

PITCH

18 HOLES OF
GOLFING
CHALLENGE IN 3.6
HECTARES



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WHAT IS PITCH AND PUTT?

A great little golf game that is basically fun, has a challenge and offers a good opportunity to finesse the short game. It requires guile and skill, not brawn.

Pitch and Putt suits all ages for either competition or social play. It offers a great way for juniors to learn golf and for seniors to compete without the daunting length of a long par 5. Other golfers can use it to practice the short game essential to a winning score on their 5800m+ course - remember around two thirds of strokes are within 100m of the green.

For many it is just a pleasant way to while away 1 to 2 hours in good company or catch some quick stimulating exercise before or after work, or even at lunchtime!

Players are only permitted two clubs - a wedge and a putter.

9TH HOLE & 18 GREEN ACROSS POND



PUTT

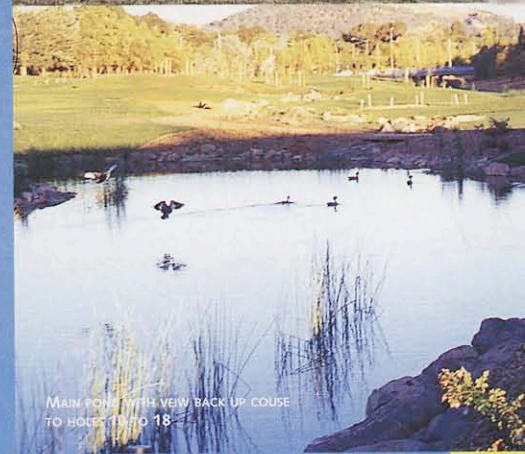
SOUTHERN CROSS PITCH AND PUTT

Jamie Dawson of Enviro Links Design Pty Ltd was appointed head consultant to undertake the golf course design and specialist supervision. Key support was provided by J.G Service Pty Ltd Project Managers; Young Consulting Engineers Pty Ltd and Greenleigh Irrigation Design.

The client was the Southern Cross Club which comprises four social clubs in Canberra with approximately 80,000 members! Their Yamba Sports Club adjoins the site which is near the Woden Town Centre.

THE KEY FEATURES OF THIS PREMIUM QUALITY PITCH AND PUTT ARE:

- located on 3.6 hectares
- 18 holes ranging from 38 to 71 metres length, totalling 868 metres.
- greens 115 to 180 m² totalling 0.25 hectares
- 13 bunkers
- synthetic turf tees
- 2.25 hectares irrigated area (marginally more than a full size Australian Rules Oval)
- 5000m³ fill and 3500m³ cut to transform the original gentle sloping site.
- designed to appeal to all standards by exciting the good player but not being too difficult for the beginner.



MAIN POND WITH VIEW BACK UP COURSE TO HOLES 1 AND 18

DESIGN / MAINTENANCE ELEMENTS INCLUDE:

WEAR: 400+ players a day on a compact site with small greens! Dispersed wear access, especially from each green to next tee, is therefore critical in the design. Fortunately few players wear spikes and even pull buggies are uncommon. Synthetic tees mean that even if the tee shot only goes 30 metres the approach shot is usually only a part swing without a divot.

Greens are built to USGA standards and other topsoil has reasonable hydraulic conductivity to ensure sustainable wear regimes, even in the wet.

BUNKERS: Bunkers are generally shallow to allow for a range of standards and skill. Bunkers are often used to protect adjacent holes or prevent balls rolling out of bounds.

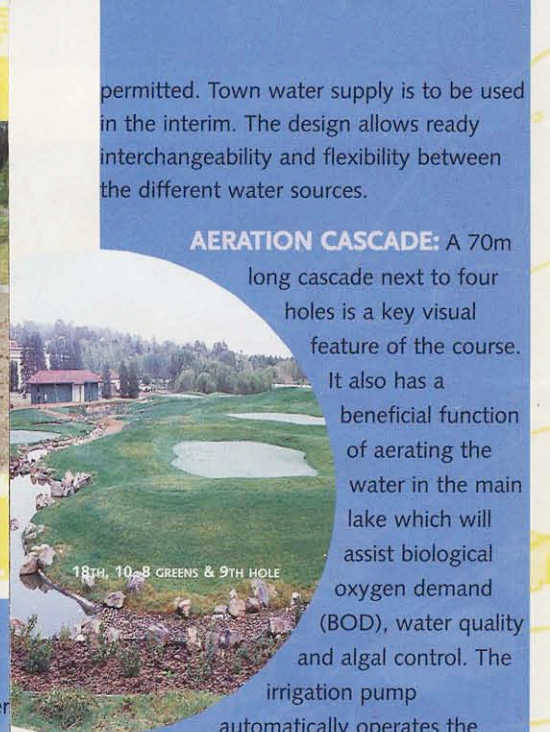
GREENS: The greens are small and at gentle grades to allow maximum pin positions. Subtle breaks are used to keep up players interest. The two larger greens at 180m² have a tier for added interest.

