

## A Brief History of Western Australian Forestry Department Fire Lookout Development

### Part I: 1919-1939

The essential backdrop behind the story of Forestry Department lookout development can be covered by reading the story of Charles Lane-Poole from chapters 4 & 5 in the book “The Zealous Conservator” by John Dargavel (ISBN 978 1 921401 14 5). In short, prior to the coming of the Forests Department through the 1918 *Forests Act*, the forests of Western Australia were unregulated and essentially diminishing resources - a real free-for-all. The early years of Annual Reports show how this situation was gradually clawed back from intransigent private concession holders who had bureaucratic and governmental influence, and how the Department eventually gained the power and acceptance it needed to be the overarching authority to direct forest exploitation and management. It is a story of gradualism, and the development of lookouts mirrors this fact.

In the 1938-39 Annual Report, a 20-year retrospective of the Department included this figure:

<i>Firelines</i>	1919	Nil.	
	1924.	Nil.	
	1929	490 miles.	
	1934.	1, 470 miles.	
	1939	6, 330 miles.	
<i>Telephone lines</i>	1919	Nil.	
	1924.	51 miles	
	1929	187 miles.	
	1934.	441 miles.	
	1939	1, 066 miles.	
<i>Fire lookout Towers</i>	1919	Nil.	
	1924.	3.	
	1929	4.	
	1934.	5.	
	1939	20.	
<i>Houses for Field Staff</i>	1919	2.	
	1924.	8.	
	1929	96.	
	1934.	123.	
	1939	175.	

Starting with practically nothing, the Department took over 15 years before significant lookout development began. There was simply so much else to do “from scratch”; from gaining control of concession areas to accumulating knowledge and skills to try and fashion a financial return from forest activities that would underpin the future work.

Both the Gunjin and Mt Dale towers construction were advertised for tender in the *West Australian* on 14 July 1921, so a likely commencement year is 1922. The Collie-Lucknow (later to be shortened to just “Collie”) tower (not the later Mungalup site) was opened by government minister (former Premier) Scaddan in April 1923, the 1929 Annual Report states that Wourahming Hill (Mt Wells) tower began operating during the year being reported

upon, and in January 1936 it was reported in the *West Australian* that whilst on a visit from England Maj. A.W. Bird, Managing Director of Millars, was shown around Gleneagle tower by Mr S.L. Kessell (Conservator of Forests - who had replaced Charles Lane-Poole when he left WA in 1922), so presumably that tower was already well established (and therefore a tentative erection year of 1934 will be used in the absence of any other historical records located - it could have been earlier). This is assumed to be the fifth tower shown on the bar chart for 1934 pictured above - some difficulty exists in precisely identifying dates.

In the *West Australian* of 5 March 1935 the following appears in a story about forestry under a sub-heading in the body of the report of "9 Fire Towers":

*During the past 12 months the scope of fire detection throughout the forest areas of the South-West had been extended by the erection of four additional fire towers, one near Sawyer's (sic) Valley, one at Teesdale (near Dwellingup), one on Mt. Keats and one on Mt. William, in the Yarloop area. The necessary telephone system from the local divisional headquarters had been extended to each of these towers.*

*A look-out man was stationed at each fire tower, of which there were now nine, throughout the fire season, which was approximately from the middle of December to the middle of March or the middle of April. The equipment of the look-out man consisted of an inch to the mile plan of the area in view, a direction finder, from which he could obtain a bearing on any smoke under observation, and a pair of prismatic binoculars.*

So, Sawyers, Teesdale, Mt Keats and Mt William also now have a fairly definite start-up year - 1934. They, plus the previous 5, now make up the "9".

Moving ahead in time, as part of the 1938-39 Annual Report retrospective mentioned above, a map (on page 4 of this essay) was provided incorporating "Fire Lookout Towers". This is the first time in an Annual Report that towers were shown on a map, and there are 18 symbols. The 9 already constructed up until the time of the 1935 Annual Report listed above, as well another 9 symbols showing the locations of (from north to south) Mt Solus, Dryandra, Mt Ross, Mornington, Yabberup, East Kirup, Carlotta, Glenoran and Kepal. So, a busy half-decade for tower building. However, the bar chart figure listed 20 official *lookouts* extant at this point in time, and only 18 symbols appear on the map - the other two which are missing are presumed to be from Mullalyup/Kirup Tree (const. 1935), Alco Tree (const. 1936), or Big Tree (const. 1937). None of these three trees appear on the map, although if all 3 were, this should mean the bar chart would read "21". This is a discrepancy which remains unresolved. As mentioned, accurate records are difficult to source so long after the events of this time.

