

REPORT ON
BRANCEPETH CASTLE GOLF COURSE

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CONFIDENTIAL

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Date of visit: 6 and 13 February 2017

Present: I inspected the course with Andrew Welsh.

BACKGROUND

I was invited to visit the course to review its current management, in particular of the greens, and to write a report on my findings. I had not visited the course since my first visit in August 2014.

On the day of my 6 February visit the frozen ground prevented me from properly inspecting the soil beneath the turf and I returned a week later. At the time of my second visit, the weather had been dry but had been wet for the previous two days. As a result the thatch beneath all the greens we inspected was slightly anaerobic. All the greens turf was dense and fine-textured and in good condition with little sign of disease. Some areas of the course were wet but in good condition for winter play and the bunkers were neatly edged.

GREENS

Soil analysis

We discussed soil analysis and the fact that the club uses the free analysis service offered by a supplier of fertilisers. In my opinion, soil-based greens do not need regular analysis and the results from my last analyses stand. This was also the view of the famous agronomist Jim Arthur, based on many years of examining soil results. My 2014 results showed that there were no major problems in the soil and that the pH level was satisfactory.

Soil type

As discussed in 2014, the soil type on the course is slowly permeable, leading to drainage problems which require improvements to the drainage system, both on and off the greens.

Grasses

It was easier for me to assess the amount of bentgrass in the greens on this occasion compared with the summer of 2014, as bent becomes more obvious at this time of year. All the greens have bent in the sward, in some cases in significant quantities. In some parts of the greens the bent was quite coarse leaved as it tends to be in the early part of the year when it would naturally be preparing to produce seed heads.

As noted before, browntop bent is one of the grasses recommended by the R & A for golf greens. It has deeper roots than annual meadow grass, the other grass present in the greens, and is therefore less prone to drought damage and is also less prone to fusarium patch disease attacks.

Late spring growth

As in 2014, we discussed the problems of late spring growth on the greens and the bobbling effect caused by this due to the presence of the different grasses present in the greens.

Small depressions caused by disease scars in the greens can also cause this bobbling, but these were not a major problem on this occasion. Any larger scars, such as those in Green 12, can be moved to the side of the green to ensure that the putting surface is more uniform.

It is important to take advantage of any warm spring temperatures, particularly if the soil becomes warmer later in spring than normal. An early low nutrient content fertiliser application, along the lines of the lawn sand recently applied, can encourage early growth. In addition, applying the spring fertiliser in March can also make nitrogen available so that growth can commence sooner.

Thatch

The layer of undecomposed thatch in the greens continues to be approximately 25-30 mm deep, which is satisfactory. Following a wet weekend, all the greens we inspected were slightly anaerobic, with signs of yellow anaerobic thatch in some places. The thatch contains a high proportion of sand following regular topdressing over the years and the use of a Dakota spinning disc topdresser to apply topdressing would help to minimise the development of horizontal layers.

Rooting depth

Rooting depth was generally good, to a large extent due to the presence of the bentgrass in the turf. In lower parts of greens rooting depth would be shallower, associated with the presence of more annual meadow grass.

Disease

At the time of my last visit in 2014, some of the greens had been suffering from a number of diseases, such as take-all patch disease in the preceding months. These had now gone and only fusarium patch disease has been seen on the greens recently.

Several of the greens had slight fusarium patch disease scars, with Green 12 being the most badly affected this winter. However, this was not too bad compared with some of the greens I have seen elsewhere.

Changes in the weather conditions in the autumn of 2016 caught a number of greenkeepers off guard and many golf courses suffered from an outbreak of fusarium patch disease in October at a time when mild weather stimulated more rapid growth. Some of those who had got into the habit of not applying fungicides at all due to the supposed resistance of their turf suffered from bad attacks of fusarium patch disease. Some who applied a preventative treatment got the timing wrong, also resulting in disease attacks, while those who got their timing right only had to spray once.

As I understand it, at Brancepeth Castle fungicide was applied in October but then four further sprays had to be applied during the autumn and winter.

