BUNKER IMPROVEMENT WORK - WINTER 2023

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2 EXECUTIVE SUMMARY

The purpose of this document is to provide members with information on the scheduled work to be completed this winter as we begin a 3-4-year programme of Bunker Improvements. The document and information contained within is for the consumption of Broomieknowe members only and is not to be shared with any external party without the express permission of the Club.

The document was prepared by the Course Strategy Group with input from both Scott Macpherson, Course Architect and Allan Duncan, Head Greenkeeper, who will work together in delivering the planned work.

3 INTRODUCTION

Following previous Course Strategy Group (CSG) communications, members will be aware of the Bunker Improvement Work scheduled to begin later this month.

Members overwhelmingly identified our bunkers required improvement in their survey responses, and during the open meetings. Improving the bunkering is a critical part of the wider course improvement plan for our course.

The CSG has spent considerable time discussing and sharing ideas with Scott MacPherson and are now able to present his plan for intended bunker improvement work, paying specific attention to the first stage of the project in the top field holes (1, 2, 3, 16, 17 and 18).

Both Scott and the CSG carefully considered various designs, aesthetic improvement, materials, sand selection, etc., and believe the details in this document will provide members with a clear picture of the process, products chosen, and how the work will improve the course bunkering.

The programme of bunker improvement work is to be completed over the next 3-4-year period. In the overall plan, Scott has mapped out the removal of 26 current bunkers, the renovation of 25 bunkers, and the addition of 15 new bunkers.

Scott will look to expand on his philosophy, the decision-making process, and his plan to improve the bunkering at the meeting scheduled on Thursday 12th October. Scott will provide insight on his philosophy and specific detail on the changes planned in the top field. A summary of the highlights of the meeting will be shared shortly after for those unable to attend.

Both the CSG and Scott firmly believe that completion of the planned work will have a hugely positive impact on the course, improving each hole, from both the aesthetic to the playability, whilst also significantly reducing future maintenance.

4 BUNKER OBSERVATIONS (SCOTT MACPHERSON)

Throughout the golf course, bunkers have undergone some changes through the years. The observed result is a range of different styles, examples provided below:

The bunkers are a range of different shapes and sizes with varying edge treatments. Aesthetically it benefits a golf club to choose one style of bunkering to unify the appearance of a golf course and provide an identifiable theme. Of course, it is important to balance the visual appearance of the bunkers with their maintenance costs, however, in addition to strategy, bunkers should add some character and flair to the course.

The placement of bunkers directly reflects their value to the playing experience. From my initial observations, I felt a number of bunkers were positioned to catch the shots of the average or weaker golfers, while less bunkers were positioned to challenge the better golfers. It is my

opinion that this should be the opposite – especially on shorter golf courses – and the better golfers should be asked to be more accurate and position their ball with greater precision if they want to score better. A master plan would indicate if any of the existing bunkers are surplus to requirements, where some need to be adjusted, and where some new bunkers could be cut.

Lastly, it was my observation that a number of fairway bunkers appear to have a cut of semi-rough grass between the bunker edge and the fairway. It is my personal preference on any golf course, but especially shorter golf courses, that a golf ball should be allowed to run freely into the bunker without being held up in an area of longer grass.

5 FULL COURSE BUNKERING PLAN

The main focus of this plan is to present new bunkering positions to ensure the course is correctly calibrated for the modern player using the latest golf balls and clubs. The plan proposes the removal of some bunkers, relocation of others, and the cutting of a few new bunkers. Overall, there is a reduction in the total number of bunkers.

