

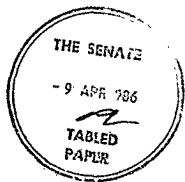
Parliamentary Standing Committee on Public Works

REPORT

relating to the

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

(First Report of 1986)



THE PARLIAMENT OF THE COMMONWEALTH OF AUSTRALIA
1986

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PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

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Australian Government Publishing Service
Canberra 1986

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

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

<u>Senate</u>	<u>House of Representatives</u>
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Senator Gerry Norman Jones	John Neil Andrew, M.P.
Senator Dr Glenister Sheil	Robert George Halverson, O.B.E., M.P.
	Colin Hollis, M.P.
	Leonard Joseph Keogh, M.P.
	Keith Webb Wright, M.P. ⁽¹⁾
	John Saunderson, M.P. ⁽²⁾

(1) Resigned 13 February 1986

(2) Appointed 18 February 1986

EXTRACT FROM THE

VOTES AND PROCEEDINGS OF THE HOUSE OF REPRESENTATIVES
NO. 64 DATED WEDNESDAY, 27 NOVEMBER 1985

27 PUBLIC WORKS COMMITTEE - REFERENCE OF WORK - TELEPHONE EXCHANGE BUILDING, DALLEY 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 1962, 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 at Dalley Street, Sydney.

Mr West presented plans in connection with the proposed work.

Debate ensued.

Question - put and passed.

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

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

R E P O R T

By resolution on 27 November 1985 the House of Representatives referred to the Parliamentary Standing Committee on Public Works for consideration and report the proposal for the construction of new telephone exchange building for Telecom Australia at Dalley Street, Sydney.

The Committee has the honour to report as follows:

THE REFERENCE

1. The work proposed under this reference involves the construction of a new Telephone Exchange building and associated cable bridges to link with the existing Dalley Street Telephone Exchange. The new building will consist of a part basement, ground floor, first floor, six equipment levels and an enclosed roof level plant room. The equipment levels will be fitted out to Telecom Australia's requirements. There will be three elevated cable bridges which will be constructed at second floor level to carry telecommunication cabling and provide secure personnel access between the new and existing telephone exchanges. Alterations will be made to the existing telephone exchange to provide for the requirements of the cable bridges.

2. The limit of cost of the proposed works is \$13 million at June 1985 prices.

THE COMMITTEE'S INVESTIGATION

3. The Committee received written submissions and plans from Telecom Australia and the Department of Housing and Construction (DHC) and took evidence from their representatives at a public hearing held in Sydney on 3 February 1986.
4. Letters were also received from the Australian Heritage Commission, the Department of Arts, Heritage and Environment, the Traffic Authority of New South Wales and the Metropolitan Water Sewerage and Drainage Board.
5. Prior to the hearing the Committee inspected the existing Dalley I Exchange as well as the proposed site for the new Telephone Exchange which will be known as Dalley II.
6. A list of witnesses who appeared at the public hearing and the organisations which they represented is at Appendix A.
7. The Committee's proceedings will be printed as Minutes of Evidence.

BACKGROUND

8. Functions of Telecom On 1 July 1975 the Australian Telecommunications Commission was established under the provisions of the Telecommunications Act 1975.

9. The functions of the Commission include:

- the planning, establishment, maintenance and operation of telecommunications services within Australia.
- to operate such services as the Commission is required by the Telecommunications Act 1975.

10. The Commission is required to perform its functions to best meet the social, industrial and commercial needs of the Australian people for telecommunication services and as far as is reasonably practicable, to make its services available for all people throughout Australia who require these services. To this end Telecom has established the following objectives:

- to provide every household with the opportunity to obtain a telephone at an affordable price;
- to maintain a level, range and high quality of telecommunications services which will assist Australian industry and commerce to remain internationally competitive;
- to ensure that the benefits of technological developments are made available as widely as possible;
- to aim for maximum reliability and security of telecommunications services;
- to maintain an adequate flow of information to customers regarding the provision, use and maintenance of services;

TELECOM CHARGES

11. Telecom is committed to pricing services at an affordable level so that telecommunications services are available nationwide. It is also committed to passing on to customers, wherever possible, savings achieved through the use of new and more efficient technologies and increased operational efficiency in the provision of communications services.

12. Telecom Exchanges in Sydney CBD At present the Sydney Central Business District (CBD) and surrounding areas are being served by the Dalley, York, Kent, City South, Pitt and Haymarket Telephone Exchanges. A plan showing the location of these exchanges and the areas which they serve is shown at Illustration 1, Appendix B.

13. Dalley I Dalley I is a 10-storey building established in 1953. It has progressively grown from an initial installation of 6,000 services to the building capacity of 12,000 services in 1973. It provides service to customers in the northern sector of the CBD.

14. York Exchange The York Exchange was commissioned in 1948/49. It is nearing saturation and has no space for extension of the cable chamber and main distribution frame. It is being replaced by the new Kent Telephone Exchange.

15. Kent Exchange The Kent Exchange, which was the subject of an inquiry and a report by the Committee in 1985 recommended the construction of a 20-level building in Kent Street, Sydney. Fourteen levels will accommodate equipment and the remaining six will accommodate ancillary equipment and support services. The building will provide all local customer requirements and provide sufficient space for Special Network facilities serving the Sydney CBD and the network in general. Completion date for the Kent Exchange is late 1988 or early 1989. Occupancy of certain levels is required by June 1988 (FWC Report No. 4/1985, Parliamentary Paper No. 190/1985 refers).

16. City South Exchange The City South Exchange is 83 per cent occupied with a variety of equipment. Unless the 1926 building is redeveloped or refurbished the remaining space cannot be used. To optimise space then available progressive replacement of old telephone equipment will be required.

17. Pitt Exchange The Pitt Exchange was completed in 1972 and will be able to accommodate local growth until the mid-1990s. It also accommodates other special network facilities for commercial clients.

18. Haymarket Exchange The Haymarket Exchange complex will be able to cater for growth of telephone services in its area until approximately the year 2000. The Exchange also provides limited accommodation for the growth of special network facilities for commercial clients in the southern and central sectors of the CBD.

