



GOLF COURSE

5 YEAR PLAN

2023



BVGC has gone through a dramatic change since our previous 5 year plan

Since the last plan in 2018, we have gone through the following

- Extending of tee boxes
- Purchasing of top dresser
 - Allowing regular top dressing of greens
- Converting of fairways from Kikuyu and other grasses to Santa Ana Couch
- Irrigation upgrades on tees/greens/fairways
- Extension of putting green- ongoing
- Installation of chipping green
- Installation of greens on the driving range
- Drainage upgrades on the range, and some minor work on course

Unfortunately, the flood/s of 2022 put a major set back in the plans with the 3rd fairway still not recovered. The 4th fairway underwent the full Kikuyu to Santa Ana Couch conversion, but the recovery of the fairway has meant a 50/50 split of these grasses.

The floods of 2022 meant that we closed the course from Sunday October 9 thru to December 19. In this time we had two floods that reached 3.84m; one flood of 3.1m and a further 3 floods that reached over 2.2m but under 3m.

For some perspective the river sits at approximately 1 meter most of the year around. The flood waters when entering the course on the 3rd and 4th is when the river height is 1.8m and the course closes when the river is 2.2m.

Thankfully this is the only major floods in the previous 5 years.



TEE BOX EXTENSION

Previous 5 years we have worked on the following tee boxes

- 1
- 2
- 4
- 5
- 6
- 10
- 11 forward
- 12
- 13
- 18 forward

We currently have around 0.75ha. of teeing grounds with 65,000 odd rounds of golf played in the last year. The 2 'like' Clubs I contacted were having around 55,000 rounds per annum with one having 3ha. of teeing ground & the other being a bit less at around 2ha.

We have very recently purchased a pedestrian coring machine with the idea of using it for things such as more regular tees renovation to be carried out in house & the additional hours created by extra staff will help enormously as well.

Our plan for the following 5 years is as presented. This plan is to increase the area of the tee boxes to be more inline with like for like courses and allowing the ground staff to move the markers more often, allowing tee box rejuvenation

	2nd Half 2023	1st Half 2024	2nd Half 2024	1st Half 2025	2nd Half 2025	1st Half 2026	2nd Half 2026	1st Half 2027	2nd Half 2027
Tee boxes									
1									
2						\$7,500			
3	\$7,500								
4							\$10,000		
5		\$10,000							
6									
6 Forward					\$10,000		\$5,000		
7									
7 Forward									
8									
9								\$10,000	
9 Forward									
10									
11									
11 Forward									
12			\$7,500						
12 Forward									
13									
14									
15									
16									
17				\$10,000					
18									
18 Forward									

Furthermore, we will explore improvements to the tee box steps, which may involve upgrading them or completely replacing them with a user-friendly grass slope.

FAIRWAY CONVERSION

As part of our ongoing efforts to enhance the overall golfing experience and maintain the highest standards, we are delighted to announce our intention to continue converting our fairways from Kikuyu and other grasses to Santa Ana Couch.

Why Santa Ana Couch, you may ask? Well, we believe this transition will bring numerous benefits to our golf course and contribute to an even better playing environment for all our members. Allow us to explain:

1. **Consistency and Playability:** Santa Ana Couch provides excellent playing conditions and a consistent ball roll. With its dense growth and tight surface, the grass offers improved ball control, allowing you to execute shots with more precision. Whether you are driving off the tee or approaching the green, the predictable nature of Santa Ana Couch will enhance your golfing experience.
2. **Durability and Resilience:** Our transition to Santa Ana Couch fairways is also driven by the grass's durability and ability to withstand heavy foot traffic and regular golfing activities. This resilience translates into reduced wear and tear on the fairways, resulting in a more resilient playing surface that can endure the demands of frequent use, ensuring consistent quality throughout the year. With water at times lacking in abundance, Santa Ana, although lacking vibrancy will still provide a great playing surface.
3. **Improved Maintenance Efficiency:** Santa Ana Couch requires less water and fertilizer compared to Kikuyu grass, making it an environmentally friendly choice. Additionally, its growth pattern and recovery rate enable efficient mowing, reducing maintenance time and costs. By embracing Santa Ana Couch, we aim to strike a balance between a pristine golf course and responsible stewardship of our natural resources. Allowing Santa Ana to be the prominent grass in our fairways, allows the ground staff to be more selective with herbicides if and when required.

