

1922.



THE PARLIAMENT OF THE COMMONWEALTH OF AUSTRALIA.

*Brongleby*  
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Clerk of the Senate.

4-10-22

PARLIAMENTARY STANDING COMMITTEE ON  
PUBLIC WORKS.

REPORT

TOGETHER WITH

MINUTES OF EVIDENCE

RELATING TO THE PROPOSED

ESTABLISHMENT OF AN AUTOMATIC TELEPHONE  
EXCHANGE AT CANTERBURY, VICTORIA.

MEMBERS OF THE PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

*Third Committee.*

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

*Senate.*

Senator Hattil Spencer Foll.\*  
 Senator George Henderson.†  
 Senator John Newland, Vice-Chairman.‡‡  
 Senator Edward Needham.§  
 Senator William Plain.\*

*House of Representatives.*

Llewelyn Atkinson, Esquire, M.P.||  
 The Honorable Frederick William Bamford, M.P.  
 David Sydney Jackson, Esquire, M.P.\*\*  
 George Hugh Mackay, M.P.  
 James Mathews, 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.      || Resigned 12th May, 1921.      \*\* Appointed 10th May, 1921.

*1/ Esq.*

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EXTRACT FROM VOTES AND PROCEEDINGS OF THE HOUSE OF REPRESENTATIVES.

No. 205 of 7th DECEMBER, 1921.

31. PUBLIC WORKS COMMITTEE—REFERENCE OF WORKS—AUTOMATIC TELEPHONE EXCHANGES, CANTERBURY, SOUTH MELBOURNE, AND BOX HILL.—Mr. Groom moved, pursuant to notice, amended, That, in accordance 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, viz.:—Automatic Telephone Exchanges and Equipment at the following places in Victoria:—Canterbury, South Melbourne, Box Hill.

Mr. Groom having laid on the Table plans, &c., in connexion with the proposed works—  
 Question—put and passed.

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

AUTOMATIC TELEPHONE EXCHANGE, CANTERBURY, /,  
VICTORIA.

X REPORT.

The Parliamentary Standing Committee on Public Works, to which the House of Representatives referred for investigation and report the question of the establishment of an automatic telephone exchange at Canterbury, Victoria, has the honour to report as follows:—

## PROPOSAL.

1. The project is to erect a new telephone exchange building at the corner of Canterbury-road and Maling-street, Canterbury, on land at the rear of the existing Post Office, which is the property of the Commonwealth, and to install therein an automatic telephone switching system having an immediate equipment of 4,000 subscribers' lines and an ultimate capacity of approximately 8,000 subscribers' lines. It is proposed that the initial equipment shall be capable of extension to the ultimate capacity named, thereby affording sufficient accommodation for the anticipated development in the proposed Canterbury automatic exchange area.

#### REASONS FOR THE PROPOSAL.

2. The subscribers in the proposed area are now served by a manual magneto-multiple switchboard in the Canterbury Exchange and, as the ultimate limit to which the existing switchboard can be extended will, it is stated, be reached in January, 1924, the Department recommends that steps should be taken by that time to establish a new exchange which will serve the present subscribers and meet prospective development in the Canterbury area.

**ESTIMATED COST**

3: The estimated immediate cost of the work as submitted to the Committee is:—

			£
Site	..	..	134
Building	..	..	7,069
Air conditioning, heating, ventilating, vacuum cleaning and air compression plant	..	..	3,500
Exchange equipment, including that necessary at other exchanges	..	..	87,700
Sub-station equipment	..	..	14,244
Line plant (conduits, cables, and open lines)	..	..	810
Cut-over	..	..	165
			<b>£113,622</b>

## COMMITTEE'S INVESTIGATIONS.

4. The Committee visited Canterbury and inspected the existing telephone exchange at that place and portion of the district it is intended to serve. The system in use is a magneto-multiple, and Departmental officials claim that in a multi-exchange network such as exists in the Melbourne metropolitan area, the continuance of such a system is not in the best interests of the efficiency of the service as a whole. Further, it is represented that the installation of automatic equipment would be a definite step towards increasing the general efficiency of the network, and allow of improved service being rendered to subscribers connected to the Canterbury Exchange.

