1950.

THE PARLIAMENT OF THE COMMONWEALTH OF AUSTRALIA.

# PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

# REPORT

RELATING TO THE PROPOSED EXTENSIONS TO THE

# TELEPHONE EXCHANGE BUILDING

AT

# LISMORE, N.S.W.

Presented pursuant to Statute; ordered to be printed, 6th December, 1950.

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# MEMBERS OF THE PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS. (THIRTEENTH COMMITTEE.) (Appointed 1st March, 1950.)

#### SENATOR GEORGE JAMES RANKIN (Chairman).

Senate. Senator JUSTIN HILARY O'BYRNE. Senator Annabelle Jane Mary Rankin.

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House of Representatives. George James Bowden, Esq., M.P. John Oscar Cramer, Esq., M.P. Hon. Allan McKenzie McDonald, M.P. William Paul O'Connor, Esq., M.P. EDGAR HUGHES DEG RUSSELL, ESQ., M.P. DAVID OLIVER WATKINS, ESQ., M.P.

EXTRACT FROM THE VOTES AND PROCEEDINGS OF THE HOUSE OF REPRESENTATIVES, No. 60, DATED 19TH OCTOBER, 1950.

5. PUBLIC WORKS COMMITTEE-REFERENCE OF WORK-EXTENSIONS TO TELEPHONE EXCHANGE BUILDING, LISMORE, NEW SOUTH WALES.-Mr. Casey (Minister for Works and Housing) moved, pursuant to notice, That, in accordance with the provisions of the Commonwealth Public Works Committee Act 1913-1947, the following proposed work be referred to the Parliamentary Standing Committee on Public Works for investigation and report, namely :---The proposed extensions to the Telephone Exchange building at Lismore, New South Wales. Mr. Casey having laid on the Table plans in connexion with the proposed work-Debate ensued.

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\* And the question-That the motion be agreed to-was put accordingly, and passed.

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# THE PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

# EXTENSIONS TO TELEPHONE EXCHANGE BUILDING, LISMORE, N.S.W.

# REPORT.

The Parliamentary Standing Committee on Public Works, to which the House of Representatives referred for investigation and report the question of Extensions to the Telephone Exchange Building, Lismore, New South Wales, has the honour to report as follows:—

### SECTION I.-INTRODUCTORY.

1. The present telephone exchange building is situated next to the Lismore Post Office in Molesworth-street, and was completed to its present stage early in 1940. It is a two-storied structure with the lower floor set at a suitable height above ground level to act as a safeguard against floods which sweep through the city from time to time.

2. When the building was originally designed the plans were based on the erection of a structure large enough to accommodate the local subscribers' and the trunk exchange equipment, as well as the long-line equipment and its associated battery and power apparatus. War-time restrictions forced the abandonment of the complete proposal and the plans were redrafted. Provision was then only made for long-line equipment and offices, but the building was designed to be capable of extension towards the rear of the site, so that exchange and trunk equipment space could be added subsequently.

3. The result of this restriction of the original proposal was that the manual telephone exchange had to remain in operation in its old location on the first floor of the Post Office building next door, while the telegraph facilities, which were situated on the ground floor of the Post Office building subject to periodical flooding and disruption, had to be maintained in the same location. This is still the case, and the position cannot be improved until additional buildings are provided.

4. The original switchboards were installed on the first floor of the Post Office building in 1916, and the equipment has long become obsolete, while the growth of traffic has increased to a point far beyond the capacity of the exchange for normal efficient service. It is now stressed as imperative that the provisions, necessary in 1940 but delayed by war-time emergencies, should be no longer deferred, and modern equipment should be installed sufficient to handle all the present traffic as well as provide for some years to come.

# SECTION II.—THE PRESENT PROPOSAL.

## GENERAL.

5. The present proposal is to extend the existing building towards the rear of the site by the addition of a four-storied building to give the space required for the purposes of the exchange, and to allow the portion of the site behind the present Post Office for use at a future date, when an "L" shaped extension would be possible to meet further requirements.

#### THE BUILDING.

6. The overall approximate dimensions of the building extensions will be 48 feet wide and 93 feet deep, while the overall height from ground level to the top of the main flat roof will be 63 feet. The ground floor throughout will be 6 feet above ground level as a safeguard against floods.

