

# WGC Golf Course Master Plan – Version 1 - for Member Comment

## 1. Introduction

### **What is a golf course master plan?**

A golf course master plan is a long-term vision for making improvements to a golf course and a basis for prioritizing those improvements. It describes the major renovations and golf course changes that are envisioned over a long-term planning horizon, typically as much as 10 years.

The Whitevale Golf Course Master Plan is a tool that future Boards will use to steer golf course maintenance and renovations in a direction that has been endorsed by the members. The Plan contains general information about costs but it is not a replacement for normal member approval of budgets and capital expenditures.

### **Why now?**

Since the McBroom redesign in 2004 and 2005, Whitevale members have suggested a number of changes they think would make our golf course even better. Meanwhile, Mother Nature has made her own changes, negatively impacting the playability of the golf course. Trees have grown or died, precipitation patterns have created areas of erosion and standing water, etc. Some features, such as bunkers, have simply surpassed their life expectancy. (The American Society of Golf Course Architects reminds us that all features on a golf course have a life span.)

Over this period, multiple Greens Committees have been dealing with the need to renovate our bunkers (details are discussed later). In their deliberations it has become clear that there is other work which may also need to be done and other opportunities for improvement which could be addressed. It isn't clear what priority each would have compared to the bunker renovation, or if they should be done at all.

As a result, the 2019 Board of Directors commissioned Thomas McBroom to evaluate the golf course and give his perspective. The work product from this exercise was a list of possible renovations and enhancements with approximate costs, along with an updated diagram of the golf course. This work was reviewed by the Board and it was decided that it should form the basis for a golf course master plan which would be presented to the membership.

### **The process**

In 2020, a team was identified to create the golf course master plan. The team is meeting regularly and developing the plan using the steps explained below. In light of the Covid-19 pandemic, it was decided that this work should continue because it is a forward-looking framework that will apply whether or not golf course improvements will occur in the next few years.

The balance of this document describes potential renovations and improvements based on McBroom's evaluation. Material has been written to explain each item, its rationale and forecasted costs, and to allow members to have a clearer understanding of how each would fit into an overall plan. Some of these items are fairly urgent (e.g., bunker renovation), others are good ideas that we may not be able to afford in the near term, and still others may be seen as costly or unnecessary and might be dropped from consideration.

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The team's current task is to continue developing the first version of the plan, to present it to the members and to consider their feedback. Once that has occurred, the team will revise the plan, establish phasing and timing for the items to be included and develop a long-term implementation plan. This updated plan will include high level costs, but no specific financial approvals will be sought at that time.

The revised plan will again be presented to the membership. After the membership has seen and endorsed it, individual items will be brought forward for funding approval at the appropriate time. Larger items that need significant funding will require formal member approval, probably at an Annual General Meeting. Smaller items can simply be added to the budget for the year in which they will be addressed.

The balance of this document describes the proposed changes from the McBroom evaluation. Each section explains one theme, along with McBroom's estimates of the costs. These costs are based on 2020 rates and are averages for what work of this nature usually involves. They are not firm costs and should only be used to assess the desirability of making a specific change or to assess its priority relative to other work.

## 2. Bunker Renovation

### Why do it?

The American Society of Golf Course Architects suggests that the life of a bunker is between 5 and 10 years. This occurs for a number of reasons: the bunker faces erode, the sand becomes contaminated, drainage fails, etc. Our bunkers are now 15+ years old, and many of our members are quite vocal that they are no longer very playable and need to be replaced. From a maintenance perspective, our bunkers have been deteriorating for years and are very labour-intensive to keep in usable condition, especially after a rainstorm.

### What is it?

The bunker renovation project includes reworking all of the existing 47 bunkers on the golf course and adding 12 new bunkers which McBroom proposed (these are discussed later). Generally, the work involved includes:

- Remove and dispose of all sand
- Repair and reshape the surrounds, adding new sod as required
- Regrade and compact bunker bottoms to ensure positive water flow
- Test and repair drainage with new 4" drains
- Install bunker liners or special drainage stone
- Install 4" of compacted bunker sand

Bunker renovations can be performed at any time from late spring through to late fall, as long as the ground is reasonable dry. The golf course does not need to be taken out of play, but renovations to greenside bunkers are quite disruptive for golfers so they are often done later in the year, after the competitive season has ended. A bunker renovation can be spread over multiple years, but the project costs go up and the consistency of the bunkers typically goes down. Should we decide to renovate some greens (discussed later) it would make sense to do greenside bunkers at the same time as the green.

