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WHAT'S YOUR NUMBER?



WHAT'S YOUR NUMBER?



Name: Tim Earley
Company: Waste2Water Europe Ltd
Position: Managing Director

How long have you been in the industry?

"Although approaching 11 years in the golf business in many ways I still feel like an apprentice. Incredibly friendly and welcoming, once you join you don't want to leave and most people you meet seem to have been connected with golf for a lifetime, which says everything about the industry."

How did you get into the industry?

"I was looking for a new challenge and was offered the opportunity to launch the range of microbial biostimulant products known as "Green Releaf" in the UK to golf courses in 1997. It seemed the perfect job with the opportunity to play golf at the same time! In 2000 I launched Waste2Water Europe, supplying Recycling Wash-Off Systems and the rest, as they say, is history."

What other jobs have you done?

"Before I joined the golf industry I was the European General Manager of an American electronics company."

What do I like about my job?

"It was initially the challenge of introducing a new concept to the industry and is now being part of an industry where it is a real

pleasure to mix with genuine people who make it happen on the golf course."

What Changes have you seen?

"When I initially introduced the concept of Recycling Wash-Off Systems in the UK around seven years ago, there had been no record drought or record flood and global warming and environmental concern was something for the future. In the intervening period everyone has come to realise urgent action is needed to safeguard the environment. The golf industry has 'grabbed the mantle' and is now leading the way in addressing environmental concerns."

What do you do in your spare time?

"Playing golf and socialising."

Where do you see yourself in 10 years time?

"Playing golf in southern Spain!"

Who do you consider to be your best friends in the industry?

"Too many to mention, this has to be the friendliest industry you could ever wish to work in."

What is your lucky number?

"7."

Pick a number

"38."

Tim has picked David Green from Terrain Aeration.



NATURAL AREA ESTABLISHMENT AND MANAGEMENT ON THE GOLF COURSE

Tim Butler provides some useful information on managing natural areas on your course

Nature on the golf course is gaining continued publicity. Golf course landscapes typically contain a diverse range of habitats, which provide opportunities for wildlife. Planting naturalistic areas on golf courses may be a very useful way of increasing the appeal of the course to golfers, while consequently accentuating the natural diversity and image of the golf course. Natural plantings are suitable for diverse areas including roughs, hillsides, along ponds and streams. Integration of naturalized areas is commonly practiced on new golf course developments, however little has been written concerning the implementation of natural areas on existing courses. From experience, meeting with turfgrass managers, much confusion exists about how to go about integrating natural areas on the golf course. With much media attention regarding the environment, people are beginning to realise that native areas can be very attractive when maintained properly. In the past, golfers had expectations about how the greens and fairways should look. In more recent times these expectations have also shifted to bunker and rough management and in some instances, the maintenance of native areas.

IN OR OUT OF PLAY

Probably one of the most commonly used methods of establishing natural areas is through the introduction of native grasses. This system as well as benefiting the environment may lead to a reduction in maintenance. Natural areas can be established in areas that are both in-play and out-of-play. Out-of-play areas can be planted to wild flower meadow mixes with species such as cowslip and foxglove included. It is very important to realise that these plants will grow tall over time and will greatly reduce playability if sown in the wrong location. Grasses such as the fescues are often sown and used for in-play areas. Such grasses will maintain a low growing habit and are often used as a base material for other plants to colonize the area. One of the main benefits with fescues is that they

will not develop the density of many other grasses, which makes them ideal for areas that receive a little play. It is vital that careful planning is put into deciding in and out of play zones or areas on the course or playability may be dramatically reduced.

Golf course superintendents spend a lot of time and money each year maintaining areas along stream banks and around ponds and wetlands. Grass strimming of these areas is a slow and tedious practise which staff rarely enjoy. Careful planting of wildflowers and native grasses in such locations if properly managed can dramatically reduce the amount of maintenance around these course features. Coupled with this, golfers on the course will be delighted to see masses of colour around lakes and other areas as it adds to the character of the course.

