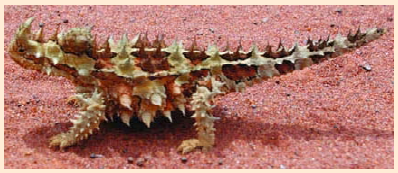
Goldfields land of surprises

The woodline track between Burra Rock and Cave Hill, near 85 mile dams. Photo – Barry Hooper

Western Australia's Goldfields and deserts are places of surprising contrasts, where first impressions can be deceptive.

Spanning more than 77 million hectares, the Goldfields is a striking contrast of landscapes. It is a place where deserts spawn elegant wildflowers, a harsh land that surprises the visitor with acacia and eucalypt trees, an arid country that bursts into colour after a sudden 'wet'.

In the middle of flat expanses of land, the visitor may come upon granite outcrops, salt lakes and spectacular 'breakaways' – inland cliffs that have been 'broken away' by wind and water erosion.



The Tropic of Capricorn is the northern boundary of the Department of Conservation and Land Management's (CALM's) Goldfields Region.

The Goldfields Region covers nearly one-third of WA, extending eastwards from the edge of the Wheatbelt, through eucalypt and mulga woodlands to the Nullarbor Plain, the Gibson and Great Victoria Deserts.

CALM is responsible for conservation and reserve management, flora and fauna management, fire control, feral animal control, flora and fauna industry regulation, reserve management, and rare plant and animal research and management.

It's also responsible for the construction and maintenance of recreation sites in the national parks, conservation reserves and nature reserves.

CALM also has a management role on Unallocated Crown Land (UCL) throughout the region and has bought pastoral leases for inclusion in the State's conservation reserve system.

Aboriginal people and CALM share a particular interest in land management and cooperative and joint management of conservation reserves. Aboriginal traditional knowledge continues to play a critical role in land management and in understanding recent changes in the ecology of animals inhabiting the deserts.

This is a fascinating land, with a rich history from traditional and ongoing Aboriginal culture through to contemporary European history and land uses, that began with the gold rushes of the late nineteenth century.

Visitors are likely to find a diversity of plant life ranging from desert oaks to mulga and spinifex, 'built' heritage of disused narrow gauge railway lines, drovers' and camel tracks, abandoned mining settlements, camps, wells forsaken gold mines, graves and much, much more.

The diversity of animals, plants and landforms on a natural backdrop of sand, ochre rock and blue sky will make the Goldfields experience an exhilarating trip through Aboriginal, European and natural history.

ABOVE The Goldfields is full of surprises such as this tranquil pool at Sydney Heads at Earaheedy.

LEFT The thorny devil (*Moloch horridus*) which abounds in the Goldfields.
Photo – Brett Lewis

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Travelling in the Goldfields

Desert oaks make a spectacular sight south of the Clutterbucks in the Gibson Desert. Photo – Ian Kealley

The Goldfields outback is an exciting place to explore.

Recently developed drive trails such as the Golden Quest Discovery Trail, Holland Track and Golden Pipeline Trail, along with the traditional outback 'highways', stock routes and four-wheel-drive bush tracks, cater for a new wave of outback travel, exploration and adventure.

Bitumen-road access is limited to arterial routes linking the main towns. The other main roads are unsealed, but are generally usable by two-wheel-drive vehicles in dry weather.

Local government authorities close many unsealed roads in wet weather. When this occurs, stay on sealed roads even if you have a four-wheel-drive vehicle. To do otherwise would certainly damage the roads and possibly leave you stranded. A few days' fine weather invariably dries out the roads, allowing normal access to resume.

Before setting out on your trip, there are certain precautions that you should take.

Not all roads marked on maps are for public use. Many are for access to Aboriginal communities, pastoral stations or mining leases only. Contact the community or land manager to get permission or permits to use them. Permission is often also needed to camp on these managed lands.

Pets should not be taken onto pastoral stations without the owner's consent. Pets are not permitted on CALM–managed conservation reserves, with the exception of the Kalgoorlie Arboretum.

When travelling in the Goldfields it is wise to carry extra fuel and water because of the vast distances involved. If you are heading into remote areas let someone know where you are going, when you expect to arrive at your destination and again when you arrive.

If you break down or run out of fuel, stay with your vehicle until help arrives (unless it is possible to walk back to a town or homestead you have just passed). **Never walk ahead to a place marked on your map, as it may be long abandoned.**

Collection of firewood is not permitted and rubbish collection services are not provided at many CALM-managed conservation reserves. Please keep an eye out for firewood en route to your destination – and please take your litter home.

Tall trees in an arid land

Nowhere else in the world are there so many different tall trees in a similar arid climate.

The eucalypt woodlands and forests of the arid and semi-arid eastern Goldfields are tall, vigorous and varied. They include the 25 metre salmon gum, the bronze-barked gimlet and the various blackbutts – a surprising sight in the drier inland.

There are about 50 different eucalypt species in the Kalgoorlie area, with 14 occurring between Coolgardie and Kalgoorlie. Unique and exceptionally well adapted, these Goldfields eucalypts thrive where annual rainfall is from 150 mm to 300 mm and temperatures range from -3°C to 45°C.

It comes as a surprise to many people to learn that much of today's inland eucalypt woodland, within 100 km of the main town of Kalgoorlie-Boulder, is regrowth dating back 40 to 100 years, and is the result of clear-felling carried out by the pioneers to supply fuel to the industries of the Goldfields. Wood was the primary fuel source and needed to fuel the mining industry boilers, for cooking and heating, to power the pumping stations that brought water along the pipeline from Mundaring, near Perth, and to generate electricity.

Timber was also used in the gold-mining industry to support hundreds of kilometres of underground shafts and to fuel the boilers to produce steam for winders that hauled ore to the surface.

About three million hectares of Goldfields eucalypt woodland were clear-felled from the 1890s to the 1950s and the timber was hauled in from the bush on narrow-gauge railways called 'woodlines'. About 30 million tonnes were harvested at an average rate of 10 tonnes per hectare.

The trees regenerated prolifically. Mature trees drop seed each year, but also retain in the crown other seeds in varying stages of maturity. When seeds drop, they germinate best in 'disturbed' soil. For example, when fire sweeps through the woodland, seed casings dry out and seeds fall, germinating in the loosened top soil.

