

SLIT TRENCH DRAINAGE ON GOLF COURSES.

by David Shelton

The ever increasing popularity of golf is resulting in some courses being used far in excess of original design parameters. In turn this is leading to major problems for those who maintain such courses and waterlogging must be high on the list.

Getting rid of this water is often not easy; soil structure is damaged by the frequent traffic and the more waterlogged the site the more damage is done. Consequently prompt attention to badly drained areas must be given priority. It is more cost effective to undertake selective drainage at once than delay matters until an overall scheme is put in hand 2 or 3 years hence.

Surface compaction leads to surface waterlogging - very wet soil in the top 2in. - 3in. and bone dry soil beneath. Aeration techniques and core extraction partially help overcome this problem but by late autumn the top 12in. - 15in. of the soil is sodden and water movement to the original agricultural field drains and ditches is slow.

The need was seen for a more intensive drainage system that could be installed with little or no disruption to the playing areas and was cost effective. The slit trench drainage system that is now being widely used meets these criteria.



Hand operated slit trencher cuts into the soil like a circular saw.

The slits usually 2in. wide and 8in. - 12in. deep depending on the requirements of the site. They are cut through the soil 1, 2 or 3 yards apart and connect with the original main drains ditches or ponds. In some cases a new network of main drains may be required but the introduction of the revolutionary Hitek Findrain enables these also to be installed in trenches no more than 2in. wide. These trenches are partly backfilled with ½in. gravel, or Lytag - a permeable fill manufactured from waste flue ash - and then topped with a course sand. Disruption to play is minimal - only for the safety of the drainage operators is it necessary to take fairway out of play!

The latest slit trench drainage machinery cuts its way through the soil in the fashion of a circular saw. Totally enclosed, the excavated soil is conveyed up an elevator into a trailer alongside; this is so fine it may be used as it is to renovate other parts of the course. Outputs per machine of the order of 3,000 - 4,000 yards per day have enabled contractors to substantially reduce prices in recent years. However, where a number of fairways have to be drained thought should be given by clubs to purchasing their own equipment. If a suitable tractor is available an outlay of around £10,000 will purchase a tractor mounted machine together with the matching gravel and sand backfilling hoppers.

Drainage, being installed in the ground, is consequently out of sight! The life of the new system and its effectiveness can be considerably reduced as a result of poor workmanship. Many more businesses are now undertaking sportsfield drainage but standards vary widely. The lowest prices inevitably lead to cost cutting procedures and acceptance of them by a club may not be the best option in the longer term. Before taking the plunge look at similar work undertaken on other courses - it can be time well spent.

Substantial drainage work should be put out to tender asking the contractor to give detailed specifications. As a guide to price a club should expect to pay around 80p to £1.00 a metre.



A tractor operated supertrencher cuts a 2" wide trench. The excavated soil can be used on other parts of the course

David Shelton is Director of Shelton Trenching Systems. His company specialises in the development and manufacture of slit trench drainage equipment for home and export markets, and in contracting work in the south east. Contact him on: (0732) 833647 for drainage advice or through this journal.