Wildflowers should be kept out of locations which receive a lot of traffic. Besides the issue with lost balls, wildflowers unlike grasses do not often rebound well from trafficking. In the past some people felt that wildflowers should be planted in small spaces, often nearby the clubhouse. It is vital to remember that when planting natural areas, "natural" needs to be kept in focus and these natural areas need space, sunlight and room to prosper. Natural areas will also serve to enhance wildlife on the course, although many do not realise that even in such surroundings that wildlife still need protection from predators and tree and shrub planting in these natural areas often serves to protect the wildlife.

ESTABLISHMENT

Establishment of natural areas on golf courses can be complicated and numerous methods have been suggested. In my opinion, excellent preparation is the key to the success of wildflower plantings. I have come across so many situations, where poor consideration was given

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into weed management prior to sowing the natural grasses or wild flower areas, which in time lead to failure of the natural grasses and flowers due to excessive weed growth. Weed management is essential on new and existing sites, since weed seed banks are usually high in most soils. For in-play areas some suggest that you can stop mowing the areas in the rough that you have decided to naturalize and letting the existing grasses grow taller. From experience this method often raises problems, since the grasses will grow tall relatively quickly leading to in-play areas that are almost unplayable. In my opinion, one of the best options is to kill off the grass in the areas that you have decided to naturalize. It is important to ensure that you check the roughs prior to herbicide application in order to maintain any native flowers that may be growing.

The grass or wildflower seeds can be sown onto the bare soil and rolled in after sowing. When choosing wildflower seed, it is important that the seeds are native wildflower seeds. A good seed mixture often contains a variety of perennials as well as some annuals. Wildflower seeds are different to grass seeds in that some species within the mixture may take several weeks or even months to germinate, so patience is essential. Fertiliser application at establishment is usually not required except on very poor fertility areas. Wildflower areas may need light seeding every couple of years in order to prevent specific plant species from dominating the stand.

MANAGING NATURALIZED AREAS

Wildflower meadows like all turfgrass systems require some management. During the grow-in year 4-6 cuts may be required in order to get the meadow established and allow non-germinated seedlings to grow. The cut material needs to be removed after each cutting to prevent problems with poor air circulation and grass death. Basically, the rough needs to be treated like a hay field and we have come across situations where animal fodder has been cut from golf course roughs and sold. Having said this, some wild flower species can be poisonous to animals and humans and careful thought should be put into species selection. In many cases, golf course superintendents choose wild flower mixes that can be consumed by animals and this gives more freedom in future management strategies. After establishment meadow mowing is often reduced to 2-3 times yearly.

WEED CONTROL

Probably one of the biggest problems with establishing natural areas is weed invasion both during and after sowing. Perennial weeds usually pose most problems in the long term in native areas, with annual weed problems usually subsiding after a couple of years. Weed control strategies include:

- Mowing
- Manual weed removal
- Herbicide spot applications

Mowing twice yearly is usually an effective means of controlling many weeds, although some weeds may persist. Spot treating with herbicides does work, but emphasis needs to be placed on the fact that many so called weeds may actually be important plants in the native system and correct identification and inspection by a turfgrass agronomist is essential in order to build a management programme and maximise the golf courses potential.

Advice that we give to many turfgrass managers is to start small, evaluate how the native areas establish and grow, and if happy with the results then larger areas on the course can be converted to natural areas. It is vital that areas which are planted with natural grasses and wildflowers do not overly affect the playability of the course. In the past, some courses have rushed into planting native areas and have ended up with over penalizing golf courses. Native areas that encompass wildflowers may attract a myriad of birds and butterflies and provide a sea of colour and

fragrance throughout much of the year. We have all at one time or other seen pictures on postcards or on television of meadows full of vibrant yellows, oranges, blues etc. Unfortunately such images are not common place in many areas of Ireland or the U.K. in recent years. Planting native areas on the golf course could be an excellent way of differentiating your golfing facility from the rest. Golf is a cut throat business and standing out from the crowd is a way of attracting more golfers, which is where native planting may turn into an important marketing tool.

