140. And by the loop that would be saved?—Yes.

141. Now, the cost of maintenance of these two branch lines would be double the cost of the loop, would they not?—Only about the same, I believe; as, for instance, if you want a train a day each way between Greymouth and Kumara, it would travel over same distance if it went by the loop as if it went by the branch line.

142. As an engineer of some standing, do you not think a loop is preferable to this branch for opening up the country, and saving cost of maintenance and avoiding an unnecessary route?—I think the loop would be easier to work if traffic is slight; but if a great deal of through traffic is anticipated I think the branch line would be the best.

143. But you do not anticipate that the Greymouth and Hokitika Railway, if made along the beach, would have much traffic?—I do not think there would be much through traffic at present.

144. *Mr. McLean.*] Taking the flat line along the beach, would the maintenance be great?—No; it would be an easy line to maintain.

145. Then, taking the deviations and cuttings at the sides of the hill, is it very steep ground?—Yes, it is so; and, although that is a question I have not gone into in my report, it is a serious one. Nearly all the workings are on the south side—that is to say, the Hokitika side of the creek.

146. *Mr. Seddon.*] And your railway would also be on the Hokitika side of the creek?—Yes; we should have to follow the south side of the creek.

147. Could you not get below the slaughter-yard there, on the German Gully side?—We might. If it was made as a branch line it could be done right enough; but if made as a main line, with grades of 1 in 50, I am afraid we should get to such an elevation that we could not cross the creek without very great expense.

148. *Mr. McLean.*] What is your opinion of the permanence of the population of Kumara?—It should be a pretty permanent one—to extent of ten or fifteen years, at any rate.

149. *Mr. Seddon.*] Waimea and Goldsborough are about the two best places on the coast, are they not? You have not sufficient water to supply them with, I believe?—No; there is not sufficient water to supply the present demand.

150. What would a regular survey of the deviation line cost?—It would cost about £80 a mile—for twenty miles, about £1,600—or to provide for contingencies, say, £2,000.

151. *Mr. McLean.*] How much of the line is let by contract at the Greymouth end now?—Three miles and a half.

152. *Mr. Seddon.*] There is nothing to prevent the two bridges going on at the present time, is there—the construction of the two bridges across the Arahura and Teremakau Rivers?—The Teremakau Bridge cannot be gone on with until it is determined which route to take; and then most of the material for it will have to come from England, so it cannot be commenced on the ground for a considerable time.

153. *Mr. McLean.*] How long will it take to do that survey?—About three months.

154. *Hon. Mr. Gisborne.*] Did I not understand you to say the present line of railway would cost £220,000?—Yes; that is the estimate.

155. If branch lines were made they would cost £11,000 more, would they not?—If both branch lines were made, in addition to the main line, they would cost £50,000, in addition to the £220,000.

156. And if a loop line was made it would cost £60,000, in addition to the £220,000?—Yes.

157. Then the difference in cost between the branch lines and loop lines would not be great?—Not on that basis; but it must be remembered that, while the estimate for the branch lines is probably a liberal one, the estimate for the deviation is a minimum one.

158. Suppose a private company determined to make a railway line from Hokitika to Greymouth, and you were not only their professional engineer but also adviser—their general adviser—would you advise them to make a line along the beach, with branch lines to Kumara and Stafford Town, or would you advise them to make a loop line—looking at all the circumstances as you know them?—What I would recommend would be to make a main line along the beach, with a branch to Kumara only.

159. How much do you estimate that at?—The branch to Kumara could be made very cheaply. It would cost about £25,000.

160. Would your advice be modified by the possibility or probability that the line would be extended in future years, either by Greymouth to the East Coast, or by Hokitika through the Haast Pass?—No; I think not. I think that I would advise as I stated above, even if the line was never going any further at all.

161. Or if it was going further?—Yes, certainly so; if it was going further.

162. You know the railway system in England, I suppose?—Yes.

163. Do you not know of companies making detours in order to meet centres of population?—Yes; I do.

164. After all, the detour in this case would not be more by the loop line than eleven or twelve miles?—That is all.

165. *Mr. Seddon.*] And the estimate for the loop is £280,000, while the estimate for the original line, with the two branches, is £270,000?—Yes; but I want to say that this estimate for the loop is a minimum estimate.

166. *Hon. Mr. Gisborne.*] How long would the survey take?—Three months.

167. How much would it cost?—Say, £2,000.

168. *Mr. Seddon.*] With regard to the question of estimates again, I understand that, with the cost of plant for the branch line added, the cost of original line, together with the branch lines, would be exactly the same as the cost of the deviation?—The one is an estimate, and the other a minimum estimate. If I was asked what it would really cost to make the deviation line, I should say it would cost fully £100,000 more than the original line along the beach.

169. In taking a fair average, you said £6,000 a mile?—That was the average of the beach line, not of deviation.

170. *Hon. Mr. Gisborne.*] For £2,000. I suppose we could distinctly know in two or three months the exact cost?—Yes, I think so, with moderate weather.