

Parliamentary Standing Committee on Public Works

REPORT

relating to the

REDEVELOPMENT OF THE SINGLETON MILITARY AREA, STAGE 1, NEW SOUTH WALES

(Second Report of 1991)

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

Report Relating

to the

Redevelopment of the Singleton
Military Area, Stage 1,
New South Wales

(Second Report of 1991)

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MEMBERS OF THE PARLIAMENTARY STANDING COMMITTEE
PUBLIC WORKS

(Thirtieth Committee)

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

Senate	House of Representatives
Senator Bryant Robert Burns	Mr Ewen Colin Cameron MP
Senator John Robert Devereux	Mr Lloyd Reginald O'Neil MP
Senator Paul Henry Calvert*	Mr Russell Neville Gorman MP
	Mr Bruce Craig Scott MP

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

Secretary: Mr Peter Roberts

Inquiry Staff: Mr Patrick Regan (Secretary)
Mrs Di Singleton (Secretarial Support)

EXTRACT FROM THE VOTES AND PROCEEDINGS OF
THE HOUSE OF REPRESENTATIVES

No. 37 dated Thursday, 20 December 1990

- 31 PUBLIC WORKS - PARLIAMENTARY STANDING COMMITTEE -
REFERENCE OF WORK - REDEVELOPMENT, SINGLETON,
NSW - STAGE 1: 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: Singleton redevelopment,
Stage 1, NSW.

Mr Beddall presented plans in connection with the
proposed work.

Question - put and passed.

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

REDEVELOPMENT OF THE
SINGLETON MILITARY AREA, 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 redevelopment of the Singleton Military Area,
NSW.

THE REFERENCE

1. Singleton Barracks near the township of Singleton in NSW
was acquired by the Commonwealth in 1941. A camp was
constructed during the Second World War. Some existing
facilities have been in use since the base was first
established while other temporary facilities were constructed
in 1965. From 1965 to 1973 these facilities were used by the
3rd Training Battalion (3TB) to train national servicemen in
recruit and infantry skills. With the cessation of national
service and the reorganisation of the Australian Army, the
infantry centre was relocated to Singleton from Ingleburn to
occupy these vacated temporary facilities.
2. Service personnel at Singleton currently total 434. It is
not expected that military strength at Singleton will vary
significantly in the foreseeable future. Student numbers
average 478. However, these numbers vary significantly
throughout the training year dependent upon course programming
and the availability of staff.

3. The proposed redevelopment of the base is aimed at upgrading existing facilities to provide sufficient and appropriate training, working and living accommodation for activities currently undertaken at the base and to reorganise the Singleton Range by relocating the existing centralised range infrastructure of small arms ranges and buildings.

4. These works will form the first stage of the base redevelopment and will involve the construction of new living accommodation for living-in staff and students, improved training efficiency of depot company working facilities and the construction of new range control facilities on the Singleton range.

5. The estimated cost of the proposed work when referred to the Committee was \$29.3m at November 1990 prices.

THE COMMITTEE'S INVESTIGATION

6. The Committee received written submissions from the Department of Defence (Defence) and Australian Construction Services (ACS) and took evidence from representatives of these organisations at a public hearing held at Singleton on 31 January 1991.

7. Submissions in support of the proposal were received from the following organisations:

- . Singleton Shire Council
- . Singleton and District Chamber of Commerce
- . Singleton RSL Club
- . Infantry Museum, Singleton
- . Army for Singleton Group.

8. Representatives of these organisations also gave evidence at the public hearing.

9. Prior to the public hearing the Committee inspected the sites for the proposed redevelopment and existing facilities in the Singleton Military Area.

10. A list of witnesses who appeared at the public hearing is at Appendix A.

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

BACKGROUND

Location

12. The Singleton Military Area is located some 5 km south of the town of Singleton and incorporates the Singleton Army Training Area (the Range) which is one of only two field firing and training areas in NSW. The Range is used annually by 33 regular Army, 18 Army Reserve and 14 other user units, including cadets, police, and the RAAF, with the School of Infantry as its main user. Maps showing the location of Singleton and the Military Area are attached at Appendix B. A detailed plan of the cantonment area is at Appendix B.

History

13. The Singleton Range was acquired in 1941. During the Second World War a camp was constructed, some of which remains in use today. In 1965, more temporary facilities were constructed and occupied by the 3TB, which was raised to train national servicemen in recruit and infantry skills. In 1973, with the cessation of national service and the reorganisation of the Army, the Infantry Centre was relocated to Singleton from Ingleburn to occupy the temporary facilities vacated by the disbanded 3TB.

