

If there is one question about irrigation that always seems to arise it's – should I upgrade? Well, as is often the way, this one question raises many others. When is the right time? Should I extend the system? Which parts could I retain? Do I need a PC based controller? What are the water supply implications? Who do I choose to offer advice? Graeme Francis provides the answers ...

# IRRIGATION SYSTEMS

## Upgrade, replace or leave alone?



The first thing to remember is that every single system is different, irrigation has evolved as design and installation techniques, materials and specialised products have developed. You need to take a long hard view at all aspects of your existing system, its operation, its maintenance and whether it's still a viable and cost effective turf management tool.

For some greenkeepers the answer will be no, the system is old, unreliable, wastes water and takes up too much time and money in either repairs or in the need to operate it manually. Of course this is not always the case, but it could be that this scenario strikes a chord with you. If it does, then now is the time to think about replacement or upgrading, not

in the spring of 2002 with the growing season fast approaching, nor after the system has failed and the course is suffering because the essential water you need as part of your management regime is not available. Far too often it's a case of "closing the door after the horse has bolted".

Golf has become a far more competitive business. Golfers expect ever-higher standards of course presentation and quality and they have far more choice as to where to play. The course is what attracts golfers and as such it is the vital key in sustaining revenue and generating margin. Today, the decision to upgrade the irrigation system or extend it to other areas of the course, particularly fairways may be a com-

mercial one. This brings the need for thorough evaluation of what you have now, what you want to achieve and how you go about meeting those objectives.

The selection of the right system for your course is a complex exercise, too often the vast range of options result in a decision being made on one criteria – price. If you are 100% certain that the lowest priced proposal is the best option, provides everything you need today and as importantly, everything you want in the long term, then go with that company, but if not, don't allow price to dominate your choice. Heard it all before? Well, unfortunately this point is just as relevant today as it has ever been. Too many orders are placed with the low-



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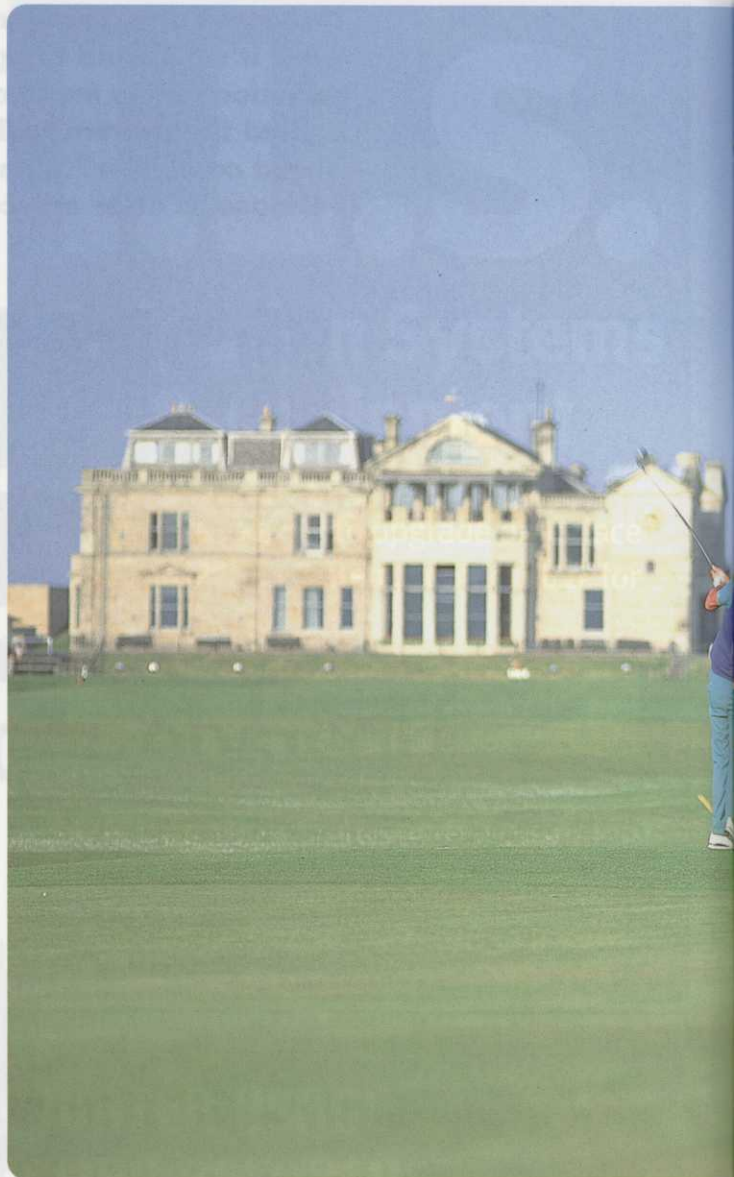
est bidder because those making the decisions are not given, or don't take, the opportunity to make the full technical and commercial evaluation that the intricacies of golf irrigation demand.

