

Course, Vegetation & Fauna Plan 2020 - 2024



KOOYONGA

EST. 1923

Core Values

A progressive and proud club that;

Is respectful of its traditions

Has a commitment to excellence

Is inclusive

Promotes the enjoyment of golf





EST. 1923

KOORYONGA GOLF CLUB STRATEGIC PLAN

Seek to maintain a premier golf experience whilst expanding member facilities and services to better serve the needs of our current and future members

Vision

To be recognised as one of Australia's premier golf clubs

Mission

To provide members with an outstanding experience on a championship golf course while offering first class facilities and services

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COURSE & WATER STRATEGIC PLAN 2020-24

KEY OUTCOME BY 2025

COURSE

Kooyonga to be firmly entrenched as one of the premier championship courses in Australia and recognised for its superb conditioning and playability all year round

WATER

Complete the design and implementation plan for a new irrigation system that enhances our water quality, efficiency and security

STRATEGIC OBJECTIVES;

To be recognised as the stand-out championship course in South Australia and on par with the top 10 private clubs in Australia

- Continue to enhance the course in line with approved concept plans prepared by our course architect
- Continue to enhance the practice facilities including:
 - Complete the design and installation of lights to increase practice opportunities
 - Complete the design and installation of a safety net to allow the use of full flight ball
 - Consider plans for the construction of an expanded chipping green complex
- Develop and maintain a vegetation management plan and policy guidelines

To be recognised as consistently presenting the course in playing conditions on par with the top 10 private clubs in Australia

- Continue to provide sufficient resources to ensure the course can be presented to the highest standard all year around
- Continue to invest in best practice technology and software to map and maintain the course and vegetation management
- Continue to maintain and measure against our course maintenance plan and policy guidelines
- Finalise design, costing and approvals for upgrade of maintenance facility, including additional storage capabilities and enhanced staff amenities

STRATEGIC OBJECTIVES (CONTINUED);

To ensure effective water security, supply, usage and management policies are in place to provide for the long-term sustainability of the golf course and its surrounds

- Complete the design and implementation plan for a new, technologically advanced irrigation system of the highest quality to deliver water in the most efficient and cost-effective manner to the golf course, its surrounds, the practice facilities and the clubhouse landscape
- Maintain adequate water storage and access to a variety of water sources to improve water quality as well as water security in the event of bore or system failure including:

Maintain the current network of bores, upgrading with advanced automation and monitoring equipment to ensure we effectively monitor operation, protect pumping infrastructure and ensure sustainable use of water from the T1 aquifer

Develop plans to install a dedicated pipe network to water greens only with treated water or mains water as and when required

Maintain access to Recycled wastewater from the Glenelg Treatment Plant

Continue to explore opportunities to harvest stormwater to provide security of future water supply







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AERIAL VIEW OF THE COURSE

legend with overview of key course
features, upcoming works etc



The Kooyonga Golf Club Vegetation Management Plan has been developed to provide clear and concise guidelines encompassing all facets of vegetation management within the club's boundaries. It is important that we acknowledge the heritage of the property and its vegetation and maintain it in a way that adds to the architectural aspects of the golf course to provide the first-class golfing experience we aim for.

Every great course has its own unique characteristics that sets it apart, and in the case of Kooyonga, the aim is to preserve, maintain, restore and enhance the vegetation and features of the site including natural dunes and wetlands that attracted Cargie Rymill's attention to the land of Mays Paddock as a site for a golf course of national standard.

It is intended that this shall be a working document that forms part of the Course & Water Strategic planning framework and provides an on-going reference point for current and future Committee's, Members, Management, Staff and interested parties.

It shall provide a reference for all vegetation activity at the club, with hole by hole plans, detailing playing and non-playing areas based upon the topography and soil types defining the vegetation plantings for each area. It should be read in conjunction with the Course Guidelines and form a part of the club's strategic plans.

INTRODUCTION



KOoyonga CHARACTER

Designed by the Club founder H.L. 'Cargie' Rymill, Kooyonga is a classic traditional style course laid out on a sandy, undulating sand hills on Adelaide's western suburbs on an area that is known as "the old red consolidated coastal sand dunes", which would have been home to a wonderful example of native bushland prior to settlement and the development of the golf course. Few changes to Rymill's routing have taken place since it opened, and the course is consistently rated amongst the top golf courses in Australia.

The "Kooyonga Way" is to maintain pure Santa ana couch tee and surrounds, with Santa ana fairways that run continuously without breaks consistently across the course. Having undertaken restoration of fairway width and mowing lines that had eroded over time, maintenance of wide playing corridors is an important design element to encourage width and options for players at all levels, one of the fundamentals of the game.

Pure bentgrass is the desired turf on the greens as putting surfaces, maintained with an appropriate level of firmness that rewards well struck shots played from the correct area of the fairway, presented at appropriate speeds that provide the test a championship course should whilst prioritising turf health and density.

Pictured: Circa 1940, 5th and 6th fairways with 5th green in foreground



EST. 1923

VEGETATION PRINCIPLES

The vegetation in the rough areas needs to compliment the fine turf playing surfaces both visually and strategically, with grass types to be reflective of the season. Where appropriate, a blend of fine fescues will be sown to soften the transition between turf and sand.

We shall promote and enhance indigenous vegetation in appropriate areas of the course, using exclusively indigenous plants for all new plantings and endemic species where possible

Sand dunes and waste (drift) areas, wetlands and natural features of interest and old bunkers shall be exposed and highlighted where appropriate, repopulating with native grasses to demonstrate the sandy topography, but minimise degradation and supplemental watering requirements.

