

Course Update Jan to Mar 2016 v1.1



In speaking with our Greenkeeping Team, we have tried to summarise recent processes on the course along with some future short term operations planned, as at 15th Feb 16:

COURSE CONDITION UPDATE

Over the past few weeks it has been necessary to bar buggies and trolleys from the course, this decision was not taken lightly and is reviewed **every day**. This report gives an overview of why this unfortunate situation persists. The recent amount of rainfall has highlighted a major problem which is prevalent across the whole course, '**Thatch**'. Below is a explanation of what thatch is and the problems it causes. Due to the course fairways being very compacted and previous maintenance regimes, thatch and compaction will be a challenge to reduce over the next few years. It will take a long term program of aeration, scarification and other treatments to see a discernible difference in our fairways and promote firmer, drier fairways and out of play areas.

A member approached me regarding the slitting of fairways recently and the uneven finish that was left behind. This is as a consequence of getting through the 3-4 inches of Thatch and underlying compaction this unfortunately is an inevitable consequences of aerating fairways and rough. Until we have begun to get on top of these issues fairways and out of play areas will still retain water and some areas will remain highly unstable and subject to sinking or tearing.



We are using a brand new large fairway slitter similar to the one shown here which works to a depth of around 10".

We have also hollow cored, scarified and continue to verti drain our fairways this process will be done many times, over the coming years.

THATCH ON THE COURSE



Here we see the sponge effect of thatch on our fairways with water trapped in the top 3 or 4 inches causing the ground to be unstable and tear: turning quickly to mud and unable to grow good grasses. This is the harsh reality of many of our course fairways some of which are much worse, especially those which are in shade or which have a clay band such as hole 6.



Thatch Layer



Here you can see the infestation of moss on fairways where 'thatch' has caused areas to be so wet grasses are unable to grow.

When this area is scarified to remove the moss you are left with bare patches of soil or mud. Removal of thatch and moss is a long term process of aeration and scarification as well as repair of the bare areas left behind.

Because many areas of the course remain very wet maintenance processes to relieve compaction and thatch by the greens team will leave evidence of this work such as tyre tracks. Unfortunately this is a chicken and egg situation, as the work to relieve compaction and thatch requires heavy machinery to be used it is an unwanted side effect, as the areas become less and less compacted and drier so damage or marking of these areas will diminish.



Tyre tracks left after completing work on the course. It is an unfortunate consequence of essential maintenance and the heavy rain which the course has had to deal with along with compaction and thatch which renders areas soft and unstable.

What is thatch?

Thatch is an organic material which naturally accumulates to the turf base as a result of the continuous process of senescence and death of grass leaves, stems, shoots and roots. Natural microbial action breaks down this organic 'litter', but when dead plant tissue production exceeds microbial digestion, thatch accumulates. This process is inhibited by anaerobic conditions, such as those that may occur in compacted or waterlogged soils.

On the golf course, mechanical operations such as scarification and aeration can aid natural digestion of thatch by physically removing a proportion of it each season. This is why, generally speaking, less thatch is noted to the more intensively managed putting surfaces (below left) than to fairways (below right).



Problems caused by thatch accumulations

Excessive thatch accumulations affect the quality and health of our playing surfaces in the following ways:-

- Soft, spongy underfoot conditions when wet.
- Produce slow surfaces that are prone to pitch mark damage.
- Hard, unreceptive surfaces when dry.
- Harbour for disease pathogens, e.g. fusarium patch (*Microdochium nivale*).
- Promote shallow root development, favouring annual meadow-grass over desirable species.
- Reduces drought tolerance of turf and increase hydrophobic dry patch incidence, thus uniformity loss.

Conditions that favour thatch accumulation

Thatch accumulations can be accelerated or promoted in the following ways, both individually and collectively:-

- Excessive fertiliser and irrigation application.
- Wet or poorly drained soils.
- Inadequate maintenance operations that physically remove and dilute accumulations.

Managing thatch accumulation

Achieving a balance between thatch inputs, i.e. growth rate, and control mechanisms is the key to managing thatch effectively. Air, or more specifically oxygen, is required by the microorganisms in the soil to naturally digest the organic material. Therefore, getting air into the upper soil profile by scarification, aeration and top dressing operations will ensure thatch is less likely to accumulate and that accumulated thatch is digested. By achieving this, playing surfaces remain true, firm and free draining.

Mechanisms to manage thatch accumulation

There are many methods to manage thatch; the adoption of each particular method is dependent upon the thatch problem on your course or the time of year.

- **Aeration:** Hollow coring, solid tining and Verti-Draining.
- **Deep scarification:** A relatively new concept that is effective in certain circumstances.
- **Top dressing:** This dilutes fresh accumulations.
- **Conventional scarification:** This should include verticutting and brushing.
- **Biological products?** There are products available that claim to contain thatch-digesting microbes or promote their activity. The jury is still out on their value.



Hollow coring (left) and scarification (right) are the main mechanical operations to remove thatch accumulations

Extend to the rest of the course

Thatch management operations should not be restricted to the putting surfaces and action should be taken to manage it effectively across other areas as well. Across Scotland, most putting surfaces have sufficient thatch management programmes in place but excessive accumulations are reducing the quality, in terms of playability and drainage, across more extensive areas of the course, e.g. green approaches and fairways. Therefore, it is essential more large-scale thatch removal operations be achieved to these areas in order to sustain play for longer periods through the year.

So you can spot your Greens Chairmen around the place here are recent photos:

Paul Orton (Chair) on the left

Trevor Ryan (Vice Chair) on the right.

Please feel free to ask questions and give feedback.