In addition to converting our fairways from Kikuyu to Santa Ana Couch grass, we will also be undertaking a significant upgrade of our irrigation and drainage systems.

Ensuring optimal playing conditions and maintaining a well-drained course are essential aspects of our commitment to providing an outstanding golfing experience. The planned upgrades to our irrigation and drainage systems will bring the following benefits to our golf club:

1. **Enhanced Course Conditions:** By investing in modern irrigation technology, we would be able to provide precise and efficient watering of the course. This will result in healthier turf and consistent playing surfaces throughout the year. The improved irrigation system would allow us to adjust watering schedules and tailor them to the specific needs of different areas, promoting healthier growth and overall course aesthetics.
2. **Water Conservation:** Upgrading our irrigation system would incorporate advanced water management techniques, such as weather sensors and soil moisture monitors. These technologies would optimize water usage, ensuring that the course receives just the right amount of water when and where it is needed. By implementing water-saving measures, we are committed to minimizing our environmental impact and promoting sustainable practices.

3. Timely Drainage and Reduced Downtime: Efficient drainage systems are crucial for maintaining playable conditions during and after heavy rain or inclement weather. The planned upgrades will enhance our drainage infrastructure, allowing excess water to be quickly and effectively removed from the course. This will minimize downtime and ensure that the course is playable soon after adverse weather conditions, offering you uninterrupted golfing opportunities.

4. Long-Term Sustainability: By improving our irrigation and drainage systems, we are investing in the long-term sustainability of our golf course. These upgrades will not only enhance the golfing experience for our current members but also contribute to the overall health and longevity of the course. We aim to create an environment that can be enjoyed for years to come, while also reducing maintenance costs and resource usage.

Please see breakdown of stepped process over the coming 5 years:

	2nd Half 2023	1st Half 2024	2nd Half 2024	1st Half 2025	2nd Half 2025	1st Half 2026	2nd Half 2026	1st Half 2027	ONGOING
Fairway									
1									\$60,000
2						In House			
3		\$5,000					\$10,000		
4									
5				In House	\$2,500				
6									
7 First Half		\$60,000	\$20,000	\$10,000					
7 Second Half	\$5,000								
8						\$10,000			
9									\$60,000
10						In House			
11									
12									
13									
14									
15									
16									
17				In House	\$2,500				
18									\$60,000
Driving Range									
		Upgrade to Santa Ana							
		Irrigation							
		Drainage works							

9th FAIRWAY

History of the 9th:

Upon commencement of Colin's employment at Barwon Valley GC, it was apparent that the section of around 2,500 square metres from the corner of the dogleg to approximately 50 metres short of the green was a major issue. It was reported via former staff & also volunteers that this was just a low lying area that had very little run off & that it was always a problem. Due to our situation in regards to not being allowed to build up any area with soil from off site, this precluded that idea as well as any build up would block the flow of serious water trying to escape our course which heads across this position then towards the 8th then the 4th then the River. This is a non - negotiable set down from both the Council as well as the CCMA (congramite catchment manaement authority).

It is / was fairly clear to most that there would be some form of sodium & / or salts build up accumulated here. We began a process of attempting to minimise these issues which included verti draining & applying calcium based products, especially Gypsum. This was having little to no positive effect so in MAY 2017 through to MAY 2019 we began installing a series of pits in the lowest lying spots which had to be linked back to a submersible pump as any surface run off was ridiculously slow & there was no way any sub - surface drainage could work otherwise. This system has worked enormously well as even with heavy rainfall, little to no puddling stays in this area, however the grass coverage was still poor even with continuing product applications.

In MARCH 2020 we had the soil tested & the results came back that the soils contained 14,880 ppm of total soluble salts. The optimum range for growing quality turfgrass is less than 600ppm, with Couch grass being at the more tolerable level of around 1,000ppm so as you can see, this is why grass struggles to survive here. Recommendations accompanied the soil tests & they were pretty much more of the same, aeration & application of Calcium based products to leach the salts off the soil to which we followed.