THE NEED

19. Existing Building The existing Dalley Telephone Exchange (Dalley I) commenced operations in 1953. The building was designed for five floors of exchange equipment and five floors of operational and technical support services.

20. Existing Equipment The Dalley I equipment is outmoded and incapable of providing modern communication services and facilities to customers. The existing engineering services such as air conditioning have reached the end of their economic life and are incapable of supporting new generation communication equipment. Customer needs and growth are met by connecting new customers to the Pitt Telephone Exchange. Approximately 3,000 telephone services in the Dalley area have been diverted this way. It is expected that this number will increase to approximately 9,000 by 1989, at which time the existing cable capacity between Dalley I and Pitt will be fully utilised. The present equipment was developed before the Second World War. This 'step by step equipment' was used until the late 1950s when 'crossbar-type equipment' was introduced. This older equipment is incompatible with the modern AXE electronic or computer controlled equipment. There is no provision for ISD nor for

identification of the calling subscriber. The equipment does not allow for the recording of subscribers calls as a record which may be made available on request.

21. Telecom advised that this redundant equipment will be withdrawn progressively over the installation period of the new equipment. Although some parts may be re-used, most of the equipment will be scrapped. The Committee asked whether any equipment of historical significance might be placed in archives or a museum. Telecom doubted that there would be anything in the Dalley building that would be of historical significance.

FORECASTS

22. The predicted demand for basic telephone services in the Dalley Exchange Area is as follows:

Year	1985	1990	1995	2000	2005
Services	15,000	18,500	21,500	24,500	27,500

23. These figures indicate that a new Exchange is required in the northern (Sydney Cove) sector of Sydney by 1988. Accommodation will also be required for the following new network facilities:

24. Digital Data Network Digital Data Network (DDN) is specifically designed for data communication. It is used mainly by Telecom's major customers who require databank access to centralised computers. DDN equipment for the Sydney CBD is presently provided in the Haymarket Exchange. By 1986 load sharing will be necessary from Pitt and by 1990 from Kent and Dalley II. This allocation of space in Kent and Dalley II will meet the needs of this facility until about 2005. Forecast requirements are as follows:

Year	1985	1990	1995	2000	2005
Potential Network Size	9,400	74,900	174,100	271,000	334,300
Dalley Local and Branch Customer Terminations	-	5,300	24,700	52,500	78,000

25. Packet Switching Network (AUSTPAC) AUSTPAC offers customers a nationwide distance independent service incorporating switching, transmission and network intelligence which will solve many existing and emergency customer problems. The facility enables a point of sale terminal to communicate directly with a bank's data processing centre. Customers are able to withdraw cash as well as debiting directly the cost of goods or services to their bank accounts. Forecast requirements for AUSTPAC are as follows:

Year	1990	1995	2000	2005
Customer Terminations	5,304	17,240	34,308	51,080
AUSTPAC Units	29	45	89	132

26. At present, 29 units are accommodated in the Sydney CBD and North Sydney. A further 16 units are planned to be located in the proposed Dalley II accommodation, with 25 units in Kent. Parallel growth for these services will be provided by these buildings until about 1997.

27. The Committee queried what would happen after this date and was advised by Telecom that the plan for the packet switching network is to establish modules of approximately 25 at each exchange. It is planned to distribute these modules over a number of the major communication buildings in the CBD and along the fringe.

28. The installation of packet switching at Dalley is part of the development of a network linking other exchanges in the CBD.

29. Special Services Network Equipment (SSNE) SSNE is any service other than a telephone service provided by Telecom to its customers. These services include:

- Emergency service lines
- 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

30. Forecasts for this service are as follows:

Year	1990	1995	2000	2005
Total Special Services	4,800	9,500	14,250	19,000
Dalley Special Network Services	780	1,960	4,300	7,900

31. Telecom advised that the space allocation in Dalley II is expected to meet the needs of this service until about 2005.

32. Long Line (Transmission) Equipment Long line equipment will service both the telephone and special networks with digital Transmission equipment. It is expected that Dalley II will meet forecast needs until about 2005. Forecast requirements are as follows:

Year	1990	1995	2000	2005
Channels	8,000	12,100	18,300	25,000

33. Reserve space is also required for the future installation of services such as:

SECURITEL - Securitel is an alarm transmission service which has been developed to meet the needs of the security industry.

008 Service - This is a toll-free service where the called party pays for the call even if it is an STD or ISD call.

Teletex - Teletex is a service using switched (data) network which permits the interconnection of Communicating Word Processors with each other and with Telex facilities.

Integrated Services Digital Network This telecommunications network is being designed for service whereby users may plug telephones, data terminals, facsimile machines and personnel computers into a multiple outlet, providing digital services both nationally and internationally.

Electronic Funds Transfer This facility enables a point of sale terminal to communicate directly with a bank's data processing centre using Telecom's switched data service. It is an extension of facilities provided for after-hours cash at banks.

34. These forecasts are based on Telecom's assessment of overseas trends as well as market information presently available.

35. Telecom advised that if these modern services presently provided by other exchanges were not provided by Dalley it would mean that approximately one-fifth of the CBD of Sydney would be disadvantaged.

36. The Committee noted that the Dalley Exchange area contains the largest proportion of financial institutions in Sydney and that Telecom is obliged to provide advanced communication systems to its customers.

37. Telecom advised that an estimate of \$13.5 million would be needed to upgrade the existing building to cater for new generation equipment and services. The cost of refurbishing the existing building equates the cost of constructing a new building adjacent to Dalley I. Refurbishment would, however, attract additional cost penalties associated with a need to provide temporary accommodation for exchange equipment and staff.

38. While the existing building cannot be readily adapted for modern usage the existing cable chamber, which represents a substantial investment and capability could continue to be used provided a new exchange is located in close proximity to Dalley I.

39. Summary The present building has reached the end of its economic life. Basic telephone switching equipment within the building is old and needs to be replaced. The building is unsuited to the introduction of modern data transfer equipment. Refurbishment of the building would be relatively expensive and create a number of problems.

40. Committee's Conclusion The Committee accepts that there is a need for new generation equipment and services to meet the current and forecast needs of Telecom Australia in the northern sector of the Sydney Central Business District.

