



## WAITE CONSERVATION RESERVE LOOP WALKING TRAIL GUIDE

Our reserve logo, Blue Devil, is a native plant with upright prickly blue foliage and striking blue flowerheads. It is a grassy woodland specialist.

It grows actively in summer and dies back underground in winter. It is rare, legally listed as vulnerable to extinction, in South Australia.



PLEASE KEEP TO THE PATHS AND RESPECT THE RESERVE

The Waite Conservation Reserve protects an important remnant of original grassy woodland along the hilly backdrop to Adelaide. On this walk you will see how change rules in habitats, especially in grassy woodlands.

The Waite Loop Walking Trail climbs into the foothills to magnificent views over the Adelaide Plains to the sea. Detour to climb a bit higher (to Gate 88) and you can see over hills towards Mt Lofty.

## Waite Loop Walking Trail

Start from the eastern end of Hartley Grove, Urrbrae to use this guide. An alternative entrance is near the large tanks on Hillside Rd, Springfield, close to Elmglade Rd.

**How:** Follow the signposts with the 'Blue Devil' logo and blue arrows.

**Length (Time):** 4 km (allow 2-3 hours)

**Difficulty:** Grade 3; one short steep rocky section and then uneven in parts

Look out for Waite Loop markers along the trail



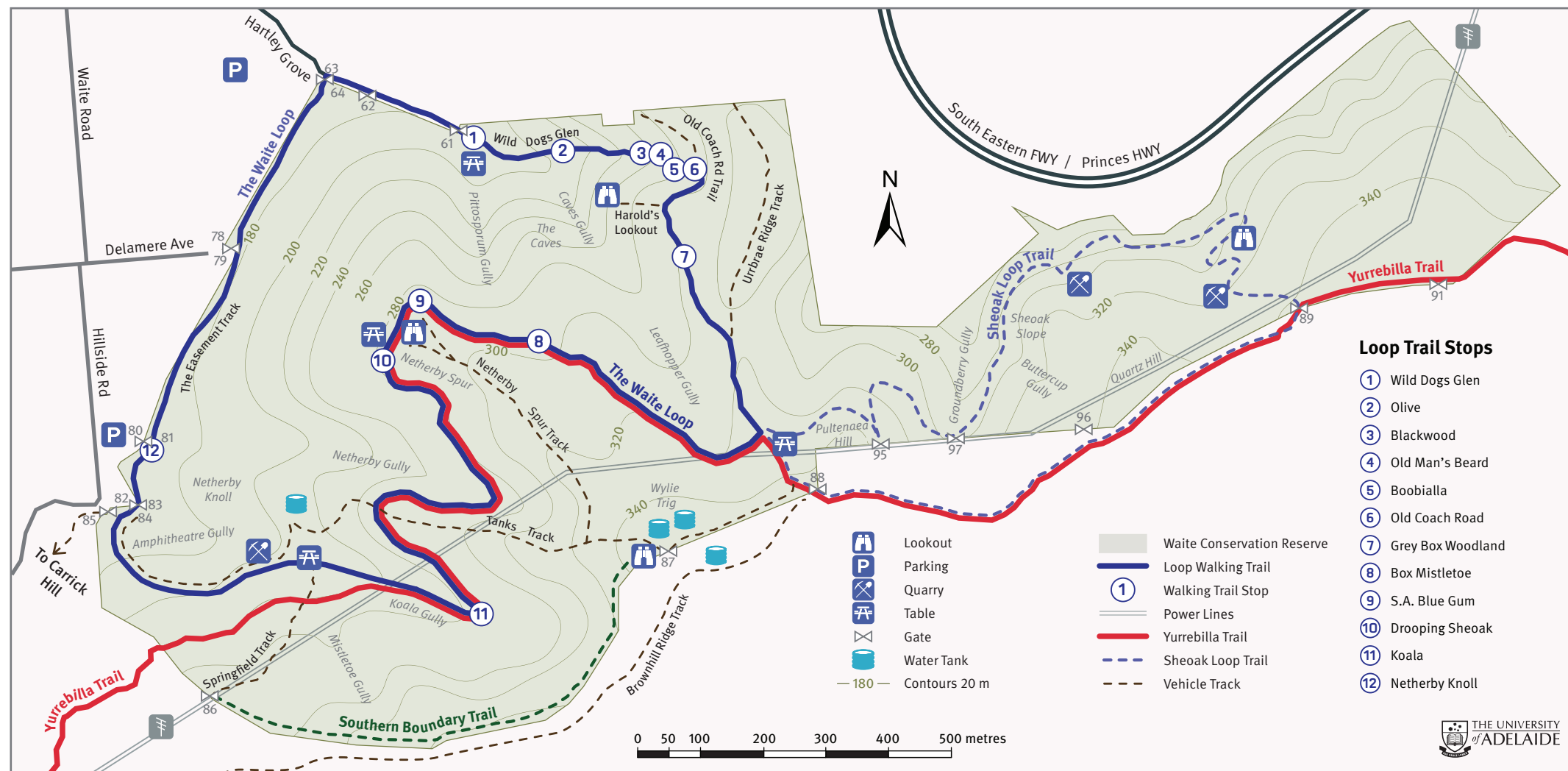
## Sheoak Loop Walking Trail

This loop is an eastward extension of the Waite Loop and takes walkers through farmland and some of the better vegetation of the Reserve. Take a look at the sea-floor from 700 million years ago in the Geological Quarry. For best views, start from the crossroads of the Waite and Sheoak Loops and walk in an anti-clockwise direction.

