

Say hello to Heritage and goodbye to Fusarium!

Heritage moves outwards and upwards within the leaf blade.

Heritage stops the spread of disease that exists prior to spraying.

Heritage is absorbed readily into the leaf and moves both systemically and translaminarly.

> Heritage moves into emerging leaves that were not present during the initial application.

Lasting residual activity keeps Heritage working longer.

Heritage protects against fungi invasion by inhibiting spore germination, disease penetration and sporulation.

> Turf roots absorb Heritage and move it throughout the plant.

The only turf fungicide with a new biochemical mode of action that will take all your Fusarium problems away.

- Contact action with systemic and translaminar movement
- Proven and unparalleled preventative and early curative action
- Highly effective and environmentally sound chemistry
- Enters turfgrass through the leaf, stem and root system
- Low recommended rates of use with unique mode of action
- Low risk environmental and toxicological profile
- · For use on all grass species



Designed by nature and perfected by chemistry

Scotts UK Professional, Paper Mill Lane, Bramford, Ipswich, Suffolk IP8 4BZ Tel: 01473 830492 Fax: 01473 830386 www.scottsprofessional.co.uk

Course Feature

BACK WHERE IT BELONGS

Royal Liverpool Golf Club, or Hoylake as it is more familiarly known, will host the 2006 Open Championship a return to the rota which rewards a great deal of hard work by the club and the local authority. Scott MacCallum found out more from Links Manager, Derek Green.

Tuesday, December 2nd, 2002, was a very significant date in the history of the Royal Liverpool Golf Club at Hoylake. It was then, at a packed press conference in the clubhouse, at which delighted members outnumbered press by around 20 to one that the R&A announced that the 2006 Open Championship would be played on the historic links a mere 39 years since Roberto de Vicenzo had become the last of the club's 10 Open Champions.

The delight which greeted the announcement was genuinely heartfelt and not, merely from the club members, as the press were delighted to be returning to a club which boasts a history others could only dream of as well as a friendliness which marked the place out as special.

Derek Green and his close friend Bill Lawson

It was, however, not wholly unexpected as a programme of both on and off course improvements had been underway for quite some time and the R&A had placed Hoylake back on its Open Championship rota about 18 months earlier. However, the final confirmation was a triumph for the club and the local authority, who had invested much in the campaign for The Open's return to this particular corner of the north west.

One of those with most to be pleased about was Links Manager, Derek Green, one of the most respected men in the greenkeeping industry and the person who bore the responsibility for the successful implementation of much of the on-course improvements.

But what was it that saw the club fall off The Open rota in the first place? After all Royal Liverpool had been responsible for the

launch of the Amateur Championship in 1885 and had its name engraved on a very particular piece of golfing history when Bobby Jones won our Open Championship there on the way to his Grand Slam in 1930.

Well, there were two key elements which conspired against Hoylake as The Open Championship grew in size over the last 30 years. One was the lack of land to cope with a modern day Championship - the club could provide a practice ground or a tented village but not both. And the second concerned the layout of the course and, in particular, certain areas which had suffered with the development of the game both in terms of distances hit from the tee and size of the galleries now attracted to Open Championships.

To look at the implications and potential solutions to these problems the club started a Championship committee who, as well as The Open Championship, looked at other potential events the club might lure to the Wirral.

One thing that came to light very early on, and indeed, was one



of the principle reasons the course had dropped off the rota was the lack of sufficient land upon which to host the event.

Part of that problem was solved when an adjacent plot of land was purchased by the club while another assisted when the feelers were put out to about the possibility of using Hoylake Municipal Golf Course as the practice ground.

"The real problem with this potential solution was that the course is across a main road and a railway line from us," explained Derek.

However, and this is where the local authority can take a huge amount of credit for what has subsequently transpired, no problem would seem to have been insurmountable.