7. The ground, first and second floors will each have an area of 4,200 square feet, and the third floor will have an area of 3,120 square feet. The third floor also provides a concrete paved flat roof on the north-east corner with access from the lunch room.

#### THE ESTIMATED COST.

8. The estimates for this proposal were originally prepared in December, 1949, when a figure of £119,200 was submitted to the Postmaster-General's Department. Since that time costs have continued to increase, and the estimated cost of the proposed additions and alterations is now submitted as £138,800.

#### SECTION III.—THE COMMITTEE'S INVESTIGATIONS.

GENERAL.

9. The Committee studied the plans and made journeys to Sydney and to Lismore to secure the evidence necessary in the inquiry. Evidence was taken from the senior officials of the Department of Works and Housing and the Postmaster-General's Department who were responsible for presenting the departmental viewpoint in connexion with the preparation of the work. A visit of inspection was made

## REASONS FOR THE EXTENSIONS.

# The Existing Telephone Exchange.

10. It was emphasized that the additions to the present building were essential because of the obsolete type of equipment, the necessity for additional facilities for local subscribers in the city network, and the pressing need for equipment to handle the expanding trunk line traffic.

11. The telephone service at Lismore is of the manual magneto signalling type, the exchange equipment being located on the first floor of the Post Office building. The size of the room in which the exchange is located is only 22 feet by 35 feet, although it contains twelve trunk positions, twelve local positions and two trunk recording positions. In addition to these switchboards the room contains the main line terminating frame, a test desk, monitors' positions, a trunk intermediate distributing frame, and other miscellaneous equipment.

12. The operating positions are in two parallel suites only 7 feet apart and this space is occupied by the operational staff, the monitor's table, trunk recording equipment, &c. During normal busy times the exchange is extremely congested and conditions during the warm summer months, in the humid climate experienced at Lismore, are very uncomfortable indeed, maximum efficiency under such conditions being clearly impossible.

13. Operational difficulties are aggravated also by the use of very old equipment, and the attempt to provide reasonably efficient service with such equipment in an exchange which has long outgrown the desirable maximum capacity can only be sustained by extraordinary efforts by the staff involved.

14. On the wall at the rear of the A and B positions in the exchange there is a narrow passageway between the backs of the switchboards, and the main distributing frame attached to the wall. This passageway provides insufficient working space for technicians who are required to have access both to the backs of the switchboards and to the main distributing frame for maintenance purposes.

15. There is also difficulty in providing any more wall space, though proposals are under urgent consideration for the provision of two additional 1,200 pair cables to relieve existing cables serving the main business block and the rapidly developing residential area of East Lismore.

16. During the inspection of this section of the exchange the Committee was astounded at the amount of equipment crammed into such a small space and at the cramped conditions under which the telephonists and technicians have to work. The weather during the Committee's visit was relatively mild, and it could well be imagined how appalling the conditions would be in that room during really hot and humid weather for which Lismore is well known. The erowded, uncomfortable and unsatisfactory conditions viewed at Lismore are worse than any seen by the members of the Committee in any of the many former inspections in various parts of Australia.

17. The Committee was also impressed with the grave fire risk which exists in the building where se many persons and such a quantity of inflammable materials are confined in a small space. There is no doubt in the minds of the members of the Committee that replacement of the obsolete equipment at the earliest possible moment is an urgent necessity.

#### Trunk Lines.

18. Due to its geographical location in the heart of a progressive dairying and agricultural district, with its communication facilities to surrounding towns, and the strong community of interest to both Sydney and Brisbane, Lismore has become one of the largest communication centres in the northern coast area of New South Wales. It is an important trunk switching centre, with direct channels to both Sydney and Brisbane. Additional trunk line facilities to both these cities and to other places are urgently needed, and to provide these the installation of further long-line equipment is necessary.

19. During the next two years carrier and associated equipment which is on order must be installed at Lismore, thus almost doubling the present facilities which are far short of even present day requirements. It is also proposed to instal automatic trunk switching equipment at Lismore, in order to enable trunk calls to be completed with the maximum speed, economy and efficiency.

# The Local Exchange.

20. The development in local exchange lines at Lismore has been rapid in the past ten years. In 1940, when the initial portion of the building was erected, there were 1,060 exchange lines connected, while on 30th September, 1950, there were 1,810 lines and 236 applicants waiting for service. Thus the potential size of the exchange has practically doubled in the past ten years.

