



fundamental aspects about the change:

- The reason for the change the
- Who will be affected by the change? This includes internal staff, customers, business partners, and all other stakeholders
- How will each person be affected by the change? More importantly, how will I doing my job differently every day?
- What will change about my daily job duties?
- When will these changes take place?

These few things sound very fundamental and fairly easy to communicate. So why don't companies follow these steps? In reality it is because to do them right can be labour intensive and they take time and energy. There must be heavy doses of relating and connecting with those individuals who are affected the most. After the interactions, leaders and other change advocates must use the information and feedback for creating key messages to communicate consistently and often throughout the entire process and beyond. The results are well worth the efforts and the effect is multiplied throughout the organisation. Engaged employees are not only more accepting of future changes, but are more likely to become change advocates. Employees who feel seen and heard are more loyal, productive and seek to create a positive work atmosphere.

In every profession, every business, every organisation and every company, change is either happening or about to happen. Even the smallest, least intrusive change can meet with drama and great resistance if not handled with the people in mind. The leaders and managers who are responsible for seeing changes through to their successful implementation must involve affected team members from the beginning. The reason the change is being considered must be made clear and communicated consistently. Once all team members can

understand the idea and determine how he or she is personally affected, the mystery begins to fade and is replaced by clarity. During times of change in the workplace, clarity diminishes resistance and creates space for healthy anticipation and cooperation.

How are you, as leaders and managers, affected during change efforts, and what can you do to prepare yourself and your team?

- Acquaint yourself with the change and get the details
- Acknowledge the change and assess your own level of resistance
- · Communicate and interact with every team member
- Recognise the stages of change and help your team navigate through

Taking time to interact, relate and connect with the people will make the biggest difference during times of change in the workplace. Accurate and consistent messages and honest expectations must be a part of every conversation and communication.

about the author





Ever since getting into greenkeeping 15 years ago I've always wondered what it would be like to work on a golf course abroad. Since becoming Deputy Head Greenkeeper at Kirtlington five years ago I thought this was unlikely unless I moved permanently to another country.

But when I heard that courses in Europe are always looking for British greenkeepers to work on their courses during the summer months, I asked my club if there was any way of being able to experience this as I knew it would enhance my CV and career.

After thinking this through and finding cover for me they allowed me to do it, so I set up a meeting with Tony Martin from Golf Recruit – the main company who advertise such jobs on the BIGGA website and in Greenkeeper International. I met Tony at BTME 2013, he explained what would happen and answered everything I needed to know. I sent my CV to Tony which he then

circulated to various golf clubs. We then kept in contact until an offer was made from Golf de Pierpont in Belgium which had an 18 hole championship course and also a small 9 hole course. After researching the course I discovered that it held tournaments including the European Seniors Tour event, so I decided this would be a great place to work and gain experience. I was to start in May. When the time came to head over there I felt nervous, but excited at the same time.

Getting there was so easy, it was a couple of hours drive down to Dover, two hours on the ferry and then another two hours drive through France in to Belgium. I arrived on a Sunday afternoon and was warmly welcomed by Gary Nisbet the General Manager, he showed me to my room which again was sorted out by Golf Recruit. I unpacked and settled in before Gary gave me a detailed tour of the course, clubhouse and hotel. I then got an early night ready to start work the following day.

Day one involved meeting the team. Golf de Pierpoint have three full time staff plus one seasonal worker and a Course Manager who looked after three other courses in the area. I was shown around the course by the Head Greenkeeper Pascal and also cut some greens. I then cut greens for the reminder of the week to help me get used to the order of their cutting routines. In my first week a representative from Golf Recruit also came out to see me to check everything was going well. As for the language, a couple of the greenkeepers only spoke French but generally it wasn't a problem as the Course Manager, Pascal and his assistant all spoke English.

The Course Manager would usually call Pascal most mornings and discuss the day's plans, we were then given our jobs for the day. Their summer hours were 6am till 3.30pm. The main difference for me was that at the end of the day, they always ensured their machines were spotless and greased for the next days' use, spending much

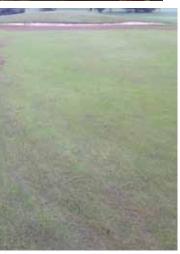
Golf Recruit brings together industry specialists from the world of golf and professional business best practice, to deliver the highest level of recruitment services to the golf industry.

