

13. We are told that it shifts now for 200 or 300 yards?—Yes. A southerly wind will come up and cut the south spit back a few chains in forty-eight hours or so.

14. Would those conditions be improved by dredging at the bar without having training-walls?—I do not think dredging would be of any use whatever without training-walls.

15. Which, of course, we know would be very expensive?—Yes, very expensive indeed, running into many thousands.

16. Do you know anything about the alteration in the depth of the river inside the bar between the bar and Foxton?—I believe it is rather bad this year. There has been a very dry season.

17. Would that affect the depth of the river?—Yes, in summer the level of the river goes down.

18. What do you say as to the proposal to dredge inside the bar at the shoals?—I do not think it would be any good. I think the Manawatu River carries more stuff suspended—more silt—than any other river in New Zealand, and if the members of the Commission were to see that river after a fortnight's bad flooding they would come to the conclusion that half a dozen dredges would make very little impression on it.

19. Do you think the silt brought down would have a scouring effect also?—Flooding would do a certain amount of scouring. I think there is really only one place you could call a shoal: that is down near the Heads. The rest are the convex banks composed of silt being deposited. These banks grow during a cycle of dry seasons, and that action accounts for the depth of water.

20. Do you consider dredging is necessary to remove those?—You do not know what you are doing by dredging. You may remove an effect and produce a similar cause lower down. That is one thing; and another thing that may happen is that immediately after you have completed the dredging you may get another big flood which will fill it up again. If you had the river under control, say, by means of submerged training-walls it might be possible to do something by dredging, but I cannot see how it is possible to do anything without them.

21. Do you suggest, then, that the condition where those shoals are could be improved naturally under any particular conditions?—No, I do not think so.

22. Will the tendency be for them to get worse?—I do not think so. If you get a cycle of wet seasons the current will cut the points off and you will get the usual depth.

23. That is what I mean by improving it by natural processes?—Yes. I did not understand you.

24. Even if you dredge the channel would you improve the conditions unless work was done lower down at the bar?—I think there are one or two banks that give them trouble inside, owing to the dry weather. One is at Robinson's bend.

25. I ask you whether you think it is of any use to attack the river inside the bar without also attacking the bar?—You might if you put in submerged training-walls. I do not think it is possible to do anything by dredging, because you are only delaying something coming on and not removing the cause. You do not remove the cause when you dredge—you are simply dealing with the effect.

26. We have heard a good deal from some of the witnesses as to the people of Palmerston North being willing to be included in a rating-area?—I am certain they would not agree to it—I am positive. I have noticed it reported in the newspapers, and I was in Court when the Commission was sitting and heard the witnesses making the statement. They are simply a few business men who look at it from their own point of view and without considering the welfare of the district generally.

27. You are sure the people as a whole would not agree?—I am certain.

28. *The Chairman.*] Do you think the people of Palmerston would not mind if the harbour was closed up?—Oh, yes, I think they would.

29. If the harbour cannot continue in its present state it had better be closed up?—My opinion is that as soon as you get a few wet seasons the harbour will be back to what it was before. A few years ago very small boats used to get frequently stuck in the river.

30. *Mr. Myers.*] What do you mean by that—that the river will not close up?—No, the river will go on just about the same as it is. There is no doubt about that. I do not think the Palmerston people would mind a rate if there was a prospect of having something effective done, but they are very dubious about attempting to do anything with that river.

31. Do you think anything could be done with the river by the expenditure of £1,500 or £2,000 a year?—Oh, no. I hold that you would have to take the whole five miles and a half and put it under control by means of groynes and training-walls, either submerged or some other system.

32. *Mr. Weston.*] How did you come to give evidence in this case?—I do not think I can tell you.

33. Who saw you first about giving evidence—were you asked by the Engineers of the Railway Department to go into this matter and give your opinion on it from an engineering point of view?—I was asked by Mr. Myers.

34. And how did you come to meet Mr. Myers?—I met him in the street.

35. What engineering work have you done in the last two years?—I am putting in some protective works in the river at the present time.

36. What works, and for whom?—In connection with the Kairanga River Board.

37. What work are you doing for them?—I am putting in a groyne in the Board district.

38. Are you the engineer for the Board?—No, I am the engineer for this particular work. They have no engineer.

39. What is the total cost of that work?—About £300.