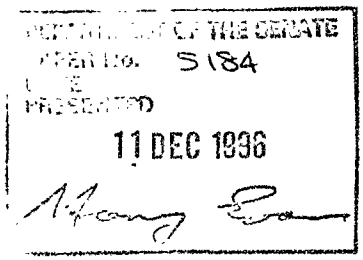
The Parliament of the Commonwealth of Australia

Parliamentary Standing Committee on Public Works



Report relating

to the proposed

Development of infrastructure on Townsville Field Training Area, Townsville

(Fifth Report of 1996)

Parliamentary Standing Committee on Public Works

REPORT

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DEVELOPMENT OF INFRASTRUCTURE ON TOWNSVILLE FIELD TRAINING AREA, TOWNSVILLE

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THE PARLIAMENT OF THE COMMONWEALTH OF AUSTRALIA
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MEMBERS OF THE PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

(Thirty-Second Committee)

Mr Neil Andrew MP (Chairman)
Mr Colin Hollis MP (Vice-Chairman)

Senate	**House of Representatives**
Senator Paul Calvert	Mr Richard Evans MP
Senator Alan Ferguson	Mr John Forrest MP
Senator Shayne Murphy	Mr Ted Grace MP
	Mr Michael Hatton MP*

* Replaced The Hon Michael Lee MP on 26 June 1996

Committee Secretary: Bjarne Nordin

Inquiry Secretary: Michael Fetter

Secretarial Support: Lynette Sebo

EXTRACT FROM THE VOTES AND PROCEEDINGS OF THE HOUSE OF REPRESENTATIVES

No. 25 dated Wednesday, 21 August 1996

PUBLIC WORKS - PARLIAMENTARY STANDING COMMITTEE - REFERENCE OF WORK - DEVELOPMENT OF INFRASTRUCTURE ON TOWNSVILLE FIELD TRAINING AREA, TOWNSVILLE

Mr Jull (Minister for Administrative Services), pursuant to notice, moved-That, in accordance with the provisions of the *Public Works Committee Act 1969*, the following proposed work be referred to the Parliamentary Standing Committee on Public Works for consideration and report: Development of infrastructure on the Townsville Field Training Area, Townsville.

Question-put and passed.

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

Development of infrastructure on the Townsville Field Training Area, Townsville

By resolution on 21 August 1996, the House of Representatives referred to the Parliamentary Standing Committee on Public Works for consideration and report the proposed development of infrastructure on the Townsville Field Training Area, Townsville.

THE REFERENCE

1. The Department of Defence proposes to develop the Townsville Field Training Area to allow sub-units (company), units (battalion), and formations (brigade) to conduct collective training and manoeuvre and live-fire training activities. The proposal will allow the Army to develop the area to improve training and to ease environmental pressure on the currently used training area.

2. The proposal will provide:

- fences and warning signs;
- office accommodation for the range control organisation;
- communication facilities;
- access roads;
- basic infrastructure for a 350 man camp;
- vehicle crossing points for creeks, roads and railways; and
- vehicle wash points.

3. When referred to the Committee, the estimated out-turn cost of the proposed work was $18.694 million.

THE COMMITTEE'S INVESTIGATION

4. The Committee received a submission and drawings from the Department of Defence and took evidence from representatives of Defence at a public hearing held in Townsville on Friday 25 October. The Deputy Mayor of Townsville (Councillor Ann Bunnell) and the Secretary of the Upper Burdekin Progress Association (Mr Eric Moon) also gave evidence at the public hearing. A list of witnesses who appeared at the public hearing is at APPENDIX A.

5. Written submissions were received from the:

- Environment Protection Agency;
- Australian Heritage Commission;
- Australian Nature Conservation Agency;
- Great Barrier Reef Marine Park Authority; and
- Commonwealth Fire Board.

6. On Thursday 24 October, the Committee flew over the Townsville Field Training area in Black Hawk helicopters. The overflight took in the following locations and features:

- Camp Engstrom;
- Range Control;
- Dotswood Homestead;
- Hervey Range Developmental Road;
- Greenvale Railway Line; and
- Star Homestead.

7. The Committee's proceedings will be printed as Minutes of Evidence.

BACKGROUND

Townsville Field Training Area (TFTA)

8. The TFTA comprises the High Range Training Area (HRTA), with an area of 48,683 hectares and Dotswood Station, with an area of 187,207 hectares - giving a total area of 231,890 hectares.

9. The HRTA was acquired by Defence in 1967 and has been used as a major training area for the Army and the RAAF, primarily in support of Townsville based units. Dotswood Station was acquired by Defence in October 1988 and cost $8.8 million.

Description

10. The TFTA is located in the north eastern sector of the Upper Burdekin catchment area, about 50 kilometres west of Townsville. The closest major population centres are Townsville and Thuringowa. To the north is the village of Paluma with a permanent population of 24 and a small number of weekend homes in the surrounding area. To the east, the nearest community is Table Top, with a population of 200. To the south and west, there are pastoral properties with isolated homesteads at Fanning River, Myrtlevale, Mirambeena, Payness Lagoon and Taravale.

Defence policy

11. The need for an increased Australian Defence Force training and permanent location in northern Australia was recognised in *Defending Australia 1994*. The need was first recognised in *Defence of Australia* (1987) and was a major consideration in the 1991 Force Structure Review. In 1987, the Cooksey Review examined the policy and planning implications for Defence facilities arising from *Defence of Australia*. The Review noted that the HRTA was overused in some sectors, which created environmental problems, and that the area was not suitable for manoeuvres by armoured vehicles. The Review identified a need for increased training in the north and recommended additional land be acquired to supplement HRTA, both in anticipation of an increase in the training of units in the north and to ease environmental pressures.

12. Defence advised the Committee that a number of limitations applied to training activities on the HRTA. There were as follows:

- the rugged terrain across HRTA restricts manoeuvre training and night air operations;

- the area is not of sufficient size to conduct all the required training activities, particularly for armoured and formation exercises. The types of armaments able to be safely fired within the HRTA places further limitations on the extent of manoeuvre training; and

- the area is overused in the most useable sectors to the stage where natural regeneration is now threatened. Soils across HRTA are prone to accelerated land degradation, particularly under the intensity of use which is currently characteristic of the training area. It has not been feasible to rest specific areas because of high levels of use of all sectors.

Acquisition of Dotswood Station

13. In 1987, Defence investigated the possibility of extending HRTA by the purchase of an adjacent property. Two properties, Dotswood and Fanning River, were assessed for suitability. Dotswood Station was chosen as it met Defence requirements for:

- buffer zones;

- firing of artillery weapons;

- variety of terrain and vegetation types; and

- concurrent use at unit level.

14. The HRTA and Dotswood Station became known as the TFTA. The Committee was advised that since it was acquired, the Dotswood property has been used for infantry training, but no live firing has taken place.

Environmental clearances

15. Defence submitted a Notice of Intention in relation to the proposed use of the area for military training activities in May 1989. A draft Environmental Impact Statement (EIS) was released for public comment in August 1993. A

supplement to the EIS was released to the public following public comment. The draft EIS and the supplement were cleared by the Commonwealth Environment Protection Agency (EPA) in December 1994. An Environmental Management Plan (EMP) was developed in 1995, and in October of the same year, a Range Siting Board (RSB) was convened for the TFTA. The RSB validated the Defence user requirement in the light of changes to force structure and training which had taken place since 1990 and provided evidence of overall increased requirements, particularly relating to combined arms training.

THE NEED

Training requirements

16. Defence advised the Committee that to provide realism and achieve training objectives, training areas must be able to provide the backdrop for various scenarios. The terrain should be undeveloped and offer a variety of characteristics including flat, undulating, hilly and precipitous country. Vegetation should range from grassland to heavily timbered and dense undergrowth. Training areas should not be located close to urban centres, but sufficiently close for ready access by the major users.

17. These broad training requirements necessitate a training area capable of accommodating live field firing of all in-service Army weapons and weapons systems, including missiles and air to ground gunnery and the conduct of manoeuvre training activities.

Required infrastructure

18. Infrastructure is required to permit:

- the conduct of non-firing training, at both individual and collective levels;

- the conduct of live-firing, including high explosives (HE), from static positions and during manoeuvre, including the use of all in-service weapons and ammunition;

- the ability to replicate the tactical requirements for all types of operations, but mainly dispersed operations, through larger areas for manoeuvre and deployment and the subsequent conduct of supporting arms, logistics and communications operations;

- the conduct of parachute operations;

- the conduct of aircraft bombing and rocket practices, air defence practices including the firing of missiles, and armoured fighting vehicle (AFV) battle runs, including tank main armaments;

- the establishment of at least two distinct manoeuvre areas for both tracked and wheeled vehicles;

- the conduct of activities associated with construction and the winning of resources such as timber, water and road building material, as part of military engineer training; and

- the establishment of at least two impact areas of suitable size to allow for concurrent activity by users and equipment type (particularly laser designator considerations).

19. The Range Siting Board addressed these training requirements by taking the user requirement and fitting it to the ground, and by identifying the necessary supporting infrastructure.

20. Defence advised the Committee that the TFTA, as a fire and manoeuvre training area, presents considerable ground variability for infantry, artillery and armoured vehicles. The area contains a wide variety of terrain and vegetation types as well as creeks and rivers which can be used as natural obstacles. The general 'Y' shape of the training area and the designated impact areas earmarked in the EIS, allow two manoeuvre and live firing corridors to be clearly identified, with both corridors ending in impact areas.

21. To ensure the entire range is used efficiently and to meet EIS obligations, certain basic infrastructure is required for reasons of safety, training support and effective environmental management practices.