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## **What does it cost?**

Existing bunkers cost between \$8K and \$10K to renovate; new bunkers cost between \$10K and \$14K to build. Our current estimate for a complete bunker renovation (using 2020 prices) is about \$650K. This would trend up over time and can only be firmed up after going to tender.

This work requires some earth-moving equipment to be brought in, so there are some savings when done at the same time as other earth-moving work such as greens renovations.

## **Other considerations**

Low budget bunker renovations are high risk. If drainage is not properly addressed or surrounds are not properly built, the life of the bunkers goes down quickly. Therefore, it is better that we not start this work until we are prepared to do it right.

Once we have conceptual approval from our members, there will be ample time to debate the details, such as which bunkers should be reshaped, combined or removed, and whether new bunkers being proposed will add to the playability of the golf course. The finer details will be decided before the work is sent to tender.

## **3. Greens Renovation**

### **Why do it?**

The greens at Whitevale were built at a number of different times, using a number of different soil types and construction techniques. The greens on holes 4, 6, 10, 11, 12 and 17 were replaced in 2004 and 2005 during the golf course redesign; the other greens are much older and several were extended during the redesign using varying soil compositions. This has resulted in very inconsistent putting conditions.

Of greater concern is the possibility of losing many of our greens after a harsh winter. This has happened at other Canadian courses<sup>1</sup> and it means loss of play for months while waiting for good growing conditions to return and for the new sod or seed to become golf-ready. Our original greens have no internal drainage and are very susceptible to adverse weather. Greens that are constructed using modern techniques have superior drainage and are much better at handling adverse winter conditions.

In 2018, a green site evaluation was performed on six Whitevale greens by DCS & Associates. Their finding<sup>2</sup> was that these greens are vulnerable to weather events and that there are a number of issues that need to be addressed including air movement, soil compaction, reduced sunlight, drainage, poa reduction, etc. DCS recommended that we reconstruct the greens to USGA standards to reduce the risk of green loss.

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<sup>1</sup> <https://globalnews.ca/news/1310322/cold-winter-leads-to-golf-course-struggles/>

<sup>2</sup> <https://members.whitevalegolfclub.com/Reference/GreenSiteEvaluation.pdf>

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## What is it?

A greens renovation involves the following steps:

- Remove the top 18" of each existing green with an excavator
- Grade and reshape the subsurface as necessary to create optimal contours for both playability and drainage. Some greens (e.g., 16) may require enlarging and extensive reshaping
- Install 4" drains on 12" centres, adding drainage stone
- If the USGA construction method<sup>3</sup> is used, install a 4" layer of stone drainage
- Install 12" of sand (special grade for greens use) and compact it
- Add soil amendments and fertilizer
- Seed each green and water regularly to ensure the seed bed remains moist

Greens can be constructed using the USGA method or the California method<sup>4</sup>. There are pros and cons to each, but USGA greens are considered better in the long term, at greater cost. The 2004/2005 greens were constructed using the California method, so it is more likely that we can simply re-grass them to ensure consistent grass cultivars and eliminate the poa which has built up over time. This would leave us with 12 greens to completely rebuild and 6 to re-grass. The 3 newer practice greens are also California, and to date it does not appear that re-grassing would be required. The older putting green would need to be rebuilt to the same standards as the other greens.

It takes approximately 12 to 16 weeks of good growing weather for greens to be ready for play. The best time to do this work is also the best time to play golf (late spring or summer).

## What does it cost?

USGA greens cost on average \$90K each to rebuild. Applying this to 22 greens and adding a contingency amount, suggests a total cost of about \$2.2M. California greens cost on average \$80K each, but only 13 greens would need to be rebuilt. Including the additional cost of re-grassing the 6 other greens and a contingency, the total cost would be about \$1.4M.

Whether we decide to rebuild or re-grass greens, it would be better to do it at the same time as bunker renovation. This will result in some cost savings, and it will mean less down time for golfers.

## Other considerations

This work can be split into sections and spread over 2 or possibly 3 years. That will increase total cost a little but it will leave more full golf holes for members. In most cases, temporary greens can be provided to allow members to play 18-hole rounds during construction and maturation. For best overall results though, all greens should be done in the same year. This reduces the chance of poa recurrence and improves overall consistency because the same supplies and staff are used.

It is possible to use sod instead of seed but this is rarely very successful. While sodded greens will be playable sooner, experience is that the maintenance requirement for sodded

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<sup>3</sup> <https://www.usga.org/course-care/specialty-articles/usga-putting-green-construction.html>

<sup>4</sup> <https://archive.lib.msu.edu/tic/golfd/article/2000sep30a.pdf>

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greens is quite high in the first few years. There is also risk that the sod being purchased can contain weeds and poa that will create problems for years to come.