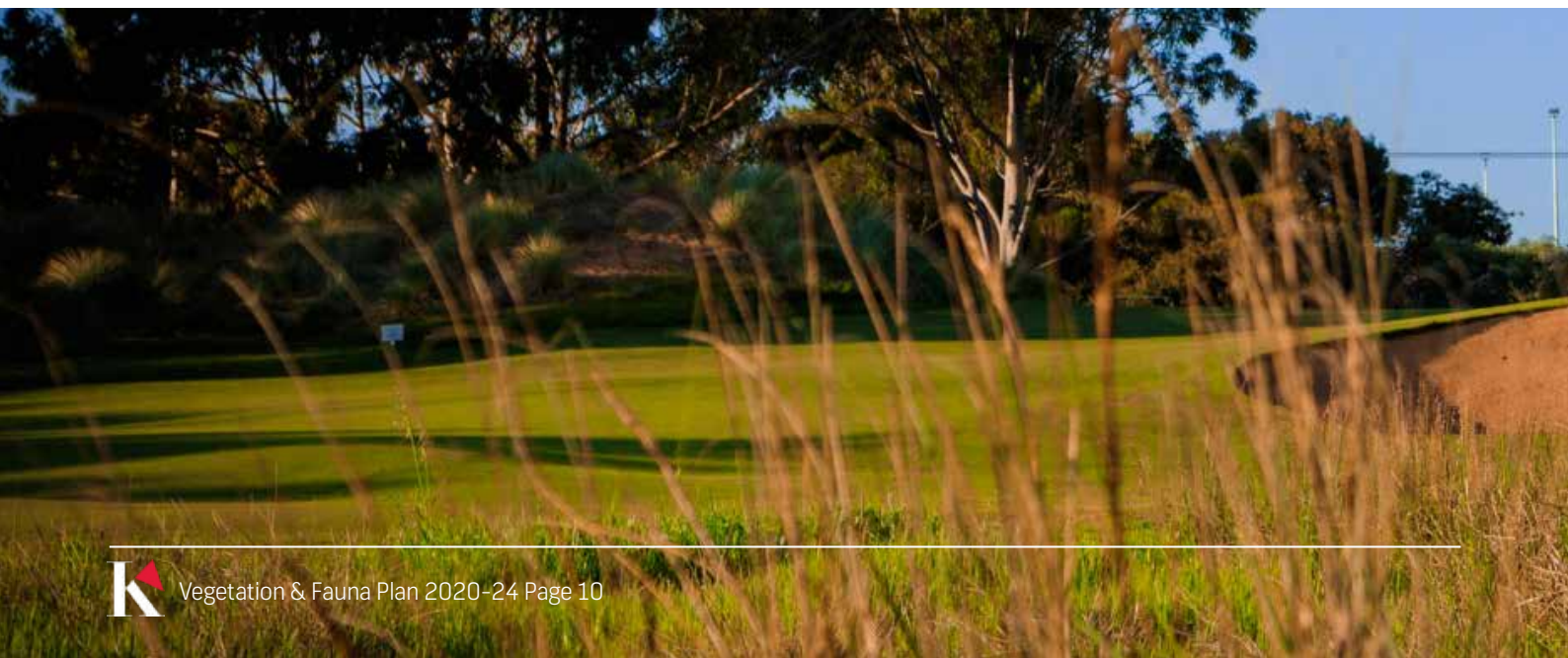
Poorly shaped mounding and vegetation areas that are out of character are to be removed to ensure all areas of the course and its vegetation are presented in a way that represents the land in its natural form

We aim to preserve healthy and significant trees where they have strategic importance for boundary and player protection, ensuring ongoing maintenance to enhance health and appearance is undertaken. This includes dead wooding, pruning and lifting of pines and other trees to open up vistas along holes and across to other holes.

Haphazard and inappropriate tree and bush plantings however, including those having a detrimental effect on turf health and playing surface presentation shall continue to be identified and removed

Where appropriate, areas of shrubbery should be maintained to enhance speed of play, save for boundary protection and privacy. Hedging of bushes at tees and other locations throughout the course is to be avoided, rather focusing on selecting and planting appropriate trees that can grow in their natural form

Environmental weed species should be controlled within tree communities including Olives (*Olea europaea*), Bridal Creeper (*Asparagus asparagoides*) and Boxthorn (*Lycium ferocissimum*). Control and minimization of Kikuyu (*Pennisetum clandestinum*) and Crowsfoot grass (*Eleusine indica*) from turf roughs and carries and Veldt Grass (*Ehrharta calycina*) from vegetation areas is ongoing



IMPLEMENTATION PLAN

It is intended that this shall be a working document that provides a reference for all vegetation activity at the club, with hole by hole plans, detailing playing and non-playing areas based upon the topography and soil types defining the vegetation plantings for each area. It should be read in conjunction with the Course Guidelines and form a part of the club's strategic plans, with the implementation timeframe in line with the 5 year period of the strategic plan, with priorities of work to be according to relevant constraints and opportunities

The goal for all native areas is to achieve a consistency in their presentation, which will be reflective of the type of area, its soil and the plant communities that are suited to them. Every attempt should be made to use Indigenous species where possible that are appropriate to the individual area, with any planting and maintenance activities attempting to recreate what would occur naturally without human intervention whilst remaining sympathetic to the game of golf

Aerial photos of the course and GIS software should be used to develop a detailed course map, defining zones of trees and vegetation to assist with planning and recording of maintenance activities and future plantings.

