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# TYNEMOUTH GOLF CLUB

## Advisory Report on the Golf Course

Report Date: 7<sup>th</sup> April 2017  
Consultant: Adam Newton



Date of Visit:	Wednesday 5 <sup>th</sup> April 2017
Visit Objective:	To review the agronomic condition of the golf course in early spring and confirm ongoing maintenance requirements.
Present:	David Steven – Greens Chairman Ian Kerr – Head Greenkeeper Adam Newton – Turfgrass Agronomist, STRI Ltd
Weather:	Fine, dry and sunny with temperatures of approximately 12°C.

### Headlines

- The course is entering the main playing season in a much stronger position than last year thanks to improved winter conditions and agronomic progress. Golfer feedback during the visit was excellent.
- The greens are generally supporting a strong grass cover, with the exception of the 7<sup>th</sup> and 13<sup>th</sup>.
- Bentgrass populations appear to have increased over the last year in response to an improved growing environment.
- Refinement of sward texture and increasing the frequency of sand topdressing is the key focus over the coming weeks to optimise ball roll quality and minimise the influence of differential growth.
- Graden sand injection went well last summer and helped the greens retain better winter firmness. Organic matter reduction remains a key objective and so Graden work is necessary again this year.
- The sand-based 7<sup>th</sup> green was weaker and thinner and requires additional micromanagement to achieve better consistency with the other greens on the course.
- Poor drainage performance on the 13<sup>th</sup> green continues to hold this surface back and pipe drainage installation is required to help water bypass the poor underlying soils.
- Plans are to incorporate closer mowing and additional refinement to the green collars and approaches this year in a bid to improve presentation, definition and playing qualities.
- The next phase of drainage work has been successfully implemented this winter and is already paying dividends.
- Tree management to the left of the 6<sup>th</sup> green has greatly enhanced aesthetics whilst increasing sunlight and airflow to the putting surface and green approach.

### Key Actions

- Increase textural refinement inputs over the coming weeks to lift laid growth, refine sward texture and optimise ball roll performance.
- Gradually reduce mowing heights down to 4mm.
- Implement 2 – 3 light sandings over the next few weeks to smooth-out surface indentations.
- Apply Sierraform GT 16:0:16 to the 7<sup>th</sup> green alone to boost sward health and density.
- Intensified bentgrass overseeding to the 7<sup>th</sup> green to improve surface durability and performance.
- Maintain the pressure on organic matter reduction through regular sanding and routine aeration through the season, along with Graden sand injection work in August.
- Investigate pipe drainage installation to the 13<sup>th</sup> green this autumn.
- Adopt closer mowing and increased refinement to the green approaches, collars and surrounds.
- Provision should be made for extension of verticutting, aeration, sanding, feeding/PGR and wetting agent to these areas to really elevate turf quality and sustain closer mowing heights.
- Increased routine refinement work to the tees to improve texture and presentation.
- Tree removal work around the 4<sup>th</sup> green this winter.

## Photo Observations and Comments



Figure 1: The condition of the greens is vastly improved in comparison to last spring when growth was minimal and many of the surfaces were heavily scarred with disease. Excellent disease management through autumn/winter has successfully kept disease at bay despite persistently high disease pressures.



Figure 2: The surfaces were mostly supporting a strong, healthy body of grass. Bentgrass populations have visibly increased over the last year in response to an improved growing environment and successful overseeding. Lifting laid growth and improving the texture of the grass sward should be the focus over the coming weeks to improve ball roll.



Figure 3: Differential growth between the bentgrasses and annual meadow grasses is a key issue on UK courses at this time of year and can negatively influence ball roll. The picture above highlights the issue perfectly, with the bentgrass showing vigorous growth and coarse texture (yellow arrow) whereas the annual meadowgrasses are still relatively dormant and of finer texture (red arrow).



Figure 4: The 13<sup>th</sup> green remains one of the weakest on the course and much of this can be linked to its poor drainage performance in winter. When assessing the soil profile beneath, we can see that topsoil depth is shallow and so the indigenous clay soils are closer to the surface (arrow). These hinder water movement through the soil and the introduction of pipe drainage would be the most appropriate solution.