### TEMPORARY RELIEF MEASURES.

### Trunk Lines.

21. To some extent it is planned to meet the problem regarding trunk operating positions by providing twelve additional positions in a separate room, by utilizing space which has been used for staff amenities. This step has been taken with the object of providing immediate relief but is regarded as most unsatisfactory, not only because of the loss of space for amenities, but also because the division of trunk positions into two separate locations will multiply the work and hamper supervision. It can only be regarded as an emergency measure until other space can be provided.

#### Local Subscribers' Lines.

22. In order to provide additional subscribers' equipment and provide a certain measure of relief in the problem of giving satisfactory service for the growing needs of the city, a proposal has been approved to install a temporary 800 line automatic exchange in a temporary building to be erected at the rear of the Commonwealth Bank building which adjoints the exchange building. Telephone services within the business area having a very high calling rate will be connected to this exchange, and will thereby provide much needed relief, both as regards the number of subscribers and the volume of traffic handled in the existing manual exchange. By this means it is hoped to give a measure of relief to tide over the period until the new exchange building is available. Such a scheme is not put forward as being either adequate or efficient to meet requirements for a very lengthy period, but the Committee agrees that the conditions at the present exchange demonstrate that it is essential to take such measures at once.

#### TELEGRAPH AND POSTAL FACILITIES.

23. The telegraph equipment at Lismore in conjunction with the associated long line equipment also provides central switching for the far North Coast. Apart from the local circuits the main outlet channels at Lismore are eighteen direct to Sydney, nine to Brisbane and nine to Grafton. At the present time the terminating equipment and operating positions for this installation are located on the ground floor of the Post Office building, where they have been subject to interruption as the result of flood waters entering the building and causing faults to develop in the telegraph equipment and associated power supply.

24. The present proposal to establish the automatic telephone equipment in the new building will make it possible to move the telegraph apparatus into the place of the present old manual exchange on the first floor, thus eliminating the possibility of interruption due to floods. In turn the space vacated on the ground floor by the telegraph equipment will then be used for postal services which have been seriously hampered up to the present time for lack of space.

#### THE BUILDING PROPOSED.

#### The Basement.

25. Owing to the prevalence of floods in Lismore the building is to be raised so that the first floor is above the flood level. The basement thus provided will be used for cable tunnel, concrete base for diesel, and lift pit, as well as for storage of various items of equipment which will not be affected by floods or which could be readily moved in case of emergency.

#### The Ground Floor.

26. The ground floor will be used for air-conditioning plant, battery room, power room, cable jointing room, and locker room. This floor will be on the same level as the ground floor of the existing section of the building, and, by means of certain structural alterations, will provide increased accommodation to the carrier room, phonogram and operating rooms. In this way the space available in both the existing and the new building will be co-ordinated and used with maximum efficiency.

#### First Floor.

27. Practically the whole of the first floor will be taken up by the switch room and automatic exchange. An opening will be made in the existing eastern wall to give access from the Divisional Engineer's Section to the lift lobby in the new building. In the switch room the main distributing frame, situated at the eastern end, will provide for possible future extensions towards the northern wall.

## Second Floor.

28. The second floor will house the trunk exchange and will be staffed mainly by women. It will accordingly provide for a rest room, locker room, traffic officer's room, toilets and store. There will also be a class room for training staff in technical matters associated with the trunk exchange.

#### Third Floor.

29. A section of the third floor is to be used for the condenser room associated with the air-conditioning equipment. The remainder of this floor will allow space for ample amenities for the staff, and it is proposed to provide a lunch room to accommodate 84 persons, with adjoining kitchen, and it will

open on to an open air, concrete-paved flat roof. There will also be a recreation room, a library, and toilet rooms. In connexion with the planning of the toilet rooms for both sexes on this floor some concern was felt by the Committee that the toilets would have to be approached through a common entry from the vestibule. This feature was also the object of comment by several of the witnesses, and, as a result of study of the plan it was suggested that the entry to the women's toilet as planned should be closed, and a fresh opening made from the lift lobby with suitable screening wall or doors. This course would probably be complicated by the presence in that position of one of the ducts for the air-conditioning installation, but it is felt that this could be diverted, or some other suitable re-arrangement made to this section of the plan without much difficulty.

30. The Committee therefore recommends that a suitable re-arrangement of the plan be made to allow an entry to the women's toilet in a more appropriate position.

