

Delamere Forest Golf Club

Autumn Agronomy Report on the Golf Course



Wednesday, 23rd September 2009

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DELAMERE FOREST GOLF CLUB

**AUTUMN AGRONOMY REPORT
ON THE GOLF COURSE**

Date of Visit

Wednesday, 23rd September 2009

Object of Visit

To review prevailing conditions on course and to offer advice on ongoing management and project work.

Present

Mr Philip Hemsted – Chairman of Green
Mr Ron Crichton – Treasurer
Mr Rolf Furmston – Green Committee
Mr Martin Brown – Professional
Mr Mike Towers – Secretary
Mr Andy Ralphs – Course Manager
Mr Andy Williamson – Deputy Course Manager
Mr Alistair Beggs – STRI Ltd

I. INTRODUCTORY REMARKS

Progress since our last visit in the spring of 2009 (14th April) can be summarised as follows:

- (i) A digital mower gauge (Accu-gauge) has now been purchased and the mowers have been set at 4.25 mm for most of the summer season.
- (ii) Pedestrian mowing has been given priority with the greens being cut on approximately five occasions per week with these units. Presentation has been good and edges are strong as a consequence.
- (iii) A number of different rolling devices were trialled and the Green-tech vibratory rollers were purchased mid-season. Their regular but sensible use in what has been a predominantly wet year is already paying dividends.
- (iv) Extra top dressing and overseeding work has been focussed on weaker green centres, for example, 3rd, 5th, etc. and there is now more evidence of better bent grass coverage in these sections.
- (v) Aeration has been regular and varied with star slitting carried out on an approximately weekly basis and solid tining, with 8 mm tines, carried out on four occasions throughout the year.
- (vi) Nitrogen levels have been kept very low this season, with only a single lawn sand application in the spring and a single 8:0:0 in May. Results have been very positive and we see no need for further nitrogen applications in the short term.
- (vii) Wetting agent has been delivered on a strict monthly cycle, as advised, and there are no signs of dry patch as a result. The appearance of the greens is much improved compared with times when wetting agents were not used.

- (viii) Verti-cutting has been relaxed and replaced with brushing (Sisis z brush). This gentler approach has led to improved grass coverage on all greens, which should be advantageous going into winter.
- (ix) Tees have been solid tined and top dressed a little more regularly this year and it is the Club's intention to continue with this in the future.
- (x) The low area within the 5th fairway has not yet been hollow cored and sanded, but the plan is to complete this programme within the next two to three weeks.
- (xi) Data is now being collected on the performance of the greens throughout the year. Speed, smoothness and firmness assessments are being made on a weekly basis to the 3rd, 5th and 17th greens. Green speeds have been consistently high through the summer, largely falling between 9 – 10 feet, for routine play. The smoothness average has been round about 7 with firmness levels also standing up well despite a wet season. Further data was collected during the course of this visit.

II. GREENS – OBSERVATIONS AND COMMENTS

It has been another wet summer in the North West of England but, despite this, it appears that the putting greens at Delamere have performed very well. The acquisition of the new Greentech vibrating rollers has allowed green speeds to be maintained without dropping height of cut on greens to particularly low levels. Indeed, the greens have been mown at around 4.25 mm throughout the summer, yet green speeds have regularly attained a stimp meter average of between 9.5 and 10 feet.

Surfaces have been firm and smooth as well, and maintenance inputs have been made without significant detriment to the quality of the playing surfaces.

Currently, the greens are presenting and playing very well. Swards show a good blend of desirable grasses with bents and fescues dominant and previously weaker centres, for example at the 3rd, 5th, etc, showing increasing proportions of desirable bents (*Agrostis spp.*). A real effort has been made to apply extra top dressing to these areas in addition to overseeding work.

The relaxation of verti-cutting has, in our opinion, allowed bents and fescues to thicken and swards are denser and fuller as a result. Brushing is ongoing and the Z brush is doing an excellent job, impacting on refinement without weakening the swards.



Fig. 1: The surface at the 5th showing good density, uniformity and texture.

There are no significant signs of weakness or stress at this time with pedestrian mowing helping to strengthen margins and edges and regular wetting agent use preventing any development of dry patch. No fungicide inputs have had to be made through the season, apart from localised delivery, and there is no active disease at this time.

