

Parliamentary Standing Committee on Public Works



REPORT

relating to the

CONSTRUCTION OF MAJOR EXPLOSIVES STOREHOUSES, MYAMBAT, STAGE 1, NEW SOUTH WALES

(Third Report of 1991)

The Parliament of the Commonwealth of Australia
Parliamentary Standing Committee on Public Works

Report Relating

to the

Construction of Major
Explosives Storehouses,
Myambat, Stage 1,
New South Wales

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Australian Government Publishing Service
Canberra

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MEMBERS OF THE PARLIAMENTARY STANDING COMMITTEE

ON PUBLIC WORKS

(Thirtieth Committee)

Mr Colin Hollis MP (Chairman)
Mr William Leonard Taylor MP (Vice-Chairman)

Senate

Senator Bryant Robert Burns
Senator Paul Henry Calvert*
Senator John Robert Devereux

House of Representatives

Mr Ewen Colin Cameron MP
Mr Lloyd Reginald O'Neil MP
Mr Russell Neville Gorman MP
Mr Bruce Craig Scott MP

* Appointed on 24.8.90 following the retirement of Senator Dr Glenister Sheil

Inquiry Staff: Mr Peter Roberts (Secretary)
Mr Patrick Regan
Mrs Jackie McConnell

EXTRACT FROM THE VOTES AND PROCEEDINGS OF
THE HOUSE OF REPRESENTATIVES

NO. 37 DATED THURSDAY, 20 DECEMBER 1990

- 33 PUBLIC WORKS - PARLIAMENTARY STANDING COMMITTEE -
REFERENCE OF WORK - MAJOR EXPLOSIVES STOREHOUSES,
MYAMBAT, NSW - CONSTRUCTION: Mr Beddall (Minister
representing the 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:
Construction of major explosives storehouses at
Myambat, NSW.

Mr Beddall presented plans in connection with the
proposed work.

Debate ensued.

Question - put and passed.

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

CONSTRUCTION OF MAJOR EXPLOSIVES STOREHOUSES,
MYAMBAT, STAGE 1, NEW SOUTH WALES

By resolution on 20 December 1990, the House of
Representatives referred to the Parliamentary Standing
Committee on Public Works for consideration and report the
proposal for the construction of major explosives storehouses
and associated facilities, Stage 1, Myambat, NSW.

THE REFERENCE

1. The works proposed in this reference consist of
construction at the Myambat Supply Company, Denman, NSW (the
Depot) of 30 earth-covered explosives storehouses (ESH),
construction of living and working accommodation, extension of
the existing headquarters building, upgrading of the railway
siding and construction of mess and canteen facilities.
2. The proposal also includes provision of roads, upgrading
of the sewerage and water supply systems, extending the
electricity supply to the new ESH and the provision of fire
and security alarm systems to the new ESH.
3. The limit-of-cost estimate for the proposed works is
\$34.4m at July 1990 prices. It is planned to carry out these
works in two phases:
 - . Phase A at \$23.4m is planned for authorisation
in 1990-91
 - . Phase B at \$11m is planned for authorisation in
1995-96.
4. The total out-turn cost for the project, including
escalation, contingency and professional fees is \$47.11m (at
July 1990 prices).

THE COMMITTEE'S INVESTIGATION

5. The Committee received written submissions from the Department of Defence (Defence) and Australian Construction Services (ACS), and took evidence from their representatives at a public hearing at Myambat on 30 January 1991.
6. The Committee also received submissions and took evidence from representatives of:
- . Muswellbrook Shire Council
 - . Rosemount Estates Pty Ltd.
7. Prior to the public hearing, the Committee inspected existing ammunition storage sites, the site for the proposed ESH and the demolition range at Myambat. It also inspected existing facilities at Rosemount Estates Pty Ltd winery and the area proposed for its expansion.
8. A list of witnesses who appeared at the public hearing is at Appendix A. The Committee's proceedings will be printed as Minutes of Evidence.

THE NEED

Background

9. The Army's national wholesale ammunition assets are presently stored in five depots dispersed throughout eastern Australia. Their locations are shown on the map at Appendix B. These depots were developed during the Second World War and contain many temporary corrugated iron ESH which fail to provide the required level of physical security and are unsuited to modern warehousing practices. Existing facilities are not sited to optimise the storage of the most hazardous types of ammunition in accordance with the recently developed United Nations/North Atlantic Treaty Organisation (UN/NATO)

storage principles, and most depots are unable to store significant quantities of Hazard Division 1.1 (HD 1.1) ammunition. Operating cost penalties exist because of these inefficiencies and the unnecessarily large number of depots.

10. The Review of Australia's Defence Explosive Ordnance Facilities Requirements recommended that Army and Air Force conduct separate studies to determine the longer-term location of their respective major national depots. This proposal represents the result of Army's separate study.

11. Army's Logistic Infrastructure Study supported the concept that, in the medium term, Army should reduce its national wholesale ammunition depots from five to two and in the long term to a single depot. This proposal addresses this recommendation within the constraints of facilities funding available. In the medium term, however, it will be necessary to retain two national wholesale depots. Stage 2 is a separate project, beyond the Five Year Defence Program, which will complete the concentration of national wholesale stocks into a single depot.

12. Myambat is in New South Wales, to the west of Singleton and Muswellbrook and is located some 12 kilometres west of Denman along the Rosemount Road; a location map is at Appendix C.

13. Myambat is a significant Defence installation, supporting a number of customer units who draw ammunition for use on NSW and Northern Territory rifle field firing ranges. It also issues ammunition to regional ammunition depots throughout Australia.

Myambat as the National Wholesale Ammunition Depot

14. Development of a single national wholesale ammunition depot will enable the rationalisation of storage facilities

and the closure of several depots, with a significant reduction in operating and manpower costs. This proposal should enhance the operating efficiency and effectiveness of the remaining depots and enable concentration of technical expertise.

15. All existing national ammunition depots were examined to determine their suitability as the site for a future single national depot. The principal factors considered in selecting the site for a national wholesale depot were:

- . existing ammunition storage and processing facilities
- . existing administrative and support facilities
- . existing demolition range and its licensed capacity
- . potential to hold the ammunition stocking liability nominated in the Army National Ammunition Stocking Plan
- . the ability to provide regional support to local Defence Force units in accordance with the recommendations of the Review of Australia's Defence Explosive Ordnance Facilities Requirements
- . the proximity to customers, major transport routes and suppliers
- . expansion capacity within the existing Commonwealth property boundary
- . local infrastructure and labour resources
- . security requirements

- . environmental factors
- . aircraft flight paths
- . adjacent land usage and the threat from civil encroachment.

Options Studied

16. The following development options were considered:

- . Option 1
develop a 'greenfields' site to meet the total national storage requirement. This option was discarded as it did not utilise any of the existing storage facilities and was considered prohibitively expensive. It would require major land acquisition with attendant environmental and political problems.
- . Option 2
develop Bogan Gate, NSW, as the sole national depot. While suitable administrative and married quarters areas exist at Bogan Gate, there are only four suitable ESH. The depot is remote from suppliers and dependant units and its demolition range has a very restricted licence limit. This option was therefore discarded since it would be only marginally less costly than a 'greenfields' option.
- . Option 3
Marrangaroo, NSW, was not considered suitable as the sole national depot, as it would require considerable land acquisition and construction of a totally new administrative area. The depot is subject to urban encroachment and security problems exist with public trespass. Only four standard brick ESH are available. Retail support could be carried

out more economically from Myambat and Moorebank, NSW.

Option 4

develop Wallangarra, Queensland, as the sole national depot. This option would utilise existing facilities and could be achieved with limited land acquisition. Existing facilities include seven suitable ESH, an ammunition process building and an administrative building. However, the existing infrastructure is poorly developed and the depot is located some three kilometres from the headquarters and domestic accommodation area, thus posing security difficulties. The main rail link south of Wallangarra is no longer used.

Option 5

develop Myambat as the sole national depot. This option utilises the major element of existing facilities (15 ESH) and could be achieved with only minor land acquisition. The depot is linked to a heavy-duty rail system.

Option 6

develop both Myambat and Wallangarra as major national holding depots. This option did not meet the Army's long-term objective to concentrate national storage into one location. Limited resources would best be applied to the phased development of a single national depot.