14. On 1 April 1986, the Minister for Defence announced that the Government would not proceed with a proposal to establish an Army training schools complex (a collocated Infantry Centre and School of Artillery) in the Bathurst/Orange region of NSW. Army was then asked to study other ways in which the schools' requirements could be met without acquiring a new site. Army's study into the requirements of the Infantry Centre recommended that the school remain at Singleton and be redeveloped along with the other Singleton-based units.

15. On 9 October 1987, the Chief of the Defence Force notified the Minister for Defence that he supported the recommendation and that redevelopment would encompass the Infantry Centre, the Singleton Range complex and the Singleton-based supporting units.

16. Development of the Singleton Military Area is in concert with the 1987 White Paper which states that "an important area of Government expenditure will involve substantial improvement of living accommodation for Defence Force members and their families. Other facilities initiatives include the rationalisation and modernisation of Defence training establishments".

17. Following a decision to relocate a number of corps directors from Canberra to their corps schools, the Infantry Centre was reorganised on 12 December 1989 as the Headquarters Infantry Centre (HQ). It includes some of the Infantry Corps functions previously performed in Canberra, and the School of Infantry.

18. Army's presence at Singleton is recognised as an important element of the community structure. The economic influence of the Infantry Centre on Singleton township is significant, contributing to the local community an estimated \$20m per annum in the form of wages, commodity purchases, food, repairs and parts.

Singleton Military Area

19. The Singleton Military Area totals some 13 235 ha, including Singleton Range (12 600 ha) and the cantonment area (645 ha). Redevelopment of living and working accommodation is to take place in the cantonment area. The entire property is Commonwealth-owned and Defence-controlled.

20. The following units are permanently based at Singleton:

- . HQ Infantry Centre
- . School of Infantry
- . 13th Platoon, (10th Independent Rifle Company)
- . Land Warfare Centre Detachment
- . District Support Unit
- . Singleton Logistic Company
- . Detachment 134th Signal Squadron
- . 18th Dental Unit
- . Singleton Detachment, Army Special Investigation Branch (SIB) Unit
- . 23rd Military Police Platoon.

THE NEED

The School of Infantry

21. The School of Infantry is accommodated at Singleton in the temporary facilities constructed in 1965 for 3TB. This accommodation does not comply with Services Scales and Standards of Accommodation (SSSA). Buildings are steel-clad,

brick-stumped huts dispersed over some 100 ha. Brick ablution blocks are located within accommodation groups up to 75 m from sleeping huts, with access unprotected in inclement weather. The majority of the living accommodation offered by the School of Infantry is used by students on course, who are away from home for periods of between two and twelve weeks. The living accommodation is dilapidated and wasteful in terms of energy efficiency and repair and maintenance resources.

Singleton-based Supporting Units

22. Personnel from Singleton-based Supporting Units occupy weatherboard accommodation constructed in the 1940s which is in even poorer condition than that of the School of Infantry. Personnel from these units who live in will be accommodated in the new facilities being provided in Stage 1. The three existing messes serving these units are to be closed during later stages of the redevelopment. This will provide savings in manpower and maintenance funds. Presently, Singleton-based living-in personnel and students occupy six messes in two separate areas of the cantonment. This situation is inefficient and wasteful in manpower and maintenance funds.

Sleeping Accommodation

23. There is currently a total of 855 bedspaces, all of which are housed in buildings which are below SSSA and in poor condition, and consist of weatherboard huts (1940-vintage) and galvanised, iron-clad huts (1965-vintage).

Singleton Range

24. Singleton Range is approximately 12 km by 12 km. Within its boundaries, there are some 12 000 ha of varying terrain, including a 6 000 ha central impact area. The Range is steep

in the south and southwest. Three areas of more open woodland terrain border onto the undulating central impact area. To the north and west there are areas of lightly timbered, undulating terrain while the remaining area is open and undulating.

25. The Range is intensively used and relatively small when compared with other military ranges. It comprises a range area and range control complex, fixed small arms ranges, firing points, impact and manoeuvre areas. With additional land acquisitions since the Range was first acquired, the Range Control buildings and small arms ranges are now situated near the centre of the Range, inhibiting optimum utilisation of the training area. Entry to the Range cannot be effectively controlled from the present central location of the Range Control complex.

Committee's Conclusion

26. There is a need to replace existing inefficient training, working and living accommodation which does not meet current standards. Facilities at the Singleton Range need to be relocated to enable optimum utilisation of the Range training area.

THE PROPOSAL

27. The following paragraphs describe the proposed work. Construction details are at Appendix C.

Scope

28. This proposal includes the construction of replacement living and working facilities for Singleton-based personnel and for students undergoing training. Redevelopment is being staged for programming reasons. The first stage will concentrate on the construction of new living accommodation to replace the existing below-standard living accommodation for

staff and students. Stage 1 will also provide new Depot Company working facilities and new Range Control facilities on the Range. The remaining redevelopment work will be carried out in further stages at a rate determined by budget outcomes and priorities elsewhere.