*Site.*

5. The site of the proposed exchange is a block of vacant land at the rear of the present Post Office building in Canterbury-road. The ground has a considerable slope, but is quite suitable for building, and is said to be in the vicinity of the telephonic centre of the district.

*Building.*

6. It is proposed that the building shall be of brick, of simple design, and constructed on the latest fire-resisting principles. It will have a timber-framed roof covered with iron behind a parapet wall, over the air-conditioning and battery room, and with a concrete ceiling over the switch room. The switch room is designed to be 89 feet 6 $\frac{1}{2}$  inches by 45 feet; the battery room 22 feet 7 inches by 34 feet, and the air-conditioning room 23 feet 6 inches by 23 feet at one side and 6 feet at the other. There is also to be a store building 16 feet by 11 feet.

The present telephone exchange is a corporate part of the Post Office building, and it is proposed to utilize the lower floor of it as a district line inspector's office with store room attached and lavatory accommodation for staff, whilst the upper floor will be used as a luncheon and recreation room.

*Air-conditioning Plant.*

7. The Committee paid special attention to the fact that, in connexion with this proposal, it is the intention to install an air-conditioning plant estimated to cost £3,500. This plant is designed to eliminate dust, regulate the temperature, and reduce the humidity of the atmosphere in the exchange.

Although satisfied, from the evidence placed before it, that a deposit of moisture on the more delicate parts of the mechanism might greatly interfere with the efficiency of the service rendered to the public, the Committee is not quite convinced that the plants already installed have been in existence long enough to demonstrate their efficiency. 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 plant on the lines of that at Collingwood until the results obtained show same to be justified.

*Financial Aspect.*

8. It was stated in evidence that the total annual charges of the proposed automatic system, as at date of cut-over would be £20,517, and five years later would amount to £26,887, while the total annual charges for a proposed alternative common battery manual system would be £20,483, at date of cut-over, and five years later £28,298.

The revenue estimated to be obtained from the installation is set down at £20,900 per annum at date of cut-over, and five years later at £38,000. The assets thrown spare, if the automatic be installed, are said to have a recoverable value of £3,024, and the difference in annual charges in favour of establishing an automatic system would, five years after the date of cut-over, be £1,411 per annum.

## COMMITTEE'S RECOMMENDATION.

9. Under these circumstances, the Committee recommends that the proposed installation be put in hand, as recommended by the Departmental officials, at as early a date as possible.

*John Newland*  
J. NEWLAND,  
Vice-Chairman.

Office of the Parliamentary Standing Committee on Public Works,  
Parliament House, Melbourne,  
20th September, 1922.

Automatic Telephone Exchange, Canterbury 1

(Taken at Melbourne.)

THURSDAY, 10th AUGUST, 1922.

*Present:*

Senator NEWLAND (in the chair);	
Mr. Bamford	Mr. Mathews
Mr. Jackson	Mr. Parker Moloney.
Mr. Mackay	

Edgar Becher, Supervising Engineer, Postmaster-General's Department, sworn and examined.

1. *To Senator Newland.*—It is proposed to erect a telephone exchange building on a site at the corner of Canterbury-road and Maling-street, Canterbury, on land, the property of the Department, at the rear of the existing post-office (this point being at or near the telephone centre), and to install therein an automatic telephone switching system, having an immediate equipment of 4,000 subscribers' lines and an ultimate capacity of approximately 10,000 subscribers' lines. It is proposed that the initial equipment shall be capable of extension to the ultimate capacity named, thereby affording sufficient accommodation for the anticipated development in the proposed Canterbury automatic exchange area. The reasons for the proposal are that the subscribers in the proposed area are served by a manual switchboard in the Canterbury Exchange, and as the ultimate limit to which the existing switchboard can be extended will, it is estimated, be reached in January, 1924, steps should be taken to establish a new exchange to serve the subscribers and meet prospective development in the Canterbury area. It will, therefore, be necessary to erect a new building on the existing site, and install therein a new telephone exchange plant. The present telephone system is magneto-multiple. In a multi-exchange network, such as obtains in the Melbourne metropolitan area, the continuance of such a system would not be in the interests of the efficiency of the service throughout the network as a whole. The installation of automatic equipment would be a definite step towards increasing the general efficiency of the network, and allow of improved service being rendered to subscribers connected to the Canterbury Exchange. The estimated immediate cost of the work is:—

