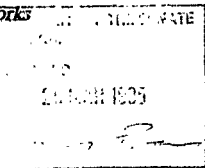




102

Parliamentary Standing Committee on Public Works



REPORT

relating to the proposed

REDEVELOPMENT OF DEFENCE OFFICE ACCOMMODATION AT RUSSELL, ACT.

(Third Report of 1995)

THE PARLIAMENT OF THE COMMONWEALTH OF AUSTRALIA
1995

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

Report Relating

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(Third Report of 1995)

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**MEMBERS OF THE PARLIAMENTARY STANDING COMMITTEE
ON PUBLIC WORKS**

(Thirty-First Committee)

Mr Colin Hollis MP (Chair)
Senator Paul Henry Calvert (Vice-Chair)

Senate

House of Representatives

Senator Bryant Robert Burns	Mr John Neil Andrew MP
Senator Shayne Michael Murphy*	Mr Raymond Allen Braithwaite MP
	Mr Russell Neville Gorman MP
	Mr Robert George Halverson OBE MP
	Hon. Benjamin Charles Humphreys MP

*Replaced Senator John Devereux on 10 February 1995

Committee Secretary:	Peter Roberts
Inquiry Secretary:	Michael Fetter
Secretarial Support:	Mahesh Wijeratne

EXTRACT FROM THE
VOTES AND PROCEEDINGS OF
THE HOUSE OF REPRESENTATIVES

No. 102 dated Thursday, 20 October 1994

5 PUBLIC WORKS – PARLIAMENTARY STANDING
COMMITTEE – REFERENCE OF WORK – REDEVELOPMENT
OF DEFENCE OFFICE ACCOMMODATION AT RUSSELL, ACT.

Mr Walker (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: Redevelopment of Defence office accommodation at Russell, ACT.

Question – put and passed.

**PARLIAMENTARY STANDING COMMITTEE ON
PUBLIC WORKS**

**REDEVELOPMENT OF DEFENCE OFFICE ACCOMMODATION
AT RUSSELL, ACT**

On 20 October 1994 the House of Representatives referred to the Parliamentary Standing Committee on Public Works for consideration and report to Parliament the proposed redevelopment of Defence office accommodation at Russell, ACT.

THE REFERENCE

1. For more than 30 years the Defence complex at Russell Hill has been the main administrative and planning centre for the Department of Defence. It is located at the third apex of the Parliamentary Triangle as proposed by Walter Burley Griffin. The Russell Defence complex consists of 15 buildings, eight of which are considered unsuitable for renovation to current occupational health and safety standards and Building Code of Australia standards. As a result, these buildings are to be demolished.
2. Defence also occupies a further ten buildings in the ACT, and it is proposed that four of these be vacated and with functions and staff being relocated to Russell.
3. The scope of the proposed redevelopment will provide:
 - 54 000m² of new office accommodation in two buildings (each of 22 500m²) and a third of 9 000m²
 - 30 000m² of accommodation as a result of the refurbishment of four of the existing buildings.
4. The scope of works also includes the necessary roadworks to create the development sites in accordance with the National Capital Planning Authority's proposed amendments to the National Capital Plan.
5. The estimated outturn cost of the proposed work when referred to the Committee was \$212m.

THE COMMITTEE'S INVESTIGATION

6. The Committee received a submission and drawings from Defence and took evidence from Defence representatives at a public hearing held in Canberra on 13 December 1995.

7. The Committee also received written submissions and took evidence from the following organisations and individuals:

- National Capital Planning Authority (NCPA)
- Community and Public Sector Union (CPSU)
- Heritage Council of the ACT
- Mr Keith Storey
- National Trust - ACT.

8. Written submissions were also received from the following organisations:

- Association of Professional Engineers, Scientists and Managers, Australia
- Commonwealth Environment Protection Agency
- ACT Energy research and development fund project selection committee
- Australian Estate Management
- ACT Planning Authority
- Commonwealth Fire Board
- Field Marshal Sir Thomas Blamey Memorial Fund
- Construction Industry Development Agency (CIDA)
- Commonwealth Department of Primary Industries and Energy

- Australian Heritage Commission.

9. On 12 December the Committee inspected the Russell complex and the sites of the proposed new buildings. The opportunity was taken to view the Russell complex from Mount Pleasant.

10. 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.

BACKGROUND

Russell complex

11. The development of the National Capital during the early 1960s saw the transformation of the Molonglo floodplain into Lake Burley Griffin, the construction of substantial numbers of Government offices, and a large influx of public servants and Defence personnel to Canberra, mainly from Melbourne. The development of the Defence complex at Russell ran parallel with this transformation. The first development at Russell was the Australian-American Memorial, completed in 1954. Construction of the first offices at Russell began in the early 1960s and by 1965 seven buildings were completed. During this period Parkes Way was also constructed according to the alignment recommended by Holford in 1957.

12. The master plan for the development of the Russell complex, developed in the late 1950s, was influenced by the location of the Australian-American Memorial on the Kings Avenue axis, with the major buildings centred on a secondary axis running at right angles to the major axis. By 1972 Russell resembled the current situation with two tower buildings (A and L) completed. The symmetry was lost when the Australian Security Intelligence Organisation (ASIO) building was completed in 1985 and the Defence Signals Directorate (DSD) building in 1990.

Committee involvement

13. From 1915 onwards the Public Works Committee has been involved in the development of Canberra's public buildings and infrastructure. A list of projects which the Committee has examined and reported on to Parliament is at Appendix B.

14. Works undertaken by the National Capital Development Commission (NCDC), which was established in 1957, were exempted from Public Works Committee scrutiny. The planning and development of Russell was undertaken by the NCDC which ceased to exist in 1988. The present reference is the first instance in which the Committee has been involved in examining and reporting on proposals concerning Russell.

THE NEED

Overview

15. The need for the redevelopment of Russell is based on a number of factors:

- significant organisational changes within Defence in recent years as a result of government policy reviews
- the inability of Defence to take full advantage of the changes because it occupies a wide variety of properties, leased and owned, throughout the ACT
- relatively high recurrent costs associated with the use of leased buildings
- the condition and adaptability of the buildings at Russell to provide modern and efficient offices in conformity with community expectations - this factor is particularly relevant to the older buildings - B, C, D, F and H, I, J, K
- projected accommodation requirements.

Organisational changes

16. There have been significant organisational changes within Defence in recent years as a result of government policy reviews, but little opportunity for Defence to reflect those changes in its accommodation. During the 1960s, when the buildings at Russell were constructed, Defence consisted of five separate departments. Four were located at Russell and later at Campbell Park and in various leased premises. The Department of Supply occupied Anzac Park West. Each department was

housed in separate buildings which reinforced organisational barriers between them.

17. In the mid-1970s the five departments were amalgamated and structured along functional lines, focussing on improved coordination of policy development and lateral communications flow. Defence advised the Committee that collocation of functional areas is essential if coordination is to be achieved. At present the Headquarters of the Australian Defence Force is accommodated in 12 buildings throughout Canberra. Service offices have similar dysfunctional accommodation arrangements which makes coordination and management of complex issues difficult. In short, although Defence has undergone various organisational changes in recent decades, the structure of the complex at Russell remained as an impediment to the effective management and coordination of the Defence Force. For these reasons, and the age and condition of the older buildings, Defence has recognised that any redevelopment of Russell should aim to arrange Programs, Divisions and Branches to suit operational requirements and take advantage of the increased efficiency resulting from collocation and improvement in office quality.

Ownership of Russell

18. Australian Estate Management (AEM), which previously controlled Russell offices, undertook a range of studies in association with Defence during 1992 and 1993 analysing the redevelopment potential of Russell. This work included negotiations with the NCPA concerning its desire to use any redevelopment as a catalyst for the completion of the Parliamentary Triangle. In July 1994 the control of the Russell buildings and land was transferred from AEM to Defence at a cost of \$52m. As part of its consideration of accommodation options, Defence continued negotiations with the NCPA in relation to redevelopment of Russell. The Russell precinct is regarded as the forgotten apex of Burley Griffin's plan. The other apexes of the triangle are City Hill and Capital Hill.

Leased accommodation

19. At present Defence occupies accommodation rented from the private sector in a number of locations in the Canberra area some distance from Russell. These locations include the National Capital Centre, Northbourne House, Tuggeranong Churches Centre, Queanbeyan Warehouse and other small tenancies. The annual cost of private sector

leases is approximately \$8.5m. AEM assumed responsibility for managing the Commonwealth's property portfolios from July 1989 and commenced charging rent. Prior to the acquisition of Russell Offices from AEM in July 1994 Defence's annual office accommodation rental in the ACT was \$35.6m. This was projected to rise to \$47.9m after redevelopment of Russell by AEM. Current projections of annual rent liability after the Russell redevelopment amount to \$14.3m. The main properties involved are Campbell Park, Anzac Park West and Deakin. Savings in rent (\$33.6m) will be partly offset by owner related maintenance costs.

Accommodation study

20. In order to identify the projected demand in the ACT in the short and medium term, Defence undertook a consultancy in November 1993 titled *10 Year ACT Accommodation Study* to identify the entire Defence ACT office accommodation requirement into the next century. The report provides a framework for all future office accommodation planning, relocations, and lease commitments to ensure that office accommodation is rationalised to the degree that the space usage is within accepted benchmarks, whilst maximising the effectiveness of individual elements by collocating those which have common functional and operational requirements.

Accommodation Needs

21. The future office accommodation requirements of Defence are based on staffing projections developed by the Programs, for their Divisions and Branches. Planning guidelines were applied to the staffing profiles of each Division with support spaces and amenities added to develop an overview of the requirements at the year 2000.

22. The *10 Year ACT Accommodation Study* identified a requirement to house 6 838 staff in 155 000m² of office and special purpose facilities. Within the total requirement is 20 000m² of special purpose facilities, such as the Deakin Computer Centre and the Queanbeyan storage facilities. The balance of 135 000m² of office space is therefore required in the ACT. This could be accommodated at the redeveloped Russell precinct, which will provide approximately 84 000m², Campbell Park with a further 37 000m², and Anzac Park West with 14 000m². Private sector leases, costing \$7.9m annually, will be relinquished resulting in annual private sector leasing costs being \$600 000.

APIN Project and Joint Headquarters

23. The Committee questioned Defence about the impact of the APIN Project (Army Presence in the North) on accommodation requirements in Canberra, in view of the large numbers of Defence personnel which it is planned to progressively relocate to Darwin. Defence advised the Committee that the recently tabled Defence White Paper reinforces the need for Defence to remain in Canberra at about its current levels. The relocation of operational forces to northern Australia is driven by strategic circumstances and geography. The strategic level of Defence is located in Canberra, at the seat of government, where interactions with political processes and government occur. There is no intention that this should change.

24. Defence also canvassed the impact of the collocated Joint Headquarters on accommodation requirements. The Joint Headquarters, which will probably be located in the Sydney area, will provide an organisational division between strategic and operational planning levels. The Joint Headquarters will be responsible for the planning and conduct of operations and it will not be related to the political-military interface, its focus being on operations, not strategy. The need for staff to support the Chief of the Defence Force and each of the Service Chiefs to remain in Canberra means that the scope for reducing the number of personnel in Canberra is limited. Furthermore, Russell will also remain as the corporate focus for Defence policy and management activities. Defence did, however, indicate that some personnel from Canberra will be transferred to the Joint Headquarters, but the majority of the staffing will be from existing separate sea, land and air Headquarters.

Deficiencies at Russell

25. The majority of the buildings at Russell (Buildings A-L) were built between 1962 and 1972 and have not undergone a major refurbishment since construction.

26. Specific deficiencies include:

- narrow, inefficient building shapes affecting functional usage
- outdated mechanical systems, minimal or no air-conditioning

- low ceiling heights restricting adaptability
- no expansion capabilities for electrical and communications systems
- leaking plumbing
- fire safety provisions below current standards
- lifts that do not comply with current codes
- corroded windows that are falling out
- asbestos within buildings requiring removal
- inadequate staff amenities
- inadequate facilities for disabled persons
- inadequate energy conservation systems
- high ongoing maintenance requirements and costs.

27. After inspecting a number of the older buildings at Russell the Committee shares the view that the standard of office accommodation available is well below modern standards.

28. Due to pressures on space, and the perceived need for many functional elements to be housed at Russell, most personnel are accommodated below the requirements set out in the *Commonwealth Office Accommodation Guidelines (1986)*.

Review of options

29. In response to these deficiencies Australian Construction Services (ACS) produced for AEM, a series of redevelopment options that generally followed the existing built form pattern. In late 1993 value management studies concluded that the cost effective option was to demolish eight buildings (B-E and H-K) and to refurbish Buildings A, F, G and L as well as develop new additional floor area. The consultant team engaged by Defence to assist in concept development also

concluded that there is no practical option to refurbish buildings B-E and H-K if Defence's operational and accommodation requirements and regulatory standards are to be met.

Summary of need

30. In summary, the Headquarters of the Australian Defence Force and the three service offices need to remain in Canberra, at the Seat of Government, mainly at Russell where substantial investment in buildings and associated infrastructure has taken place during the past three decades.

31. Buildings at Russell were constructed to house separate Service departments which have now been replaced by a central Department of Defence. The buildings have not been substantially refurbished since they were constructed. Defence, which has purchased the buildings from AEM, believes that refurbishment or replacement is required to provide more modern and functional office accommodation arrangements which reflect structural and functional relationships.

32. A review of options available to achieve improved functionality and at forecast staffing levels revealed that eight older buildings should be demolished, four more substantial buildings should be refurbished and new construction are the only viable solutions to the provision of accommodation for Defence civilian and uniformed personnel. Staffing levels and space requirements were determined by a ten-year accommodation and staffing study which indicated that 6 838 staff will require 155 000m² of office and special facilities. Apart from special purpose facilities, this translates to a requirement of 135 000m² which could be provided by the following means:

<input type="checkbox"/> Campbell Park	37 000m ²
<input type="checkbox"/> Anzac Park West	14 000m ²
<input type="checkbox"/> Refurbished buildings at Russell	30 000m ²
<input type="checkbox"/> New construction at Russell	54 000m ²

Committee's Conclusions

33. There is a need to provide modern office accommodation for the Headquarters of the Australian Defence Force, service offices and program managers at Russell.