17. The preferred option was to develop Myambat as the principal national wholesale depot, with Wallangarra holding any overflow in the medium term. It will be necessary for some HD 1.1 ammunition to be stored above-ground but the major holding would be held at Myambat in earth-covered ESH. Sufficient facilities are included in this proposal to permit

the closure of Marrangaroo and Bogan Gate depots. (The Wirilinga, NSW, ammunition depot closed in September 1990 and stocks from there were transferred to Myambat). The Wallangarra depot could close on completion of Stage 2 subject to the provision of a joint user regional facility at RAAF Base Amberley, in accordance with the recommendations of the Review of Australia's Defence Explosive Ordnance Facilities Requirements.

18. The Committee noted advice that, while Defence intended Myambat to become the single national wholesale depot for ammunition, a reasonable portion of stock held would continue to be scattered to other retail depots. Thus, particular types of ammunition would be split between wholesale and retail depots to ensure accidental or deliberate destruction would not remove all stocks.

The Committee's View

19. The Committee wishes to record its concern that a decision has been made to concentrate national wholesale ammunition holdings at Myambat. It notes this decision was made as the result of Defence and Army studies with the intention of reducing inefficiencies and operating cost penalties. Because of the depot's relative isolation and the narrow access road to and from the highway, the Committee believes further consideration should be given to the wider dispersal of wholesale ammunition holdings. In particular, it believes a study should be made of the costs and benefits of retaining Wallangarra as a second national wholesale depot, and the results of the study be passed to the Committee. Retention of Wallangarra would ensure continuity of supplies to retail depots should there be any problems in supplying ammunition to and from Myambat.

COMMITTEE'S RECOMMENDATION

20. The Committee recommends the Department of Defence study the costs and benefits of retaining Wallangarra as a second national wholesale ammunition depot. The results of this study should be passed to the Committee.

Existing Land Use and Topography

21. The Myambat depot can be divided into five areas of land usage, depicted at Appendix D:

- . Explosives Storage Area, Ammunition Processing Buildings (APB) and Burning Ground
- . Non-Explosives Area, Returned Produce Store, Carpenter's Workshop and Depot Store
- . Demolition Range, Demolition Area and Observation Bunker
- . Administrative/Camp Area. Headquarters building, Quartermaster, Transport Compound and Messes
- . Married quarters area, housing and some sporting facilities.

22. The Explosives Storage Area is widely dispersed on a flat but narrow valley floor. On three sides there are precipitous sandstone escarpments which provide natural revetments and a good measure of physical security, as well as being an effective natural barrier, between the Explosives Storage Area and surrounding landowners.

Existing Facilities at Myambat

23. The Myambat depot developed to its present stage because of Army's need to make maximum use of temporary facilities left surplus as a result of scaling down of ammunition storage requirements after the Second World War. The majority of ESH constructed during the war years have been demolished; however, 24 assorted storehouses remain from that period. The 'Sydney Williams' type ESH is a corrugated iron clad building that provides inadequate security and incurs a significant repair and maintenance liability.

24. In the 1960s, 15 brick ESH were constructed. However, these buildings were constructed prior to the introduction of the UN/NATO regulations and were not sited to optimise the storage of the more hazardous types of ammunition. This has resulted in Myambat not being able to store significant quantities of HD 1.1 ammunition, (demolition explosives, 155mm High Explosive (HE) rounds and HE grenades).

25. In the 1980s, a new APB was constructed. This APB has increased the depot's ability to process ammunition for issue and storage. A new Headquarters building and Quartermaster and Transport Compound were also constructed in the 1980s. In recent years, the quality of housing has been improved with the construction of four new married quarters.

26. Living-in accommodation for all ranks consists of sub-standard temporary accommodation which provides inadequate relief from the climatic extremes experienced in the Denman area. Messing and kitchen facilities were erected during the Second World War; they are inadequate and constitute an on-going repair and maintenance liability.

27. The Returned Produce Store is housed in dilapidated corrugated iron clad sheds which are inadequate to cope with the depot's expanded role and are inappropriately located

within the Explosives Area. The Carpenter's Workshop is currently located within the previous Headquarters building, a weatherboard structure which is uneconomical to maintain and does not comply with current Occupational Health and Safety Regulations. Locating the Carpenter's Workshop with the Returned Produce Store will enhance efficiency as most of the work involves repairs to returned wooden ammunition packaging containers.

28. The Myambat depot now comprises a mix of modern permanent facilities and old temporary structures, many of which are well beyond economic repair.

COMMITTEE'S CONCLUSION

29. The Committee agrees that a need exists to provide permanent ammunition storage and living, messing and working accommodation at Myambat.

THE PROPOSAL

Objectives

30. The objectives of the proposal are:

- . to rationalise a major part of Army's national ammunition storage, enhance its effectiveness and conform to UN/NATO Ammunition Storage Regulations, without interruption to existing logistic support capabilities
- . to provide explosives storehouses with the capacity to provide HD 1.1 storage
- . to provide permanent living accommodation to Services' Scales and Standards of Accommodation (SSSA) for living-in personnel

- . to provide permanent facilities for a Returned Produce Store, Carpenter's Workshop and Depot Store
- . to provide a planning and infrastructure framework on which to complete, as a second stage, the consolidation of Army's national ammunition assets at Myambat.

Justification of Objectives

31. Continuing advances in weapons technology and the increasing sophistication of munitions demand an efficient, flexible warehousing and distribution system to meet Army's operational needs for the future. Changes have also been made to UN/NATO Ammunition Storage Regulations, SSSA, and Codes of Practice for Occupational Health and Safety in Commonwealth Government Employment. Present facilities are deficient in meeting these requirements and have a detrimental effect on the efficient and effective storage and processing of ammunition.

32. Defence believes that existing ESH do not provide sufficient numbers of suitable, secure facilities for the storage of ammunition. Redevelopment of Myambat will enhance security by concentrating national wholesale stocks predominantly in one depot in the medium term and exclusively in the long term. The redevelopment will negate the requirement to store ammunition in temporary corrugated iron 'Sydney Williams' buildings, and enable compliance with a Ministerial directive to improve the security of explosives storage. Security will be additionally enhanced by using earth-covered storehouses.

33. The development of Myambat is a long-term project and has been divided into two stages. Stage 1, this proposal, will provide the most urgently required facilities and engineering services. Stage 2 will complete the redevelopment.

34. This proposal has two phases, reflecting financial programming requirements and Defence's priority for works.

Phase A

35. The proposed scope of Phase A is for:

- . construction of 21 earth-covered ESH with associated roadworks
- . construction of a Returned Produce Store and a Support Building comprising Depot Maintenance Store, Carpenter's Workshop and Timber Store
- . extension of the existing Headquarters building
- . construction of living-in accommodation for all ranks and minor refurbishment of messing facilities
- . upgrading of sewerage and water supply
- . upgrading of depot roadways
- . provision of electricity, fire and security alarm systems to the proposed ESH.

Phase B

36. The proposed scope of Phase B is for:

- . construction of 9 earth-covered ESH with associated roadworks
- . construction of officers' and senior non-commissioned officers' mess and other ranks' canteen facilities

. upgrading of the rail siding.

DESIGN PHILOSOPHY

General Planning and Design

37. The siting and design of the proposed works have been guided by the following considerations:

- . making maximum use of the natural features of the site for each area
- . maintaining a functional relationship between the proposed buildings and those already existing, in particular maintaining the separate zones for the ESH, the Non-Explosives Area and the Administrative/Camp Area
- . making maximum use of the existing road system
- . economy of construction and minimum maintenance characteristics for buildings.

Explosives Storehouses

38. The design philosophy for the ESH is to maximise the effective use of the available land whilst maintaining the regulation safety distances to the property boundaries.

39. The proposed ESH will be earth-covered and located centrally within the property. Earth-covered ESH will permit the closest possible spacing of such structures and hence achieve the most efficient use of the available land. This will also permit the construction of additional storehouses in the future. The central location provides the optimum solution

for achieving the safety distances to the property boundary, with minimum land acquisition.

Buildings in the Non-Explosives Area

40. The design philosophy for this area is to provide functional and economic buildings which are located close to the existing Non-Explosives Area. They will be of simple design and construction to relate to the traditional forms of construction in the rural setting.