Regrowth woodland of ribbon-barked gum and redwood. Photo – Ian Kealley

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Design and Production: Gooitzen van der Meer

Published by the Department of Conservation and Land Management 2005

Sydney Heads, Earaheedy. Photo – Ian Kealley

North to the mulga

North of Kalgoorlie-Boulder, visitors will notice a change in vegetation as the eucalypt woodland is replaced by low acacia woodland.

Much of the change occurs between Broad Arrow and Menzies. This vegetation change coincides with the transition from the eucalypt dominated Coolgardie bioregion to the acacia-dominated Murchison bioregion.

The Murchison bioregion's acacia woodland is dominated by mulga (*Acacia aneura*), growing as a low woodland. It is the dominant vegetation of the north-eastern Goldfields and Australia's interior. Mulga, takes many forms: narrow leaves, broad leaves, a weeping appearance and even horizontal branching (pine mulga) all adding to a rich vegetation diversity.

CALM takes an active interest in the management and conservation of acacia woodlands. They are extremely well adapted to the arid environment, but conflicting land uses and threatening process can impact severely on the woodland. Major changes to road draining can cause large areas to degrade or die, too frequent fires can kill mulga and pastoral and mining activities can have an impact. All these impacts must be managed carefully.

CALM manages several conservation reserves in the mulga areas. These include Goongarrie National Park and the adjacent former Goongarrie pastoral lease, Wanjarri Nature Reserve in the north-eastern Goldfields, the former Mt Elvire, Lake Mason, Black Range, Earaheedy and Lorna Glen Stations and parts of Kaluwiri, Cashmere Downs and Bulga Downs pastoral leases, all proposed conservation reserves.

A malleefowl on its nest, which you may see at Jaudi. Photo – Babs and Bert Wells/CALM

Jaurdi boasts rare species

The sheep have long gone, but the proposed conservation reserve at the former Jaurdi Station is still a hive of activity.

As the crow flies, the former pastoral station is located 130 km (175 km by road) west of Kalgoorlie-Boulder north of the highway and railway line. It was bought by CALM in 1989 to create a conservation reserve.

Jaurdi boasts a number of rare flora species, more than 100 bird species, nine native mammal species, more than 36 reptile species and two frog species. These are found on a variety of landforms and vegetation types including sandplains, granite rocks, banded ironstone hills, salt lakes, eucalypt woodland and acacia thickets.

Notable animals include the malleefowl, a large bird that builds distinctive nests that comprise a large mound of soil covering a core of leaf litter. These nest mounds can span more than five metres, be more than a metre high and are scattered throughout the station. Nest preparation begins in autumn and the male tends the nest through summer until temperatures begin to fall. The female spends most of her time looking for food to meet the metabolic demands of egg production. Malleefowl are omnivorous and will eat whatever food is seasonally available. Although they will drink if water is available, they normally live without it.

On the breakaways north of the homestead is the easternmost recorded location of the inland wandoo (*Eucalyptus capillosa*).

Passing through the area is the old Goldfields Stage Route from Southern Cross to Goongarrie, now a rough four wheel drive track. It follows a series of rocks from Darrine to 71 Mile Rock where old tin-covered and rock-lined soaks and wells receive their water as run-off from adjoining granite rocks. Legible graffiti on the lid of one of these soaks dates back to 1939.

The remnants of two old graves can also be found along this route. The grave north of Darrine and the Perth to Kalgoorlie-Boulder railway is barely recognisable but is thought to belong to an Afghan camel driver, while the other, near Wallangie (or Deadman's) Rock, has an inscribed brass plate and belongs to an old prospector.

Woodline timber cutting occurred at Jaurdi from 1910-20 to supply the Kalgoorlie mines with fuel for boilers, power generation and timber for mine shafts. A number of woodline spur lines off a main woodline that ran from Kurrawang via Wallaroo Rock can be found. There are several old mines as well as active mining and exploration operations. Care should be taken as unsecured shafts and dangerous excavations still exist. Mining lease rights still apply to these prospects, so nothing should be disturbed in these areas, including old infrastructure, materials, soil or stone.

THINGS YOU NEED TO KNOW

Jaurdi

- **Where is it?** 175 km west of Kalgoorlie via the Great Eastern Highway and Ryan's Find or by Mt Walton road.
- **Travelling time:** Three hours from Kalgoorlie. Access to, and travel within, Jaurdi Station is on unformed, unsealed tracks with tight corners. Sections of tracks can be impassable in wet weather. Please drive slowly and cautiously and watch for other traffic. Four-wheel-drive vehicles are recommended, in dry weather only.
- **Facilities:** The homestead, just north of the railway, has basic accommodation, a water supply, a shower, toilet, pot-belly stove, cooking facilities, tables, barbecue, rain and dam water tanks, shearers' quarters and a shearing shed. Camping fees apply and bookings can be made through the CALM Kalgoorlie Office.
- **What to do:** Sightseeing, walking, photography, nature study, camping, environmental education, 4WD trips, yabbies in the dams.

Goongarrie: A conservation reserve in the transition zone

Goongarrie is in the transition zone between the Coolgardie and Murchison biogeographic regions.

In 1995 the 100,686 ha Goongarrie Station – taken up to run sheep in 1924 but never fully developed because of difficulty in establishing water points – was purchased by CALM to expand existing conservation reserves.

Goongarrie is 90 km north of Kalgoorlie-Boulder and a popular camping destination.

This is the region where semi-arid and arid country converge, giving visitors the chance to see eucalypt-dominated woodlands from the semi-arid zone in the south become a landscape dominated by mulga trees from the arid zone in the north and east. As a consequence of this vegetation change, Goongarrie has rich and diverse plant and animal life.

It is biologically significant because many species occur here, associated with geological features and land systems, such as granite sheets, breakaways, greenstone hills, sand dunes and salt lakes.

The desert grass tree (*Xanthorrhoea thorntonii)*, near the Adelong Dunes to the north of Goongarrie Station, is one of many interesting plants to be found. Other unique species include the locally endemic Jutson's mallee (*Eucalyptus jutsonii*) and priority species such as lamb's tail (*Newcastelia insignis*) and hopbush (*Alyxia tetanifolia*).

