

46. Would not the seas from north-north-east sweep into this bight with considerable force?—No, not with very great force.

47. Then, if not with great force, what is the meaning of that part of Sir John Coode's report where he says, "In the absence of a jetty of this character some temporary inconvenience from wave scend and undulation will occasionally be experienced; but seeing that a suitable work, if placed in the position of the outermost jetty or somewhat more to the north-east and nearer the end of the pier, would require to possess considerable strength in order to adapt it for resisting the heavy seas to which it would be exposed"? Now, if there is not a great "fetch" in the direction from north-by-east, or north-north-east, Sir John Coode is wrong in his inferences?—It would be almost a contradiction.

48. Do I understand that in your opinion Sir John Coode's report in that direction is not well founded?—I am not disposed to say that. If a heavy sea comes in from the north-north-east, no doubt great inconvenience would be felt by vessels lying inside; but, when I say there is no heavy sea upon this jetty, I am speaking comparatively. Any sea that has to get up in a distance of three and a half miles cannot of itself be a heavy sea; it is simply impossible. There is no doubt that the jetty there would be a vast convenience.

49. In the absence of such a jetty, would vessels be able to lie alongside that quay with a strong wind from the north-north-east?—Yes, with landward springs.

50. And you think you could put springs of sufficient strength to hold vessels?—Yes, undoubtedly; because if vessels were lying along the wall the sea would operate between the wall and the vessels, and assist the springs.

51. Will you state the depth at low water at the termination of the proposed work—Y Y?—From 19 to 20 feet. There is no record of the depth at the end, but inside it is 18 feet, and just outside 20 feet.

52. And what is the depth at a point 565 feet inside?—Between 15 and 17 feet.

53. With a depth of water of 15 to 17 feet, what draught of vessel would be safe in lying there?—They would require 3 feet 6 inches under the keel.

54. Then that position would only be safe for a vessel of about 12 or 13 feet draught of water?—Yes.

55. And that at the extremity of the work?—Yes.

56. What is the depth 500 feet inside the last point under consideration?—Somewhere about 13 feet.

57. Then, if the work should be restricted to the £200,000 referred to by Sir John Coode, the accommodation would be limited to one or two vessels drawing from 10 to 12 feet of water?—Yes, unless they hauled off at dead low water. These soundings were taken at dead low water spring tides.

58. The hauling-off would only refer to the number of vessels, and would not be of advantage to any vessel of greater depth?—No; certainly not.

59. Have you read Sir John Coode's report on the Waitara Harbour?—No.

60. Are you aware what class of vessels frequent that harbour at the present time?—Small steamers drawing perhaps 7 feet.

61. Are you acquainted with the harbour?—Well, I do not know much about it.

62. I would like you to state the cost of making concrete blocks at New Plymouth; I mean all the ingredients—cement, sand, gravel, and broken stone?—The total cost per yard in moulds would be somewhere about 18s. or 20s.

63. What is the cost per yard of the sand used for the purpose?—I can give you no definite estimate.

64. I want the details showing how this 20s. is arrived at?—I could not give it you from memory I could give it you to-morrow

65. You can put it in to-morrow, but in the meantime give as nearly as you can from memory the cost of the materials you have used—not your estimate for the future?—The stone costs 3s. per yard for breaking; but I would rather not give you details now, because I might mislead you. The total cost for that already done is 26s. 2d.

66. And that has been for concrete mixed, and placed *in situ* at once?—Yes; not made into blocks, but made under circumstances which would rather increase the cost than otherwise.

67. Will you state what this cement will cost per ton?—Five guineas delivered on the works.

68. Are you aware what cement costs delivered at Oamaru and Timaru?—I am not.

69. Would you expect the cost to be greater at New Plymouth than at Oamaru, for instance?—I should.

70. And also greater than the same material at Timaru?—I should.

71. On account of transhipment?—Yes. I may as well tell you that in the contract entered into with McEwen, of London, the specification is: Cement to stand a tensile strain of 350 lb. per inch; fineness, 2,500 meshes to the inch; and weight not less than 112 lb. per bushel. The cement already received—1,500 casks—has been tested by the agents for the Indian railways in London, and the breaking strain of White's cement is 480 lb. per square inch; that of Knight, Bevan, and Stery's cement, I think, was 375 lb.

72. Are you aware of the strain required by either the Timaru or Oamaru Harbour Board for their cement?—I am not.

73. You are not aware that they require the cement to stand a strain of 1,000 lb.?—The usual strain for a briquet of $2\frac{1}{2}$ sectional inches would be about 1,000 lb. Upon about 200,000 tons supplied to the Liverpool docks, the tests all averaged from 900 lb. to 1,200 lb. per $2\frac{1}{2}$ inches.

74. Then, according to the data you have given in that respect, the cement should stand a strain of about 440 lb. per square inch. If it is to stand a strain of 1,000 lb. for $2\frac{1}{2}$ inches section, that would be 440 lb. for the inch?—I am not well acquainted with the size of the briquet.

75. Assuming that you are correct in stating it to be $2\frac{1}{2}$ sectional inches, then the standard strain would be 440 lb. per square inch upon that basis?—Yes.