#### CONSTRUCTION.

31. The building has been designed as a normal steel-framed structure, carried on piles in conformity with the foundation conditions in the existing building. For the floors reinforced concrete slabs designed to carry the varying floor loadings will be incorporated with the structural framing throughout. It is proposed to maintain the appearance of the present building by the use of similar bricks, if they are available at the time of construction. Roofs are to be of flat construction in reinforced concrete, finished with precast concrete slabs laid on dwarf walls spaced to form troughs. These will be lined with copper as a precaution against water penetration on to the valuable equipment beneath.

32. Ceilings will be of fibrous plaster with the exception of those of the ground floor and fan room which will be cement rendered. Windows will be steel sashes painted, and with precast concrete surrounds and vertical shade fins.

#### Engineering Services.

33. The building is to be of framed construction of normal design, but, as structural steel is not readily available from local sources it will probably have to be imported from overseas. As overseas supplies are also becoming difficult it may be necessary to substitute reinforced concrete, but the Committee is informed that this would not affect the cost materially.

34. The other engineering services essential to such a building are provided for, including water, sewerage, hot water supply, lift, hoists, and fire extinguishers. There will also be an emergency generating set for the provision of power essential in case of power failures.

#### Air-conditioning.

35. Full air-conditioning is an essential part of the equipment of automatic telephone exchanges in temperate and hot districts, and in localities such as Lismore, where temperature and humidity become more exacting, this service is extended to certain staff rooms. In this instance it is proposed to provide full air-conditioning in the following spaces:—

Ground floor-Carrier room, phonogram room and operating room.

First floor—Switch room and automatic exchange, supervising technician's room, divisional engineer's staff rooms, and engineer's room.

Second floor—Trunk exchange, traffic officer's room and class room.

In spaces not provided with full air-conditioning mechanical ventilation will be provided.

36. The Committee was struck with the very high proportion of cost of the air-conditioning apparatus as compared with the total cost of the building, £28,850 being required for the air-conditioning installation, while the construction of the building itself was estimated at £70,790. Further inquiry was therefore made, and evidence was taken in this connexion, so that the Committee could be satisfied that this figure could not be reduced by the use of alternative equipment or by some other means.

37. It was explained to the Committee that equipment for full air-conditioning in this humid climate has to include refrigeration and other very expensive units, all of which are supplied by contract for the purpose. It was also pointed out that, in a building of comparatively straight forward design and construction, it is inevitable that the relation of cost of the air-conditioning installation to that of the building construction shall be high. The Committee is therefore satisfied that the matter has been fully examined, and it is essential to install the expensive equipment proposed for the maintenance and protection of the delicate automatic telephone equipment, as well as for the comfort and satisfaction of the staff who have to work in the trying elimate of the Lismore summer.

#### ARCHICTECTURE.

38. The new building has been designed to conform to its own particular requirements and, beyond using the same colour brick, it has been treated as a separate building. A flat roof was required and a lift tower has been used to form an effective break between the two buildings. Windows have been provided in the western elevation to light lavatories and lift lobbies and to provide suitable relief to this high wall.

39. The fenestration in the existing buildings has not been repeated, for it was considered that the north wall should have sun protection, and that as much light as possible should be obtained from the windows in the south wall while protecting the glass areas from the late western sun. This could not be done by using windows similar to those in the existing exchange. The smaller unit, which is more flexible, has therefore been used.

40. After a careful study of the plans the Committee is satisfied that, with the exception of the slight re-arrangement desirable on the third floor, they are eminently suitable for the Lismore Exchange.

#### Site.

41. The site for the proposed extensions forms portion of the property of the Postmaster-General's Department situated on the corner of Molesworth-street and Magellan-street, Lismore. The old Post Office building is on the corner, and the existing exchange building is next to it in Molesworth-street. The land available is at the rear of the existing exchange building and continues behind the Post Office to a frontage in Magellan-street. For the present, only the land at the rear of the existing exchange building is to be used for the additions contemplated in this proposal, but the fact is being borne in mind that the remainder of the site will be needed in future years for further development. The plans have therefore been drawn, and the placing of the equipment so disposed, that future extensions will be possible with a minimum of disruption to the services.