41. The Committee agrees it would be impractical and uneconomical to upgrade the existing telephone exchange building in Dalley Street.

THE PROPOSAL

42. It is proposed to construct a new building, consisting of a part basement, ground floor, first floor, six equipment levels and an enclosed roof level plant room.

43. The proposed building will house equipment to provide 32,000 services of basic telephone equipment. As well, provision will be made for the installation and operation of new generation equipment which is currently provided by other exchanges as well as new technologies currently being developed. The space allocation in Dalley II is expected to meet this forecast need for telephone services to about 2012.

44. Site The site selected for the proposed building is located on the south east corner of Dalley and Underwood Streets, Sydney. It is bounded by Underwood Street to the north and west, Dalley Street to the south and a 10-storey commercial development and a major Sydney County Council electrical substation to the east. It is irregular in shape and has a total area of 999 square metres available for development. The northern half is occupied by a six-storey building known as Latec House. It is proposed to demolish this building prior to the commencement of the proposed work. The cost of demolition, estimated to be \$250,000 is not included in the limit of cost estimate.

45. Telecom acquired the site in 1972 at a cost of \$2.74 million. Its current value is about \$4.5 million.

46. The site is zoned A1 Tank Stream (Northern Business Precinct) which means that it can be used for any purpose approved by the Council of the City of Sydney. The proposed work conforms with that requirement.

47. Space Allocation The proposed space allocation is as follows:

- Basement The basement will house fuel storage tanks, the pump room and lift overrun pits.

Fuel storage will comprise two tanks, each with 35,000 litres capacity.

- Ground Floor Level Staff entrance and the main security control post will be located at the Dalley and Underwood Street corner. A vehicle entrance and secondary security control post will be at the Underwood Street (north) end of the building. The vehicle turntable, goods unloading area, parking for two official vehicles, the exchange installation workshop, the electrical main switch room, a Sydney City Council electrical supply building substation and cleaner facilities will be located on the ground floor as well as access and facilities for the disabled. Telecom confirmed that the 13-tonne turntable will facilitate the movement of trucks leaving the building and will comply with the Sydney City Council's strategic and safety requirements.
- Level One Office accommodation and a lunch/recreation area for staff as well as future growth space for communication equipment is provided for on the first floor.
- Level Two Dalley II will be connected to Dalley I by three overhead bridges on this level. Local customer and transit telephone exchange equipment, teletex equipment and power and battery equipment for levels two and three will also be located on this level.

- Level Three Line conditioning equipment, non-exchange services, local private automatic branch exchange, integrated services digital network signalling equipment and '008' services will be located on this level.

- Level Four Security alarm network (SECURITEL), special services network equipment, long line transmission equipment and power and battery equipment for levels four and five will be provided on this level.

- Level Five Level five will house the digital data network terminal.

- Level Six Packet switching network transit and terminal equipment, electronic fund transfer equipment and power and battery equipment for levels six and seven will be located on this floor.

- Level Seven Level seven will accommodate packet switching network terminal equipment.

- Level Eight The air conditioning plant, cooling towers, water tanks, chiller sets, pumps, emergency diesel generators, air compressors, local monitoring and control system, building engineering services workshop and passenger lift motor room, will be located on level eight.

- Roof The goods lift motor room will occupy space on the roof area.

An air handling plant room will be located on each equipment floor level including level one. The main security control post and staff entry foyer will be air conditioned from the plant on level one. The remainder of the ground floor level and basement will be mechanically ventilated.

48. Committee's Conclusion The construction of a new Telephone Exchange building is necessary and should be built alongside the existing Dalley Street telephone exchange.

FITTING OUT

49. The building will be occupied progressively from 1988 to 1991. By 1991 approximately 30 per cent of the total usable space of 3,700 square metres will be occupied. The building will be fully occupied by the year 2005 or 2010. The Committee questioned the use of vacant floor space during the progressive fitout. Telecom advised that the plant level floor and the staffing and ground floors would be occupied immediately. The six equipment levels would be occupied progressively. The floor containing the substation's insulation equipment would be occupied immediately. On other floors the equipment will be spread across the floors so they will not be vacant, but will be partially occupied and progressively filled.

50. Telecom confirmed that further consultations will take place with staff associations as each level is being developed.

51. Elevated Cable Bridges It is proposed to construct three elevated cable bridges at second floor level to carry communications cabling and provide secure personnel access between the new and existing telephone exchanges. The cableways

across Underwood Street will enable the main distribution frame and basement cable chamber in Dalley I to function in support of the proposed Dalley II exchange.

52. The Committee queried whether consideration had been given to the installation of underground cables. Telecom advised that this option would introduce a number of technical difficulties as well as significant economic disadvantages. It would cost approximately \$7 million to place a cable chamber and a main distribution chamber in the new building. Technical difficulties would be involved due to the presence of the western bank of the Tank Stream estuary under the site. The cable tunnel beneath Dalley Street dips sharply from the end of the existing exchange to pass under the Tank Stream.

53. At the southern end of the site there is a dyke about two to three metres wide of intrusive volcanic material which has weathered very deeply. This allows ingress of water and provides additional difficulties in the area where the connection to the existing cable tunnel would be located.

54. The Committee asked whether Telecom had considered connecting the two buildings above ground level thereby giving more reserve space. Telecom advised that this possibility had been considered but had decided that the amount of space provided by the three cable bridges and the new building would be sufficient until the year 2010.

55. The Committee was assured that the existing building is structurally sound and should be able to support loads from the cable bridges.

56. Following discussions with the Australian Council for Rehabilitation of Disabled (N.S.W.) (ACROD), Telecom confirmed that the overhead ramps between the buildings would be at an appropriate gradient to allow disabled persons greater mobility.

57. It is proposed that the Dalley I building will be refurbished to appropriate accommodation standards and used for Technical Support Services such as the N.S.W. Network Management Centre, the Service Restoration Centre, a Subscriber Assistance Centre, a Service Assessment Centre and a Subscriber District Centre. The proposed Dalley I building refurbishment will be the subject of a separate investigation.