MOUNDING: As the original site had no features of interest mounding was used to:

- create character and visual appeal;
- ensure a full range of stances and lies to



PREPARATION FOR SEEDING & TURFING



18TH, 10-B GREENS & 9TH HOLE

permitted. Town water supply is to be used in the interim. The design allows ready interchangeability and flexibility between the different water sources.

AERATION CASCADE: A 70m long cascade next to four holes is a key visual feature of the course.

It also has a beneficial function of aerating the water in the main lake which will assist biological oxygen demand (BOD), water quality and algal control. The irrigation pump automatically operates the cascade by day using one station on the controller.

RESOURCES

The golf course design was comprehensively documented on 13 No. B1 plans at 1:250 scale, plus details. A 100 page Specification and Bill of Quantities supported the golf course and civil works. The works was put to competitive tender with 4 local civil engineering contractors. Woden Contractors Pty Ltd were successful with a tender in the order of \$700,000 for the golf course works. (This excludes costs of starters hut, offsite works, land purchase and maintenance equipment). The course budget increased in the order of 15% with the November 1998 decision to turf greens and most of the key play areas to make up for protracted earthworks delays due to consistent Winter/Spring 1998 wet weather.

The Superintendent, Bruce Grimmond took over the Pitch and Putt consolidation in January 1999. He leads a multi-skilled team maintaining 3 bowling greens, club gardens and the pitch and putt. Their staff resources doubled from 2.5 to 5 persons with the addition of the course.

The Southern Cross Pitch and Putt opens mid April 1999. Enviro Links Design believe these short courses, if well designed and appealing to all ages and range of golfing ability, have a very positive future in well sited locations.



ensure the experienced golfer gets a good range of practice opportunities; reward pitch and run or high lob shots for variety depending on the land form or pin position.

All slopes are less than 1 in 4 so machine maintainable.

VEGETATION: Due to the tight space, need for dispersed wear and sun access for turf - trees are generally limited to select 'out of play' areas.

Tufted lomandra/dianella and macrophytes (reeds and sedges) are used for visual highlights and contrast. Species selection varies dependent on the water regime.

The only existing trees are perimeter willows and poplars requiring root control barriers in key areas.

ENVIRONMENTAL RESPONSIVENESS

Environmental sustainability and providing benefits downstream was a hallmark of the original design approach. The key features included:

NUTRIENT STRIPPING PONDS: The small site has six nutrient stripping ponds with macrophytes above the adjoining floodway to allow treatment of low flow water and greens subsoil drainage. Extensive swales built as an integral part of the course shaping, direct most flows to these ponds.

Many stormwater outlets discharge into the swales to allow nutrient uptake by the turf to disperse the loadings prior to the ponds.

WATER MINING: The key irrigation water source is the Woden stormwater channel that services an urban catchment of 30,000 people. Flow is generally sufficient even in drought periods to supply the 2.25 hectares of irrigated area. This water has reasonable nitrogen and phosphorus loadings, plus other nutrients, therefore course fertiliser needs can be reduced based on monitored soil and leaf analysis.

The floodway water is 'trickle' pumped from a small weir to the golf course lake where the main pump operates a pressurised automatic irrigation system. This applies the high nutrient runoff water

PRECONSTRUCTION DURING EARTHWORKS



to the course allowing its quality to be improved as it passes through the natural filter and uptake systems of the golf course.

Runoff from the course into the floodway should be of higher quality than the water originally pumped out.

Unfortunately this approach requires legislative change and public consultation by the ACT Government which is expected to take 2 years, despite making a positive contribution to their water resource and environmental objectives. Much of the infrastructure is now in place on the course for water mining and a bore when