Parliamentary Standing Committee on Public Works

REPORT

relating to the

CONSTRUCTION OF NEW TELEPHONE EXCHANGE BUILDING FOR TELECOM AUSTRALIA, KENT STREET, SYDNEY

(Fourth Report of 1985)

THE PARLIAMENT OF THE COMMONWEALTH OF AUSTRALIA
1985

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PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

R E P O R T

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Canberra 1985

MEMBERS OF THE PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS
(Twenty-Eight Committee)

Senator Dominic John Foreman (Chairman)
Percival Clarence Millar, Esq., M.P. (Vice-Chairman)

Senate	House of Representatives
Senator Gerry Norman Jones	John Neil Andrew, Esq., M.P.
Senator Dr Glenister Sheil	Robert George Halverson, Esq., O.B.E., M.P.
	Colin Hollis, Esq., M.P.
	Leonard Joseph Keogh, Esq., M.P.
	Keith Webb Wright, Esq., M.P.

EXTRACT FROM THE
VOTES AND PROCEEDINGS OF THE HOUSE OF REPRESENTATIVES
NO. 13 DATED 27 MARCH 1985

15 PUBLIC WORKS COMMITTEE - REFERENCE OF WORK - TELEPHONE EXCHANGE BUILDING, KENT STREET, SYDNEY: Mr West (Minister for Housing and Construction), pursuant to notice, moved - That, in accordance with the provisions of the Public Works Committee Act 1969, the following proposed work be referred to the Parliamentary Standing Committee on Public Works for consideration and report: Construction of new telephone exchange building for Telecom Australia, Kent Street, Sydney.

Mr West presented plans in connection with the proposed work.

Debate ensued.

Question - put and passed.

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PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

CONSTRUCTION OF NEW TELEPHONE EXCHANGE BUILDING FOR TELECOM AUSTRALIA, KENT STREET, SYDNEY

R E P O R T

By resolution on 27 March 1985 the House of Representatives referred to the Parliamentary Standing Committee on Public Works for investigation and report, the construction of a new Telephone Exchange Building for Telecom Australia, Kent Street, Sydney.

The Committee has the honour to report as follows:

THE REFERENCE

1. The proposal referred to the Committee is for the construction of a multi-storey Telephone Exchange Building, on a Telecom owned site at 246 Kent Street, Sydney.

2. The building will consist of twenty levels with a gross floor area of 17,500 square metres. Fourteen levels will accommodate equipment and the remaining six will accommodate ancillary equipment and support services.

3. The estimated cost of the proposed work is $27.6 million indexed at January 1985 prices.

THE COMMITTEE'S INVESTIGATION

4. The Committee received written submissions and drawings from the Australian Telecommunication Commission (Telecom Australia) and the Department of Housing and Construction (DHC) and took evidence from their representatives at a public hearing in Sydney on 30 April 1985.

5. The Committee also received submissions from the Australian Heritage Commission, The Council of the City of Sydney, and G.M. Laurence and Wherry, Solicitors and Attorneys. At the conclusion of the public hearing the Committee directed that Telecom should obtain a statement from the Australian Heritage Commission that it has no objection to the proposed Kent Telephone Exchange Building.

6. A list of witnesses and the organisations which they represented is at Appendix A.

7. Prior to the public hearing the Committee inspected the Kent Street site as well as the Pitt Exchange which houses similar equipment to that which will be housed in the proposed Kent Exchange.

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

BACKGROUND

9. Existing Exchange and Network Facilities The Central Business District (CBD) of Sydney and surrounding sectors are currently being served by the York, Dalley, City South, Pitt, Haymarket, and Phillip Telephone Exchanges. A plan showing their locations and the areas which they serve is at Appendix B. The following paragraphs describe the existing telephone exchanges servicing Sydney and the surrounding CBD.

10. York Exchange The York Exchange is located in leased accommodation on the ground floor of the Grace Building, 77 York Street. It was commissioned in 1948/49 and currently serves customers who will eventually connect to the Kent Telephone Exchange.

11. The York Exchange is nearing saturation. It has no space for extension of the Cable Chamber and Main Distribution Frame. More importantly, the existing equipment cannot provide the modern facilities required by a number of customers in the York exchange area or the adjoining CBD. The needs of these customers are presently met by transferring services to other exchanges in the CBD of Sydney, e.g. City South and Pitt.

12. It is expected that the number of services to be transferred will increase, hence placing additional strain on these exchanges.

13. Dalley Exchange The Dalley Exchange utilizes old generation switching equipment which is not capable of being modified to provide the advanced facilities now available. Also, the ancillary services are nearing the end of their economic life and are inadequate to support modern generation equipment.

14. The Committee was informed that a further building proposal to extend this exchange is currently being developed.

15. City South Exchange The City South Exchange complex is 90 per cent occupied with a variety of equipment but sufficient space exists to enable progressive replacement of old telephone equipment with modern equipment when required. However, there is no space available for other network facilities such as those now required by commercial clients.