29. The Committee was advised that the Singleton project is currently Army's highest priority project because of the emphasis being placed on improving living-in accommodation for all personnel.

30. The proposed scope of works is:

- . living facilities for 198 permanently living-in staff and for 552 students, including site works
- . working facilities for Depot Company Headquarters staff, including site works
- . redevelopment of roads and provision of car parking
- . construction of new Range Control buildings and upgrade of the Mitchell Road/Range Road intersection
- . extension of area engineering services
- . furniture and fittings.

31. The Singleton Shire Council in its submission sought to have a maximum of local content in contracts associated with the proposal. In response ACS advised the Committee that tenders will be called in a number of packages which balance the benefits created by the use of a number of smaller contracts against the additional costs and risks of administering more than one contract on the same site. This should ensure that a significant portion of the work is attractive to local contractors.

32. In response to a request from the Committee, ACS will advise the local Commonwealth Employment Service (CES) regarding the approximate numbers and mix of labour required for the project. ACS will arrange to consult with CES in a similar fashion in future on all major projects for which it has supervisory responsibilities.

Master Plan

33. This proposal comprises the first stage in the planned reconstruction of the entire South Ridge zone. Future stages of the redevelopment will provide new working facilities for the remainder of the Infantry Centre and the eventual replacement of all buildings presently at North Ridge.

34. The efficient operation of this Stage 1 proposal is not dependent upon specific completion of the subsequent stages. In the case of the Senior Non-Commissioned Officer (SNCO) and Junior Officer living accommodation, provision has been made in site planning for a future Joint Ranks Mess building and new car parking in accordance with the Master Plan.

35. Allowance has also been made for limited further expansion of the Initial Employment Training (IET), Rank and File Staff (R&F) and Student and SNCO and Junior Officer living accommodation.

Elements Involved in Stage 1

36. The School of Infantry. The largest unit based at Singleton is the School of Infantry. The school is organised into a Headquarters element, Administration Company and the three training wings of Careers Wing, Specialist Wing and Depot Company. The school conducts individual training and IET

for personnel of the Infantry Corps, trains personnel of other corps in selected infantry skills and contributes to the development of doctrine and equipment. During an average training year, the school will train some 1700 personnel of all ranks in infantry skills.

37. 13th Platoon of the 10th Independent Rifle Company is presently attached to the School of Infantry for training demonstration purposes. A detachment from the Land Warfare Centre is also accommodated at the School of Infantry and uses its training facilities and support.

38. Singleton Range Control. Staff comprising Singleton Range Control are included on the establishment of District Support Unit, Singleton. Range Control is responsible for the co-ordination of bookings, supervision of users, enforcement of safety aspects applicable to the Range and maintenance of the small arms ranges and firing points contained within Range boundaries. Range Control has a staff of 17, including four civilians.

Training Concept

39. Initial Employment Training. Initial Employment Training (IET) at the School of Infantry is conducted by Depot Company. Trainees arrive at Singleton direct from recruit training at Kapooka having been trained there in platoon groups within a company structure. The team approach to training is continued at Singleton where soldiers are trained in section groups in a platoon setting.

40. Career Courses. Officers and Other Ranks of the Infantry Corps return to the School of Infantry periodically for promotion courses to provide them with greater depth in their specialist abilities, and broader knowledge and skills in preparation for promotion to higher ranks.

41. Land Warfare Centre Detachment. This element provides training to Other Ranks of all corps in those general military skills required by all soldiers to prepare them for promotion.

Personnel

42. Staff. The total military establishment of the units based at Singleton is 434 personnel (63 officers and 371 other ranks). It is not planned that the military strength at Singleton be varied significantly in the foreseeable future.

43. Students. Student numbers average 478, comprising 30 officers, 42 SNCOs, 146 R&F and 260 IET. However, these numbers vary significantly throughout the training year, with the size of the student population greatly dependent on course programming and staff availability. Student numbers peak at 66 officers, 59 SNCOs, 157 R&F and 303 IET. Accommodation capacity is under greatest pressure in the peak training periods, and every effort has been made to reduce the numbers to provide an even workload for instructional purposes as well as providing the most efficient use of available bedspaces and training facilities.

Design Philosophy

44. The design philosophies of this proposal are:

- . that the buildings convey an architectural character suitable for the Stage 1 redevelopment and appropriate for the subsequent working, educational and industrial building stages
- . to establish an identity for each rank or group of buildings to provide some degree of individuality within the overall architectural character

. that the site planning of the buildings create an ordered and disciplined arrangement that reflects aspects of the formal functions of a military training centre, but still has a residential atmosphere appropriate for medium-density living.