Site	...	...	...	...	£134
Building	...	...	...	...	7,069
Air conditioning, heating, ventilating, vacuum cleaning and air compression plant	...	...	...	...	3,500
Exchange equipment, including that necessary at other exchanges	...	...	...	...	87,700
Sub-station equipment	...	...	...	...	14,244
Line plant (conduits, cables, and open lines)	...	...	...	...	810
Cutover	...	...	...	...	165
					£113,622

The approximate annual revenue derived and the annual revenue it is estimated will be obtained on the date of transfer, viz., 1st January, 1924, and with five years' development, is shown hereunder:—

Number of lines connected on 1.12.20	...	...	1,160
Average annual revenue received past four years	...	...	£8,855
Estimated number of subscribers' lines, 1.1.24	...	...	2,200
Estimated annual revenue, 1.1.24	...	...	£20,900
Estimated number of subscribers' lines, 1.1.29	...	...	4,000
Estimated annual revenue, 1.1.29	...	...	£38,000

Automatic Telephone Exchange, Canterbury 2

It is proposed that the building shall be of simple design and built on the latest fire-resisting principles. The immediate installation in the exchange is for an equipment of 4,000 subscribers' lines, but it is proposed that the building be designed sufficiently large to accommodate an equipment having a capacity of approximately 8,000 subscribers' lines. The financial aspect is as follows:—

	Annual Charges, &c. as at 1.1.29 (5 years after cut-off.)	
	£	£
1. Capital cost—new	113,629	126,652
2. Capital cost—new and in situ	161,319	181,945
3. Annual working expenses of existing manual system as at 1.1.24	6,840	—
4. Annual Revenues—		
Annual for past four years	8,855	—
Estimated, 1.1.24	20,000	—
Estimated, 1.1.29	38,000	38,000
5. Annual working expenses of proposed automatic system as at 1.1.24	5,027	8,701
6. Total annual charges for proposed automatic system as at 1.1.24	20,517	26,887
7. Annual working expenses of proposed alternative common battery manual system as at 1.1.24	7,021	12,308
8. Total annual charges for proposed alternative common battery manual system as at 1.1.24	20,483	28,298
9. Assets recoverable or thrown spare if automatic exchange is installed—		
(i) Book value	17,230	—
(ii) Recoverable value	5,024	—
(iii) Cost of recovery	348	—
Difference in annual charges in favour of establishing an automatic system	—	1,411

Regarding item 9 of the foregoing statement, the difference between sub-items (i) and (ii), viz., £2,915, is an amount which will have to be written off in the departmental accounts as representing the proportion of the capital outlay on the original asset which is irrecoverable, and is made up as follows:—

(a) Exchange equipment ..	£2,448
(b) Sub-station equipment ..	4,699
(c) Line plant ..	68

These amounts represent ordinary depreciation due to wear and tear, which would be written off, and the same recovery costs, viz., £348, incurred when new equipment is installed, whether it be of the common battery manual or automatic type. The site chosen is quite suitable. It is at or near the theoretical centre, and has the advantage of adjoining the present exchange, the result being that the re-routing can be done with a minimum of inconvenience and expense. I made inquiries as to why materials are stored on the premises at Canterbury, and I found that the reason is that there are a number of gangs working on outside construction. The material has been placed there as a matter of convenience, because it is not the practice to have depôts throughout the metropolitan area. There will be no inconvenience to the Department on that account when the new exchange is built. We have taken the same precautions as in the case of the South Melbourne proposal as regards the possible growth of the district, and we think that the full accommodation that could eventually be provided would satisfy the requirements for fifteen years. I have gone through the plans, and they will meet our needs.

