



**PROVISION OF FACILITIES FOR
HEADQUARTERS JOINT OPERATIONS COMMAND
NSW**

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

**DEPARTMENT OF DEFENCE
CANBERRA ACT
March 2004**

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INTRODUCTION

1. The Headquarters Joint Operations Command Project (the Project) has been established to create a collocated operational level joint headquarters for the Australian Defence Force. The Headquarters Joint Operations Command capability consists of the buildings and infrastructure, command, control, communications and information systems, intellectual capital embedded in the military and civil staff, culture, doctrine and procedures that are required to provide a responsive and flexible operational command and control capability. The facility will collocate the Chief of Joint Operations and Strategic Operations Division staff located in Canberra, and the Sydney based Deputy Chief of Joint Operations, joint staff, the Component Commanders and their staffs, the Joint Operations Intelligence Centre and the Headquarters 1st Joint Movement Group. The synergies of collocation will provide the strategic advantages of improved command arrangements and enhanced situational awareness, leading to superior decision-making, all of which are essential to the Australian Defence Force's ability to implement the concept of Multidimensional Manoeuvre as described in *Future Warfighting Concept*.¹

2. The main headquarters building will accommodate up to 1185 personnel and consist of a two or three storey building with a Gross Floor Area of approximately 27,000m². It is to be designed to provide maximum flexibility to allow for future changes in requirements and organisation. All parts of this building will be designed to provide high levels of physical and information security. The Headquarters will be constructed on a greenfield site, and the Project will include the acquisition of land and development of the site infrastructure including access roads, connection of electricity, water sourcing and treatment from on site, and security and stock fencing. Facilities will also be required for site services, messing, concessionaire, and limited transit accommodation and recreation facilities.

3. The Headquarters will be fitted out with appropriate furnishings and fittings and a complete suite of command, control, communications and information systems to serve the needs of the Australian Defence Force's operational level headquarters. Multiple communication paths will provide assured connectivity of the Headquarters to the Australian Defence Force, and the national infrastructure. The provision of the command, control, communications and information systems, and their evolution over time, will be a significant opportunity to embrace the concepts of Effects Based Operations and Network-Centric Warfare in the Australian Defence Force.

4. The command, control, communications and information systems will be provided under separate contract arrangements from those that will apply to the provision of the buildings, infrastructure, ongoing maintenance and ancillary support services.

5. Two existing facilities, Headquarters Air Command, RAAF Glenbrook (Blue Mountains) and the Interim Headquarters Joint Operations Command (AC Lewis House, Potts Point) will be surplus to Defence requirements as a result of the project.

IDENTIFICATION OF THE NEED

PROJECT OBJECTIVES

6. The objective of this proposal is to provide a collocated operational level joint headquarters for the Australian Defence Force. The Headquarters Joint Operations Command

¹ Future Warfighting Concept, Department of Defence, December 2002

will be located in the Queanbeyan region, within the Kings Highway corridor, on part of the “Woodlands” property, 11km south west of Bungendore, New South Wales.

BACKGROUND

7. In 1995, the Chief of the Defence Force initiated fundamental changes to Australian Defence Force command arrangements to provide more coherence and unity of command at the operational level. This included the establishment of a permanent joint operational level commander, Commander Australian Theatre, who would exercise command functions through Headquarters Australian Theatre. On 22 December 1995, the Minister for Defence approved the revised command arrangements. An interim Headquarters, only sufficient for the Commander and the joint staff, was established in a vacated building at HMAS KUTTABUL, Potts Point, Sydney in 1996. The Theatre Component Commanders (Maritime, Land, Air and Special Forces) and their staffs remained in their original headquarters in the Sydney area.

8. Australia’s Strategic Policy, 1997 gave priority to implementing and consolidating the new command arrangements, most notably the formation of Headquarters Australian Theatre. Australia’s Defence Policy 2000, the White Paper, states that a single collocated Theatre Headquarters is one of :

‘the key investments planned over the coming decade’.

It also states:

‘Our focus, even more than at present, will be on the advantages we can achieve by combining well trained people with the effective use of technology – what we have called the knowledge edge.’

And:

‘Improved command arrangements and systems are essential to our ability to deploy and operate effectively in complex environments at short notice.’

9. On 20 May 2003, the Minister for Defence² stated that the new Headquarters Australian Theatre would provide a unique opportunity to embed Network Centric Warfare into the command structure of the Australian Defence Force. On 16 March 2004 the Minister for Defence announced new Defence Force Command arrangements with the setting up of Joint Operations Command to provide simpler and more direct command and control of ADF operations. Operational command of the ADF is now executed through the Vice Chief of the Defence Force in his new role as the Chief of Joint Operations. Supporting the Chief of Joint Operations is the Deputy Chief of Joint Operations, previously the Commander Australian Theatre, and a joint staff, including the current Strategic Operations Division. One outcome of the revised command arrangements was the retitling of Headquarters Australian Theatre to Headquarters Joint Operations Command.

Cabinet and Government

10. The decision to site the new Headquarters in the ACT/Queanbeyan region was announced by Government on 18 July 2001. This followed a review of three general siting options, in the south west of Sydney (Holsworthy), Newcastle (RAAF Williamstown) and the ACT/Queanbeyan region. The preferred site option was in the ACT/Queanbeyan region. This region offered the greatest advantages in terms of personnel issues, particularly back-to-

² MINDEF Address to the ADF Network Centric Warfare Conference, 20 May 2003

back postings in the Canberra area, support costs and proximity to Government and Defence Headquarters. In its further analysis of the Queanbeyan area, Defence consulted widely, including with the Queanbeyan City Council, and through property and engineering consultants, examined a number of local site options.

11. On 3 October 2001, the Prime Minister announced that the new Headquarters would be built in the Queanbeyan region within the Kings Highway corridor near Bungendore. The location subsequently selected was the “Woodlands” property.

12. Defence examined a number of site options within “Woodlands”. A Defence Site Selection Board was convened on 24 April 2003, and recommended a site at the western end of the property. The Head Infrastructure Division, as the Defence Delegate, approved the site option on 30 April 2003. Following the development of the Operational Concept Document and Acquisition Business Case, the Defence Capability Committee endorsed the project on 12 November 2003. Government approved the project on 9 March 2004.

Role of Headquarters Joint Operations Command

13. Headquarters Joint Operations Command is the operational level joint headquarters of Chief of Joint Operations Command. It consists of the Chief of Joint Operations, the Deputy Chief of Joint Operations and joint staff, the Component Commanders (Maritime, Land, Air and Special Operations) and their staffs, the Joint Operations Intelligence Centre, and the Headquarters 1st Joint Movements Group. The Chief of Joint Operations is responsible to the Chief of the Defence Force for the planning and conduct of military campaigns, operations, support to the civil community, and other activities. In addition, the Component Commanders have separate responsibilities to their respective Service Chief to ensure that their forces are appropriately trained and ready for operations.

14. Headquarters Joint Operations Command is critical to the Australian Defence Force's ability to concurrently conduct a range of war-fighting, peacekeeping, humanitarian operations, and support to the civil community and to synchronise military and non-military effects to meet national objectives. These missions entail the following broad functions:

- a. The command, planning, monitoring and execution of combined and joint campaigns, and combined, joint and single Service operations, exercises and designated activities.
- b. The conduct of joint activities designed to build joint readiness.
- c. The conduct of activities designed to build the readiness of the single-Service forces.
- d. The conduct of other single-Service activities, particularly in support of their forces.

15. The Component Commanders and staff assist the Chief of Joint Operations and the joint staff with the first two joint functions, and undertake the third function as Commanders in their own right. The last function is largely a single-Service function conducted by Component Commanders and staff under their responsibilities to their respective Service Chief. The Chief of Joint Operations provides the link between the national logistics support and deployed forces for the sustainment of the force, and ensures that force preparation is in accordance with operational requirements.

