

Championship Course Plan



CONTEMPORARY

"A much more compelling and thoughtful golf course to play, which feels at peace in its landscape and hearkens back to the great historic features of Australian golf - **one that we know that Members will certainly be proud of**."

- Gil Hanse

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....a contemporary Royal

History of the Championship Course

Unlike many famous courses around the world, Royal Sydney's Championship Course has no strong architectural reference point – it simply evolved. Over the years, it has developed, adapted, and accommodated change.

The Championship Course is central to the standing and reputation of the Club. Members, both golfing and non-golfing, are proud of its history. However, the standard of the Championship Course has become increasingly difficult to maintain, and the outstanding quality of our other sporting facilities is no longer matched by their golfing companion.



A Short History

The layout that exists today was first established in 1922, when four new holes were created on the land previously occupied by the Chinese Market Gardens which had been gradually incorporated into the Club's property from around 1905.

In 1926, renowned golf course architect Dr Alister MacKenzie wrote a report which proposed the first set of significant changes to the relatively new Championship Course, and a renovation ensued the following year. While some of his ideas were rejected, including his 'two loops of nine' concept, many of the 'MacKenzie' features were adopted and remained until the renovation in the 1980s.

Following the MacKenzie renovations, the course underwent its next major transformation in the later 1940s. In an attempt to 'beautify' the course, a Tree Planting Sub-Committee was formed. From 1947 to 1949, more than 1,000 trees were planted – primarily the Paperbark (*Melaleuca quinquinerva*). It was believed that many of these plantings would not survive (as they have), so second and sometimes second alternate plantings were also made. This explains how these trees became established in such large numbers on the course. In late 1978, the Club brought in two firms to devise a master plan for a course redesign. It was cited that the greens needed reconstruction, the current fairway bunkers were penal, and congestion needed relieving in some areas. A 'two loops of nine' concept was again rejected. In 1986, Thomson Wolveridge & Associates completed a refurbishment.

By the early 1990s, the General Committee acknowledged that the landscape had distinctly changed to appear 'parkland', with an abundance of now-mature large Paperbarks, and restoration of some native shrubs and grasses was begun. A bunker assessment was also completed, acknowledging several issues. In 2003, Ross Watson completed a reconstruction of the Championship Course greens, also reshaping and resurfacing the tees. In 2011, Watson supervised modification of some course bunkers.

The Championship Course in 2019

So while the Championship Course in its current layout has remained largely unchanged since 1922, several renovations and various Committee-led design and landscape adjustments have been performed over the past 100 years. Aspects and anachronisms of these many different changes are still present on our course today and, without the opportunity for an architect to take a holistic approach to the Championship Course, the result is a disparate collection of stylistic ideas. Additionally, many issues such as poor drainage and an ageing irrigation system have now reached a stage where doing nothing is simply not an option.

With globally-renowned golf course architect Gil Hanse and landscape architect Harley Kruse, the Club now has the opportunity to not only address these issues but deliver to Members a contemporary golf course design and sustainable landscape plan that can be enjoyed and appreciated by golfers and non-golfers alike.

Current Issues with the Championship Course

The Championship Course is in a state of slow but steady decline. Our sporting facilities are the envy of clubs throughout the world, but the Championship Course is not of the standard set by our tennis, bowls and croquet facilities - nor is it of a standard expected by Members. The main areas needing remediation are the following:



Our greens are heavily infested with the weed Poa annua (Poa). Additionally, the putting surface on many greens is compromised by the shade cast by, and roots stemming from, nearby trees. Undue wear is created in areas of high traffic both on and around areens. such as walk-on and walk-off areas. A number of greens have closed contours that prevent surface water run-off and compromise growing conditions.

BUNKERS

Bunkers on the Championship Course are penal in nature and costly to maintain. Walkin areas often correspond to main landing areas for balls, while many bunkers have only one access point which leads to regular collapses at entry points. Sand is routinely lost from bunkers during times of high wind - this is due to the style of bunkering and the type of sand used. Drainage needs to be improved to enable the bunkers to recover more quickly from heavy periods of rain.

The irrigation system is reaching the end of its 25-30 year life expectancy and will need to be replaced over the next 5-10 years. System failures are now a regular occurrence, with failing pipework, fittings and wiring causing reliability issues and, in some cases, turf decline. Regular maintenance continues to cause a problem with annual costs steadily increasing. The irrigation system is

wasteful of water and fails

to manage target areas

DRAINAGE

Poor drainage directly impacts golf courses in many ways. Excessively wet areas usually require additional maintenance resources and create poor playing conditions. Poorly drained golf courses (e.g. as a result of underground pipes blocked by tree roots) struggle to provide good conditions on a consistent basis and are more reliant on favourable weather conditions to remain successful. Providing firm, consistent playing surfaces requires good drainage.

adequately.

Current Issues with the Championship Course (cont.)



07

05 LANDSCAPING

There is a lack of consistency and character in the landscaping of the Championship Course owing to the ad hoc development of landscaped areas rather than careful strategic planning. Wildlife habitat is also limited due to a lack of biodiversity. For example, birdlife is lacking in variety across the landscape.

06 TREES & SHADE

Tree roots from a number of trees are now underneath many greens, creating substandard putting surfaces. Tree roots at or near surface areas on fairways and adjacent to greens also damage equipment and complicate mowing procedures. In addition to the impact on greens, shade from trees is also detrimental to growing turf on tees, with many tees requiring ryegrass seeding to cope with the playing pressure over the cooler months. Poor tree placements have narrowed playing corridors and impacted visibility causing safety issues.

Many infrastructure elements throughout the Championship Course (such as cart paths, access and service roads, soil bins, etc) are beginning to show their age and, in some cases, have been poorly planned and are in need of replacement and/or relocation.

INFRASTRUCTURE

08 MAINTENANCE

The amount of golf played on the Championship Course is significantly higher than at comparable clubs. This high usage contributes to many of the existing issues (e.g. excessive wear on greens, tees, paths, etc) and impacts the Turfcare Team's ability to address problem areas and maintain the playing surfaces to an acceptable standard.

Architect Selection Process

In 2016, a shortlist was drawn up of golf course architects who were considered to be suitable for the role of providing the Club with a holistic master plan to address the current issues on the golf courses. The list included a mix of Australian and international candidates; each with an impressive history of golf course design.