**How:** Follow the blue signposts with white arrows

**Length (Time):** 2.9 km (allow 45 minutes - 1 hour)

**Difficulty:** Grade 2; no bush-walking experience needed. Mainly gentle slopes with some steps



Welcome to our reserve, where you will get to see how things are changing.

At the time of the arrival of Europeans in South Australia, Grey Box woodlands were widespread on the foothills and plains of Adelaide, and in areas of the South East and the southern Flinders Ranges.

For many years, this land was used for intermittent sheep grazing. Despite this, the Reserve remains one of the best and, at 121 hectares, one of the largest surviving examples of Grey Box Grassy Woodland near Adelaide. Sturt Gorge, Watiparinga and Blackwood Reserve are other examples.

The western part of this land was originally owned by Peter Waite who bequeathed it to the University of Adelaide in 1914. The University purchased additional land to the east more recently.

In 1992 the land was set aside to conserve natural habitat and promote scientific knowledge. Most is protected by Heritage Agreement, and it is a valuable asset for all South Australians.



**Harold Woolhouse 1932-1996**  
(University of Adelaide, 2011)

Setting aside the land as a reserve was achieved with the strong support of Prof. Harold Woolhouse, Director of the Waite Agricultural Research Institute (1990 – 1995).

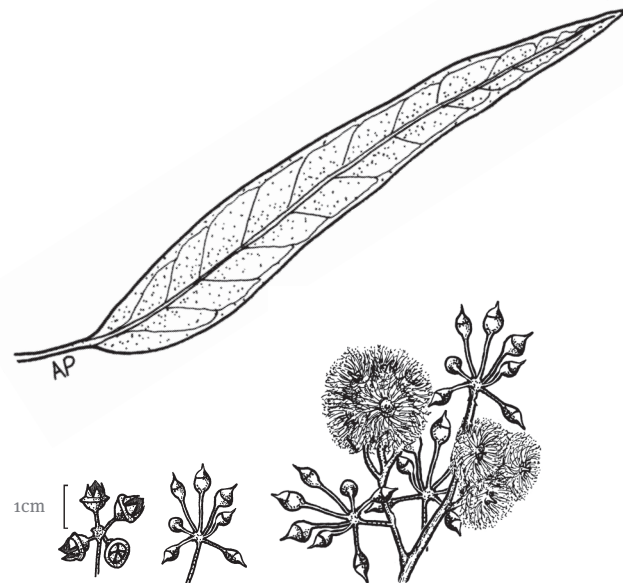
## STOP 1

### Different trees favour different (mini) habitats

Grey Box, River Red Gum, S.A. Blue Gum and Drooping Sheoak are all trees found in this reserve.