16. Pitt Exchange The Pitt Exchange was completed in 1972 and has sufficient capacity available to accommodate local customer growth until the mid-1990's. It is currently programmed to absorb during 1984/85 the services provided by the Phillip Exchange.

17. Phillip Exchange The Phillip Exchange is located in leased premises in the basement of the Australian Government Centre building. The present equipment requires modification to provide the facilities now available to commercial clients. The accommodation has proved to be unsuitable for both exchange equipment and staff, and action is currently in hand to re-provide these facilities with modern equipment in the Pitt Exchange and vacate the area in the Phillip Exchange.

18. Haymarket Exchange complex The Haymarket Exchange complex was extended in 1980 (Committee's *Third Report of 1974* [Parliamentary Paper 180/1974] refers). It has sufficient capacity to cater for growth of telephone services in its area until about the year 2000. The exchange also provides other special network facilities for commercial clients in the southern and central sectors of the CBD. However, there is limited accommodation for the growth of these facilities.

THE NEED

19. A recent review was undertaken by Telecom to redefine the equipment accommodation space available in the Sydney CBD and to ascertain the future needs.

20. The review became necessary in the face of rapid changes in technology, introduction of new services, recognition of future new facilities, and changes in approach to meeting accommodation needs.

21. The most significant influences on this review have been:

- the development of a wide range of new services;
- the planned removal of Telecommunications equipment from the GPO, and York, Dalley and Phillip Exchanges;
- exhaustion of exchange capacity in the York and Dalley exchange and the need for overlay of customers to adjacent exchanges;
- a more rapid growth in the Digital Data and Austpac networks than previously forecast;
- the expected decline in Telex services and now proposed recovery of crossbar telex equipment;
- the overall shortage of usable equipment space in all CBD buildings.

22. The current usable equipment occupancy in the CBD is extremely high and is undesirable. It inhibits flexibility in space allocation and prevents the establishment of additional ancilliary services. This high rate of equipment usage has been allowed with this knowledge that replacement of obsolescent equipment by more modern, more complex and more compact equipment will give most buildings sufficient space for future development.

23. The results of this review indicate that a new exchange is required. A new exchange would provide all local customer requirements for the north western sector of the city and accommodate a wide range of facilities to service the Sydney CBD.

24. The predicted demand for basic telephone services in the proposed Kent Exchange area is set out in the following table.

Year	1985	1990	1995	2000
Customers	12,000	14,200	16,500	18,700

25. Beyond the year 2000, nett growth is predicted to be approximately 450 services per year. The space allocation in the proposed Kent Building is expected to meet the basic telephone needs of customers in the Kent Exchange area until about the year 2005.

26. In addition to the provision of basic telephone equipment, Telecom informed the Committee that accommodation will be necessary from 1990 till beyond the year 2000 for new communication networks and facilities. The following paragraphs describe these new networks and facilities:

27. Digital Data Network (DDN) Digital Data Network is specifically designed for data communications. The service is known as Digital Data Service (DDS) and offers advanced features not currently available from the present data service - Datel. This service has been designed to meet customers existing and emerging data communication needs. The basic services offered by the DDS are synchronous leased services operating at 2400, 4800, 9600 and 48,000 bit/s.

28. The attractiveness of DDS results from features such as:

- better quality transmission;
- high reliability;
- new network/terminal interfaces, which are simpler, cheaper and provide new facilities;

- network multiplexing to reduce the need for customer-supplied multiplexing equipment;
- faster provision of services;
- faster restoration of services;
- flexibility, which allows customers to reconfigure their networks to accommodate changing operational needs.

29. Forecast requirements for Digital Data Networks are:

Year	Potential Network Size	Kent Local and Branch Customer Terminations
1985	9400	-
1990	74,900	6,300
1995	174,100	29,600
2000	271,300	62,900
2005	334,300	93,450

30. Currently, DDN equipment for the Sydney CBD is provided in the Haymarket building. This will reach capacity by 1986.

31. Growth from 1986 will be taken by the Pitt Exchange. More space is required in order to meet the needs of DDN until 2005.

32. Packet Switching Network (AUSTPAC) AUSTPAC offers customers a nationwide distance independent service incorporating switching, transmission and network intelligence which will solve many existing and emerging customer problems. AUSTPAC has been specifically designed to meet customers' data communication needs and addresses the following problems:

- incompatability between computerized terminals on one network with those of another. AUSTPAC facilitates multiple use of terminals, such as VDUs for different applications;

- inflexibility of customers' networks which makes it difficult to expand a network to accommodate either new applications or different types of terminals;

- high start-up costs which inhibit smaller potential users from making a commitment to develop an automated network.

33. Most teleprocessing applications are suitable for use with AUSTPAC.

34. The following table indicates the forecast for Packet Switching Network customer terminations and associated AUSTPAC Switching Units required for the Sydney CBD.

Year	1990	1995	2000
Customer Terminations	5,304	17,240	34,308
AUSTPAC Units	29	45	89

35. There is currently accommodation available for 24 AUSTPAC units in the Sydney CBD. A further 16 units are to be located in the proposed Dalley Exchange. The proposed Kent Exchange has been limited to 25 units for security reasons. These buildings will provide parallel growth for this service until about 1997.