#### Foundations.

42. The site, in common with all the other land in the vicinity, is composed of black alluvial soil, unsuitable for heavy load bearing, and the conditions are rendered less favorable by the liability of the site to flooding from the river. It will therefore be necessary to carry the superstructure on timber piles in conformity with the foundation conditions in the existing building.

43. Evidence submitted by a local architect and townplanner with wide experience of large buildings in various parts of the city of Lismore indicates that particular care is essential in planning and constructing the foundations to ensure that the building can be carried on them with safety for the years to come. Various methods have been used in building foundations in Lismore in an effort to find the most reliable for the purpose, but it is agreed that the turpentine piles provide the most reliable foundations in this locality.

#### Flooding.

44. In past years the town of Lismore has been subjected to disastrous flooding in wet seasons, and the Committee was concerned that the proposed building should have to be constructed on a site so close to the river and low enough to be within reach of flood waters. Inquiries were made in an attempt to find a site in a higher locality, but it was pointed out that practically the whole of the present city is in the low-lying area, and the copper centre of the exchange area is in the vicinity of the present exchange building. It would be extremely expensive, as well as complicated, to remove the exchange elsewhere, and it is considered sufficient to ensure that the building is on safe foundations, with the ground floor sufficiently high to protect it from the height of the floods. With this opinion the Committee was constrained to agree, as it was impressed with the size of the city and the business area surrounding the locality of the exchange. It is recommended, however, that particular care should be taken, in the final planning stages, to ensure that adequate tests of the actual site should be taken, and that calculations connected with the loads involved should be specially checked in this case.

#### TIME OF COMPLETION.

45. It is estimated that six months will be required to prepare working drawings, specifications and bills of quantities, and to call tenders for this project. The actual building operations will probably take from two and a half to three years, but this is largely dependent upon the availability of materials and labour. The Committee hopes that this time can be considerably shortened by utilizing local materials and contractors as suggested in the evidence.

#### LABOUR AND MATERIALS.

46. Valuable evidence was obtained by the Committee, while in Lismore, in connexion with the availability of labour and materials, and it appears that, by the time the department is ready to commence construction, it should be possible to obtain all the bricks and a great deal of the timber and labour necessary for the work from local sources. The Committee was also informed of a number of local contractors who would be qualified to undertake the project and would be likely to be interested in carrying out the work.

#### COMPETITION WITH HOUSING.

47. The Committee investigated the question of the extent to which this proposed building construction would compete with housing projects for labour and materials, and it found that the prospects were unusually bright in this particular district.

48. In the first place the materials to be used in the construction are largely of a type not used to any great extent in house building, with the exception of bricks and timber, both of which are likely to be in plentiful supply in that locality shortly. In addition, as contractors are likely to be available locally with sufficient skilled and unskilled labour for their works, the competition with housing projects in other parts of the State will be minimized. It was also pointed out that only about 3 per cent. of the houses in the Lismore district are constructed of brick, and plenty of timber exists for the purpose in the vicinity.

49. The Committee is therefore of the opinion that the competition with home building projects for labour and materials is not sufficient to warrant any delay in proceeding with this proposal.

#### FINANCIAL.

50. The costs involved in the construction of this building were studied, and, as referred to above, special inquiries were made concerning the item for air-conditioning installation. The other items appear normal for this type of work, and the details are as under:---

						2
Building					 • •	70,790
Foundation work, inclu	ding piles and	beams			 • •	12,180
Water and sewerage				۵	 	2,200
Mechanical services—						
					£	
Air-conditioning ins	stallation			••	 28,850	
Heating and ventila	ation	• •			 4,030	
Hot water service					 560	
Electric lift					 7,150	
Hoists			• •	••	 850	
Fire extinguishers			••	••	 240	
Emergency generat					 5,850	
						$47,\!530$
Electrical services-						
					 5,500	
Thermostatic fire al	larm			· · ·	 600	
						6,100
Total					 	138,800
20000						

#### Total Expenditure Involved.

Added to the cost of the building, the whole expenditure involved in establishing the trunk exchange and the subscribers' automatic exchange is estimated to total £406,916, made up as follows:----

Building-							:£	£
Existing portion	••		e				9,116	
Proposed extensio	$\mathbf{ns}$	· ·	••	• •	• •		138,800	
-								147,916
Automatic exchange e	• •					· · ·	166,000	
Trunk exchange equipment			••	•••	• •		••	90,000
Line construction		••	• •	• •	••	••	• •	3,000
Total	• •						••	406,916

51. The recoverable value of assets is estimated to be £26,000, including amounts in connexion with the old manual exchange, the temporary automatic exchange and the Magneto sub-station equipment.