Interim Headquarters Joint Operations Command

16. An interim Headquarters, only sufficient for the then Commander Australian Theatre and joint staff, was established in a vacated building at HMAS KUTTABUL, Potts Point, Sydney in 1996. With the establishment of Joint Operations Command in March 2004, the functional areas of the broader headquarters, and their locations, are:

- a. Chief of Joint Operations and Strategic Operations Division staff, Russell Offices, Canberra;
- b. Headquarters Joint Operations Command, Deputy Chief of Joint Operations and joint staff, HMAS KUTTABUL, Potts Point, Sydney;
- c. Maritime Headquarters, Maritime Component Commander and staff, HMAS KUTTABUL, Potts Point, Sydney;
- d. Land Headquarters, Land Component Commander and staff, Victoria Barracks, Paddington, Sydney;
- e. Headquarters Air Command, Air Component Commander and staff, RAAF Glenbrook, NSW;
- f. Headquarters Special Operations, Special Operation Commander and staff, HMAS KUTTABUL, Potts Point, Sydney;
- g. Joint Operations Command Intelligence Centre, Commander and staff, HMAS KUTTABUL, Potts Point and RAAF Fairbairn, ACT; and
- h. Headquarters 1st Joint Movements Group, Commander and staff, Sydney Central Business District.

NEED FOR THE WORK

Justification

17. Headquarters Joint Operations Command is critical to the Australian Defence Force's ability to concurrently conduct a range of war-fighting, peacekeeping, humanitarian operations, and support to the civil community, and to synchronise military and non-military effects to meet national objectives.

18. The major advantage of collocation is enhanced operational effectiveness. The current geographic dispersion of the Chief of Joint Operations and strategic staff, and Deputy Chief of Joint Operations and joint staff, the Component Commanders and their staffs, the Joint Operations Intelligence Centre and the Headquarters 1st Joint Movement Group impacts Chief of Joint Operation's ability to increase operational effectiveness. The synergies of collocation will provide superior decision-making, and increase operational effectiveness.

19. Collocation will also assist in the development of Network Centric Warfare for the Australian Defence Force. The Collocated Headquarters provides the opportunity to improve commanders' situational awareness, which is critical to controlling operational tempo. Better collaborative planning processes will result in faster and better decisions. Improved Information Management within Headquarters Joint Operations Command will provide accurate, timely and assured information that is essential for Multi-Dimensional Manoeuvre. It will enable deployed forces to reach-back for support and intelligence in a more efficient and effective manner.

20. The collocated Headquarters will provide the Chief of Joint Operations and the Component Commanders with common command, control, communications and information systems. The command, control and monitoring of operations, and the sharing of information across all Theatre intelligence, operations and plans staff, will be enhanced. It will allow for more informed and responsive advice, achieve improvements in the passage of information through the chain of command, ensure efficient resource allocation, both across the headquarters and deployed forces, and quality decisions. Collocation of joint and component logistics staff with joint planning staff will result in improved logistic support for deployed forces. Collocation will also enable administrative efficiencies. It will enable rationalisation of headquarters administrative procedures, such as common registry and communications and

information systems support, which can be provided for the joint and component staff through a single 'shopfront' arrangement.

21. The collocated Headquarters will also improve the Australian Defence Force's ability to work with allies and coalition partners in the planning and conduct of campaigns and operations, and major exercises in Australia, and to interact with other Australian Government departments to develop a range of military, non-military and whole-of-nation options in responding to crises.

DESCRIPTION OF THE PROPOSAL

Location

22. The Headquarters Joint Operations Command facility will be located on a greenfield site within the "Woodlands" property, 11km south west of Bungendore, NSW. The site will be accessed from the King's Highway via a yet to be built sealed dual lane road running south from the highway for approximately 5km direct to the site.

OPTIONS CONSIDERED

23. The location of the Headquarters Joint Operations Command was decided after a series of siting studies. Initial studies examined site options in the Newcastle area, (RAAF Williamtown), Blue Mountains (RAAF Glenbrook), Nowra (HMAS ALBATROSS) and the ACT/Queanbeyan region, and recommended ACT/Queanbeyan.

24. A further study refined the potential sites in the Queanbeyan area to:

- a. Two sites at HMAS HARMAN;
- b. A site in the Jerrabomberra area; and
- c. A site in the Bungendore area.

25. The Bungendore area was selected because it:

- a. can be controlled as a greenfield site;
- b. offered the best fit from functional, operational, servicing and project cost perspectives;
- c. is not beneath a commercial flight path;
- d. security concerns are reduced as it is remote from built-up areas; and
- e. the site is near Defence Headquarters.

26. A study of the general area was undertaken to identify the best location within the overall site. This study considered a range of factors including:

- a. The area of land required;
- b. Proximity to the Molonglo Observatory Synthesis Telescope; and
- c. Environmental factors, including impact.

REASONS FOR ADOPTING THE PROPOSED COURSE

27. The proposed facility has been sited to provide the maximum possible degree of passive physical and electronic security and to minimise its impact on the environment, including visual and noise impacts.

28. It is proposed to deliver the project (design and construction) and provide ongoing maintenance and ancillary support services under private financing arrangements. As such, the final design for the facility may vary from the concept design model depicted in Annexes 3 – 8 to this document. Defence will retain responsibility for the acquisition and installation of the command, control, communications and information systems under traditional (or direct) procurement.

ENVIRONMENTAL IMPACT ASSESSMENT

29. An Environmental Impact Statement has been prepared by an external consultant under the *Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth) and in accordance with the guidelines provided by Environment Australia. This process included public consultation, exhibition of the draft Environmental Impact Statement and submissions from any interested parties. Twenty-three submissions were received, and the issues raised are being addressed in the Supplementary Report, which will be submitted to the Minister for Environment and Heritage in April 2004 for approval.

30. The Environmental Impact Statement includes consideration of landform and soils, geology and hydrogeology, water management, terrestrial ecology, traffic and transportation, noise, landscape and visual issues, land use, social issues, cultural heritage issues, meteorology and air quality, economic issues, radio frequency interference, and energy and waste management and minimisation. The Environmental Impact Statement includes recommendations for the management of these issues.

31. The recommendations of the Environmental Impact Statement, including any Conditions directed by the Minister for Environment and Heritage, will be implemented by Defence either directly or through contractual arrangements with the successful consortium.

CONSULTATION

32. Consultation has commenced and will continue throughout the design, delivery, operation and maintenance of the facility. The following stakeholders have been involved in consideration of the proposed project to date:

- Federal and State Government representatives for the area;
- Department of Environment and Heritage;
- Commonwealth Environment Protection Authority;
- ACT Government;
- ACT Forests;
- Roads ACT;
- National Capital Authority;
- Canberra Business Council;
- Capital Region Employment Council;
- Country Energy;
- ACTEW AGL;
- Telstra;
- Optus;
- Rail Infrastructure Corporation (NSW);
- Rail Estate Property Group (NSW);
- Resource NSW;
- NSW Health;
- NSW Agriculture;
- NSW Department of State and Regional Development;

- NSW Department of Land and Water Conservation;
- NSW Roads and Traffic Authority;
- NSW National Parks and Wildlife Services;
- NSW Department of Education and Training;
- NSW Department of Infrastructure, Planning and Natural Resources;
- Queanbeyan City Council;
- Yarrawlumla Shire;
- Carwoola Community Association;
- Defence Housing Authority;
- Sydney University / Molonglo Observatory Synthesis Telescope;
- Aboriginal Areas Protection Authority;
- Burra Ngunnawal Aboriginal Corporation;
- Ngunnawal Elders Council Incorporated/Ngunnawal Local Aboriginal Land Council;
- “Woodlands’ landowners; and
- other interested landowners within the area.