A copy of the project brief was sent to each of the candidates who replied with a proposal (including a high level design for the golf courses). Each candidate then presented their vision to an interview panel consisting of members of the General Committee and Green & Match Sub-Committee, as well as the Course Superintendent and General Manager.

All candidates presented well thought-out and imaginative designs. Ultimately, it was Gil Hanse who most impressed the panel as his design-style, reputation and personality was deemed to be the most suitable to work with the Club and its Members.

Following the appointment of Gil as the Club's golf course architect, the search commenced for a suitable landscape architect who specialised in Australian native landscapes to complement Gil's style of course architecture.

Through a similar interview process as the one employed to find Gil Hanse, a number of renowned candidates presented their proposed landscape designs to the interview panel.

It was Sydney-based architect, Harley Kruse, who was chosen due to his expertise as both a successful golf course architect and knowledgeable landscape architect.

Following the appointments of Gil Hanse and Harley Kruse, and through initial consultation with Members, the General Committee decided to focus primarily on the Championship Course as Stage 1. Future improvements to the Centenary Course and Practice Facilities will be considered at a later date.

With both architects engaged and enthusiastic about the possibilities ahead, the General Committee and Green & Match Sub-Committee embarked on a comprehensive and considered design process determined to find the best solution for the Club into the future.

INITIAL PROJECT BRIEF

Produce an all-encompassing master plan which incorporates both golf courses (Championship and Centenary), as well as the golf practice facilities, the Links Turfcare Facility and associated landscaping, while considering the following:

- 1. Playability of the golf courses to both meet the expectations of Members and reflect the Club's world class reputation.
- 2. Enhancement of golf course and practice facility infrastructure (e.g. irrigation) to improve course maintenance techniques to ensure surfaces can be kept to a consistently high standard.
- Turf selection and green design to provide the best possible putting surface consistent with the environment and usage patterns on the courses. A solution to address, on an enduring basis, future *Poa annua* infestation is a critical issue.
- 4. Placement and need for all bunkers to maintain the integrity of the Championship Course as both an Australian Open course and a course that can be enjoyed by Members. Bunker design needs to take into account golfer access and future maintenance requirements.
- 5. Improvement of the aesthetic of the landscape and its connection with both golf courses.
- 6. Practice facilities of a high quality, appropriate to the Club's needs.
- Enhancement of the Centenary Course (currently 9 holes) to improve its appeal as an alternative to the Championship Course for Members of all ages and abilities, while maintaining its appeal as the course where our children and grandchildren learn to play golf.
- The need to work closely with Club's consultants charged with redesign of the Links Turfcare Facility, with respect to location and integration with the design of both golf courses, to ensure that facility meets the Club's future needs.
- 9. Any changes to the golf courses require approval by Members at a General Meeting.

Architect Selection Process (cont.)





GIL HANSE

Gil Hanse was appointed golf course architect at Royal Sydney in July 2016 and has a first class global reputation for designing, restoring and renovating some of the world's finest golf courses. These include: Los Angeles Country Club (North and South Courses), Pinehurst No. 4, Streamsong Resort (Black Course), Castle Stuart, Mossy Oak Golf Club, Tokyo Golf Club in Japan, and the Olympic Course at the 2016 Games in Rio de Janeiro.

Gil has also been retained by many prestigious and internationally recognised clubs, such as; Merion, Los Angeles Country Club, Winged Foot Golf Club, Oakland Hills Country Club, Baltusrol Golf Club, Fishers Island Club and The Country Club (Brookline) to advise on the re-modelling / renovation / restoration of their golf courses.

Gil was selected from a number of quality applicants to develop the Club's Golf Course Master Plan and improve the playability of its golf courses while meeting the expectations of Members.

HARLEY KRUSE

Harley Kruse was appointed in 2017 as the Club's consulting landscape architect for the proposed Championship Course works.

Harley's association with the Club goes back to the late 1990's when he was working for Peter Thomson's design company, Thomson Wolveridge Perrett Golf Design. Harley has an extensive career in successful golf course projects having worked for long periods with the firms of both Peter Thomson and Greg Norman before forming KruseGolf in 2010.

Harley has worked with clubs such as Killara Golf Club, Commonwealth Golf Club, Danang Dunes Golf Club (Vietnam) and the Norman Course at Mission Hills Golf Club (China).

With degrees in Horticulture and Landscape Architecture, along with a design philosophy based on sound ecological, biodiversity, and sustainability principles, Harley brings his specialist skills in golf course landscape design that will complement Gil Hanse's design work and create a stunning and golfing friendly landscape character for the Championship Course. "The Royal Sydney Golf Club is one of the most classic clubs in the world and our belief is that the golf course should match that character a golf course rooted in the strategies of the game, the traditions of the game and the best examples of golf course design."

- Gil Hanse

PLAYABLE

Introduction to the Championship Course Plan

The Royal Sydney Golf Club's new Championship Course will stand among the finest heath courses and be **contemporary**, **playable** and **sustainable**.

The intent is to maximise the potential of the golf course and how it relates to the topography, character, and setting of its magnificent Rose Bay location. The Club's property features some wonderful contours along the boundary and the sandy nature of the site lends itself well to a more traditional, less parkland-like aesthetic.

As with any great golf course, the plan is also to create variety and interest. Not only in the shape and distance of the golf holes, but also through the positioning of bunkers, the shape and sizes of the greens and tees that allow for maximum flexibility in how the course can be set up to accommodate golfers of all capabilities.

The philosophy on feature shaping each fairway is drawn from internationally renowned golf course architect, Dr Alister MacKenzie, when he said, in the early 1900s, that the features should be shaped in a way as to be indistinguishable from nature itself.

All of this can be done in a fashion that will be aesthetically appealing, sustainable, and friendly to the needs of both the golfers and the environment.

The focus is on renovating some of the key design features as well as restoring a native landscape style. The combination of these efforts will result in a reimagining of the Championship Course.

The Royal Sydney landscape is a fundamental part of the golfing experience, character of the course, and helps form the unique Club identity. It is essential that the course landscape and vegetation complements the architecture and playability to provide an outstanding and memorable golfing experience. Since the Golf Course Master Plan was first announced in February 2016, the General Committee has engaged with Members on numerous occasions to discuss, identify, workshop and seek to agree on a plan for the steadily declining Championship Course.

