INFORMATION SHEET 16

THE GOLDFIELDS FIREWOOD AND MINING TIMBER TRADE

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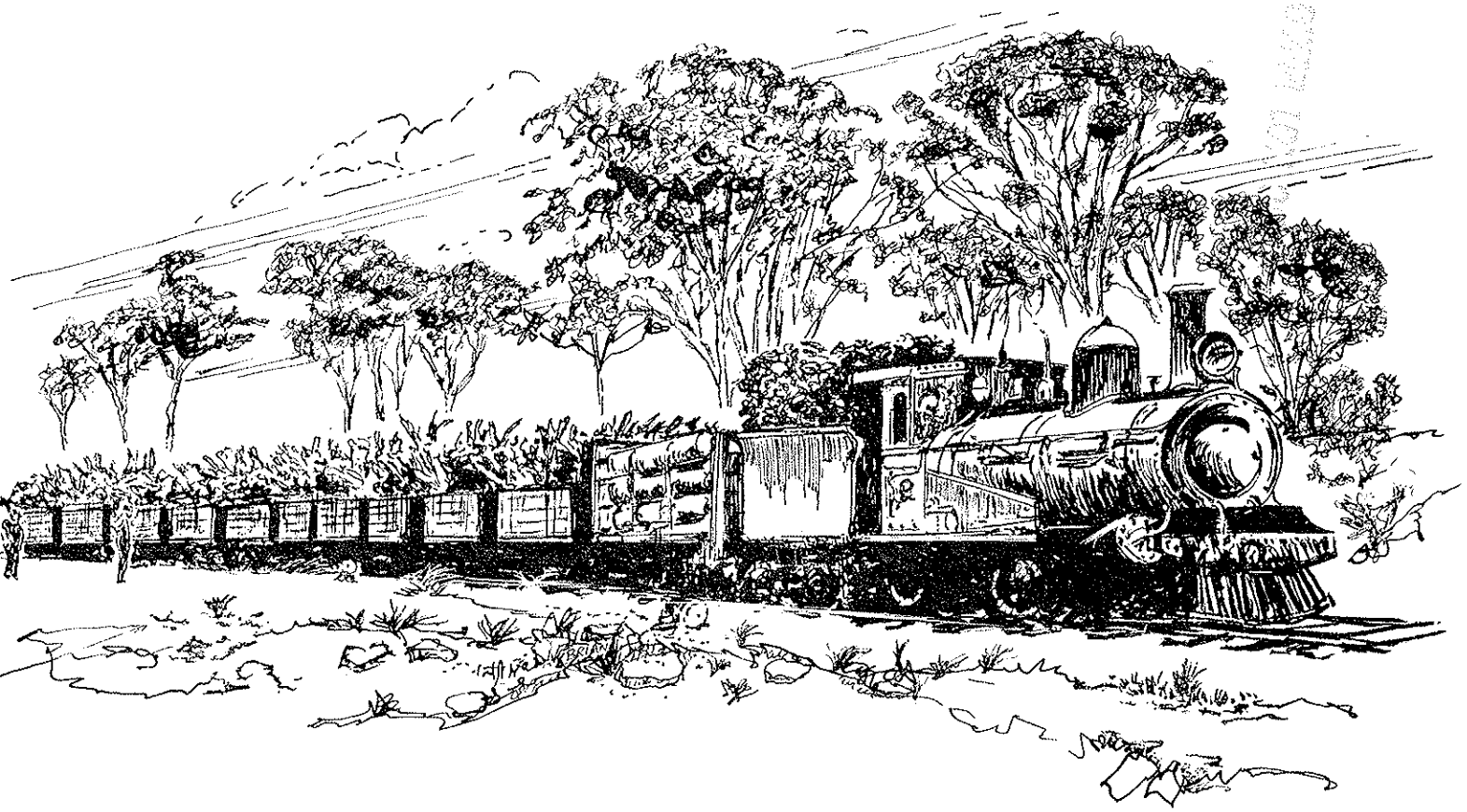
Since the pioneering days of 1892/93 when gold was first discovered at Coolgardie and Kalgoorlie, and deep underground mining commenced, there has been a continuing demand for the local inland timbers.