#### Revenue.

	52.	The	annt	ial rev	enue fr	om t	elephon	e rentals	s, local	calls	and	phono	grams	s is stat	ed t	o be—	
												Local. £		Trunks.		Total. £	
		Twe	lve 1	months	s ended	30t1	h June,	1950	•••	1		$23,\!352$		$24,\!631$	• •	47,983	
	The	e esti:	mate	d total	per an	num	in 1953	is £66,0	000 and	by 1	973,	the twe	enty-y	ear peri	od c	on which	the
whole	pro	posal	is b	ased, t	the reve	enue	should	exceed a	£120,000	).							

#### DEVELOPMENT IN THE DISTRICT.

53. In addition to inspecting the surrounding district the Committee obtained a considerable amount of evidence demonstrating the rapid expansion which is taking place in Lismore itself, and in the surrounding districts which will be served by the proposed automatic exchange and trunk services. 54. The City of Lismore is regarded as the logical capital of the far North Coast district of New South Wales, and it is the centre of the most densely populated rural area in the Commonwealth. It is connected by navigable waterway to the sea, and is served by regular steamer services with Sydney. Boats are able to come right up the river to the city wharfs to discharge cargo, and this will no doubt prove an important factor in the development of the district as time goes on.

55. During the past ten years the growth of the district has been most rapid, particularly during the last three years. The population has grown from 11,794 in 1933 to almost 16,500 at the present time. The population within a radius of 20 miles is over 30,000, while it is estimated to be over 70,000 within a radius of 40 miles.

56. The city itself is a remarkably busy one as illustrated by details of evidence submitted in connexion with land subdivision, building, and communal services, as well as by the local loan programme. Projected programmes for the near future, including construction of commercial buildings, hospitals, and completion of the important gravitational water supply scheme, all confirm the evidence of progress and continued rapid development. Evidence showing the progressive development of telephone traffic in this district over the past 50 years demonstrates the soundness of the estimates compiled in connexion with requirements for the next twenty years which are to be provided for in the building being considered.

57. From the wealth of evidence obtained from the officials of the Postmaster-General's Department, as well as from the Mayor of Lismore and members of the local Chamber of Commerce, the Committee is greatly impressed with the potentialities of the district and is satisfied that ample provision must be included in the new building to meet the growing demands.

#### URGENCY.

58. The Committee was informed that the conditions at this exchange made the Lismore project one of the most pressing in Australia. All the evidence emphasizes the great urgency of the matter, and there is no doubt that the deferment of the proposal in 1940, has created tremendous difficulties for the technical and operating staffs and limitations on service to the city, resulting in a great deal of inconvenience to the public and restriction of business in the commercial centre. Conditions have become so bad that deputations have been made recently to the Divisional Engineer in order to voice grievances and attempt to secure some improvement in services. As no relief was possible the members of the latest deputation were conducted on an inspection of the exchange, with the result that their evidence submitted to the Committee is full of praise for the magnificent work being conducted under almost impossible conditions by the staff in the exchange. The Committee also agrees that there is the utmost urgency for these conditions to be relieved, and it recommends that the temporary exchange and other relief measures should be pressed into service as soon as possible, and that the proposed new exchange be established without delay.

# SECTION IV.—SUMMARY OF CONCLUSIONS.

59. The following is a summary of the recommendations made by the Committee after study of the plans and evidence:—

- (1) Replacement of the obsolete equipment is an urgent necessity (paragraph 17).
- (2) The temporary relief measures proposed are essential (paragraph 22).
- (3) In general the plans for the building are eminently suitable for the Lismore Exchange (paragraph 40).
- (4) A slight re-arrangement of details of the third floor plan is desirable (paragraph 30).
- (5) The air-conditioning equipment proposed is necessary under the circumstances outlined in the evidence (paragraph 37).
- (6) The site is the best in consideration of the factors involved (paragraph 44).
- (7) Special tests of the site should be made before construction proceeds (paragraph 44).
- (8) Competition with housing is not sufficient to warrant any delay in this proposal (paragraph 49).
- (9) Ample provision for the growing demands of the district is warranted (paragraph 57).

G. J. RANKIN, Chairman.

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