





BURLONGPOOL

Located 5 kilometres west of the Northam Townsite, Burlong Pool is a semipermanent body of water and a site of significance to both the Aboriginal and non-Aboriginal people of Northam.

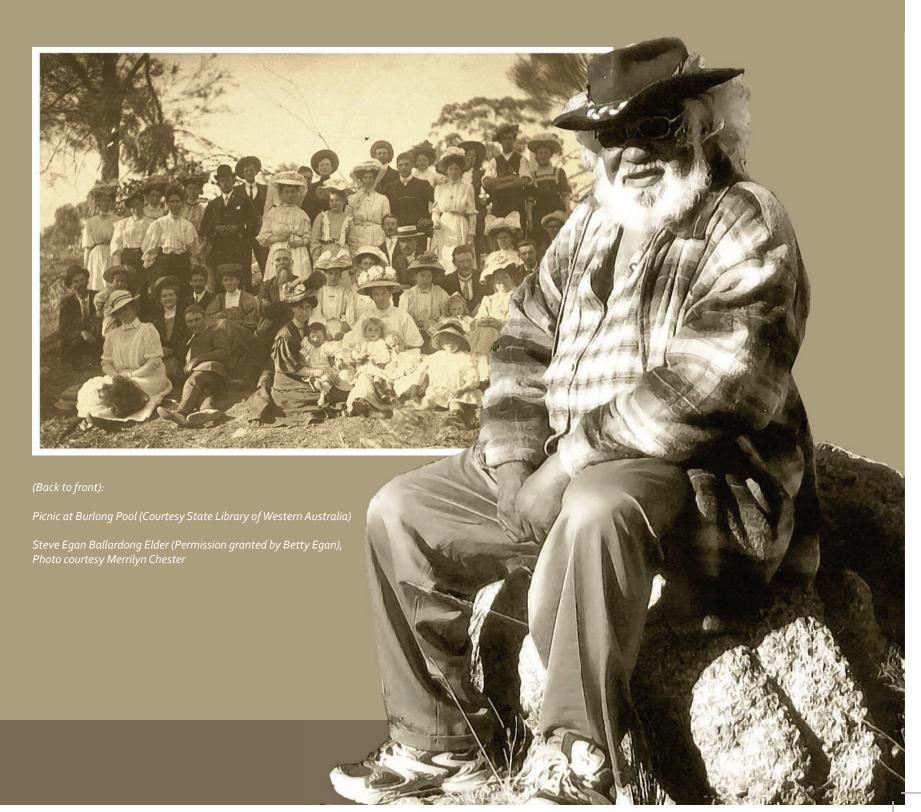
Aboriginal spiritual beliefs are that Burlong is the "Summer home for the Wargal"

'...during the winter floods the snake lived deep in the flowing springs at Bolgart and haunted the rocky slopes of Boolegin nearby. On the approach of summer the brooks ceased to flow and the creek beds dried up. Then the giant snake slowly made his way underground, down the Toodyay Brook to the Avon, and upstream along that river to the deep pool at Burlong near Northam.'

Rica Erickson (1974, Unknown Publication).

The site was also used as a training location in water crossings by the military and for recreational activities for the local Northam community in the 1940's and 50's.

Wheatbelt NRM (formally known as Avon Catchment Council) in association with its partners has installed 12 interpretive signs at Burlong Pool that are reprinted here in this booklet. The site has also undergone a major cleanup and development. This project was a joint initiative involving the local Aboriginal community, Shire of Northam, Avon Valley Environmental Society, Department of Water, Avon Valley Contractors, Green Corps and Wheatbelt NRM.





WELCOME TO BURLONG POOL ON THE GULGULGA BILYA

Nyaarn, ngany djoorap noonook djinanginy Hello, I am happy to see you

Nidja ngalang Australia bojdera Ngalang djoorap korl ngala miya-k-ngat nyininy Our land Australia We are happy for our beautiful country We are happy to name it our home where we live

Koora, koora, yeyi, kalyakool noongar Moort boodjera-k-ngat djinanginy Ngulak Ngaank Nidja Biidja Long long ago, now and forever Nyungar people looking after the land

Kathy Yarran (Nyungar Elder)

Respect for the Wargal

Nyungar belief says that the Wargal can be a destructive force if not respected and if it's resting place is harmed the country could dry

For some, throwing a handful of sand into the water shows respect for the Wargal and lets him know that you are there and do not mean any harm.

