

# LIBRARY

Department of Biodiversity,  
Conservation and Attractions

This PDF has been created for digital preservation. It may be used for research but is not suitable for other purposes. It may be superseded by a more current version or just be out-of-date and have no relevance to current situations.

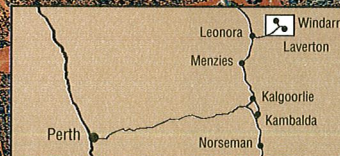




From 1969, when Ken Shirley pegged the leases which started the story, to 1994 when the Mount Windarra plant was de-commissioned, this was the site of a mine and plant that employed 600 people. Now, almost all trace of the project has been removed, and the bush is slowly reclaiming the landscape.

Almost - but not all. Some visible reminders have been left and the heritage trail has been constructed so that this remarkable project will not be easily forgotten. Those who visit the site will gain a clear understanding of the scale and significance of the Windarra Nickel Project.

Aerial photograph of Windarra in July 1996 prior to rehabilitation being completed



For their help in developing the Windarra Heritage Trail, WMC Resources Ltd gratefully acknowledges the assistance of the Heritage Council of Western Australia, Shire of Laverton, Gayle and Mailland Abbott of Laverton Downs Station, Murray and Denise Thomas of Minara Station and the Ministry of Justice.

Photographs in this brochure and at the Heritage Trail are from WMC Archives, Keith Biggs and Graham Mitchell.

Further reading: "History of the Windarra Nickel Project"

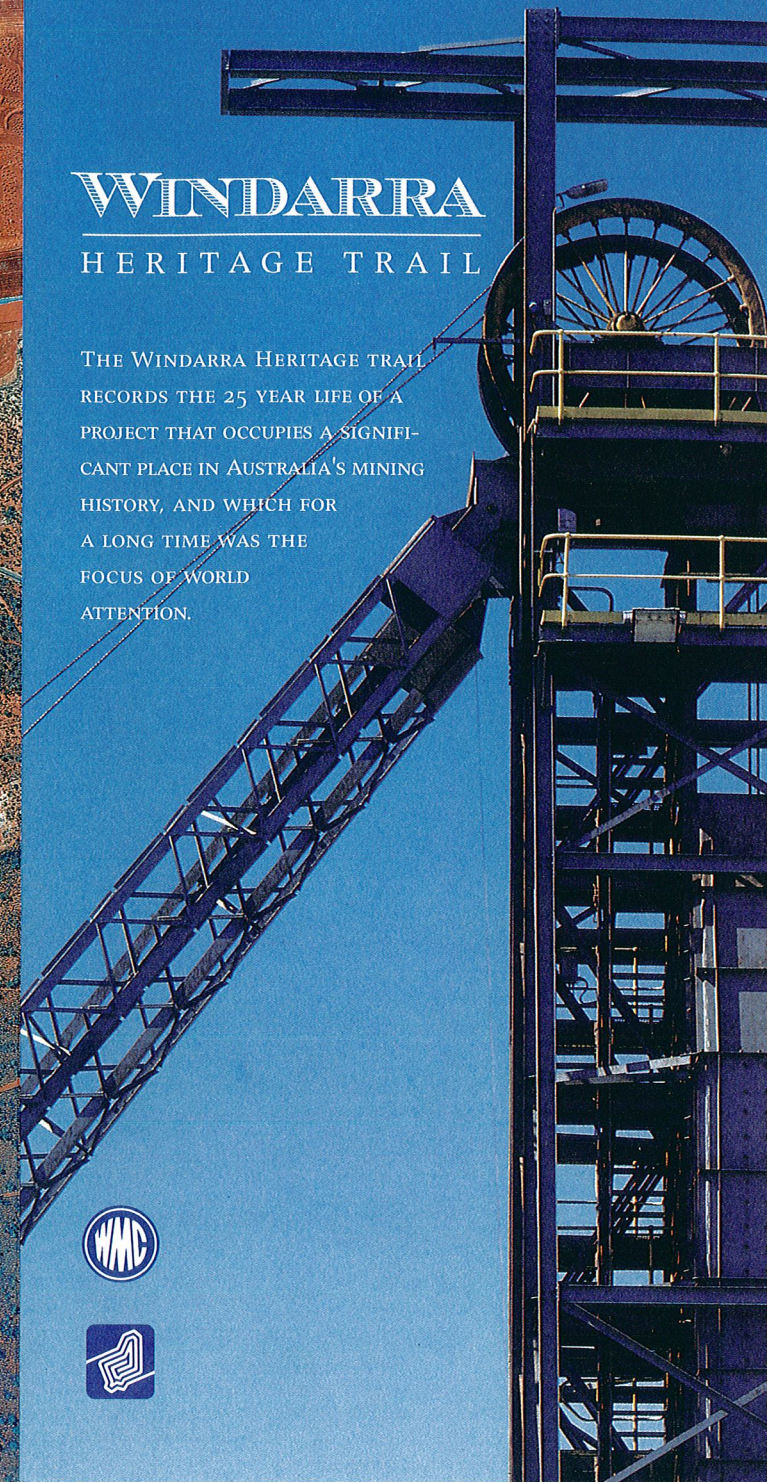
All Inquiries: Shire of Laverton, Laverton WA



