

1222.



THE PARLIAMENT OF THE COMMONWEALTH OF AUSTRALIA.

Laid on the Table by

Senator Newland

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In return to Order

George Monash

Clerk of the Senate.

12-10-22

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

RE P O R T

Together with

MINUTES OF EVIDENCE

Relating to the proposed

ESTABLISHMENT OF AUTOMATIC TELEPHONE EXCHANGE AT

CITY SOUTH (SYDNEY).

# APPENDIX TO THE REPORT OF THE COMMITTEE ON PUBLIC WORKS.

## MEMBERS OF THE PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

### *Third Committee.*

The Honorable HENRY GREGORY, M.P., Chairman.

#### *Senate.*

Senator Hattie Spencer Foll.<sup>\*</sup>

Senator George Henderson.<sup>†</sup>

Senator John Newland, Vice-Chairman.<sup>‡</sup>

Senator Edward Needham.<sup>§</sup>

Senator William Plain.\*

#### *House of Representatives.*

Llewelyn Atkinson, Esquire, M.P.<sup>||</sup>

The Honorable Frederick William Bamford, M.P.

David Sydney Jackson, Esquire, M.P.<sup>\*\*</sup>

George Hugh Mackay, Esquire, M.P.

James Mathew, Esquire, M.P.

Parker John Moloney, Esquire, M.P.

\* Appointed 28th July, 1920.      † Resigned 22nd July, 1920.

§ Ceased to be a Member of the Senate, 30th June, 1920.

‡ Re-appointed 28th July, 1920.

|| Resigned 12th May, 1921.

\*\* Appointed 19th May, 1921.

#### INDEX.

	Page
Report	III
Minutes of Evidence	1

## LIST OF WITNESSES.

Page.

Burch, Arthur, A. , Australasian Representative of the Automatic Electric Company, Chicago, United States of America.

Crawford, John Murray, State Engineer for New South Wales, Postmaster-General's Department, Sydney.

Goodwin, John Thomas Hill, Commonwealth Surveyor-General, Department of Home and Territories, Melbourne.

Hall, John Vine, Marine Surveyor, Bond-street, Sydney.

Kitto, James Walters, Accountant, Postmaster-General's Department, Sydney.

Lister, William Lister, Artist, Sydney.

Noble, Eric, Electrician, Telephone Branch, New South Wales Railways and Tramways, Department, Sydney.

Oakeshott, George James, Commonwealth Works Director for New South Wales, Sydney.

Paxton, John Maitland, President of the Chamber of Commerce, Sydney.

Percival, William Kirby, Town Clerk, Municipality of Randwick, New South Wales.

Sneddon, Andrew William, Actuarial Clerk, Australian Mutual Provident Society, Sydney.

Thoday, Robert, Manager of the Industrial Department, Australian Mutual Provident Society, Sydney.

**EXTRACT FROM VOTES AND PROCEEDINGS OF THE HOUSE OF  
REPRESENTATIVES.**

No. 204 of 6th December, 1921.

22. PUBLIC WORKS COMMITTEE - REFERENCE OF WORKS - NEW  
TELEPHONE EXCHANGES, &c., EAST SYDNEY, CITY SOUTH  
SYDNEY, RANDWICK, WAVERLEY, AND GORDON - Mr  
Groom, moved, pursuant to notice, That, in accord-  
ances with the provisions of the Commonwealth Public  
Works Committee Act 1913-1914, the following works  
be referred to the Parliamentary Standing Committee  
on Public Works for its investigation and report  
thereon, viz :- New Telephone Exchanges and Automatic  
Equipment at the following places in New South Wales:  
East Sydney (Paddington and Williarn); City South,  
Sydney; Randwick; Waverley; Gordon.  
Mr Groom having laid on the Table, plans, &c., in  
connection with the proposed works.  
Question - put and passed.

CITY SOUTH (SYDNEY) AUTOMATIC TELEPHONE EXCHANGE.

R E P O R T .

The Parliamentary Standing Committee on Public Works to which the House of Representatives referred for investigation and report, the question of the proposed erection of a new telephone exchange and the installation of automatic telephone equipment at City South (Sydney) has the honor to report as follows:-

PROPOSAL BEFORE THE COMMITTEE.