"It became obvious that that the Municipal authority and the transport department were prepared to close the railway line between Hoylake and West Kirby for the week of the Championship which was great," revealed Derek.

Donald Steel was then brought in to upgrade the Municipal's 14th green and 15th fairway to suit the high standards expected and Head Greenkeeper, Nick Bower, can enjoy a course alteration carried out by one of the world's top architects and lick his lips at the prospect of seeing Tiger, Ernie et al visiting his course for one week in July, 2006.

With the off course issues being addressed the club turned its attention to the grand old course itself.

"It became obvious that certain things were a real problem and Donald Steel spent time evaluating the situation," recalled Derek, as we spoke several months before the much anticipated announcement.

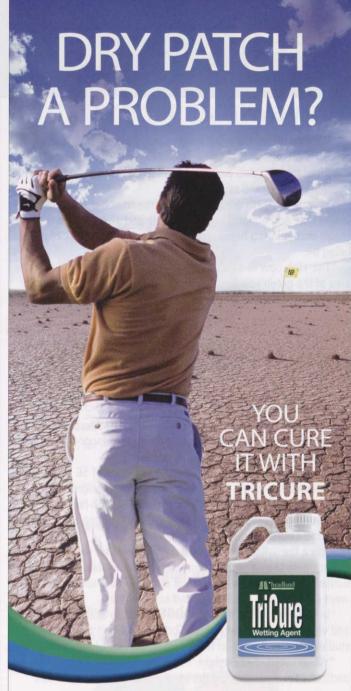
"Donald looked at bunker positions taking on board the fact that the ball is now hit a lot further, the size of tees which were very, very small but the real issues were the 17th green; the 3rd hole which was a short par-5 and the 18th which was not a very good finishing hole with an undemanding green at the end of it," he explained.

The 17th green was at the side of the Stanley Road which was causing real health and safety issues.

"It was a very good hole when there was little traffic going down the Stanley Road and people didn't park their cars along it but it did genuinely become very dangerous and the club was looking at it irrespective of whether we were getting The Open or not.

"The 3rd hole would have been fine if we could have played it from right back in the corner of the course but that would have eliminated any gallery movement around the 2nd," said Derek.

Donald Steel came up with the alternative design which alleviated the congestion problems on the 3rd and improved the 17th and 18th giving the course a finish to be proud of.



Cures and prevents
 Dry Patch in hydrophobic soils

The New Generation Wetting Agent

- Available in liquid or granular form
- And now in pellets for accurate hose end application
- Works on all types of rootzone particles sand, soil or organic matter
- Safe to use non-phytotoxic will not burn or discolour turf
- Single application lasts up to 3 months



www.headlandamenity.com Email: info@headlandamenity.com

Find out more by contacting us on 01223 597834.



"It says a lot for the open minded nature of the club, and the superb presentation Donald Steel made on the changes he proposed that the club embraced it all so readily but like anything in life you can't stand still.

"Moving the 17th green away from the road has given us a longer hole and a more demanding hole and also allowed the crowd circulation to be correct. It also eliminated the risk of people being hit.

"The 18th now has a much tougher green. You have to pick the area of the green you want to land on, rather than just aiming for the whole green. As a result it is much easier to defend," said Derek

Hoylake had always been known for its tough finishing five holes - known as the Finningley Five but those holes now consist of two par-5s of around 560 yards, followed by three par-4s of 475, 470 and 460 yards. Anyone finishing in par figures for those five holes in the heat of an Open Sunday afternoon will be deserving of the glory.

The course has never lacked length and when The Open is played, at over 7200 yards it will be the second longest course on the Championship rota behind Carnoustie.

As well as the work on the three holes a total of 56 new bunkers have been built - some totally new and some redesigned.

Indeed Derek's bunker revetment work has seen him conducting masterclasses on the subject at Harrogate and appearing in BIGGA's own Golf Course Preparation video.