Buildings in the Administrative/Camp Area

41. The design philosophy here is to upgrade existing buildings to acceptable standards and to provide new buildings which reflect SSSA for work and accommodation areas. The Headquarters extension will match the design and materials of the existing building. The combined mess will have verandahs, metal deck roof and skylights in the form of contemporary domestic rural architecture.

Technical Standards

42. The proposed design complies with the relevant Codes of the Standards Association of Australia, Defence Codes, State Ordinances and Supply Authority Regulations.

43. Construction details for the proposed works are at Appendix E. The site plan for the depot and the plan for the explosives area are at Appendixes F and G respectively.

Use of Energy

44. Evidence was given that the energy consumption of the proposed buildings will not be great, compared with many military establishments. Apart from the kitchen for the

combined mess, energy consumption is comparable with domestic usage.

45. In its report on the redevelopment of Borneo Barracks, Cabarlah, Queensland (First Report of 1991), the Committee recommended all projects referred to it should be thoroughly analysed to ensure the most efficient use of energy, and that it should receive copies of these analyses. In its response to that recommendation, the Government indicated ACS would make these arrangements on all future projects for which it has responsibility. The Committee believes these arrangements should apply to all projects referred to it, not only those for which ACS has responsibility.

COMMITTEE'S RECOMMENDATION

46. The Committee again recommends that all projects referred to it should be analysed to ensure the most efficient use of energy in completed buildings, and that it receive copies of the results of these analyses.

Asbestos

47. Some of the buildings at Myambat contain asbestos. Evidence was given that it will be removed in accordance with the appropriate Australian Standard, by appropriately trained personnel. Disposal of asbestos will be at an approved site.

AUSTRALIAN EARTHQUAKE CODE

48. Design of buildings for earthquake effects is covered by the Australian Earthquake Code. Under this code Myambat, like Newcastle, is currently specified to be in Zone 0, which has no special earthquake design requirements. The Code is currently under review.

49. Following the Newcastle earthquake of December 1989, the Institution of Engineers, Australia, prepared a report for the NSW Government. This report recommended reclassifying all Zone 0 regions to a higher zone. The recommendations of this report will be applied to the design of all buildings in the project. The requirements will involve minor adjustments to the design of brickwork, when compared with the current practice for Zone 0 buildings. Because of the inherent strength of the ESH, they are capable of resisting significant earthquake forces without modification.

LAND ACQUISITION

50. The proposed ESH will be located centrally within the site so as to contain as much as possible of the Yellow and Purple Arcs inside the Commonwealth property boundary, thereby reducing to a minimum the amount of land to be acquired.

51. The Purple Line or Arc defines the minimum distance from an explosives facility within which large public buildings where many people may congregate, or major community amenities, may not be sited.

52. The Yellow Line or Arc defines the minimum distance from an explosives facility within which inhabited buildings, general community amenities or major traffic routes, may not be sited. These arcs and other safeguarding terms are dealt with more fully and depicted in Appendix H.

53. Most of the land required is NSW Crown land which currently abuts the existing property. The areas of land required are depicted at Appendix I. Two small areas of private freehold land are required and negotiations are nearing completion for the acquisition of the area on the north west boundary. Negotiations have commenced regarding the other freehold area of land.

54. In order to contain the Purple Arc fully, it will be necessary to extend the Commonwealth property boundary by acquisition of land from the State Government. This acquisition will also serve to rationalise the boundary of the depot and allow better boundary fencing, as much of the boundary with the Crown land is along inaccessible ridgelines and cannot be adequately fenced. Should the State Government be unwilling to sell the land to Defence, an agreement will need to be reached to ensure any future utilisation of the land does not affect the HD 1.1 licence capacity of the depot.

55. Early land acquisition or another satisfactory agreement will safeguard the future of Myambat for Army's planned storage of ammunition. This will also enable the licence capacity of existing storehouses to be increased and allow the relocation of some explosive ordnance stocks to Myambat prior to construction. Additional stocks transferred from Wirilinga has necessitated the use of temporary licence conditions to allow the stock to be accommodated in existing ESH.

TRANSPORT OF AMMUNITION

56. The currently unused railway line near the depot leads to a heavy-duty State Rail Authority link via Muswellbrook to Newcastle. The local line is planned for upgrading in Phase B of this proposal. Highway access is good with a suitable route from the Point Wilson explosives wharf near Geelong, Victoria, via the explosives factory at Mulwala, NSW and the Newell Highway to Myambat. Highways from the depot to the north and west are also good.

57. Defence advised that:

- . because of the inflexibility of the existing infrastructure and economies of scale, it is envisaged rail will not be used for routine issues of ammunition from Myambat

- . deliveries from local sources are progressive deliveries against period contracts and the use of rail is not envisaged
- . the major port which could be used for deliveries, Newcastle, is not now directly linked to the depot
- . the current cost of road transport is far less than rail; rationalisation of road transport is not anticipated for several years.

58. Thus, Defence does not anticipate there will be significant use of rail for routine movement of ammunition. However, maintenance of the upgraded line and siding at Myambat could offer flexibility in the event of a large mobilisation, and if the cost of transport by rail becomes more favourable.

59. Defence therefore considers work proposed for the railway siding should remain in Phase B, which is to be funded as a partial offset project. If insufficient revenue is available, work on the siding would be one of the first items considered for deletion. The Committee supports this overall approach.

ENVIRONMENTAL AND HERITAGE CONSIDERATIONS

60. In its evidence, ACS stated the proposed works will be wholly within Commonwealth property and that there will be no adverse effect on the property and adjoining properties. The proposed ESH will be located at the appropriate safety distances from the depot's boundaries.

Mines Subsidence

61. Myambat lies within the Muswellbrook Mines Subsidence District and is underlain by six coal seams whose depths vary between 50 and 550 metres. Mining rights to almost the entire

area are held by the Commonwealth. In its submission, ACS stated that the NSW Department of Minerals and Energy advised that the seams have no development potential, and that the proposed buildings need not be designed to take account of mine subsidence.

Environmental Concerns

62. NSW Water Resources raised a number of matters with the Committee:

- . all water supplies from bores are licensed under Part V of the NSW Water Act
- . provision of adequate containment areas for accidental spills from ammunition storage
- . contingency plans be available for accidental spills
- . containment of effluent within the property and adequate buffer zones between rivers and creeks and the sprinkler systems
- . traps be built off-site to prevent siltation during construction.

63. In reply, ACS stated:

- . this proposal does not involve any work on the bores; the matter will be further investigated
- . as all explosives held in the depot are packaged, there is no need for a containment area, or for a contingency plan
- . should there be problems with effluent in times of heavy rain, there will be adequate capacity in the

retention lagoon to hold effluent back from the sprinkler system. There is also a considerable buffer zone between the irrigation area and the rivers and creeks

- . siltation traps will be used during construction.

64. The NSW State Pollution Control Commission raised the following issues with the Committee:

- . while the Commission endorsed installation of a sewage treatment plant and disposal of effluent by irrigation, it pointed out that it was essential that the irrigation area, in particular, be established and operated in a manner which does not contaminate local streams
- . any sludge or contaminated backwash produced will require proper disposal
- . provision must be made for the disposal of waste, both domestic and general. The Commission opposes non-approved dumping and burning of waste in the open
- . because the demolition of explosives can generate vibrations, dust and fumes, special plans are needed so that possible environmental consequences are considered and addressed.

65. Defence in turn advised that:

- . a treatment system of a high standard will be installed and operated in accordance with the Commission's guidelines. While details of disposal of the sludge from the treatment system have yet to be finalised, discussions have been held with the

Muswellbrook Shire Council and the method to be used will comply with its requirements

- . domestic and general refuse is removed from the depot by contractors. Some biodegradable material is buried on site
- . demolition/disposal of ammunition is undertaken in accordance with strict guidelines designed in part to minimise the environmental impact.

Environmental Certificate of Compliance

66. The proposal has been assessed in accordance with the Administrative Procedures of the *Environment Protection (Impact of Proposals) Act 1974* and its impact has been determined as minimal. An Environmental Certificate of Compliance was issued by the Department of Defence Environment Section on 13 November 1989, and a copy is held by the Committee. This Certificate prescribed three conditions:

- . a public meeting be held at Denman to explain the proposal, including any possible future expansion
- . an accurate register of noise complaints be kept, including the type of demolition which caused the complaint
- . where possible, demolitions should occur either underground or underwater.