2. To Mr. Mackay.—The sum of £134 set down as the cost of the site is simply a *pro rata* estimate on the basis of the price paid for the land, which has, apparently, belonged to the Department for years. The estimate of £87,700 for exchange equipment at Canterbury, as against £66,900 at South Melbourne, is due to the fact that the Canterbury Exchange is the larger one. The ultimate capacity of the South Mel-

*initial* *exchange* *of the* *equipment* *for*

Automatic Telephone Exchange, Canterbury 3

bourne Exchange is only 5,000 lines as against 16,000 at Canterbury. Another feature which adds to the expense at Canterbury is the fact that Box Hill will have to be worked from Canterbury when the automatic exchange is established. Therefore, the equipment for Box Hill is included in the Canterbury proposal, and for the purpose of simplicity it is regarded as part of the cost of the Canterbury Exchange. The estimate of revenue at Canterbury is only £20,900, as against £32,965 at South Melbourne. This is accounted for by the fact that the subscribers in the South Melbourne area are mostly business people, whereas at Canterbury the majority of the subscribers are residential people. This gives a higher calling rate at South Melbourne. The area to be served at Canterbury will be slightly greater than that at South Melbourne, because the development is not quite so congested.

at Box Hill  
The difference  
is a result the  
subscribers connected  
to the

are at 1. 1. 24 (the proposed  
date of opening the  
exchange)

exchange will have a  
higher calling rate

exchange will  
be

one exchange  
and telephone

of the subscribers to be  
connected to the

3. To Mr. Bamford.—I do not think it would be of any value to the Committee if I prepared a comparison of the cost of different exchanges. To compare one telephone centre with another is most difficult. It is impossible to make a fair comparison when geographical situations and all the local conditions are quite different. For argument's sake, let us compare South Melbourne with Canterbury. The calling rate of South Melbourne is much higher than at Canterbury, and if I showed the revenue in proportion to the number of subscribers it would be much higher at South Melbourne than at Canterbury. There would not be quite so much difference in regard to construction costs, but I doubt if a comparison would be of any real value. For a comparison to be useful, it would be necessary to take the network where the buildings were the same, the line plants identical, and where there were the same telephone, etc., lines. I have given this matter a great deal of thought, and I can come to no other conclusion. One would require identical conditions, and that is not practicable. The present building at Canterbury is overcrowded and out of date, and under such conditions a quick service is impossible.

where a comparison  
is to be made  
between two districts

4. To Senator Newland.—When a subscriber at Canterbury wishes to attract the attention of the Exchange he has to turn a handle on his telephone and operate a magneto. The current from the generator flows along the line to an indicator at the Exchange in front of the telephonist, who, upon seeing the number, lifts up a plug and puts it into the corresponding jack of that subscriber's number. The telephonist ascertains the number required by the subscriber, and then connects with the wanted line. Unless the telephonist, at various intervals during the period of the connexion, operates the listening key associated with the cords used, she cannot ascertain by any visual means whether the subscriber obtains service or not. If the subscriber neglects to ring off, she does not know when the conversation is finished, and she has to loop in with her listening key. With the more modern system lamps are used, and instead of the subscriber turning a handle she merely has to lift the receiver from the telephone. That operation lights a lamp at the Exchange, which is situated above the subscriber's jack. The telephonist plugs into the subscriber's jack, and ascertains the request, opens her listening key, and connects the subscriber with the wanted line, and rings in the usual manner.

Until the wanted subscriber answers, a lamp is lit on the corresponding cord, and the moment the subscriber answers the lamp goes out. There is another lamp associated with the answering cord that does not light, because the calling subscriber has his receiver off the hook. If both lamps are alight, the telephonist knows that the subscriber has received service, or, if she has not obtained the subscriber she wanted, she has certainly obtained an answer from the premises called. This system entails a

generator

on the circuit

+ in front of the  
telephone

remains

alight  
are extinguished

by the subscriber who originates the call

Automatic Telephone Exchange, Canterbury 14

minimum amount of work on the part of the telephonist, and thus she can give more efficient service; but even this is not as effective as the automatic system. In registering the calls in the case of Canterbury, the telephonist has a suitably marked. As a subscriber calls and receives service, she puts that subscriber's number on the tip. In the other instance, where the lamp signals are displayed, the telephonist has a metre key, and when both lamps light she knows that service has been given. She presses the key and ~~the meter~~ is registered. If a wrong number were obtained, and the calling subscriber informed the telephonist of the fact, she would adjust the matter so as to prevent the subscriber being improperly charged, but if the telephonist were not informed it is likely that the subscriber would be charged for a call that was not effective. Our experience, however, is that there is very little, if any, overcharging. No case of overcharging has come under my notice in the Malvern area. In an automatic exchange, the whole operation is automatically recorded; and unless there is a faulty circuit a call could not be improperly registered. The ~~records~~ are almost identical with those used in the manual exchanges. The mechanical portion is identical.

of paper  
on the keyshelf  
cause to blow

meter

(one call is) registered  
on the meter

etc

meter

Automatic Telephone Exchange, Canterbury 5

(Taken at Melbourne.)

