

more concerned about was to show in what way something practical can be done to improve the situation.

"Are we making too much profit?" asked Mr. Mainland, having Mr. Ingoid's remarks in mind. "I think builders can clear themselves of any charge of exploitation of the public. We are all competing against one another, and we find that in our painters', plumbers', electricians', and blacklayers' work they are always within a few pounds of each other. And we have to include their prices in our quotations. So far as timber is concerned, we buy at list prices, and they govern this aspect of building costs. Hardware can be bought at the store, and everybody knows the prices. There is nobody at a disadvantage in buying these lines, and none of us could do much better than the other.

"As for labour, you can estimate this cost very closely. It is practically in the vicinity of 30 per cent. of the total cost of the house. You add this to the cost of the timber and hardware, both of which are out of our hands, and you can see for yourself if builders make any exorbitant profit. In a five-roomed house there are practically 10,000 feet of timber, costing, on the average—taking first-class and O.B.—£2 per 100 feet, which brings the cost of timber to £200. Excavation is usually a very important cost factor in a hilly city such as Wellington, and this may have been completely overlooked in our visitor's general comparison with Queensland conditions.

"The hilly nature of the district also adds to the cost of cartage. To take a load up to the hilly residential suburbs of Wellington costs at least 15s. for a three-horse dray. The most this load would comprise, if the timber is green, would be 600 feet. If dry, it might run to 1,000 feet. But our critic talks of carrying big loads up to 4,000 feet—'not in Wellington' is all I have to say."

#### SUGGESTED SAVINGS.

If the high cost is not in the profit, where is it to be found? was the natural query of the interviewer.

This drew some important suggestions from Mr. Mainland.

"A lot of timber could be cut down," was Mr. Mainland's reply. You might be able to leave off the sarking from the roof where iron is used, and thus you save the cost of about 2,000 feet of timber, plus the labour employed to cut it and put it into place. The cost of labour for sarking is 7s. 6d to 10s. per square, and the cost of the sarking is 30s. per 100 feet. In a roof of twenty squares, it would be possible, by a relaxation of the building by-laws, to save at least fifteen squares by putting the iron on the purlines. It would thus be possible to save up to £40 on the roof alone. You could use 3 x 2 purlines, and stretch your rafters to three feet apart, with complete safety.

"Coming to the framing, in certain cases I think we could do with two or three more inches on the centres, making 20in. instead of 18in. centres as now required by the by-laws. In ceiling joists, they could be spaced to suit the materials. If plaster boards are used, the joists could be spaced and battened to suit. You could hardly go past the by-laws with flooring, but the few suggestions I have made would lead to an appreciable cheapening of the cost of a moderate-sized dwelling in wood, if the by-laws were made easier. As for the stringent sanitary requirements, I do not know that we could relax, because the requirements have so direct a bearing on the health of the community, though the result is that all our plumbers' work is expensive. We are paying £5 per thousand for bricks, although our Queensland critic gets his for £3, and we must build chimneys of brick. So far as I can see, there is not much chance of saving on the plumbing, electricity, painting or brick-laying. It seems from recent tenders that painting is being done at a pretty low rate, and the competition is keen. People can rule out any idea that builders act in collusion, because anyone who handles tenders knows that competition is keen. Now and then, a builder submits a fairly high price in comparison with others, but this is usually due to the fact that he is very busy. If we could use red gum in New Zealand, as they can in Queensland, we could get heart timber for 17s. per 100, whereas the cost of heart timber in New Zealand is £3 10s.

"Our by-laws were framed when timber was cheap and plentiful. But to-day, while the same standards of size and strength are insisted upon, timber costs three to four times the price; therefore it is reasonable to suggest that we might make timber go a little further, especially as there need be no danger in revising the by-laws on these lines. It would be a wise plan if the architects co-operated with the builders in approaching the Wellington City Council with a request for reasonable revision of the building by-laws, with the object of cutting down the cost of dwellings. There need be no approach to Jerry-building if the framing of new by-laws is done by competent persons. And I might add that New Zealand builders are quite enterprising enough to efficiently carry on the building industry without outside assistance."

#### BY-LAW REQUIREMENTS AN OBSTACLE TO ECONOMY.

Mr. Alec. Campbell, another well-known Wellington builder, strongly corroborated Mr. Mainland's view that over-stringent building by-laws are partly responsible for high building costs. "If builders here are making £200 profit on a house, as Mr. Ingoid suggests," commented Mr. Campbell, "it is a wonder that Mr. Ingoid does not start business in Wellington, where, on his own figures, he would soon amass a fortune. If, as he says, he built 31 houses last year, and could do the same