From Bulldust to Beef Roads and Beyond chronicles the first fifty years of the history of Queensland's Department of Main Roads.

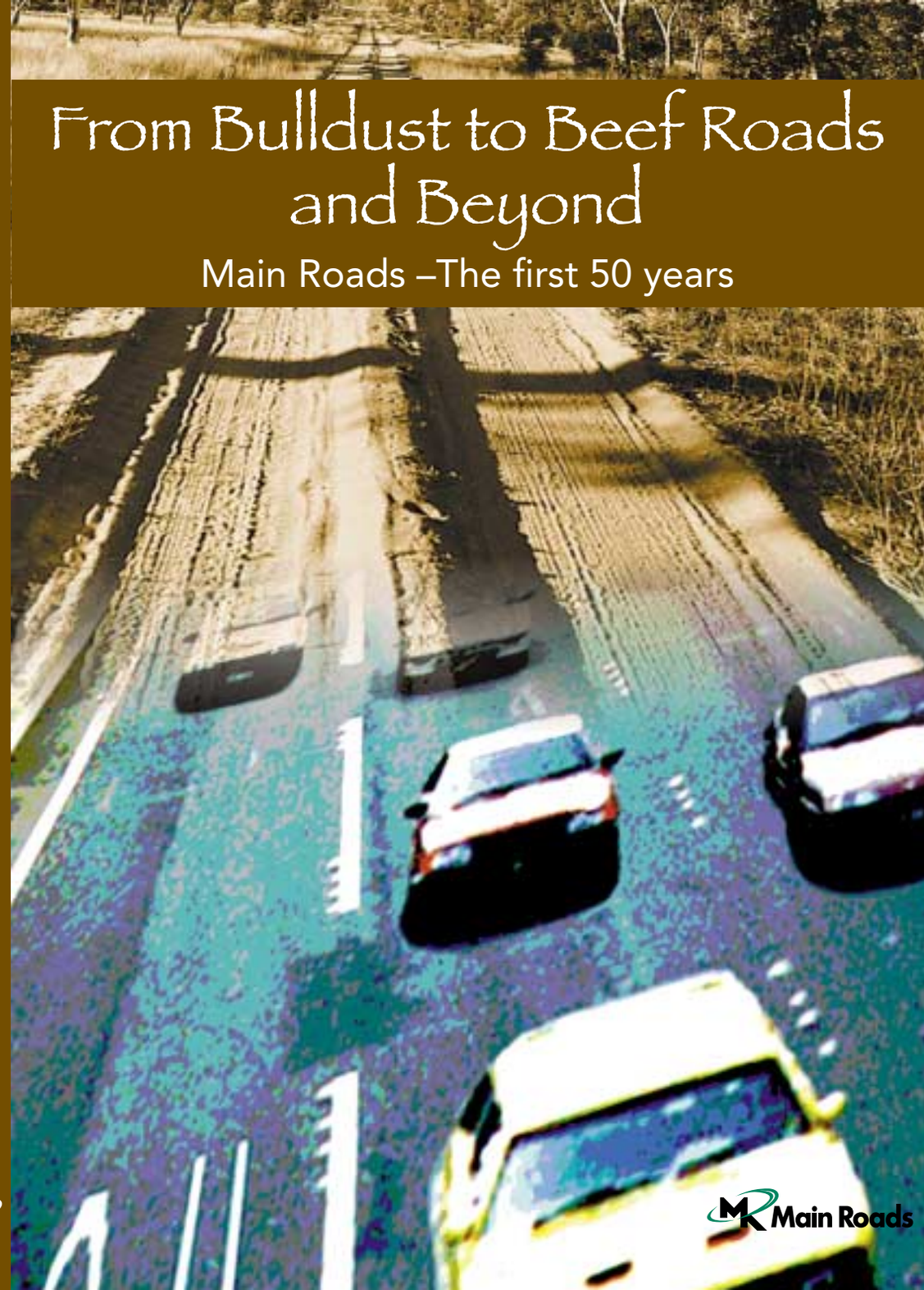
The book is essentially a testament to the people who have worked in the organisation from its earliest formation as the Main Roads Board, through the Depression years and the Second World War, up to the 1960s. It details the progression of road travel and construction during the 20th century, and Main Roads' task of responding to Queenslanders' needs for an improved road system.

This is the first instalment of Main Roads' history and it is hoped that a second production, outlining the 1970s to the present day, will follow.

Main Roads hopes you enjoy the journey ...

Main Roads

From Bulldust to Beef Roads and Beyond Main Roads –The first 50 years



From Bulldust to Beef Roads and Beyond

Main Roads –The first 50 years

Main Roads

PREFACE

The history of Main Roads is essentially the history of the people who have worked in the organisation, and this book could not have been written without help from the many people who gave up their time and their privacy to be interviewed.

Some of those interviews have been used verbatim; many others are absorbed into the general text in a variety of ways. They include Peg Brown, Bill Carson, Bill Cock, Roger Devey, Leo Feenaghty, Harry Lederhose, Ken Leitch, Kath Mahoney, Oscar Masters, Peter and Betty Meirs, Doug Moreton, Edna Mullen, Gordon Neilsen, Stan Rawlings, June Ross, Des Simmonds, Helen and Margaret Sycamore, Harold Wade, Clem Wilson and Thomas Young. To all those who gave their time so generously, I express my gratitude. I hope they will enjoy the book.

Shane Kelly worked through the files at the Nundah workshop, and Shirley Scott helped with the interviewing. Jean Smith edited the manuscript, and Ian Waples and Darryl Brennan checked for the more egregious errors. The rest are mine.

Marion Diamond

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CHAPTER 1

An Introduction
Where It All Began

White settlers first arrived in what was to become Queensland in 1824. They brought with them their saddle horses and their carriages and drays, and so created a need for roads able to carry sharp hooves and ironclad wheels. Until then, during the untold thousands of years of Aboriginal occupation of the land, all transport was by foot. The tracks and pathways of the Aboriginal people were therefore designed to meet different purposes, both practical and ritual, and are now difficult to trace on a landscape which has long since been altered by the intervention of the white newcomers.

The introduction of horses and drays created a need for sturdy roads.

Some traditional Aboriginal routes covered long distances, such as the seasonal movement of people from the Brisbane area, through Enoggera, Caboolture, Maroochy and Nanango to the Bunya Mountains for the great bunya feast, described by the early settler Tom Petrie.[1] Such routes were learned and committed to memory by each generation as the group travelled over well-remembered territory, marked by recollected landmarks. There was no need for a constructed road to tell them where to walk, and no point either.

1. Constance Petrie, *Reminiscences of Tom Petrie* (Sydney: Angus and Robertson, 1983).

Instead, the group moved purposefully across a broad swathe of country, gathering food as they travelled, certain of their eventual destination.

Other pathways however, of more ceremonial significance, were more deliberately created – beaten by the feet or marked with stones. When Allan Cunningham and Charles Fraser were in the Jimboomba area in 1828, for instance, the explorers found evidence of what they called a "battle circle" – a bora ring – which "consisted of an enclosure 33 yards in circumference, edged by a path three feet broad and 10 inches deep, [90 by 25 centimetres] from which another path of similar dimensions diverges in a direct line".[2] Such pathways, beaten out with the feet, were not uncommon. On Tabletop Mountain outside Toowoomba, another ceremonial pathway, edged with stones for most of its length, ran for 120 metres to a stone cairn, and continued without stones for another 170 metres beyond the cairn.[3]

Foot travellers have very different requirements from those with wheeled vehicles. With the arrival of the first white settlers at Moreton Bay in 1824, a new emphasis on practical road-making began. Nevertheless, during the first years of the penal settlement, the main form of long distance transport was by water. Ships from Sydney and Port Macquarie maintained links with the south, and the Brisbane River was the main thoroughfare of the settlement, linking the separate settlements of Redcliffe, Eagle Farm, Limestone Plains (Ipswich), and the main administrative centre straggling between North Quay and Petrie Bight.

Over short distances, most travel was by foot. The convicts, marching out each day to their work on the government farm at Eagle Farm, beat out a track which eventually became Brisbane's first road. This road was then improved, using convict labour, to take wheeled vehicles. Early Moreton Bay was a convict outpost run by the military, so when the streets of the early town were laid out, the soldiers followed the pattern of many military outposts and chose a grid pattern, along the original Queen and William Streets axis of

2. Charles Fraser, quoted in J. G. Steele: *Aboriginal Pathways in Southeast Queensland and the Richmond River* (St Lucia: University of Queensland Press, 1984), p. 77.
3. Steele, ibid., p. 152.

the settlement. Only a few concessions were made to the natural features of the landscape. When Governor Gipps visited Brisbane for the first time in 1839, at the end of the convict period, he arrived in the middle of the survey of Brisbane's streets. The following tale may be apocryphal:

> Governor Gipps, seeing pegs in the ground, asked what they represented. "The main street of the town, sir," was the reply. "Oh!" he exclaimed, "the idea of wasting such a lot of land for a street in a place that will be nothing else but a paltry village!" and he insisted on the removal of the pegs. The surveyor had placed the pegs to provide for a main street being two chains in width, but the Governor reduced it to one chain. The surveyor, Mr Warner, had to obey the Governor, but when the Governor went away, he took the liberty of moving them a little further back.[4]

The first free settlers began to arrive on the Darling Downs during the early 1840s. Patrick Leslie and a servant were the first to find a land route north from New England in 1840, following the path of the explorer Allan Cunningham, and during the next few years, more squatters followed bringing their families, servants and flocks to establish sheep runs on the Downs. These early squatters maintained their links with New England, and in the early days exported their wool through Port Macquarie. Their main road-building efforts went into the construction of a road across the Great Dividing Range at Spicers Gap, to link them to their associates in the south.

In 1842, the convict settlement at Moreton Bay was disbanded, the district was opened to free settlement, and Brisbane began to grow. During the next decade, the first arterial roads were built to link Brisbane with its hinterland. In 1849 a road was opened to the Burnett district, 120 miles [192 kilometres] to the north, and in 1850, £50 was raised, largely by private subscription, for a new road to Ipswich. In 1851 the colonial government based in Sydney spent £300 on road works in the Moreton Bay district, including £170 on

4. Quoted in J. G. Steele, *Brisbane Town in Convict Days, 1824-1842* (St. Lucia: University of Queensland Press, 1975), p. 307. The following extract is from a speech by Alderman McMaster, then in his 89th year, who claimed that Surveyor Warner had personally described the incident to him. It is quoted by John Wheeler in "Further Notes on the Moreton Bay Settlement", pp. 69-73. Wheeler's source was *Volume and Proceedings of Second Australian Planning Conference*, Brisbane, 1918, p. 21.

road improvements from the coast to the Darling Downs.[5] By 1860, this "Dray Road" extended as far west as Dalby.

However land transport remained slow, inconvenient and costly. Water transport was much cheaper, wherever it was possible. Queensland's coastal towns were more conveniently linked by the various shipping lines that operated up and down the coast. Similarly, the heaviest traffic between Ipswich and Brisbane was by ship along the Brisbane and Bremer Rivers, and Ipswich remained an important port in its own right, supplying coal for the large fleet of small steamers that travelled along the coast.

By the time Queensland became a separate colony in 1859, only the first steps had been taken to develop a road network. According to the *Statistical Register* for 1860, Queensland roads were "always bad and often impassable". Local roads were built by private co-operative effort for, outside the towns, there were no local authorities to organise or pay for road-building. In this way, for instance, the local squatters built their road across Spicers Gap.

Road construction was not a high priority in the new colonial government, for it seemed that roads were about to be superseded by the new technological marvel of the age: the railway. The contract for the first railway line, between Ipswich and Grandchester, was negotiated in 1863; Ipswich and Brisbane were linked in 1872, and other separate rail lines were built inland from Rockhampton and Townsville by 1880. Using the cheaper narrow gauge, the Queensland Government built 2904 miles [4646 kilometres] of rail by the time it entered the Federation in 1901.[6] The railways seemed set to dominate land transport, and on this basis the Queensland Government, like all the Australian colonies, borrowed heavily to pay for their construction.

Compared with the railways, roads were a local affair, often built on the initiative and at the private expense of a local community. The main purpose of most roads was to move people and goods as far as the nearest railway station or shipping port. At the other extreme were the stock routes, covering hundreds of kilometres through the

5. Ross Johnston, Brisbane, *The First Thirty Years* (Brisbane: Boolarong, 1988), p. 134.
6. P. J. Rimmer, "Politicians, Public Servants and Petitioners: Aspects of Transport in Australia 1851-1901", in J. M. Powell and M. Williams (eds.), *Australian Space Australian Time: Geographical Perspectives* (Melbourne: Oxford University Press, 1975), p. 219.

interior. These routes were marked out by the passage of many feet and the best of them were serviced by wells and waterholes along the way, but they were hardly recognisable as roads in the normal sense. The stock routes, too, often had their termini where they met a railway line.

For a time the railway was viewed as the preferred form of land transport.

Queensland faced particular difficulties in building and maintaining a road network. In a large state, with a small and scattered population, the cost of road construction was always a particular concern, for the tax base was small, and the distances to be covered very great. Only Queensland, too, had such extremes of climate to contend with. In the summer rains, roads and bridges along the coastal strip could be washed away by flooding, while the blacksoil plains were turned to a quagmire. Roads through the channel country could disappear under sheets of water, while at the other extreme, in a drought, water supplies along the stock routes dried up, making the routes impassable to livestock.

Towards the end of the century, two new forms of transport made their first, relatively tentative appearance in Australia. The first

bicycle was imported into Melbourne in 1875, and cycling quickly took off as a popular sport. A bicycle club was formed in Brisbane in 1881. By the 1890s, enthusiasts with bicycles fitted with pneumatic tyres were travelling long distances, both for recreation and to travel in search of work. Bicycles were popular amongst itinerant rural workers, while also appealing to sporting enthusiasts. For both groups, Queensland's roads could be a trial. In 1899, Frank White and Donald Mackay travelled 450 miles [720 kilometres] from Charters Towers to Normanton in only nine days, but on the next stretch, from Normanton to Burketown, the roads became rougher and they suffered many punctures on the crude track: if "the road to hell was as rough the traveller would be too weary to care what happened by the time he arrived".[7]

Bicycles were popular, but for rapid transport of passengers or freight they could not compete with the railways, while bullock drays and wagons remained the dominant form of transportation beyond the railway tracks. It was the coming of the motor car that renewed interest in an efficient road system. In 1897, the "Pioneer" was built

Horse teams were still popular, but the advent of the motor car heralded an exciting new form of transport.

7. Jim Fitzpatrick, *The Bicycle and the Bush: Man and Machine in Rural Australia* (Melbourne: Oxford University Press, 1980), p. 100.

by the Australian Horseless Carriage Syndicate. By May 1900, the first car had made the journey from Sydney to Melbourne, taking nine days from Bathurst to Melbourne at an average speed of 8.72 mph.[8]

Despite being noisy, smelly, slow and very expensive, motor cars quickly gained in popularity and opened up new possibilities in transportation. During the great drought at the turn of the century, grass dried up along the western roads making it impossible for horse teams or bullock drays to travel. In 1902, James Trackson used two Yorkshire steam lorries to carry wool from western woolsheds to the railheads. His venture was a success, and he had proved the commercial potential of the new horseless carriage in western Queensland.[9] By 1912, the first motor shipments of wool were operating out of Longreach.

