

THE CENTRAL RAILWAY STATION, SYDNEY.

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WHEN I promised to prepare for you a lecture on the Central Station I little thought how the subject would open up under treatment. I undertook the task in a somewhat light-hearted frame of mind, as I felt that it was perhaps the subject which was uppermost in my thoughts, and I anticipated that there would be little trouble in collecting what facts were necessary for your information and in putting my thoughts on paper. I had not long begun before I realised that I was mistaken. It is a large subject, and I say large not on account of the size of the works so much as because there is such a large amount of detail to be discussed and comparisons to make with other works of the same kind elsewhere. Time will not permit, however, of my giving you more than a mere outline.

It may at first sight seem a little premature to take as a subject a building which has not yet been erected, of which, in fact, the foundations have scarcely been laid, but too much has already been done to permit of any radical alteration of the design during the progress of the work, Parliament has at last approved of the project, has passed an Act authorising its construction, a good deal of money has been spent and it is already beyond the condition of the unhatched chickens, which the proverb warns us against counting. In fact, the chickens are hatched and we only have to feed them and help them grow.

Although the adoption of the design as to the disposition of the space and the arrangements for the public and for traffic are practically settled, there is a great deal of minor detail yet to be worked out and the details of the roof are not yet complete. When the building is finished, I hope someone may be found to undertake the task of describing the works in all their details.

It will thus be seen to be unnecessary to unduly tax your powers of endurance, as I propose to-night to confine myself chiefly to mentioning those points that are settled and to indicating the points of interest in the work, so that those of you who remain in Sydney during its construction may have an idea of what you have to look out for when you visit the works, as no doubt you will, from time to time.

I will, however, in the first place bring before you a few facts with regard to the history of the Sydney Terminus and the circumstances which gradually led up to the final adoption of its present site. As this is a subject of very general interest, I trust that it may not be considered out of place.

To illustrate the lecture some lantern views have been prepared and will be exhibited on the screen.

HISTORICAL NOTICE.

On the 29th January, 1846, a public meeting was held for the purpose of considering the expediency and practicability of establishing railways in New South Wales. A Provisional Committee which was then appointed to investigate the matter, arrived at the conclusion that efforts might be made to establish railway communication between Sydney and Goulburn, that the cost of construction would not exceed £6,000 per mile, and that a net profit of eight per cent. per annum might be anticipated. The Committee's Report, giving expression to these very sanguine expectations, was adopted at another public meeting, and arrangements were made for Mr. Woore to undertake the preliminary survey, which was completed and submitted at a meeting held on the 27th January, 1848, just about two years after the inauguration of the movement.

Eventually a Company was formed and an Act of Incorporation passed by the Legislature, the Royal Assent being given on the 10th October, 1849. The Company was called "The Sydney Railway Company," the authorised capital being £100,000 on which six per cent. interest was guaranteed by the Government. Mr. Shields, then City Surveyor, was appointed Engineer to the Company.

It may be interesting to record that the first Directorate of the Company consisted of the following gentlemen:—Messrs. C. Cowper, C. Kemp, C. Nicholson, John Lamb, Wm. Bradley, Daniel Cooper, junr. Mr. Cowper (afterwards Sir Charles Cowper) was elected President and Manager. Of these Mr. C. Nicholson, better known as Sir Charles Nicholson, alone survives.

The first sod was turned on the 3rd July, 1850, on the site of the present station, by the Hon. Mrs. Keith Stewart, daughter of His Excellency the Governor, Sir Charles Augustus Fitzroy, and so far all went well, but it was not long before the progress of the Company became beset with difficulties. The discovery of gold having occurred soon after, labour became very scarce and prices went up. At the beginning of 1851 the Company having felt themselves compelled to reduce the salaries of their staff, Mr. Shields, their Engineer, refused to submit, and resigned his appointment, whereupon Mr. Mais was selected to fill the position temporarily.

In 1852, Mr. Wallace came out from England, having received the appointment of Engineer-in-Chief. He landed in Sydney on the 9th July, and one of his first acts after his arrival was to recommend that the railway should be a double one between Sydney and Parramatta.

Towards the end of 1852, the funds of the Company proving insufficient to complete the railway, application was made to the Government for a loan of £150,000 of public money and this was agreed to.