By MAY 2021, we were still not seeing any improvement so a subsequent soil test showed we had somehow regressed to an almost unbelievably high figure of 17,612 ppm of the salts, thus we realised more drastic measures needed to be investigated. We appointed Bruce McPhee, Senior Agronomist at the ASTMA which is the turf industries leading turf research body to assist us & make a recommendation outside of what has previously been suggested. Bruce recommended the trial of an area to be constructed using a 'sand carpet' method, of stripping the existing salt laden soil to a depth of around 200mm initially. We then install what are described as 'sand slit drains' into the sub – surface which run into the existing pipework we had laid a few seasons earlier. A turf sand was then placed into the excavated area, smoothed, fertilised & watered before Santa Ana Couch turf was laid. To complete this process in one session was going to cost us in the vicinity of \$75,000 so we chose to do smaller areas at any one time as well as trialling the first patch before committing any further. With this process in place, it becomes far easier for the salts to be 'flushed out' of the growing medium. This was undertaken in March 2022. In JUNE 2022, we had the soil in this particular area tested & a fantastic reading of only 386 ppm was returned. This gave us great encouragement to continue this work & the trial area was looking magnificent.

Sadly, as most are aware, we suffered serious flooding right throughout the Spring of 2022 & once everything began to settle, we could see this spot was struggling again so a soil test was sent off in FEBRUARY 2023 which returned a reading of 5584 ppm of total soluble salts again, no doubt due to the River / flood water

containing excessive amounts of salts. We have been again treating this trial with calcium products & rainfall has been helping flush through the sand carpet into the drains, & even though we are in the wrong time of year for strong Santa Ana couch growth, we are seeing what look to be positive signs that recovery in Spring is highly likely in most of this spot.

We were also lucky enough to have an expert on salt effected turf in the name of Andrew Peart, who has written papers on this subject visit us in early MAY 2023 & he was of the opinion that everything we have carried out so far in this trial will be successful, with some patience & if we have enough water available each season to irrigate, then this would assist flushing. It was discussed whether another more salt tolerant turf be trialled such as Seashore Paspalum which is widely used in parts of the world that only have access to salt contaminated water such as Dubai, but with our colder Winters, this grass has failed previously in Melbourne.

Action plan going forward:

The plan going forward is to continue the 'sand carpet' method in sections, avoiding having to spend a large amount in one hit. Our planned timing for this next work will be Spring 2023.

We understand that the 9th fairway is pretty much most golfers first impression of our course so are dedicated to improve to the point where it is no longer the eyesore it has been. There is also very little doubt that spots such as the carryway & LHS of the 8th hole, the RHS of the 10th fairway & also the LHS of the 18th fairway are suffering from the same affliction so we will move onto them once the 9th is finalised.

Finally, just as a point of interest, it is understood that the Pacific Ocean water measures between 10,000 & 35,000 ppm salts....

WATER CONSERVATION

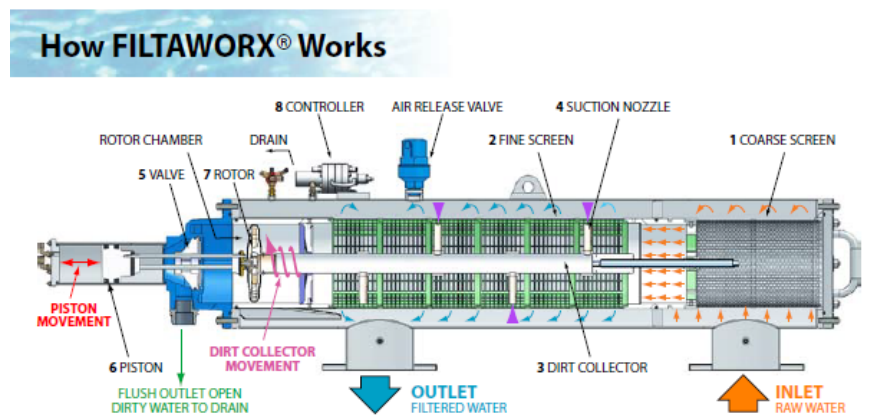
When full we have approx. 20 mega liters of water in our dams between 4/6/7/8.



