

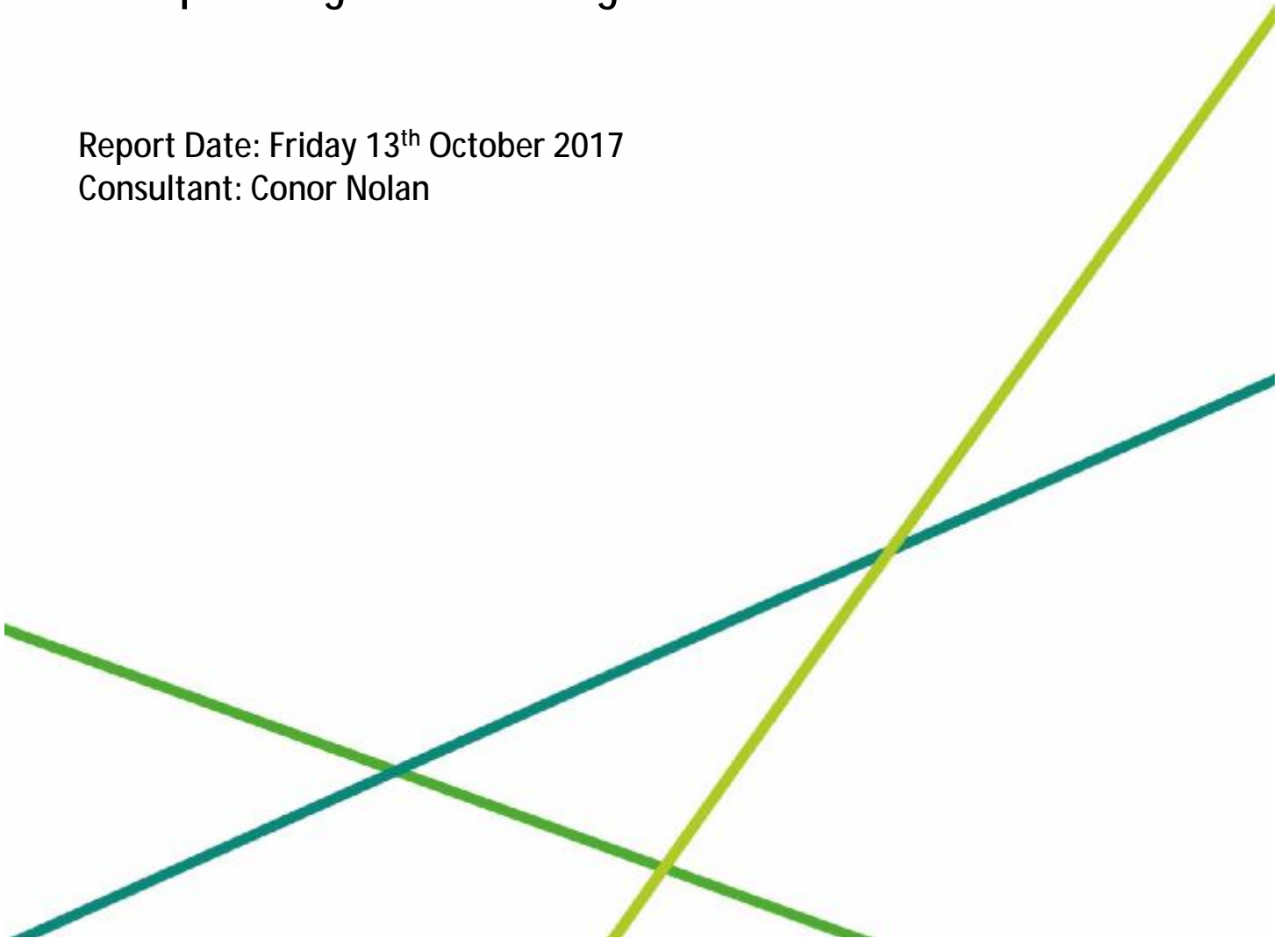


Making great sport happen

MONKSTOWN GOLF CLUB

Advisory Report on the Golf Course incorporating the STRI Programme

Report Date: Friday 13th October 2017
Consultant: Conor Nolan



Monkstown Golf Club

| | |
|------------------|--|
| Date of Visit: | Tuesday 10 th October 2017 |
| Visit Objective: | To objectively measure greens playing quality in addition to review of overall course condition and provision of general advice on maintenance issues throughout the course. |
| Present: | Mr J Byrne – Course Convenor Mr H Madden – General Manager Mr M Travers – Course Superintendent Conor Nolan – STRI Ltd |
| Weather: | Overcast but dry. 14°C |