There are a number of ways in which you can set about the process of updating the system.

- Call upon the services of an irrigation consultant, there are several very well respected irrigation consultants in the UK and they offer a wide range of services including design, water sourcing, tender and quotation evaluation and site supervision.

- Go to individual irrigation contractors and ask them to prepare design and install proposals and then make a decision based upon their proposals and presentations. Make sure they provide all the technical information that you will need to compare the different designs. Details of such information can be found on the British Turf and Landscape Irrigation Association website at [www.btlia.org.uk](http://www.btlia.org.uk).

There are many good contractors and you should select a small number with whom you can establish system criteria and whose proposals you can comprehensively assess. I have heard of as many as twelve companies being asked to submit proposals for a single project. Quite frankly that is doing nothing except making the selection process unworkable.



- Talk to the specialist product supply companies who can provide valuable information on all aspects of their particular ranges and their support structures. The number of such suppliers is limited, but you may wish to choose the supplier and then ask contractors to bid using that company's products.

- Seek further education on the subject of irrigation to a level where you can undertake the design and proposal evaluation yourself. This can be achieved through the turf colleges or via the specialist BTLIA irrigation courses held regularly. These provide a very good grounding in sportsturf irrigation. Irrigation education is becoming well defined. It is becoming integrated into the turf education mainstream where its importance is being recognised.