With a line which would undoubtedly be better received in a bar at Harrogate than a nightclub in Liverpool he explained: "Revetted bunkers have been a fascination of mine for quite some time." He went on to explain the background to his interest.

"In fact when I was still at Woburn I went to Scotland for a week and visited all the Championship courses. I didn't play, I just studied them and some of the revetting was absolutely tremendous.

"When I started at Hoylake, I suppose fortunately, there was no particular set style of doing the bunkers so we developed this system of tapering the edges of the bunkers in and getting it to flow so, instead of being a pure hazard, we tried to make them aesthetically blend into the area," said Derek, who talks on all greenkeeping issues with such an enthusiasm and sensible matterof-factness that makes him a joy to listen to.

But bunkers are definitely one of his specialist subjects.

"We build them to 10 to 15 degrees and while some might consider that to be a bit to generous our members don't. After years thinking about them my conclusion is thus. If you play The Belfry and go into a lake you've lost your ball. If you play St Pierre and get behind one of the the 300 year old oak trees you play out sideways. So the weakness of a bunker is that the decision is left to the golfer who has to play it, whereas the lake or the tree make the decision for you. You have the choice and the people who moan are the people who take the wrong choice. They will always try to go out forward although there is no rule which says you have to and what happens is that when they've played three shots they then go out sideways," said Derek.

The Midlander has also worked hard on improving the quality of the sward over the past 17 years.

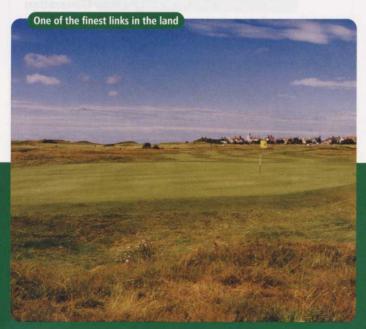
"When I arrived we had a very, very high phosphate level in the greens and on some we had between 80 and 90% annual meadow grass. Basically without overseeding we set to work top dressing with fen soil and local sand. Once we were happy with the mix we retained it and still use the 80-20 today. We've built up about two inches on top of the green and the phosphate level is very low and we have an average of 80% bent grass."

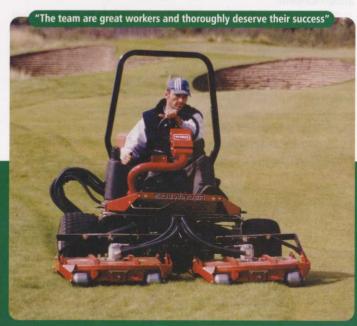
He does admit that since reaching the 80% mark progress has slowed somewhat.

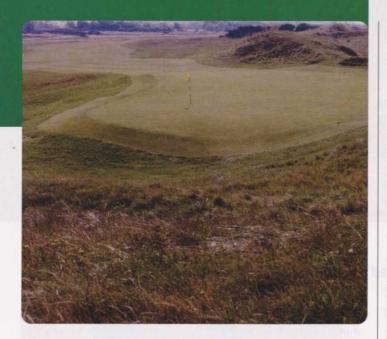
"In an ideal world it would be lovely to remove the lot but I don't think I'll live long enough to see it."

They have also been working on the removal of some of the green surrounds.

"We have been doing this because of the high rye grass contamination we have found."







Another project they started doing last year which has proved successful came with the help of North West Turf who grew a special mix of sheeps fescue and creeping red fescue for the club.

"We replaced about an acre and a half of rough which had become contaminated with rye grass and creeping soft grass and the results have been very good indeed."

A keen Aston Villa fan, Derek uses a footballing analogy to paint a picture of where he feels Hoylake is at the moment.

"We are a good First Division team who very occasionally have a very good cup run and do well against the Premiership teams. I'd say that was when we hosted the Curtis Cup and the Amateur Championship, but after that we go back to being a First Division team.

"Getting The Open back has put us in a position where we have got to be a Premiership team again but we have got to be one which is in the top three or four and this is where we've got to remain.