Figure 5: The sand-based 7<sup>th</sup> notoriously struggles due to its extreme undulations and lower nutrient holding capacity in the underlying sandy soils.



Figure 6: Grass cover is much thinner and weaker in the flatter areas where the majority of pins are located.



Figure 7: The front tier of the 4<sup>th</sup> green also notoriously suffers through the winter, although it is hoped that the recent improvement to fairway and approach drainage will see the situation improve in the future. The imminent focus is on restoring grass cover to the front-left section.



Figure 8: The Club's plans to introduce closer mowing of the green collars and approaches are fully supported. This will elevate course presentation and definition, whilst also widening shot selection when playing around the greens.



Figure 9: Part of the plan is to extend some of the green approaches to create a better entrance to the greens. Some additional sanding, refinement and renovation should therefore be budgeted for these areas to improve turf quality and overall surface performance.



Figure 10: I was delighted to see the excellent tree work carried out to the left of the 6<sup>th</sup> green following our discussions last year. This has made a real feature of the pine woodland and already brought an improvement in turf quality on the green and surround.



Figure 11: Further tree and scrub removal should be scheduled for the back of the 4<sup>th</sup> green next winter to expose the two copses of pines. These copses could then be bolstered by further planting of Scots pine. This work would greatly improve aesthetics and create an appealing backdrop to the green.



Figure 12: The work to the swale on the 8<sup>th</sup> has been mostly completed and the focus now is on finishing off topsoil integration to the base and regaining grass cover through seeding.

## Recommendations

### Greens

- Increase refinement inputs over the next few weeks to lift 'laid' growth, refine sward texture and optimise ball roll performance. Start by initiating the groomers during mowing operations to lift procumbent growth. These should be set so they are not digging-in but rather 'lifting' the turf canopy. The faintest of lines should only be seen at the tops of undulations (the slopes on the 7<sup>th</sup> green would be a good indicator for this).
- Verticut the greens at -1mm with immediate effect. This should be repeated as you see fit over the coming weeks depending on turf texture, health and performance at the time. The aim should be to carry out the majority of verticutting in spring to set the texture of the greens for the season ahead. Summer refinement should then mostly concentrate on grooming, brushing and occasional light verticutting.
- Look to reduce the cutting height in 0.25mm increments over the next couple of weeks from 5 to 4mm. The aim should then be to maintain mowing heights no lower than 3.5 – 4mm through the season.
- After the above mentioned verticutting treatment, look to carry out 2 – 3 light sand applications to the greens over the next 4 – 5 weeks. Implement micro solid tining (6 – 8mm) prior to at least one of these treatments to help 'key' sand into the surface. These light sand treatments are essential for smoothing out surface indentations and really optimising ball roll performance through the early season.
- Sustain light sand applications every 3 – 4 weeks through the summer, with the aim to apply a minimum of 120 tonnes of sand to the greens again this year. These applications will not only improve surface performance but are a critical part of the organic matter reduction programme.
- Graden sand injection is scheduled again this August to help make real headway with reducing organic matter levels further. The process should continue in a similar vein to last year but I would recommend that you slightly increase bentgrass overseeding rates to 8g/m<sup>2</sup> through the Graden. This should see an improvement in recovery rate and achieve greater success with botanical improvement.
- The planned fertiliser programme is generally well-balanced but I would suggest that some of the supplementary products could be removed to help reduce costs and simplify the programme. Also bear

in mind our recommendation from last year to reduce water rates to 350 – 400l/ha during Primo Maxx applications. The target for total nitrogen inputs should be 80 – 95kg/ha this year.