45. With this in mind the residential buildings have been designed with a symmetrical facade treatment, with the buildings located in regularly spaced groups.

46. The IET and R&F accommodation maintain the symmetrical building design concept. The layouts grade the open spaces around the buildings from informal at the site perimeter to more formal along major circulation routes and at each building address.

47. The SNCOs and Junior Officer accommodation has a formal arrangement to reinforce the axial geometry of the parade ground, roads and site contours, with the future Mess building as the focal element.

48. The Range Control planning places the Headquarters at the main arrival point with stores, workshops and compound to the rear. The requirement for access through the compound without entering the secure range area determined the road layouts and the location of the future Range Warden's house.

General Planning and Design

49. The siting and design of the proposed works have been influenced by the following considerations:

. utilisation where possible of as much of the existing road and major services network without unduly constraining the planning objectives

- . allowance for a phased construction schedule to minimise disruption to the Infantry Centre's training program while still meeting budget commitments
- . alignment of buildings to face north-south where possible to achieve optimum solar orientation
- . efficient movement of staff, students and vehicles
- . positioning of the Range Control buildings outside the safety templates of the new Marksmanship Training Ranges and explosives magazine
- . economy of construction, low energy consumption and minimum building maintenance.

Technical Standards

50. The design complies with the relevant Standards Association of Australia codes, Building Code of Australia and Supply Authority Regulations.

51. Residential buildings have been designed in accordance with current SSSA and Design to Cost Target criteria.

DESCRIPTION OF BUILDING WORKS

General

52. This proposal comprises the provision of new living accommodation for all ranks and a component of working facilities for Depot Company. The new living accommodation is on two sites presently used for this purpose and broadly

reflects the existing rank structure. One site accommodates IET and R&F with the latter further divided into separate staff and student sub-zones. These groups are located centrally between existing messes, parade ground, sports fields and within walking distance of the new range facilities.

53. The other site to the north of the main parade ground accommodates all SNCO and Junior Officer staff and students as well as the Senior Officer staff. This site has separate staff and student sub-zones. The SNCO and Junior Officer student buildings have been collocated to permit overflows of students at peak intake periods to be spread across all the available accommodation.

54. All buildings are single storey apart from the two-storey R&F student blocks and some two-storey buildings for R&F staff. The new buildings on the Range are part of the complex of facilities associated with the provision of a Marksmanship Training Range (see paragraph 90).

55. The Range Control buildings are located adjacent to the existing entrance in order to control the flow of both pedestrians and vehicles. The Headquarters will also serve as the main registry and booking office for all training activities undertaken on the Range. Access by the disabled is not required.

Depot Company Buildings

56. This group of buildings comprises a Headquarters building, Company Q Store, Company Armoury and an associated weapon cleaning area. A lecture room block, including a

student common room, completes the third wing of this administrative centre which serves as the main address to the IET living and working accommodation. This area includes a compound for storage of bulky materials and equipment used in training exercises as well as a paved area capable of serving as a parade ground, assembly point or training demonstration area.

Initial Employment Training Accommodation

57. Living accommodation for the IET students follows a traditional military structure of six training platoons with one additional holding platoon for remedial, injured or overflow students. Each platoon comprises four sections of ten men each and the building designs reflect this structure. Each section has a ten-man dormitory-style wing which includes ablutions and laundry facilities. The section concept is intended to foster group identity, commitment and team spirit.

58. The four wings along with the centrally located platoon office forms a semi-courtyard space with a paved area for assembly. This creates the formal address to each platoon building and it is accessed from a central pathway which links all the buildings. These paths have been designed for marching width movement throughout the complex. Commonroom entitlements of the IET students have been combined into a single recreational facility located adjacent to the Depot Company lecture rooms.

R&F Accommodation

59. The student and staff areas are located on both sides of a central pathway with avenue planting which serves as a separating element between the two groups. The R&F students are accommodated in two-storey blocks of ten men to each floor

with commonroom and ablutions at opposite ends of the building. This layout reflects the course and training structure similar to that for the IET trainees. Bedrooms are sized to provide maximum space in the commonrooms and ablution areas.

60. The R&F staff accommodation in single and two-storey buildings are sited in units of four to form a group courtyard area that serves as a semi-private space for these occupants. This accommodation is located closest to the R&F Mess and to their own car parking area. Bedroom areas have been maximised under bulk scale entitlements with 13.5 m² per room achieved by deleting commonrooms and boxrooms. A small teamaking area is provided to each group of four bedrooms.