In the beginning of 1854 it was clear that the money at the command of the Company was still insufficient and the Government was again approached. The final result of the negotiations was that a transfer of the property of the Railway Company to the Government was effected on the 3rd September, 1855.

It is noteworthy that a similar fate had befallen the Hunter River Railway Company, and that on the previous 30th July the property of that Company became vested in the Government. Thus, in these two instances, private enterprise having signally failed, it became the duty of the Government to push on with the development of the Railway System in New South Wales.

These circumstances are well worthy of notice, for there are many people who are only too ready to charge the Government with the wilful crushing of private enterprise, and even in matters of railways, which, in new countries, it is particularly difficult to induce capitalists to undertake, they have sometimes been abused for taking so much upon themselves. In these cases, at any rate, the Government only stepped in after private individuals had failed, and had the action been otherwise, railway development would have been retarded for a long period, and the country would not have been opened up.

Shortly after the Sydney Railway Company became defunct, namely, on the 26th September, 1855, the railway was completed and opened for traffic. The total expenditure, as given in Captain Martindale's First Report as Chief Commissioner for Railways was £566,716 8s. 8d. This sum was stated to include the terminal works in the "Cleveland Paddock" and the Darling Harbour Branch.

On the 25th February, 1856, Mr. Wallace resigned the office of Engineer-in-chief and steps had to be taken to appoint a successor. This was found in the person of my predecessor in office, Mr. John Whitton, who entered upon his duties on the 15th January, 1857.

GUAGE.

A few words on the subject of gauge.

In 1848, when the question of the construction of railways in Australia had come to the front and their introduction was only a matter of time, the English "Narrow Gauge" of four feet eight and a-half inches, so called to distinguish it from the "Broad Gauge" of seven feet which had been adopted by Brunel for the Great Western Railway Company, was recommended by Earl Grey, Secretary of State, in a despatch to Governor Fitzroy for the future Australian Railways, and it was actually determined that this gauge should be used.

In 1850 Mr. Shields, who had been appointed Engineer to the recently formed Sydney Railway Company, strongly urged the adoption of the Irish Gauge of five feet three inches, as being, on account of its greater width, more suitable, and in 1851 the assent of Her Majesty's Government was obtained to the change. An Act was passed in the Colonial Legislature, assented to on the 27th July, 1852, which made this gauge the legal gauge, and the Colonies of Victoria and South Australia were duly informed.

Mr. Wallace took up his duties as Engineer-in-chief just before the passing of this Act. It will be remembered that he arrived in Sydney on the 9th July. Some time afterwards he recommended that the four feet eight and a-half inch gauge should be reverted to as being the recognised standard, and eventually a Bill was passed in 1854 by the New South Wales Legislature making this gauge legal in place of the other. In due course the Bill was forwarded to the Home Government for the Royal assent. On the 8th November of the same year, 1854, Earl Grey wrote to Governor Fitzroy strongly urging that the five feet three inch gauge should be adhered to, and pointing out the inconvenience which must ultimately arise when the railway systems of the neighbouring colonies were joined. On receipt of the despatch from Earl Grey, Governor Fitzroy penned a message to the Legislative Council, and a Draft Bill was actually prepared and forwarded to that body with the object of repealing the previous Act and making five feet three inches again the legal gauge. As, however, the New South Wales Government had on the strength of the Bill that had been passed ordered rolling stock for the four feet eight-and-a-half inches gauge it seemed to be too late to change back again, and as the Victorian Government had already given orders for rolling stock to the five feet three inches gauge, all further negotiations for the adoption of a uniform gauge seemed futile.

A last effort was made by Mr. Whitton after he took office as Engineer-in-Chief, in January, 1857, to induce the Government to revert to the five feet three inches gauge. He pointed out that at that time the railway had only reached Liverpool, and that the cost of the change then would be trifling compared with what it would be later on. Captain Martindale also in his First Report, dated 22nd October, 1857, emphasized the inconvenience which must in future be felt, but in vain.

I wish now to say a few words on the selection of the site of the Sydney Terminus, and show how it came about that the location of the existing station came to be adopted. With that object, it is necessary to go back to the time before the Company was inaugurated.

The question of the selection of the site for the Grand Terminus in Sydney, as it was called, became the subject of correspondence between the Chairman of the Provisional Committee and the Colonial Secretary. The matter was referred to Sir Thomas Mitchell, then Surveyor-General, who reported upon it. I quote from the letter of the Chairman of the Provisional Committee to the Colonial Secretary, as the expressions used are of interest.