"To that end we have to bring the financial structure up to meet the needs and already we have increased our staff to 10 and now have first class maintenance faciltiies."

With more than three and a half years until its Open Derek is already excited about the prospect.

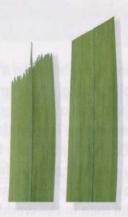
"I hope it will be the pinnacle of my career. I can't think of anything greater but what I will be especially happy for the club itself because it didn't deserve to be off the rota in the first place. Also for my staff because I have always been lucky with the staff that I've worked with. The Liverpool sense of humour is great but they are also great workers and they thoroughly deserve the success that it is going to bring because they are the guys who have been out there in the driving wind and rain when in normal years we would have found some work inside. Over the years Jim Arthur and David Stansfield's contributions to the development of the links should never be underestimated and my good friend, Bill Lawson, Heswell retired, who has always been at hand to talk over any problems.

But above all I'll be delighted most for the Green Chairman, Brian Gourley. Hopefully I will see the Open through with him before we both retire. That would come together quite nicely."

That it would, and you can't think that it will have happened to a more deserving person and a more deserving club.

Photographs taken by Alan C. Birch, Golf Design Consultancy

With Express Dual and Anglemaster the difference is always clear-cut!



Top golf courses choose Express Dual and Anglemaster grinders to give their mowers the sharpest cutting cylinder... for healthier, stronger and more attractive grass.

The benefits are clear

...reduced maintenance costs
...fewer cylinder and bottom blades
...lower use of chemicals
...happier golfers

Test drive a Dual and see the difference... call **01788 811600** today!



SHARPER SOLUTIONS... with BERNHARD



BERNHARD & COMPANY LTD

Rugby England CV227DT email: info@bernhard.co.uk

www.bernhard.co.uk

From Princes to Presidents

George Brown was brought up on a golf course, played and still plays golf to a high standard and for the last 17 years he has held one of the most prestigious jobs in the industry. Indeed his love of the game, and his position of Golf Courses and Estate Manager within the Westin Turnberry Resort, has seen him play with some of the most famous people in golf as well as some of the most powerful men in the world.

"I was brought up in the Deal/Sandwich area where my father was Caddie Master at Princes Golf Club and then latterly Royal St George's. From the age of 15 we lived on the golf course right between Princes and St George's," recalled George, as we sat in the Majestic Hotel a couple of days before he officially became BIGGA's latest Chairman.

With his mother and sister both working in the club kitchen it was natural that George would work on the course where he caddied and then started greenkeeping.

"I started as a greenkeeper when I was 15 and I was 'the boy'. When I left nine years later I was still 'the boy'," said George, in reference to the fact that there was no greenkeeper education in those days.

"In fact it was more the other way round. I was an inquisitive young man, working on a golf course and wanted to learn what fertiliser mixtures were used on the greens but I was not allowed to know. In nine years I never did find out. It was a closely guarded secret."

His first move came about through his prowess as a golfer and a bet.

"I used to play three or four nights a week with one of the assistants at the club,. He said I should try my hand at pro because I was quite a useful golfer. I said I wasn't ready for it, plus the fact that there was a five year apprenticeship.

"He bet me half a crown that if I applied for a job I'd get one. So when I was 24, and recently married to Brenda, just as a bet, I applied for the job of pro/greenkeeper at Alton, in Hampshire, a nine hole course."

Of course he got the job and had to pay out, but he stayed at



Alton for almost three years, living out of a caravan.

"I did everything. I was working on the course on my own, with very little machinery and give lessons in the evening. My learning curve went through the roof and this is how I've progressed through the years - I haven't actually been trained. What I have been is self taught."

It was perhaps fitting that he returned to Princes as Course Manager in the 70s, the very place where he'd started greenkeeping.