TECHNICAL INFORMATION

PROJECT LOCATION

33. The site will occupy approximately 100ha on the north west boundary of the “Woodlands” property, 11km south west of Bungendore, NSW. Primary access to the site will be by a dual lane sealed road, owned and maintained by Defence, that will intersect the King’s Highway approximately midway between Queanbeyan and Bungendore.

PROJECT SCOPE

Facilities

34. The design of the Headquarters Joint Operations Command facilities will be flexible to allow for different command arrangements, including combined operations, and to provide flexibility to accommodate evolving Australian Defence Force command and control arrangements.

35. The Headquarters will be a low-rise facility within a secure fenced compound comprising two areas. The inner area will accommodate a two or three storey building that will be surrounded by a person and vehicle proof fence providing pedestrian access only. Ancillary buildings, messes and concessionaire areas, plant and services, car parks and fitness facilities will be located in the outer area.

36. The main headquarters building will accommodate personnel in a combination of standard office environments, specialised operations areas, communication centres and secure facilities. It will consist of a high security inner area and an outer area of lower security office space.

37. The ability to plan and conduct concurrent joint or combined operations is a critical requirement for Chief of Joint Operations. Collaborative planning and briefing rooms will be a feature of the building concept.

Command, Control, Communications and Information Systems

38. Provision of the command, control, communications and information systems is a key component in the delivery of effective Theatre-level command and control. Commanders

and staff will have access to the standard Defence communications networks (RESTRICTED, SECRET and TOP SECRET), specialist intelligence capabilities relocated from current headquarters, and new capabilities will be provided to enhance situational awareness and support collaborative planning. Communications with deployed forces will be via already established Defence communications facilities. Multiple connections will be provided to ensure reliability and availability, and a mixture of commercial and Defence owned fibre will be used for improved survivability. Standard telephone and facsimile, video conferencing and free to air and cable news television systems will also be provided.

Service Infrastructure and Access Roads

39. As the Headquarters will be located on a greenfield site, access and service roads will need to be constructed. The manner in which the site is developed is limited only to the extent that operational and architectural requirements dictate, but will include the provision of services such as messing, concessionaire and cafeteria services. External to the main facility will be limited sporting, parking and emergency power facilities.

40. Site services necessary to fulfil operational and functional requirements of the facility include potable water supply, stormwater and wastewater facilities, power, heating and ventilation, communications facilities, lighting, fire water, waste collection and landscaping.

41. Access to the facility will be provided along a dual lane sealed road from the Kings Highway, which will be owned and maintained by Defence and fenced to curtail stock movements. A dedicated intersection at Kings Highway, designed to recognised standards, will facilitate safe entrance to and from the site. A secondary access route, also owned and maintained by Defence, will enter the King's Highway approximately 5km west of the primary access, and will be available for emergency use.

Facility Functional Elements

42. The Headquarters facility will contain approximately 22,000m² of floor space, which will service the functions described below. The building will consist of conventional office areas and other areas designed to support specialised operations, planning and intelligence functions. The building will contain the following range of functional areas:

- a. **Foyer Area.** This is the 'public' face of the facility and contains the security desk and pass office, and a supporting security area where observation over the inner perimeter can occur.
- b. **Executive Area.** The Chief of Joint Operations, his Deputy, the Chief of Staff and executive support staff, and the four Component Commanders, their Chiefs of Staff and executive support staffs will be located in a medium security zone.
- c. **Joint Operations Centre.** The Joint Operations Centre will accommodate the operations, intelligence and other specialised staff required to support the conduct of operations, and provide the common operating picture required by the Chief of Joint Operations and the Component Commanders to maintain operational situational awareness.
- d. **Joint Planning Centre.** This area will accommodate the joint planning staff and provide planning rooms and systems to support concurrent joint planning.
- e. **Joint Operations Command Intelligence Centre.** Security requirements for some levels of information mean that the overall situational awareness can only be provided to Commanders within the Joint Operations Command Intelligence Centre. This functional area will facilitate close and continuous liaison across intelligence staffs, and with national and allied agencies.

- f. **Theatrette.** A 200-seat theatrette will be provided for large briefings of either unclassified or classified information. The Theatrette will also provide a media briefing area.
- g. **Provision for Allied / Coalition Partners.** The Headquarters will also have space, separate from the intelligence, operations and planning facilities to meet Australian national security requirements, for coalition and allied representatives together with communications and information systems to support their planning.
- h. **Planning and Operations Support Functions.** This area contains the joint and component personnel not required permanently within the intelligence, operations and planning areas, and includes legal, personnel, logistics, health, business management and resources, communications, training and development personnel. This area will comprise mainly open office areas.
- i. **Engineering Services and Access Roads.** This area covers the following elements:
- (1) **Road Access.** Access to the facility will be by a road to be constructed from the Kings Highway to the site. Security control will be provided.
 - (2) **Emergency Power.** Generators and fuel for emergency power may be located in the precinct.
 - (3) **Parking.** Parking for approximately 1000 vehicles will be provided.
 - (4) **Landscaping.** Landscaping will be focused mainly on the preservation of the existing landforms and appearance. The general philosophy is that the facility will use the least water possible for landscaping.
 - (5) **Sporting Facilities.** Limited sporting areas will be provided.
 - (6) **Fencing.** The Defence property boundary and the facility itself will be fenced.
 - (7) **Water.** The proposed design uses a mixture of rainwater collection, on site bore water and recycling.
 - (8) **Waste Water.** A tertiary sewage treatment plant is proposed, with treated water recycled for non-potable uses including site irrigation.
 - (9) **Power.** Power will be supplied by a primary source from the Queanbeyan area.
- j. **Corporate Facilities.** Supporting functions include provision for the following aspects:
- (1) **Logistic / Facility Support.** Staff supporting the operation and maintenance of the facility.
 - (2) **Messing and Transit Accommodation.** Messing facilities will be provided for all ranks. A small number of transit rooms will be provided for overnight operational accommodation.
 - (3) **Physical Training Complex.** An indoor gymnasium including changing, locker and shower facilities will be provided.
 - (4) **Concessionaire Areas.** Concessionaire areas are to be provided for services such as cafeteria, hairdresser, banking, newsagent and a post office. A child-care facility may be provided, but would be remote from the Headquarters site.

SITE SELECTION

43. The location of the Headquarters Joint Operations Command was decided after a series of siting studies. Initial studies examined site options in the Newcastle area, (RAAF Williamtown), Blue Mountains (RAAF Glenbrook), Nowra (HMAS ALBATROSS) and the ACT/ Queanbeyan region, and recommended ACT/Queanbeyan.

44. A further study refined the potential sites in the Queanbeyan area to:

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45. The Bungendore area was selected because it:

- a. can be controlled as a greenfield site;
- b. offered the best fit from functional, operational, servicing and project cost perspectives;
- c. is not beneath a commercial flight path;
- d. security concerns are reduced as it is remote from built-up areas; and
- e. the site is near Defence Headquarters.

46. A study of the general area was undertaken to identify the best location within the overall site. This study considered a range of factors including:

- a. The area of land required;
- b. Proximity to the Molonglo Observatory Synthesis Telescope; and
- c. Environmental factors, including impact.

SITE DESCRIPTION

47. The proposed acquisition area is about 200ha located at the north west corner of the “Woodlands” property, bounded on the north and west by the ACT/NSW border, with the Headquarters Joint Operations Command facility occupying approximately 100ha of the site. The site consists of moderately undulating topography covered in low grasses with scattered cobble size rock pieces. Eucalyptus trees are scattered across the higher parts of the site. Dairy Station Creek runs in a southerly direction through the western end of the site. Several shallow drainage channels run across the northern part of the site in a westerly direction to meet Dairy Station Creek. The south-eastern portion of the site is generally higher than the western and northern portions. The site is typically overlain by up to 300mm of topsoil over sandy gravelly clays over sandstone rock at 2.5m to 3.8m below surface level.