Headlines

- The putting surfaces had recovered very well following overseeding two weeks earlier.
- The best trueness and smoothness was seen to the 12th green due to the lighter volume of grass.
- The aprons are getting better but still had some patchy bits from dryness while texture can be even better.
- The approaches can only be bettered through introduction of better ryegrasses together with fescue.
- The sand within the bunkers was in very good condition and was very clean.
- Tees remain beautifully firm and well grassed of good vigour.
- The fairways continue to offer very good ball support and nice definition.
- Dealing with tree leaves was already underway which is a draw on labour.

Key Actions

- To be more confident that young seedlings on greens come through, the winter and summer heights of cut need to be a bit more forgiving. Raise the winter height of cut to 5mm, if you can.
- Hold off on nitrogen input to greens for 4-6 weeks or so to avoid crowding seedlings and to help ball roll.
- Overseed the aprons/approaches immediately with fine red fescues and dwarf perennial ryegrass using the plant pot method.
- Ideally the tees should be overseeded as the aprons twice per year.
- Keep up the vigour and sanding of the tees.
- An application or two of ammonium sulphate may be required to the fairways over the winter and early spring to maintain good ball support. Apply at 50-75kg/hectare.
- Sand topdressing of the fairways is supported next spring, although there is a preference for timing with decent growth.
- Tree work is due soon as removal of less valuable evergreens firstly, in addition to improvement of the 12th green complex.

Objective Measurements

| Measurement | Average | Target Range |
|--|----------------------|--------------|
| Soil Moisture (%) | % (28.1-32.0) | 15-25% |
| Hardness (Gravities) | Gravities (94-97) | 85-110 g |
| Smoothness (mm/m) | 15.69-18.34 mm/m | <23 mm/m |
| Trueness (mm/m) | 4.84-10.27 mm/m | <8 mm/m |
| Green Speed | 7 ft 11 in – 8ft 7in | 8.5-9.5ft |
| Organic Matter 0-20 mm (%) | 2.58-3.20% | 3-4% |
| Organic Matter 20-40 mm (%) | 2.11-2.96% | <4% |
| Soil pH | 6.7-6.9 | 6.0-7.0 |
| Phosphate (P ₂ O ₅) | 44-55mg/l | 10-30 (mg/l) |
| Potassium (K ₂ O) | 87-147mg/l | 15-30 mg/l |

Key: In Target Marginal Variance Out of Target

Photo Observations and Comments



Figure 1: Excellent seed strike from recent overseeding with browntop bentgrass seed as seen to the 7th green above. Smoothness and trueness was hardly affected two weeks after overseeding with good ball roll quality noted. The challenge is to nurture the seedlings to full establishment.



Figure 2: The smoothest and truest surface seen to the measured 12th green above. It was better than the measured 5th and 16th greens however because there was less friction due to the lower grass volume on the 12th. Light triplex ring was found to all greens even with only three times weekly mowing. It is likely that it is more prevalent because of the deeper aeration at seeding time which increased softness.



Figure 3: Shaded 11th green most effected by some small spots of fusarium patch. It was in contrast to the unaffected and very open 14th green. Small spots of fusarium patch disease were seen to a good number of greens.



Figure 4: Silvery thread moss on the 18th green a feature of the green construction and heights of cut. It was the main blemish besides Take- All Patch scarring on the 3rd green.



Figure 5: 2nd approach offering very good lies. It was consistent with the remainder. Some patches of weakness remain to aprons. Note the lack of earthworm casts above due to collection of grass clippings over time. Clippings are a main food source of earthworms.



Figure 6: The 15th greenside bunker, like all, offered very good lies.

Photo Observations and Comments (continued)



Figure 7: Excellent firmness and good grass cover noted to the 2nd tee. They can only be better by introducing finer ryegrasses/fescue and regrading where uneven.



Figure 8: Weaker range tee because of the sand rootzone would benefit from additional labour input/fertiliser.



Figure 9: Good lies noted to the shaded 12th fairway. All were similar in quality with below moderate levels of earthworm casting at this stage.