A few giant old River Red Gums stand here with the typical spreading branches of woodland trees. They are now surrounded by a large grove of lanky saplings which all came up together after sheep were removed in about 1993. They stretch upwards for light and space without the room for spreading.

River Red Gums grow in gullies and on the shady wetter south-facing slopes. As you climb up this steep gully (and take a well-earned stop) look for the change from Red Gum trees with their smooth pale mottled trunks to the trees with rougher grey-brown bark which are Grey Box.



#### River Red Gum

(*Eucalyptus camaldulensis*)  
Smooth mottled bark, many buds and tiny globe-shaped gumnuts with raised 'equator'.

## STOP 2

### And would you like olives with that woodland?

In this habitat, one must choose between olives and woodland. Here's why.

The ground layer in pristine grassy woodland has long-lived native grasses, lilies, daisies and other wildflowers. Shrubs are only widely scattered or in small groves. The openness of grassy woodlands provides low perches for native birds which specialise in living in woodlands.

Thousands of olive pits are distributed by birds, deer and foxes. Germinating pits form dense thickets of olives which close down the open spaces, bare the ground, and block the flight paths for woodland birds. Olive thickets make it harder for birds to watch for predators and to scan the ground for insects or grass seeds to eat.

Removing olives improves the habitat for woodland birds and also allows more soil moisture to soak in, which helps our native plants to survive.



Hundreds of olive trees have been removed from this gully. It should gradually return to native grassy woodland.

#### Kangaroo Grass (*Themeda triandra*)

### STOP 3

#### Will Blackwood survive climate change?

The Blackwood wattle is usually found in the cool wet gullies and damp soil higher up in the Ranges. Here it's on the dry edge of its range and struggles a bit.

In very much cooler and wetter Tasmania, Blackwoods grow into forest giants big enough to make into tables. Here you'd be lucky to make a table leg out of one. Predicted increases in temperature associated with climate change do not bode well for the already besieged species. It seems possible Blackwood may go locally extinct in the next century. Friends are planting these trees back in the dampest nooks and crannies in the gullies.



#### Blackwood

(*Acacia melanoxylon*)  
Dark brown to blackish trunk, very pale yellow wattle flower-balls, leaves yellow-green.

### STOP 4

#### Native Cherry - feral animals bring new challenges

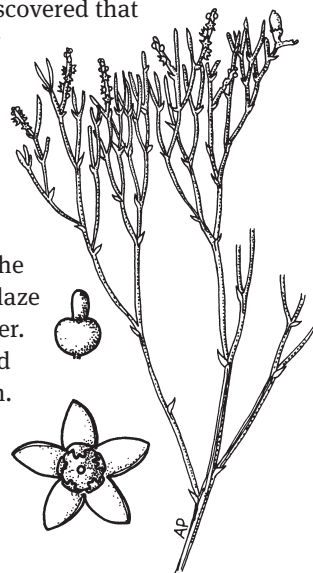
Close by are two Native Cherry trees which resemble small neat pines. Young plants tap into roots of nearby plants for nutrients and water to 'kick start' the sapling.

The fruits of a mature plant grow on stalks that swell to form small fleshy 'cherries' which are eaten by native birds. The trunk is clothed with rich brown strongly-ribbed bark. >>

Introduced feral deer have discovered that this makes a suitable rubbing post for their antlers. Deer rub their hardening antlers against the trunk prior to sparring with other males in the breeding season or rut. Abrasion exposes the light-coloured heartwood of the Native Cherry and creates a blaze – a territorial sign to other deer. Unfortunately all this can lead to ring-barking and tree death.

#### Native Cherry

(*Exocarpos cupressiformis*)  
Twiggy upright branches without obvious leaves, tiny yellow flowers grouped at the tips.



