

# Annual Agronomy Report on the Golf Course

STRI

Wirral Ladies Golf Club

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Report Title	Annual Agronomy Report on the Golf Course
Sports Facility Name	Wirral Ladies Golf Club
Date of Visit	Friday 17 June 2011
Visit Objective	To review prevailing conditions on site and to offer advice on ongoing management and project work.
Present	Mrs Liz Monroe – Captain Mrs Bernie Heath – Chair of Course Management Committee Mrs Karen Simpson – Course Management Committee Mrs Terri Philipson – Course Management Committee Mr Steve Wheelden – Chairman Men’s Committee Mr Peter Greville – Secretary/Manager Mr Alex Wright – Head Greenkeeper Mr Alistair Beggs - STRI

## Introductory Remarks

Despite the extremely cold weather in November and December the golf course overwintered well and further progress was made with new drainage installed for example at 13, 14 and 18 and with bunker renovation projects completed for example at the 4<sup>th</sup>, 6<sup>th</sup>, 8<sup>th</sup> etc. In addition to this the weaker tees for example 8<sup>th</sup> Men’s and 18<sup>th</sup> Men’s were returfed with the same good quality Lindum material used around the bunkers. The results from all the project work are very pleasing and help convey an air of tidiness and presentation at this time.

Most of the recommendations relating to day to day greenkeeping have been implemented with good results and it is particularly pleasing to see that the drainage work on fairways was supplemented with a full programme of Verti-draining. The one area of slight concern is that of fungicide use. By my calculations some seven or eight applications of chemical have been applied to the greens over the last twelve months to counteract fusarium patch disease (*Microdochium nivale*). We know that these greens can be prone to this condition primarily because of the growing environment in which they sit, however the challenge for the future is to reduce frequency of input because the current level of use is unsustainable both from an environmental and from a financial standpoint.

## Greens - Observations & Comments

Despite a dry April and May the greens have progressed well throughout the spring and are currently offering very good surfaces for play.



The putting surface at the 18<sup>th</sup> which is smooth, firm and well paced

Annual meadow-grass (*Poa annua*) seed head activity is the only real blemish in most of the greens and whilst this is a transient effect that occurs to a greater or lesser extent every year, it is now appropriate to intensify verticutting inputs and remove as much of this as possible.

The grass mix in most of the greens remains a good and healthy blend of annual meadow-grass, with mixed bents and with Yorkshire fog. Better greens such as the 11<sup>th</sup> show very little in the way of seed activity, whereas poorer and historically wetter surfaces such as the 2<sup>nd</sup>, rear of 4, etc. show a little more in the way of annual meadow-grass and associated seed head activity. Further Verti-drain work is planned for these wetter sections and we also discussed the merit of introducing some vertical sumps (see recommendations section).

Wetting agent programmes appear to be working very well for the most part and dryness and turf weakness is essentially confined to some green margins and bunker banks. Some significant drought damage was seen to the front edge of the putting green due to irrigation failure in April and May and this goes to show how important it is to have a functional and efficient irrigation system. Wetting agents do a good job but they need water as well if the grass is to survive!

A ThetaProbe moisture meter was used to determine volumetric moisture content within greens. The ideal range for greens of this type is 15-30%. Healthier and drier greens such as the 11<sup>th</sup>, 18<sup>th</sup>, etc. generally showed values in and around the 15-16% mark whereas the centre of the 2<sup>nd</sup> and rear of the 4<sup>th</sup> showed values around 35-38%. These areas are still clearly holding on to more moisture. It does not manifest itself as much at this time of the year but it will do once again in the winter unless efforts are made to remove it from the profile.

At the other end of the spectrum drier sections for example on bunker banks registered below 10% and the photograph below shows the reading and the core extracted from the left hand bunker bank at the 18<sup>th</sup> where the turf cover is thinner and weaker.



A volumetric moisture reading of 9.6% was obtained on the left hand bunker bank of the 18<sup>th</sup>

Once volumetric moisture content readings get below 10-12% it tends to have a negative impact on turf health and presentation. These areas need to be remoistened fully if turf recovery is to take place and this may well require a different type of wetting agent product over and above the current programme.

Profiles beneath the greens show reasonably good attributes. Some three applications of top dressing constituting approximately 40 tonnes of material have been applied to the greens so far this year and this is very visibly integrated within the surface thatch layer. There is no layering or compaction through the top 75 mm and root growth is good and healthy in this zone. Panning and compaction of soils is a little more obvious through depth particularly beneath wetter greens for example the 2<sup>nd</sup> where the presence of iron oxide is still obvious. Root development is reasonably good but it can always be strengthened and the emphasis here must remain on regular and varied aeration along with ongoing use of seaweed based supplement materials.