36. Special Services Network Equipment (SSNE) SSNE is any service other than a telephone service provided by Telecom to its customers. Typical of these services are:

- Emergency service lines, e.g., fire, ambulance, disaster, etc.
- Security services and Alarms
- Department of Defence private lines
- Facsimile lines

- Piped Music Lines
- PABX alarms, Out-door Extensions and Tie-Lines
- Telemetering Lines and Control Circuits

37. The forecast requirements for Total Special Services Network equipment and for the proposed Kent Exchange building Special Services Network are as follows:

Year	Total Special Services	Kent Street Special Services
1990	4,800	940
1995	9,500	2,350
2000	14,250	5,150
2005	19,000	9,500

38. The space allocation in the Kent Exchange building is expected to meet the needs of SSNE until about 2005. The remainder of the SSNE requirements will be provided by normal direct connection (non-exchange lines).

39. Satellite and Microwave Radio Equipment This service will provide a range of business communication packages which include telephony (STD, ISD and operator assisted services), data and text services to organisations operating in remote areas of Australia.

40. As the building is being developed to the maximum extent possible there will be capacity to establish a major CBD Satellite and Radio Communication Terminal for both customer and trunk microwave systems. The space allocation in the Kent building is expected to meet the needs for the facilities until about the year 2005.

41. Long Line (Transmission) Equipment This is special equipment designed for the transmission of telecommunications over long distances.

42. 27,000 channels capacity will be provided in the Kent Building for long line equipment to service both the telephone and special networks with digital transmission equipment. This capacity is expected to meet these needs until about the year 2005.

43. Other Special Network Services In addition to the above facilities, a number of other special network services are foreseen. These facilities are described in the following paragraphs:

- Common Channel Signalling

  This equipment provides for faster set-up of telephone connections after the completion of dialling. It is a message network overlaid onto the telephone network to carry end to end signalling information. It is also capable of passing messages associated with network management, customer billing or even non-network associated commercial data.

- Digital Point to Multi-Point Radio

  This is new radio telephone equipment used for rapidly providing digital services to fixed locations in metropolitan areas. In this case, the "point" is Kent Exchange; the "Multi-Point" refers to its potential reception and transmission from many subscriber locations in Sydney.

- Electronic Funds Transfer

  This is a facility to enable a point of sale terminal to communicate directly with a bank's data processing centre using Telecom's packet switched data service. This allows customers to debit directly the cost of goods or services to their bank accounts, withdraw cash or both. It is an extension of facilities provided for after-hours cash at banks.

- Facsimile Equipment

  This is equipment for the exact transmission of copies of documents over telephone lines. Facsimile machines operate by scanning the material to be sent with a photosensitive sensor as it rotates rapidly on a spinning drum. A similarly spinning drum at the receiving end recreates the picture line by line.

- Integrated Services Digital Network

  A telecommunications network being designed for service about 1990 whereby users may plug telephones, data terminals, facsimile machines and personel computers into a multiple outlet, providing digital services both nationally and internationally.

- Local Area Networks (LAN)

  A network under the control of one user and restricted to his premises. LAN allows the user to "talk" to people through the computer, access remote data sources and use the power of much larger systems. It also links office equipment into a main frame computer.

- Mobile Cellular Radio

  A high capacity small cell (cellular) mobile telephone service operating in the 800/900 MHz band.

- Telefile (Electronic Mail) Equipment

  Computer based information equipment which will allow direct communication between interactive terminals, personal computers and word processors connected to the telecommunication network. It is a personalised message service whereby a customer can leave and collect messages from a Telecom provided electronic mailbox.

- Telemeter

  A meter in the customer's premises connected directly to the customers telephone service. It operates simultaneously with the exchange telephone service meter and provides an immediate visual record of each meter registration to the customer.

- Teletex

  A service using switched (data) network which permits the interconnection of Communicating Word Processors with each other and with Telex facilities. This means that documents prepared on modern electronic typewriters or word processing equipment within an office can be distributed efficiently and reliably in a manner appropriate to the business correspondence.

- Videotex (VIATEL)

  A low cost computer based information retrieval system that uses the existing telephone network to distribute information. The system uses a control computer to store data and displays information on the customer's television or on a special videotex terminal.

  Videotex will enable users to access information on an extensive range of topics from business information, such as stock markets, exchange rates, world ecomonic indicators and company reports, etc. to other information of interest to the general public.

- Wideband Services

  High speed data services or facilities which require wide bandwidth and which cannot be carried on the present or foreseen telephone network because of their high speed of operation. These include such things as cable television, videophone, local area networks,and television conferencing.

44. All the above systems relate mostly to commercial clients in the CBD. Telecom believes it is important to provide the major links and interface equipment central to the user terminals in order to minimise equipment and materials required to provide the connections. The existing Telecom exchange buildings in the CBD cannot provide the necessary scope for these facilities.