The Committee has actively collated and evaluated feedback from Members and sought to incorporate it in revised plans.

Changes, alterations and improvements have been made and we now have an outstanding golf course design to secure the Club's future by renovating and restoring the Championship Course to a standard befitting a club of our history and its standing in Australian golf.

The Committee is unanimous in its view that implementation of the Championship Course Plan - with major changes to the course's routing, the introduction of a number of new holes and a 64% increase in the size of the fairways - will deliver that significant legacy for future generations:

- a contemporary course from Gil Hanse, one of the world's best golf course architects, whose plan innovatively unlocks the potential of the course, given its footprint and topography.
- a course providing all Members and their guests with, first and foremost, **a memorable and enjoyable golf experience** and one capable of periodically hosting championship events.
- an exciting landscape that will make the Royal Sydney property one of the most important sanctuaries of native flora and fauna in Sydney's Eastern Suburbs.
- a revitalised approach to our ecology that will make our Club far more sustainable, both environmentally and financially, long into the future.

Championship Course Plan



| Championship Tees | | | | | |
|-------------------|-----|-------|-------|-----|-------|
| Hole | Par | Mtr | Hole | Par | Mtr |
| 1 | 4 | 274 | 10 | 3 | 201 |
| 2 | 4 | 459 | 11 | 4 | 368 |
| 3 | 3 | 183 | 12 | 5 | 495 |
| 4 | 4 | 392 | 13 | 4 | 300 |
| 5 | 4 | 440 | 14 | 4 | 340 |
| 6 | 3 | 120 | 15 | 5 | 567 |
| 7 | 4 | 300 | 16 | 4 | 445 |
| 8 | 4 | 380 | 17 | 3 | 193 |
| 9 | 5 | 545 | 18 | 4 | 396 |
| OUT | 35 | 3,093 | IN | 36 | 3,305 |
| | | • | TOTAL | 71 | 6,398 |

| | White Tees | | | | |
|------|------------|-------|-------|-----|-------|
| Hole | Par | Mtr | Hole | Par | Mtr |
| 1 | 4 | 254 | 10 | 3 | 183 |
| 2 | 4 | 436 | 11 | 4 | 347 |
| 3 | 3 | 155 | 12 | 5 | 477 |
| 4 | 4 | 363 | 13 | 4 | 270 |
| 5 | 4 | 407 | 14 | 4 | 295 |
| 6 | 3 | 105 | | 5 | 537 |
| 7 | 4 | 265 | 16 | 4 | 408 |
| 8 | 4 | 352 | 17 | 3 | 167 |
| 9 | 5 | 510 | 18 | 4 | 361 |
| OUT | 35 | 2,847 | IN | 36 | 3,045 |
| | | | TOTAL | 71 | 5,892 |

| Red Tees | | | | | |
|----------|-----|-------|-------|-----|-------|
| Hole | Par | Mtr | Hole | Par | Mtr |
| 1 | 4 | 225 | 10 | 3 | 168 |
| 2 | 4 | 404 | 11 | 4 | 317 |
| 3 | 3 | 119 | 12 | 5 | 435 |
| 4 | 4 | 338 | 13 | 4 | 221 |
| 5 | 4 | 328 | 14 | 4 | 258 |
| 6 | 3 | 98 | 15 | 5 | 481 |
| 7 | 4 | 230 | 16 | 5 | 389 |
| 8 | 4 | 319 | 17 | 3 | 132 |
| 9 | 5 | 470 | 18 | 4 | 328 |
| OUT | 35 | 2,531 | IN | 36 | 2,729 |
| | | | TOTAL | 71 | 5,260 |

| Green Tees | | | | | |
|------------|-----|-------|-------|-----|-------|
| Hole | Par | Mtr | Hole | Par | Mtr |
| 1 | 4 | 200 | 10 | 3 | 156 |
| 2 | 4 | 324 | 11 | 4 | 286 |
| 3 | 3 | 94 | 12 | 5 | 391 |
| 4 | 4 | 287 | 13 | 4 | 160 |
| 5 | 4 | 320 | 14 | 4 | 220 |
| 6 | 3 | 70 | | 5 | 382 |
| 7 | 4 | 195 | | 5 | 375 |
| 8 | 4 | 294 | 17 | 3 | 124 |
| 9 | 5 | 385 | 18 | 4 | 282 |
| OUT | 35 | 2,169 | IN | 36 | 2,376 |
| | | | TOTAL | 71 | 4,545 |



Trials and Specifications

Greens Specifications

In late 2017, the Turfcare Team commenced a trial on the short practice range green to assess a number of initiatives aimed at improving the playing standard of all greens at Royal Sydney. The trial was comprised of multiple elements, which included:

- USGA-specified greens construction methodology.
- Testing of several combinations of soil profile and turf species.
- Installation of moisture sensors, new irrigation system and SubAir system.

USGA GREENS SPECIFICATION

The USGA greens specification, used internationally since the 1960's, consists of a drainage pipe, gravel layer and a growing medium. The specification sets out parameters against which to measure each component in order to ensure that the quality of the products used during construction can be assured.

SOIL PROFILES

The Trial Green featured two different soil profiles: one from a quarry at Coolac ('Eulonga') and one from a quarry in Menangle ('Benedict'). Following the trial period, it was concluded that Eulonga was the most suitable to use as the growing medium because it recorded higher values for surface firmness, retained slightly more moisture and showed greater root growth and an increase in secondary root branching. Both profiles have tested well with good drainage rates and nutrient retention.

GRASS SPECIES

This Trial Green assessed two species of grass: Pure Distinction Creeping Bentgrass and A1/A4 Creeping Bentgrass. Following the trial period, it was concluded that Pure Distinction Creeping Bentgrass was the most suitable grass for producing smooth true putting surfaces. Its colour, density, the fineness of the leaf, resistance to disease and the ability to recover quickly are what makes it stand out from other bentgrass varieties.

SUBAIR SYSTEM

SubAir is a system that can be installed under greens to control airflow and surface water retention by removing excess moisture being held in the subsoil. In simple terms, it is like a giant vacuum cleaner that can either suck moisture out of the ground or push air from below up through the playing surface to increase oxygen levels and stimulate plant growth by creating optimum growing conditions.

The system was installed beneath the Trial Green and tested throughout 2018. While the tests were highly successful, it is not envisaged that all 18 greens on the new Championship Course will feature a SubAir system. However, each green will be built with the 'in ground' infrastructure necessary to support the system if needed in the future.