Figure 10: A main drain has been installed to the end of the 10th fairway to capture subsurface water flow. Slit drains may be needed in time to intercept surface water from higher ground.

Recommendations

Greens

- Hold off on application of nitrogen for 4-6 weeks to reduce potential suffocating of young seedlings and to enhance trueness across the line of cut.
- Resume fertiliser input with applications of ammonium sulphate at 20-25kg/hectare when needed over the slower growing months. The intention is to maintain density but allow seedlings to survive and not to choke them out without losing sward density.
- Recent research indicates increased better control of Take-All Patch disease when applied 2-3 times per year at appropriate rates. Apply as manganese sulphate at 8kg/hectare now, in April and again in July out through the sprayer with your foliar fertiliser applications.
- Additional sand should be applied to lower lying sections where moisture accumulation slows down breakdown of organic matter.
- Solid tine every 6 weeks or so with 8mm diameter tines to assist with infiltration and reduce ponding.
- Vertidrain with 10-12mm solid tines to 20-25mm sometime towards the end of November. Apply no heave.
- The current approach to topdressing shall continue. Only apply at very light rates of 3-5 tonnes per hectare during the coming disease vulnerable months. Resume at lighter rates of 6-7 tonnes per hectare whenever the sward will absorb the sand in the early spring. Application with rainfall due is a good strategy to reduce the potentially damaging need for working-in the sand. Avoid using the steel dragmat. You will need to find a more forgiving means of doing so with a brush or even a rubber dragmat.



Fig: Homemade brush with medium bristle stiffness from elsewhere.

- Make sure to move the flag locations to the sides of the greens, where possible, to favour the better grasses.
- Next year plan to overseed the greens with 40% slender creeping red fescue, 40% chewings fescue and 20% browntop bentgrass seed (by weight). The fescue is added as a carrier, to help against Take-All Patch on the 3rd green and to develop on any droughty spots. It is not the main grass species we are after.

- Next summer apply Headway fungicide more often to the 3rd green to control Take-All Patch disease. Four applications are permitted according to the label within a 12 month period.
- Instrata, Chipco Green and Interface fungicides currently provide a knockdown control of fusarium patch disease. All are being taken off the market EU wide with Chipco Green and Interface being withdrawn on the 31st of January according to the manufacturer. All three could be used during cooler weather as they had a contact action. During cooler weather there will be no fungicide that will have a curative effect once disease activity is seen. Therefore, the importance of practicing cultural controls to reduce fusarium patch disease incidence and the promotion of bents and some fescue should be clear.
- At this time of year to reduce risk of fusarium patch disease application of Exteris Stressgard, Heritage, Headway and Banner Maxx II fungicides should be applied preventatively until mid-late November i.e. If there is no disease present in early December apply Medallion TL fungicide to help get you through that period. It is a contact material that only works before disease is seen, as it essentially causes disease spores to bust. It has no curative property.
- Use of dew dispersal agents should be planned for as laid out previously to reduce risk of dew or drizzle forming droplets on the leaf. They are relatively cheap materials at keeping surfaces dry to suppress fusarium patch but they don't last long if you are mowing a lot. Expect two weeks control if mowing once per week or less. If a second cut is necessary per week during the low season it would be better to replace it with a roll rather than mowing off the dew dispersal agent (glued to the leaf) or indeed any fungicide. Best results are achieved when applied to a dry leaf. You may struggle with applications if the ground conditions to some holes are poor. I would expect to commence treatment from the end of October through March. Avoid application in frosty weather and at 75% of the labelled rate to start or if in doubt.
- Avoid mowing the clean-up cut more than 2 per week with the triplex mower year round to overcome the triplex ring.

Green Aprons and Approaches

- Overseeding is due now using the plant pot method to both elements. Make the holes with 16-18mm diameter tines on your Aercore Aerator, apply the seed with a drop fertiliser spreader ideally before working the seed to the 'plant pots'. Sand when seedlings emerge to restore loss of smoothness. Repeat under earliest mild conditions in the spring if you want to make real progress.
- Maintain the height of cut at 8-10mm year round if you can.
- Leave the vigour of the aprons and approaches as is to allow young seedlings to survive. Fertilise with the putting surfaces. There is no need to apply additional fertiliser to help seedlings along.