45. In summary, due to rapid changes in technology, the introduction of new services, the recognition of future new facilities and a change in accommodation needs, a redefinition of the available equipment accommodation space in Sydney and the surrounding CBD was needed. It was concluded that a requirement

exists for a new exchange in the north western sector of the Sydney CBD, which would provide all local customer requirements of the area and provide sufficient space for Special Network facilities serving the Sydney CBD and the network in general.

46. Committee's Conclusion A new exchange is required to meet the needs of local customers in the north-western sector of the Sydney CBD.

THE PROPOSAL

47. The proposed building will comprise 3 basements, ground floor, mezzanine, 14 equipment levels, and a building service plant level. It will reach a height to roof level, of approximately 94 metres above the Kent Street pavement, which is understood to be in accordance with local government building height regulations for the area. The development will have a gross floor area of approximately 17,500 square metres and will have provision for the installation of microwave radio and satellite dishes on the fourteenth equipment level and roof level.

48. Initially, it is proposed that only the building envelope be constructed which will include the provision of centralised services and plant and the reticulation of these to all levels. Eight of the 14 equipment levels will be fitted out as part of the project. Fitout work will comprise the provision of partitions, some areas with raised computer floors, appropriate task lighting, and air conditioning distribution to the equipment space. The remaining 6 equipment levels will be fitted out as separate projects when required by Telecom.

49. Location The site, which is Telecom owned, is located at 242-246 Kent Street, in the north-western sector of the Sydney CBD. It extends from Kent Street in the west to Clarence Street in the east, and is surrounded by multi-storey buildings. A locality plan is shown at Appendix C.

50. The site is close to the main cable centre of the area it will serve. It will have access to the existing Erskine Street cable tunnel. It is regarded as the optimum location for a new telephone exchange building.

51. The total site area available for development is 1155 square metres. A site photograph and plan is shown at Appendix D.

52. The site is well served by public transport. It is within close proximity to Wynyard railway station and bus terminals, and a pedestrian covered way will provide all-weather access. These transport systems should adequately cope with the transport needs of the proposed telephone exchange staff.

53. Adjacent to the proposed Kent Telephone Exchange are the Erskine Street Watch House Group of buildings. This group includes the former Watch House, 82 Erskine Street, and the terraces Nos. 66-80 Erskine Street. The Australian Heritage Commission (AHC) stated that these terraces are good examples of Classical Victorian and Edwardian commercial buildings, and as such, have been entered in the Register of the National Estate.

54. Planning and Design The proposal is for the construction of a 20-storey building consisting of 3 basements, ground floor, mezzanine, 14 equipment levels and a plant room.

55. Equipment levels will be fitted out to Telecom's requirements.

56. Cable chamber hammerheads and a tunnel will be constructed to link the new telephone exchange with the existing city network.

57. The building structure will be a reinforced concrete column and flat slab design. The services core will be primarily of reinforced concrete to provide resistance to lateral wind forces on the building. The footings will be reinforced concrete pads on suitable sandstone material.

58. The basement walls will be of reinforced concrete. Underpinning to adjoining buildings and footpaths will be provided as necessary for the excavation and construction of the basement.

59. The building exterior will be clad with pre-cast concrete panels and the building base will be of reinforced concrete with an exposed aggregate finish. The services core will have an off-the-form reinforced concrete finish.

60. Windows will have aluminium frames and be double glazed. The roof will be finished with a trafficable surface over a waterproof membrane.

61. Equipment areas will have smooth rendered and painted internal walls, welded sheet vinyl floor and painted underside of concrete slabs.

62. Office areas will have carpet floors and suspended acoustic ceilings. The lunch/recreation room will have a vinyl floor and suspended acoustic ceiling. Amenities areas will have limited tiled walls and floors.

63. Plant rooms will have granolithic concrete floors and rendered and painted walls and ceilings. Acoustic treatment will be provided to the walls and ceilings of the Diesel Generator room.

64. Details of Mechanical Services, Electrical Services, Fire Protection, Lifts, Hydraulic and Civil Works, and the Cable Chamber and Hammerheads, are at Appendix E.

65. Space Allocation The allocation of equipment for each floor level is listed at Appendix F.

66. Security Telecom Building Security Guidelines have been adopted for this building and are consistent with the standards applying to other buildings of a similar scope and function. Emphasis will be placed on measures to control the entry of personnel and vehicles.

67. During the construction of the building the Committee expects complete security of the site to be maintained at all times. Steps should be taken to ensure security measures are reflective of the terms of the National Public Works Conference General Conditions of Contract.

68. Amenities and Staffing The building has been designed to include amenities in accordance with Local Government requirements and the Telecom Australia Guidelines, "Provision of Amenities in Telecom Australia Buildings".

69. It is anticipated that by the year 2005 about 260 staff will be employed in the building with a maximum of about 240 on duty simultaneously.

70. A lunch/recreation room will be provided on the ground floor for use by 120 staff at any one time. Tea making facilities are provided on all staff levels.