Options examined

22. Two broad options were considered for the future of TFTA:

- Option 1 - Do not provide any infrastructure and continue to conduct manoeuvre activities elsewhere (eg Shoal Water Bay Training Area - SWBTA); or

- Option 2 - Commence phased development.

Option 1 - continue using SWBTA

23. This option neither addresses the limitations of HRTA, nor satisfies the users' training requirements. Dotswood would not be useable for military purposes, while HRTA would continue to be over-utilised to the extent that it would suffer environmental degradation.

24. SWBTA was acquired in 1965 and is located on the Queensland coast 100 km north-east of Rockhampton, covering an area of 274,071 hectares. It has sufficient size and terrain diversity to support formation manoeuvre and live firing. There are limitations imposed by current impact area restrictions, tidal estuary constraints and vegetation regrowth, which require exercise areas to be rotated. Additionally, the impact areas of SWBTA are within difficult terrain which is not suitable for manoeuvre activities. The EIS reviewed alternative sites around Australia for use by Townsville based units and came to the following conclusions:

- SWBTA is one of the few large areas of native vegetation remaining on the east coast of Australia and is a valuable conservation reserve. It has been placed on the Register of the National Estate because of its size, diversity and condition;

- the need to carefully manage the training area to protect its environmental values imposes restrictions on the amount of use and damage to sensitive areas. In addition, environmental constraints and the topographical requirements of the users, result in restrictions on the areas that can be used as impact areas; and

- use of the area is restricted during the wet season. The average total days that the training area is active is 263 days per year. This heavy usage, coupled with the restrictions imposed on use means that any increased activity, to the extent indicated by the TFTA User Requirement, would not be feasible without increasing the size of the area available for training by the acquisition of additional land.

Option 2 - Commence phased development

25. Defence prefers adoption of this option for the following reasons:

- HRTA has size and environmental limitations which particularly limit combined arms manoeuvre and live firing training. Dotswood has suitable terrain to support these activities and contains a variety of vegetation and terrain. TFTA currently offers the best impact areas of any Australian range for joint live firing activities;
- it meets the long term training requirements for Townsville based units in a cost effective manner by reducing the travelling time to SWBTA;
- it meets Defence's commitments under the EIS and EMP and the grazing research project;
- it supports the investment already made by Defence in acquiring Dotswood. (Defence has already spent nearly $10 million on the purchase and environmental assessments); and
- it allows development to occur based on training and environmental experience.

Development options

26. Defence considered three development options for TFTA. These were:

- Option 1 - minimal development for unit level training - estimated cost $15 million;
- Option 2 - further infrastructure to enable formation level training - estimated cost $17 million; and
- Option 3 - infrastructure for formation level training and relocation of a major public road and high voltage power line - estimated cost $39 million.

Option 1

27. This option would provide a minimum level of infrastructure to allow live firing and manoeuvre activities at unit level; estimated cost - $15 million. It would allow the property to be used safely as a unit-level live firing and manoeuvre range; provide road access to the key training areas, and remove the environmental pressures on HRTA. It would also allow regeneration to occur while training, environmental and grazing experience is obtained as well as enabling Defence to meet its commitments under the EIS and EMP.

Option 2

28. This option would include all Option 1 development activities, plus some further minor infrastructure necessary to allow restricted formation-level manoeuvre and live firing training at an estimated cost of $17 million. This option adds a number of minor works to improve range management and utilisation and further enhances the range's potential for live-firing and manoeuvre activities at formation-level. Some of the infrastructure elements may be developed by Army engineers.

Option 3

29. This option would include all developments proposed in Options 1 and 2, plus additional minor infrastructure and removal of some physical limitations at an estimated cost of $39 million. It would require the relocation of two high cost items (a major public road and a high voltage power line), which are physical constraints to live firing and manoeuvre activities at formation-level. This option represents a perfect situation, which cannot be justified at this time. However, after formation-level groups have used the range for some time, it might be possible to demonstrate sufficient justification to relocate these items based on practical operating experience.

Preferred option

30. The preferred option is to proceed with Option 2 as it will allow the range to be developed close to its maximum potential, thereby returning improved formation-level training benefits within a realistic timeframe and at a realistic cost. The Committee questioned Defence about the acceptability of constraints such as the Kidston power line and the Mingela Road reducing the full potential of the area for training. Defence advised that the training benefits

derived from relocating both features would not justify the substantial capital investment required.

31. Defence believes a conservative approach has therefore been adopted involving the provision of minimum infrastructure required for management purposes, safety and the facilitation of training. This infrastructure is required to enable training to be conducted in a safe and environmentally responsible manner. Defence did acknowledge that, after a period of operating experience, the situation regarding identified constraints would be reassessed to ascertain if changes are required. The Committee was assured by Defence that any changes would be in the nature of fine tuning and that adjustments to infrastructure to meet evolving requirements may be involved.

COMMITTEE'S CONCLUSIONS

32. A need exists to provide the necessary infrastructure to enable elements of the Australian Defence Force to undertake collective and joint training in live fire and manoeuvre, at Brigade level, in the Townsville Field Training Area.

33. Of development options examined, the preferred option is the provision of infrastructure to support training at Brigade level which will allow the Range to be developed close to its maximum potential and provide training benefits within a realistic time-frame and at realistic costs.

THE PROPOSAL

34. Defence proposes that the TFTA (HRTA and Dotswood Station) be developed into a major field training area to support the requirements of the Townsville based Ready Deployment Force, the RAAF, other Army units and formations and the Australian Defence Force generally.

Outline

35. Defence advised the Committee that the planned infrastructure developments are considered critical for public safety, for the efficient and effective management of the range and to ensure maximum use of the area in accordance with the user requirement and the concept for manoeuvre operations.

36. The following infrastructure is proposed:

- 250 km of external boundary fencing and sign posting;
- a range control complex to ensure the safety of all personnel, both civilian and military, who are either exercising in or passing through the training area and to provide more effective range management;
- communication facilities which are essential for safety during all training activities, especially live-firing;
- an improved gravel access road from the Hervey Range Developmental Road (HRDR) to the Star homestead to provide access to the northern sectors;
- a 350 man camp at Dotswood;
- upgrading an airstrip at Dotswood to accommodate 'Hercules' C130 aircraft;
- hardened road, railway and creek crossing points for administrative traffic;
- strobe lighting at western and eastern ends of the air corridor over Sector 6; and
- vehicle wash points to comply with EMP guidelines.

Fencing

37. The Committee questioned Defence about two aspects of the extensive fencing proposed. First, if adjoining property owners will be invited to meet half the cost of fencing; secondly, if property owners could be involved in doing the work. Defence advised that it will meet the cost of fencing. Defence policy requires that training areas, where live firing of large calibre weapons takes place, need to be fenced. Fencing works themselves will be tendered for. This arrangement would not prevent adjoining property owners either individually or collectively submitting tenders.

Air corridor

38. A permanent air corridor, traditionally used by local landowners, conveniently follows the railway line and the HRDR. It forms a boundary which bisects the TFTA. The Committee questioned Defence about the impact of the corridor on operations. Defence advised that the corridor was found to be in an environmentally sensitive area (Sector 6) and is therefore not to be used for any live firing activities. Bisection of the TFTA by the corridor has been accepted and the concept of operations will be designed accordingly. The strobe lights will be located at the beginning and end of the corridor to assist aircraft navigation.

Master plan

39. The report of the RSB provides the Master Plan for TFTA. The report identifies all facilities aspects to meet the user requirement. The facilities included in this proposal satisfy the basic need to allow restricted formation-level manoeuvre and live firing training, thus returning training benefits within a realistic timeframe and at a realistic cost. Defence believes this will allow the range to be developed close to its maximum potential.

40. Defence advised the Committee that further infrastructure development, to enhance the area's potential for training and to improve range management and utilisation, will be carried out using Army engineers as part of the ongoing range management programme. This work will be conducted in accordance with the requirements of the RSB and the EMP.

Range control buildings

41. The main office building will have a concrete floor slab; concrete block exterior and interior walls plaster rendered; plasterboard ceilings; colorbond roofing; air conditioning; with standard finishes to walls, floor, doors and windows. The outer building (Quartermaster store) will be constructed from concrete slab on ground, steel framed and steel cladding.

350 man camp

42. All buildings have been based on proprietary 'kit-form' buildings from local suppliers. All buildings have engineers' certification and are cyclone rated for the local area. Building details are: floor (100mm thick reinforced concrete slab on ground); frame (hot dipped galvanised steel); cladding (steel colorbond

wall and roof sheeting); no internal lining; windows and doors (fixed, steel colorbond ventilation louvres; aluminium framed sliding windows; insect/security screens).

Roads

43. All roads are planned to be unsealed gravel all-weather, two lane roads built to normal country road standard. It is intended that construction materials be obtained locally.

Use of Army engineers

44. The Committee questioned Defence about the possible use of Army engineers on elements of the project. Defence advised that the possibility of Army engineers undertaking lower priority works would be examined. This is necessary for two reasons:

- the magnitude of the work would not compare with earthworks undertaken by Army engineers for the construction of RAAF Base Scherger; and
- difficulties in guaranteeing the availability of Army engineers.

Committee's Conclusions

45. The extent of the proposed development can be justified on the grounds of public safety, effective management and maximum use of the Range, in accordance with the user requirement and concepts for manoeuvre operations.

Committee's Recommendation

46. The Committee supports the use of Army Engineers on elements of the project which would provide training benefits and not directly compete with the private sector.