Meanwhile, recreational motoring was becoming a popular social activity. The RACQ (Royal Automobile Club of Queensland) began in 1905, when a meeting of twelve motorists gathered to establish the Automobile Club of Queensland, to "band together for their mutual protection" against public hostility to the motor car.[10] It was soon a significant lobby.

The drivers of wheeled vehicles found the roads very difficult. In 1908, the Hon. J. W. Blair, Attorney-General and Secretary for Mines in the Queensland Government, travelled to Western Queensland by car to see the area for himself. He later described many of the problems he encountered:

> The entry into Winton [from Longreach] was particularly difficult. Heavy rain had fallen during the previous week, and the heavily-laden wool wagons had cut up the soil to a surprising extent. The road had to be travelled by the car in semi-darkness, as the acetylene lights were not working properly. The wagons, with varying weights from seven to thirteen tons, had in places sunk to the axles. We passed one which was bogged and apparently immovable, and soon after almost ran into a mob of cattle, which appeared to us as

8. John Goode, *Smoke, Smell and Clatter: The Revolutionary Story of Motoring in Australia* (Melbourne: Lansdowne Press, 1969), p. 15.
9. ibid., p. 47.
10. V. D. Mathieson, *Our First 80 Years* (RACQ in-house publication, c. 1986), p. 1.

moving and deceptive lines of darkness. Voices of the men attending the mob warned us of the danger, and we pushed silently on. The lights gave out, but we persevered, and by use of the screw jack when the car became embedded in the blacksoil ruts we overcame the difficulties. To intensify – if that were possible – the bad condition of the road, some thousands of travelling stock had gone over it, and the combined result of heavily-laden wood teams and the tramping of travelling stock on hardened wet blacksoil "beggared all description".[11]

On his trip in 1908, Blair encountered many folk who had never seen a car before. This quickly changed. By 1914 there were approximately 37,000 motor cycles, cars and trucks in Australia. By 1918, there were 55,596 cars and 2436 trucks.[12] Most of these vehicles were in the wealthier and more populous south, but by the beginning of 1921, there were an estimated 8000 cars and trucks on Queensland roads.

Motoring remained an adventure over inadequate roads, and motorists wrote stirring accounts of their journeys. A. E. Filby's account of his journey, from Mackay to Cairns and back, illustrates many of the hazards of Queensland's road network in 1923. After first shipping his car by train to Mackay, he headed first for Proserpine along a bad road, "there being two or three river beds which necessitate a slow entry, a quick pickup at the bottom and a stiff little pull up the other side and I went on, having no difficulty in following the track, as there was only the one. The driver of any kind of car on this trip is kept well occupied, as there are over one hundred rivers or creeks in the ninety-five mile run". These creeks could be hazardous; some "want looking at before entering by a stranger to the road, as the road follows along the river bed before going up the other side". Stock gates across the road were an added inconvenience, as was the railway line, then being built between Mackay and Proserpine, which cut across the track at several points.

11. J. W. Blair, *Through Queensland in a Motor Car*, April 1909.
12. Goode, p. 49.

Reaching Proserpine Filby was told that his car could not possibly make it to the next stage, Bowen, without reserves of petrol. This was a common difficulty faced by motorists. Blair had arranged for petrol to be left by horse teams along his route, but Filby treated the problem as a challenge to prove his car's capabilities. He asked the local bank manager to witness the filling of his petrol tank, and to seal the cap with the bank's own seal, before travelling on to Bowen:

> The first river certainly did look a puzzle, as the ground simply disappeared from the front of the car, and I was under the impression that we had taken the wrong track and the road must be somewhere else. Mr. Hallam got out and found the road was down the bank and then along a stretch of loose sand.

The main problem between Proserpine and Bowen was washaways. It had just rained and the creek approaches were slippery, while clay pans on the road itself "made it very hard to keep straight". Nonetheless when he got to Bowen, the local bank manager broke the seals on the petrol tank, and they were able to calculate a petrol consumption of 28 miles per gallon [10.15 litres per 100 kilometres]. At Bowen the road stopped completely, and Filby had his car "trucked" by rail across the Burdekin to Ayr. His journey continued on to Townsville, "the Haughton River, which proves such a bug-bear to many cars, being negotiated without any trouble, the car pulling very well through the sand and up the other side in great style".

In Townsville the tar roads were in fine condition – "the paradise of the north for motors". Similarly the road to Charters Towers was good, "except the Oakey Creek and over the Range", but coming back from Charters Towers, he found several cars at Oakey Creek well stuck in the soft sand – "one car had been there nearly two hours, as it had got off the right track and was in the sand over the hub caps, the dif. [differential] resting on the sand, with the result the wheels were just spinning".

The road to Ingham followed over very rough roads, and bridges "all of which give one the impression that they will fall through before the car can get to the other side". Filby ventured on, driving on over the Cardwell Range to Cardwell. He had his first near miss on this road, narrowly avoiding a construction lorry, "as one is apt to think they are the only car on the road".

The Tully River presented one of the biggest obstacles so far. The ferry was "a sampan or banana boat with boards put across from side to side and then two planks put parallel on top". Filby managed to drive his car on to this contraption, taking care to distribute the weight as evenly as possible, but as they moved out into the river, the ferry sprang a leak. Bailing furiously, they were able to cross but on the other side the anchor would not hold, so "we circled slowly round and round, gradually getting lower and lower". Finally, just as the boat sank, he managed to drive his car off into about a foot and a half of water, and up the bank to safety. The ferryman charged him £3.

Although it was getting dark, he decided to push on for Innisfail through the Tam O' Shanter Range, although "we repeatedly had to retrace our course, as the railway fence had been erected across the road". The car could only get as far as El Arish before the road petered out altogether, "the bridges all being burnt and the scrub all grown up in the track", and again Filby was forced to arrange for his vehicle to be loaded on to the railway for the trip through to Innisfail.

From Innisfail the way led on to Babinda. This time Filby struck trouble with tree stumps "which were too high to get the car over, so we had to build each side for the wheels to run up and so clear the car". After the trees came scrub, "rather trying to the driver, the road being practically a tunnel through the tropical undergrowth, which comes right up on both sides and also right down on the hood", and washaways running down the centre of the road which left the car at a perilous angle. In an attempt to deal with washaways, an earlier generation of road-builders had "corduroyed" parts of the road with eight inch logs, but ants and the bush fires had destroyed many of the logs, "so that about every

3 ft. [0.92 metres] there is an 8 in. [20 centimetre] drop". Nevertheless, it was only at the Russell River that a steep sandy bank finally defeated Filby and his car, and he borrowed a couple of horses to pull them out.

From Babinda to Gordonvale and on to Cairns, however, the roads were all "pretty good", and he completed the return journey from Cairns to Townsville in a mere fourteen and a half hours actual running time, two and a half hours less than the train, since the road was in "wonderful condition".[13]

Such an epic journey illustrates many of the problems faced by motorists in Queensland. Along the coast, where the population, and therefore the need for roads, was greatest, heavy summer rainfall and numerous creeks and rivers made road construction particularly difficult. Older methods of road building, such as the corduroy roads made by laying tree trunks side by side, had not been built with cars in mind. Stock gates were a minor inconvenience to travellers by dray or on horseback; they were a major impediment for the faster motorist.

The establishment of the Main Roads Board was a response to the new challenges posed by the motor car. People like the intrepid Mr Filby might gain a masochistic delight from such a journey, but the growing band of Queensland motorists in general wanted an improved road system, such as only a centrally co-ordinated organisation could provide.

13. A. E. Filby , "Touring in Northern Queensland", *The Steering Wheel*, Vol. X, No. 4, February 1924.

CHAPTER 2

THE 1920s
The Formation of the Main Roads Board

In 1920, the Queensland Government decided to set up the Main Roads Board, the precursor of the Main Roads Commission and the Main Roads Department. Central road authorities, to supplement the work of local councils, were introduced in a number of European countries and some American states, well before the First World War. In Australia, the first such board was the Country Roads Board of Victoria, which was established in January 1913. Queensland followed in 1920, New South Wales in 1925, South Australia and Western Australia in 1926, and finally Tasmania in 1935.

Main Roads' first Commissioner, J.R. Kemp.

The Queensland Main Roads Board was based on the Victorian experience in its organisation and style of management. J. R. Kemp was the first person to be appointed to the board on 29 October 1920. Born in Victoria in 1883, Kemp had studied engineering at the University of Melbourne but left without taking a degree. Before coming to Queensland, he had worked for the Country Roads Board in Victoria. He was joined during February and March 1921 by J. A. Fraser and D. A. Crawford. J. E. England, a qualified accountant, was Secretary of the Board and in 1923 became Registrar of Motor Vehicles. At first the administration of the Board was in the hands of the Minister for Public Works, but in September 1921 it passed to the Minister for Public Lands to improve co-ordination with the Survey and Roads Branch of the Lands Department.

The first objective of the new Board was to collect information about the existing road system: the condition of the roads, the resources available in each area for road building, and the number

of vehicles using the roads. Before the creation of the Main Roads Board, roads had been the responsibility of local authorities, who built local roads to suit the needs of their own communities, but who had neither the financial nor the technical resources to tackle major projects. The Main Roads Board was established with the objective of handling projects which extended beyond the boundaries of the individual shire. In most cases, however, the local authority participated, for it contributed up to 50 per cent of the cost of road building and was responsible for subsequent maintenance of the road.

Under the *Main Roads Act of 192*0, a road could be gazetted as a 'Main Road' only under certain conditions. Roads within towns were specifically excluded, and remained the responsibility of the relevant local council. Outside the towns, three priorities were identified: to join towns which were not as yet connected by railway through a series of main trunk roads; to construct a series of feeder roads linking farming areas to the existing rail network at railheads; and developmental roads which were to open new areas of Crown Land to closer settlement.

On 1 July 1921, a system of motor vehicle registration came into operation, at first handled by the police, but transferred to the Main Roads Board in December that year. The cost of registration was based on a formula involving 'power plus weight' for vehicles with pneumatic tyres, and 'power plus weight plus maximum load' for vehicles with solid rubber tyres, since these were more likely to cause damage on the roads. Thus fees for pneumatic-tyred vehicles varied from £2 4s to £22 for the heaviest motor truck. Motor bikes were charged 15s per annum, and side-cars 10s.

The revenue raised from registration fees gave the Main Roads Board, from the first, a measure of independence within the public service in determining its activities. In the year to 30 June 1922, for instance, the Board received £60,000 from the Treasury Loan Fund, and nearly £50,000 in registration fees. In later years, with an additional contribution of money from the Commonwealth government, the proportion of total money represented by registration fees fell, but the principle of independence had been

established, and was consolidated by the growing power of John Kemp and his associates on the Board. In October 1925, the Main Roads Act was amended, replacing the Main Roads Board with the Main Roads Commission. Kemp became Commissioner, D. A. Crawford was Chief Engineer, and J. A. Fraser was Assistant to the Chief Engineer. Kemp's growing dominance within the organisation was consolidated by the change.

There was a great increase in car ownership in the years following World War I, and the car had a considerable impact on government planning. On the one hand, the war had stimulated technical improvements, and after 1919 excess capacity was turned from war materials to the manufacture of automobiles in both England and America. On the other hand, many young men had learned how to drive while they were in the army, and now that the war was over they were eager to buy motor cars if and when they could afford them.

With motor vehicle registration, accurate figures became available on car ownership: at the beginning of 1921 there were an estimated 8000 cars and trucks in Queensland; eighteen months later the number had risen to 13,807, and by 30 June 1923 there were 16,893 cars and 3217 motor cycles registered in the state.

This growing number of motorists wanted better roads, but local authorities lacked both the expertise and the funds to provide them. Only a centrally co-ordinated body could develop a plan to provide decent roads for Queensland, and with motorists becoming a significant lobby group, the state government responded by establishing the Main Roads Board to respond to the many challenges posed by the motor car.

Filby's account of travelling the road from Mackay to Cairns illustrates many of the technical problems faced by the new Main Roads Board. The arterial road system of Queensland in the early 1920s was not just bad, but was getting worse. Older roads, built before the coming of the railways, had been allowed to deteriorate – the corduroyed road Filby describes between Babinda and the Russell River, for instance, must once have handled horses and

stock, but in the state in which he found it in 1923, would certainly have broken their legs. Other roads he found overgrown, with scrub or large trees encroaching on earlier routes. Selectors had also encroached: Filby complained of finding fences built by farmers across the old roads.

Other problems arose from the hard terrain. The bridges, built of wood to handle only light traffic, were destroyed in the bush fires – on one occasion Filby drove at top speed across a bridge that was already on fire – and in many places, of course, there was no bridge at all. The roads through the mountains were dangerous, tortuous and liable to slippage. Moreover, North Queensland was seasonal; the washaways, the clay pits and, above all, the many creeks he forded during this driest time of the year, would have been quite impassable in the wet.

Above all, wherever he went, Filby encountered railways, some well-established, others still being built. In the early 1920s, railways still took priority over roads, both literally and in the financial considerations of the Queensland Government. Yet where conditions were favourable, such as between Cairns and Babinda, Filby was able to demonstrate that the car was already out-performing the railway. In this dilemma lay the seeds of future conflict.

Motor cars put new pressures on the road system and required new solutions to a number of engineering problems. Cars travelled faster than any earlier form of transport, and their speed therefore made the camber of the roads a much more important matter, to be determined mathematically. The motorist also required a smoother surface on the roads he drove over, both to allow for a comfortable ride at the higher speeds at which he travelled, but also because of the vulnerability of car tyres in poor conditions. Pneumatic tyres did less damage to the road surface than solid wheels – a fact that was recognised by the Board when calculating registration fees – but a car's greater acceleration and braking capacity put different stresses on the road surface, and localised suction caused by the car engine could also cause problems with dust and corrugations.

On the other hand, drays and other vehicles pulled by bullocks and horses also did damage: one common method of slowing down on a steep hill, for instance, was to increase drag by locking the wheel by placing a sapling through the spokes, or by driving the cart so that one wheel was hooked over the shoulder of the road, causing the edges to crumble. Motorists complained too that solid cart wheels did as much damage to road surfaces as car tyres, while horses could chop up dirt surfaces, particularly in wet weather. Yet only motorised vehicles were taxed through registration.

The First Report of the Main Roads Board suggested that, on the experience of other states and countries, the number of cars on Queensland roads would increase exponentially if a reasonable road construction policy was introduced. In Queensland during the 1920s the car was never quite the "people's car" that Henry Ford dreamed of, for it remained largely the preserve of the relatively well off, but car numbers did increase rapidly throughout the decade, and car owners formed a growing band, with strong ideas about how the money they paid in registration fees – £46,227 18s 7d by mid-1922 – should be spent.

Car owners were of several kinds. Cars were costly, so in the early 1920s most car owners were wealthy. However, small farmers also took to the automobile as fast as their bank balances would let them. This rural car-owning lobby emphasised the financial benefits that would come if roads were improved – reducing the cost of getting their product to the local railhead, and maintaining the quality of their product. The third report of the Main Roads Board gave the example of dairy farmers whose cream turned to butter on poor quality roads:

> at Springbrook the farmers claimed that one-third of their cream was graded second class, at a loss of 2d a pound, as a direct result of poor roads!