Trials and Specifications (cont.)



Tees, Fairways & Roughs

Windsor Green Couch (not to be mistaken with the Wintergreen Couch currently used on the Championship Course) is a newer variety of Couch grass that has been developed using Wintergreen as the maternal plant. Windsor Green has been found to produce superior density, colour and wear tolerance as well as lower seed head production with no pollen. This ensures the turf is drought and disease tolerant, as well as recovering quickly from wear; making it the perfect choice for use on the Championship Course.

This grass has been used in numerous areas around the golf courses over the past 10 years where the Turfcare Team have needed to purchase new turf for repair work.

Bunker Specifications

The construction of the Trial Green on the short practice range also provided the Club with the opportunity to undertake another significant 'test' project - the creation of a set of trial bunkers. These two bunkers allowed the Club to analyse and evaluate potential future bunker design and construction methodology. A significant focus of the trial was to scrutinise the potential sand choice, with options being evaluated for playability, colour, stability and drainage.

BUNKER LINER - "KUSTOM BIND"

The "Kustom Bind" liner uses a 70mm gravel layer spread across the floor and walls of the bunker which is sprayed with a polymer to bind the gravel together while remaining porous - this allows water to move through the gravel. Kustom Bind will be installed in all bunkers and, as a result, the bunkers will require significantly less maintenance and the Turfcare Team will have much more control over bunker presentation.

BUNKER SAND

The bunker sand that has been chosen for use in all the Championship Course bunkers is Benedict Premium Quartz Bunker Sand which is sourced from a quarry in Cowra NSW. As this sand has particle sizes less than 2mm with an angular particle shape, it has an excellent plugging resistance, drains well and the angle of repose is such that it sits well and is stable on bunker faces. This bunker sand is also compatible with the Kustom Bind liner.







Trial Landscape Areas

Landscape Architect Harley Kruse, with the assistance of the Club's horticultural team, created a number of trial landscape areas to test the suitability of various native species, as well as to demonstrate the look and feel of the proposed Championship Course.

Harley's landscape plan for the bunker surrounds, using the heathland characteristics, was designed to give Members an idea of the general appearance of this landscape style, though bearing in mind that the landscape will continue to transform as the plants grow to reach full maturation.

SUSTAINABLE

"The Royal Sydney Heath, with its sophisticated range of **native flora with a variety of texture**, **form, colour, and seasonal flowering** provides all the ingredients to create a sustainable sanctuary with a unique character and identity on the Championship Course - **there will be a sense of place**."

- Harley Kruse

Artist's impression of view across the 2nd Green to the Clubhouse

Introduction to the Landscape Plan

The proposed Championship Course landscape has been designed in a fashion that will provide Members with a golf course sanctuary that will be aesthetically appealing, sustainable, and friendly for all Members - golfers and non-golfers.

Internationally acclaimed golf course landscape architect, Harley Kruse, has been engaged by Royal Sydney to work with golf course architect Gil Hanse. Their shared vision is to restore some of the historic components of the course as well as returning the landscape to its original heathland character.

An introduced and unsustainable ecosystem

The Championship Course originated as an Australian native heathland golf course and, for many decades, the landscape was synonymous with the local ecology. However, over the past several decades the course has changed character into a dense, parkland-style course - though even this identity is compromised by inconsistencies and anachronisms.

The birdlife and native fauna is sparse and floral diversity is limited to just 30 different species. The trees planted over 70 years ago, which fundamentally changed the course into a parkland style course, are now ageing, narrowing the fairways and failing at an increasing rate.

Creating a legacy: The Royal Sydney Heath

The Landscape Plan is designed to return to the original heathland character of our course. This will create more seasonal flowering interest along with textural and colour differences that exist in the dynamic plant species of the Sydney coastal heathland and Eastern Suburbs banksia flora communities.

These species, some of which are extremely rare or endangered, will form a palette of plants and trees unique to the Club's Championship Course and will create a landscape we can proudly call the 'Royal Sydney Heath'.

In order to achieve this, 703 trees will be planted, made up of attractive and sustainable local species, suitable for golf while being consistent with the original vegetation of the area. The planting and establishment of these trees will coincide with the removal of 559 trees identified as detrimental to course health, as well as others that were deemed to impact the playability of the new design.

This will create a self-sustainable Royal Sydney Heath ecosystem which will maximise the geographical and environmental aspects of the course. Tree selection will also re-open views across the course - some views having not been seen for years.

The landscape design will also see the staged establishment of more than 500,000 small heathland shrubs, sedges and grasses, which will be planted to restore the course's ecological diversity and to create a sustainable landscape which requires minimal water use. These plants are made up of 110 native heathland species, all of which are found scattered throughout Sydney's Eastern Suburbs.

The landscape will feature a sophisticated range of diverse and unique flora and fauna providing a vast range of colour, texture and form and provide seasonal flowering all year round. Most importantly, this flora will restore habitat within the course and bring back the birdlife, bees and other insects, while providing enjoyment for golfers on the course, as well as Members in the Clubhouse.

'Royal Sydney Heath'

The Royal Sydney Heath will be an identifying feature of the Championship Course and will make the Club's property one of the most important sustainable sanctuaries of native flora and fauna in Sydney's Eastern Suburbs.



Trees

The Championship Course is currently dominated by a small variety of medium-to-large tree species, such as Paperbark (*Melaleuca quinquenervia*). At over 70 years old, these trees are deteriorating and structural failures are occurring more frequently on the course. Many of these trees have also grown to crowd play lines, narrow fairways, and cause shade and airflow problems, impacting turf growth. Some other species are classified as 'noxious weeds' such as the African Olive - which are damaging to surrounding flora.

To implement the proposed Landscape Plan, 559 trees deemed detrimental to the course health or impacting on playability of the new design will be removed. They will be replaced by 703 new attractive, sustainable and native species to provide greater diversity - and greater numbers - of our medium-to-large trees. These species include Sydney Peppermint, Coastal Banksia, Old Man Banksia, Scribbly Gum, Red Bloodwood and Angophora. Many of the established perimeter and internal trees will continue to provide shade along playing corridors - along with newly planted species in various locations.



GREATER DIVERSITY

- ✓ Floral diversity an increase from 30 species to 110 species.
- ✓ 500,000 small heathland shrubs, sedges and grasses added.