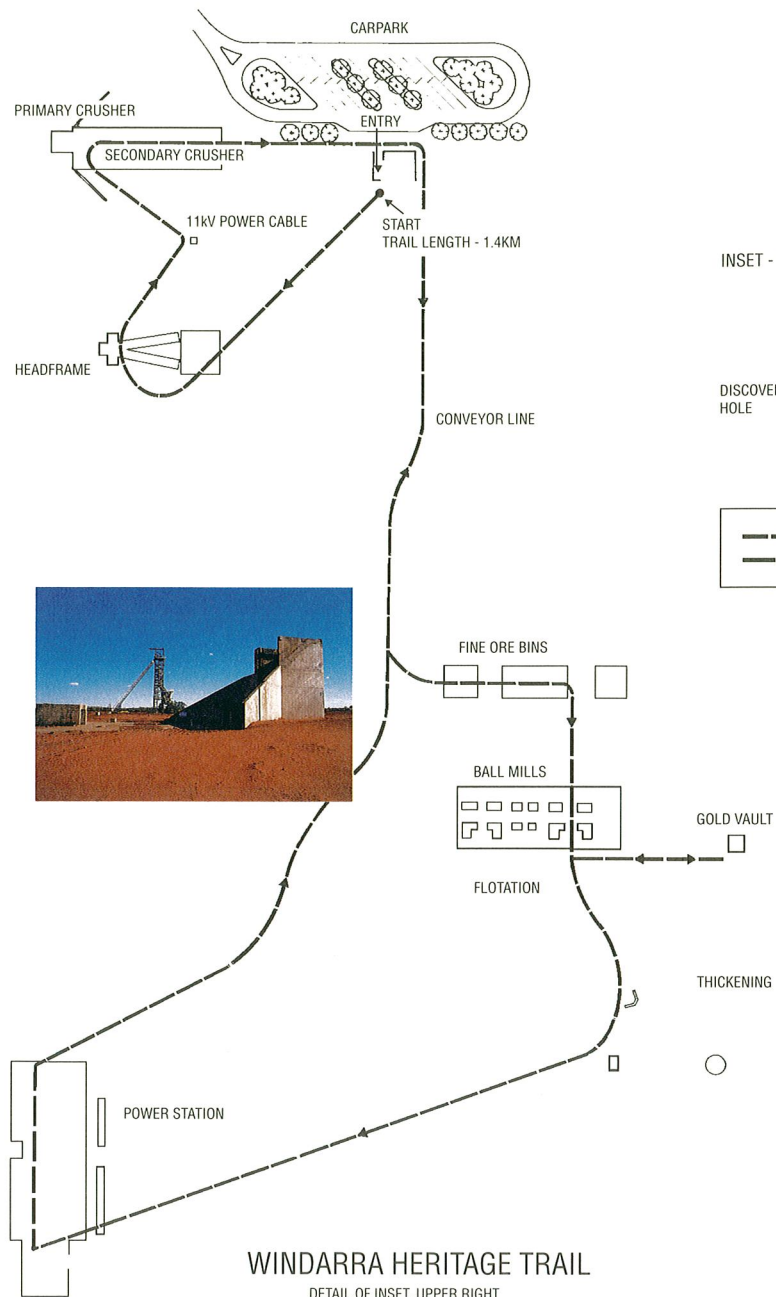
# WINDARRA

## HERITAGE TRAIL

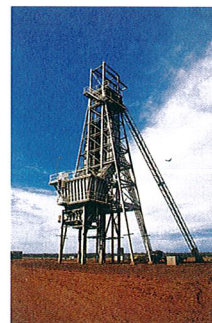
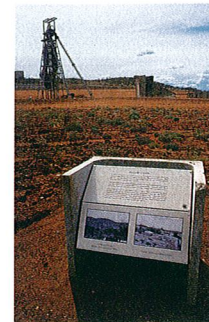
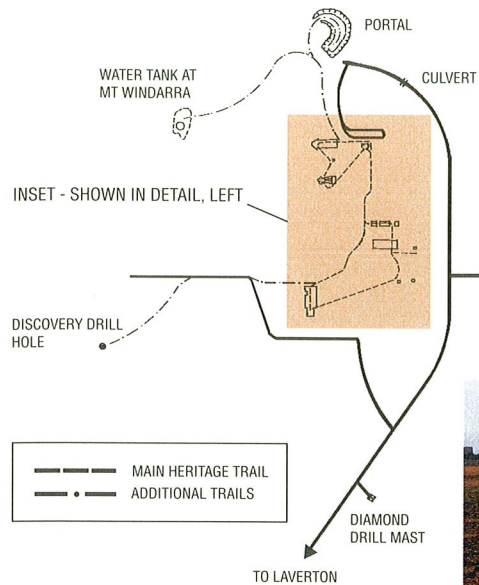
THE WINDARRA HERITAGE TRAIL RECORDS THE 25 YEAR LIFE OF A PROJECT THAT OCCUPIES A SIGNIFICANT PLACE IN AUSTRALIA'S MINING HISTORY, AND WHICH FOR A LONG TIME WAS THE FOCUS OF WORLD ATTENTION.







## ALTERNATIVE TRAILS



## THE POSEIDON STRIKE

In April 1969, Ken Shirley reported to his employer Poseidon NL, that using hired Shire equipment, he had located nickel-bearing rocks just South of Mount Windarra and had pegged some 40 claims in the area. On 26 September, geologists using a