

1853.

VICTORIA.

REPORT

FROM THE

SELECT COMMITTEE

ON THE

MELBOURNE AND HOBSON'S BAY

RAILWAY COMPANY'S BILL,

TOGETHER WITH

THE PROCEEDINGS OF THE COMMITTEE,

AND

*Minutes of Evidence.*

Melbourne:

PRINTED AT THE "ARGUS" OFFICE, COLLINS STREET, EAST.

1853.

TUESDAY, 2ND NOVEMBER, 1852.

7. MELBOURNE AND HOBSON'S BAY RAILWAY COMPANY.—Mr. Westgarth, having produced a certificate that the sum of £25 had been paid by the promoters of this Bill into the hands of the Colonial Treasurer for the public uses of the Colony, moved that this Bill be read a first time.

Question put and passed. Bill read a first time.

Mr. Westgarth then moved, pursuant to contingent notice, that this Bill be referred to a Select Committee, to consist of Mr. Splatt, Mr. Campbell, Dr. Thomson, Mr. Rutledge, The Auditor-General, and the Mover.

Question put and passed.

# R E P O R T .

THE Select Committee of the Legislative Council, for whose consideration and report was referred, on the second day of November last, " A Bill to Incorporate a Company to be called The Melbourne and Hobson's Bay Railway Company," beg leave to report to your Honorable Council that they examined several witnesses (whose evidence will be found appended hereto), and that the Preamble of the Bill has been satisfactorily proved to your Committee.

Your Committee afterwards proceeded with the several Clauses of the Bill, and carefully noted the amendments they deemed it expedient to make therein, taking care to insert no clause and make no amendment foreign to the title and general objects of the Bill attached to the Petition presented to your Honorable Council.

Your Committee have now the honor to lay before your Honorable Council the said Bill as so amended by them.

W. WESTGARTH,  
CHAIRMAN.

Legislative Council Chamber,  
Melbourne, January, 1853.

## PROCEEDINGS OF THE COMMITTEE.

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TUESDAY, 9TH NOVEMBER, 1852.

*Members Present.*

Mr. Westgarth, Mr. Childers, Mr. Rutledge.

Mr. Westgarth called to the Chair.

Course of Proceeding decided on by Committee.

Adjourned to Tuesday next, at 10 o'clock.

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TUESDAY, 16TH NOVEMBER, 1852.

*Members Present.*

Mr. Westgarth in the Chair.

The Auditor-General.

No Quorum present before half-past 12 o'clock.

Chairman adjourned Meeting to Thursday, 18th November, at 10 o'clock.

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THURSDAY, 18TH NOVEMBER, 1852.

*Members Present.*

Mr. Westgarth in the Chair.

Mr. Childers.

Adjourn until To-morrow, at 11 o'clock.

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FRIDAY, 19TH NOVEMBER, 1852.

*Members Present.*

Mr. Westgarth in the Chair.

Mr. Childers, Mr. Campbell.

Promoters appeared.

Counsel opened the Case.

Mr. J. B. Watson examined.

Mr. — Trenchard examined.

Adjourned to Wednesday, at 11 o'clock.

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WEDNESDAY, 24TH NOVEMBER, 1852.

*Members Present.*

Mr. Westgarth in the Chair.

Mr. Childers.

No Quorum.

Adjourned to Thursday, at 11 o'clock.

THURSDAY, 25TH NOVEMBER, 1852.

*Members Present.*

Mr. Westgarth in the Chair.  
 Mr. Childers, Mr. Splatt, Dr. Thomson.  
 Mr. J. B. Watson further examined.  
 Mr. Chauncy examined.  
 Mr. Oldham examined.  
 Adjourned to Saturday, November 27th.

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SATURDAY, 27TH NOVEMBER, 1852.

*Members Present.*

Mr. Westgarth in the Chair.  
 Mr. Childers, Mr. Campbell, Mr. Rutledge, Dr. Thomson.  
 Mr. Chauncy further examined.  
 Captain Ferguson, Harbour Master, examined.  
 Mr. Chauncy re-examined.  
 Leave given to Mr. Chauncy, Engineer of the Company, to amend his Section Lines.  
 Adjourned to Wednesday, 1st December, at 11 o'clock.

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FRIDAY, 3RD DECEMBER, 1852.

*Members Present.*

Mr. Westgarth in the Chair.  
 Mr. Childers, Mr. Rutledge, Mr. Campbell.  
 Captain Goss, of the "Candahar," examined.  
 Captain Bell, of the "Royal Shepherdess," examined.  
 Captain Lamond, of the "Admiral," examined.  
 Mr. J. B. Watson further examined.  
 Mr. Trenchard further examined.  
 Adjourned to Tuesday, 7th December, 1852, at 11 o'clock.

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TUESDAY, 7TH DECEMBER, 1852.

*Members Present.*

Mr. Westgarth in the Chair.  
 Mr. Childers, Mr. Rutledge, Mr. Campbell.  
 Evidence considered.  
 Question—That this Preamble stand part of the Bill, put and passed.  
 Adjourned to Tuesday, 14th December, 1852, at 11 o'clock.

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THURSDAY, 30TH DECEMBER, 1852.

*Members Present.*

Mr. Westgarth in the Chair.  
 Mr. Splatt, The Auditor-General.  
 The Committee went into and passed various Clauses of the Bill, as submitted by Counsel, on the part of the Company.

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FRIDAY, 7<sup>TH</sup> JANUARY, 1853.

*Members Present.*

Mr. Westgarth in the Chair.

Mr. Splatt, Dr. Thomson.

The Committee continued their course through the Clauses of the Bill, as far as Clause 66 of the new Bill.

Adjourned to Saturday, 8<sup>th</sup> January, at 12 o'clock.

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SATURDAY, 8<sup>TH</sup> JANUARY, 1853.

*Members Present.*

Mr. Westgarth in the Chair.

The Auditor-General, Mr. Splatt.

Completes the consideration of the several Clauses of the Bill.

Report agreed to.

MINUTES OF EVIDENCE.

FRIDAY, NOVEMBER 19TH, 1852.

MEMBERS PRESENT—Mr. Westgarth, Chairman; the Auditor-General and Mr. Campbell.

Mr. James Butler Watson, called in and examined.

1. *By Mr. Wrixon on behalf of the Petitioners for the Bill.*—Q. You are Secretary to the Melbourne and Hobson's Bay Railway Company? A. I am; I have been acting as Treasurer and Secretary to the Provisional Committee.

Mr. J. B. Watson.  
19th November, 1852.

2. Q. I see your name attached as witness to the signatures of a great number of the persons who have signed the Partnership Deed of the Company? A. Yes, I witnessed the majority of the signatures.

3. Q. You are acquainted I believe with the City of Melbourne and Hobson's Bay? A. Tolerably well, but more with the City than the Bay, though I have some knowledge of it. I have now resided eleven years in the Colony, and during that time have had many opportunities for making observations.

4. Q. What have been your avocations during that period? A. They have been exceedingly various, so that my knowledge of the City is entirely general.

5. Q. What is your opinion with regard to the utility of the proposed railway from the City to the Bay? A. That such a railway will be useful, can, I think be very easily proved, and from observations I am enabled to make in my capacity as Secretary to the Chamber of Commerce, it is made evident to me daily; for numbers of gentlemen have complained to me of the delay, expense, and loss attendant upon bringing up goods from the ships in the Bay to the stores in Melbourne by lighters. As a case in point, I may mention that previous to the New Tariff coming into operation, one gentleman gave the necessary security for having a large quantity of brandy passed through the Customs; and this gentleman was for a period of three months paying a charge for storage at the bonded warehouse, whilst his brandy was actually on board ship in the Bay during the time, he having found it impossible to get it discharged and trans-shipped. Then again, there is the expense attendant upon cartage and lighterage. The lighterage ranges from 30s. to 50s. the ton; and though the price is supposed to be regularly fixed at 30s. per ton, yet I have seen five pounds given for bringing up a single cart from the Bay. The complaints of loss of luggage are exceedingly frequent, since, after it is once put on board the lighters, it has no protection; when they arrive at the wharf, and the cargo is landed, any body that chooses to help himself may go and take what he likes. Nor are they a bit safer in their progress to the wharves, for Mr. Russell told me a few weeks ago, that he had had four cases of goods opened on their passage from the Bay, and a portion of the contents abstracted. He was obliged to put up with the loss, for the goods were not missed until the cases were unpacked. I could, if it were necessary, multiply these cases, for many such have come to my knowledge.

6. Q. Then by the formation of wharves and jetties in conjunction with the railway, so as that goods might be placed in the railway carriages from the Hold of the ship, these evils that you speak of would be removed and obviated? A. By the establishment of this railway goods may be landed at once and forwarded to town, thereby preventing all delay and all chance of robbery; for by the adoption of some system, such as I should presume the Company would be careful to do, all the merchandise might be easily secured. As to the saving of expense, I have made an estimate from the returns of the inward bound cargoes and passengers during the past three months, and I find that, reckoning these alone, without taking into account outward bound passengers and cargo, a charge of 5s. per ton for goods, and 1s. each for passengers, a sum of £60,000 per annum would be produced. Now it is estimated that the railway can be worked at an expense of £30,000 per annum, thereby leaving an equal amount as profit. For this reason then, I think I could state that the Company would be quite satisfied with a toll of 5s. per ton.

7. Q. This calculation is based on an estimate of the arrivals for the past three months? A. Yes.

8. Q. And if the arrivals of vessels should be more numerous than they have been during the period you name, a much larger revenue might be expected? A. Of course; and besides this, I have not, as I have said, taken into account the exports, the outward bound passengers, nor the passengers up and down the line, but have confined myself merely to goods and passengers arriving in the Colony.

9. Q. And that each of these passengers comes up to town only once? A. That is all.

Mr. J. B. Watson,—  
continued.  
19th November, 1852.

10. Q. So that you may very fairly double the amount received for passenger traffic, since very many of them would go several times up and down? A. Of course; but I was desirous of keeping within bounds in my estimate.

11. Q. You have no doubt then as to the advantage and utility of the railway? A. None whatever.

12. Q. In reckoning the annual cost of working the line, have you taken into the calculation the cost of maintaining the wharf and jetty? A. The annual cost of working I had from the Surveyor of the Company, but from the knowledge I myself have on this subject, I believe it includes all expenses that can be foreseen.

13. Q. Can you give us any information as to whether the body of the shareholders are consenting parties to this Bill? A. I was present when the majority of them signed the Deed of Settlement, and in it there is a clause providing for the present Bill. Some of the parties asked what was the purport of the Deed, and I told them; and others read the Deed for themselves before signing; so that it is to be presumed that they are cognizant of the present application, since the whole management of the Company is by the Deed given to the Provisional Committee. The Prospectus of the Company, in which it was clearly stated that a Bill would be applied for, so soon as a certain number of shares were taken, has been advertised in all the newspapers. It was first published on the 20th of August, and has continued to appear, I think, ever since. The advertisement of the intention of the Committee to apply for the Bill has also appeared in all the newspapers.

14. Q. What were the terms of the Prospectus? A. Almost a counterpart of those of the Deed of Settlement, with the exception of that part of the Prospectus which provides for the transmission of certain funds to England; this was altered in the Deed on account of our not having had a sufficient number of shares taken up to enable us to send home the amount we had intended by the "Chusan."

15. Q. Are you aware whether any information as to the intention of the Company has been given to His Excellency the Lieutenant-Governor? A. Yes; a Deputation waited upon His Excellency, on the 11th August, and this report from the Deputation was handed in to the Chamber of Commerce afterwards. It is as follows:—

"Report of a Deputation appointed to wait on the Lieutenant-Governor, to confer on the subject of a Railway between Melbourne and the Beach.—In compliance with an appointment to that effect, your Chairman and Deputy-Chairman, in company with Messrs. Nicholson and Guthridge, waited on the Lieutenant-Governor on Wednesday last, when his Excellency stated his approval of the project of a Railway to the Beach, and intimated that the Government would give a grant of the land required for the line, to any Public Company which might be organised with sufficient capital to carry it out, and would otherwise give every facility which they consistently could.

(Signed)

"JAMES BURNETT."

"6th August, 1852."

Some short time after this Deputation to His Excellency, the present Company was formed, and I then chanced to meet the late Auditor-General in the streets, and I told him how large an amount we had already had subscribed, and that we should have no difficulty in at once making up the half of what was required, but, that owing to the very great public benefits that would be derived from the formation of such a line of communication between Melbourne and the Bay, I thought that as one-half had been raised from private resources, the public might very well contribute the remaining portion. He desired me to show him our plans and estimates, and I did so. He then said that His Excellency the Lieutenant-Governor ought to be waited upon, and he went, I believe, in company with Mr. Fawkner, to see His Excellency on the subject. The Lieutenant-Governor was understood to consent that the Company should have a loan of £50,000 for a certain period from the public funds, but desired that the application should be made to him in writing. As soon as a sufficient number of shares to form the Company were taken up, I was instructed to write to his Excellency on the subject. I have done so, but as the letter was only sent in on Saturday last, we have not yet received any reply.

16. Q. Then the Government have had notice of all your proceedings? A. Yes, for along with my letter, I sent in a plan of the proposed line and works.

17. Q. Have the City Council also had notice of your operations? A. They have, full notice. On the 9th of October, the Provisional Committee addressed a Memorial to the City Council, which was presented on the 11th of that month by Mr. Alderman Robinson, of which the following is a copy:—

"To the Mayor, Aldermen, Councillors, and Citizens of the City of Melbourne: The Memorial of the Provisional Committee of the Melbourne and Hobson's Bay Railway Company, Humbly Sheweth—That from the vastly increased and rapidly increasing trade of the Port of Melbourne, additional facilities are required, and should be immediately provided for the communication between Melbourne and the Shipping in Hobson's Bay. To complete such communication in the most direct, perfect, and speedy manner, it is proposed to construct a Railway commencing at some spot in Melbourne on the North side of the River Yarra, and terminating at a pier or jetty carried out into the Bay at Liardet's Beach, where vessels of any tonnage may with ease and expedition discharge their cargoes and land their passengers. That the site best situated for the terminus of such Railway on the North side of the River Yarra, is, in the opinion of the Engineer engaged by your memorialists (in which opinion they fully coincide) the piece of land lying between Flinders Street and the River, and bounded on the West by a continuation of Queen-street, on the East by approaches to Princes Bridge, on the North by Flinders Street,

and on the South by the River Yarra. That this piece of land has, it is believed, been appropriated to public purposes by Proclamation by the Crown, and is consequently under your control and superintendance. That a Bill has been introduced into the Honourable the Legislative Council of the Colony of Victoria, for incorporating the proposed Company and enabling them to hold lands for the purposes of the Railway; in order to carry out to the fullest extent and with as little delay as possible such a great and beneficial undertaking: Your memorialists therefore pray that your Honorable Corporation will be pleased to aid and assist them in rendering the piece of ground before alluded to, available for the construction of the terminus, and other works necessary for the proper management of the Railway, according to the provisions and restrictions contained in the Bill, a copy of which will be forwarded to you as soon as printed.

(Signed) "THOMAS DICKSON, HEAPE AND GRICE, ALEXANDER A. BROADFOOT,  
JOHN L. SMITH, W. F. A. RUCKER, N. GUTHRIDGE, GEORGE  
ANNAND, HENRY MILLER, JOHN MASON."

"Melbourne, 9th October, 1852."

To this memorial I received the following answer:—

"Town Clerk's Office, Melbourne, October 19th, 1852.

SIR,—I have the honor to inform you that the memorial of the Provisional Committee of the Melbourne and Hobson's Bay Railway Company, intimating the desire of the Committee to obtain a portion of the land on the North bank of the Yarra Yarra, included in Flinders street, as a site for the terminus of the projected railway, and asking the aid of the Corporation in the matter, which was presented by Alderman Robinson, was brought under the consideration of the City Council at its last meeting, when I was instructed to intimate to you the desire of that body to aid in any way consistent with its duty to the Citizens of Melbourne, a project, which it is considered calculated to confer great advantages on the community, and to assure you of the readiness with which the Council will assist in rendering available any land which, on due enquiry, may be considered necessary for the terminus of the projected Railway. The Council has also remitted to a Select Committee the enquiry as to the position and extent of the land which may be necessary and the conditions on which it may be considered proper to cede it to the Company, and I am to request that you will furnish me with a copy of the Bill which is to be submitted to the Legislative Council at your earliest convenience.

"I have the honor to be, Sir,

"Your most obedient Servant,

(Signed)

"WM. KERR,

"Town Clerk."

"To the Chairman of the Provisional Committee of the  
Melbourne and Hobson's Bay Railway Company."

I forwarded a Copy of the Bill to the Town Clerk, as soon as it was printed, and subsequently received this other letter.

"Town Clerk's Office, 2nd November, 1852.

SIR,—I am instructed by the Select Committee of the City Council appointed to take into consideration all matters connected with the proposed Railway to Hobson's Bay, to request that you will furnish them with a plan of the land on the North bank of the river Yarra Yarra, which the Provisional Committee of the Melbourne and Hobson's Bay Railway Company is desirous of obtaining as the site for the terminus of the Railway. I am to state to you that if the extent of land required should be approved of, the Committee will be willing to recommend the City Council to consent to its being leased to the Company at a merely nominal rental, for as long a period as it may be used for the terminus of the Railway; reserving, however, the right of resumption of such portion of it as may hereafter be required for any works which may become necessary in connection with the construction of a new cut for the River or a Canal to the Beach.

"I have the honor to be, Sir,

"Your most obedient Servant,

"WM. KERR,

"Town Clerk."

"To the Secretary of the Provisional Committee of the  
Melbourne and Hobson's Bay Railway Company."