At first they were happy with the government plan to concentrate on building roads radiating from a rail terminus, and were less interested in linking population centres, but there was a growing awareness that road transport could, under certain conditions,

replace railways, even for relatively long haul transportation if better roads became available.

As well as farmers, however, there were many car owners who used their cars primarily for touring and leisure. This group was primarily interested in long touring roads joining the major towns, many of which would parallel railways or roads through picturesque (but not necessarily productive) areas, or to holiday spots. Car owners were in a strong position to lobby, since they contributed to the Queensland Government through their registration fees and to the Commonwealth Government, after 1926, through petrol taxes and excise on motor vehicles. Yet, as amongst the wealthiest of Queenslanders, they probably did not vote for the current government, which was Labor. Through their motoring and touring clubs, they formed a powerful lobby.

Of these motoring organisations, by far the most important and most enduring was the RACQ. From the very first, the RACQ was concerned with the condition of roads, first in Brisbane and later, as the Club expanded its membership, throughout the state. In 1915, the Club put up the first hundred road direction signs in Queensland, and for some years voluntary initiatives by road users played an important part in improving the quality of roads generally. The most famous such example was the construction of Anzac Memorial Avenue to Redcliffe during 1922; a project paid for by voluntary contributions, using unemployed ex-servicemen. But other community initiatives were not uncommon. At about the same time, for instance, a road was built from Samford Railway Station by the government to serve farms and a new estate for soldier settlement. The settlers beyond the estate then raised enough money to continue this road to the top of Mount Glorious, "thereby not only exhibiting a spirit of enterprise, and self-reliance, but opening up a good road for visitors who wish to experience the health-giving atmosphere and enjoy the expansive outlook east and west from this well-named glorious mount".[1]

By the time this was written, however, enterprise and self-reliance were proving to be insufficient for the rigours of road building, and the

1. *Beaudesert Times*, 25 May 1923.

Beaudesert Times admitted that cars could negotiate only the lower, government-built section of the road, and that the engineer from the Pine Shire Council had now taken over responsibility for the project.

At least in one respect the road to Mount Glorious conformed to Main Roads priorities: it ran from a railway station, and its primary function was to service existing farms and open up new land for settlement. But the *Beaudesert Times*' correspondent was quick to see its potential as a tourist road – "a highway used by thousands of city and other dwellers" – and argued that it would be quite unfair to make the local population pay for a road that would be used by many visitors. This point of view highlighted a growing problem in the allocation of funding.

In 1922, its first full year of operation, the Main Roads Board was funded from two main sources, registration fees and treasury loans, for which a sinking fund was established. (A third, minor source of funds was the rental of roads to adjacent stockholders for grazing, which amounted to a few hundred pounds per year.) In addition, the local shires paid 50 per cent of the cost of building main roads, and were responsible for their subsequent upkeep. Demand for improved roads, however, not just in Queensland but throughout Australia, could not easily be met. Roads had in many cases been allowed to deteriorate with the coming of the railways. The population of Australia in 1921 was less than five and a half million – in Queensland it was only 755,972 – yet the distances to be crossed were immense, and none more so than in Queensland. Funding was therefore a major problem.

In December 1919 a letter to the editor of the *Steering Wheel* suggested that German reparations payments promised to Australia under the Treaty of Versailles could be used to build a national road network, including an "Anzac Highway" around Australia. The original Baker's Creek Bridge just south of Mackay, with steel girders complete with bullet holes, came from this source, but Germany was never able to pay more than a fraction of the debt imposed by the Allies.

The original proposal for an "Anzac Highway" therefore came to nothing, but the idea of a national road network kept recurring in

the early 1920s. Both federal and state governments were eager to encourage economic development, and roads were recognised as an important factor, providing an infrastructure for closer settlement in rural areas. Roads were also strategically important, and could help to develop Australia's "wide open spaces" in the centre and the north. For the Federal Government an important consideration was the role that roads could play in drawing the whole country together, linking city with city, and city with country to help create a more unified nation from the old disparate colonies which had federated only a generation earlier. Road construction also offered short-term benefits. The immediate post-war years were a period of high unemployment, and roads could employ large amounts of unskilled male labour.

In mid-1922, these ideas coalesced in the decision of the Commonwealth Government to establish a National Main Roads policy. On 25 July, the Prime Minister, William Morris Hughes, announced that the Commonwealth would give £250,000 – later raised to £500,000 – for road construction on a £ for £ basis, to be made available to the state governments "to develop and open up the country, and promote land settlement, and in aid of temporarily unemployed soldiers". The money was to be used by the states either to build new roads or to improve existing ones, and in line with existing Commonwealth policy, preference in employment on these projects was to be given to ex-servicemen.[2] The plan was subsequently incorporated in the *Main Roads Development Act 1923* (Cwlth).

The grant was allocated to the states on the basis partly of population and partly area, and Queensland's share was £35,000. The matching state grant was made up of two equal parts; half a free grant by the state, and half based on the terms of the *Main Roads Act of 1920*, under which money was raised half and half by the state and the local authorities. In other words, the Commonwealth provided half, the State 3/8ths, and the local councils 1/8th of the allocation.

2. J. Earle (for Prime Minister) to Premier, 10 August 1922, MRD 200/1/1.

Under the regulations accompanying the Main Roads Development Act, only certain types of roads could be built with this money:

> Each of the following roads shall be deemed to be a main road for the purpose of the Act:
>
> (a) A main road which opens up and develops new country for agricultural, pastoral or mining purposes, and which is necessary:
>
> (i) to convey the products of that country to the nearest railway; or
>
> (ii) to give access from the railway to that country for the supply of plant, merchandise, food, fodder or other goods;
>
> (b) A main trunk road between important towns, either within a State or between States where no railway communications exist, and which is necessary in assisting in the interchange of products and in increasing the range of markets; and
>
> (c) An existing arterial road which is required for the transport of products to any railway, river or port, and in respect of which the cost of construction is, owing to the nature of the country, and the lack of local material suitable for road making, beyond the ordinary resources of the district through which the road passes.[3]

3. MRD 250/1/1.

Using these criteria, the Main Roads Board recommended, and the State government approved, work on the following roads:

Brisbane-Mount Lindesay	£8,000
Mount Lacrom-Bracewell	£2,000
Peeramon-Boonjee	£5,000
Cairns-Tableland	£9,700
Hampton-Esk	£4,750
Caves-Charcoal Scrub	£2,000
Beerburrum-Coast	£5,750
Murgon-Gayndah	£6,000
Sarina-Nebo	£8,000
Samford-Mount Nebo	£8,000
Redcliffe	£12,000
Marburg-Frenchton	£2,000
Brisbane-Toowoomba	£1,300
Kingaroy-Gordonbrook-Burrandowan	£500

The actual expenditure to 30 June 1923 was only £49,031 19s 3d rather than the budgeted amount of £70,000, for the lead time for new road construction was inevitably slow.

From its inception, the Main Roads Board took the view that it was preferable to concentrate its efforts on a small number of roads, rather than spread the money more widely, but more thinly, throughout the State. The policy was probably a wise one in the long term, but it laid the Board, and its Minister, open to criticism.

At the second reading of the Main Roads Act Amendment Bill in October 1922, for instance, it was claimed that a road through Clifton Shire – in black soil country – was costing £5000 to build. The Deputy Opposition Leader, Arthur Moore, found such a cost outrageous:

> I do not say that roads costing £5000 a mile [$6250 a kilometre] are not a good class of work and probably

> everlasting: but, we have to consider whether the scattered population of Queensland is capable of carrying the burden, and whether it is not better to build a satisfactory road which will last twenty-five or thirty years at a cost of £800 a mile [$1000 a kilometre] rather than build roads that may last for 200 years at a cost of £5000 a mile . . . But whatever you pay for the road, if you let the water get into it, it goes to pieces just the same as a road which costs a good deal less, and I do not know that the advantage is commensurate with the extra burden. I would ask the Minister to see whether the Board cannot do a little more economical work.

And he added, in a dig at Kemp:

> I can quite understand that a man who comes from Victoria and is accustomed to building roads there may want to build roads which are suitable for a State like that in places where there is not so much settlement.

Moore was on the Executive of the Local Authorities Association of Queensland. In the opinion of the Main Roads Board, local authorities took a slapdash approach to road building: "Many Local Authorities do not appear to recognise that road making is a specialist's job". Relations between the Board and the local authorities were often tense, for the shire councils often resented the intrusion of specialists and the criticisms they brought, while the priorities of local councils regarding roads were often very different from those of the Board, as the first Annual Report indicated:

> Local Authorities have, in many instances, completely neglected to maintain through roads; bridges have been allowed to tumble down and have not been replaced. The reason for this neglect is obviously, in many cases, that no rate revenue is derivable from the adjoining lands, and the Councils have not felt it their duty to maintain roads for traffic whose origin is outside their area. When such roads become 'Main' this state of things will be remedied.

Yet the local authorities remained liable for half the cost of these new 'Main' roads, which were built according to criteria not their own, and often with labour that was not of their choice.

Despite Moore's criticism, the Main Roads Board was capable of economy, but it was run by engineers rather than accountants, and it resisted what it saw as false economies. In the western districts, where there was a low rainfall and light soil, and population density was low, the Board recommended that the only improvements that should be introduced were to the creek and river crossings. In areas with a low population, single-tracked roads were acceptable, so long as there were lay-bys at regular intervals to allow vehicles to pass. On some single track roads in hilly country, such as the Cairns Range Road, a timetable was introduced to allow cars to travel up or down at different times. In areas of high rainfall, where rivers could rise rapidly, the Main Roads Board argued against building high bridges since their cost would be prohibitive, and concentrated on low bridges and culverts to allow cars to ford creeks in flood. In such ways, costs could be kept down, and money spread as widely as possible.

On the other hand, the Board was adamant that money should not be constricted when it came to funding for proper surveys, especially to ensure a suitable gradient for new roads, or on designing proper drainage, for if these things were ignored it would result, ultimately, in higher costs. One of the banes of road construction in Queensland was the combination of steep gradients with high rainfall. On the old Landsborough to Maleny road, for instance, the gradient averaged 1 in 8, and the road was impassable after rain. This "so-called road" had been costing the local council £1600 a year to maintain in its "present awful condition". The Main Roads Board survey designed a new road with a gradient no steeper than 1 in 18, and improved drainage. The Marburg-Frenchton Road was similarly redesigned. Another curse for the engineers was the black soil country of the Darling Downs, where "nothing short of solid construction . . . will suffice" and even then was seldom successful.

The most persistent problem that the Main Roads Board faced, however, was that only a finite amount of money was available to

deal with the seemingly infinite demands of road users. Under such circumstances, questions were bound to be asked about the reason why certain road projects were chosen at the expense of others, and questions of political favouritism were raised.

Some complaints were general ones: opposition politicians regularly complained in Parliament that the "Automobile Club has got too much influence with the Government, and roads are being built in the interests of the Automobile Club, instead of in the interests of the farmer". But others were much more specific.

In October 1924, for instance, an Opposition member, Mr. Fry, queried the decision to build a main road through Upper Brookfield, since the Moggill Shire Council had expressed its preference for a road through Kenmore, Pullenvale and Moggill to the ferry at Riverview. The Upper Brookfield road, Mr. Fry claimed, would be a dead-end, serving very few people – but it would pass through five hundred acres [100 hectares] of freehold owned by the Minister for Agriculture, W. N. Gillies, raising the value of his property by thousands of pounds. No scandal was caused by this revelation however, for the following February, Gillies became Premier.

Questions were raised, too, about the road from Cairns to the Tableland. It was policy not to spend money on roads that competed with a railway, but in 1923 the Annual Report announced two exceptions to this rule: the road from Brisbane to Ipswich, which already existed and was heavily used, and a road from Cairns to the Atherton Tableland, passing through the electorate of the Premier of the day, E. G. Theodore. Later Kemp admitted to Arthur Moore, now the new Country Party Premier, that "Messrs Gillies and McCormack were somewhat opposed to the Cairns Range road at first (although not publicly so), and the Main Roads Board as then constituted had some difficulty in getting a start although the matter was strongly pressed by all the Councils concerned. Later on, they of course publicly supported it and pressed for early completion".[4]

The shifting relationship between railways and roads is one of the long-standing themes in the history of the Main Roads Commission.

4. Kemp to Moore, Copy, 29 May 1930, MRD 210/7/2/4.

The first railways were built by the Queensland colonial government during the 1860s, and remained a state responsibility after federation in 1901. They were an important factor in government decision making for the railway network represented an enormous capital outlay, while the railways were also amongst the largest employers of labour in the state.

Railway construction expanded rapidly after Labor came to power in 1915, and was closely linked with the government's policy of closer land settlement and agricultural development. In 1921 the coastal railway from Brisbane reached Mackay, and an uninterrupted line finally reached Cairns in December 1924 – Filby saw it being built during his drive.

These railways represented a sizeable investment by the Queensland Government, and were built with borrowed money. They expected the railways eventually to pay for themselves, directly through fares and freight charges, and indirectly by promoting the sale of Crown Land, as the railways opened up new areas to settlement. In the meantime, however, the government debt as a result of railway construction was rising, and the demands of car owners for roads rather than railways brought new pressures.

The compromise was a system of road priorities which was designed to complement, rather than compete with, the railways already in existence. Main trunk roads between towns would be built only if no railway line existed. This policy meant that, with the completion of the coastal railway line to Cairns, there was little chance that the coastal road system Filby had found so difficult to negotiate would be improved, or that gaps, such as that between Bowen and Ayr, would be filled. Instead, the Main Roads Commission concentrated on providing "feeder roads" to feed passengers and freight into the nearest railway station.

By the mid-1920s however, wherever roads were available, farmers were beginning to recognise the advantages of sending produce by road rather than rail. There were fewer handling costs, and often greater speed. In the Far West there was no competition, for

railways had not reached many areas. During the drought in 1928, the *Steering Wheel* reported that motor trucks were being used extensively to move sheep to agistment from western and central western Queensland. Government policy, however, was to prevent competition for freight wherever railways existed. One response by government to the growing competition from road trucks was to impose a prohibitive level of registration on them. Under *The Heavy Vehicles Act of 1925*, taxes on such vehicles were raised because of the competition with railway services, and they were further increased in 1929. It was then estimated that the registration fee added £3 per trip to the costs of a 6 ton [ca. 6 tonnes] solid-tyred vehicle plying between Brisbane and Toowoomba, 10s per trip for a 30 cwt [1.524 tonnes] pneumatic-tyred truck.[5] Yet, with all these disincentives, road freight continued to outpace that of the railways.

During the 1920s, with a government eager to improve all forms of transport in the interests of economic development, this potential rivalry between railways and roads was merely an irritant. With the arrival of the depression at the end of the 1920s, it became a much more serious problem.

On 25 October 1922, a form letter was drafted by the Secretary to the Main Roads Board, to announce to those shires lucky enough to be included, that they were to be provided with Commonwealth aid in building a road. That letter says much about the preoccupations of the Board and the purposes of road-building in the 1920s:

> I have pleasure in informing you [the Secretary told the shires] that an amount of £[blank] has been made available to this Board for expenditure on the [blank] Road, under the conditions stated hereunder:
>
> Terms of the Commonwealth and State Grant are:
>
> That, it shall be used for the relief of unemployed. First preference shall be given to returned soldiers and then to other unemployed. Work will be carried out under the Local Authorities Award.