ZONING AND APPROVALS

48. The site is located in Majura & Molonglo parishes of the Yarrowlumla Shire and is currently zoned Rural 1(a) in terms of the Yarrowlumla Local Environmental Plan 2002.

LAND ACQUISITION

49. Land on which the Headquarters will be located is to be acquired using the compulsory process provisions of the *Land Acquisition Act 1989* (Commonwealth), with the agreement of the landowners.

APPLICABLE CODES AND STANDARDS

50. The design of new facilities would conform to the relevant sections of:

- Building Code of Australia;
- Relevant current Australian Standards and Codes;
- *Occupational Health and Safety Act, 1991* (Commonwealth);
- Environmental Protection Act and Regulations;
- Workplace Health and Safety Act and Regulations;
- Defence Infrastructure Manual including:
 - Manual of Fire Protection Engineering,
 - Defence Security Manual,
 - Defence Facilities Communications Cabling Standard; and
- A range of specific Defence Security and Communications Standards.

PLANNING AND DESIGN CONCEPTS

Design Philosophy

51. The general philosophy to be adopted with the design of the proposed facilities shall incorporate the following considerations:

- a. the provision of cost effective and utilitarian facilities of energy efficient design suitable for the climate conditions and in harmony with the rural environment;
- b. adoption where possible of conventional construction techniques and materials, in particular those commonly used by the construction industry in the Canberra / Queanbeyan area;
- c. an awareness during design that changing strategic circumstances may impact on the future organisation of the Headquarters and the facilities;
- d. an awareness that changing technology in military communications and information systems will require that a flexible configuration exists;
- e. utilisation of durable materials that combine long life with minimum maintenance to ensure minimisation of whole of life costs;
- f. provide environmentally sustainable services to the facility and the site; and
- g. consideration of the requirements for the services to support this facility in a relatively remote location.

Design Features

52. The proposed facilities would incorporate buildings up to a three-storey height limit. Landscaping will be required to complement the facility. The buildings would use reinforced concrete floors and steel columns, with steel trusses supporting metal deck roofs. The number of internal load bearing walls and columns would be minimised for maximum internal layout flexibility.

53. Designs would incorporate the general features outlined below:
- a. Where appropriate, internal fitouts would be typical of modern offices, using carpet on floors, suspended ceiling tiles and internal walls lined with painted plasterboard and interspersed with floor to ceiling glazed panels. Storage areas would incorporate epoxy surfacing on the floors.
 - b. The principals of ecologically sustainable development will be incorporated to the extent that is consistent with the function and purpose of the facilities.
 - c. Working accommodation areas may be air-conditioned using ceiling mounted registers and ducting within ceiling spaces with provision for operable windows. Some areas may incorporate underfloor air-conditioning. Interior lighting would typically be low glare fluorescent fittings flush mounted in the ceiling providing adequate lighting on work surfaces.
 - d. A number of collaborative planning and briefing rooms will be configured to facilitate the joint planning with a higher level of technology fitout. Suitable acoustic treatment is required through the facilities.
 - e. The command, control, communications and information systems infrastructure will be linked into existing Defence networks. The server rooms would be designed to the appropriate security standard.
 - f. The site and buildings would be monitored by contract security guards 24 hours per day, assisted by electronic surveillance and intruder alarms as appropriate. Where buildings and spaces are secured, access may be by electronic card key monitored by a central building management system. This system would also monitor and control the engineering services.
 - g. Engineering services would be designed to commercial standards. Fire alarm systems would be incorporated into the facility security system.
 - h. Traffic access to and from the Kings Highway will be provided with a purpose designed intersection.

Design Options

54. Concept designs were developed for the facility to explore design issues and to refine the project budget. Three options were considered. As each option had a similar cost impact, the preferred option was selected for its functionality. Issues that were examined in the development of the options included:
- a. Security;
 - b. Interrelationships of spaces;
 - c. Flexibility for future change and growth of the Headquarters;
 - d. Environmentally sustainable design and whole of life cost impacts of the facility;
 - e. Provision of high quality working environments; and
 - f. Provision of engineering services to the site and reticulation of services within the site, consistent with the other issues.

Certification

55. Prior to acceptance of the facility, Defence will require the consortium to certify that the facility complies fully with Defence requirements, and with the applicable codes and standards.

Philosophy Adopted for the Design of the Fire Protection System

56. The following philosophy has been adopted in respect of the design of the fire protection systems:

- a. All construction and fire protection requirements will, as a minimum, be in accordance with the provisions of the Building Code of Australia, the Defence Manual of Fire Protection Engineering and all other applicable Codes and Standards. The levels of fire protection specified are above the Building Code of Australia's requirements and have been determined by a risk assessment and risk management approach to fire protection.
- b. Defence will require certification from a suitably qualified certifier, that the design and construction meet the requirements of the Building Code of Australia, Defence Manual of Fire Protection Engineering, relevant Codes and Standards and any additional Territory and Defence requirements.
- c. Any recommended departures from Building Code of Australia requirements in relation to the project will be technically assessed by Defence specialist fire protection staff. Agreed departures (ensuring an equivalent or higher level of protection than Building Code of Australia requirements) will require written approval by the Project Director General, or another competent authority as applicable.

Philosophy Adopted for Energy Management and Lighting

57. The design of all power supply, electrical and mechanical equipment will include an assessment of energy use applying life cycle costing techniques and power demand analysis. Facilities may incorporate building management systems, metering and other provisions to measure energy use and to allow regular energy audits.

58. To reduce energy consumption and consequential greenhouse gas emissions, lighting is to be controlled, where possible, by photoelectric switches in conjunction with time switch schedules. This is to include provision of personal sensor controlled lighting to intermittently occupied areas. Lamps are to be high efficiency fluorescent, compact fluorescent or discharge type. External lighting is to be designed to minimise glare and colour distortion. Where appropriate, time switches are to be installed at airconditioner controls to reduce energy consumption and gas emissions when premises are unoccupied. Solar hot water systems are to be used where practical and cost effective. Consideration will be given to the control and or monitoring of building services through a central energy management system which links individual building control systems.

Philosophy Adopted for Precautions against Legionella

59. Air-cooled air conditioning systems are proposed. As such, no specific precautions against the legionella bacillus are considered necessary. Potable water would be below the temperature range where legionella can breed to levels affecting public health. Opportunities to provide alternative systems will be considered in conjunction with an appropriate legionella prevention strategy.

PROJECT COST

60. The estimated cost of the proposal is \$318.08 million (2003-04, out-turned) and includes buildings and infrastructure, command, control, communications and information systems, land acquisition, workplace relocation costs, design, preliminaries, professional fees and construction contingency but excludes Goods and Services Tax.

Timing

61. Subject to Parliamentary approval, construction is planned to commence in mid 2005, with completion in late 2007.

Construction Workforce

62. Over the construction period of some 28 months, it is anticipated that approximately 100 workers will be required during the first six to 12 months of construction, with 250 workers required during peak construction and fit-out activities. Additional effort will be associated with off-site prefabrication and material preparation activity to support the project.