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longer on this than I'm used to.

As my time at the club continued I was involved in all sorts of tasks around the 27 holes including their greens maintenance, which involved hollow tining and top dressing. Their machines are pretty similar consisting of a mixture of Toro, John Deere and Ransomes Jacobsen so it didn't take long to get used to them.

The club hosted a couple of big competitions during my time there so I got to see the differences between their general daily set up of the course and tournament set up which was great, this gave me a few new ideas to take back with me to my course. I noticed a lot of similarities between their approach and ours at Kirtlington, and also how they dealt with the conditions. The climate seemed very similar to ours.

They did suffer from some Fusarium on the greens, and sprayed a contact fungicide as soon as they spotted it. They appeared to have no other problems with disease-for example they didn't suffer from red thread due to their regular nitrogen fertiliser programme. They had a lot more meadowgrass and bent grasses on the greens and surrounding areas than I'm used to.

After work I usually just relaxed or played a bit of golf - on Wednes-

days I took part in the manager's nine hole competition, a great way to meet some of the members. The club had a lovely friendly vibe about it all round. At weekends I took the time to go and see Brussels and the site of the Battle of Waterloo. I also visited Bruges and Antwerp, two beautiful cities. These trips allowed me to compare French and Flemish cultures which was extremely interesting.

I also spent a lot of time at weekends with Gary and his family during my summer in Belgium. I can't thank them enough for looking after me - their barbecues were the best! I made a lot of good friends and still keep in contact with them all now. It truly was an amazing work, cultural and life experience which I will never forget. I would encourage any greenkeeper at any stage of their career to look into doing something similar if at all possible.

I would particularly like to thank Tony Martin (Golf Recruit), Gary Nisbet (General Manager Golf de Pierpont), Brett Moggridge (Head Greenkeeper at Kirtlington) and Pam Smith (General Manager at Kirtlington) for making it all happen. If anyone wants to know anything else from my experience please feel free to email me at Hirons07@hotmail.co.uk





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The 2013 Open Championship at Muirfield in July was certainly one to remember. Muirfield was in fabulous condition and the playing surfaces were the firmest and fastest in recent years and perhaps even in the history of the Championship.

The firm, fast and bouncy conditions set a great challenge for the players. The leaderboard and Phil Mickelson's eventual win suggested

that the traditional links conditions challenged and identified the best golfers in the world.

The warm and dry weather played a major part in the story of The 2013 Open but so did the agronomic quality of the course, combined with the skill, judgement and knowledge of the greenkeeping team headed by Course Manager Colin Irvine. This article starts to tell the greenkeeping story of what was a truly memorable Championship.

Since 2009, STRI have a team of four at The Open to take a range of objective measurements from the greens and other parts of the course. We measure firmness, speed, smoothness and trueness of the greens, along with the firmness and soil moisture of selected green aprons and fairways.

We begin this process on the Tuesday before official practice and continue up until the Championship ends. The detailed information



"As the Championship moved closer, the aim was to reduce soil moisture values further to optimise surface firmness and reward accurate ball striking"

striking and accurate positional play. The surfaces should remain receptive to a well struck shot taken from tight fairway lies but release those that are poorly struck or taken from the rough. In essence, well struck shots are generally rewarded and poorly struck shots are punished.

Now that we use the Clegg Impact Hammer to measure surface firmness we can put a number on this. The target is to achieve Clegg Hammer values of 100-130 gravities. However, since testing began in 2009, a run of successive wet Opens has meant the top end of this range hadn't yet been tested.

The achievement of target firmness is all about the condition of the underlying soil profile. The desired level of surface firmness cannot be achieved if the soil profile is failing and too moisture retentive. So, the focus in the years leading up to The Open involved regular sand top dressing to regulate organic matter content and create a sandy, dry and free draining soil profile.

Sand top dressing was applied to keep organic matter to 4-6% and 0-20 mm and less than 5% lower down. Due to the intensity of sand top dressing, organic matter was in the perfect place for The Open.

Careful management of organic matter to reduce moisture retention was one part of the strategy to optimise surface firmness. The other part of the strategy involved consolidation of the soil profile by regular rolling and targeted aeration.