The lookout network is now (1939) fairly well established from the hills east of Perth down to Manjimup, with a stronger concentration of lookouts at the northern end. The absence of any symbols for tree lookouts may suggest that the "tree men" of the Forestry Department

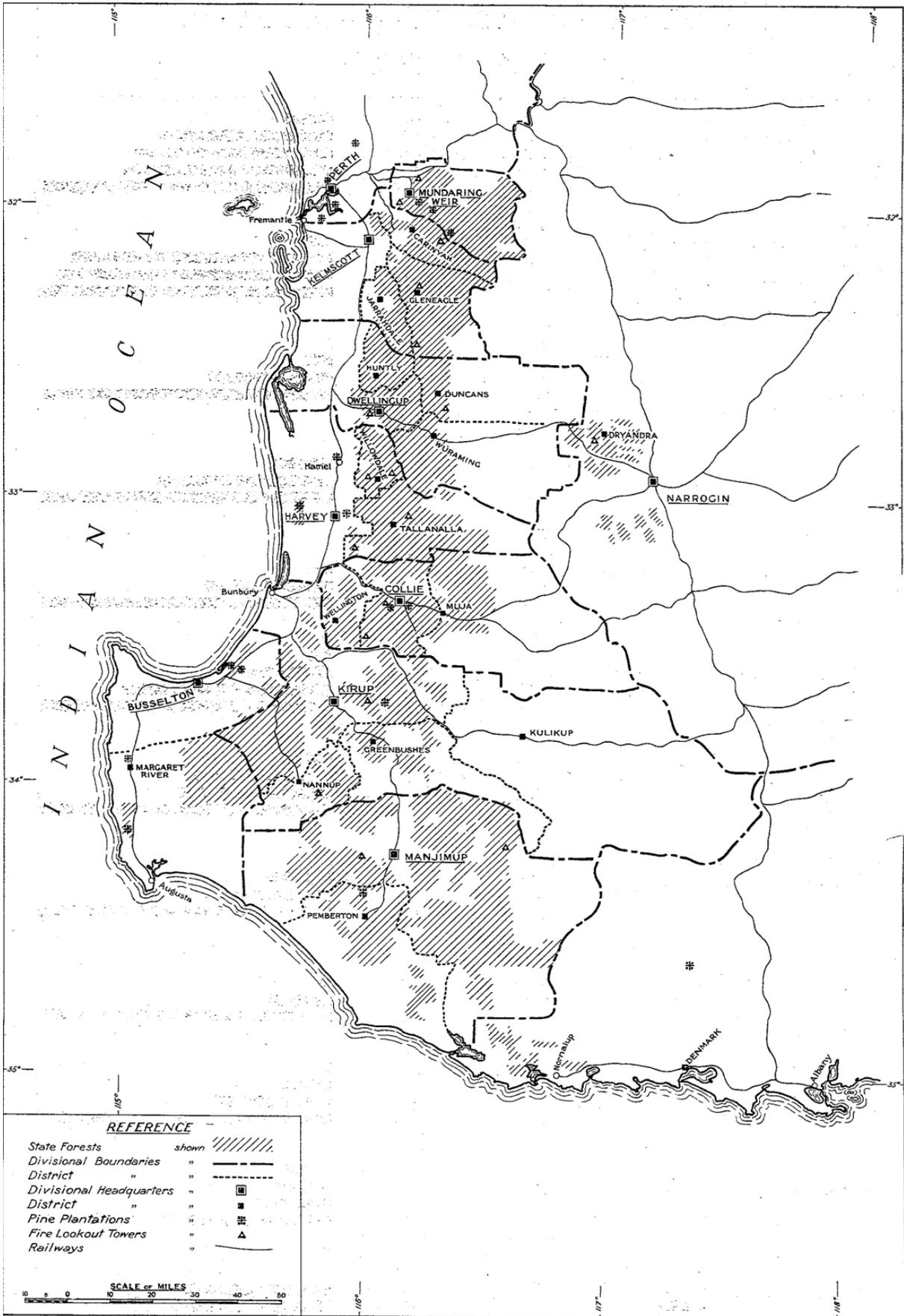
(whose time would soon come) were still considered a bit of passing phenomenon, and perhaps not in need of being taken seriously. Or perhaps it was simply a clerical error. Some confusion appears to be prevalent in the literature which is still available as to whether trees and towers belonged on the same metaphorical page when discussing fire detection, and this is a particularly Western Australian example of why the term “lookout” is a far better choice.

To add to the seeming fluidity of just what was and what wasn't “official”, a very low tree at Lol Gray outstation (in the Dryandra area) had been fitted with a rudimentary viewing platform (and so was, strictly speaking, a man-made lookout), but appears to have never been included in the numbers - despite that work being done by Forestry Department personnel.

