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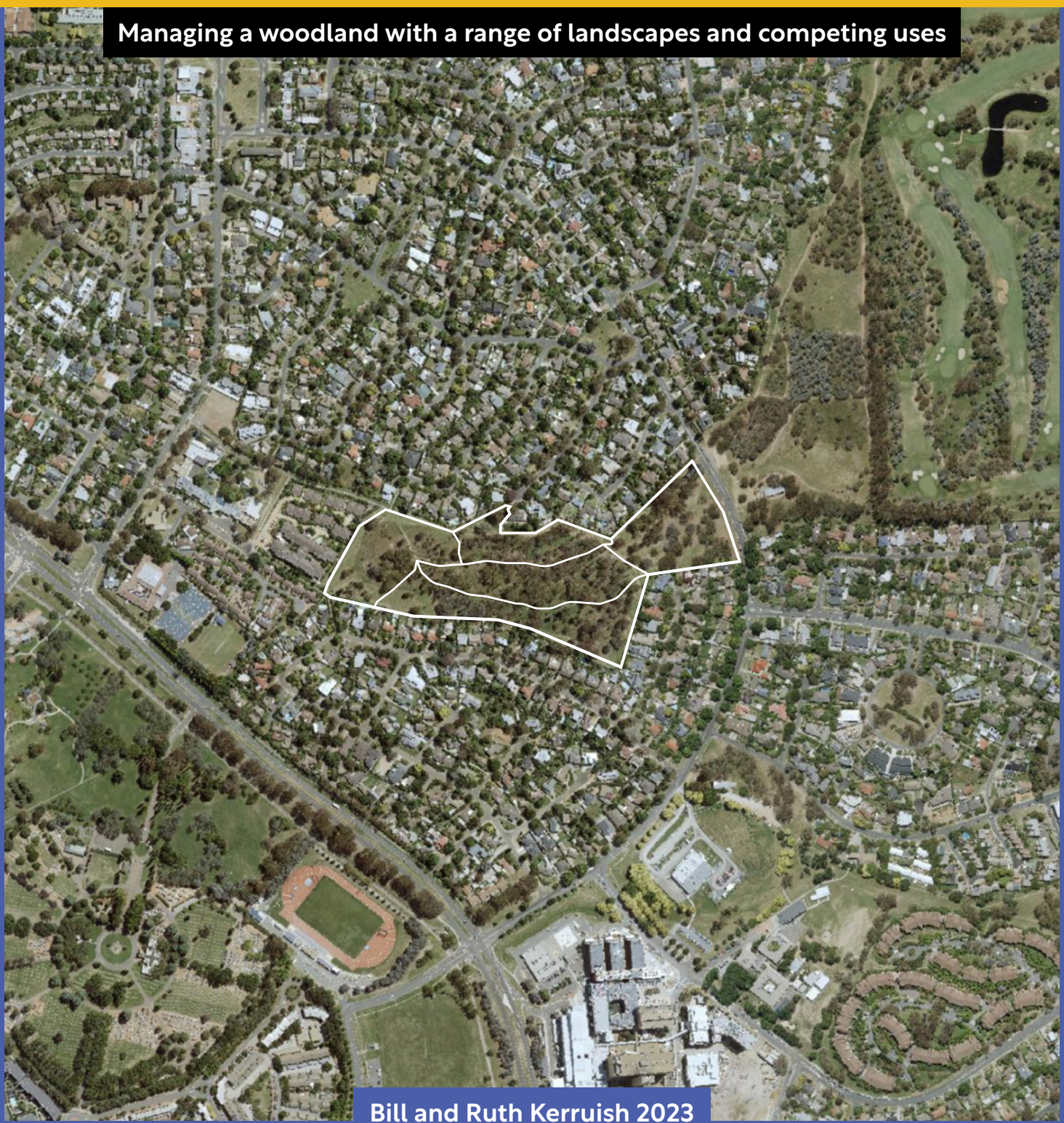
SOUTHERN ACT CATCHMENT GROUP INC

HUGHES GARRAN WOODLAND

LOOKING AFTER THE LAND

Managing a woodland with a range of landscapes and competing uses



Bill and Ruth Kerruish 2023

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Aerial image sourced from ACTmapi (February 2022)

LOOKING AFTER THE LAND

Managing a woodland with a range of landscapes and competing uses

This is a story about a small, wooded park, hidden between two Canberra suburbs. It includes a little of its history, of recent activities and something of the park today. Most of the plants, animals and other natural features to be found in the Woodland are illustrated in a separate document (Native and Exotic Plants and Animals in the Hughes Garran Woodland).

We hope it will be of particular interest to the four schools and the two scout troops adjacent to the park and those interested in park volunteering.

Thanks to all the Volunteers who have contributed so much towards looking after the park over the past 20 years. Other contributors include the volunteer coordinators and depot staff in the ACT Government Agencies, individuals from other volunteer park groups, the Southern ACT Catchment Group who have helped in organising funding, Greening Australia and in particular, the Canberra Nature Map, for their much-appreciated help with plant identification.

Thanks too, to Australia's Indigenous people for ***Looking after the Land*** *so well over the last 60,000 years!*

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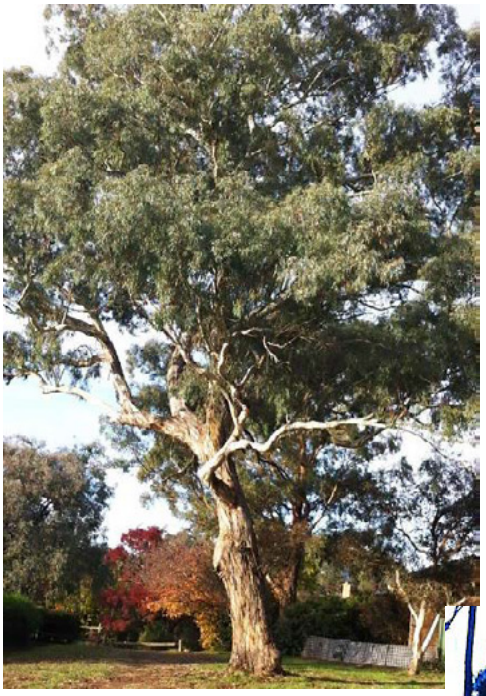