1. In accordance with the scheme of telephonic development of the Sydney metropolitan area, and in order to cope with the extra business in prospect and to permit of the public receiving a better telephone service than is possible under existing conditions, it is proposed by the Department to establish in Sydney a new telephone exchange to be called "The City South Exchange". This exchange is designed to serve telephone subscribers in the present Sydney City Exchange area south of King-street, and to some of those in the existing ~~Glebe~~<sup>and</sup> Redfern exchange areas. With this object in view, it is proposed to erect a new building on a site, which has been selected in Castlecragh-street, and to install therein an automatic telephone switching system having an immediate equipment

2.

and an ultimate capacity of approximately 16,000 subscribers' lines or 8,000 subscribers lines. The number of lines to be immediately connected will be 6,245 and it is estimated that this number will increase to 8,360 in five years and to 13,000 in fifteen years.

ESTIMATED COST.

2. The estimated immediate cost of the proposal as submitted to the Committee is as follows : -

Site	£ 36,000.
Building	32,900.
Air conditioning, heating, ventilating, vacuum cleaning and air compression plant.	7,500.
Exchange equipment includ- ing that necessary at other exchanges	214,622.
Equipment <sup>for</sup> other subscribers premises.	73,063.
Line plant (conduit cables and aerial lines)	40,116.
Cost of cut-over of exchange equipment.	41.
	<hr/>
	£ 404, 242.

COMMITTEE'S INVESTIGATIONS.

3. The Committee visited Sydney and took evidence from the Telephone Engineers and Works officers in regard to the present proposal and from representative subscribers in regard to the working of the metropolitan telephones manual and automatic, charges, etc. An inspection was made of the automatic telephone exchange at City

and

exchange at City North (Sydney) or the Exchanges at Collingwood, and Geelong, Victoria, with a view to obtaining information in regard to the working of the air-conditioning plants at those places.

S I T E .

4. When this proposal was first placed before the Committee, it was suggested that the building be erected on a block of land in Pitt-street, but prior to the conclusion of the Committee's investigations, it was ascertained that the land proposed to be acquired had been purchased by a private owner and that work had been commenced thereon. A communication was accordingly addressed to the Department of Works and Railways on the 19th July, 1922, drawing attention to this matter and intimating that the Committee could not complete its report until a definite site could be submitted to it.

5 On the 29th September, 1922, an intimation was received from the Postmaster-General's Department that a new site was under consideration and, with a view to expediting action in the matter, a sectional committee was constituted and visited Sydney on the 6th October, 1922, to make inquiries in regard to it.

6 The land now proposed to be acquired consists of a block having a frontage of about 91 feet to Castlereagh-street by a

depth of approximately 117 feet on which are erected a building known as "The Playhouse", a second-hand book store, a tailor's shop and a lodging-house. The site is level, centrally situated, and within a reasonable distance of the theoretic telephone centre, and after hearing the evidence of the works officials and telephone engineers, the Committee is satisfied that the land is eminently suitable for the purpose of the proposed exchange..

7. The Committee, however, was unfavorably impressed by the fact that, during the course of its investigations and after plans had been prepared for the erection of a costly building on the Pitt-street site, it should have been possible for a private owner individual to purchase the land in question without the Commonwealth having an opportunity to secure it at the same figure. The Committee, realises that of necessity certain formalities must be gone through in connection with the purchase of land for Commonwealth purposes but recommends that, in instances of this nature, arrangements should be made to get an option, or at least to have the land under firm offer before a reference of this kind is submitted to the Committee.

#### BUILDING

8. The building plans laid before Parliament indicated a

brick /

brick structure of three storeys, the design being as simple as possible, consistent with the locality of the site. It was suggested, however, that at so central a site it might be advisable to anticipate future extensions to the building by an additional upwards by a further three storeys, and the Committee was invited to consider this aspect of the question. Although the original estimate, as tabled, was for £32,900, it was stated in evidence that further estimates had been prepared, which placed the cost of a three storey building of steel construction with re-inforced concrete floors at £34,064, and for a further three storeys at £21,542 making a total of £55,606. A three storied building of reinforced concrete was estimated to cost £29,200 or if carried to 6 storeys £48,000.

