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# **Willesley Park Golf Club**



**Advisory Report on the Condition of the Golf Course**

**Report Date- 6th October 2020**

**Consultant - Chris Roberts**

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**6th March 2020**

## **Willesley Park Golf Club Greens Report**

### **1.0 Present**

1.1 Mark Illsley (Greens Chairman) Frazer Harrison (Course Manager), John Dumelow (Member of the Greens Committee ) and Chris Roberts (Consultant)

### **2.0 Executive Summary**

- Thatch accumulations are making the greens surfaces soft and uneven through periods of wet weather
- Ryegrass was noted on the 3rd green and was not in keeping with other grasses within the sward
- The bases of the greens are heavy clay which is draining slowly
- A herringbone drainage system has been installed on the greens but there are no records of specifications or plans
- Black layer and poor root development could be seen, again due to the poor draining characteristics of the green
- The tees are small, have limited or no irrigation, and have to contend with relatively large volumes of play
- Worm casting on the tees is smearing and leading to grass loss
- The fairways are dry on the ridges that run through them and grass coverage on them is thin
- Grass loss on the banking around the greens and bunkers was evident. Frazer described this was being caused by machinery damage
- The use of an Air2g2 machine that blows highly pressurised air into the greens was recommended to aid the greens drainage
- Slitting of the greens in the winter months is to continue
- From next spring light frequent top dressings are recommended to firm and smooth the putting surfaces
- Inputs of slow-release fertiliser on the tees are to increase slightly to offset wear
- A trial of Purity soil conditioner is to be conducted on the tees to treat casting worms
- Pre-emergence fertiliser to be mixed in with divot mix
- Irrigation needs to be installed around the tees. This could be carried out in - house
- Fairways to be solid tined to aid the penetration of water into the dry ridges on the fairways
- Fairways to be disk seeded with a ryegrass, fescue mixture

### **3.0 Brief**

3.1 To assess the current condition of the golf course and advise on possible improvements to its condition and playability.

## **4.0 Observations on Greens**

### **4.1**

The greens were soft and footmarks were visible from the days play. These footmarks resulted in a slightly bobbly ball roll.

### **4.2**

The height of cut on the greens had recently been increased to 5mm to aid recovery from anthracnose disease. The greens had generally recovered well from the attack of anthracnose, with only slight thinning witnessed on most greens.

With the greens being soft, 5mm was a sensible height of cut for the time of year.

### **4.3**

The 3rd greens had patches of ryegrass present. The clumpy characteristics of the ryegrass made the surface uneven and aesthetically poor in comparison to some of the other greens

### **4.4**

The picture below is a sample taken from the 1st green. Starting at the bottom of the sample, the base of the green is made up of heavy clay which at 75 -100mm gives way to a more relatively free draining root zone. Within this root zone layer, streaks of black layer were visible. Black layer is a build-up of iron and sulphur within the soil and is associated with poor drainage as the sulphur and iron get trapped in the slow-draining soil. In the picture it is clear to see where the sample has broken apart, indicating the depth of the root system. The majority of the root system in the greens is within the top 75 mm and is generally weak and sparse.

The top 40mm of the soil sample is thatch rich. Thatch is a sponge-like layer that accumulates within the soil profile as dead stems and roots struggle to break down within the profile. Over time thatch builds up producing a thick yellow sponge-like layer that traps water and nutrients within it.

This thatch build-up is causing the softness of the greens and will be a contributory factor in the recent bout of anthracnose disease.

### **4.5**

Although there are no known plans, it is believed that all the greens have a herringbone primary drainage system. Where these are located within the greens is unclear, along with their depths or specifications.

**Fig 1 a soil sample taken out of the 1st green**



## **5.0 Observation on Tees**

### **5.1**

The tees at Willesley are generally small and endure a reasonable amount of play. The dominant grass species in the tees is ryegrass, however, bent and fescue grasses were also noted on some tees.

### **5.2**

Only a small number of tees have irrigation, and the tees that do have water have sprinklers that are incorrectly spaced and provide poor coverage.

### **5.3**

Most of the tees had worm casts on them. When being played off by golfers or mown, these worm casts will smear the surface resulting in grass loss.

## **6.0 Observations on Fairways**

### 6.1

The fairways at Willesley are undulated with ridges and furrows running through many of them. I understand that the fairways have improved after the recent rain, however, some of the early fairways on the course still have thin or no grass cover on the top of the ridges.

6.2 A soil sample was taken from one of the ridges on the fairways and the ground was hard and still dry, even though a penetrating wetting agent had been applied and the course had recently seen heavy rain.

6.3 Previously successful overseeding was noted. The grass species sown was ryegrass, which is in keeping and indigenous to the site. Although hardwearing and relatively drought resistant, as described in 4.3, ryegrass is a clumpy grass that doesn't creep. Therefore grass density is not achieved unless it is sown in multiple directions.

## **7.0 Grass loss around green and bunker banks**

7.1 The amount of G.U.R present around the greens was noted. These areas had been seeded and germination and establishment of ryegrass were present in most areas.