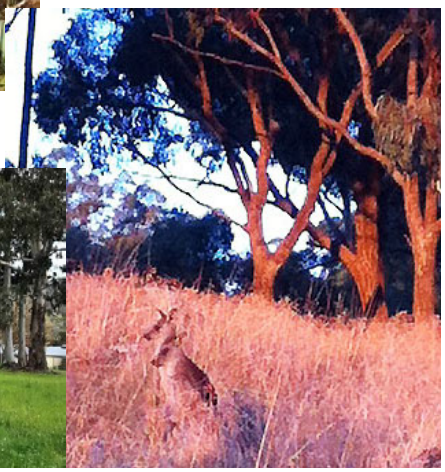

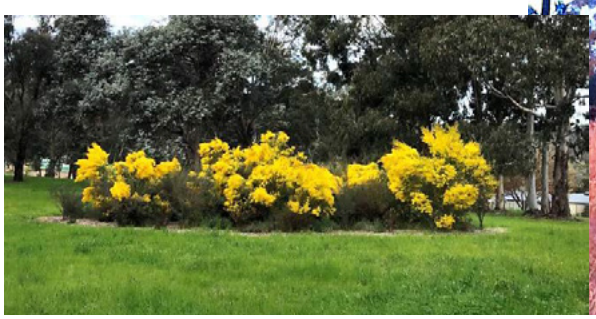

A LITTLE HISTORY

Australians have been ***Looking after the Land*** for about 60,000 years. Indigenous people, living close to the land, had little impact on the landscape and their widespread use of fire as a tool probably helped much of Australia's vegetation tolerate fire.

The arrival of Europeans only 235 years ago was followed by the introduction of their farming practices and in the few years following their arrival, the population grew from less than one million people to about twenty-six million today. Not only did the human population increase, but the combined population of their sheep and cattle increased from zero to 180 million by 1924-25!

While the more intensive use of the land has allowed people to live in towns and cities, the farming methods, crops and animals brought here, were not always suited to our old, old land with its very different soils, plants and animal life.

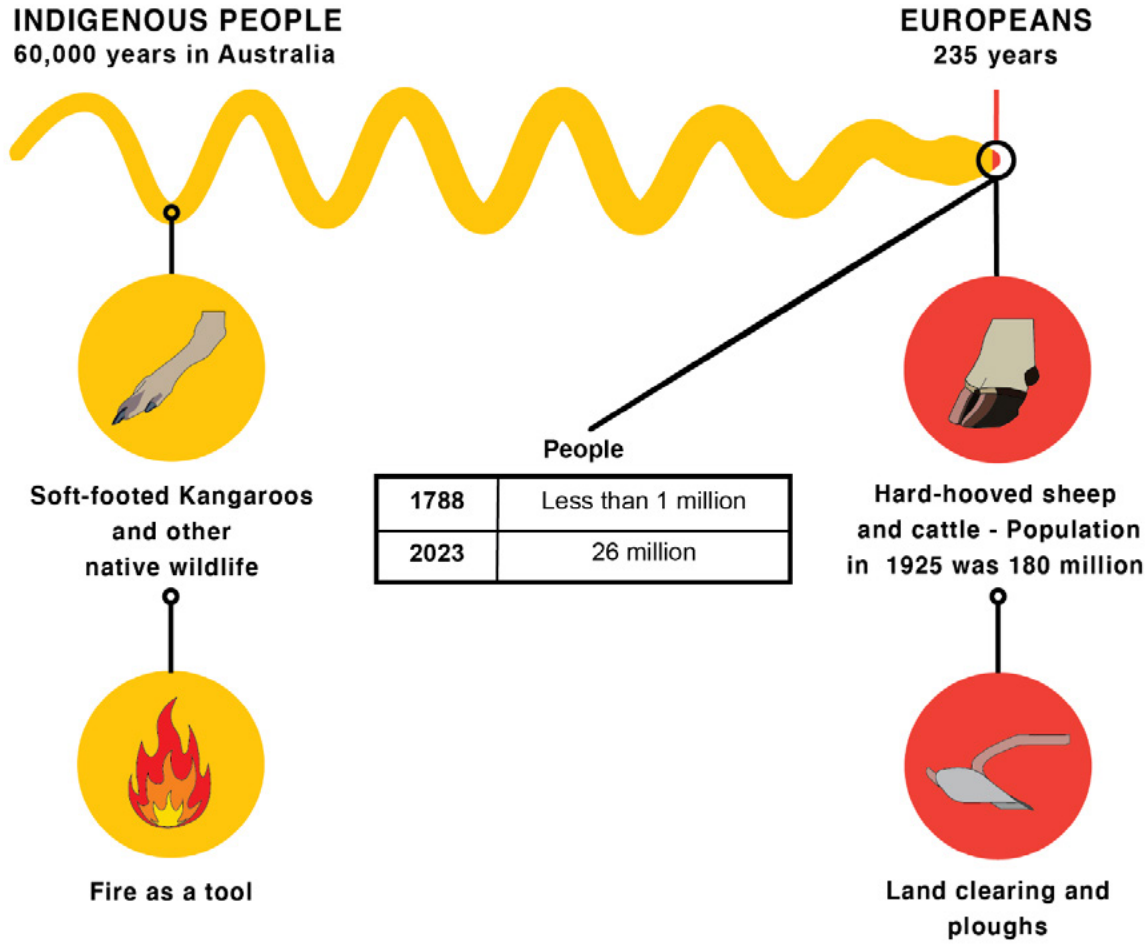

Fig. 1. A timeline showing human occupation of Australia and some of the factors impacting its soils, plant and animal life. (Zoe Kerruish)

The relatively few years of European occupation has seen a serious loss of topsoil, the degradation of rivers and streams, the loss of forests, woodlands and grasslands, and the extinction of much of our unique plant and animal life. Much has been achieved in adapting farming practice to our poor soils and dry conditions, but pressure from a growing population and a changing climate, makes it essential that we, like the Indigenous people, need to look towards being **part of** nature, and **not apart** from nature.