percussion drill confirmed that there was a significant ore body, which then started a run on Poseidon shares that took them from 80c to \$280 during the following five months.

It then became clear that the analysts had placed an inflated value on the quality and quantity of the ore body. With nickel prices having peaked and beginning to fall, the share prices fell back to \$100 during the next two months.

Around the world, the shares had made headlines and investors had made and lost fortunes.

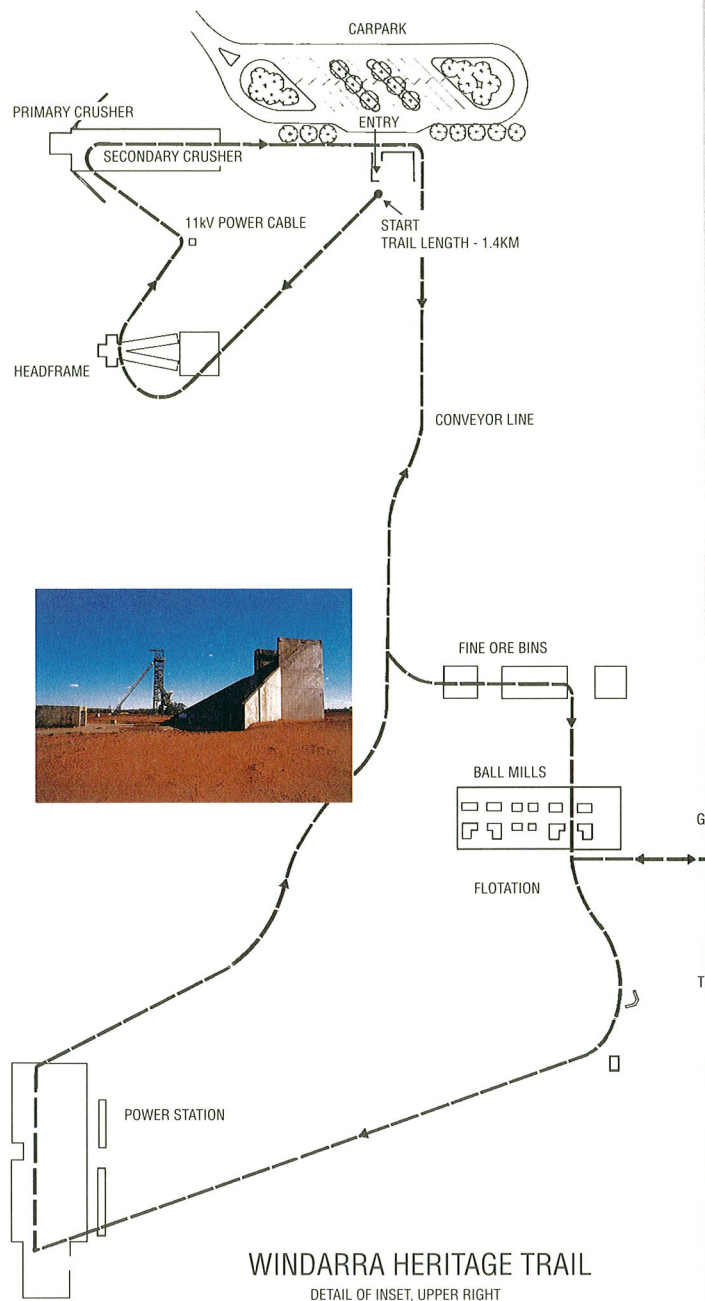
The ore body was not as rich as first thought, but it was good enough to set up a viable mine at Mount Windarra, with production beginning in 1974.