67. Defence advised that:

- . a public meeting was held at Denman on 29 November 1990, concentrating on the works which are the subject of this reference. Detailed information could not be provided on Stage 2 but it is envisaged

a further meeting would be held prior to the Committee's hearing of that proposal

- . the depot maintains a register of complaints, as required by the Certificate
- . because underwater demolition is only suitable for the destruction of single items with large explosive contents and it is not intended to store these items there, this type of demolition is not appropriate at Myambat
- . trials are being held to determine whether underground demolition could become the normal means of disposing of explosives. It will be considered for introduction after the results of the trials are known.

Heritage Considerations

68. While some of the stonework at the depot was built by Italian prisoners of war and internees during the Second World War, the Australian Heritage Commission advised the proposal was unlikely to affect any place in the Register of the National Estate. The National Trust of Australia (NSW) had no comment to make on the proposal.

The Committee's View

69. In view of the existence of the Environmental Certificate of Compliance, the adherence by Defence to its conditions, and the comments by Defence/ACS on the various environmental issues raised, the Committee is satisfied that appropriate measures have been or will be taken.

MUSWELLBROOK SHIRE COUNCIL

70. In its submission, the Muswellbrook Shire Council stated that, although submissions from Defence and ACS were comprehensive about works proposed for the site, they did not fully examine the external effects of these works on the local community. In particular, the Shire Council sought a statement of the environmental effects for its consideration, together with a development application for the project.

71. In evidence, the Shire Council's representative said the Council needed further details from Defence of how the expansion of the depot will affect Denman. A preference was expressed that the majority of married quarters, which might be provided for staff, be built in Denman.

Defence/ACS Views

72. The public meeting at Denman in November 1990 dealt principally with the works in this proposal, rather than any impact the development might have on the local community. If the military population is likely to increase by 26, and civilian staff by up to 16, of whom at least half in each case will probably be married, it is reasonable to anticipate some impact on that community. ACS believed that construction will generate about 50 jobs in the community but were unable to estimate how many people would come to the area for the project.

73. The Committee sees advantages for both the depot at Myambat and the Denman community in timely assessments of what these impacts may be. It notes that the Department of Defence is not required to submit a development application or a statement of the likely effects of this proposal for consideration by the Shire Council. Nevertheless, it believes a continuing consultation program with the Denman community would be worthwhile, and that the first step in such a program

could be a further public meeting at which all the likely impacts of the proposed works would be outlined.

74. Although more information could have been provided to the Denman community about the proposed works, the Committee commends Defence for the efforts it makes to be a good neighbour in the communities in which bases are located.

ROSEMOUNT ESTATES PTY LTD

75. Rosemount Estates Pty Ltd (Rosemount) is a winery whose property adjoins the depot on the winery's north/north western side. In its submission, Rosemount informed the Committee that it plans almost to double its size within the next ten years. Clearing works have begun, with plans to extend buildings into the area covered by the Purple Arc. Restrictions on the use of land within the arc may inhibit development of Rosemount. A further concern was that there was no guarantee present regulations would not change, altering the type of buildings allowed within the arc. Other areas for expansion of the winery cause Rosemount serious problems because all its buildings are, and extensions/additional buildings are proposed to be, built in the limited area at the foot of the escarpment overlooking the vineyards to the west. If the winery were unable to expand, it would not be able to implement economies of scale to cope with cost increases, causing a considerable loss of profit and the likely extinction of the winery as a viable entity.

76. Rosemount's second written objection to the project, which was also covered in evidence to the Committee, dealt with the adverse impact on its operations of the destruction of explosives.

77. In evidence to the Committee, Rosemount also stated it did not want the Purple Arc within its freehold land and that there were three ways to resolve this difficulty:

- . there is a mountain between the winery and the depot and a computer model was being prepared which should show it is unnecessary to have such a large arc
- . Defence move its ESH back far enough into the depot to bring the Purple Arc within its own boundaries
- . restrict the amount of ammunition held so that the Purple Arc falls within the depot's boundaries.

78. Rosemount also stated it would be satisfied with an undertaking about the quantity of explosives to be stored at the depot if regulations were to change.

79. The second concern raised in evidence was the location of the sewage treatment plant which is to remain in a small area in the south west corner of the depot, close to the boundary with the winery. A final matter was fires being started by demolition of explosives at the depot.

Defence/ACS Responses

80. Defence told the Committee that the south western portion of the existing Purple Arc extends over the Rosemount property (see the Attachment to Appendix H). None of the facilities proposed for that area by the winery would cause Defence any concern. There was no reason why safeguarding arcs would change for the worse; Defence was hopeful they would be reduced. As a result of the project, ESH will be put into a smaller area and concentrated in the middle of the depot; HD 1.1 ammunition will be removed from peripheral storehouses and the Purple Arc will then be moved back significantly within the Defence boundary. The project will reduce the amount of Rosemount's land covered by the Purple Arc.

81. Evidence was also given that the Purple Arc required by the UN/NATO guidelines is a radial distance drawn on a map from the centre of each storehouse, without taking topography into account. There is a considerable amount of rugged terrain between the depot and Rosemount; the area of the Purple Arc which is presently over portion of the winery is to the south west of the mountain. Included in the evidence from Defence is a comment that this area provides a very effective natural barrier between the Explosives Storage Area and surrounding landowners. A computer model is being developed to determine the effect of any explosion at the depot on this terrain. It is expected to show such a significant effect that it would be possible to redraw the Purple Arc entirely within the depot's boundary. This outcome would satisfy Rosemount's concerns about the Purple Arc.

82. With reference to Rosemount's concern that present regulations could change, Defence stated that, if its standards did change and safety distances were increased, it would not have the right to tell Rosemount to demolish any buildings it might have built. If buildings had been constructed in the relevant area of the winery, explosives holdings would be reduced or the property would have to be acquired with proper compensation.

83. Since the public hearing, Defence has advised the Committee that routine disposal of white phosphorous-filled ammunition ceased at Myambat on 3 February 1991. Only emergency demolitions of single rounds are permitted at a new demolition site further away from the winery. This new site will be less susceptible to wind drift and this, combined with the reduced amounts of white phosphorous being disposed of, should alleviate problems both for Rosemount and the general community. There will always be problems with explosives in such dangerous states that they have to be disposed of under proper safeguards. Any such disposals would be at the new

demolition site, but it is not possible to give quantities which would have to be destroyed in future.

84. Referring to Rosemount's wish for an undertaking about reducing the amount of ammunition stored, Defence said the Purple Arc could not be pulled back simply by reducing the quantity of explosive stored without a reduction to the maximum capacity of the depot. Moving the site for the proposed ESH 150 metres north would reduce the number which could be provided because this site is constricted; thus, the quantity of explosive which could be stored, other than HD 1.1, would be reduced. Use of the northern site would also move the Purple Arc over private property to the north of the depot.

85. The sewage treatment plant is located in accordance with the distance from the married quarters recommended by the State Pollution Control Commission. The plant has been designed to install tanks in the ground, protruding about 150 millimetres above the surface. All treatment will be within the tanks and the spray irrigation system is not expected to produce odours or any nuisance. ACS believed the plant, if anything, would enhance that area of the depot.

86. Defence witnesses agreed there had been the occasional fire in the area and believed that increased staff numbers at Myambat will increase the capacity to fight such small grass fires as might occur. The unit is well aware of the fire hazard, generated in part by its demolition range, and has a fire reduction program, principally back-burning.

87. At the public hearing on 30 January 1991, Defence stated that a letter would be sent to Rosemount which would:

state no more white phosphorous or any other materials determined to be hazardous to the wine industry would be burnt in the current demolition

area, and that any other white phosphorous held at Myambat would be destroyed at a site well away from the winery

state the Purple Arc will be moved back within Defence property as the result of the project

state that, even if safeguarding distances did change, Defence would not be able to tell the winery to demolish any structures built under current rules.

The Committee's Views

88. The Committee notes that the content of the letter to be sent to Rosemount was discussed in some detail at the public hearing. It believes that this letter should satisfy the reasonable concerns which were expressed. It notes that the public hearing on this reference was held on 30 January 1991 and that results of the computer modelling by Defence were not available at the date of clearance of this report. Defence should continue its efforts to resolve outstanding issues with Rosemount.