The Hughes Garran Woodlands is part of the Southern Tablelands which was once blanketed with a mix of Eucalypt trees (Yellow Box and Forest Red Gum), shrubs (Cassinias, Silver Wattles) and groundcover (Kangaroo Grass, Wallaby Grass, Spear Grass, Windmill Grass). These extensive grassy woodlands provided shelter, grain, and good hunting for the Indigenous people.

They also proved to be very good grazing for sheep!

Sixty years ago, when the Canberra suburbs were being built, the eight hectares of land which is now the Hughes Garran Woodland, was part of a sheep paddock. It had three surviving trees, numerous wattles, half a dozen Cassinia shrubs, some remnants of the original ground cover, and many weeds, including exotic pasture grasses. When the volunteers started work in the park, garden escapes had added to the weed list.

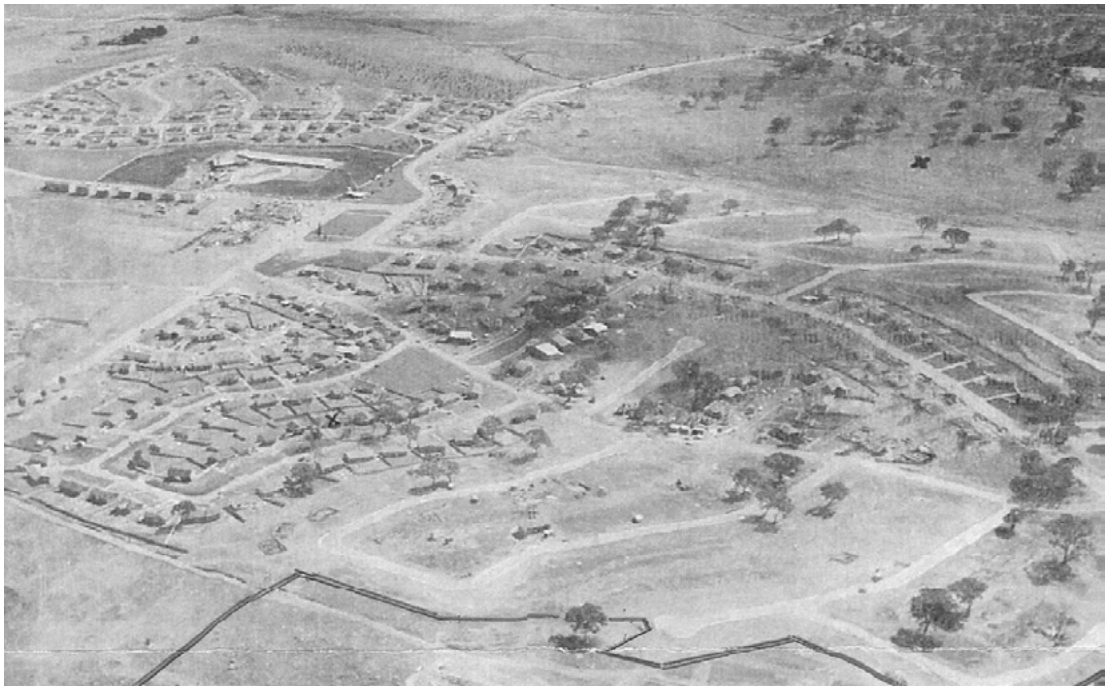

Fig. 2. Photo of Hughes including part of the Park (foreground) taken in 1965.

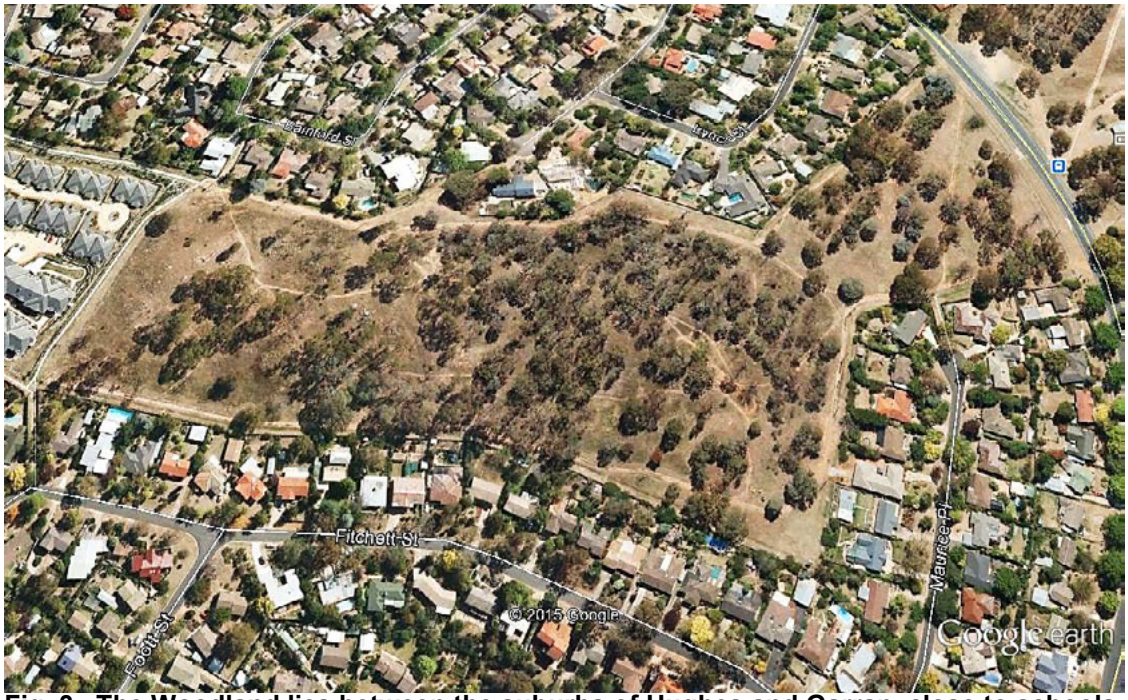

Fig. 3. The Woodland lies between the suburbs of Hughes and Garran, close to schools, scout halls and a retirement village. It is almost entirely surrounded by homes. 2015. Extensive planting of eucalypts mostly indigenous to the site, was carried out by the Dept. of Interior in 1965.