34. To meet current and forecast requirements for modern and functional office space there is a need to demolish eight of the older buildings, refurbish four existing buildings and to provide 54 000m² of new office space at Russell.

THE PROPOSAL

Outline

35. To provide 84 000m² nett area of office space at Russell, while also addressing the significant deficiencies which have developed within the buildings, a complete redevelopment of the Russell precinct (excluding the DSD and ASIO facilities) is proposed. In brief, three new buildings known as RN1, RN2 and RN3 are to be built to replace Buildings B-E and H-K which have an area of 34 000m² and also provide an additional 20 000m². Buildings A, L, F and G will be completely refurbished and will provide 30 000m².

National Capital Plan

36. The NCPA is the authority responsible for the planning of Russell because the National Capital Plan identifies Russell as a Designated Area. The *Australian Capital Territory (Planning and Land Management) Act 1988* requires that all works in a designated area be approved by the NCPA and the works be consistent with the detailed conditions of planning design and development as specified in the National Capital Plan. An amendment to the National Capital Plan is required to be approved by the Minister for Housing and Regional Development prior to the NCPA being able to issue works approvals.

37. As a result of the proposed redevelopment by Defence, NCPA has responded to this opportunity by preparing a new draft master plan for Russell (see Appendix C). The draft master plan integrates Defence's proposal within the context of a long term plan that reinforces Russell's prominent location within the central National Area. The draft master

plan has been designed to accommodate the next 50-100 years. The NCPA advised the Committee that whilst the draft master plan shows future roads proceeding through buildings which are to be retained, there is no suggestion that these buildings should be demolished in the short term. If in time they become redundant, the opportunity will exist to achieve other aspects of the draft master plan. The NCPA believes the draft master plan has been designed with flexibility.

38. The draft Russell master plan seeks to:

- complete the National (Parliamentary) Triangle
- create a new point of entry to the Triangle
- connect Russell to Civic and the Parliamentary Zone
- create a legible local road network
- provide sites for possible future Commonwealth offices and other National Capital Uses
- provide for a greater variety of land uses
- progressively reduce surface carparking
- create opportunities for the placement of national symbols and the conduct of ceremonies
- create an integrated system of landscaped parks.

Public and Parliamentary review

39. The NCPA draft Russell master plan (referred to as *Draft Amendment of the National Capital Plan - Amendment No 12 - Russell*) was placed on public exhibition during September 1994. It is presently under consideration by the Joint Standing Committee on the National Capital and External Territories (the NCET Committee) which held a public hearing on 9 December 1994. The NCET Committee is expected to report to Parliament shortly. The NCPA will consider the NCET Committee's recommendations and will submit the amendment to the Minister for approval and tabling in Parliament.

Planning and design

40. The planning and design of the new and refurbished buildings is based on creating commercial office accommodation that meets Defence's current and future requirements and is in accordance with the draft master plan and guidelines. The proposal will involve the demolition of the eight older buildings and the refurbishment of four others. The Committee was advised that the valuation of the buildings to be refurbished amounts to \$52m; they will be worth \$100m when refurbished. There is little residual value in the remaining buildings and they will be demolished.

41. The new buildings RN1, RN2 and RN3 have been designed to meet key criteria:

- the NCPA's guidelines for the site including an overall height limit of RL617 metres
- create large floor areas to suit Defence's requirements for modern office accommodation and for functional collocation at Russell
- meet Commonwealth Accommodation Standards
- create a working environment with access to natural light and aspect
- create buildings with a high degree of flexibility and efficiency for Defence's Tri-service needs
- develop design solutions that are to commercial standards of efficiency and cost effectiveness
- accommodate Defence user specific requirements.

42. New buildings RN1 and RN2 consist of seven to eight level structures with a total of 45 000m² Nett Lettable Area (NLA). Typical floors are in excess of 3 000m² of NLA each and with a nett to gross efficiency of approximately 87%. The floors are designed to commercial and Commonwealth Standards with large column free areas and a maximum of 12m to a window and natural light from the majority of the

floor area. The ground level areas incorporate entry foyers, common user facilities such as conference rooms, food services provisions such as a canteen and Tri-service messes, as well as a security control point into the office accommodation areas. Central plant and mechanical systems are located on the roof of the buildings but contained in an enclosed structure.

43. New building RN3 consists of approximately 9 000m² of NLA. In accordance with NCPA guidelines it is a four storey building with typical floors of 2 250m² NLA.

44. The carpark building is a multi-deck structure of six levels providing a total of 500 car spaces.

Flexibility

45. The Committee questioned Defence about the flexibility of the design to accommodate future organisational changes. Defence assured the Committee that the new and refurbished buildings will enable organisational developments identified from trend and risk analysis and unexpected developments to be dealt with.

46. Construction details are at Appendix D.

Siting

47. The sites for the elements of the Russell redevelopment are as follows:

- Buildings A, F, G and L will be refurbished and will be sited within the new road network proposed as part of the redevelopment
- Buildings RN1 and RN2 will be situated on sites created by the construction of new roads defined by the draft master plan. The sites are at the apex of the completed Parliamentary Triangle flanking Kings Avenue with frontage to the proposed new roundabout at the apex of the Triangle. When viewed from Parliament House, RN1 will be located to the left of the apex and RN2 to the right.

- The carpark building will be located on the site to be created by the extension of Constitution Avenue and the new internal road network.
- Building RN3 is located within the site created by new roads in close proximity to the existing DSD building.

Reactions to master planning, siting and design

48. The National Trust raised questions concerning the draft master plan, traffic problems associated with the plan and the proposed redevelopment, the roundabout linking Kings Avenue with Northcott Drive, and the design, siting, orientation and height of the proposed new buildings.

49. The Trust believes that the site, at one of the apexes of the Parliamentary Triangle, is very significant and recent media reports have canvassed the possibility of roads leading to this apex to be the principal point of entry to Canberra. This will mean that traffic loads at the Russell apex, forming the gateway to Canberra, will be much greater than earlier studies have indicated. The Trust therefore questioned the appropriateness for the 'gateway' to Canberra comprising two Defence office buildings and believes the siting of RN1 and RN2 are unduly proximate to the roads.

50. The NCPA advised the Committee that the 'gateway' concept arose from a design forum which examined future ideas for the entire central National Area. The NCPA believe the concept should be explored further but believes the achievement of the Russell draft master plan and the redevelopment of Russell is of far greater importance than the 'gateway'.

51. The NCPA advised the Committee:

If, in the future, because it would require another amendment to the National Capital Plan to achieve it, the implications of bringing an entry in was such that it impacted unreasonably on this development, then we believe this development is the one that should take precedence. We are

quite happy proceeding with this if in the future that cannot happen.¹

52. The Trust believes the buildings should be located one block back from the realigned Constitution Avenue. Defence advised the Committee that if these buildings were set back by one block, the entire redevelopment would need to be reconsidered and would require demolition of the older buildings much earlier than planned and alternative leased accommodation would need to be provided. The location of the multi-story carpark, and the orientation of RN3 were also questioned by the Trust as it sees the carpark is an unfortunate way of achieving the objectives of the draft master plan. The Trust believes the orientation of RN3 could be improved. In the context of master planning and divided responsibilities between this Committee and the NCET Committee, the Trust believes the Public Works Committee should defer any decision on the redevelopment until the report from the NCET Committee has been presented and the draft master plan has been approved by Parliament. This matter is addressed later in this report.

53. In response to concerns expressed about traffic volume, the NCPA advised the Committee that studies of likely traffic flows along Kings Avenue when Canberra reaches a population of 500 000 were undertaken. The results indicate that under a variety of scenarios Kings Avenue is unlikely to have more than 1 500 vehicles per hour travelling into the city during the morning peak. This amount of traffic could be accommodated on a single lane road. The NCPA believes one reason for this relatively low usage is the number of designed intersections and the likely need for traffic lights which will produce delays, making Kings Avenue an unattractive route for major through traffic.

54. The NCPA advised the Committee that more detailed design will be undertaken on the configuration and layout of the roundabout. NCPA consultants have indicated, however, that a roundabout, with a 60m diameter, will accommodate the long term traffic projections for the intersection.

55. The NCPA aims to eliminate all surface carparking from Russell and it was on this basis, and the decision not to provide underground parking in Buildings RN1 and RN2, it supported the provision of a

¹Transcript, p. 262

carpark structure. It is sited on Constitution Avenue to enable easy access to users. The NCPA did acknowledge that the proposed site is sensitive and its consideration of the approval application from Defence will take this issue into account. In response to the suggestion that Building RN3 should be aligned with Kings Avenue, the NCPA believes this alignment would produce a long term anomaly in the urban fabric - both Constitution and Kings Avenues reinforce Griffin's geometry through the road network and the building form. Building RN3 has been sited and aligned to reinforce these features.

56. The Australian Heritage Commission indicated support for the draft master plan which will extend Constitution and Kings Avenues to one of the apexes of the Parliamentary Triangle. The Commission believes the Australian-American Memorial and Blamey Square are important heritage features. They have achieved interim listing on the Register of the National Estate. The Commission expressed concern that the flow of traffic through Blamey Square and the narrowness of space between carriageways will adversely affect people's appreciation of the Memorial and indicated that there should be wider distances between the Kings Avenue carriageways and that traffic flow through the square should be avoided or minimised.

57. Defence indicated that the roads passing through Blamey Square accord with the draft master plan, although substantial details relating to the design of the square had not been prepared. The NCPA indicated that alternative design concepts are under consideration. Because the Memorial and the square are included on the interim Register of the National Estate, the NCPA is proceeding on the basis that any specific proposal to alter Blamey Square will require the approval of the Australian Heritage Commission.

58. The Field Marshal Sir Thomas Blamey Memorial Fund advised following a briefing by the NCPA, it is satisfied that the importance of Blamey Square is being appreciated and safeguarded. The NCPA advised the Committee that the Fund and the Australian-American Association are satisfied that the traffic design of Blamey Square can be handled in a responsible and integral manner. For ceremonial purposes Blamey Square will function without any significant impact on traffic flows through the area.

59. While the ACT Planning Authority supports the proposal, it expressed concern about the long term increase in employment, the impact on decentralisation of employment, public transport and infrastructure. The Authority also indicated that it is unclear how the road layout will fit into the draft master plan because it presupposes the demolition of Building A, the cafeteria, and the ASIO and DSD buildings.

60. The Authority also raised the need to identify suitable areas where the demolition material from the redevelopment will be dumped, the need for environmental protection and temporary carparks during construction.

61. Defence advised the Committee that the proposed road layout for the Russell development was established in consultation with the NCPA and reflects the layout proposed in the draft master plan. The scope of roadworks involves the construction of only those roads considered necessary to provide access and definition to the new buildings. It is not intended to demolish buildings that have not reached the end of their economic lives.

62. On the questions of the disposal of demolition material and the impact of construction activities, Defence advised the Committee:

- disposal of demolition material will be discussed with the ACT Government in the very near future
- a full review of the environmental effects of construction activities will be undertaken and contractors engaged on the project will work to *Defence environmental guidelines*.

63. The NCPA advised the Committee that extensive consultation with the ACT Planning Authority had taken place and a number of sessions had been held with the ACT Planning Committee. A committee, at departmental head level, has been established to examine joint issues which need to be resolved. These include infrastructure and public transport.

64. The ACT Conservation Council expressed concern that RN1 and RN2 may be visible above the skyline of hills when viewed along Kings Avenue. The Burley Griffin planning concept was to have the hills remain a dominant element in the city. The NCPA advised the Committee

that the height of the two new buildings will be lower than Buildings A and L.

65. Mr Keith Storey, a private citizen, expressed concern about the urban design aspects of the proposals within the broader context of the Parliamentary Triangle. He indicated that the extension of Constitution Avenue will require extensive cutting, extending into the Canberra Nature Park and would be visually intrusive. Extending Constitution Avenue to Russell is not required for transportation reasons because connections to Civic exist. Furthermore, there is no justification for connecting Kings Avenue to Northcott Drive to create a new point of entry to the Parliamentary Triangle. He believes that to have significance, Constitution Avenue and the apex must be given a building definition and character expressing its importance as a symbolic place within the wider context of the Triangle. Mr Storey believes that the draft master plan does not do this because the view along Constitution Avenue is likely to be dominated by the back of the DSD building and the 6 storey carpark. And when viewed from within the Parliamentary Zone the new buildings will have a disjointed appearance in relation to the other remaining buildings; there is no certainty that the further buildings postulated in the draft master plan will happen.

66. The NCPA indicated that because the design of the proposed new buildings are at the preliminary stage, a number of issues need to be resolved during the detailed design phase. These relate to the external design of the buildings, the final siting of RN3, external finishes, plant room and roof designs, the screening of cars on the top deck of the carpark, roof mounted telecommunications equipment and the location of retail space on the ground floor of the carpark. The NCPA also advised that approval to proceed with RN1 and RN2 will be subject to the condition that the carpark is provided as part of the redevelopment.

67. Mr Storey also expressed concern about the size of the cutting along Constitution Avenue. Defence and the NCPA were also concerned about the extent of the cutting and its visual impact and considered a number of options. The problem confronting the planners is striking a balance between less cut and an unsatisfactory vertical alignment of Kings Avenue from Blamey Square to the connection with Constitution Avenue. Defence undertook to consider the matter further during the detailed design of the roads, but believes it unlikely that there will be any significant change in the scale of the cutting.

Carparking

68. The NCPA commissioned a number of studies relating to transport and parking at Russell as part of the background analysis for the preparation of the draft master plan. Defence believes the proposed redevelopment conforms with the guidelines and strategies set down in the master plan.