Design standards

47. Where appropriate, the design of the proposed facilities will conform to the relevant sections of the following:

- current Australian Standards and Codes, including the Building Code of Australia (BCA);
- local, State and Commonwealth Environmental Acts;
- the Defence Fire Protection Engineering Manual (FACMAN2);
- the Defence Security Manual (SECMAN);
- the Occupational Health, Safety and Welfare Act;
- the Defence Explosives Safety Manual (OPSMAN3);
- the Army Facilities Cabling Manual (AFCM); and
- the Manual of NATO Safety Principles for the Storage of Military Ammunition and Explosives.

Fire protection

48. All construction and fire protection requirements will, as a minimum, be in accordance with the provisions of the Building Code of Australia (BCA), the Defence Manual of Fire Protection Engineering (FACMAN 2) and all other applicable Codes and Standards. FACMAN 2 details Defence fire protection policy for asset protection and building function protection. The levels of fire protection specified are above BCA requirements and have been determined by a risk assessment and risk management approach to fire protection.

49. Defence will require certification from a suitably qualified certifier that the design and construction meet the requirements of the BCA, FACMAN 2, relevant Codes and Standards and any additional State, Local Government and Defence requirements.

50. The Queensland Fire Brigade will be invited to comment on the proposal, visit the site and offer comment throughout the construction phase to ensure that the Brigade's operational requirements are met.

Any recommended departures from BCA requirements in relation to the proposed work will be technically assessed by Defence specialist fire protection staff. Agreed departures (ensuring an equivalent or higher level of protection than BCA requirements) will require written approval at Director General level.

51. Successful tenderers will be required to produce a Quality Assurance Plan to clearly show how BCA, Australian Standards and any additional Defence requirements in relation to fire protection/fire safety, will be met and the required standards for construction/installation maintained.

52. Development and management activities will comply with the fire management measures identified in the EMP Fire Management Sub-Plan.

Energy conservation

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

54. To reduce energy consumption, where possible, lighting is to be controlled by photo-electric switches in conjunction with time-switch schedules. This is to include provision of personnel sensor controlled lighting to amenities and other 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. In addition to the use of efficient lamp types, advantage will be made of natural lighting through the use of skylights where possible.

55. The Range Control facility will be connected to mains power extended from the Table Top area. Also, for safety reasons, a back-up generator will be provided. Preliminary investigations and advice from NORQEB indicate that it is not economical to upgrade and replace the existing power line into Dotswood. Therefore, the 350 man camp will be equipped with its own generator to provide power as required. Where possible, solar power will be used.

56. Waste treatment costs have been based on using 'DOWMUS' wet systems, which treat all domestic wastes, including food, greases, detergents and recycles treated waste back through the toilet cisterns.

57. The two wash point facilities will incorporate an oil separator and a water recycling capability for vehicle washing.

Committee's Conclusion

58. Design standards will conform with relevant codes, statutes and operational manuals and procedures.

PROPERTY CONSIDERATIONS

59. HRTA was acquired by Defence in 1967. In October 1988, Defence purchased Dotswood Station which comprised: Pastoral Development Holding Lease No 44/3176; Special Lease No 44/45266; and an Occupational Licence No 510. The Pastoral Development Lease and the Occupational Licence were converted from leasehold to freehold in 1994.

60. All development activities required to meet the user requirement and the concept for manoeuvre can be constructed within boundaries. All areas can be utilised and, at present, there are no redundant sites.

Argentine township

61. The Argentine township reserve (no houses) is located centrally in the Dotswood property north of HRDR in Sector 5. It comprises 109 allotments of freehold property which Defence is acquiring. The township is located within an area designated by the EIS as environmentally sensitive, where usage is restricted to through traffic and helicopter landing areas.

Greenvale Railway Line

62. The Greenvale Branch Railway Line (used in the past to support mining activities and currently unused) runs east-west along the southern boundary of Sectors 3 and 5. Defence is currently liaising with the Queensland Department of Transport (DOT) for crossing points across the railway. Acquisition of the complete easement may be a long term option. While Defence does not own the railway line, crossing points will have to be developed after negotiation with DOT.

Public Areas

63. The Mingela and HRDR are public roads. Vehicle crossing points have been negotiated with the appropriate controlling authorities. Other public assets include: easements through the northern sectors for the two powerlines; a

water reserve where the HRDR crosses Keelbottom Creek; and a Travelling Stock Reserve.

Mining

64. As part of the land purchase, the State Government would not allow Defence to acquire the mineral rights to Dotswood. There are currently numerous Exploration Permits for Minerals (EPM) and approved mining leases, mostly inactive, throughout the area. Defence and the State Government have agreed upon a set of permit approval conditions for both EPM and mining leases.

Grazing

65. The lease covering the Dotswood and Star areas expired on 23 October 1995. New lease arrangements take into account the Commonwealth freehold title to the land and Army's intention to use grazing as a land management tool. A new grazing lease is to be let from August 1996 for a period of three years.

ENVIRONMENT AND HERITAGE

Environmental Impact Statement and Environment Management Plan

66. An EIS and an EMP were developed for the TFTA. These documents outline management issues to ensure that the TFTA environment and heritage sites are preserved throughout the life of the range. The EIS and the EMP take into account the long term cyclic weather and land conditions relating to the area. Considerable time (three years) and funds ($1.2 million) were spent on technical assessment to ensure that the proposed use of the range was sustainable. The Committee believes that the extent of environmental impact assessments, including resource inventories, have been exemplary. The concept of an Environmental Management Advisory Committee is also an excellent idea.

67. The 1990 user requirement was defined in some detail in the EIS. However, as a result of changes to force structure and training requirements since 1990, this initial user requirement continued to be developed and modified throughout the EIS process. It was not until after the RSB was convened in October 1995, that an amended user requirement was confirmed by the Board. This current user requirement is substantially consistent with the

earlier one prepared for the EIS, by way of land usage, but differs in terms of operational concepts.

68. Under the EMP and the RSB, the training area has been divided into a number of sectors which allows activities to be defined for each sector.

Further environmental consultancy

69. To ensure the proposed use was compatible with the EMP, a further environmental consultancy was commissioned in 1996. This consultancy was to undertake an assessment of revised activities to establish their impacts and significance and to prepare a Range Development Plan for inclusion in the EMP. The key results of this consultancy are summarised below.

70. In Sector 2A, due to ecological and potential archaeological significance, only limited dismounted manoeuvres should be conducted in the area north of the confluence of the Little Star and Ponto Creek. No tactical crossings were to be conducted across the riparian area north of Ponto Creek but, an existing administrative crossing point could be used. Tactical and administrative crossings of the Little Star River were to be confined to those crossing points and zones as identified in the consultancy report.

71. In Sector 2B, vehicle movement was to be restricted due to fragile soils. Crossing of the Star River for administrative purposes was only to occur at designated crossing points.

72. For Sector 6A, the EIS recommended that no tactical manoeuvring or vehicle traffic be allowed in Sector 6 because of soil erodibility. After a closer analysis of the terrain and accessibility, the latest environmental study identified a narrow manoeuvre corridor through Sector 6 and recommended that administrative access also be confined to this corridor. The use of the corridor has the following limitations which are acceptable to the user:

- rocky outcrops are to be avoided as they provide a refuge for fauna;
- administrative access is to be restricted to the existing track and any Aboriginal artefacts scatters along the track are to be recorded and relocated;

- if an alternative administrative access is to be constructed through the corridor then the proposed route should be subject to an archaeological survey;
- use of the corridor for manoeuvre activities cannot take place until the sector has adequately recovered from current drought and grazing impacts; and
- no grazing should be allowed for a minimum of two wet seasons and, during this interim period, no burning is to occur which would allow regeneration of emergent species.

73. In Sector 9A, tactical and administrative crossings were to be confined to the nominated crossing points and zones. Monitoring of the use of Keelbottom Creek for tactical crossings was to be conducted for one to two years, before tactical crossing of the Little Star River was permitted.

74. The study concluded that the remote location and the sparse vegetation of the surrounding country has resulted in little urban encroachment on the TFTA. It is not anticipated that this will become a problem in future years. Residents will not be disturbed by the training activities because the few homesteads on neighbouring properties are sufficiently distant to minimise impacts. Community reaction to noise varies considerably with the degree of public knowledge and understanding of the reason for the noise. Military activities which are well advertised generally attract fewer complaints than incidents which come without warning. The noise sub-plan of the EMP emphasises the need for training activities to be advertised as a major component of noise management. While activities on the HRDR and Mingela Road are transitory, sudden loud noises could pose a safety hazard to civilian traffic. To minimise this possibility, noise warning signs will be erected at certain locations to warn motorists of possible unexpected noises, in addition to the usual advertising of activities.

75. Members of the Tabletop community (about 200) and other properties along the HRDR may be affected to some extent by additional traffic on the HRDR and, occasionally, by some restrictions on the public roads which pass through TFTA. These restrictions will involve occasional closing of roads to allow armoured vehicles and convoys to cross. These road closures will be coordinated with the local council, advertised in the local media and are been addressed in the existing EIS/EMP.

Impact Areas/Unexploded Ordnance

76. A report prepared by the Australian National Audit Office on the Management of training areas, recommended that Army ensures that designated impact areas are of the smallest practical size consistent with realistic training and the need to minimise unexploded ordnance (UXO) pollution of land. The Army has agreed to this recommendation.

77. In selecting the TFTA impact areas, the RSB ensured that the areas:

- fall within the areas recommended in the EIS and, where small extensions have been sought, these have been subject to further environmental investigation;
- exclude areas of environmental or heritage value and, where these areas are contained within the boundaries of an impact area, rules exist to protect them from being engaged;
- are specifically defined on Commonwealth land and are of the smallest practical size;
- are large and diverse enough to provide realism in training;
- are large enough to allow heavily used parts to be periodically rested through rotational management;
- have a suitable buffer around the boundaries; and
- have the potential to be cleared of UXO.