Also, at this early stage of Western Australian fire detection capability there was no ‘going over old ground’ - every new lookout was going into ‘virgin’ areas in terms of detection capability. The re-siting of any newer lookouts - which could do essentially the same job of an earlier one but from a better location, was yet to happen. In later decades a re-orientation of lookouts would lead to some of these early ones from the first two decades either losing value as primary places of detection or of being, for all practical purposes at least, largely ignored for the task (and subsequently being dismantled). Collie-Lucknow is one example of that - it was superseded in later years by the not-too-far-away Mungalup Tower only a short distance to the south which gave preferred coverage for the forestry working landscape existing at a later time.

Pine plantation fire detection was yet to be an issue for serious concern during these years. The growing of pines had only commenced in the 1920s at selected sites, and those young trees were still some way off from being a fire threat compared to the native forests.

The situation of lookout coverage may indeed have continued to accelerate at this pace but for the intervention of the Second World War; the start of which had massive ramifications on labour, on output, and on Forestry Department priorities for at least the next decade. This important historical hiatus - essentially mid-stream in the Forestry Department's lookout development programme - needs always to be borne in mind when looking at the chronology of Western Australian fire lookouts.



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### Part II: 1939-1949

With the arrival of World War II, Western Australia's forestry industries underwent major upheaval. The burst of fire lookout construction in the last half of the previous decade slowed to a trickle as men and resources were re-deployed elsewhere. The war itself would last over five years, but the slow post-war reconstruction years would essentially mean this was a decade which deserves to be considered in its entirety.

In terms of labour, the situation had become so dire that the 1943-44 Forestry Department Annual Report included the following:

*"Gangs of women were employed with considerable success on controlled burning, and in actual fire fighting, proving invaluable in view of the acute shortage of manpower. Women have been employed as "fire spotters" on the less lonely towers, five of which have been operated in this way. Some have worked on the tallest lookouts at nearly two hundred feet above the ground. Unfortunately, few offer for this work and only one girl has retained her employment over a number of seasons"*

That girl would be Maureen McCune, the "Girl in the Tower" featured later in an April 1946 Western Mail Women's Magazine Supplement article. Maureen "manned" the East Kirup Tower.

In terms of new lookouts both Grevillea and Mornington towers are listed in documentation as having been constructed in 1940, and then three lookout trees were erected over subsequent war years as Gardner Tree (No. 1), Diamond Tree, and Gardner Tree (No. 2) were added; and then finally the Gloucester Tree joined the network post-war in 1946 to give a total of four. As the decade came to an end, both Dickson and Kelson towers were built.

Also, and assumed on best available evidence to be around 1946, the first lookout servicing solely pine plantation timber came into existence when the Wetherell Tower (which was a short distance south-west from the original location of the Gnangara Pine Plantation Headquarters) was erected.

There is some minor discrepancy as to the total, officially-recognised Western Australian Forestry Department lookout numbers at this point as the decade closed out, but a figure of 31 is considered the best guess. The focus was still on expanding the geographic range of detection rather than "re-jigging" or supplementing the existing lookout coverage in any way. The network now had a more balanced look to it, as the majority of new structures completed in those ten years were south of Manjimup, in more karri-dominated country.

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### Part III: 1949-1969

The early years of the 50s saw the last of the lookout trees being constructed, with Beard, Boorara, Somerville (in greater metropolitan Perth, at the Somerville Plantation) and Greenbushes all “on the books” by 1952. The first of the lookout trees to be replaced by a tower (at the same site) happened in 1962 when Alco was thus converted. At the very end of this 20-year block of time it was also joined by Beard. The heyday of tree lookouts had passed.

Lookouts were also placed on large granite outcrops at Mt Frankland and Granite Peak, to complete the network for as far south-east as it was planned to advance. This took detection to the eastern edge of karri country.

Plantations north of Perth on the coastal plain also saw numerous lookouts erected during this two decade period, as the pines were now beginning to occupy a significant part of this area, and starting to reach considerable size. The suburban Collier Plantation (Como) also gained a tower during this time.

The area around Julimar only became vested as a State Forest in 1956, and this “outlier” part of the Darling Scarp on the northern side of the Avon River and Indian-Pacific rail line received its own small Forestry Department settlement and lookout tower circa 1960. It would mark the northern limit of fire detection in jarrah-dominated country.

A noticeable feature of Annual Reports by this time is how lookout reporting moves from “towers constructed” to “towers manned”, perhaps indicating how the main part of the construction work had now been largely completed and focus was shifting to how the expansive network could now be selectively operated in any given season.

The first tentative experiments using air surveillance began towards the end of this time period, and would ultimately re-define fire detection in much of Western Australia in the future.