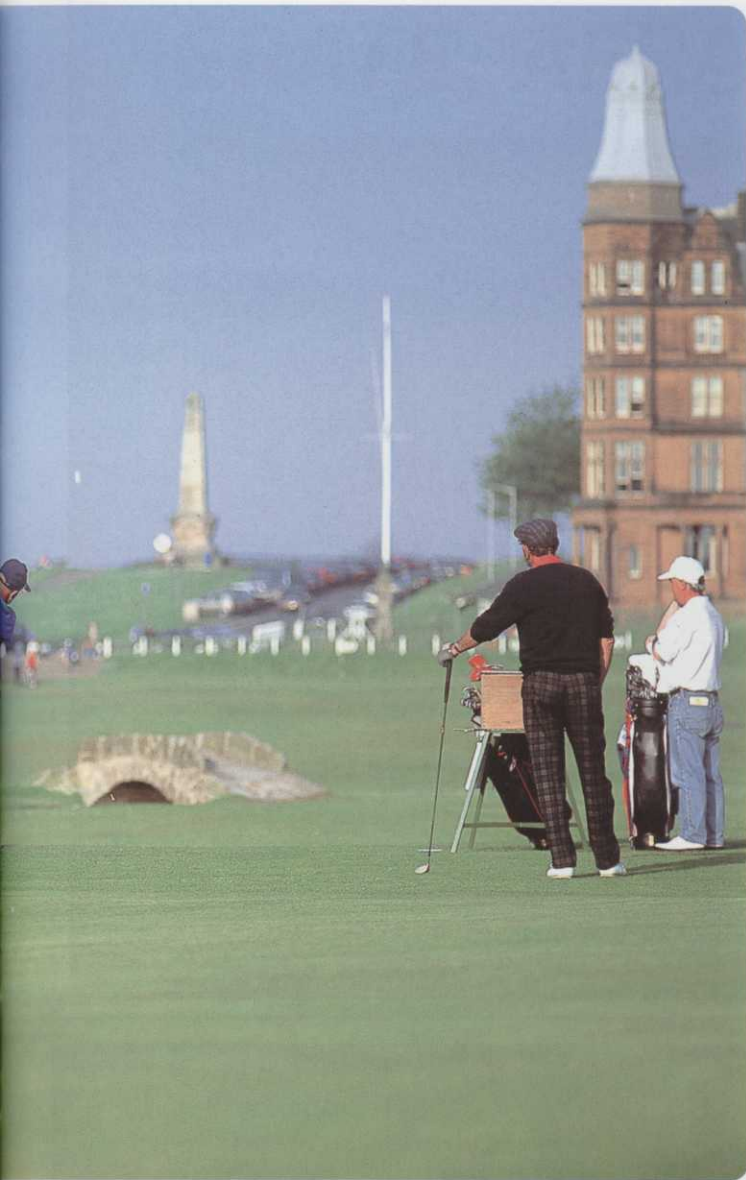
Once again these options raised more questions. In each case you also need to make a reasoned decision as to which method and which companies you use. Investigate their backgrounds, recent projects and other aspects such as the level of longer term support the manufacturers and contractors offer. Use companies who are members of the BTLIA, as they are committed to providing proposals and installation services in accordance with the Associations

standards and membership requirements.

Can you keep parts of the existing system? Very careful consideration must be made when looking at retention of existing components. Partial upgrades require complete confidence that any parts retained, which may include pumps, pipework and control systems will provide durability and are properly suited to the new and often greater system demands. I have often seen new pumping systems and sprinklers fitted to existing pipework in an attempt to save money, only to hear that very shortly afterwards the pipework has not been able to withstand the increased pressures and flows modern systems create. The result? An expensive pipework replacement undertaking that will almost certainly erode all the previous savings and more-than-likely actually cost more than if the work had been done as part of the initial project. Hydraulic principles dictate that adding more sprinklers to an existing system without increasing pump and pipe capacity will result in extending the time needed to irrigate all areas. The normal maximum time is 10 hours, but some course managers end up with systems that have to run during the day and through the night just to get the water applied.







This makes no sense and can seriously impede other maintenance operations and play.

There is no doubt that the most topical aspect of golf course irrigation today and I believe for some time to come, is the availability of water. There are very significant potential changes coming as part of the Water Bill, currently in draft form and at present relevant to England and Wales. This Bill will almost certainly bring fundamental changes to the water abstraction licensing process for those courses that obtain water from lakes, watercourse and boreholes. In the future there will be an increase in the monitoring of water use and course managers could need to prepare water budgets, forecast water use for the next year or even longer and also may need to produce detailed records of actual water use against forecast and show how those figures relate to licensed quantities. It is not beyond the realms of possibility that longer term regulation could take place and the monitoring process could go further, to the point where clubs would have to demonstrate that they have put in place systems and procedures that optimise water use and eliminate waste particularly from unreliable system components and inaccurate application. System effi-

ciency through good design, installation, maintenance and operation needs to be a fundamental objective in any golf course irrigation system provision regardless of the scope of pending or future legislation. It is very important for everyone associated with golf course management to understand that the water issues are becoming crucial. Good irrigation practice must be given the attention it needs and the willingness to make a sound financial investment has to prevail to ensure that systems can stand up to potentially closer scrutiny and the ever increasing demands of course management and ever more discerning players. Even those many courses using potable water supplies to feed irrigation systems have to make sure that such operational efficiency is created to allow optimum water use from this more expensive source.