A detailed recent biological survey found 58 species of reptiles and amphibians, 21 native mammals including seven bat species, and at least 95 bird species. Malleefowl, one of WA's threatened bird species, are occasionally seen.

The Goongarrie reserves have a rich cultural history with many important Aboriginal sites, including the adjacent Adelong Station managed by the Menzies Aboriginal Corporation, rockholes, graves, watering points (Comet-Vale and Deadmans Soak) and a long history of prospecting, mineral exploration and mining.

Goongarrie was the first important gold find after Coolgardie. First miners named the area Roaring Gimlet because of the cold south-westerly winds through the gimlet trees. As the mining town flourished during the gold rush peak from the 1890s, Goongarrie was known as the Ninety-Mile, boasting hotels, bed and breakfasts, a Cobb & Co coach stop, a railway and several stores. At its height the town had 112 houses. Now, three remaining historical railway cottages are part of the Golden Quest Heritage Trail.

The Goongarrie homestead complex has several accommodation buildings (a homestead, sandalwood camp and shearers' cottage) in good working order and makes an ideal place to visit and camp either in the three main buildings or outside.

All the buildings have tables, wood barbecues, water supply, rainwater, showers, some furniture and provisions for electricity (BYO generator).

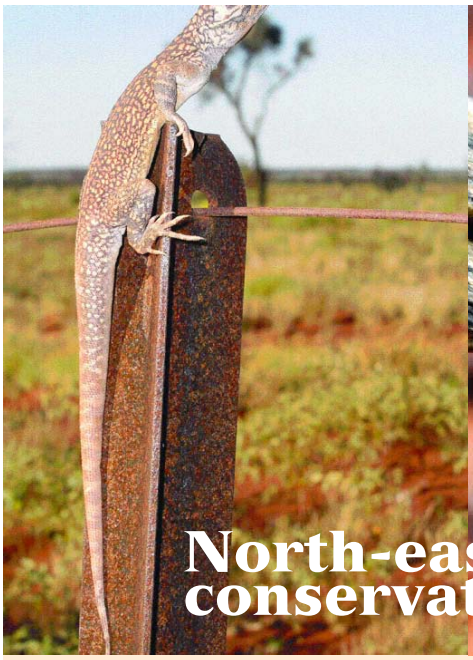
The facility is an excellent venue for bush workshops, conferences, meetings or group and school excursions. Camping fees apply and bookings can be made through the CALM Kalgoorlie Office.

The Goongarrie Homestead. Photo – CALM Goldfields

THINGS YOU NEED TO KNOW

Goongarrie area

- **Where is it?** 90 km north of Kalgoorlie. The homestead is 14 km west of the Goldfields Highway on a dirt road turning off near the Goongarrie railway cottages, or there is access from the North at the old Comet Vale siding following the main track for seven km. Access east to the Goongarrie National Park is via Pianto Rd, approximately 12 km north of the homestead turnoff.
- **Travelling time:** 1 hour from Kalgoorlie
- **Facilities:** Goongarrie homestead complex has accommodation in buildings and full facilities. All the buildings have tables, wood BBQs, water supply, rainwater, showers, some furniture and provisions for electricity (BYO generator). Camping fees apply and bookings can be made through the CALM Kalgoorlie Office.
- **What to do:** 4WD trips, touring, history, bush walking along a marked five km trail, bird watching, cycling, camping and nature study.



North-eastern Goldfields conservation reserves

A netted dragon (*Ctenophorus nuchalis)* at Lorna Glen. Photo – Mark Cowan

This *Diplodactylus* gecko species has no common name. Photo – Mark Cowan

Travellers to the north-eastern Goldfields may be familiar with Wanjarri Nature Reserve north of Leinster, managed by CALM.

CALM has recently acquired additional pastoral leases as future conservation reserves. These are Lorna Glen and Earaheedy (north-east of Wiluna) Lake Mason, Black Range and parts of Kaluwiri, Cashmere and Bulga Downs in the Sandstone area.

CALM's aim in buying these stations is to conserve the representative land systems, flora and fauna, and additionally to provide facilities and nature-based tourism opportunities for visitors.

The purchase of the stations as conservation reserves was funded through the National Reserve System Program of the Natural Heritage Trust and the Gascoyne-Murchison Strategy.

Black Range, Lake Mason and other reserves in the Sandstone area are located in the Murchison Bioregion whereas Earaheedy is situated in the Gascoyne Bioregion and Lorna Glen on the boundary between the two.

North of Leinster
Wanjarri Nature Reserve

Located 80 km north of Leinster, the 53,248 ha Wanjarri Nature Reserve is an extremely valuable conservation reserve in the arid zone. The area was the former Kathleen Valley Station purchased as a conservation reserve in 1971.

Wanjarri is essentially a broad flat valley with breakaways on the east and west margins. The vegetation consists of mulga communities and spinifex sandplains with dunes and marble gums in several areas. To the west, the Barr Smith Range from which river gum lined creeks flow, is rich in Aboriginal history and sites.

The surrounding area has a rich mining and pastoral history with the remnants of former mining activities obvious at the abandoned Kathleen Valley and Sir Samuel towns and mines. Recent gold and nickel mining operations continue at Bronzewing and Mt Keith.

Visitors to Wanjarri can experience the history, vegetation and landforms of the Murchison bioregion and north-east Goldfields, part of the unique WA outback. There is a simple camping facility at Wanjarri around the old shearing shed (the former Kathleen Valley mine assay shed). Camping fees apply and bookings can be made through the CALM Kalgoorlie Office.

The western pigmy possum (*Cercatetus concinnus*). Photo – Mark Cowan

Lake Mason's breakaways. Photo – Brett Lewis

Breakaways and mulga at Lorna Glen. Photo – Ian Kealley

North of Sandstone

Lake Mason, Black Range and Kaluwiri

Lake Mason (149,557 ha), 50 km north of Sandstone, was bought in July 2000.

It has a long and interesting pastoral history Originally established in 1906 when it was known as 'Berrigun', it was later subject to numerous changes of boundaries and owners. Initially a cattle station, it changed to sheep and wool production for its primary income for more than 80 years.