SNCO and Junior Officer Accommodation

61. A living unit has been designed for these ranks by aggregating the scaled entitlements for all SNCOs and Junior Officers, students and staff and developing a composite building which provides bedrooms to Junior Officers' scale (14 m²) within the provisions of Services Sleeping Accommodation Design to Cost Targets.

62. This aggregation also enables the inclusion of a separate bathroom to each bedroom and a teamaking alcove to each group of four bedrooms. A separate laundry building including a bathroom is provided for SNCOs and Junior Officers, staff and students. The Junior Officer staff laundry also includes a stewards facility and staff box store.

Senior Officer Accommodation

63. This accommodation consists of a courtyard group of buildings providing verandah access to each wing. The six living units are self-contained with separate ablutions, sitting room and bedroom. The Commanding Officer's and Area

Commander's flats have in addition a tea preparation area. The box store, laundry and bathroom entitlements for the Senior Officers have been combined into a common laundry and stewards building that is shared with the Junior Officer staff.

Range Control Buildings

64. This group of buildings comprises a headquarters with booking office, staff amenities and sleeping accommodation for duty staff, a covered shelter for range vehicles as well as a working facility for the maintenance and storage of target equipment. A battery charging room is included. Associated with these buildings is a secure compound area, gravel bins and equipment wash bays. Separate parking for 15 visitor and staff vehicles is provided.

SITE

65. The Singleton Military Area is located on the southern outskirts of the Singleton township, in the Hunter Valley, NSW. The Military Area is 6 km from Singleton, 65 km from Newcastle and 250 km northwest from Sydney. It includes the camp area and the Range.

66. The camp area occupies an area of 330 ha within which all working, living accommodation and recreational buildings and facilities are located including a grassed airstrip and some training areas.

67. The Range is immediately to the south of the camp area and is separated from the camp by the Mitchell Line Road. The Range is 12 600 ha of largely undulating open country with some woodland and heavier forest toward the southern boundary. All work in this proposal within the Range is in the northernmost sector of the Range adjacent to the Mitchell Line Road.

68. The northeast corner of the Range is bordered by the main northern railway line and adjoins the New England Highway. The remainder of the range and camp area is surrounded largely by private rural holdings. An opencut coal mine is adjacent to the southwest corner of the Range. A private rail spur to the coal mine loops around the northern end of the camp area crossing the main entry road.

Committee's Conclusion

69. The sites chosen for the Stage 1 redevelopment of the Singleton Military Area are suitable.

Environmental Considerations

70. The proposed works are within an established military area. They are well removed from the property perimeters apart from the Range Control group of buildings. The proposed works will not have any adverse effects on adjoining privately-owned properties. Since the living and working accommodation in the camp area replaces existing buildings there will be no overall increase in population. As a result there will be no significant increase in demand placed upon the electricity and water supplies, sewage treatment services or in the extent of stormwater runoff into local watercourses.

71. The Range Control buildings are all single-storey structures of low profile. They will be screen planted to reduce the visual impact from Mitchell Line Road. These buildings will not be overlooked by any private residences.

72. During construction there will be increased traffic on the access roads as construction materials are delivered to the site and tradespersons travel to and from work. Precautions will be taken during construction to prevent siltation of the local creek system and to minimise dust and noise to reduce inconvenience and health hazards to the

contractors' employees and users of the existing facilities. The new works will be constructed in sympathy with the surrounding environment. An active tree planting program has been in operation on the Singleton Range, and to a lesser extent in the cantonment, for a number of years. There will be no increase in noise levels emanating from the cantonment as a consequence of these works.

73. The proposal has been assessed by Defence in accordance with the administrative procedures under the *Environment Protection (Impact of Proposals) Act 1974* and its impact has been determined to be minimal.

Buffer Zone

74. At the public hearing the Singleton Shire Council (SSC) stressed the need for Defence to acquire and maintain an adequate buffer zone around the base. While the SSC does not favour compulsory acquisition of land to expand the base it believes that Defence should continue to strengthen the existing buffer zone as opportunities arise. While Defence has purchased a small number of parcels of land along the more irregular parts of the boundary, it has no program for general expansion of its boundary.

75. The SSC also pointed to the need for consultation with Defence in relation to subdivision proposals in the vicinity of the base. Defence stated that it was appreciative of the zoning controls imposed by the SSC to prevent encroachment by large numbers of very small landowners.

Mine Subsidence

76. The Singleton Military Area lies within the Gunnedah Coal Basin but falls outside the Patrick Planes Mines Subsidence District. Since the boundary of the mine subsidence district is 4 km to the west of the camp area and the Range, no special construction methods are required.