MONDAY, 14th AUGUST, 1922.

Present:

Senator NEWLAND (in the chair);	
Senator Plain,	Mr. Mathews,
Mr. Jackson,	Mr. Parker Moloney.
Mr. Mackay,	

George Herbert Morgan, Telephone Manager, Postmaster-General's Department, Melbourne, sworn and examined.

5. To Senator Newland.—The automatic telephone exchange proposed for Canterbury is, in my opinion, necessary to relieve the congestion in that district. At Canterbury, at the estimated rate of development, congestion will exist in 1924, when the present equipment will be practically exhausted. I do not think the work is of an urgent character at Canterbury. We can carry on until 1924, but we ought to have the apparatus and buildings ready by that time. Canterbury Exchange will then be full, if our estimates are realized. In 1924, the Canterbury Exchange will be full and a new building will have to be obtained. The present building is close to a railway line, with a cross-over close by. The whistling of the engines and the noise of the trains is distracting to the telephonists. Therefore, a new room will have to be built whether the present manual system is retained or the automatic system is introduced. At Canterbury, 80 to 90 per cent. of the calls go to other exchanges. That means that the operator who receives the call passes it on to at least one other operator to complete. If the system were automatic, the person calling could dial direct to Windsor, Hawthorn, Central, Collingwood, Malvern, Brighton, or Canterbury. That would save double handling. I consider the automatic system preferable to the manual for Canterbury, as it is being installed elsewhere, and it is desirable to have uniformity. I know nothing against the automatic system. At Geelong, it has been a great success, and has also been satisfactory at Malvern. I do not think it was as good as it might have been when first installed at Brighton, but improvements have been made since, and everything is now satisfactory. I have no doubt that the mechanism will do all that is claimed for it. The defects at Brighton were attributed at first to the fact that the operators had not been properly trained, but I think the adjustments were not as good as they might have been. The Brighton Exchange is working satisfactorily now. Calls from Melbourne to Geelong are dialled direct, and we have no difficulty, provided the weather is good, in spite of the long distance. The wires to Geelong are aerial wires, and in wet weather the resistance to leakage of current is reduced, and consequently there is more leakage. When the weather is boisterous we have to revert to the magneto. This is not due to faulty apparatus, but to the fact that we have not sufficient power to overcome the leakage on the long line. Between Melbourne and Geelong we are doing more than is claimed for the system. Instead of dialling up to 25 miles, we are doing it over 45 miles, and without difficulty except in bad weather. There would be no such difficulty in the metropolitan area, because the wires are nearly all underground. We have to encounter the same difficulties in using the Morse code over long distances with exposed wires in bad weather. The weather affects the Morse system along the coast in bad weather. I think the proposed location of the exchange is quite satisfactory. The additional equipment is necessary, and particularly so in the Central Exchange area. I supply all the traffic data upon

*short*

*when*

Automatic Telephone Exchange, Canterbury 6

which the engineers prepare their plans, but I am not consulted in the drawing of the plans. I am consulted about the position of the exchange and the number of lines necessary. The present cost of operating the Canterbury Exchange is £2,045, and it is estimated that the cost on the 1st January, 1924, will be £2,438 1s. 3d., and on 1st January, 1925, £1,025 17s. I have prepared the following figures regarding the growth of that exchange:-

Date.	No. of subscribers.	Increase.	Increase per cent.
1910 ..	423 ..	— ..	— ..
1911 ..	191 ..	66 ..	12.5
1912 ..	574 ..	83 ..	14.9
1913 ..	870 ..	96 ..	10.7
1914 ..	881 ..	111 ..	13.5
1915 ..	1,017 ..	136 ..	13.4
1916 (war period) ..	1,047 ..	30 ..	2.9
1917 (Box Hill Exchange opened)	995 ..	— ..	—
1919 ..	1,111 ..	116 ..	11.6
1920 ..	1,318 ..	207 ..	18.6
1921 ..	1,527 ..	209 ..	13.8
1922 ..	1,738 ..	231 ..	13.1
1923 (estimated) ..	2,030 ..	— ..	—
1924 ..	2,235 ..	— ..	—
1925 ..	2,730 ..	— ..	—
1926 ..	3,161 ..	— ..	—
1927 ..	3,660 ..	— ..	—

Certain discrepancies between my figures and those supplied by Mr. Becher are explained by the fact that my figures are for the end of the financial year, and his are for January. The South Melbourne proposal is extremely urgent. The Central Exchange is very congested, and it is only by providing additional buildings around Melbourne that we can relieve it.