MORE TREES

- ✓ 559 trees deemed detrimental to course health or impacting playability removed.
- ✓ 703 new trees re-planted.
- ✓ Net gain of 144 trees.

TRANSITIONS

- ✓ 62 different species of shrubs and low profile plants combine with large trees to add landscape shape and dynamic.
- ✓ 42 species of native grasses, sedges and rushes help transition the landscape into the playing areas.

Championship Course Landscape Plan (cont.)

Shrubs and Low Profile Plants

A fundamental aspect of the proposed Landscape Plan is to bring more shape and character to the course. A total of 62 species of shrubs and low profile plants will introduce a rich and sophisticated landscape with an abundance of different hues, textures and plant form. The carefully chosen species will provide a year round flowering interest on the course, through the entire four seasons. Among these 62 species are soft pinks of the River Rose (*Bauera rubioides*) and Pink Wax Flower (*Eriostemon australasius*), rich reds of the Fuschia Heath (*Epacris longiflora*) and Mountain Devil (*Lambertia formosa*), soft blues of the dainty Australian Bluebell (*Whalenbergia gracilis*), stunning white of the Wedding Bush (*Ricinocarpus pinifolius*) and a range of yellows of the Showy Guinea Flower (*Hibbertia linearis*), Variable Bossiaea (Bossiaea heterophylla), and the multiple species of Wattle and Banksia.



Sustainability and Biodiversity

Royal Sydney's local ecology provides a perfect environment in which native and heathland species thrive naturally. It will require little irrigation, so that the landscape remains lean and natural-looking. It will enable the more sustainable use of our water resources and allow the Turfcare Team to concentrate its efforts on producing optimal playing conditions. Several of the proposed plants are rare or endangered and the use of these species at Royal Sydney can be vital in helping their preservation. The result of this restoration of local species will also have a significant environmental benefit. A greater diversity of flora will provide different food sources and habitat. It will encourage a return of wildlife species on the course – in particular a variety of bird species.



SUSTAINABILITY

- ✓ Heathland landscape will thrive naturally, requiring less water resources.
- ✓ Noxious weeds to be removed, replaced with naturally-occurring species that will better co-habitate with surrounding flora.

COLOUR & TEXTURE

- ✓ Species selected to provide wider range of colour, shapes and textures.
- ✓ Varied species will provide a yearround flowering pattern, guaranteeing colour from summer through to spring.

BIODIVERSITY

- ✓ Diversity of flora will provide food sources and habitat for a wider range of native birds, butterflies, lizards and frogs.
- ✓ Royal Sydney landscape will be a sustainable sanctuary for several rare or endangered species of flora and fauna.

Grasses, Sedges and Rushes

Forming an important part of the vegetation works is the addition of 42 species of native grasses, sedges and rushes. Coming in a variety of rounded and angular shapes, these plants provide light, textured plumes between the denser landscape elements. They are low in profile and thus eminently suited to golf when situated closer to the fairway. They also provide character and ambience on course, and will attract native birds, butterflies and frogs to feed and reside in their foliage. Some of the species included in Harley Kruse's Landscape Plan are Scale Rush (*Lepyrodia scariosa*), Grass Tree (*Xanthorrhoea resinosa*), and Heron Bristle Rush (*Chorizandra cymbaria*).



LEGACY

Securing the future of the Championship Course by **renovating**, **restoring and reimagining it for current Members and the next generation**.

Benefits of Championship Course Plan

What do Members have to look forward to in the design?

Consistent with Gil Hanse's strong philosophy that a golf course should be both accessible and challenging to all levels of golfer, Members can expect a course offering greater accessibility, challenge and strategy. Expansive teeing ground will provide variety and flexibility and a 'two loops of nine' routing will provide more playing options. Many elements of the new design will also provide improved safety on the course, as well as increased speed of play. In addition, the design will assist in providing an overall better quality of turf on the course, in particular the fairways and greens.



Tees

In the proposed new design, teeing ground is 68% larger and the teeing grounds follow a 'ribbon' design to create greater variation among the tees. The front-most tees have wider angles onto the fairway, providing more shot choice and forgiveness. These angles and shot choices become more difficult as you move further back.

This means that each hole will provide a similar degree of challenge to all levels of golfer by presenting them with angles, shot choices and risks befitting their ability. It also means more harmonious play, especially among playing groups of differing skill levels, with the disparities in golfing ability less likely to impede the group's speed of play.

Another benefit of the longer, angled teeing grounds is that they provide a greater level of safety, especially on the holes along the boundary. As many of these teeing grounds face away from the boundary line, there is less risk of a mishit shot travelling over the fence, or even directly into the large trees which line it.

TEES

- ✓ 68% more total area in new design.
- ✓ Greater accessibility, challenges and strategy.
- ✓ Wider course variety and flexibility.
- Improved safety and speed of play.

Championship Course Features Comparisons

| | Current Course (m ²) | Proposed Course (m ²) | Difference (m²) |
|-----------------|-------------------------------------|--------------------------------------|--------------------------------|
| Greens | 9,138 | 10,587 | 1,449 (16% more) |
| Fairways | 69,626 | 114,454 | 44,828 (64% more) |
| Couch Rough | 227,974 | 50,130 | -177,844 (78% less) |
| Tees | 7,475 | 12,524 | 5,049 (68% more) |
| # of Bunkers | 126 | 87 | 39 (31% less) |

Greens

The greens on the proposed Championship Course will be more varied in size, slope and orientation than those on the existing course. This variety will be a feature in the presentation of the golf course.

They will sit more 'on grade' and be integrated with the hole, sitting within the landscape. Greens will be set up on the basis of 'slope' as opposed to the current greens which are based on 'undulation'.

Constructing the greens according to USGA methodology will create a firmer putting surface than the current Championship Course greens.

GREENS

- \checkmark Greater variety in size and orientation.
- ✓ Constructed to USGA specifications.
- ✓ Consistent putting surfaces.
- Improved drainage providing increased playability.

Benefits of New Championship Course (cont.)

Bunkers

Gil Hanse's philosophy places emphasis on bunkers that are less penal and more strategic. With a reduction in numbers from 126 to 87 in the proposed design, bunkers will present a strategic risk – to shoot over, around or even into. Golfers who may find it more difficult to play out of a bunker are offered more conservative alternatives.