COMMITTEE'S RECOMMENDATION

89. The Committee recommends that the Department of Defence continue to resolve outstanding issues with Rosemount Estates Pty Ltd.

CONSULTATION

90. Discussions have taken place throughout the project's development, including the Committee's consideration, with the following authorities and organisations:

- . Muswellbrook Shire Council
- . Rosemount Estates Pty Ltd
- . Australian Ordnance Council
- . NSW Department of Minerals and Energy
- . NSW Water Resources
- . NSW Mines Subsidence Board
- . NSW Soil Conservation Service
- . NSW Pollution Control Commission
- . The Federal Task Force for the Hunter
- . The National Trust
- . Australian Heritage Commission.

Concerns raised by some of these organisations are dealt with elsewhere in this report.

FINANCE AND PROGRAMMING

91. The limit-of-cost estimate for the proposal at July 1990 prices is \$34.4m made up as follows:

Phase A (for authorisation in 1990-91)	
Explosives Storage Area	\$20.42m
Camp Area	<u>\$ 2.98m</u>
Sub-total (Phase A)	\$23.4m
Phase B (for authorisation in 1995-96)	
Explosives Storage Area	\$ 7.6m
Camp Area	\$ 3.14m
Railway Siding	<u>\$ 0.26m</u>
Sub-total (Phase B)	\$11m
Total Stage 1	<u>\$34.4m</u>

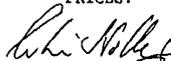
COMMITTEE'S RECOMMENDATION

92. The Committee recommends the proposal for the construction of major explosives storehouses and associated facilities, Stage 1, at Myambat, NSW, at a limit-of-cost estimate of \$34.4m at July 1990 prices.

CONCLUSION AND RECOMMENDATIONS

93. The conclusion and recommendations of the Committee and the paragraph in the report to which each refers are set out below:

- | | Paragraph |
|---|-----------|
| 1. THE COMMITTEE RECOMMENDS THE DEPARTMENT OF DEFENCE STUDY THE COSTS AND BENEFITS OF RETAINING WALLANGARRA AS A SECOND NATIONAL WHOLESALE AMMUNITION DEPOT. THE RESULTS OF THIS STUDY SHOULD BE PASSED TO THE COMMITTEE. | 20 |
| 2. THE COMMITTEE AGREES THAT A NEED EXISTS TO PROVIDE PERMANENT AMMUNITION STORAGE AND LIVING, MESSING AND WORKING ACCOMMODATION AT MYAMBAT. | 29 |
| 3. THE COMMITTEE AGAIN RECOMMENDS THAT ALL PROJECTS REFERRED TO IT SHOULD BE ANALYSED TO ENSURE THE MOST EFFICIENT USE OF ENERGY IN COMPLETED BUILDINGS, AND THAT IT RECEIVE COPIES OF THE RESULTS OF THESE ANALYSES. | 46 |
| 4. THE COMMITTEE RECOMMENDS THAT THE DEPARTMENT OF DEFENCE CONTINUE TO RESOLVE OUTSTANDING ISSUES WITH ROSEMOUNT ESTATES PTY LTD. | 89 |
| 5. THE COMMITTEE RECOMMENDS THE PROPOSAL FOR THE CONSTRUCTION OF MAJOR EXPLOSIVES STOREHOUSES AND ASSOCIATED FACILITIES, STAGE 1, AT MYAMBAT, NSW, AT A LIMIT-OF-COST ESTIMATE OF \$34.4M AT JULY 1990 PRICES. | 92 |



Colin Hollis

Chairman

11 April 1991

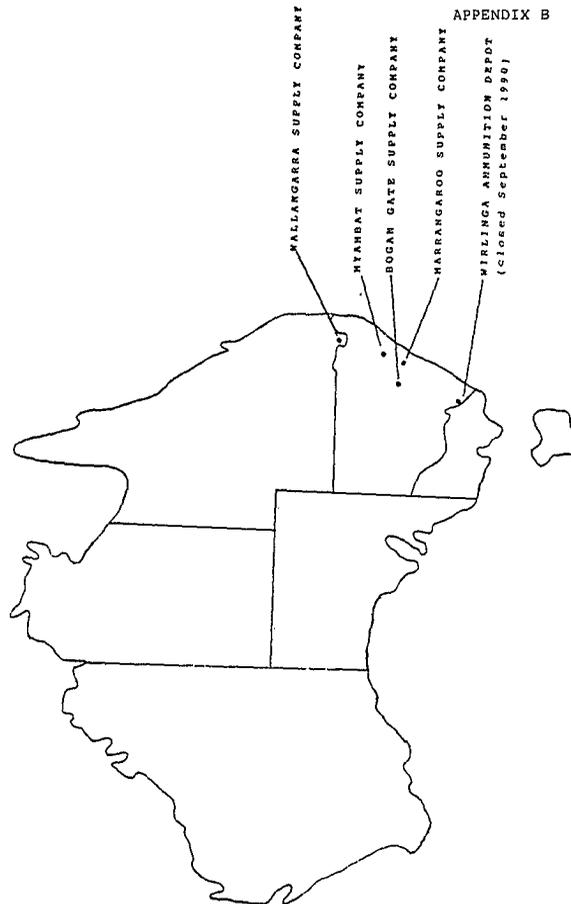
APPENDIX A

LIST OF WITNESSES

- BELFORD**, Major Mark Collin, Command Ammunition Technical Officer, HQ Logistic Command, Department of Defence, 350 St Kilda Road, Melbourne, VIC 3004
- BUTLER**, Mr Kenneth Robert, Assistant General Manager, Client Services, Australian Construction Services, PO Box 111, Dickson, ACT 2602
- DICKENS**, Lieutenant Colonel William Rostron, Project Manager, Accommodation and Works - Army, Department of Defence, Russell Offices, Canberra, ACT 2600
- HOROSCHUN**, Mr Gerhard, Senior Structural Engineer, Australian Construction Services, Sirius Building, Furzer Street, Phillip, ACT 2606
- HELLYER**, Brigadier Grahame Leslie, Director General Accommodation and Works - Army, Department of Defence, Russell Offices, Canberra, ACT 2600
- KENDELL**, Mr David Ward, C/- McCabe Brown, Level 5, 580 George Street, Sydney, NSW 2000
- NICHOLS**, Mr Kerry Glen, Engineer-Planner, Muswellbrook Shire Council, PO Box 122, Muswellbrook, NSW 2333
- OATLEY**, Mr Robert Ian, Chairman, Rosemount Estates Pty Ltd, 16 Herbert Street, Artarmon, NSW 2064
- OATLEY**, Mr Andrew Geoffrey, Deputy Chairman, Rosemount Estates Pty Ltd, Rosemount Road, Denman, NSW 2328
- QUAIFE**, Major Alan Edward, Officer Commanding, Myambat Supply Company, Department of Defence, Denman, NSW 2328
- TIECHERT**, Mr Klaus Dietrich, Project Manager (Army), Project Services, Australian Construction Services, Zenith Centre, Chatswood, NSW 2067
- WOLFGANG**, Mr Edward Ian, Deputy Shire President, Muswellbrook Shire Council, PO Box 122, Muswellbrook, NSW 2333