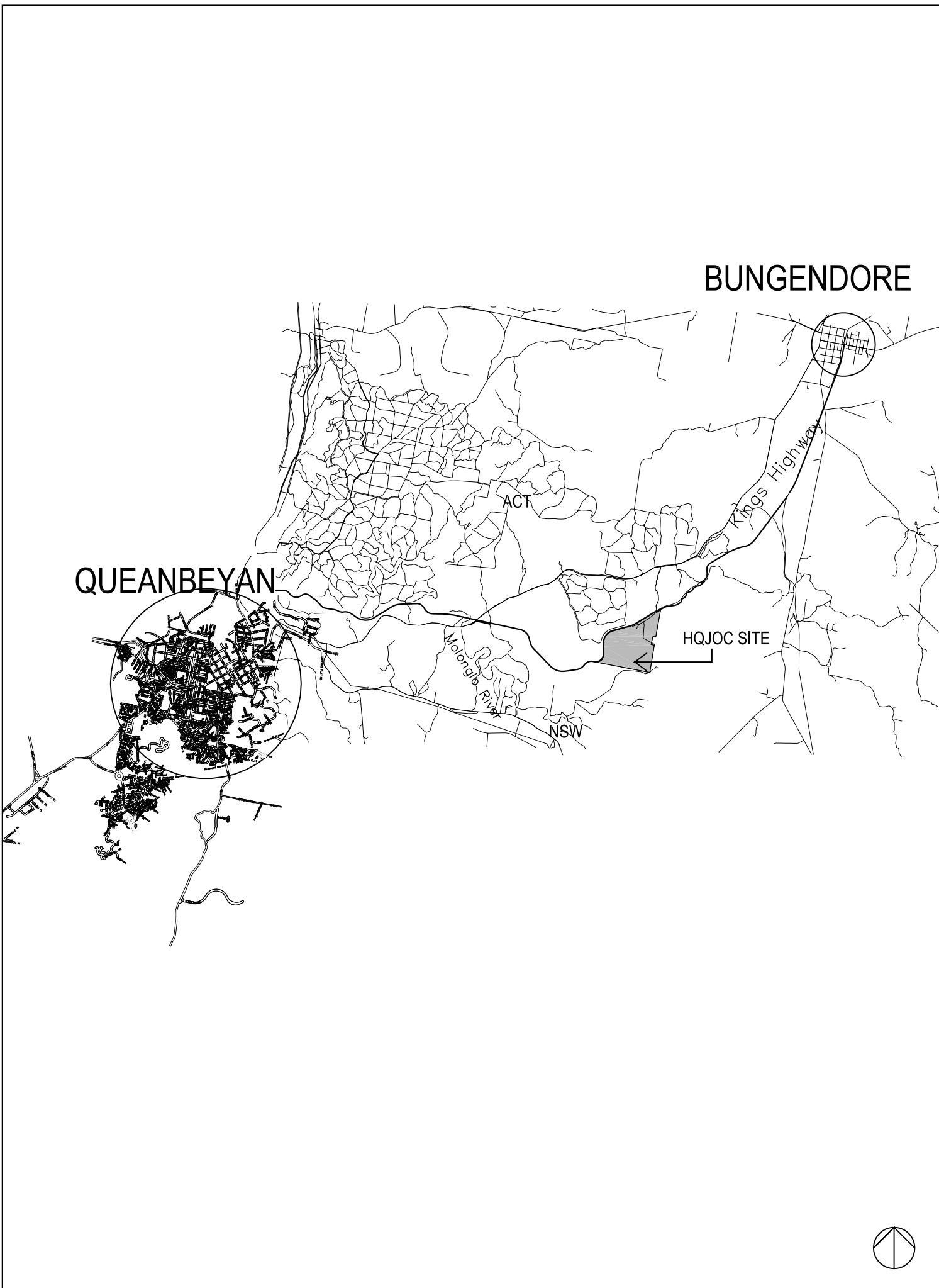
Establishment Population

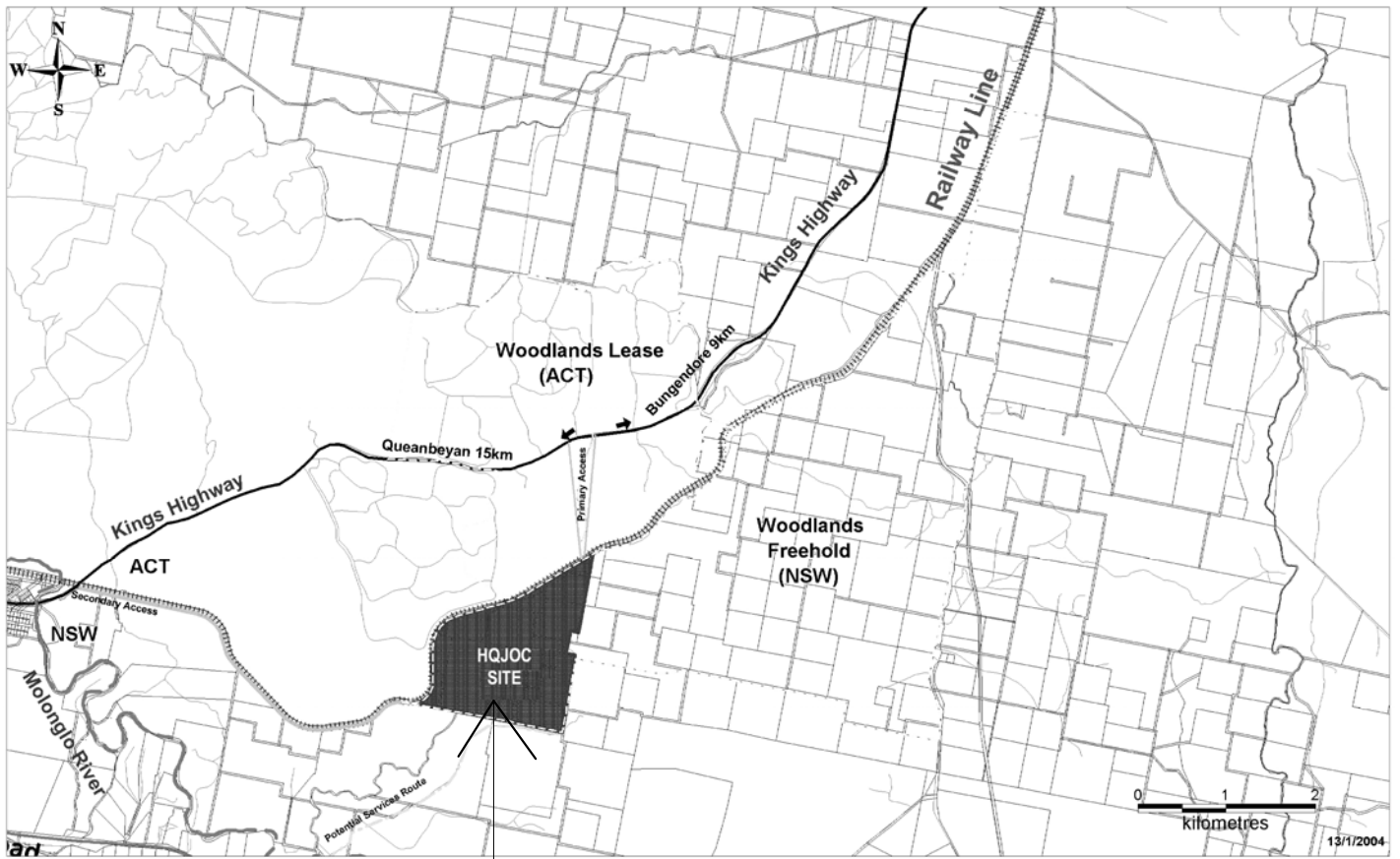
63. The population of the Headquarters Joint Operations Command facility will be approximately 1,000 Defence staff during a normal working day, with the capability to expand to 1,200 staff during high tempo operations.

PROJECT DELIVERY SYSTEM

64. Subject to Government approval, Defence proposes to procure the buildings and infrastructure under private finance arrangements. This process will engage the private sector in design, construction, operation and maintenance of the Headquarters, and in the provision of infrastructure and ancillary support services for a minimum lease period of 20 years.