Aspects of the new bunker design offer improved playability. The proposed choice of sand will be more consistent to hit from and less likely to 'plug'. The Kustom Bind liner will provide faster drainage, which means bunkers will be more likely to remain in play following periods of rain.

The new bunker design offers greater safety, with reduced steepness in the faces and more access and exit points. The increased ease in entering and exiting bunkers, as well as easier raking, will help facilitate improved speed of play.

Fairways

The proposed design delivers 64% more fairway through the careful and strategic positioning of bunkers and landscape areas, the reduction of rough, as well as interconnected fairways that naturally flow into each other.

Our existing fairways have an average width of 25 metres. The proposed new design broadens this to an average width of 41 metres. This provides players with a greater range of strategies and shot choices on each hole. It will also increase the speed of play by opening the playing corridors, which are currently quite narrow in many places. It also means less time spent searching for balls in the rough.

The open fairways improve safety by increasing line of sight. Golfers will better see mishit shots and call out a warning. Similarly, golfers standing on the perimeters of holes that border other holes will be more visible. A factor inhibiting turf health on many existing holes has been the formation of humid 'micro-climates' due to a lack of airflow. A widening of the playing corridors will improve airflow, providing better growing conditions for turf.

Landscape

In addition to the ecological and financial sustainability improvements, the proposed course landscape provides a number of golfing benefits. The landscape will transition through progressive layering starting with couch rough, then small shrubs, low profile plants and grasses, before transitioning into the larger and more dense planting which will be farthest from the fairway. This will provide more space for shot selection and strategy.

The shape and contouring of the landscape areas will also assist with increasing the airflow which will benefit turf health.

The heathland flora has been selected for its ability to thrive naturally in the local ecosystem, and will require far less maintenance and irrigation than the current areas of couch rough. It will be easier to find balls that have been played into areas off the fairway and, with greater visibility and more options, hit a recovery shot. This not only improves playability, but also speed of play.

Better sight-lines and visibility will also increase safety on course. The introduction of new, younger trees will also provide another safety benefit by decreasing the number of age-related tree failures.

The removal of 559 trees will initially result in a small reduction in canopy cover. However, as the 703 newly planted native trees grow in, this will change. After 10 years it is predicted that there will be more canopy cover than our existing course. This will mean more shade cover, while the strategic placement of the trees will mitigate the negative impacts currently posed by our existing trees.



Please note that the above images are only intended to be visual representation of the design aspects discussed in this section.

BUNKERS

- ✓ More strategic and less penal.
- ✓ Greater accessibility and safety.
- More suitable sand that will be easier to rake.
- ✓ 39 fewer bunkers in total.

FAIRWAYS

- ✓ 64% more fairway area.
- ✓ Better turf quality.
- ✓ Greater contouring.
- ✓ Improved safety and speed of play.

LANDSCAPE

- \checkmark More variable challenges and strategy.
- ✓ Progressive layering of vegetation.
- \checkmark Increased safety and speed of play.
- ✓ Better turf quality.
- ✓ More tree canopy cover.

Benefits of New Championship Course (cont.)

How will the Design Lead to Better Turf Quality?

Consistency is a key component to golf course management. Given consistent growing conditions, selected turfgrass species will always out-compete invasive weed species. It is only when conditions are poor and turf health is diminished that invasive weed species like *Poa annua* take hold.

The current growing environment, grass types, soil profiles and ageing infrastructure sees the Club delivering good playing surfaces at various stages of the year - but not consistently. Most weeds and invasive species like Poa are opportunistic, seizing upon shortcomings in the turf health. Poa notably has a shallow and fibrous root system that thrives in damp, shady conditions where turf health is poor. Numerous elements of the proposed new design will help deliver better playing surfaces by providing more beneficial growing conditions for our turfgrass, while eliminating factors that give rise to Poa infestation.

Removing the Current Poa Seedbank

Early in the construction process the current turfgrass will be stripped and removed from the Championship Course. This is because, within the current turf grass, there is a seedbank of Poa residing in the thatch (upper) layer.

To purge the course of Poa entirely, removing this turf and Poa seedbank is a necessary first step. We will then start with a fresh new canvas without Poa seed and, through the other facets of course design outlined on this page, create a growing environment that will inhibit Poa germination.

Drainage Improvement

Turf health declines in wet, shady areas. Conversely, these conditions are perfect for growth of Poa's shallow root system. The proposed new design not only upgrades but also adds to the existing drainage network. Every green and bunker will be drained using dedicated drainage pipes.

This will provide better water movement through the soil profile and off the course. It will allow us to add extra drainage to areas where concentrations of water might form after wet weather. The shape and contouring of the golf course will also assist in improving drainage by naturally dispersing water around the property and avoiding the flooding of low-lying areas.

New Irrigation System

As part of the plan, a new state-of-the-art irrigation system will be installed. This will include a new storage dam, pumps and pump shed. The system will allow better control of water, resulting in more efficient use and precise delivery of water to each surface. This will help maintain strong, healthy turf that can out compete weeds and create a growing environment that is less favourable for Poa.

Trees

Harley Kruse's Landscape Plan has 559 trees being removed and 703 trees being planted. Not only will this result in a total gain of 144 trees, but their size, shape and positioning will also improve the health of the course.

When in the wrong position, trees block sunlight, restrict airflow and the roots fight turfgrass for water and nutrients. This diminishes turf health and increases the likelihood of Poa infestation. With better contouring, positioning and species selection we can enjoy a landscape that is more harmonious with our playing areas and promotes the growth of healthy turf.

Greens

The turf species selected for use on the greens is Pure Distinction Creeping Bentgrass. One of the primary reasons it was selected is its dense, upright aggressive growth with an exceptional ability to compete against Poa.

The greens will be constructed using the USGA methodology and the 'in ground' infrastructure to utilise SubAir technology will be installed. This will ensure a more controlled drainage rate of the green which will reduce the need for watering. The methodology, which features a gravel layer and sand-growing medium, allows moisture to be retained at the base of the root zone, which encourages the deep-root growth.



Water drains through the soil profile.

Water drains through soil profile but is slowed at the gravel layer to encourage bentgrass growth. SubAir enables management of the moisture content in the root zone.

Solid Turfing

All tees, green surrounds, fairways and roughs will be turfed using solid rolls of turf that will be grown off-site. The turf will be procured, managed and prepared to precise specifications set by the Club.