"I worked there until 1979 when I moved to Broome Park Golf and Country Club, near Canterbury, where, working closely with architect, Donald Steel, and agronomist, Jim Arthur, he supervised the construction of the new golf course.

"I took on the job of Director of Golf and eventually was responsible for everything from the pros to the kitchen staff and I was working six or seven days and 60 + hours a week."

It was a six months before the '86 Open Championship that George took the job at Turnberry.

"My predecessor, Russell Brown, tragically died suddenly of a heart attack in the autumn of '85 and my first job was to prepare for BIGGA's new Chairman, George Brown, celebrates 50 years in greenkeeping this year and, as Scott MacCallum found out, is a man with golf running through his veins



the Open Championship with an extremely young staff," said George, who added that by sheer coincidence Russell had been the person to take his job when he left Princes in the 70s.

That '86 Open will be remembered for the horrendous weather and a round of 63 shot by the eventual winner Greg Norman, which is widely regarded as one of the finest ever played.

"It was a spectacular experience and another fast learning curve to be working closely with the R&A and installing new underground services to the tented village."

Since then he has done another Open, Nick Price's victory in '94, as well as Amateur Championships; the Ladies' British Open and three Senior Opens, with another due this year, coincidentally, the week after George will return to Royal St George's for this year's Open.

"The highlight was probably my first Open but to me every day is magic and I love every moment of it. I love a challenge."

With 50 years in the business, George is in a prime position to assess the industry.

"It is very big business nowadays. When I started we'd have half a dozen cars in the car park on a Saturday morning. If it was raining the course would be virtually empty. Now most courses are full and golfers all want fast putting surfaces greens and year round quality conditions in which to play."

George feels that it has all conspired to put the greenkeeper in an extremely tough position, particularly in this country.

"Despite all the dedication and money spent I believe golf courses are not that much better than they were, but that's purely down to the sheer volume of play. Compaction is now much worse and guys have got to run to stand still. In warmer climates it is not so bad, but in Britain we have an all year round game, but a seven month growing period with no grass recover and it does take its toll."

George is one of the very few Englishmen to have headed north of the border for a greenkeeping job.

"Someone had to go in there to re-educate them and redress the balance," he laughed, while adding that one of the first people to go up and shake his hand when he started was Harry Diamond.

"I've won them all over now. I get on well with most guys," said George, who is known to have a word for everyone, from the top Course Managers to the young apprentices.

"There is a lot of camaraderie. It's a lovely industry and most of the greenkeepers I meet are just the salt of the earth."

The Scottish weather did its bit to be a little unwelcoming in those first years.

"If you look at the video of the '86 Open and the BBC pro celebrity series which was filmed at Turnberry the following years you will see collars up and gloves on. And this was in August. Coming from southern England and warmer summers Brenda didn't like this much. But since then it has changed. We've got to know

everybody, the weather has changed and we love it in Scotland

And as well as getting to know the Scottish greenkeeping fraternity George has also had the opportunity to golf with some extremely high profile people who welcome the chance of playing the Ailsa Course at Turnberry in the company of someone so well acquainted with the course .

"I've played with many Open Champions, while I have also had the chance to playing with Prince Andrew and President Clinton. Thinking back to the times when we humble greenkeepers weren't even allowed to stand near the clubhouse door, never mind go into the clubhouse, that's quite a privilege."

George recalled when, on the Christmas staff day, he was allowed into the Princes clubhouse and saw the huge honours boards hanging on the walls.

"I was gobsmacked and from then my ambition was to have my name on one of them. Now when I return my name is on virtually all of them," said the man who was Club Champion many times and course record holder with a 67.

He also holds the course record on Turnberry's Arran course with a 64 shot when aged 58.

He is delighted to have been given the opportunity to become BIGGA's Chairman.