Railway Office,

Sydney, 23rd November, 1848.

Sir,—The Provisional Committee for making arrangements for the formation of the Sydney Tramway and Railway Company have the honour to state for the information of His Excellency the Governor, that after attentively considering the important question of the best site for a Grand Terminus in the City of Sydney, they have arrived at the conclusion that a part of the vacant Crown Land between the Benevolent Asylum and the road to Botany is the most eligible position for that purpose. They are of opinion that its elevation renders it highly desirable for a terminus and that it is quite far enough within the boundaries of the City for putting down passengers. Looking forward also to a few years hence, when the buildings to be erected for the purpose of the Company will, it is presumed possess some architectural beauty, they are not aware of any preferable site, where they could be placed with more advantage as ornamental to the City.

(Signed) CHARLES COWPER,

Chairman of the Provisional Committee.

The Surveyor-General, to whom the matter was referred, was opposed to the site selected, and suggested that the terminus might with advantage be placed further back on the upper part of Grose Farm, now occupied by the University and Grounds, and recommended that the whole of that property be reserved from sale.

The question then came before the Executive Council and their decision is expressed in a letter written by the Colonial Secretary to the Chairman of Committee on the 12th January, 1849. He therein states that the Council were prepared to recommend the grant of a site for a terminus, but that it would be premature to promise any particular portion of land.

After the incorporation of the "Sydney Railway Company," in October, 1849, the Engineer, Mr. Shields, submitted a recommendation as to the sites which might be set apart for a terminus. His opinion was that it should be located at the junction of Elizabeth Street and the Haymarket, a position which corresponds with the north-east corner of Belmore Park, and he pointed out how unsuitable on account of elevation alone Grose Farm, the site suggested by the Surveyor-General, was. An application for a grant of the land having been forwarded to the Government the matter was again referred to the Surveyor-General for report. That official, in a report dated 10th February, 1850, concurs in the suitability of the site selected by Mr. Shields, although at the same time he expressed his opinion that the Grose Farm site was more suitable. Eventually in March, 1851, the land applied for was made over by Deed of Grant from the Crown. Had this site been retained, the ground must necessarily have been raised very considerably by filling, and the station would have been situated on a high embankment.

In November, 1852, after Mr. Wallace had taken up the position of Engineer-in-Chief, a proposal was made to set the terminus back to face Devonshire Street, and place it in what was then known as the the Cleveland Paddock. It was thought that the site at the corner of Elizabeth Street and Haymarket was somewhat cramped and that the land already granted might be advantageously exchanged for a larger area a little further away from the city. Negotiations were entered into, and it was ultimately agreed that the Company should be free to

select ten acres of ground in the Cleveland Paddock, in addition to what they already possessed at that spot. Thus it came about that the Railway Terminus was located at Devonshire Street.

The first beginnings of the railway were of a modest character. It is true that it had been decided as the result of Mr. Wallace's forethought, to make the line to Parramatta a double one. The permanent way also was constructed in what was considered a substantial manner in accordance with ideas prevailing at the time. In imitation of the practice of the great Brunel, Barlow rails, seventy-five pounds to the yard, were adopted; these were laid on longitudinal sleepers, the supporting surface of which was, however, afterwards supplemented by cross sleepers underneath. On the other hand, the terminal station at Redfern contained a single line and a single platform, the western side of the building covering them being widened under a lean-to roof and containing the booking and other offices.

The amount of traffic for some time after the opening was, as may be expected, not large. I find, on reference to Captain Martindale's 4th Report of September, 1860, that there were only six trains leaving Sydney during the day, namely: 6.55, and 10 a.m., 2, 4.35, 5.45, and 6.45 p.m., six trains in all.

The traffic had evidently not improved much; at any rate, there had been no necessity for an increase in the number of trains, for I find that in October, 1857, three years before, there were also six trains leaving Sydney.