This water and the health of this is incredibly important to the life of the course. Currently this is harvested from the wetlands which means this comes to us at no cost. Without this our water bill would be enormous. However this water comes in is unfiltered and aquatic weeds can be an issue and can extend to the health of our grass after watering. This is why we need to filter our water before using it on the course.

Dam waters are tested at the end of the season, which indicated that the water is it at a very high quality due to the filter system.

The filters to maintain the health of this water is vital.



The new filter will come at a cost of **\$50,000**
 This is to be purchased in late 2023

MACHINERY

The main supply of machinery being our mowers was replaced when the lease was up in 2022. Due to the floods these arrived in 2023. This was all mowers, tee, fairway, and greens along with a new roller for the greens.



These mowers will now be locked in for 5 years as we pay the lease.

The following items have not been reviewed but could be looked at in the following 5 years or with the next lease renewal

Machine	Cost	Priority
35 hp Tractor	\$75k	2
Blower	\$15k	4
Spray Unit	\$100k	3
Verti-drain	\$25k	1
Top Dresser	Not a requirement as purchased in 2018 and like new	

We will look into any grant opportunities that come available for replacement machinery.

INDIGENOUS PLANT CONVERSION

Indigenous plants play a crucial role on golf courses in Australia due to their numerous benefits and significance in the local ecosystem. Here are some key reasons why incorporating indigenous plants on a golf course is important:

1. **Biodiversity conservation:** Indigenous plants are native to the region and have evolved to thrive in the local climate, soil conditions, and ecosystems. By incorporating them into a golf course, you support the preservation of native flora, ensuring the conservation of biodiversity. This, in turn, helps maintain healthy ecosystems, as indigenous plants provide habitat and food sources for native wildlife, including birds, insects, and small mammals.
2. **Water conservation:** Australia is known for its arid and semi-arid regions, and water scarcity is a critical issue. Indigenous plants are well-adapted to the local conditions and typically require less water once established compared to non-native species. By using indigenous plants, golf courses can reduce water consumption, minimize irrigation needs, and contribute to water conservation efforts.
3. **Reduced maintenance:** Indigenous plants are naturally adapted to the local environment, which means they often require less maintenance compared to non-native plants. They are accustomed to the local soil, climate, and pest pressures, reducing the need for excessive fertilizers, pesticides, and other maintenance inputs. This leads to lower costs and a more sustainable approach to managing the golf course.
4. **Enhanced aesthetics:** Indigenous plants offer a unique beauty and aesthetic appeal to the golf course. They showcase the natural diversity and character of the Australian landscape, creating a visually pleasing environment that reflects the region's identity and cultural heritage. Additionally, the use of indigenous plants can provide seasonal variation, attracting visitors and creating a memorable golfing experience.
5. **Cultural significance:** Indigenous plants hold immense cultural value for Australia's First Nations people. Incorporating these plants on a golf course acknowledges and respects the traditional custodians of the land. It helps promote cultural awareness, education, and reconciliation by honoring the historical and ongoing connection between Indigenous communities and the environment.
6. **Erosion control and soil health:** Indigenous plants often have deep root systems, which help stabilize soil, prevent erosion, and improve soil health. These plants are well-adapted to local conditions, including periods of drought or heavy rainfall. By using them on a golf course, you can mitigate soil erosion, retain water, and maintain the integrity of the landscape.

In summary, the incorporation of indigenous plants on a golf course in Australia brings multiple benefits, including biodiversity conservation, water conservation, reduced maintenance, enhanced aesthetics, cultural significance, and improved soil health. By embracing the natural heritage of the land, golf courses can create sustainable environments that harmonize with the local ecosystem and contribute to the broader goals of conservation and cultural understanding.

Under the Geelong city council, we sit in zone 6, Marshall plains and Waurm Ponds Flats.

This area was characterized by a grassy woodland community dominated by either River Red Gum or Yellow Gum. In wetter areas, River Red Gum was dominant while the Drooping Sheoke preferred drier sites. Common understory species included Wattle species, Sweet Bursaria, Shrub Violet and scattered populations of Silver Banksia and Giant Hop-bush. Kangaroo Grass would have been common through much of the drier areas. Tussock Grass was present in low lying wetter areas and along watercourses. Species only found in the Waurm Ponds area include Hop Wattle, Prickly Moses and Prickly Tea-tree.