71. Toilets are provided on all levels except basement 3 and level 15. Showers are located in basements 1 and 2, ground level and level 15.

72. Provision has been made in the design for disabled persons. Special entry facilities into the building and suitable toilets will be provided.

73. Parking Parking for 10 official vehicles will be provided at basement 2 level. Private vehicle parking is available in a council owned car parking station situated in Kent Street, opposite the site.

74. Energy Conservation It is proposed that the size of the windows be limited, and double glazing be provided where necessary in order to minimise solar heat loads on the air-conditioning plant. The windows will also be positioned predominantly on the southern and eastern sides of the building. Energy conservation measures will be incorporated in the air-conditioning design by the provision of a full fresh air economy cycle system.

75. Committee's Conclusion The proposed design of the Kent Street Telephone Exchange appears to be satisfactory and in accordance with requirements of Telecom.

ENVIRONMENTAL CONDISERATIONS

76. The proposal was referred to the Department of Arts, Heritage and Environment (formerly Home Affairs and Environment) by way of a Notice of Intent (NOI). A number of impacts such as the visual effect of building, shadow, wind effects, air pollution and noise, were mentioned in the NOI and assessed as having no significant detrimental effects. The Department advised Telecom that an environmental impact statement for this proposal would not be required.

77. The NOI mentioned that the site was adjacent to a group of terrace shops which were "classified".

78. Correspondence received from the AHC, in answer to an invitation from the Committee to comment on the proposal, revealed that the buildings adjacent to the site were not only classified, but listed on the Register of the National Estate.

No mention of this important fact was contained in submissions to the Committee from Telecom or DHC, although at the public hearing Telecom and DHC witnesses assured the Committee that this omission was not intended in any way to mislead or withhold information from the Committee.

79. It is pertinent to record the following points made to the Committee by the AHC:

- The site is adjacent to the Erskine Street Watch House Group, which is entered in the Register of the National Estate.

- Submissions from Telecom and DHC did not mention that the adjacent terraces were entered in the Register of the National Estate.

- Under section 30 of the Australian Heritage Commission Act 1975, the proposal was submitted to the Commission for comment. However, this was not done until March 1985, after the Developed Sketch Plans were completed.

- The great height and bulk of the Kent Street Telephone Exchange and its proximity to the historic buildings is detrimental to the heritage qualities of the Erskine Street Watch House Group.

80. At the public hearing amended drawings aimed at redressing AHC's reservations about the relationship between the entrances to the exchange and the adjacent historic building were substituted for the drawings provided in the DHC formal submission. Telecom officials undertook to attempt to obtain from the AHC an unqualified assurance that the architectural treatment now proposed complies with the Commission's requirements.

81. The Committee is most concerned about a number of issues in relation to this matter.

82. First, the Committee is critical of the omission of any reference in departmental submissions to the fact that adjacent buildings are of sufficient historical interest to be listed on the Register of the National Estate. The Committee must again emphasise that by the time proposals are referred all relevant statutory requirements should have been met by departments and appropriate clearances obtained from relevant agencies. According to the AHC, clearances and proper procedures were not obtained or adhered to in accordance with the Australian Heritage Commission Act 1975. Sub-section 30(3) of that Act provides that:

> Before a Minister, a Department or an authority of Australia takes any action that might affect to a significant extent, as part of the national estate, a place that is in the Register, the Minister, Department or authority, as the case may be, shall inform the Commission of the proposed action and give the Commission a reasonable opportunity to consider it.

83. Second, there appeared to be some confusion amongst Telecom and DHC about responsibilities for requesting and granting clearances from the AHC. The Committee can only point out that the Australian Heritage Commission Act 1975 has been in operation for a decade and that departmental officials should be familiar with the provisions of the Act and procedures relating to consulting and receiving clearances from the AHC.

84. In summary, the Committee accepts the view expressed by the AHC that the great heigh and bulk, and the proximity of the proposed exchange is detrimental to the heritage qualities of the Erskine Street Watch House Group.

85. However, the Committee appreciates Telecom's requirements in that the external dimensions of the proposed building are derived solely from the nature of the functions the building has been designed to house.

86. Committee's Conclusion The Committee is concerned that the AHC was not given the opportunity of performing its statutory responsibilities in a spirit of consultation, and recommends that in future, proper procedures are adhered to in accordance with the Australian Heritage Commission Act 1975.

87. Impact of Construction The Committee received a submission from the NSW Lands Department and representatives of the owners of the terraces. The latter expressed concern about the following:

- the effect the proposed site excavation and construction would have on their building;

- the detrimental effect upon clients and staff from any construction noise, and

- the effect on access to their premises for both clients and staff during the excavation stage.

88. DHC replied that while steps will be taken to ensure that disruption to the surrounding areas will be kept at a minimum, it must be realised that there will be some minor impact on the surrounding area. DHC will continue to consult with the Council of the City of Sydney during the construction stage to ensure that disruption and disturbances are kept to an acceptable level.

ESTIMATE OF COST

89. The estimated cost of the proposed work is $27.6 million at January 1985 prices.

90. Interest and administrative charges amount to $9.7 million giving a total commitment to be invested in the building of $37.3 million.