In this connection it may be interesting to observe the high fares at first charged. These were the following:—

	1st Class.		2nd Class.		3rd Class.			
	s.	d.	s.	d.	s.	d.		
Sydney-Newtown ...	1	0	...	0	9	...	0	6
„ Ashfield ...	2	0	...	1	3	...	1	0
„ Burwood ...	2	6	...	1	9	...	1	3
„ Homebush ...	3	0	...	2	3	...	1	6
„ Parramatta ...	4	0	...	3	0	...	2	0

No return tickets were issued at first, but at the end of the following year a reduction on the double journey came into force.

The first published list of rolling stock in use on the Government Railways is given in Mr. John Rae's Report of 30th September, 1855. We there find a list of sixteen locomotives employed on the Southern, Western, and Richmond Lines. Of these, Nos. 8, 12, 14, 15 and 16 are Tank Engines. Of the Tank Engines, Nos. 8 and 12 are the heaviest and weigh in steam 29 tons 19 cwt. 3 qrs., the heaviest axle load, that on the trailing wheels, being 11 tons 11 cwt. 3 qrs. Of the tender engines, the heaviest and most powerful were Nos. 1 to 4 inclusive, built by R. Stephenson. The engines weighed in steam 26 tons 1 cwt. 1 qr., the tenders full 20 tons 8 cwt., or 46 tons 9 cwt. 1 qr. in all. The heaviest axle load was on the driving wheels and was 12 tons 5 cwt. 1 qr., cylinder 16 in., stroke 2 ft., diameter of wheels 5 ft. 6 in. These were the first imported. On the Northern Line the tender engines were lighter, but the greatest concentrated load was caused by Tank Engines Nos. 6 and 7 of the Northern stock which weighed 35 tons on the three axles, the driving axle accounting for 12 tons 10 cwt.

It is interesting to compare these early engines with the heaviest now in use, particulars of which are as follows :—

LOCOMOTIVES NOW IN USE.

(See *Railway Commissioners Report, June, 1899.*)

P. Class Express Locomotive, Beyer & Peacock—	t.	c.	q.
Weight of Engine under steam	56	10	3
„ Tender	31	16	1
Total	88	7	0

Six Wheels coupled, 5 ft. diameter.

Heaviest Axle Load ... 14-t. 13-c. 2-q.

Cylinders 20 in. x 26 in. stroke.

J. Class Consolidation Goods—Baldwin Co.—			
Weight of Engine under steam	62	12	0
„ Tender	37	8	0
Total	100	0	2

Eight Wheels coupled, 4 ft. 3 in. diameter.

Heaviest Axle Load ... 15-t. 9-c. 0-q.

Cylinder, 21 in. x 26 in. stroke.

T. Class, Australian Consolidation Goods—			
Weight of Engine under steam	65	15	0
„ Tender	41	10	0
Total	107	5	0

Eight Wheels coupled, 4 ft. 3 in. diameter.

Heaviest Axle Load ... 15-t. 9-c. 0-q.

Cylinders, 21 in. x 26 in. stroke.

In 1857, only two years after the railway had been opened, a proposal was made to extend it into the City, the north-west corner of Hyde Park being selected for the terminus. Mr. Whitton estimated the cost of the line at £47,000. This was, of course, a line with earth embankments and earth slopes to the cuttings, not brick viaducts and brick retaining walls and tunnels as contemplated in later and, necessarily, more expensive schemes.

Captain Martindale, in his First Report, dated 22nd October, 1857, brings this scheme forward and the total cost including station buildings is then put down at £65,000. He was not, however, a very keen advocate of the proposal, as he appeared to think that work would interfere with one of the lungs of Sydney, and he recommended instead the construction of a tramway, for goods and passengers, along Pitt Street to Sydney Cove, or Semi-Circular Quay as it was then called, at an estimated cost of £10,000.

In Captain Martindale's Second Report of the 29th April, 1858, he again refers to the Pitt Street Tramway Scheme.

In his Third Report of October, 1859, he mentions that a sum of £7,500 had been voted by Parliament for the tramway, but that the municipal authorities having objected to its construction, a Bill was to be introduced to provide the necessary authority. When the matter came before the Assembly a Select Committee was appointed to deal with it and they, in May, 1860, passed a resolution recommending the scheme to be adopted and to be worked by horses.

From Captain Martindale's Fourth Report, dated September, 1860, it would appear that orders for rails and rolling stock had been sent to England in anticipation of the passing of the Bill. Eventually, the Act authorising the construction of the tramway was passed and the rails were laid, but from the beginning there seems to have been much dissatisfaction, as may be judged from the fact that as early as 1862 a Select Committee of the Legislative Assembly was appointed to report as to the desirability of taking it up.