69. Defence will undertake the necessary works to cater for its own specific needs. Carparking spaces affected by construction work will be relocated to temporary areas. In addition separate carparking areas will be provided during the redevelopment for construction workers in order to minimise pressure on Defence parking. The following arrangements are proposed:

- during the construction of RN1 and RN2 which removes existing car spaces, a temporary carpark will be provided between Russell Drive and Parkes Way south of Kings Avenue. This temporary carpark will not impact on existing trees.
- at the completion of RN1 and RN2 a temporary carpark with a similar number of spaces will be provided to the area available after the demolition of buildings B, C, D and E
- the multi-deck carpark of 500 spaces will be developed concurrently with RN3 and will reduce the number and influence of on grade car spaces at Russell.

70. Defence undertook to maintain an ongoing dialogue with the relevant authorities in relation to parking needs and provisions.

71. The NCPA also indicated a desire for the carpark located in front of Buildings G and I to be removed. The carpark was approved as a temporary facility following construction of the DSD building. It occupies a highly visible location and should be relocated as part of the redevelopment program. Defence advised the Committee that it is not intended to remove the carpark as part of the development. The Committee believes the need for the carpark should be reviewed throughout the construction phase.

Committee's consideration

72. Many of the matters raised by witnesses at the public hearing or in written submissions relate to the draft master plan, which is under consideration by the NCET Committee.

73. It is unfortunate that two parliamentary Committees are examining simultaneously aspects of the same matter:

- the draft master plan of Russell - by the NCET Committee
- the need for the Russell development, if what is proposed will adequately satisfy the need, if the estimated cost of the work can be justified and the amount of revenue, if any, the work will generate for the Commonwealth - by this Committee.

74. The draft master plan is a vital component of the development and the Committee strongly believes that its consideration by the NCET Committee and approval by Parliament should have preceded the Russell development being referred to the Committee. The Committee is not swayed by arguments advanced to support the compression of the approval processes by two Parliamentary Committees examining the draft master plan and the construction proposal concurrently on the grounds of 'a narrow window of opportunity'. Accordingly, the Committee believes that future projects in Canberra which require amendments to the National Capital Plan should not be referred to the Public Works Committee until they have been formally approved.

75. In summary, a number of issues relating to appropriateness of the draft master plan, including the design and siting of the proposed new buildings, were raised in submissions. These issues in no way diminish the need for Defence to be provided with suitable office accommodation at Russell. The NCPA and Defence believe the proposed redevelopment and the draft master plan are mutually consistent with planning objectives and Defence requirements.

Committee's Conclusion

76. The extent of the proposed redevelopment of Russell will provide the Department of Defence with modern and functional office accommodation.

Committee's Recommendations

77. The redevelopment should proceed provided the agreed amendment of the National Capital Plan (Amendment No. 12 - Russell) does not require changes to the design and siting of roadworks and buildings.

78. If the agreed amendment of the National Capital Plan (Amendment No. 12 - Russell) requires changes to the proposed redevelopment, these changes will need to be considered by the Committee.

79. Future projects in Canberra which require amendments to the National Capital Plan should not be referred to the Public Works Committee until they have been formally approved.

Functional allocation

80. In the allocation of space at Russell, primary consideration was given to those elements that have either an operational (functional) or a management (structural) requirement to be collocated. This has driven the collocation of a Policy core within the first new building (RN1) at Russell, a centralised Tri-service facility within the second new building (RN2) and a refurbished Building F, and the relocation of the Defence Intelligence Organisation (DIO) into the third new building (RN3).

Analysis of space requirements

81. The 10 year Accommodation Plan identified those Programs, Divisions and Branches likely to be affected by any redevelopment of Defence office accommodation in the ACT. December 1993 staff profiles were considered and projection of staffing needs in 2000 and beyond were evaluated. A Planning Module was applied which identifies the space allocations for the various service ranks (and their civilian equivalents) as well as the 'typical' support areas (such as meeting and resource rooms) which will be allocated to all office areas. This planning module concept has been widely trialled in several recent Defence accommodation projects and provides for a flexible, modern office environment which can be modified cost effectively for any number of uses as requirements change over time.

82. In addition to the general office space allocated to each Division, the requirements for additional Branch specific support spaces were

identified through a combination of detailed interviews, space usage questionnaires, and audits of current special purpose facilities.

83. The Committee was advised that total gross space required for the Department is a sum of all Divisional work area requirements, including all support spaces specific to a functional element (such as training rooms, reception areas or computer rooms), and additional support spaces and amenities (such as gym, conference rooms, and recreation areas) and circulation.

84. An average which is often applied to Commonwealth departments is the gross Net Lettable Area (NLA) per staff member which includes all of the dedicated office, support and circulation areas. For Defence in the ACT, and excluding the special purpose staff and facilities, this figure is calculated to be 19.8m²/staff in the year 2000. This is consistent with other new Commonwealth projects which average between 17.5 and 22.5m²/employee; and includes a high component of special requirements such as Secretary, Chief of the Defence Force, Minister's suite and the DIO facilities. These preliminary figures will be refined as part of the ongoing analysis and performance measurement during the design development phase.

Reactions to accommodation standards

85. The Committee questioned Defence on the need to provide accommodation for Ministers in the complex. Defence indicated that 215m² will be provided under the scope of the project for what was initially described as being for "a senior visiting politician", then as a "senior visiting officer's room" and finally as a "senior officers suite". The Committee believes this suite should be deleted from the project.

Committee's Recommendation

86. **The provision of space for a senior officers suite should be reallocated for more essential services.**

87. The CPSU expressed concern about the standard of accommodation and the amount of space which will be provided to civilians working at Russell. The CPSU drew the Committee's attention to past instances in which it was claimed agreement about standards and space allocations had been reached with management before the commencement of a

project which, when the project was completed, did not match the agreed standards. This, it was claimed, occurred on a project, examined by the Committee in 1991, involving the refurbishment of the former Royal Edward Victualling Yard (REVVY) to provide accommodation for the Naval Support Command Headquarters (*Committee's Eleventh Report of 1991 - Parliamentary Paper 302/1991*). This led to industrial disputation between management and the union. In essence, the CPSU believes the allocation of space should not be based on rank or status but rather on the functions to be performed by each position. Furthermore, the accommodation guidelines are outdated and the new standards are vague.

88. The CPSU believes that the success of the project in aiming to provide modern office accommodation depends in large measure to ensure that there are no attempts at false economies in the fitout and accommodation standards. If this were to transpire, there would be scope for losses in efficiencies and effectiveness which the Russell development aims to redress.

89. The views of the CPSU are similar to those expressed to the Committee by various unions and staff associations during the Committee's inquiry into the new laboratory complex at DSTO Salisbury, SA. (*Committee's Seventh Report of 1994 - Parliamentary Paper 426/1994*). In response to strong arguments against the allocation of open plan offices to personnel required to perform tasks requiring long and sustained periods of concentration, the Committee recommended that Defence undertake or commission a study on staff efficiency and productivity of open planning and other forms of office accommodation.

90. Defence indicated that the problems experienced with the REVVY project have been resolved and provided Defence management with the basis on which to plan future office layouts. To ensure that the fitout and accommodation standards to be provided at Russell proceed smoothly, Defence will invite a representative of the CPSU to membership of the project control group which is the highest level committee overseeing the project. In addition, Defence is currently developing accommodation guidelines and will be holding discussions with the Association of Professional Engineers, Scientists and Managers Australia and other Defence staff associations to determine the appropriate guidelines for the Defence environment.

Committee's Recommendation

91. The Department of Defence should proceed with the study of the impact on staff efficiency and productivity of open office space and other forms of office accommodation as a matter of urgency.

92. Staff associations also raised with the Committee the question of membership of various messes which will be provided in the new buildings. Defence advised that civilian members, at appropriate levels, are eligible to be members of the existing Single Service messes and these opportunities will continue with the Tri-service messes to be provided as part of the redevelopment.

93. The Committee questioned the need for Tri-service messes to be included in the proposed redevelopment. Defence advised the Committee that current plans are for the Tri-service mess to occupy about 800m² constructed as office space, on the northern outer side of the ground floor of the second new building. This will be divided into three mess areas, each of around 220m², designated for Officers, Warrant and Senior Non-Commissioned Officers, and other ranks. All three messes will be served by a common central kitchen taking up the balance of the 800m². The nature of the fitout has yet to be determined, but it is intended to suit the main role of the messes, which is to provide meal and social facilities for special occasions. At other times they will be used for morning and afternoon teas, and minor social meetings. In line with this, it may be practical to use movable partitions between the mess areas, and to use outside areas in conjunction with the inside areas.

94. On balance the Committee is prepared to support the inclusion of the messes. This support is on the Committee's understanding that memberships will be available to all civilians as well as uniformed personnel. The design of individual messes should provide flexibility to enable expansion to cater for special functions.

Benefits from the redevelopment

95. Defence believes the following benefits will result from the proposed redevelopment:

- rationalisation of existing office services and maximising the use of shared facilities

- fewer buildings, with significantly larger floors allowing the increased collocation of elements into the same buildings, and where critical, adjacent on the same floor
- improved operational efficiency by decreasing the amount of time spent by staff travelling to other floors and buildings
- a much more flexible office environment through the increased use of open plan, and modular work stations
- consolidation of the majority of Defence administrative planning and policy activities close to or at Russell
- provision of appropriate standard of accommodation that meets Occupational Health and Safety and Building Code of Australia requirements
- vacating of private sector accommodation
- office accommodation that meets the standards of performance used in the private sector.

CONSULTATIONS

96. Defence advised the Committee that the following organisations were consulted regarding the proposed redevelopment:

- NCPA
- ACT Government
- Commonwealth Environment Protection Agency
- Australian Heritage Commission
- Australian Estate Management
- ACT Electricity and Water
- Defence User-Groups and Public Service Unions.

ENVIRONMENTAL AND HERITAGE CONSIDERATIONS

97. The NCPA is negotiating with the Commonwealth Environment Protection Agency (EPA) concerning the construction of part of the proposed extension of Constitution Avenue. There will be a significant cutting encroaching into the Canberra Nature Park, Mount Pleasant, and the NCPA will obtain the necessary environmental clearances.

98. Defence will be constructing buildings on sites of no environmental significance as their current use could be described as roads, carparking, landscaped areas around existing buildings that have been cleared of natural vegetation and sites on which current buildings will be demolished. Defence will be carrying on environmental assessment and will be setting standards for the protection of the environment during the construction phase.

99. Blamey Square has been assessed to be of exceptional heritage significance (Class A) and Buildings F and G, together with the Netherlands Memorial are considered to be of considerable significance (Class B). This has been recognised by the draft master plan and the proposed redevelopment will be in sympathy with these heritage features.

ENERGY AND WATER CONSERVATION

100. The Committee questioned Defence about energy conservation measures and energy targets which will be applied to the development. Defence advised the Committee that 1992-93 was established as the base year for improvements to energy management. A target of five per cent has been imposed for five years with a view to achieving a 25 per cent cumulative saving. The annual expenditure on light, fuel and power, in all Defence buildings in Canberra is \$5.7m.

101. Defence advised that the proposed design complies with the 1993 Defence Policy on Energy Management and the buildings will incorporate the following energy conservation features to minimise gas and electricity consumption:

Lighting

- lighting systems with low loss ballasts and energy saver lamps

- light dimming controls to compensate for natural lighting
- time controls to automatically switch off lighting during after hours periods.

Heating and cooling

- fresh outside air cooling cycle when ambient conditions are suitable
- digital controls for accurate temperature control to minimise overshooting of heating and cooling cycles
- automatic control of preheat and pre-cooling startup periods
- night purging to pre-cool buildings in summer periods
- variable volume air distribution to reduce fan energy consumption.

Passive measures

- window shading, double glazing and heat reflective glass to reduce solar loads
- high quality wall and roof insulation to minimise heat transfer.

Water conservation

102. The annual cost of water and sewerage at Russell is \$168 000. Water efficient showers and dual flush toilets will be provided.

Cogeneration

103. The ACT Energy Research and Development Fund (ACT ER&DF) project selection committee submitted that the opportunity for cogenerated heat and power should be considered in the development of the proposal. Cogeneration produces heat and power and is increasing in favour because it improves energy efficiency and reduces energy costs - the Austin Hospital in Melbourne has a plant which has proved very successful. In the case of the Russell development a cogeneration plant

could operate during peak working hours and revert to grid power in off-peak hours.

104. In response to this suggestion Defence advised the Committee that as the project moves into detailed design, one of the major considerations will be the on-going cost of operating the buildings. The selection of mechanical and electrical equipment to be installed will be based on current best practice aimed at minimising energy costs. To that end, the consultants engaged to design the building services will be requested to consider cogeneration and contact the ACT ER&DF.

FIRE PROTECTION

105. All new buildings and Buildings A and L will have an automatic wet pipe sprinkler system installed. The system will be designed to meet the requirements of the Building Code of Australia and the appropriate Australian Standards.

106. A smoke detection system will be provided for initiation of a building smoke control system. This system will be connected to the fire alarm system, fire indicator panel to be located on the ground floor foyer area or fire control room as required by the BCA. The detection/alarm system will provide indication of sprinkler/detection system and automatic transmissions of coded alarm signals to the Fire Brigade. The system will be designed in accordance with the requirements of the BCA and the appropriate Australian Standards.

107. A new fire detection system designed and installed to the requirements of appropriate Australian Standards will be provided throughout Buildings F, G and the carpark. Portable fire extinguishers will be provided throughout the premises.

108. The Commonwealth Fire Board recommended that Defence liaise with the ACT Fire Brigade, given the magnitude of the development and the complexity of some of the fire protection systems to be installed. Defence indicated that the design team will meet with the ACT Fire Brigade to ensure that fire-related issues are covered.

SECURITY

109. The plans for the redevelopment were reviewed by the Defence Security Branch which indicated the collocation of Defence facilities in commercial type buildings will not create any significant security risks. Individual buildings will be secured. With the exception of Building A, all new and refurbished buildings on the site will be linked by a series of tunnels for secure cabling and the transfer of classified documents.