Black Range (79,300 ha), situated 15 km north-west of Sandstone, adjoins Lake Mason and was purchased by CALM in October 2000. The Kaluwiri north block (103,640 ha) also adjoins Lake Mason along the north boundary and was purchased in August 2003.

Black Range and Kaluwiri remained largely undeveloped as pastoral leases because most of the area was very low pastoral value rangeland of spinifex sandplains and dunes known as the 'Bullimore' land system. The remainder is mulga plains and breakaway areas.

The land systems of the 332,497 ha reserve are characterised by a gently undulating landscape dominated by a salt lake system in the centre with several spectacular breakaways and low hills in the west and north. Ridges of banded ironstone and granite hills feature in the east. The Lake Mason salt lake system with fringing alluvial plains, calcrete, gypsum (kopi) dunes and sandy banks links east-west through the area.

The most common vegetation type is the spinifex sandplains and spinifex dune fields in the north and north-west section along the Number One Vermin Proof Fence. Samphire and saltbush lake country and mulga plains make up the next two most common vegetation types, with low acacia shrubland common in the hills. One known species of priority flora, the Cue grevillea (*Grevillia inconspicua*) is found on Lake Mason at several locations.

A series of systematic biological surveys began in September 2004. So far they show there are at least 60 reptile and 100 bird species. Because of the diverse geology and vegetation of the reserves, expectations are that the flora and fauna diversity will also be high. Opportunistic survey has already shown this to be the case, with the diverse bird fauna that will expand when the lake system floods providing a significant habitat for waterbirds and waders.

Facilities for camping and public use are located around the Lake Mason homestead and shearers quarters complex. CALM maintains these facilities to accommodate visitors and caretakers, and uses it as a 'field study centre' for visiting staff and the public. Camping fees apply and bookings can be made through the CALM Kalgoorlie Office. Facilities include buildings for shelter, tables, a shower, toilets and barbecues. Bush camping is permitted throughout the reserves with approval from the CALM regional office.

The rufous treecreeper. Photo – Bill Nelson/Lochman Transparencies

The common brushtail possum was found in the Goldfields before the arrival of the fox. Photo – Jiri Lochman Transparencies

Sunrise at Lake Mason. Photo – Ian Kealley

South of Sandstone

Cashmere and Bulga Downs, Ida Valley and Mt Forrest

In April and May 2002, as part of a voluntary lease adjustment under the Gascoyne Murchison Strategy, CALM bought the undeveloped parts of Bulga Downs (the 83,338 ha western part of the former Ida Valley lease) and Cashmere Downs (80,589 ha) as two separate reserves.

These isolated and remote reserves include excellent examples of land systems, flora and fauna representative of the area. The reserves contain a spectacular area of banded ironstone hills around Ida Valley–Mt Forrest, with natural springs. There are extensive areas of granite, breakaways, spinifex and mallee sandplain. The Cashmere–Bulga block has lake frontage to Lake Barlee and Lake Noondie. The mulga woodlands and other vegetation communities are in excellent condition.

There are several remote historic and cultural sites in the area including Depot Spring where the explorer John Forrest camped during his expeditions in the early 1900s.

Both areas are remote with limited 4WD-only access on bush tracks and no facilities.

Visitors enjoy the view from Mt Forrest. Photo – Ian Kealley

Lorna Glen's bunkhouse provides a place to relax. Photo – Barry Hooper

The desert mouse (*Pseudomys desertor*). Photo – Mark Cowan

North of Wiluna

Earaheedy and Lorna Glen

Earaheedy (321,812 ha) was bought in March 1999 and is 180 km north-east of Wiluna. In the south-west corner it joins the 245,094 ha Lorna Glen reserve bought in August 2000, located 150 km north-east of Wiluna.

The two areas were former cattle and sheep stations that now form a large and valuable conservation area that will be managed jointly with Aboriginal traditional owners from Wiluna.

Lorna Glen is near the highest part of the WA inland plateau and is divided by an upland, which correlates with the boundary between the Gascoyne and Murchison bioregions. The diverse landscape has 26 different land systems including an undulating mix of sandstone plateaux, stony plains, and dune and hill systems with large breakaways and lakes. To the north, in the Gascoyne bioregion, Earaheedy has deposits of laterite, silcrete and calcrete occurring on infilled ancient drainage systems. There are numerous claypans and lakes in the east and the unique Leeuwin land system, an ancient drainage channel, in the west. The Lee-Steere Range runs close to the north boundary and contains the unique geological feature of the Sydney Heads Conglomerate, which is confined to a single outcrop in the Sydney Heads Pass.

The vegetation on Earaheedy, surrounding the extensive drainage line, salt lake and claypan ecosystems, consists of chenopod shrublands, spinifex sandplain, acacia (mainly mulga) woodland and shrubland with scattered eucalypts.

The vegetation on Lorna Glen station is dominated by extensive spinifex sandplains with overstoreys of mulga and the majestic marble gum. A number of stony rises and breakaway systems, particularly in the north, provide relief from the surrounding subdued topography and support rich and distinctive vegetation communities of their own.
An extensive lake system, Lindsay Gordon Lagoon, spreads south of the Lorna Glen

Continued page 7

homestead. Around its perimeter there is exceptional diversity in vegetation with open eucalypt woodlands, isolated spinifex dunes, samphire beds, and dense groves of melaleucas and grassy flats.

A biological survey conducted over three years in different seasons found more than 450 plant species on Lorna Glen. The area is particularly rich in eremophilas and acacias, as these species are well adapted to the erratic and unreliable rainfall of the region.

Animal life is also abundant and diverse with more than 76 species of reptiles and amphibians alone! This is one of the richest reptile faunas documented anywhere in the Australian arid zone. At least 20 mammal species also occur, including rarely seen species such as the long-tailed dunnart (*Sminthopsis longicaudata*) and Woolley's false antechinus (*Pseudantechinus woolleyae*). The region is rich in bird life, particularly after substantial rain when the lakes and clay pans support a variety of waterfowl and waders. More than 100 bird species have currently been recorded from the area but the number may still increase with further work.

Windstorms caused extensive damage to the homestead buildings at Earaheedy requiring them to be demolished leaving just the machinery shed which is available for emergency shelter. Visitors should carry their own fuel and water.

