

Arcot Hall Golf Club

AGRONOMIC ADVISORY REPORT ON THE GOLF COURSE



Date: 27th August 2009

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ARCOT HALL GOLF CLUB

**AGRONOMIC ADVISORY REPORT
ON THE GOLF COURSE**

Date of Visit

27th August 2009

Present

Mr Brian Rumney

Mr Barry Dunn

Mr Ian Kyle

Mr Jay S Dobson – Agronomist, STRI LTD

INTRODUCTION

Despite a wet end to 2008, it would appear that the course stood up well to those conditions and the greens were available for play all winter apart from a couple of occasions due to frost and snow cover. This is positive and reflects the level of input within the maintenance programme to improve their condition and playability. This is reviewed in this report along with disease, growth regulators, maintenance, nutrition, over sowing, the Haul road, tees, drainage and roughs.

GREENS

General

The course was viewed during the Seniors Open and general presentation and playability appeared excellent. This despite some wet weather prior to the inspection in July particularly. All of the greens viewed showed good play surfaces with very few anomalies to report. As noted in the introduction, little appears to have compromised their playability and their general condition reflected this.

Swards

Generally all of the greens seen showed good uniformity and density, particularly those with more open aspects or where water was less inclined to shed onto the surface. The 14th, 15th and 16th for instance all showed excellent firm and dry surfaces. Those greens that were slightly more shaded or wetter generally showed slightly less good population dynamics with annual meadow grass (*Poa annua* sp.) and bent grass (*Agrostis* sp) being less well mixed. This could be seen for instance on the 7th, 9th and practice putting greens. In addition areas where some pressure due to water shedding onto the surface or sitting for any length of time could be seen, also showed some slightly compromised condition in this respect. The 11th green would be a good example of this. Having said this, apparently the greens did knit together in a satisfactory manner at the start of the growing season, fewer problems being reported in respect of early season growth differentials or canopy closure. Having said this, surfaces were slightly soft in places, reflecting the amount of rainfall prior to inspection, however there were substantial improvements generally in the greens where bent grass was better mixed with meadow grass, here sward condition being generally excellent. There was a noticeable reduction in Yorkshire fog (*Holcus lanatus*) due to the impact from the

verticutting programme e.g. 14th green and generally surfaces were as would be expected given the focused input by the greenkeeping team.

Profiles

Despite wet conditions in 2008 and some wet conditions through the summer months, the profiles were in reasonably good condition. They were fairly clean at the base of the sward at the plant/soil interface, verticutting having dealt well with debris as it was laid down in the sward base.

Organic matter was slightly reduced in depth (see figure 1 below) but still showed some water retention issues in places e.g. 6th, rear 7th. At inspection moisture readings were taken using a Theta probe moisture meter giving general readings in the high 30's to low 40's percentile. As discussed, we would expect that low to mid 20's would be a target for greens of your type, the figures at testing generally reflecting the more water retentive nature of the organic matter. This points to a requirement to continue working on this feature within the greens.



Figure 1: Generally homogenous profile

Generally the profile was dry below the thatch, mid profile condition being settled but not compacted. Voids and fissures from previous Verti-Draining etc were found in the mid and lower profiles with roots extending into these. General root bio-mass was good with most of this found in the top 120mm of the profile.

DISCUSSION

Generally the greens in Arcot Hall have shown a measure of improvement year upon year that we have worked with the Club. The surfaces are drier, have better sward density and uniformity and generally support fewer anomalies associated with play and general use. The population dynamics are still somewhat weak in places where meadow grass predominates, however the over sowing programme is beginning to make a difference here also, with generally increased bent grass populations over all of the surfaces seen. Further work should be focused on the organic matter beneath the greens and regular top dressing will also be of benefit over time helping to dilute the organic matter and help firm and true up the

surfaces further. Please pursue the purchase of a 'Turf Iron' as per our discussions as this will be of substantial benefit in 'finishing' the putting surfaces prior to competitions etc.

DISEASE

Generally as the greens improve so therefore there has been a general drop away in disease infection. As we have discussed in the past grass plant susceptibility always means that there is more likelihood of infection and therefore costs will rise with the requirement to apply fungicide to check and control these symptoms and cases. The use of the Mascot Fusion product appears to have worked well the combination of contact and systemic action and containing Trifloxystrobin and Tebuconazole working well in respect of control. Please note our points on discussion with regard to the potential for building resistance into the fungal populations by using just one active ingredient. As per discussions we would therefore suggest a change to a different product next year such as Syngenta Banner MAXX (propicoconazole).

Some yellow tuft was seen in a couple of areas, however as we noted this generally just leaves the slightly discoloured plants with a woody base and little else. We would expect that symptoms would not create any visual or playability issues.

PESTS

Although no specific issues were seen nor reported in regard to pest activity, we have noted increased populations of crane flies. This may mean that leather jackets are a more common problem at the end of this year and next and we would therefore remind you to keep an item within the budget for the application of insecticide (Chlorpyrifos).

GROWTH REGULATORS

We have discussed the possible benefits of using growth regulators on greens, tees and on particular shaded areas. We would therefore further reiterate a support for a programme certainly on greens and tees allowing us the benefits of its improvement and sward density and uniformity, helping with general playability factors and in shaded areas reducing the open canopy issues that we have discussed in the past.