110. Each building will have space for access control points and a coded keycard access system for authorised access via a nominated entry during prescribed periods. All ground level access points to buildings will be monitored at the control point.

IMPLEMENTATION

Cost

111. When referred to the Committee the outturn cost of the proposed work was \$212m, with construction expected to commence in March 1995 and completion in 2000. The submission to the Committee from Defence indicated that the limit of project estimate cost was \$197.53m at December 1994 prices. At the public hearing Defence advised the Committee that the limit of project estimate had increased by an additional \$8m to \$205.53m at December 1994 prices. Defence justified the increase on the basis of studies into standards to be applied to the buildings and site cabling works. Originally, when the budget for the redevelopment had been prepared, the information technology and communications systems to be provided were based on commercial standards. Defence requires systems of a higher standard.

Value management

112. Defence advised that the project had been subjected to value management analysis, to ensure that initial cost estimates and the scope of the proposed work were soundly based. This analysis had reduced the cost by \$30m. Defence indicated that further value management exercises will be undertaken during the detailed design stage.

Committee's Recommendation

113. Further value management studies should be undertaken to reduce the cost of the project.

Location and landscaping costs

114. The NCPA acknowledged that the two main buildings, to be located on a prominent site, will require a high standard of design and finish. The Committee therefore questioned the NCPA about any added costs which these considerations may impose on the project. The NCPA indicated that the designs are cost effective and the design work undertaken so far indicates that unreasonable costs will not be incurred.

115. The Committee questioned Defence about the \$1.06m in the cost estimate which is to be allocated for landscaping. Defence advised that there will be landscaping associated with the new road network which is separate from the building sites. The development of the Russell precinct will maintain the existing landscape character.

Staging

116. The redevelopment will be undertaken in stages during the period 1995-2000. The Committee was advised that the program will meet the requirements of funding and the ability of Defence to sequentially vacate leases and relocate staff within Russell and from leased premises. A key element of the staging will be the avoidance of double moves of operational units from existing premises.

Timetable

117. At the time of the public hearing the timetable for the staging of the works was as follows:

- Stage 1 construction of the new road networks around Buildings RN1 and RN2 and excavation of the sites.

Commencement: February 1995
Completion: June 1995

- Stage 2 - construction and fitout of Buildings RN1 and RN2.

Commencement: July 1995
Completion: September 1997

- Stage 3 - With the completion of Buildings RN1 and RN2, Defence personnel will be moved from Buildings A - K allowing Buildings B, C, D, E and H, I, J, K to be demolished and Buildings A, F and G to be refurbished.

Commencement: April 1997
Completion: August 1998

- Stage 4 - Construction of the new road network around Building RN3 and the carpark, and excavation of the sites.

Commencement: August 1998
Completion: November 1998

- Stage 5 - Construction and fitout of Building RN3 and construction of carpark.

Commencement: October 1998
Completion: May 2000

- Stage 6 - With completion of Building RN3, Building L will be vacated and refurbished.

Commencement: June 2000
Completion: December 2000.

Project delivery

118. A range of project delivery methods and standard Defence contract forms will be used to suit each stage of the redevelopment. Defence will continue to monitor industry trends in project delivery methods and select the appropriate contract form closer to the commencement of each stage.

Capacity of building industry

119. The Committee questioned Defence if the ACT building industry has the capacity to undertake the construction of the project. Defence indicated that experience in the ACT and the Northern Territory indicates that the building industry is able to cope with any demands imposed on it.

Land swaps

120. A series of land swaps associated with the development of the new road network and sites will be undertaken between Defence, the ACT Government and AEM. Negotiations have commenced with the ACT Government with a view to having Heads of Agreement in place and authority to proceed with construction.

Committee's Recommendation

121. The Committee recommends the construction of the redevelopment of Defence office accommodation at Russell, ACT, at a limit of cost estimate of \$205.53 million at December 1994 prices subject to the agreed amendment of the National Capital Plan (Amendment No. 12 - Russell) being consistent with the scope and siting of building elements which constitute the redevelopment as examined by the Committee.

CONCLUSIONS AND RECOMMENDATIONS

122. The conclusions and recommendations of the Committee and the paragraphs in the report to which they refer are set out below:

	Paragraph
1. There is a need to provide modern office accommodation for the Headquarters of the Australian Defence Force, service offices and program managers at Russell.	33
2. To meet current and forecast requirements for modern and functional office space there is a need to demolish eight of the older buildings, refurbish four existing buildings and to provide 54 000m ² of new office space at Russell.	34
3. The extent of the proposed redevelopment of Russell will provide the Department of Defence with modern and functional office accommodation.	76
4. The redevelopment should proceed provided the agreed amendment of the National Capital Plan (Amendment No. 12 - Russell) does not require changes to the design and siting of roadworks and buildings.	77
5. If the agreed amendment of the National Capital Plan (Amendment No. 12 - Russell) requires changes to the proposed redevelopment, these changes will need to be considered by the Committee.	78
6. Future projects in Canberra which require amendments to the National Capital Plan should not be referred to the Public Works Committee until they have been formally approved.	79

7. The provision of space for a senior officers suite should be reallocated for more essential services. 86
8. The Department of Defence should proceed with the study of the impact on staff efficiency and productivity of open office space and other forms of office accommodation as a matter of urgency. 91
9. Further value management studies should be undertaken to reduce the cost of the project. 113
10. The Committee recommends the construction of the redevelopment of Defence office accommodation at Russell, ACT, at a limit of cost estimate of \$205.53 million at December 1994 prices subject to the agreed amendment of the National Capital Plan (Amendment No. 12 - Russell) being consistent with the scope and siting of building elements which constitute the redevelopment as examined by the Committee. 121

Colin Hollis MP
Chair
9 March 1995

WITNESSES

- BURNHAM**, Mr Keith, Acting Director, Planning Projects Unit, National Capital Planning Authority, 10-12 Brisbane Avenue, Barton, Australian Capital Territory 2601
- COREY**, Mr Rodney William, First Assistant Secretary, Facilities and Property Division, Department of Defence, Campbell Park Offices, Building 3, Campbell, Australian Capital Territory
- DEVINE**, Mr Peter Richard, Senior National Industrial Officer, Defence Portfolio, Community and Public Sector Union, 1st Floor, 28 Lonsdale Street, Braddon, Australian Capital Territory
- DICKSON**, Mr Nicholas Rohan, Executive Director, National Capital Design, National Capital Planning Authority, 10-12 Brisbane Avenue, Barton, Australian Capital Territory 2601
- FENNESSY**, Mr Richard Anthony, Steward/Delegate, Community and Public Sector Union, B-125 Russell Offices, FDA Division, Department of Defence, Russell, Australian Capital Territory 2600
- FITZGERALD**, Mr Paul Arthur John, Head of Defence Centre, Department of Defence, National Capital Centre, Civic, Australian Capital Territory
- GREEN**, Mr Bruce Donald, Assistant Director, Facilities Engineering, Facilities and Property Division, Department of Defence, Campbell Park Offices, Campbell, Australian Capital Territory
- LYON**, Mr Carey Hamilton, Consultant, Department of Defence, 20 Fitzroy Street, St Kilda, Melbourne, Victoria
- MARTIN**, Mr Eric, Chairperson, Heritage Council of the ACT, 22 Jardine Street, Kingston, Australian Capital Territory

PRATTLEY, Mr Gary Noel, Acting Chief Executive, National Capital Planning Authority, 10-12 Brisbane Avenue, Barton, Australian Capital Territory 2601

ROBINSON, Mr Ashton Scott, Workplace Delegate, Community and Public Sector Union, Building L, Russell Offices, Russell, Australian Capital Territory

SETCHELL, Mr Garth Howard, Senior Vice-President, National Trust, 6 Geils Court, Deakin, Australian Capital Territory

STOREY, Mr Keith William, 20 Fergusson Crescent, Deakin, Australian Capital Territory 2600

WALLS, Rear Admiral Robert Andrew Kevin, Assistant Chief Defence Force (Development), Department of Defence, Russell Offices, Russell, Australian Capital Territory

WILLIAMSON, Ms Lesley Gay, Director of Landscape Architecture, National Capital Planning Authority, 10-12 Brisbane Avenue, Barton, Australian Capital Territory 2601

APPENDIX B

**PUBLIC WORKS COMMITTEE REPORTS ON CANBERRA
PROJECTS - 1915-1994**

- 1915 Construction of a Main Sewer for the City of Canberra
Storage and Regulating Reservoir, Upper Queanbeyan River
Site for a Small Arms Factory at Canberra
Proposed Cement Works for Federal Capital and other Commonwealth purposes
- 1916 City Railway, Canberra
Dams for Ornamental Waters, Canberra
Site for a Commonwealth Arsenal within the Federal Territory
- 1918 Arsenal Railway (Tuggeranong)
- 1919 Erection of Commonwealth Note Printing Offices
- 1922 Construction of Main Intercepting Sewer from Centre of City of Canberra to connect with Main Outfall Sewer
Water Supply for the Federal Capital - Distributory Works within the City Area, Canberra
Construction of a Hostel at Canberra, with necessary engineering and other services
- 1923 Erection of Provisional Parliament House, Canberra
Construction of Provisional Administrative Offices at Canberra

- 1923 Erection of Officers Hostel, Canberra
- 1924 Construction of a Railway to connect Canberra with Yass
- Construction of Southern Intercepting Sewer at Canberra
- Erection of a Secretariat Building at Canberra (including provision for an Automatic Telephone Exchange and Post Office)
- 1925 Construction of Sewage Treatment Works, Canberra, Federal Capital
- Construction of Northern Main Sewer, Canberra, Federal Capital
- Erection of a Hotel (No. 4) at Canberra
- National Library Building, Canberra
- 1926 Construction of Dam and Improvements on the Molonglo River, Federal Capital
- Erection of Permanent Administrative Offices, Canberra
- Erection of Cottages at Canberra
- 1927 Construction of Buildings and Formation of Zoological Reservation at Canberra for the National Museum of Australian Zoology
- 1928 Construction of North-western Intercepting Sewer, Canberra
- Australian War Memorial, Canberra
- 1929 Construction of Buildings for the Institute of Anatomy, Canberra

- 1929 Erection of Laboratories and an Administrative Block for the Division of Economic Botany of the Council for Scientific and Industrial Research, Canberra
- 1930 Construction of Public Baths in Canberra
- Construction of Federal Highway within the Federal Capital Territory
- Erection of Cottages in Canberra
- Construction of Concrete Roads, City Area, Canberra
- 1938 Erection of Community Hospital, Canberra, Federal Capital Territory
- 1939 Erection of Hostel, Canberra (Forrest), Australian Capital Territory
- 1941 Erection of Abattoirs at Canberra, Australian Capital Territory
- Erection of Temporary Office Buildings, Canberra, Australian Capital Territory
- 1943 Additions to the Government Offices, Canberra, known as "West Block"
- 1944 Erection of a new Hostel at Canberra (Barton), Australian Capital Territory
- 1945 Additions to the Institute of Anatomy, Canberra
- 1947 Erection of Permanent Administrative Offices, Canberra, Australian Capital Territory
- 1948 Erection of Administrative Building for the Entomology and Plant Industry Divisions, Council for Scientific and Industrial Research, at Canberra

- 1949 Erection of National Library and Roosevelt Memorial, Canberra, Australian Capital Territory
- 1952 Erection of National Library and Roosevelt Memorial, Canberra, Australian Capital Territory (Re-submission)
- 1955 Extension of Water Supply Storage System, Canberra, Australian Capital Territory
- Construction of New Commonwealth Avenue Bridge, Canberra, Australian Capital Territory
- 1956 Erection of Community Hospital at Canberra, Australian Capital Territory
- 1959 Construction of a new Government Printing Office at Canberra, Australian Capital Territory
- 1960 Construction of a new Main Hospital Block at the Canberra Community Hospital, Australian Capital Territory
- Construction of a new Nurses Home and Training School at the Canberra Community Hospital, Australian Capital Territory
- 1961 Construction of Cadets Barrack Blocks, Royal Military College, Duntroon, Australian Capital Territory
- 1964 Construction of Stage Two Land Research and Regional Survey Laboratories for the Commonwealth Scientific and Industrial Research Organization at Black Mountain, Australian Capital Territory
- 1968 Construction of Woden Valley Hospital, Canberra
- 1969 Establishment of Central Laundry and Sterilizing Services at Canberra Hospital, ACT

- 1971 Construction of a Brucella Vaccine Testing Laboratory at Canberra, ACT
- 1972 Construction of a Central Hospital Services Complex - Stage 1 at Canberra, ACT
- Extension of 17/35 Runway, Taxiways and Aprons at Canberra (Fairbairn) Airport
- Erection of a Communications Tower at Black Mountain, ACT
- 1974 Construction of a Central Health Laboratory at Woden, Australian Capital Territory
- 1975 Construction of a Central Hospital Services Complex - Stage 2 in the Australian Capital Territory (Crace)
- Construction of a Telephone Exchange at Deakin, Australian Capital Territory
- Extension to the Podium of Canberra Hospital - Stage 1, Australian Capital Territory
- 1979 Construction of a Defence Force Academy in the Australian Capital Territory
- Construction of a Crop Adaptation Laboratory for the CSIRO at Black Mountain, Acton, Australian Capital Territory
- Construction of the National Biological Standards Laboratory (NBSL) and Australian Dental Standards Laboratory (ADSL) at Symonston, Australian Capital Territory
- 1984 Redevelopment of the Royal Military College, Duntroon, Canberra, ACT
- 132kV Subtransmission Development, Tuggeranong, ACT

