

## CHAPTER XXIX

### COST OF CONSTRUCTION OF SPORTS GROUNDS

The cost of construction of a Tennis Lawn or a complete Sports Ground depends upon the nature of the soil, the levels of the site, the standard of excellence required and a multitude of minor factors connected with the preparation and treatment of the soil both physically and mechanically.

The more care that is given to the preparation of the soil, the greater will be the cost of the work and the better will be the results; but as this subject is so difficult to explain clearly to those who are not intimate with it, it is usually ignored in part or whole with the result that grounds when finished are frequently disappointing and both difficult and expensive to keep in order. There are very few contractors who are really masters of this craft, and what chance have they got of securing the contract when the work is put out to tender?

At least 75 per cent. of the cost of construction is absorbed by labour, so is it not obvious that the lowest tenderer intends from the start to put in the least amount of work? If this is not so, how does he intend to do it?—presumably by magic.

I will now give a few examples, showing how and where the money goes, and explain why one quotation may easily be 100 per cent. higher than another.

In all cases where there is any levelling to do, it is imperative that the whole of the top spit soil be removed and replaced after the ground has been levelled out with the subsoil.

If this is not done, and very carefully at that, failure is certain, but it means three conscientious movements of the soil instead of one simple one.

The turf can either be lifted and replaced with care, or without care, at possibly half the cost.

If the mechanical or chemical condition of the soil is not suitable, and receptive to the growth of fine grasses, it should be examined and any deficiencies made good.

The question of drainage, particularly of clay soils, is of the utmost importance, and it is worse than useless to expect a few lines of pipes buried in the clay to keep the soil sufficiently dry for Winter games.

Many people talk knowingly about the "draw" of drains, but if water cannot penetrate soil vertically, it cannot horizontally, so how can drains "draw" in such cases? They do not, and one only too often sees large puddles in their immediate vicinity, whilst the drains themselves are quite dry.

Then think of the awful condition of many football pitches, which in the Winter are frequently nothing more or less than seas of black, slimy mud, which effectively robs the players of their speed and skill, and destroys all interest in the game.

These mud patches are sometimes laid over the most elaborate system of drains, with thick cinder foundations, and yet the water cannot get away; to the utter amazement of all concerned.

The reason why the water cannot get away is very plain indeed. The usual specification makes provision for 6 inches of good loamy soil to be spread over the cinders, and finished off with 2-inch turf, making 8 inches in all.

A good loamy soil, or a good holding soil, as it can be generally more accurately described, is usually composed of such fine particles that it becomes impervious to water when alternately churned up by the players' feet and squashed by the roller. Now it would seem impossible, after going to the expense of putting in an elaborate system of drains, that the Contractor and Principals should lack the necessary imagination to ascertain how long it would take the rain to penetrate the turf and soil and reach the elaborate filter-bed provided to deal with it. It never seems to strike them that if the water cannot penetrate the soil quickly, the pitch will be wet, soft, muddy, and wear badly in spite of all the drains. It may not be possible to find the actual grade of soil required within an economical distance of the ground, but the majority of sports grounds are in the near vicinity of large towns or cities where cinders, breeze or crushed clinkers can be obtained in abundance. If the nature of the soil available is so fine that it will hold water, it should be broken up by mixing in sufficient cinder to make it so porous that it cannot hold water. This, of course, adds to the first cost of the ground, but the ground

would stand up to its work, wear better, the standard of play would be higher, the cost of upkeep reduced, and the manager or committee would have one worry the less.

There are two great questions to consider when making a Sports Ground.

Are the geological structure and nature of the soil suitable for the games that are to be played upon it, and is the ground likely to be a success from the players' point of view ?

If the soil is unsuitable, it is imperative that it be treated in accordance with its requirements, and if this is not done, it cannot be a success from the players' point of view, and it will be a constant source of trouble to the Committee and ground staff, and unnecessarily expensive to keep in condition.

The cost of construction naturally depends upon the volume of work put in. If it is done thoroughly, and the ground worked up to the desired condition both chemically and mechanically, and nothing left to chance, it is obvious that it will be more expensive than if these most important points are ignored.

The system of putting the work to tender is obviously wrong, if for no other reason than that there are no recognised standards to work to.