Control systems offering precise and reliable operation with comprehensive water use monitoring and recording are increasing being chosen for golf course irrigation. Water use records can of course be kept by noting water meter readings and equating those with agronomic factors particularly evapotranspiration, but controllers which can produce this information quickly and auto-

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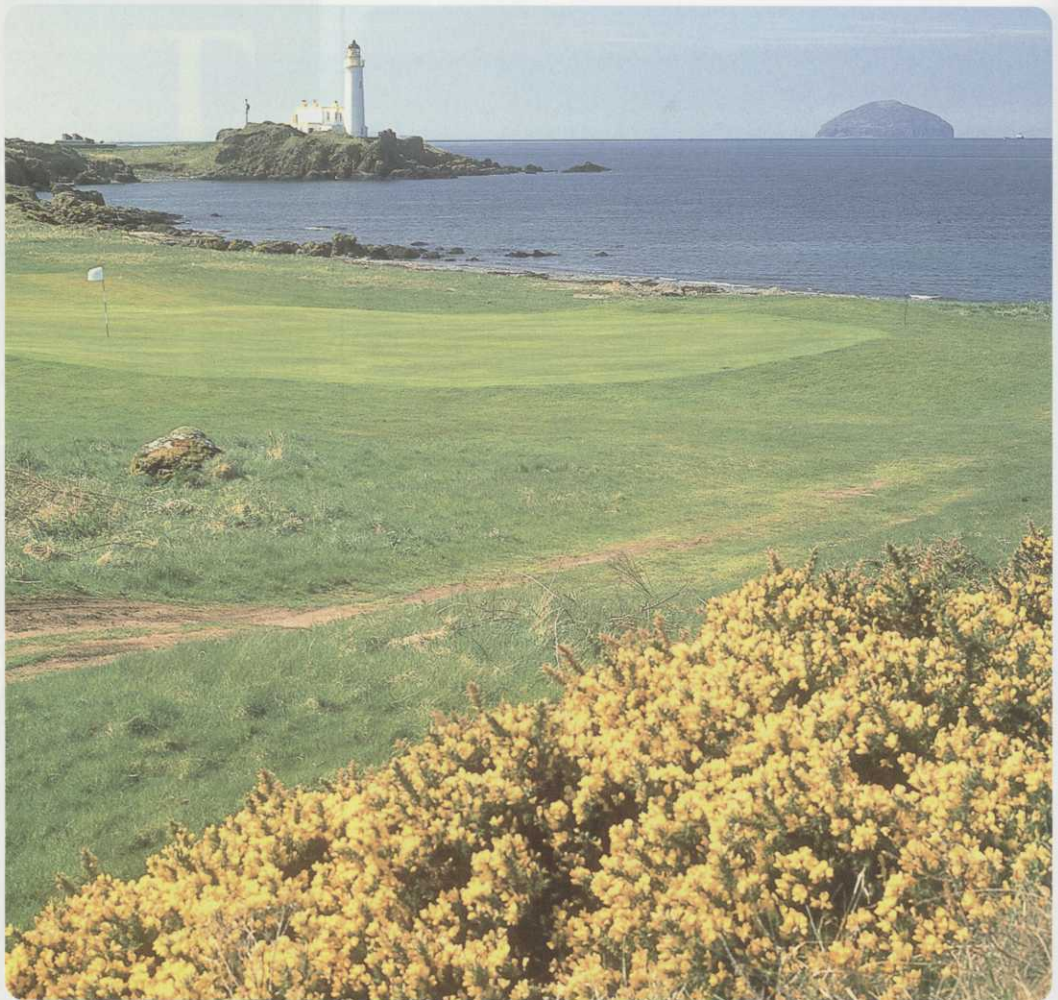


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# IRRIGATION SYSTEMS

Upgrade, replace or leave alone?



matically clearly make the exercise quicker and simpler. Some of these automated functions can be found in certain "box-on-the-wall" controllers, but many course managers choose a PC based central controller with specialist software that meets the requirements of modern irrigation operations. The PC can then be used for other tasks using spreadsheet and word processing packages creating a more general management tool.

