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THE ENGINEERING ASPECT OF LOCAL SELF-GOVERNMENT.

BY T. W. SEAVER, B.C.E., Municipal Surveyor

THE subject of Local Self-Government is a large and important one, and opens up a wide field for discussion and research. It forms indeed part of the very foundation of all civil and religious liberty, in so far as it enables every individual member of the community to have some share in the framing of its domestic laws.

It is a system founded upon one of the grandest principles of daily life, that of self-help, and is, when properly understood and carried out, one of the most important factors in a nation's progress.

In the more restricted sense of municipal government, for the purposes of improving the physical aspects of a country, the subject is still a wide one, for in studying it we have to trace the history and progress of various county councils, shire councils, corporations, and so forth, by means of which the vast work comprised in the opening up of a new country, and the improvement of the conditions of the older and more settled districts is being carried out.

But even in this aspect the varied and complicated system of Local Government could barely be glanced at, dealing as it does with acts of Parliament, methods of procedure, elections

of councillors, their prerogatives and powers; all of which are outside the scope of this paper.

Narrowing the subject down, the author will endeavour to confine himself as closely as possible to his text, and deal solely with the question from an engineering standpoint. He is induced to bring this matter before you at the present time, because after so many promises made at so many times by so many politicians, and knowing that the great mass of people in the country districts of this colony desire to have the expenditure of their own moneys and the carrying out of their own local works, he considers that the granting of this boon is within measurable distance, and he has the more reason to think so when he finds the promise made once again in the Governor's speech at the opening of Parliament in these terse and concise terms :—

“A bill has been prepared, and will be immediately submitted for your consideration, to confer upon the people of New South Wales the advantages of self-government, giving to the inhabitants of defined areas full authority in the direction of the local affairs of their respective districts.”

Now, if this bill is to become law, it behoves every person who is likely to be affected by it to inquire closely into its provisions, and to make such suggestions, which, if embodied in the bill, would add to its usefulness and efficiency. It is in this spirit that the author approaches the subject, and, on behalf of a future race of municipal engineers, he offers to this Association, and through it to the law-makers of the colony, such suggestions, as a good many years' experience of municipal work in all its various branches enable him to set forth.

The history of Local Government may be said to date from the 8th century, at which time a number of the petty kingdoms of Great Britain were cut up into shires—a word derived from the Saxon *sciran*, to divide. The civil, military, and judicial heads of these shires were the ealdormen (or earls), so that although the curse of Adam may have descended upon our worthy mayors and councillors, otherwise aldermen, yet in their official capacities they bear an ancient and an honoured name.

The subdivision of shires are termed ridings, and derive their name, not as might be supposed from the fact that it is about one day's riding on horse back over them, but from the Saxon *trithing*, a third part, and in the Doomsday Book we find the shire of York or Yorkshire divided, as it is at present, into three trithings or ridings.

So far as he knows, the first shire surveyors were elected in the reign of Phillip and Mary, A.D. 1555, when an act was passed providing that each parish should elect two surveyors of highways to see to the maintenance of their repairs by compulsory labour, the preamble setting forth that "the highwaies are now both verie noisome and tedious to travell in, and dangerous to passengers and carriages."

We find that in the present day, the opening up of a country, and the making and maintenance of its roads, bridges and other works, is carried on in various ways, but of these it will serve the author's purpose if he mentions three, viz.:—The Irish system of county surveyors, the Victorian system of shire engineers, and the New South Wales system of departmental work. Now each of these has its good and its bad points, and from the three a combination might be made which would form, he thinks, the best method of working, and this possible combination he will consider later on.

Before, however, going into the question as to the relative merits of these systems, it will be well for us to have a very clear idea as to the circumstances out of which the appointment of shire engineer arises; what are the duties pertaining to his office, and how he should carry on his work, so as to expend the money of the ratepayers to the best advantage.

The manner in which the shire system has evolved in Victoria, where the law has allowed it to expand, is a most rational one. After a new district has been opened up by explorers and pioneers, they are soon followed by a stream of settlers and selectors who have to wander from the older

and more populous districts in search of new selections and homes.

For the first year or so the selector's time is wholly taken up in making his ground ready for crops, clearing timber or excavating dams; he has no time to see after new roads and bridges, but so long as his pack-horses can scramble in with provisions he is quite content. But when his land is cleared and partly sown, he wishes to get his cattle on and off it, as do his neighbours with regard to their holdings, so they meet together and work with a will and soon produce a passable stock track. But once again—the hardest of their fight with nature is over, they are reaping the first fruits of their toil and they feel that now they are entitled to a certain amount of comfort; the pack-saddle has given place to the waggon, and the riding saddle to the buggy—better roads are now required and more substantial bridges must be erected. This new labour is beyond their means and capabilities, so they set to work once more, but this time it is with their heads and not with their hands. They hold meetings and urge upon the government the necessity of forming their district into a municipality. After full inquiries into their population, rateable value, prospects and so forth, they effect their object and attain a new dignity, being corporate members of the body known as the President, Councillors and Ratepayers of the Shire.

Amongst the first duties of this new body is that of electing a surveyor or engineer, the title of surveyor being, as we have seen, a very old one and handed down to us from the time of the old road-surveyors, those plodding, energetic men of highways and byeways. The duties of the officer having, however, been very much extended in recent times, the title of shire engineer is much more appropriate. His position is a very peculiar one, he must know something of most things and be ready to do almost anything. He will have to deal with such varied matters as privies, slaughterhouses, iron and wooden bridges, architecture, surveying, irrigation, gas works,

water works, exploring, bookkeeping, besides all the ordinary routine of shire work. The engineer is in a very true sense the most important officer in the shire. He it is who is wholly and solely responsible for the condition of the roads, bridges and all other works; it is by his report that the councillors are guided when apportioning the various sums of money amongst the different parts of the shire, and when letting contracts, and the author does not think that even the councillors themselves fully appreciate the fact that by the judicious wording of specifications, large sums of money can either be saved or wasted in the carrying out of almost the same class of work.

