Bunkers

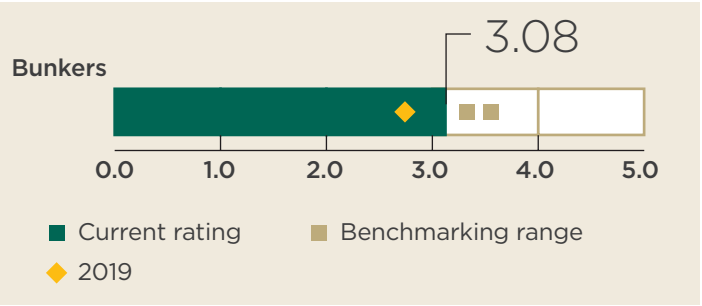
Current Issues

Our 98 existing bunkers vary in style, construction method and sand specifications. This leads to variable conditions in playability and a lack of consistency.

In the last two Member surveys bunkers were rated the weakest aspect of the course conditioning and well below the industry standard. The design of existing bunkers hampers access and egress for Members. The balance and size of bunkers across the four loops is inconsistent, there are currently 40 bunkers on the Gold Loop and only 6 on the Green Loop.

- Top: Flooded fairway bunker Red 1.
  Above: Course staff repairing Gold 7 fairway bunker after weather event.

Member Satisfaction Survey 2020



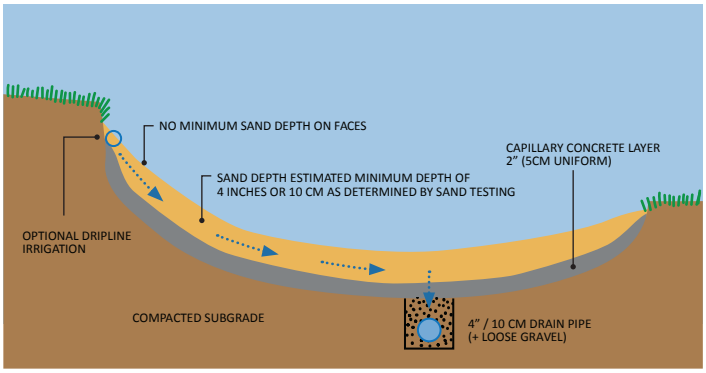
The course team currently invest over 3200 hours annually presenting and maintaining the bunkers. This significantly increases after any major weather event leading to bunker washouts and unplayable bunkers requiring up to 130 additional man hours for each weather event to get the course back in play.

During periods of heavy rain, the Club experiences unacceptable levels of failure in the bunker faces, with large amounts of sand washing down the faces and onto the bunker floor. This generally occurs 6 to 8 times a year. Drainage needs to be improved to allow the bunkers to recover more quickly from heavy periods of rain.

The course team spend many hours, edging and trimming bunkers and spraying and removing couch runners that encroach bunkers.

- The sand specifications varies impacting consistency and playability
- Points of entry and exit are not obvious and some are physically difficult to enter and exit
- Bunkers drain poorly, bunker matting becomes visible and significant resources are required after every major weather event.

Proposed Solutions



● **Above: Cross-section diagram of preferred bunker construction method.**

Bunker Construction

In order to maintain a level of bunker playability and consistency across the course, bunkers will be constructed using porous concrete lining. This will allow the floor and walls of the bunker to remain porous - the water moves through the porous concrete greatly improving drainage and reducing bunker wash outs and collapsing bunker faces. This construction method will be used for all new bunkers and as a result, the bunkers will require significantly less maintenance, reducing the impact on play after major rain events and providing the course staff with more control over bunker presentation.

Bunker Sand

The new bunker sand will meet the USGA specification and ensure consistency and improve playability. The Course Manager is currently conducting sand testing and analysis to identify the most appropriate sand for the bunkers to provide consistent playability, balance drainage and moisture level requirements and meet presentation expectations.

Bunker Surrounds

The bunker surrounds will be turfed with a 400mm Zoysia edging (a grass species that will require less maintenance and trimming than the existing wintergreen couch). This will reduce the level of resource currently dedicated to bunker trimming, spaying and removal of couch runners.

Bunker Design

Perrett Webb's philosophy places emphasis on bunkers that are more strategic, providing risk and reward options - to shoot over, around or even into. While bunkers will increase in number slightly across the property, they will be smaller in size and designed to reduce current maintenance costs. The bunkering will be more evenly dispersed throughout the four loops.

Course comparison

	Current	Proposed	Difference
Bunkers Total	89	100	**11**
Bunkers Area m²	8,859	7,234	**18% decrease**
Bunkers Red	30	27	**-3**
Bunkers Gold	40	27	**-13**
Bunkers Blue	13	20	**7**
Bunkers Green	6	26	**20**

The bunker design will consider access and egress, ensuring Members of all ages are able to safely enter and exit the bunkers from multiple points, spreading wear and avoiding Member access on steep bunker faces.

● **Above: Front bunker Red 3 after modifications to improve egress.**