HOLE NUMBER	BUNKERS			
	New	Remove	Renovate	No Change
1	1	3	1	
2	1	3	2	
3	1		1	
4				
5	1	1		2
6	1	1	1	1
7	1		1	
8	1	2	4	
9	1	1		
	8	11	10	3
10			1	
11		2	2	
12		2	2	
13	2	2	1	
14	1	4	2	
15	1	1	1	
16		1	2	
17			3	
18	3	3	1	
	7	15	15	0
GRAND TOTALS	15	26	25	3

6 TOP FIELD BUNKERING PLAN

- Red – Identifies 10 existing bunkers that are to be renovated/ reshaped.
- Blue – Identifies 6 new bunkers that will be created.
- Green – Identifies the 8 bunkers to be removed.

7 HOLE BY HOLE NARRATIVE (SCOTT MACPHERSON)

- **Hole 1**: This hole only requires two bunkers. I propose a bunker about 30 yards short of the green on the left side of the fairway, and for the existing bunker on the right side of the green to be renovated to the style proposed. All other bunkers can be removed. A decision on converting the bunker on the left-hand side of the green to a grassy hollow will be discussed with Allan and contractors when on-site.

- **Hole 2**: The fairway bunker on the left side needs to be moved closer to the green. I shall set the exact location on the ground, but it may be approximately 250 yards from the back tee. The greenside bunkers shall narrow the approach to the green and defend the flanks. Room must be given for golfers to move around each side of the green.

- **Hole 3**: Due to the out-of-bounds and housing down the right side of the hole, I suggest adding a new fairway bunker down the right-hand side to further discourage golfers from taking this line off the tee. The bunker must be visible from the tee and placed approximately 230 yards from the tee. Renovate the bunker on the right side of the green to the new style.

- **Hole 16**: As the boundary of the course is on the right side of this hole, the bunkering has a purpose to ward off stray shots, and direct play to the left. Bunkering shall be renovated to proposed style, but the bunker on the left side of the green can be converted to a mounding creating further room for golfers to walk to the next tee.

- **Hole 17**: The strategy of this hole needs to be tailored for a risk/reward and is so. The three remaining bunkers around the green are well positioned but need to be converted to the proposed style. The two bunkers on the right side of the green must visually work together, and the gap between the two fronting greenside bunkers shall only allow a tee shot down the left of the fairway to run into the green. Tee shots down the right side of the fairway shall need to be played over the bunkers to reach the putting surface.

- **Hole 18**: Bunkering shall be adjusted to encourage a tee shot to be aimed at the fairway for longer hitters. This will be a lay-up shot for them. Move the bunker on the left side of the fairway further from the green. Remove the current front right bunker and add a new one further back toward the fairway. Add a new bunker to the back right portion of the green. Renovate the bunker front left of the green.

8 BUNKER STYLES

The majority of the better bunkers on the course have a rolling top edge, organic shape with ‘noses’ and sand flared up to the face to a small edge. In keeping with that style, a more attractive and enhanced version can be seen in the photos below. They are a good size, with visible sand, and a naturalistic feel. These are an appropriate style for the parkland setting at Broomieknowe Golf Club and will improve the look of the course.

9 STAGES OF WORK

9.1 Stage 1 – Stripping Turf

Scott will mark off areas to be newly constructed or renovated. The Greens team will then strip the turf from the area marked. Some of that turf may be used in reconstruction, on those bunkers being removed/ filled in, or on specific weaker areas throughout the course.

Expected sizes of the bunkers are estimated to be 45^{m2} for the greenside bunkers and roughly 60^{m2} for fairway bunkers. The dimensions will be determined during the shaping process, and where necessary may be larger or smaller once areas have been stripped.

Turf Cutter

9.2 Stage 2 – Contouring and Shaping

Once the excavators move in and begin contouring and shaping we will start to see things taking shape. Both Scott and the CSG want the bunkering to be visible from the tees and fairway approaches, with no hidden surprises once you play your shot. Golfers have often described many of our existing bunkers as just holes in the ground where the spoil is packed up as a banking, and then back filled with sand. We will move away from this, creating bunkers that are aesthetically appealing, whilst not being impossible to get out from.