McAdam, in his system of road-making, remarks with reference to the money available for works: "These funds, considerable as they are, continue to be expended nominally under the direction of the commissioners, but *effectually* and *practically* under the surveyor." Again he says: "Much depends upon the selection of the officer to whom the charge of the roads shall be committed, he must have a considerable share of general information respecting country business, and the subject of road-making ought to have been very well considered by him; his station in society should be such as to secure for him the confidence of the commissioners, whilst it commands the obedience and deference of the subordinate officers." These remarks are very much to the point with regards to the appointment of shire surveyors at the present time. It is no doubt the duty of the council to see that these officers are properly qualified as regards professional knowledge, but they should also see that he is suitable in other respects; he should be sober, honest, upright, and of fixity of purpose, for he will find on every hand temptations to step aside from the straight line of rectitude, perhaps to oblige a councillor—whose vote is useful to him, perhaps—to make it easy for a contractor, it may be from motives of friendship or from other and more weighty reasons. Indeed the author has heard a councillor of an important city say at the election of an engineer: "There are

some qualities a candidate should possess which are not to be found in the Local Government Act."

Still, when an engineer proves to be the right man in the right place, he is in a position of great usefulness to the country at large. Upon this subject Mr. Dobson remarks in the preface to his "Pioneer Engineering" as follows: "There is nothing," he says, "very attractive in the life of a Pioneer Engineer. The duty is generally very hard, the pay scanty, and the work quite unappreciated by the public. But there are few ways in which a man can spend his life more nobly, more usefully, or more happily than in devoting his practical skill and scientific knowledge to the preparation of a new country for healthy and prosperous settlement of his fellow creatures."

Now, seeing that the engineer occupies a position of so much importance in the shire, it might be expected that it would be made as pleasant and easy as possible for him, instead of which we find in, at least the great majority of cases, that he is hampered and hindered on every side, he finds he is supposed to be the factotum of a number of individuals, who, as a rule, are as much inferior to him in intelligence as they are in social standing; he has been placed in his position after a stiff contest with other candidates by the individual votes of the majority of the councillors, and he is expected not to forget that fact.

He knows that his tenure of office is at best a very uncertain one, as if he falls out with any one of them (and who would not), it will be the first cloud upon the horizon of his happiness; other clouds in the shape of some of the particular councillors' clique loom in the distance, and before the storm breaks—and he need not think he can keep it from breaking—he had better accept another appointment.

Now why should this be so? Why is not the fact of a man doing his duty properly, of itself, sufficient to make his position secure? and why should he fear the enmity of

individual members of the council? The reason is this—by the very necessity of the mode of his election, he has had generally speaking, to place himself under obligations to the councillors who vote for him, so that, though he is supposed officially to carry out the wishes of the council, yet he is also required to carry out the wishes of the councillors—a very different thing; then it becomes the story of the old man and the ass, with the unfortunate official as the ass.

This difficulty does not exist in those shires who only employ an engineer to carry out special works, and who pay him a commission on the cost, for in that case he has definite work to do, and he does it in an independent manner.

The author considers what he has just stated to be a vital point in connection with his subject, and one of the first that requires to be amended, and to show that he has not at all exaggerated matters he will give, in as condensed a form as possible, some examples, taken from the working of various shires, of how engineers have been treated by the councillors.

A shire-surveyor, who was also a B.C.E., was asked to include in the voucher for works near a town, an amount which had been expended on the construction of a bridge twenty-five miles away, under another grant. Of course he pointed out that the works were different and far removed from each other. He was, however, ordered to forward the claim, "cooked" as it was. He did so, but also on his own account sent an explanatory letter, which resulted in the Public Works Department refusing to allow the items of claim relating to the bridge. Some days afterwards the President went to town and wired up to the Engineer to send down the vouchers as at first made out as he had seen the Minister and it was all right. But the Engineer knew the President, and did not think he could trust him, so he refused to forward the vouchers. This resulted in the President accusing him of being the cause of having the Council kept out of their money, and actually called a meeting "to consider the relations existing between the Council and their

Engineer." However, after things had been made very unpleasant for the officer, correspondence with the Public Works Department showed that he had acted quite correctly, and that the President's statement was false. The end of it all was, that as some of the President's friends took his part and were consequently ill-disposed towards the Engineer, he resigned and obtained a much better appointment, whilst the President got mixed up with several unpleasant law cases, in which an important officer from the Roads and Bridges Department said he was not to be relied upon, and in which also he was strongly denounced by the Judge.

In another case, in which the Engineer was a certificated surveyor, a misunderstanding occurred at the first meeting after he had been appointed, which led to some of the councillors taking a bitter dislike to him. It occurred in this way: "Towards the end of the meeting one of the councillors asked a question about some road repairs, and, with the concurrence of the others, told the Engineer to keep on the day-man who had been doing the work; of course the Engineer did not know anything about this man, but found he had been working for his predecessor, and, after his verbal instruction from the council, wrote to him to go on with the work. In a few days he got a letter from two councillors teeming with abuse towards himself, asking by what right he had put on that particular man, and threatening to hold him personally liable for his wages. Now if the engineer had gone to these councillors—who had no right to have sent such a letter—and asked them to hear his explanation, he would no doubt have got on much better—but then he would always have been to some extent under their control; instead of doing so, he wrote a formal reply, saying he would lay the letter before the Council at the next meeting, which he did, and the question of the appointment of that particular day-man was fought out by the councillors interested.

Now it turned out that this man belonged to a party in