5. J. England to Minister for Railways, 18 November 1931, MRD 215/8/4.31.

The Grant is as follows:

Commonwealth	50%		Free
State	50%	25%	Free
		25%	Under Main Roads Act Terms

Thus of each £1000 expended, the Shires concerned will pay interest and redemption to the extent of less than £9 per annum, or, in other words, are liable only for payment of interest and redemption on £250 at the rate of £6.17.6 per cent over a period of thirty years the conditions being four times as generous as those under "The Main Roads Acts". Your co-operation is desired so that works may proceed as smoothly and economically as possible.

I should be glad if you would kindly submit the names of unemployed soldiers desiring work either directly to this Board, or through the Repatriation Department Brisbane.[6]

First, road building was closely tied to the relief of unemployment. The Australian states have historically sustained a high level of public sector employment. From the last century, patterns of state employment on public works were geared to the business cycle. It was, for instance, a common policy for colonial governments to increase expenditure on public works during winter, when seasonal unemployment was at its peak and Queensland, with an agrarian economy and consequent high levels of seasonal unemployment, was particularly geared to this system of relief. Until 1920, road building had offered an important opportunity for local shire councils to help their own unemployed. To a certain extent, this continued to be the case, but with the formation of the Main Roads Board many roads were taken out of their hands, and into the responsibility of state and federal governments, where different priorities applied.

Second, preferential treatment was given to ex-servicemen in dealing with unemployment. The importance of the lobbying activity of the Returned Services League [RSL] is highlighted in the

6. Draft letter, 25 October 1922, MRD 200/1/1.

final sentence of the letter where "Repatriation Department, Brisbane" appears, in Kemp's handwriting, replacing the typescript "District Returned Services League" of the original copy.

Third, a pattern of shared funding was being established, which emphasised the dominant position of the Commonwealth, but with contributions from State and local authorities. At each level, expenditure was funded from borrowings, but the system was designed to incorporate a sinking fund that would repay these loans over thirty years.

When the Main Roads Board was first established in 1920, it was based on the assumption that, as with railways over the past half century, roads would be paid for out of state coffers. Until 1920, funding was purely local: in Brisbane the roads were built by the local councils, while other towns and shires similarly relied on their own resources. The result was highly uneven development; some towns, such as Townsville, gained a reputation for providing a good road network, but others continued to languish.

The formation of the Main Roads Board was never intended to put an end to all local responsibility for roads: in the first place, its authority did not cover urban areas, where town councils remained responsible. The role of the Board, and its successor, the Commission, ran only along the network of major arterial roads linking towns, together with the developmental and railway-oriented roads. But within a very few years, the inadequacy of this policy began to be very clear, for it satisfied no one.

Car users objected to a policy which discriminated in favour of railways, and these people had an increasingly effective lobby in the RACQ. The Federal Government – without the incubus of railway loans borne by the state governments to consider – wanted a national network both for political and developmental purposes. Local authorities had their own local requirements, too, which did not necessarily match those of the state as a whole. Local interests could also conflict with state and national interests in the matter of employment and maintenance of the roads.

Employment on the roads has always been an important political issue. In the 1920s this was particularly true because unemployment levels were high throughout the decade. Seasonal unemployment particularly affected rural areas where Main Roads concentrated its activity. The political issue was complicated, however, because effectively there were four competing priorities in the employment of unskilled labour. The Commonwealth National-Country Party government insisted that where roads were funded, or partially funded, from Commonwealth grants, the first choice of labourers should be ex-servicemen. The State Labor government, which was dominated by the Australian Workers Union [AWU], proposed to employ unionists as its first priority. The local authorities, looking to their own backyards, wanted to employ local men, including impoverished free selectors who were not technically unemployed at all, but for whom road work or other unskilled labour was necessary to make ends meet. All three of these groups preferred to employ married rather than single men.

Finally, there was the Main Roads Commission itself. Buffeted by these conflicting political priorities, the Commission's objective was experience. Road building was seen by all levels of government as an unskilled occupation, and therefore one that could absorb any unemployed man. From bitter experience, the Main Roads Commission knew better. Competence was important; without any apprenticeship or other form of training, road gangs developed their skills on the job, living and working in groups which grew to know the best way of doing things, and in which specialist skills developed. An experienced gang saved both time and money, and produced a better road. Moreover, the preference for married men hardly suited the conditions in which road building took place, for road builders lived under canvas, far from any facilities appropriate for families, constantly moving from camp to camp as construction proceeded. Nonetheless, the order of priority was clear: where Commonwealth money was involved, as late as the 1930s ex-servicemen still got preference, with the Returned Services League acting as a most powerful lobby on their behalf.

In several areas, the employment policy caused problems. On the Marburg–Frenchton Road for instance, the Main Roads Commission's assistant engineer arranged that for every six returned soldiers employed, one civilian would also be taken on, provided he had an AWU ticket. The arrangement, it was said, was designed to provide some experienced men to teach their skills to the soldiers: "no one intended to deprive the returned soldiers of work, but the request was made because they wanted to get experienced men to help the soldiers to pick up the work"[7], but it caused great controversy within the local Rosewood Council. It was also followed up by the Ipswich branch of the Returned Services League, which complained that "several returned servicemen call on the ganger inquiring for work and are refused, while there are a number of local farmers and others" employed on the road works.[8]

Meanwhile, on the Sarina–Nebo Road, a similar controversy between soldiers and civilians erupted amongst the workmen themselves. This road went through difficult country and the work was hard and dangerous. Early in 1923, the local engineer described the conditions involved:

> clearing the dense impenetrable scrub and lantana on the slopes. A fair amount of clearing (Scrub Vines) has been done for the full width of the Road (viz. 66' [20 metres]) from peg 44300 to peg 49700, but owing to light showers of rain at night, the scrub remained too green to fire, but by last week's dry weather burning operations are now proceeding . . . The trees along the line of operations (some of them 3 deep) have been felled, cut up and removed and the heaps burnt, as also a large number of stumps have been grubbed. I am conserving the logs of any trees that may be suitable for log culverts . . .

Conditions in the base camp, ten miles [16 kilometres] from the nearest town, were also difficult. As was usual on Main Roads Commission projects so far from a town, the men lived in tents and relied on pit latrines. Their drinking water was drawn from a well and it was a dry summer. In early March, Holmes wrote that "the continued absence of usual rains has dried up the well supply at the

7. *Rosewood Register and Marburg Mail*, 9 March 1923.
8. A. O'Keefe to Secretary, MRB, 31 May 1923, MRD 200/12/2.

camp; I went down the well myself and found a lot of debris on the bottom and sent a man below to clear it out; which has slightly increased the flow".[9]

Moving from camp to camp was a challenging part of life for Main Roads' road builders.

Not surprisingly, Holmes insisted that everyone had to be inoculated against typhoid fever, but also unsurprisingly, it was hard to keep these workers when alternative work became available: "the men will be constantly coming and going and I anticipate an exodus from the road work when the sugar season starts in July".

Relations between local farmers and the Main Roads workers deteriorated. In the unnaturally dry weather, it was hard to keep fires from spreading and at the end of February, one fire got away and burnt out part of a neighbouring canefield, bringing complaints from both the owner and the shire chairman. Rightly or wrongly, Holmes blamed his men and fined them for negligence. Like all the workers on this road, the men were ex-servicemen and the secretary of the Mackay branch of the RSL intervened, accusing Holmes of victimisation. The next day, he called the men out on strike. The strike only lasted a few days, but the whole incident illustrates the

9. J. A. Holmes to Secretary, MRB, 7 March 1923, MRD 200/7/2.

difficulties of maintaining social harmony in a road gang, working in primitive conditions with conflicting loyalties – to the union, the RSL or the local ganger.

Funding for road building came partly from revenue from registration, and other state sources, but the Commonwealth gradually developed an important role in Main Roads funding. The Commonwealth first introduced a customs duty on fuel in 1902, but it was not until 1923 that it used this petrol excise to offer the first grants to the states, on a fifty-fifty basis. Then, in 1926, the *Federal Aid Roads Act* was passed. In introducing this bill, on 27 July 1926, the Commonwealth Minister for Works and Railways, W. C. Hill, promised to provide £20 million over 10 years, on the basis of $^{3}/_{5}$ population and $^{2}/_{5}$ area, with the states to provide 15s. for each £ provided by the Commonwealth:

> road construction generally comes within the jurisdiction of the State governments, [but the Commonwealth] recognised that, in view of the rapid development of motor transport, the provision of suitable roads has now become a problem of national importance, and of too great a magnitude for the various State Governments to handle without the aid of the National Government . . . a comprehensive scheme of national road construction must be taken in hand at the earliest possible date, with a view to providing those arteries of communication so essential in a country like Australia, which is absolutely dependent on the development and prosperity of her country districts.

Under the new Federal system, Queensland was to receive £3,760,000 over 10 years. As mentioned earlier, according to regulations accompanying the Main Roads Development Act, only certain types of roads were to be built with this money:

1. main roads opening up and developing new country;
2. trunk roads between important towns;
3. arterial roads to carry the concentrated traffic from developmental, main, trunk, and other roads.

Building 'main' roads, 'trunk' roads and 'arterial' roads was a priority.

The first and third categories were much the same as those already existing within Queensland, but the new category of trunk roads between important towns represented a major departure. Until now, the system of priorities had been designed to divert money away from any roads that might compete with the railway network. But the intention of the new Federal Aid Roads Board was a national road network, modelled on those developing overseas, in the United States in particular. The Board met for the first time in October 1926 with representatives from the Commonwealth, Queensland, Western Australia and Tasmania; the other three States of New South Wales, Victoria and South Australia entered later, when they finally accepted the Commonwealth proposals. The Board's aim was to serve as part of the process of making Australia a single nation, rather than six ex-colonies, and the national government was much less concerned about possible competition with the railways. As Hill, the Commonwealth Minister for Works and Railways, stated at the Board's first meeting:

> It [the Federal Aid Roads Board] has as its object the speeding up of the development of the Commonwealth, in the direction

> of providing the means of communication between present undeveloped areas of the States and centres of population and markets. It is no use our talking about increasing our population and the placing of migrants on the land, unless we are prepared to provide suitable means of access to the population centres of the Commonwealth.[10]

On 8 October 1926, the Commissioner of Main Roads, J. R. Kemp, drafted a memorandum looking at the Federal Aid Roads Board proposals, and how they could best be implemented by the Commission. There was nothing very new in Kemp's plans. Most of the roads chosen for the first five years of development were roads which had already been gazetted between 1920 and 1925, and despite the different priorities of the Commonwealth, his plans had been vetted – and vetoed – by the Commissioner of Railways. "Before submitting the scheme in its present form," he told the Secretary for Public Lands,

> I have had two conferences with the Commissioner for Railways, Mr Davidson, as the result of which certain sections of road have been deleted from the programme . . . I have avoided so far as is possible . . . including any roads parallel with the railways, but must most strongly press the point that some arterial and trunk roads are intended to be [included in the] scheme.[11]

This rivalry between roads and railways was a continuing problem during the 1920s, and by no means limited to Queensland. All the states had incurred heavy debts over a long period of railway construction, and those debts could only be serviced if the railways paid their way. Railways also employed large numbers of men in country districts where unemployment was high. For these reasons, state governments wanted no competition either for passengers or freight, from motor traffic. Yet for the Commonwealth Government the priority was different, for it had no such debts to service. Instead, it saw the need to draw the nation together through a single road network, rather than relying on the different, and

10. W. C. Hill, Minutes of Proceedings of the First Meeting of the Federal Aid Roads Board, 28 October 1926, MRD 250/1/6.
11. Memorandum, John Kemp to Secretary for Public Lands, 8 October 1926, MRD 250/1/2.

mutually competing, state railways, with their separate gauges and their mountain of debt.

The details of the Railway Commissioner's objections illustrate the conflict between roads and railways, and how it operated at the local level. In his memorandum, Kemp itemised the many projected roads to which Davidson objected: a road from Brisbane to Southport and Coolangatta, for instance, would "seriously affect railway revenue". A road from Brisbane via Mt Lindesay to the New South Wales border would affect railway revenue between Brisbane and Beaudesert, and to meet these objections, the section between Jimboomba and Beaudesert would be omitted – despite the inconvenience to motorists that this must cause. Davidson similarly objected to roads between Ipswich and Warwick, Amberley and Rosewood, Ipswich and Toowoomba, Warwick and Toowoomba, Toowoomba and Goondiwindi, Warwick and Stanthorpe, Brisbane and Gympie, Childers and Bundaberg, Rockhampton and Mt Morgan, Rockhampton and Yeppoon, Mackay to Nebo via Sarina, Townsville and Ayr, Gympie and Maryborough, Murgon and Gayndah, and Ravenshoe and Innisfail.

Such obstruction from the Railways Department went against the trend of events; however, as Kemp pointed out:

> Whilst it may be admitted that railway traffic will be interfered with to some extent from road competition in some few directions yet . . . a road intercommunication system today is as essential as was the railway system when it was first introduced . . . There will not be sufficient money available in the fund over the ten year period to make these arterial or trunk roads continuous, consequently many of the objections of the Commissioner for Railways are groundless.

With the new involvement of the Commonwealth in road building via the Federal Aids Roads Board came another new consideration – the need to classify roads and the vehicles that drove on them. The Board set recommendations for dividing roads into three classes. First class roads, defined as those carrying traffic at the rate of 2,000 vehicles or more per day, were ideally to have a

metalled and bitumen surface, with 30 feet wide formation and 22 feet paving, and could take vehicles up to twelve tons gross, at speeds up to 30 miles per hour. Other roads would be narrower, with a gravelled surface, taking traffic at a maximum speed of 25 miles per hour [40 kilometres per hour].[12]

This first attempt to impose uniformity was unsuccessful, as all subsequent attempts have been. Speed restrictions, for instance, were quite different in the different states of Australia. In Queensland, the maximum speed on a straight road was 25 miles per hour [40 kilometres per hour]; on curves, through towns or over bridges it was twelve. In New South Wales, on the other hand, the only speed restriction was on vehicles over two tons, though "negligent, furious or reckless driving" had been an offence since 1909.

Regardless, by the end of the 1920s many of the patterns of road development had been established. J. R. Kemp had already emerged as the dominant influence within the Main Roads Commission, replacing the earlier triumvirate of Kemp, Crawford and Fraser, but these others, with the Secretary of the Commission, J. E. England, all played an important, supportive role. All of them were to remain in the Commission for a long time – Kemp finally retired in 1949, England in 1952, and they set their mark upon the organisation.

The political demands of State and Federal governments in using road building as a way of mopping up unemployment, and the difficulties that this imposed on the Main Roads Commission, emerged as a potential source of conflict. So did the rivalry between railways and roads. Neither of these problems loomed very large in the decade of the 1920s however, for roads were so scarce, and so bad, that the public was grateful for anything, and the Main Roads Commission worked with a groundswell of goodwill from both the electorate and the local authorities. As the decade ended, however, the depression brought these problems into sharper focus.