Earthquake Effects

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

78. 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.

79. The recommendations of this report will be applied to the design of all buildings in the project. These requirements will involve minor adjustments to the design of brickwork, when compared with the current practice for Zone 0 buildings.

Energy Conservation Measures

80. The buildings have been designed for thermal efficiency. To the extent possible within site planning constraints the design employs passive solar design principles of orientation, sun shading, avoidance of large glazed areas, thermal mass and roof insulation. The careful selection and placement of plant species within the landscape component will also contribute to the shading of building walls subject to solar gain.

81. Additional features proposed to assist the management of energy consumption include the use initially of LP gas for hot water heating. This will be replaced later by natural gas when supply becomes available in the Singleton district. Photo-electric switching of external lights and the fitting of timers to ceiling fans, room heaters and exhaust fans in the residential areas will also reduce electricity consumption.

82. In its report on the redevelopment of Borneo Barracks, Cabarlah, QLD (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 response to this recommendation the Government indicated that ACS would make these arrangements on all future projects for which it has responsibility. However the Committee believes that these arrangements should apply to all projects and not only those the responsibility of ACS.

Committee's Recommendation

83. 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

84. The Committee was advised that Defence and ACS have carried out a survey of asbestos in the Singleton Military Area. Asbestos was mainly concentrated in the 1940s buildings on North Ridge and Centre Ridge. The asbestos was predominantly corrugated roof sheeting and the Committee was assured that all necessary precautions will be observed during removal.

CONSULTATION

85. Consultation has taken place with the following authorities:

- . New South Wales State Government (including the Department of State Development, and the Forestry and Electricity Commissions)
- . New South Wales Mines Subsidence Board
- . Natural Gas Company
- . Shortland County Council
- . Telecom Australia
- . Singleton Shire Council.

86. None of these authorities raised objections to the proposal.

87. A public meeting was held in Singleton in February 1989 to clarify the Commonwealth's intentions with regard to land acquisitions around the Military Area as a result of the decision to proceed with the redevelopment. Defence indicated that no compulsory land acquisition was planned. A public information briefing was held at Singleton in December 1990 to advise the public of the scope and timings of the redevelopment prior to examination by the Committee. The Committee believes that Defence should continue to consult with the SSC during the further development of the proposal.

88. The base has an active "good neighbour" policy which is designed to minimise the impact of noise pollution and to ensure that complaints received are promptly investigated and followed up. The policy is designed to enlist the support and understanding of local people who, not unnaturally, are sometimes disturbed by the noise of high explosives from the range.

89. The Base Commander has frequent contact with officers of the SSC and the base is represented on a number of community organisations. It is evident to the Committee from both the written and verbal evidence provided by local organisations that there is strong support for the proposal within the local community. The Committee also wishes to congratulate Army for its efforts to develop good relations with the Singleton community.

OTHER WORKS AT SINGLETON

90. A medium work is in progress on the Range to address urgent training area shortfalls. This work includes the installation of an automated Marksmanship Training Range to replace the centrally located static classification range, and a small magazine to hold demolition stores. Work is due to be completed in 1992 at an estimated cost of \$5.7m.

FUTURE WORKS

91. There are a number of other works required to complete the redevelopment; these will be undertaken in later stages as funds permit. Future works include:

- . provision of the remaining office accommodation and working facilities for units based at Singleton
- . construction of new area messes and recreational facilities
- . upgrading of drainage to playing fields
- . upgrading of access and internal roads.

ROYAL AUSTRALIAN INFANTRY CORPS MUSEUM

92. The Director of the Infantry Museum, which is located within the Singleton Military Area, proposed to the Committee that the museum be rebuilt as part of the redevelopment proposal. Defence indicated to the Committee that while the Infantry Museum is recognised as a Defence museum and as such is eligible to certain entitlements such as the use of surplus buildings and the provision of services such as power and water at no charge, the current policy does not allow Defence to spend money on new works for museums.

93. While the Committee recognises that Defence is constrained by existing policy it believes that Defence should examine ways of providing upgraded facilities for the Infantry Museum.

PROGRAM

94. Subject to Parliamentary approval, it is expected that tenders will be called early in the 1991/92 financial year.

95. A phased construction program will be required to complete the project as the new facilities are located in areas where numerous occupied buildings are to be replaced. These have to continue to function while construction takes place. It is anticipated the project will take approximately 33 months to complete.

96. The Range buildings are on a vacant site. The new facilities will be constructed concurrently with the camp works and will take in the order of 16 months to complete.

ESTIMATE

97. The limit of cost estimate for the proposal is \$29.3m at November 1990 prices. The estimated completed cost, including escalation, construction contingency and professional fees, is \$38m.