Tees

- From the end of October until April retain sward density with ammonium sulphate applications (50kg/hectare in 400 litres of water). Avoid ammonia applications at that rate on sunny warm days above 13°C, which would cause scorch.
- Ensure there is 40-50% greenwaste compost within the divot mixture when adding seed.
- It would be a real bonus if the tees were overseeded as per the aprons using fine dwarf ryegrasses and fine red fescue seed now and next spring under mild weather conditions. They would enhance the texture and body of grass over time.
- The approach to sanding should remain.
- Additional nitrogen inputs are required to the range tee during the main season together with divoting with sufficient compost. Overseeding and divoting are due now. With regard to potential developments of the range it would seem a good idea to define 'fairways' with tree planting. it would reduce potential artificiality and reduce disruption. Every effort should be made to locate the chipping green out of the shaded corner and at the same time ensure sufficient safety for users from the range tee; a real challenge.

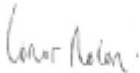
Fairways

- The height of cut will probably have to rise to 17-18mm for the 'winter' very soon as earthworm casts increase.
- Application of ammonium sulphate at 50kg/hectare may be required to maintain ball support as and when needed between November and March. Apply in 400 litres of water out through the sprayer.
- While installation of a sprinkler is planned for the droughty area on the 10th reducing water need and drop off in quality will still be helped by promotion of better grass types. I would therefore encourage overseeding with dwarf perennial ryegrass, slender creeping red fescue and chewings fescue seed when seeding the aprons very soon. Sow now at 80-100kg/hectare with the plant pot method.

Tree Management

- The time for tree work for this year is fast approaching. Focus shall remain on removal of the less valuable evergreens (non-pines) before progressing on to broadleaved trees. Following the basic principles of the semi-natural landscape approach of creating shelter and openness will make for a more interesting design on the upper holes especially, as well as improving turf conditions/playability.