12. Minutes of proposals, 28 October 1926, MRD 250/1/6.

CHAPTER 3

THE 1930s
The Depression Years

In May 1929, the long-standing Labor government lost power to the Country Progressive National Party. The new government was led by Arthur Edward Moore, a gentleman farmer who had run his election campaign largely on the issues of unemployment and the ailing economy, under the slogan 'Give the Boy a Chance'. Moore was no political theorist, but he was committed to "the encouragement of individual enterprise and reducing governmental interference to a minimum"[1] and his "dislike of public enterprises extended even to his own government's bureaucracy."[2]

The new Minister to take charge of the Main Roads Commission was Mr. Godfrey Morgan, Minister for Transport, a pastoralist and horse-breeder from the Condamine who had been on the Opposition benches for fourteen years. According to his son, it was a portfolio "he did not want or appreciate. He was a specialist on land administration, and naturally expected to be made Minister for Lands, something he really knew all about."[3] Instead Morgan, "a tough man for a tough portfolio,"[4] was placed in charge of the joint Department of Transport, dealing with both railways and roads. In linking these two transport areas for the first time in a single department, the Moore government was signalling a change in policy. Under the new administration, the railways, not the roads of Queensland, were to be the main priority.

Moore and his government arrived on the Treasury benches at a most unfortunate time. After fourteen years in opposition, the new ministers were totally inexperienced, and unemployment, which already was rising steadily at the time of their election in May 1929, steadily worsened during the next three years. Australia was already in depression by October, when the stock market fell on Wall Street. Two months later, in December 1929, a new and equally inexperienced Labor government was elected federally and Queensland once again faced the prospect of dealing with a government of the opposite persuasion in Canberra.

1. *Brisbane Courier*, 21 July 1932.
2. Brian Costar, "Arthur Edward Moore: Odd Man In" in D. J. Murphy and R. B. Joyce (eds.), *Queensland Political Portraits 1859-1952* (St Lucia,1978), p. 384.
3. Godfrey Morgan, *We are Borne on as a River (My First Seventy Years) Autobiography* (Smith and Paterson, Kemp Place, Brisbane, 1971), p. 243.
4. J. C. H. Gill, "Godfrey Morgan" in *Australian Dictionary of Biography*, vol. 10, p. 585.

The depression brought problems for governments of all levels – federal, state and local – and of all political persuasions. The enthusiasm for development which had been such a major feature of the 1920s had been based on credit, and the governments now found themselves heavily in debt, with a burden of interest payments due to overseas creditors which could not be reduced, even though government revenues were falling as a result of the economic malaise.

Australia suffered particularly badly during the Great Depression of the 1930s. At its peak, in 1933, almost a third of registered trade unionists were out of work throughout the country, a severity matched only in Germany and the United States. The situation in Queensland was rather different: Queensland was a very decentralised state, with little industrial development, so it did not suffer the terrible downswings in industry experienced by the more industrialised states. Moreover, during the 1920s, the Theodore Labor Government had introduced a system of compulsory workers compensation insurance. Under this system, which was introduced to deal with the uneven seasonal pattern of employment in Queensland, workers and employers contributed to an insurance fund which could then be drawn on when unemployment rose during the downswings, but it was quite unable to cope with the problem of long-term unemployment which arose in the 1930s, and it was of no benefit to young people who had not contributed to the scheme, because they had *never* had a job.

One solution to the difficulties of the 1930s was to go on the road. It was an ironic twist to the road- and rail-building activities of earlier days that Queensland's roads and railways now became a haunt of unemployed job-seekers. In the 1930s, Clem Wilson, an engineer with the Main Roads Commission, drove with his brother to Sydney – only when he saw large numbers of unemployed men tramping the country roads south of Sydney did he realise the enormity of the catastrophe through which Australia had passed:

> The country got over the 1930s depression quickly, I think. It never hit Queensland as severely as it did the southern states. At that time, I was working for Main Roads surveys in the

South Burnett and, at Easter 1931, my brother and I drove down from here to Melbourne, and until we got on the road going south of Sydney, it never dawned on me what a terrific thing this depression was – you know, people walking along the road with their swags, and they had to keep going, they could only stay – I forget how long it was – a week or two weeks, and then they had to move on. I hadn't seen anything like that in the South Burnett, and the economy there didn't, in hindsight, seem to be very much affected by the depression.

But this impression that things were better in the north may be largely false: Queensland was a decentralised, agricultural state, so it missed the worst impact of the depression which struck the cities of the south. But it was still bad enough: in 1931, the Bureau of Economics and Statistics estimated that the *real* level of unemployment in Queensland exceeded 30 per cent of the workforce.[5]

Like all government departments, the Main Roads Commission was affected by these economic conditions, and in a number of ways. In the first place, the Commission's expenditure dropped during these years as a result of these financial problems. The following table shows expenditure between 1929-30 and 1935-6, by which time the worst was over, but even then, unemployment relief, funded either by State or Federal Governments, provided a considerable percentage of that spending, and had to be used in certain restricted ways.[6]

Year	Total Exp	Unemployed	
		State	Federal
1929-30	£1,232,712	£13,356	£42,006
1930-31	1,080,342	148,196	123,080
1931-32	721,205	146,195	22,913
1932-33	1,255,916	58,880	–
1933-34	894,382	35,396	–
1934-35	1,582,289	38,969	–
1935-36	1,365,531	139,618	–

5. *Economic News*, 9 June 1932, p. 18, quoted in Brian Costar, "Arthur Edward Moore: Odd Man In" in D. J. Murphy and R. B. Joyce (eds.), *Queensland Political Portraits 1859-1952* (St Lucia,1978) p. 385.
6. Extracted from Main Roads Commission Annual Reports, 1929/30-1935/36.

The shortage of money was felt in many ways. As a result of the shortfall in government revenues, money was transferred from the Main Roads Commission, which was in a comparatively healthy financial condition, to Consolidated Revenue, to meet loan payments – £59,501 in 1930-31, £65,357 in 1931-32, then, from 1932, a block diversion of £250,000 from the Commission went into Consolidated Revenue between 1932 to 1934. From the Commissioner downwards, wages for all permanent staff of the commission were cut by 10 per cent. Local authorities were also hit by the slowdown, and were often unable to meet their share of road funding, or to keep up with the road maintenance which was their responsibility on completed roads.

For the public at large, the depression was everywhere in evidence. While the most obvious impact was on unemployment levels, there were more subtle indicators, too. Car registration numbers fell, though not dramatically, as some motorists found the costs of motoring too high, and took their cars off the road. The total number of cars, trucks and motor cycles on the road fell by 684 in 1930-31, and by a further 1871 in 1931-32, to 88,960, and "the depressed state of the country rendered necessary a greater volume of correspondence than usual in collecting the outstanding fees."[7]

In 1930, Australia effectively came off the gold standard and devalued its currency. The change in the exchange rate meant that imports rose in price. For the Main Roads Commission, the most important such product was bitumen, which was imported by the barrel from Trinidad. As bitumen became more expensive, new efforts were made to find a local alternative – tar, for instance, or rubber latex from Papua. In fact, one effect of Queensland's financial troubles may have been more creative attempts to solve problems using local technology. It made it very difficult for the Main Roads Commission to keep up with international developments in road building, where these involved greater capital investment, or reduced the use of unskilled labour. As the Annual Report stated in June 1932:

7. Main Roads Commission Annual Reports, 30 June 1931 and 30 June 1932.

> The value of another aspect of road construction, particularly in times when unemployment is rife, must not be overlooked. It can safely be said that no other occupation finds more employment per £1000 expended than road construction.

In a situation of desperately high unemployment, there was a clear role for the Main Roads Commission as a major potential employer of unskilled labour, though it was a role which it accepted somewhat unwillingly. Road building fitted into the time-honoured system of providing public works as a redress against unemployment, but, as in the immediate post-war period, the Main Roads Commission resented the sacrifice of professionalism in road building to the immediate imperative of providing jobs for unskilled labour.

To deal with the problem of unemployment, the Main Roads Commission introduced a number of palliative schemes, where small amounts of money were allocated to small projects that could target unemployment in specific localities. The grand scheme of a national arterial network, initiated by the Bruce-Page government, had to be deferred indefinitely. Oscar Masters worked with road gangs in the Stanthorpe area:

> Cunningham's Gap, in about 1930 it was done with relief work, unemployed. All they did was cleared the work through the bush. When we was at Stanthorpe, they used to send them out to us from Toowoomba and Brisbane and that. They didn't get any training, just work on the pick and shovel. We had some queer types came to us up in Stanthorpe. They'd send them up in the train, and you'd meet them off the train, take them out. You were supposed to give them two days pay immediately they landed on the job, to buy a bit of food but a lot of them they came up on the train and they went back or the foreman sent them back on the train the next day. The government used to give them a free ticket up.

Road building projects, such as those at Cunningham's Gap, provided unemployment relief during the Depression.

Several different types of unemployment relief operated in Queensland at different times during the 1930s, but the usual experience for unemployed workers was to be signed on a rotational basis for so many weeks, the length of employment depending on whether they were married or single, as well as on the money available in that district. J. E. England explained the system, as it existed by 1935:

> On jobs being carried out under the Relief scheme, such as on the Nerang–Numinbah Road at the present time, the labour is selected by the Director of Labour in Brisbane and married men get 8 weeks and single men 6 weeks. On all other Main Roads' jobs the labour should be obtained from the nearest Labour Agent, but the Local Authority has the right to select the men they require from those who are considered eligible for the work. There is no rotation on ordinary Main Roads' jobs in the Nerang area.[8]

The policy of the Main Roads Commission was to use relief funding where possible for projects which otherwise would not have a high

8. Secretary to K. R. Hack, Secretary, Burleigh Heads Branch ALP, 23 July 1935, MRD 231/0/1.

priority. Many, such as this one through the Numinbah Valley, were 'tourist' roads. By their nature, they were often in areas which were undeveloped, isolated, and sometimes very rugged indeed. The Annual Reports list many projects, large and small, where unemployed labour was used, but amongst the more substantial was the Mount Spec Road, 64 kilometres north of Townsville, and the Cook Highway between Cairns and Port Douglas. Both went through the most difficult terrain.

In 1931 the Annual Report rhapsodised of the Mount Spec Road: "This road climbs the coastal range amid beautiful scenery and running streams to the watershed of the Burdekin River. It will provide Townsville with a refreshing holiday resort and temperate climate within easy reach of the City" – but it also mentioned the tidal mangrove swamps between Halifax and Lucinda through which the workers were pushing, using dried mud from the swamps to face earthworks along the way. Further north, the road beyond Cairns to Port Douglas and the Daintree was even more isolated. Five bridges had to be built along this route, and materials for girders and other equipment had to be transported by launch in the open sea, then transferred by floating to the beaches. Rough weather caused some delays.

By 1933 the Main Roads Commission was employing an average of 640 men on unemployment relief, and it was faced with the need to absorb men without skills – or with the wrong skills – into its workforce. Many of the unemployed were used on jobs where skills were minimal. Oscar Masters particularly remembered the prickly pear and the problems that it caused:

> I worked on the first bit of road done in the Millmerran Shire – 1927 – that was when prickly pear was nearly as high as this house, we had to force our way through with just horses. We didn't have tractors or anything like that. This was at Millmerran, going further out west, it took over hundreds and thousands of acres. When we went to Millmerran in 1927, you couldn't move for prickly pear, and then we went back there again in 1932, 33, and there wasn't a bit of prickly pear to be found. The prickly pear used to be the home of death adders,

and the death adders disappeared with the prickly pear as well. It used to be good shelter for them.

In the early 1930s, the cactoblastus insect was introduced to control the prickly pear infestation, and it became possible to reclaim large areas of the central west for farming, and many men were employed to clear land. In the Chinchilla Shire for instance, 53 kilometres of brigalow scrub was cleared using relief labour, and similar gangs worked on similar projects throughout the state. The rotational system, where men were employed for only a few weeks at a time, made training difficult and ineffective, but in some areas, the Commission tried to use particular projects – such as the Mt Nebo–Samford road near Brisbane – not just as 'make-work projects', but to train at least some of the unemployed in road building techniques.

The new conservative government in Queensland brought in a number of changes in policy, some of which were not easily accepted by the staff of the Main Roads Commission. Under the long period of Labor administration from 1915 to 1929, public servants were treated well by the government in power, and became a loyal and "well-entrenched bureaucracy".[9] That loyalty was probably greatest in areas of the public service which were first created by a Labor government, such as the Main Roads Commission. Rightly or wrongly, the new government, arriving in power after a long term in resentful opposition, was suspicious of some of its senior public servants who had fared so well under the previous regime. One such was J. R. Kemp, the Commissioner of Main Roads.

In May 1930, the new Minister, Godfrey Morgan, made a trip to the north. His intention, he told a welcoming committee in Ingham, was "to travel over about 9000 miles [14,400 kilometres] of railway, to get among the people, and to see what their requests were."[10] Such an ambition might be unexceptional, but Morgan was also a politician, and he was well aware of the strength of Labor support in the sugar regions of the coastal north. On his arrival at Tully, he was

9. Ross Fitzgerald, *A History of Queensland: From the Dreaming to 1915* (St Lucia: University of Queensland Press, 1984), p. 25.
10. *Brisbane Courier*, 27 May 1930.

met by a number of complaints from the local shire, amongst them a complaint that so little money had been allocated for roads to the Cardwell Shire. Morgan responded, as any new minister might, by blaming his predecessors: "In the past," he explained, "a number of shires had got far more money for Main Roads work than they should have. Apparently political pressure had been brought to bear."[11]

Morgan's reply had been phrased in very general terms, but it was enough to arouse the anger of his Commissioner. Kemp immediately responded with letters to the Premier as well as to Morgan. The impression that the Commissioner of Main Roads would exert undue political influence, he told Moore, was "as bad as, say, the suggestion that the Commissioner of Taxes could be influenced. Perhaps I am supersensitive on the point," he added.[12]

Moore's response, however, was less than soothing:

> Now and then men connected with Shire Councils make foolish statements. Only a few weeks ago, when in Cairns, at a reception an ex-member of the Eacham Shire said that they had been favoured with large expenditure on main roads thanks to the influence exerted by two ex-premiers Mr Gilles and Mr McCormack. As he put it – we made the pace a welter while the going was good. When receiving multifarious deputations reported by more or less inexpert short hand writers, things appear in the pen that were expressed quite differently. The Gov't are all of one mind in holding the very highest opinion of you and your administration of a very difficult department – and also for very valuable assistance in other directions. I can only express regret that anything should have appeared in the press to cause you uneasiness. Kindest Regards.[13]

A more cautious public servant might have subsided at this point. Kemp replied on the same day:

> I have to most sincerely thank you for the sentiments expressed in your most kind and reassuring letter.

11. *Daily Mail*, 27 May 1930.
12. Kemp to Premier, n.d., MRD 210/7/2/4.
13. Moore to Kemp, 29 May 1930, MRD 210/7/2/4.

> I may say that Messrs Gilles and McCormack were somewhat opposed to the Cairns Range road at first (although not publicly so), as the Main Roads Board as then constituted, had some difficulty in getting a start although the matter was strongly pressed by all the Councils concerned.
>
> Later on they of course publicly supported it and pressed for early completion.[14]

Appointed under a Labor government, Kemp had become a figure of considerable power within the public service generally, and something of a benevolent dictator within his own Commission. Now, under the Moore administration, his power was lessened when railways and roads were brought together in a single Department of Transport, and Kemp was in a subordinate position to the Railways Commissioner, Mr. J. W. Davidson. This clearly irked him.