Since this letter was received, I myself took a Copy of the Plan of the terminus, to the Town Clerk, and he assured me personally that there would not be the slightest opposition offered to the Company by the City Council.

18. Q. I believe that you yourself saw such of the persons sign the deed against whose names your signature is appended? A. I did.

19. Q. And opposite to each persons name is the number of shares they have subscribed for? A. Yes, I was particularly careful that each of the parties as he signed, should himself put in the number of shares he was willing to take.

20. Q. And do you know what is the total number of shares thus subscribed for? A. Yes, 1,015 shares have been appropriated, though some of the parties have from various causes been prevented from signing. The amount actually paid in, is £9,080, for which I produce the Bank-book of the Company, as being the best voucher. The other shares that have been taken up will be paid for when this Bill is passed; and the money due on them is, from the character of the parties holding the shares, equally as good as if already received.

21. Q. Have there been any applications for more shares? A. There have been, but the Committee were unwilling to dispose of more than they have already appropriated.

Mr J. B. Watson,—  
continued.  
19th November, 1852.

22. Q. What was their reason for this unwillingness? A. The chief reason was that if the Company had left the share list open much longer the season for operations would have passed by, and the work would have been retarded for another year. Besides this, there were very many persons, who we know would take shares, but who were yet waiting, until the very last moment of closing the list before they took them up. The Committee were, therefore, obliged to at once close the list in order to compel these persons to come forward, and to enable the Company to get at once to work.

23. Q. Yet, since you have now got to work, why has not the share list been again thrown open? A. Because the Committee consider themselves bound by the terms of the notice they issued, closing the share list.

24. Q. Perhaps they expect these shares to sell at a premium? A. It is not, I believe, contemplated to bring them into the market.

25. Q. Then with the amount that you have mentioned as already paid up, there can no doubt as to the *bonâ fide* nature of the Company? A. There cannot possibly be such a doubt, as, independent of the respectable names appended to the deed, the Committee have already contracted for the timber for the work. Part of it is to come from Van Dieman's Land, and part from New Zealand.

26. Q. What is the total proposed Capital of the Company? A. £100,000, in 2,000 shares of £50 each.

27. Q. I presume that the Provisional Committee have a full knowledge of the application for the present Bill? A. They have; and I am personally aware that the Bill has not only been for some time past lying on the table of the Committee, but that the Committee have actually gone through it and proposed certain alterations which have been made.

28. *By the Auditor-General.*—Q. Can you inform me, by whom this Company was originally started; who were the projectors? A. Mr. William Nicholson was the first person that spoke to me on the subject; and asked me, as Secretary of the Chamber of Commerce, whether I thought the Chamber would as a body take the matter up if it were proposed to it. The matter was then mooted in the Chamber, and was at once proceeded with. Mr. Nicholson and Mr. Guthridge were, I think, the originators of the scheme.

29. Q. How long ago was this? A. In the beginning of August last.

30. Q. A public meeting was then called, I believe? A. It was.

31. Q. And what was the next step? A. The appointment of a Provisional Committee, in whose hands the management of the affairs of the Company was left.

32. Q. Were the terms of the Deed of Settlement arranged at that public meeting? A. They were.

33. Q. You say that the Committee have already entered into contracts for timber—may I ask, with whom? A. Mr. Milligan, of Launceston, has contracted for a supply of piles and hardwood, and Mr. Henderson, of Auckland, for the pine.

34. Q. Have you any contract with Mr. Degraives? A. We have not. He talked about tendering for a long time, but he did not do so. I think the other persons tendered too low for him.

35. Q. On referring to the Bill, I find that the 20th and 21st Clauses state when the Company is to commence operations, viz. when a certain amount has been subscribed. Now, am I right in assuming that these Clauses will be given up if the Bill be passed, and that the Company will be prepared to go on at once? A. Yes, certainly. By our Deed, we are now already in a position to act, having the requisite number of shares taken up.

36. Q. The 22nd, 23rd, and following Clauses refer to the power of the Company to enter upon and take lands belonging to private persons. Now, as the proposed line does not touch upon private property, but runs entirely over Government ground, may I ask what these Clauses were introduced for? A. Simply for the purpose of making this Bill uniform with other Railway Bills.

37. Q. The 56th Clause enacts that the Company shall have power to make branch lines—anywhere, in fact—has this Clause been submitted to the Provisional Committee? A. It has, along with the rest.

38. Q. And has it been submitted to the subscribers? A. No portion of the Bill has been submitted to a public meeting.

39. Q. Would you have any objection to withdraw this clause? A. None whatever; in so short a line as the one proposed, such a power will be quite unnecessary.

40. Q. I find, too, that by the 66th Clause, the Company are left to impose what tolls they think proper—have you ever heard of any Railway Bill that has such a provision as this? A. The clause is taken from the Sydney Railway Bill, and the reason for its insertion is, that the Legislature is altogether incapable of fixing the amount of toll to be demanded; since we have here no precedent to guide us, and no data upon which to base calculation. In England it is different, and the rate of tolls can be calculated to the greatest nicety.

41. Q. Is there a similar clause to this in the Sydney Railway Bill? A. Yes; in that Bill the tolls are not fixed; but they are, of course, subject to the revision of the Legislature, in case of their being fixed at an excessive rate.

42. Q. I see likewise that the Committee of the Company are not bound to give any account of their receipts and expenditure, until after the expiration of seven years; is it proposed to give the public any information respecting the proceedings of the Company before the end of these seven years? A. It is not intended by the Bill as at present drawn that such information should be given; but my own opinion is, that the balance-sheet of the Company ought to be published annually.

43. Q. The maximum rate of profit is fixed at 30 per cent., allow me to enquire whether you look upon this as a fair rate of interest on money so invested? A. Yes; I consider it to be a very fair maximum to be allowed, according as things go now; and I do not think that a public Company will ever be got up in the colony, at all events at the present time, unless you give the shareholders as good a rate of interest for their money as they can get by any other investment; and 30 or even 50 per cent. profit is by no means an unusual thing just now. But there is not much danger of the profits in this case being made excessive, because the Company is principally composed of merchants who will have to pay themselves the tolls that may be fixed; and this is the best guarantee you can have against their being too high, because the amounts will have to come out of their own pockets.

44. Q. The Government are empowered to purchase the line at the end of twenty-one years, at a price equal to twenty-five years purchase? A. Yes.

45. Q. And the Company is to be allowed to get 30 per cent. interest on their capital, if they can get it? A. Exactly.

46. Q. Does it appear to you right, that the Company having the privilege of levying tolls to raise so large a revenue, should yet demand that the only conditions on which the works should be transferred to the Government, should be by a twenty-five years purchase of this exorbitant income of 30 per cent., or at a premium of 500 per cent. on the originally subscribed capital? A. If the profits, by a fair rate of tolls, should range so high as 30 per cent., I do not see that it is at all unfair that the Government should be called on to pay in proportion to the rental of the line. The Government are not compelled to buy the line, and they need only do so if they find the purchase to be a good one. Of course, the larger the profit the line yields, the larger will the purchase-money necessarily be.

47. Q. You also empower the Government to erect an electric telegraph on the line, and you then require them to pay you for using it? A. This is only the usual provision.

48. Q. But the Company itself makes use of the telegraph? A. Yes, but only after the Government. Government messages will always have precedence.

49. Q. It is also provided, that any other Company, running trains over your line, shall pay the full amount of toll; do you find any such provision as this in any of the English Railway Bills? A. This clause we shall be prepared to give up, as its provisions are quite useless on so short a line, into which it is not at all likely that we shall ever have any branch lines running.

50. Q. The 85th clause enables the Company to raise money on mortgage of the stock and plant of the line, to the extent of one-half the amount of the whole capital stock of the Company; are you aware that in England the limit is one-third of the capital of the Company? A. Yes; but this was made one-half in this case on account of the loan that is expected from the Government.

51. Q. Then it is not intended to raise any money on mortgage in addition to the loan from the Government? A. Not at all. The Company will be allowed to borrow money only to the extent of one-half the capital, and the loan from Government will be exactly that half.

52. Q. Would you have any objection to introduce a clause into the Bill to compel the Company to carry all passengers who may appear at the termini to demand a passage at the appointed hours of starting? A. I do not think there will be any objection, but I must be allowed to think the matter over before I give a definite reply.

53. Q. Also a clause making the Company responsible for all goods intrusted to it for carriage? A. I think that it would be so by common law, as it must be looked upon as a common carrier, who is liable by law at present.

54. Q. Will you explain to the Committee, why, in your opinion, this particular line of communication with the Bay, is more convenient than any other that has been proposed? A. Because it is so much shorter than any other that can possibly be suggested, and consequently much less time will be consumed in the transit. It is the only direct line that can be made to the Bay, any other one must be circuitous; besides this, there are no curves, and no private land to purchase.

55. Q. What time will it take to go from one end of the line to the other? A. About ten minutes.

56. Q. And supposing a railway to be made, as is proposed, to Williams Town, what time will it take to traverse it? A. Perhaps, twice as long.

57. Q. Do you think the mere saving of ten minutes is such a very great object as to cause this line to have the preference? A. I do. This ten minutes saved, small as it may be, will make a considerable difference in the course of a day.

58. Q. Then supposing your scheme to be carried out, Sandridge will become the Piræus, or port town of Melbourne, and will be a place of some importance? A. Yes.

59. Q. Do you know what the nature of the soil there is? A. I can hardly say, but I believe it is sandy.

60. Q. Are you not aware that it is nothing but a succession of sand hills? A. Yes; I believe it is.

61. Q. Williams Town, on the contrary, is founded on a bed of stone? A. Yes, but I see no particular advantage in having a town built upon a rock; neither is there any peculiar danger in having a city built on sand hills.

62. Q. From what quarter do the fiercest winds generally blow in the bay? A. From the south and south-west; and Sandridge is sheltered from the south-west winds and partly from the south.

63. Q. But it is open to the south-east gales that sometimes prevail? A. It is.

Mr. J. B. Watson,—  
continued.  
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64. Q. Have you ever seen the sea washing over the pier or jetty at Liardet's, when it has been blowing from the south and south-east, whilst at the jetty at Williams Town the water has been quite calm? A. Yes, but this is only for a very short period of the year. Even now several vessels are discharging at Liardet's pier, and their cargoes are brought on to Melbourne by carts. The Harbour Master, Captain Fergusson, who was formerly adverse to the formation of any pier or wharf, at the point selected by this Company, has latterly been led to change his opinion in this respect, and has admitted that the place chosen is the proper one.

65. Q. Would there not, however, be some danger to vessels moored to the pier, in case of it coming on to blow from the south or south-east? A. I think not, if they were well secured.

66. Q. There is a proposal, I believe, to run a railway to Geelong? A. There is.

67. Q. Running into one to Mount Alexander? A. I believe so.

68. Q. Supposing this plan of a railway to Mount Alexander, and a branch to Geelong, and another to Williams Town, were to be decided to be advantageous, would not the construction of your line be a superfluous expenditure of capital? A. I think not; because there will be abundance of employment for both lines, and our line will be in action long before the other can be commenced, and I expect will pay for itself before the trains begin running on the other. I see no way of accomplishing the communication between the City and the Bay, at once, easier than this. I for a long time advocated the construction of a canal and docks, but there were so many obstacles in the way, and it would require so long a time to complete the work, that I turned to a railroad as the next best means of communication, and to this line in particular as being the shortest and most direct.

69. *By Mr. Campbell.*—Q. With regard to the convenience of landing goods, might not this line be made a very great convenience to the Mount Alexander railway, since goods could be taken from the vessels and forwarded directly into the interior: by thus transferring goods from one to the other, a great saving of time would be effected? A. Yes, we contemplate a junction of the lines of the two Companies under an arrangement to accommodate the two.

70. Q. Would it not be a convenience to connect the two Companies from the beginning? A. I do not say that, because this line can be formed at once, whereas the other must be some time first. It will be easy enough for the Mount Alexander Company to form a junction with us as soon as it is in a position to proceed.

71. *By the Auditor-General.*—Q. That will render it necessary to run a line through the town? A. It will.

72. Q. Are you aware of any lines of railway that pass through towns in the way you describe? A. I cannot remember a specific instance, but I believe that it is done.

73. Q. Do you not know that the House of Commons will not pass Bills for railways through towns on a level with the street? A. I am not aware, but I recollect that at Liverpool the line crosses very public roads on a level. Supposing the junction to be at the foot of Queen-street, the line would have to run round the edge of the City by Batman's Hill, going of course at less speed than ordinary.

74. Q. You would not have one terminus for the two railways, outside the town? A. No, I think not; one of the advantages we propose, is to deliver goods almost at the store doors.

75. *By Mr. Campbell.*—Q. Nor would you have the two schemes embraced by one Company? A. I do not see how it would be possible to do so, since it would require us to wait, although prepared to go on, until the arrangements of the other Company were completed.

76. Q. Would it not greatly facilitate the transfer of goods, if the two lines were undertaken by one company? A. I hardly think so.

77. Q. I mean by preventing exorbitant charges on one line or the other? A. With respect to the tolls, both lines will be under the power of the Legislature, so that neither will be able to set the public at defiance in the matter of charges.

78. Q. Presuming that the two lines were undertaken by one Company, could not the line be commenced at the Beach, and so run on without delay; and would there not be the same facilities that you now have? A. That Company is not prepared to go on, nor will it be for some time, whilst we are so. In two months time we shall be at work, and they cannot be for a long while yet. We have half our number of shares subscribed for, and we are bound by our prospectus to go on.

79. Q. Do you think a loan from the Government to be absolutely essential? A. Only because it will greatly facilitate our operations and enable us to get more speedily to work, whilst the fewer shares we have the less expenditure we shall be caused in management.

80. Q. Do you not think that the public would be more satisfied if, instead of asking for this loan, the remaining shares were thrown open? A. We are not now in a position to do this, because the share list has been closed by public advertisement, and if it were re-opened those who have paid under that stipulation, would have some cause to grumble.

81. *By the Auditor-General.*—Q. Is it proposed that the Government should receive the same proportionate dividend on its loan, as the shareholders do on their shares? A. No. It was understood that the money would be lent without any interest.

82. Q. And do you think it right that the shareholders should get 30 per cent. on the capital, or rather 60 per cent. on what they have subscribed, whilst the Government, which advance half the capital, are to be left without interest? A. There would be a corresponding advantage to the public, who would profit by the expenditure of the capital of the shareholders. If no interest be paid to the Government, the amount of toll would be lighter than if interest had to be provided out of it, and thus the public would be still a gainer.

83. *By Mr. Campbell.*—Q. But surely your getting £50,000 from the Government without interest, must greatly increase the profit on the remaining £50,000? A. Not at all, since

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the amount of profit is limited, and with the Government loan or without it, the Company would still be subject to that limit.

84. Q. But the limit is very high? A. Not at all higher than it should be at this time, and under such circumstances.

85. *By the Auditor-General.*—Q. But although private persons in a mercantile speculation may get as high a profit as 30 or even 100 per cent., is that any reason why the Legislative Council should pass an Act authorising a Company to raise so high a rate of interest? A. That must depend entirely upon what benefit the public is to derive from the work of the company.

86. Q. And you really mean to say that a number of private persons should get from the public or the Government, grants of land for their line, should get a loan of £50,000 to set them going, should get 30 per cent. interest on their subscription, and yet that they should not be bought out by the Government under an amount of purchase money equivalent to 750 per cent. on the original capital? A. The Government are not compelled to make the purchase. All we ask of the Government is, that having raised £50,000 for a great public purpose, they will lend us an equal amount in order to complete it. This is but a very small amount for so grand a purpose, and I doubt very much if the Government would ever be able to do the work for twice the amount that it will cost the Company.

87. Q. And what benefit will the public derive to justify the advance of such a sum as £50,000? A. A very great benefit, in the reduction in the cost of carriage of persons and of merchandize from the Bay.

88. *By Counsel.*—Q. In the Government proposing to advance one half the sum required, was that only on condition that the public did not take up more than half the shares? A. No, but that one half of the £100,000 required should be lent as soon as the other half had been raised by the public.

89. *By Mr. Campbell.*—Q. Do you not think that it would be much better than taking this loan, if the time were extended, and all the shares granted to the public? A. I think not, because it would interfere with the working of the Company.

90. Q. Why so? A. Because we should have to wait until the other £50,000 were subscribed before we could go to work, and we should therefore be unable to send to England for our plant in time for the completion of our works here.

91. *By Counsel.*—Q. At the time the list was closed, were the shareholders consenting parties? A. They were. I know the whole of the principal shareholders personally, and I know that they were in general anxious to close the list in order to push the work forward.

92. *By Mr. Campbell.*—Q. In reckoning the comparative advantages of the two lines from the Bay that have been spoken of, have you taken into account the additional expense that would be caused by a pier at Sandridge? A. Yes.

93. Q. To what amount? A. Mr. Chauncey made that estimate; and I think he said the cost of a pier out to deep water would be about £30,000.

94. *By Mr. Campbell.*—Q. Do you think that the breadth of 100 yards for the roadway is absolutely necessary? A. I think it is. There have been various suggestions since this Company started, for alterations in the original plan; one of these is for the formation of a tramroad for carts, as it is said that many of the settlers would like to have their wool carried down to the pier in their own drays. Under any circumstances it would be advisable to have the full width that may possibly be necessary reserved; as even the 100 yards is much less than is accorded in some instances.

95. Q. Instead of fixing the rate of toll to be demanded for mails brought up by the company, I see that you leave the company to make a bargain with the Government? A. Yes, I believe that such was the usual course of proceeding, until latterly, in England, the rate of toll has been fixed; and in some of the late Bills the Companies have been compelled to carry the mails gratis. But in England they have data to go upon in making their calculations, whereas we have none.