ABOUT THE AUTHORS

Dr. Tim Butler is a Sportsturf Science Agronomist and consults on all aspects of Golf Courses including Environmental Management, Construction/Renovation, Agronomy and Drainage. For more information contact Tim at tim.butler@ucd.ie

Mary Purcell is carrying out research for a doctorate degree in Environmental Science at University College Dublin. Mary has Undergraduate and Masters Degrees in Environmental Science and Engineering respectively and is a specialist in all aspects of Environmental Management and Enhancement on Golf Courses. For more information contact Mary at mary.purcell@ucd.ie

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Knautia species



Cornflower and Corn Chamomille



Tim Butler



David Simpson, BIGGA National Champion



Elliott Small, winner of the BIGGA Challenge Cup

Kubota

A CHAMPIONSHIP OF WHICH TO BE PROUD

Dundonald and Kilmarnock Barassie hosted the BIGGA National Championship, sponsored by Kubota and produced one of the finest events ever

October on the west coast of Scotland and what would you expect for your golfing weather? Exactly! Well you will appreciate just how delighted the 80 plus competitors were to be playing the majority of the 36 holes in shirt sleeves.

The 2007 BIGGA National Championship, sponsored by Kubota, basked in sunshine... at least for some of the time and the two venues Dundonald Links and Kilmarnock Barassie witnessed golf to match the conditions with the home nation taking a clean sweep of the major prizes.

David Simpson, a plus 1 handicapper from Crieff Golf Club, emerged as BIGGA's new Champion Golfer with two rounds of 75 to pip another plus 1 handicapper Steve McIntosh, of Torvean Golf Club, by two shots. Steve had fought back after an opening round 78 to post a second round 74. Three handicapper Paul Dolton, of Southfield Golf Club, finished third a further shot back.

The Challenge Trophy for Best Nett was a triumph for the older brigade when BIGGA Past Chairman, Elliott Small, after many years of trying got his hands on the silverware with a two round total of 144 off his still very useful handicap of 12. Elliott shot a gross 82 around Dundonald and followed it up with an 86 around Barassie.

To top off a fine couple of days for the host nation Scotland clinched the Regional Trophy for the first time in many, many years with their eight

best counting scores giving them a healthy advantage over the Midland Region on the 18 hole opening day competition which runs concurrently with the main individual event.

Both golf clubs made BIGGA exceptionally welcome with Ken Seims MG Director of Agronomy for Loch Lomond Golf Club, which owns Dundonald, greeting every player on the opening hole and the catering staff doing a sterling job in keeping the competitors fed and watered.

In the evening at the Championship Dinner held at Barassie, Course Managers, Frank Clarkson, from Dundonald and Brian Finlayson, of Barassie, received the acclaim of their fellow greenkeepers for the condition of both courses and were presented with tankards to commemorate the occasion. Captain Bob Pollock also warmly welcomed BIGGA to his golf club and said how proud they were to show off their course to so many greenkeepers.

Kubota proved wonderful sponsors of the Championship. National Sales Manager David Roberts and Tom Dunlop, who looks after the Scottish area, provided everyone with superb goodie bags containing balls, tees, a pen, towel and hat and the halfway house on the 10th tee of both courses was a welcome sight for all the competitors.

Despite being a winner of both the Blairgowrie and Crieff 36 hole events and being the Perth and Kinross Order of Merit winner and last



year's Team Player of the Year David believes that the BIGGA National Championship is the top event he has won.

"It is a British event and there were a lot of very good golfers playing in it. I was there after Monday's round and started well on Tuesday but I dropped quite a few shots over the last six holes and while I was relieved to have won I was disappointed in the way that I finished," explained 29 year-old David.

"It was the first time that I'd played either course and I thought they were superb. In fact the Scottish Mid-Amateur is being played at Dundonald next year and I'll look forward to going back," he said, adding that he was hoping to defend his title next year. Discussions are currently underway with East Sussex National to play the Championship there.

Elliott, National Chairman in 2000, has played in at least 17 National Championships but this is the first time his name will be engraved on a trophy.

"At last! I think I might just retire now," explained Elliott, while admitting that if it is played again in Scotland or the north of England he might make an exception.

Elliott entered the back nine of the second round feeling he had a chance but an 8, a 7 and a missed two footer at the last left him feeling that he might just miss out. However his scored was enough to win, on a better second round, from overnight leader Francis Kempster, who followed his first round nett 67 with a nett 77.

The best two round score of the week was actually achieved by 1 handicapper, Alex Webster, of Tower Chemicals, who shot rounds of 73 and 75 to win the Associate prize.