58. Committee's Conclusion The proposed three elevated cable bridges to link the new and existing telephone exchanges at second floor level will ensure compatibility of operation and cost savings by utilising the existing cable chamber.

CONSTRUCTION DETAILS AND SERVICES

59. Structure The building structure will generally be a reinforced concrete column and flat slab design. The service core will be reinforced concrete to provide resistance to lateral wind forces on the building. Footings will be reinforced concrete bored piers and pads on sandstone material. The part basement walls will be of reinforced concrete. DHC advised that the foundations for this building are expected to go down to solid rock. If the foundations of an adjoining building do not go to this level, underpinning would be provided as necessary. Telecom assured the Committee that owners of adjacent buildings will be consulted about the possible need for underpinning.

60. Building Materials

- Exterior The building exterior will comprise an exposed beam and column frame with face brick infill panels. All exposed concrete will be finished in a durable exposed aggregate finish selected to complement the face bricks used.

- Windows The Committee queried whether all windows would be double glazed, including those in the shadow of adjacent buildings. The Department of Housing and Construction advised that all windows would be double glazed as this would reduce the heat loss from the building as well as minimising the heat coming in from the outside.

- Roof The roof will be finished with a trafficable surface over a waterproof membrane. The Department of Housing and Construction advised that the purpose of this waterproof membrane is to prevent ingress of water and to enable the stormwater from the roof to be drained away to outlets. As these membranes are subject to deterioration from exposure to the elements and also from pedestrian traffic, it is a common practice to apply a thin layer of concrete, brick or various kinds of paving over the top to provide the required protection.

61. The Committee queried whether shielding would be required to reduce electromagnetic radiation from a major Sydney County Council electrical substation to the east. Telecom admitted that they had not carried out any specific tests, but it was a requirement of the brief that adequate shielding be provided. They assured the Committee that part of the brief to DHC will be to ensure that there are no radiation effects.

62. Air conditioning The building will be air conditioned to maintain temperature and humidity conditions in equipment rooms, public spaces, office areas and the staff lunch/recreation room. Energy conservation measures will be incorporated by the provision of a full fresh air economy cycle system. In reply to the Committee's query on how this system would work, the Department of Housing and Construction advised that on days when the outside temperature and humidity are satisfactory, the total

air requirement for circulation will be drawn in from the outside of the building at each level and will be discharged to the outside. This is instead of air being recirculated and cooled within the building and when no heating or cooling is required. A centralised chilled water plant will be located on the level 8 plant room and chilled water will be piped to modular air handling systems in plant rooms servicing each equipment level.

63. Mechanical Ventilation Plant rooms, power and battery rooms, the basement and all toilet and locker areas will be mechanically ventilated.

64. Diesel Generating Units Diesel generating units will be provided on the level 8 plant room to supply essential power and lighting requirements and limited lift operation should a power failure occur.

65. Electrical Services Mains power will be supplied from a sub-station within the building at ground level. The building's main switchboard will be located adjacent to this facility with the Diesel room located in the main plant room. Duplicate power feeds will be provided to distribution boards serving power and battery rooms and chiller plant and air handling plant rooms to ensure back up supply to all essential facilities.

66. Lighting will be provided in equipment rooms to permit easy adjustment and maximum flexibility. Lighting to other areas will comply with relevant Australian Standards. Emergency lighting will be provided to permit basic lighting to public areas, stairs and fire escape routes.

67. Power outlets will be strategically located throughout the building.

68. A comprehensive lightning protection system will be provided in accordance with the relevant Australian Standard.

69. An emergency warning and intercommunication system for personnel evacuation will be installed within the building.

70. A computerised energy management control system will monitor and control all mechanical and electrical services to ensure maximum operational efficiency within the building to conserve energy.

71. Fire Protection The building will be protected by a sprinkler system. The Committee queried whether water-sensitive equipment could be protected once the system was activated. Telecom advised that the building will be equipped with an early warning fire detecting system which will detect smoke sufficiently early to allow staff to attend to the fire with normal hand appliances. This will minimise the risk of damage to equipment. The building is also zoned so that should a fire commence in a particular area the sprinkler system will only come into operation in that area.

72. Telecom advised that amenities in their buildings are provided in accordance with the code in Telecom Consultative Council procedures. Staff associations had been consulted and are in agreement with the amenities to be provided.

73. A lunch and recreation room will be provided on level one and will accommodate up to 96 staff. Separate tea making facilities will be provided on all staffed levels.

74. Telecom advised that a unisex shower will be provided on the ground floor and maintenance staff will be provided with a shower on the upper plant level on the eighth floor. The Committee queried whether two showers would be sufficient for 146 employees, particularly if some of the staff participated in sport such as jogging at lunchtime. Telecom replied that if the necessity arose for more showers, then these would be provided in due course. This had been done in other buildings.

75. Male and female toilets will be provided on level one. Male toilets will also be provided at levels, two, four, five and seven, and female toilets at levels three and six. A unisex toilet will be provided at level eight for plant maintenance staff.

76. Following discussions with the Disabled Peoples International N.S.W. and ACROD, Telecom confirmed that toilets will be standard with wheel chair operation.

77. Lifts Two passenger lifts with a capacity of 750 kilograms each will operate from the ground floor to level 7. One of these lifts operates on separate power circuits and may be used by the fire brigade in an emergency. A goods lift of 2.7-tonne capacity will enable various items of equipment to be lifted to the level 8 plant room.

78. The Committee queried whether facilities would be available to disabled persons in the event of a fire, when lifts were unable to be used. Telecom advised that provision for the movement of disabled persons is specified in their evacuation procedures. Floor wardens are responsible for disabled persons in specific locations. Arrangements are made to physically help them downstairs. The emergency lift would also be available and the handicapped person can be removed by the fire brigade staff in this lift, as long as the fire is not advanced.

79. Committee's Conclusion The design and construction of the proposed new telephone exchange building at Dalley Street appear satisfactory.