78. The Committee questioned Defence about a number of aspects of safety and the clearance of UXO. Defence advised that sectors will be fenced and signposted and that target areas will be monitored for damage and the presence of UXO. Target areas will also be rested and cleared. Defence believes active management measures will ensure that most UXO will be cleared. Defence did acknowledge that training procedures, which may involve simultaneous targeting from a number of locations, would make it impossible to maintain a complete record of every UXO which may occur. The UXO clearance policy will dictate that it will be the responsibility of user units to clear any UXO created.

Fire management

79. The results of 30 years of live firing on the HRTA became evident to the Committee during the aerial reconnaissance. So too, were the effects of six years of drought. The Committee questioned Defence about controlling fire from live firing. Defence advised that the EMP contains a Fire sub-plan, which will be implemented. Further, the enlarged TFTA will considerably increase the number of impact areas. This will enable the effects of live firing to be spread more evenly, thus enabling areas to be rested. Defence also advised that when necessary, controlled burns are undertaken along the boundaries of adjacent grazing properties.

Road traffic

80. The environmental impact assessment considered the issue of Army traffic on public roads. An assessment was made that 10 per cent of traffic using the HRDR Road would be Army vehicles. Defence recognised that an *ex gratia* contribution to local authorities for upkeeping the road was justified. Defence proposes to construct crossing points across the HRDR and across creeks and rivers. These works will be designed to protect the road from military traffic.

81. The Upper Burdekin Progress Association (UBPA) advised the Committee that the HRDR has a length of 132 kilometres, of which 78 kilometres remains unsealed. The road is of major economic importance to the region, being part of the shortest route from Townsville to the Gulf of Carpentaria. The Queensland Government will contribute $22 million, over the next eight years, towards road improvements. The UBPA submitted that, due to increased traffic generated from use of the TFTA, Defence (or the Commonwealth) should make a contribution towards road improvements.

82. Defence acknowledged that *ex gratia* payments in lieu of rates to Dalrymple Shire Council, which is responsible for road maintenance, are linked to revenues foregone from the acquisition of Dotswood and are not related to road maintenance. Defence undertook to review the contribution and consider making similar payments to those applying elsewhere to access roads to Commonwealth properties. The Committee believes this would be the most prudent course to follow.

83. The UBPA also submitted that a case could be made for Army engineers to undertake some of the road improvements. In response, Defence advised the Committee that:

- the Army needs to be sensitive about competing with the local construction industry;
- Army engineers are only employed on a task if it provides training value, is acceptable to the construction industry and local and State governments; and
- tasks are considered on a case by case basis, and there is a requirement to recover additional operating costs which the Army would incur.

84. Defence advised the Committee that a mechanism exists, involving Defence Force assistance to the civil community, whereby the community can seek Army assistance and undertook to provide the UBPA with advice on how this assistance may be sought. Again, the Committee believes this would be the most prudent course to follow.

Heritage Considerations

85. The presence of Aboriginal archaeological sites has been confirmed by surveys. Some of these sites are of relatively high scientific and Aboriginal significance. Standing Orders have been issued to prohibit live firing near these sites, to forbid access by unauthorised personnel and to ensure that they are not disturbed.

86. Defence has commissioned a heritage study of TFTA. The study will include specifying the content and structure for interim Conservation Management Plans (CMP). An interim plan is being developed for Aboriginal heritage values and a second interim plan for cultural heritage values. As part of these studies, Defence will give consideration to nominating the southern portion of the Argentine mining area, the Plum Tree Hotel, the drystone wall, Boolangalla township and associated mines, for inclusion on the Register of the National Estate.

87. As part of the consultation process between Defence and local Communities, Defence has hosted meetings with the Kudjala Land Trust to seek the involvement of people who could assist with the heritage study. State

government departments were advised of the meetings and their outcomes. Defence is also examining the feasibility of appointing an Aboriginal ranger in the TFTA.

88. Gold was found on the Star River Station in 1866, but the resultant gold rush was short lived. The Argentine township was the centre of the Star River diggings and was located on Cattle Creek, a branch of Keelbottom Creek. Argentine became an important mining town until the First World War, when the major hotel closed and mining ceased. This site is currently marked by a cemetery, a few large trees and the foundations of a blacksmith's forge. A stone wall also remains near the abandoned village of Boolangalla. Neither the wall nor the remains of the Argentine mine are classified by the National Trust. However, the homestead at Dotswood is regarded as an historic house. The Argentine mine is also historically important. Defence assured the Committee that Standing Orders will be framed to ensure these sites are protected from development and training activities.

Referral to EPA/AHC

89. Defence advised the Committee that the key environmental issues for successful implementation of the Range Siting Board's concept of operations are ecology, heritage, soils and landform, noise and access. Where there have been some changes in sector use to those which were considered by the EIS, these changes are assessed as being 'not significant' in terms of *the Environment Protection (Impact of Proposals) Act 1974*, provided the planned changes are implemented in accordance with the modifications, constraints, management actions and monitoring guidance set out in the recent consultancy report. The Memorandum of Understanding between Defence and the EPA, on the application of the Act, enables Defence to provide 'environmental clearance' via an environmental Certificate of Compliance.

Local Impact

90. The infrastructure development of TFTA and the expected usage levels will provide limited economic advantages to the Townsville local community.

91. There will be short term economic benefits to be derived from the construction and refurbishment works which are planned to extend over 30 months. Sections of the works will be of a suitable size and nature to attract tenders from local trades and builders.

92. The longer term use of the Range will have limited benefits from slight increases in commodity consumption levels (eg, food and fuel), as a result of additional training activities by Townsville based units and by units based elsewhere.

CONSULTATION

Organisations consulted

93. Throughout the preparation of the EIS, there was extensive consultations between the Department of Defence, the Australian Heritage Commission, Queensland Department of Environment and Heritage, Queensland National Parks and Wildlife Services, and the Environmental Protection Agency. The EIS and EMP reflect the outcome of these consultations.

94. The developments flowing from the latest environmental consultancy were advised to all neighbouring property owners during a briefing at Lavarack Barracks on 30 August 1996. At the public hearing Defence advised the Committee that arrangements were made to brief representatives from the Environmental Management Committee (EMAC) during the period September-October 1996. The EMAC includes representatives from Townsville and Thuringowa Councils, Wet Tropics Management Authority, Queensland Department of Natural Resources, North Queensland Conservation Council, Queensland Department of Primary Industry, Great Barrier Reef Marine Park Authority and Queensland's Department of Environment.

95. The North Queensland Electricity Corporation (NORQEB) and TELSTRA have been consulted about the provision of electricity, telephone and radio services.

Air traffic management

Air Traffic Control Townsville was consulted in the preparation of the air space management plan, which is being progressed for approval by the national level Airspace Co-ordination Committee. The Committee questioned Defence about airspace restrictions applying to TFTA. Defence advised that airspace restrictions apply to two blocks - the northern Star area and the southern Dotswood area. Agreement has been reached that either area may be closed by Defence notifying appropriate authorities. It should be emphasised that both areas may not be closed simultaneously. Defence also advised that airspace restrictions will not apply when there is no live firing.

Townsville City Council

96. Although not directly affected by the proposed development of TFTA, Townsville City Council supports the proposal as it will have significant positive economic and social effects on the city. Council acknowledged that elements of the Australian Defence Force, located in Townsville, are a very important part of the community. Economic benefits to be derived from the proposal, estimated by the Centre for Applied Economic Research at James Cook University, are as follows:

- additional gross output - $34.3 million;
- contribution to gross State product - $16.6 million;
- contribution to wages and salaries - $9 million; and
- full time and part time employment - 324 persons.

97. Council also offered Defence assistance in erosion control and land care practices. The use of small construction packages which allow for competitive tendering by local contractors was also advocated by the Council. Defence assured the Committee that these matters would be taken into consideration and acknowledged the good working relationship between Council officers the Army's north Queensland environmental officer.

CONSTRUCTION PROGRAM

Project delivery

98. The project is to be delivered under traditional project management arrangements as a series of discrete work packages. The packages will be delivered as either Head or Design and Construct Contracts. Defence advised that the main advantages of this method of delivery are:

- the project can be organised flexibly into a series of smaller packages;
- competitive pricing can be achieved at all levels of work; and

- participation is possible by a range of contractors and trades, which is particularly suitable for a community where local contractors will be keen to participate.

Program and Cost

99. Subject to Parliamentary approval, a project manager will be appointed in late 1996, with construction planned for completion in June 1999.

100. The preliminary estimate for the proposed construction works is $17.4 million at December 1996 prices. The out-turn cost is $18.694 million.

RELATED DEFENCE PROJECTS IN THE TOWNSVILLE AREA

101. Defence advised the Committee of a number of other developments, either underway or planned in the Townsville area. These are summarised below:

Defence High Frequency Modernisation Project

102. The Defence High Frequency Modernisation Project (HFMP) will provide a network of High Frequency (HF) radio stations to support all Australian Defence Force long range fixed tactical HF radio communications with ships, aircraft and mobile land units. The network will comprise four stations, each station consisting of a local management facility and separate sites for transmitter and receiver stations. Construction of the four stations will commence in early 1997, with the project fully operational by the end of 1999. This project has been referred to the Committee and will be the subject of a report early in 1997.