Some time afterwards it was taken up, and this fact and the utilisation of the rolling stock are mentioned in Mr. John Rae's Report dated 9th January, 1872.

Public opinion does not appear to have been satisfied with leaving the terminus at Devonshire Street, for in 1868 plans were prepared for a scheme to extend the Railway to the northwest Corner of Hyde Park, at St. James' Road. In this design there was room for two train docks and four platforms.

In a Report dated 5th May, 1873, Mr. Whitton calls the attention of the Commissioner to the advisability of extending the railway from Redfern through Hyde Park and King Street.

In 1879, plans were prepared for an extension of the railway up to Hunter Street. In this proposal there were included two train docks and four platforms.

In 1884, a scheme was prepared and submitted to Parliament for a double line running underground through Hyde Park and terminating at Fort Macquarie. This was approved and a sum of £450,000 voted. When the working plan was submitted to Parliament in 1886 the matter lapsed in the Legislative Council.

In 1888, a western side scheme with a double line running for the most part on viaducts between Kent and Sussex Streets, curving round past Miller's and Dawes' Point, and terminating with a station at the Naval Depot, was worked out. This line was favoured by Sir Henry Parkes.

In October, 1888, the Railway Act came into force, and the three Railway Commissioners, with the late Mr. Eddy as Chief, entered on their duties.

About this time, 1888-89, the Hyde Park proposal again came to the front, and plans were prepared for an extension with a terminus facing King Street. This scheme had four docks and eight platforms.

In 1890, the subject of City Railway Extension was referred to a Royal Commission, comprised of citizens with Mr. Sydney Burdekin as President. These gentlemen at first passed a resolution in favour of the Hyde Park proposal, which was strongly supported by Mr. Eddy, but they were deterred by the opposition shown by Sir Alfred Stephen and others, and notably by Sir Henry Parkes.

In consequence of this opposition Mr. Eddy submitted a scheme of his own for suburban railway extension. This consisted of a double line underground through Hyde Park, with a station at the High School site, thence the line proceeded underground on a grade of one in forty-five to the back of the Customs House. The High School was to be the terminus for some of the trains, the rest being taken on to the Circular Quay. This scheme, which necessitated a large station for long distance traffic at the Benevolent Asylum, was then recommended by the Royal Commission. The proposal was subsequently practically withdrawn by Mr. Eddy, who acknowledged that he was not satisfied with it.

The Royal Commission had a large number of schemes from various sources submitted to them, adopting all imaginable routes on both sides of the City, but they all had defects.

About this time, 1890, a plan was worked out for a station at the Benevolent Asylum site, on the exact spot fixed for the station now being erected. The plan was well thought out and was considered by Mr. Eddy to be the best to be adopted, if no extension into the city could be made. This proposal was before the Royal Commission. It included five train docks and ten platforms, and provided approaches for the cable tramway.

On the 1st December, 1892, after consultation with the late Chief Commissioner, a modification of Mr. Eddy's proposal, giving considerably improved grades, was submitted to the Minister for Works.

No further steps were taken until the late Chief Commissioner, (April, 1896, after consulting with the Hon George Reid) came forward with a proposal which was thought would prove satisfactory, as it avoided the most frequented part, namely the northern section of Hyde Park. This was to make the terminus at Park Street. It was similar in accommodation to the last-named, and contained five train docks and ten platforms.

The Public Works Committee having, in 1896, been appointed a Royal Commission to inquire into the subject of City Railway Extension, this scheme was handed over to them for enquiry.

After investigating a multitude of schemes, some of which were worked out at their request in my office, they ultimately recommended the extension to St. James' Road; the plan of the station being the same as the Park Street proposal, except that another road and platform were added. At the request of the Commission, one story was cut out, as shown in elevation.

In order to comply with the Public Works Act of 1888, this proposal had to be submitted to the same body acting then as the Parliamentary Standing Committee, and they went afresh into the matter and came again to the same conclusion. In consequence of the opposition of the Premier, the Hon. G. H. Reid, it was not further proceeded with.

After this, a great many other proposals were, at the instance of the Government, worked out in my office, but none were found to exactly meet the requirements, some on account of cost, others as not being conveniently workable.