96. Q. The Company getting a grant of land as well as a loan from Government, ought naturally to fix a low rate of toll? A. They ought, and I have no doubt but that they will do so. This, however, must depend upon what the cost of working the line will be, and of this we can form no certain estimate beforehand.

97. Q. You do not think then that the Company will drive a hard bargain with the public? A. I do not in the least anticipate it.

98. Q. Still they will have it in their power to do so? A. They will, but there need be no fear on this account.

99. *By the Auditor-General.*—Q. You will be quite ready to yield to any reasonable proposition for amending the clauses, in the passage of the Bill through Committee? A. We shall be quite so.

John Trenchard, Esq., called in and examined.

100. *By the Auditor-General.*—Q. You are Solicitor to the promoters of the Bill? A. I am.

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101. Q. The 11th clause of the Bill appears to be a very unusual one, can you explain to the committee why it was inserted? A. The object of the clause was to enable the Company to proceed at once to work, without waiting until the whole amount of capital was paid up.

102. Q. Might it not be objected to this clause that it would cause a very large and undue proportion of shares to be allotted to a single individual? A. Such cannot be the case, since the number of shares that any one person can hold, is limited to 40.

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103. Q. What is the reason that the 20th clause has been inserted in the Bill? A. To enable the Company to construct the line on £20,000 of the capital being paid up, in case it should not be before the Act was passed; and this plan was adopted in the Sydney Railway Act: but as that sum has been now subscribed, the clause may be struck out.

104. Q. By the 22nd clause, I see that you do not propose to attach lithographs of your plans to the Bill and Act, but to deposit the original plans at the Surveyor General's Office, and to be bound by them? A. This will also now be altered and this clause may be struck out inasmuch as the plans will now be annexed to the Bill and Act.

105. Q. I will now call your attention to the deviation clauses, whereby the Company is empowered to deviate from the plans filed: now, although on a long line such a provision may be necessary, it can hardly be said to be so on so short a line as the present, which may be almost said to be within the boundaries of the City? A. I do not myself see any advantage in having this provision for so short a line. It was introduced in the same way as many of the other clauses, in accordance with the provisions of the Sydney Railway Bill, which I have taken as a model, thinking that, perhaps, as we are to have other lines of railway, it would be as well if all the Bills were framed on the same model so as to have a uniformity amongst them. So far as I see, however, there will be no difficulty about this clause, if the Committee object to it.

106. Q. Then if the Committee require it you will have no objection to withdraw it? A. Not the least, unless the Engineer of the Company may consider it necessary. It certainly may happen that, by a deviation, a better foundation may be chosen than that marked on the plan.

107. Q. Would the Company object to the insertion of a clause binding them to complete their line within a certain time? A. Not if the time allowed be reasonable.

108. Q. Say two years? A. There would be no objection to that I think.

109. Q. Referring to the 29th clause, I would ask if it is usual for railways to be allowed to cross public roads at a level? A. I am aware that it is not usual.

110. Q. Will there be any objection to striking out the 27th clause? A. I think not, at the time Bill was drawn it was uncertain when the shares would be taken up and the work begun, so that we could not know what property would be sold by the Government, and in the event of such sale, the Company would not, without this clause, possess any power to enter upon and pass over the lands of private parties.

111. Q. There is a very important clause enabling the Company to buy and sell land; but, as the land of the Company will be nearly all public land, the Company should have no power to sell it? A. I think not, and I presume that the Grant of all the public land the Company may require, will be made in such a manner as to prevent its sale by the Company.

112. Q. The 56th clause, if I understand rightly, you are prepared to omit? A. We are.

113. Q. Are you of opinion that the tolls ought not to be fixed by the Bill? A. I am; for there is at present so much uncertainty in the price of almost every thing, that, under the circumstances, it would be all but impossible to fix anything like an equable scale of tolls.

114. Q. Would you consent to the rate of tolls being fixed by the Bill, but subject to be altered, on the application of the Company, by Proclamation of His Excellency the Lieutenant Governor, by the advice of His Executive Council? A. But even this could not act fairly, because the tolls being fixed at a high rate, if prices fell, the Company need not apply to the Governor.

115. Q. Would you consent to leave it to the decision of the Executive? A. Yes, if they would merely content themselves to limiting the rate of interest to be paid, without interfering with the amount collected. I see no possibility of fixing the tolls equitably as between the Company and the public.

116. Q. No doubt it would be impossible on a long line, but on so short a line, the traffic upon which can be so easily arrived at, it appears to me that the tolls could be fixed as easily as you could fix a cab fare in the City? A. I do not conceive it so, since we have no data to guide us.

117. Q. Could you not state a rate of tolls in the Bill, and empower the Governor to alter it from time to time, as occasion might require? A. It would be much better to fix the maximum rate of interest to be received on shares.

118. Q. You propose also to keep the accounts of the Company private for seven years? A. The Bill proposes to do so; but this is, in my opinion, objectionable, since the fullest information should be given to the public. I am persuaded that the more the public know of their proceedings, the better it is for all Companies.

119. Q. Do you think that as high a maximum of profit as 30 per cent. should be allowed to the Company? A. It may appear high, but it is by no means exorbitant as things go.

120. Q. But comparing this with the 25 years purchase required to buy it out, do you not think that the Company is asking for unheard of privileges? A. Some inducements should be given to individuals to embark their money in a speculation of this kind. Here it is very difficult to get men to enter into a public company, as there are so many other means of investing capital. In England the case is very different, and means of investment are eagerly sought after.

121. Q. What is the rate of interest given here for money lent on land? A. The ordinary rate is 8 per cent.

122. Q. And what is the rate in England? A. 4 per cent., and even as low as 2½ per cent.

123. Q. Provision is made for the carriage of the military and police; I presume there would be no objection to extending this clause so as to allow of all Government officers on public business to use the line? A. None whatever.

124. Q. And in the case of other public companies using your line, am I to understand that you will not insist upon demanding the full toll from them? A. This provision is inserted in the ordinary Railway Bills; besides it is all the same expense to the Company, whether what it conveys be the property of another Company or the property of an individual.

125. Q. But surely, if I send my goods by my own dray on your line, you would not charge me the same toll as if I made use of the Company's Carriages? A. I should do so. I cannot say whether such a provision is contained in the Sydney Bill; but I have taken the clause from an English Railway Bill, on which this very clause was adopted by the Committee, after the subject had received the fullest enquiry, and the most serious consideration.

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126. Q. You propose to allow the Company to borrow money to the extent of one-half of its advertised capital, or to the full extent of its capital paid up; now, may I ask if this is to be in addition to the loan which you assume will be made you by the Government? A. No, the provision has been altered to meet the case of the Government Loan.

127. Q. With regard to the Electric Telegraph, you expect the Government to erect it, and then to pay the Company for its use? A. Yes, for the Government have the advantage of the construction of the line. This clause is precisely the same as that contained in the Sydney Act.

128. Q. Still you must be aware that there is a great difference in the privileges to be granted to a line 150 miles in length, over which the traffic must be uncertain, and those granted to a line only two miles long, almost within the precincts of the City, and where the traffic can be counted upon with the greatest certainty? A. I am aware of this, yet, still I see no reason why the Company should not be paid by the Government for the use of their line in laying down the Telegraph as mentioned in the Bill, and as provided for in the Sydney Act.

THURSDAY, NOVEMBER 24TH, 1852.

PRESENT—Mr. Westgarth, Chairman; The Auditor-General, Dr. Thompson, and Mr. Splatt.

Mr. James Butler Watson, called in and further examined.

129. *By Mr. Wrison, Counsel for the promoters of the Bill.*—Q. Are there any portions of your evidence given on the last day that the Honorable Committee sat, upon which you would now wish to offer any explanations? A. There was a question put to me with regard to whether the Company would have any objection to the introduction of a clause to compel it to provide a passage by its Carriages for all persons who might offer themselves. At the time, I hesitated to give a decided answer to the question; and I would now ask the object for which it would be required to insert such a clause. If it is merely to provide that all respectable persons having business to transact should be enabled to claim a passage by the Company's carriages, no doubt the provision would be a very proper one, but it would be against the public interest to let all persons whatever have a right against the Company of claiming a passage, because improper persons might apply for admittance into the carriages, and them it might be deemed advisable to exclude.

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130. *By the Auditor-General.*—Q. The object was merely that the public should not be excluded from the trains; of course the Company would have the right of refusing to convey any doubtful or improper characters? A. In that case, I am sure that the Company will have no objection to the insertion of the proposed clause.

William Snell Chauncy, Esq., C. E., called in and examined.

131. *By Counsel.*—Q. You are Engineer to the Melbourne and Hobson's Bay Railway Company? A. I am.

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132. Q. Have the plans, which are now before the Committee been prepared by you? A. They have.

133. Q. May I ask if you are a regular Engineer by profession? A. I am, and have served Articles of five years to an Engineer in England.

134. Q. Have you had any experience in the formation and construction of Railways prior to your arrival in this Colony? A. I have. During the time I was serving my Articles, I had opportunities of acquiring considerable experience; and since then, for a period of twelve years, the whole of my time has been devoted to my profession. I had numerous opportunities afforded me of acquiring experience on the subject from being employed on various lines of Railway laid out at that time in different parts of England. I may also mention that for a portion of the time, I was employed under Mr. Cubitt, one of the first Engineers of the day.

135. Q. In England? A. Both in England and in Ireland.

136. Q. Have you ever, prior to your present employment, undertaken the survey and laying out of Railways in this or any of the neighbouring Colonies? A. Yes; I came out from England under an engagement with a Company of Gentlemen who proposed to form a Railway in South Australia, where I executed a Railway Survey of ninety miles.

137. Q. You have since been regularly appointed Engineer to the Melbourne and Hobson's Bay Railway Company? A. Yes; I have been appointed by the Provisional Committee.

138. Q. Can you explain to the Honorable Committee, if there are any, and what, difficulties to the formation of the present line? A. I do not consider that there are any that may be called engineering difficulties in the way of the line; or any that may not be easily got over and surmounted by ordinary skill.

139. Q. There are then no extraordinary difficulties in the way of the line? A. There is nothing that would be termed a difficulty in England.

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140. Q. What is the whole length of the line from the terminus in Melbourne to the terminus at Hobson's Bay? A. From the Passengers' Station in Flinders Street, to the Passengers' Station at the Beach, is a distance of  $2\frac{1}{4}$  miles; and from the former Station to the end of the Pier, a distance of above  $2\frac{1}{2}$  miles.

141. Q. Without including the Pier then, there will be a distance of  $2\frac{1}{4}$  miles? A. There will.

142. Q. As regards the length of the Pier, can you inform us precisely what that is intended to be? A. It is to be 1869 feet, which will be the extreme length, including the transept, which runs across at right angles to and at the end of the Pier, and which will be 660 feet in length.

143. Q. Do you intend to continue the lines of Rail along this transept? A. There will be lines of Rail laid down along it for the trucks to run upon, in order to afford facilities for the loading and unloading of vessels and the carriage of goods, but none of the engines will run on it.

144. Q. You have spoken of the Melbourne Terminus; where is this to be situated? A. Between Swanston and Queen Streets, facing Flinders Street.

145. Q. And of what extent will the Terminus be? A. It will be rather more than a quarter of a mile in extreme length, and will contain an area of about twelve acres; being the plot of ground lying between the parallels of Swanston and Queen Streets, and contained between Flinders Street and the River.

146. Q. Is that area sufficiently large for the purpose? A. Yes, to accommodate the traffic we shall have on the line for some time to come; eventually, however, it is quite possible that we may find ourselves cramped.

147. Q. After leaving the Terminus, what is the next work that you propose to undertake? A. The erection of a timber frame bridge over the Yarra River, in the manner shown on the plan I now produce.

148. Q. How is it proposed to construct this bridge? A. Mainly of New Zealand pine, resting on piles of hardwood, driven into the bed of the River, and supported by trusses as shewn in the plan, in a manner, which, in my opinion, is well calculated to sustain it.

149. Q. Are you sure that a bridge constructed like the one you have planned, will stand the rush of water that comes down the River in time of flood? A. This bridge is planned on the same principle as one that is erected on the Utica and Syracuse line in America. In fact, it is the common principle adopted on many Railway lines, and frequently used for the purpose in England.

150. Q. How do you propose to obviate the influence that the force of the water must exercise during the time of floods? A. I propose, as you will see by a reference to the plan, to offer very little opposition to the current, so that the force of the water will have little or no effect upon the structure.

151. Q. How many rows of uprights have you? A. Six, arranged as you perceive.

152. Q. And these you consider sufficient to support the bridge? A. I do.

153. *By Mr. Splatt.*—Q. What is the length of the longitudinal beam? A. The distance between the rows of uprights on which the structure rests, is 40 feet.

154. Q. And does not this appear to be a very great length to be supported by a beam? A. It is quite a common distance in many of the bridges built in England and America on this principle.

155. Q. Would not the bridge be stronger if the spans were confined to 30 feet? A. I should consider it to be a waste of material to have a span of 30 feet where I could as readily obtain one of 40 feet. It is always considered a waste of material to construct any work stronger than is absolutely necessary for the service it has to perform.

156. *By Counsel.*—Q. I presume that the trusses as shewn in the plan assist materially to support the beam? A. Certainly, without them the beam would not be sufficient; but these trusses being fixed as they are, the actual distance to be supported is only from 12 to 14 feet.

157. Q. From the level of the Rail shown on the plan, do you consider it to be out of all danger of being submerged by floods? A. I believe the line of rails at the level I propose to be above the reach of any flood that has hitherto been known to occur.

158. Q. Have you investigated this subject so as to ascertain the highest point to which any prior flood has reached? A. Yes; I have both personally inspected the banks of the River and the marks left by the floods, and have made enquiries from persons long resident in the Colony, and from these observations and enquiries, I am inclined to think that the level I propose, is high enough to be beyond the reach of floods.

159. Q. Then if the level of the bridge is above the highest flood level, the Rails will be still higher than the level of the bridge? A. They will.

160. Q. And the bottom of the carriages, how far will they be above the Rails? A. About three feet.

161. Q. Then supposing the Bridge and the Rails to be submerged, the water would still not reach the carriages? A. I do not anticipate any such thing as the submerging of the Rails taking place.

162. Q. Is it your intention to raise the level of the terminus above the level of the highest floods? A. The line will be on a level throughout, and the Terminus will be on a level with the highest part of Flinders Street, so that at such a level there is no danger to be apprehended from floods.

163. *By Mr. Splatt.*—Q. But are you aware that the whole of Flinders Street, even in the highest parts where you propose your Terminus has been covered by floods? A. So I have been informed; but our Rails will be above even this, for we contemplate making a roadway which will raise the Rails at least 18 inches above the natural level of the highest parts of the street.

164. *By Counsel.*—Q. Leaving the Yarra and the Bridge, have you any difficulties to

encounter between these and the Bay? A. For the distance of a mile there is a low lying piece of ground, over which we shall have to make an embankment; but the soil necessary for this can be brought in the Company's trucks along the Rails, which will be laid down as the work of embanking proceeds; so that cart hire which would otherwise form the chief item of expense, will be saved.

165. Q. Then the only expense will be the cost of labor attendant upon filling your own trucks? A. That is all; and as they are to be filled with sand, it will be a very easy matter. Besides, sand forms the very best embankments, as it is the only description of soil that will never sink or subside after a time.

166. Q. How long will this embankment require to be? A. It will require to be carried for about one mile from the River bank, or about half the distance of the line.

167. Q. After passing over this mile, have you then a solid foundation for the Rails? A. Yes, the soil is mostly sandy, but here and there some filling up will be required, and in one place there will have to be a short cutting to the depth of about four feet; in other places cuttings of from one to three feet deep will be required.

168. Q. What works do you propose to make at the Bay Terminus? A. A depot for the carriages, and engine stables, as they are called, also workshops and store houses, with sheds in which to place goods which may not be immediately wanted. It is possible also, that we may find it necessary to erect residences for such men employed on the line, as may have to be on the spot on duty, either to look after the property left there, or otherwise.

169. Q. How much does the piece of ground contain that you have marked out for a Terminus? A. The piece marked on the plan has an area of twenty acres.

170. Q. And is that Crown Land? A. Yes, and at present unsurveyed, at least by the Government.

171. Q. You have stated what the length of the proposed Pier and Transept is to be, can you now describe how you intend to construct them? A. It will be erected on piles, which in some portions of the Pier will be at a distance of eleven feet apart, but the bearings will be only nine feet three inches apart. At that portion which is nearer to the Beach the piles will only be nine feet apart, and the bearings will consequently be about seven feet six inches. For the distance of 750 feet from the shore the water is much shallower than at the other end of the Pier. Vessels will not be able to lay there and discharge, and the piles required will not be so stout, though of sufficient strength to bear the weight of the trucks passing backwards and forwards with sufficient room left for persons to walk up and down.

172. Q. For the first 750 feet what breadth do you propose to have the Pier? A. About 34 feet, which will include the space required for the lines of rail for the passage of the trucks.

173. Q. From that to the termination of the second 750 feet what is the breadth? A. It is increased to 48 feet; because within that space small vessels will be able to lie; and in order to provide accommodation for loading and unloading them the Pier is increased in width. It is also proposed to have a raised platform, on a level with the tops of the trucks, on which goods discharged from the vessels can be placed and thus handed without difficulty into the trucks which are to carry them away.

174. Q. You have said that for the first 750 feet, the water is shallow; now what depth of water is there along the remaining portion of the Pier? A. With the exception of two sand-bars, the water from this point gradually deepens, until at the end of the Pier we have 22 feet.