103. One of the stations will be in Townsville. The transmitter station will be located at the existing RAAF site of Bohle River. The site for the receiver station will be near Speed Creek in TFTA. The Committee overflew the site during the aerial reconnaissance of the wider TFTA. Defence advised the Committee that the proposed location of the receiver station will not impact on the use of the range or the proposed infrastructure.

Military Operations in Urban Terrain (MOUT)

104. A MOUT facility is being constructed near Horne Dam, in HRTA. The Committee overflew the facility during the aerial reconnaissance. A contract

has been awarded for the design and construction of the facility with construction expected to be completed by May 1997. Cost - $4.23 million.

Ross Island Development

105. This approved project involves the relocation of 10 Terminal Regiment and the Army Maritime School from four sites in Sydney, to one site in Townsville. Work on the access road commenced in March 1996 and construction is expected to be completed by June 1998. Cost - $25.914 million.

5 Aviation Regiment

106. The aim of this proposed work is to construct aircraft shelters to improve the long term sustainability of the Black Hawk and Chinook helicopters. The proposal has been referred to the Committee and is the subject of a separate report.

Lavarack Barracks Redevelopment Stage 2

107. This proposed work is programmed for commencement in 1997/98 and will complete the second stage upgrade of Lavarack Barracks. Estimated cost - $88 million.

RAAF Base Townsville Redevelopment

108. This proposed work is scheduled for 1998 and provides for the redevelopment of a number of facilities and engineering services at RAAF Base Townsville. Estimated cost - $40 million.

Committee's Recommendation

109. The Committee recommends the development of infrastructure on the Townsville Field Training Area at an estimated out-turn cost of $18.694 million.

CONCLUSIONS AND RECOMMENDATIONS

110. The Committee's conclusions and recommendations and the paragraphs in the report in which they occur are set out below:

1. **A need exists to provide the necessary infrastructure to enable elements of the Australian Defence Force to undertake collective and joint training in live fire and manoeuvre, at Brigade level, in the Townsville Field Training Area. (Paragraph 32)**

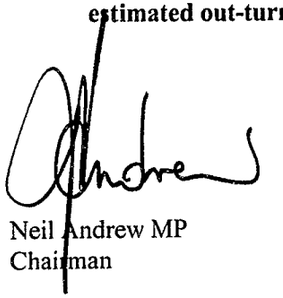
2. **Of development options examined, the preferred option is the provision of infrastructure to support training at Brigade level which will allow the Range to be developed close to its maximum potential and provide training benefits within a realistic time-frame and at realistic costs. (Paragraph 33)**

3. **The extent of the proposed development can be justified on the grounds of public safety, effective management and maximum use of the Range, in accordance with the user requirement and concepts for manoeuvre operations. (Paragraph 45)**

4. **The Committee supports the use of Army Engineers on elements of the project which would provide training benefits and not directly compete with the private sector. (Paragraph 46)**

5. **Design standards will conform with relevant codes, statutes and operational manuals and procedures. (Paragraph 59)**

6. **The Committee recommends the development of infrastructure on the Townsville Field Training Area at an estimated out-turn cost of $18.694 million. (Paragraph 111)**



Neil Andrew MP
Chairman

5 December 1996

APPENDIX A

WITNESSES

BUNNELL, Councillor Ann, Townsville City Council, Walker Street, Townsville, Queensland 4810

DAWSON, Lieutenant Colonel Brian Robert, Commanding Officer, Base Area Support Centre—North Queensland, Department of Defence, Milpo Lavarack Barracks, Queensland 4813

HARTLEY, Mr Rolfe George, Environmental Manager, Canberra Office, Kinhill Engineers Pty Ltd, 21 Barry Drive, Turner, Australian Capital Territory 2601

KAY, Mr David John, Senior Planner, Townsville City Council, Department of Planning and Development, Administration Building, Walker Street, Townsville, Queensland 4810

LANS, Lieutenant Colonel Benjamin, Staff Officer Grade One, Training Area Design, Directorate of Plans, Army Headquarters, Department of Defence, Canberra, Australian Capital Territory 2601

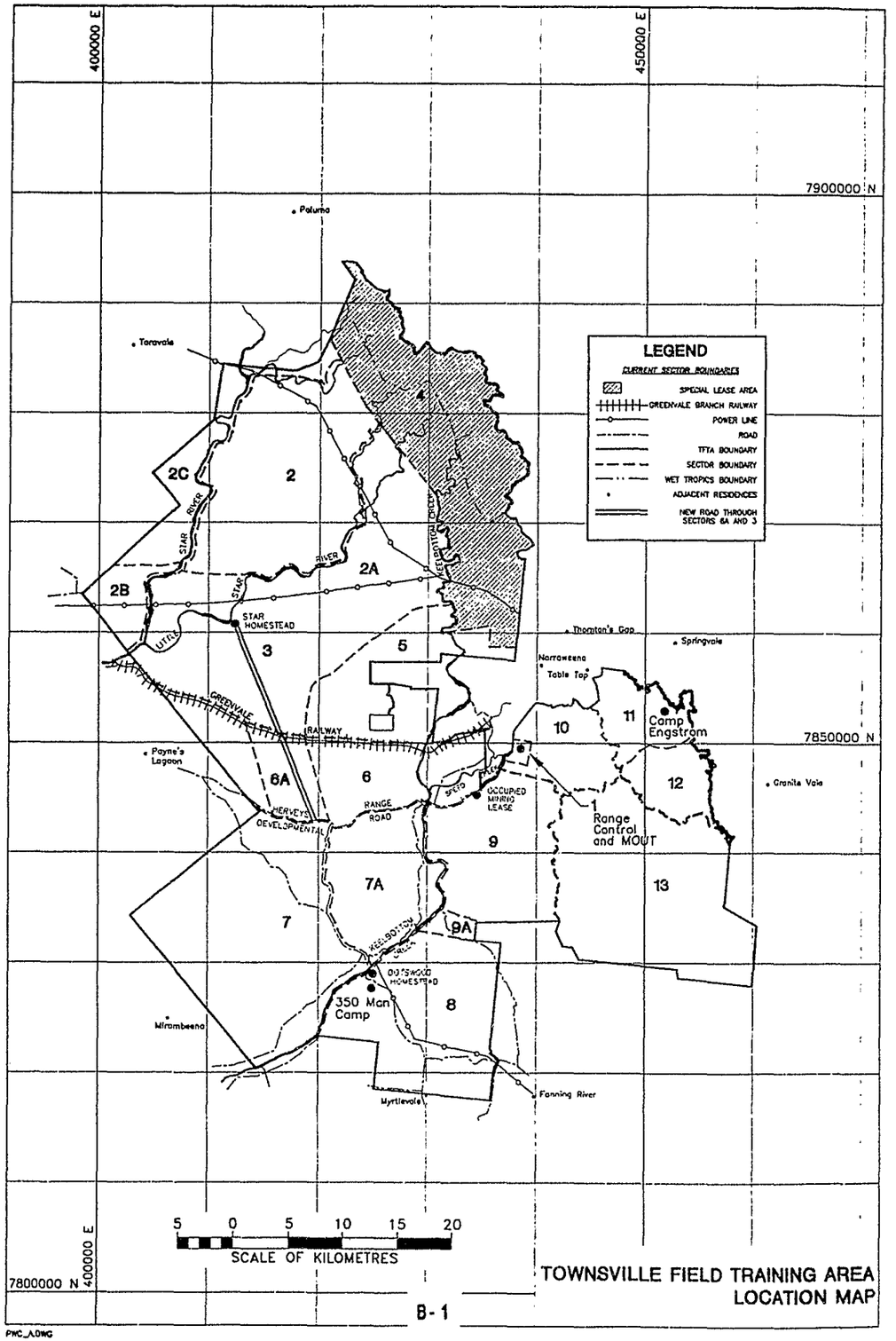
McCANN, Brigadier Raymond Leslie, Director General, Accommodation and Works—Army, Facilities and Property Division, Department of Defence, Campbell Park Offices, Canberra, Australian Capital Territory 2600

MOON, Mr Eric John, Secretary, Upper Burdekin Progress Association, Mail Service 913, Burdekin Bridge, Charters Towers, Queensland 4820

STRACHAN, Lieutenant Colonel Olga Nina, Project Director, Facilities and Property Division, Department of Defence, Campbell Park Offices, Canberra, Australian Capital Territory 2600