Nestled among the river gums, the Lorna Glen homestead is an ideal camping location with some self-contained bunkhouse accommodation and facilities available. CALM maintains these facilities to accommodate caretakers and for use as a 'field study centre' for visiting staff and the public. Camping fees apply. Bush camping throughout the reserves, with permission, is allowed.

Sydney Heads Pass at Earaheedy. Photo – Ian Kealley

A knob-tailed gecko (*Nephrurus vertebralis*) at Lorna Glen.

Wildflowers at Jaudi. Photo – Ian Kealley

THINGS YOU NEED TO KNOW

Lorna Glen and Earaheedy

- **Where is it?** 150-180 km north-east of Wiluna. The Lorna Glen homestead is 37 km east of the main road.
- **Travelling time:** 2-3 hours from Wiluna.
- **Facilities:** Full homestead complex at Lorna Glen (phone 99812986), power, toilets, showers, camping areas, airstrip and caretakers.
  A basic shed at Earaheedy. Remote, no fuel available. Camping fees apply and bookings can be made through the CALM Kalgoorlie Office.
- **What to do:** 4WD outback touring, camping, nature study, research areas, nature-based recreation.

Lake Mason, Black Range and Kaluwiri

- **Where is it?** North of Sandstone. The Lake Mason homestead (phone 99815880) is central and is located 56 km north of Sandstone 5km off the Gidgee mine road.
- **Travelling time:** 40 min from Sandstone to Lake Mason homestead.
- **Facilities:** Only at the Lake Mason homestead. Buildings for shelter, showers, toilets, BBQ, rain and bore water. Camping fees apply and bookings can be made through the CALM Kalgoorlie Office.
- **What to do:** 4WD touring, camping, history, nature study and research, bird watching and prospecting.

Bulga and Cashmere Downs, Ida Valley and Mt Forrest

- **Where is it?** Two remote reserves 90-150 km south of Sandstone off the Sandstone-Menzies Rd.
- **Travelling time:** Two to three hours from Sandstone or Menzies.
- **Facilities:** No facilities.
- **What to do:** 4WD touring and exploring, bush camping, historic sites, nature study.

Wanjarri Nature Reserve

- **Where is it?** 80 km north of Leinster 15 km east of the main highway, bush track access only.
- **Travelling time:** One and a half hours from Leinster.
- **Facilities:** Old shearing shed with basic camping facilities, shelter, shower, toilet and BBQ. Bring your own drinking water. Camping fees apply and bookings can be made through the CALM Kalgoorlie Office.
- **What to do:** 4WD touring and exploring, bush camping, historic sites, nature study.

Take in gold mining ghost towns on Rowles Lagoon circuit

Rowles Lagoon and shelter. Photos – Tracy Churchill (left) and Barry Hooper (right)

Rowles Lagoon Conservation Park and the adjacent lakes (Clear, Muddy and Carnage Lakes Nature Reserve) are a popular recreation destination for Goldfields families, visitors and tourists.

The freshwater Rowles Lagoon relies on rainfall runoff to maintain its depth and when full offers excellent opportunities for water-based recreation and wetland studies.

A range of facilities has been developed for both day users and larger groups wanting extended camping weekends. Located in shaded areas around the lagoon, CALM has provided camping areas, barbecues, picnic tables, information panels and toilets. As the area is a conservation park, pets are not permitted and vehicles must remain on defined tracks.

Rowles Lagoon and the surrounding lakes are a bird watcher's paradise. The lakes are culturally and environmentally significant and included in Australia's register of significant wetlands. Many species of waterfowl visit the area.

The wetlands are an important cultural site for local Aboriginal people and the story of the site is told at the interpretation shelter.

Black swans, pink-eared ducks and wood ducks are commonly found, along with several rare species including the freckled duck, Australia's rarest waterbird. For dedicated bird watchers, the CALM Kalgoorlie office has available a list of birds recorded at Rowles Lagoon and the adjacent lakes.

Activities for visitors include nature based recreation, swimming, catching yabbies and boating when the water depth permits.

Rowles Lagoon can also be included in an interesting day circuit visiting the gold mining ghost towns of Broad Arrow, Ora Banda and Kunanalling, and the Coolgardie town along the Golden Quest Heritage Trail.

THINGS YOU NEED TO KNOW
Rowles Lagoon Conservation Park

- **Where is it?** 73 km north of Coolgardie along the Bonnie Vale and Carbine Roads or alternatively from Kalgoorlie via Ora Banda.
- **Travelling time:** One hour from Coolgardie.
- **Facilities:** Information shelter, tables, toilets, camping sites, freshwater lake (intermittent depending on rainfall), boat launching site, gazetted water-ski area, heritage trail.
- **What to do:** Sightseeing, walking, photography, nature observation (especially bird watching), swimming, water-skiing, canoeing, picnics, camping.

Cave Hill's cave and wave formation

Cave Hill is an excellent camping spot and is one of several large granite rock conservation reserves managed by CALM.

It is also suitable for longer day trips from Kalgoorlie-Boulder, Coolgardie, Kambalda, Widgemooltha or Norseman.

The reserve is dominated by a spectacular granite outcrop with a large cave and wave formation on the western side which gives the rock its name. The rock is an important Aboriginal cultural site and has a water catchment with four dams that supplied the woodlines.

These dams were constructed during the woodlines timber cutting era and were used as a water source to supply steam-driven engines on the narrow-gauge woodline railways. The timber was supplied to Kalgoorlie-Boulder by the many camps scattered around the area between 1930 and 1937.

For those with four-wheel-drive vehicles, a trip along the woodline towards Burra Rock can be a memorable and historically interesting experience. There are a number of woodline camps along this track. Alternatively the new two-wheel-drive tourist road linking Widgemooltha and Coolgardie via Cave Hill and Burra Rock is an excellent drive.

The Cave Hill reserve has developed camping areas at the base of the rock, picnic tables, barbecues and toilets. The many activities available include camping, nature-based study, water-based recreation and exploring the massive granite outcrop. Surrounding woodlands offer pleasant sites for passive recreation, picnics, walks and wildlife observation.

The granite outcrop is the home to mammals, reptiles and insects, many of which are quite rare, so please respect the environment and keep vehicles to established roads and tracks.