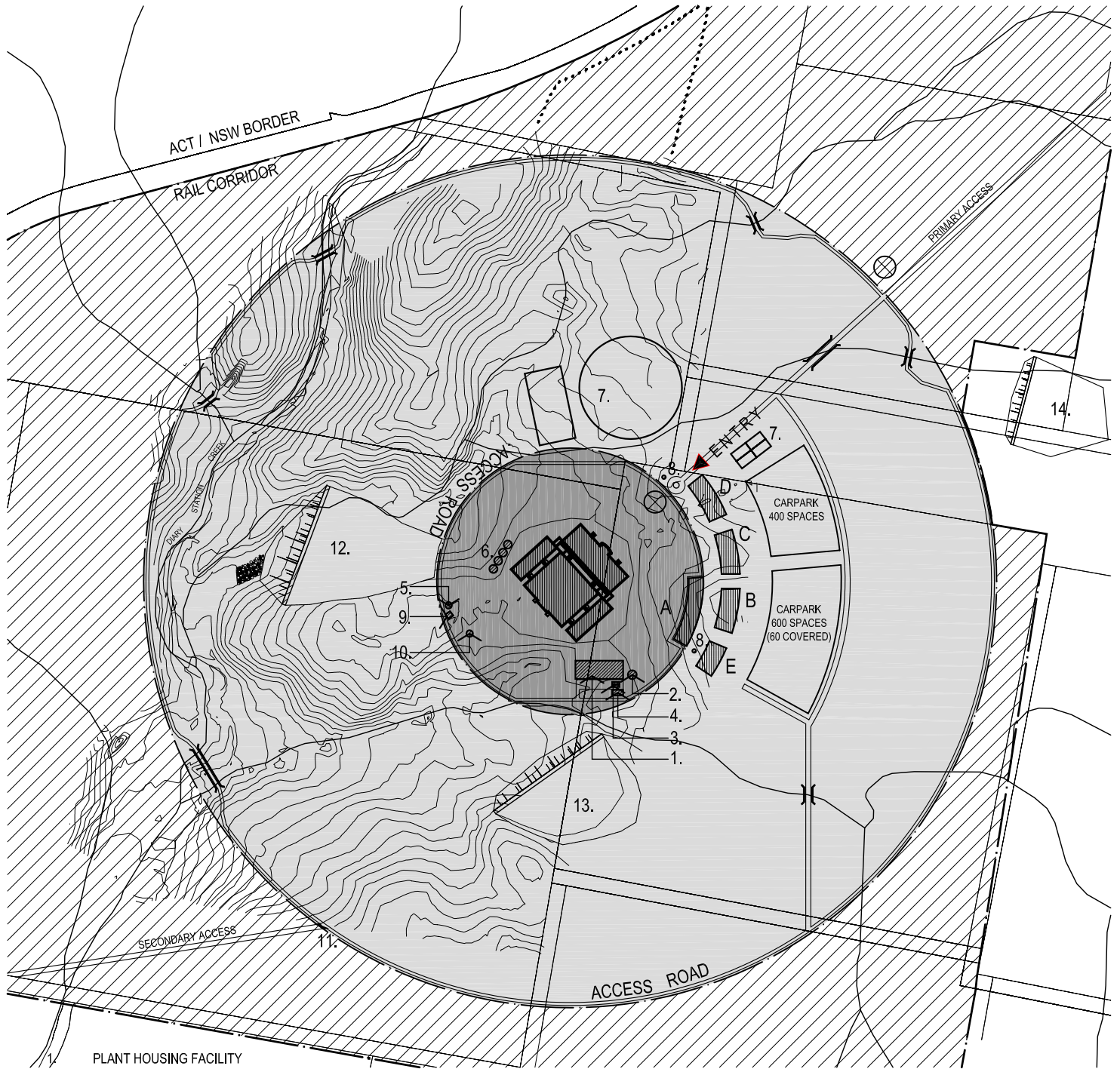
65. A conventional procurement process will be used to acquire and install the command, control, communications and information systems.