Profiles beneath the greens remain in good order too. There is no doubt that the verti-draining carried out last autumn / winter has helped the greens cope with summer rains this year. However, we see no reason to repeat the verti-draining at this time, although there will be a need to return to this important operation in future seasons. Although organic matter tests carried out during the spring visit revealed levels to be high throughout these profiles, when they are examined in detail there is no evidence of them retaining moisture either at the surface or through depth. There is some thatch at the base of the turf but in most cases this is well ameliorated with top dressing and it is important that this remains the case. We discussed increasing the annual delivery amount to nearer 100 tonnes, rather than the current level for this year which was round about 60 tonnes. Root growth is good and strong and showed development beyond 100 mm beneath all the greens examined.

The 3rd, 5th and 17th greens were assessed for smoothness, firmness and green speed as part of the visit.

STRI Green Speed	
Green N ^o	Stimpmeter Reading
3 rd	9' 6"
5 th	9' 6"
17 th	10' 6"

When compared with the table below (Radko, USGA), these speeds are very impressive and illustrate the benefit of purchasing the Green-tech vibrating rollers. The aim from hereon will be to cut at relatively modest heights, but to roll to achieve reasonable speeds.

	Average distance rolled		Green speed classification
	(m)	(ft)	
For regular membership play	2.55	8'6"	Fast
	2.25	7'6"	Medium fast
	1.95	6'6"	Medium
	1.65	5'6"	Medium slow
	1.35	4'6"	Slow
For tournament play	3.15	10'6"	Fast
	2.85	9'6"	Medium fast
	2.55	8'6"	Medium
	2.25	7'6"	Medium slow
	1.95	6'6"	Slow

Greens were also assessed for smoothness and results are summarised below:

STRI Smoothness Scale		
Scale	Description of smoothness/trueness	Example greens
10	No chatter or snaking. Perfect roll.	
9		
8	Smooth, isolated chatter and insignificant snaking.	
7		3 rd , 5 th , 17 th
6	Chatter, isolated bobble and occasional snaking.	
5		
4	Distinct bobbling with some snaking.	
3		
2	Bobbling and snaking.	
1		
Chatter = Distinct vertical vibrations discernable but ball does not leave ground. Snaking = Lateral deflection from intended path. Bobble = Distinct vertical movement where ball leaves the ground.		

Smoothness values are good, with all three greens attaining a score of 7 (1 – 10 scale). They correspond very well with results taken on a weekly basis throughout the summer and the greens have only scored below 7 on one occasion since the 22nd May 2009.

The firmness of the greens was assessed using the word picture system and, in all three cases, the greens scored 4 on the STRI scale (scale 1 – 6). Again, these correspond very well with data values taken throughout the summer, and the greens scored 4 or above every week from the 1st of May until the 24th of July, but softened a little following heavy rainfall in August. They have become significantly firmer again in September with lower rainfall levels.

During this visit, a Clegg hammer was used to objectively assess the firmness of the greens. This is an industry-standard device which utilises a decelerometer released from a fixed height of 0.5 metres. This measures the firmness of the surface in gravities. On golf greens, it is usual for values to range between 70 and 110 gravities, with the smaller number representing a softer surface. On each of the representative greens, nine drops were carried out and the Clegg means and their associated standard errors are summarised in the table below.

STRI Clegg Hammer Readings	
Green N ^o	Clegg Reading (gravities)
3 rd	97 (2.5)
5 th	98 (2.4)
17 th	98 (2.1)

The data is very consistent from green to green with very little difference encountered between the three tested surfaces. With means in the high 90s results are very favourable and these numbers are more akin to a seaside course than an inland one at this time of the year.

It should be remembered that the data collection process has only just begun. It is really important that we continue to collect data on a weekly basis and that we continue to use the Clegg hammer on at least a twice yearly basis. It is not only how firm these greens are during the summer that is important, but also how they resist softening during the wetter winter months.