When choosing a PC system, make sure it does what you need as simply as possible. Good support from the contractor, distributor and manufacturer must be in place and provide a service offering such things as fast component replacement, upgrade programmes, telephone helpdesks and all the other essential support infrastructures that you should expect. Hardware and software can be superseded relatively frequently, but choosing the right provider should permit upgrade options in the

future. In many cases the control options and precision of PC based control systems offset initial capital cost when the savings in water and the course manager's time are taken into consideration. It is not unreasonable to say that overall, water use can be reduced using better control, even when more of the course is being irrigated. More and more clubs are extending irrigation to their fairways; this is due to the higher maintenance requirement that heavier play brings and also to allow the best presentation of the course for the purpose of attracting visiting golfers and societies. With such fairway irrigation, the need for efficiency increases dramatically as the potential cost of water wastage becomes much larger. In addition, the use of licensed water sources such as boreholes and in-ground reservoirs is the only realistic way to get the volume of water required. Despite the need for more water, fairway irrigation will become

more important and consequently widespread and the current trend of established clubs having fairway systems installed will continue. With the larger systems, the capital expenditure involved means that careful selection is of the utmost importance and must be undertaken in an informed manner.

The pressures on golf courses make optimisation of all management tools vital for sustained course and club development. Irrigation is just one of those tools, but it is an essential one and extension of systems to larger areas of the course will be important in future course management. Its provision is specialised and requires extensive expertise. Choose carefully, invest wisely and make sure your system meets your requirements and works for you and not against you.

Graeme Francis is the Marketing Manager of The Hydroscape Group, Toro, Irrigation Distributors for UK and Ireland

Although it may not have been apparent in recent months, water is a precious resource and extraction is becoming increasingly difficult and expensive. At the same time irrigation is a vital tool to the greenkeeper and the 28 minute video looks at using it to its best advantage with the Why, What, How and Where of irrigation. The video features interviews with recognised experts in their field, graphics and film showing why irrigation is needed, when to

apply and what equipment to use. "This video is not only of benefit for training greenkeepers in the art of good water management and irrigation, it would also be very useful for communicating to the wider golfing community," said BIGGA's Education and Training Manager, Ken Richardson. The other four video's in BIGGA's portfolio cover, spraying; golf course preparation; golf green construction and golf course ecology. The production of this video was only possible through the generous support

of the Association's Golden and Silver Key Supporters who donate to BIGGA's Education and Development Fund. Irrigation is produced by Goodwood Videos, who also produced the Golf Course Ecology video, and is priced at £15 for BIGGA members and £25 for non-members.

Contact the BIGGA Education Department for further details on 01347 833800 or via [sami@bigga.co.uk](mailto:sami@bigga.co.uk)

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Roland Taylor takes a leaf out of the old book using a variety of methods

# Shake 'n' Vac



Leaves look good on trees - it is when they fall that the picture changes. With the large fluctuations in the present climate there now seems to be plenty to clear up throughout the summer. Mild autumns have also meant they tend to stay on the trees longer. In the past a sharp frost or high winds and the clearing up operation could be completed in a matter of days - now it is done piece meal and you can never foretell when the fall will finally be over.

Every course has different requirements when it comes to leaf collection and in most cases if there are a lot of trees more than one piece of equipment will be needed.

Three basic systems are used on machinery specifically built for leaf and litter collection and these are - suck, blow (sometimes both) and rotary brush. There is a fourth method - rotary mowers. Their efficiency depends on the sucking or lifting action of the blade and the sys-

tems ability and effectiveness to deliver the leaves into a collector.

With suck and blow units their efficiency depends on a number of factors involved. At the heart of the machine is an engine driven impeller, which creates the airflow.