SECURITY

80. Telecom provided the Committee with an 'In-Confidence' paper on the security aspects of the proposal. Telecom told the Committee that one of the main points of the security paper was the controlled entry of personnel and vehicles. Emphasis will be placed on the need to deal efficiently with visitors and contractors wishing to gain access to the building. The Telecom Building Security Guidelines which have been adopted for this building are consistent with the standards applying to other building of a similar scope and standard.

ENVIRONMENTAL CONSIDERATIONS

81. Wind Velocity The Department of Housing and Construction advised that analysis of wind movements around the proposed building had been undertaken and that velocities at pedestrian levels will be acceptable. The Committee queried what would be considered an acceptable level. DHC advised that the building should not create a gustiness to which people are not accustomed. In Sydney over the past 50 years the acceptable figure has been determined at 15-16 metres per second.

82. Noise and Traffic Disruption DHC advised that the SCC has indicated a requirement to meet its noise and traffic restrictions. This will be part of the contractual requirements entered into with the building contractor.

CONSULTATIONS

83. Consultations have taken place with the following Authorities:

- Department of Arts, Heritage and Environment
- Australian Heritage Commission
- N.S.W. Department of Environment and Planning

- Traffic Authority of N.S.W.
- Council of the City of Sydney
- Sydney County Council
- Metropolitan Water Sewerage and Drainage Board
- Height of Buildings Advisory Committee
- Australian Council for Rehabilitation of Disabled (N.S.W.)
- Disabled Peoples International (N.S.W.)

84. Pedestrian Colonnade Telecom advised the Committee that following discussions with the Sydney City Council, a pedestrian colonnade had been incorporated into the design. This colonnade along the southern, western and northern boundaries of the block will eventually link with other development in Dalley and Underwood Streets. In response to the Committee's query regarding maintenance of the colonnade, Telecom advised that it was the responsibility of the Council of the City of Sydney, being an area dedicated to the movement of pedestrians.

85. Splays Following discussions with the Sydney City Council, Telecom agreed to provide a 2.5 metre splay at each end of the western boundary along Underwood Street to be dedicated for road widening or road cornering purposes.

COST AND TIMETABLE

86. The estimated cost of the proposed building is \$13 million at June 1985 prices. Interest charges and administration are expected to cost an additional \$4.5 million.

87. The Committee asked whether the cost of the proposed building would lead to an increase in the cost of telephone charges. Telecom responded that telephone charges are set in relation to Telecom's total overall package of expenditure. The proposed building is a small proportion of this, and the cost of construction will not result in any increase in the tariffs.

The Committee questioned whether it was necessary to seek the approval of the Prices Surveillance Authority before charges could be increased. Telecom confirmed that tariffs are set after review by that authority. The Committee sought assurance that there were no immediate plans to introduce timed local calls. Telecom advised that although timed local calls have been introduced into many countries, there are no immediate plans to introduce them into Australia.

88. DHC advised that construction time from acceptance of the main contract will be 26 months.

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

RECOMMENDATIONS AND CONCLUSIONS

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

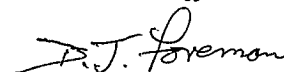
Paragraph

- | | |
|--|----|
| 1. THE COMMITTEE ACCEPTS THAT THERE IS A NEED FOR NEW GENERATION EQUIPMENT AND SERVICES TO MEET THE CURRENT AND FORECAST NEEDS OF TELECON AUSTRALIA IN THE NORTHERN SECTOR OF THE SYDNEY CENTRAL BUSINESS DISTRICT. | 40 |
| 2. THE COMMITTEE AGREES IT WOULD BE IMPRACTICAL AND UNECONOMICAL TO UPGRADE THE EXISTING TELEPHONE EXCHANGE BUILDING IN DALLEY STREET. | 41 |
| 3. THE CONSTRUCTION OF A NEW TELEPHONE EXCHANGE BUILDING IS NECESSARY AND SHOULD BE BUILT ALONGSIDE THE EXISTING DALLEY STREET TELEPHONE EXCHANGE. | 48 |
| 4. THE PROPOSED THREE ELEVATED CABLE BRIDGES TO LINK THE NEW AND EXISTING TELEPHONE EXCHANGES AT SECOND FLOOR LEVEL WILL ENSURE COMPATIBILITY OF OPERATION AND COST SAVINGS BY UTILISING THE EXISTING CABLE CHAMBER. | 58 |
| 5. THE DESIGN AND CONSTRUCTION OF THE PROPOSED NEW TELEPHONE EXCHANGE BUILDING AT DALLEY STREET APPEAR SATISFACTORY. | 79 |
| 6. THE ESTIMATED COST OF THE PROPOSED BUILDING IS \$13 MILLION AT JUNE 1985 PRICES. | 86 |

Paragraph

7. THE COMMITTEE RECOMMENDS CONSTRUCTION OF THE WORK IN THIS REFERENCE.

89



(D.J. FOREMAN)
Chairman

Parliamentary Standing Committee
on Public Works
Parliament House
CANBERRA

13 March 1986

APPENDIX A

LIST OF WITNESSES

Conlin, Mr R.J., Manager, Planning, Programming and Projects
Branch, Buildings Division, Telecom Headquarters,
4/172 William Street, Melbourne, Victoria

Macdonald, Mr P.B., Superintending Engineer, Forward Planning
Branch, New South Wales, Telecom House, 233 Castlereagh
Street, Sydney, New South Wales