MAINTENANCE

General

The maintenance programme is now focused well on the requirements of the golf course. The greens in particular have improved substantially due to the focus work carried out by Ian and the team, being cored on three occasions, Verti-Drained on three occasions regularly verticut and solid tined. We note you have purchased a Propass Spinning Disk Bulk Top Dresser and this has been a positive purchase allowing top dressing to be spread quickly and easily to the greens. So far this year 50 tonnes has been applied with more planned. We would reiterate our points in respect of looking at a target of say 100 – 120 tonnes per annum within the general programme. Top dressing can be applied using the Spinning disc spreader on any occasion where sward or soil engaged operations are carried out.

Generally the programme needs little further refinement at present, cornerstone operations such as:

- Aeration
- Top dressing

- Verticutting
- Verti-Draining

All being important and being fitted into the programme with appropriate and allowing for best recovery of the surfaces.

Nutrition

No issues were reported in respect of fertiliser requirement, use or impact. The greens appeared uniform in terms of colour and no issues were noted in respect of general nutritional pick up or availability. We would however reiterate our discussions in the past in respect of the thatch and organic matter and that there may be still a reservoir of nutrition within this which can cause localised flushes of growth as we have noted in the past. Please continue to be aware of this when you are carrying out aeration work.

The use of the 4:0:8, 8:0:6 and then liquids (14:4:14) appears to have worked well with no drop offs or particular issues with nutritional pickup. The general issues with early season canopy closure appeared to have been less of a problem this year, however we would reiterate the importance of making sure that irrigation is available to water in any granular product that you apply in the early parts of the growing season. This is important to allow it to solubilise within the profile and to be made available for the grass plants to use.

We would suspect that the use of a high potassium (K) product in late September/early October (3:0:22 or similar) would of benefit to the greens generally.

OVER SOWING

The over sowing programme has worked reasonably well and continues to improve population dynamics generally. However areas on the greens where meadow grass predominates still exist, generally associated with older problems in respect of drainage, standing water, thatch etc. These would we feel benefit from some focused intervention using an ad hoc over sowing programme as discussed. The use of a seed pricker, some seed and top dressing on local areas can produce positive and quick results, introducing bent grass into predominately meadow grass populations very quickly. Please carry this out in the next growing season and you should see some positive impact particularly on meadow grass predominant areas.

HAUL ROAD

The area between the 7th and 10th fairway (see figure 2 below) has not really recovered from the drainage works carried out in 2005. As per discussions you should consider the following for this area.

- Verti-Drain
- Core
- Break up cores and amend sandy top dressing mixed 50/50 with Zeolite or similar
- Return down the holes from previous coring and Verti-Draining by brushing. Apply an autumn/winter or pre-seeding fertiliser.
- Over sow (fescue/bent 35g m²)



Figure 2: Haul Road – 7th and 10th fairway

TEES

General

Improvement in the teeing areas is also positive to see the environment particularly around some of the more shaded tees having been improved substantially over the last couple of years. The 8th tee has had some further Leyland Cypress removed (see figure 3 below) and we would suggest that some further work is carried out here this winter to further thin the Leyland Cypress to the left hand side.



Figure 3: 8th tee showing improved environment

The 11th tee (see figure 4 below) requires some work to the trees on the right hand side in respect of crown and canopy thinning. The current overhang to the right hand side of this tee whilst creating shade issues also now interferes with tee placement and playing of the hole. Please consider this for winter work.



Figure 4: 11th Tee

Of the other tees, we still feel there is a measure of improvement to be made using Primo-MAXX growth regulator to help with those in shade e.g. 15th and also with some of the newer slightly weaker areas for instance on the back of the 9th tee. Here the turf is still taking some time to settle and requires some increased aeration, some further fertiliser and top dressing subsequent to the aeration works with Zeolite mixed into the material at 50% v/v.

DRAINAGE

Ongoing works around the course to improve drainage have also been positive and many areas show positive improvement. Since our last inspection the works which we reviewed at the 11th approach and to the side of the 11th green have been implemented (see figure 5 below) giving fewer issues with playability and catching the water in the furrows which used to cause problems on the front and centre of the green as well as on the approach. Please continue with works of this sort as it does make a difference to general playability and use of the course in wetter periods which now appear to affect all times during the year.



Figure 5: Drainage improvements at 11th approach

ROUGHS

The programme to improve the roughs has also begun to show some positives. We would therefore support the continuance of experimenting with areas as these do have implications in respect of:

- Ecology
- Environmental issues
- Aesthetics
- Maintenance inputs



Figure 6 – Rough and heather between 6th fairway etc.

Areas such as the heathland parts of the course are improved substantially by proper management and the increase in heather and finer grasses here is also positive to see. Please do continue to experiment with areas of rough on the golf course.

SUMMARY

The golf course was in excellent condition at inspection and certainly provided aesthetically pleasing and excellent surfaces for play. However it is important to keep our eye on the ball so to speak and continued work to control and remove thatch and to help firm up the surfaces should be implemented. We would however expect that given the condition of the greens presently there will be good condition over the winter and general condition for play should correspondingly be good in the early parts of the following playing season.

Signed

**J S Dobson, NDTs(Dist), MBPR
Turfgrass Agronomist (Scotland)
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SEPTEMBER 2009