## Greens - Recommendations

We make the following recommendations following observations and discussions held on site:-

- The current mowing height of 4 mm is appropriate and it appears from Alex's recent Stimpmeter data and from feedback from those present that green speeds are more than acceptable at around about 8-8.5 ft. It should be possible to generate a little more pace by integrating more regular light verticutting into the programme from now on and this too will

remove unwanted annual meadow-grass seed head. Gentle and regular is better than infrequent and severe.

- Continue to take data from the greens on a regular basis and if the club wish to upgrade to STRI Programme from next year onwards the Extranet web portal will act as a data storage and analysis service for the club.
- It was agreed that further bentgrass overseeding work would take place during August in an effort to boost bentgrass populations in the weaker greens in particular. I emphasised the importance of using the best quality seed possible and in this respect mixes such as Barenbrug's Bar All Bent or Johnson's Pro Master 15 will be appropriate. If you go for the Johnson's option the Grow Max coating which is essentially a bio stimulant is worth considering.

Bentgrass seed should be applied at a rate of approximately 5-6 g/m<sup>2</sup> so although individual bags are expensive they will go quite a long way. Start with the weaker surfaces such as 2, 3, rear of 4, 8, 17 then extend the bentgrass use to other greens as you see fit.

Preparation work should consist of a double pass with the star slitting together with a double light verticutting pass and then the seed should simply be dusted into the surface of the greens with a top dressing carrier.

- The ThetaProbe ML2X moisture meter was demonstrated during the visit and in my view there would be merit in the club considering the purchase of such a unit to help Alex programme and deliver his irrigation strategy. We know it is very important not to overwater greens and it is equally important not to underwater them. Having a target range for volumetric moisture content which in your case will be somewhere between 15 and 30% will help optimise grass health, reduce dry patch, reduce disease and over time should ensure that water is used efficiently and effectively. As you are paying for water from the mains supply the cost of a moisture meter at around £800-850 will probably pay for itself over a period of years.
- The basic wetting agent programme employing Revolution on a monthly basis is working reasonably well in most cases. However there are one or two weaker and drier sections of turf for example through the left hand side of the 18<sup>th</sup>, front edge of the putting green, etc. where soils have dried down too much. Despite all the recent rainfall the left hand edge of the 18<sup>th</sup> was still registering a volumetric moisture content of below 10% and indicating some water repellency. Areas that fail to remoisten should be treated with a rewetter such as Farmura's Aquaduct or equivalent and this approach should be taken at the 18<sup>th</sup> and any other areas around the course where similar symptoms are apparent. Keep the Revolution programme going without fail and supplement any Aquaduct treatments with additional hand irrigation, particularly if conditions turn dry and warm again.
- Top dressing inputs are going well and these should continue on a monthly basis alongside solid tining with the aim of delivering at least 100 tonnes to all the greens by the year end.
- Routine aeration should continue with star slitting on at least a weekly basis and monthly pencil solid tining. In addition all greens should be Verti-drained with 12 mm tines and rolled during October/November and should then be deep slit to at least 150 mm depth on a fortnightly basis through until the end of January if weather permits.

In addition to the above programme we suggested that additional deep aeration procedures be carried out on wetter hollows for example at the 2<sup>nd</sup>, 4<sup>th</sup>, rear of 17, etc. In these cases look to fit 25 mm tines to the Verti-drain, treat localised areas and then backfill individual holes with top dressing by hand. This approach worked well at the 2<sup>nd</sup> last year and it should work well again during the latter part of this year. Try and complete it during October if possible.

As an alternative to the above approach we also discussed the merits of hiring a post hole borer to examine soil profiles beneath greens and see if it is possible to install mini sumps to evacuate moisture from low spots. This is a job that could be done during the winter and if it is planned and applied properly it should be possible to do very cleanly and without any damage to the greens. The aim is to make a vertical connection with the porous layer of soil or sand stone beneath each green. We know this golf course sits on porous material but we do not know how deep it is necessary to go to make contact with it. Begin the investigative process this autumn and if it is workable it may be possible to install a grid of sumps in the base of wetter greens. On courses where this has been done successfully, very good results have been achieved.

- I remain concerned about the amount of fungicide that is being used to control disease. I appreciate that some of these greens are vulnerable to fusarium patch disease given the growing environment but we must look to reduce the number of applications of fungicide if at all possible.

