Small scale drainage projects need not be costly

This month James de Haviland looks at ‘DIY’ drainage solutions...

If water is collecting in areas that were once free draining, the first job is to find out why. Digging a small hole with a spade or taking a core sample can help identify if there is a compaction layer and its depth. Regular spike tests can also help spot when a compaction problem is building. Deep aeration may cure the problem.

In other cases, an existing primary drainage system may not be functioning as well as it could. Blocked, collapsed and silted up main drains obviously will not work as well as they should and will struggle in a really wet period. If these drains feed into open ditches, it also follows that water needs to be able to get away.

With the basins in place, supplementing an existing system with ‘microband’ additional drainage to cope with localised problems need not be difficult or too costly. This can be done by installing a silt or trench backfilled with sand, gravel or purpose developed material such as Lytag. Or a new run of drainage pipe can be installed and linked to an existing pipe.

Tools that can be used to create backfilled drainage slits include the AFT Sandbender that comprises a 1.0 cubic metre stainless steel hopper and hydraulically powered vibrating single filling blade. It can create a 25mm wide slit to a depth of 250mm.

The Shelton Gravel Band Drainer will again produce a slit, which can be 6 or 25mm wide, and will deposit a band of kiln dried sand, gravel or Lytag at depths adjustable between 100mm to 350mm.

For either type of blade slitter to work effectively, ground conditions need to be just right; too wet and there is a risk of damaging the turf and smearing the soil. In soils with high clay content side smear can lead to ‘lateral’ compaction along the sides of the slit. If the soil is too dry, the slits can be difficult to produce cleanly and the ground may be too hard for the blade to ease through the soil.

‘Microband’ drainage using sand, gravel or other infill medium will typically comprise slits of between 250 to 300mm in depth, with spacing at 400, 600 or 800mm centres. Buying a system may cost upwards of £9,000, but hiring in the equipment on its own or with an operator experienced in doing the job is another option. With support from club staff, hiring in a slitter and operator for several greens could see a costs average out at as little as £650 per green.

Taking powered slitters one step further, Shelton and AFT also offer larger trenching units. Trenching machines can do a great deal more than produce a ‘slot’ into which a drainage medium can be backfilled. They can be used to lay drainage or irrigation pipe as well as be used to install underground services including water and electric cables.

Although it is tempting to compare this type of slit with ‘microband’ additional drainage tools, the way in which trenchers can be used is different. For a start, a chain trencher such as the AFT-95 can produce an opening that ranges in width from 40 to 200mm and can be up to 1.20m deep. There are also pedestrian powered chain trenchers available. These include machines from Barreto, Vernmer and Ditch Witch.

Small project work

It follows that you do not need to use a trencher to dig a trench; short runs can be dug by hand and need not be as onerous as you think. It follows that some simple planning will also help.

• Keep backfill dry. Removed soil needs to be kept dry and should be shelved if it is in a heap that is likely to be rained on.
• Use a turf cutter. This will help speed reinstatement as well as provide a clear indication of the trench direction and size. You can hire in a suitable ‘soil cutter’, with entry level versions being those that will help cut a turf slice costing from around £1,500.
• Use boards and planks. When working on greens and tees, boards and planks can help protect the playing surface.
• Tyres and compaction. If possible, reduce the inflation pressure on the equipment tyres to the permitted minimum. With trailers and turf trucks, avoid overloading.

Turfdry remedies waterlogged golf greens

Turfdry is a very professional drainage solution. “For some time we had some drainage issues on seven greens. The problems were highlighted more over the wet winter months and after much deliberation it was decided to do something to ensure golfers could enjoy the beauty of Thorndon Park Golf Club all year round.”

The Turfdry system was presented well, the materials used were of excellent quality and the entire package is delivered very professionally. The club decided to do a trial green first which just happened to be our chipping green which is right outside the club house and in full view of everyone, so the pressure was on to do it right the first time. With the trenching tool in place, it was easier to see what was going on. Cleaning turf with a ‘sod cutter’ helps and can make restoration considerably easier.

The Turfdry Drainage System is highly recommended and Turfdry is a very professional organisation.”

The remaining six greens at Thorndon Park Golf Club were drained in October 2012, and in September Turfdry will be installing similar systems at Great Barr GC, Birmingham, and Wyke Green GC, Middlesex, where the system was first installed on other greens.

For further information please visit www.turfdry.com or phone 01283 551417.
If water is collecting in areas that were once free draining, the first job is to find out why. Digging a small hole with a spade or taking a core sample can help identify if there is a compaction layer and its depth. Regular spike tests can also help spot when a compaction problem is building. Deep aeration may cure the problem.

In other cases, an existing primary drainage system may not be functioning as well as it could. Blocked, collapsed and silted up main drains obviously will not work as well as they should and will struggle in a really wet period. If these drains feed into open ditches, it also follows that water needs to be able to get away.

With the basics in place, supplementing an existing system with ‘microband’ additional drainage to cope with localised problems need not be difficult or too costly. This can be done by installing a slit or trench backfilled with sand, gravel or purpose developed material such as Lytag. Or a new run of drainage pipe can be installed and linked to an existing pipe.

Tools that can be used to create backfilled drainage slits include the AFT Sandbander that comprises a 1.0 cubic metre stainless steel vibratory single filling blade. It can create a 25mm wide slit to a depth of 250mm. The Shelton Gravel Band Drainager which has proved very successful with backfilled drainage slits includes the AFT 85. This can produce an opening that ranges in width from 40 to 200mm and can be up to 1.20m deep. There are also pedestrian powered chain trenchers available. These include machines from Barretts, Vermeer and Ditch Witch.

Small project work

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• Keep backfill dry. Removed soil needs to be kept dry and should be sheeted if left in a heap that is likely to be raised on.

• Use turf cutter. This will help speed re-instatement as well as provide a clear indication of the trench direction and size. You can hire in a suitable ‘soil cutter’, with entry level machines that will help cut a turf slice costing from around £1,500.

• Use boards and planks. When working on greens and tees, boards and planks can help protect the playing surface.

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Turfdry remedies waterlogged golf greens

For some time we had some drainage issues on seven greens. The problems were highlighted more over the wet winter months and extra rough de-turfing was undertaken when needed. It was decided to do something to ensure golfers could enjoy the beauty of Thorndon Park Golf Club all year round.

The Turfdry system was presented well, the materials used were of excellent quality and the entire package is delivered very professionally. The club decided to do a trial green first which just happened to be our chipping green which is right outside the clubhouse and in full view of everyone, so the pressure was on to not only ensure the job ran smoothly but the system worked as well.

True to form and word the Turfdry installation and system has worked perfectly. Comparing this green to the remaining problem greens, the chipping green is saluting!

The Turfdry Drainage System is highly recommended and a very professional organisation.

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