An onsite treatment plant was constructed to crush the ore and separate the nickel concentrate from the residues. The plant also treated ore from South Windarra where another deposit was mined, and later treated gold ore from Lancefield and Beasley Creek.

Poseidon was not able to profit from the venture and finally went into receivership in 1976. WMC Resources Limited (formerly Western Mining Corporation) which owned 50% of the project, had taken over management in 1975 and Poseidon's interest was acquired by Shell in 1977. WMC became sole proprietor in 1984.







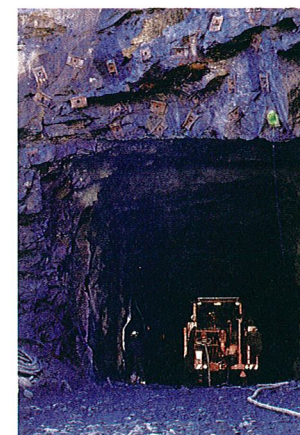
## NICKEL

Nickel is used in alloys where durability and heat resistance are important. It is in everyday use as an ingredient in coins and gave its name to the American five cent piece. It is used in stainless steel and also in special alloys for jet engines.

Nickel was discovered near Kalgoorlie in 1897, but there was no demand as very few uses for it were known at that time. The need for armoured steel in World War I changed all that, but it was not until another world war had come and gone that any serious prospecting began in the Eastern Goldfields.

The nickel boom was launched by the discovery of high grade ore near the site of the town of Kambalda in 1966 by WMC.

This started a period of frenetic activity, with prospectors combing the region in attempts to find more nickel-bearing ore bodies. In April 1969, Ken Shirley did exactly that at the peak of the boom, and the rest is now history.





## THE MINE

Windarra was an underground mine, although where the ore body reached the surface, some open cut mining was carried out. Initially, the main tunnel, or decline, was built to take the miners down into the mine and also to bring the ore out. By 1980, the decline was so long that it was decided to drive a vertical shaft to bring up the ore. The headframe was built over this shaft and the ore, in five tonne loads, was brought up in skips. This meant that primary crushing had to take place at the bottom of the shaft.

In the end, if all the tunnels in the mine had been joined end to end they would have stretched for 47 Kilometres - the distance from Perth to Rockingham.

The deepest workings were more than 500 metres down, and it could take a miner up to 40 minutes to reach his work place from the surface.

The discovery of adequate water near Windarra meant that a processing plant could be built at the mine site, thus avoiding the cartage of the bulk material to Kalgoorlie. The large work force called for under these circumstances was initially housed near the mine site and a village was built complete with shop, post office, swimming pool and a range of recreation facilities. Up to 400 people lived there at one stage, but then the decision was made to accommodate families in Laverton and keep the village for single workers. Laverton was redeveloped for this purpose.