Objective measurements and bespoke research carried out by STRI in the years leading up to The Open demonstrated that the soils were a little loose and there was a significant difference in firmness between trafficked and non-trafficked areas. The trafficked areas were firmer and supported tighter soils, with a higher soil bulk density, whereas non-trafficked areas were looser and slightly softer. To provide optimum levels of firmness, we needed to carefully manage soil moisture but also improve the consolidation and bulk density of the soils.

The strategy to improve the consolidation of the underlying soils

involved a programme of regular rolling combined with routine hand mowing. From early April, rolling was implemented two to three times a week with the Tru-Turf roller.

This operation intensified in frequency through the spring and daily operations were implemented in the final four to five weeks before the Championship. In addition, from mid-April, all mowing was carried out with John Deere 180 hand mowers and the frequency intensified throughout the spring.

Daily operations were implemented from mid-May until the Saturday before official practice began. The squeezing and soil consolidation effect of rolling and hand mowing was probably most effective during early to mid-June when a period of wet weather occurred which increased soil moisture values

During the latter stages of preparation, careful regulation of soil moisture via specific wetting agent use and accurate irrigation inputs, aided with the regular use of a Theta Probe soil moisture meter, was the plan. The initial target during May and June was to maintain soil moisture around 12-15% (weather permitting) and to retain strong and healthy growth to facilitate the necessary sward refinement operations.

During mid-June, the firmness values were 119 gravities at a soil moisture content of 14% - progressing nicely towards the target.

As the Championship moved closer, the aim was to reduce soil moisture values further to optimise surface firmness and reward accurate ball striking. It was possible to reduce soil moisture without compromising sward health and ball roll qualities.

This was due to root development being deep and strong, and the fact that browntop bent and fine fescue dominated the sward. On 10 July soil moisture values were 9.2% and surface firmness had increased to 132 gravities. These values were the firmest achieved since objective testing began at The Open in 2009.

In the last seven to ten days leading up to and then during the Championship, soil moisture measurements were taken from all

provided informs and supports the decision making process regarding daily course setup. It also provides an accurate record of the performance from each Open and the standards achieved. This allows assessments of what worked and what didn't and drives a constant culture of learning for the future.

Very firm surfaces are at the heart of links golf and The Open Championship. The aim is to provide very firm surfaces that reward clean ball



greens twice a day. From this information, green specific irrigation inputs were calculated and applied.

The aim was to ensure sufficient moisture was applied to keep the surfaces healthy, and to ensure that the surfaces were uniform and very firm to provide the optimum challenge to the players. It was also important to ensure the visual presentation of the greens were authentic to the warm and dry weather conditions encountered in the weeks leading up to The Open.

Accurate measurements of soil moisture were a crucial part of this process, combined with the incredibly skilful implementation of hand watering from the green staff. This was top class greenkeeping in action. At the start of The Championship, surface firmness was 147 gravities and soil moisture values were 6.5%.

As the greens became firmer and drier, ball roll qualities continued to improve. Due to the relatively benign weather forecast for the Championship, it was possible to safely generate additional green speed.

The aim was to achieve speeds of 11ft for the start of play. On Thursday morning, the average speed was 10ft 11in following a double cut at 4mm and Tru-Turf roll.

Green speeds had consistently increased by 2-3 feet during the course of the day throughout the practice rounds, and the forecast suggested a similar trend would be sustained. So, the firmness and speed of the greens were set for a challenging day of links golf.