Annual tree audits undertaken by certified arborists, with recommendations for pruning and removals undertaken either in house or via external contractors

Timing of works will be seasonally dependent, such as new plantings, which are best planted through late Autumn and early Winter, while and alterations involving turf establishment best commenced in Spring

It is suggested that consideration be given to establishing an on-site plant nursery at Kooyonga to store and grow-on purchased plant-stock, along with the commencement of a seed collection and propagation program to develop plant-stock from the gene pool of existing Indigenous plants and trees. Mutually beneficial relationships with local groups should be considered to assist with the collection of seed and propagation of plants for use on course.



NOTES ON THE SPECIFICS

TREES – PLANTING AND MAINTENANCE

Since its establishment in 1923 there have been many approaches taken with the selection and planting of different varieties of trees and shrubs, leaving Kooyonga with a wide variety of trees and shrubs growing across the property, Indigenous, native and introduced. It is the aim this plan to implement a more consistent approach to the selection, planting, maintenance and removal of trees and shrubs throughout the property.

The course looked very different from where we see it today, with no trees at all on the southern and eastern sections of the course apart from two Eucalypts located on the 17th and 18th holes, whilst the western side of the course was quite densely forested in Eucalypts, with a few Pine trees throughout these areas when it opened for play in 1924.

Over time, the Eucalypts gradually gave way to Pines as these trees were planted, with the 1970s the peak of the Pine tree as the dominant tree species at Kooyonga as trees planted in previous decades reached maturity. Apart from the distinctive row of River Red Gums between the 6th and 7th holes many of the old Eucalypts in this north western section of the course have disappeared.

Whilst there is no argument that Pines are now a significant part of the golf course landscape due to decisions made by previous generations, this does not mean that they are the best choice for every situation on the course. Achieving a balance between maintaining pines where appropriate coupled with a focus on promoting Indigenous vegetation species is our priority.

If replacement of a tree or any new plantings are to be carried out, consideration is to be given to what species is appropriate for the location and the reason it is to be planted. This includes any strengthening of Pine or Eucalypt areas, boundary plantings or for visual screening or separation where required. At all times, the most suitable species should be chosen for use, which may mean not replacing a removed tree with a tree of the same variety if there is indeed a requirement for a new planting to occur.

It is important for the ongoing health of a stand of trees no matter the variety that there be maturing trees growing as future replacements where possible. This is particularly so in the case of Pines, as they have a somewhat lesser lifespan when compared to species of Eucalypt such as the River Red Gum.

No matter the variety of tree being considered for succession planting, future replacement locations should be considered with regards to sun direction, their location relative to the adjacent hole and their likely future canopy size and spread. There needs to be appropriate amounts of space for new plantings to be able to establish into well-formed trees, which may require pruning of the existing tree to allow development of the succession plantings in their formative years.

It should also be kept in mind that appropriate succession planting may mean that no tree should be planted in place of an existing tree. There are areas of the course where no trees once existed that have since had trees, whether appropriate or inappropriate planted at some point in time. In these areas, it may be entirely appropriate, upon the failure and removal of an existing tree to not replace it or prepare for its future failure with the planting of another tree in its place.

FESCUE

An addition to the use of endemic species is the use of a fescue blend, sown to soften the transition between turf and more sandy, native areas. Fescue was selected for this purpose as it is quick to establish and presented a nice contrast to the Santa Ana couch of our fairways. It also enabled the use of a selective herbicide to control re-emerging veldt grass and other weeds without the fescue being affected.

The intention was that once established, the irrigation required to establish the fescue in these sandy areas would be reduced or eliminated, enabling the plants to develop seed head, but avoid being lush and thick in appearance and present in a manner that is reflective of the season. What has been seen is that the fescue requires much more water constantly through the summer months to ensure a reasonable level of survival.

Even with large amounts of irrigation, we often see the fescue growing in a clumpy form, which creates an undesirable lie for golf balls, or alternatively, we see areas where fescue plantings receiving excessive irrigation, primarily around tees and greens where it becomes thick and lush and tends to “fall over” making it difficult to find balls and to play shots from. Another side effect of irrigation is the amount of weed growth that is being stimulated. These areas are readily infested with weed growth including couch varieties (*Cynodon* spp.), summer annuals such as Crowsfoot grass (*Eleusine indica*) and a large number of broadleaf weed species. Whilst these plants can be selectively controlled with chemicals, such work adds a large amount of labour to maintenance operations.

Whilst fescue may continue to be used to soften transitions into native areas and to aid initial establishment of native species, the primary focus in vegetation areas is to promote the development of native grass populations to achieve the desired natural look and ensure that these rough areas are ultimately reflective of the season.

OLD BUNKERS

A number of old remnant bunkers still exist on the course, with prominent examples on holes 12, 13, 16 and 17. These can be enhanced by making their bases sandier, thus adding an interesting feature to play on the course.

Additional areas such as the left side of the 6th fairway have seen attempts to recreate old bunkers in rough areas. Where possible, these areas shall be treated in the same manner, removing couch and other turf species, encouraging sandy bases and sparse native grass populations.

SAND DUNES

One of the features of Kooyonga’s native areas is its sand dunes, with defined dunes located in the area around the 1st green, 13th tee and 12th green, the large dune to the right of the 2nd fairway which links to the 10th green and 11th tees, at the top of the hill between the 4th and 8th fairways, the entire area between the 8th and 9th fairways and at the rear and to the left side of the 17th green, along with between the 17th and 18th holes.

Where practical on sand dunes, a mixture of primarily native grasses and tussocks should be planted, ensuring an element of the sand dune themselves are always evident. Fescue may be used to soften the transition from turf to sand dunes, along with acting as a stabilisation method for the dune. Tree plantings should be kept to a minimum on the dunes and only to the extent necessary to prevent erosion of sand.