### 4. Cart Path Upgrades

#### Why do it?

At present there are a limited number of paved cart paths at Whitevale. What exists was designed to keep power carts away from greens and tees and our philosophy has been to let the golf course be as natural as possible. But with global warming, we are experiencing more “wet” days than ever before, and in spite of an increased emphasis on golf course drainage there are a number of places where power carts struggle, leaving tire tracks and damage.

In an effort to let members play golf through inclement weather, we sometimes allow carts to go out when the ground conditions are too soft. This causes damage to the golf course and takes time and effort to recover. When we close the course to power carts we lose as much as \$40K per year in power cart revenue. An end-to-end cart path would allow us to implement cart-path-only rules on wetter days and allow more members to play.

There is no safe cart path for maintenance vehicles to use to go from the Turf Building to some areas on the golf course. As a result, these vehicles often cross fairways, frustrating golfers and creating unsafe conditions. A maintenance vehicle path running from the Turf Building that connects to the existing path behind the 17<sup>th</sup> tee would significantly reduce this type of traffic on the golf course.

#### What is it?

The suggested cart path upgrade would provide a continuous asphalt cart path around the golf course, allowing golfers to leave power carts on the cart paths and play through most wet conditions. This would require the installation of approximately 4,000 linear metres of asphalt.

Upgrading the cart paths involves these steps:

- Excavate a path 6 inches deep and 8 feet wide
- Grade the area to ensure positive water drainage
- Add, grade and compact 6” of granular aggregate
- Add and roll 2.5” of asphalt
- Apply topsoil and sod to the path edges

A maintenance vehicle path is similar in construction, but is 12 feet wide and requires additional materials and excavation.

This work can be performed at any time from late spring through to fall, as long as the ground is reasonably dry.

#### What does it cost?

It costs approximately \$100 to install a linear metre of asphalt cart path. The maintenance path would be constructed to handle heavier equipment and is therefore more expensive, in the range of \$250 per linear metre. In total, including a reasonable contingency, creating an

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end-to-end path through the golf course and adding a maintenance path would cost approximately \$460K.

The cost per metre goes down when more is done at the same time. Ideally, cart path additions would be done at the same time as other changes that require the same types of equipment, such as a bunker renovation, to help keep costs down.

### 5. Tee Renovation

#### Why do it?

A number of tees at Whitevale need renovation. Unlike bunkers and greens, there is no single concern that is driving this requirement. Rather there are a variety of issues, and tees can be updated and expanded when it makes financial sense.

New tees are described for holes 7 and 15 due to realignments that are discussed later in this document. New back tees are proposed for holes 10, 11, 14 and 18 to add length for longer hitters.

Existing tees are expanded in size for holes 1, 3, 4, 6, 9, 12 and 17 to disperse divots and accommodate more traffic. Existing tees are releveled on holes 2, 3, 5, 8, 10, 11, 13, 14, 16 and 17. This is needed because over time these tees have either settled or crowned from the addition of divot mix. The slope of some tees is now quite noticeable.

#### What is it?

Generally, renovating a tee requires an excavator, a bulldozer and dump trucks. The chosen area is graded and shaped, with fill being added as necessary. Irrigation must be added or rerouted, and drainage must be planned. Once the ground has been prepared, tee mix can be applied or sod can be used to speed up maturation.

Tees can be renovated at any time during the normal growing season from late spring to fall, as long as it is reasonably dry. Tee renovations do not normally disrupt play as alternate tee boxes or temporary tees can be used.

#### What does it cost?

New tees cost about \$10K each to build. Tee expansions have varying costs based on the size and the condition of the existing tee. The current plan contains 12 new tees and a significant number of expansions and releveled tees. The total cost if it were all done would be in the range of \$250K.

Some savings can result from renovating multiple tees at the same time or from renovating a tee while other compatible work is occurring in the same area on the golf course.

#### Other considerations

The additional tees, including those required by the hole realignments, will improve playability of the course and should be considered for that reason. The remaining renovations (expansions and releveled) should be considered as ongoing maintenance and be handled when the timing is best.

## 6. Tree Maintenance

### Why do it?

Like bunkers and greens, most trees have a lifespan on a golf course. While the lifespan varies by species, it is safe to say that a number of the trees at Whitevale have grown well beyond the space that they were planted to fill. In some cases, trees on the course are diseased and dying while in others the trees and their root systems are taking critical nutrition and air flow away from fairways and greens, increasing the efforts expended to keep them healthy. In some cases, trees cast shade onto greens which causes increased disease pressure and favourable growing conditions for poa.