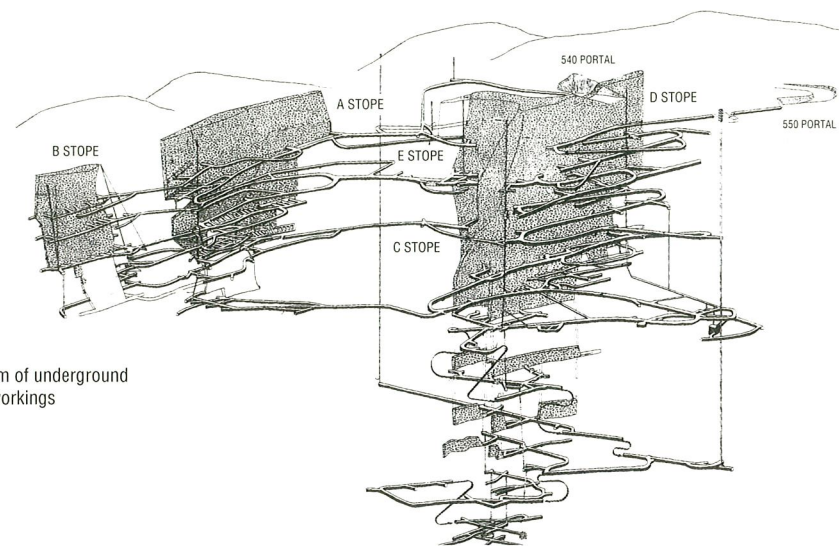
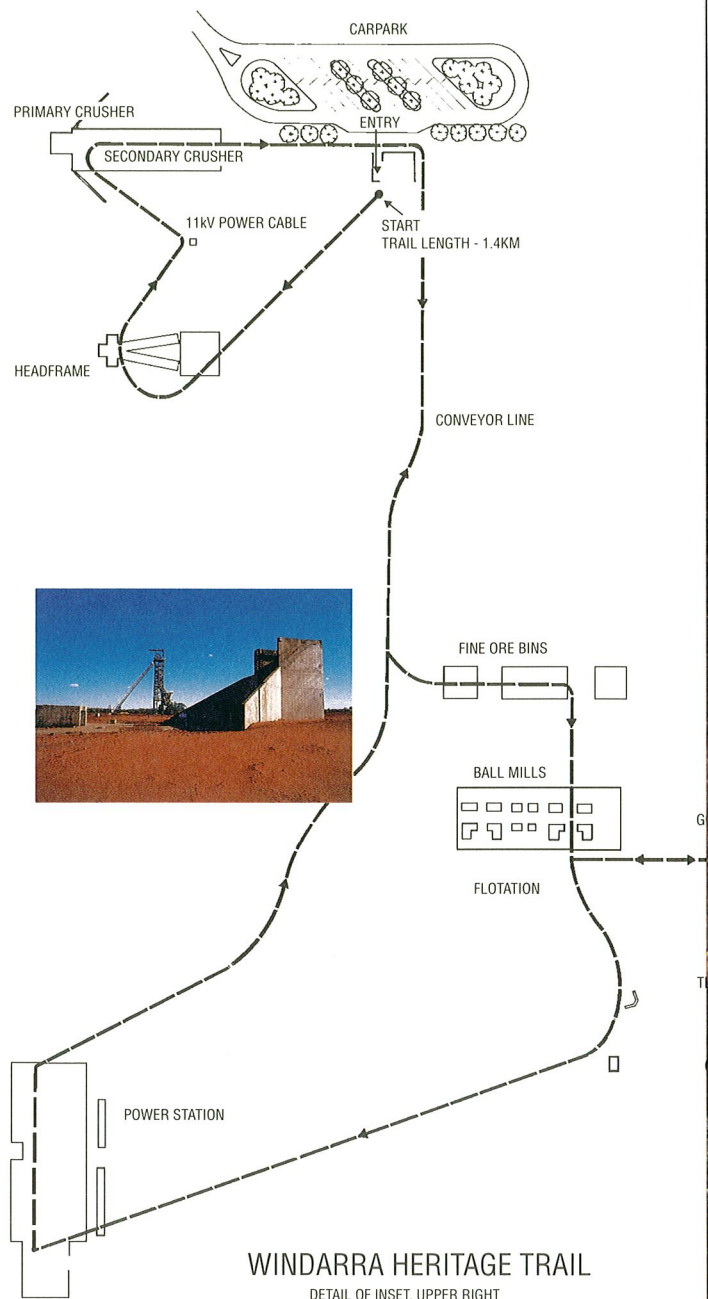


