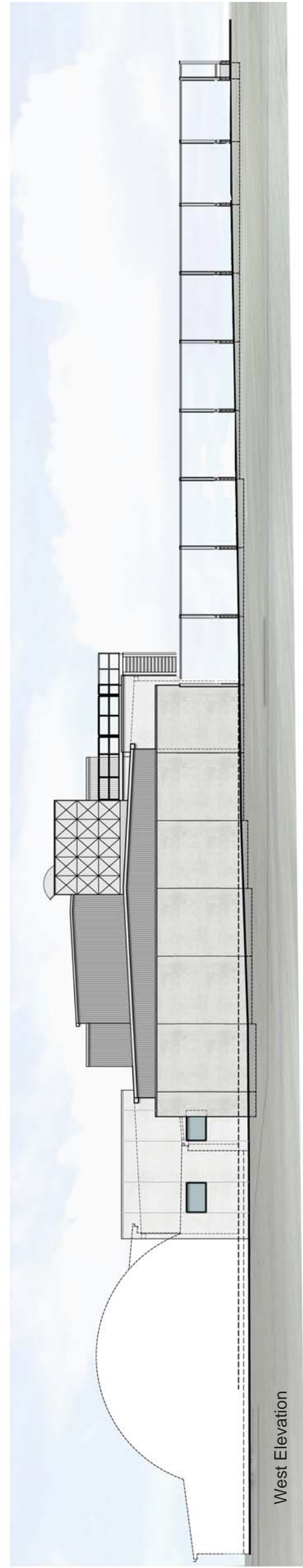
North Elevation



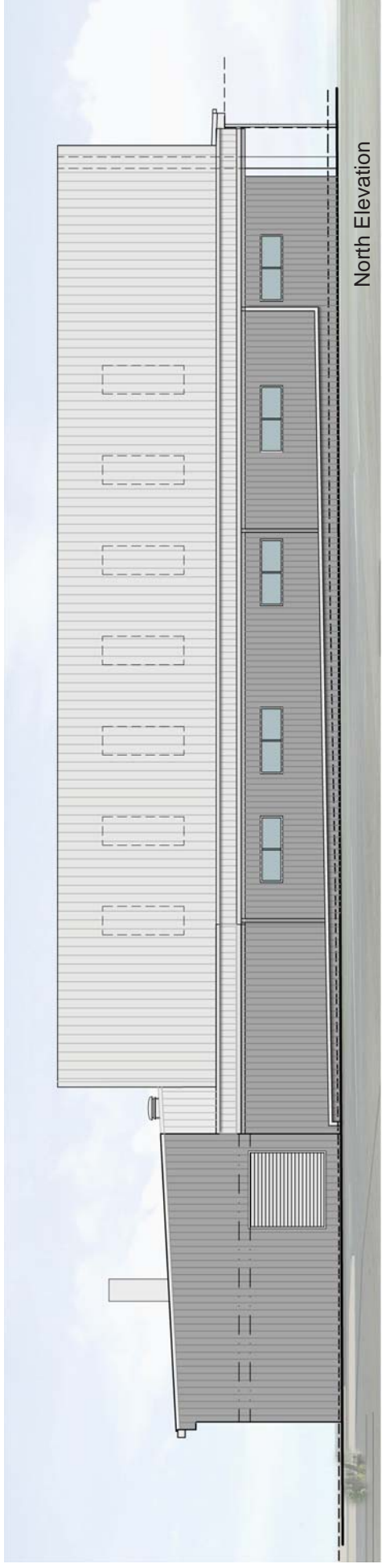
East Elevation



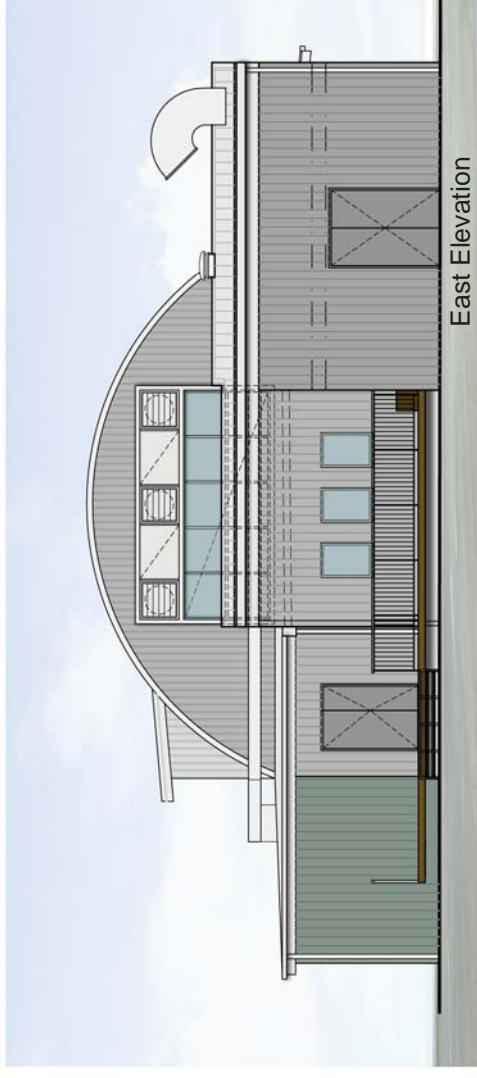
South Elevation



West Elevation



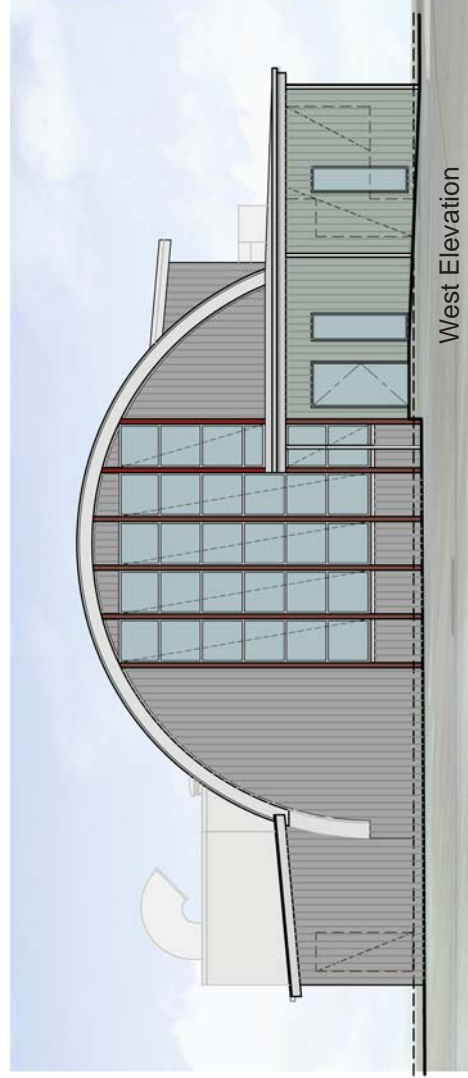
North Elevation



East Elevation



South Elevation



West Elevation