Once each hole is completed, solid turf will be laid. This process will instantly cover any exposed sand and form a solid expanse of turf, protecting it against invasive weed content. The benefits also include dust suppression, erosion control and a shorter establishment period for the turf.





- **A** Add 3 metres to front of tee. Add native plants to bank below tee.
- **B** Enlarge and re-grade tees to one level to tie into Small Practice Putting Green.
- C Create new forward tee.
- D Lower vegetation to improve visibility.
- E Fill in part of existing bunker to expand fairway to the left. Reshape 3 fairway bunkers.
- **F** Expand fairway by 10-15 metres and reshape landform to slope to the right.
- G Remove 3 existing greenside bunkers.
 Reshape 2 new greenside bunkers on right.
- H Remove 25 Pine Trees to rear of 9th green.
- I Remove 5 large Fig Trees and create low heath area.
- J Create narrow ridge-top green.







- A Create a single free-form tee deck.
- **B** Add a new forward tee.
- C Remove 3 Hoop Pines, 3 Cheese Trees, 1 Paperbark and 1 Fig Tree.
- **D** Expand fairway by 2 metres.
- **E** Reshape 2 bunkers and strip back of bunker dune to expose sand.
- **F** Remove bunkers and create connection with 9th fairway.
- **G** Remove existing fairway bunkers on left and reshape complex as 3 bunkers.
- H Expand fairway by 5 metres on both sides. Remove 3 Paperbarks.
- I Remove existing bunkers and build 4 new bunkers.
- J Create a new green 45 metres short of existing green turning the hole into a par 4.
- **K** Remove 5 Figs. Build new greenside bunkering and create sandy pits in hillside.
- L Remove Eucalyptus to rear of existing green.









- A Create new tees with short grass connection to 3rd green.
- **B** Create new forward tee.
- **C** Extend fairway by 35 metres towards the tee and expand to the left.
- **D** Remove Paperbarks and Angophora between 4th and 8th holes.
- E Expand fairway by 15 metres.
- F Remove 3 Paperbarks, 2 Pines and 1 Apple Myrtle.
- **G** Remove 10 Paperbarks between 4th and 8th holes.
- Fill 'bathtub' to reconnect ridge to elevation of current green. This will work as a feeder slope onto new green. Utilise new landform for new large fairway bunker on left and 2 greenside bunkers on right.
- I Create short grass connection to new 5th tees.







- A Relocate tees to left of 4th green with new back and forward tees.
- **B** Prune Fig Trees on boundary.
- **C** Lower native vegetation.
- **D** Expand fairway 5 metres to the left and fill bunker to create connection with 7th fairway.
- **E** Fill in 2 bunkers and reshape 3rd bunker to create a centerline hazard.
- F Remove 4 Paperbarks.
- **G** Remove 7 Paperbarks and a Kaffir Plum to set up expansive bunker on 6th hole.
- **H** Fill in existing bunkers to create steep tight mow slope up to green.
- I Create tight mow trench valley between green and 6th tees.







- **A** Expand and reshape tees into a multi-tiered free-form deck.
- B Remove 17 Coast Banksia, 2 Saw Tooth Banksia, 5 Tea Trees, 7 River Sheoak, 1 Swamp Sheoak, 3 Kanooka, 2 Apple Myrtle and 2 Pines. Create expansive bunker-carry extending into the area between 5th, 6th and 7th holes.
- C Build new green shifted closer to tee.
- **D** New bunkering to provide backdrop for the hole.







- A Create new short par 4 starting from existing 14th tees.
- **B** Create new free-form tees.
- C Remove tree left of new forward tee.
- **D** Remove existing green, existing bunkers,
 17 trees behind existing green and existing tees. Create new fairway as per drawing.
- **E** Build 3 new fairway bunkers along right side of hole.
- **F** Raise the right half of the fairway to create a strong right to left slope.
- G Remove 4 Paperbarks.
- H Build new green complex with 2 bunkers behind green.







- A Create new set of tees to the left of existing 15th tees.
- **B** Remove 3 Paperbarks and create connection with 12th fairway.
- C Build 2 new fairway bunkers on right.
- **D** Build new green and greenside bunker as per drawing.
- **E** Remove existing 15th green and bunkers. Use material to create new green complex and new 9th tees.
- F Remove 4 Paperbarks.







Par: 5

545m

() 510m

470m

385m

- **B** Fill in bunker and connect 9th and 11th fairways.
- **C** Remove 3 Paperbarks and add new bunkering right of fairway.
- D Fill in bunker and expand fairway.
- E Remove 6 Paperbarks. Reshape 2 fairway bunkers high into ridge supporting 11th tees.
- F Remove 10 Paperbarks.
- G Fill in 4 fairway bunkers and build 2 new bunkers +/- 35 metres down range. Expand fairway around and connect with 2nd fairway.
- H Remove 10 Paperbarks.
- I Expand existing diagonal fairway bunkering.
- J Remove 3 existing bunkers right of green and build three-bunker complex.
- **K** Remove 2 Willow Myrtles and create short grass connection to new 10th tee.







- A Reshape and expand existing 17th tees for new 10th hole complex connected to 9th green.
- **B** Remove 36 Paperbarks and 3 Willow Myrtles between the 10th and 18th holes to create a fairway connection.
- **C** Reshape bunker to set up green angle.
- **D** New green to be expanded and wrapped behind diagonal bunker.
- **E** Fill in behind green to connect green to ridge and create sand and vegetation dune backdrop.







- A Create new back tee and connect to dune between 11th tees and 10th green.
- **B** Reshape dune and bunkers between 11th tees and 9th fairway.
- **C** Remove 1 Pine and 2 Cook Islands. Reshape dunescape between 11th and 17th holes.
- **D** Remove 16 Paperbarks, 2 Figs, 2 Willow Myrtles and 1 Monterey Pine and create fairway connection with 17th hole.
- Fill in bunker and expand fairway connection with 9th hole. Reshape bunker shifted +/- 25 metres down range.
- **F** Remove 4 Paperbarks and 1 Pine. Build new fairway bunker on left.
- **G** Remove 1 Paperbark on left. Build new fairway bunker on left.
- H Remove 16 Paperbarks, 3 Honey Myrtles and 1 Casuarina.
- Remove existing green and bunkering. Build new green with a central and back right greenside bunker.
- J Create short grass connection to new 12th tees.