1985	Fitout of Office Space at Canberra National Convention Centre, Canberra City, for Commonwealth Use
1985	Construction of Canberra Mail Centre, Fyshwick
1986	132 kV Subtransmission Development, East Tuggeranong, ACT
1987	Construction of Department of Aviation Central Training College, ACT [Initial Report]
1989	Construction of National Biological Standards Laboratory, Symonston, ACT
	Fitout of Civil Aviation Authority Headquarters Building, Canberra
1990	Dedicated Computer Centre for the Australian Taxation Office, Bruce, ACT
1991	Purpose built computer centre for Australian Customs Service, Bruce, ACT
1992	Refurbishment and fitout of Juliana House, Phillip, ACT
	Office Construction at Section 45, Belconnen, ACT
	Storage/Display Facility for the Australian War Memorial, Mitchell, ACT
	York Park Offices
1994	Refurbishment of Australian Federal Police College, Barton, ACT
	Stage 2 redevelopment of the Royal Military College, Duntroon, ACT
1995	Refurbishment of Scarborough House and Construction of Commonwealth Offices, Phillip, ACT

PLANS AND ILLUSTRATIONS

PLANS

Locality	C - 1
Existing conditions	C - 2
National Capital Planning Authority - draft master plan	C - 3
Proposed development	C - 4

BUILDING RN1

Ground level	C - 5
Upper ground floor	C - 6
Typical floor layout	C - 7

BUILDING RN2

Basement	C - 8
Ground floor	C - 9
Upper ground floor	C - 10
Typical floor layout	C - 11

ELEVATIONS AND SECTIONS

Cross section RN1 and RN2	C - 12
Elevation - RN1 - Kings Avenue	C - 13
Elevation - RN1 - Constitution Avenue	C - 14
Blamey Square	C - 15
From apex	C - 16

BUILDING RN3

Ground floor	C - 17
Typical floor	C - 18

CARPARK

Typical floor	C - 19
Carpark and RN3 - cross section	C - 20

BUILDINGS F AND G

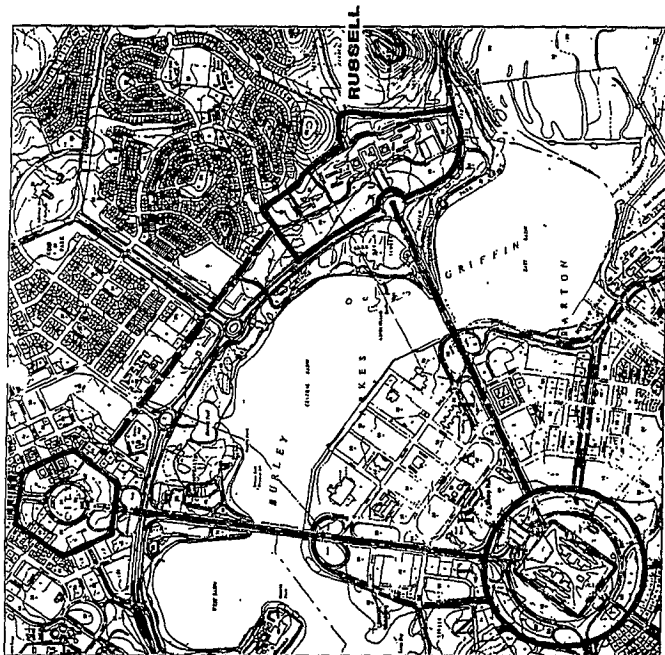
Existing floor and typical fitout plans	C - 21
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BUILDINGS A AND L

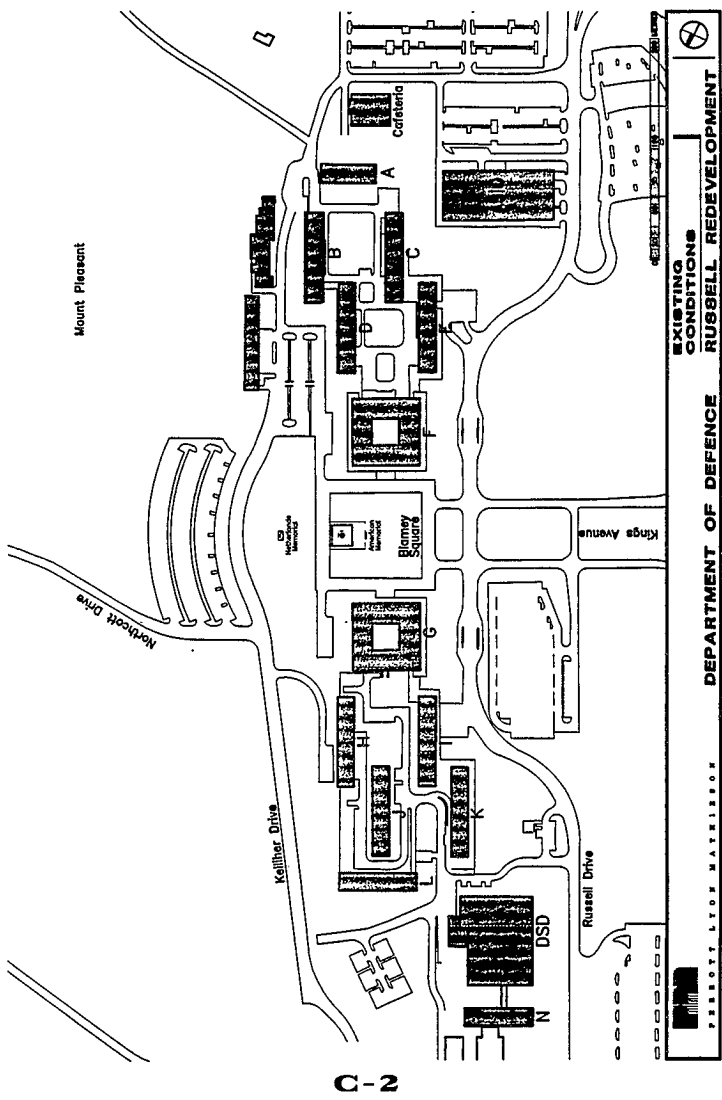
Existing floor and typical fitout plans	C - 22
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PERSPECTIVE

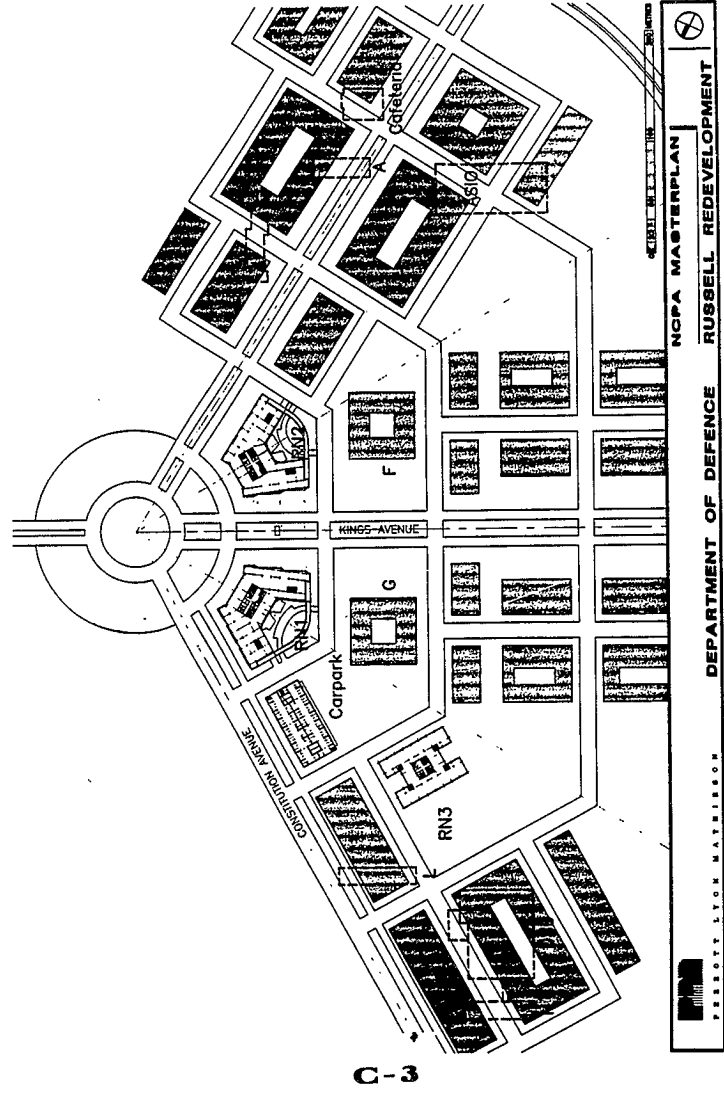
View from Blamey Square	C - 23
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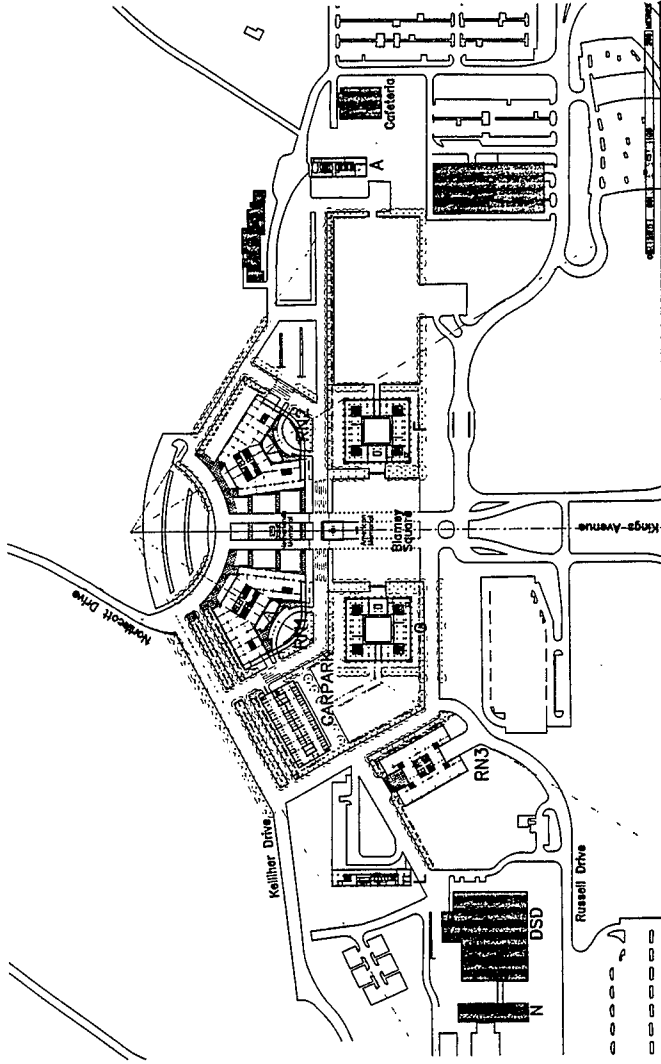
C-1