175. Q. Is this at high water? A. No, at low water.

176. Q. What depth have you at the end of the first 750 feet? A. About 12 or 14 feet.

177. Q. And is there that full depth from that point to the end of the Pier? A. Yes, and gradually increasing to 22 feet.

178. Q. Do you know anything of the nature and quality of the soil into which the uprights for your Pier will have to be driven? A. Near the beach the bottom is sandy, but farther out it is much firmer. Beneath the sand there is a stiff blue clay, the sand covering it for some distance out from the shore. This clay is the finest and best ground into which piles can be driven.

179. Q. Are you quite sure that the plan you propose for the construction of the Pier is of such a nature as to render the structure sufficiently strong to resist the violent action of the wind and water? A. I have not the least doubt of it in my own mind. There is a Pier on precisely the same principle of construction at San Francisco, in California, which has answered remarkably well, although it is much longer than the one I propose, and is run out into far deeper water.

180. Q. Have you estimated the number of vessels that might at one time lay alongside this Pier to load and unload? A. Sixteen vessels of the larger size might lay at the deep end of the Pier, which is 69 feet in width; and 24 might lay at the centre part of the Pier, that is from the commencement of the second 750 feet to the fifteenth hundred foot.

181. Q. Then how many small vessels might be accommodated besides? A. The space I have mentioned, is all that we reckon upon for accommodation; that is, about 40 vessels of all sizes might load and unload at one time at the Pier.

182. Q. Are there any peculiar advantages that you anticipate deriving from the formation of this transept? A. Yes; as the Pier is exposed to the southerly winds, I expect that the transept will serve materially to protect it, so that vessels lying at the Pier will be in smooth water; the transept acting as a breakwater.

183. Q. To what point of the compass does the line of the Pier point? A. A little to the west of south.

184. Q. And the transept is at right angles to the Pier? A. It is.

185. Q. What is the length of the transept? A. One hundred yards on either side.

186. Q. So that this length would form a complete shelter from southerly winds? A. Yes, all vessels inside the transept would be perfectly sheltered from southerly winds, and there would be no others that would affect the Pier.

187. Q. Have you calculated carefully the expense that would have to be incurred by the Company, for all the works you have mentioned,—including the construction of a bridge across the River, fittings-up and cuttings, the stations at either end, and the formation of the Pier? A. I have prepared an estimate of the expense, which I believe to be as accurate as it is possible to be at such a time as the present; but of course there is a difficulty with the present variation of prices, in the way of approximating the expense as near as I could wish; but as a tender has been taken for the whole of the timber we shall require, at a cost of £20,000 some of the difficulty has been removed, and from my having been made acquainted with certain particulars of which I was previously ignorant, I am now in a position to state as closely as possible what will be the expense of the works.

188. Q. And what, according to your estimate, will be the probable amount? A. My estimate, without including the cost of management, shows an expenditure of £98,000. This amount consists of the following items:—Fencing £4600, Earth work £4000, Rails £4500, Sleepers for ditto £3750, Plate laying £1200, Pier £42,000, Sheds for ditto £3000, Passenger station at the Beach £1500, Other erections on the Beach £2500, Import warehouse Melbourne £6000, Export warehouse Melbourne £3000, Passenger station Melbourne £2000, Raising of level of Terminus, Flinders Street £1000, Platforms for goods and passengers £1000, Bridge for occupation road £2000, Culverts £500, Bridge over the Yarra Yarra £4000, Engines, carriages and machinery £12,000. Thus £98,000 is what will be required for putting the line in perfect working order.

189. Q. Has this estimate been framed upon the present state of the labor market, or upon an hypothesis that the rate of labor will fall? A. It has been framed entirely upon present rates and prices of everything except timber, because this part of our expenditure will not be made here, as we have found a much better market elsewhere in which to make our purchases.

190. Q. But the labor? A. That has been calculated at present high rates.

191. Q. Then if the labor market should become better supplied and rates should fall your amounts would be over estimated? A. Such a case would make a difference in our favor and would enable us either to make a saving in our expenditure or to carry out our works in a much superior manner.

192. Q. Do you propose to lay down a single or double line of rails? A. A double line.

193. Q. And what gauge? A. That which has been approved of by His Excellency the Governor-General, as the one to be adopted as the uniform gauge for the whole of the Australian Colonies—5 feet 3 inches.

194. Q. That is neither what is known as the broad nor the narrow gauge in England? A. No. The English narrow gauge is 4 feet 8½ inches; and the broad is 7 feet. This gauge of 5 feet 3 inches may be looked upon as a medium between the two, though it approaches nearer to the narrow than the broad gauge.

195. Q. Has this particular gauge any advantage over either the broad or the narrow gauge? A. I believe it to be preferable to the narrow gauge, and the English broad gauge would be too wide here, especially as we have no occasion for such large and heavy engines as they have in England.

196. Q. Do you happen to know whether this is the same gauge as that employed on the Sydney Railway? A. I believe so.

197. Q. Now with regard to the Railway itself, are there any gradients on the line? A. It is proposed that the line should be level throughout, so that properly speaking, there will be none. Probably however, in working out our plans we may find it necessary to introduce some slight variations on what we now propose. Still in any case, a gradient would be so slight as to be scarcely perceptible, the level nature of the ground being a circumstance that will afford the greatest facility to the works of the Company; because on a level the engine can always take as much as it can draw, whilst on a gradient it can only take so much as it can raise up the incline, therefore, where there are gradients much of the power of the engine must be lost.

198. Q. On what principle do you intend to lay the permanent line? A. The plan that we have adopted is that which has been approved of by Mr. Brunel, and on which a large portion of the Rails of the Great Western Railway has been laid down.

199. Q. The plan you propose is the one then that is in use on the Great Western line? A. I know it to be in use on that line; but I do not say however, that this system has been employed throughout the whole of the line. To my knowledge it is used on portions of the line; that portion, for instance, between Maidenhead and London has been laid down on this principle, as also the South Devon line.

200. Q. Are there any curves on your line? There are two on the line as now proposed; one of these will have a radius of a mile, and the other a radius of ten chains. The latter is rather a small radius for engines to travel along the curve at any great speed, but as it occurs near the place where the train will have to stop, the relaxed speed over this curve will cause no practical inconvenience.

201. Q. Where does this curve occur? A. Very near the Melbourne Terminus.

202. Q. And there it will cause no great inconvenience? A. None whatever. There are curves on some of the British Railways that I am acquainted with, of only eight, and even seven chains radius, being much smaller than the one I propose.

203. Q. What motive power do you intend to apply to work the line? A. We intend to work it by locomotive steam engines of a somewhat peculiar construction, and called "outside

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cylinder tank engines." The difference of these from other engines is that the tender is not attached to the engine, but it is fixed upon the same frame and wheels with it. This has been found to be the more convenient mode, as it is not required to turn the engine, that is, it can be worked backwards and forwards as required, without turning it as is the case with engines of the ordinary construction. In addition to this, they have been found more economical than the other engines, and for this reason they are coming more generally into use on branch lines in England, as they consume less fuel, and are much cheaper in the first cost of purchase.

204. Q. Taking the number of working hours in the day at twelve, from six in the morning till six in the evening on an average of the year round, how many trains can you despatch from one Terminus to the other? A. Without any reference to the number of working hours in the day, I should say that it is proposed to despatch a passenger train every half-hour, and a goods train every quarter of an hour from each station; and this will require us to keep three engines constantly at work.

205. Q. Have you formed any estimate of the annual expense of working the line, with such a traffic as you have just supposed? A. There are some portions of the expense of working the line that do not properly come under my department; but still, as I have been accustomed to almost every branch of this service, I am enabled to form a pretty good estimate of the total cost, which I have calculated will be somewhat less than £30,000 per annum, supposing the line to be worked as I have said, and to have as much traffic as it can carry.

206. Q. This annual sum will take into account the greatest possible amount of wear and tear on the line? A. It does. £30,000 will be the outside annual cost, including management and every expense.

207. Q. And in the event of there not being so much traffic as you contemplate on the line, the expenses will be so much diminished? A. Of course, if there is not so much traffic as I suppose on the line, the expenses of working cannot be so great; but if the line has as much traffic as it can carry, what I have stated will be about the annual expense.

208. Q. Calculating wages, I presume, at the present rate? A. Yes, and not merely at present average rates, but at the highest wages, so as to secure the services of the very best men we can obtain; and allowing amply for the employment of numerous porters and carriers at either Terminus.

209. Q. Can you state any thing with regard to the prospective advantages that this line must have over any other, more particularly over any line between Melbourne and Williams Town? A. It appears to me that the best way of judging of the relative merits of these two lines will be to compare the cost of constructing and the expense of working the one, with the cost and expense of the other. I have not made any survey of the proposed line to Williams Town, and I therefore cannot say what the expense of its construction will be; but looking at the length of the line, which is four times that of ours, and supposing them to go to the same expense that we do for stations, and that they have only the same proportionate amount of cutting and earthwork, I calculate that the expense of constructing this line will be not less than £120,000; but the cost will actually be much greater than this, since they will have more cuttings and embankments to make on their line than we have on ours.

210. Q. Need there be a Pier at the termination of the Williams Town line? A. I have not taken into the calculation the cost of erecting a Pier, but one would be necessary to render the line fully available and efficient. In considering the nature of the soil also, there is every probability that the cost would be much more than I have roughly set it down at, for it is my impression that they will have to go to the expense of ballasting a greater portion of the line, and this will involve a considerable outlay. Consequently, I do not think the line, not including a Pier, can be constructed under £150,000, if a double line of Rails be laid down. There is another thing also that I would refer to, which is the difference that there must necessarily be between the amount of fares on this line and on ours; and to judge of this, we must look at the comparative cost of working the two lines. Supposing the expense of direction and other fixed expenses to be the same, and a similar amount of traffic on the two lines, then the one being four times the length of the other, could not be worked at a less expense than £60,000, or rather more than double what we should require, therefore the fares would have to be more than double those of our line in order to pay the same dividend that we should do. Besides this, our train would occupy but ten minutes in the transit between Melbourne and the Beach, whereas theirs would occupy twenty-five minutes at the least.

211. Q. Do you happen to know whether the land over which the Williams Town line will have to pass is all Government Land, or whether any portion of it has been purchased? A. I believe that some portion of the line will have to pass over private property, but I cannot speak of this from my own knowledge.

212. Q. Does any portion of your line pass through private property? A. None whatever; the whole of the land is Government property, and we do not in the least touch upon any sold land.

213. Q. The area of the Beach Terminus is twenty acres, is that all Government land? A. It is.

214. Q. Have you in your plans made all due provision for the comfort and convenience of passengers? A. I have; in my estimate a sufficient sum has been included for the erection of comfortable and commodious stations for passengers that may be waiting.

215. *By Dr. Thomson.*—Q. Are you aware that there are three other Railway projects on foot, and that the three Committees have united themselves into one Railway Company, and in that capacity have applied to His Excellency the Lieutenant Governor for the Grant of a piece of land as a General Railway Terminus for the whole Colony? A. I have heard something of it.

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216. Q. Have you then thought upon what will be the best means of connecting your line with the Grand Junction Terminus for all the lines in the Colony? A. I am not aware whether the spot has yet been fixed upon; if the site be selected, it appears to me that it will be a very easy thing to connect our line with the General Terminus.

217. Q. You must be aware that nearly the whole of the Wool of the Colony will come down to Melbourne from the Country by these proposed lines, and that consequently it is most imperative that some mode should be thought of, of connecting them with the Beach line? A. I can see no difficulty that could arise in doing so. Supposing the Junction Terminus to be at the end of Flinders Street, a line of Rails could be laid down along the side of that street, between our Terminus and the Grand Junction. Such a mode of communication is quite common in England, very many of the Railways being continued through a town on a level with the street; but of course the speed is limited, and the train is drawn by horses, and no evil consequences have ever occurred. There is nothing that I can see to prevent this being done here.

218. Q. Would it not be advisable that you should have some consultation on the subject, with the Engineers of the other Company? A. I should be very happy to unite with them in anything that would be likely to tend to advantage, and would afford them every facility for their operations.

219. Q. You have referred to the Williams Town line; have you thought of any way by which the Williams Town and the Beach lines might be connected? A. If it were thought desirable to connect the two, no doubt it might be done; but I am not prepared with any estimate as to the expense. In my opinion, the readiest way of forming this communication between Williams Town and the Beach, would be to have our Pier extended, and to have a Pier run out from Williams Town to join it, and thus to run the line of Rails across the Bay. This would be a much cheaper mode than going an unnecessary round of eight or ten miles.

220. Q. Are you prepared to say what would be the expense of such a Pier, with a balance bridge in the centre to allow of ships to pass? A. From a rough calculation I have made, I should say that a communication may be formed from Williams Town to the proposed Pier at Hobson's Bay, on piles, for a single line, at an expense of £60,000.

221. *By Mr. Splatt.*—Q. Would not your present selection of a Terminus be the cause of very great expense in order to connect it with the Junction at Batman's Hill, supposing that to be the site chosen? A. No, the expense would be inconsiderable.

222. Q. Would you not have to purchase properties? A. No; there would be no necessity to go through the houses, or over private property, whilst we could pass along the street, or rather along the side of it, where I have remarked that there is still some vacant ground.

223. Q. Would not the variation in the inclination of the two pieces of ground be against you? A. That I am not prepared to say, for as I do not know the level of the proposed station, I cannot be expected to give an opinion; but I should conceive that the gradient would not be so great but that trains drawn by horses at a low speed would be able to surmount it.

224. Q. Would it not be desirable to have the main Terminus as high as possible? A. I do not think this of much consequence, as the incline would be very long, and if the train has to ascend a gradient, though it may be slower in going out, it will have an incline to run down on coming in, and will therefore be quicker; and in my opinion it is an advantage to have the trains quick in coming in rather than in going out, since the most part of the traffic will be from the interior.

225. Q. You have not taken the levels at the proposed spot at Batman's Hill? A. I have not, for I never thought that it would be considered necessary for us to bring our line in to this Terminus. I was of opinion that goods from on board ship usually went to the warehouses of the Merchants, where they were purchased, and thence sent off to order into the interior, and that there was nothing sent on to the Country direct from the vessels. In the same way with the wool, I was led to believe that it never went direct from the Settlers' drays into the ships, but that it was first stored and thence transmitted to the vessels. For these reasons, I was not led to take any pains in making myself acquainted with the position and level of the proposed General Terminus.

226. Q. In both these suppositions you are wrong, more particularly as regards the wool, but putting aside this question, let me ask you whether, as a general proposition, in a new country in which no Railroads exist, you do not think it would be advisable to have one General Terminus for all the Railroads of the Country, so as to prevent the unnecessary shifting about of goods and passengers? A. As a general proposition, and without reference to this particular Railway, I think it would; but as to this line, I looked upon it merely and solely as a means of connection between the City and Bay.

227. Q. May I ask whether, as you have now made your level to the highest part of Flinders Street, it would not add materially to the expense of constructing the line if the general level were raised two feet? A. It would of course add to the expense, but not to such an extent as to render the work impossible to be undertaken; and I may say that I have already had under my consideration the expediency of raising the level of the line, in consequence of what I have heard elsewhere with reference to the extent of the floods.

228. Q. Raising the level would not then add materially to the expense? A. The first foot that the line is raised above the present proposed level, will cause an expenditure of between £600 and £700, increasing with each extra foot.

229. Q. Would you still propose to keep the line on a level all through? A. I would wish to do so if it were possible, but still this is not absolutely necessary. A fall or rise of two feet on the whole length of the line will be scarcely perceptible.

230. Q. In your estimate of the additional expense, have you taken into account the additional sum necessary for raising the 1500 feet of Pier and Jetty, and the greater length of piles

that will be required? A. I have not; and that would of course make some difference, but as I have said an incline of a foot or two on the whole length would be scarcely appreciable, and the line might still be considered a level one for all practical purposes.

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231. *By Counsel.*—Q. Let me ask you what is your opinion as to the general utility of this line of Railway? A. I firmly believe that it is the readiest and cheapest mode of communication that can be found between Melbourne and the Bay.

Mr. Thomas Oldham, called in and examined.

232. *By Counsel.*—Q. Have you been engaged in the capacity of Contractor for the construction of Railways? A. I have.

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233. Q. And as Contractor for other kinds of work? A. Yes; for the construction of piers, wharves, bridges, docks, &c.

234. Q. You have been engaged in all of these? A. Yes, and in the formation of harbours likewise.

235. Q. How long have you been practically acquainted with these kinds of work? A. For the last sixteen years, since Railways came into general use in England.

236. Q. Have you inspected the plans for the Railway between Melbourne and Hobson's Bay? A. I have.

237. Q. And what is your opinion of its practicability? A. There will be no difficulty in the way of carrying out the line to the Bay, and in constructing the Pier nearly as is described. I do not quite agree with all the details of the plan for the Pier, but my objections are merely to minor points.

238. Q. That such a Pier, constructed on the principle proposed, will be safe you consider, I believe, to be beyond doubt? A. I do.