Cave Hill's famous cave. Photo – Barry Hooper

THINGS YOU NEED TO KNOW
Cave Hill Conservation Reserve

- **Where is it?** 50 km south-west of Widgiemooltha, 90 km south of Coolgardie, 60 km west of Higginsville off the Coolgardie-Esperance Highway.
- **Travelling time:** One hour from Kambalda, one and a half hours from Coolgardie, three hours from Coolgardie if you take the 4WD Woodline track from Burra Rock.
- **Facilities:** Information shelters, tables, barbecues, toilets, camping areas.
- **What to do:** Sightseeing, walking, photography, nature observation, yabbying, picnics, camping, four-wheel-drive trips along the old woodlines (if conditions are wet remain on formed roads only).

Time stands still at Burra Rock

Burra Rock Conservation Reserve contains several large granite rocks surrounded by regrowth eucalypt woodland and areas of sandplain.

It also has a historical dam and catchment wall that supplied water for steam-driven engines on the narrow-gauge 'woodline' railways bringing timber to Kalgoorlie-Boulder from 1921-37.

The regrowth woodland around Burra Rock is the result of clear felling from 1922-1927 to supply fuel wood for steam-driven engines, industry and structural timber for the gold mining industry.

There is an air of abandonment about several old woodline camps that dot the landscape between Burra Rock and Cave Hill, now connected by a four wheel drive- only track along the old woodline or an alternative new two wheel drive tourist road further west. It's as if the cutters had suddenly dropped everything – tools, tea mugs, drink bottles – and left the still burning ash pits without looking back.

A welcome sight on a hot day is the Burra Rock Dam and rock catchment. A short climb to the summit of the rock rewards visitors with a great view over the regenerated woodlands that stretch as far as the eye can see. Visitors can also undertake other activities such as camping, nature study, exploring the rock and water-based recreation around the dam and rock.

Visitors must not drive off tracks or on the rocks, as the fragile granite and other historical features are easily damaged and areas are being rehabilitated. Exfoliating granite sheets provide shelter for a number of different animal species and damage to these sheets reduces available habitat and can result in local animal extinctions. Pets are not permitted in any conservation reserve, including Burra Rock.

THINGS YOU NEED TO KNOW
Burra Rock Conservation Reserve

- **Where is it?** 60 km south of Coolgardie, past the old Nepean Mine on the Burra Rock Road.
- **Travelling time:** 45 minutes from Coolgardie.
- **Facilities:** Information shelter, tables, barbecues, toilets, historic dam, camping areas.
- **What to do:** Sightseeing, walking, photography, nature based recreation, picnics camping.

A black-footed rock wallaby. Photo – David Pearson

The Burton legless lizard (*Lialis burtonis*) found throughout the Goldfields. Photo – David Pearson

Local trees delight Kalgoorlie Arboretum visitors

The Kalgoorlie Arboretum provides an excellent window to the Goldfields eucalypt woodlands.

A wide variety of native flora, walk trails for all ages, picnic tables in a grassed area under the shade of river red gums and a small dam that attracts water birds are some of the features of the Kalgoorlie Arboretum in the City of Kalgoorlie-Boulder.

The dam is filled by intercepting run-off from residential areas draining into the Arboretum. This run-off is directed through a series of shallow water harvesting areas and eliminates the need to artificially water grassed areas.

Facilities at the Kalgoorlie Arboretum. Photo – CALM Goldfields

The Arboretum, a 26 ha reserve, was established in 1954 by CALM's predecessor, the Forests Department. Three foresters, George Brockway, Bill Brennan and Robert Donovan, sought to test and demonstrate native and exotic tree species suitability for planting in the semi-arid environment of the Goldfields. Since then, seed from these tree species has been exported to similar semi-arid countries around the world.

About 60 eucalyptus species have been planted in the last 40 years. Recent plantings include species such as Boree (*Melaleuca pauperiflora*) and regeneration and seeding of Goldfields understorey species such as salt bushes and eremophilas.

Information about tree species, the Arboretum and Goldfields bioregions is available from the interpretive panels near the car park. The extensive interpretation panels were developed in partnership with Placer Dome Asia Pacific which also assisted with understorey regeneration, research and trials.

THINGS YOU NEED TO KNOW
Kalgoorlie Arboretum

- **Where is it?** Hawkins Street, Kalgoorlie. Adjacent to Hammond Park.
- **Travelling time:** Five minutes from central Kalgoorlie.
- **Facilities:** Information shelter, tables, disabled toilet, catchment dam, grassed shady picnic area, arboretum of local and exotic trees, walk trails, bike path, Gribble Creek pathway.
- **What to do:** Sightseeing, walking, photography, nature observation, picnics, tree identification, environmental education.

Spectacular rock formations at Victoria Rock, in the Goldfields. Photo – Steve Sadler

Spectacular granite outcrops at Victoria Rock

One of the Goldfields' most spectacular natural granite outcrops can be seen at Victoria Rock Nature Reserve south of Coolgardie.

If you climb to the summit of Victoria Rock and view the surrounding woodland, you might find it difficult to believe that this area was clear-felled for its timber in the 1920s. The woodland now seen is regrowth, consisting of salmon gum, gimlet and redwood. Closer to the rock, thickets of rock sheoak, mallee York gum and granite rock box provide an ideal spot for nature-based recreation and camping.

The keen explorer can view the plentiful wildlife, including ornate dragons (small lizards), emus, echidnas and frogs. The abundance of wildflowers at the base of the rock provides an excellent food source for the variety of birds in the area, which include honey eaters, yellow-throated miners and rainbow bee-eaters.

Nestled beside the rock are several secluded picnic and camping sites catering for visitors, complete with barbecues and toilets.

Another interesting stop on the way to Victoria Rock is Gnarlbine Rock, 23 km south of Coolgardie. H. M. Lefroy discovered it in 1863 and it was named Gnarlbine Rock by C.C. Hunt in 1865. The soak at its base was an important water stop for early explorers and became a water supply for Coolgardie. John Holland included the soak in his track linking Broomehill and Bayley's Find at Coolgardie in 1893. This link became known as the Holland Track.