Future maintenance of bunkers will also be a focal point during construction. We must strike the balance of visually appealing bunkers that are relatively easy to maintain. With staff numbers not expected to increase going forward, having bunkers requiring in excess of 30 hours per week of maintenance would be too labor intensive, adversely impacting presentation in other parts of the course.

Shaping/Contouring

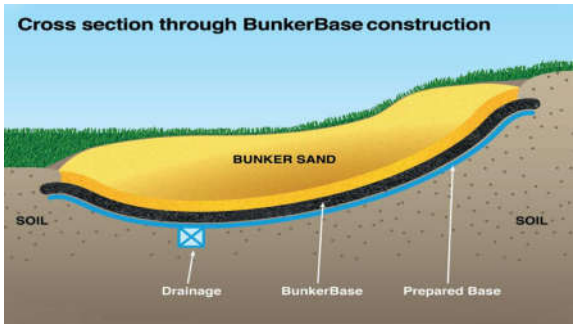
9.3 Stage 3 – Bunker Facing

Once the basic contouring has been completed with drainage installed and Scott is happy, he will then mark off and paint an outline/ shape where the bunker facing is to meet the sand.

After defining the shape, the team will dig out and prepare the straight facing of the bunker, firming up the banks ready for turfing. Scott has intimated the areas to be stripped, ready for construction, will be around three times the size of the final bunker. It will no doubt be a busy period for the team who will lay over 2000^{m2} of turf in total.

Marking

Reconstruction



Specification of bunker gradient or slope will be agreed by both Scott and Allan, however normal specification would result in no more than 2” of compacted sand on the faces, and 4” of compacted sand throughout the base of the bunker. This will result in the sand being compacted sufficiently to allow the ball to roll down the face and into the middle of the bunker, whilst also providing firm footing and a better opportunity to play out.

The turf must be given time to root and gain sufficient strength to allow both machinery and golfer wear and tear before we begin the process of adding sand. Once sand has been added, all of the GUR signs will be removed, and bunkers will be in play for the beginning of the main 2024 golf season.

9.4 Stage 4 – Fabric Lining

Once facing and turfing is complete, we will have to wait on contractors coming in to lay the fabric lining. The contractors are due to come in late January/ February and are estimated to be on site for two to three days while laying the fabric liner. The pictures above show examples of the liner we have chosen, supplied by completebunkersolutions.com. The link should take you to their website if you want more details.

Facing/ Liner

Shape/ Liner

This liner is the same color as the sand and has a 20-year product warranty. There were a number of factors considered in choosing this liner option. Its ability to reduce bunker face erosion, prevent bunker washout and requirement for less sand on the slopes was a unique selling point. After any prolonged periods of rain, we will be in a position to get bunkers back into play far quicker and will not encounter as many flooded bunkers as we do in the existing bottom field bunkers. In addition, it also presented the best value for money option for the Club.

9.5 Stage 5- Sand

The Club will use a similar sand to that currently in greenside bunkers at holes 2, 11 and 15. Various options were considered during the selection process.

Both rainfall and moisture content play a huge part in sand playability. During periods of high rainfall, bunker sand saturates and becomes firm, much like the beach when the tide goes out. After a period of time the sand on the beach dries down and becomes soft and supple.

Bunker sand is much the same and it is the particle size of the sand that determines how quickly water passes through, and how quickly it dries down. The sand in the bottom field bunkers has a particle size much smaller, resulting in it retaining moisture far longer and often remaining flooded. The performance of the selected white sand is the opposite, moving water quickly and drying down faster too.

6th Hole

2nd Hole

The above pictures were taken on the 12 July and highlight the difference in sand performance noted above.

There is an argument that the white sand can, on occasion, dry down too much during prolonged periods of dry weather. This often results in the feeling there is too much sand underfoot. This is also a moisture issue, and the team and volunteers will actively check and apply water via hosing to those bunkers a couple of times a week during any prolonged dry period.