This critical component has to be aerodynamically designed and perfectly balanced. The housing also has to be exact. When used in collection mode, the leaves and litter pass directly through the impeller so it



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must withstand a constant battering.

Therefore both the way it is constructed and the materials used are very important in relation to its longevity. Some companies offer extended warranty on this component so when considering particular models with this type of system ask how long the impeller is guaranteed for.

The volume and speed of the airflow created will determine the machine's efficiency - this can vary considerably between different makes. The best way to determine which is the best is to try more than one unit under the same conditions and then compare the results. The same applies when collecting is involved. A really good test of a machine's efficiency is picking up wet leaves.

Engine power is another factor that needs to be addressed and there is plenty of choice in the pedestrian range.

#### Hand-held Blow/Vac

Out on the course, these are going to be the best machines for clearing

greens and other sites where access is very limited. Whilst the hand-held units are good for some areas, if a machine is going to be used for long periods then the backpack versions are a better choice. The hand held can in most cases be adapted for use as a collector, the only disadvantage of this is the size of the bag. If there are a lot of leaves you continually have to empty it. Some models include an optional extension tube for clearing guttering and open drains.

#### Pedestrian

In this category the choice is either blowers or collecting units and these are available as push or self-propelled. With the blowers the leaves can be windowed or made into heaps ready to be picked up.

As most collection models pass the material through the impeller this makes the number of times the unit has to be emptied less. An optional wanderhose is generally available and this is ideal for sucking leaves off areas such as greens.

One possible disadvantage of this type of machine is that they are mounted on wheels and these could mark the turf, especially when the unit is full.

#### Tractor powered

There are a number of specialist leaf and litter units now available. These have pto driven impellers. Like their pedestrian counterparts there are models for blowing the leaves into windrows or heaps, whilst others suck them up into large collecting hoppers, some with moving floors to make emptying easy. They have high work output and are an efficient method for clearing large areas. A wanderhose is usually an integral part of the system and this can be used for clearing ditches and emptying waste bins. Another method is the flail unit. These have a large capacity collector and the big advantage of this system is that other operations can be carried out including cutting grass and scarifying.

#### Brushes

One area that can present problems





when it comes to mechanising leaf collection is bunkers. For obvious reasons blowers and vacs are not the answer. A possible solution is a powered rotary brush - a few of these are now available. A nylon brush is mounted on a long shaft similar to a brushcutter. Because they are hand-held the amount of pressure to move the leaves can be easily adjusted to avoid disturbing the sand. They are also useful for sweeping hard surfaces and one course has used them for clearing beechnuts.

For large areas such as car parks there are the rotary brush units - these can be either pedestrians, self-propelled or tractor operated.

Some ride-on rotary machines can be fitted with one of these attachments

Large self-powered units are available but whether their cost can be justified will depend on the specific applications and requirements

#### Loaders

These are a very useful piece of machinery. The loader is a powered unit, which is clamped onto the tail-

gate of a trailer or vehicle buck. A wide mouth suction hose is used to vacuum up the leaves and they are delivered directly into the collecting receptacle. This type of unit is ideal as part of a system that uses blowers to direct the leaves into either windrows or one spot.

Leaf collection covers only a few weeks each year so investing in specialist equipment has to be carefully considered. In most cases more than one type of machine is going to be required. If an attachment is available for existing or new machinery then for many clubs this may be the answer.

Another possible solution could be to consider hiring. The only problem here would be determining when the machinery was needed. As other organisations within your locality might be thinking along similar lines there could be a shortage of available equipment when you need it.

We might curse about clearing up leaves each year, but one sobering thought is without them we would not exist, plus the fact they set off the greens and fairways in their summer and autumn livery.



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# Textron invest to support customers in the Midlands and Yorkshire

Textron, the Ipswich-based manufacturer of turf maintenance equipment, golf cars, compact sweepers and light industrial utility vehicles, are opening three retail branches in strategic locations in the UK.