9. It was ascertained in evidence that the plans of the building had been prepared by the Department of Works and Railways after due consultation with the officials of the Postmaster-General's Department, and that those officials were satisfied it would meet all their requirements.

10. It was stated that owing to the proposed position of the building, it would be necessary to bring the telephone cables from Pitt-street, but the Committee was informed that satisfactory arrangements had been made with the owner of the land at the rear of the Castlereagh-street site to construct a tunnel to permit of this being done. The owner of the land fronting Pitt-street had also agreed to allow right of <sup>through</sup> footway ~~for~~ an <sup>the</sup> Arcade, ~~but~~ intended building which would enable officials and others to enter the Castlereagh-street building by means of this Arcade from Pitt-street.

11. Consideration was given by the Committee to the value of the site proposed to be obtained and, in view of the price to be paid for it, is of opinion that it should be utilised to the best advantage. It was shown that there are various Commonwealth activities in Sydney, at present housed in rented buildings, <sup>The proposed building</sup> which might be located in Castlereagh-street and, if not required for Commonwealth purposes, it would be always possible to let the space to private individuals. Under these circumstances, the Committee recommends that the building <sup>be erected</sup> ~~be~~ of <sup>to</sup> unforced concrete, and on this site ~~be~~ not less than six storeys.

12. The decision arrived at in connection with this matter is shown by the following extract from the Minutes of Proceedings /

7.

Mr Jackson moved that the building <sup>to</sup> be erected ~~up to~~ <sup>be of</sup> six storeys.

Seconded by Senator Yell.

Mr Mathews moved as an amendment that the words "not less than" be inserted after the word "of".

Seconded by Mr Banford.

The Committee divided on the amendment :-

Ayes (6)

Mr Banford.

Mr Mathews.

Mr Moloney.

Senator Yell.

Senator Newland.

Senator Bain.

Nos (2)

Mr Gregory.

Mr Mackay.

and so it was resolved in the affirmative.

The motion, as amended, was then put :-

that the building <sup>to</sup> be erected ~~up to~~ <sup>be of</sup> not less than six storeys.

The Committee divided on the motion :-

Ayes (8)

Mr Banford.  
" Gregory  
Mr Jackson  
"  
Mr Mathews

Nos (1)

Mr Mackay.

Ayes (8)

Mr Mathews  
Senator Full.  
Senator Newland.  
Senator Plain.

and so it was resolved in the affirmative.

13. A suggestion was made that it might be of advantage to continue the proposed Arcade from Pitt-street through to Castlereagh-street but the Committee was assured in evidence that such a course would not be in the best interests of the exchange or of administration in connection therewith. It was, therefore, unanimously resolved that no consideration be given to any proposal to have an Arcade through the suggested telephone exchange building

Over-Charges.

14. During the hearing of evidence in Sydney, several witnesses attended before the Committee to voice complaints to the effect that even after keeping the strictest of tallies in their own home they frequently found that the accounts rendered by the Department showed that they had been debited with a considerably greater number of calls than they had put through. Although careful inquiry was made in regard to this matter, the Committee was unable to ascertain how much overcharge could occur. In the case of /

9.

automatic telephones, the meters operate electrically and automatically and the representative of the Automatic Telephone Company as well as the technical officers of the Department claim that theoretically it is impossible for the automatic meter to err to any extent. The fact remains, however, that a considerable number of subscribers more particularly those connected to the manual systems have a feeling that they are paying for more calls than they make, and the Committee invite the attention of the Department to this fact, so that strenuous action may be taken to eliminate any possibility of overcharge and restore public confidence in the telephone system.