These timbers are used in underground mining for the construction of shafts, passageways and ore passes. Their purpose is to ensure the safety of the miners by preventing possible cave-ins or the subsidence of ore bodies. Selected local timbers are admirably suited for the purpose because of their toughness and ability to withstand pressure. The construction of these safe passageways permits free movement by the miners and the transport of ore which is then hauled by winder to the surface.

In past years, local timber was also utilised as fuel in the steam boilers that drove the winding engines used on all large underground mines on the Goldfields. The local power station for Kalgoorlie and Boulder also relied on firewood for its boiler fuel. The introduction of diesel fuel engines in power stations and the conversion of steam driven winding engines to electricity, has made firewood fuel obsolete. Up to 600 tonnes daily was consumed by these two industries until the conversion to other sources of fuel. In addition approximately 75000 to 80000 tonnes of timber were consumed as domestic firewood by the population of 25000 to 30000 inhabitants. Gas and electricity are now used for domestic heating and cooking, considerably reducing the tonnage of wood required.

On the completion of the Kalgoorlie-Mundaring water pipeline in 1902, wood fuel was used in the boilers at eight pumping stations situated at intervals along the pipeline. These generated steam to drive the large water pumps which supplied water to the Goldfields and to many wheatbelt centres. Pumps Nos. 1 and 2 used



jarrah timber as fuel for steam boilers, the other six pumps used the inland timbers at a consumption rate of 10000 tonnes annually. Wood fuel for this purpose has been gradually superseded. Today all pumps (with the exception of No. 8, situated 88 kilometres west of Kalgoorlie, which uses diesel fuel) are being powered by electricity from the State Electricity Commission.

The species of timbers used for mining purposes are:

Salmon gum (*E. salmonophloia*), which is utilised for sawn timber and also round timber used in construction of all passageways, shafts and ore passes.

Gimlet (*E. salubris*). This is used mainly in small diameter sizes up to 12·5 cm for lagging up ceilings and the sides of ore passes.

Merritt (*E. flocktoniae*), boongul (*E. transcontinentalis*) and dundas blackbutt (*E. dundasii*) are the main species used for small-sized lagging timber in the round, and also larger sizes such as legs, etc., used in conjunction with the lagging for underground construction.

These, and many more species of eucalyptus, are used as firewood in the inland and Goldfields areas. It is interesting to note that during the 70 years of full-scale mining, the eucalyptus timber used for mining-timber, firewood for mines, firewood for domestic purposes and pumping stations, consumed 350000 tonnes annually, or a total of 25 to 30 million tonnes. The yield per hectare in these areas ranges from 7 to 9 tonnes, so that during this 70-year period some 3·4 million hectares of inland forest has been utilised.

Timber and firewood has in the past been hauled by steam trains by such companies as Lakewood Firewood Supply, Lakeside Firewood Co., and Kurramia Firewood Co.—the steam engines, of course, using wood as fuel. Several hundred kilometres of line had been laid down for this purpose and areas up to 200 kilometres distant from Kalgoorlie have been utilised. A portion of the supply of wood for domestic purposes was also hauled in this manner, but has been replaced by motor transport. Firewood for pumping stations was carted by motor trucks, which superseded the old horse and drays used at the commencement of the water scheme.

As the eucalyptus forest is limited to regions of 70 to 80 kilometres north of Kalgoorlie, mulga (*Acacia aneura*) trees are used for mining timber and firewood in the distant north mines.

In one large mine, the Sons of Gwalia, situated 240 kilometres north of Kalgoorlie, a miniature railway of 500 mm gauge was constructed to haul timber and firewood from distances up to 70 kilometres away. Over many years, loads of 60 tonnes each trip were efficiently hauled over these lines on a rake of roughly constructed open railway trucks. During full production at the mine, some 15000 tonnes of firewood and mining timber was used annually. During the 50 years' life of the mine a quantity of 0·75 million tonnes was felled. From a total area of 120000 hectares utilised during this period, a yield of 5 to 7 tonnes of timber per hectare was obtained.

It is pleasing to know that regeneration of eucalypts in the cut-over areas has, in most cases, been quite satisfactory; both as coppice growth from the stumps (which, in time, develop into several stems of timber from the one stump), and from trees developed from naturally germinated fallen seed.

However, regeneration in the mulga zones is not so prolific. Although some areas do show good regeneration from seed, this species does not coppice from the stump as do the eucalypts. Consequently, areas which were cut over at a time when mature seed was not available have little or no regeneration—leaving a scar on the natural landscape.