RECENT ACTIVITY IN THE PARK

The Hughes Garran Woodland is a recreational park, not a nature park. It has a range of slopes and aspects, many of which are very rocky. It presents an opportunity to maintain the natural beauty of the bush and to explore how we might ***Look after the Land*** for the benefit of the local community. A Landcare Group was first formed by volunteers in 2003 with the aim of restoring the park to something approaching the original Box, Redgum, grassy woodland landscape that existed before the Europeans (and their sheep) arrived. It was recognised that there would be limits to achieving this within a suburban setting.

Initial activities included establishing walking tracks through the park, opening the park up by removing some of the understorey along the pathways and removing suckers from fire damaged trees. There was some planting of eucalypts – mostly Yellow Box - in the open weedy areas.

In 2013 a re-invigorated Hughes Garran Volunteer Group, with financial support from the ACT Government, prepared a Management Plan to guide work for the following years. Recognising the past difficulties, the park was divided into 5 Blocks, each managed differently to meet the demands of the varied landscape and the differing interests of the community.

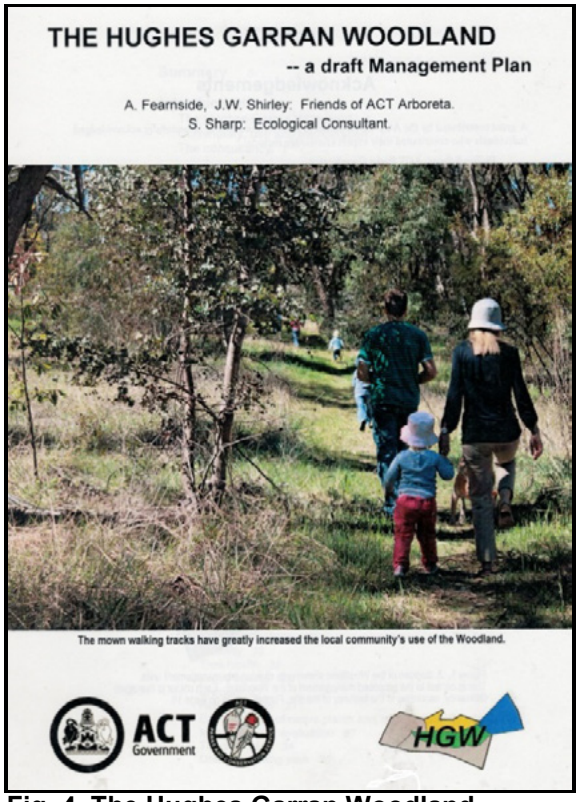

Fig. 4. The Hughes Garran Woodland Management Plan.

Fig. 5. The Qantas / Landcare Award for Innovative Community Groups.

The adjacent community clearly wanted safe access to walk and play, better habitat for native plants and animals and a reduced risk of fire to their houses. The woodland is used as a pathway to schools and shops, as a play /cycling area for children and for recreation by residents and their dogs.

Some of these requirements are conflicting. For example, totally protecting the Woodland to maximise the conservation of animals and native plants would increase the risk of fire (particularly to those living in the houses along the southern border) and would reduce personal safety. Similarly, mowing to provide fire protection and play areas, occurs at a cost to developing plant and animal habitat.

To try and meet the need for recreation, conservation and security, advantage was taken of the varied terrain to divide the park into five blocks each of which are looked after with different objectives.

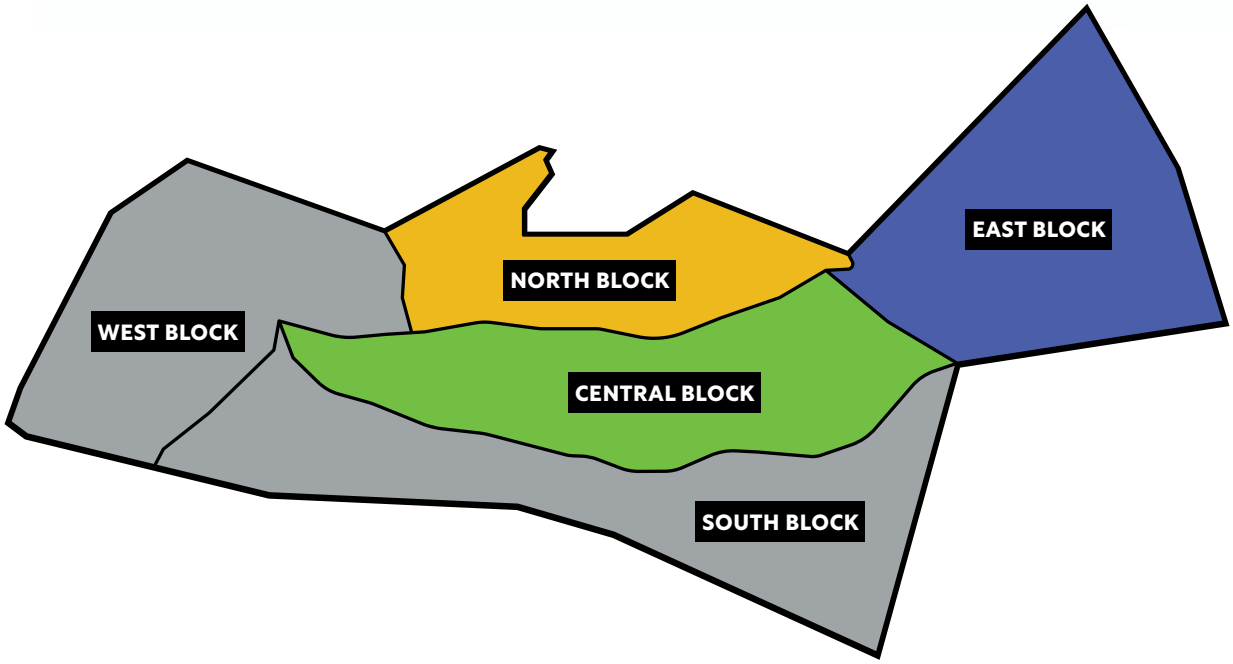

Fig. 6. The woodland is divided into five blocks, each looked after differently.