Signed

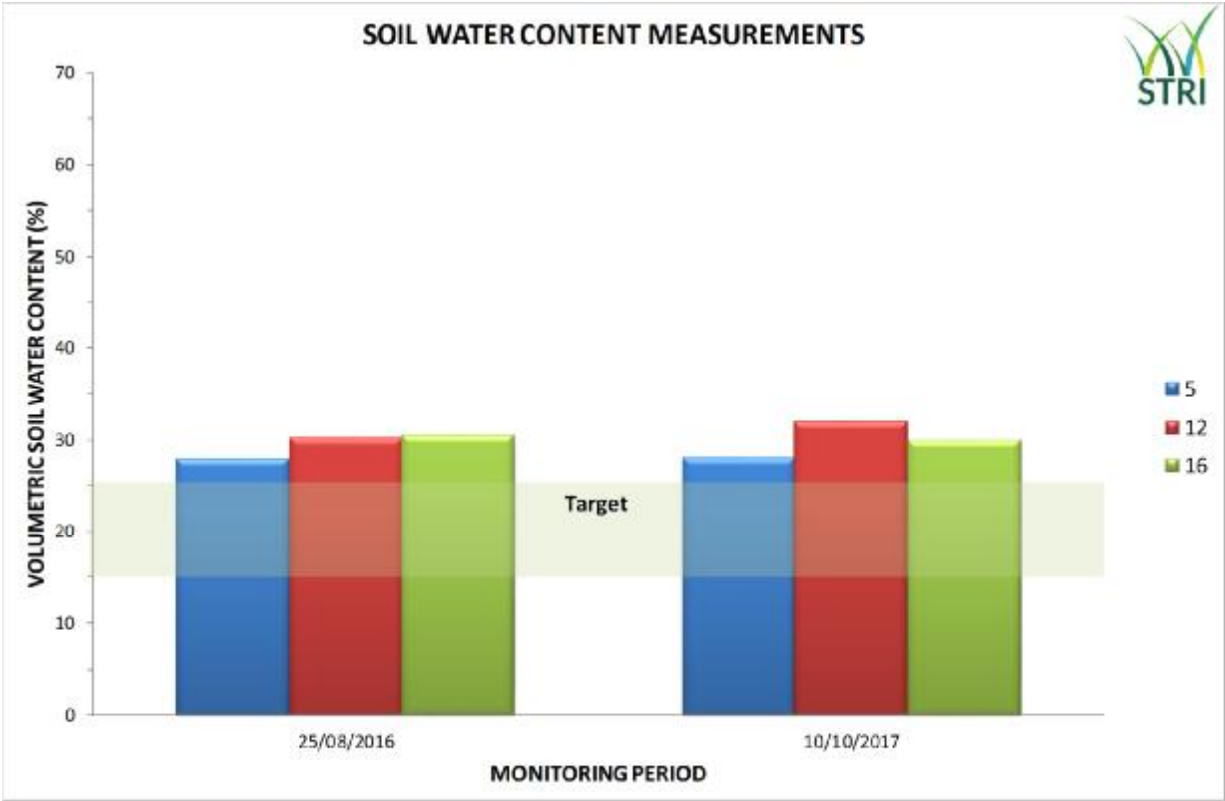


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STRI is completely independent and has no alliances to commercial products, services or contractors. This ensures that our design, project management and advisory services provide the best solutions for each individual client.

Monkstown Golf Club

Objective Data

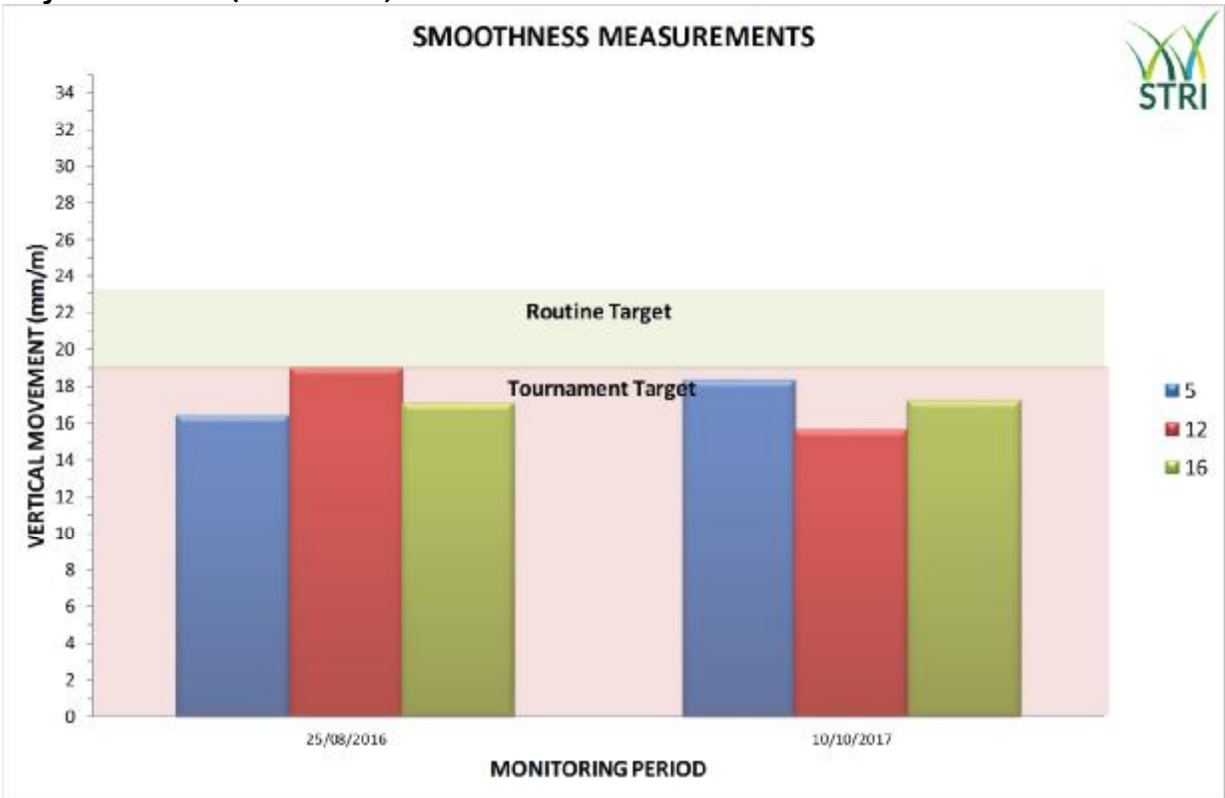


Objective Data Graph 1:

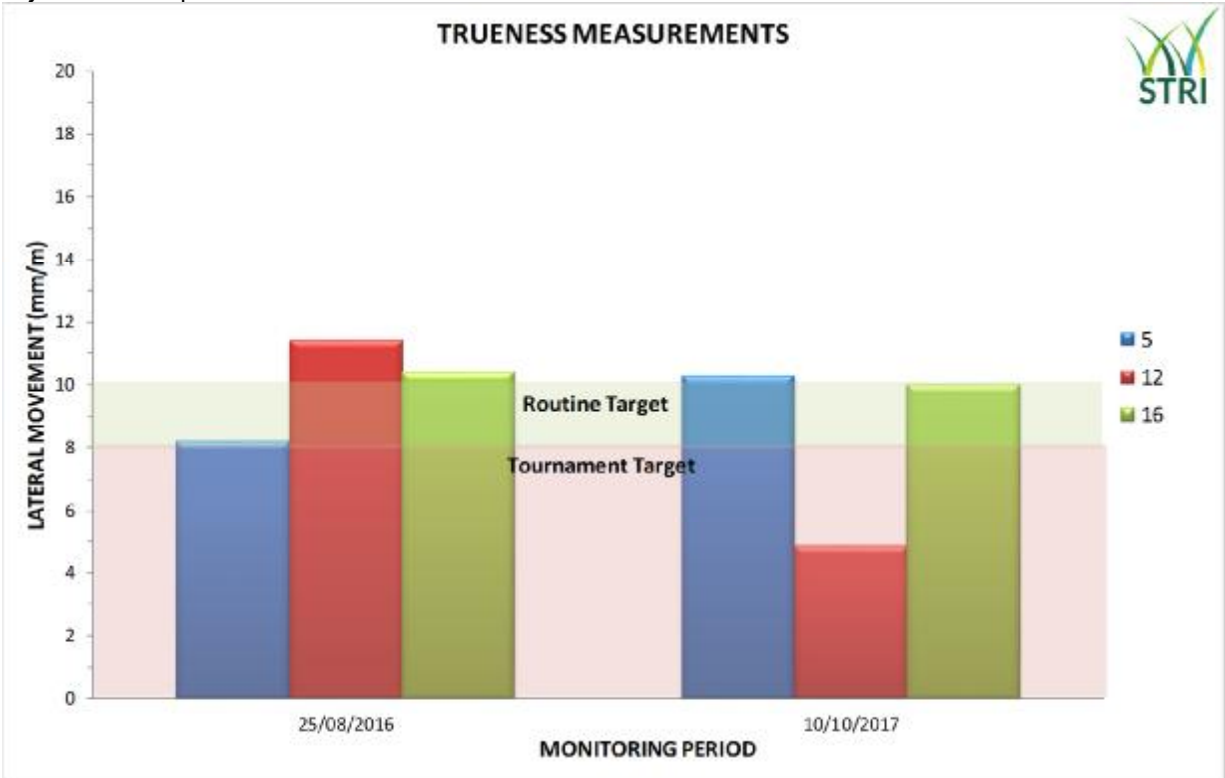


Objective Data Graph 2:

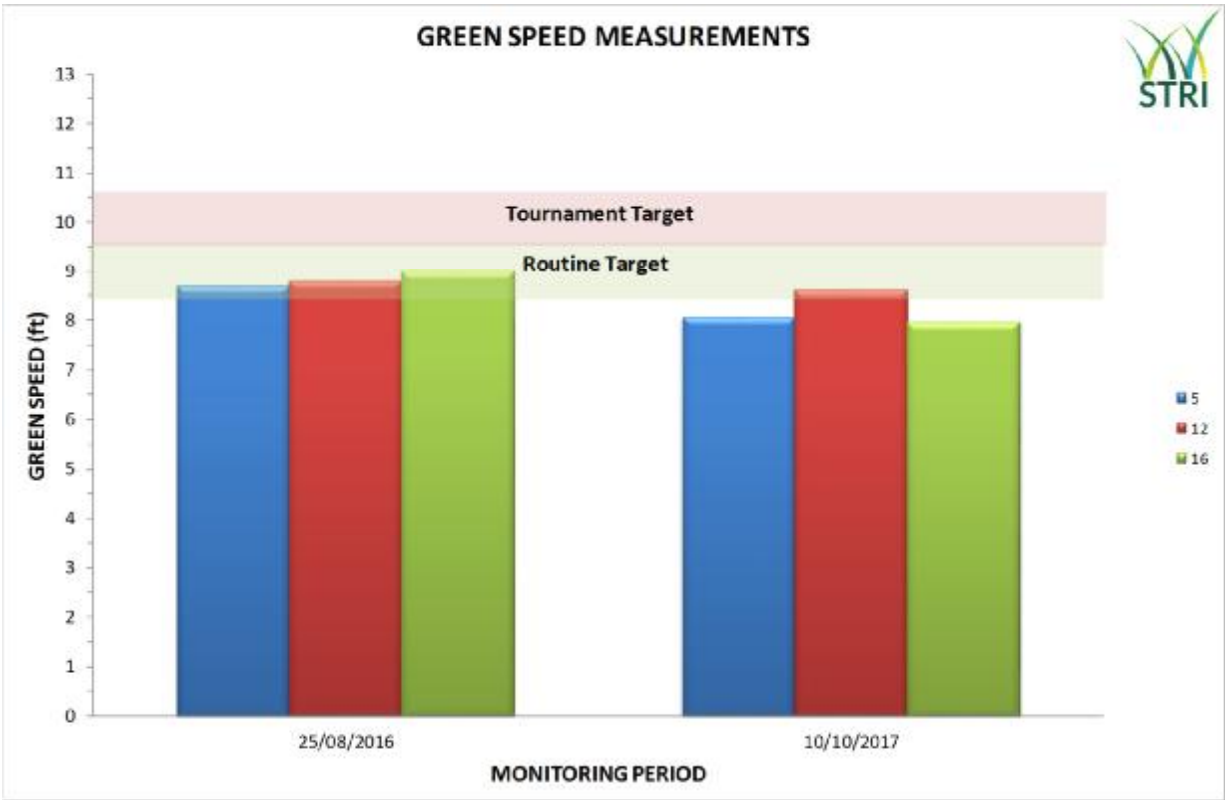
Objective Data (continued)



Objective Data Graph 3:



Objective Data Graph 4:



Objective Data Graph 5:

ORGANIC MATTER CONTENT

CLIENT: MONKSTOWN GC
ADDRESS: PARKGARRIFFE,
MONKSTOWN,
CO. CORK, REP OF IRELAND

DATE RECEIVED: 12/05/17
DATE REPORTED: 19/05/17
RESULTS TO: CN

TEST RESULTS AUTHORISED BY:
Michael Baines, Laboratory Manager

CONDITION OF SAMPLE UPON ARRIVAL: MOIST

| SAMPLE NO | DESCRIPTION | LOSS ON IGNITION (%) [*] | |
|-----------|-------------|-----------------------------------|------|
| A15882/1 | 5 | 0-20 mm | 3.20 |
| | | 20-40 mm | 2.45 |
| | | 40-60 mm | 2.32 |
| | | 60-80 mm | 2.05 |
| A15882/2 | 12 | 0-20 mm | 2.58 |
| | | 20-40 mm | 2.11 |
| | | 40-60 mm | 1.79 |
| | | 60-80 mm | 2.10 |
| A15882/3 | 16 | 0-20 mm | 3.12 |
| | | 20-40 mm | 2.96 |
| | | 40-60 mm | 2.04 |
| | | 60-80 mm | 2.08 |

* ASTM F1647-11 Standard Test Methods for Organic Matter Content of Athletic Field Rootzone Mixes (Method A)