"It is a chance for me to put something back into the industry as greenkeeping has been very good to me. I am a little apprehensive given that I have such a big job at Turnberry but the General Manager and the Directors have encouraged me to go for it. They feel proud that it is a Turnberry man who is the 2003 Chairman. I will also be relying more on the staff and my three Head Greenkeepers at Turnberry, Martin Lothian, Jimmy Johnstone and Tom Cuthill. during this period."

He also has some firm views on the style he will adopted as Chairman.

"I don't see myself as purely a decision maker. I will rely on the Headquarters staff and the experienced members of board who will make decisions. I see the role of the Chairman as to be impartial, put the members point of view and promote the Association in any way I can," he explained.

He is also pleased to be joining his old friend, Walter Woods, as a BIGGA Chairman.

"Walter and I do engage in a little bit of oneupmanship so I think I'll dye my blazer just a little bit darker than his just to rub it in," he laughed.

And you know laughter will never be far away with George Brown around.

GET IT RIGHT!





Graeme Francis discusses the thinking that is required before making a decision on renovating, upgrading or installing a new irrigation system

Last month in 'Continue to Learn', Barry Beckett wrote about the future of turf management. Barry, an international Senior Marketing Manager at Toro, discussed a wide number of new technologies that are set to change the face of many aspects of course management. Among these was irrigation, in particular the impact that computers will have on the management of golf course watering.

This article focuses entirely on irrigation and how Course Managers and greenkeepers can ensure that they make the right purchasing decisions when renovating, upgrading or installing a new system.

Many factors come into play during this process, but the increasing sophistication of irrigation systems, the wide choice and significant capital expenditure involved, all make it essential to take a well-planned step-by-step approach.

A modern system can have an effective working life of up to 25 years and making the right decisions at the outset can have great bearing on that life expectancy being realised.

As with any important project there has to be strong emphasis on planning before anything else. With irrigation, planning involves laying down the parameters, criteria and objectives within the project.

At some point the Course Manager or greenkeeper, as the client, will be asked a number of questions that relate to what is required. These will include:

- · What are the areas of the course to be watered?
- Is there a need to expand the system to other areas in future and if so where?
- What is the optimum time available to irrigate, and are there restrictions through pressure from players and course maintenance operations?
- What is the proposed water source?
- Are there any planning restrictions or implications?
- If radio operation of the system is desired, do any licensing regulations need reviewing?
- What is the budget?

During the process, one imperative aspect of golf course irrigation that must be considered is the water source. It's likely to have a significant bearing on the scope and success of the new system provision.

Much has been written about the new Water Bill and indeed this legislation could be very relevant to any individual course. The Water Bill justifies its own article, but there should be an awareness that the supply of water will be more controlled in the future.

Almost everything that's done in establishing the objectives and selecting a new system will be affected by the source of the water.

When it is almost certain that a non-potable water supply will be required for larger systems such as fairways, the whole area of water availability, control and cost must be investigated at the earliest possible opportunity.

In addition to technical aspects, ask why the club is looking to improve what's already there. What are the reasons and motives behind the choices and decisions? What is wanted from the system? This should be a thought process geared more to the benefits that a good efficient system will bring rather than simply taking a strongly technical bias. All these elements will have a direct impact on the design of the system and the project as a whole and they need to be considered before approaching contractors or consultants.



In recent years the Construction (Design and Management), or CDM Regulations, have entered the golf-contracting field. This regulation places increased responsibility on clubs as the client with regard to Health and Safety. It is essential to establish if the contracting provision of the new system comes under the CDM Regulations, as there are certain tasks that have to be undertaken by the client at the outset.

Having established the project's CDM status and fulfilled any obligation, the next move is to establish the basis upon which bids will be sought.

There are two approaches to choose between once the basic criteria have

A design/build project is the more common route. This path involves asking a number of contractors to submit proposals based upon the designs they produce. With this approach it's absolutely essential to ensure comparable proposals are received.

Every irrigation designer produces a different solution to meet individual requirements, which makes true comparison more difficult. An effective way to overcome this is to insist that all product selection and performance information is submitted with the bid.