- **A** Create new free-form tee and connect to 11th green with short grass.
- **B** Remove 9 Paperbarks and 2 Honey Myrtles.
- **C** Remove 14 Paperbarks, 1 Tea Tree, 5 Banksia and 2 Kaffir Plum. Create native sand and vegetation area with added drainage to address wet low.
- **D** Remove 17 Paperbarks and create fairway connection to 8th hole.
- **E** Build 2 new fairway bunkers on the right and expand fairway 10 metres to the left and right.
- F Remove existing bunkers.
- **G** Remove 7 Paperbarks, 1 Pohutukawa and 1 Grevillea.
- H Remove Tea Tree.
- Remove 1 bunker and rebuild 2 new fairway bunkers on the left expanding larger bunker up into plateau.
- J Create bunkered and native hillside to 16th tee.
- **K** Fill elevation to create high plateau for new green.
- L Remove existing bunker behind green. Remove1 Paperbark and 2 Kaffir Plums.







- **A** Create a new drive-able par 4 starting from existing 7th tees.
- **B** Add new back tee.
- C Prune 6 large Figs on boundary.
- **D** Create larger middle tee with short grass connection to 15th green.
- E Remove 1 Kaffir Plum and 2 Tea Trees.
- **F** Add new forward tee.
- G Dig out triangle of dirt to create new angle on fairway. Build new large bunker into landform. Expand fairway in front +/- 10 metres.
- H Remove existing bunker. Use fill from bunker to expand ridge and build steep fairway sloping up to green. Expand fairway left +/- 5 metres.
- Remove existing bunkers. Remove 11 Coastal Banksia, 5 Willow Myrtle, 1 Eucalyptus and 1 Kanooka. Build new green as per drawing.







- A Create new par 4 finishing at existing 7th green site. Build new back, middle and forward tee complexes.
- B Remove 19 Paperbarks, 2 Monterey Pines, 5 Willow Myrtles, 2 Queensland Box and 3 Kaffir Plum between 14th and 15th holes. Create native sandscape and connection with 15th hole.
- C Expand fairway 15 metres to the left.
- **D** Create new bunkers and fairway movement to maximise angles and strategy.
- **E** Build new green shifted back +/- 5 metres and at lower elevation.
- F Remove 1 Pittosporum, 3 Silky Oak,
 1 Weeping Fig, 1 Morton Bay Fig, 1 Willow Myrtle, 2 Black Tea Trees, 1 Saw Toothed Banksia and plantings behind green.
- **G** Move road to edge of property away from play. Relocate storage area elsewhere on property.







- **A** Create new par 5 by combining the playing corridors of existing 8th and 9th holes.
- **B** Remove 32 Paperbarks, 1 Oleander, 1 Tea Tree and 1 Grevillea and create new large free-form tee.
- **C** Create new forward tee elevated 0.5 metres above current grade.
- Remove existing fairway bunkers and create fairway connection with 14th hole.
- E Remove large Monterey Pine. Build new large bunker and expand fairway left.
- F Remove existing green and bunkering.
 Reshape landform lower and tier into top of ridge for new fairway tying into existing 9th.
- G Narrow existing 9th fairway on left.
- H Remove 5 Pines.
- I Remove Monterey Pine and Fig on left. Expand fairway on left and right.
- J Remove 5 Pines, 2 Queensland Box, 1 Tea Tree. Create new fairway bunker on right.
- **K** Rebuild bunker expanded and with raised top edge to obscure view of approach.
- L Remove existing green and bunkers. Build new green complex and new greenside bunkers.
- **M** Pull native back on right and clean up fairway edge. Make tight mow connection to 13th tees.
- **N** Remove Paper bark and 2 Kaffir Plums.







- **A** Remove 2 trees and 15 metres of native vegetation to create a large free-form tee.
- **B** Create sandy dunescape tying into bunkering on 12th hole.
- **C** Create new forward tee.
- **D** Expand left and right side of fairway +/- 5 metres.
- E Rebuild bunker expanded down the right side.
- F Remove existing green and bunkers and expand fairway 15 metres to the right. On left, remove existing tee complex and 1 Sheoak.
- **G** Create new landform connecting 17th tees and build new bunker short left of green.
- **H** Build new green complex +/- 70 metres down range from existing green.







- A Create new par 3 over existing 11th hole.
- B Remove 8 Paperbarks and 1 Monterey Pine. Create a large free-form tee connected to 16th green.
- C Create fairway connection with 11th hole and expand fairway +/- 20 metres left.
- **D** Create new green and bunkers tying into large mound in the back right.







- A Create new large free-form tee +/- 40 metres back from existing tee.
- **B** Build new forward tee.
- **C** Expand beginning of fairway to the left +/- 15 metres and make fairway connection with 10th hole.
- Remove trees between 18th hole and Centenary Course / Long Practice Range.
 Create a series of lows to collect and transfer water during rain events.
- Create new bunker series on left side of fairway.
- **F** Expand fairway right +/- 25 metres.
- **G** Remove 8 Paperbarks, 6 Tea Trees and 1 Honey Myrtle.
- **H** Raise fairway +/- 1 metre and expand on left and into ridge on right.
- Remove existing green and bunkering. Build new green featuring a large false front and steep sides. Build 3 new greenside bunkers.





Financial Summary

2021/22 capital expenditure: \$16.85 million

Subscription rates during Championship Course closure will have 0% increase. This will apply to all Member categories. For example:

| 4% | 2020 | \$201* |
|----|------|--------|
| 0% | 2021 | \$0* |
| 0% | 2022 | \$0* |
| 4% | 2023 | \$209* |

*Amounts above are based on the 'Senior Member' subscription rate.

Fees for Lockers and Golf Bag Storage will also have 0% increase in 2021 and 2022.

Construction will be funded from the Club's cash reserves. No bank loan forecast.



Indicative Project Schedule

| W/C 19th August | Information Displays open in Clubhouse |
|-----------------|----------------------------------------|
| W/C 19th August | 'Clubhouse Chats' start |
| 17th September | EGM |
| September 2019 | Lodgement of Development Application |
| June 2020 | Detailed design completed |
| October 2020 | Tenders close |
| April 2021 | Championship Course closes |
| April 2022 | Championship Course re-opens |
| | |