6. *To Mr. Mackay.*—I am familiar with each of the three systems of automatic telephony. I cannot say that I am familiar with the class of apparatus provided by the different automatic telephone companies. I know that every agent says that his system is the best. I am not anxious that the Department should introduce different systems. The Strowger system is no doubt good, but they say that the relay system is better. Those are claims that have to be proved, but the system looks all right, and does all that is claimed of it. There is, of course, the danger of getting ourselves into the hands of a monopoly, but that can always be overcome. Firms who are tendering do not know who is going to get the tender, and consequently they all have to quote their lowest prices. We have apparatus of the Western Electric Company's and the General Electric Company's at Windsor. There is not much difference between them. The different manual systems do not work together satisfactorily. There are many different kinds of multiple switchboards, and the slightest variation in the design of the plug means that it cannot be used for another exchange. If the Department introduced a new automatic system, it would insist that it must be able to work in with the existing system, but this would necessarily mean the introduction of additional complicated mechanism. To attempt to combine the relay and step-up systems would mean trouble in the end. The Department is justified in increasing the number of automatic installations, and I think every telephone operating company in the world would introduce the automatic system if it could dispose of its existing manual plant at a profit.

7. *To Mr. Jackson.*—The plans put forward by the engineer should be undertaken so that the buildings will be ready to have the machinery fitted in 1924. The longer the installation of the automatic system is delayed the more confusion will be caused in such districts as Box Hill and Canterbury, where the majority of calls go to other exchanges. Immediately Canterbury was working on the automatic system, calls

Automatic Telephone Exchange, Canterbury 7

would go direct to any other automatic exchange without the intervention of an operator, and would go through Central with the intervention of only one operator. If a person at Canterbury was calling Brighton under the present system, the operator at Canterbury would call up an operator at Windsor, and the second operator at Windsor would pass the call on to another girl at the semi-automatic desk in the Windsor exchange, who would pass it on to the Brighton number. An automatic exchange at Canterbury would, in such a case, eliminate three operators. There is no doubt in my mind that the automatic system is preferable to the manual, both from the point of view of revenue and efficiency.

*(The witness withdrew).*

Lawrence Bede Fanning, Telephone Traffic Officer of the Central Staff of the Postmaster-General's Department, Melbourne, sworn and examined.

8. To Senator Newland.—The equipment at Canterbury, ~~now~~ with the addition of new equipment, would probably ~~not~~ serve us over for more than two and a half years. The board we are putting in at the present time has 6 positions with 200 lines per position, making 1,200 lines in all. We already have 400 subscribers on auxiliary boards in a very unsuitable position. The boards are of the non-multiple type, and it is proposed to ~~take~~ <sup>transfer the</sup> these subscribers off and put them on the new equipment. That will take 400 of the 1,200 lines, leaving 800 for development. The present rate of development is about 15 per cent, and we expect that the new equipment will not last more than two and a half ~~or~~ years. A large number of people in the Canterbury district are waiting for services owing to want of cable. That difficulty will be overcome in about twelve months. A new exchange will certainly be necessary.

*The witness withdrew.*

Auto Ex Canterbury.  
Taken at Melbourne.  
14<sup>th</sup> August 1922.

*at present in course of installation*

*transfer the*

*of the present exchange  
with the additions that are  
being made*

Automatic Telephone Exchange, Canterbury 8

(Taken at Melbourne.)

TUESDAY, 15TH AUGUST, 1922.

Present:

Senator NEWLAND (in the chair);  
Senator Plain, Mr. Mackay;  
Mr. Jackson, Mr. Parker Moloney;  
Mr. Mathews,

John Smith Murdoch, Chief Architect, Commonwealth Department of Works and Railways, sworn and examined.

