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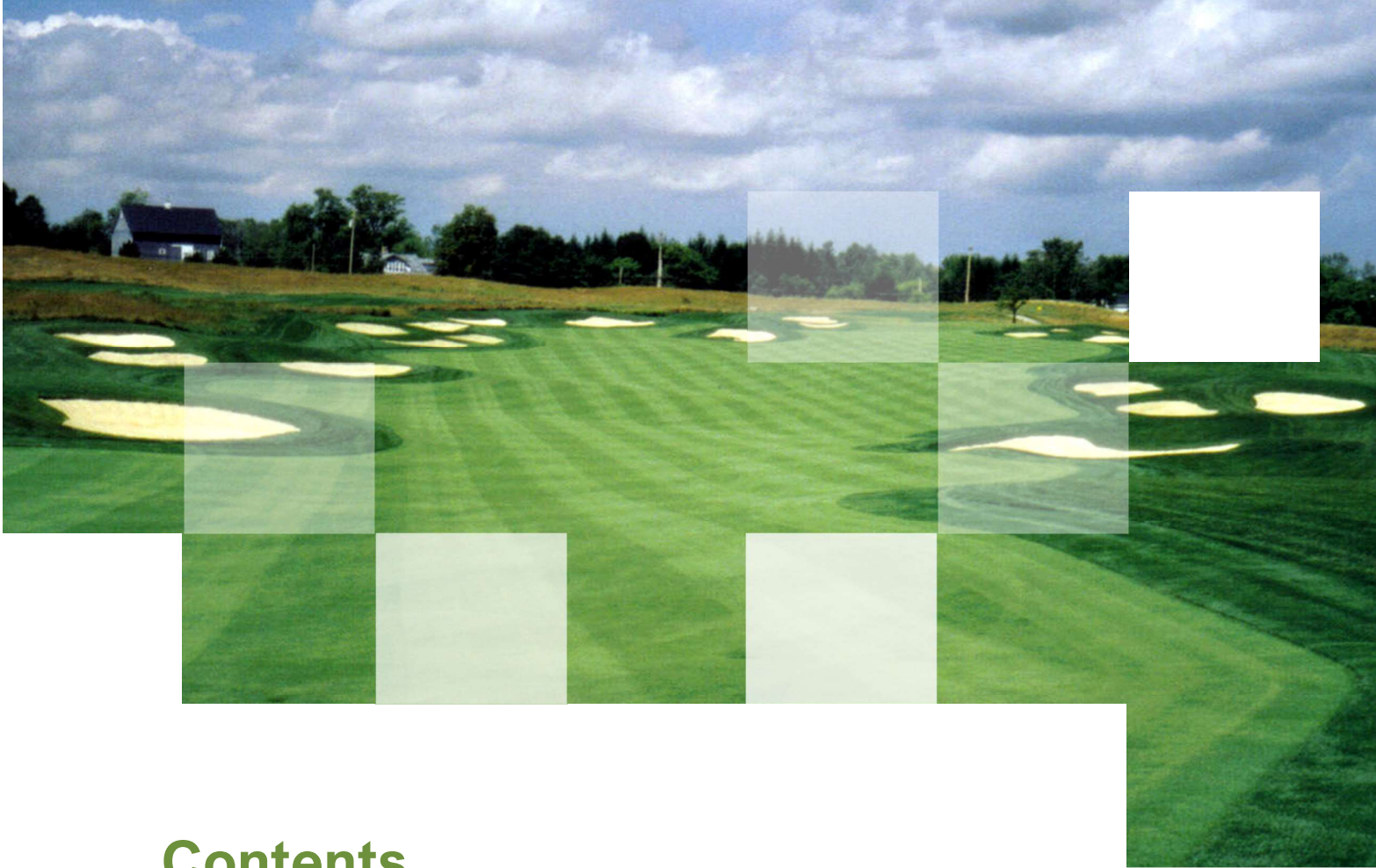


Waihi Golf Club

Turf Advisory Report

Report Date: 19 October 2022





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Introduction

Recently (19 October) David Ormsby (NZSTI) met with the following club representatives.