239. Q. Have you taken into consideration the safety of the vessels lying at the Pier? A. I have.

240. Q. And what is your opinion? A. That they will lay perfectly safe.

241. Q. In all weathers? A. Yes; I have seen Piers run out 400 or 500 yards further, in worse water than this.

242. Q. And can you say whether such Piers have been durable? A. They have; and I would instance Granton Pier, which runs out into the Frith of Forth for a distance of 400 yards. They have there heavier weather and worse seas than we are ever likely to have here. Steamers lay along side this Pier at all times,—the London Steamers, and the whole of the Steamers from the North of Scotland, and the whole of the traffic of the Edinburgh, and Perth, and the Dundee lines pass along this Pier, being brought from another Pier on the other side. This has been the case for the last two years, the traffic consisting during that time, of fourteen passenger trains, and five goods trains a day, each way. The amount of goods carried over in trucks on board the steamers plying from Pier to Pier was from 600 to 700 tons per diem. In this instance, the trains drop the trucks, loaded as they are, down on board the Steamers, which carry them over to the opposite Pier, and they are then run off on to the Pier by means of a moveable platform, which is hove up and down according to the state of the tide, by means of an engine. Though I have frequently seen the waters of the Frith, so that Steamers of one hundred horse-power could not venture to cross, yet I know of no case in which they could not lay in perfect safety at the Pier.

243. Q. When was the Granton Pier erected? A. In 1843, I think.

244. Q. And ever since then it has withstood the shocks of the weather and the wear of the traffic? A. Yes; but there has been an extension of the Pier made on wooden piles, and to this the whole of the traffic of the Edinburgh, Perth, and Dundee Railway has been brought.

245. Q. And it is along this extension on piles that the Railway runs? A. It is.

246. Q. Is the instance you have named the principle one? A. It is not the only one, for I would also mention the wooden Pier at New Haven, or Trinity, within half a mile of the Granton Pier. The boats that run to that are small Steamers from Kirkaldy and other small harbours in the Frith of Forth; but I have seen vessels of from 200 to 300 tons discharging there. I would say of this Pier that it is nothing like so strong as that which is proposed to be erected at Hobson's Bay.

247. Q. Yet its position would, I presume, require it to be pretty strong? A. Yes. It is run out into a mere open roadstead exposed to the whole sweep of the German Ocean. There is a Pier also at Leith, which is run out for a distance of two miles, only supported on piles.

248. Q. Is the Leith Pier constructed of wood? A. Yes, entirely.

249. Q. Comparing the strength of the proposed Pier in Hobson's Bay, with that of the Leith Pier, and taking into account the force of the seas that they would each have to encounter, do you think that the former would be likely to be as durable as the latter has proved? A. I do, and I think also that the Pier here will be less exposed than that at Leith. The Leith Pier also has only four rows of piles, whereas this has from four to seven rows.

250. Q. How long has the Leith Pier been erected? A. Part of it was erected eight years ago, but a portion has been added recently.

251. Q. Has any part of it been ever undermined or shaken by the water? A. It never has.

252. Q. Do vessels lay alongside of it? A. Yes; they moor alongside previous to entering the Docks, and generally lay there for a day or two until a berth is provided for them.

253. Q. Have you inspected the plan of the proposed Bridge over the Yarra? A. I have.

254. Q. Are you able, from seeing the plan, to state whether that bridge will answer the purpose for which it is intended? A. I have only one objection to it, and that is, that I think it

would be the better for another truss beam; and I would also, if it were my plan, make it a little higher above the river level. As to the beam, I do not think that for the slight expense that another truss beam would cause, that it is worth while running the risk of weakening the bridge.

255. Q. In other respects however, you consider it perfectly adapted for the purpose intended? A. Yes, I think so, with some improvements in details that I could suggest.

256. Q. With regard to the Deviation Clause, what necessity is there for this power of deviating from the original line, being given to the Company? A. In all cases the plans lodged with the Bill are got up in a hurry in order to be in time, and the consequence is that all the detail of execution is not then thought of; it is always considered necessary to obtain a power to deviate from the plan lodged. The power given is generally to vary for a distance of 100 yards on either side the line in towns and 500 yards in the country.

257. Q. You think then that such a power is essentially necessary? A. I do, with a provision to the clause making it compulsory on the Company to purchase all private lands through which the line may pass

258. Q. Why is it necessary? A. Because in the first instance the plans are not laid out so minutely as they will afterwards have to be on the ground itself; and because, when the line comes to be marked out on the land, it would be found absolutely necessary to alter some portions of it; for instance, it is my opinion that in the present line, the mode of crossing the Yarra will have to be altered, as you cannot work your goods traffic into your proposed station by locomotive power, and this cannot be done unless room be provided for it by a Deviation Clause. Generally, also, a power is obtained to raise or lower the level of the line, the allowance being an alteration of five feet in towns and eight feet in the country.

259. Q. I do not know if you are aware of it, but there are some anticipations of a plot of ground being granted by the Government, for a General Railway Terminus, in the vicinity of Batman's Hill; can you give us any information as to the mode of connecting, in such a case, the Terminus of the present line, with the General Terminus at Batman's Hill? A. There are many cases that I am aware of, of Railways being connected with each other by crossing the main streets of towns, on a level.

260. Q. Can you mention any cases? A. Yes. There is an instance at Dundee; the Arbroath is connected with the Dundee and Perth Railway by means of a line running through the Town between the Docks and Warehouses, to the extent of about 500 yards.

261. Q. Do the Rails run on the same level as the street? A. They do.

262. Q. And how are the carriages moved, at what speed? A. They are limited to a speed of five miles an hour; and the line is not even protected by fencing, there being merely policemen stationed there to keep the line clear as the train passes.

263. Q. Are there any other cases that you can cite? A. The London and North Western Railway crosses one of the main streets of Birmingham, with all their goods traffic.

264. Q. Is this fenced in? A. Yes, there are a pair gates which are shut across the street when the train arrives. All the passenger traffic of the Grand Junction Railway Station, and of the Midland Counties Railway Station, both in and out of Birmingham, goes over this Railway at a level with the street. They have a pair of gates, as I have said, which are shut, as the train approaches, by a policeman.

265. Q. Can you call to mind any other instances of trains passing through a town at a level with the streets? A. The Midland Counties Railway goes through Nottingham to Newhaven, and through Lincoln, Peterborough, and Boston, all at a level with the streets. The Great Northern Railway crosses the turnpike road thirteen times between London and York, and each time at a level with the road. The Great Northern Railway also crosses the High Street of Lincoln and Boston, with about sixty trains daily.

266. Q. And from all these instances which you have seen, you think that there will be no difficulty in connecting the Terminus of this line with the general one at Batman's Hill, by a line of Rails laid down on a level with Flinders Street? A. None. There will of course be some trifling inconvenience, as the traffic will not be altogether so unrestricted as if there were no obstructions; but still this will be nothing very serious.

267. Q. Do you know Williams Town at all? A. I have seen it.

268. Q. You know its position with respect to Hobson's Bay, and the Transept part of the proposed Pier? A. I do.

269. Q. What is your opinion with regard to the facilities that would be offered of connecting Williams Town with the Beach by means of this Pier? A. It is not at all impossible to do so, by widening the Pier, and carrying it out right across the Bay, if the depth of water in the Harbor does not interfere to prevent the piles from being driven. But in that case you would have to put up a Swing Bridge, of the description of the one that crosses the River Ouze at Selby, in order to allow the Shipping to enter the mouth of the River.

270. Q. Provided the depth of water be not too great to drive the piles, would the expense of such a work be very heavy? A. That I cannot say without some data to guide me.

271. Q. But with an extension of the Pier at Williams Town, persons could cross over from one Pier to the other, in boats? A. No doubt.

272. Q. Have you considered what advantage this line would have over one that it is proposed to run to Williams Town? A. I should prefer this line to one running to Williams Town, for several reasons.

273. Q. What are those reasons? A. First, because of the greater length of line in the latter case, which would necessarily involve a heavier charge on parties sending goods by it. It is three times the length of the other line, and therefore assuming that the Beach Railway Company charge 5s. per ton for goods, the Williams Town Company would have to charge 15s. per ton.

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274. Q. So that, in your opinion, it will be more advantageous for the community that the shorter line should be adopted? A. Certainly; but this is not my only reason, for I look at the relative positions of the two lines, and I find that the North Beach is much the better place for the construction of Docks; I consider that the Beach at this point offers greater facilities for the formation of Docks than any place I have seen.

275. Q. The cost of constructing Docks here will consequently be much less than at Williams Town? A. The great difficulty in such a work at Williams Town will be the rocky nature of the soil, by which the excavation will be both difficult and expensive; besides which, the rock is of an open porous character, and the water is sure to work into it. On the opposite side, you have a good strong clay to work into.

276. Q. And you think that Hobson's Bay, where this line terminates, affords great facilities for the formation of Docks? A. There could not be a better position; for by putting down good strong impenetrable sea walls out into deep water, and enclosing as large a space as may be considered necessary, and then setting a powerful dredging machine to work within the enclosure, and emptying out all within the walls to a proper depth, you will have one of the best kind of Docks that can be constructed.

277. Q. Then you seem to think that the formation of Docks, in the shallower parts of the Bay, will be much easier than on dry land? A. Very much more so; and there will be a vast amount of saving in the excavation.

278. Q. All that would have to be done then would be to construct the walls, and the dredging machine would do the rest. A. Exactly.

279. Q. With regard to the comparative cost of constructing Docks at Williams Town, and at the North Beach, how would you compare the one with the other? A. If it is earth that is to be excavated, it can be done at about one-fourth the expense of what rock would be; and if the stuff is as I expect at Williams Town, the cost of making Docks there will be four times that of making them at the Beach.

280. Q. The other expenses, excavation excepted, would, I presume, be the same? A. They would.

281. Q. Have you been long acquainted with the Colony? A. Not very long.

282. Q. Have you seen the great number of ships that are now in the River waiting for their turn to discharge, and the number of vessels laying in the Bay waiting for lighters to unload them; and can you have any doubt as to this Railway being of immense advantage for the speedy conveyance of passengers and goods to Melbourne? A. There can be no question about the advantages of the line.

283. Q. Both as regards the saving of time and the saving of labor? A. Yes, as well as the saving of expense; for there will be a saving, even though the Company charges four times the price that is paid at home.

284. Q. Have you examined the plan of the Melbourne Terminus? A. I have.

285. Q. And do you think that the whole extent of that land is necessary for the purposes of the Company? A. My opinion is, that you will require five times as much as that. What is there, will be of but very little use to you in a short time.

286. Q. Have you any further information on the subject of Railways that you would feel desirous of laying before the Honorable Committee? A. No, nothing that would affect the general idea contained in the plans; though I have some objections to the working details.

287. *By Mr. Splatt.*—Q. Do you not think that it would be most desirable that the whole of the Railways of the Colony should have one General Terminus? A. I think it is very essential that they should, and I consider the Government will be committing a very great error if they do not insist upon this point.

288. Q. You have, I believe, given some attention to other lines of Railway that have been proposed? A. I have.

289. Q. Would it not be more to the advantage of the different lines that may be proposed to various parts of the Colony, that the General Terminus should have a higher elevation than that proposed by this Company? A. My impression is that neither this locality, nor the one spoken of at Batman's Hill, is the proper one for a General Terminus. The lines ought all to go out of Melbourne at the East end.

290. Q. You think then that the locality of the Government Paddocks would be the most desirable one for a General Terminus? A. Yes; and in giving this opinion, I do not look to the present but the future, when your town shall have extended out in that direction, for in that direction it must go.

291. Q. Have you considered how the selection of such a spot for a Terminus will affect the junction of the Geelong Railway? A. I have not; but I do not see what is to prevent the junction being made by the Geelong Railway taking a sweep round the Town.

292. Q. You think that ultimately this position will be the most central? A. I do.

293. Q. But you are aware, that at present the whole of the Merchants' Stores would be at some distance from this spot? A. Yes, but there is no reason why a line of Rails should not be laid down from this point to the Wharves, as at Liverpool, where there are as many as twenty-eight miles of Rails laid down in this manner; the trucks being worked by horses. This is done also at the Hull, Gloucester, Aberdeen, and East Indian Docks.

294. Q. You mentioned just now, that in consequence of the distance to be traversed by the Williams Town Railway, being three times that of the Hobson's Bay line, the expenses of carriage would be three times greater; are you not aware that a short line sometimes costs as much as one that is three times its length? A. I do not see how the cost per mile in these cases can be

Mr. T. Oldham,—  
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more on one line than on the other, seeing that both are on a level; and that there are no tunnels, cuttings, or embankments to make to any extent.

295. Q. But there is a Pier proposed to be erected on the Hobson's Bay line; and this would be unnecessary at Williams Town? A. I do not think it would. The accommodation afforded by the present pier would be a mere bagatelle, if the whole traffic of the Bay were brought to it. This is supposing that the Pier was run out to a sufficient depth, which it is not.

296. Q. You have instanced the Granton Pier—does the railway, in that case, run on piles? A. Yes; the Pier was first built of stone, but an extension was afterwards made on piles; and on that the trains run.

297. Q. Is that the case with the Trinity Pier? A. Yes, the communication is by a tramway, which is worked by horses. That pier is built wholly on piles.

298. Q. Is the Leith Pier a long one? A. It is, and is built entirely on piles.

299. Q. Does any railway run on it? A. No, not on that one.

300. Q. You think that the general level of the present Company's line is not out of the reach of heavy floods? A. I do.

301. Q. From the inquiries and observations you have made, how much higher would you raise the level? A. I would have it at least three feet higher. I have always found that in new countries, as the land is brought into cultivation, you give free vent to the waters, which consequently run off more quickly, causing the floods in the rivers and creeks to rise more rapidly than they had previously done.

302. Q. The Williams Town line would be always free from the effects of floods, owing to the nature of the country through which it would have to pass, and the elevation of the terminus? A. That I am unable to say, though I should imagine, from the casual glance I have had, that unless the line were raised up, the ground is naturally as low as that of the present line, and would be quite as subject, if not more so, to floods.

303. *By Dr. Thomson.*—Q. Are you aware what was the cost of the Granton Pier? A. It was £120,000.

304. Q. And of the Trinity Pier? A. That cost £9,000.

305. Q. And of the Leith Pier? A. The cost of this was £68,000, without the extension.

306. Q. Do you know the width of this last Pier? A. I cannot at present remember it.

307. Q. When you speak of docks, do you mean such docks as they have at home, with tide gates? A. I do.

308. Q. Do you think that this will be necessary, or would not open basins be quite enough? A. Quite enough; and in my opinion, the Pier itself would be sufficient. I see no difficulty in running out the Pier to twice the present length, doing away with the transept altogether, as that part cannot be worked with either speed or economy. A line of piles could then be driven at a distance of 200 or 300 feet from the Pier, with horizontal beams fastened to them, one at the level of high-water, and one at low-water level, to break the force of the water.

309. Q. Could not the whole of Hobson's Bay be made as smooth as a mill-stream by running out Piers from either side of the bay, so as to join each other? A. With a swing bridge in the centre, so as not to impede the shipping, it might be.

310. Q. Do you consider the proposed Pier to be of sufficient magnitude for the traffic that will pass along the line? A. The width is quite sufficient; but I would not have the platform that is proposed; nor would I, as I have said, put a transept to the Pier, but would extend it right out in a straight line, and would occupy the space of the platforms by an additional line of rails.

311. Q. Considering that the wind blows at times very strongly from the south, and that the Pier is totally unprotected in this quarter, will there be any danger to ships lying at it? A. No; I think not. I have never known of any case where the water has been so rough as to require vessels to be unmoored and taken off from the Piers similarly situated; especially if the suggestion I have offered as to the rows of piles be adopted, the safety of the ships will be secured.

312. Q. Have you considered what number of vessels would be able to lay at this Pier? A. I have not; but this would depend on the size of the Pier; but as to the depth, I consider that to be quite sufficient.

313. *By Mr. Splatt.*—Q. Would vessels be able to lay on both sides the Pier? A. Yes, decidedly.

William Snell Chauncy, Esq., C.E., called in and further examined.

m. S. Chauncy, Esq.  
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314. *By Dr. Thomson.*—Q. If the pier were run out above the point where you now propose, what depth of water would you have? A. We should have the same depth of water, but we should have to run farther out.

315. Q. Has it been on account of this being the point at which you can readier get into deep water, that has led you to select this spot? A. Yes; I selected it because it is the point at which we can reach the deep water at the nearest distance from the shore.

316. Q. You have heard the evidence of Mr. Oldham respecting your Pier—may I ask if you still adhere to your proposed plan in preference to that suggested by Mr. Oldham? A. I do.

SATURDAY, NOVEMBER 27TH, 1852.

PRESENT—Mr. Westgarth, Chairman; the Auditor General, Mr. Campbell, Dr. Thomson, and Mr. Rutledge.

William Snell Chauncy, Esq., C.E., called in and further examined.

317. *By Mr. Wrixon, Counsel for the Promoters of the Bill.*—Q. You were examined before, but I wish to know your opinion as to the necessity there is for the Company having a power of deviation? A. My opinion is, that in all cases where a Railway Bill is introduced, there ought to be a power of deviation allowed, though, of course, confined to certain limits. I have never known of any Bill being passed without a power of deviation being given to the Company; for, however carefully the plans may be drawn, some necessity may possibly arise for a slight alteration of the line, and the Company ought to be allowed to make it. In this particular instance, I cannot see any possible objection to such a power being given, because it can make no difference whether the line be run a little on one side or the other, as the land on either side is of a very inferior quality, and will never be available for cultivation; and we trench on no private property.

Wm. S. Chauncy, Esq.  
27th November, 1852.

318. *By the Chairman.*—Q. Is it not also another reason that the inequalities of the cuttings will often cause you to require a greater breadth of surface? A. That is not the reason; but it is because some parts of the ground may be found preferable to others in laying out the line.

319. *By Counsel.*—Q. To what extent would it be necessary to have the power of deviating? A. In England, a line may deviate to the extent of five chains on either side the centre of the line, or 110 yards.

320. *By the Chairman.*—Q. What width do you consider to be absolutely required for two lines of rail and a ditch? A. The actual width at present required for the two lines of rails will be 66 feet or one chain; but in the case of this line I anticipate that we shall eventually require four lines of rails, as the increase in the traffic may in a short time be so considerable that two lines of rails will not be sufficient.

