

be somewhere about £50,000 apiece, and it is inevitable that we would have to purchase property alongside so as to give access to the people direct without having to go up over gradients. The estimated cost of £350,000 would be increased by 50 per cent.

The estimated cost of that scheme would be, what?—£850,000 without compensation for the closing of streets.

Then there is a third alternative scheme?—The third alternative is much on the same lines as alternative scheme No. 1. If you remember, the alternative No. 1 scheme was for making a purely passenger and local goods station on the present site, with a sorting-yard to the north. This is providing for that same traffic, but with a sorting-yard and an engine-depot to the south. The main difference between that third scheme and the No. 1 scheme is that in the third scheme I have included the bridges. It runs altogether into about £850,000, but if you want a bridge at West Street, and not close it, it would mean £30,000 or £40,000 more.

Then you go into a further alternative scheme on page 4?—Yes, that is the one suggested by Mr. Holmes.

You estimate the expenditure on Mr. Holmes's suggested scheme at £1,450,000?—Yes; that is, assuming that in the course of construction we would be allowed to divert the railway from the centre of the street along Main Street farther towards one or other of the boundaries, and *vice versa*, while making retaining-walls, which are essential in the scheme. We would have to make retaining-walls the whole way along unless we bought up properties on the whole frontage on each side. Either that or else a trestle the whole way, in which case the expense would be enormously increased.

That involves raising the station and raising the track?—It means raising the track 20 ft. up., and limiting the present site to purely passenger business, because you could not without enormous expense accommodate all the traffic, and it would be very inconvenient in the case of goods traffic.

Then Mr. Holmes made an alternative suggestion, that you should lower the level of the line?—I did not understand him to say that. I thought he meant subways instead of overbridges.

He suggested lowering the line, and what do you say as to the advisability of that?—You cannot do that where there is water.

In the first place, what do you say about the danger of water?—Your lowered line would have to have a watertight case, which is absolutely impossible.

Take the Square: you said before that the datum in Palmerston North is 100?—Assuming a certain datum, the level of the Square is 100·42, and the flood-level 98.

Does that mean that immediately you lower your line by about 2 ft. in the neighbourhood of the Square you are running into the danger of water?—A very few feet indeed.

Mr. Holmes said, as an argument in favour of that, that you should take the neighbourhood of Terrace End and look at the ballast-pit there where there was no water. What is the difference in level between Terrace End and the Square?—28·20 ft. That is the lowest part of Terrace End. It goes up to about 30 ft.

It is plain, therefore, that a comparison between the position in Palmerston North at the Square and the position at Terrace End is useless?—Quite useless.

Furthermore, supposing you had not the difficulty of meeting with water, would Mr. Holmes's suggestion be practicable, having regard to the fact that you are going up all the time in the neighbourhood of Terrace End to Bunnythorpe?—It would mean very great development of new construction-work necessary to get up to the level again.

And all that means heavy cost?—Very.

He also made some suggestion that instead of having overhead bridges you should have subways between Palmerston North and Terrace End?—Yes.

That still involves you in the same difficulties as you find at present in regard to the station-site and yards?—That is so—exactly the same difficulty.

What do you say about this difficulty of subways?—Subways anywhere between the Square and, say, Scandia Street are quite out of the question; but in any case a subway would cost quite as much as an overhead bridge.

Why out of the question?—On account of the water. It is possible that we might avoid the water difficulty in Scandia Street, but not between Scandia Street and the Square.

So that, looked at from any point of view, your difficulties in connection with the Palmerston North railway facilities seem to be very serious?—There is no doubt about that.

And whatever you do is going to involve in considerable expense?—Very large expenditure.

Had you taken all those matters into consideration before you came to the conclusion that from every point of view the diversion is the best scheme?—I had.

*Mr. Marchbanks.*] With regard to the crossings north of the Square, supposing your track was lifted 5 ft., 6 ft., or 7 ft. and banked, that would mean you would get the subway 8 ft. or 10 ft. in under the present ground-level?—If you raised the level 8 ft. at Alexandra Street the distance between the street frontages is 132 ft., and you must make provision in any scheme you are going to carry out for ultimately four lines of railway. We have three lines at the present time. That means 54 ft. total width. If you are up 8 ft., you cannot then have banks for the 54 ft. width, which means concrete walls and complications, which add very seriously to the cost unless you are prepared to buy frontages. In the present grades it would be pretty awkward to do, and you are still faced with the question of what you are going to do with the shunting.

How would you put a subway there?—You cannot put the subway there. [Plans discussed.]

*Mr. Luckie.*] In connection with your estimates of the cost of the deviation as indicated in the statement put in, you state, "Main deviation, station-yards, locomotive-depot, &c., £600,000." Does that include all the subways and overbridges which you are going to make?—Yes.

Both for vehicular as well as pedestrian traffic?—Yes.