



# Grass Greens at Red Cliffs 'A Feasibility Study'



## **Re: Grass Greens – Red Cliffs Golf Club.**

Further to my inspection of the golf course on January 21<sup>st</sup>, the following report outlines factors and guidelines, which must be considered by your committee in establishing grass greens.

There is no doubt that grass greens can be established and maintained at Red Cliffs Golf Club, but it will be necessary to give careful consideration to factors such as additional labour, new equipment and the cost of maintaining grass greens [eg fertilizers and fungicides.

### **Soils.**

The sandy soil known as Murray sand is ideally suited to grass greens. This soil is well drained, has a good texture and reasonable fertility. Also, it appears that there is an ample supply of this soil on the course. Therefore a major cost in establishing grass greens can be avoided.

### **Siting of the new greens.**

The position of the new greens is another factor which requires careful consideration. It is usually desirable that the greens be located on new areas. This position of the greens on new areas enables the course layout to be altered slightly and also it avoids the need for fumigation or use of soil sterilant to remove the unwanted Kikuyu, Couch or Paspalum. During the inspection I formed the opinion that, on most holes, the grass green would be located on new areas. The repositioning of the greens and altering the layout on four holes would result in a better golf course.

### **Equipment.**

In any consideration of the feasibility of grass greens, it must be appreciated that additional costs will be incurred in maintaining these greens. It will be essential for a greens mower to be purchased and in view of the difficulty of obtaining labour, I would suggest that the purchase of modern equipment such as the triple gang greens mower available from Deveson Jahn, Ransomes or Toro Morrison costing about \$3000.00 is well worthwhile. This type of equipment means a saving in the cost of labour.

It will also be essential that you have a spray unit capable of applying fungicides for disease control and a scarifier and a hollow tyne coring machine for control of root mat and better water penetration. You may be able to hire such equipment in the Mildura district or even enter into a co-operative arrangement with another club to purchase such equipment. This equipment is essential for the maintenance of grass greens.

It will also be essential that an adequate water supply be available and equipment to water the greens be provided. Again, labour costs are a problem and consideration should be given to installing an automatic system whereby the greens can be watered early morning in preference to manual shifting of sprays and hoses. The initial expenditure on good, modern equipment will mean a considerable reduction in subsequent labour costs. It has been estimated that excluding the provision of an adequate water supply that expenditure of up to \$8000.00 will be needed on new equipment.

### **Labour.**

It must also be appreciated that there will be the need to employ at least two men to maintain the course. I doubt if a course can be maintained in a satisfactory condition by one man unless members are prepared to provide a lot of voluntary help.

### **Watering.**

An adequate watering system is essential and it is useless proceeding with grass greens unless it is provided. Generally, you will require a system capable of applying to all greens about 1.5 inches of water per week, but more may be required in extremely hot weather. Also you will appreciate that the period of watering is fairly long due to the low rainfall.

### **Comments on course layout.**

**Hole 1:** This hole is relatively straight and it is suggested that the green be located on the right hand side of the present scrape in a clean area. The placement of the green in this position would give a slight dog-leg to the hole.

**Hole 2:** There is no room to shift the green, consequently it will be necessary to install a temporary green and poison the Kikuyu and Paspalum on the site before dumping the new soil. This green will need to be built up to provide drainage.

**Hole 3:** The green for this hole could be located on the left hand side of the present scrape and to provide character this green should be built up.

**Hole 4:** There is ample room to place a green beyond the present scrape on the other side of the pipeline. In fact, extension of this hole would improve it for golf.

**Hole 5:** This hole is far too short for a par 4 and the opportunity should be taken to extend it to the right hand side and beyond the present scrape. A distance of 370 to 400 yds should be possible.

**Hole 6:** There is ample room to form a new green behind the present scrape. Again this green would need to be built up to provide character and drainage.

**Hole 7:** A drawback of this hole is the long walk across a fairway. It is suggested that this hole be extended beyond the scrape a considerable distance, as there is ample room. The soil on site is quite suitable and no soil would have to be bought in. Moving the green forward would enable the tee to be bought forward.

**Hole 8:** This hole is a disaster to the game of golf. It is a trick hole and the opportunity should be taken to reconstruct the whole hole. Resiting the green on the top of the rise would improve the hole immensely. The soils on site are good for greens and it would become a feature hole. Resiting the green would enable the tee for the 9<sup>th</sup> hole to be bought back to increase the length of that hole.

**Hole 9:** The site for a new green is on the left hand side of the present scrape, but it will be necessary to poison to eradicate Couch and Kikuyu.

**Hole 10:** It is not possible to resite the green on this hole. The current site of the scrape is the best position. Again it will be necessary to poison Couch and Kikuyu. The green would have to be built up.

**Hole 11:** The present scrape site for the green is ideal, but again Couch and Paspalum will have to be poisoned.

**Hole 12:** It is suggested that the tee for this hole be shifted closer to the 11<sup>th</sup> green and that a new green be constructed beyond and slightly to the right hand side of the current scrape. There is Couch and Paspalum on the site that would have to be poisoned.

**Hole 13:** The green for the hole can be located on the right hand side of the current scrape and at the same time it would introduce a dog-leg into this hole. There is ample room for this placement.