When people have been known to travel through the home of the Wargal they would lay fresh rushes or pieces of meat at the water's edge or near sacred rocks to appease it.



Sand thrown into Burlong pool to show respect for the Wargal

Dream Time Story

At the time of the Earth's formation there were huge explosions at York, the ground erupted and out of it came the Wargal.

With it's huge body as thick as tree trunks, the Wargal created sacred sites.

These sites held wirrin (spirits to look after the land) and were both places of quop (good) and warra (bad).

The Wargal went kardup budjar (under the earth) and sometimes yira budjar (over the earth) forming the bilya (rivers), the kaart (hills) and the ngama (waterholes).

These signs can be seen in the Earth today at places such as York, Spencers Brook and Toodyay where the Wargal's mark has been left in the hillside.

The Wargal travelled vast distances creating the universe and gave life and sustenance to where there are boggy springs. The Wargal lived at Bolgart during the winter. You knew when he the Nyungar people who were the custodians of this region.

Nidja Nyungar budjar nguny wangkiny (this is Nyungar land and stories) Wargal kierp wirrinitj (the water snake belongs to the water)

Entrance to Boyagin Rock (near Brookton)

Wargal Travels

Bolgart, a fown 65 kilometres north of Northam, means magic and refers to one or two places would return as he caused the autumn thunderstorms.

When the hot, dry summer came the Wargal would head to the deep water of Burlong Pool. You could see the path where the Wargal had been, because springs would break out in dry river beds at places like the Toodyay Brook.

Wargal Real or Myth?

Nyungar people believe the Wargal is sacred and should never be harmed or killed. It created the waterways, and was the giver of life. In 1929 the Wargal was thought to have been seen in the water and the townspeople of Northam kept a vigil over the river and at Burlong Pool. Fossil records show that during the Pleistocene there was a medium to gigantic sized snake that lived in Australia and is known in scientific circles as the Wonambi.















NYUNGAR PEOPLE - BURLONG POOL

Traditional Nyungar people lived sustainably off the land; they did not wander aimlessly but travelled through country, with regard to the seasons, which provided them with sustenance for daily life. Their living was made by hunting animals such as kangaroo, possum and echidna and by fishing, collecting and gathering an extensive range of edible bushfoods. Nyungar people lived in a clan group, which is larger than a family group but based on links with common ancestry.

Nyungar Seasons

Birak (December to January) **Bunuru** (February to March)

Djeran (April to May)

Makuru (June to July)

Djilba (August to September)

Dry and hot

Hottest part of the year

Cooler weather begins

Usually the wettest part of the year

Often the coldest part of the year

Kambarang (October to November) Warming trend accompanied by longer dry periods

Aboriginal Heritage Act (WA) 1972

This site is protected under the Western Australian Aboriginal Heritage Act 1972. This allows for the preservation on behalf of the community, places and objects of traditional value to the original inhabitants of Australia and their descendants. A registered site is a place of importance connected with the traditional or cultural life of the Aboriginal people. Fines apply for the desecration of sites such as Burlong Pool including excavation, destruction, damage or removal of artefacts.



Nyungar tools



Buka-Kangaroo cloak

Sites of significance

Burlong Pool was a significant site for the Nyungar people because it was the summer home to the Wargal. The Wargal was a dream time being that helped form the World as the Nyungar people knew it. This site would not have been a site for camping but would have been well known by the Nyungar people.

Nyungar tools and uses

A yonga (kangaroo) provided many things for the Nyungar and bones could be used to make tools and it's meat would feed the family.

Mens Business

The men hunted with kitj (spears) and kirli (boomerang), looking for yonga (kangaroo), waiti (emu) and other diet (birds) sometimes using karl (fire). Diildiit (fish) could also be caught.

Womens Business

collected foods like mandjarak (figs) and dug for djubak and djabak and kuwin (edible roots).

Right: Steve Egan Ballardong Elder (Permission granted by Betty Egan) Photo courtesy Merrilyn Chester

Warna-digging stick used for getting bush foods





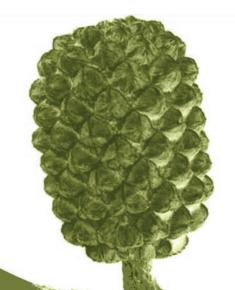












FLORA OF BURLONG POOL

The Nyungar people of the South West of Western Australia used the plants of this region in a number of ways. They provided a range of various food sources and important materials for tools and shelter and were an important aspect of traditional life. With the settlement of Europeans in the early 1800's the environment started to be used in a markedly different way.