To avoid future autumn fusarium patch disease outbreaks it would make sense to minimise the amount of young lush growth in autumn. This can be done by not using an autumn fertiliser and by correctly scheduling aeration. Autumn aeration can stimulate fresh growth and any autumn growth caused by this or fertiliser should be protected by at least one preventative fungicide application. I understand that Headway followed by Medallion were the most effective in control of the disease this winter.

Using a preventative fungicide makes sense but timing is crucial and luck plays a part, particularly in relation to weather conditions following spraying. Successfully using a preventative fungicide application means that the greens go into winter with no disease scars. This results in putting surfaces which are in good condition sooner and which can be treated using growth regulator is starting in late spring, as discussed below.

In future, I recommend a preventative application in October followed by a further application using a contact fungicide with a different active ingredient in December to protect against snow mould in the event of prolonged snow cover.

Moss

Some moss was present on Greens 2 and 5. This is not problematic and becomes less apparent during the growing season. For this reason it is not being treated chemically, though fertilisers containing iron will have a blackening effect on it. If the moss becomes more widespread it can be treated using a more modern mosskiller, such as Jewel, in summer.

NOTES ON MANAGEMENT OF THE GREENS

Aeration

Some of the greens, such as Green 16, contained slight anaerobic black layer and yellow thatch indicating the need for continuing aeration.

Several different types of aeration are carried out during the year using the Wiedenmann GXi aerator. Graden deep scarification has been carried out annually and was carried out in 2016 but is not planned for the coming spring, though it should be used again in future years.

Regular solid tine aeration is carried out followed by topdressing in spring. We noted stimulated growth over the aeration holes that had been made in November. Solid tines were used to 6 inches depth in mid-February.

It is a good idea to ring the changes as regards aeration to prevent machines always operating to the same depth, and we discussed the benefits of hollow tining, which has not been done for some years, followed by topdressing to make columns of sand down through the thatch.

Other forms of aeration could be used on the course and of course the use of all of these pieces of equipment can be viewed easily these days on YouTube. An example is the Air2G2 compressed air deep aerator which has never been used on this site, but which is becoming more popular on golf courses. I recommend that a demonstration be arranged on a green with a view to getting a contractor to treat the greens at least once a year in future. A number of my clients have bought this machine following use. It allows deep aeration to take place on the greens without disrupting the surface as much as the VertiDrain deep aerator.

Another machine which could be tried to improve drainage and aeration on the greens is the Imants Sandcat (available from Campeys). I also recommend a demonstration of this machine, which provides lateral slits which can move water across the green into the drains which have been introduced recently. This works to a shallower depth than normal sand slitting but serves a similar purpose.

We also mentioned the Sarel roller, which works at a shallow depth in the thatch to improve aeration near the surface.

Top dressing

Mansil 35 sand has been used successfully for topdressing the greens for some years.

A Dakota spinning disc topdresser should be used for light dressing throughout the growing season to avoid the development of thick sand layers.

Growth regulators

A programme of Primo Maxx growth regulator applications should be used on the greens from May to September. Most of my regular clients use this (all of my most important clients). Provided the greens are in good condition in May I recommend that treatments start this year following the manufacturer's instructions closely until confidence is gained in how this product works on your particular greens.

Using growth regulator reduces the bobbling caused by different growth rates and improves green speed late in the day, an issue that we discussed during my visit. There are also benefits to shade tolerance and rooting depth.

Irrigation

As discussed at my last visit, the irrigation system is old and should be upgraded. This is a common problem at golf courses where the pipework is out of sight and out of mind.

Drainage

Following the wet weekend, several greens were showing puddles near or on the green. For example, Green 12 had a puddle at the front, while Green 13 had a puddle at the right-hand side and front left-hand but was otherwise dry. These indicate areas which should be drained in future.

Drainage work has continued on some of the greens, and Greens 8 and 14 had been drained (trenched) using a 90:10 backfill over the drain lines. At Green 14, a small green, sand had been poured down individual auger holes to help get water to the drains.

Green 8 had been drained in late 2014 and was very much drier as a result. Green 1 had also been drained. Greens 7 and 10 were much drier now following drainage 10 years ago but had been backfilled using topsoil rather than rootzone, which is not as effective as rootzone. In contrast, the drains in Green 11 were much better, having been backfilled with a faster draining material.