III. GREENS – KEY RECOMMENDATIONS

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

1. Continue to solid tine the greens with 8 mm tines on the Aercore through to the middle of October.
2. We see no requirement for verti-drain work this autumn, although the treatment worked very well last year and has allowed the greens to perform well this summer. With the Centenary season next year, it makes no sense at all to verti-drain for the sake of it, so we simply suggest that greens are deep slit to a minimum depth of 150 mm (6") from mid October onwards, aiming for passes on a fortnightly basis through until Christmas. Slitting should be extended beyond this if soils are dry and receptive in January and February.
3. The density of turf is good at this time and this is a good characteristic going into winter. Continue to brush, which will refine but not weaken the swards, and this can be continued through November provided that density is retained and no weaknesses seen.
4. Use liquid sulphate of iron inputs alongside a nitrogen-free liquid seaweed (for example, Rigby Taylor's Maxicrop No. 7, or equivalent) to maintain colour and hardness of leaf through the winter. The regular use of iron should also help discourage any moss colonisation and this should also be less likely now that turf density has improved. Scotts have just brought out a new moss killer called Jewel (carfentrazone plus Mecoprop-p) and Rigby Taylor has a material called Pan Glory which contains the same active ingredients. Our advice would be to stick with iron sulphate in the short term, but note there is now an alternative for moss control. These latter materials will always work best when there is growth and recovery beyond the application to allow light verti-cutting / brushing and fill in to take place.
5. The machinery range available to staff is good, but the one key item of equipment that the Club does not have access to is a verti-drain. We appreciate that regular verti-draining has not been part of the maintenance programme at Delamere in the past, but it is likely to become more and more commonly used in the future. The modern units exhibit great speed and versatility and verti-drains are not only used on greens, they have uses on tees, approaches, walkways and pathways, sections of fairway, etc. They can also house a range

of tines so that traditional verti-draining with 12 mm or 17 mm tines can be supported with more regular 8 mm tine work through the season if necessary.

Although we cannot justify recommending this type of expenditure in the short term, it is likely (particularly if patterns of wet summers continue) that having access to a machine like this will be advantageous in the future. The cost of a verti-drain or equivalent Wiedenman unit would be in the region of £14 - £16,000.

IV. OTHER POINTS OF DISCUSSION

1. Tees

It was agreed that all par 3 tees, and additional par 4 and par 5 tees that require it, should be hollow cored over the next fortnight or so whilst conditions remain predominantly dry. Leave the cores on the surface and break them up with a stiff brush or verti-cut unit, then mat extruded material back into the base of the sward, allowing fibrous debris to disperse naturally.

Back up coring with slitting through the autumn and applications of iron sulphate and seaweed over winter to harden the turf against disease.

The above programme of work should prepare the surfaces very well for Centenary pressures next year.

2. 5th Fairway

Proceed as planned with coring and sanding work to the hollow in front of the green, as advised in spring report.

3. Chafer Grubs

There is notable damage in some areas of rough, for example to the right of the 1st, left of the 4th, etc. with birds searching for chafer grubs. The Merit Turf material applied during the summer to selected areas has worked very well to eliminate the problem, and it is a case of extending treatments to other areas in May 2010.

4. Rough Management

Continue with programmes of cutting, collection and scarifying to reduce the productivity of fringing roughs. The rate at which these treatments work is very site specific and, in some cases, it may take three or four years of inputs before tangible results are seen.

We also discussed two further options in respect of improving the structure and species composition of the longer roughs which, in some areas, for example between the 2nd and 3rd, and the 3rd and 4th, are very coarse and rank in places.



Fig. 2: Rank grassland between the 3rd and 4th holes.

- (i) Syngenta have just released a new graminicide to the UK market called Rescue. This is a selective material which will take coarser grasses such as rye grass and Yorkshire fog out of stands of finer fescue and bent. It should be noted that Highland bent is susceptible to the graminicide. This material could have a role to play in cleaning up some areas of rough, particularly semi-roughs, fringing roughs and perhaps wider roughs as well. Rather than making large scale applications this autumn, we suggest that the material is trialled on various areas of the course including semi-roughs, roughs, as well as perhaps some tees and some aprons to greens where rye grass is a contaminant.

One note of caution: When Syngenta launched the material in August, they were uncertain as to whether or not they would achieve approval for use of the material in rough grassland. Check the label before use and only apply it to rougher areas if approval has been granted.

- (ii) We discussed the possibility of grazing areas of grassland, and particularly those where contouring limits the effective use of equipment. Grazing has been used very effectively on some golf courses, for example Notts Golf Club at Hollinwell, Littlestone in Kent, Muirfield, etc, and although it is not a standard practice, it is one which is very effective in improving the structure and health of large grassland areas.

I enclose a couple of articles from the STRI bulletin for your perusal and if, following discussion, the Club considers this a viable way forward, I suggest that you contact Bob Taylor in our Ecology Department at STRI, on 01274 565131, for more information.

Signed:

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Official R & A Agronomist**