#### Meters.

15. Representations were made to the Committee as to the advisability of installing at subscribers premises meters which would show the number of calls originated at such premises, and the Committee carefully examined the model of a patent appliance designed with this end in view. Inquiries made elicited the information that in no other telephone service in the world is a meter installed at the subscribers' premises, and several objections were pointed out to such a course /

course being followed. In addition to the expenses involved and the possibility of further complicating the already intricate mechanism of the telephone, it was explained that the reading of the meters at subscribers' premises would involve considerably more labor than the present system of reading them at the exchange and, in any case of variation between the meter at the exchange and at the subscribers' premises, the Department must naturally accept the reading at the Exchange. Under these circumstances, the Committee is not prepared to recommend the installation of meters at subscribers' premises.

AIR-CONDITIONING PLANT.

16 The Committee paid special attention to the fact that, in connection with this exchange, it is the intention to install an air conditioning plant estimated to cost \$7,500.

This plant designed to eliminate the dust, and regulate the temperature and humidity of the air in the switch room, is said to be necessitated by the fact that the manufacturers of the automatic switching equipment do not guarantee reliability unless the atmosphere of the switching room is kept free from dust, the temperature is kept below 70° Fahr., and the relative humidity is not allowed to exceed 70%.

Evidence placed before the Committee showed that a

a deposit of dust or moisture on the more delicate parts of the mechanism might materially interfere with the efficiency of the service rendered to the public, and convinced members of the necessity of eliminating dust and moisture from the air in the switch room. The next point was to consider whether this condition could be attained at a lower cost than that estimated by the Department and to this end visits of inspection by the Department were paid to the Automatic Telephone Exchanges at City North (Sydney) and Collingwood and Geelong, (Victoria) and the systems of air-conditioning adopted in these places were carefully examined.

Although, it was stated that in the United States various systems are resorted to for conditioning air in office buildings, factories, etc., no evidence was adduced to show that any system is extensively used in connection with automatic telephone exchanges and it is claimed that, in this respect, the Commonwealth is as far advanced as is any other country. Ever here, however, the matter is still largely in the experimental stage, and so far the efforts made to condition air in automatic telephone exchanges such as Perth, Melbourne, Geelong and City North (Sydney) have not been entirely satisfactory. The plant recently completed at the Collingwood Exchange has as the result of knowledge gained been constructed with the accumulated experience obtained by experiments at other exchanges and theoretically should

do all that is claimed for it. It has not, however, been installed long enough to demonstrate this in actual practice and until it has done this, the Committee does not feel justified in recommending an expenditure for this service which taken over the number of automatic telephone installations in prospect will amount to many thousands of pounds. At this stage, however, it contents itself with the observation that, while convinced from all the expert evidence placed before it that the economic life and efficiency of the service rendered to the public by an automatic telephone exchange depends largely on the air in the switchroom being kept free from dust and moisture, sufficient time has not yet elapsed to show whether the methods proposed by the Department for arriving at this desideratum will be entirely effective. It is, therefore, recommended that careful observations be made and records kept of the results achieved by the recently erected plant at Collingwood and that no steps be taken to install any future air-conditioning plants on the lines of that at Collingwood until the results obtained show the same to be justified.

#### FINANCIAL ASPECT.

17 It was stated in evidence that the total annual charges for the proposed automatic system as at 1st April, 1923.

were estimated at ... ... £73,852.

and five years after the

date of cut-over at **280,763.**  
... **280.**

The total annual charges for an alternative

alternative common battery manual.

system as at 1st April, 1923 were estimated at £92,116.  
and five years after date of  
cut-over at ..... .... £110,510.

The estimated revenue at 1st

April, 1923 was shown as £142,383 per annum  
and five years later at £182,525 per annum.

The assets thrown spare, if the automatic equipment is  
installed on the 1st April, 1923, are shown estimated to  
have a recoverable value of £142,094, and  
the difference in annual charges in favor of  
establishing an automatic system have been given to the  
Committee as £18,264 at  
date of cut-over and at £29,747 five  
years after the date of cut-over.

COMMITTEE'S RECOMMENDATION.

18 Under these circumstances, the Committee has no hesitation  
in recommending that the proposed installation, as recommended  
by the Department, be put in hand as early as possible.

*Howard*  
Vice-Chairman,

Office of the Parliamentary Standing Committee on Public Works,  
Parliament House, Melbourne.  
12th October, 1922.