HQJOC SITE

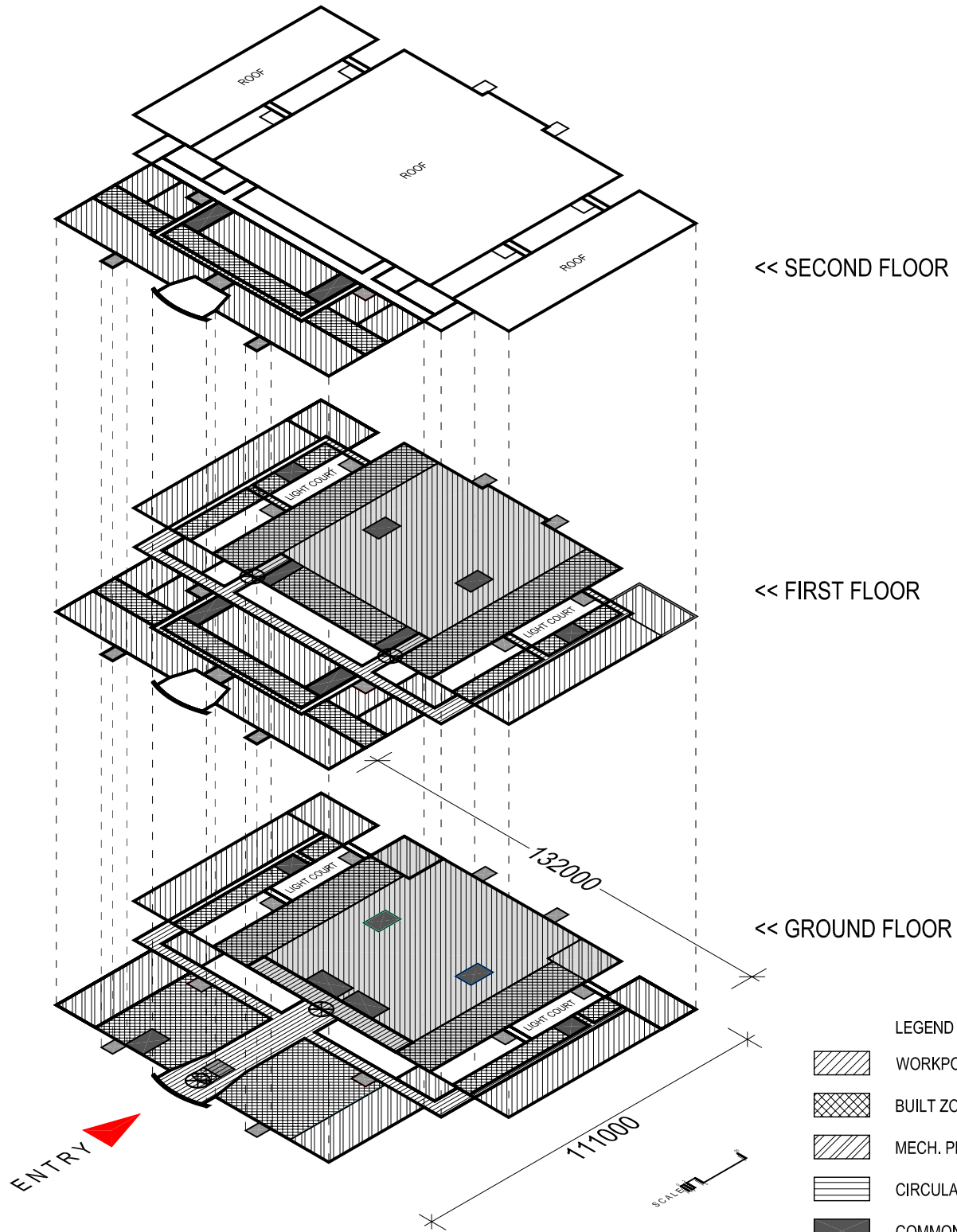




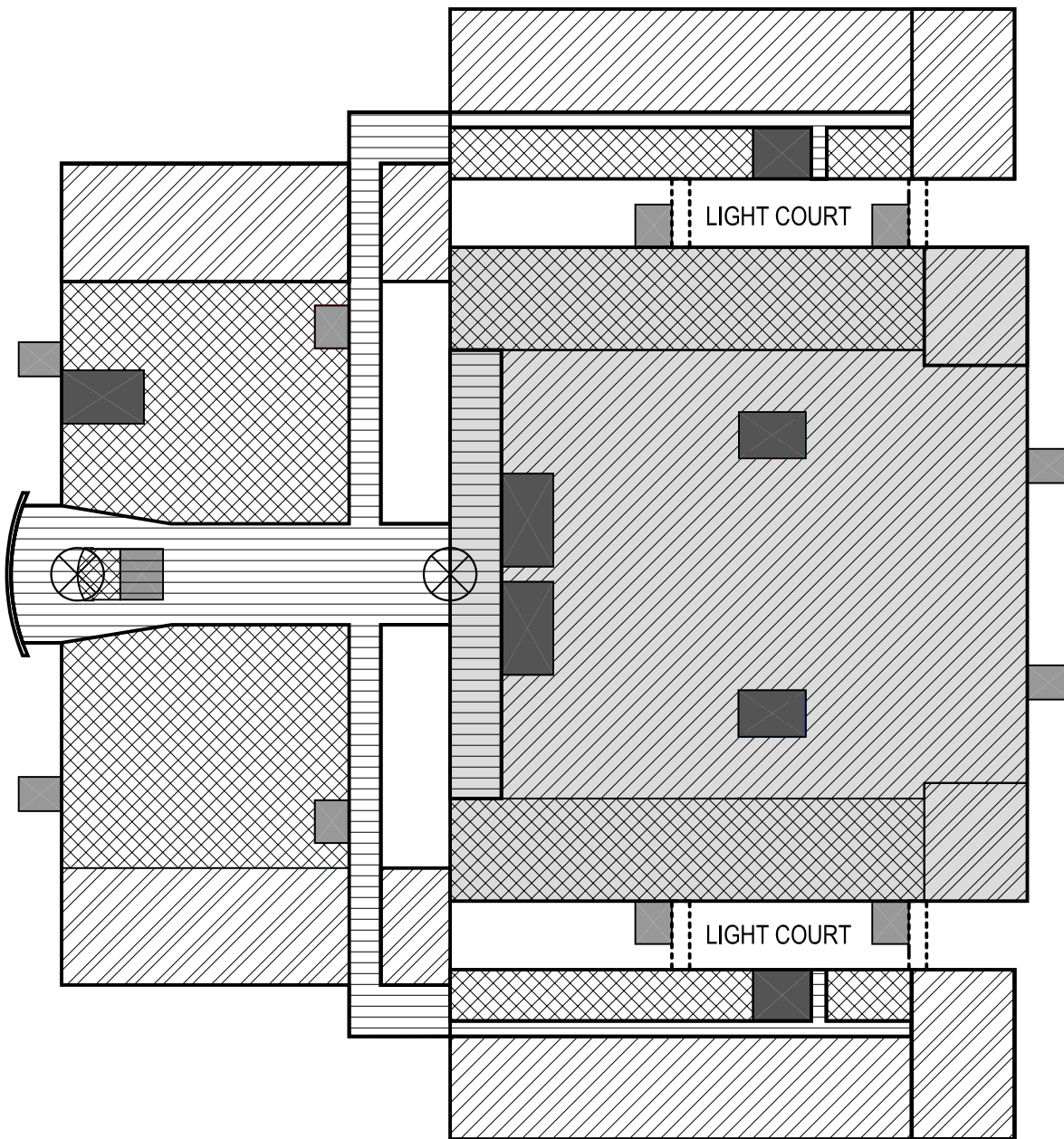
- 1. PLANT HOUSING FACILITY
- 2. FIRE FIGHTING WATER STORAGE TANK
- 3. DIESEL STORAGE TANKS
- 4. SEWAGE TREATMENT PLANT
- 5. SERVICE RESERVOIR
- 6. WATER TANKS
- 7. PLAYING FIELDS
- 8. GROSS POLLUTANT TRAPS
- 9. WATER TREATMENT PLANT
- 10. BORE
- 11. SECONDARY ACCESS GATE
- 12. STORMWATER DETENTION BASIN
- 13. IRRIGATION LAGOON
- 14. EXISTING DAM

LEGEND









- HQJOC SITE
- SECURITY POINT
- A MESS BUILDING
- B TRANSIT
- C CONCESSIONARE / CHILDCARE FACILITY
- D FITNESS FACILITY
- E FACILITY SUPPORT

