TREE-PLANTING IN STREETS.

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(MEMBER.)

THIS subject has not received the attention of local authorities which it deserves. Persons who have travelled on the continent and who know some of our own towns on the south coast cannot fail to have been impressed with the attractiveness which trees add to thoroughfares and to the buildings which abut upon them. The hard ugly lines and the equally unæsthetic colours which are usually prominent in the domestic architecture of the present age are softened and their asperities reduced by the cloak which is afforded by the green foliage of the trees which the authorities of those towns in their wisdom have established. Under the glaring heat and the dazzling rays of the mid-summer sun, such trees give a welcome protection and relief to the eyes and the body of the pedestrian. To the merchant and to the toiler who are compelled to work in factories, warehouses and shops in districts where bricks and mortar are supreme and green foliage is absent, the relief and rest afforded by trees in thoroughfares where he resides are appreciated to an extent which is not generally understood by local authorities. Indirectly, tree-planted streets serve to add to the rateable value, in the same manner as the presence of matured trees around a residence add to its rental value. It is therefore a matter for the consideration of local authorities whether prudent expenditure on the planting of trees in public streets is not profitable for the towns which they administer.

Until the passing of the Public Health Acts Amendment Act, 1890, it was doubtful whether local authorities could lawfully plant trees in public roads. But by the provisions of section 43 of that Act it is enacted that "an urban authority may if they see fit cause trees to be planted in any highways repairable at large and may erect guards or fences for the protection of the same."

The power is restricted to urban authorities only, and rural authorities can only legalise the planting of trees in highways by obtaining urban powers under section 5 of the Act of 1890. It should be observed as

evidence of the inability of local authorities to plant trees in highways prior to the adoption of the Act of 1890 that the Lewes Corporation were convicted on indictment, at the Sussex Assizes in 1886, of causing a nuisance to the highway by the planting of trees thereon.

There is a tradition amongst highway surveyors, from the time of McAdam, that trees should not be allowed to grow adjacent to highways, as it is alleged they exclude sun and air, and tend to keep the surface damp. In some rural districts this tradition is still acted upon, and some surveyors use all the powers they possess to secure the removal of timber trees. It is, however, a mistaken policy, and one which is not consistent with the position taken up by surveyors generally, that roads cannot be kept sufficiently moist owing to the action of fast-moving motor traffic. On the one hand, therefore, trees which by their shade assist in maintaining roads moist are objected to, whilst a loud outcry is at the same time raised against the dust which is created by motors owing to the dryness of the road surface, and all kinds of specifics are called for to combat the nuisance.

Another objection sometimes raised is that fallen leaves constitute a nuisance, and increase the cost of road scavenging in urban districts. It may be granted that a slight additional cost is incurred in removing leaves during the autumn, but this is too infinitesimal to be serious, while the advantages accruing from the presence of trees greatly outweigh this objection.

These are the principal objections which can be raised against tree planting in public streets, and when once overcome no authorities ever desire to see the practice abolished.

During the last ten years, owing to the clear-sightedness of the local authority with which he is associated, the author has supervised the planting of some 7,000 trees in roads, and as a consequence it is probable that no town in the kingdom of similar size has so many boulevards or is so embowered with foliage, making it an especially attractive residential suburb highly appreciated by the city merchant who enjoys the relief and the change from the bricks and mortar of the metropolis.

It has been found by experience that the best practice is to plant the trees 30 feet apart and to place them within about 9 inches from the back of the kerb. Excavations are made in the path 2 feet wide, 3 feet long, and 2 to 3 feet in depth, and into this is placed up to within 9 inches of the surface, carefully selected mould with the addition of a little stable manure. The tree, which should have roots with plenty of fibrils to ensure successful growth, is planted in the centre of this and the soil is well rammed around it.

The use of iron guards to surround the trees is, the author considers, objectionable, and the cost is also prohibitive. All that he has found necessary is to provide a support for the young tree against winds by means of a stout larch pole (known as a ricker pole) about 14 feet in length, which is driven well into the ground, and the tree is secured to this by means of wire wound round it, with a strip of tarred felting to prevent the wire cutting into the bark. These ricker poles are stripped of their bark for 2 feet from the bottom, pointed, charred over a fire, and then dipped in boiling tar to protect the portion in the ground from decay.

In order to preserve the young trees from injury by youths lacerating or stripping the bark with knives, and also to protect them against horses gnawing the bark, the author uses galvanised wire netting of 1 inch mesh which he winds twice round the tree and the pole attached to it to a height of 6 feet, the ends being secured by wire; and this has been found to answer most successfully.

Time for Planting.—The best time for planting is between the end of October and the beginning of March.

Selection of Trees.—Care requires to be exercised in the selection of trees so as to suit the soil in which they are to be planted. The author's district comprises chalk soil over one half and clay over the remainder. Trees, however, such as planes, which thrive luxuriously on clay cannot be made to grow on chalk, and limes, which are very successful on chalk, will not thrive on clay. He has found limes, horse chestnuts, beech, sycamore, Norwegian maple, and Camperdown elm, answer on chalk soils, whilst on clay soils the plane, sycamore, horse chestnut, maple, and Camperdown elm have been extensively planted. Care is, however, taken to plant different varieties alternately and not to have one variety running along any street.