91. Telecom assured the Committee that telephone charges and associated costs would not rise as a result of this proposal.

PROGRAM

92. It is proposed to invite tenders as soon as possible with a view to achieving the completion of construction by late 1988 or early 1989.

93. Occupancy of certain levels is required by June 1988.

94. Committee's Recommendation The Committee recommends construction of the work in this reference.

RECOMMENDATIONS AND CONCLUSIONS

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

		Paragraph
1.	A NEW EXCHANGE IS REQUIRED TO MEET THE NEEDS OF LOCAL CUSTOMERS IN THE NORTH-WESTERN SECTOR OF THE SYDNEY CBD.	46
2.	THE PROPOSED DESIGN OF THE KENT STREET TELEPHONE EXCHANGE APPEARS TO BE SATISFACTORY AND IN ACCORDANCE WITH REQUIREMENTS OF TELECOM.	75
3.	THE COMMITTEE IS CONCERNED THAT THE AUSTRALIAN HERITAGE COMMISSION WAS NOT GIVEN THE OPPORTUNITY OF PERFORMING ITS STATUTORY RESPONSIBILITIES IN A SPIRIT OF CONSULTATION, AND RECOMMENDS THAT IN FUTURE, PROPER PROCEDURES ARE ADHERED TO IN ACCORDANCE WITH THE AUSTRALIAN HERITAGE COMMISSION ACT 1975.	86
4.	THE ESTIMATED COST OF THE PROPOSED WORK IS $27.6 MILLION AT JANUARY 1985 PRICES.	89

Paragraph

5. THE COMMITTEE RECOMMENDS CONSTRUCTION OF THE WORK IN THIS REFERENCE. 94

D.J. Foreman

(D.J. FOREMAN)
Chairman

Parliamentary Standing Committee
on Public Works
Parliament House
CANBERRA

16 May 1985

APPENDIX A

WITNESSES

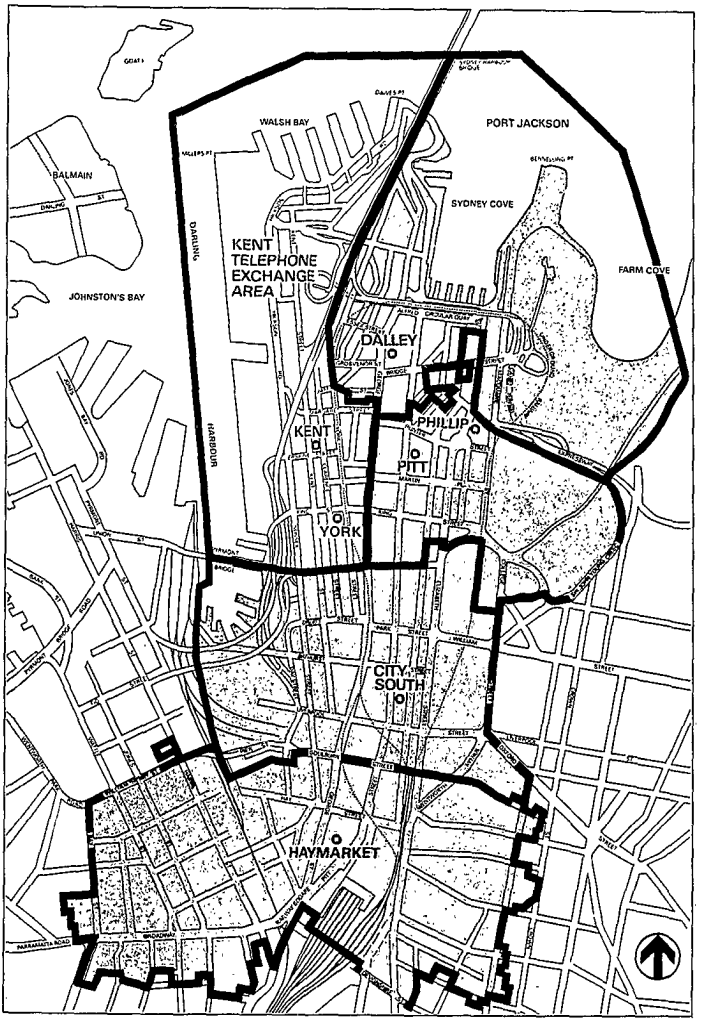
Brigden, W.F., Esq., Manager, Buildings Division, Telecom Headquarters, Telecom Australia, Melbourne.

Columbo, D.W., Esq., Project Manager, Class 3, Department of Housing and Construction, N.S.W. Region.

Conlin, R.J., Esq., Manager, Planning, Programming and Projects Branch, Buildings Division, Telecom Headquarters, Telecom Australia, Melbourne.