The WEST BLOCK. Priority is given to the regeneration of the Kangaroo Grass which requires it to be burnt every 7 to 10 years and to maintaining vegetation on the exposed, rocky western face. Kangaroo Grass dominates the vegetation with a few trees (mostly Apple Box) towards the top of the slope and some plantings of shrubs and ground cover.

The SOUTH BLOCK is managed largely to protect the homes on Fitchett St and Maurice Place, which are vulnerable to a park fire driven by hot, north-westerly winds. There is a mix of eucalypts, most planted in 1965 (and a few more between 2003 and 2020). This narrow Block slopes moderately to the south and about a quarter of the area is rocky. Fuel loadings are reduced by mowing and prescribed burns.

The CENTRAL BLOCK is managed to provide maximum habitat for both plants and animals. It is mostly rocky and not mowed or intentionally burnt. Dense Yellow Box plantings (1965) straddle the ridge track towards the eastern end of the Block. Some Yellow Box, *Allocasuarinas*, Callitris and group plantings of shrubs, mostly wattles and some bottle brush, were planted from 2013 to 202**0**.

The NORTH BLOCK is also managed to provide maximum habitat for both plants and animals. However, because of the proximity of the Lynch St homes, fuel loadings are moderated by the physical removal of material. It is dominated by remnant vegetation from the grazing days plus several recently introduced weedy grasses.

The EAST BLOCK is managed as conventional, open parkland for recreation. It is a treed, grassy area, comparatively flat and free of surface rock. It is mowed by the ACT Government as required and has never been burnt, so the trees are healthy with no burn scars. Two large circular plantings of native shrubs were established by the volunteers in 2016 to form a “small bird bridge” between the Red Hill Nature Reserve and the park.

Future activities are likely to focus on replacement planting, weed control and exploring means of establishing ground cover. Consideration might be given to extending the "small bird bridge" in the East Block and other areas.
Volunteers' will continue to maintain a range of native shrubs and ground cover, control weeds, reduce the risk of fire and maintain the walking tracks and internal fire breaks. Volunteers contribute some equipment, fuel, water, plants and of course, their labour.

The ACT Government is the landowner and through a number of different agencies, partners the volunteers in the management the park. It provided a grant to facilitate the preparation of the Hughes Garran Woodland Management Plan (2013) and supports the Volunteer Groups via its Volunteer Coordinators. It supplies tools, personal protective equipment, and materials such as mulch and herbicides. The Government's main activity in the park is mowing as required, a 20 to 30m wide fire break around the Park, and all of the more accessible and formal East Block. Accident insurance cover is provided for the registered Volunteers.

Fig. 10. ACT Government Mowers at work. These large mowers make short work of the surrounding fire break and large mowed areas.

Fig. 11. A cool-burn demonstration, by Wally Bell, of the Buru Ngunawal Aboriginal Corp. at Tuggeranong, 2022. Controlling flame height is the key to cool burning.

The Bushfire Management Unit implemented a trial **cool burn** in the South Block to reduce fuel loadings close to the Fitchett St. and Maurice Place residences. This traditional practice was seen as being particularly relevant to the small areas associated with urban parks. Much of the Woodland is too steep/rocky/ wooded to be mown and fuel can build to unacceptable levels. The results were mixed; fuel loadings were effectively reduced with little damage to planted vegetation, but there were complaints about smoke and concern about the resources required to burn such a small area. In our view both these issues can be addressed if the technique is pursued and refined.

CHANGE

Over the past twenty years we have changed much of what we do, as we've come to understand the site's difficulties. These include: the cycles of drought and good rain years, the shallow rocky soils, the dense canopy of the 1965 tree plantings and vigorous weed growth, to name a few!

Random planting of shrubs and ground cover in the Woodland, didn't work. Plants got lost in the weeds and were not maintained in the critical first year after planting. To overcome this, we started planting close to the tracks and in groups, so the plants could be mulched and watered and later encouraged to spread out from the original site. It also provided a bonus in that the grouped, well-tended plantings, soon produced colourful displays for park users.

Fig. 7. A group planting of Box Wattle, Yellow Buttons, Clustered Everlastings and prostrate Grevilleas, surrounded by a mown, meter wide strip. Such plantings spread outwards and have been more successful than the random planting of individual shrubs and ground cover.

Knowledge that our climate is warming has made us rethink our plant selection. Initially, we planted species that grew on-site, used to grow on-site, or grew nearby. The criterion for selection now includes resilience to the alternate drought and wet weather we are experiencing. While we still plant species native to the ACT, some are from further afield or are cultivars of native species. Planting only the local native material is not a desirable goal, because the environment itself is changing.

Park users are also changing; twenty years ago, the users were mostly children and adults living around the park, playing and walking to and from work, school and the shops. Today they include an orienteering club, individual and group cyclists, walking groups, including those from the nearby aged care home, dog walkers from afar, and a few school groups.

Why Be Concerned About *Looking After the Land*? Since European settlement, our forests and woodlands have been reduced to one third of their original area, mostly due to clearing for farms but also for city development. **Both are still happening!** This occurs because we do not recognize the contributions our forests and woodlands make to our lives.

That is understandable. We can measure and market the wood we harvest from the forest; we can measure and market the water we harvest from the forest.