The new branches, are located at Redditch, serving the West Midlands, Warwickshire and Hereford & Worcestershire; at Selby, covering North, East and West of Yorkshire; and at Mansfield covering Nottinghamshire, Derbyshire, South Yorkshire and Leicestershire.

They are operating under the day-to-day control of Alan Prickett, who until recently was Textron's regional sales manager for the south and southwest of England. He has overall management responsibility for the 12 staff at each branch, which otherwise operate independently. The branch functions, in marketing, service, admin and accounts, are heavily supported by Ipswich.

Glynn Patrick, Textron's sales director commented,

"We have been considering the option of a possible retail operation for the past two years and when Breakwell's and Henton & Chattell tendered their resignations, it provided the opportunity to put it into practice.

We looked at the options in these regions and concluded that we could provide a higher level of service, ourselves. Manufacturer-owned dealerships are not new: they exist in other industries and in other parts of the world. In fact, in the States, Textron own dealerships in North and South Carolina and in California.



The Redditch branch has over 14,000 square feet of combined office, service and storage space.



The hub of the Yorkshire operation is the 8,500 square feet modern premises at Selby. This depot also has 18,000 square feet of secure outside storage.

With this new venture, our main objective is to provide top quality service support to all customers in these three regions, so the branches will be highly geared to technical and parts support. In order to provide a complete service we will also be selling non-Textron brands which complement our own product ranges, where possible."

Experienced teams have been assembled, with a number of sales, service and parts personnel moving to the new Textron branches, from Breakwell's and Henton & Chattell.

Glynn Patrick adds, "We would obviously prefer to sell and support our products through independent distributors as we do in all other regions of the UK, but the availability of dealers with the resources to handle a franchise with our product ranges in different market sectors, is very limited. There will be no special favours for our company-owned branches as they will sell and service on the same terms as the rest of our distributors; they will receive no more favourable terms and we are confident that they will soon become viable businesses in their own right.

These branches represent a significant investment in both people and resources, and I can promise our customers that they will see a much improved level of service, sales and parts support in their territories - a level of service that our customer base expects and demands from a major manufacturer in the golf, turf, sweeper and vehicle sectors."

**Peter Cooper** 58, has been appointed Key Account Manager at Redditch, reporting directly to Alan Prickett. Well known throughout the West Midlands he spent 14 years as Senior Sales Manager at E.T. Breakwell Ltd., Textron's former dealer for the region. Prior to this he worked for a Toro dealership after a career in the aircraft manufacturing industry.

His senior position at Breakwell's ensures that he has an industry knowledge and awareness second to none, especially in the local authority sector.

**Julian Taylor** is Area Sales Manager at the Selby branch. He has a wide knowledge of Textron's products having been a depot manager with Cliff Evans Ltd and he was also a Sales Demonstrator with Andrews of Sunningdale at the time when they were dealers for the Ransomes, Cushman and Ryan products. He comes from a technical background having worked as a service technician with Lister Wilder and Oaks Brothers horticultural and grass machinery dealerships in the south west of England.

**'Spike' Spires** is the Foreman/Technician responsible for the service operation at Mansfield. 12 years experience of Jacobsen equipment has been gained at Purdy Grass Machinery and



Peter Cooper

Henton & Chattell. He oversees a team of workshop based and mobile service engineers in the Mansfield territory.

**Gary Whitney** is one of the Area Sales Managers at the Redditch branch. He is responsible for Warwickshire and part of the West Midlands and has an extensive background in turf maintenance. For the past three years he has run his own hard landscaping company and prior to that worked for Brophy Grounds Maintenance, first as National Transport and Plant Manager, then latterly as Marketing Manager. He was an Area Sales Manager with Hayter on their commercial product range and also held the same position with Victor UK.



Gary Whitney

The three teams of field service engineers based at the new branches will have a fleet of fully equipped Renault support vehicles, plus a Land Rover Discovery Commercial with trailer allocated to each workshop.