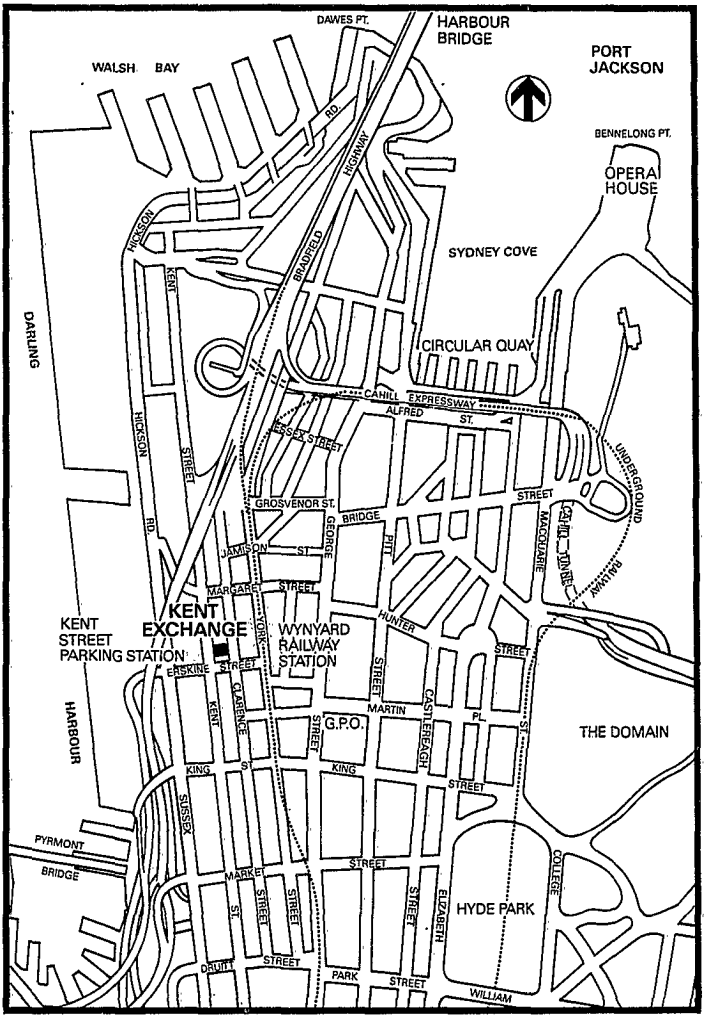
Macdonald, P.B., Esq., Superintending Engineer, Forward Planning Branch, Telecom Australia, Sydney.

Roxburgh, R.D., Esq., Associate Director (Projects), Department of Housing and Construction, N.S.W. Region.



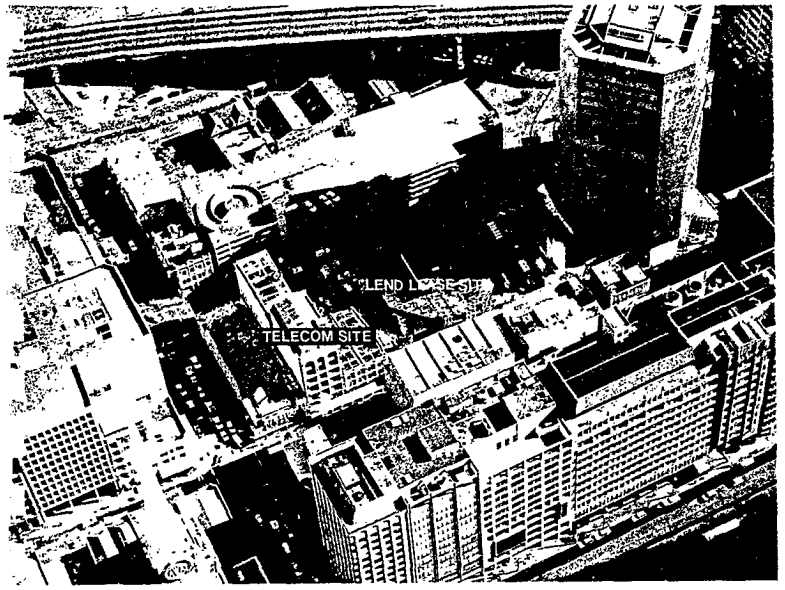
KENT AND ADJACENT EXCHANGE AREAS

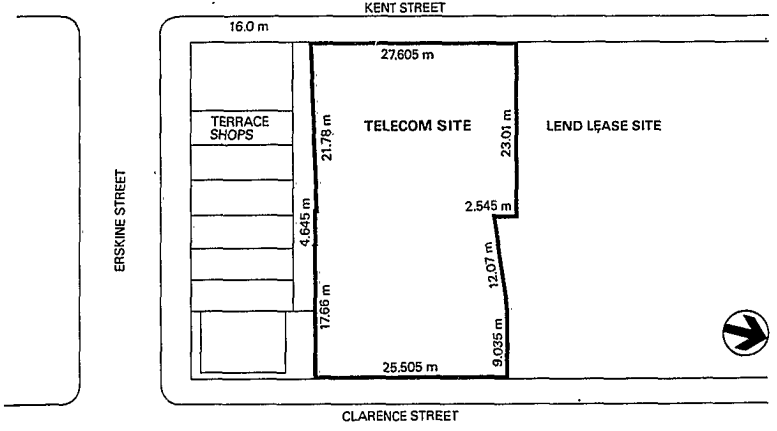
(B-1)



LOCALITY PLAN

(C-1)





SITE PHOTOGRAPH AND PLAN

(D-1)

DETAILS OF SERVICE

Mechanical Services Air conditioning will maintain temperature and humidity conditions in equipment rooms, public spaces, office areas and lunch/recreation room. Chilled water will be piped to modular air handling systems in plant rooms serving each equipment level.