EPHEMERAL AREAS

The course once consisted of many areas that could be described as ephemeral wetlands, as evidenced in many of the old course descriptions and photos. With the installation of the burn through the course and reclamation activities, many of these areas are now dry. There remains a prominent ephemeral area on the 7th carry, and the pond adjacent to the 17th green is to be vegetated and largely treated as an ephemeral area, even though it has a water level that is maintained.

SAMPHIRE FLATS

An area of samphire flats exists between the 9th and 10th holes, extending towards the 3rd carry and southern boundary. Within this area is a variety of samphire varieties and plants that are favoured by the low lying, saline ground that exists in this area. There are areas throughout the course of lower, heavier soils, particularly along the burn that lend themselves to being returned to this natural state, which is as the property would have been when it was identified as ideal for a golf course.

CLUBHOUSE LANDSCAPE

The use of water friendly native vegetation is encouraged in these areas, whilst still seeking an attractive display of colour and foliage to highlight the clubhouse and its surrounds. This standard of presentation is to be extended to the clubhouse lawns, which are to be maintained as either high quality fine fescue or Santa ana turf in a similar fashion to the on-course tees and surrounds.

PATHS

It is desired to have turf paths and traffic areas where possible through the course, with enough space to alternate traffic flow and sustain turf coverage. Where artificial path surfaces are required due to limited space or through native carry’s, quartzite sand is the preferred surface, as it compacts well and resists being blown by the wind reasonably well. Ideally, irrigation is to be prevented from impacting path surfaces, as spreading of material and potholes can become an issue with excess moisture. Where appropriate, exposed aggregate concrete in a colour to match native sands can be considered, as evidenced through the dune on the 17th hole.



1ST

Highlight old bunker at the beginning of the fairway on the LHS, exposing the sandy base and highlighting its shape with native grasses

Fairway bunkers – RHS. Retain all existing Pines and skirt up. Remove Veldt grass from this area and revegetate with native grasses, highlighting the large sand crater. Add irrigation to maintain moisture levels in bunkers and assist with vegetation development.



Improve the native vegetation along the right side from the fairway bunkers to the green. Removal of existing pasture grasses and top 100mm of soil to expose native sand/soil, with replanting of native grasses including additional plantings of Gahnia filum in the low ground around Casuarinas. No succession plantings of trees to occur in this area.



Creation of a new maintenance path to the green waste/nursery area along the school oval, removing all traffic from the LHS of the fairway, with some tree removal required. Strengthen screening of the new path, green waste and turf nursery areas at the left before the green with trees, shrubs and grasses.

2ND

Develop a plan for improved screening of the road boundary adjacent to the tees as current vegetation is declining. One option is removal of existing bushes, construction of a low retaining wall (1.0 - 1.2m high) on the boundary with a 2m brush fence on top to screen passing vehicles and plantings of trees, shrubs and native grasses along the fenceline amongst existing Pine trees to screen the new fence and road.

Fairway bunkers – LHS. Remove Veldt grass from bunker surrounds, promoting indigenous native vegetation. Adjustment of the irrigation system to ensure control over the coverage of bunkers and vegetation in this area.

Provide additional screening to the shed and tank at the left side to screen the view of infrastructure from the fairway.

Strengthen plantings of native grasses on sand dunes to the left and right sides of the neck.

Remove the grove of Casuarina saplings middle right of the green (behind the 10th green) to give more space to these greens and expose the sandy hollow they are growing in, which should be kept sandy and revegetated with low tussocks. Removal of strong tree root competition for the greens and surrounds will assist turf health.



HOLE BY HOLE RECOMMENDATIONS 2020-24+ (HOLES 1-2)

Remove the *Leptospermum laevigatum* bushes immediately beyond the green, as these unfairly catch many shots that just roll off the green, as these unfairly catch many shots that just roll off the back edge. Replace with a low sand dune of around 1.5m in height, vegetated with native grasses, which will continue the sand dune character for the full length of the hole and be a more attractive hazard behind this green.

3RD

In the carry forward of the tee to the burn, remove annual pasture grasses create a native grass area with character similar to the roughs between the 1st and 13th, 12th and 13th and 11th and 12th holes, highlighting sandy, native grasses.



Reconstruct the bridge over the burn, incorporating Carey Gully sandstone walls to continue the theme created by the wall at the 17th pond. Add plantings of *Gahnia filum* to the banks of the burn to improve its natural appearance.

Remove poor quality suckering *Casuarina cunninghamiana* to the right of the end of the tee (behind 2nd green) to widen out view corridor, maintaining existing *Melaleuca halmaturorum* and adding appropriate saltbush and native grass species.

To the right of the path, create a series of ephemeral Samphire flats by lowering these areas by around 0.5m and vegetating with samphire plants and *Gahnia filum* to replicate the existing natural samphire flats sited some 100m to the north between holes 9 and 10. These new flats will be off to the right side of the carry and should not present any great difficulty to the shorter hitters, but will significantly add to the character of the hole.

Remove the fork at the end of the path and the wedge of vegetation that lies in the fork, creating a single path that

leads to the 9th tees with a wide area of multiple exits for traffic on the 3rd. Improve irrigation and turf quality along this section of path to cater for the traffic.



Prune, deadwood and skirt up the two mature Pines at the right side opposite the start of the fairway to give improved low-level views across to the 9th hole.

4TH

Strengthen tree and shrub plantings along left side to guard against balls leaving the property.

Promotion of native grasses surrounding the approach bunkers. Re-configuration of the existing irrigation system to provide improved control over irrigation overspray into this area.