THINGS YOU NEED TO KNOW
Victoria Rock Nature Reserve

- **Where is it?** 43 km south of Coolgardie on the Victoria Rock Road.
- **Travelling time:** 30 minutes from Coolgardie.
- **Facilities:** Information shelter, barbecues, toilets, camping areas.
- **What to do:** Sightseeing, walking, photography, nature based recreation, picnics, camping.

Nature reserves in the deserts

The Townsend Ridges east of Warburton. Photo – David Pearson

WA's southern deserts contain several large reserves that are part of the State's conservation reserve system.

These reserves include the Gibson Desert Nature Reserve (1.8 million ha), Great Victoria Desert Nature Reserve (2.1 million ha), Yeo Lake Nature Reserve (320,000 ha), Plumridge Lakes Nature Reserve (308,000 ha) and Neale Junction Nature Reserve (723,000 ha).

Plants and animals well adapted to the desert flourish in the different types of terrain and vegetation throughout the desert reserves, from the unique landscape of the Nullarbor Plain to vast dune-fields interspersed with breakaway ranges, salt lakes and desert ranges, to the tree-lined sandstone gorges and creeks of the Gibson and Sandy Deserts

There are chenopod shrublands surrounding salt lakes that once were ancient 'fossil' rivers, breakaway outwash areas with low mulga woodlands and the very beautiful open eucalypt woodlands of marble gum and mallees that prosper in yellow sands of the Great Victoria Desert.

The Gibson Desert supports a rich bird fauna with more than 124 species having been recorded. A number of threatened animals are also known to occur including the bilby, mulgara and great desert skink. Queen Victoria Spring Nature Reserve has one species of declared rare flora, the Victoria Desert smokebush (*Conospermum toddii*), as well as two priority-listed plant species and eight geographically restricted ones. There are also six known species of threatened fauna including the malleefowl, scarlet-chested parrot and sandhill dunnart.

Aboriginal people from several communities have cultural ties with lands within the Gibson Desert and Great Victoria Desert Nature Reserves where native title rights have been granted. These cultural ties are strong and should be respected by visitors.

Some desert reserves contain important historical sites. For example, a plaque commemorating the 1891 Elder Exploring Expedition can be seen at Queen Victoria Spring in the nature reserve.

Early explorers such as Giles and Carnegie named many of the mapped features within the Gibson Desert Nature Reserve. All cultural sites require careful management, particularly with increasing visitor numbers, so please respect and preserve them. Not all sites are readily accessible and approval should be sought to visit these locations.

There has been a significant increase in the number of people travelling to the desert reserves in four wheel drive vehicles, including group tours and tag along trips. Outback tracks built by Len Beadell's Gunbarrel construction party – the 'Connie Sue', 'Anne Beadell' and 'Gunbarrel' highways and the recently named David Carnegie Highway – offer remote access through the deserts. Information on the desert roads is available from CALM.

Goldfields Woodlands National Park

Regrowth salmon gums in the Goldfields Woodlands National Park. Photo – Steve Sadler

The Goldfields Woodlands National Park straddles the Great Eastern Highway 60 km west of Coolgardie, running for another 40 km beside the road.

It is part of a 152,500 ha conservation reserve network that includes Boorabbin National Park to the west, Victoria Rock Nature Reserve and a special management area to the south and east.

These reserves add to a linear network of other conservation reserves 400 km long from Jilbadgi Nature Reserve in the south through the Jaurdi Conservation Reserve to the CALM-managed Mt Elvire reserve and Mt Manning Range Nature Reserve in the north. They form an important part of the conservation estate east of the Wheatbelt.

An additional area of 142,140 ha to the south is proposed to be added to the national park and a further 10,000 ha to the other conservation reserves. This will create a conservation reserve network of more than 311,000 ha.

The reserves are within the Coolgardie biogeographic region. They complete the comprehensive adequate and representative (CAR) network of conservation reserves for the Boorabbin vegetation system within the Coolgardie bioregion.

The area has significant conservation values. It includes a diversity of landforms and vegetation types such as sandplains, freshwater swamps, salt lakes with saltbush and samphire surrounds, uncut and regrowth eucalypt woodlands and granite complexes. The area contains a wide variety of original stands and regrowth areas of eucalypts including salmon gum, gimlet, ribbon-barked gum, mallees, red morrel, redwood and woodline mallee. There also is a range of other native flora including wattles, banksia, bottlebrush, hakeas, melaleucas, sheoaks, sandalwood and grasstrees. Many of these were the source of bush tucker for Aboriginal people who used the area.

The park and associated conservation reserves provide visitors travelling by road from the east with their first views of the State's spectacular spring and summer wildflower displays of the kwongan sandplain heaths.

Fauna surveys for the area, including the neighbouring 26,000 ha Boorabbin National Park, have found 17 native mammal species, four frogs species, 52 reptile species and more than 100 bird species. Mammals include the southern ningaui, pygmy possum and several species of dunnart (small nocturnal marsupials) as well as bats and native rodents.

There are recreation and camping sites within the park along the highway at Boondi Rock and south of Coolgardie at Victoria Rock. Passing through the park, with a site at Woolgangie Rock, is the Golden Pipeline Heritage Trail. It provides a tourist route incorporating different biological and historical features including distinctive rock catchments along the historic Goldfields railway and pipeline running parallel to the Great Eastern Highway.

The famous and historic Holland Track from Broomehill to Coolgardie crosses the park from Diamond Rock through to Thursday Rock and Victoria Rock to Coolgardie. This route is now a popular outback four-wheel-drive track and will continue to be managed for this use.

Remnants of the historic Kalgoorlie woodlines, in the eastern part of the reserves, generate much interest. These woodlines were narrow gauge railway lines used to haul timber into Kalgoorlie-Boulder for the mines and fuel for industry. They were developed around 1900 following the discovery of gold in Coolgardie in 1892 and in Kalgoorlie the following year and operated until the 1960s.