Diagram of underground mine workings





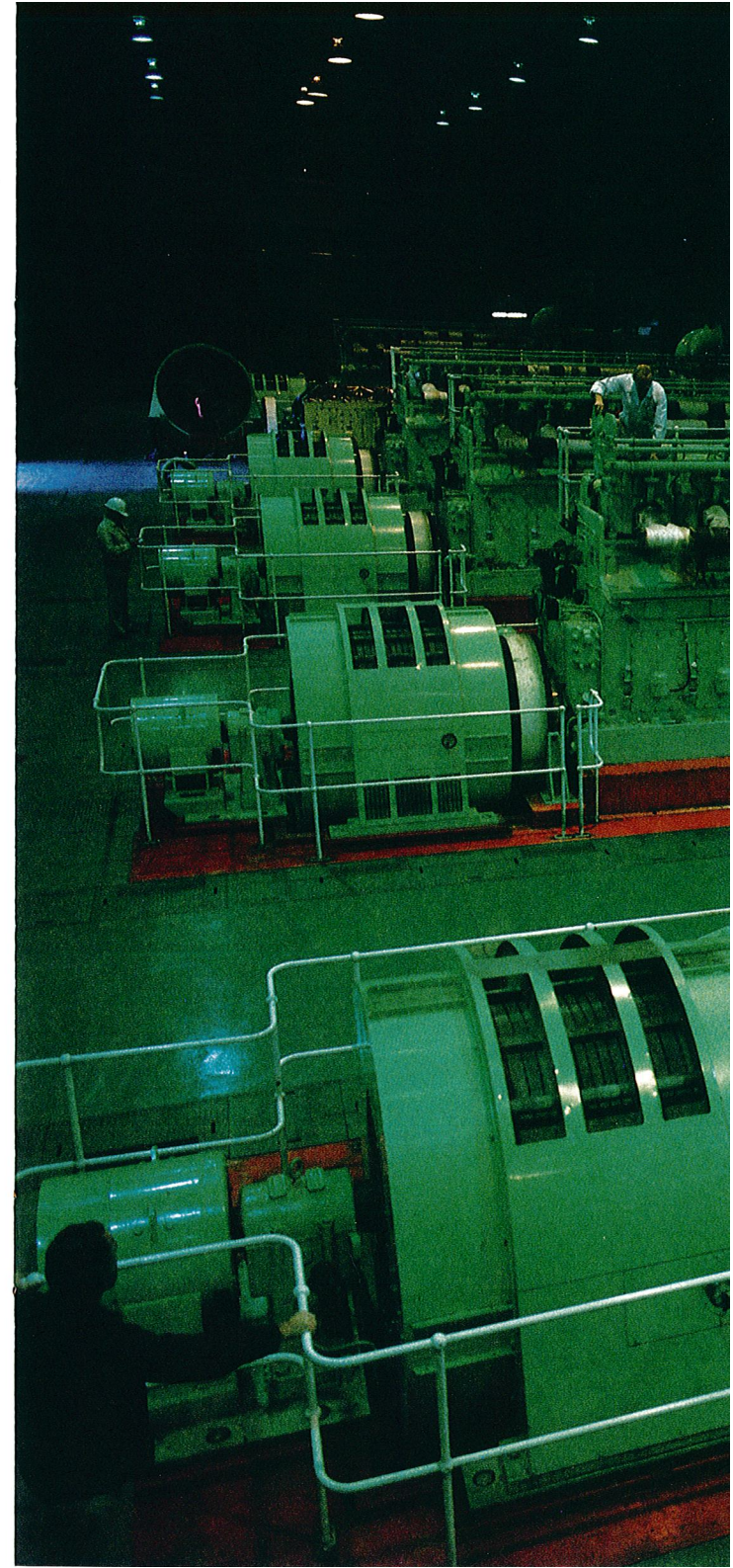