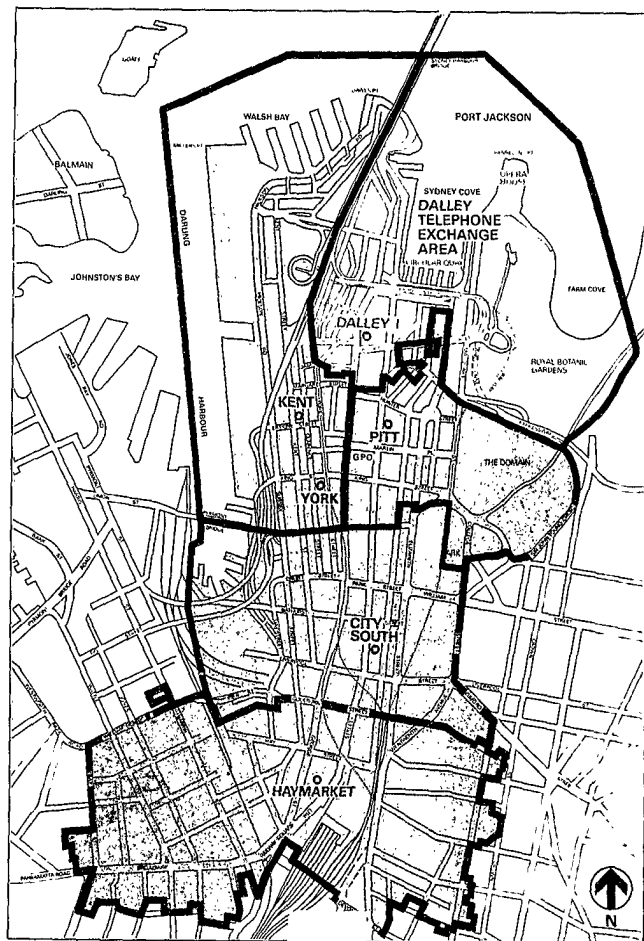
McKenzie, Mr G.A., Associate Director, Projects Division 1,
New South Wales Region, Department of Housing and
Construction, P.O. Box H27, Australia Square, Sydney,
New South Wales

Moeskops, Mr G.H., Project Architect, Projects Division 1,
New South Wales Region, Department of Housing and
Construction, P.O. Box H27, Australia Square, Sydney,
New South Wales

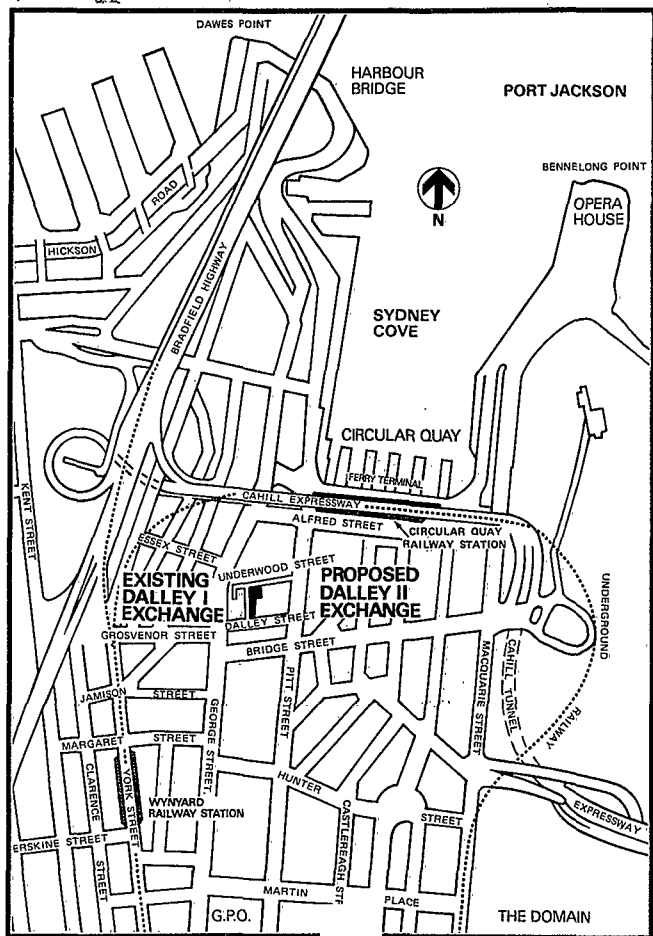
APPENDIX B

ILLUSTRATIONS

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Telecom Exchanges in Sydney	B-1
Locality Plan	B-2
Site Plan	B-3
Diagrammatic Section Building Occupancy	B-4
Plan - Basement	B-5
Plan - Ground	B-6
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Plan - Levels 3-7	B-9
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West Elevation	B-11
South Elevation	B-12
North Elevation	B-13
Section Plan	B-14

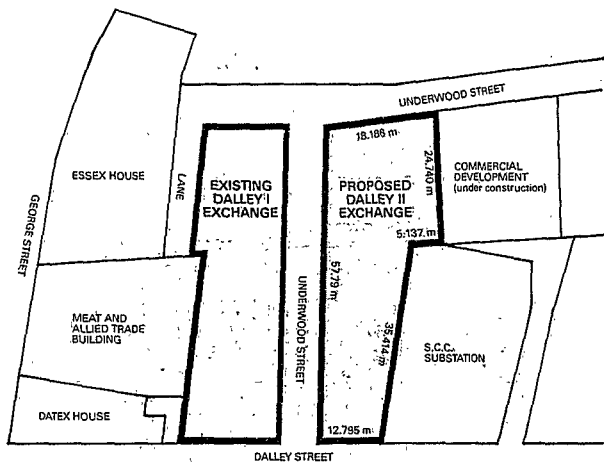


DALLEY AND ADJACENT EXCHANGE AREAS



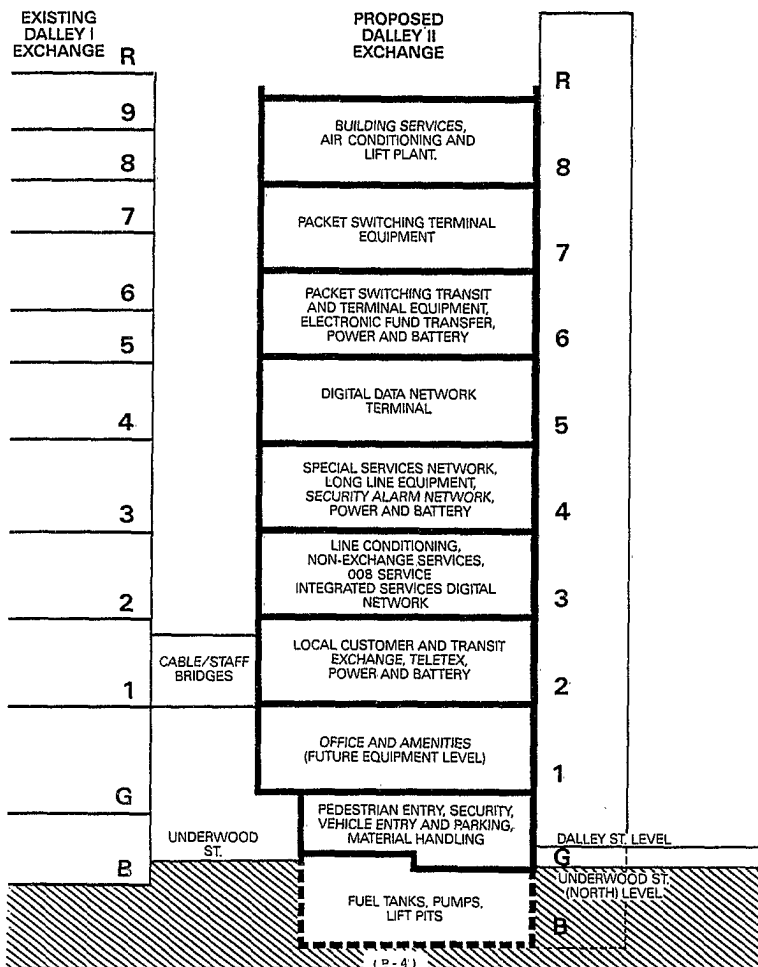
(E-2)

LOCALITY PLAN



(B-3)

SITE PLAN



DIAGRAMMATIC SECTION BUILDING OCCUPANCY

legend

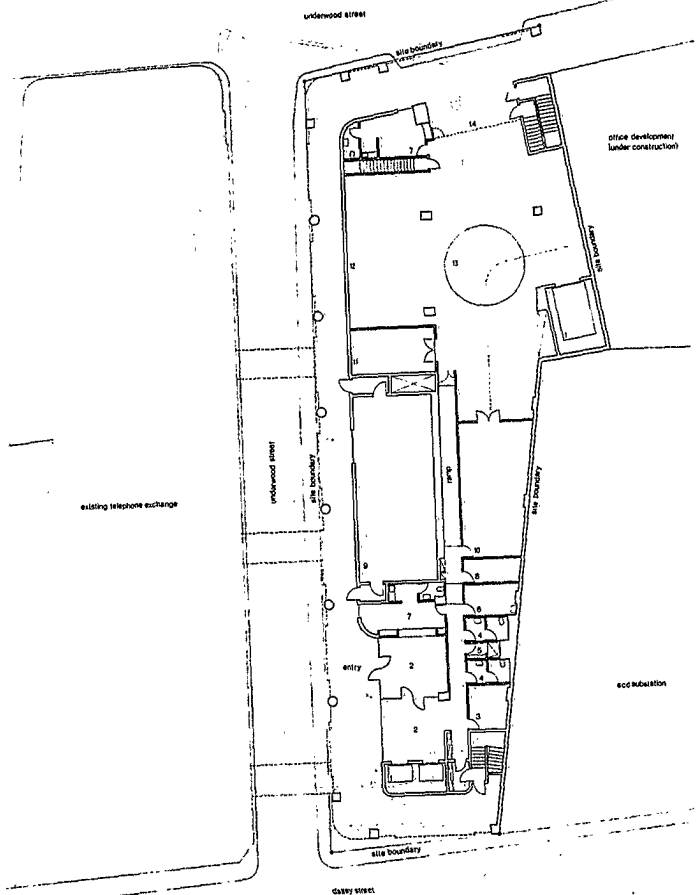
1 silt overrun pit
2 plant room

(B-5)



plan basement.





legend

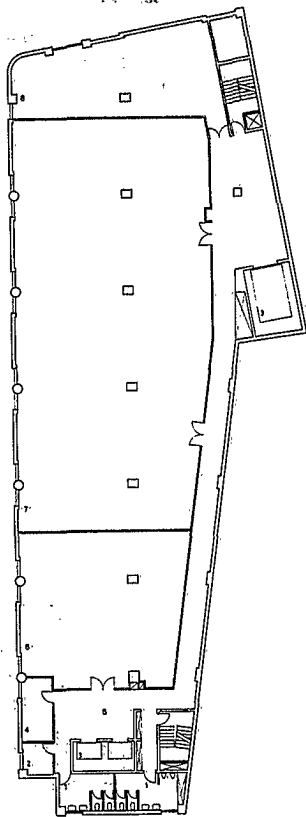
- 1 site
- 2 lobby
- 3 lav control room
- 4 toilet
- 5 shower
- 6 cleaners store
- 7 security control post
- 8 cleaners lockers
- 9 reception
- 10 main switchroom
- 11 exchange installation workshop
- 12 parking
- 13 vehicle turntable
- 14 vehicle access



plan

ground





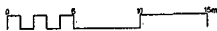
legend

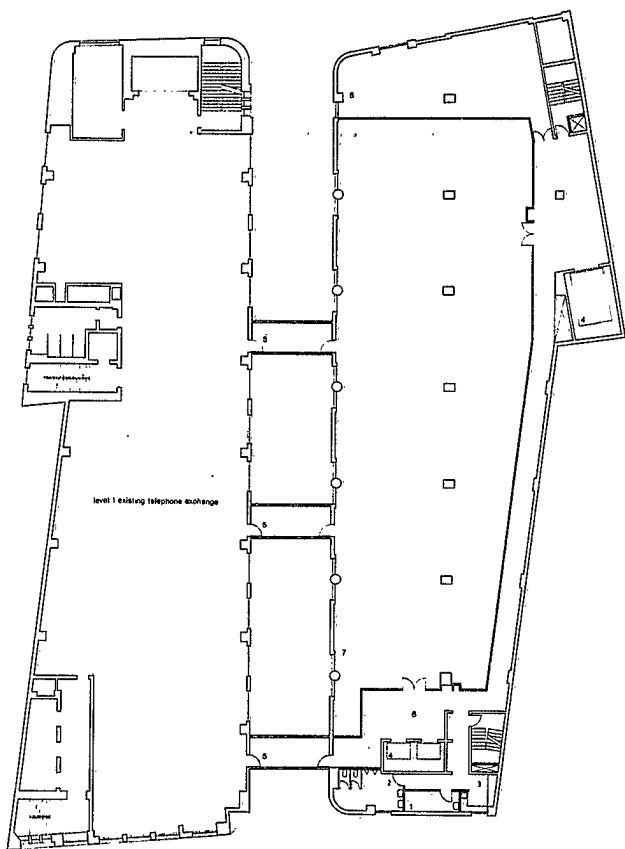
- 1 toilet
- 2 cleaner
- 3 lift
- 4 sick bay
- 5 lobby
- 6 lunch recreation area
- 7 office area
- 8 air handling plant

(B-7)

plan

level 1





legend

- 1 cleaner
- 2 toilet
- 3 tea preparation
- 4 lift
- 5 cable/pedestrian access bridge
- 6 lobby
- 7 equipment area
- 8 air handling plant

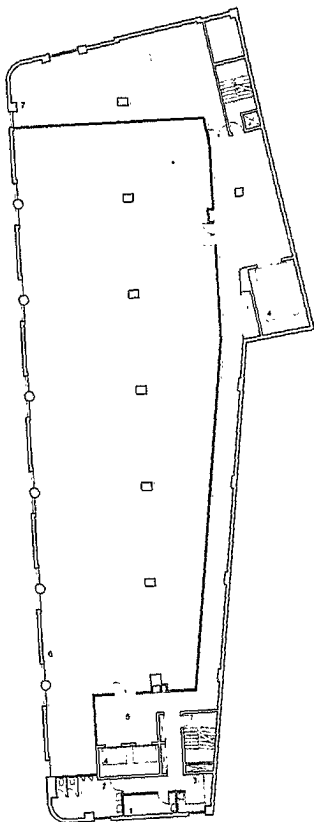
(3-8)



plan

level 2





legend

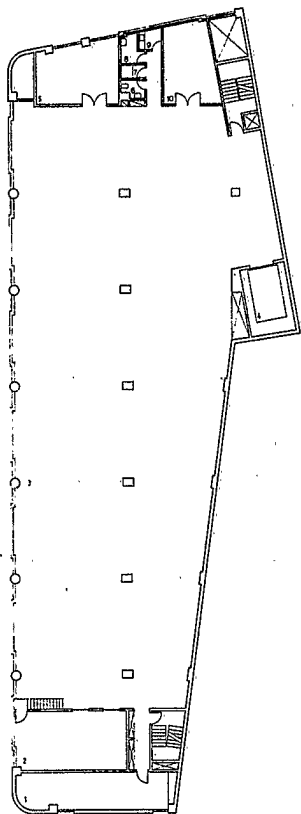
- 1 cleaner
- 2 toilet
- 3 tea preparation
- 4 kitchen
- 5 litter
- 6 equipment area
- 7 sle handling plant

(B-C)



plan

hull



legend

- 1 store
- 2 air motor room
- 3 main plant room
- 4 lift
- 5 building engineering services workshop
- 6 toilet
- 7 shower
- 8 cleaner
- 9 tea preparation
- 10 local monitoring and control systems room

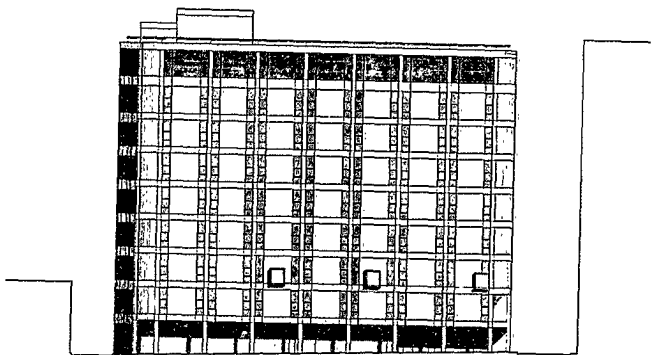
(B-1.0)



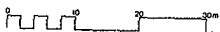
plan

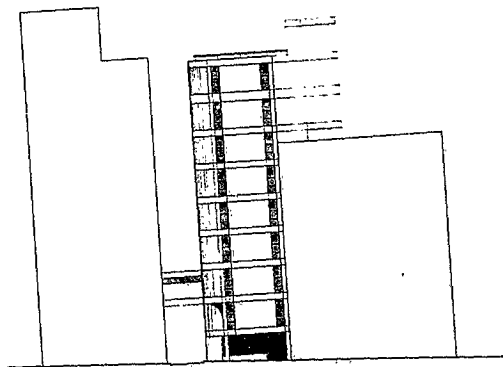
level 8





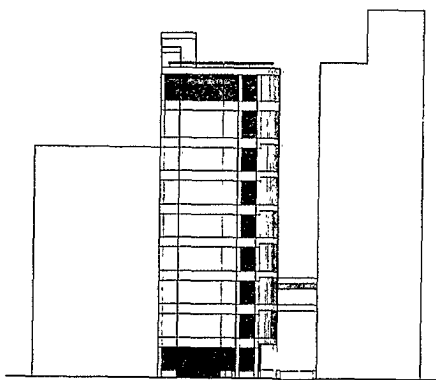
(B-11) west elevation





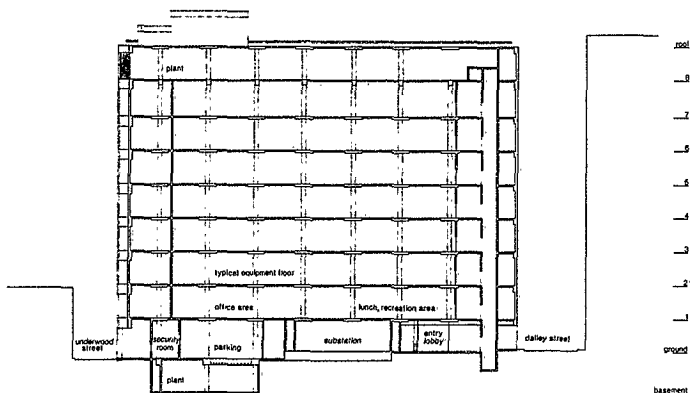
(2-12; south elevation





(3-13) north elevation





(E-14) section