Committee's Recommendation

98. The Committee recommends construction of the Stage 1 redevelopment of the Singleton Military Area, NSW at an estimated cost of \$29.3m at November 1990 prices.

CONCLUSIONS AND RECOMMENDATIONS


99. The conclusions and recommendations of the Committee and the paragraphs in the report to which each refers are set out below:

Paragraph

1. THERE IS A NEED TO REPLACE EXISTING INEFFICIENT TRAINING, WORKING AND LIVING ACCOMMODATION WHICH DOES NOT MEET CURRENT STANDARDS. FACILITIES AT THE SINGLETON RANGE NEED TO BE RELOCATED TO ENABLE OPTIMUM UTILISATION OF THE RANGE TRAINING AREA. 26
2. THE SITES CHOSEN FOR THE STAGE 1 REDEVELOPMENT OF THE SINGLETON MILITARY AREA ARE SUITABLE. 69
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. 83

4. THE COMMITTEE RECOMMENDS CONSTRUCTION OF THE
STAGE 1 REDEVELOPMENT OF THE SINGLETON MILITARY
AREA, NSW AT AN ESTIMATED COST OF \$29.3M AT
NOVEMBER 1990 PRICES.

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Colin Hollis
Chairman
11 April 1991

APPENDIX A

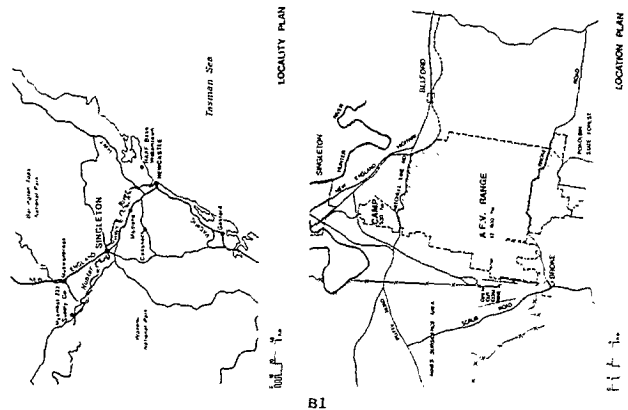
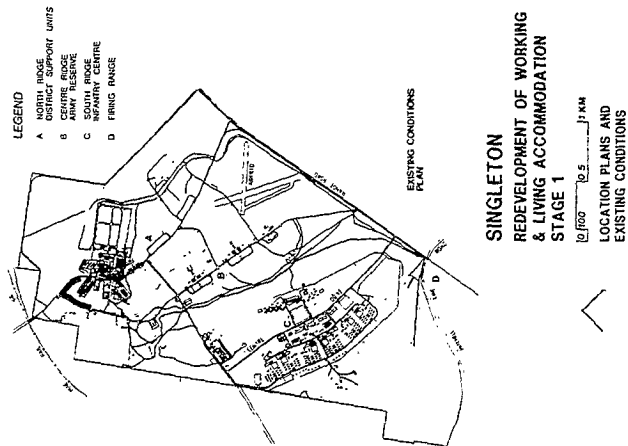
LIST OF WITNESSES

- BUTLER**, Mr Kenneth R, Assistant General Manager, Client Services,
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- CONSIDINE**, Mr Raymond E, Convenor-Chairman, Army for Singleton,
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- FLANNERY**, Mr John A, General Manager, Singleton Shire Council,
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- GRAHAM**, Mrs Jocelyn, Secretary, Army for Singleton, Hunterview,
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- HELLYER**, Brigadier Grahame Leslie A, Director General,
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- JOHNSTONE**, Mr James Douglas, Director, Infantry Museum,
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- LANCASTER**, Mr Christopher J, President, Singleton and District
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- MANTLE**, Mr Raymond J, President, Singleton RSL Club, Castlereagh
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- McMILLAN**, Mr Gerard J, Secretary-Manager, Singleton RSL Club,
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McNAMARA, Mr Neil W, Shire President, Singleton Shire Council,
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POTTER, Lieutenant Colonel Thomas W, Project Manager, Directorate
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Department of Defence, Russell Offices, Canberra, ACT, 2600

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APPENDIX C

CONSTRUCTION DETAILS

Structure

The Camp Area sites consist of relatively stiff clay and gravel materials with slightly more alluvial material on the Range site. This foundation material is quite stable and the soils are non-reactive. Reinforced concrete raft slabs will be used throughout for floor construction with load bearing external and internal brick walls.

The roof structure will incorporate timber trusses except in some of the larger open structures, such as the Q store and Range workshops, where steel portal frames will be used. The size and function of the buildings enables a domestic type of construction to be used.