- Mark Lindsay – Course Superintendent
- Terry Gerbic – Course Chairman
- David Campbell – Manager

A number of issues were discussed, specifically:

1. Fairways
2. Greens/Tees irrigation
3. Carts

Our comments in relation to these issues are summarised below.

Recommendations

Fairways

Fertiliser

To make a real difference to the turf density on your fairways (in absence of irrigation) a localised approach to fertilising and reseeding is required, i.e. you need to 'grow' the weak areas, not the good areas – which are the majority of your fairways.

Given the large areas involved with your fairways, prioritisation is recommended. For example Year 1 & 2 focus will be the area 20m around the greens.

2022

As discussed, I don't believe a single fertiliser application will make any significant difference to the weak areas. It will make the good areas, grow more.

If you elect to fertilise the fairways this spring, I recommend simply applying ammonium sulphate at 100 – 120kg/ha.

2023

I recommend the focus be on the weak areas and resown areas (see below) as opposed to treating fairways on mass.

1. During August, upskill some volunteers and get them to spot fertilise the weak and resown areas (see below). Spot fertilise the areas with Bioboost at 50 – 60g/m². This will take a while to wet up and activate and will provide 6 – 8 weeks growth response. Additionally, it won't burn the turf.
2. If as staff you have the time, I'd retreat the areas during early October with slow release. For best results, select a product that has 80%+ of nitrogen in a slow release form. Sulphur coated urea is generally the cheaper of the slow release products.

Bare areas

As discussed, undersowing the fairways isn't recommended. Firstly you are reseeding areas that already have good density (majority of your fairways).

Additionally:

- getting the density of seed is very difficult except with a couple of seeders, ie as illustrated, you simply end up with widely spaced lines of seed 30 – 50mm apart..... this makes no difference to the playing lie.
- With browntop (actually most undersowing), it is difficult getting seed it into the profile at the correct depth.

Sadly most undersowing of fairways results in a lot of money being spent with little or no results.



Figure 1. Typical (NO RESULTS) from undersowing.

Although it is time consuming you will get a better result by adopting a localised approach. I recommend:

- During April, broadcast Bioboost over the individual patches at 50g/m²
- Use your dethatcher to cultivate the bare areas to a depth of 20mm, in multiple passes such that a friable seedbed is prepared.
- Oversow the patch with the cheaper NZ or a non certified browntop at 5g/m² and rake this into the surface. Caution: - Don't get too generous with the sowing rate as you will just get Damping-off
- Rake the seed into the surface and track roll with a tractor.
- During spring fertilise as discussed above.

Fairway irrigation

Given the on-going concerns about your fairways, the issue of irrigation has been raised by members and was discussed during the visit.

Members, need to understand:

- there is more to growing grass on fairways than water and consequently you effectively end up extending the greens management programme to the fairways – however now you are dealing with about 15ha so the costs are considerable. Failure to appreciate this generally results in disappointment as other limiting factors, (disease etc) result in cover loss over summer.

- This is a major increase in course standards so the costs and hence impact on annual subscriptions is expected to be significant.

In order that members have a better understanding of the costs that go with irrigation, the following indicative budget is provided.

If you want to proceed further, a more detailed assessment and budget process is required.