This includes sprinkler data, application rates, system operating times, pump capacities and operating pressures and, importantly, water-use figures.

The British Turf and Landscape Irrigation Association has for many years produced a list covering all technical operation data that should be provided within a design/build bid. It can be found on the Association's website at www.btlia.org.uk

A design cannot be produced without the generation of this information and any company that has undertaken a comprehensive design should be able to provide it as a matter of course.

The other path is to employ an irrigation consultant. There are a number of irrigation consultancy practices in the UK. Employing their services brings their expertise and experience into the equation. They can provide advice on the technical and contractual aspects of the project as well as areas such as CDM Regulations and water sourcing. The consultant may be making product

Dryspell Irrigation Solutions Ltd

Irrigation Sprinklers and Spares Specialists

TORO - RAINBIRD - HUNTER LOGIC - NELSON

Eg. Logic L210 pc Impact Green Sprinklers Only £66.75 + vat

For all your irrigation bits and pieces
BEST BUY from DRYSPELL

Dryspell Irrigation Solutions Ltd Parts warehouse – Tel: 01789 414 850 Fax: 01789 414 361

20+YEARS EXPERIENCE



YOURS FOR THE ASKING...

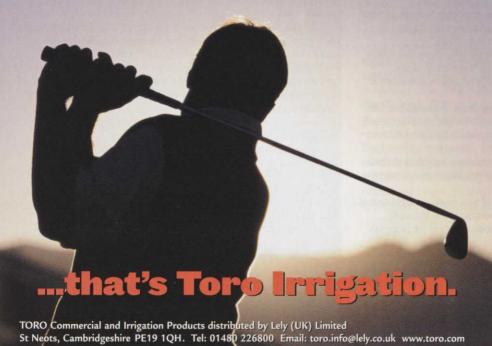


Irrigation systems, lakes and reservoirs, plus servicing, repairs and system extensions a speciality.



Unit 18, Downton Industrial Estate, Batten Road, Downton, Salisbury, Wiltshire SP5 3HU TEL: 01725 513880 FAX: 01725 513003

Power, flexibility, endurance and control...



As if to mirror the world's finest golfers, Toro irrigation systems offer outstanding performance. From course managers and greenkeepers of legendary clubs, to cost-conscious grounds staff teams at municipal courses with heavy-user traffic – every customer can rely on Toro Irrigation, no matter what the location, terrain, soil conditions or climate.

Whether you're upgrading an existing system to a PC-based controller or installing a complete new automatic watering network for greens, tees and fairways, Toro offers technologically-advanced, quality products with outstanding performance, easy adjustability and durable construction.

All this is combined with the best technical support and spares back-up service in the business.

To find out how Toro Irrigation can put you in control, simply call 01480 226800 today.



Count on it.





recommendations and it is important, therefore, to work with one who holds a truly independent commercial status.

Whichever option is chosen - the design/build or consultant-led bidding process - a number of contractors need to be selected to bid.

There are a relatively large number of irrigation contractors in Britain. They vary from small service-orientated companies that usually operate locally, to large national and international businesses.

Some of the selection criteria should include establishment of golf irrigation experience, depth of resources to carry out the contract, long-term service and support strategies, product linkage, financial standing and levels of insurance

Real, relevant references are best to get a good feel for the suitability of a particular company for the work, but all too often they are not sought. If a thorough evaluation is made there is no need to ask more than three or four contractors to bid.

Once requirements for the system have been set and a list of contractors created, it's time to invite the bids.

Contractors will want to meet the club to establish what's required and carry out a detailed site survey. This initial meeting is a good opportunity to get a first impression of the bidders. Are they asking the right questions to fully understand what is wanted? Do they act in a professional manner? Do they instil confidence or raise concern?