TREE SPECIES

Zone 6 Marshall Plains & Waurm Ponds Flats

Common name	Botanical name	Size (H x W m)	Slopes/Well drained areas	Watercourses/Wet areas
Lightwood	<i>Acacia implexa</i>	5-15 x 4-7	◆	
Black Wattle	<i>Acacia mearnsii</i>	8-25 x 6-10	◆	
Blackwood	<i>Acacia melanoxylon</i>	5-30 x 4-15	◆	◆
Golden Wattle	<i>Acacia pycnantha</i>	3-10 x 2-5	◆	
Drooping Sheoke	<i>Allocasuarina verticillata</i>	4-11 x 3-6	◆	
River Red Gum	<i>Eucalyptus camaldulensis</i>	12-35 x 15-35		◆
Yellow Gum	<i>Eucalyptus leucoxydon ssp connata</i>	10-20 x 6-20	◆	
Swamp Gum	<i>Eucalyptus ovata</i>	8-20 x 8-20		◆
Manna Gum	<i>Eucalyptus viminalis</i>	10-20 x 8-15		◆ on sandy alluvial deposits only
Cherry Ballart	<i>Exocarpos cupressiformis</i>	3-8 x 3-5	◆	
Moonah	<i>Melaleuca lanceolata</i>	1-8 x 3-6	❖	❖

SHRUB SPECIES

Zone 6 Marshall Plains & Waurn Ponds Flats

Common name	Botanical name	Size (H x W m)	Slopes/Well drained areas	Watercourses/Wet areas
Silver Wattle	<i>Acacia dealbata</i>	6-15 x 5-10		◆
Hedge Wattle	<i>Acacia paradoxa</i>	2-4 x 2-5	◆	
Hop Wattle	<i>Acacia stricta</i>	2-5 x 2-4		◆ Waurn Ponds Creek
Prickly Moses	<i>Acacia verticillata</i>	2-6 x 3-5		◆ Waurn Ponds Flats
Silver Banksia	<i>Banksia marginata</i>	1-10 x 1-5	◆	
Sweet Bursaria	<i>Bursaria spinosa var macrophylla</i>	2-6 x 2-3	◆	◆
Dogwood	<i>Cassinia aculeata</i>	2-4 x 1-2	◆	
Common Correa	<i>Correa reflexa</i>	0.3-2 x 1-2		◆
Grey Parrot-pea	<i>Dillwynia cinerascens</i>	0.6-1.5 x 0.5-1.5	◆	
Giant Hop-bush	<i>Dodonaea viscosa</i>	1-3 x 1-3	◆	
Hop Goodenia	<i>Goodenia ovata</i>	1-2.5 x 1-3		◆
Hemp-Bush	<i>Gynatrix pulchella</i>	2-4 x 1.5-3		◆
Shrub Violet	<i>Hymenantha dentata</i>	2-4 x 1-2.5	◆	◆
Prickly Tea-tree	<i>Leptospermum continentale</i>	1-4 x 1-2		◆ Waurn Ponds Flats
Woolly Tea-tree	<i>Leptospermum lanigerum</i>	2-6 x 1-3		◆
River Tea-tree	<i>Leptospermum obovatum</i>	2-4 x 1.5-2		◆
Common Boobialla	<i>Myoporum insulare</i>	1-6 x 3	◆	
Sticky Boobialla	<i>Myoporum viscosum</i>	0.5-2 x 1.5-2	◆	
Snowy Daisy-bush	<i>Olearia lirata</i>	2-5 x 2-3	◆	
Twiggy Daisy-bush	<i>Olearia ramulosa</i>	0.5-2.5 x 1	◆	
Shrub Everlasting	<i>Ozothamnus ferrugineus</i>	2-6 x 1-3		◆
Kangaroo Island Pomaderris	<i>Pomaderris halmaturina ssp. continentis</i>	1-3 x 1-2	◆ uncommon	
Kangaroo Apple	<i>Solanum laciniatum</i>	1-3 x 1-3	◆	