But we cannot yet measure in a practical way or market:

- The carbon removed from the atmosphere and stored in trees, plants and soils.
- The water that goes into recharging our subsoil and artesian basins.
- The moderation of the extremes of climate by trees and vegetation.
- The value of recreation and tourism, and
- our quite unique plant and wildlife.

Current methods of measuring carbon uptake and storage used by landowners are inaccurate and unreliable. It can be measured more precisely using scientific techniques, but these are costly and impractical from the landowner's viewpoint. There is, however, much current research into more suitable methods and we can expect them to be available and affordable in the near future.

Similarly, there is work being done on developing economic techniques for broadly valuing landscape in terms of recreation and tourism, plants and wildlife.

CSIRO's research has shown that under extreme summer conditions Canberra's town centres and industrial suburbs were 8 degrees C hotter than surrounding rural area. Such studies have encouraged Canberra, Melbourne and other cities to increase tree cover.

Finally, we can look to a growing body of medical literature demonstrating that the exposure of patients to nature can reduce the time to recover from physical and mental illness and in a general way, it improves people's physical, emotional and psychological well-being. Time in nature can lower blood pressure, reduce stress and hormone levels, reduce nervous system arousal, increase self-esteem and enhance immune system function.

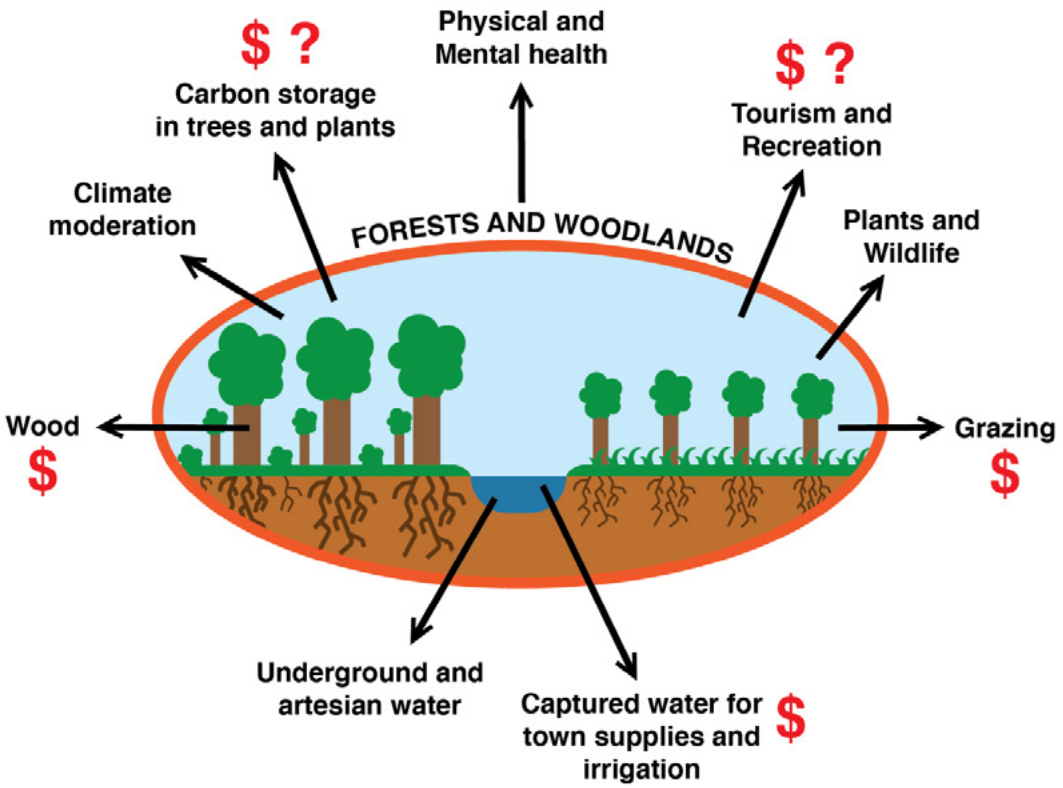

Fig 8. What wooded landscapes can yield. Not every landscape will yield all of these services / products at the same time; that will depend on how they are looked after or managed. (Zoe Kerruish).

With this growing knowledge of how **some** of these benefits can be quantified, decision makers in government and industry are in a better position to manage landscapes wisely. In the meantime, the community has an important role to play in protecting some of the less material benefits from the commercial activities of urban developers and rural land-clearing. These pressures are probably greatest on the peripheries of our towns and cities and along our much-neglected inland waterways.

Hopefully, the Hughes Garran Woodland can show the local community the value of wooded parkland and suggest how we might ***Look after the Land.*** Urban parks in towns and cities with community involvement in their management and upkeep can play a major role in awakening an appreciation of what our forests and woodlands can contribute to our community.

HAVE A WALK IN THE PARK

The **Volunteers have established and maintain the walking paths and internal breaks within the Woodlands for three purposes**. Firstly, to establish some internal fire breaks, secondly to identify / protect recent plantings and finally, to provide safe access for people to walk and cycle through the park. Previously, due to the dense cover of weeds from the grazing days and shrubs that had escaped from people's gardens, people walked ***around*** the woodland, not ***through it***.

In hindsight, the establishment and frequent maintenance of these tracks has been the Volunteers most important contribution to the community's use of the Woodlands.