APPENDIX B

PROJECT PLANS AND DRAWINGS



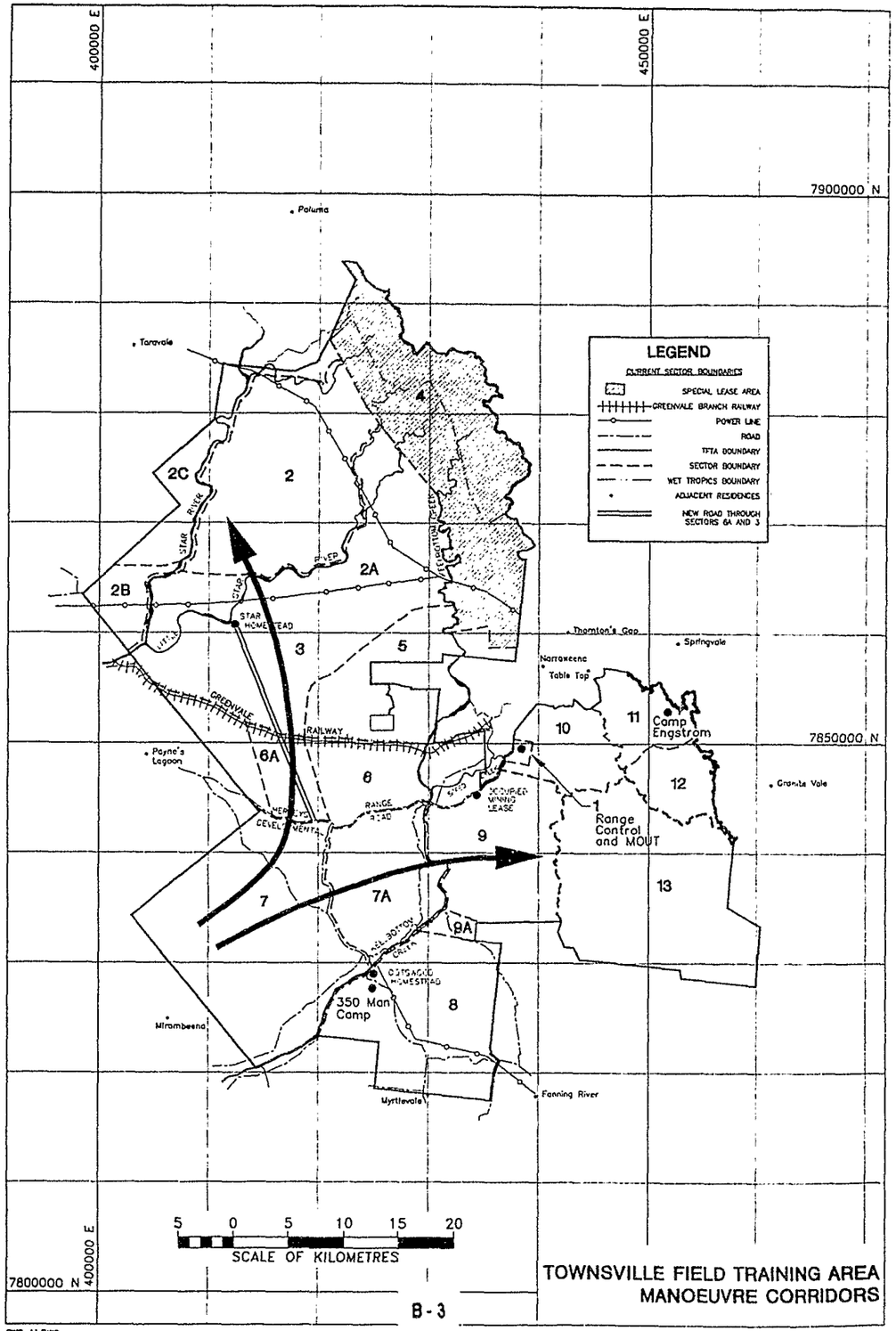
TOWNSVILLE FIELD TRAINING AREA
LOCATION MAP

B-1

PWC_A.DWG

PROPOSED SECTOR USE

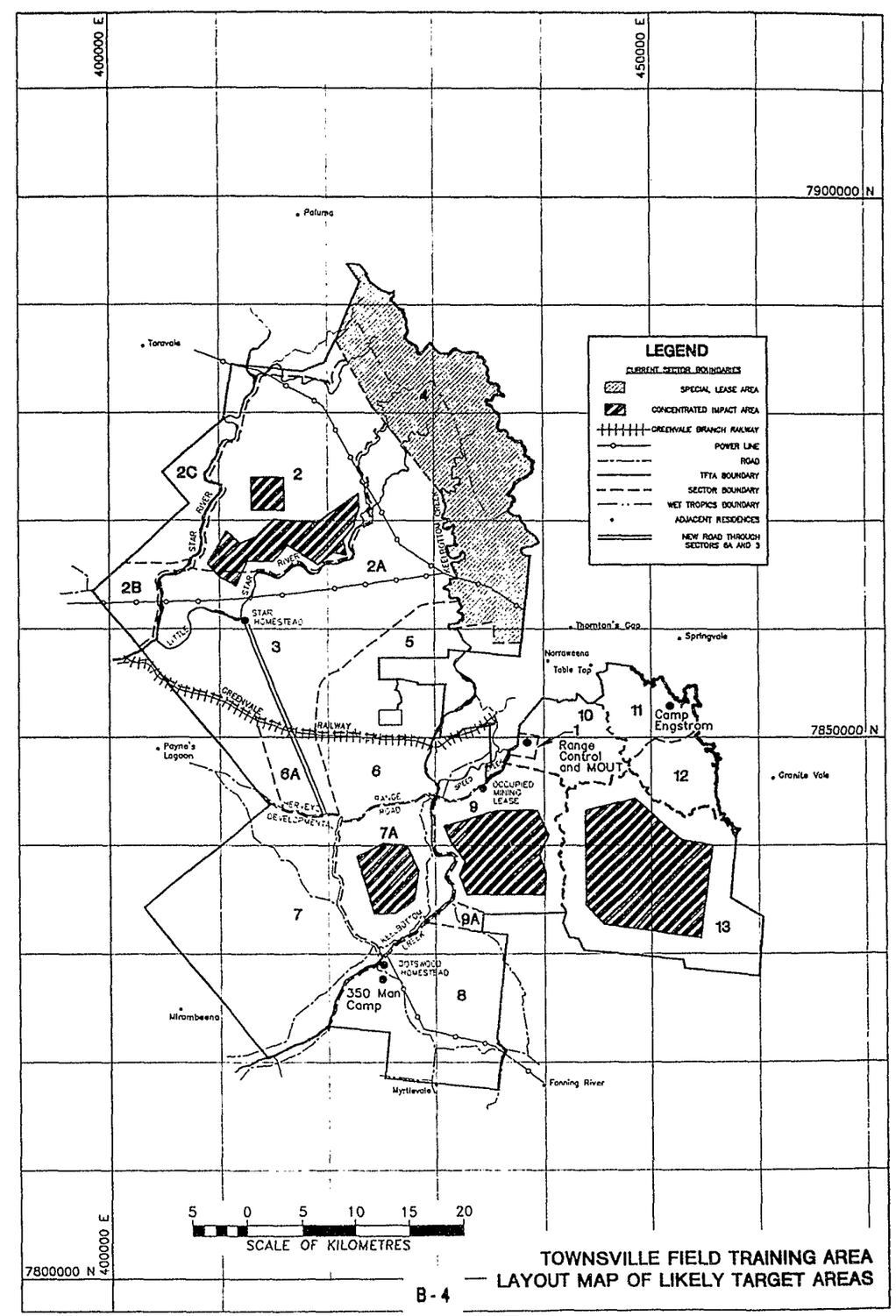
Sector Number	Proposed Sector Use
1	Small sector for the new Range Control Complex
2	Manoeuvre and impact area
2A	Manoeuvre and deployment
2B	Manoeuvre and deployment
2C	Buffer
3	Manoeuvre and deployment
4	Foot traffic, survival and close training
5	Small scale activities, no field firing
6	Small scale activities
6A	Small scale activities, manoeuvre/deployment corridor, no field firing
7	Manoeuvre and impact area
7A	Manoeuvre and impact area
8	Small scale activities
9	Manoeuvre and impact area
9A	Small scale activities, minor manoeuvre corridor
10	Small scale activities (HRTA - no change from current usage)
11	Small scale activities (HRTA - no change from current usage)
12	Small scale activities (HRTA - no change from current usage)
13	Manoeuvre and impact area (HRTA - no change from current usage)