Bibool **Paperbark**

Melaleuca rhaphiophylla

Paperbarks were very common and useful for the



Kwel Sheoak

Casuarina obesa

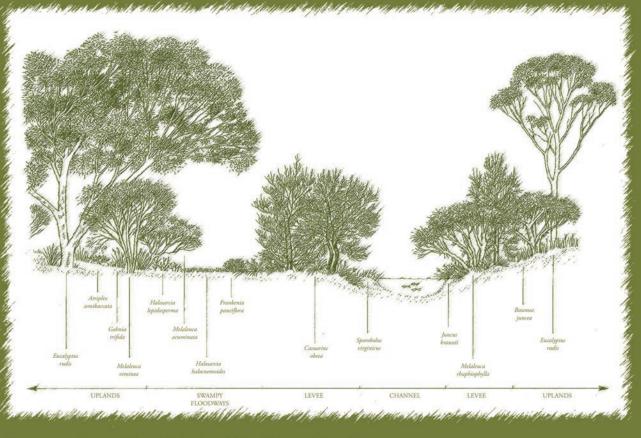


Ngarant Flooded Gum

Eucalyptus rudis



Splendid Fairy Wren in Bibool tree at Burlong Pool



Cross-section of the Gulgulga Bilya (Avon River)

This is a typical cross section of the Gulgulga Bilya (Avon River) showing the main channel and flood plain. Above this flood plain level the















FAUNA OF BURLONG POOL

The Avon Valley is rich and diverse in native fauna but introduced species such as the rabbit, fox and cat represent a constant danger either by predation, through destruction of habitat or competition. Many of our native fauna are nocturnal and can be observed at dusk and dawn or by spotlighting at night.

Fauna of the Avon Valley

water, the Western Banjo frog can be heard calling for a mate with its distinctive 'bonk' sound. Not included

NYUNGAR ENGLISH

Karda Koomal Yonga Dobiti Wargal Dog Ant Woodiny Ant hill Noordu Flies Baan-baan Butterfly Nindjaliny Scorpion

Bees

Frog

Trapdoor Sp

Ngoowak

Warrkaly

Kara

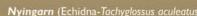




Nyingarn (Echidna-Tachyglossus aculeatus)

Hollows and Habitat







Yonga (Kangaroo-Macropus fuliginosus)















BIRDS OF BURLONG POOL

At least 124 birds species have been known to nest during the breeding season (August to December) in this area. Birds are highly visible and mobile creatures and by observing their population dynamics one can measure the degree of environmental change that affects all living things. There have been at least 53 different bird species identified at Burlong Pool. These include nomadic, irruptive and resident bird species. This highlights how important the river system is as habitat.

Migrants

Birds that are migrants move seasonally from one place to another. The opposite of a migran bird is termed a resident bird.

Nomads

Irruptive Birds

Birds that are extremely nomadic and roam over vast areas of arid inland Australia such as the Black-shouldered Kite (Elanus axillaris) are said to be irruptive. They move to where the food is plentiful.

Kuran **Smoker Parrot**

Polytelis anthopeplus



Kwiwok Sacred Kingfisher Todiramphus sanctus

This site has been developed through a partnership between the local Aboriginal Ballardong Community, the Avon Valley Environmental Society, the Shire of Northam, the Department of Water and Wheatbelt Natural Resource Management. Funding was provided through the Australian Federal and State Governments National Heritage Trust program.

Kulbardi

Magpie

Gymnorhina tibicen















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Habitat and food sources

Red Capped Robin

Introduced Birds

Kaa Kaa Laughing Kookaburra Dacelo novaeguineae



Australian Raven Corvus coronoides

eats carrion and any other meal















lendid Fairy Wren Malurus splendens



WHAT'S IN THE WATER?

The most obvious thing you notice when looking at the river is the number of birds. The presence of birds indicates the river is reasonably healthy, because they depend on the health of the river to survive. A great deal of what they eat comes from the creatures and plants that

So what is in the water?