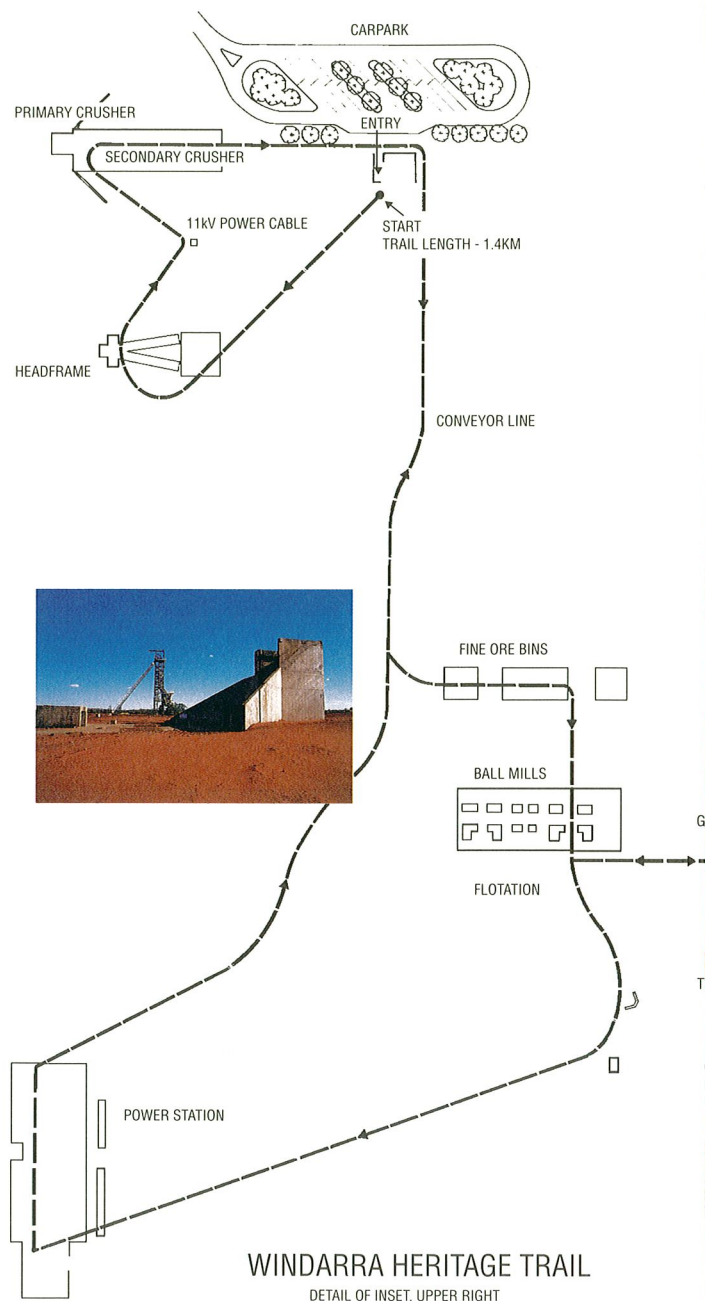
## POWER