Assess annually and prune as required existing pine tree plantings on the top of the dune between 4 and 8 fairways to ensure growth and development of succession plantings.

5TH

Strengthen tree and shrub plantings along left side to screen the golf course from surrounding properties and roads.

Protection of the remnant *Melaleuca lanceolata* population along the left side of the hole, propagating from collected seed to ensure replacement plants of local provenance are being used throughout the course.

Remove couch edges from the rear of the approach bunkers, encouraging broken ground with native grasses and expansive areas of open sand on the back side of the bunkers.

HOLE BY HOLE RECOMMENDATIONS 2020-24+ (HOLES 3-5)

Promotion of native grasses in sandy hollows to the left and right of the approach, reducing irrigation and encouraging sparse plantings with pockets of visible sand.

Reduction of irrigation applied to pockets of fescue to the right and rear of the green, encouraging a sparser population of native grasses rather than the lush planting of fescue currently present.



6TH

Tamarisk *aphylla* trees opposite the left of the ladies tee to be progressively removed and replaced with new Pine tree plantings.

Removal of the Geraldton Wax bushes from the left side boundary plantings, replacing with indigenous varieties.

Enhance the recreated "old disused bunkers" along the left edge of the fairway with partial sand exposure to their bases and faces, along with native grass plantings.



Removal of Veldt grass from the side of the left fairway bunkers and formation of a new low sand dune ridge up against the path to screen it from view. Native grass plantings to occur, extending onto the dune towards the 7th green.

Promotion of native grasses along the right side of the hole, protecting the remnant Eucalypt trees in the area along with continued promotion of succession plantings for these Eucalypts.

7TH

Prune and maintain *Melaleuca halmaturorum* on the eastern and northern edges of the pond to give improved width for women and shorter hitters playing from the front tee. Clear reeds from the base of the pond, adding *Gahnia filum* plantings and other samphire species into the base and banks of pond.



Revegetate slope beyond the pond at left as native grass grasslands, extending along the left of the 7th and joining with native grassland vegetation on the 6th hole.

8TH

Prune, deadwood and skirt up Pine trees at left corner of dogleg. Enhance the sandy hollows at the base of these trees, adding native grasses and encouraging expose sand.

Soften the transition between couch and sand along the length of the hole with sparse fescue planting and native grasses.

HOLE BY HOLE RECOMMENDATIONS 2020-24+ (HOLES 6-8)

9TH

Extend the existing samphire flats along the left off the carry to add character and blend into the existing area back towards the 10th and 3rd holes

Maintain regime of pruning to the *Melaleuca halmaturorum* plantings along the right side of the hole adjacent to the burn to keep them off the ground. Protect the native grass and saltbush plantings at the base of these trees.

Protect and promote salt bush plantings along the length of the burn, adding *Gahnia filum* plantings to both sides of the burn.

Soften the transition between couch and sand along the length of the hole with sparse fescue planting and native grasses. Consider extending these plantings out and around the fairway bunkers to continue the theme of native vegetation surrounding fairway bunkers in other areas of the course.



Remove out of place *Melaleuca halmaturorum* on the left side near fairway edge, replanting with native grasses

Reconstruction of burn crossings utilising Carey Gully Sandstone walls, continuing a consistent treatment throughout the course.

10TH

Reconfigure the irrigation system surrounding the native grass area behind the forward tee to extend down to the trees at the left side to encourage less density in the fescue transitions and greater exposed sand and low native tussocks to develop a character like the low areas between holes 1, 13, and 12.

Reconstruct the walls of the burn crossings utilising Carey Gully Sandstone walls, continuing a consistent treatment throughout the course.

Add additional *Gahnia filum* plantings along the banks of the burn. Lower the right side of the 10th carry adjacent to the burn, planting with samphire, saltbush and *Gahnia*'s.

Encourage native grass growth through existing sandy hollows under *Casuarina* plantings between the 10th fairway and beyond to the 11th fairway. Promote plantings of *Distichlis spicata* and saltbush varieties under the row of casuarinas to match other areas of the course, including between the 1st and 13th holes.



Remove 2 *Casuarina cunninghamiana*'s to the right of the fairway and associated suckers that have developed towards the 9th hole. In conjunction, remove older, split *Melaleuca halmaturorum* bushes, replanting this area with new *Melaleuca halmaturorum* plantings, saltbush and *Gahnia* plantings.

Strengthen the samphire flats to the right side of the hole, adding additional plantings of samphire and *Gahnia* plants, transitioning from native grasses at the edge of the rough line. Consider erecting signs denoting it as an Environmentally Sensitive Area.

HOLE BY HOLE RECOMMENDATIONS 2020-24+ (HOLES 9-10)

As per 2nd hole, remove Casuarina's at the rear of this green to expose this sandy hollow. Also consider removal of a similar grove to the right rear of the 10th green to remove root invasion and debris issues created by these trees. Return to sandy hollows with native tussocks and exposed sand.



11TH

Further evaluate and consider the removal of the two deciduous trees at the right rear of the tee, replacing with an appropriate species of Eucalypt.

Prune, deadwood and lift row of Pine trees at the right side of the carry. Planting of native shrubs and bushes along the bank between the 11th carry and 19th path. Prune, deadwood and lift Pine trees beyond the end of the carry row, including the Pine growing in the sandy hollow at the crest of the hill.



Remove Veldt grass from hollow and backside of hill to the right of the fairway, revegetating with native grasses. Widen the hollow towards the fairway to improve its visibility and impact, extending vegetation and sand over hill on the right side of the hole.



Remove 2 x Brachychiton trees on the left side at approach bunkers, replacing with appropriate Eucalypt species and further appropriate tree and shrub plantings to screen maintenance compound from the course.