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### Part IV: 1969-Today

From this time onwards, with a couple of exceptions, lookouts underwent a period of decline. Two lookouts were constructed at Callcup and Mt Chudalup on the coastal side of the Pemberton area forest - ostensibly to provide coverage lost by the demise of the Gardner (No. 2) and Boorara trees, the Margaret River area received additional coverage (Collins), and Stewart Tower came into existence via the wholesale removal and re-siting further south of the old Kelson Tower - all of this by 1973.

However, as intimated earlier in the 1949-69 section, aircraft were fast encroaching as the preferred way of tackling WA fire detection in the future following successful preliminary trials. As such, this time period is marked more by the abandonment, demolition, and/or mothballing of lookout sites than by their creation.

The typical official reporting during this time tends to take the following form:

*The area covered by spotter aircraft was increased last fire season to include valuable pine plantations in the Blackwood Valley. Eight aircraft provided surveillance over State forest between Mundaring and Walpole and this cover included adjacent private property and Crown lands.*

*Lookout towers were retained for the Wanneroo pine plantations and as a back-up for aircraft at Harvey and Nannup. The remaining towers were not manned but maintained in a serviceable condition for emergencies.*

*(Forests Department Annual Report, 1976-77)*

By the 1980s the “aircraft craze” was in full swing, as is well shown in this triumphal paragraph from an article in Forest Focus No. 24, September 1981, (pages 3-9)

*Over the past eight years the network of aerial spotting in Western Australia has increased by leaps and bounds from one hired Cessna 150 in 1973 to eight Cubs in 1980-81. In 1979 the Department purchased four of those eight Piper Super Cubs at a cost of \$31 000 each which represented a large saving over the hiring method. Obviously the use of aircraft is an important part of the Forests Department's protection operations. No other country in the world can boast the inventive, efficient surveillance system which has developed in Western Australia. The special nature of our forested environment has been at the heart of the innovation.*

*(“Aircraft of the Forests”, H.K. Bradbury)*

Over time, the use of aircraft solely was felt not to be the magic silver bullet it first appeared, and a more measured approach was being proposed by the late 1990s. This nuanced view essentially saw a bias towards an aircraft presence in the south, and a bias towards a tower presence in the north. This article covers the new thinking well:

### Lookout towers make a comeback

*Lookout towers are making a comeback as part of the fire surveillance effort in the forests of the South West and the hills around Perth this summer.*

*The Department of Conservation and Land Management is halfway through an extensive program to upgrade its tower network, which stretches from north of Perth to Walpole on the south coast.*

*These towers, coupled with rapid-response spotter aircraft, will significantly reduce the time taken to detect a fire and mobilise suppression crews.*

*CALM Fire Manager Rick Sneeuwjagt said towers were being reintroduced into the Department's fire management system as they were more reliable and cost-effective than having aircraft continually circling the forest in the fire season.*

*"Tower staff will alert spotter planes at the first sight of smoke," he said.*

*"The planes, Western Australian-built Eagles, have the latest navigation technology including global positioning systems that enable them to pin-point fires more accurately and provide intelligence on fire behaviour."*

*"This information can be relayed to fire fighting crews, thereby improving response time, minimising the risk of fires developing into major events and improving fire crew safety."*

*The planes will be based at Dwellingup, Bunbury and Manjimup but also will work out of Mundaring, Collie, Nannup and Walpole.*

*The towers are dotted throughout CALM's three forest regions - Swan, Central and Southern.*

*In Swan Region, a tower in the Gnangara pine plantations has been replaced by a new tower in Walyunga National Park. This tower will be coupled with existing towers at Pinjar and Wabling to provide complete coverage of the pine plantations north of Wanneroo.*

*Another new tower, at Bickley, provides excellent surveillance of the jarrah forest between Mundaring and Jarrahdale.*

*An existing tower at Mt Solus also will be staffed to cover the jarrah forest between Jarrahdale and Dwellingup.*

*In the Central Forest Region, Stewart tower near Kirup in the Blackwood Valley, Mowen east of Margaret River, and Mt William north-east of Harvey, have been upgraded. Work is also planned for Mungilup tower near Collie, and Carlotta east of Nannup.*

*Towers being upgraded in the Southern Region are Diamond Tree near Manjimup, Mt Frankland near Walpole, and Beard east of Quininup.*

*(Landscape, Vol 10 No. 2, Summer Issue 1994-95, page 8)*

So, a slimmer, trimmer network than dreamt about by the pioneers of the 20s and 30s, but perhaps more reflective of what could be done best by the technology now available which wasn't around then.

Just as a final note, 1988 saw the construction of the first lookout tree since 1952 - the Evans Bicentennial Tree. As best as is known, this tree has never been used for fire detection purposes - it's for tourists to climb.