Materials and Finishes

Buildings will be of cavity brick construction for economy and minimum long term maintenance and thermal insulation considerations with pre-coloured profile metal deck roofing having sarking and insulation over all internal areas. Windows will be aluminium framed with sunhoods of pre-finished metal with vertical expanded mesh panels to those windows subject to low angle solar exposure. Internal walls will be face brick to circulation areas, stores and workshop areas with render and paint finish to bedrooms, offices, common rooms and laundry areas. Ablution areas will generally be tiled to an appropriate extent.

Floor finishes will be carpet throughout office, teaching and residential areas although Initial Employment Trainee (IET) accommodation will be sheet vinyl. Vinyl will also be used in Depot Company store rooms. Workshops and stores in the Range buildings will have steel trowel concrete finish with anti-dusting treatment.

The battery maintenance room at Range Control will have acid resistant epoxy finishes to walls and floors.

ENGINEERING SERVICES

Electrical Services

Supply will be drawn from an existing overhead 11kV main which extends along Centre Drive. From this point, distribution will be underground into the Rank and File (R&F) site with two new substations. From these locations medium voltage for building light, power and external lighting will be reticulated underground.

The Senior Non-Commissioned Officers' (SNCO) and Junior Officers' site will be fed from existing mains along Parade Ground Circuit to one new substation. Another existing substation will be retained until the new Mess building is constructed when it will be replaced with a larger capacity unit.

Artificial lighting will generally be provided by fluorescent fittings with special requirements only in the Weapons Cleaning area where hazard rated fittings and outlets will be installed.

Communications and Security

Ducting and wiring for telephone and computer links will be provided where required. The Armoury will be fitted with an intruder alarm system comprising door and internal movement detectors connected to an alarm panel in the present Infantry Centre Headquarters.

Mechanical Services

The Depot Company and Range Control Headquarters will be mechanically heated and ventilated. Living quarters generally, and other office areas in the Q store, Platoon Offices and Range workshop buildings, will have electric strip heaters and ceiling fans. Ventilation to these areas will be achieved by natural means with fixed roof ventilation to the Q store and Range workshops. The two lecture rooms in Depot Company will be air-conditioned.

The Battery Charging room will have a forced mechanical extraction system. L.P. gas will be used as the prime energy source for heating and domestic hot water. The pipe installation is sized for future natural gas.

Fire Protection

In accordance with the Building Code of Australia and Department of Defence requirements smoke detectors will be provided in IET living accommodation only. Other residential buildings will have hand held extinguishers and external hydrant protection. Depot Company Headquarters, Q Store, Armoury and lecture rooms will have thermal alarms.

Other offices, stores and working areas will have internal hose reels where required in addition to extinguishers and external hydrants.

Hydraulic Services

Water service for the new complex will be drawn from the existing water tanks located at Centre Ridge. New piping will be required for the increased number of ablution facilities although the demand will be only marginally greater than current usage. These new mains will also provide water for the hydrant points. Some of the existing pipework is in sound condition and where unaffected by new construction activity, it will be re-used. Sewage at Range Control will be disposed of by means of septic tank and absorption trenches.

The Range Control buildings will be connected to an existing water main adjacent to the Range entry road.

Sewage from the two sites in the Camp Area will gravitate into existing mains which presently service the Infantry Centre and connect to an existing sewerage treatment works. Sewage at Range Control will be disposed of by means of septic tank and absorption trenches.

No special pollution control measures are required in the Camp Area. Waste material from the weapons cleaning area will be drummed and removed from site. The cleaning bay will be bunded to contain any spillage.

The Battery Charging room within the Range Control workshop building will be connected to a neutralising and dilution pit to collect spillage from floor wastes. Battery cleaning solutions and waste contents will be drummed for disposal off site.

Roads, Car Parking and Pathways

The extension of Boundary Road around the IET living accommodation will be sealed with raised kerb to one side of the road and flush kerb on the other side. New car parking for the IET and R&F students will be sealed pavement with kerb and gutter. The existing car park in the R&F staff area will be resealed where required and extended to provide additional parking spaces. No additional parking is required in SNCO or Officers living accommodation areas.

The assembly areas at each IET block will be sealed as will the main assembly ground adjacent to Depot Company Q store. Pathways generally will be concrete with selected areas in coloured block paving.

Landscaping

The R&F site presently has scattered ornamental tree planting while the SNCO and Junior Officer site is cleared grassland with light woodland to the west and north west.

The new residential development will be landscaped to create a pleasant living environment and to establish a character that relates to the surrounding woodland planting.

The Range Control site is cleared grassland. Landscape treatment will screen the buildings from Mitchell Line Road while maintaining the rural character of the site.