There are many plants and Yerderap (ducks) like to will see them dive under the water and come back to the surface with a beak full of water plant.

Some of the birds also like to forage for the vegetation on the banks. The Eurasian Coots (Fulica atra) often

Some birds thrive on small creatures and fish, like the water, waving their beaks from side to side, filtering what they catch.

(Threskiornis molucca) and Cormorants (Phalacrocorax prey or quietly walk the shallows to spear their chosen

Life in the water

The largest creature is the *Booyi* or Oblong Turtle (*Chelodina oblonga*) which still thrives in these waters. Like all turtles, they leave the water at breeding time, lay their eggs on the land, bury them, and then take no further interest. The young eventually hatch and make their way to the nearest water. They largely feed on detritus at the bottom of the waterway.

The next largest creatures are the fish. The most common is the introduced species They tend to be in large schools so if you see fish, chances are this is what they are. (Bostockia porosa) are still found but are quite rare.

Macroinvertebrates

If you look carefully at the water you will see tiny things moving in the water. These are the macroinvertebrates and are defined this way because they have no backbone and are small enough to be seen with the naked eye. Their presence is a good are larger, such as the shrimps and the molluses but many can only just be seen as a moving dot in the water. They are an important food source for creatures further



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Djilgi (Cherax quinquecarinatus)







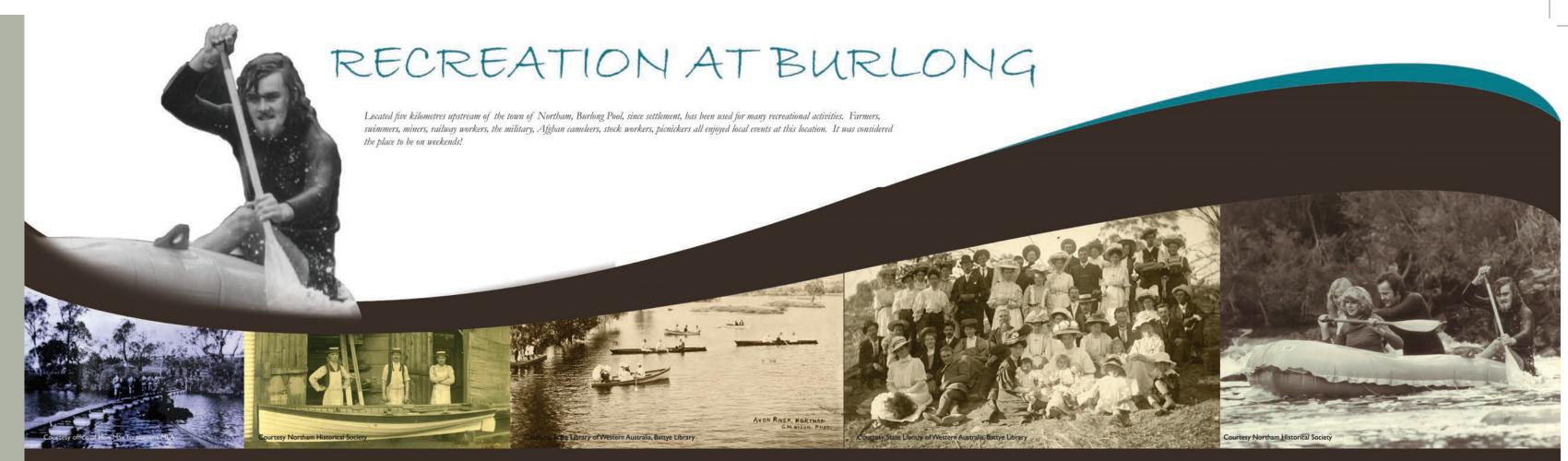








Caddisfly (Oecetis sp.)



Military use

When the World Wars broke out the Northam Army Camp was situated above Burlong Pool. The Australian Army used the pool to train soldiers to cross rivers. In this photo you can see the soldiers crossing with a full pack and rifle.

Mechanised units and the 10th Light Horse Regiment would also cross the river. On one occasion a tank went into the river. It is thought some of the soldiers' gear that was being carried across remains at the bottom of the pool, although it would now be covered in sediment.

Recreation

Looking into the depths of the pool in certain spots you would still see today, north of the pipeline. have been able to see springs bubbling with fresh drinking water. At this time the water was clear and clean and you could dive There were canoes and some people in Northam can still In memory in and not touch the bottom!