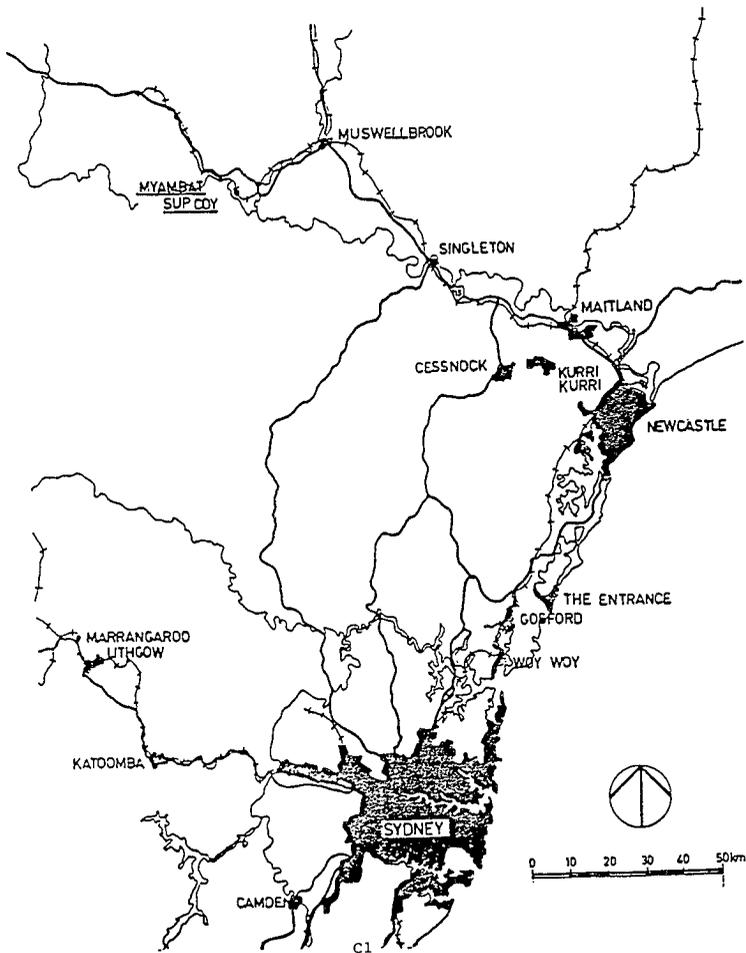
APPENDIX B

LOCATION OF ARMY NATIONAL AMMUNITION DEPOTS



APPENDIX C

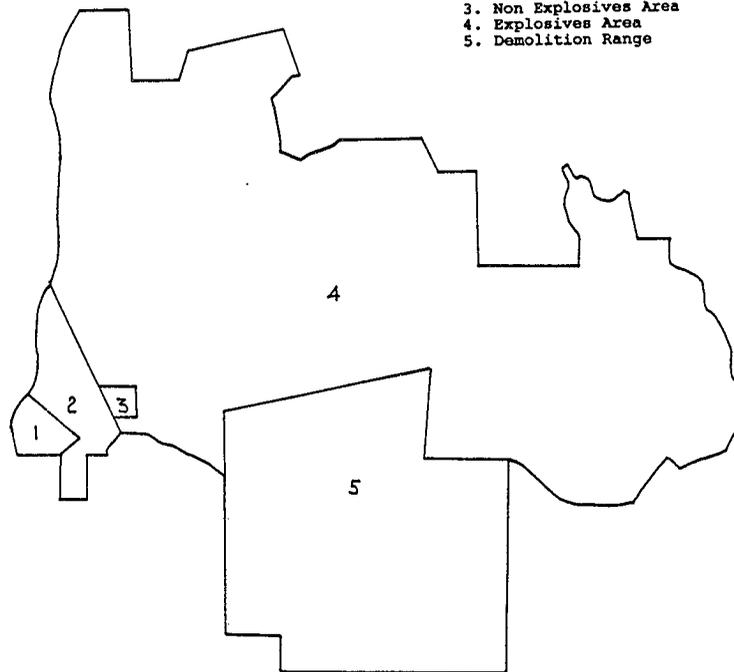
LOCATION MAP



APPENDIX D

LAND USAGE MYAMBAT SUPPLY COMPANY

1. HQ Area
2. Administrative Area
3. Non Explosives Area
4. Explosives Area
5. Demolition Range



CONSTRUCTION DETAILS**BUILDING WORKS IN THE EXPLOSIVES STORAGE AREA****GENERAL**

The proposed works in the Explosives Storage Area comprise:

- thirty earth-covered Explosives Storehouses (ESH)
- the modification of an adjacent existing ESH (Building 29) to serve as a support building to the proposed ESH.

SITE LAYOUT

These buildings will be located in three rows, the layout being governed by the site constrictions of creeks on two sides of the area and steeply sloping ground on the third side; there is potential for further development of the Explosives Storage Area.

Door openings in the new buildings will be facing generally south to allow the existing 1960s ESH to be used.

The buildings will be served by a system of interconnecting concrete roads. These were chosen as more suitable than bitumen for use by forklift trucks.

STRUCTURE AND MATERIALS

The buildings follow a standard design which has been certified to contain up to 75,000 kg of explosives when the buildings are located at the appropriate regulation safety distances from each other.

Because of the comparatively low explosives weight-to-volume ratio of the material to be stored by the Army in these facilities, it would not normally be possible to store 75,000 kg of explosives within the available volume of each building.

It has therefore been decided that the buildings will be licensed to hold only 50,000 kg of explosives. The buildings will be located at the safety distances appropriate to this explosives content per building. This will result in more efficient land utilisation and reduced costs in terms of roads and site works, without compromising the effective storage capacity of the buildings.

The basic construction of ESH is reinforced concrete walls, floor and roof with steel doors capable of withstanding a standard design blast pressure. The buildings will be constructed on the natural sand/gravel type of soil in the Explosives Storage Area, using wide strip footings.

To improve their suitability for the safe storage of explosives, the certified design requires that the buildings be covered with a layer of earth over the roof and a bank of earth on three sides.

The buildings are not intended to remain intact should an explosion occur, but are intended to provide protection to the stored explosives should an explosion occur in another building in the group.

This type of structure has been chosen as it enables ESH to be located safely in close proximity, thereby permitting the most efficient use of the available land. It has the added advantage of requiring minimum maintenance since, with the exception of the doors, the exposed surfaces are concrete.

CONVERSION OF EXISTING BUILDING 29

Building 29 is an existing brick ESH constructed in the 1960s. Because of its type of construction and its proximity to the proposed ESH, it will not be permissible to use it for the storage of explosives.

This building will be converted into a support facility for the new ESH. A staff amenities area will be constructed within part of it. The remainder of the building will be used to garage and re-charge the electrically-powered forklift trucks to be used in the ESH.

ENGINEERING SERVICES IN THE EXPLOSIVES STORAGE AREA**ELECTRICAL SERVICES**

New high voltage aerial cables will be installed to the Explosives Storage Area. All electric cables in the vicinity of the ESH will be located underground. Two new sub-stations will be located within the Explosives Storage Area.

All ESH will have lightning protection and static earthing. Internal light fittings to the ESH will be of the appropriate type for an explosive environment. External security lighting will be installed throughout the Explosives Storage Area. It will be operated by a photo-electric cell.

FIRE PROTECTION

All ESH will be provided with a smoke detection alarm system. The alarm will be connected to the Security Control Room in the Headquarters building. Push-button fire alarm points will also be provided at suitable locations within the Explosives Storage Area.

Four 60,000 litre water storage tanks will be provided around the Explosives Storage Area for fighting grass fires and bush fires.

COMMUNICATIONS

Telephones will be provided connecting the Explosives Storage Area to the Headquarters building.

SECURITY SYSTEM

All ESH will be provided with infra-red movement detectors and door alarms. The detectors and alarms will be monitored by a computer system in the Security Control Room.

SITE WORKS IN THE EXPLOSIVES STORAGE AREA

There is no reticulated water service to the Explosives Storage Area. Rain water is collected from the roofs of the existing Explosives Storehouses and stored in tanks. It is not proposed to alter this system. Stormwater from the Explosives Storage Area will continue to discharge into the creek system, and thence into the Goulburn River. The drainage system will be designed to cope with rainfall intensities with an average recurrence of once in 100 years.

ROADS AND PARKING

A parking area for three trucks will be constructed at the entrance to the Explosives Storage Area. This will permit explosives trucks to park while paperwork is being processed.

The existing single-lane southern access road from the Headquarters building to the Explosives Storage Area will be upgraded. It will be re-sealed with bitumen and widened on the curves. The ESH will be serviced by a network of concrete roads and unloading aprons. A sealed security road will be provided at the rear of the northern row of Explosives Storehouses.

To allow for the overnight parking of trucks loaded with explosives, a secured transit parking area for five semi-trailer trucks will be provided to the east of the ESH.

To retain any earth or rocks dislodged from the adjacent steep slopes, a one metre high earth barrier will be constructed on the southern side of the Explosives Storage Area.

UPGRADING OF RAILWAY SIDING

The existing rail line and platform, not currently used, will be repaired to enable them to be used for the transport and handling of explosives. The roads serving the railway siding will also be upgraded.