BIGGA National Chairman, Billy McMillan, with Frank Clarkson, Course Manager at Dundonald



The winning Scottish region



BIGGA National Chairman, Billy McMillan with Brian Finlayson, Course Manager at Barassie

ROLL OF HONOUR

BIGGA National Champion for the BIGGA Challenge Trophy	David Simpson, Crieff GC, 150
BIGGA Challenge Cup – Best Nett Score	Elliott Small, Life Member, 144 (Better Second Round)
Gross Over 36 Holes	2. Steve McIntosh, Torvean GC, 152 3. Phil Dolton, Southfield GC, 153
Nett over 36 Holes	2. Francis Kempster, Glen Gorse GC, 144 3. Kerr Rowan, Carrick GC, 146

DUNDONALD LINKS

Scratch to 6	Gary Burgess, Grange Park GC, 73
7 to 13	William Craig, Kirriemuir GC, 75
14-24	Frank Stewart, Cookridge Hall GC, 79

BARASSIE

Scratch – 6	Graeme MacDonald, Newark GC, 73
7 to 13	Derek Wilson, Irvine GC, 75 (BIH)
14-24	David Fellows, Cocks Moor Wood GC, 74
Nearest the Pin	Andy Peel, Bull Bay
Longest Drive	Kerr Rowan, Carrick
Associate Prize	Alex Webster, 146

TEAM TROPHY

Winner Scotland Total 601

Elliott Small, Life Member; Kerr Rowan, Carrick GC; Kenny Mitchell, St Andrews Links; William Craig, Kirriemuir GC; David Simpson, Crieff GC; Derek Wilson, Irvine GC; Christy McKenzie, Dunblane GC and Jim MacCormack, Kirriemuir.

Runner Up Midland Total 622

Francis Kempster, Glen Corse GC; Paul Dolton, Southfield GC; Steve Scott, North Warwickshire GC; John Ganley, North Warwickshire GC; Carl Small, Ellesborough GC; Steve Mason, Stocks GC; David Fellows, Cocks Moor Wood GC and Brian Robinson, Belton Woods GC.



BIGGA Chief Executive, John Pemberton, with Dave Roberts, from Kubota



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**Maurice Gaumley
(Middlesborough Municipal Golf Club)**

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Easy to address problem areas quickly.



“ We have been replacing our conventional bunker drainage over the last 3 years with Aquadyne. Installation is very quick and simple and the drainage performance remains very high. ” (installed 2005)

**Duncan Kelso
(Kings Hill Golf Club)**

- Eradicates stone migration into the bunker and onto the fairway. Aquadyne is easily located and can be removed and reused during remodeling or refurbishment.



“ We installed the 3000 metres of fairway drainage ourselves ... the Aquadyne system has worked without any problems whatsoever.

We use a shallow slitter on this fairway to keep the surface open and aerated, this works exceptionally well with the Aquadyne system. ” (installed 2003)

**Neil Hullah
(Leeds Golf Club)**

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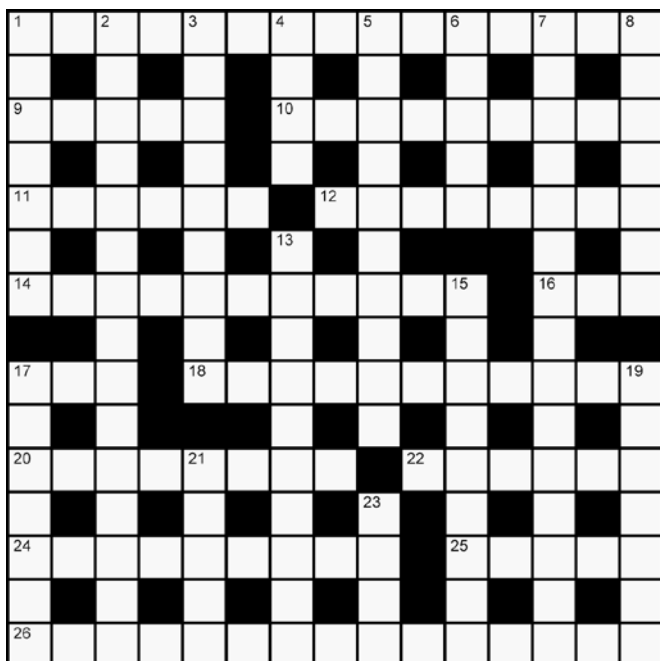
CROSSWORD