It was a favourite location for the townsfolk of Northam for driven into the pool! water activities. Swimming carnivals were held, swimming lanes

wide, one kilometre long and in some places six metres deep. change rooms and bathing sheds – the relics of which you can especially on the weekends when there were bands, concerts

remember a Flying Fox crossing the river. One local Northam Sadly, there have been people who have died here at Burlong, person even tells the story of an old Buick car that was accidently either by accident or suicide.

Once upon a time Burlong Pool was approximately 50 metres were put up and swimming clubs were formed. There were Burlong Pool was known as the best playground for people, and other events held there with hundreds of people attending.















STEAM TRAINS AT BURLONG

This site was used by numerous groups heading to the gold fields in search of gold. When the goldfield operations were in full swing there were up to half a dozen trains leaving Burlong Pool each day filled with water. When the steam trains would come to fill up at Burlong Pool the level of the pool could be seen to drop up to 20cm. This site was important because it was the only source of fresh water between Perth and Kalgoorlie.

Gold Rush

Gold was first discovered in Western Australia between Northam and Southern Cross by a man digging post holes on a property in the 1880s.

By 1891 the mines in Southern Cross were in full



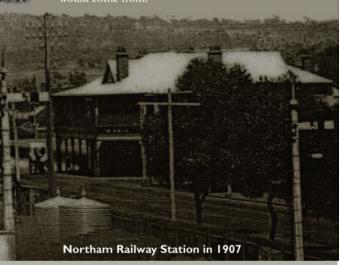
To the Goldfields

point before heading inland. In a single camp there could be up to 1000 people using Burlong Pool before departing for the goldfields.

Spencers Brook to Northam

opened on the 13th of October 1886. Burlong Pool was the last permanent water supply beyond Northam. Cross railway in November 1892 there was still no locomotive water available past Burlong and all trains had to tow enough water in tankers to be able to go out and return along this section. This was still the

Most of the load of a goods train was taken up with water for the forward and return journey. Contractors



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Northam Railway Station in 1960













RIVERTRAININGSCHEME



Flooding of riverside towns (Beverley, York, Northam and Toodyay) and of agricultural land along the river was the main concern that led to the River Training Scheme. This scheme involved the removal of channel vegetation, dead trees, logs and debris to a width of 60 metres, ripping of the river bed to induce erosion of a deeper watercourse and removal of minor kinks and bends in the river.



River Training Scheme

This Scheme was started after a major flood in 1955 and the Avon River Development Committee was formed. Between the years 1957-1972 the riverbed had the trees, sediment and debris removed for nearly 200km to enable the river to flow more rapidly and reduce the duration of flooding events. This occurred between Toodyay and Brookton.

This scheme helped to increase the velocity and erosional power of the river which helped to scour out the base of the river. There was the suggestion that an advantage of the River Training Scheme was that flood water would go down quicker than before. People now know that the River Training Scheme did more harm then good. Millions of tonnes of sediment were mobilised and as a result of this the river pools became sand traps and continue to fill with sediment to this day.



Salinity

Avon River Pools

Salinity is a feature of the modern Western Australian landscape. It is thought that the ocean winds can take salt from the ocean and deposit more than 15kg of salt per hectare per year onto the land. It is this salt that continues to be deposited in the landscape that has to be dealt with.

Seven of the major river pools along the Avon River have been

filled with extra sediment and many others are now partially

filled. This was a result of extensive land clearing and elements

of the River Training Scheme. At Burlong Pool a dredging

operation continues to remove this sediment.

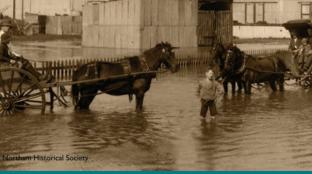
This salt would have been underground, but with the removal of deep rooted perennial trees, ground water has been allowed to migrate to the surface bringing with it the salt that has been stored for a long time underground.

The water pools are now classified as Highly Saline which is measured as 11,000-30,000 milligrams of salt per litre. Freshwater is classified as 0 - 1000, seawater contains 36,850 and the Dead Sea contains a massive 73,700 milligrams of salt per litre.

Would you like to drink out of the river pools?





