BUILDING WORKS IN THE NON-EXPLOSIVES AREA

GENERAL

The proposed works in the Non-Explosives Area on the western side of the site comprise:

- a Returned Produce Store
- a Depot Store
- a Support Building comprising an office, staff amenities, Carpenter's Workshop and Maintenance Equipment Store.

SITE LAYOUT

These buildings form a single complex to the north of the existing building in the Non-Explosives Area.

The Returned Produce Store consists of a fully enclosed store and a covered unloading area. This building is intended for the processing and storage of spent shell casings, empty ammunition boxes and spare pallets prior to dispatch or re-use.

The Depot Store is an enclosed store situated between the Returned Produce Store and the Carpenter's Workshop. It is intended for the storage, issue, receipt and maintenance of ordnance handling and packaging equipment.

The Support Building consists of a Carpenter's Workshop, timber store, Maintenance Equipment Store and garage, together with an office and staff amenities area which will serve all the buildings within this complex.

STRUCTURE AND MATERIALS

The Returned Produce Store and Depot Store will be constructed using a steel frame and metal cladding. Brick will be used on a portion of the Depot Store, where it abuts the Support

Building, to provide visual continuity. These buildings will be constructed on independent concrete pad footings. The stores will be fitted with smoke vents in the roofs and walls. Supplementary wall vents will provide permanent cross-ventilation.

The Support Building will be constructed using a steel frame, brick walls and a metal deck roof, to blend with the existing adjacent buildings of similar scale. To counteract the effects of the expansive clay on a brick building, this building will be constructed on a stiffened concrete slab footing.

FINISHES

The Returned Produce Store will have pre-finished metal wall cladding in matching colours to the existing buildings.

The roof will be an insulated metal deck with strips of clear sheeting to provide natural light. Floors will be concrete.

The Depot Store will have a mixture of pre-finished metal wall cladding and brick walls. The roof will be an insulated steel deck with strips of clear sheeting to provide natural light. Floors will be concrete.

The Support Building's walls will generally match bricks used elsewhere in this area.

Internal walls will be rendered and painted, those for the ground maintenance and vehicle areas will be face brick.

Windows will be aluminium framed.

Floors will be steel-trowelled concrete in the workshops and vehicle areas, ceramic tiles in the wet areas and sheet vinyl in the office.

The offices workshops and amenities will have plaster-board ceilings.

BUILDING WORKS IN THE ADMINISTRATIVE/CAMP AREA

GENERAL

The proposed works in the Administrative/Camp Area on the western site comprise:

- . an extension to the existing Headquarters building
- . new messing and accommodation facilities.

Live-in accommodation will be provided for two officers, four senior NCOs and 12 other ranks.

SITE LAYOUT

The extension to the Headquarters building has been located to the west of the existing building and it is set back to create a new main entrance to the building.

The new messing and accommodation facilities have been sited to the north of the existing buildings to enable these facilities to remain in operation while the new buildings are under construction. This location also provides better views to the north and north west and places the building in a focal position within the camp area.

STRUCTURE AND MATERIALS

The extension to the Headquarters building will be of cavity brick construction with a tiled roof to match the existing building. Some internal refurbishment of the building will be included, to satisfy functional requirements.

The messing and accommodation facilities will consist of three building groups comprising a central mess and accommodation blocks for the different ranks. Because of its height and the amount of internal open space, the Mess Building will have a steel frame supporting the brick walls and roof. The accommodation buildings will be of domestic type cavity brick construction.

FINISHES

Finishes to the Headquarters building will match the existing finishes of rendered and painted walls, plaster-board ceiling and sheet vinyl floor covering.

Roofing for the messing and accommodation facilities will be pre-finished metal deck with sarking and insulation over all internal areas. Ceilings will generally be plaster-board with some timber finishes to upper level skylight areas. Wall finishes to lounge, recreation areas, dining area and common rooms will be face brick. Wall finishes to kitchens, bedrooms and ablutions will be rendered and painted. Windows will be aluminium framed and glazed. Floor finishes will be carpeted in all living, accommodation, recreational and lounge areas in the mess. The rank and file dining room will have timber parquet flooring. Wet areas will have a non-slip ceramic tile finish.

ENGINEERING SERVICES IN THE NON-EXPLOSIVES AND ADMINISTRATIVE/CAMP AREAS

MECHANICAL SERVICES TO THE NON-EXPLOSIVES AREA

The Returned Produce Store will be provided with smoke vents. The Carpenter's Workshop will be equipped with wood-machines and sawdust extraction equipment. It will be heated by an oil-filled heater. Heating to the office in the Support Building will be radiant strip heaters. Exhaust ventilation will be provided to the Support Building amenities.

MECHANICAL SERVICES TO THE ADMINISTRATIVE/CAMP AREA

The extensions to the Headquarters building will be air-conditioned by means of a package unit, in a similar manner to that in the existing building. The transient accommodation will be provided with electric radiant strip heating. The new Mess Building will have evaporative cooling and electric radiant strip heating. The new Mess Building will have evaporative cooling and electric fan heaters. Refrigerators, glass washing equipment and cool rooms will be installed. The new kitchen will be provided with a full range of electric and gas-fuelled cooking equipment and with exhaust ventilation. The new accommodation buildings will be heated by electric radiant heaters and ventilated by ceiling fans. Toilets will be provided with exhaust ventilation.

ELECTRICAL SERVICES

Power reticulation will remain aboveground and will be upgraded as necessary. Pole mounted street lighting will be provided to the new roadways. Light and power to the buildings will be provided in accordance with current Australian Standards.

FIRE PROTECTION

Thermal fire detectors will be provided in the kitchen. Fire hydrants, fire hose reels and fire extinguishers will be provided generally.

COMMUNICATIONS

Conduits for telephone and computer links will be provided where required.

HYDRAULIC SERVICES

The existing water supply is obtained from ground water bores and is unsuitable for domestic purposes due to hardness and dissolved salts. The potable water supply is obtained from rain-water tanks. It is proposed to improve the quality of the ground water supply by upgrading the existing water which has been softened, filtered and chlorinated. The partially treated water will be used for the bathrooms, toilets, laundries, fire service and garden watering. Potable water for use in kitchens will be obtained from rain-water tanks erected at each new building as at present.

The existing septic tank system will be replaced by a tertiary sewage treatment system. Treated effluent will be disposed of by irrigation. Sludge production is minimal in this type of plant as sludge is recycled within the plant.

UPGRADING OF ACCOMMODATION IN THE CAMP AREA

GENERAL

The works in the Camp Area comprise:

- upgrading of the kitchen and messes pending the construction of new buildings to replace them
- upgrading of the accommodation buildings used by transient personnel.

UPGRADING OF EXISTING KITCHEN AND MESSES

This group of timber-framed buildings consists of the kitchen, the Officers' Mess, the NCOs' Mess, and the ORs' Mess. Since the messes and kitchen will not be replaced until the second stage of the works, minimal upgrading will be carried out on them to improve their habitability and efficiency, pending their replacement. This will also involve some general repair work.

UPGRADING OF TRANSIENT ACCOMMODATION BUILDINGS

This group of timber-framed buildings consists of two accommodation buildings and a laundry. They will remain as permanent structures for the use of transient personnel. The buildings will have their electrical services upgraded for provision of new heating. The asbestos cement roofs will be replaced with metal deck roofing. General repairs will also be carried out on these buildings.

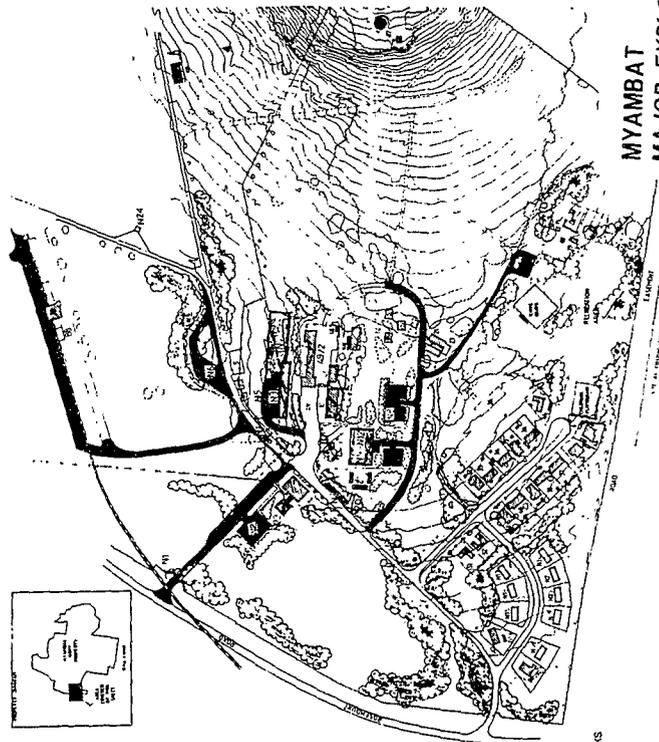
SITE WORKS IN NON-EXPLOSIVES AND ADMINISTRATIVE/CAMP AREAS
SITE SERVICES

Electricity, telephone and water services are currently available. There is an existing LPG storage tank for the supply of gas to the kitchen equipment.