321. Q. But supposing that only the two lines of rails will be required, what particular reasons are there for this power of deviation being given? A. I have no particular reason at present for thinking that it will be necessary to exercise such a power, but it is at all events desirable that we should have it, if it be only as a matter of usage and custom.

322. Q. You think, I presume, that it will be found necessary to vary a curve in some portion of the line? A. Yes, I think we shall have to vary the entrance into the Flinders-street Station a little, and to effect this the deviation clause will be necessary. There is however no other alteration that occurs to me.

323. *By the Auditor-General.*—Q. Has this power of deviation been ordinarily given in the case of short and level lines like the present? A. I never knew an instance where the clause was omitted.

324. *By Counsel.*—Q. And even supposing the line to be varied, the end of the matter would be that only the same quantity of ground would be required—it being only a shifting of position? A. Yes, I do not see how there can possibly be any objection to this power, since in either case the line will pass over Government Land. If by the deviation we at all trenched upon private property, then indeed, I should consider that an important question was involved; but, as it is, there cannot be.

325. *By the Chairman.*—Q. What width do you propose to reserve for the line? A. One hundred yards.

326. Q. Is not this more than is necessary? A. Yes, it is more than was decided upon by the Provisional Committee when I was present; since they agreed upon applying for only two chains in width.

327. *By Mr. Campbell.*—Q. Could not the curve just after crossing the River be avoided by running your bridge over the Yarra in a diagonal line? A. No doubt it might be reduced, but the curve is not so very great.

328. *By the Auditor-General.*—Q. What is the radius of that curve? A. Ten chains.

329. Q. And what is the minimum radius of curves on English lines? A. Seven or eight chains near a station. This curve also is very near the Station, at a point where the speed will have to be slackened, and will not therefore be so material as it would be on the centre of the line where great speed is required.

330. Q. Did you ever hear of a curve of only 10 chains radius when the line comes up to a bridge? A. I do not recollect such an instance at present.

331. Q. Have you not heard of accidents of a very serious nature occurring from the carriages getting off the line at a bridge? A. No doubt such accidents have occurred, but I do not contemplate any in this instance as they have arisen from the insufficiency of the bridge.

332. *By Mr. Campbell.*—Q. But might not this curve be avoided by building the Bridge obliquely across the river? A. No doubt the curve might partly be done away with in this manner; but I apprehend no difficulty, for the line is so short that one can see from end to end of it, consequently there can be no danger of any accidents or obstructions. Besides being so near the Terminus the train will not require to traverse the curve at speed.

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333. Q. But if the train were coming very quickly there might you think be a fear of some accident? A. I think not; trains do not run off a curve of 7 chains radius though going at a speed of 10 miles an hour.

334. *By the Auditor-General.*—Q. I believe it requires more power to impel a train over a curve than over a straight line? A. Undoubtedly.

335. Q. And have you not noticed that, even on a straight line, some difficulty is experienced in getting a train to start, when the ground is slippery? A. Such is the case, but here the train will be in motion before it reaches the curve.

336. Q. And have you not seen some difficulty in getting a train moved along in slippery weather? A. Yes, when there has been an immense load of 70 or 80 trucks attached to the engine; but we shall run with very light loads on our line. We do not propose to run heavy trains, but to have only 7 or 8 trucks attached to the engine, and to make frequent passages.

337. Q. If the suggestion offered by Mr. Oldham, on the last day the Committee sat, were agreed to, and the Bridge were made higher, would not that (if the Terminus were also raised) greatly facilitate the starting of the train, by giving it a gentle incline to descend? A. No doubt but it would.

338. Q. And in coming back, you could ascend the incline by shutting off the steam a little later? A. It would be as you say; and I may mention, that I know instances even of inclines being made for no other reason than to facilitate the starting.

339. Q. Are you not aware that at Croydon, on laying down a line on the atmospheric pressure system, a similar plan was adopted? A. I am; and I may state, that it was my intention to have applied to the Committee to allow me to alter the levels of my sections. In forming the present plan and fixing the level of the Bridge, I was under the impression that the present Dam was to be immediately removed, whereby the level of the river would have been reduced several feet. But, as this is not to be done, and as it is generally thought that heavy floods may reach the bridge, I had come to the conclusion of recommending that it be raised two feet higher.

340. Q. You say you know of no lines, on which a power of deviation has not been allowed; are any of these as short lines as the one now under consideration? A. I know of no line in England so short as this.

341. Q. There is the Greenwich line? A. That is five miles long.

342. Q. Was the power of deviation allowed in that case? A. I cannot speak distinctly as to this line, but I do not remember any one case, in which the Company was not allowed to deviate; and I believe even that the Standing Orders of the House of Commons provide for this power being given to companies for railways.

343. Q. Suppose you deviate with your line to the East, would not your Station be then brought more in that direction? A. It would.

344. Q. Would not that render it necessary to trench on some of the sold land at Sandridge? A. Not at all; I do not in any case propose to alter the site of the Terminus at the Bay.

345. Q. It would not follow then that the whole line would be thrown a certain distance in any particular direction? A. Not at all.

346. Q. The Pier for instance,—in altering the position of the line at its centre, you would not have to change the position of the Pier? A. Not at all; I do not propose to alter the Pier in any way.

347. Q. And the Cricket Ground, is there any probability of that being cut up? A. We tried to avoid doing so, but if it is not material, the line would be improved by running through it.

348. *By Mr. Campbell.*—Q. I would again put it to you, whether by running your Rails in a straight line, by a bridge crossing the River diagonally, you would not avoid both the curves on your present line? A. We should in a measure, but then there are disadvantages as well as advantages attending such a plan. I do not allude in particular to the increased expense of the bridge, but it would also cause some inconvenience within the Station. But I have no doubt that it is quite possible that when we come to consider the details of the plan, there will be room for some improvements.

349. *By Counsel.*—Q. Have you calculated the amount of tonnage that might be passed and repassed daily along the line? A. I have calculated that from 750 to 1000 tons of goods might be passed each day along the line; the amount depending upon the kind of goods conveyed.

Charles Ferguson, Esq., called in and examined.

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7th November, 1852.

350. *By the Auditor General.*—Q. You are Harbor Master at Williams Town? A. I am.

351. Q. You have had some considerable experience in Harbors, and have had from your situation, opportunities of judging of works connected with Harbors? A. I have had abundance of experience of Harbors, though as Harbor Master my experience is not very great.

352. *By Counsel.*—Q. Have you inspected the plans of the proposed Railway between Melbourne and Hobson's Bay? A. Yes, I have examined them cursorily.

353. Q. Do you think that the business of the Shipping will be impeded or injured by the erection of a Pier at the spot proposed? A. That will depend upon where it is to be placed.

354. Q. Supposing it to run out from the shore at the Western extremity of Sandridge, to a distance of 1600 feet into the Bay, would it in your opinion be injurious or otherwise? A. It will not be injurious; but unless it is brought farther up the Bay than you propose, so as to have Gellibrand's Point bearing S., or S.S.E., it will not be of any very great service. Any Pier run out from the North Beach should, in order to have the vessels laying at it fully protected, have the Lighthouse Point bearing S.S.E.; because our strongest winds are from the S., S.W.,

and S.S.W., and there is a fetch of over 30 miles in upon Sandridge, so that a heavy swell comes rolling in there, which would endanger the safety of shipping lying at a Pier exposed to it. For this reason it is necessary to get Gellibrand's Point to intercept the long fetch of the swell.

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355. Q. This would apply to vessels lying outside the Transept of the Pier, and not to those lying within the shelter it would afford? A. It would form a protection for vessels lying on the Western side, but those lying on the Eastern side of the Pier would still feel the swell.

356. Q. Supposing that the position of the Pier be as now planned, if a strong row of piles were driven in a parallel line with the Pier at a distance of 100 yards or so from its Eastern side, so as to leave plenty of room for the passing and repassing of ships; would not this form a sufficient breakwater to protect the vessels from the effects of the swell? A. If this were done it would; but you will have some difficulty in doing this, for after leaving the sixteen feet line, you go out into four fathoms water at once; and besides taking ships through such gaps as you propose to leave between the piles when there is anything of a swell on, will be a very awkward job.

357. Q. Would it not then be possible to do what I have mentioned? A. Yes, it would be possible, but it would be a work of difficulty and expense; but the proper way to remedy this, would be to have the Pier higher up the Bay so as to be sheltered by the Lighthouse Point. Where you now propose a Pier, you have a fetch of thirty miles for the swell, and until you get some protection against this, you can never make your Pier available.

358. Q. Would not the Transept afford protection? A. Such vessels as had the Transept between them and the wind, would be protected.

359. Q. Does that kind of weather that you apprehend often occur? A. Yes; I should say that for six months out of the year, strong southerly winds prevail. In the summer, these winds almost regularly set in of an afternoon, with great force, and cause so heavy a swell that boats are often upset in it.

360. Q. But could not vessels anchor in safety a little out from the Pier? A. Yes, and in secure anchorage.

361. Q. You do not think then that if the Pier were constructed, it would all tend to injure the Harbor or incommode the Shipping? A. Not at all; but, on the contrary, it would be a benefit, more particularly to the lighter traffic and to the small Steamers. These could all load and unload there.

362. Q. In all weathers? A. Yes, on the Western side of the Pier.

363. Q. Are you acquainted with the present cost of Lighterage? A. I believe it is very heavy.

364. Q. Do you know how much they charge per ton? A. The general charge is about £2. a ton, and to vessels lying, what they call outside the Lighthouse Point, they charge £2. 10s. a ton.

365. *By the Auditor-General.*—Q. It is your opinion that if a Railway runs from Melbourne to the North Beach, the Pier must be constructed considerably to the Westward of where it is now proposed to place it? A. Yes, so as to afford any security for vessels laying at it.

366. Q. You have said that the worst sea comes in upon Sandridge when the wind is from the South? A. Yes.

367. Q. Have you ever known very heavy gales blowing from the S.E.? A. Yes, but there is a bank running out this side of St. Kilda, which breaks the sea when this wind is blowing; and the Red Bluff also intersects the swell, so that there is far less fetch for the swell with this wind.

368. Q. We had a very strong wind from the S.S.E. a day or two back, was the swell very heavy on that occasion? A. It was; and I had a very hard pull to get from the Beach during its continuance.

369. Q. You had to Beach your Boat I suppose? A. No. In that wind the Wharf at Liardet's gives some shelter, and I landed under its lee.

370. Q. Have you heard of other plans for Railways being a-foot; one for instance to Williams Town? A. Yes.

371. Q. From your acquaintance with the two localities, which would you consider to be the most advantageous spot for a Railway to run to? A. As far as the Wharf is considered, I consider that better and more ample convenience can be given to the Shipping at Williams Town, than there can be on the other side of the Bay; whilst a Pier can here be much more easily constructed, and will always be secure for vessels to lay at. In saying this, I put out of the question all consideration of the difference in time that it will take to complete the two lines, and merely compare the relative advantages of the two places.

372. Q. Looking only to the public benefit, which would you say would be the best and most convenient? A. Williams Town most certainly, because there, in all weathers, you are sure of a shelter, and the vessels are protected from all but Northerly winds, and these blow off the shore, and as there is a fetch of only three miles, very little sea is raised; this is nothing compared to being exposed to a fetch of thirty miles as you are on the other side of the Bay.

373. Q. If a Breakwater were run out from Gellibrand's Point, would not the Beach be comparatively sheltered? A. Yes, such a work would make the Harbor much more perfect; but the Williams Town side is the place for the Wharves, because you there get into deep water much quicker than you do on the other side.

374. Q. Supposing you take the middle of the bight, if I may so term it, of the Bay, from Williams Town, how far would you have to go out from the shore to get deep water? A. About 500 yards out, you would get eighteen feet water, from the middle of the bight to a little below the present Jetty.

375. Q. Would it be difficult to form Wharves there? A. You would merely have to point the piles and drive them.

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17th November, 1852.

376. Q. What bottom is there? A. Stiff blue clay with an upper surface of mud and sand.  
377. Q. It is not stone? A. I think not; but after you get to some depth, I have no doubt but that you would come upon rock.

378. Q. Could a Jetty be thrown out there at a reasonable expense, and within a reasonable time? A. Yes, I would undertake to run out within six months, a Jetty capable of taking alongside the largest ships that come to our Harbor. On the Sandridge side it would be impossible to work at a Pier, unless from the shore, and this would be a tedious process.

379. Q. Therefore, in your opinion, as far as the Shipping are concerned, you consider that it would be more advantageous to run out Wharves from Williams Town, than from the North Beach? A. I do. They would not in the first place require to be run out so far, and in the next place they would be much safer, and the Shipping would lay much easier. A vessel moored alongside a Wharf at the North Beach would not be able to leave it if there were any swell on, and the Wind Southerly, without employing a Steam Tug, and that would materially increase the expense.

380. Q. Let me now draw your attention to the nature of the soil at Sandridge, as compared with that at Williams Towns; what is Williams Town built upon? A. On trap rock.

381. Q. And what is Sandridge built on? A. On sand.

382. Q. In the event of either of these Towns being chosen for the Terminus of a Railway and the erection of a Jetty, would not the Town selected become the Port Town of Melbourne, through which all the traffic with the Shipping would pass? A. Yes. If the plan were successful, there is no doubt but that Docks and other maritime works would be undertaken in the locality.

383. Q. And which do you conceive to be most preferable for the foundation of a Town of such importance, stone or sand? A. Where you have stone would of course be the best situation, for you would then have abundance of material for the construction of Wharves, and for the formation of works for the shelter of the shipping.

384. Q. Which would you consider to be the best line for a Railway between Melbourne and Williams Town;—to follow the banks of the River, or to cross the River at Melbourne, and then again to cross it a little above the mud bank? A. I have not given my attention to this matter, and I am scarcely prepared therefore to hazard an opinion; but it appears to me to be much more simple and natural to follow the banks of the River; for, if you cross the mouth of the River by a Bridge, you completely upset its present use as a canal to Melbourne.

385. Q. At what part of the River below the Junction, are the banks nearest together? A. At Spottiswood's Ferry; the banks are there not above 300 yards apart. That is the narrowest part of the River, with very deep water right up to the banks.

386. Q. And could a bridge be thrown over that distance in one span? A. That is rather a question for an Engineer to answer, but I think it might. It would however intercept the navigation of the River.

387. Q. You would rather prefer then that the Railway should go round the banks of the River? A. Yes; as a bridge thrown across the stream would entirely condemn its use by the Shipping.

388. *By Dr. Thomson.*—Q. Is it not usual for Railways to cross Rivers by balance bridges? A. Yes, such is the plan at some places.

389. Q. But it is not, in your opinion, a convenient one? A. It would be found occasionally inconvenient here. It would not be so if you could get the vessels to go through only at regular times; but this cannot be done now, as vessels are continually crowding up and down the river as quick as they can, and there is every danger that the carelessness of Masters of Vessels might materially damage the bridge and works, by their running foul of it.

390. Q. But if a Railway were completed, communicating with Wharves at Williams Town, would not the traffic by the River be greatly diminished? A. It would.

391. Q. And only very few vessels of the smaller class would come up to Melbourne? A. No doubt.

392. Q. So that a Balance Bridge would require to be only very seldom opened? A. Exactly.

393. *By Mr. Campbell.*—Q. Colonial vessels would still, however, require to use the River? A. That would depend entirely upon the expense attending the passage; at present Steamers charge from £15 to £30 for taking a vessel up the River.

394. Q. At all events, if a Railway were constructed, the number of vessels using the River would be materially lessened? A. They would.

395. Q. A swing bridge would not therefore cause a very great obstruction? A. It need cause none, if regular hours were appointed at which vessels should be allowed to pass. In this way it could be arranged that no difficulties should occur. Now, vessels are going up and down at all hours.

396. Q. Still it is the case now, that large Vessels can only go up the River at particular times, when the tide suits? A. Yes, the large vessels must wait for the tide. It a great thing against us here, that we have so little rise and fall of the tide.

397. Q. What rise of tide have you at this part of the River? A. About four feet.

398. Q. With regard to your opinion respecting the stone at Williams Town lying at a great depth, may I ask if the stone extends up the River also? A. No doubt it does, at some depth; though in some places the bottom of the River is rocky, owing to the rising of the strata.

399. Q. Have you found any difficulty to arise from the stone at the site of the present Jetty? A. No, the piles when driven, went down at once into a bed of stiff mud. Higher up the River, some difficulty from this cause was experienced when driving the beacons along the banks of the River.

400. Q. You are acquainted with the Frith of Forth, and Granton Pier? A. I am.

401. Q. Is there any comparison to be made between the facilities offered by the Pier at Granton, and that which it is proposed to erect at Sandridge? A. Yes, there is some similarity between them; there is at Granton nearly an equal amount of fetch in upon the Pier from the N.N.W.; and it has been found that this has been the means of filling up the mooring ground on the Western or weather side, for a depth, to my knowledge, of eighteen inches; the roll of the water being impeded by the Pier, has caused the sand to be deposited alongside.

402. Q. That is a stone Pier? A. Yes; but there is a portion of it built on piles.

403. Q. The pile portion of the Pier has not caused any such accumulations of deposit? A. I do not think it has been erected long enough to have caused the accumulations to be observed.

404. Q. Could vessels lay at a Pier at Sandridge, with the same safety as they can at Granton Pier? A. Yes, I think they might; but the latter is of a great breadth, and the piles moreover are filled in at the centre with stones. This I presume would have to be done at Sandridge, to render the Pier secure.