### STOP 5

#### Sticky Boobialla plant numbers ebb and flow across the seasons

Since this sign was created, much regeneration of Sticky Boobialla has come and gone.

Plants of this species responded rapidly to the extra light and nutrients after olive trees were felled in the 1990's. They aged and died after their (20 year) 'moment in the sun' and are now regenerating again. Just as the plants have come and gone so has the name. Sticky Boobialla is now known as *Myoporum petiolatum*

If plants are your thing, visit the Reserve website for the detailed list of 200 species of native plants found here.

**Sticky Boobialla** (*Myoporum petiolatum*)  
Sticky bright green young leaves, pretty white flowers in spring.





## STOP 6

### Even rocks and mountains come and go

This is part of the original Old Coach Road which linked Adelaide and Mount Barker.

In places the road is buttressed with fine examples of dry stonework. The stone was sourced locally from rocks exposed on the Waite hills face; the rocks of the Belair Subgroup.

These rocks represent several thousand metres of sediments deposited under shallow seas 750 million years ago (Late Proterozoic), just prior to the onset of a major glaciation. They comprise mostly siltstone, shale and sandstone, folded and weakly metamorphosed to phyllite and quartzite in a period of mountain-building some 500 million years ago.

Our current foothills are just the stumps of once enormous mountains.

## STOP 7

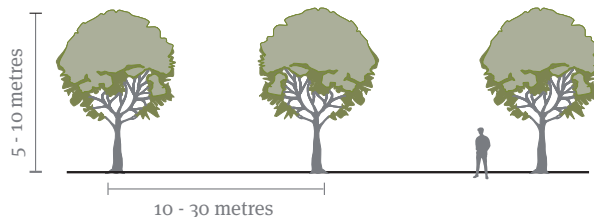
### Grey Box woodland starts to bloom again

Extensive past clearing and grazing of Grey Box Grassy Woodland has now made this habitat of 'mint condition' extremely rare. It is recognised as a nationally threatened habitat or ecological community restricted to small patches.

The quality of woodland in this reserve should improve as we continue work to rehabilitate it. Original understorey plants are spreading back into weeded areas. In spring there are yellow Bulbine Lily, purple Spring Vanilla-lily, yellow Australian Buttercups and ivory Creamy Candles.

Now you see them, now you don't.

In summer, they retreat underground to survive the hot summer as bulbs, corms, or rhizomes, while native grasses such as Kangaroo Grass, Spear Grass and Wallaby Grass flourish and flower. >>



In woodland, trees are widely spaced, often 10-30 metres apart, so that their canopies cast a shadow across less than 25% of the ground at midday. Woodlands are 'see-through' with many grasses, wildflowers and few large shrubs.

## STOP 8

### Every part of Mistletoe is used in nature

Recent research suggests that native Box Mistletoe is not a pest but rather a keystone species – one that has a greater positive effect in the habitat than its numbers would suggest.

Many species depend on ecological services it provides: leaves, flowers, fruit and clump. Leaves are eaten by possums and butterfly larvae; nectar feeds honeyeaters and native bees. In summer, when few other plants flower, its succulent fruit sustains many bird species such as Mistletoebirds, Red Wattlebirds, Silvereyes, honeyeaters and rosellas. Caterpillars of various insects also eat into the fruit. Small birds shelter and build nests in the leafy canopy.

*A healthy tree in woodland can carry some mistletoe without a serious effect. It will outlive and shed the mistletoe. It's give-and-take in the web of life. A big infestation may kill its host, but such a tree will already be stressed from other causes.*

#### Box Mistletoe

(*Amyema miquelii*)

Small red fleshy sugary fruits with sticky seeds develop after the flowers bloom.



## STOP 9

### Give me a home among the gum trees.....

This is Netherby Spur. Relax on a seat. Can you pick out your home among the many thousands of houses laid out before you? What about the homes behind you? At your back are large S.A. Blue Gum trees full of homes.

