

Dunfermline Golf Club
Greenkeeping Report January 2018

Paul Miller PhD

Dunfermline Golf Club

Report of Visit and Meeting of 4th January 2018

Those present were Jock McNeil, Joan Peden, Kenny Duncan and Paul Miller; a discussion was held in the Clubhouse about the approach to be taken in 2018 and subsequently in terms of the strategy for course management and maintenance. We subsequently (not JMc) had a walk over parts of the golf course to inspect the golf course generally and some of the greens in general terms.

The Golf Course

Greens

The greens remain very wet in the surface. A small number of cores were taken on the 9th and 14th, these revealing the organic surface layer to be saturated while the soil beneath is not. This highlights the issue of this surface organic layer, in that it traps water in a way that prevents it being passed to the soil beneath; the lack of evaporation during winter (due to cold temperatures) means that the roots of the turf are sitting in this saturated, cold, anaerobic environment for several months. In these situations any microbiological action is also anaerobic and the by-products of anaerobic respiration are toxic and smelly gases including Sulphur Dioxide and Methane, which tend to acidify the soil. This means a very hostile environment for our grass roots and completely vindicates the approach that we are taking which is to aggressively reduce that layer of organic matter.

The knock on effect of these very wet surfaces is that the grass is sitting yellow and in a stressed state, and is likely to be susceptible to attack by fungal pathogens, leading to disease. Kenny Duncan and the team need to be vigilant to the possibility of disease outbreaks, and prepared to take action should we come into slightly milder weather where the humidity is high. Any damage to greens in winter will not be repaired until spring growth

is strong, so there is a case for preventing the damage through judicious use of chemical controls. The judgement and decision making on this has to lie with Kenny Duncan and the team in consultation with the needs of the Club.

Other Areas and Considerations

The golf course is very much in mid winter condition, with the grasses essentially dormant and showing no growth to speak of. The fairways and tees that we walked on were relatively dry, despite some wet weather and the water-retentive nature of the soils of Pitfirrane. Kenny Duncan and the greenkeeping team are actively verti-draining the fairways, walk ways and any other appropriate areas, keeping the soils as open as possible and leading these areas to be surprisingly dry. There are one or two areas of the course where, clearly, there is standing water, these tending to be low areas where either the water table is high, there is no potential for surface run-off, or a combination of these two factors. There is little further that can be done in these areas, other than to aerate when access is possible, and trust that spring, when it comes, will allow them to dry out and become playable.

The topic of drainage was discussed, referring to the potential of nearby house building, old mine workings and the maintenance of existing drains, for example adjacent to the 11th, 14th and 17th greens. It is beyond my professional competence to advise on drainage and drainage systems beyond a very basic level, however a situation can be foreseen in the mid to long term when the Club will need to take advice on all aspects of drainage at Pitfirrane.

There has clearly been a lot of tree work taking place recently, for example adjacent to the 7th Tee, and the large single tree behind the 11th green. This is all to the good and I am aware that there is a tree plan and project underway; again this is beyond my competence, however any improvement in air movement and light penetration to the turf has to be welcomed.

Bunker work has been on going, with a sizeable project at the 5th green nearing completion. This looked to be professional work tidily finished, and I look forward to seeing these areas once they are complete and in play.

Clubhouse Discussions

Several aspects of course management were discussed, these including the capacity to bring the greens on earlier in Spring, the use of data to support decision making and communication, and the prospect of establishing a support group (or 'Turf Club') of greenkeepers in the Forth valley.

Early Spring Growth

As a permanent solution to this the best strategy to encourage early spring growth is to encourage and support plant health throughout the whole year. This is being addressed through an amended turf management programme and through the reduction of the organic matter in the greens, and it is anticipated that improvements will be seen year on year. IN the short term it is important to keep the grasses disease free (within realistic thresholds) during the winter and spring, such that the amount of repair required in spring is minimised and the plant can concentrate on growing without that pressure, and the greenkeepers can concentrate on nurturing them into full growth and full playability. If the greens are sufficiently dry to give access then any aeration will be appropriate.

There are one or two new fertiliser products specifically aimed at early spring growth, and whilst soil temperature is the most significant determinant of that there is no harm giving these a try. The BIGGA Harrogate exhibition is the week after next and I shall make specific enquiries about these products whilst I am there, and report on my findings.

Data Collection

In recent years there has been a move to greater data collection in greenkeeping, and using that data to support decision making and communication with committees and members. I would very much like to see Dunfermline Golf Club introduce this approach, and whilst it could take many years to build up a large data set there would be immediate benefits to starting now. I would envisage weekly readings of soil temperature and moisture content (using the Pogo) as well as, if possible, daily max and min air temperature. I have recently purchased a weather station and have that data (not soils – that has to be local) for Cupar, allowing a good approximation to Dunfermline, however it would be great if that could be gathered locally. I would be more than happy to collate data and prepare something for the greenkeepers report if this was felt to be a good idea. Clearly this would require a member of the greens team to take this on as a project, and therefore needs commitment and diligence, however I do feel there are tangible benefits to be gained through a greater understanding of the conditions and how the grass is responding.

Support Group or 'Turf Club'

There are several instances where greenkeepers have got together to offer and receive mutual support in their work. The examples of which I am aware tend to keep in touch through social media e.g. WhatsApp, meet quarterly, have a speaker for a short formal session, discuss their golf courses and work in general, play each others' courses, and spend some social time together. We discussed the potential of setting one of these up for greenkeepers in the Forth valley, trying to find 3 or 4 in a similar situation who are professional in their approach to greenkeeping and from whom Kenny Duncan and the team could discuss all the relevant issues, as well as being able to support the other members in return. Courses that come to my mind include Murrayfield, Duddingston and Stirling, where the greenkeepers are enthusiastic, are active in their CPD and networking already, and would be, I believe, willing to share their problems and solutions within a trusted group.

Summary

A mid winter visit allows the opportunity to see the course under stress and at its least playable, and is very fruitful in highlighting issues that are less apparent when temperatures are higher and the ground is drier. The organic matter layer within the greens remains the major problem, although a strategy is in place and appropriate actions are being taken against it. On-going patience will be required as this is brought to an acceptable level, however the programme is in place for this.

A visit at this time of year also allows some discussion of the general situation and some of the important activities that are not easy to address under full maintenance conditions in the season, and I feel that we gave a good airing to the notions of data collection and the formation of a support group, and I very much look forward to making progress in both those areas. I feel they could bring real benefit to the greenkeeping operation at Dunfermline Golf Club.

Paul Miller PhD, January 2018