Stormwater from the Non-Explosives Area and the Administrative/Camp Area will discharge into Rosemount Road drainage system and from there into the Goulburn River.

ROADS AND PARKING

A new access road will be constructed from Rosemount Road to the Headquarters building. This will remove the industrial traffic from the vicinity of the married quarters and mess buildings. Access roads will be constructed to the new buildings. The existing roads will be repaired and upgraded as necessary. New carparks will be constructed near the Headquarters building and near the Mess building.


**SCHEDULE OF NEW
FACILITIES**

NO.	FACILITY
N1	MAIN ENTRANCE
N2	CAR PARK (12 CARS)
N3	SUPPORT FACILITY
N4	RETURN PRODUCE STORE
N5	CONDOUR
N6	TRANSIT PARKING
N7	CAR PARK (10 CARS)
N8	CAR PARK (2 CARS)
N9	SERGEANTS QUARTERS & MESS
N10	OFFICERS QUARTERS & MESS
N11	KITCHEN & BAR MESS
N12	CANTEEN
N13	WSP QUARTERS
N14-N21	MARRIED QUARTERS
N22	EXTENSION TO
N23	ADMINISTRATION BUILDING
N24	CONT'D. POINT (PAPER)
N25	FLAMMABLES STORE (PAPER)

**SCHEDULE OF EXISTING
FACILITIES TO BE
RETAINED**

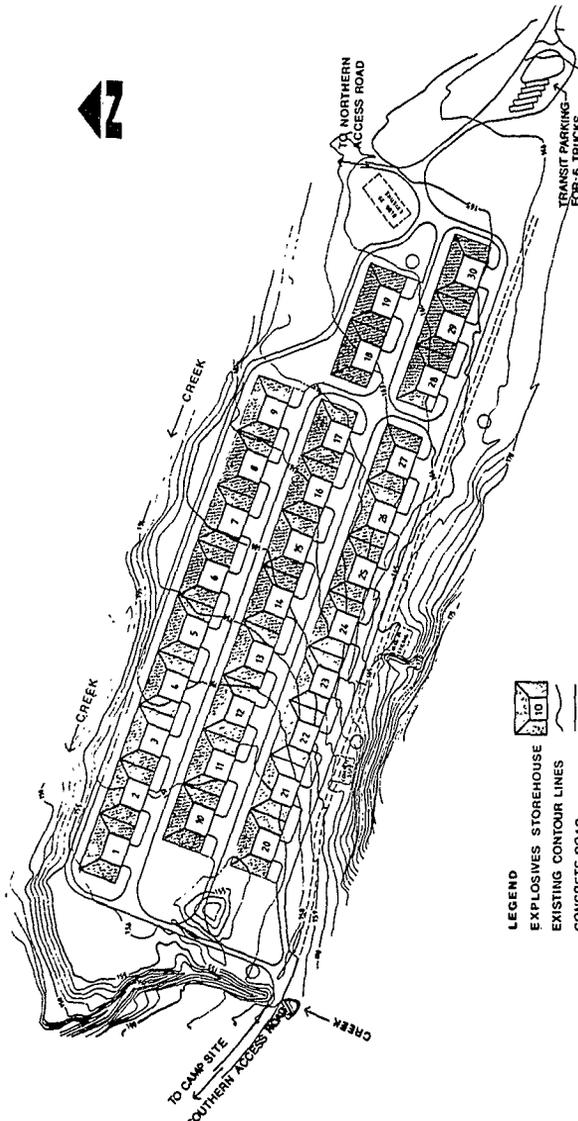
NO.	FACILITY
10	O STORE
28	SHELTER SHED
29	SHELTER SHED TOILETS & DRESSING SHEDS
31	SWIMMING POOL
32-44, 51-54	MARRIED QUARTERS
79	LABORATORY
84	ADMINISTRATION BUILDING
85	TENNIS COURTS
86	CHILDRENS PLAYGROUND
87	SUB-STATION
49/1	WATER TANK & TREATMENT WORKS
49/2	FIRE STATION
48	PARKING BAYS
21, 22	P.O.L. STORE
23	DR. HANSEBART
88	ACCOMMODATION
89	RAIL PLATFORM
33	RAIL SHELTER



APPENDIX G

MYAMBAT MAJOR EXPLOSIVES STOREHOUSE PROJECT

EXPLOSIVES STOREHOUSE AREA
PLAN
0 50 100 150M



- LEGEND**
- EXPLOSIVES STOREHOUSE
 - EXISTING CONTOUR LINES
 - CONCRETE ROAD
 - SEALED ROAD
 - EARTH MOUND
 - 60000 LITRES WATER TANK

APPENDIX H

SAFEGUARDING AND DEFINITIONS OF TERMS

The proposed explosives storehouse construction, at Myambat, must comply with the United Nations/North Atlantic Treaty Organisation (UN/NATO) Storage Principles for Storage of Explosive Ordnance. The storehouses are being built to store the highest Hazard Division of ammunition - Hazard Division 1.1. The UN/NATO principles dictate explicit safeguarding distances for the storage of ammunition and the proposed site at Myambat has been chosen to conform with the required safety distances.

SAFEGUARDING

Safeguarding is a consultative process between local civilian planning authorities and Defence, which enables assessment to be made of the possible implications of proposals to develop areas in the vicinity of explosive ordnance facilities. It involves both the protection of people and property from the effects of accidental explosions at facilities used for storing, maintaining and handling explosive ordnance, and the prevention of urban encroachment which would impede operations within the facilities.

The Department of Defence's policy on safeguarding is contained in Defence Instruction General (Supply) 20-1. It is Defence policy to contain the Purple Safeguarding Arc for Hazard Division 1.1 within the Commonwealth property boundary, for all new explosives storehouses has been determined by the maximum footprint of the Purple Safeguarding Arc, imposed by a 50,000 kg Nett Explosives Quantity, Hazard Division 1.1 licence. The safeguarding arcs for Stage 1 and 2 of the redevelopment of Myambat are depicted in the attachment to this Appendix.

PURPLE SAFEGUARDING LINE OR ARC

PURPLE LINE defines the minimum distance from an explosives facility within which large public buildings where many people may congregate, or major community amenities, may not be sited.

The following are examples of structures and facilities that the Department of Defence may not wish to see approved inside the Purple Line:

- major public structures or facilities of economic importance or of vulnerable construction, eg transportation terminals, telephone exchanges

H1

major structures or facilities that attract large populations, eg multi-story buildings, schools, hospitals, shopping centres, sports stadiums.

YELLOW SAFEGUARDING LINE OR ARC

YELLOW LINE defines the minimum distance from an explosives facility within which inhabited buildings, general community amenities or major traffic routes, may not be sited.

The following are examples of structures and facilities that the Department of Defence may not wish to see approved inside the Yellow Line:

- the structures and facilities listed under Purple Safeguarding Line above
- residential housing and its associated services
- major public roads and railways
- places where people permanently or temporarily assemble eg golf and tennis clubhouses, churches
- facilities which serve the needs of the general public eg water, gas and electricity installations.

GREEN SAFEGUARDING LINE OR ARC

GREEN LINE defines the minimum distance from an explosives facility within which public recreation areas should not be permitted.

The following are examples of structures and facilities that the Department of Defence may not wish to see approved inside the Green Line:

- the structures and facilities listed under the Purple Safeguarding Line above and under the Yellow Safeguarding Line above
- railroads and public roads of minor to medium importance
- open space recreational areas to which members of the general public have uncontrolled access.