**Hole 14:** It will be necessary to locate the green on the current sand scrape site, therefore poisoning off Couch and Paspalum will be needed. The current site is good, but the green should be raised.

**Hole 15:** The site for this green is behind the present scrape. It will require the removal of some citrus trees. The soils are ideal and it will not be necessary to bring in soil. The scrape site is too wet.

**Hole 16:** The green for this hole should be located on the left hand side and slightly beyond the existing scrape. Again the green should be raised and siting the green in this position would provide a double dog-leg to the hole. It will also mean that the tee can be bought forward and improve the hole.

**Hole 17:** This hole, which is not a golf hole, should be scrapped and a new tee and green built in the area on the left hand side of hole 16. The new green would be located on high ground in a southerly direction. This would enable the tee for the 18<sup>th</sup> hole to be relocated and make a much better golf hole of the 18<sup>th</sup>.

**Hole 18:** The green for this hole can be located on the present scrape site, or built behind. If it were to be located on the present scrape site, the Paspalum and Couch would have to be poisoned.

I have not provided a sketch plan of each green with this report, but I will forward these on when I know you are prepared to construct the greens.

In regard to green size, the average size of a green would be about 600 sq. yds. [approx 502 sq. mts], which means with the surrounds the total area to be constructed would cover an area of approximately 900 sq. yds. [approx 753 sq. mts]. I have estimated that where a green has to be built up, between 150 – 200 cubic yards [approx 115 – 152 cubic mts] of soil will have to be bought in, if the soils are entirely unsuitable. Where the existing

soil is suitable as a base, about 50 yards [approx 46 mts] to cover the actual putting surface will be needed.

For holes 1, 2, 3, 4, 6, 9, 10, 11, 14, 16 and 17 some of the existing soil can be used, but most of the soil will have to be bought carted in. For holes 5, 7, 8, 13 and 15 the site soils are suitable for the greens.

### **Seed mixture.**

The most suitable seed mixture for the greens and the recommended seeding rate is set out in the technical details section. The same mixture should be sown on the surrounds to ensure consistency across the course. The suggested mixture at the recommended rate will cost approximately \$130.00 per green, but this cost could be reduced by cutting the seeding rate on the green surrounds.

### **Fertilizer.**

The inclusion of fertilizer in the soil before seeding will be necessary and I would recommend 'Lawn Starter' at a rate of 60lb [approx 27kgs] per green. The cost of this fertilizer is relatively low.

### **Site construction.**

Where greens have to be built up much of the soil that is dumped can be spread using a tractor mounted front-end loader with a rear blade for scraping. However, the final seed-bed preparation will involve a lot of manual work [ie] raking, rolling etc.

I would also suggest that you construct all 18 greens before undertaking any seeding. This will mean that all greens can be brought into play on a common date. It will be possible to draw up a maintenance program for the greens with regard to fertilizer, cultural, mowing, disease control, and top-dressing when you advise that you intend to proceed with the project. The Institute is prepared to help you at all times and if you desire detailed supervision, there would have to be a small charge for this service.

I hope that you decide to proceed with your project to establish grass greens on your course as they obviously make the game of golf more enjoyable.

### **TECHNICAL DETAILS – SUMMARY.**

The technical details of the feasibility study covered the following issues:

#### **1. Construction of grass greens.**

Included the size of greens, the base filling and the top loam.

#### **2. Seeding of the greens.**

Included the putting surface and the surrounds and fertilizer recommendations.

#### **3. Water supply requirements.**

This section covered water usage during summer and winter, on-course dam capacity including the extension of the dam adjacent to the 9<sup>th</sup> fairway. Water availability was also discussed in regard to the present system as well the proposed connection to the First Mildura Irrigation Trust's 'Mid-area

Scheme'. The study also commented on the possible connection to the Mildura Urban Watertrust supply in regard to clubhouse use. Quite a lot of information was provided on the watering system to be used on the greens. A range of proposals were considered including watering the greens from one source, existing pump and pressure lines from two sources to cover all 18 greens and the use of sprinklers, both permanent and pop-up at each green.

#### **4. Course alterations.**

A range of course alterations was suggested in an attempt to make better use of the grass greens, which included relocating the 17<sup>th</sup> hole [see above in 'Comments on course layout'] and alterations to the 18<sup>th</sup> hole. Although some fairway realignment would be needed it was stated that this could be handled with very little work required.

#### **5. Future maintenance costs.**

The study made reference to experience at the Kerang Golf Club following the introduction of grass greens and indicated that the extra maintenance of the grass greens could be handled by a full-time curator and one other staff member with the recommendation that this be an apprentice.

#### **6. Total cost of the scheme.**

The total capital cost of the proposed scheme to establish 18 grass greens and to provide an adequate and independent water scheme is estimated to be \$17,760.00. This total cost includes a figure of \$2000.00 for alterations to the existing dam adjacent to the 9<sup>th</sup> fairway. Although this work may not be carried out immediately, but should be considered as part of the overall scheme.

#### **7. Detailed estimate of costs.**

This section provided the full details of the estimated cost of completing the scheme component by component, but did not include machinery costs or the recommended labour cost.