In specifying for the supply of trees the author requires that the circumference of the stem at the ground level shall not be less than 7 in. and that the lowest branch must be at least 7 ft. from the ground level, whilst the roots must show healthy fibrils as distinguished from tap-roots. As the tree grows the lower branches are lopped until the lowest branch is not less than 10 ft. from the ground.

Cost of Planting.—This is as follows, viz.:—Ricker poles, 1/3; tree, 3/-; wire, 1/-; soil, manure, labour, and cartage, 3/6. Total, 8/9 per tree.

In order to encourage the planting of newly developed streets, my Council some years ago inaugurated the system of planting such streets immediately prior to their being made up under the Private Street Works Act, 1892, providing the owners contributed at the rate of 2d. per foot

frontage of their premises, the balance of the cost being borne by the Council. This method has been much appreciated, and owners willingly pay this sum to secure the carrying out of the work, recognising the influence of tree-planted streets on the letting value of their houses, whilst each year the Council continue to plant at the cost of the rates in streets adopted as highways and which have a width of not less than 36 feet, such a number as will ensure that in a very few years the whole of the streets, which are not already bordered by overhanging trees from private gardens, are planted with trees.

From the hygienic point of view much could be said in support of the practice of tree planting in towns, and as to the purification of the atmosphere by the absorption of carbon dioxide and the liberation of oxygen by the leaves of the trees. Sufficient has I trust been shewn to indicate to local authorities the importance of the subject of tree planting in public roads so as to enhance the amenities of town life, and to render towns attractive and more healthy.

[*This Discussion applies also to the Paper by MR. W. W. PETTIGREW, page 638.*]

MR. J. S. BRODIE (Blackpool) stated that he had experienced the greatest difficulty at Blackpool in getting trees to grow satisfactorily in the streets, and if Mr. Pettigrew could give some hints as to how this difficulty could be overcome on the exposed foreshore and other parts of Blackpool, he would be glad. He had fought this question of tree planting by the sea for many years now with varying success, but he thought his prospects now were better owing to the help which he obtained from an exceptionally able practical gardener. He had found that sycamores and Scotch elms were the most successful trees in exposed positions.

MR. H. A. GARRETT (Torquay) quoted his experience at Torquay, where the foliage was most profuse, and the greatest difficulty he had experienced was the keeping of the trees within bounds. He was sorry Mr. Pettigrew had omitted the lime. The lime at midsummer was a most beautiful tree, and the lovely aroma on a June morning from the lime avenues at Torquay was the pride of the town.

He recommended lime and plane planted alternately; these trees, although late coming into leaf, held on their foliage until late autumn. The chestnut was not recommended, as it came into leaf very early and was liable to be frostbitten by late frost, and so have its beauty destroyed for the rest of the summer.

MR. E. G. MAWBEY (Leicester) said they had recently experienced difficulty in some of the streets of Leicester by reason of the rapid growth of black Italian poplars. In the case of one very long road, where black Italian poplars were planted some twenty-five years ago, they grew to such an enormous size, notwithstanding frequent pruning, that the residents complained very much of the obstruction of light and air and of the damp arising from them. There appeared to be only two remedies: either to remove the whole of those trees and plant new ones, or to pollard them. He adopted the latter course. Owing to the appearance of that long street of tree stumps great complaints were received at first; but to-day, as he noticed from personal inspection, on each stump had grown a beautiful top and the street was quite a picture. He did not, however, think that these trees were suitable for town streets, generally speaking, excepting perhaps for very wide thoroughfares with wide footways, and where the houses were well set back.

ALDERMAN S. PATEY (Leicester) dissented from the inclusion of the chestnut as a suitable tree for street planting: firstly, because the tree in question was a fruit-bearing tree, and consequently youths indulged in throwing stones to the annoyance of the residents; secondly, because the tree was of such full growth and close foliage that light and air were obstructed, to the loss and annoyance of the residents. Mr. Pettigrew mentioned the Catalpha tree as a suitable tree for planting. That tree was very little known in England, but was most beautiful, bearing flowers, and it was altogether very ornamental. He doubted that this tree was of too delicate a nature for ordinary planting, but given a suitable situation it would make a most beautiful avenue; though it would be unsuitable for any but suburban areas.

MR. W. W. PETTIGREW (Cardiff), in replying, said that although he mentioned certain trees as useful for street work, it did not naturally follow that they were suitable for every kind of street. The question of suitability had to be decided upon a variety of grounds, and could only be done by one on the spot.

He did not think it practicable to root-prune street trees. He feared the only way of getting over the difficulty mentioned was to plant fastigiate forms, the branches of which did not spread. It was possible to get mop-headed acacias with stems 12 ft. high by ordering them a season or two in advance from nurserymen, who would have them specially grafted.

In reply to Mr. Brodie, of Blackpool, he stated that the best trees, so far as he knew, for seaside towns were the elm, sycamore, and beech.

MR. A. E. COLLINS, MR. HURST, MR. C. H. COOPER, and MR. C. BROWNRIDGE also took part in the discussion.