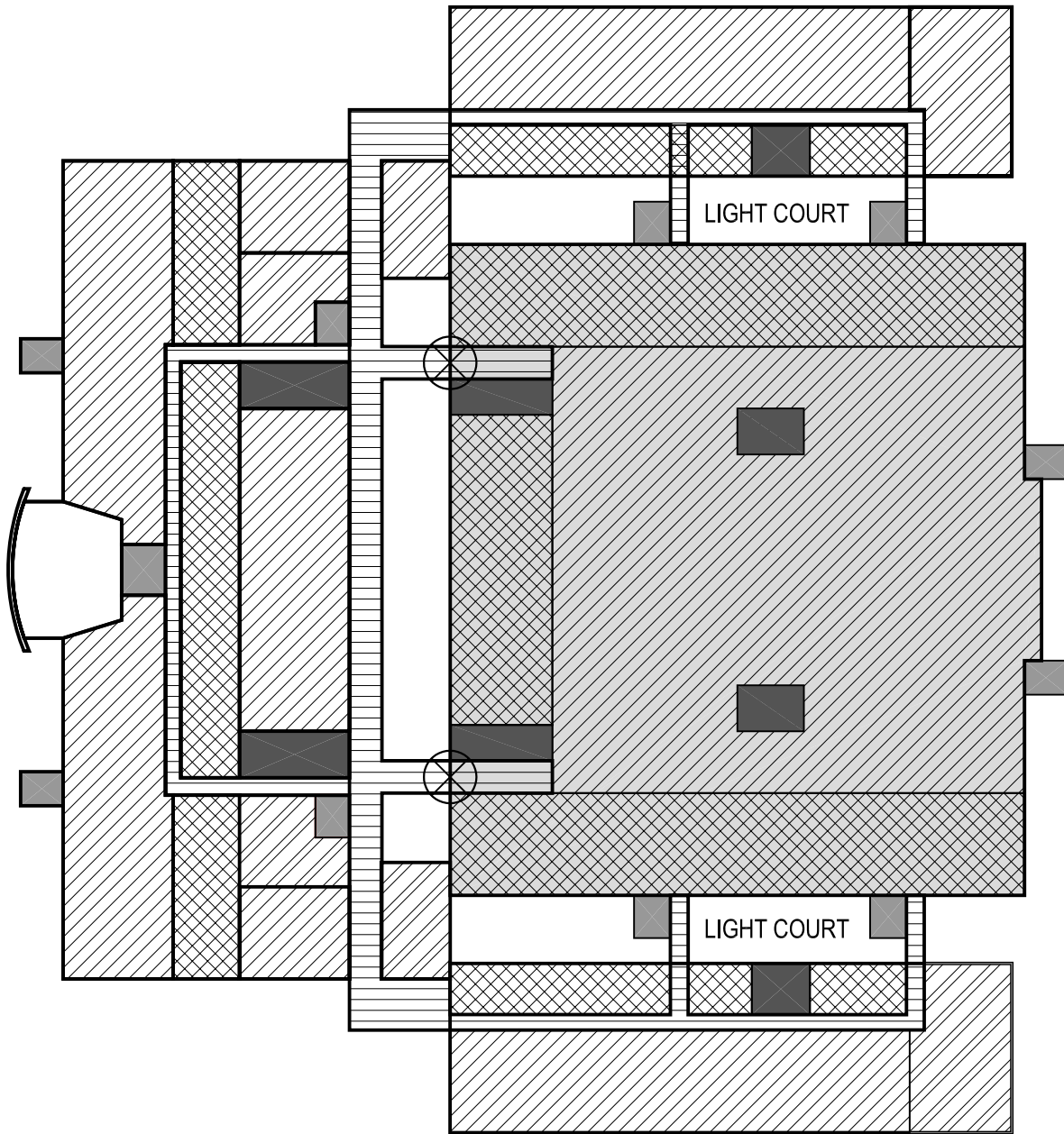


BUILDING OCCUPANCY	
HIGH SECURE AREA	- 541
SECURE AREA	- 644
TOTAL	- 1185











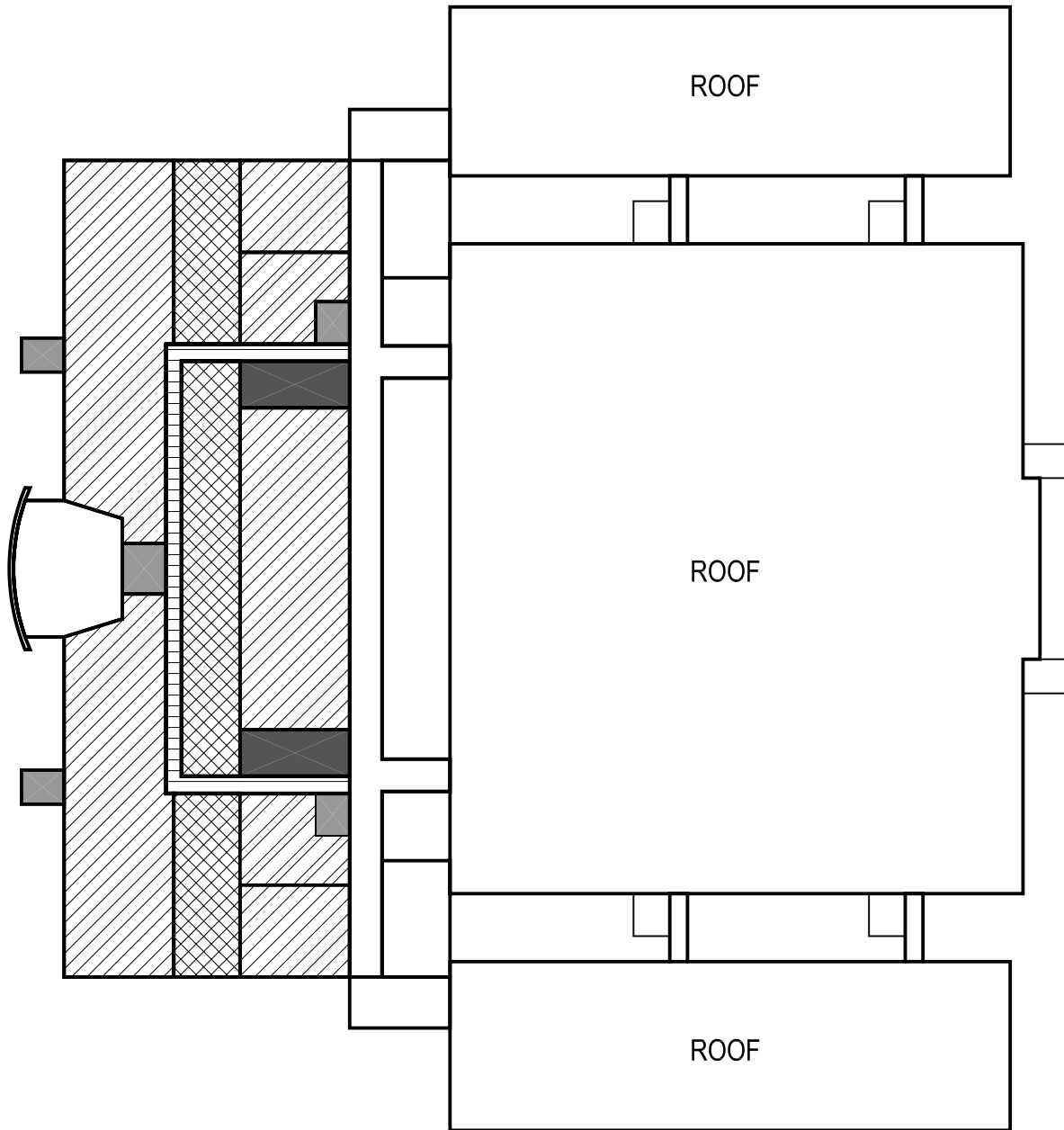
LEGEND

-  WORKPOINT ZONE
-  BUILT ZONE
-  MECH. PLANT ZONE
-  CIRCULATION
-  COMMON FACILITIES
-  VERTICAL ACCESS
-  HIGH SECURE AREA
-  SECURITY POINT











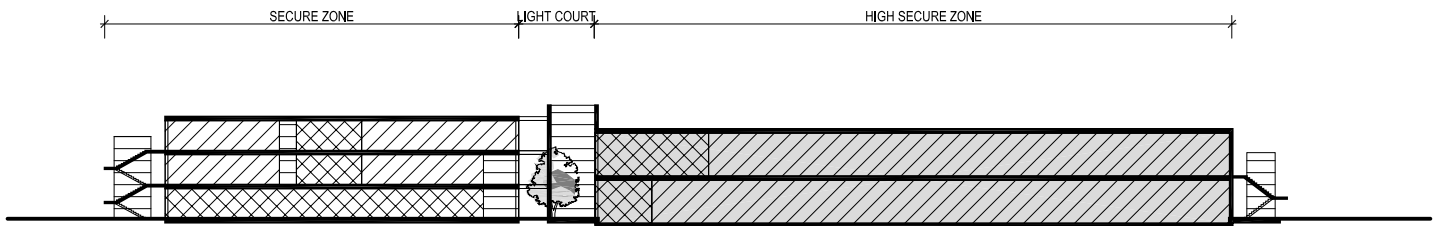
LEGEND

-  WORKPOINT ZONE
-  BUILT ZONE
-  MECH. PLANT ZONE
-  CIRCULATION
-  COMMON FACILITIES
-  VERTICAL ACCESS
-  HIGH SECURE AREA
-  SECURITY POINT

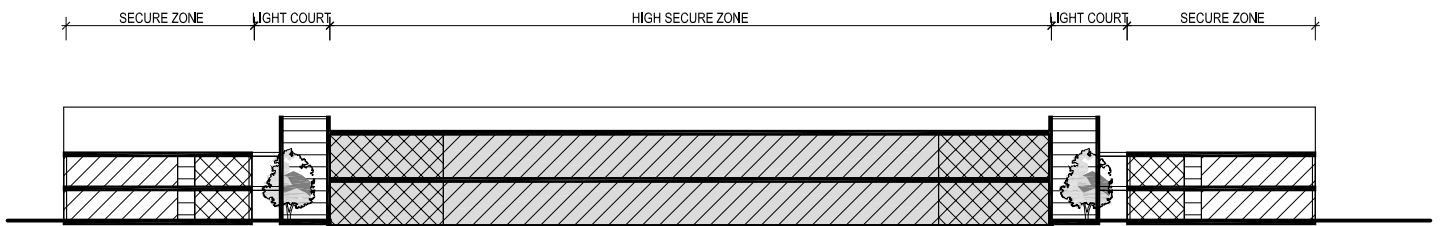


LEGEND

-  WORKPOINT ZONE
-  BUILT ZONE
-  MECH. PLANT ZONE
-  CIRCULATION
-  COMMON FACILITIES
-  VERTICAL ACCESS
-  HIGH SECURE AREA
-  SECURITY POINT











SECTION 1



SECTION 2

BUILDING SECTIONS

LEGEND

-  WORKPOINT ZONE
-  BUILT ZONE
-  MECH. PLANT ZONE
-  CIRCULATION
-  COMMON FACILITIES
-  VERTICAL ACCESS
-  HIGH SECURE AREA
-  SECURITY POINT