It takes a considerable amount of energy to drive a process that tears rock from the earth, lifts it half a kilometre vertically, and then progressively reduces it to a fine powder. Quite apart from that, power was needed to serve the daily needs of 600 people at the site. The mine itself had to have water constantly pumped from it to keep it dry. Clean air had to be forced in and stale air removed. There had to be light below the surface at all times.

All of this was delivered by a 20 MW power station on the site. It was big enough to have supplied a town the size of Bunbury, and in fact provided power not only to the mine and plant but also to the village, the mine at South Windarra, and Laverton.

## PRODUCTION

Total production of ore extracted from Mount Windarra was 5.3 million tonnes yielding an average grade of 1.5% nickel. With the ore from South Windarra, and gold from Lancefield and Beasley Creek, the processing plant treated over 14 million tonnes during the life of the project. If this had been loaded on to a line of trucks, they would have stretched from Perth to Cairns! Fourteen million tonnes of rock were ripped from the ground and smashed and pulverised to a fine powder over a period of 20 years, from the first production in 1974 to the de-commissioning in 1994.





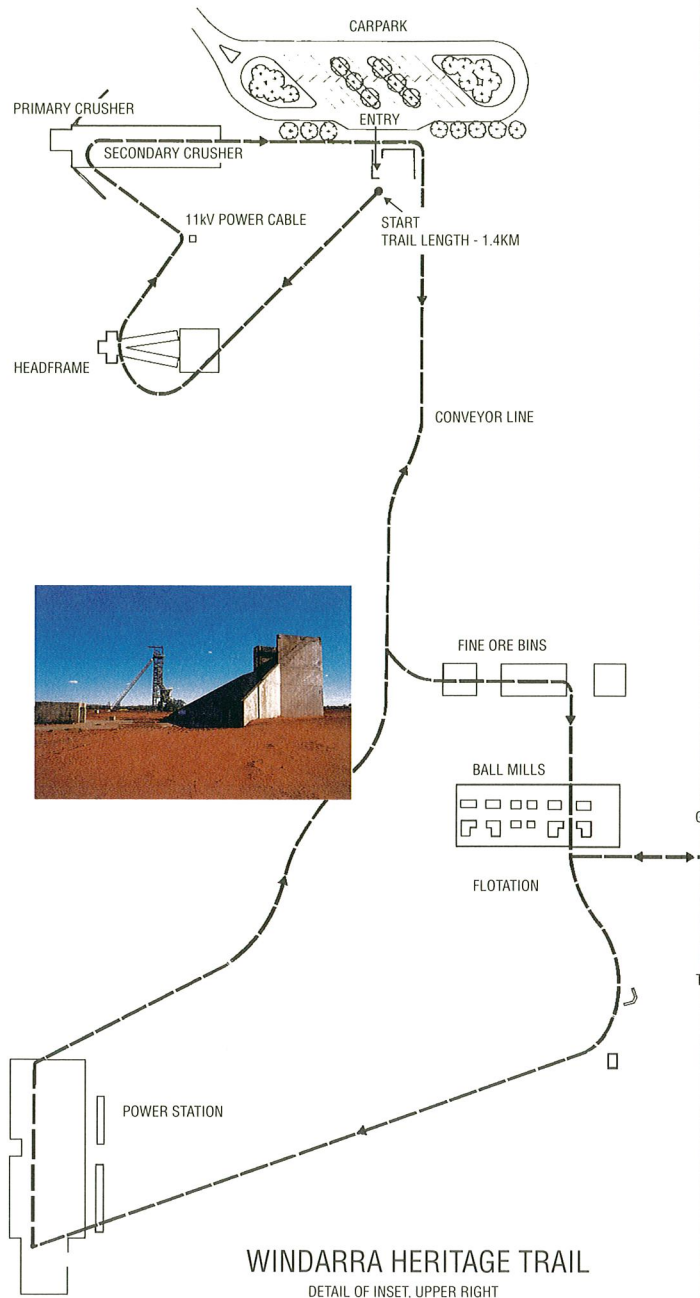
## THE END

Now the Windarra Nickel Project is finished. The workforce has dispersed. Where once 600 people assembled every day to work, and where once great engines roared and machines moved vast tonnages of rock, now there is only silence. The tunnels below are full of water and on the surface, the plants and wildlife are reclaiming their territory.

To remove almost all trace of the project itself took nearly two years. Equipment was sold and removed; the structures were demolished and sold as scrap and the ground was then cleared of all debris, ripped, and topsoiled. Seed was collected from local native plants and sown in the wet winter of 1996. Trees were planted by the school children of Laverton.

The headframe and some massive foundations are all that are left to mark this remote place.

A plaque on a large rock indicates the area where Ken Shirley started it all in 1969.



## THE HERITAGE TRAIL

The heritage trail is located at the Mount Windarra mine site some 28 Kilometres from Laverton. It is signposted off the Leonora to Laverton Road and directional signs lead into the heritage trail car park. The car park can accommodate vehicles with trailers and caravans, and tour buses.

Adjacent to the car park are toilets and an orientation display. From this point it takes 40 - 45 minutes to walk the main trail and read the information displayed.

For those with more time, there are four spur trails. One leads to the site of diamond drill hole number one which proved the presence of the ore body. Another takes in a hilltop lookout with a view over the whole site. Other trails lead to the mine entrance (portal) and to a diamond drill rig (near the main road).

The trail and all its facilities are accessible and legible to people with disabilities. Only the hilltop spur is difficult to access because it involves steep gradients.