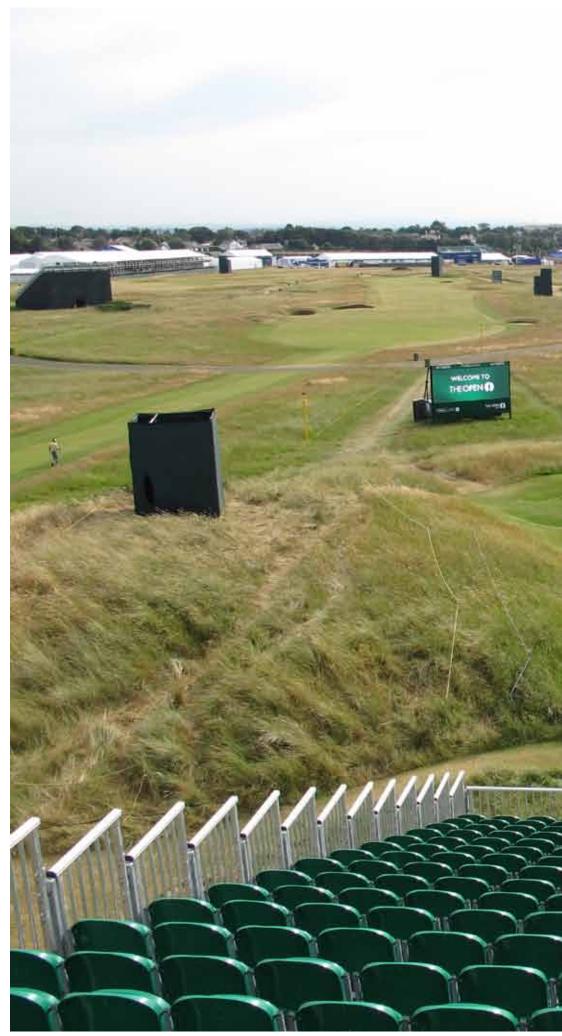
Thursday certainly developed into an interesting day. It was particularly sunny with a warm and drying westerly breeze. Temperatures increased slightly higher than predicted with a maximum of 27°C and very high solar radiation. Records from the Muirfield weather station showed it was in effect the warmest and sunniest day in July and one of the most extreme days of summer weather for several years.

These conditions, combined with footprinting from play, desiccated the sward and gave the greens a particularly glassy appearance.

The resultant effect was significantly greater increases in speed during the day and some particularly challenging conditions for the golfers during the latter part of the afternoon.

Contrary to the comments from some players, the greens were certainly not dead!

The greens became very quick, especially in areas of high foot traffic, which inevitably meant the area





around the hole. While the surfaces were quick, there was never any suggestion of play having to be suspended.

To reinvigorate the sward and replenish lost soil moisture, hand watering was accurately and expertly delivered overnight.

Soil moisture measurements from each green were taken along with spatial measurements to each individual surface. The plan was to increase soil moisture levels slightly in comparison to the previous day in order to retain moisture within the leaf for longer and therefore provide a better balance of speed between the morning and afternoon. The amount of water applied was minimal and amounted to 1-1.5 mm.

As moisture increased to 8.7%, excellent levels of surface firmness were retained at 147 gravities and green speeds were set at 10ft 2in for Friday morning. As with Thursday, the greens dried out similarly through Friday but not to the same extent. Speeds increased by 2-3ft during the course of the day.

For the weekend, the objective was to set the course up in a similar way with very firm greens and speed increasing during the day although not to the extent of Thursday and Friday.

It remained crucially important to ensure the visual appearance of the greens were consistent and authentic to the warm and dry weather received.

A further 1-1.5 mm of irrigation was delivered by hand. As the greens did not dry as much during the less extreme conditions on Friday, soil moisture values were 10.5% for Saturday morning, with firmness values of 138 gravities and green speeds of 10ft 4in.

Although firmness had been tempered slightly, they were still the firmest and indeed driest greens in recent years for The Open.

Again, on Saturday, the greens picked up significant pace during the course of the afternoon.

The same programme of irrigation was repeated on Saturday night for the final day of play and almost exactly the same conditions in terms of speed, moisture and firmness were presented on the morning of the final day.

Unfortunately, the weather didn't develop as predicted with tempera-

tures peaking at 19°C and solar radiation 50% less than Thursday. This meant the greens didn't dry as they had on Thursday, Friday and Saturday so speeds were slightly slower on Sunday compared to previous afternoons.

Achieving firmness to the greens was of course important but it was essential to match the firmness values of the green aprons and indeed fairways to those of the greens. To achieve this level of consistency, selected green aprons and fairways were selected for Clegg Hammer and Theta Probe readings to accurately inform the necessary maintenance operations.

In the 10-14 days before the Championship, verticutting was carried out to the aprons to refine sward density in addition to careful regulation of irrigation and regular rolling. By the start of practice, the fairways were consistent with the green aprons and the green aprons were perfectly consistent with the greens.

They remained this way throughout the Championship due to careful regulation of soil moisture. It is this level of refinement and

about the author



Richard Windows

Richard is Agronomy Service Manager for STRI working from a Glasgow base. He has worked as an STRI Agronomist for 13 years. A major part of his work is to provide agronomic advice and support on behalf of The R&A to all Open Championship venues in Scotland, a role he has carried out since 2003. In addition to this work he has helped developed the STRI Programme Agronomy Service and was co-author of the Disturbance Theory.