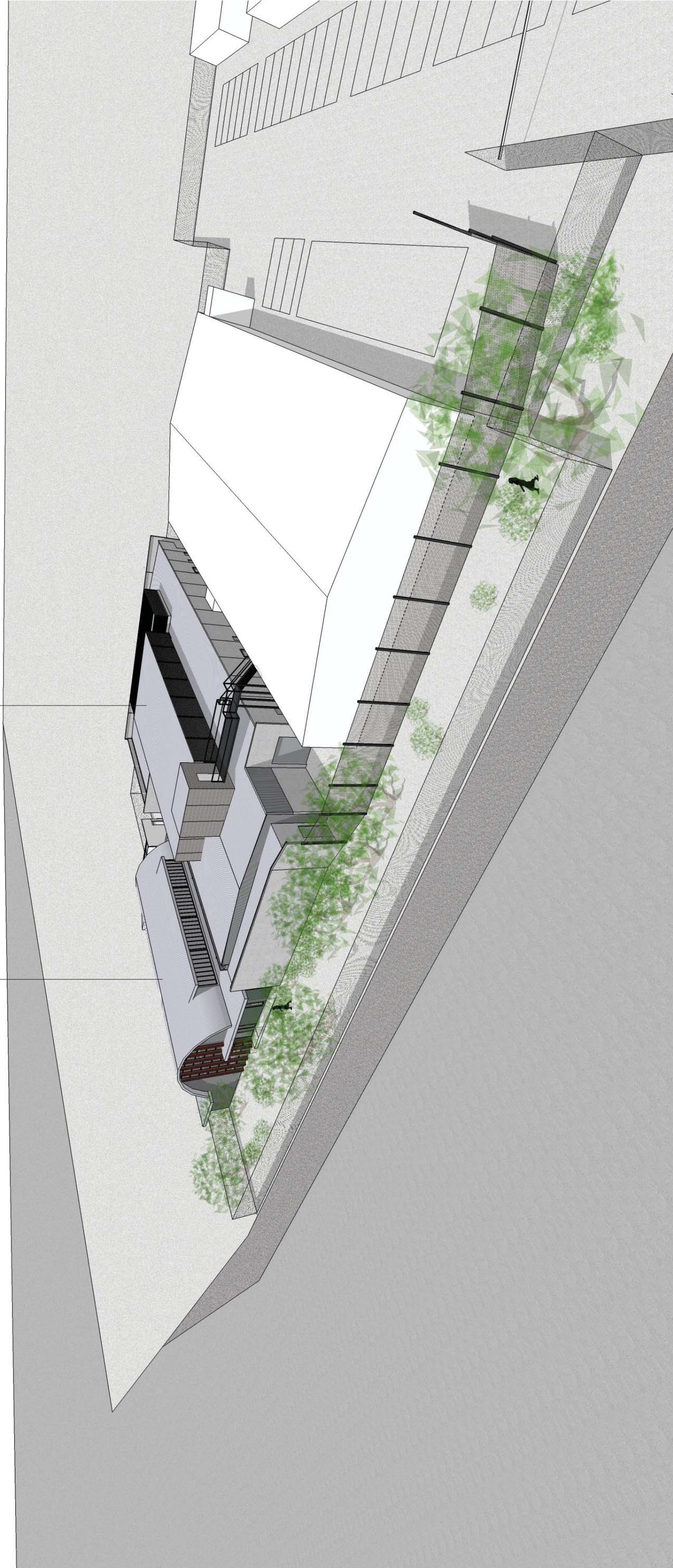
New Office Accommodation
(Building 1)

New Laboratory
(Building A)



New Office Accommodation
(Building 1)

New Laboratory
(Building A)



New Office Accommodation
(Building 1)

New Laboratory
(Building A)



** property boundary fence removed from view for clarity*