C-2

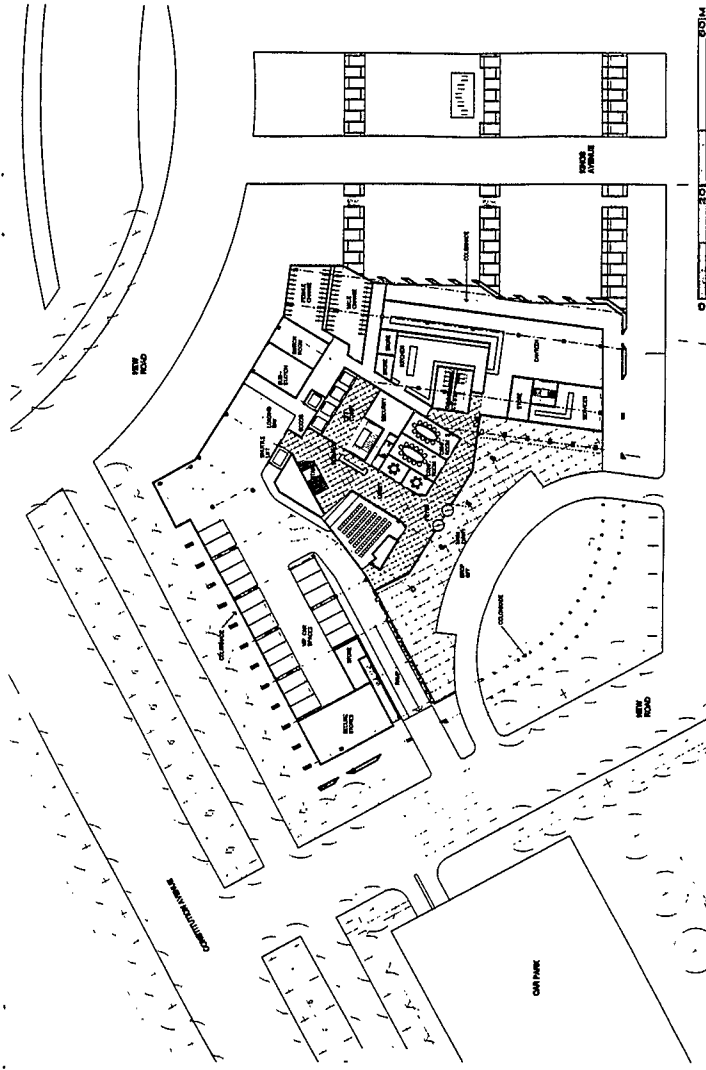


C-3





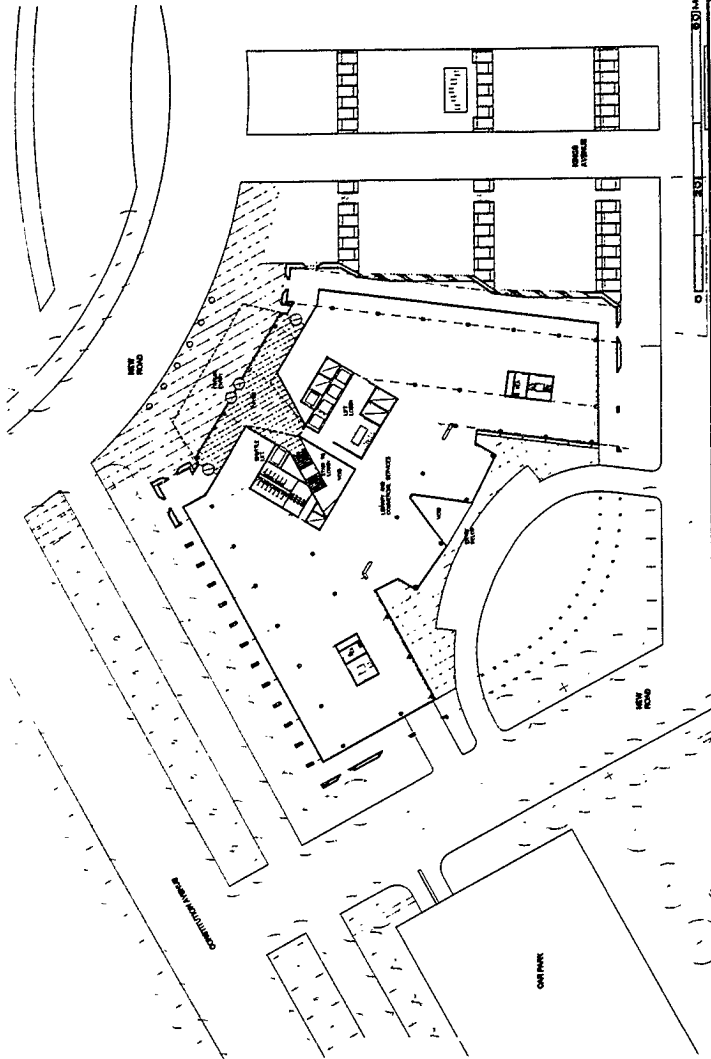
C-4


PROPOSED REDEVELOPMENT
RUSSELL REDEVELOPMENT
 PERROTT LYON MATTHEWSON **DEPARTMENT OF DEFENCE**

C-5

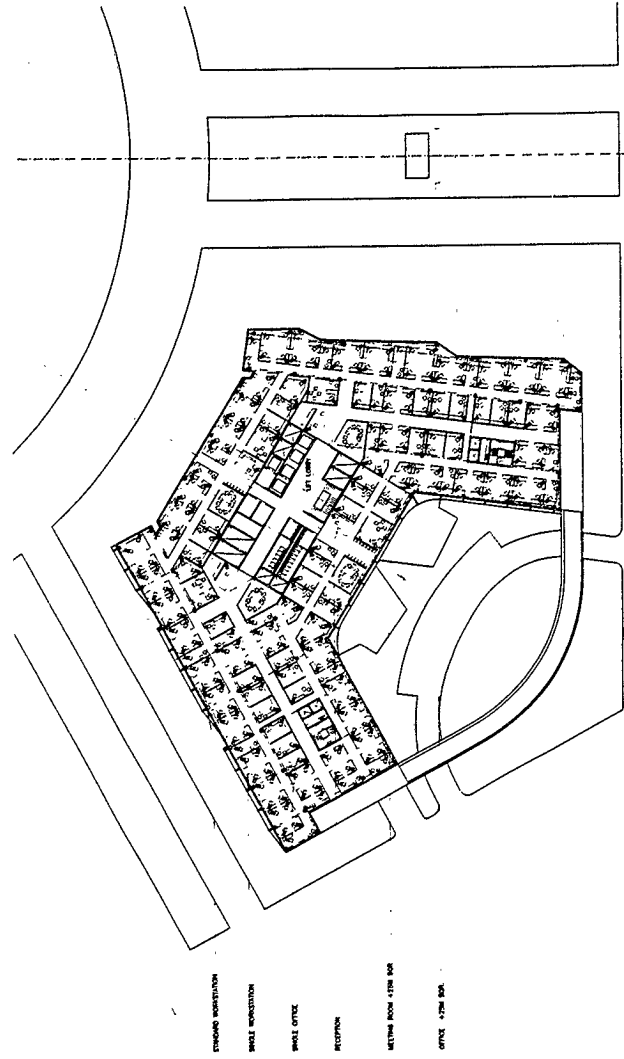

RN1
GROUND FLOOR PLAN
RUSSELL REDEVELOPMENT
 PERROTT LYON MATTHEWSON **DEPARTMENT OF DEFENCE**




C-6

0 100 200 300M

PERSEUS LOGO MATRISBOON
 RN1
 DEPARTMENT OF DEFENCE
 UPPER GROUND FLOOR
 RUSSELL REDEVELOPMENT

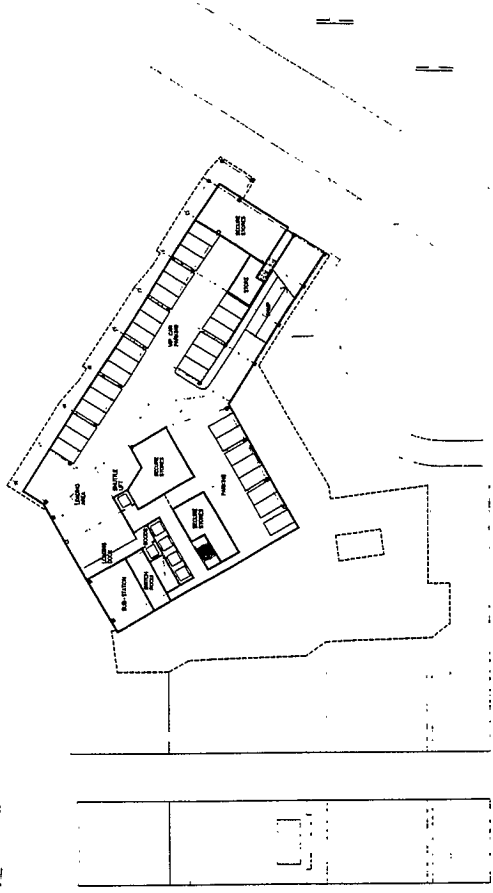


C-7

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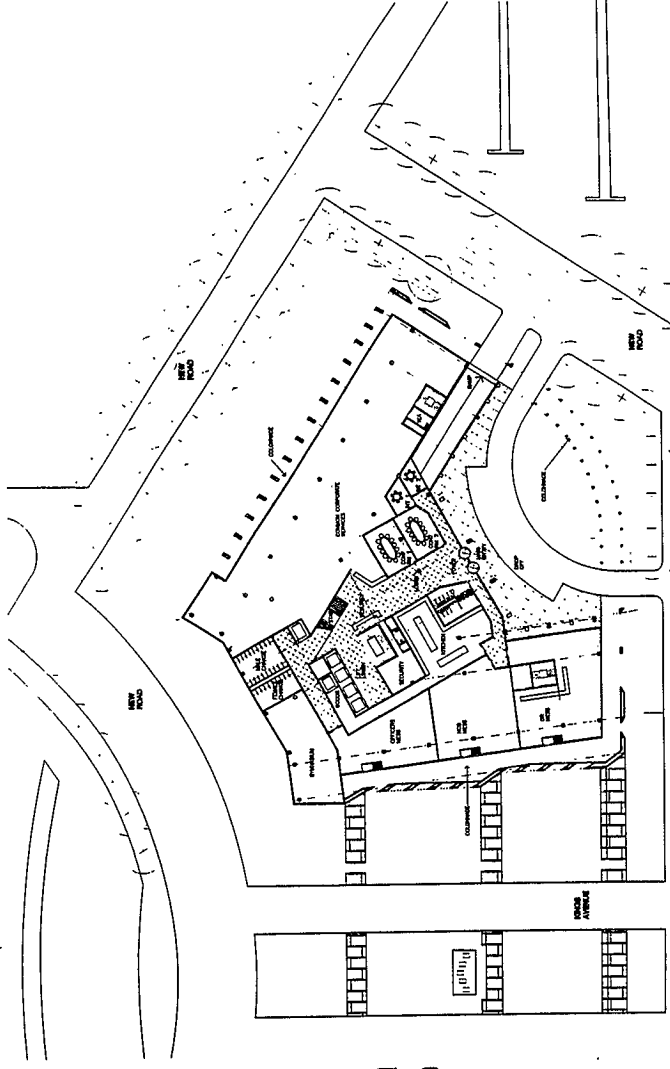
PERSEUS LOGO MATRISBOON
 RN1
 DEPARTMENT OF DEFENCE
 TYPICAL FITOUT LAYOUT
 RUSSELL REDEVELOPMENT

- STAIRS AND WALKWAYS
- SMALL RECEPTION
- SMALL OFFICE
- RECEPTION
- MEETING ROOM 4.125M SQM
- OFFICE 4.25M SQM




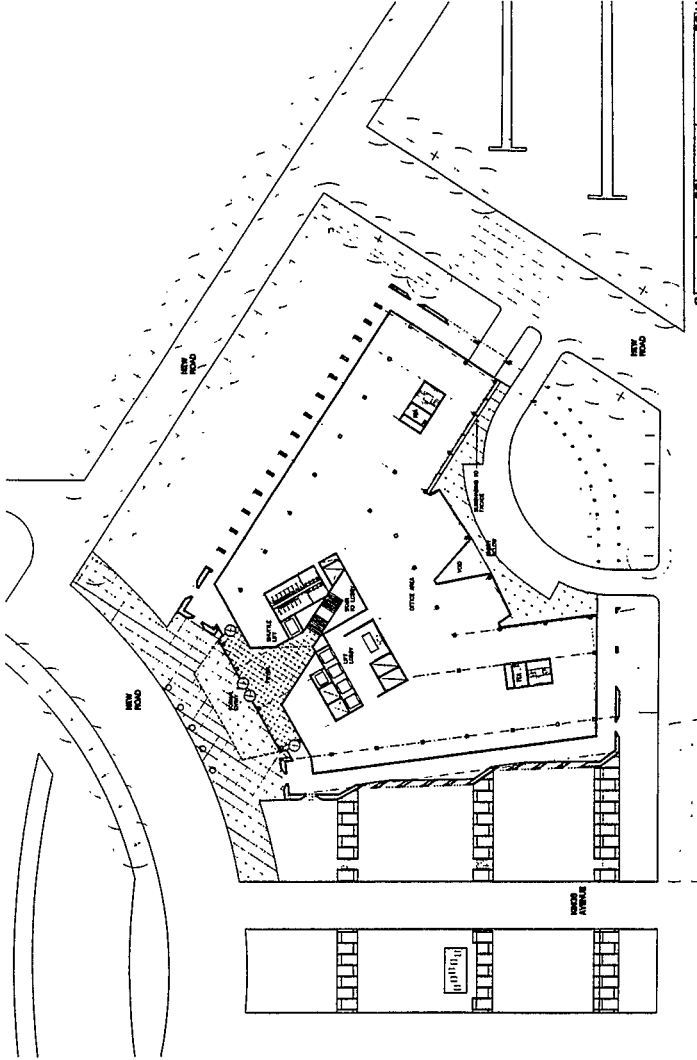
C-8


 0 10 20 30 40 50 M
 PIN2
 PERROTT LYON MATRIEXSON
 DEPARTMENT OF DEFENCE
 RUSSELL REDEVELOPMENT
 BASEMENT LEVEL
 RUSSELL REDEVELOPMENT




C-9


 0 10 20 30 40 50 M
 PIN2
 PERROTT LYON MATRIEXSON
 DEPARTMENT OF DEFENCE
 RUSSELL REDEVELOPMENT
 GROUND FLOOR PLAN
 RUSSELL REDEVELOPMENT