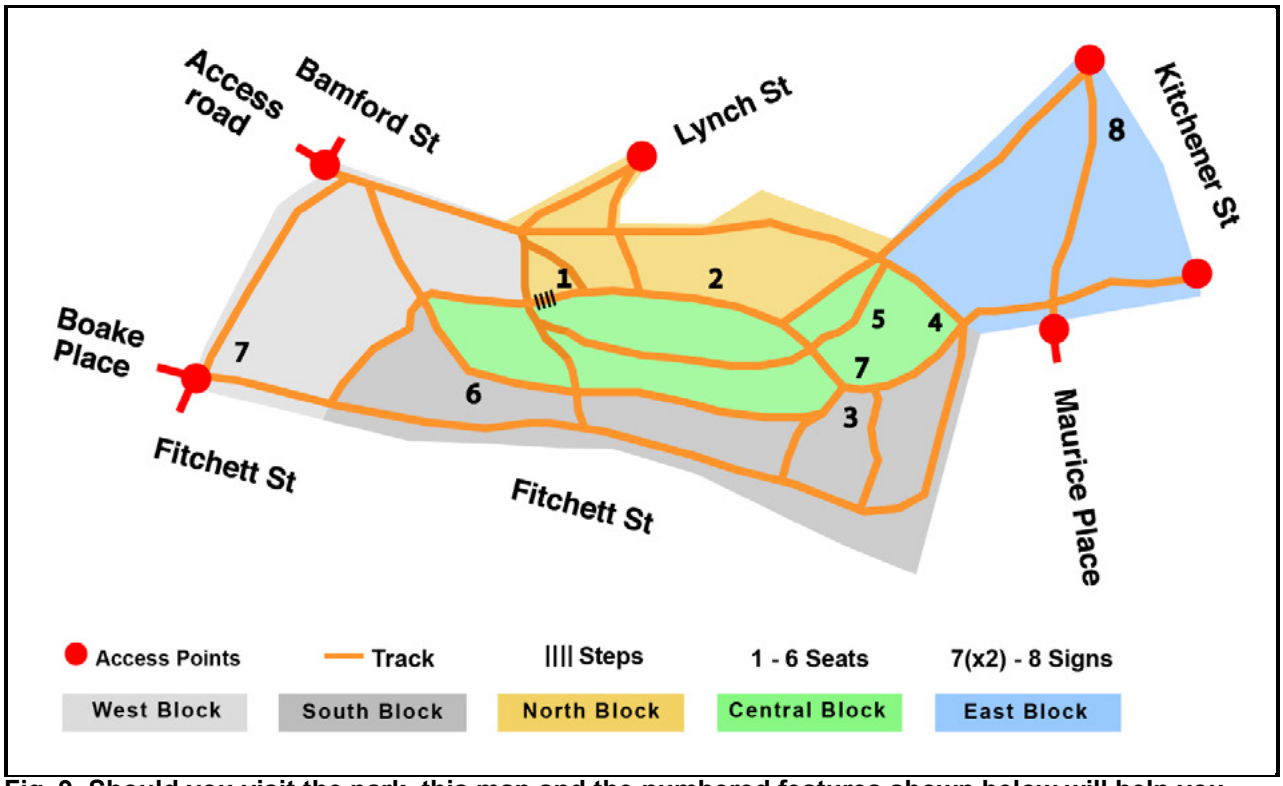

Fig. 9. Should you visit the park, this map and the numbered features shown below will help you find your way around and locate yourself in the park. (Zoe Kerruish).

1. Hawk Hill.

Seat 2. Ridge Rd.

Seat 3. Helicopter viewing.

Seat 4. Billy Button Corner.

Seat 5. The Good Ship Lollipop.

Seat 6 Janny's Patch.

Sign 7 (2 signs).

Sign 8. Kitchener St.

SOME PHOTOS OF THE PARK TODAY An addendum

Following are a few photographs from an extensive collection taken in the Hughes Garran Woodlands and sent out as Flyers to the Volunteer group from 2016 to 2022. They are online and can be accessed in the Native and Exotic Plants and Animals in the Hughes Garran Woodland PDF.

Fig. 12. A survivor: while eucalypts do not reliably produce annual growth rings like conifers, it is estimated that this tree is about 300 years old. This Yellow Box, (*Eucalyptus melliodora*) would have germinated about the same time that Governor Phillip sailed into Botany Bay with 9 boatloads of convicts to establish an British settlement in Australia.

Fig. 13. Rocks and steep slopes make much of the park difficult to access. This colourful and hardy Dianella has survived amongst the rocks along with many other native plants including Kangaroo grass, Dichondras and small animals.

Fig.14. The more "civilised" part of the park, near Kitchener St. Plantings of native shrubs include Box Wattle (*Acacia buxifolia*) and Early Wattle (*Acacia genistifolia*). Wattles feature widely in the park, but the emphasis is on shrub wattles, as the taller tree wattles provide a ladder for fire to climb into the tree canopy. Not all have prospered, this year has seen some shrub wattles die from too much soil moisture.

Fig.15. All aboard the Good Ship Lollipop!
Kids playing on a carved log during an open day