ACROSS

- 1 One who cannot venture beyond established behaviour (8,2,5)
- 9 Belgium's largest French-speaking city (5)
- 10 Ready, on hand (9)
- 11 Foul-smelling, usually because of decomposition (6)
- 12 Sandwich filling featured in the 1966 spy spoof "What's Up, Tiger Lily?" (3,5)
- 14 Supernatural messaging devices (5-6)
- 16 Unspecified quantity; in the US, also means "whatsoever" (3)
- 17 Colloquial name for tea (3)
- 18 Pertaining to the branch of surgery dealing with the spine and joints (11)
- 20 Engrave (8)
- 22 Written order directing a bank to pay money (6)
- 24 Administer a virus to create immunity (9)
- 25 Thick woollen fabric originating in Scotland (5)
- 26 Symbol of communism - in Russian, Serp i Molot (6,3,6)

DOWN

- 1 Percussive dance music of Trinidad (7)
- 2 ALL TIMES CORRECT (anagram) (10,5)
- 3 G&S opera which included the first use of the phrase "short, sharp shock" (3,6)
- 4 Wander aimlessly (4)
- 5 Herbal medicine plant also called goldenseal (10)
- 6 Accommodates (5)
- 7 British dish of leftover cabbage, potato and meat fried together (6-3-6)
- 8 Day of the week closely associated with Mars (7)
- 13 Its largest resort is Lloret de Mar (5,5)
- 15 Pasta in the form of long strings (9)
- 17 Informal gathering for folk music, typically in Ireland (7)
- 19 Staffordshire market town close to Alton Towers (7)
- 21 Make-up of red or pink powder (5)
- 23 Patch up, restore (4)

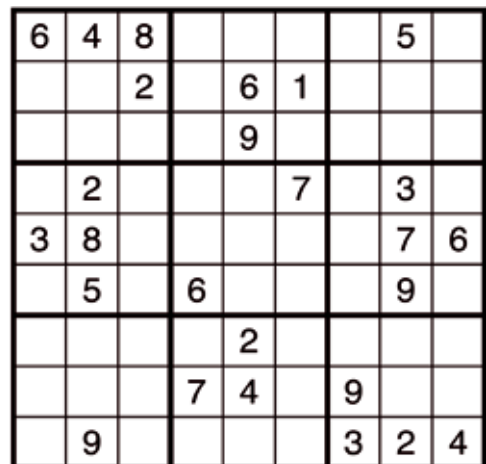


QUICK 'NINE HOLE' QUIZ

- 1 Why was professional footballer Maribel Dominguez forbidden by FIFA to play for Mexican side Celaya, after having signed?
- 2 Which golfer completed the Grand Slam of the amateur and professional Opens of both the USA and Britain in 1930?
- 3 Which Scottish rugby player married a TV sports presenter in 2001?
- 4 By what name did the Empire Stadium become known?
- 5 Which sports goods company, founded by Joseph Foster in 1892, is named after a species of South African antelope?
- 6 Which Football team play their home matches at the 'Estadio Nou Camp'?
- 7 On which piece of apparatus would a male gymnast do a Crucifix?
- 8 In rugby union the Australian team is called The Wallabies; what is their name in rugby league?
- 9 How many players are there in a basketball team?

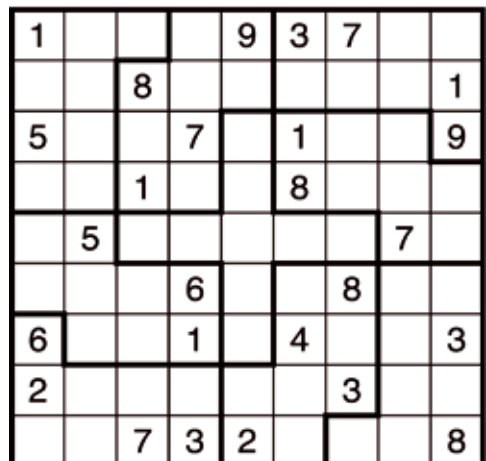
MONSTER SUDOKU

Fill in the grid so that every row, every column and every 3x3 box contains the numbers 1 to 9 and the letters A,B and C.