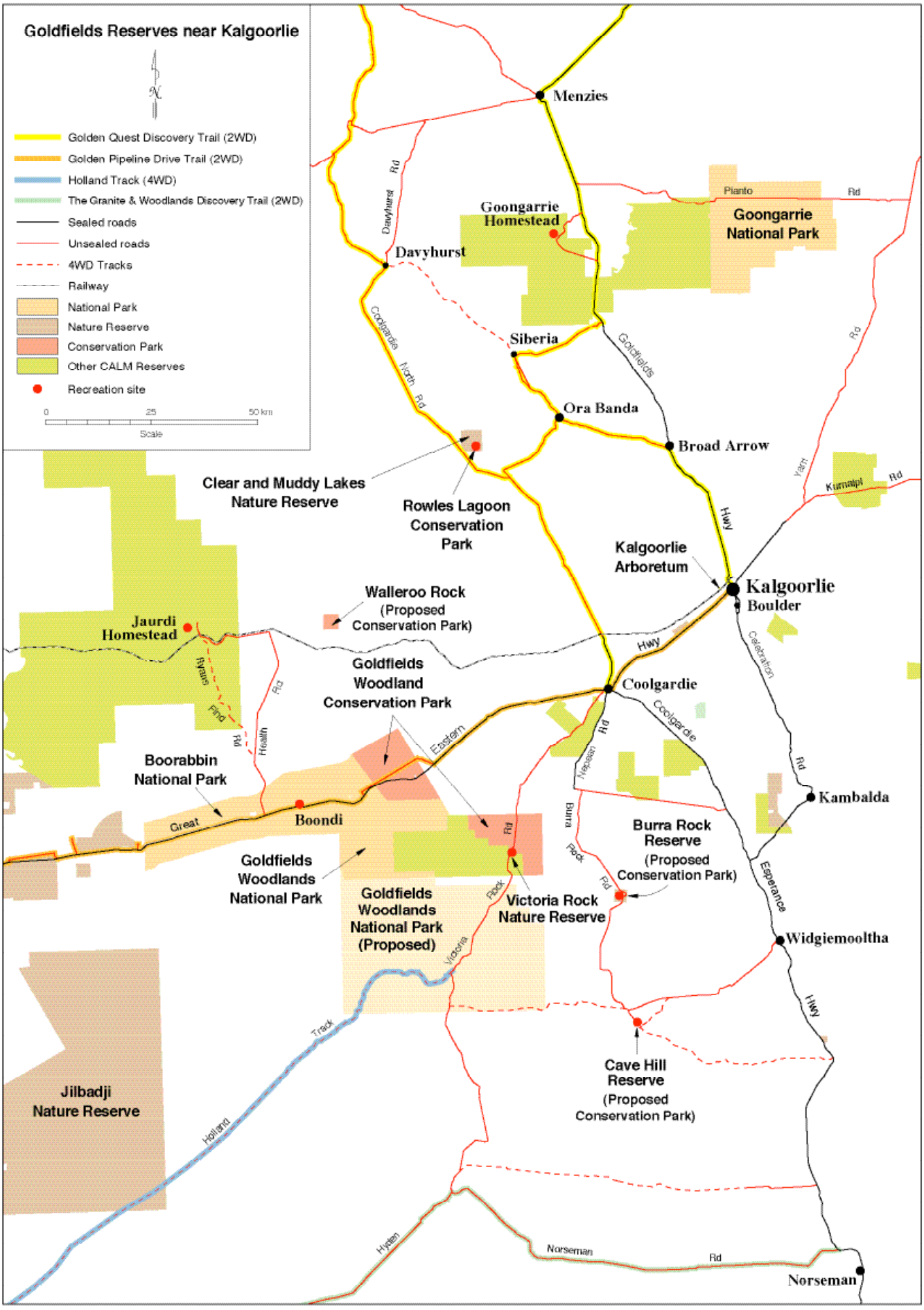
Timber cut from the arid inland forests and woodlands was also used as fuel in the pumping stations along the Goldfields water pipeline between Mundaring and Kalgoorlie, completed in 1903. The last of the wood-fired boilers and pumping stations converted to diesel in 1960. By 1965 the Goldfields woodlines and timber-fuelled pump stations had been consigned to history.

Many visitors have a strong interest in the history of the pipeline, woodlines and historic aspects of the access tracks that serviced the Goldfields. The national park incorporates several sites interpreting these features and the Aboriginal culture, history and ecology of the area.

THINGS YOU NEED TO KNOW

Goldfields Woodlands National Park and Conservation Park

- **Where is it?** 60 km west of Coolgardie along the Great Eastern Highway and south of Coolgardie on the Victoria Rock Rd. It runs for another 40 km beside the road.
- **Travelling time:** One hour from Coolgardie.
- **Facilities:** Visitor and camping areas at Victoria Rock and Boondi Rock. Information shelter, tables, toilets, camping sites, freshwater dam at Boondi, heritage trail, Holland Track, picnic sites.
- **What to do:** Sightseeing, walking, photography, nature observation, bird watching, swimming, yabbies, picnics, camping, 4WD trips.


Goldfields Reserves near Kalgoorlie
N
Golden Quest Discovery Trail (2WD)
Golden Pipeline Drive Trail (2WD)
Holland Track (4WD)
The Granite & Woodlands Discovery Trail (2WD)
Sealed roads
Unsealed roads
4WD Tracks
Railway
National Park
Nature Reserve
Conservation Park
Other CALM Reserves
Recreation site
0
25
50 km
Scale
Menzies
Davyhurst Rd
Davyhurst
Goongarrie Homestead
Goongarrie National Park
Plianto Rd
Siberia
Coolgardie North Rd
Goldfields Rd
Ora Banda
Broad Arrow
Yarri Rd
Kurnalpi Rd
Clear and Muddy Lakes Nature Reserve
Rowles Lagoon Conservation Park
Kalgoorlie Arboretum
Kalgoorlie Boulder
Hwy
Walleroo Rock (Proposed Conservation Park)
Jaurdi Homestead
Ryans Find Rd
Heath Rd
Goldfields Woodland Conservation Park
Eastern Rd
Coolgardie
Celebration Rd
Napier Rd
Coolgardie Rd
Kambalda
Boorabbin National Park
Great Eastern Hwy
Boondi
Goldfields Woodlands National Park
Goldfields Woodlands National Park (Proposed)
Victoria Rock Nature Reserve
Burra Rock Reserve (Proposed Conservation Park)
Burra Rock Rd
Esperance Hwy
Widgiemooltha
Cave Hill Reserve (Proposed Conservation Park)
Jilbadji Nature Reserve
Holland Track
Hyden Norseman Rd
Norseman