C-10


PERRYOTT LYON MATHIESON


DEPARTMENT OF DEFENCE

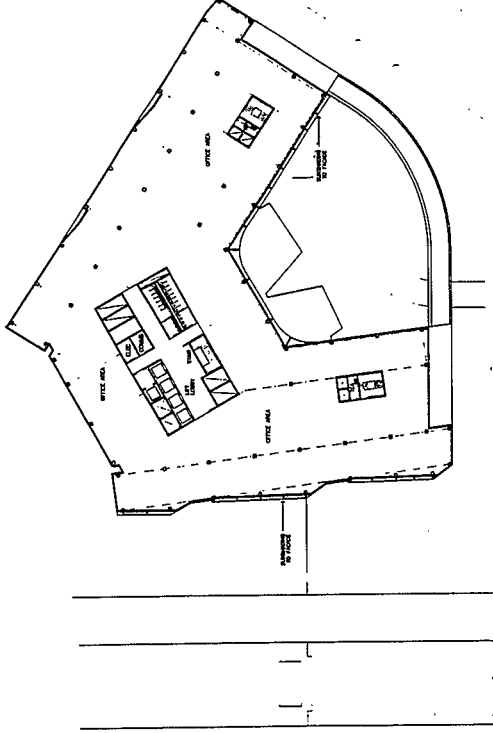
RUSSELL REDEVELOPMENT

UPPER GROUND FLOOR


RUSSELL REDEVELOPMENT

0 20 40 M





C-11


PERRYOTT LYON MATHIESON


DEPARTMENT OF DEFENCE

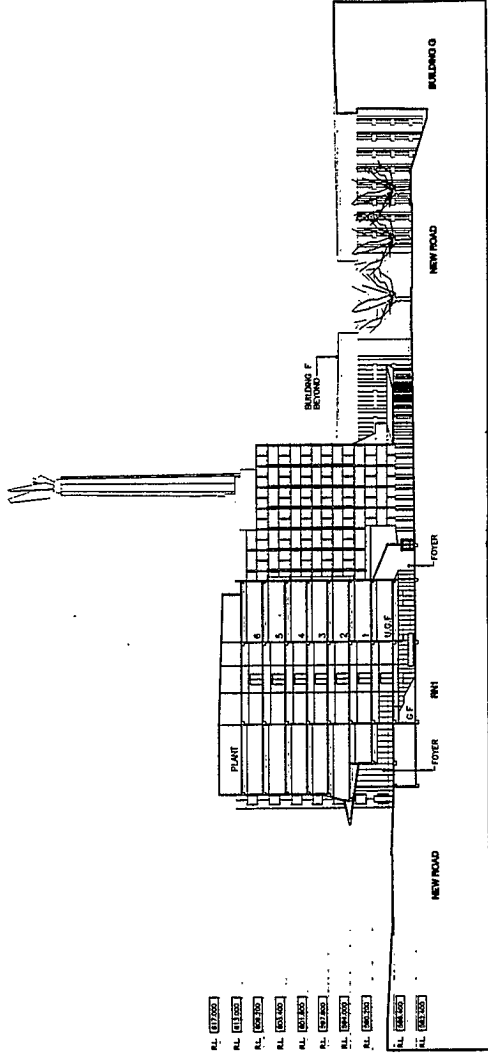
RUSSELL REDEVELOPMENT

TYPICAL FLOOR PLAN

RUSSELL REDEVELOPMENT

0 20 40 M

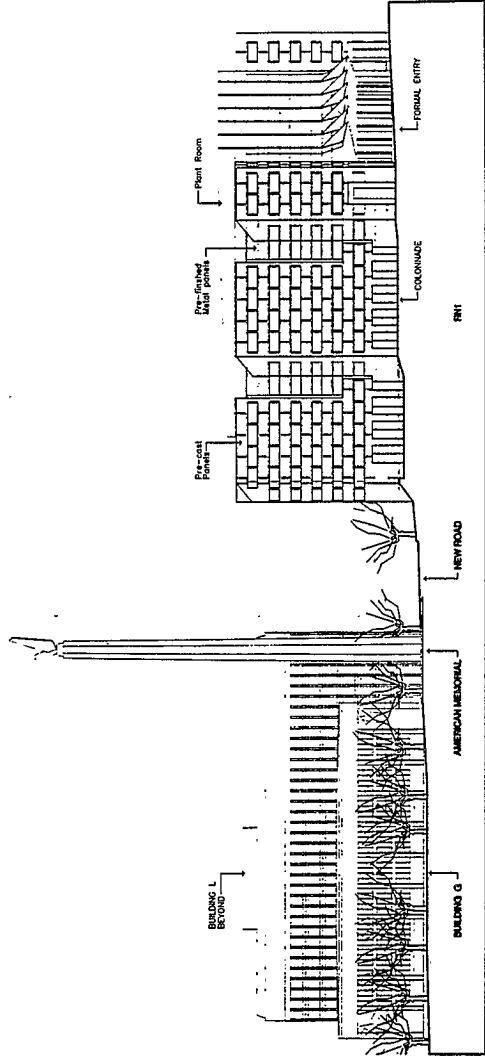




AL 077000
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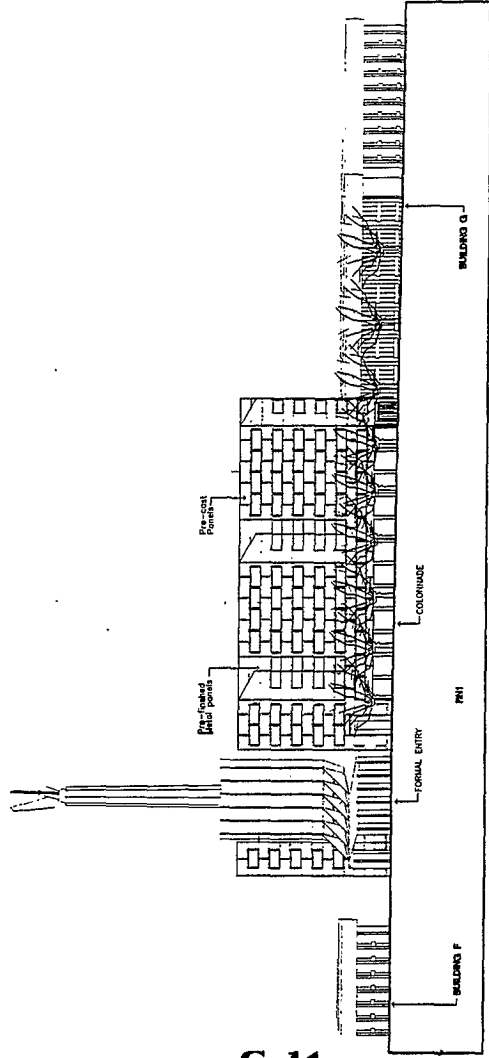
C-12

PERROTT LYON MATTHEWS
 DEPARTMENT OF DEFENCE
 RUSSELL REDEVELOPMENT
 RNT
 RNT
 TYPICAL CROSS SECTION
 0 25 50 75 M

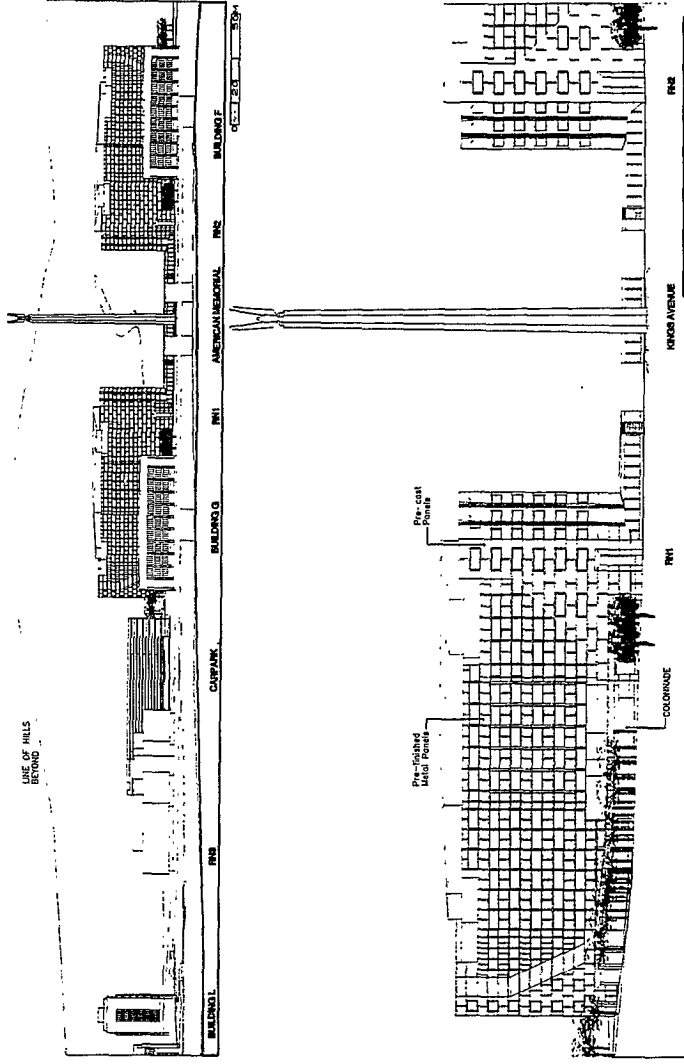
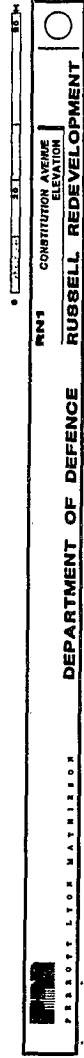


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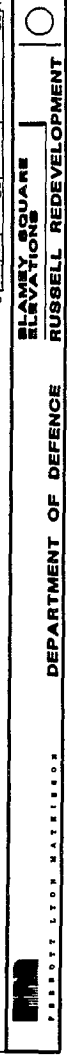
PERROTT LYON MATTHEWS
 DEPARTMENT OF DEFENCE
 RUSSELL REDEVELOPMENT
 RNT
 RNT
 TYPICAL CROSS SECTION
 0 25 50 75 M