As part of initial meetings, a timescale for receipt of tender bids will be agreed and contractors hoping to win the business will submit their bids within this. It's very important to give contractors adequate time to produce comprehensive, well-prepared submissions. Rushing them will only bring errors and ambiguity.

Contractors usually base proposals on the products of one, perhaps two, manufacturers. This will be due to commercial links or the suitability of certain products for particular system requirements that have been set out.

With a tender process based upon a consultant's design and specification, all the performance data will have been part of the consultant's design package. However, with a design/build bid, remember to ensure that all information discussed earlier in this article is provided to allow a fair and true comparison

Other than design, history shows that key areas of concern for clubs looking at a new irrigation system are course disruption, reinstatement of pipe installation lines, training, plus long-term support and service.

Short and long-term support and spares pricing are other items that should also be investigated, but often aren't. So make sure these are all clearly covered in proposals and that as much ambiguity as possible is eliminated at that stage.

Contractors make a big investment in producing design proposals and bids. While they are responsible for gathering the information they need for the bid, it's perfectly reasonable to allow them to formally present their proposals at

This meeting can give a deeper insight into contractors' individual abilities and provides each with an opportunity to demonstrate how they will meet the requirements.

I mentioned earlier that an irrigation system can be a relatively sophisticated piece of engineering, so there will be questions relating to the technical, installation, operation, and contractual and financial aspects of the proposals and bids. This meeting is the perfect forum for raising these issues. By well managing the timing, with a succession of contractors visiting the club over a short period, a continuity of questioning achieves a better comparison process.

At this point, there is likely to be discussion of particular products. Often this discussion is centred on the control system and particularly the controller. There is no doubt that, as Barry Beckett mentioned last month, PCs will radically change golf course management.

This is no more so than with irrigation control, where PC-based control has been used in the UK for over 15 years. Today's PC-based systems, such as

Toro's Gemini-Trident controller with VIP (Visual Irrigation Program) graphics package, have advanced greatly since then.

The integration of PCs with other course management tasks using GPS and other related technologies is with us now. PC-based control systems offer major operational benefits and it is strongly recommended that when specifying a PC-control system a graphics package is included. A good graphics package, one that shows the actual course, with sprinkler positions and types, can make irrigation system programming, scheduling, operation and diagnostics as simply as is possible.

When it is considered how valuable a turf professional's time is, any management tool that saves time and allows a focus on those tasks that need a direct input must be given very serious consideration. How long does it take to recoup the small extra investment in a PC-based controller when set against the longer-term reduced operational costs?

Other major benefits are the increased flexibility and programmability brought about by PC-based control. The ease with which such tasks as programming, scheduling and fine-tuning of the system can be undertaken reduces the time spent in front of the controller and allows important operational benefits to be derived.

Some Course Managers who've progressed to PC-based control report water savings as high as 30 per cent. Therefore where water costs are a major aspect of irrigation system management, such savings need to be fully evaluated before choosing the controller.

More and more Course Managers and Head Greenkeepers now look at the longer-term support services that manufacturers and contractors provide. PCbased control system support for hardware, software and specialist interface units must be assessed.

This should be not simply an insurance policy against system failure, but should offer other services such as a dedicated telephone helpdesk giving guidance on programming and scheduling. Looking at more general support, it is important to question the level of back-up behind the contractor.

Find out if it's through a strong national distributor with support product and personnel, as it is for example with companies like Lely UK, the distributor for Toro irrigation products. The level and quality of support that contractors get from manufacturers are important points that must be raised during presentations.

Following the bid evaluation and presentations it should be possible to award the contract and move onto the next stage, installation.

An irrigation system must be well designed, installed, operated and maintained to be an effective turf management tool. The process described in this article is only a beginning. But if a thorough, well-planned, well-managed decision process is executed at the outset there is a far greater chance of realising the objectives.



PC-based irrigation control systems like this Toro Gemini-Trident unit offer major operational benefits to Course Managers and greenkeepe