AVON RIVER CARE

River care is an integral part of the management of the Avon River Basin. On-going river care has been happening in the Avon River Basin for a number of years with community leading the way. Burlong Pool is one site where environmental remediation work has been taking place to restore and repair the river.

Avon River Care

The Avon Rivercare Project started in 1995 as part of the Swan Avon Integrated Management Program with a survey of the main channel of the Avon River. Since then it has developed into a catchment wide project focussing on improving both land and river management practices to improve the riverine environment. Some of the issues that have been addressed are the protection of the riparian vegetation, revegetation of the banks and land next to the river and removal of sediment from the river pools. The project has also included preparing 22 River Recovery Plans for the whole length of the river, these plans contain recommendations for management of the river into the future.

Revegetation

The planting of local native trees and shrubs on the river bank and areas next to the river help to improve the river environment. By 2009 over 1 million plants had been planted with the help of community, some 1500 plants were planted at Burlong in 2009.

Sedimentation

Following the River Training Scheme the movement of sediment increased dramatically and most of the 26 river pools filled with sediment. The Avon Rivercare Project has focussed on removing sediment from these pools to allow them to regain their role in providing a refuge for aquatic life during the long dry summers. Removal of sediment has taken place at Burlong over the last 25

Fencing

Following the channel survey in 1995 only 45% of the main channel was fenced to protect the river, in partnership with landholders this has now increased to 90% by 2009. The aim of the fencing is to protect the vegetation and keep livestock out of the river. Over the past 15 years over 650 kilometres of fencing has been supplied to landholders to assist in protecting Avon waterways.

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Burlong pool rock riffle



WALKINGTRACK

This is the Burlong Pool section of the Dorntj Koorliny track 'Nyungar for Walking Together'. It is approximately 18km long. This track has 14 bridges and ramps made from recycled material and the surface varies from a bitumen surface to a dirt track. The Avon River can be crossed in all weather at the Swing Bridge, Gairdner Street Bridge, Peel Terrace Bridge and the Bypass Bridge. It is hoped that the Pool Street Bridge will one day be made safe for pedestrian traffic. This track is a multi-purpose track for walking, riding, running and bicycling.

Motorbikes and other motorized transport are forbidden.



Dorntj Koorliny track

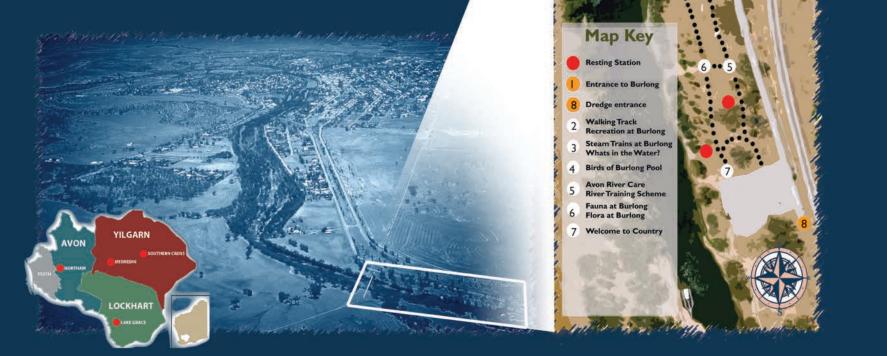
On this track you will be able to walk from the centre of Northam along the Eastern Bank to Burlong Pool. It is expected in the future that you will be able to walk along the Western Bank on the return trip to Northam.

Knowing the flow of the water course would be like being able to follow a map. If you knew it well you would know where there are good places to camp, where there are local food resources and what sites are taboo and therefore not allowed to be visited.

The *Nyungar* people have many tracks throughout this region. Sometimes they are known as dreaming tracks or song lines. The knowledge of these tracks has been handed down through the generations by stories and by walking. It is said that *Nyungar* people from as far as Southern Cross would come via this site. Sometimes people would travel these vast distances to attend ceremony. A ceremonial ground is within walking distance from where you now stand.

As you walk along this track be sure to look in the *mangart* (jam tree), *hibool* (paperbark), and *djaawit* (york gum) trees as this is where some of the animals can be seen.

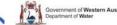
We hope that you enjoy your barn (walk) along this bidi (path).



















Nidja Nyungar budjar nguny wangkiny
(this is Nyungar land and stories)
Wargal kierp wirrinitj
(the water snake belongs to the water)