TOWNSVILLE FIELD TRAINING AREA
MANOEUVRE CORRIDORS

B - 3

PWC_A1.DWG

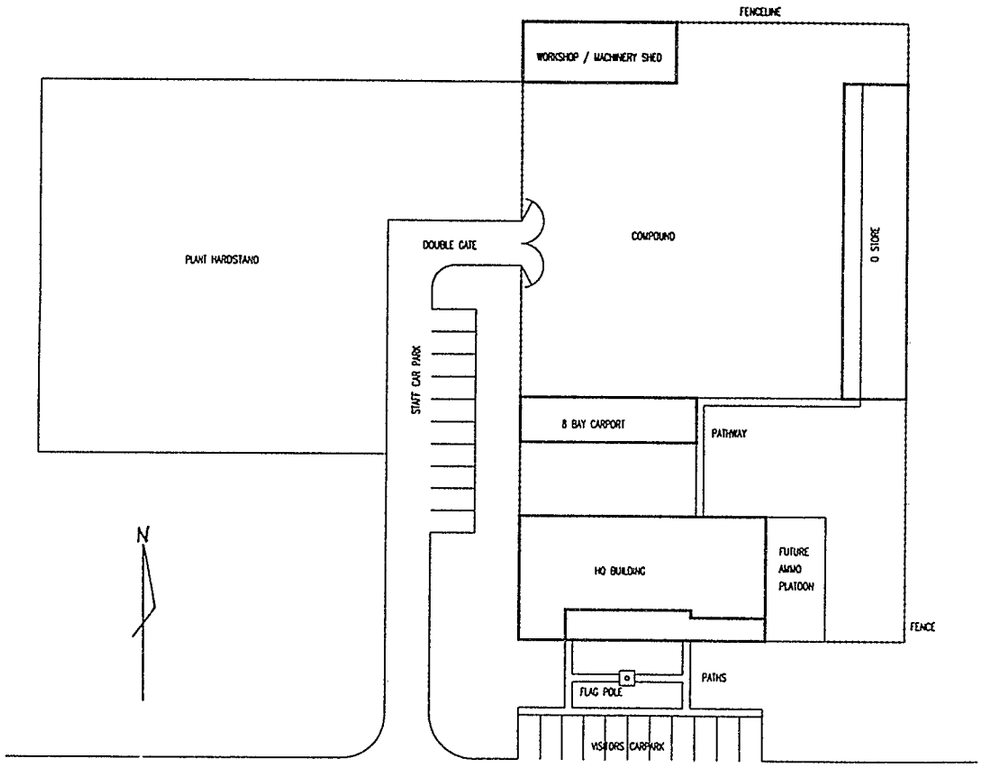


TOWNSVILLE FIELD TRAINING AREA
— LAYOUT MAP OF LIKELY TARGET AREAS

B - 4

PWC_B.DWG

PROPOSED LAYOUT OF RANGE CONTROL COMPLEX

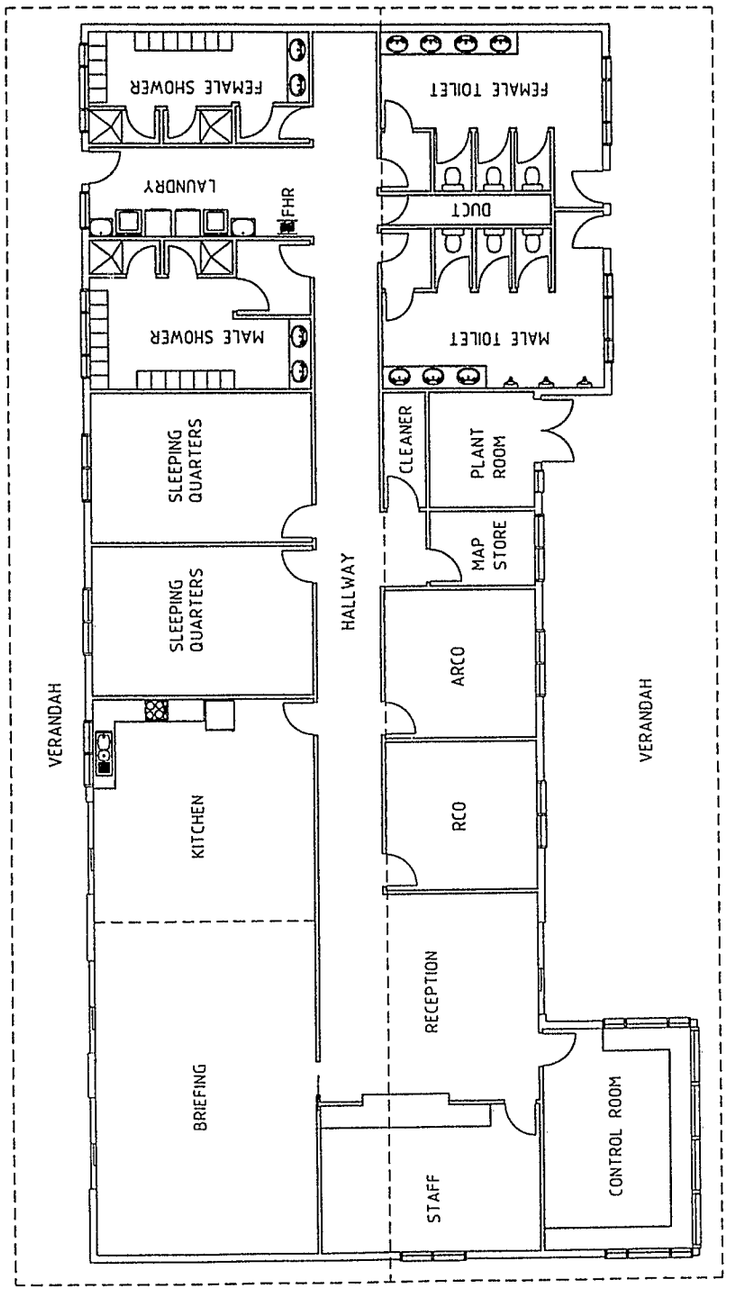


PROPOSED LAYOUT OF NEW TFTA RANGE CONTROL

Scale: 0 50m.

B-5

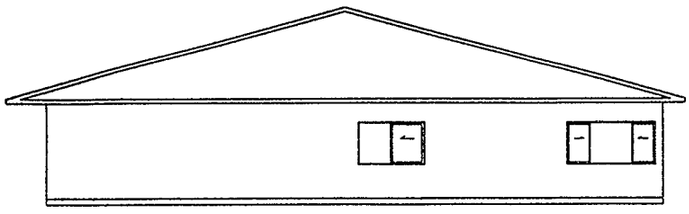
RANGE CONTROL HQ BUILDING - PLAN VIEWS



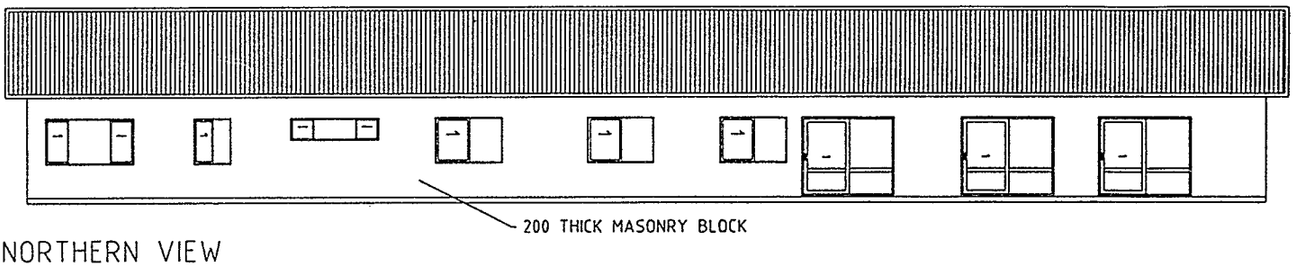
PROPOSED TFTA RANGE CONTROL HQ BUILDING

Scale: 0 10m.

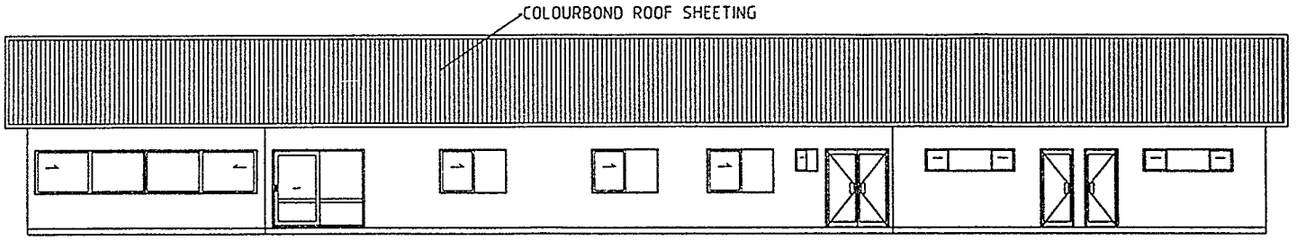
B-6



WESTERN VIEW



NORTHERN VIEW

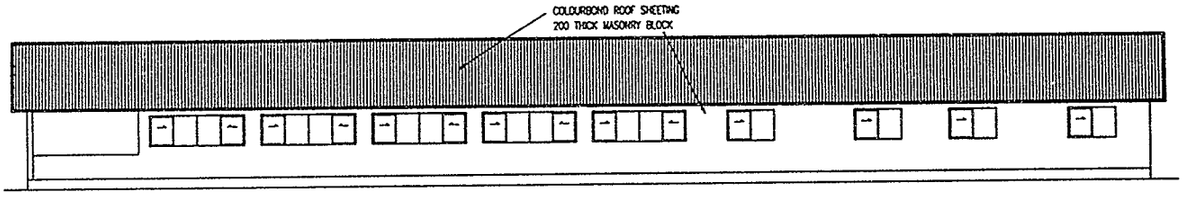


SOUTHERN VIEW

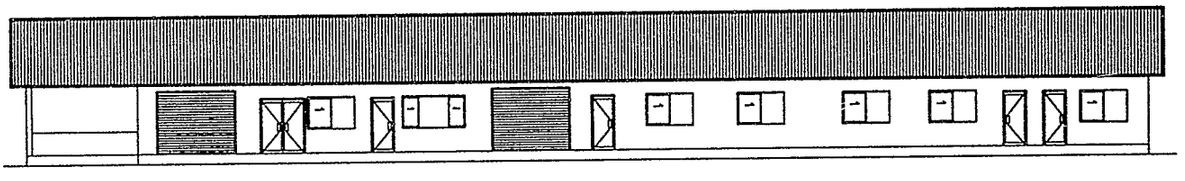
Scale: 0 10m.