Remove couch edges from the rear of the approach bunkers, encouraging broken ground with native grasses and expansive areas of open sand on the back side of the bunkers.

Remove couch from depression on the right side of the green surround, exposing sand and planting with native grasses to integrate the hollow into existing vegetation in the area.

Limit pruning as hedging of vegetation around the rear of the green through to the 12th tee, encouraging trees to grow in their natural form.

HOLE BY HOLE RECOMMENDATIONS 2020-24+ (HOLE 11)

12TH

Remove couch from low areas of the left and right sides of the carry, exposing natural ground and planting with appropriate native grasses to match existing vegetation in the area. Consider reconfiguration of the irrigation system in the area to control overspray.



Expose three old remnant bunkers in the right rough with partial sand exposure to their bases and faces, along with native grass plantings extending along the entire right side of the fairway, joining to the 11th and 19th holes. Add judicious plantings of appropriate endemic trees and shrubs through this area, along with the selective removal of exotic species.



Beyond the remnant bunkers, prune, deadwood and lift Pines to open views down the 2nd hole. Add new Gahnia filum plantings to low areas towards the 2nd hole, removing Veldt grass from this area. Re-route maintenance path behind these remnant bunkers, hiding from view behind them towards the 19th green.

13TH

Prune, deadwood and lift Pine trees left and right at the start of the carry, ensuring a wide view and playing corridor from the tee.

Expose two old remnant bunker hollows at the left of the fairway on the crest of the hill, creating sand exposure to their bases and faces, along with plantings of native grasses through this area back towards the 12th fairway. Continuing down the hole, on the downslope of the hill at the left of the fairway expose sand in the base and face of the old remnant bunker hollow here and add native grass plantings, tying the area into existing native areas.



Promote native grasses and with areas of exposed sand to the right side at the top of the dune in place of the fairway bunker, linking with existing native grass areas between the 1st and 13th holes.

Expose remnant bunkers on the left and right of the approach, encouraging sandy bases with plantings of native grasses transitioning into native grass areas on either side of the approach.

HOLE BY HOLE RECOMMENDATIONS 2020-24+ (HOLES 12-13)

14TH

Limit pruning as hedging of vegetation around the tee, encouraging trees to grow in their natural form.

Maintain Casuarina vegetation beyond roadway to ensure width of playing corridor.

15TH

Strengthen boundary plantings with appropriate trees and shrubs to screen houses from the golf course. Include similar plantings on the right side to screen the bore shed and green waste area from the hole.

16TH

Strengthen tree and shrub plantings along left side to guard against balls leaving the property and to screen Henley Beach Road from the golf course.

To the left of the fairway bunkers, remove Veldt grass, replanting with native grasses and encourage areas of exposed sand. Maintain native vegetation with fescue transitions and areas of exposed sand through the right side of the hole to the 17th fairway.

Clear the hollow behind the 17th tee in this sandy area with fescue transitions in keeping with the native grass areas throughout the course, minimising the use of marram grass in this area.

Expose existing remnant bunkers to along the right side of the fairway towards the 17th tee and consider creation of new remnant bunkers to tighten second shot landing area and encouraging layups, offer some protection for players on the 17th tee.



17TH

Consider pruning or removal of poorly placed *Leptospermum laevigatum*, left and right of the 17th carry, opening sightlines through both sides of the carry.

At the beginning of the 17th fairway on the LHS, control couch growth, add plantings of *Ghania filum* and other low sedge tussocks and native grasses with the aim of creating a low area with a similar appearance to that of the low ground roughs between holes 1, 13 and 12. Include planting of new *Eucalyptus camaldulensis* trees as succession plantings for the damaged remnant tree in the area.



Expose sand in remnant bunker hollow on the right side of the fairway towards the 16th hole, featuring exposed sand to the base and face and the planting of selected native grasses.

Maintain all Pine trees between the 17th and 18th holes, pruning, lifting and dead wooding to allow improved views through and feature the old remnant bunker hollows through this area.

Remove Veldt grass from the sandhill under these Pines and replant sparsely with native grasses and tussocks, including the indigenous *Lomandra leucocephala* ssp. *robusta*, Woolly Mat-rush, leaving large areas of exposed sand.

HOLE BY HOLE RECOMMENDATIONS 2020-24+ (HOLES 14-17)

Reconstruct the walls of the burn crossings utilising Carey Gully Sandstone walls, continuing a consistent treatment throughout the course and to match the stone wall along the pond. Include plantings of Gahnia filum into the banks

In the right rough in the location of the two previously remove mounds, reshape as sandy hollows to recreate the original bunkers that were once existing using exposed areas of sand, fescue transitions and feature tussock plantings to create an attractive character that will still provide a hazard impact to long tee shots.



19TH

Remove the Tea-tree bush and Eucalypt immediately behind the green given that the bush is within a few metres of the rear of the green and inordinately penalises a good shot that is played a little too strongly. Retain as an open corridor out to the 12th fairway.



Control annual pasture grass growth on mounding through the entire 19th hole, with fescue transitions blending into native grass plantings and exposed sand.

18TH

As for the 17th, maintain all Pine trees between the 17th and 18th holes, pruning, lifting and dead wooding to allow improved views through and feature the old remnant bunker hollows through this area, exposing large areas of sand on faces and bases of the hollows, and add feature tussock plantings.

The interface between the 18th fairway and 1st tee sides are to be softened, with reduced irrigation inputs to thin fescue transitions, favouring native grass populations and larger areas of exposed sand. A similar theme is to continue on the mounds at the rear of the green with and through into the clubhouse surrounds, with fescue transitions leading into native grass plantings and areas of exposed sand.