The principles outlined in last year's report remain valid and the aim should be to use a protectant fungicide such as Banner Max, Headway or equivalent during early to mid October to provide six to eight weeks protection during the vulnerable autumn period. After that you now have a choice of contact materials including the usual Chipco product that has been used regularly in the past or the new contact plus material from Syngenta called Medallion. The advantage of this latter material is that it is contact in its action but may provide up to four to five weeks protection after application.

During the spring and summer months fusarium will still occur but it is likely to be less damaging because the plant is growing and able to recover. It is this period when fungicide inputs need to be reduced and by using either a seaweed and iron combination or by using sulphate of iron on its own it may be possible to very cheaply head off superficial attacks without applying fungicide.

I do appreciate how difficult it is to make the judgement on whether or not to apply a fungicide. From now weigh up all the alternatives and the impact of the short term weather forecast and only apply a fungicide in the April to September period if it is felt it is absolutely necessary. If it is a minor attack and it can be identified promptly consider the iron or the seaweed and iron option to help suppress the problem.

Only use registered and approved pesticides and ensure that they are applied according to label recommendations and always by certified individuals.

## Other Points of Discussion

### Tees

Some good tee refurbishment work was completed last winter with the Men's tees at the Par 3 8<sup>th</sup> and at the Par 4 18<sup>th</sup> looking much improved having been levelled and returfed. Furthermore at the 18<sup>th</sup> the thinning and lopping work is now allow a little more sunlight to this area and overhead canopies have been reduce to good effect as well.

It is likely that small tees in difficult growing environments and particularly those on Par 3s which receive a lot of iron damage will need returfing from time to time. However we discussed that there may be merit in applying a slow release NK feed during August/early September which may then help these tees go into winter a little stronger and aid any surface renovation work in the form of aeration, seeding and dressing that Alex and the team manage to deliver to them.

### Fairways

A significant amount of drainage work has been done to fairways at Wirral Ladies over the last two or three years and over the last twelve months further systems have been introduced for example at the 13<sup>th</sup>, 14<sup>th</sup> 18<sup>th</sup>, etc. Ensure that the drain lines remain topped up and support drainage with further Verti-draining during the autumn. This should be timetabled to be completed before soils become too wet. Again October would be a good month to undertake this type of work.

If resources allow augment the Verti-draining with some sand top dressing.

If surface thatch is an issue localised coring should be undertaken as well. This too would benefit from sand top dressing upon completion.

Fairways should be slit in addition to Verti-draining if weather conditions are suitable in the late October to January period.

### Bunkers

Some very good bunker work was completed last winter. Firstly the right hand approach bunker at the 4<sup>th</sup> has been re-sited to good effect. Secondly the greenside bunker short left of the 6<sup>th</sup> green has been replaced by two pot bunkers.



The new bunker arrangement at the 6<sup>th</sup>

Thirdly both greenside bunkers at the short Par 3 8<sup>th</sup> have been renovated.

All these bunker projects have been completed to the highest standards and we were particularly impressed with the workmanship at the 6<sup>th</sup> and 8<sup>th</sup> holes. The shaping and scale are first class and the Lindum Turf is of a very good quality as well. Press ahead with further renovation in this year's winter programme.

We discussed resizing and reshaping a number of bunkers including the central front of greenside bunker at the 2<sup>nd</sup>, the greenside bunker at the 4<sup>th</sup> and left hand approach bunker at the Par 4 7<sup>th</sup>, etc. In all these cases the hazards have become overly large and in some cases they could be reduced in size by between 30 and 50%. This, if done sensitively would not impact on their strategic merit or gather potential but would reduce the cost of maintenance in the longer term and would allow Alex and his team to do some shaping and refurbishment which would improve visibility and impact.



The right hand greenside bunker at the 4<sup>th</sup>. This could be reduced in size by up to 30% without reducing its impact.

If bunker heads are weak and dominated by sand splash dig them out and resoil them prior to reshaping the lips and returfing. Top lips and sand turf interfaces should have some movement in them in three dimensions. The completed greenside complex at the 6<sup>th</sup> is a good example of this.

### Vegetation Management

There is always work to do in this respect and we are greatly encouraged by the work completed last winter and also the tree root pruning exercise completed with the help of Campeys.

Although there will be plenty of areas to tackle we specifically discussed vegetation on the left hand approach to the Par 3 8<sup>th</sup> where three or four gorse bushes should be removed to improve the visual impact of the hole and allow male golfers in particular to see the greenside bunkering from their tee.



Gorse bushes in the left forefront of the picture should be removed

#### Machinery & Resources

We understand that the current range of equipment is functional and reliable and there is no immediate requirement for any new items. We did discuss the potential merits of the Turf iron which may be a useful tool to have in the future to increase green speed. However feedback on the day was very positive in respect of green speed and there is no immediate requirement to increase this.



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