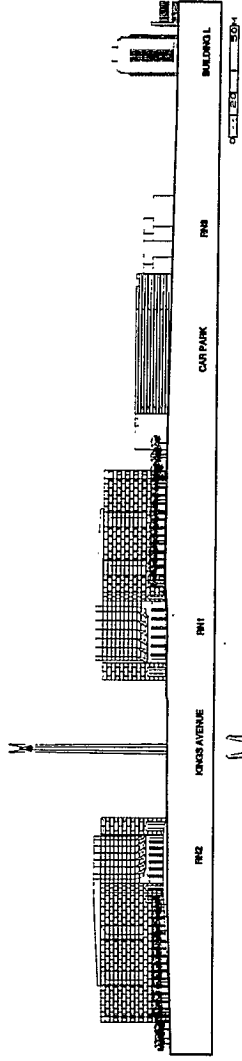


C-14

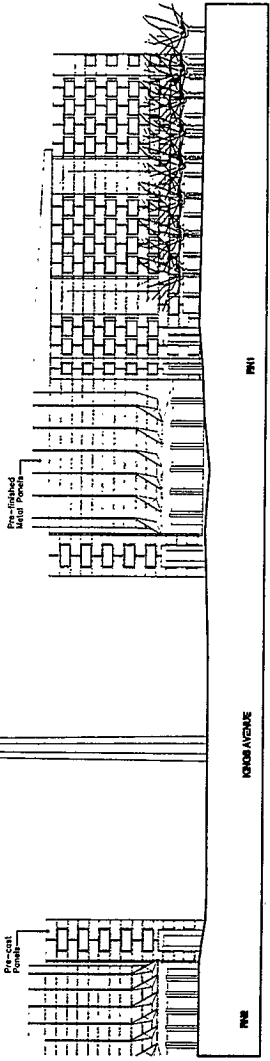




C-15

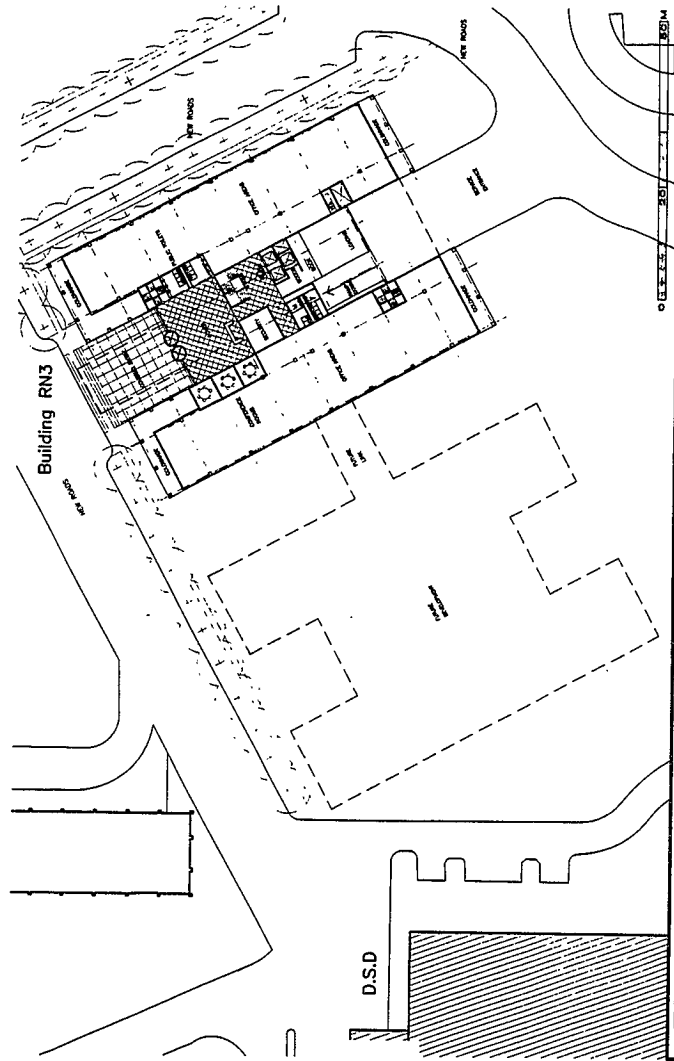






C-16

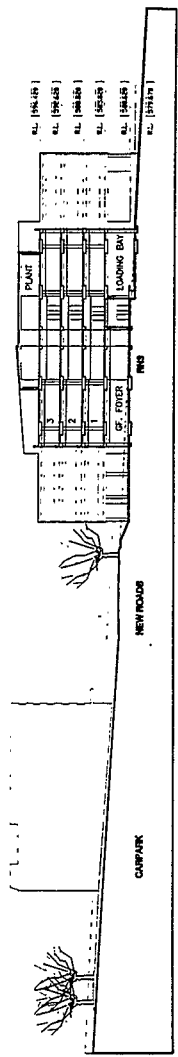



PERROTT LTON MATTHEWS
DEPARTMENT OF DEFENCE
ELEVATION FROM APEX
RUSSELL REDEVELOPMENT




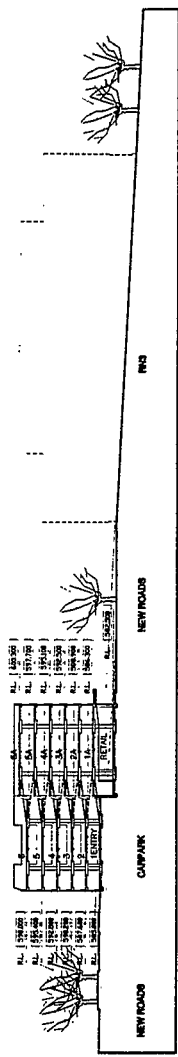
C-17


PERROTT LTON MATTHEWS
DEPARTMENT OF DEFENCE
GROUND FLOOR PLAN
RUSSELL REDEVELOPMENT





RNS - CROSS SECTION

C - 20



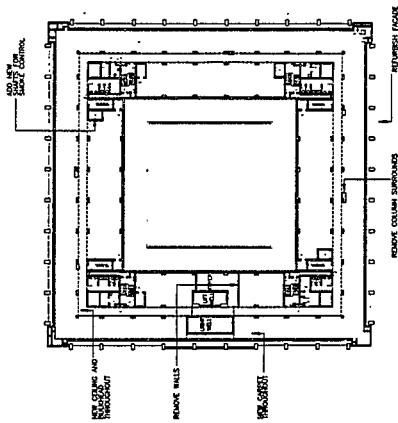
CARPARK - CROSS SECTION


PERRYDY LYON MATRISEON

RNS AND CARPARK CROSS SECTIONS

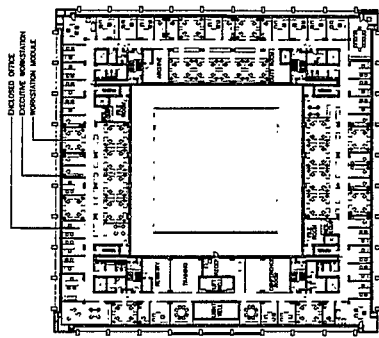
DEPARTMENT OF DEFENCE

RUSSELL REDEVELOPMENT




EXISTING FLOOR PLAN

C - 21



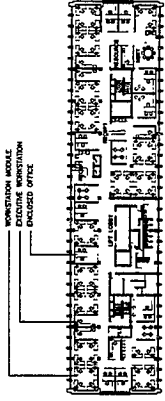
TYPICAL FITOUT PLAN


PERRYDY LYON MATRISEON

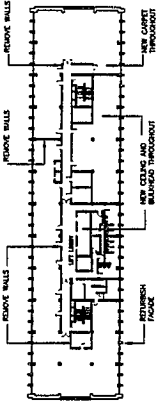
BUILDING PLAN AND FITOUT

DEPARTMENT OF DEFENCE

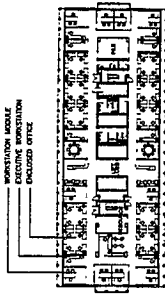
RUSSELL REDEVELOPMENT



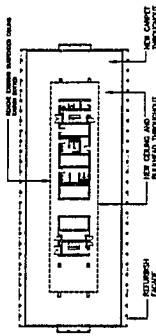
BUILDING L - TYPICAL FITOUT PLAN



BUILDING L - EXISTING FLOOR PLAN




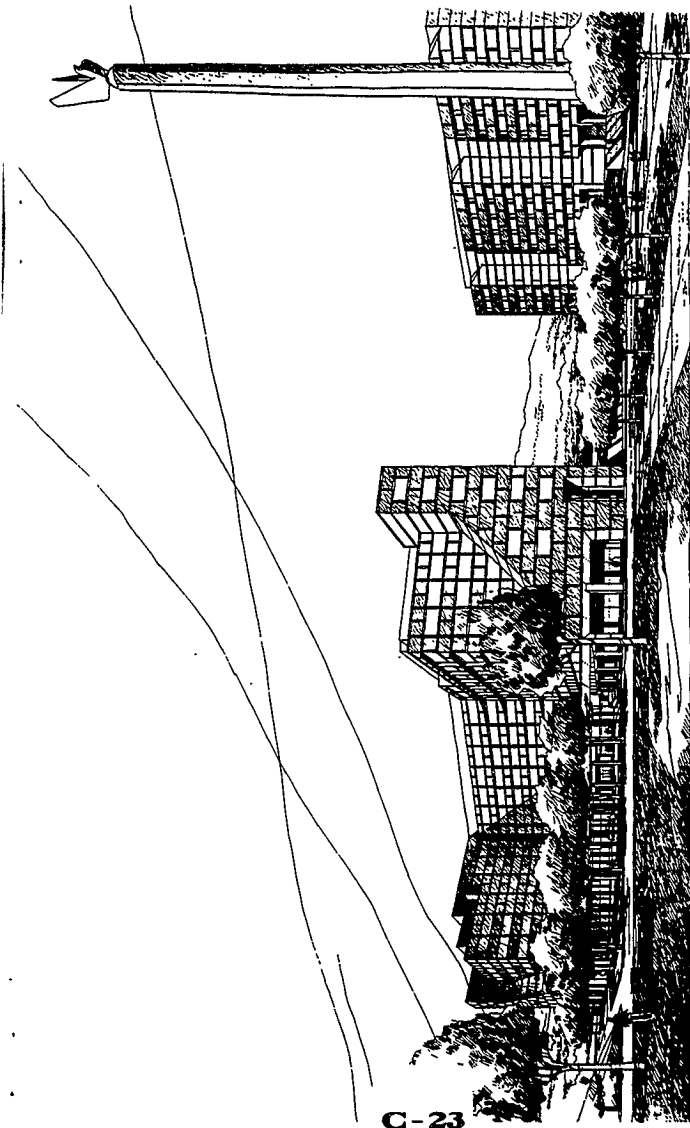
BUILDING A - TYPICAL FITOUT PLAN




BUILDING A - EXISTING FLOOR PLAN




PERROTT LYON HARRISON **DEPARTMENT OF DEFENCE** **BUILDING A & L** **PLAN AND FITOUT** **RUSSELL REDEVELOPMENT**




PERROTT LYON HARRISON **DEPARTMENT OF DEFENCE** **VIEW FROM SQUARE** **RUSSELL REDEVELOPMENT**

CONSTRUCTION DETAILS

STRUCTURAL DESIGN

Design Philosophy

1. The structural design of the buildings will incorporate features to ensure functional, low maintenance, economical solutions are achieved. The structural systems will complement the architectural form of the building, whilst having the ability to carry the design loads, cater for services, and allow maximum flexibility for future usages.

Foundations

2. The sites for the proposed new buildings are generally underlain by tuffs, siltstones and shales with tuffaceous sedimentary rocks, overlain in parts by fanglomerates. These generally have good load-bearing characteristics and will adequately support the proposed structures on shallow footings. Excavation for basements will be through these sedimentary rock materials.

Structural Systems

- Buildings RN1, RN2 and RN3 - a number of floor systems have been considered for each of the proposed new buildings, and the relative costs and merits of these were reviewed. The floor framing systems considered included reinforced concrete bands, composite steel beams and prestressed concrete bands
- Carpark - both prestressed and normally reinforced concrete floor systems have been analysed, and by taking advantage of the simple nature of this structure, a reinforced concrete system of bandbeam and one-way slabs has been adopted.

Floor load criteria

3. The adopted office floor framing options have been sized to satisfy current Australian Standards for commercial buildings, with allowances for partitions, ceilings, services and floor finishes. They also satisfy the

requirements of the *Guidelines for the Design of Commonwealth Office Buildings*, with a typical live load allowance of 5kPa (consisting of 4kPa general plus 1kPa for demountable partitions).

4. Compactus areas are nominated, representing not less than 5% the available office accommodation area, and these will be designed for a live load allowance of 10kPa. Safes and other Defence secure document storage cabinets will be required within various workstations, and these are allowed for in the structural design. The carpark structure has been sized to satisfy current Australian Standards, with an allowance for normal vehicle loads and services.

Refurbished buildings

5. The existing buildings to be refurbished have been inspected and no evidence of major deficiencies in the superstructures were observed. Some local areas require minor rectification works including;

- reinstatement of sealant between the precast concrete facade panels on Buildings A and L, due to sealant breakdown
- rectification of stone cladding to the columns on the northern facade of Building G, some of which are displaying substantial bowing
- reinstatement of tanking to the concrete window sills overlooking the internal courtyard, and the perimeter first floor level roof of Building G. Some associated cracking in the external finishes also requires rectification
- Building F to be rectified similar to Building G.

6. New penetrations and other refurbishment works are not expected to cause any significant problems in these buildings.

CIVIL DESIGN

7. The new roads are set out in accordance with the NCPA Master Plan. Extensive consultation and a range of options were reviewed with officers of the NCPA and ACT Government in order to determine the final geometry and road alignment levels.

Road Network Changes

8. Approximately two kilometres of new road will be constructed to complement and maintain accessibility within and through the redeveloped Russell site. These roads link into Kelliher Drive, Northcott Drive and Kings Avenue and allow circulation around new Buildings RN1 and RN2 and access to new Building RN3. Road network changes incorporate an extension of Kings Avenue to the east and development of a segment of the future extension to Constitution Avenue.

9. A number of existing roads and 0.8 hectares of existing carparking will be demolished to allow development of new roads and buildings. All new roads within the development will be asphalt sealed.

Road Geometry

10. New roads are aligned to suit extensions to Constitution Avenue and Kings Avenue and to form a functional and symmetrical arrangement about Kings Avenue. Sections of the Russell site are naturally steep, however roads will be constructed with predominantly flat to moderate grades. This permits comfortable operation of vehicular and pedestrian movements throughout the site.

Earthworks

11. Extensive earthworks to develop formation levels for new roads will incorporate approximately 100 000m³ of excavation and 30 000m³ of fill. The geology of the site is a combination of different rock types below relatively thin soil and clay layers.

12. At the eastern edge of the site, excavation into the Mount Pleasant hill area, which forms part of the Canberra Nature Reserve, will be required to accommodate an appropriate alignment for Constitution Avenue. This work will be carried out by Defence under the direction of the NCPA.

Road Redevelopment Staging

13. Roadwork construction will be staged to maintain the serviceability of existing and new roads, buildings and carparks as follows:

- **Stage 1** - the development of new roads circulating around Buildings RN1 and RN2, and the construction of temporary carparking west of Building F. It also includes construction of three new tunnel links between new and existing buildings.
- **Stage 2** - the realignment of Kings Avenue through Blamey Square.
- **Stage 3** - the replacement of temporary carparking constructed in Stage 1 with new temporary carparking south of Building F.
- **Stage 4** - incorporates the development of new roads which provide access to new Building RN3 and the construction of two new tunnel links between Building RN3 and existing buildings.

SERVICES INFRASTRUCTURE

Water Supply

14. The water supply serving the site at present is supplied by two operational 300mm diameter supply mains. Fire Services within the existing buildings are served via 100mm mains pressure extensions taken from the external mains system. Domestic supply to each of the buildings is also supplied utilising mains pressure to each building.

15. The existing water reticulation system serving the site does not adequately cover the proposed site of the new buildings and extension of the existing system to the proposed building locations will be required. The existing services in Buildings A, F, G & L will be adequate to meet the needs of the refurbishment.

Sewer Drainage

16. The sewerage system serving the site consists of a gravity main network flowing in a northerly direction and connecting via a 300mm diameter main to the trunk main located within Constitution Avenue. The existing system serving the site does not adequately cover the proposed site of the new buildings and extension of existing reticulation system to the proposed building locations will be required.

Stormwater

17. Existing stormwater systems serving the Russell site incorporate two major underground drainage systems which discharge flow to open channel systems located in Kings Park and Grevillea Park, west of the Russell site, before eventually flowing into Lake Burley Griffin. On the basis of available information, these major drainage systems appear capable of accommodating the enhanced flows following the Russell redevelopment. Approximately 500m of existing major drainage conduits require relocating due to conflict with proposed new building sites and proposed new road alignment levels.

Electricity

18. Two new dedicated high voltage feeders from the Telopea Park zone substation were provided to the site when Building M (DSD) was constructed. A third existing feeder previously entering at building A was retained and extended to the new high voltage metering substation at Building M. The three feeders are metered on the high voltage time of use tariff. The two old feeders from the city east zonal substation were retained and can be manually switched to provide supply if required. The feeders have adequate capacity for the foreseeable future.

19. As part of the upgrade in 1991, and in order to allow high voltage metering, a loop was formed to provide a 11KV ring around the site. The ring is generally copper cable rated at approximately 230 Amps. When surveyed in 1988 it was loaded at less than 50 percent. There is adequate capacity to supply the new buildings.

Gas

20. The gas supply to the site is via a 100mm underground main looping around Kelliher Drive to the east of the compound at the junction of Kelliher Drive and Northcott Drive and a spur added to supply a new meter to the north of Blamey Square. The Natural Gas Company has indicated that the supply to the site has sufficient capacity to supply any envisaged development.

Communications

21. Trunk cables reticulate from the main distribution frame in Building F to each building frame. These cables reticulate via underground conduit

systems which are external to the building. However, some building cables are fed through other building frames. Telecom is the maintenance provider for the cabling system and has confirmed that there are few maintenance problems with the trunk cables.

HYDRAULIC SERVICES

22. Hydraulic work will allow for the complete operation of the buildings in accordance with Australian Standards and local authorities' requirements.

23. A fire hydrant/hose reels system will be installed in all new buildings. It will comply with the BCA and Australian Standards. In buildings F, G, A and L the existing hydrant system will be modified to meet current regulatory requirements. Toilets with facilities for the disabled will be provided in accordance with the BCA. Sewerage from the new buildings will be discharged into the existing reticulation servicing Russell.

24. Water will be supplied to each facility from the existing water reticulation system. Water efficient shower roses will be installed in all shower cubicles.

LIFT SERVICES

25. New lifts incorporating modern technologies will be installed in new buildings as follows:

- Buildings RN1 & RN2-4 - passenger lifts of 1360kg (20 passenger) capacity. One shuttle lift of 900kg (13 passenger) capacity, serving basement and ground floors. One goods lift of 2200kg capacity, serving all floors
- Building RN3 - 2 passenger lifts of 1360kg (20 passenger) capacity, 1 goods lift of 2200kg capacity, serving all floors
- Carpark - 2 passenger lifts of 1080kg (16 passenger) capacity, serving all floors.

26. New lifts will be designed and installed in compliance with Australian Standard.

27. For refurbished Buildings A, F, G and L the hoisting machines, structural car and well equipment are all generally in good condition and have a further operational life of at least 15 years. Lift car interiors are in poor condition and require refurbishment. There is additional work required to ensure the lifts meet current regulations.

COMMUNICATION SERVICES

28. The communications systems will include:

- voice and data cabling distribution within buildings providing services to work stations
- voice and data cabling distribution providing services to buildings
- existing PABX and associated equipment expansion
- managed network equipment to distribute data services between buildings and to work stations.

29. All systems will adhere to the current applicable Defence, Austel and Australian Standards applicable. Cabling systems will be capable of delivering the required security classification services between buildings and to work stations.

ELECTRICAL SERVICES

30. The existing reticulation system will be modified to suit the proposed redevelopment. This will require new high voltage mains to buildings RN1, RN2, RN3, F and Carpark. Existing services for Buildings A, G and L will be upgraded.

31. New substations will be provided for buildings RN1, RN2, RN3 and F with existing substations reused for G, A and L. New street lighting will be provided to all roadways in accordance with Authority and code requirements.

32. The electrical services will comprise the following major components: