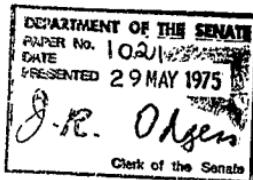


1975

THE PARLIAMENT OF THE COMMONWEALTH OF AUSTRALIA

Parliamentary Standing Committee on Public Works



REPORT

relating to the proposed construction of

EDGECLIFF TELEPHONE EXCHANGE Sydney, N.S.W.

(SIXTH REPORT OF 1975)

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PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

EDGECLIFF TELEPHONE EXCHANGE
SYDNEY, NEW SOUTH WALES

R E P O R T

On 5 April 1975, His Excellency the Governor-General in Council referred to the Parliamentary Standing Committee on Public Works for investigation and report to the Parliament the proposal to construct the Edgecliff Telephone Exchange, Sydney, New South Wales.

The Committee have the honour to report as follows:

THE REFERENCE

1. The proposal submitted to the Committee is for the erection of a five storey telephone exchange building on a site located close to the present Edgecliff Post Office and exchange building which is situated on the corner of Edgecliff and New South Head Roads, Edgecliff, New South Wales. Due to the unusual levels over the site and the planning requirements, the proposed building will rise to only one floor above Edgecliff Road whilst presenting four storeys to New South Head Road. The proposed building has been designed to accommodate a local subscribers exchange, long line equipment and a subscribers Service Assistance Centre to cater for the foreseeable needs of the Edgecliff area and, in the case of the Service Assistance Centre, to cater for an additional area beyond Edgecliff.
2. The estimated cost of the proposed work is \$3.4 million.

THE COMMITTEE'S INVESTIGATION

3. The Committee received written submissions and drawings from the Australian Post Office and the Department of Housing and Construction and took evidence from their representatives at a public hearing in Sydney on 1 May 1975. We also received a written submission and took evidence from representatives of the Woollahra Municipal Council. Prior to the hearing, the Committee inspected the existing building and the proposed site.

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

EDGECLIFF POST OFFICE AND TELEPHONE EXCHANGE

5. Location The existing post office and telephone exchange occupies the whole of the area extending eastwards from the intersection of New South Head Road, Edgecliff Road and Ocean Street.

6. Buildings and Facilities The post office and exchange building was erected in 1941 and extended vertically in 1972. An old brick building housing the original exchange has recently been demolished to permit the construction of a vehicle tunnel to connect with the proposed Edgecliff Railway Station. The equipment presently installed in the exchange section of the existing building provides service to subscribers in the Edgecliff Exchange Area. Recent additional equipment has increased the capacity to provide for a maximum of 13,300 subscribers to meet projected growth. When this number is reached, a new building will be essential for the Australian Post Office to maintain an on-demand service to new subscribers.

7. Proposed Demolition The planned widening of New South Head Road will absorb about two-thirds of the present post office and exchange site and will, in the future, necessitate demolition of the building.

THE NEED

8. The Committee were informed that the space available in the existing building will only accommodate sufficient exchange equipment to meet the forecast needs to about the year 1980. As the present building cannot be extended laterally or vertically, it is essential that new accommodation be provided to meet the needs beyond that time.

9. Expected Future Growth The expected future growth in the number of subscribers in the Edgecliff Exchange Area has been used as a basis for assessing the space required to accommodate the associated subscriber switching equipment, long line apparatus and support services for a period of 20 years after the new exchange becomes operative.

10. Character of the District The Edgecliff Exchange Area extends about 260 hectares (1 square mile) and is predominantly a high class residential area and the character of the district is reflected by the high demand rate for telephone services. In 1971, the aggregate of subscriber services operating in the area was 45% of the population which is an extremely high order of telephone service density when compared with an average of 30% in the Sydney Metropolitan Network and 26% in other capital cities. It is expected that by 1990 the density of the Edgecliff area will rise to 75% of the population.

11. Predicted Demand The following table indicates the present and predicted demand for additional subscriber services.

<u>Year</u>	<u>1974</u>	<u>1980</u>	<u>1985</u>	<u>1990</u>	<u>1995</u>	<u>2000</u>	<u>Beyond 2000</u>
<u>Subscribers</u>	8,260	13,300	16,530	19,550	22,370	25,000	Up to approximately 32,000 subscribers (the exchange building capacity).

12. Committee's Conclusion There is a need to provide a new telephone exchange in the Edgecliff area to cater for future growth in subscriber services.

THE PROPOSAL

13. Background Development In 1966 a proposal was developed to proceed with an extension of the existing post office and exchange building to meet the immediate and future growth of subscriber services in the Edgecliff Exchange Area. This scheme was abandoned in 1967 following advice from the New South Wales Government that the area of the site available for the building extensions would be required for the construction of a bus tunnel connecting New South Head Road with the future Edgecliff Railway Station complex. It was also learnt that a scheme to widen New South Head Road would ultimately necessitate the demolition of the existing post office and exchange building. A new site adjoining the existing premises was obtained in 1969 and a six floor building planned for the site. However, in 1971 the State Planning Authority advised that as the new site was located in the "Foreshore View Protection Zone", the building should be limited to a maximum of two floors above Edgecliff Road. The architectural concept that was developed is illustrated in a sketch at the end of this report.

14. The proposed building has been designed to accommodate the following facilities.

15. Local Subscribers Exchange This switches and controls all calls originating from and terminating at subscribers equipment located within the exchange boundary.

16. Long Line Equipment A small amount of long line equipment would cater for junction traffic between this and other exchanges, as well as providing access to the trunk network.

17. Subscribers Service Assistance Centre This facility is one of a number of centres to be provided in the network as envisaged in the "Service Assistant and Repair Facilities Plan" for the Sydney Telephone District and will provide relief to the existing Service Assistance Centre at the Dalley

Telephone Exchange building. The centre would cater for service difficulties and faults arising in a defined geographical zone of the network, which would include some areas beyond the Edgecliff Exchange building. It provides a means for subscribers, by calling the number 1100, to report and/or discuss with a manual operator any particular problems arising from calls originated or terminating at the subscribers substation equipment.

18. Committee's Conclusion The facilities proposed by the Australian Post Office for the Edgecliff Telephone Exchange are satisfactory.

THE PROPOSED BUILDING

19. The Site The site for the new building adjoins the existing post office and exchange site which contains the area that is to be transferred to the Public Transport Commission for the proposed bus tunnel access road. That portion of the total site to the east of the tunnel access is irregular in shape and will be used to accommodate the largest possible rectangular structure. It has a vertical cliff face falling from the Edgecliff Road boundary which varies in height from 10 to 13.5m over its length. The site has been cleared and is currently used by the post office for vehicle parking.

20. The site is located as near as possible to the practical copper centre of the area it is to serve. It is about 150m from the new Edgecliff Railway Station and bus interchange and is therefore convenient for staff using the public transport system.

21. The site is flanked to the east by a thirteen storey residential building and the surrounding area generally contains three to five storey older brick residential buildings with some commercial development to the north.

22. Committee's Conclusion The site selected is suitable.

23. Planning Considerations The site is subject to the foreshore and scenic view protection requirements of the Woollahra Municipal Council. The scheme recognises the necessity for expansion of telecommunication facilities in the Edgecliff area and is commensurate with the needs of the planning scheme and district.

24. In the early development stages, alternative proposals of greater height were discussed with planning authorities. The proposal as developed has sought to rationalise the needs of the Australian Post Office for telecommunications facilities in the area with the requirements and policies of the planning authorities.

25. The proposal will not adversely affect adjacent properties to the south which are situated well above the subject site on a ridge. The Committee were told that the preservation of views from this area was a paramount consideration in the resolution of the design.

26. Space Allocation It is proposed that the building whose gross area would be $5,250\text{m}^2$ will be occupied in the following manner:

Basement - provision will be made for a cable chamber with an entry from New South Head Road, and a ramp access for cables entering the building from the higher level of Edgecliff Road. An office, workshop and amenities for the building's engineering services staff will be provided at this level together with the mechanical ventilation, air conditioning plant, electrical switchroom, emergency power generators, secondary supply water tanks and pumps.

Ground Floor - apart from the area occupied by the upper level of the cable chamber, the whole of this floor will accommodate vehicle parking facilities including a vehicle turntable. The electrical switchroom and substation, equipment handling and uncrating area, staff amenities and a security station will also be provided.

First and Second Floors - the available areas on these two floors will accommodate the main distributing frame, local exchange equipment, long line apparatus and the power and battery room, together with offices and appropriate amenities for staff and an area for air conditioning plant.

Third Floor - this floor which, in the long term, will accommodate switching equipment is initially to house the subscriber Service Assistance Centre and the toilets, lockers and other necessary amenities for the staff to be employed in this area. A common lunch room, staff recreation area and first aid facilities would also be located on this floor.

Roof Area - the only structure to extend vertically above the roof line will be the lift machinery room.

27. Amenities and Staffing The building has been designed to include amenities and recreation facilities in accordance with the relevant local ordinances, the approved Australian Government Amenities Code and to the standard adopted by the Post Office as being commensurate with that necessary to provide suitable conditions for its staff.

28. The total staff to be employed in the building by the year 2000 is estimated to be 220 with a maximum of 150 on duty at any one time. Of the total staff, about 130 would be females employed on duties associated with the subscribers service assistance facilities. When these services are relocated and the third floor is fully installed with local subscribers exchange equipment, the overall staff complement would reduce to about 80. The total staff figure quoted includes technical officers who would, at various times, be engaged on the progressive installation of equipment.

29. Vehicle Accommodation Undercover parking is to be provided for at least 18 vehicles at ground floor level. Most of this space will be

occupied by departmental vehicles. However, parking will be made available to staff commencing or ceasing duty outside the hours when public transport is available.

CONSTRUCTION

30. Structure The structural system has been designed to meet the special function and requirements of the building, including heavy floor loadings for equipment floors, building plant loads, provision of slots in the floor for cable penetrations, and the need to position columns to suit the spacing of equipment racks.

31. Design studies have shown that reinforced concrete construction will be the most suitable and economical structure for this building. Foundations will be of reinforced concrete founded on rock.

32. Internal Finishes Plain smooth internal surfaces which will not generate or harbour dust will be used throughout the building. All equipment areas will have a minimum maintenance coating applied to walls. Floors are to be screeded level and finished with vinyl flooring to equipment and general areas. A roof membrane will be provided over the upper structural slab of the building. Toilet areas will have ceramic tiles on floors and walls.

33. Equipment, vehicular handling, plant and toilet areas will have painted off-form concrete ceilings. Corridors, lecture room, lunch room, and service district assistance facilities will have suspended ceilings.

34. Mechanical Services Air conditioning will be provided to serve all equipment and other normally occupied areas. Central plant located in the basement will provide chilled water and hot water to individual air handling plant in the basement and on the third floor. Mechanical ventilation will be provided to the power rooms, locker room, toilet areas, cable chamber, basement and vehicular areas.

35. An emergency generator located in the basement will provide essential light and power should a failure occur in the mains supply. The cooling towers for the emergency generating set and air conditioning plant will be located in the annex adjacent to the main building.
36. Hoisting facilities will be provided on the ground floor for equipment associated with emergency power, air conditioning plant and telecommunications.
37. A motorised turntable will be provided on the ground floor for equipment vehicle handling.
38. Miscellaneous equipment will include hot water supply to all sinks and basins, refrigerated drinking fountains, tea preparation and lunch room equipment.
39. Electrical Services Power will be supplied from the Sydney County Council mains and substation. Illumination will be provided by fluorescent light fittings, located to suit the needs of the project and to the standards of the S.A.A. lighting code. A master clock will be provided with slave clocks suitably located on each floor.
40. Lift Services One passenger lift and one goods/passenger lift are to be provided, each serving the basement, ground and floors one, two and three.
41. Hydraulic Services The building will have water, sewerage and drainage lines connected to mains services in New South Head Road and Edgecliff Road. Pumping facilities will be provided for fuel, sewerage, site drainage and fire protection as required.
42. Fire Protection The building is to be of fire resisting construction and has two fire isolated stairways. Fire services and equipment will include a wet pipe sprinkler system to the vehicular handling areas and hydrant and

and hose reel coverage on all floors. Hand fire extinguishers will be located throughout the building in accordance with normal standards. Fire protection equipment also includes automatic fire detection systems and manual call points. Alarm calls will be connected to the fire brigade. The Committee noted that the Department of Housing and Construction was continuing to examine the new fire detector and alarm system that was developed jointly by the Australian Post Office and the C.S.I.R.O.

ENVIRONMENTAL CONSIDERATIONS

43. Architectural Appreciation The proposed building will occupy a prominent position in the surrounding area. It will be clearly visible on all sides, particularly from New South Head Road and ultimately, the intersection of the New South Head Road, Edgecliff Road and Ocean Streets. Suitable architectural treatment will be provided to all external walls and the design will take into account all those factors necessary to ensure harmonious relation to surrounding buildings. External facade materials will be provided at the New South Head Road and Edgecliff Road frontages to assist in the integration of the building with its environment.

44. Foreshore and Scenic View Protection The proposed building of a limited height complies with the foreshore and scenic view protection requirements set by the Woollahra Municipal Council.

45. Local Authorities The Committee are satisfied that the proposal complies generally with the requirements of the Woollahra Municipal Council and other relevant local authorities and is acceptable to them.

46. Committee's Recommendation The proposed building will have no significant detrimental impact on the environment. The Committee recommend the construction of the work in this reference.

ESTIMATE OF COST

47. The estimated cost of the work when referred to the Committee was \$3.4 million made up as follows:

Building works	2,320,000
Mechanical services	500,000
Electrical services	320,000
Lift services	130,000
Hydraulic services	120,000
Site works	<u>10,000</u>
	<u>3,400,000</u>

PROGRAM

48. It is estimated that contract documents necessary for the construction of the project could be prepared for tenders to be invited in early 1976. Construction of the building will require a minimum contract time of 24 months.

OTHER OBSERVATIONS

49. Justification for the Provision of Two Lifts Some reservations were expressed on the need for the two lifts. We were later advised by the Australian Post Office that a complete reappraisal had been made on the need to move people and equipment between the five levels. Although it is expected that the majority of staff will enter from the Edgecliff Road level and remain there during their working periods, the technical staff of 80 will require the use of a passenger lift to traverse all floors, particularly during the maximum installation period. In addition, staff from the lower floors will need to move to the top floor which contains the amenity areas.

50. The second lift is needed to transport individual equipment racks, which completely occupy a goods/passenger lift, from the unloading bay at the ground level to the appropriate upper floor. Deliveries of such equipment will be progressive over the major portion of the life of the building. The design of the access to this site only allows one vehicle at a time to occupy the unloading bay, therefore there is a need for a second lift to be designated exclusively for the purpose of transporting telecommunication equipment.

51. In addition, it was explained that the use of two lifts provides improved service and at the same time helps to lower running costs as well as providing a continuity of service when one lift is out of commission during routine servicing (hence the designation of the second lift as a passenger/or goods lift). As consideration has been given to the employment of handicapped people in the building, it is highly desirable for a continuous lift service to be available.

52. In summary, the provision of the two lifts is necessary to ensure that the building can be equipped and maintained in the most economic and efficient manner. The Committee were satisfied with this explanation.

53. Floor to Floor Heights The Committee noted that this proposed telephone exchange will have a lesser floor to floor height than would normally be provided in other telephone exchanges. We were later advised that a comprehensive report was being prepared on all aspects of equipment dimensions and the ceiling heights required for installation and maintenance purposes.

RECOMMENDATIONS AND CONCLUSIONS

54. The summary of recommendations and conclusions of the Committee is set out below. Alongside each is shown the paragraph in the report to which it refers.

Paragraph

1. THERE IS A NEED TO PROVIDE A NEW TELEPHONE EXCHANGE IN THE EDGECLIFF AREA TO CATER FOR FUTURE GROWTH IN SUBSCRIBER SERVICES.

Paragraph

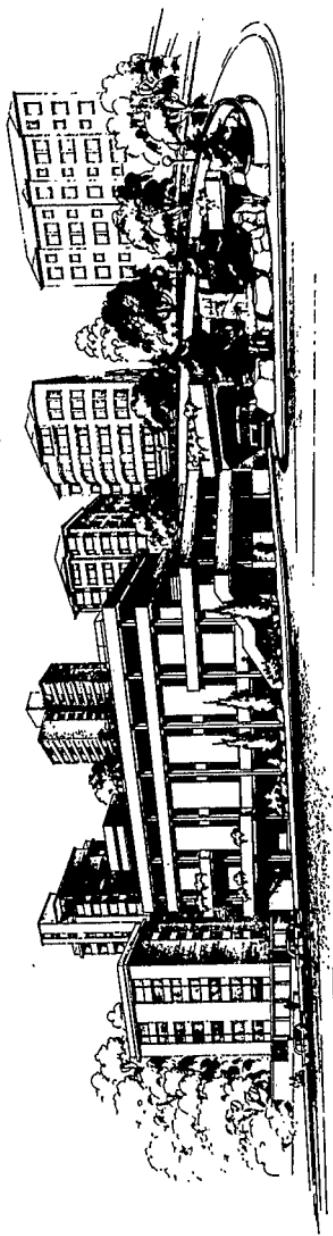
2.	THE FACILITIES PROPOSED BY THE AUSTRALIAN POST OFFICE FOR THE NEW EDGECLIFF TELEPHONE EXCHANGE ARE SATISFACTORY.	18
3.	THE SITE SELECTED IS SUITABLE.	22
4.	THE PROPOSED BUILDING WILL HAVE NO SIGNIFICANT DETRIMENTAL IMPACT ON THE ENVIRONMENT	46
5.	THE COMMITTEE RECOMMEND THE CONSTRUCTION OF THE WORK IN THIS REFERENCE.	46
6.	THE ESTIMATED COST OF THE WORK WHEN REFERRED TO THE COMMITTEE WAS \$3.4 MILLION.	47



(L.K. JOHNSON)
Chairman

Parliamentary Standing Committee on Public Works,
Parliament House,
CANBERRA, A.C.T.

22 May 1975.



PERSPECTIVE OF EDGCLIFF TELEPHONE EXCHANGE
FROM NEW SOUTH HEAD ROAD