- The sand based 7<sup>th</sup> green should receive an additional controlled release feed over the next 2 weeks using a product such as Sierraform GT 16:0:16. This will be less prone to leaching through the sandy underlying soils and will help provide a phased release of nutrient to the green over the next 2-3 months. Our aim is to maintain better consistency with the other soil based native greens on the course.
- Increasing bentgrass populations on the 7<sup>th</sup> green will improve its wear tolerance and achieve more consistent surface performance. Organic matter levels on the 7<sup>th</sup> are also now sufficiently low enough to make real progress with overseeding. With this in mind, I would suggest that you allow for this green to be DynaSeeded on 3 occasions this year with high quality browntop bentgrass (e.g. BAR All Bent or J-All Bent). The first application should take place as soon as temperatures are consistently above 15°C (hopefully mid-May) to help strengthen the thinning sward. A double pass at 4g/m<sup>2</sup> should be applied on this occasion. A further DynaSeed should take place in late June, followed by a final overseed through the Graden in August (as mentioned above).
- Monitor the 13<sup>th</sup> green closely over the next few weeks and apply an additional light feed if needed to help strengthen grass cover. Use a product of low nitrogen content (e.g. 4:0:8) at a rate of 25g/m<sup>2</sup>. If grass cover is still thin and inconsistent on this green through the early season, then look to DynaSeed browntop bentgrass at the same time as you apply to the 7<sup>th</sup> in May.
- The vulnerabilities of the 13<sup>th</sup> green are most evident in winter when it suffers with poor drainage performance. Shallow rootzone depth and clay dominant subsoils are the root of the problem and it would be strongly advised that this green is pipe drained this autumn whilst fairway drainage work is carried out on the 13<sup>th</sup> and 14<sup>th</sup> holes. We can discuss the pipe drainage process in more detail during my visit in September but I would suggest that you speak to your Drainage Consultant at the nearest opportunity to plan in the work and come up with a suitable drainage design. I have attached an advisory leaflet to the report which discusses the process of draining a green and the importance of correct material selection.
- The greens aeration programme is generally excellent and should now focus on 6mm needle tining on a 4-5 week basis through the main season. This should ideally be timed prior to the monthly applications of sand to help with integration into the surface.
- Re-turfing work to the front-left of the 4<sup>th</sup> green should continue as planned at the next available opportunity. Utilising native turf from your chipping green will be the best option to achieve a good blend with surrounding turf. Some additional levels work is also required to the drain running through the front-centre of the green although this may be achieved through intensifying topdressing to this area to improve surface micro levels.
- Look to introduce more frequent pin movement on vulnerable, weaker greens such as the 7<sup>th</sup> and 13<sup>th</sup> to help spread out wear and tear. The undulating 7<sup>th</sup> is a great example where available pin locations are limited by the slopes on the green. This causes wear to be concentrated in small areas and the turf to subsequently weaken. Increasing pin movement to 3 times per week would greatly help.

### Green Collars, Surrounds and Approaches

- Plans to introduce closer mowing and increased refinement to the collars, surrounds and approaches are fully supported and will notably improve presentation, definition and performance of these areas.
- Reduce the mowing height of the collars and approaches down gradually in 0.5mm increments over the coming weeks as full growth initiates. The aim should be to eventually maintain these at 7 – 8mm but this may take some time to get to. When reducing the height, ensure that you remove no more than 1/3 of the leaf blade in any one mowing operation and lift the height back up temporarily if the turf notably weakens or thins. Always box-off clippings when mowing these areas.

- Look to extend green approaches out to a standardised 6 – 8m length (where appropriate) to create more of a striking entrance into the greens. Intricate shaping of the green collars should also be adopted to suit each green complex with occasional run-off areas being incorporated where features and contouring are suitable e.g. front-left of the 7<sup>th</sup>.
- With closer mowing being introduced into these areas, there is a certain need to extend some greens maintenance practices into the collars and approaches to maintain the desired turf health and performance. This should include aeration, sanding and liquid feeding/Primo treatments. There will also be a need to hollow tine and sand these areas in early autumn.
- Refine the texture of the approaches and collars through some imminent verticutting. This should be repeated as necessary through the growing season.

## Tees

- I was pleased to hear of the intensified maintenance applied to the tees in the autumn following our discussions last summer. Scarification, overseeding and two sand topdressing treatments were applied, coupled with regular aeration.
- Following the recent 15:2:8 granular feed, the fertiliser programme should now switch to occasional liquid feeding/seaweed application and Primo Maxx. As discussed previously, look to lower the water rate of these applications to gain maximum performance from Primo Maxx.
- An increased level of routine refinement work would be beneficial through the season. Look to introduce a similar programme to that mentioned above for the collars/approaches through an imminent verticut and then more frequent brushing and verticutting through the season.
- Cutting heights should be reduced down gradually over the coming weeks and maintained at 9 – 10mm through the season.
- The Club's plans to build a new 14<sup>th</sup> medal tee 15 – 20 yards behind the existing one are fully supported and we can discuss this further during my next visit prior to commencement of any work.