RANGE CONTROL HQ BUILDING - ELEVATION VIEWS

B-7

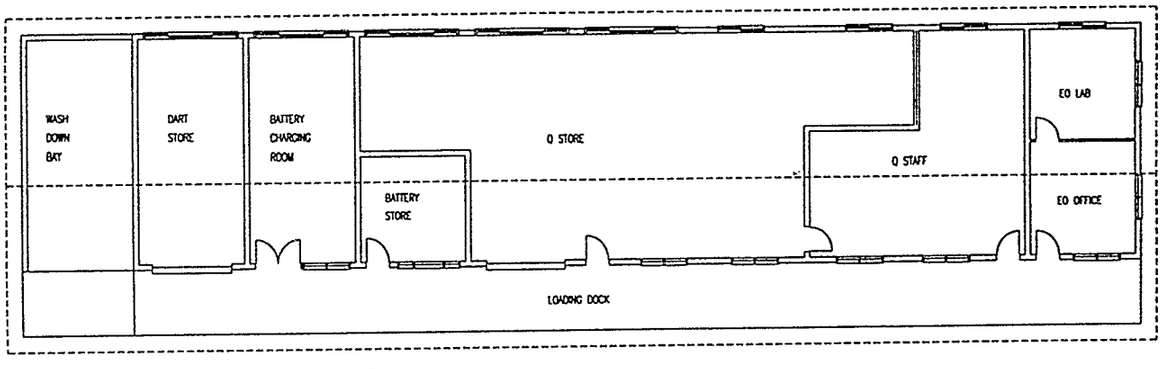


EASTERN VIEW



WESTERN VIEW

B-8

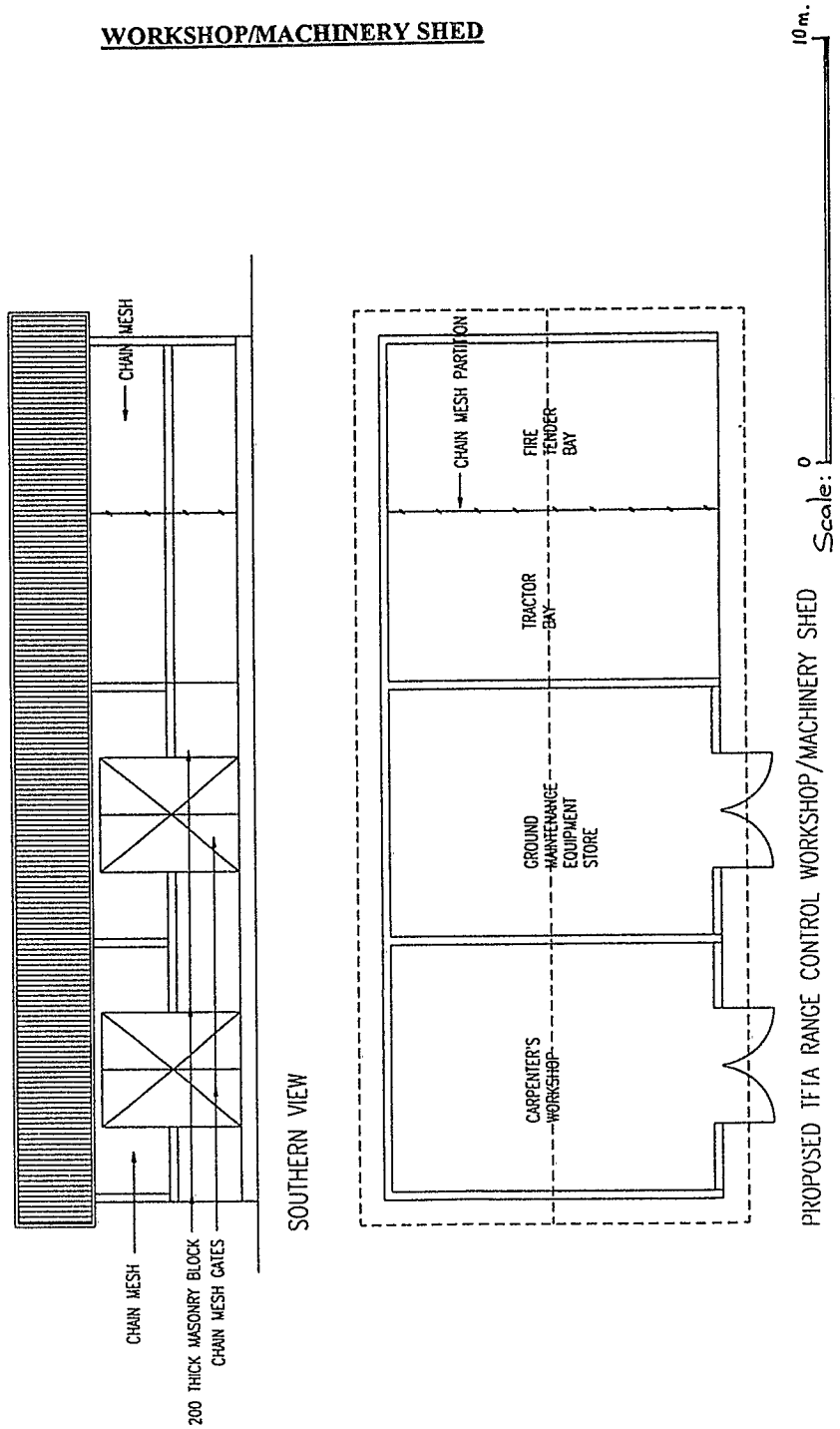


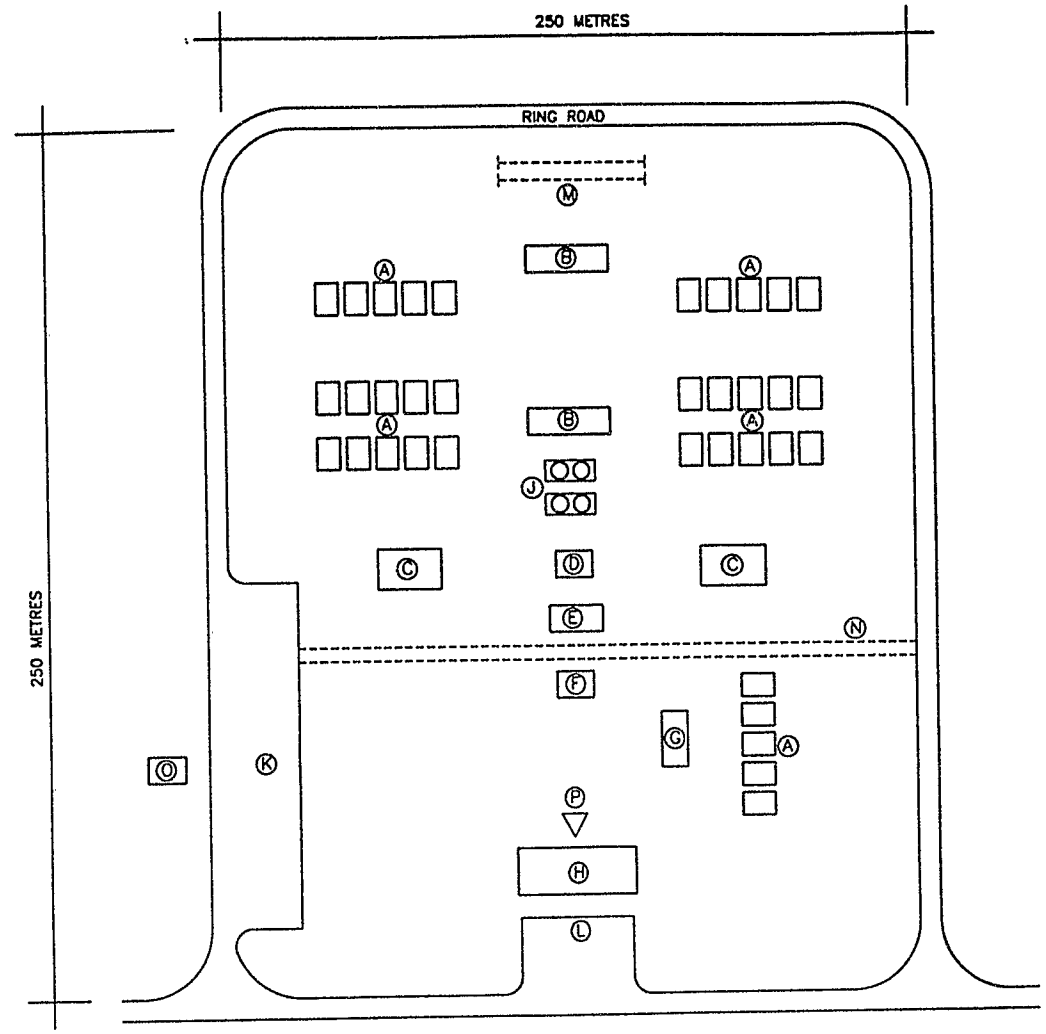
PROPOSED TFTA RANGE CONTROL Q STORE

Scale: 0 10m.

RANGE CONTROL Q-STORE

WORKSHOP/MACHINERY SHED





SCALE
0 10 25 50m

LEGEND

A	TENT SLAB AREA (10 SLABS - 100 MEN)
B	OR TOILET BLOCK
C	MESS TENT SLAB
D	WASH UP
E	KITCHEN
F	RAP
G	OFFR/FEM TOILET
H	ADMINISTRATION
J	OVERHEAD WATER TANKS
K	HARDSTANDING 2000sqm
L	PARKING AREA
M	SEWERAGE PLANT
N	ACCESS TRACK - RATIONS, AMBULANCE, WASTE
O	ENVIRONMENTAL TRAP
P	COMMUNICATIONS TOWER

SITE PLAN

350 MAN CAMP
TOWNSVILLE FIELD TRG AREA
PROPOSED SITE PLAN

Existing security fence

Concrete slab

Flexible pavement

Concrete slab

ACCESS

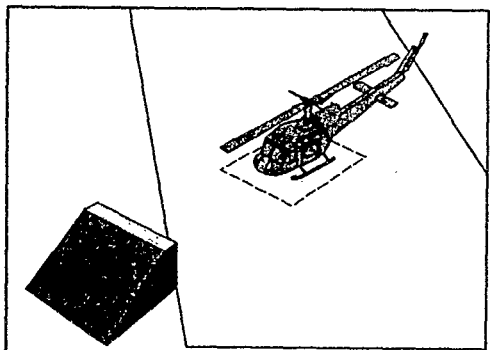
Concrete slab

Flexible pavement

Concrete slab

ACCESS

B-9



PERSPECTIVE VIEW

EXISTING HELICOPTER APRON

5 0 5 10 15 20m

TOWNSVILLE ARMY AVIATION WORKS

OLA 6 LAYOUT