HOLE BY HOLE RECOMMENDATIONS 2020-24+ (HOLES 18-19)

TREES

*Acacia ligulata	Umbrella Bush
*Allocasuarina verticillata	Drooping Sheoak
*Callitris gracilis	Cypress Pine
*Eucalyptus camaldulensis	River Red Gum
*Eucalyptus dumosa	White Mallee
*Eucalyptus gracilis	Yorrell
*Eucalyptus incrassata	Ridge-Fruited Mallee
*Eucalyptus largiflorens	River Box
*Eucalyptus leptophylla	Narrow-Leaved Mallee
*Eucalyptus leucoxylon	Southern Blue Gum
*Eucalyptus microcarpa	Grey Box
*Eucalyptus odorata	Peppermint Box
*Eucalyptus porosa	Mallee Box
+Pinus halapensis	Aleppo Pine
+Pinus pinaster	Maritime Pine
+Pinus pinea	Stone Pine
*Pittosporum angustifolium	Native Apricot

TALL SHRUBS

*Acacia hakeoides	Hakea Wattle
*Acacia ligulata	Umbrella Bush
*Acacia provincialis	Swamp Wattle
*Acacia pycnantha	Golden Wattle
*Banksia marginata	Silver Banksia
*Dodonaea viscosa spatulata	Sticky Hop Bush
*Maireana brevifolia	Small-Leaved Blue Bush
*Melaleuca halmaturorum S.A.	Swamp Paper-Bark
*Melaleuca lanceolata	Dryland Tea Tree
*Myoporum insulare	Native Juniper Common
	Boobialla

MED-LOW SHRUBS

*Acacia acinacea	Gold-Dust Wattle
*Acacia myrtifolia	Myrtle Wattle
*Atriplex cinerea	Coast Saltbush
*Atriplex paludosa	March Saltbush
*Atriplex semibaccata	Berry Saltbush
*Atriplex suberecta	Lagoon Saltbush
*Einadia nutans	Climbing Saltbush
*Enchylaena tomentosa	Ruby Saltbush
*Leptospermum continentale	Prickly Tea-Tree
*Maireana brevifolia	Small-Leaved Blue Bush
*Maireana oppositifolia	Heathy Blue Bush
*Olearia ramulosa	Twiggy Daisy-Bush
*Rhagodia candolleana	Seaberry Saltbush
*Rhagodia crassifolia	Fleshy Saltbush
*Rhagodia parabolica	Fragrant Saltbush
*Senna artemisioides mixed subsp	Puny Bush

APPENDIX TREES & SHRUBS

GRASSES & SEDGES

*Chrysocephalum apiculatum	Common Everlasting
*Dianella mixed species	Flax Lilly
*Dichanthium sericeum	Silky Blue Grass
*Distichlis distichophylla	Emu Grass
*Elymus scaber var. scaber	Native Wheat Grass
*Gahnia filum	Chaffy saw sedge
*Lomandra leucocephala	Woolly mat rush
*Poa poiformis	Poa
*Themada australis	Kangaroo Grass
*Anthropodium strictum	Chocolate Lily
*Anthosachne scabra	Common Wheat-Grass
*Austrodanthonia caespitosa	Wallaby grass
*Austrostipa mixed species	Spear Grasses
*Chloris truncata	Windmill Grass
*Ficinia nodosa	Knobby Club-Rush
*Hardenbergia violacea	Native Lilac
*Halosarcia halcenemoides	Grey samphire
*Halosarcia pergranulata	Samphire
*Lotus australis	Australian trefoil
*Juncus pallidus	Pale Rush
*Rytidosperma mixed species	Wallaby Grasses
*Vittadinia mixed species	New-Holland Daisies

GROUND COVERS

*Astroloma humifusum	Native Cranberry
*Baumea juncea	Bare Twig rush
*Carpobrotus rossii	Pigface
*Disphyma crassifloium	Round leaf pigface
*Kennedia prostrata	Running postman
*Lepidosperma viscidum	Sticky saw sedge
*Muehlenbeckia florulenta	Lignum
*Muehlenbeckia gunnii	Coastal lignum
*Myoporum parvifolium	Creeping Boobialla
*Wahlenbergia lillicola	Bluebell
*Wilsonia rotundifolia	Round leaved wilsonia

DENOTES

- * Indigenous
- ^ Native
- + Exotic

APPENDIX GRASSES & GROUND COVERS



REFERENCE TO PREVIOUS REPORTS, DOCUMENTS, LITERATURE

There are a number of previous documents and plans that have been produced over many years that discuss trees and native vegetation throughout the course. Listed below, these documents all contain valuable reference material that has been utilised in the development of this document, with current philosophies and ideals blended with those developed through different periods to form a plan for ongoing management of the vegetation at Kooyonga.

LANDSCAPE ENHANCEMENT PLAN CRAFTER & MOGFORD – GOLF STRATEGIE MAY 2013

An extensive document that covers the history of Kooyonga and its trees and vegetation from the creation of the club through to the present day. Many recommendations are contained within this plan, including trees and vegetation along with course design and strategy.

The LEP contains a hole by hole assessment of the course, detailing philosophies and plans to enhance the course, many of which have been completed. Philosophies from this document form the basis for this plan and plans for improvement not yet carried out have been carried over to this plan where relevant.

KOOYONGA GOLF CLUB – VEGETATION PLAN KGC COURSE STAFF 2008

A survey of the course that identifies a vast quantity of the vegetation, both indigenous and exotic along with the varying soil types throughout the course.