Testing Certificate 2159 - 01

THE RESULTS PERTAIN ONLY TO THE SAMPLE(S) SUBMITTED AND TESTED

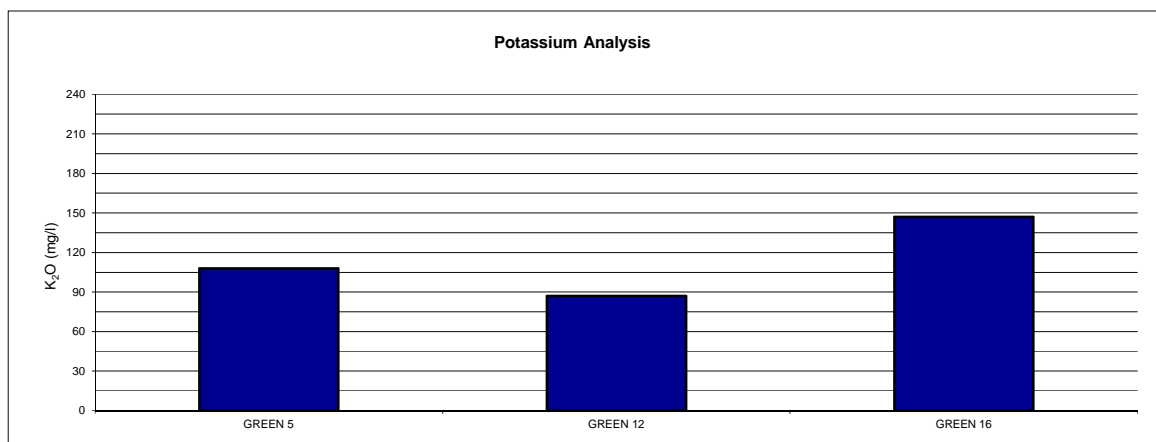
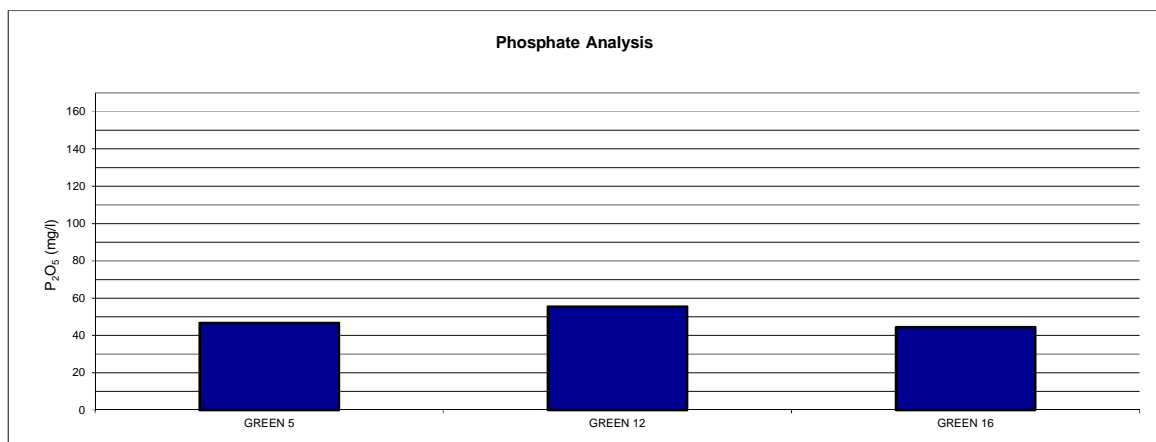
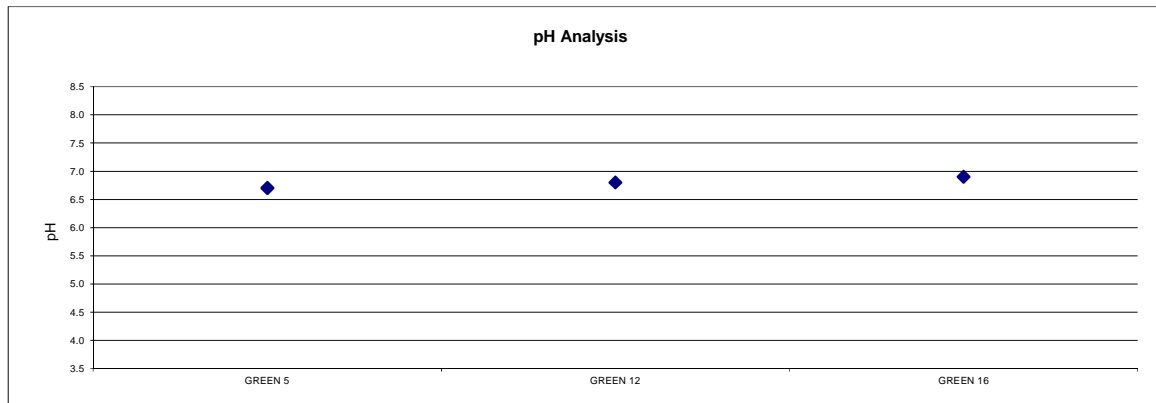
STRI

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SOIL CHEMICAL ANALYSIS

MONKSTOWN GC

Date: 12/05/17



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