It was in an effort to justify the importance of the Commission to a Minister who preferred railways to roads that in October 1930 the Secretary, J. E. England, asked a number of local councils to provide details of the benefits that they had gained from its activity in their shire. The responses to his request were positive, and give a good indication of how effectively many roads built by the Commission were fulfilling the original agrarian priorities under which the Main Roads Act had first been drafted.

In the Central District based in Rockhampton, the District Engineer outlined the numerous benefits which had flowed as a result of road policy. In the Calliope Shire, for instance, the Mt Larcom to Bracewell road was a typical railway feeder which had opened up a dairying and mixed farming area to closer settlement, by bringing it within 13 miles [21 kilometres] of the nearest rail head. As a result, cream production had doubled in weight, and nearly tripled in value, between 1924-25 and 1929-30. The Yarwon to Targinnie road, another feeder, was also opening up scrub land to closer settlement, and tomatoes and other perishable products were reaching the market as a result of the road.

In the Pioneer Shire, a road had been built over the Kungurri Range to the railway station, and "the settlers now have prompt and

14. Kemp to Moore, 29 May 1930, MRD 210/7/2/4.

economical transport operating. In this case, the provision of access meant the difference between success and complete failure and the road is appreciated accordingly."

In the Mirani Shire, the Eungella Range Tourist Road served a different and more questionable purpose according to the original government rationale, but as well as giving encouragement to tourist traffic to the "native beauties of the locality," the District Engineer insisted that it had also, more acceptably, "given prospects of success to newly established dairy farmers". He also enumerated the bridges built by Main Roads on important stock routes and over sections of roads at which "traffic was held up when the remainder of the road was trafficable." Such bridges included those across the Barcoo at Isisford and at Northampton Downs between Blackall and Tambo. These had once been impassable for up to three months at a time, but now, he said, "communication is not interrupted for more than a few days during heavy floods." There were other new bridges over the Alice River near Barcaldine, the Landsborough River near Muttaburra, and Jordan Creek near Jericho, and more were planned across the Diamantina River on the Winton to Boulia road.[15]

Similar responses to England's request came from other parts of Queensland, though some were less wholehearted than that from the Central District. The Shire Clerk at Clifton, having dealt with the savings in costs to farmers, expanded on the social benefits of good roads:

> The construction of Main Roads is helping to keep the people, especially the rising generation, on the land. Whereas a few years ago social events were few and far between in this area and were usually confined to the immediate district sporting clubs – cricket, football, basketball, tennis, etc., were a negligible quantity or did not exist; and it was noticeable how the younger people were longing to get away to town jobs, and were getting away.
>
> During the last couple of years in particular this leaving the district, because things were too dull, has disappeared, and

15. District Engineer, Queensland Main Roads Commission, Rockhampton, 25 October 1930, MRD 210/7/3.

> the improvement in our roads has undoubtedly been one of the greatest factors in this. As proof, the area is at present travelled over every weekend by numerous local and distant clubs visiting one another. These club exchanges embrace the whole of the Downs and the younger people have now a much wider and happier outlook. One can with certainty say that if we were to go back to the road conditions that generally existed before the advent of Main Roads, the same old discontent with country life would immediately come into prominence and the exodus of the younger people return.[16]

The knowledge that the Main Roads Commission had improved the social life of young people on the Darling Downs must have warmed England's heart. Indeed, he thought so highly of it that it went into the Annual Report next year – but it was not the sort of ammunition he needed. England's initial request for evidence to support the importance of the Main Roads Commission was so urgent that it was made by telephone calls around the state – rare in 1930. By October 1930, the Main Roads Commission was in considerable internal upheaval, and England was soliciting support from the shire councils to strengthen the position of the Commission against the change of personnel and of policy at the top.

One policy change which particularly irked Kemp and his immediate subordinates was Morgan's preference for railways, and his insistence that within the one department, the Commissioner for Railways must take precedence over the Commissioner for Main Roads. In particular, the Railways Commissioner, Mr. J. W. Davidson, had an effective right of veto over the Main Roads Commission's plans to extend the road network. The Minister also favoured railways over roads: it was rumoured that Godfrey Morgan kept a copy of the railway timetables on his desk, and if any road proposal was brought to him, he checked first to see if it was possible to travel between the two points by rail. If it was, then the proposal was rejected.

Bill Cock tells the tale of a famous victory over Morgan, the gazettal of the Kilkivan–Fat Hen Creek Road in Kilkivan Shire. This gazettal

16. Shire Clerk, Clifton, 27 October 1930, MRD 210/7/3.

passed the test because although Kilkivan was on the railway, Fat Hen Creek was not. Subsequently, another road was gazetted, within the rules, between Woolooga, which was on the railway, and Fat Hen Creek. The two separate gazettals had the effect of achieving a through road from Kilkivan to Woolooga, despite Morgan's rule.

One can only sympathise with the difficulties that the new government faced. Queensland's government debts were heavy. Nearly £65m was owing on money borrowed from London to build the railway network, and the cost of servicing that bill was £3m a year. These interest costs meant that the railways were running at a loss of £1,700,000 annually. Even without the debt servicing component, the railways could not meet running costs, unless they could increase demand for their services, yet they were faced with a public that wilfully preferred the independence of the motor car rather than the cost effectiveness of the railway carriage – and had the political muscle, particularly through the RACQ, to make its preferences known. Despite the continuing debt of the railways, they were a major employer of labour. In fact, any reduction in railway services would inevitably increase unemployment: in May 1931, for instance, more than fifty skilled workers were retrenched from the government's railway workshop at Ipswich.[17] If the railways were wound down, that pattern would be repeated throughout the state.

The Moore government wanted to encourage Queenslanders to use the railways both for passenger and freight services, in the hope that increased use of trains would make them profitable again, or at least reduce the enormous annual losses that the railways incurred. However, in practice, encouragement of the railways tended to take the form of *discouragement* of road transport, at great political cost, and to little practical effect.

Godfrey Morgan, the Minister for Railways, stressed the original intention of the Main Roads Act that roads should not be built in competition with railways. In November 1930 he sent a memorandum to Kemp reiterating that "no further construction

work should be undertaken on roads which are more or less of a competitive nature with the railways. Available funds should be diverted to feeder roads." Kemp immediately minuted:

> **Noted** that this is an intimation that any decisions of the Commissioner to construct any road in any degree in competition with the railway will not be confirmed.
>
> I just as strongly hold the opinion that certain roads passing through country not already sufficiently served by railways should be constructed and regard it as my duty to submit certain schemes in accordance with the spirit of the Main Roads and Federal Aid Roads Acts.[18]

One indication of the political strength of the motoring lobby came with the introduction of a new Heavy Vehicles Tax. The intention of the new tax was to discourage heavy commercial road vehicles from competing with the government railways in the transport of passengers or goods. It did this, brutally, by increasing by 400 per cent the cost of registering all heavy vehicles. In early January 1930, a deputation of the Queensland Motor Bus Proprietors' Association met Morgan to protest. According to their spokesman, W. Argaet, "The biggest competitor with the railways to-day was not the motor bus, but the private motor car. People favoured up-to-date methods of transportation. The tax is iniquitous. If it is imposed I will be compelled to sack three men straight away." To which the Minister replied unsympathetically, "and if it is not imposed I will have to sack 1000 men from the railways!"[19]

The issue quickly became a public relations nightmare. The Master Carriers' Association met in Ipswich to protest against the tax[20] and a stream of letters to the newspapers complained of this untoward attack on small businesses. Even the Queensland Cricket Association asked for an exemption on vehicles carrying players to cricket fields on Saturday afternoon.[21] The departmental file includes complaints from, amongst others, a newspaper delivery run in Ipswich; the Juvenile Branch of the Lodge of the United Ancient

18. G. M., Memo for Mr Kemp, 28 November 1930 and Minute, J. R. Kemp, 29 November 1930, MRD 210/7/2/4.
19. *Brisbane Courier*, 16 January 1930.
20. *Brisbane Courier*, 25 January 1930.
21. *Brisbane Courier*, 18 January 1930.

Order of Druids Social Committee in Townsville; the Catholic Presbytery, Mundingburra; the Salvation Army Band at Stewart's Creek Gaol[22] – as well as that other manifestation of the unpopular law, the anonymous letter:

> Can you tell me if it is right for a cream carter running between Mundubbera and O'Bil Bil and Riversleigh to cart letters and flour and other goods and charge the public less than railway freights. There is a licence for him to get for running goods and mail – now this fellow is the one that wants to be caught as he is the man who is crippling your railway so get after him.

By the end of January an advisory board, consisting of the Commissioners of Railways and Main Roads, and the general manager of Brisbane Tramways, was appointed by the Government to try to iron out some compromise.[23] Yet variations on the Heavy Vehicles Tax continued to be applied, in an increasingly fruitless attempt to keep freight transport in the hands of the Queensland Railways. The issue outlived the Moore Government, however. In 1932, the Forgan Smith Government established a State Transport Board, which took over the supervision of the Heavy Vehicles Tax. Gradually, in an effort to whittle away resentment, more and more exemptions were introduced, including all goods vehicles travelling less than 15 miles [24 kilometres], vehicles carrying calves, pigs, lambs and poultry exempt up to 25 miles [40 kilometres], vehicles carrying firewood, fertiliser, bottles, newspapers and bakers delivering to customers direct, while hawkers' vehicles were registered at a concession rate. Only in 1935, with the establishment of a Royal Commission on Transport to investigate the most efficient relationship between the various elements of public and private transport was the question of competition between road and rail finally dealt with in a comprehensive way.

Under the Moore government, a new system of tolls was introduced to meet some of the difficulties of finance. Tolls were applied in three different ways. First, there were some roads already built where for special reasons the costs of maintenance were too high

22. MRD 231/3.
23. *Brisbane Courier*, 31 January 1930.

for the local authority, and a toll was introduced to cover maintenance costs: the Cairns Range Road, the Tamborine Mountain Road and the Mt Nebo Road were in this category. The second category of tolls were bridges built by private enterprise, where a company was given a franchise to construct a project with its own funds in return for the right to levy a toll for a certain number of years, after which the project reverted to government control. The two most important examples were the Walter Taylor Bridge at Indooroopilly and the Hornibrook Highway at Sandgate. Thirdly, there were projects initiated by the government itself, where tolls were imposed to help recover the cost: the Logan River Bridge on the Pacific Highway south of Brisbane and the Story Bridge.

None of the tolls in the first category was very significant, and the money raised was used to offset maintenance costs on the roads concerned. The Cairns Range Road had always been contentious, a costly project which, the Country Party believed, had been built for political reasons without sufficient local demand to justify the expense. There had also been technical problems associated with its construction and maintenance in steep country with a high rainfall. The road was finally completed in 1930. Two gatekeepers controlled the twelve mile [19 kilometres] stretch of one-way according to a timetable for up and down traffic, and a shilling toll helped to pay their wages. The same system was introduced on the Tamborine Mountain Road, which raised £394 in its first year of operation, 1931-32. "In general," the Annual Report noted in 1932, "tolls upon tourist roads are justified, as with this type of road the rateable values are small, and it would be impossible for the local users of the road and landowners to pay for it."

The second category of private toll franchises was much more contentious. The depression made governments look more closely at alternative methods of funding, and tolls were a logical development, particularly in the case of bridges which replaced private ferries where a toll had previously been imposed anyway. The most famous example in the period was the Sydney Harbour Bridge, opened as a private toll bridge in 1932. But the process by which Hornibrook and Taylor acquired their franchise rights aroused

considerable political debate. At a time of depression, the government was pleased to encourage such large capital works, with their promise of relieving unemployment. But no public tender was called for either project, and the Labor opposition made known its hostility to the general principle of privately funded tolls. The franchises were granted by Order in Council on 21 November 1931.[24]

One problem was the difficulty of calculating the length of the franchise period during which a private toll would be levied, before the facility reverted to the state. The other, more general problem was that the distinction between private and public aspects of the construction sometimes overlapped. At the Indooroopilly Bridge, for instance, the design of the central span, 600 feet [183 metres] in length between centres, "necessitated much work in checking the design to an extent and with a responsibility as great as if the design had originated in the Commission office."[25] There was also the possibility that such a bridge, by diverting traffic flows into new patterns, would lead to further associated costs for local authorities or the government. Thus though the two projects were private, they were built under close supervision by the Main Roads Commission. The Hornibrook Highway, costing £265,210, opened in October 1935 and the Indooroopilly Bridge, costing £123,000, the following February.

The third category of tolls was levied on government projects, and included the Logan River Bridge and the Story Bridge, both built by the Main Roads Commission. The Logan Toll Bridge opened for traffic at midnight on 30 June 1931. It filled the last gap on the main South Coast road between Brisbane and the New South Wales border. Bill Cock recollected the road in the 1930s:

24. *The Tolls on Privately Constructed Road Traffic Facilities Act of 1931.*
25. Main Roads Commission Annual Report, 30 June 1933.

The Logan Toll Bridge, 1934. Tolls were introduced to meet some of the difficulties of finance.

> It was in the 30s, because I was a kid, and we used to go to Burleigh for our holidays. And I remember one Easter, we left Brisbane about 11 o'clock on Thursday to beat the holiday rush so that we could get over the ferry at the Logan, and when we got there, my brother and I walked along and there were 128 cars lined up, and the ferry was taking 8 at a time. And then, of course, it was a flat-out trip to Oxenford, to the next ferry. Well, you could get round it by going up, round Russ Hinze's place, but it was an ordeal to drive off the highway and over the Coomera at the crossing there, so very few people tried that sort of tactic.
>
> The Coomera Bridge was built first, and when that was done, the ferry from the Coomera was transported up to the Logan, hooked on and it became a 16 car ferry.

The franchise on the operation of the toll on the new Logan Bridge was auctioned by the government for £11,000, but when the franchisee withdrew from the agreement, the Commission took over the collection. This proved to be a windfall. In its first full year of

operation, the bridge took tolls of £9767. When the Labor Party returned to power in 1932, the toll was too valuable a source of revenue for the Labor government to remove it, despite its earlier philosophical objections to tolls on public utilities.

During the depression, tolls were accepted by members of the public since they allowed facilities to be built that could not otherwise have been started, and taxed the user, many of whom came from interstate, rather than the Queensland public at large. By 1936, however, attitudes were becoming less sympathetic. The *Courier-Mail* described the bridge as "a portcullis on the Logan River, by means of which friends and strangers alike are made to pay tribute for the use of one of the principal arterial roads of the State"[26], and estimated that it had paid for itself twice over: built in 1931 for £25,796, net revenue from tolls by mid-1936 amounted to £55,649.[27] Indeed it seems that about this time, Kemp indicated that the funds being collected were not only to cover the costs of constructing the Logan River Bridge, but for the whole of the Pacific Highway.

The second, much larger, government toll bridge was the Story Bridge. The first discussions regarding a bridge at Kangaroo Point began in 1926, when a Cross River Commission was appointed by the Brisbane City Council to advise on ways of relieving traffic congestion at Victoria Bridge. The Commission recommended a bridge at Kangaroo Point, but the Council chose instead to build the Grey Street Bridge from the City to South Brisbane. Plans for a bridge at Kangaroo Point lapsed until 1931, when the builders of the Sydney Harbour Bridge, Dorman Long and Co., were searching about for a project to start after their Sydney work ended. They approached the Moore government with a proposal for a private toll bridge on a similar basis to the Harbour Bridge. The Dorman Long suggestion was considered during 1931, but in the last months of the Moore government, Bradfield, who had been the engineer on the Harbour bridge, approached Kemp with an alternative proposal for a bridge to be built by a British consortium.