These provide roost and nest sites for assorted birds: from tiny hollows for Striated Pardalotes or Tree Martins to larger hollows for lorikeets, Adelaide Rosellas and cockatoos. They also house some of the estimated 1000 Ringtail Possums that call the Reserve home. A block of apartments for wildlife.

*If birds are your thing, visit the Reserve website for the checklist of 70+ species of native birds.*

#### Ringtail Possum

*(Pseudocheirus peregrinus)*

Ringtail possums, white tip on the curled tail, nocturnal feeders.



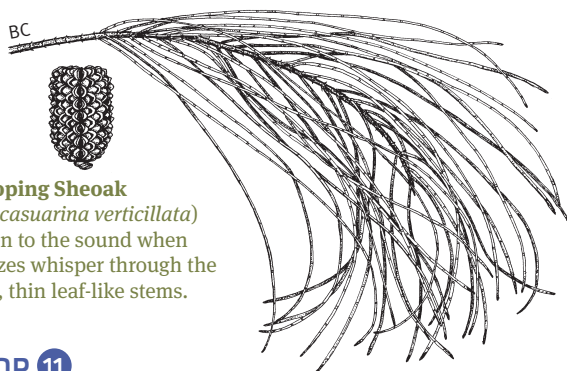
## STOP 10

### There is something timeless about sheoaks

Old sheoaks become gnarled and fissured. Female trees bear cones reminiscent of fossil plants, while tassels of rusty-orange flowers droop from the branch tips of male trees.

They were known as *karko* in the local Kaurna aboriginal language. The Kaurna chewed the stems to relieve thirst and cooked and ate the young cones (*karkomargngo*). Its hard timber was also used to manufacture shields, clubs, and boomerangs.

*Patches of Drooping Sheoak trees mark a series of rocky lookouts around the rim of the Reserve. Their roots penetrate soil patches amongst the outcrops of hard Mitcham quartzite. Crevices in the rocks protect small skinks and tawny dragons. >>*



#### Drooping Sheoak

*(Allocasuarina verticillata)*

Listen to the sound when breezes whisper through the long, thin leaf-like stems.

## STOP 11

### Koalas are a newcomer to this habitat

Koalas are now often seen in the Reserve. A count in 2013 found that there were about 20 koalas here. But it was not always so.

The only naturally occurring koalas in South Australia, in the South East, were shot out in the 1930s, hunted for the fur trade. The ever increasing numbers of koalas near Adelaide are all offspring of Victorian koalas released at nearby Brownhill Creek or escaped from local wildlife parks last century.

*The koalas put pressure on trees in many parts of the hills as they over-eat favourite trees.*

## STOP 12

### Netherby Knoll is a star in nature's back and forth struggle

Prior to 2009 this site had been taken over by a tangle of weedy Kikuyu grass. Very few native understorey plants could win the fight against it for space and resources. The site was then engulfed in an avalanche of dumped soil from local excavation work.

From a blank palette of bare dirt, many thousands of seedlings and countless seeds were planted into the sticky clay soils by University workers and Friends. Now there are spear grasses, wallaby grasses, salt bushes, daisy bushes and wattles. Seemingly overnight, Netherby Knoll underwent a giant makeover to be reclaimed as a seed orchard for native grassy woodland plants. Seeds from here can be easily gathered and used in revegetation projects elsewhere in the Reserve.

# Join the Friends group to help bring the bush back. You would be most welcome.

## For more information contact

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 [@waiteconservationreserve](https://www.facebook.com/waiteconservationreserve)

**IN AN EMERGENCY - Waite Security: 83137200**

## Plant species mentioned in this booklet

Australian Buttercup (*Ranunculus lappaceus*)

Blue Devil (*Eryngium ovinum*)

Bulbine Lily (*Bulbine bulbosa*)

Creamy Candles (*Stackhousia subterranea*)

Kangaroo Grass (*Themeda triandra*)

Spear Grass (*Austrostipa* spp.)

Spring Chocolate Lily (*Arthropodium strictum*)

Wallaby Grass (*Rytidosperma* spp.)

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