Item	Quantity	Unit	Estimated cost	Comment
Water				
The difficulty will likely be finding adequate water. Theoretically you need 180,000m ³ to water 20 ha for 15 months or 800 – 1000m ³ /day			?	Even where adequate water is present, it will need to be consented.
Capital requirements				
New irrigation system	1	Item	1.5mil+	
Bore(s)	1	Item	200,000	For Fairway irrigation and in absence of a lake you will generally need 2 – 3 high yielding bores.
Lake (lined)	1	Item	300,000+	Depends on size. This will be required for a slow yielding bore.
Fairway mowers			?	Increased mowing will effectively ½ the economic life of the mower
Additional machinery (sprayer for large areas, verti-drain etc)			?	
Staffing				
At least 1 additional staff member	1	Item	\$45,000	Once you install fairway irrigation, there are a lot of sprinklers and hence time required to effectively maintain and run the irrigation system. Additional mowing, spraying etc
Maintenance (in effect you have to extend the greens management plan across the fairways)				
Mowing				30 – 50% more than at present
Renovation	3	No	50,000	Contractor, 1 x core and 2x verti-drain of fairways.
Wetting agent (injection into system)	1	No	10,000	
Disease	1	Item	50,000+	Contractor application
Fertiliser	3	Item	45,000	
Pests	2	Item	8,000+	Contractor application
Irrigation repairs	1	Item	5,000	
Irrigation – power	1	Item	10,000	
Fuel			?	
Seed			1,000	
Herbicides			2,000	New weeds like summer grass often become an issue and need to be treated.

Greens/Tees irrigation

The proposal is to split the greens/tees irrigation, in order that each area is watered individually. This is a great option as it allows you to programme individual watering requirements to each area and will increase pressure/flow rates, generally resulting in improved watering efficiency.

As part of this process, I recommend you investigate converting your irrigation system to a two wire system.

Presently you use a multi-wire approach and once you split tees/greens the cables need to be bought back to the controller in the shed. This requires a lot of wire and considerable course disruption.

I'm not a big fan of moling cables in as the depth is often too shallow (< 400mm) preventing future renovations and experience shows cables often get stretched resulting in issues down the track.

The two wire system will effectively involve installing a cable loop within the golf course and then decoders at each valve.

I expect this option will be cheaper as you need less cable, less disruption whilst it provides greater flexibility as new areas can be watered by simply installing a new valve and decoder.

Golf carts

Golf carts are a great income stream and they make the courses more available to older people or people with disabilities. Presently cart traffic and hence damage to golf courses is increasing exponentially. However, they can be very damaging to the golf course and this damage increases as more cart traffic occurs. NZSTI's recommendation is to develop a simple cart policy that provides members and guests with rules that must be followed when using carts on Waihi Golf Course.

The major challenges that I see with carts are:



	
<p>Lack of signage to clearly direct carts as to where they can travel</p>	<p>Problem of narrow paths or lack of a kerb – turf shoulders simply get worn away. This is a major requirement in ‘traffic pinch points’ around tees.</p>

1. Lack of understanding by cart users as to their responsibilities and damage caused by carts.
2. Carts just travel anywhere
3. Lack of signage
4. Lack of appropriate paths
5. Paths that just end – ie damage just gets pushed further into the course

A range of requirements are recommended:

1. Establish (if not already completed a cart policy document). The attached article provides a summary of key points to consider.
2. If not already present, ensure that the hire carts have a card with main club ‘cart rules’ located on the “dashboard” so it’s visible. Many clubs as part of their H&S briefing when hiring carts will also quickly run through the main rules where carts can be used.
3. Rather than as occurs at present, allowing members to just bring their carts onto the course, there should be some sort of induction policy – in many cases members just aren’t aware of the damage that carts can cause.
4. Improve signage on your course – as to where carts can / cannot travel
5. Introduce better traffic control e.g. ropes / signage / paint to define how close carts can travel to greens.
6. Start a programme of widening paths and installing shoulders (kerbs) to confine carts to paths, particularly in high wear areas around tees. Some key points around designing paths are covered in earlier Premium Note sent to member golf clubs and include:
 - a. In your high wear exit points, consider:
 - How path is shaped – see Premium note (they need to be long or curved to provide multiple exit points)
 - Consider using a reinforcing product such as Maccaferri Grassprotecta
7. Implementing/adjusting the management plan in these high wear areas e.g. aeration, re-seeding, additional fertiliser, managing worms etc

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