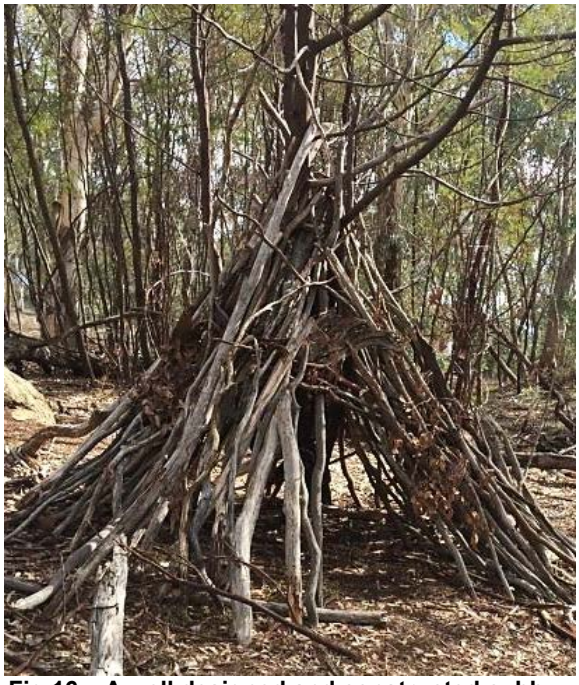

Fig.16. A well designed and constructed cubby

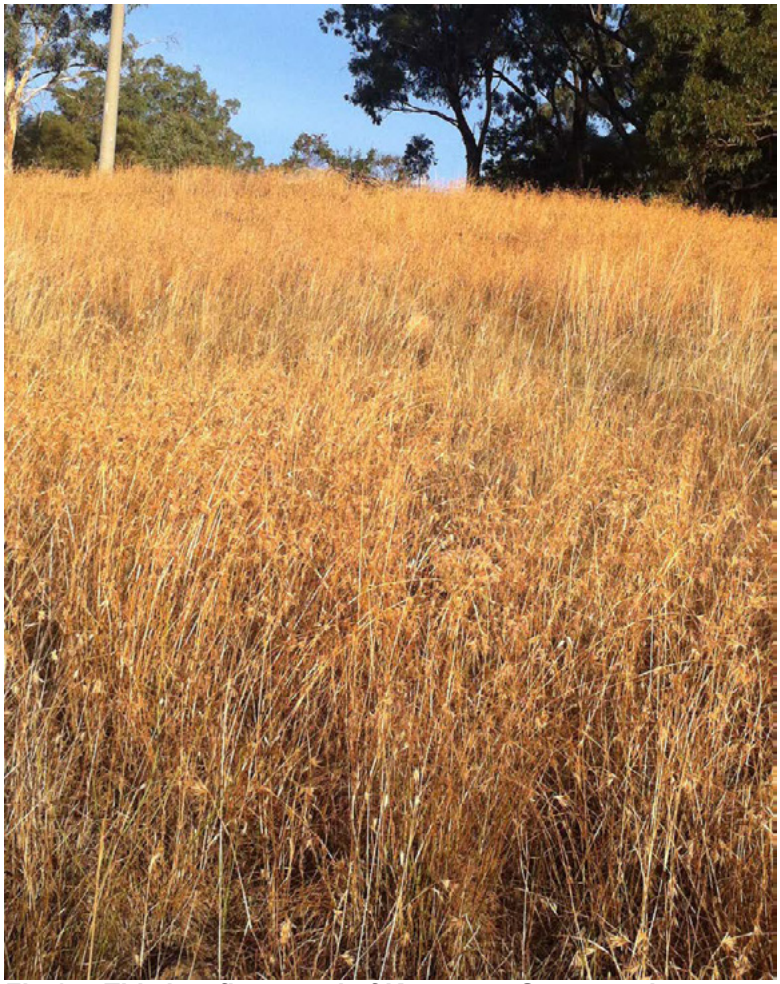

Fig.17. This is a fine stand of Kangaroo Grass on the western slope of the Woodland. It is thought that the first peoples harvested and stored the seed. When you see a stand like this, heavily laden with grain, that would seem highly likely.

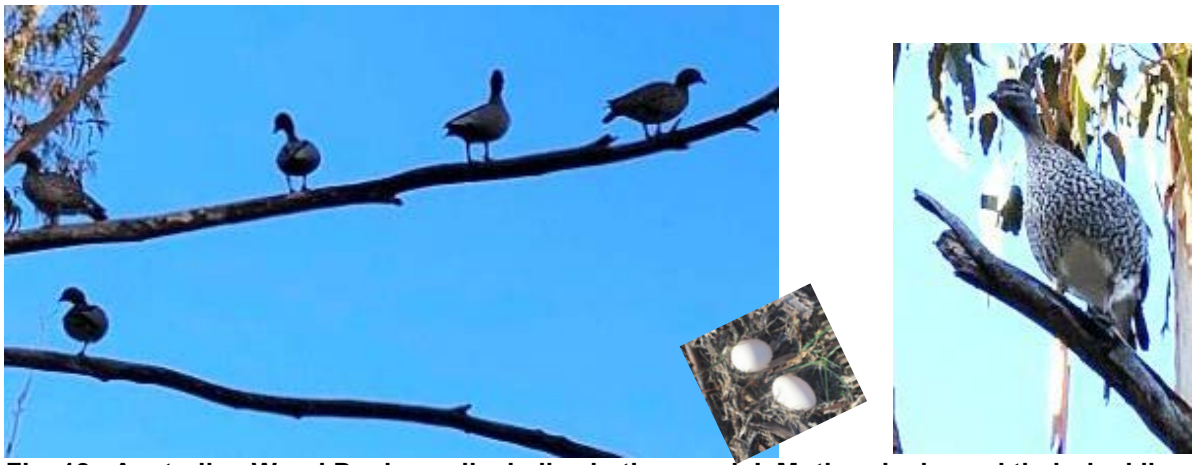

Fig .18. Australian Wood Ducks really do live in the woods! Mother ducks and their ducklings are often seen wending their way towards the Lake but houses and roads are a real barrier. Ducks have been seen nesting high in the trunks of old Southern Blue gums and in bird boxes. In high winds eggs sometimes fall out of the nest.

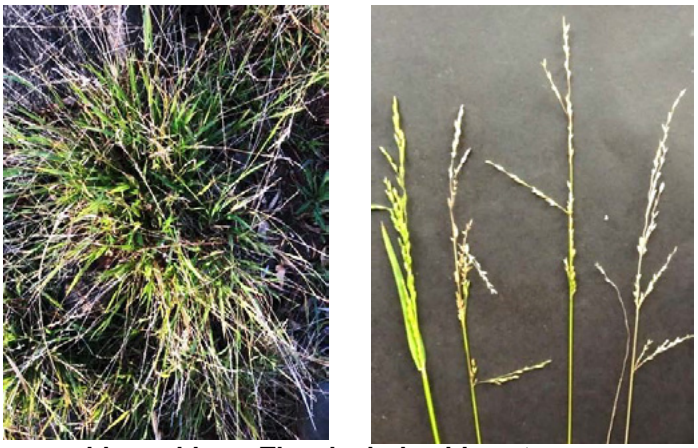

Fig.19. Weeds are a big problem. They include old pasture grasses, many broad-leaved weeds, escapes from local gardens including woody weeds. There are also new weeds, Panic Veldt Grass (*Ehrharta erecta*), an aggressive new weed has recently found its way into the park. An environmental weed in NSW and Victoria.

Fig.20. The rocky and steep slopes help maintain the natural beauty of parts of the park.