SQUIGGLY SUDOKU

Fill in the grid so that every row, every column and every 12 box shape contains the numbers 1 to 9.



IN THE SHED ANSWERS ON PAGE 55

WHEN SHOULD I UPGRADE OR REPLACE MY IRRIGATION SYSTEM?

By Giles Wardle BSc MSc MIAgrE, Irriplan Ltd.

Whenever I buy a piece of consumer electronics, from MP3 player to DVD player, a better and cheaper model is on the market next year. The pace of technological development in irrigation over the last decade has been such that one might be tempted to conclude that it is worth waiting a little while before upgrading or replacing your system, since something cheaper and better will be on the market soon. So, is there any merit in this argument?

Unlike consumer electronics, the cost of irrigation systems has never dropped. So the argument that a technological innovation might make irrigation systems much cheaper for similar or better performance would certainly be highly optimistic, at least on historic grounds. You can be pretty sure that the cost of an irrigation system is not going to drop in the future, either.

This is because a major element of the cost of a new irrigation system is the sprinklers, valves, pipe and fittings, which are all made from plastic, the cost of which is predominantly dependent on the price of oil; which is unlikely to drop significantly any time soon.

Approximately 30-40% of the cost of a new irrigation system is the installation element which is dependent on the cost of labour, machinery and fuel - our friend oil again! While the direct cost of unskilled labour has dropped a little (due to the recent expansion of the EU to Eastern Europe), this has been more than offset by the rising cost of skilled labour and associated employment costs and legislation.

In real terms, the cost of the electronic components (decoders, controllers etc) has probably dropped in recent times, but these components account for less than 15% of the entire cost of a new irrigation system.

So if you need a new irrigation system there's no benefit in waiting on the grounds that costs might drop. One might arguably justify waiting on the grounds that one could benefit from some future technological advance, but on this rationale we would never upgrade or replace anything as there is always the potential for future technological advances.

The dilemma most commonly faced by golf clubs is whether to upgrade their current irrigation system or to replace it completely. This will be dependent on the individual circumstances and history of the course's particular irrigation system and ideally should be evaluated and assessed by an independent engineer/consultant, who has no vested interest in

selling or installing irrigation equipment.

The cost of purchasing a new irrigation system is a high capital cost for all golf clubs and is often a bitter pill to swallow. With machinery, you buy an item every year and replenish your fleet over time; however irrigation is normally a one-off capital purchase.

The temptation is to keep spending modest amounts and merely upgrade certain specific elements within the system. The problem with this approach is that one tends to end up with an incoherent patch-work quilt of an irrigation system. While financially palatable in the short term, in the long-term this approach costs a great deal more and more often than not performs inefficiently, unreliably and imprecisely.

So under what circumstances is it justifiable to upgrade a system rather than completely replace it? The answer really lies in the pipe and cable network. If both these elements are robust and have sufficient capacity to accommodate any modifications or extensions, then you have a good basis to upgrade the system rather than replace it. If you have an ageing PVC pipe network, then wholesale system replacement should be given serious consideration and money spent on short-term measures, will almost certainly be a palliative and not a cure.

The good news is that while PVC pipe networks have a life expectancy typically no longer than 25 years, polyethylene (PE) pipes have a design-life of 50 years (so long as they are rigorously jointed and installed). In this context, capital expenditure on an irrigation system is potentially a 50 year investment – not one to be undertaken lightly. During the 50 years, there is no doubt that some components will be replaced (sprinklers for example), in the same way that one might replace the tyres on a car. The upgrade v. replacement argument will thus be vastly different in the future for golf clubs with PE pipe networks compared to that faced today for clubs with PVC pipe networks.

By way of illustration let's consider a case study of a current Irriplan project; Saunton Golf Club. This is a 36 hole links on the North Devon coast with an irrigation system that can be summarised as follows:

- Recently installed PC controller, new decoders and new cable network
- Old PVC pipe network of varying age up to 30 years old, with capacity to irrigate greens, tees and approaches only; not fairways
- Sprinkler coverage to greens, tees and approaches and some fairways