Trees are a natural way to hide unsightly portions of the property. For that reason, the plan includes the planting of new trees near the pumphouse and garbage bin area, and adjacent to the Back Shop area.

In golf course perimeter areas such as the 5<sup>th</sup> hole, the underbrush has grown thick, cutting back the light and air circulation in addition to impacting pace of play. Healthier, cleaner underbrush is not only more attractive, but there is less risk of gofer injuries or of noxious weeds taking root.

### What does it cost?

Most tree removals and plantings can be performed by our greens staff and is therefore of nominal cost. The trees on the 4<sup>th</sup> hole will be done by professional arborists at a cost of approximately \$2K.

The proposed tree additions are estimated to cost: pumphouse (\$14K), Back Shop (\$25K), hole 15 (\$25K).

### Other considerations

Tree removals can be done at any time, but are often delayed until the golf season is over when demands on staff are down and there is no impact to play. Tree planting is best done in the spring.

## 7. Hole by Hole Review

This section summarizes the changes proposed for each hole. Because bunker and green renovations are being considered for every hole, they are not specifically discussed in this section.

### Hole 1

The tees are enlarged and the yews beside the tee are removed. Several trees along the east side of the hole are removed. A cart path is run down the west side of the hole.

### Hole 2

All tees are releveled. Drainage is improved. A cart path is run down the west side of the hole.

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### **Hole 3**

Tees are enlarged and releveled. Drainage is improved. One tree is removed. A cart path is run down the west side of the hole.

### **Hole 4**

Tees are enlarged. Two trees are removed to improve playability and new bunkers are installed to catch longer shots and frame the hole, in the absence of the trees.

### **Hole 5**

Some tees are releveled. Trees and shrubs along the east side of the hole (out of bounds) are thinned to improve pace of play and air movement for conditioning. Mounding on the west side of the hole is releveled. Drainage is improved. The hill in front of the green is regraded to make the green more visible from the approach shot. A cart path is run down the west side of the hole.

### **Hole 6**

The back tee is lengthened and enlarged. Drainage is improved. The approach to the green is made more gradual. Trees are removed to improve conditioning and playability. New greenside bunkers are installed to catch wayward shots and to frame the green.

### **Hole 7**

Tees are moved to the west side of the existing cart path to realign the hole. The cart path is shared with hole 6 in places and continues down the east side of the hole.

### **Hole 8**

Some tees are releveled. Trees and shrubs in the old boulder area on the east side of the hole are removed to change the look of the hole and to provide additional options for wayward shots. Drainage is improved. A cart path is run down the west side of the hole.

### **Hole 9**

Some tees are enlarged. Two trees have been removed. The cart path continues along the east side of the hole.

### **Hole 10**

A new back tee is created. Drainage is improved. A larger swale is added to the fairway. A cart path is run down the west side of the hole.

### **Hole 11**

All tees are releveled. A new back tee is added. A dual fairway is created by removing two of the trees and sodding the area left of the fairway bunker. This will provide options for short and long hitters. The grade on the east side of the green is lowered to improve the view of the green. A cart path is run down the east side of the hole. The cost to rework this hole is estimated at \$75K.

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### **Hole 12**

All tees are enlarged. Trees behind and beside the green are thinned to allow more light and air circulation for the green.

### **Hole 13**

All tees are releveled. Tee drainage is improved. The fairway is widened on the west side of the hole and the shrubs and trees in that area are thinned. A cart path is run down the east side of the hole. Fescue and sod are added to the riverbank by the green.

### **Hole 14**

A new back tee is created with stairs to reach it. Trees and shrubs on the west side of the hole are thinned. Rough is replaced by a grass apron in front of the green. New bunkers are added to catch wayward tee shots and keep them from going out of play, and to frame the green.

### **Hole 15**

All tees are moved to the east side of the existing cart path to realign the hole. Some trees are removed. The fairway is regraded and widened. The existing fairway bunker is removed. A cart path is run down the west side of the hole.

### **Hole 16**

All tees are releveled. The landing area is regraded and fairway drainage is improved. A cart path is run down the east side of the hole.

### **Hole 17**

All tees are releveled. Areas from the old entry road are regraded. The silver maple at the green is removed to improve conditioning. Bunkers are added by the green to catch wayward shots. A cart path is run down the east side of the hole.

### **Hole 18**

All tees are releveled. A new back tee is added. Areas from the old entry road are regraded. A cart path is run down the east side of the hole.

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