405. Q. Are you acquainted with the Leith Pier? A. I am.

406. Q. What is its length? A. Two miles.

407. Q. How has it been found to answer? A. It is very stable and strong, but the centre of that also, is filled in with stones up to low water mark, so that it forms what may be called a low water breakwater. This Pier, however, is always undergoing repair, from the damages it receives by vessels thumping against it.

408. Q. There is some risk then to the Pier as well as to the vessels, by this thumping? A. The risk is to the Pier and not to the vessels, for the sides of the latter being rounded, they receive very little damage, being usually well provided with fenders; besides that, the Pier is stationary, and when a moving body dashes against one that is stationary, the stationary one suffers most.

409. *By Mr. Rutledge.*—Q. Can you inform the Committee what difference in distance there would be between a line of Railway crossing the River at the City, and then recrossing it below the Junction, and one running round by the banks of the River? A. I am hardly competent to answer that question, but probably the difference will be about five miles.

410. Q. Supposing the Rails to cross the River twice, would not the expense of erecting two bridges, cause the cost of the line to be as great as if it went round, even though by going round, you have five miles more of road to make? A. Yes, the expense of one would no doubt be as great as the expense of the other; and in addition to that, the Swing Bridge would be always liable to injury.

411. Q. Then if it were resolved upon to make a Railway to Williams Town, which, in your opinion, would be the best line for the public? A. The best way will be to leave the River open and to go round by the River banks.

412. *By the Auditor-General.*—Q. Have you ever been at Brighton? A. I have sailed past it, but have never been on shore there.

413. Q. You do not happen to know then, the depth of the water into which it is run out? A. I do not, but I know that it is run out to a considerable depth.

414. *By Mr. Campbell.*—Q. What is the greatest depth of water in the Bay on a line between Sandridge and the nearest point of the Williams Town shore? A. About thirty feet, or five fathoms.

415. Q. Are you aware that it has been proposed to throw a Jetty right across the Bay from Sandridge to Williams Town, what portion of the distance would there be of this greatest depth? A. You would have for about a third of the way, a depth of thirty feet.

416. Q. What length of piles would be required in this depth of water in order to make a Pier serviceable? A. They would require to be from 50 to 60 feet long.

417. Q. Would there be any difficulty in the way of getting piles of this length? A. There would be no difficulty in getting them, but they would be very expensive.

418. Q. What do you think the cost per pile would be? A. I think you would be able to get persons to contract for them, and to land them at Williams Town, at about £4 10s. per pile.

419. Q. From where would you get them? A. From Van Diemen's Land.

420. Q. You are inclined to think, that if a pier were run out at Sandridge, it would sustain damage from the shipping moored at it? A. Yes, during southerly winds it would; heavy moving masses thumping against a fixed pier are sure to injure it.

421. Q. At Williams Town, all danger of this would be avoided? A. Yes; the only strong wind that would reach them there would be the north wind, and there is but very little fetch for the swell; but the moment the wind comes at all round to the west, the vessels are sheltered.

422. Q. Taking all the advantages and disadvantages of the two lines, which do you think would be the most desirable, a Railway from Melbourne to Williams Town, or one from Melbourne to the Beach? A. If the Railway is to be undertaken solely with a view to benefit the Colony, I most certainly think that it should run to Williams Town. For the benefit of the shipping, also, it should be there, for the shelter and deep water they would have.

423. Q. The expense of making a Pier at Williams Town would therefore be less than of one at Sandridge? A. Yes, if it were made off the point where you have deep water almost at once. A Pier made there would only require to be one half the strength of one made at Sandridge.

424. *By Dr. Thomson.*—Q. How would a stone Pier run out from the Lighthouse do? A. Vessels lying inside would receive shelter from it, but not those lying outside. There is however a reef which runs out from Gellibrand's Point, in an Easterly direction, which might, by being added, make a very good breakwater.

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425. Q. Supposing the Terminus of the Railway to be just in the bight of the Bay, what depth of water would you have round the Bay from Sandridge on the edge of the deep water? A. An average of about ten feet.

426. Q. In that case, would not a pile Pier extending round the Bay, be an infinitely cheaper mode of communicating with Williams Town than any other? A. Perhaps so.

427. Q. Would not a depth of sixteen feet alongside a Pier be sufficient for all the vessels that frequent this Port? A. Yes, nearly so, but then you must allow for the rise and fall of the swell, or else the vessel will be always bumping.

428. *By Mr. Campbell*—Q. Such a communication round the Bay would still interfere with the Shipping? A. It would.

429. *By Dr. Thomson*—Q. But if such a line were carried across the Bay, would it not make one immense Wharf; and by enclosing the portion to landward, would you not be able to form Pier and a Dock at the same time? A. I can perceive the advantages that such a plan would have; and if this were efficiently done, there would be no such a Port as this in the world for the convenience that it would offer for shipping.

430. Q. You have in the course of your evidence mentioned that wooden structures of the proposed principle, require to be filled in with stones? A. Yes, they should be filled in.

431. Q. Would not such a line as I have said, stand without this; would not the skeleton frame be sufficient? A. There is no doubt but it would stand, but this filling in would make it solid, and secure the bottom of the piles.

432. Q. If it were filled in, would not deposits be attracted, and the mooring grounds be thus filled up with sand? A. Any deposit would be outside the piles, and would tend to strengthen your Breakwater, or Pier. On the other hand, if there were no filling in, the water would carry the sand through, and deposit it as now, all over the Bay.

433. Q. Can you form any idea of what the expense of such a work would be? A. I cannot; but I know that it would be very great. You would require to have short Wharves or Jetties run out from the line at which vessels could lay and discharge.

434. *By the Auditor-General*—Q. What is the greatest rise and fall of the tide here? A. Not more than four feet.

435. Q. And at Granton Pier, what is the rise? A. Nine feet.

436. Q. Or more than double? A. Yes.

437. Q. Then the strength of the tide must be greater at Granton than here? A. Yes, they have a strong tide running there, such as we have not here.

438. Q. Have you considered, with reference to the facilities to be afforded in supplying Ships with water, whether it would be better to have the Pier at Williams Town or Sandridge? A. If we had the water at Williams Town, vessels could always obtain it in all weathers, and yet lay in quiet water.

439. Q. A greater length of pipe would be required for the supply at Williams Town? A. It would.

440. Q. There are pipes now in course of being laid down? A. There are, they have been carried within about one-fifth of the distance to the Beach.

441. Q. And on account of the smaller quantity of pipes required, do you conceive that Sandridge would be the more convenient locality for supplying the water? A. Yes, it can be much easier brought out along the Jetty.

442. Q. Will the pipes be of any use when they are there? A. They will, of course.

443. Q. Will the shipping be able to get water here? At times.

444. Q. Is there a sufficient fall from the source of supply to render a certain supply to be depended on? A. That is for Engineers to say.

445. *By Counsel*—Q. In the formation of Wharves at Williams Town, will there be any sinking or excavating required? A. I think not. There is quite as much water space on that side as there is on the North Beach; and you will be able to get even more Dock room.

446. Q. But in making Docks, would you not have to sink deeper than you would at Sandridge? A. No. The arms of two Piers could be brought together by a sea wall, and a Dock would thus be formed, whilst you would have a Wharf towards the Bay.

447. Q. Would the length of Pier at Williams Town require to be longer than at Sandridge? A. If you carry out your Pier from where you now propose, the length at Sandridge will be the shorter one; but it will not answer, as I am convinced that no Commander of a vessel will take his ship to your Pier, if you have it where you have planned. In order to be safe, and to be of real utility, you must bring it more round to the West.

448. *By Dr. Thomson*—Q. And in that case the Pier would require to be much longer? A. It would, because the water is shallower.

449. *By Counsel*—Q. Have you taken into consideration the fact—the liability of Jetties to fill up the Harbour with sand? A. I have.

450. Q. And would not lines of Jetties, placed where you propose, have this effect? A. If they were carried out into the strength of the current they would, for the tide being obstructed, the sand carried up by it would be deposited. This is only in the case of the Jetties being carried out beyond the still water, for the strength of the current is very small, and the slightest obstruction would cause a deposit on the outer side of the Jetty. Anything deposited on the inner side would be carried out by the freshes which occur in the River, which would have the same effect as the scouring we employ in the Docks at home.

451. Q. Would a Jetty, placed where we propose, have such an effect? A. Not at all, it would not in any way affect the mouth of the River.

452. Q. In the case of goods being brought to Town from the Bay, would not the cost of

conveyance be greater by a line from Williams Town than by one from Sandridge? A. Of course, because the distance being doubled, the cost of carriage would have to be increased. Charles Ferguson, Esq. continued. 27th November, 1852.

453. Q. There is no fresh water at Williams Town? A. None but rain water, which is caught and stored. There is however, a person, lately arrived from England, who has brought with him a set of boring apparatus for Artesian Wells; I had an opportunity to meet him to-day, to go with him to try one or two spots in which he thinks water may be found. He is of opinion that it is quite practicable to supply Williams Town with water from Artesian Wells.

William Snell Chauncy, Esq., called in and examined.

454. *By Counsel.*—Q. You have heard Captain Ferguson's opinion relative to the injury likely to result to the Pier, from vessels laying alongside of it in heavy weather; what is your opinion on this point? A. My confident opinion is that no ship can possibly injure the Pier, unless it runs bodily against it. Independent of the strength of the structure, it is well guarded by fenders in all directions. Wm. S. Chauncy, Esq. 27th November, 1852.

455. Q. So that the mere bumping of a vessel during a gale would not shake the piles at all? A. One cannot be displaced without the whole going, for they are all so braced and bound together, and the Pier is of such a width, that I cannot contemplate the possibility of any injury occurring from this cause.

456. Q. As to filling up the centres between the piles with stones, would that be desirable? A. I am aware that this is frequently done, and in some cases with great advantage to the structure; but these are only where there is not good ground for driving the piles; but in other cases, this plan acts injuriously, as by making the Pier a solid body, it has a tendency to silt up the moving grounds with sand, by obstructing the flow of the current. In the case of our Pier, this filling up would be unnecessary, because, having good holding ground, we can secure our piles without it; and I prefer not adopting the plan, because the open piles will allow a free passage for the water so as to incur no risk of filling up the anchorage.

457. Q. Filling the interstices with stones would be injurious, then? A. It would cause eddies, which would produce obstructions in the Harbor.

FRIDAY, DECEMBER 3RD, 1852.

PRESENT—Mr. Westgarth, Chairman; the Auditor-General, Mr. Rutledge, and Mr. Campbell.

Mr. Thomas Oldham, called in and re-examined.

458. *By Mr. Wrixon, Counsel for the Petitioners for the Bill.*—Q. You are acquainted with the construction of the Granton and Leith Piers? A. I am. Mr. T. Oldham,— 3rd December, 1852.

459. Q. Are they constructed upon piles in the same way as it is proposed to construct the Pier at Hobson's Bay? A. The Granton Pier is built of stone, but there is a roadway at the side of it that is constructed on piles.

460. Q. Do you know any Pier that is constructed in the same way as it is proposed to do this? A. Yes; the Pier at Lieth is built entirely of timber. There is one at Gravesend and one at Dover also.

461. *By the Auditor-General.*—Q. How long is the Leith Pier? A. About a mile and a half.

462. Q. And what depth does it run out to? A. To about eight feet at low water; the tide there rises thirteen or fourteen feet.

463. Q. Is there much surf there? A. Yes, there is a very heavy surf occasionally.

464. *By Counsel.*—Q. And this Pier is built for its whole length on piles? A. No. The first part of about 600 or 700 feet in length, is on piles and filled in with stone.

465. Q. And beyond that distance is there any stone? A. None.

466. Q. It is entirely built of piles for the remainder of the distance? A. It is.

467. Q. Are the interstices between the piles filled in with stone? A. Not at all.

468. Q. Do you know of any other Piers that are built entirely of piles, without any stone being used? A. Yes, there are very many on the coast; up the Thames, also, this mode of construction is very common. All the Steam Wharves are built in this way, nothing being used but piles.

469. Q. Can you give any opinion as to the frequency of repairs required at wooden Piers? A. I have never seen any damage done to the Piers, or any difficulty occur from vessels laying alongside of them. When I say none, I of course mean that only very trifling damage has occurred such as perhaps the expenditure of £20 or £30 yearly would put to rights. At the Leith Pier, I am sure that £50 would cover the whole expenditure it has cost for three years.

470. *By the Auditor-General.*—You are acquainted with the Trinity Pier? A. Yes; and the damage to that is very slight, although the largest sized Steamers of 200 and 300 horse-power

Mr. T. Oldham,—  
continued.  
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lay alongside,—such vessels as the *Victoria*. In fact the whole of the London and Edinburgh trade goes there.

471. Q. These Steamers, I believe, lay at the end of the Pier? A. At the end and at both sides also.

472. Q. Is it the same at the Granton Pier? A. It is.

473. Q. But that is a stone Pier? A. Yes, the centre is of stone, but outside is of piles. The Pier was originally built of stone, but it was soon found that it was not near wide enough for the traffic that came to it, and the extension on piles was then made.

474. Q. Do vessels of large tonnage lay at the Leith Pier? A. Yes, all the vessels go alongside the Pier until a berth is made for them in the Docks.

475. Q. I mean such vessels as now visit our Port, of from 800 to 1000 tons? A. They do.

476. Q. And do they unload at the Pier? A. No. The Pier is not wide enough for that; being merely used as a Wharf for the vessels to draw up to until they can get into Dock. The Pier was run out for the purpose of providing accommodation for vessels for which there was not room in the Docks, and until berths were provided for them.

477. *By Mr. Campbell.*—Q. Is the Pier built in a parallel line with the shore, or does it run out at right angles? A. It is constructed at right angles with the shore.

478. *By Counsel.*—Q. And is it equally exposed to the weather as the proposed Pier at Sandridge will be? A. Yes, a great deal more.

479. *By Mr. Campbell.*—Q. What is the greatest depth at the Granton Pier at high water? A. About twenty feet.

480. *By the Auditor-General.*—Q. The centre of this Pier being of stone, the Pier must act as a kind of breakwater? A. It does not.

481. Q. Then in fact, there can be no action of the sea to affect the vessel; and in heavy weather, vessels, instead of being forced on to would be driven off of the Pier? A. Yes, on one side, but vessels lay on both sides, and both sides are exposed to the wind.

482. *By Mr. Campbell.*—Q. Vessels are not then exposed to the wash of the sea? A. They are exposed to much worse sea than can be here.

483. *By the Chairman.*—Q. Is not the Granton Pier very much exposed to strong North winds? A. It is to North East winds.

484. Q. And you have never known the Pier to be damaged from the effects of these winds? A. No.

485. *By Counsel.*—Q. How long have you known these places you speak of? A. For the last eight or nine years.

John Goss, Esq., called in and examined.

486. *By Counsel.*—Q. You are Master of the *Candahar*? A. I am.

487. Q. How long have you been in Hobson's Bay? A. I have been about a fortnight this trip; but I have been in the Port four times within this last year.

488. Q. Have you gone much about the Bay during the time your vessel has been here? A. Yes, I have been all over it.

489. Q. Could you state to the Committee, what, in your opinion, are the relative advantages and disadvantages of Sandridge and Williams Town for the construction of a Pier or Wharf for the benefit of the Shipping? A. An advantage that the North side of the Bay has over the other is, that the Anchorage is much better. This is now the third time that I have anchored on this side of the Bay, and can speak from experience. My vessel is now within a cable's length of the present Jetty, and I find that there is much better holding ground, and never so much sea as there is farther out. The advantages, as I look at them, are being close into Town, and not having so much sea.

490. Q. You have inspected the plans for the proposed Jetty at Sandridge? A. I have.

491. Q. Do you think that a Pier run out for a length of 1800 feet, into a depth of 22 feet water, would afford sufficient shelter and accommodation for the shipping? A. I think so, as the transept, if carried out as laid down in the plan, will be formed into a breakwater. The S.S.E. wind will have some influence on the Pier, but after the wind gets rounds to the S. and W., the Lighthouse Point shelters it; still there will not be much sea, in consequence of the bank of St. Kilda, which will naturally break it. The worst wind to which the Pier will be exposed will be broken off by the transept. I may mention that I have been landing Cargo lately, at the present Jetty, and I find that even now that Southerly winds are prevailing, up to ten o'clock in the morning, the present Jetty is perfectly available. In the summer months, the wind, for the greater part of the day is off the land, and then the water at Sandridge is perfectly smooth. My own impression is, that there will be no difficulty about the Pier, but that it may be made everything that is necessary for supplying one of the great wants of the shipping.

492. Q. How many vessels would this Pier accommodate? A. From what I can gather from the plan, I should say that nine or ten large ships could lay at it.

493. Q. Why do you think that a wharf at Sandridge would be more convenient than one at Williams Town? A. I do not think it would be more convenient, for if you could make a proper one at Williams Town, I think that place would be the more desirable; but then the question will be, what will be the amount required to make a Pier there.

494. Q. And why would it be more convenient; do you think the anchorage is better? A. No, I do not say that, I have been laying off Sandridge in very heavy gales, and my ship never

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started her anchors. In my last, I was laying there in a gale, when the *Aberdeen* dragged her anchor and ran foul of me.

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495. Q. Had she been properly anchored? A. She was anchored by a pilot, and therefore I presume that she had been anchored properly.

496. *By Mr. Campbell.*—Q. Was she anchored within the Lighthouse Point? A. Yes; she was laying between the Lighthouse Point and St. Kilda. It was owing to this accident that orders were issued that have caused the ships to be so scattered about the harbour as they are now. The Harbour Master, to prevent a similar occurrence, directed that the ships should not be anchored so close together.