7.2 I was informed that the vast majority of these areas had been damaged by machinery.

## **Recommendations**

### **8.0 Recommendations on Greens**

8.1 Although the base of the greens at Willesley are heavy clay, they do have herringbone drainage installed in them. Locating such drainage in areas as delicate as a green is going to be problematic. So the first objective must be to increase the aeration being carried out into the greens. The best piece of equipment to do this work is can Air2G2 machine. This machine injects highly compressed air into the greens at a depth of 6-12 inches. When the air is released, the soil is fractured relieving compaction and improving drainage. Hopefully, this fracturing of the soil will energise the primary drainage system and the surfaces start to drain better.

There will be minimal disruption to play after using this machine.

Initially, this machine could be hired or borrowed, but if successful then I would strongly advise the club to purchase one.

8.2 Along with the aeration with the Air2g2, I would advise that the greens are slit tined as regularly as once every two weeks. I was pleased to see Frazer putting new blades on the slitter on the day of my visit. This aeration is relatively gentle to the surface of the green and again should not have a major impact on playability. One note of caution is that with regular

slitting, the slit marks might lift slightly when using the Air2g2, if this becomes problematic then I would recommend reducing the pressure of the air being released.

**Fig 2 shows an Air2g2 air injection machine**



8.3 From next spring onwards, I would like to see the greens lightly top-dressed more frequently. Over time, this little and often top dressing will smooth and firm the surfaces. The firmness will be achieved by diluting the thatch layer with either top dressing or straight sand. With limited outdoor storage, I would recommend using straight sand.

Top dressing of the greens should take place at least once every two weeks, with approximately two to three tons applied over the greens. This on its own isn't a lot of sand and shouldn't cause too much disruption to play. However, if carried out regularly, it will have a hugely positive effect on the performance of the green.

Timings of these dressing are pivotal, if top-dressing is applied when there is no rain forecast then the sand stays on the surface for an extended period. If the dressing is applied just before rain or irrigation then the sand is away from the surface in possibly hours.

8.4 To aid penetration of the sand into the thatch layer I would also recommend that the greens are Sarrell rolled before top dressing. The small holes will puncture the thatch and create holes for the sand to penetrate.

8.5 Hollow tining of the greens should continue once a year to control thatch build-up and aid root development.

## **9.0 Recommendations on Tees**

9.1 As described in 5.0 the tees at Willesley are relatively small and endure high volumes of play.

To offset this I would recommend increasing the fertiliser inputs into the tees from one slow-release fertiliser application per annum to two.

I would recommend that this product is a minimum of 20% nitrogen and 10% potassium at a rate of 25-30 grams per square meter and releases over a four to six month period.

9.2 Worm casting is a significant problem on many courses, especially with the removal of chemicals such as Carbendazim. On the tees, I would recommend trialling a product called Purity. Purity is an organic soil conditioner that contains Mowrah meal, which irritates the worms and fetches them to the surface. I would advise at least trialling this product to see how it performs. It must be applied just before heavy rain so that the product is washed straight into the soil.

9.3 To aid the repair of the tees I would recommend mixing pre-emergence fertiliser with the divot mix. This will create a quicker and stronger establishment of the ryegrass being applied.

9.4 The mixture of no irrigation on some tees and in places poor coverage is a real hindrance to the performance of the tees. Without proper irrigation, grass will struggle or die in drought conditions, germination of new seed will be severely hampered and fertiliser and chemical application may have to be postponed.

Therefore installing an automatic irrigation system around all of the tees with sprinklers set at the right spacings with the correct nozzles is imperative for the tees performance.

## **10.0 Recommendation on Fairways**

10.1 I am fully supportive of the use of penetrating wetting agent on the dry compact areas and ideally, this should be applied to the worst affected fairways twice a year in the spring and autumn.

10.2 To aid water penetration into the dry ridges on the fairways, they should be tined as frequently as possible. We spoke on the day of the visit about using two machines to speed up the process. The tines don't need to be set too deep to start off with, 50-75mm would be sufficient.

10.3 Like the tees, the fairways have problems with worms casts. Unlike the tees, however, Purity cannot be used due to the cost implications. Instead, I would recommend trialling using soluble iron applied through the golf club's sprayer. This will temporarily acidify the surface and should reduce the volume of worms casts.

## **11.0 Damaged areas around Bunker and Greens**

11.1 As described in the recommendations, Frazer has already made a plan to deal with the machinery damage that has caused the grass loss on the greens and bunkers banks. This involves stopping the use of ride-on mowers on the steeper banks and instead use pedestrian mowers to cut these problematic areas. This change must take place as these areas look unsightly so close to the green.

## **12.0 Summing Up**

12.1 The issues addressed in this report are far from insurmountable, however, there is a need to draw up and a concise and clear plan for the course that prioritises the main issues described. These improvements will require full commitment from both the committee and the green staff. Further investment will also be required, and it is up to Frazer to identify what additional consumable resources, irrigation, and machinery he requires to carry out this program.

Chris Roberts