26. *Brisbane Courier*, 14 July 1936.
27. *Brisbane Courier*, 7 January 1937.

The final decision, in 1933, was for a cantilever bridge based on one built in Montreal in 1930, to be designed by Bradfield. The tender was won by Hornibrook and Co. Other engineering firms, including Evans Deakin, were also involved. By this time, the Moore government had fallen, and the Labor government was opposed to private tolls. Therefore the government, through the Department of Public Works, organised the project. The cantilevered bridge was a major engineering feat for the time in Queensland, involving digging foundations for the piers to a depth of 100 feet [30.5 metres] below the water level, using a system of airlocks, and teams of workers working in shifts under high air pressure.

Unlike the Logan Bridge, which filled an obvious gap in the Pacific Highway, the Story Bridge was built without any clear demand, as a 'make-work' project. It was only with the coming of the Americans in World War II that traffic use grew to a significant level. It then quickly paid for itself and the toll – of sixpence – was lifted in 1947, well ahead of schedule.

The Moore government was defeated at the state election in 1932 and Labor returned to power. Queensland was not to see another conservative government until 1957. The new Minister for Transport, who briefly became the Minister in charge of the Main Roads Commission, was John Dash, the member for Blackall. Dash was one of Labor's numbers men. He was vice-president of the Australian Workers Union from 1925 to 1942, and thus played an important role in forging links between the AWU and the Forgan-Smith government. Under Dash, AWU officials acquired virtually an *ex officio* role on road works, not just in protecting conditions for their members, but ensuring that the closed shop was maintained. Thus, in July 1932 the district secretary in Cairns wrote to W. J. Riordan, the State Secretary of the AWU to complain that:

> there are several affluent farmers employed on the Mossman–Daintree Main Roads Construction job to the detriment of bona fide wage workers. Several of these farmers including one named Williams and one named Blackwood

have Aborigines employed on their farms, and at least in one instance, 40 cows are being milked.

Enquiries by [Organiser] Morrissey are to the effect that Lucas Hughes, a wealthy farmer and pastoralist and who is popularly known as 'The King of Daintree' influences the selection of these men for this work, and that at least one ganger has definite instructions from the Main Roads Authorities to give preference to ratepayers for this job.

If the Govt is desirous, and I have no doubt they are, of alleviating the unemployment position, the above complaint should be thoroughly sifted and farmers sent back to their farm where they properly belong.[28]

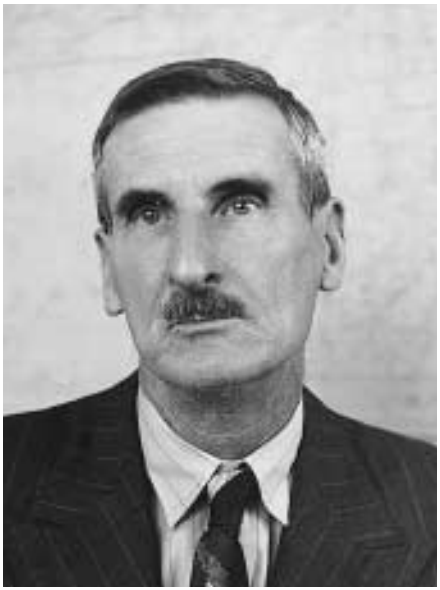
This complaint led to a meeting between the Minister and union officials to discuss "matters affecting men employed by Main Roads Contractors"[29] and by 27 July, an instruction had been "forwarded to Local Authorities carrying out work by day labour that preference to unionists must be observed, and that all labour is to be engaged through the local labour Bureau, as it is the Government's desire that preference be given to genuine unemployed."[30] The Australian Workers Union, under the Forgan-Smith government, thus insinuated itself into a similar position in permitting access to jobs on the roads that the Returned Services League had achieved during the 1920s in relation to Federal Aid roads only.

There was possibly another element in this alliance between the Labor government and the AWU as it related to roads: in his autobiography, Godfrey Morgan's son claims that in the lead up to an election, road projects were commenced in swinging electorates, not just as a bit of pork barrelling to encourage the voters, but to bring itinerant road workers into a district so that they could be added to the electoral roll and thus swell the Labor vote. The claim is interesting, but hard to prove.

Dash was Minister for Transport from 1932 to 1939, but his authority over the Main Roads Commission was short-lived, for in a ministerial

28. J. Campbell, District Secretary, Cairns, to W. J. Riordan, AWU, 20 July 1932, MRD 231/3/21.
29. Minute by E. B. R., MRD 231/2/4.
30. MRD 231/3/21.

shuffle in late 1932, the Commission was moved to the control of the Minister of Public Works, Henry Bruce, a less controversial figure altogether, who is remembered mainly for giving his name to the Bruce Highway.



Main Roads' Chief Engineer, D.A. Crawford.

At the end of August 1932, the Main Roads Commission held its eighth annual ball. The official party included the new Minister for Transport, Mr. J. Dash, with his wife and two daughters, his private secretary, Mr. J. S. Strahan and his wife, the Commissioner for Main Roads, Mr. J. R. Kemp with his wife, the Chief Engineer, D. A. Crawford and Mrs Crawford and the Secretary of the Commission, J. E. England and his wife.

Mrs Kemp, wearing "a jacket frock of saxe blue satin and lace and a black velvet, fur-trimmed coatee," presented a bouquet of pink sweet peas and camellias to Mrs Dash, dressed in "an ensemble of cedarwood marlette and lace, cut with a vandyked skirt," and received, in her turn, a similar bouquet from the secretary of the organising committee, Miss I. Connelly, who wore "peach morocain with a jacket of white fur fabric." Mr. England, who was a noted chorister, sang a selection of light classics, and the company was entertained with "humorous sketches depicting the lighter side of road construction and of the Motor Vehicle Regulations."[31]

Outside the ballroom, however, all was not well. Unemployment continued to increase after the fall of the Moore government. It reached its worst point in 1933, but conditions thereafter improved very slowly, and was still a serious problem at the outbreak of war in 1939. Gradually, however, policies to deal with the problem became

31. *Brisbane Courier*, 29 July 1932.

more co-ordinated. The shift of the Main Roads Commission into the Department of Public Works was a recognition of the role that road works played within the general policy of using public works to generate employment. In 1932, an interdepartmental committee on unemployment was established within the Bureau of Industry to find suitable public works to relieve unemployment. Kemp was appointed chairman, and the Main Roads Commission thus became involved through its Commissioner in organising several large-scale projects, including the Story Bridge, the Somerset Dam, and the St Lucia buildings of the University of Queensland. As well as expanding the work of the Commission, these changes also expanded the power of the Commissioner, J. R. Kemp, until he was the most powerful public servant in Queensland.

In this way, the Main Roads Commission's activities were gradually extended during the 1930s until in early 1939, the Government passed the *State Development and Public Works Organisation Act*, to further co-ordinate public works in Queensland. The Act called for the appointment of a Co-ordinator-General of Public Works to oversee its implementation by:

(a) an orderly programme of works over a period;

(b) the creation of additional means or methods of employment;

(c) the progressive restoration and maintenance of full-time employment;

(d) the maintenance of continuity of work in various parts of the State;

(e) the provision of ways and means for an equitable spreading of work throughout the State to meet fluctuations in financial and general economic conditions;

(f) the most advantageous allocation of finance amongst the public service and local authorities; and

(g) the general examination and review of larger developmental works and projects with a view to the selection of the best for the State's good.

This new system of co-ordinating large-scale projects in the wider interests of the state placed the Main Roads Commission in a key position, for it was the government instrumentality which was best able to provide civil engineering expertise in a wider variety of projects. Its key position was reflected by the appointment, on 1 January 1939, of John Kemp, the Main Roads Commissioner, as Queensland's first Co-ordinator-General. In Bill Cock's assessment:

> Well, when they dreamed this up – I rather suspect when *he* dreamed this up, because he didn't like other organisations building things, there was an organisation called the Public Estates Improvements. This was introduced by the government to develop undeveloped land, and part of the exercise – they built roads and other facilities, to get people moving to these undeveloped areas. Well, because they built roads, this hurt John Kemp a bit. He didn't like hordes of odds and sods building roads in Queensland.

The main work of the Commission, however, remained road building. As the worst years of the depression began to pass, the number of cars on the roads started rising again, bringing renewed pressure for better roads. A feature of the later 1930s was the extension of the Queensland road network, and the greater coherence with which state highways were planned. Bowing to the inevitable at last, these highways were designed to link cities, rather than to funnel traffic into the railway network, as in the 1920s. The need for improvement was obvious. In March 1934, C. T. Stephenson, a Melbourne journalist, wrote to the Main Roads Commission asking for information on road conditions in Queensland:

> Would you be good enough to inform me of the condition of the roads north of Brisbane – the main road Brisbane to Cairns?
>
> Can the journey be taken in comfort in a small car?
>
> People living here speak in scathing terms of the Queensland

roads. I write to you for information under the impression that I am misinformed.[32]

This letter apparently caused some consternation, for the records contain drafts of two separate replies, one honest, one – probably the one that was sent – rather less so. On 12 March, England wrote the following:

> I have to say there is no gazetted main road up the coast to Cairns. The distance is 1050 miles via the coastal route and the Railway has been constructed parallel with the coast for the whole way. Several hundred miles of the road have been gazetted and constructed under the Main Roads Acts and surfaced with either gravel, macadam, bitumen or concrete. Rockhampton may be reached in comfort in a small car. There are rough sections between:
> Marlborough and Koumala
> Mount Ossa and Ayr
> Townsville and Innisfail
> There are several other routes inland and in fine weather the journey may be undertaken in less time via one of these routes.

But the following day, a less uncompromising letter was drafted:

> The road generally is trafficable, and in the dry weather season, from April to December, no difficulty would be met with in traversing it, although some sections in sparsely settled districts are rough. Long stretches, notably between Brisbane and Gympie, and to a lesser extent between Gympie and Maryborough, are well constructed main roads. From Cairns to South of Babinda, and again in the vicinity of Innisfail, the road is well improved and passes through canefields and embraces wonderful scenery, including mountain and clear running streams, unsurpassed in the Commonwealth.

As a journalist, Stephenson was sufficiently cynical to see through this description – he decided not to come: "considerable time

32. C. T. Stephenson, *Australian Municipal Journa*l, Melbourne, to Secretary, Main Roads Commission, 1 March 1934; draft reply, Secretary to Stephenson, 12 March 1934; draft reply, ditto to ditto, 13 March 1934; Stephenson to Secretary, 23 May 1934, MRD 231/0/1.

would be required and it is doubtful if I can spare the time this Winter."

During the 1930s, the scattered and local road system of Queensland began to be shaped into highways. Even where the highway still remained little more than a pious hope, these state-wide arteries were now given titles – the Pacific Highway, the Bruce Highway, the Condamine Highway, the Gillies Highway. The titles were designed to help through traffic to identify them, but also gave them a coherence which stressed their function as state highways, rather than roads built primarily for local purposes. The main South Coast Road, for instance, which had originally been built as a series of small roads linking the dairying and sugar farms south of Brisbane to the main railway line, now became the Pacific Highway, a highway whose main function was to funnel road traffic between Brisbane and the South Coast, in competition with the railway line.

The name change was an important indication of new thinking about the primary function of the road; it did not, of course, change the road itself. In 1931 a correspondent to the *Brisbane Courier* complained:

> In December, 1930, the unpaved road between Beenleigh and Pimpama was graded and rolled. Since then a little desultory patching has been done. In the meanwhile the road has carried very heavy traffic, and has been subjected to flood rains. Its present condition is awe-inspiring. In a moment of inspiration the authorities have just decided to label this infernal track with the resounding title, 'Pacific Highway'. Who can say that officialdom is devoid of a sense of humour?[33]

At the other end of the state, in January 1934, the Minister for Public Works, Bruce, opened the Cairns to Daintree road as the Cook Highway. The following March large sections of the road were washed away in a cyclone. Despite such setbacks, however, the idea of state highways had come to stay, and with them the realisation that such roads served the wider interests of the state, rather than the local populations, and that local authorities therefore

33. *Brisbane Courier*, 20 May 1931.

could not be expected to pay as much towards their construction and maintenance.

By 1935, there was widespread public discontent with the piecemeal nature of the road and rail systems in Queensland, especially as the depression was less severe and car numbers were rising. There was also great irritation, particularly among small businessmen, over the imposition of the heavy vehicles tax as a means of discouraging road transport. The response of the Labor Party was an election promise that an inquiry into transport would be instituted. They won the election, and set up a Royal Commission on Transport, which sat for the first time on 29 July 1936. The three members of the Commission were William Webb, President of the Industrial Court of Queensland, James Bell, a member of the Bureau of Industry, and J. R. Kemp.

The Royal Commission investigated all aspects of transport, including railways, trams and buses, ports and shipping, and air services, as well as roads. In 1937, it reported, there were a total of 11,994 miles [20,790 kilometres] of road in Queensland, divided as follows:

State highways	3,142.34
Main roads	8,148.55
Developmental roads	256.14
Tourist roads	208.06
Secondary roads	121.84
Mining access roads	115.80
Tourist tracks	1.27

In the same year, current motor vehicle registrations were 111,765, consisting of:

Cars	68,857
Utilities	20,605
Buses	346
Trucks	13,917
Cycles	8,040

The recommendations of the Royal Commission did not herald great changes. It recognised that competition between roads and railways was a problem, and suggested that the railways should investigate co-ordinated freight haulage, linking road and rail services. Other than that, it had little to say on roads, concentrating its recommendations on ways of making railways and port facilities more efficient.

In November 1930 – the year Phar Lap won the Melbourne Cup – a road gang was at work on the road at Killarney. That November, one of the road workers wrote a poem for his mates, which illustrates many of the separate jobs that went into road building at the beginning of the 1930s:

The Crusher Gang

The morning sun is blazing,
The time is seven forty-five
And Clatts has pulled his whistle
So we'd better look alive.

With Snowy Slatter on the bins
The dust flies in the breeze;
And the feeders they are busy.
Archie Dunce and Jack Devries.

And in the drays came rolling,
Drawn by old Star and Mack;
Squib tips them in the crusher,
And sends the empties back.

Now John, he walks to meet them,
The whip in hand has he,
For John, he drove for Cobb & Co.,
Way back in sixty-three;[34]

And when Thunderbolt attacked his coach,
Threatened husbands, sons, and wives,
Jack fought him with a tug chain,
And saved his passengers' lives.

34. Author's note: This date seems unlikely – artistic licence?

Squib, he walks along the bank,
A smile is on his face,
The work is going smoothly,
Each man is in his place.

Tom Lovell's in his blacksmith's shop
He doesn't care a rap,
For in the quarry sweepstake,
Old Tom, he drew Phar Lap.

Jack Walsh is standing by his side,
He makes the bellows blow,
While jumpers neatly sharpened,
Are standing in a row.