INDIGENOUS NATIVE PLANTS OF KOOYONGA GC PENNY PATON NOVEMBER 2005

A booklet prepared by Penny Paton that details the history of Kooyonga in regards to its native vegetation, including references to the book “Pre-European Vegetation of Adelaide: A Survey from the Gawler River to Hallet Cove” by Darrell N Kraehenbuehl; a wonderful reference for vegetation on the Adelaide Plains.

Contained within the booklet are indigenous plant lists of significant remnant vegetation discovered at Kooyonga, along with maps indicating their location on course. A number of species identified are categorised as uncommon, rare, threatened or vulnerable. There are also lists and maps for reference of Environmental weeds identified on the property.

NATIVE BIRD & PLANT LISTS – KOOYONGA GC PENNY PATON ?

Penny Paton has been carrying out birdwatching surveys at Kooyonga since the late 1980's. This paper provides a list (since updated) of birds sighted over a long period of time along with identification of significant native vegetation and their locations throughout the course.

All of the above documents are available for viewing in the Kooyonga Library in the Edward Leaver Room

COURSE CONSTRUCTION WORKS 2020 TO 2024+

THIS PAGE TBC - IF CONFIRMED TO KEEP, WILL BE FORMATTED ACCORDINGLY

2020 to 2024+ Course Construction Works

2020: 12th Tee and 13th Hole / Green complex
Clubhouse landscape

2021: Australian Women's Open
Course Maintenance – Bunkers, Tee's Carry's, Poa and surrounds, mound lifting (reduce scalping)

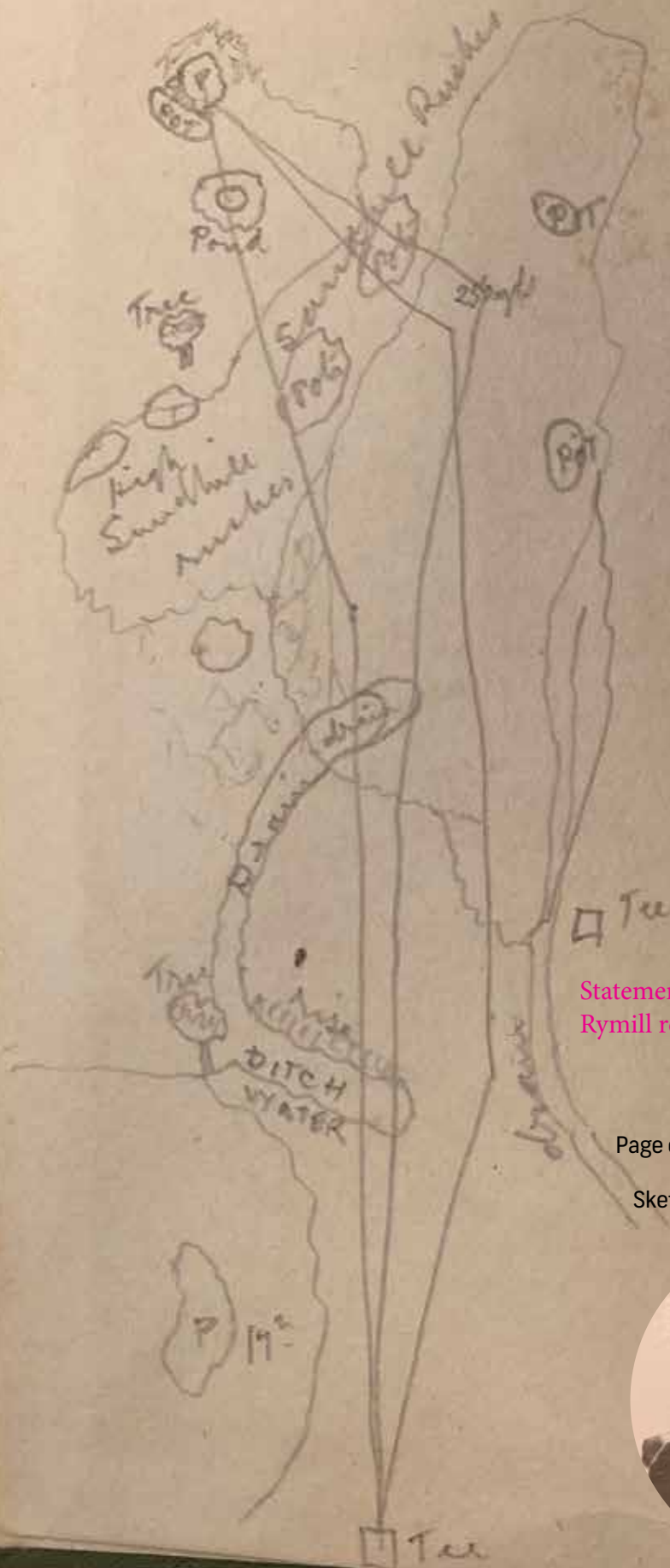
2022: 1st Tee & Practice Facilities

2023: Australian Women's Open
Centenary – present the course in championship condition for the year

2024: 16th Green complex

2025: 10th Green complex (part of the SW corner upgrade maybe?)
South West Corner upgrade in consultation with the Members Irrigation upgrade

East Hole W. Hooyanga 380/400



Statement highlighted/underlined by Rymill re plating of trees as shown in diagram- tba

Page extract from 'Golf Architecture'
- Dr A Mackenzie
Sketch by HL Rymill, circa 1920's



KOOYONGA

The Kooyonga Golf Club Inc
May Terrace, Lockleys
PO Box 119, Brooklyn Park SA 5032
t 08 8352 5444
admin@kooyongagolf.com.au
www.kooyongagolf.com.au