## Fairways & Rough

- The fairways were well grassed and growth is now well and truly underway. Intensify mowing frequencies and alter mowing directions with each cut over the next couple of weeks to help refine sward texture. Some mowing across the width of the fairways is always useful at this time of year to help tighten-up turf texture and target some of the grassier hollows.
- As discussed last year, I would highly recommend that semi-rough mowing is omitted in some of the out-of-play areas to help save maintenance costs and mowing time. This can also aid course definition. Grass growth on the course at Tynemouth is extremely productive and so any areas we can reduce mowing input will be greatly appreciated and allow the Greenstaff to spend more time carrying out more intricate greenkeeping tasks.
- Commence with sand/soil integration to the base of the swale on the 8<sup>th</sup> as soon as possible, looking to achieve a minimum depth of 4" (more ideally 7 - 8"). Use of a slightly sandier mix in this area would also aid drainage. Carry out seeding as soon as possible using a dwarf ryegrass/fescue mix at the full recommended seeding rate.

## Tree Management

- Consideration should be given to thinning out undesirable scrub and tree populations behind the 4<sup>th</sup> green next winter. Exposing the two pine copses will create a far more appealing backdrop to the hole. Some supplementary planting of pines will be required to bolster both copses and aid future succession.

Signed

A handwritten signature in black ink that reads "A R Newton". The signature is written in a cursive style with a large, looped initial "A" and "R".

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## Technical Note

# PIPE DRAINAGE FOR GREENS

Plan the work well in advance and communicate plans to members to minimise disruption and complaints.

Start work as early as possible in the autumn when ground conditions are most suitable. If the ground is worked when conditions are wet it will have a significant impact on the quality of the finished work. There may also be significant damage caused to the haul routes during the works if the ground is too soft. Aim to complete the work prior to Christmas to allow plenty of time for the turf to re-establish along the drain lines before bringing the green back into use in the spring.

The drains may take in excess of 12 months before they start to pull to their full potential but an improvement should be noted straight away. However, further aeration treatments are likely to be required to maximise efficiency of the installed drainage, helping water migration to newly installed pipes. This should be part of a thatch reduction programme involving other elements such as extra top dressing and scarification/hollow tining.

The guidelines for pipe drainage introduction following excavation of drain trenches are as follows:

- Use 80mm diameter plastic pipe at 2-3 metre spacing depending on conditions.
- In cutting the drain trench, allow for 25mm either side of the pipe.
- There is always the risk of drain lines standing out in the summer which is one of the potential problems with pipe drainage introduction compared with redevelopment. Introduce a 60:40 rootzone at a uniform firmed depth of 300mm and a minimum of 250mm.
- To ensure bridging factors are met and to avoid rootzone migration into the gravel over time, it is important to test the suitability of proposed materials in the STRI Laboratory prior to proceeding.
- Whether a blinding layer is required depends on the choice of gravel size. An 8-10mm gauge aggregate could be blinded with 50mm firmed depth of a 1-4mm hard washed grit.
- The aggregate should be a washed, hard aggregate that is not limestone or sandstone.
- In order to dispense with the blinding layer the aggregate size can be reduced to a 3-6mm gravel. As a guide, the blinding layer or rootzone should be around one-sixth of the aggregate size. The depth of aggregate will depend on the drain depth, preferably 600mm but at least 450mm.
- Adequately firm each layer. Once the backfill has been completed, re-lay the stripped turf flush with surrounding ground, not proud in anticipation of settlement. If there is minor settlement then the unevenness can be selectively top dressed. Scalping of the turf should be avoided.
- Finally, give a light roll and top dress. Bringing the green back into play will depend on how quickly the turf knits in. Once the turf is fully integrated and a good surface has been restored, subsequent maintenance should involve tining and top dressing to maintain through flow of water past the initial base of the turf and organic layer into the growing medium and drain below.