497. Q. Can you explain more particularly where the *Aberdeen* was lying at the time? A. Yes, she was laying about two-thirds of the way between Gellibrand's Point and the St. Kilda Buoy.

498. Q. How do you think that a Breakwater, run across from St. Kilda or Sandridge, to the Lighthouse Point, with a telescope bridge for the admission of shipping, would be likely to answer? A. If that were done, you would make your Harbour as secure as it had need be.

499. *By Counsel.*—Q. You are aware that the delay which ships encounter in discharging their cargoes is very great? A. Yes; I am sorry to say that I can speak from experience that such is the case.

500. *By the Auditor-General.*—Q. What do you consider to be the prevalent wind in the Harbour? A. The prevailing winds range from the N.W. to the S. E.; the most general being from S.W. to S.

501. Q. And the wind that raises the greatest sea, is, I believe, that from the South? A. It is.

502. Q. To this wind Sandridge is exposed, whilst Williams Town is sheltered from it? A. Yes.

503. Q. Supposing a pier to be thrown out from the inner Point at Williams Town, there would not be far to go to get into deep water? A. No; there is deep water close in upon the Lighthouse Point.

504. Q. I do not mean that Point, but the next, close upon the town? A. From that Point I see by the map that you would have to go out about twenty chains to get into the channel.

505. Q. Can you imagine any wind that would injure a vessel lying at a Pier like that? A. No, a vessel would lay there in smooth water in all winds.

506. Q. There is, in fact, a natural breakwater there, and I would ask you, as a ship-owner, which you would rather send your vessel from,—from a Pier that was run out from a lee shore, or from one that was run out from so sheltered a shore as Williams Town? A. That would depend entirely upon what was to be done with the cargo when landed.

507. Q. But supposing the same opportunities of transmitting cargo were offered by both shores; supposing the advantages of both to be equal; which would you prefer? A. I would put my vessel alongside of the Pier on the weather shore, most decidedly.

508. Q. Do you know anything of the bottom at each side of the Bay? A. The anchorage ground is hard on the Sandridge side and soft on the other.

509. Q. Do you know anything of the different character of the shores, of what soil they are composed? A. I do not; but from what I have observed, in landing at Sandridge, the ground appears to be hard and solid enough a little off the Beach; and it appeared to me as if there were plenty of soil capable of cultivation a few yards from the shore.

John Bell, Esq., called in and further examined.

510. *By Counsel.*—Q. You are master of the *Royal Shepherdess*? A. I am.

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511. Q. How long have you been acquainted with this Harbour? A. About five months.

512. Q. Have you been remaining in port during that time? A. No; I have within that period made three voyages between Adelaide and here.

513. Q. You are acquainted with the anchorage at Williams Town, and also that at Sandridge? A. Yes; I have anchored in both.

514. Q. And which do you prefer as good holding ground? A. If Melbourne was on the same side of the Bay as Williams Town is, I should prefer the Williams Town anchorage; but as Melbourne is where it is, I prefer the anchorage off Liardet's Beach, owing to the facilities that are offered for landing goods there.

515. Q. You have seen the plan of the proposed Pier at Sandridge? A. I have.

516. Q. Do you think such a Pier as that, with a transept of the length proposed, would afford protection for ships laying at it? A. It would afford some protection, but I think the plan ought to be improved upon.

517. Q. Could ships load and unload at such a Pier in safety? A. Yes; I should have no hesitation in taking my ship alongside of such a Pier, with the exception of one or two berths at it, which would be rather exposed. In the angles of the transept, and on the lee side of the Pier, vessels would be quite safe.

518. Q. In the angles of the transept on both sides, vessels would be safe in a southerly gale, as well as on the lee side of the Pier? A. Yes; on both sides.

519. Q. And in ordinary weather, both sides of the Pier would be available? A. Yes; quite so. Even the present Jetty is so now, and I have landed goods at it to-day, and I am going to land cargo at it to-morrow.

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520. *By Mr. Campbell.*—Q. For a Pier in such a position, what distance should the piles be apart? A. The piles ought to be placed in such a position as that the sea should not wash through them; and should be so arranged as that a person on one side the Pier should not be able to see through to the other.

521. Q. In that case the piles would have to be very close? A. No; not where the Pier is wide enough to allow of such an arrangement. The present Pier at Liardet's is only twenty-two feet wide, and the piles in that case would have to be pretty close; but with a Pier twice that width, and with double the number of piles, there would be no trouble in arranging them so as that no one could see through. With a wide Pier, it would not require to have more than the ordinary number of piles if they were used properly.

522. *By Counsel.*—Q. Which do you consider under all the circumstances would be the better place for the construction of a Pier, Sandridge or Williams Town? A. I certainly should prefer Sandridge.

523. *By Mr. Campbell.*—Q. Supposing a Pier were erected at each place, which would be preferable? A. In my opinion Sandridge would be, for you then get deep water nearer to the shore than you can on the other side; and though at Williams Town there is more shelter, still there is less water.

524. *By Counsel.*—Q. Then the water is deeper on the Sandridge side than the other? A. It is.

525. Q. So that a Pier run out from Williams Town would require to be much longer than one at Sandridge, in order to reach the same depth of water? A. Yes; at Williams Town, a Pier would have to run right out into the channel to get twenty-two feet of water.

526. *By the Auditor-General.*—Q. Is not that a greater depth than is ordinarily required for ships of even the largest tonnage? A. Yes; there are not many vessels that would require such a depth of water as that, but still there are some that would; and these could not come alongside the Wharf in anything like bad weather.

527. Q. But are there not vessels of 1,500 and 2,000 tons, that do not draw twenty feet water? A. Yes; some of the newly constructed vessels; but there are many of the old vessels that will not carry near so much as that, and will yet require twenty-two feet.

528. Q. A vessel such as the *Cornwall*, for instance; could she not go alongside of such a Pier? A. Yes; she might go up to it at high water, but the chances are, that if it came on to blow, she would be injured at low water.

529. Q. Would not the same thing occur at a Pier at Sandridge? A. No, on account of the difference of bottom. I, myself, if forced to the alternative, would have no hesitation in beaching my vessel at Liardet's, in preference to running higher up the Harbour; and in some of the Bay Harbours it is a very common thing to do this. Where the bottom is level there is no danger in doing this, and therefore a vessel would not hurt at a Pier at Sandridge, where the bottom is quite clean and level; but, at Williams Town, the bottom is covered with stones and snags, and would do a ship very great injury.

530. Q. If a Pier were erected in both places, which would you prefer as a question of convenience? A. I think that of the two, if they were made of breadth sufficient to allow of the arrangement of the piles in the manner I have before described, I should prefer one at Liardet's Beach, on account of the price, I should have to pay for the carriage of cargo. From Sandridge carriage can be had to Melbourne at one-third of what it would be from Williams Town. I should always land at Liardet's in preference myself, and I do so now. The pull over to the Jetty at Williams Town is as long as that to Sandridge, and when at the Jetty, there is generally some time to wait for the steamer, and, by landing at Sandridge, you can be in Melbourne before the steamer starts from the Williams Town Jetty.

531. *By Mr. Campbell.*—Q. With a Jetty run out at Williams Town, and one at Sandridge, both connected with Melbourne by railways, do you not think that there would be sufficient trade for the lines? A. No doubt there might, but a beginning must be made, and my impression is that you must first come to Sandridge, as that is but a short line and will be sure to pay, thereby giving confidence to the public to support the other lines.

532. *By Counsel.*—Q. Have you examined the bottom of the Bay so as to be able to say whether the anchorage is better on one side than on the other? A. It has always been considered that there is better holding ground on the Sandridge side than on the other; at all events it is not so much cut up there by anchors. The material composing the bottom is also more tenacious than on the other side, being a stiff blue clay; whereas, off Williams Town, it is a soft mud formed by deposits from the river, and in heavy weather when there is much swell, the waves agitate this and loosen it, so that the anchors come home.

533. Q. Then for every reason,—for the better anchorage afforded, for the cheaper conveyance of goods to Melbourne, and for the greater depth of water in proximity to the shore, you prefer the Sandridge to the Williams Town side of the Bay? A. Yes, for all these, and for a reason you have not named, and which I consider the chief one, its nearness to Melbourne. I always land at Liardet's Jetty, and pay half-a-crown to go to town in his omnibus, in preference to landing at Williams Town, and going to Melbourne by the steamer for eighteen pence.

534. Q. Do you know what the rates paid for lighterage are? A. They are twenty-five shillings per ton for heavy goods, and fifty shillings per ton for measurement goods. The charges for lighterage are out of all reason. I have myself landed passengers, trunks, and boxes, in preference to letting them come up to town by the lighters, just to prevent the new arrivals from being imposed upon by the charges. In addition to this extortion, if a trunk or bag be sent by a steamer, and landed at Cole's or Raleigh's Wharf, an additional sum of two shillings is charged; the whole cost often amounting to more than double the value of the goods.

William Harrison Lamond, Esq., called in and examined.

535. *By Counsel.*—Q. You are Master of the *Admiral*? A. I am.
536. Q. How long has your vessel been laying in Hobson's Bay? A. About three weeks.
537. Q. Does your experience extend no further than that; have you not known the Bay longer? A. Yes; I have been acquainted with the Bay since 1845.
538. Q. Have you ever compared, in your own mind, the advantages and disadvantages of Sandridge and Williams Town as places for landing Cargo? A. I believe there is very good holding ground off Sandridge.
539. Q. Which side do you consider to be the best? A. I have anchored on both sides; this time I have come to an anchor off Liardet's, and my vessel is laying very close in, and I certainly think it the best holding ground, the bottom being a hard blue clay or mud.
540. Q. Have you seen the plan of the proposed Pier at Sandridge? A. I have.
541. Q. Do you consider that at such a Pier it would be safe for vessels to lay moored to unload and load? A. Yes, I think so; but it will depend in a great measure on the breakwater that it is intended to construct at the end of the Pier.
542. Q. But supposing the breakwater or transept to be extended a distance of 300 feet, would not ships then be so enclosed as to allow of their unloading and loading in all weathers? A. Yes, I think they would. The protection afforded will be quite sufficient, provided the transept at the end be so constructed as to break the sea from the whole length of the Pier.
543. Q. Having regard to the shipping interests, whether would it be more advantageous to run out a Pier from Sandridge or from Williams Town, for all the purposes of shipping? A. If Sandridge were sufficiently sheltered, that would certainly be the best spot; but, as it is, I should prefer Williams Town, because there you are more sheltered in all winds, more particularly from the worst, by being under the Lighthouse Point. If, however, you put a sufficient breakwater where you propose, vessels may lay smooth enough at a Pier at Sandridge; in fact it appears to me to be quite practicable to run a breakwater right across the Bay, so as to have it all smooth within.
544. *By Mr. Campbell.*—Q. Do you know what the greatest depth is between the Lighthouse Point and St. Kilda? A. I have never sounded it, but I should think not more than six fathoms.
545. Q. Supposing a Pier to be made across from one point to the other, with a telescope bridge to allow the passage of vessels, would not that form a complete Wharf for vessels to lay at and unload? A. Perhaps so; but without a breakwater some distance from it, or being made sufficiently broad to sustain the shocks it would have to encounter, it might be injured by vessels laying alongside of it. It would however form a very great shelter and protection to vessels laying in the Bay, and enable them to unload by boats in the smooth water. There is another question that arises, which is, that if you made a close breakwater so as to admit of vessels discharging at it, you would prevent the escape of the deposits that are now brought down by the current from the river, and thus form banks to the detriment of your Harbor.
546. *By Counsel.*—Q. Do you know how far a Pier, constructed at Williams Town and run out into the same deep water, would have to go, in order to get into the same depth of water as that into which the proposed Pier at Sandridge is to run? I should say that you would get into deep water closer to the shore at Sandridge than at Williams Town.
547. *By the Auditor-General.*—Q. If it were proposed to form a Dock and Pier at Williams Town, with a Railway connecting it with Melbourne; and also to form the same at Sandridge, with a similar connection with the City; which, in your opinion, would be the most advantageous, or, rather let me ask you, which, as a sailor, would you take your ship to? A. As a sailor, I should of course prefer laying my ship alongside of the Pier which was most sheltered, and in the present state of the Bay that would be at the Williams Town side. I should not now anchor at the Sandridge side, but for the convenience of landing my Cargo.
548. Q. Will that transept at the end of the proposed Pier afford sufficient protection to satisfy you? A. If it is properly constructed it will.
549. Q. *By Counsel.*—Q. And if it is properly constructed, you think that it will afford quite sufficient protection? A. Perhaps so.
550. *By the Auditor-General.*—Q. Would it not be easy to construct a breakwater running out from Point Gellibrand, by adding to the ledge of rocks or reef that already exists there? There is no difficulty in the way, and I have no doubt that if a stone breakwater were carried out sufficiently far from where you describe, it would shelter the whole Bay; but then, by checking the deposit brought down by the current, it would tend to shallow the water of the Bay and to fill up the anchorage.

Mr. James B. Watson, called in and re-examined.

551. *By Counsel.*—Q. You wish to offer some explanation of your former evidence, will you be good enough to state what it is? A. I would merely desire to add something to my former evidence on the subject of the advantages offered by this line of railway. At the time of giving that evidence I considered that it would have been premature to have alluded to the matter, but as it has since been so strongly dwelt upon by many of the witnesses, I think that some reference to it by me is called for. The point I would refer to is that as soon as the proposed Pier is sufficiently constructed to be made available for the shipping, the public voice will demand

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its extension on to Williams Town. If the Committee would wish it, I could lay before them a plan, approved by eminent Engineers in England, for enclosing a bay much more exposed than Hobson's Bay is. And I wished to have my opinion on record in order to have something on which to base an application for the introduction of a clause to empower the Committee to extend their Pier, if they should deem it advisable, to the other side. The whole object of the Company is to advance the public good, and if the public good should demand the extension of the Pier, I wish to lay some foundation on which to base an application for giving the Company power to do so.

John Trenchard, Esq., called in and examined.

J. Trenchard, Esq.,  
3rd December, 1842.

552 *By Counsel*.—Q. You are solicitor to the Melbourne and Mount Alexander Railway Company? A. I am.

553. Q. It is proposed by that Company to form a branch line to touch at Williams Town on the way to Geelong? A. It is.

554. Q. You are also solicitor to the promoters of the present Bill? A. I am.

555. Q. And how do you reconcile it to yourself in being solicitor to two companies whose interests are conflicting; or rather, do you consider the interests of the two companies to be conflicting? A. My idea was and is that they would not be at all conflicting. It appeared to me that the wants of the City required some easier mode of communication with Hobson's Bay than that which now exists by way of the river; and the present plan struck me as being the most practicable, because it could be carried out with less difficulty than any other. Taking the Mount Alexander scheme as one that was to be general for the whole Colony, and therefore to be connected with Hobson's Bay by way of Williams Town; I also looked at the line now proposed, as one that was to act for the benefit of the City in particular. Without regarding the engineering facilities or difficulties that were interposed, I looked merely at the quantity of shipping in the Bay, and I came to the opinion that if the Hobson's Bay line could be formed speedily it would be of immense advantage, whilst the line from Williams Town in connection with the great lines from the interior, there would be as much traffic on the two lines as would be sufficient to pay a fair dividend to the proprietors. I did not look upon either scheme as a mere private speculation, but rather as a great public improvement, but one that would at the same time give a fair return for the money embarked in it. If the two lines are looked to only as a means of realizing a large profit, then indeed, one will compete with the other; but, regarded only as schemes for the general interest of the Colony they would not do so. It is my impression that they would rather assist each other, since the traffic from the City could be carried on by the Sandridge line, and the Williams Town line could be taken as a feeder for the great inland lines of the country.

556. Q. You think then that it would be of more benefit to Melbourne to have a line running to Sandridge and to the interior, than to have a line to Williams Town? A. Yes; we are yet but a young country, and the greater the means of communication we have with the interior, the more will our inland lands be cultivated, and the interior be populated.

556. Q. Have you any idea when the Mount Alexander line will come into operation? A. The engineers are proceeding as fast as possible.

557. Q. Will you be in operation in seven years time? A. Long before that time.

558. Q. Or within four years? A. I hope so; I hope that we shall, at all events, have a good piece of the line finished by that time.

559. Q. Do you not think, taking the evidence that has been given, that the present Company will pay all its expenses in three years—that the present Company will pay up all its outlay and expences before the Mount Alexander line comes into operation? A. It would be hard to say that, but I firmly believe that if it be formed quickly, it will pay a very fair dividend.

560. *By Mr. Campbell*.—Q. What rate of profit do you think ought to be reserved? A. About £25 per £100 ought to be the limit. In a country like this the rate of interest ought not to be less, since these sort of speculations are very different matters here from what they are at Home.

561. Q. Suppose no limit were imposed upon the Company, what rate do you think the public could afford to pay for carriage? A. I should always advise the Company to charge as low a rate as they possibly could, since I am persuaded that the lower the rate the greater will be the traffic returns by way of profit.

562. Q. If the Company were to demand the same rate as that now charged by the lighters, what rate of interest would that pay? A. The amount would be too fearful to contemplate, even for an instant.

563. Q. Looking at the present line as the one that must pay well at once, and at the Mount Alexander line, as one upon which the returns will be for some time doubtful, do you not think it would be advisable to amalgamate the two lines into one general scheme? A. It would, perhaps, be desirable, if the proprietors of the present Company were willing to do so. I should certainly hope to see a communication made between the two lines, but, as to an amalgamation, that is a mere private question, which regards the shareholders only.

564. Q. With a Jetty running across the Bay, an additional line to Williams Town would not be required? A. Not at all.

565. Q. And thus there would be a saving to the public? A. Yes.