Mechanical ventilation will be provided to plant rooms, power and battery rooms, basement levels and all toilet and locker areas.

Diesel generating units will be provided to meet equipment needs, essential power and lighting requirements and limited lift operation in the event of a power failure.

The vehicle entry area includes the provision of a 13 tonne turntable and associated hoist to facilitate direct and safe vehicle access/agrees and unloading within the building.

Electrical Services Mains power will be supplied from a basement sub-station. Adjacent to this will be the main switch-board and Diesel Generator room. Duplicate power feeds will ensure back up supply to all essential Telecom facilities.

Lighting in equipment rooms will permit easy adjustment and maximum flexibility. Emergency lighting will be provided to public areas, stairs and fire escapes routes.

Power outlets will be strategically located. A comprehensive lightning protection system will be provided, and an emergency warning and intercommunication system for personnel evacuation will be installed.

Fire protection Fire protection will be in the form of a sprinkler system. An early warning alarm will be provided to the Main Distribution Frame room at ground level and all equipment rooms.

Fire hydrants and hose reels will be provided internally and portable fire extinguishes will be located in appropriate areas. Fire escape stairs will be fully pressurised.

Lifts Four passenger lifts will be installed. One to serve all building levels from the lowest basement, and the others to serve from the ground floor upwards.

A goods/passenger lift will provide materials handling access to all levels.

Hydraulic and Civil Works Adequate town water, sewerage and drainage facilities serve the site. Building hydraulic services include the provision of hot water units to basins and showers, boiling water to tea rooms, and refrigerated drinking water units to all staff occupied levels.

Civil works comprise the provision of a covered paved pedestrian space at the main entry to the building which will link with adjoining developments on Clarence Street.

Cable Chamber Hammerheads and Tunnel New cable chamber hammerheads will link the cable chamber in the proposed building to the existing city network. A new tunnel in Clarence Street will also link the cable chamber to the existing tunnel network in Erskine Street.

FLOOR ALLOCATION OF EQUIPMENT

The equipment to be accommodated on each floor level is as follows:

Basement 3

Ventilation plant, fuel storage tanks and pumps, fire services, sewerage and storm water pumps, a building engineering services workshop and store, and cable entry from Kent Street.

Basement 2

Vehicle entry from Kent Street, a security post, turntable, goods unloading area, parking for ten official vehicles, the lower cable chamber level, cable entry from Clarence Street, and an exchange installation workshop and store.

Basement 1

The upper level of the cable chamber, a Sydney County Council electric supply sub-station, an electrical main switch room, diesel generators, cable protection equipment and ventilation plant rooms.

Ground Floor

Provides, at Clarence Street level, the main staff entry and security control point, Main Distribution Frame, test desk, exchange records area, lunch area, recreation facilities and sick bay, and access and facilities for the disabled.

Mezzanine

Main Distribution Frame and a power and battery room to serve exchange switching equipment on level one, and space for office staff associated with the exchange.

Level 1

Local customer and transit telephone exchange equipment, Teletex, Integrated Services Digital Network signalling equipment, Telemeter and Common Channel signalling equipment.

Level 2

Power and battery equipment for levels two and three, Long Line (transmission) Equipment, Special Services Network Equipment, and Local Private Automatic Branch Exchange.

Level 3

Line conditioning, non-exchanges services and interface equipment for Integrated Services Digital Network.

Level 4

Digital Data Network Terminal.

Level 5

Packet Switching Network transit and terminal equipment and power and battery equipment for levels four, five and six.

Level 6

Packet Switching Network Terminal equipment.

Level 7

Facsimile, Electronic Funds Transfer, Telefile (Electronic Mail), Local Area Network equipment and battery equipment for that level.

Level 8

Videotex, future networks and facilities equipment and power and batter equipment for that level.

Level 9

New customer facilities and power and battery rooms to serve levels nine and ten.

Level 10

New customer facilities.

Level 11

Wideband Services Equipment and power and battery equipment for levels eleven and twelve.

Level 12

Wideband Services Equipment.

Level 13

Mobile cellular radio plus digital point to multi-point radio equipment and space for radio development, and power and battery equipment for levels thirteen and fourteen.

Level 14

Satellite and Microwave Radio terminal private and trunk equipment.

Level 15

Air handling plant, water storage tanks, chiller sets, local monitoring and control room, and lift machine rooms.

Roof

Microwave radio and satellite dishers, cooling towers, water storage tank and the goods lift machine room.