9. To Senator Newland.—The site of the Canterbury Exchange is vacant land behind the present post-office building, in Canterbury-road. The proposed new telephone exchange building will face Canterbury-road at one end and Maling-street at the other. The site faces the right-of-way connecting Canterbury-road and Maling-street, while the other side of the building will face the post-office yard. The entrance to the building will be in Maling-street. The size of the switch room will be 39 ft. 6½ in. by 45 feet; of the battery room, 22 ft. 7 in. by 34 feet; and of the air-conditioning room, 23 ft. 6 in. by an average width of about 15 feet; that is to say, it will be 23 feet wide at one side and 6 feet wide at the other. There is to be a store building 16 feet by 11 feet. The present telephone exchange, which is a corporate part of the post-office building, is proposed to be utilized, on the lower floor, as a district line inspector's office with store-room attached and lavatory accommodation for the staff. The upper floor of the existing exchange is proposed to be used as a luncheon and recreation room. A portion of the present building is two-storied. The site is a very sloping one, and the lower end of it, on which is the telephone exchange, is two-storeyed. There are only the two rooms, 31 feet by 19 feet. The post-office people are not likely to want those rooms. There are certain store-rooms on the ground. We intend to retain the present store-room and to give another, 10 feet by 11 feet; there is also another store-room in the old building, 10 feet by 9 feet. I am proposing in this building to have a wooden roof, covered with iron, behind a parapet, over the air-conditioning room and the other room. I do not think the concrete roof will be called for in this case. There will be a concrete ceiling; there will be no difficulty in covering the span of this switch room without stanchion support. The proposed span, namely, of 45 feet, is just about the limit, however, to which we can go without requiring support. The slope of the building site will not be sufficient to permit us to take advantage of it by the construction of a basement. Upon this project we have been in collaboration with the Postmaster-General's Department's engineers. The only change which has been made is that we will increase the size of the air-conditioning room slightly, and we will put in the concrete ceiling. Perhaps the estimate will be increased by about £120 to £140. The new building will occupy the whole of the vacant block. There will be a space of 15 feet left between the post-office building and the telephone exchange.

10. To Mr. Mackay.—The new building at Canterbury will be larger than that to be erected at South Melbourne.

*The witness withdrew.*



*battery*

*\* in switch room*

6

Automatic Telephone Exchange, Canterbury



Taken at Melbourne.

TUESDAY, 12TH SEPTEMBER, 1922.

Present:

Mr. MATHEWS in the Chair;  
Senator Plain | Mr. Mackay  
Mr. Jackson | Mr. Parker Moloney.  
Lawrence Bede Fauning, Traffic Officer, Postmaster-General's Department, recalled and further examined.

11. To Mr. Mathews.—As I was unable to ascertain the cost of a common battery switchboard for the Canterbury Exchange I ~~was unable~~ to make any comparison. We are adding to the equipment there ~~the~~ requirements for two or two and a half years, ~~so~~ we must have a new exchange in a new building. There is no alternative to that. We have a large number of subscribers held up because of a shortage of cable, but the position in that respect will be relieved in less than twelve months. Development in that district will be considerable. As to whether the exchange should be manual or auto is a question of cost. On the figures submitted the auto system is shown to be the cheapest. Personally, I think that the annual charges of the common battery switchboard would be very much lower than ~~is~~ shown if we could get up-to-date quotations. The position at Canterbury will be serious within two years. We are putting in additional equipment which will provide 1,200 lines. A portion of that additional equipment will be used to accommodate subscribers who are ~~on~~ auxiliary switchboards. That will leave us only 600 lines for meeting development. The rate of development at Canterbury is ~~16~~ or 17 per cent.

12. To Mr. Mackay.—I favour an auto exchange at Canterbury.

13. To Mr. Mathews.—The same statement applies to South Melbourne as to Canterbury. South Melbourne is a very urgent proposition. I do not suggest that the provision of an auto exchange at Box Hill should be deferred until 1929, but it should be deferred until such time as a new exchange is necessary. The rate of development at Box Hill may alter. The figures are based upon a very high rate of development. The present exchange will last until 1929, but we will probably have to ~~put in operation~~ proposal for a new exchange before that date.

The witness withdrew.

The Committee adjourned.

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