GROUNDCOVER AND TUSSOCK SPECIES

Zone 6 Marshall Plains & Waurn Ponds Flats

Common name	Botanical name	Size (H x W m)	Slopes/Well drained areas	Watercourses/Wet areas
Common Everlasting	<i>Chrysocephalum apiculatum</i>	0.3 x 1-2	◆	
Black Anther Flax-lily	<i>Dianella revoluta</i>	0.3 x 1.5-2.0	◆	
Tussock Grass	<i>Poa labillardieri</i>	0.8 x 0.8		◆
Kangaroo Grass	<i>Themeda triandra</i>	0.3 x 0.3	◆	

◆ - species is present in areas of remnant vegetation ❖ - species once occurred in this area

Our trees / plants are regarded as CoGG assets & as such, CoGG are responsible for the health & maintenance of those. However, due to trying to work closely together, we assist heavily in the planting & maintenance of, especially the young trees / plants.

OTHER DISCUSSION POINTS

IRRIGATION UPGRADE

This is now a very old system and will need to be replaced in the foreseeable future.

As this is a massive expense I suggest we apply for as many grant opportunities as possible.

Estimated cost of \$1,000,000

SHED AND HOIST

Needing further shed space and a hoist. Discussions around a new shed have led to the original quotes price of \$30k but due to our flood plain nature the structure ended up at \$60k.

Knock down and one large shed would be ideal, but the worry is the allowance due to the flood plain may not allow us to redevelop this.

Removing the tea room and super office into a new site would allow the current mower shed to hold more equipment and a hoist

The hoist cost is approx \$15k.

KIRBY MARKER ADDITION

The Kirby markers which state the distances from the centre of the green. This has been trialed as a success on the 18th fairway. We would be adding these to every fairway at the rate of 1 hole per quarter.

Cost is \$190 per marker.

BEE HIGHWAY

A bee highway refers to a strategically planned corridor or network of bee-friendly habitats that provide food, shelter, and nesting sites for bees and other pollinators. It aims to create a connected pathway of diverse and pesticide-free floral resources, enabling bees to navigate urban and rural landscapes more easily. Bee highways play a vital role in promoting pollinator health and biodiversity, ensuring the successful pollination of plants, and safeguarding agricultural productivity. By establishing these corridors, we can support the survival of bees and contribute to the overall well-being of our ecosystems.

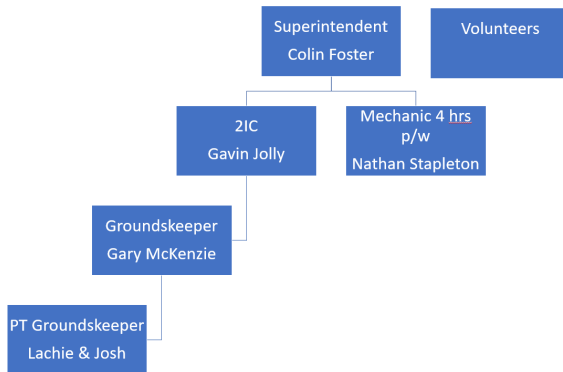
We have been successfully selected as a host for 'Operation Pollinator' which is overseen by Syngenta & also Environmental Golf Solutions.

REDEVELOPMENT OF 1ST 2ND AND 3RD HOLES

ON HOLD

STAFF

Current staffing levels are as follows;



This is similar to the structure 5 years ago- however we have affirmed the qualified ground staff to the 2IC role, and added 2 PT groundskeepers.

In the past 5 years we have had valuable members move on such as Ian Hargraves (Superintendent at Geelong GC) Kallum Sheridan (Senior Apprentice at Geelong GC), Matt Murdoch (Assistant Superintendent at Queenscliff GC) Alistair Carroll (Retired). While it is sad to see these staff leave, it is great to see them move onto positions within the golfing community.

We have added in this time Gary McKenzie McHarg (new to the industry), Gavin Jolly as 2IC (Previously Bellarine Lakes and Torquay), with the part time addition of Josh Cooper (previously Gisborne) and Lachie Field (previously Barwon Heads).

Adding the experience of these gentlemen into our golf club has allowed us to fine tune our operations.

In the coming 5 years we would like to see this continue to grow in small increments