As discussed above, I recommended the use of sand slitting or the Sandcat on the drained greens to connect the surface to the drains more effectively.

Rigby Taylor's Penetr8 soil penetrant was used in 2016 to help water move from the surface to the drains by changing the surface tension on the soil particles.

Fertiliser regime

The weather in spring 2016 was very cold and the spring was late. Liquid fertilisers were used early in the season but in retrospect it was felt that a granular formulation would have given better results. 20-0-10 fertiliser was used. 80-90 kg nitrogen were applied to the greens in 2016, slightly higher than in the recent past but not excessive. I suspect that this was due to applying additional fertiliser early in the season to stimulate growth in the awful spring of 2016.

Lawn sand (3-6-8+3% iron) had been used in early February 2017 to stimulate early growth and to harden the turf against fusarium patch disease.

My recommendation for the coming year would be to apply a granular fertiliser in March (my suggestion is ICL Sierraform 16-0-16 GT Spring Start controlled-release fertiliser). This will release nutrients in the event of warm spring weather. A more traditional alternative would be to apply a series of light dressings containing 8-0-0 granular fertiliser, possibly SSD, from March to May.

Thereafter, I recommend the use of liquid fertilisers with a high nitrogen content (possibly with potassium) tank mixed with liquid seaweed (my preference would be

Orkney Seapower seaweed) and incorporating Primo Maxx growth regulator from May until September, as discussed above.

Kieserite (magnesium sulphate) was applied to two greens in 2016 on the recommendation of a fertiliser rep. As noted above, my 2014 soil analyses did not show any requirement for additional magnesium on the greens, but it would be as well to use this up as it is taking up storage space. Its use will not do any harm and it is relatively cheap.

The use of compost tea on the greens is being considered. Compost tea is a slightly controversial topic. Some greenkeepers swear by it, others find it does not have much effect. Having said that, it is reasonably cheap to produce and certainly will not do any harm, particularly when it is tank mixed with other materials which are beneficial to the greens. Anaerobic conditions kill the microorganisms in the tea so aeration must be adequate. Some greenkeepers attribute their lack of fusarium patch disease infection to compost tea, but I still recommend preventative fungicide applications as insurance.

Mowing and rolling

At the time of my visit the greens were being mown at the winter height of 6-7 mm. Mowing height on the greens never falls below 3.5 mm and the turf iron is used to get the speed to 9.5 feet, which is satisfactory for normal club golf (though some golfers desire faster speeds).

If 9.5 feet is acceptable to club members, management of the greens can be organised so that they are kept more or less at that speed by altering height of cut slightly - slightly shorter in wet conditions and slightly longer in dry conditions.

Using trinexapac ethyl growth regulator (Primo Maxx or similar) would also improve green speed, as discussed above.

Verticutting

In order to remove prostrate bentgrass stems and leaves it would be worth verticutting the greens. I understand that no verticutters are available to the club but suggest getting a set when the machinery fleet is renewed next year. Using Thatchaway verticut units on the greens would be beneficial to maintain fast surfaces.

Overseeding

Given the amount of browntop bent seen in the greens on this occasion, it is important to keep overseeding improved cultivars of browntop bent into them. Overseeding using browntop bent seed has always taken place in recent years after use of the Graden deep scarifier. Using a dedicated overseeder would give good results provided there is enough space for new seedlings to develop.

TEES

It is important to have a rolling programme of tee levelling/renovation and I noted the new Tee 14 that is being built.

Use of Primo Maxx growth regulator would be worthwhile on banks and tees, particularly in shady areas, to reduce mowing costs.

FAIRWAYS

The fairways were generally in good condition and since my last visit, some wetter areas have been drained.

SUMMARY OF MAJOR SUGGESTIONS

- Use a programme of Primo Maxx growth regulator on the greens when surfaces are in good condition, starting in May.
- Use preventative fungicides in good time in autumn to avoid fusarium patch disease outbreaks.
- If using compost tea keep the greens as aerobic as possible.
- Arrange demonstrations of the Air2G2 and Sandcat.
- Use Primo Maxx growth regulator on difficult to mow areas to reduce mowing costs.
- Continue to drain wet areas of the course.

Robert Laycock

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