There's Bob Thornton, Harry Krause,
Picking on the toe,
And Owen Mitchell, Arthur Russell,
Working down below.

Jim Jenner's on the hammer,
You can hear his rat-a-tat.
And Dick Bridge, he looks lonely
Without his boxer hat.

Jack McMillan and Ernie Wyton,
Are on the bottom row.
I extend a hearty welcome,
To Reg McKay and Len Ludlow.

Bob Purtle's walking to a dray,
A fork is in his hand.
He tells Mat Ryan, Phar Lap's a champion,
The best horse in this land;

He had an even fiver
On the winner, so they say.
And he got a convict haircut,
Just to celebrate the day.

The recovery of quality road making material from quarries was an important part of the Crusher Gang's work.

The crusher's had to ease up,
The main bearing has run hot,
And Clatt reaches for his oilcan,
He's swearing quite a lot.

Charlie Coombe's working up above,
He'll give the rock a shock,
For he'll fire a thirteen footer,
With a charge of rack-a-rock.

There's Skidgey Hancock and John Maw,
They'll soon be back again,
While Ringer's at the crossing,
Watching for a railway train.

Ollie Cunningham and Jim Jones
Are due back very soon,
And Fred Pacholke's swinging round the bend,
Followed by young Les Moon.

Jack Magarry and Ted Bennett,
Are spalling up some rock,
And Ted looks very savage,
He's like a fighting cock.

And when Ted's feeling out of tune
And his radiator begins to boil,
Ted loosens up his gear-box
With a pint of dinkum oil.

Now Mun and Ned Green
Are spreading with a will,
They're putting down the A class
Up there on Canning's hill.

Butcher and Joe Homan
Are shovelling 'neath the trees,
While Stan Pacholke and Joe Cavanagh
Throw screenings with the breeze.

Old Timer and Old Horse
Are in the gravel pit,
With Harry Slatter and Bob Lingard
We'll have to do our bit.

For Big Bertha takes some filling
She makes us fellows moan,
For when she swings round the bend
You can hear a silent groan.

She never seems to puncture,
Or get held up on the track,
For Clem Luck understands her,
And brings the old girl back.

And Clarkie in the Butcher's truck,
He's due back soon again;
He's just come to the crossing
And has turned up Driver's Lane.

And when the day's work is done,
We're smoking after tea.
Bob Lingard on his accordion
Plays 'Way Back in Tennessee'.

I forgot young Tom Hawkins,
Our cricketer by the way,
Who scattered all the wickets
At Spring Creek yesterday.

Now boys, I hope you're not annoyed,
Don't take offence at me,
You asked me to write this poem,
And I've obliged, you see.

And when the sun is blazing hot,
Let's keep smiling while we can,
And let us stand united
For the common good of man.

And when this contract's finished,
It will be Killarney's loss,
For Laws' men have proved themselves
A credit to their boss.

Perhaps soon we will be parted,
I wish you plenty of good cheer.
A Bright and Happy Xmas
And a Prosperous New Year.

– 'One of the Boys'

Killarney, 4 November 1930 [35]

The men in the Crusher Gang had little mechanical help in the business of building their A-class general road. They depended on horses and drays to carry rock to the crusher, and on the skills of a horseman who could manage them. Perhaps it is a sign of the times, that John, the horseman, was an old man, for by 1931 the old timers who knew horses were no longer easily replaced. Mechanisation had arrived in the shape of Big Bertha, the steamroller, and the crusher itself was mechanised, if fractious. But most of the work,

35. Original held by Oscar Masters, Toowoomba.

loading the drays with stone, filling the crusher, screening and spreading the gravel, drilling and blasting the rock was done by men alone, with only minor assistance from horse or machine.

Perhaps it was only minor assistance at first, but the business of building roads was made a little easier with mechanical help provided by the steamroller.

The road builders lived on the job, dependent on the butcher's truck or the railway to bring in their provisions from the nearest town. Conditions in the road camps were primitive. Men usually lived together in tents, cooking their own food over an open fire and washing and cleaning as best they could. They were not encouraged to bring their families with them, though some wives and children made a life in the camps. Harry Lederhose lived in such a camp, where his job was to look after the horses:

> That was one of our big camps. And it was wet underfoot. You woke up in the morning and there was that much water running under the bed. I was there for 6 or 12 months. They used to rig the camp in the middle of the job, and it would be there for the term of that job. We used to depend on the cream trucks. They used to bring our bread and our meat out

every week. We never had families in those days, not in the tents, they was only six by eight tents, you'd get your head up there and your feet would be almost out of the door.

Later, as more permanent camps were established and conditions began to improve, his wife and family joined him. Living conditions were theoretically monitored by the AWU, the main union for road workers, but especially during the depression, against a background of high unemployment, neither the union nor individuals had the industrial strength to make much of a fuss. Oscar Masters was a member of the AWU for over fifty years:

> We only occasionally got to see an organiser and all he was interested in was whether you had a ticket. It was hard on part-time workers – three months work, but you had to take a union ticket. One organiser walked in one evening to a tent, and he said, "Are you the bloody nigger driver here?"
>
> The unions were up against it then. We had a Labor Government right through, except 1929 to 1932, but often you'd get an increase in your wages of two shillings a week – or a reduction in the depression times. The lowest wages we got – we used to get about £7 8s a fortnight after a few things were taken out living out on the job, not including rations. We used to get paid a paltry two shillings a week camping allowance. One chap once used to stop in the camp seven days a week. He wanted an extra fourpence.
>
> We accepted it then. We used to only get our goods once a week, and the butcher'd come out, and it would mostly consist of corned beef and dried bread. There was no cook, we all done our own. Most of the time in my early days I was batching with a chap that was a pretty good hand at cooking, and he looked after me the first four years I was on the road.

Morale in the camps often depended on intangible factors. The easy camaraderie depicted in the poem could make for a happy and efficient gang, who moved from one job to the next as a team, and organised their leisure with cricket and an accordion. But in some

camps, the primitive conditions were a source of tension and conflict. In January 1939 the Minister received a letter of complaint from a worker at a camp near Townsville, detailing:

> several things in the Award which we were entitled to, and not enjoying, mainly travelling time to and fro from the camp, closed-in water buckets, two sheets of iron for our fire place, sanitary arrangements on the job, covered-in lavatory at the camp, firewood and the most disgraceful of all, two pits that had been used as lavatories at the camp about 9 inches deep [23 centimetres] uncovered and not a chain off the creek where the drinking water of the several camps was taken.
>
> No, Mr. Bruce, the conditions experienced by the men on this section of the road is misery, absolute slavery – would make old timers turn in their graves. I only worked on two sections of Main Roads, one under a thorough gentleman who will not flinch a spec off the men's condition, a man in the true sense of the word, one loyal to the welfare of his men, one whom men have faith in, one whom all men are prepared to admit as such, and as I was representative [of the AWU], on the job dealing with all grievances [*sic*] that occurred, I can assure such to be the case. The other I could fill a book on, probably you could do the same, as rumour has it that he was shifted from around Atherton somewhere for his trouble making tactics. I might mention that one ganger who was on the job from the commencement of the Moongobulla section, some four years or more service, walked off at a minute's notice the last week before the Xmas holidays.[36]

Much, it seemed, depended on the personality of the foreman, as Oscar Masters recalled:

> There was one foreman who used to blow the men up a minute or so before the full hour at dinner time, and one of the chaps said to him one day: "What's the idea of this not giving us the full hour"?
>
> He said: "That's just in case you want to have a leak before you start work."

36. F. McCann, Townsville, to Minister for Public Works, H. Bruce, 14 January 1939, MRD 231/2/4.

If living conditions for road workers had not improved much by the end of the decade, the work itself was gradually changing, as the Main Roads Commission introduced new technologies and aimed at bigger and more co-ordinated projects. But the pace of change remained slow. So long as unemployment was still a problem, there was little incentive to bring in labour-saving methods – indeed, quite the reverse, for road building was one of the main ways in which the government tried to soak up unskilled labour. As the 1939 Annual Report bluntly stated, "The elasticity of the works programme of the Commission makes it a very suitable medium for dealing with unemployment, it being possible to commence works at comparatively short notice to coincide with the completion of other works, or to lessen the effects on the labour market at times when seasonal works are tapering off." Lack of money was also a problem in introducing new technology. Machinery was expensive to buy and to maintain, and there were few skilled men available who could use it effectively.

One machine, however, which has since disappeared from use, was tried extensively during the 1930s, the Irvine heat treatment machine. Bill Carson never worked with it, but knew those who did:

> Before my time there was a very major machine, two of them were imported to Queensland, which were called heat treatment machines. I can't hold any claim to those, but they were a major advance in road building in those days. In south west Queensland where all the black soil is, out there, the idea of these machines was that they had big furnaces on, they used to stoke them up with wood, that they used to cut from all over the place, and this machine used to travel slowly over the road and used to bake the road. It used to come out as a very hard surface on the road. You see, this black soil when it gets wet, it used to pick up and get up under the wheel arches of the vehicles. You'd have half an inch of rain in the black soil country and you couldn't move at all. So this used to actually bake this black soil and put a top on the road. So there were a couple of those machines which were imported, which were

mechanical engineers' headaches but they were all finished by the early war years.

By the end of the 1930s, some trends were apparent. Horses were still important, but tractors, trucks and steamrollers were coming in. The first small aerial survey was made in 1931, and the Photography Section became important. New engineering techniques were introduced. The Main Roads Commission became involved in other engineering projects, such as building the Story Bridge. In January 1939, Kemp was appointed Co-ordinator-General, and in the next months, Main Roads became involved in further building projects, such as a series of aerodromes in provincial centres. It was a sign of the times, for these airfields were built at the initiative of the Commonwealth Government – in preparation for war.

CHAPTER 4

THE 1940s
Main Roads and Australia's War Effort

On 4 September 1939 Australia – and the Main Roads Commission – entered the Second World War. With the outbreak of the war, the Commission was involved in a wide range of defence projects. It was charged with the construction of military encampments, often in isolated parts of the state, which had to be provided with a water supply, sewerage and roads. It built aerodromes, fortifications, fuel storage tanks, rifle ranges, parade grounds, docks and jetties. It was involved in construction work in the Northern Territory as well as in Queensland, working in collaboration with the Commonwealth and other states to provide an infrastructure for a war which, especially after the bombing of Pearl Harbour in 1941, seemed frighteningly close. And all of this work had to be done against a background of labour shortages, as men left to join the armed forces, and shortages of many necessary materials, such as bitumen, which were imported from overseas.

It has been a convenient simplification for many people to divide Australia's wartime experience into two parts. During the first phase, from 1939 to 1941, the war was fought on the other side of the world by volunteer forces, and civilian participation was limited to support for these volunteers, and the relatively minor inconveniences of petrol and other rationing. After the Japanese attack on Pearl Harbour, the focus switches closer to home, and the second phase of war, 'total war', involved civilians as well as servicemen, and an economy turned over to war production.

For the Main Roads Commission, this simplistic division of the war into two phases is only partly accurate. To begin with, the Commission was involved in defence projects well before the war broke out, for during the last years of the 1930s, preparation began for a war which had begun to seem inevitable. A defence road was planned across Queensland, and other defence projects, such as provincial airports, began to be built by the Commission with Commonwealth support. With the outbreak of the war, the Commission was immediately thrown into a turmoil of building activity which was to continue, without respite, until 1945. Defence

projects which had already been planned were now given a higher priority, and new technologies, which had been tried only tentatively during the hard times of the 1930s, were now introduced wholeheartedly.

So that the resources of the Commission could be used to the best advantage, the policy until 1942 was to concentrate in the first instance on works directly connected with defence, and on those which were requested by the Departments of Army, Air and Internal Affairs. These works included the construction of the Mt Isa–Tennant Creek Road, and a 100 mile [160 kilometres] section of the Tennant Creek–Birdum Road, both of which were seen as vital defence links with Darwin. After those, the next priority was given to those works which would result in assisting production directly connected with the war effort. During the first year of the war, some civilian projects which were already under way continued, but gradually, the shortages of men, materials and money made it impossible to continue with purely civilian roads. The emphasis shifted to work which had direct defence purposes, especially those projects which were requested by the Commonwealth or its agencies. For example, in 1939, work started on a road west from Marlborough over the Connors Range and northwards to join the Sarina–Nebo Road. Surveys were made by the RAAF during 1939, and work began in 1940 on the section from Clive Creek to Yatton Creek. But the next year, as defence projects became more critical, the whole work force was transferred to the Rockhampton aerodrome, and later to the Central District section of the Inland Defence Road. The Connors Range Road had to wait until 1947, when work returned to normal.[1]

In February 1942, the Allied Works Council was formed. This represented, in many ways, the main turning point for the Main Roads Commission. The Allied Works Council was chaired for the Federal Government by E. G. Theodore, a former Queensland Premier, and J. R. Kemp who, in addition to his positions as Commissioner of Main Roads and Co-ordinator General, now became Deputy Director of the Allied Works Council in Queensland.

1. *Queensland Roads*, vol. 12, no. 24, December 1973, p.46.

The Japanese war brought institutional changes in the relationship between the States and the Commonwealth, for the role of the Federal government was extended to deal with the emergency situation. Co-ordination between the Main Roads Commission and other instrumentalities, such as the Allied Works Council and the Civil Construction Corps, became an important aspect of the Commission's work.

From this time, with the whole country geared to 'total war', all the resources of the Main Roads Commission were concentrated on defence projects which were initiated under the authority of the Allied Works Council. This meant that ordinary works were limited to completing projects already in progress, and to other roads which were likely to assist in the war effort. Work was concentrated on a wide variety of projects carried out for defence purposes: from roads and bridges to foundations for oil tanks, ordinance stores, aerodromes, and gun emplacements.[2]

During the later years of the 1930s there was a sharpening awareness of the military considerations involved in the Main Roads Commission's work. Even in 1931, the strategic importance of the Pacific Highway was sufficiently recognised for the Logan Bridge to be built to military specifications, to bear the weight of a tank, albeit probably a very small tank. Doug Morton and Bill Cock both remembered when loading limits were introduced:

> Bill Cock: That was when loading on all the bridges was evaluated and had the signs put on them – a circular sign with 9, 12, 18 or 24 which was to be the limit of loads to cross this bridge. And Jimmy Dickson, who was Deputy Bridge Engineer in the early 40s, and I travelled virtually all over South East Queensland, examining bridges, measuring the width, the size of the girders, and determining the plate that was put on the bridge end guard post.
>
> Doug Morton: I can't recall the details of the military type loading, but I can imagine it probably was an extra type loading that was allowed over these structures with certain military controls, to reduce the impact and so forth.

2. S. Schubert, Highway Development in Queensland, in *Queensland Roads*, vol. 1, no. 1, June 1962, p. 27.

> Cock: At that time I had a 1935 *Courier Mail* road guide, and Jimmy Dickson and I used it for travelling all over these roads and working out the bridge strength. I made a long pole with a sort of a calliper on the top, with the inches marked on it, so we could just push it up and measure the diameter of the girders from below so we didn't have to get a ladder to crawl up under these timber bridges.

As fear of Japan grew more widespread, roads, bridges and airfields were targeted as strategic points. One priority was a good road, linking Queensland from north to south, but inland from the coast, for the vulnerability of the coastal road and railway network was widely recognised. According to Bill Cock:

> I remember years after the war somebody who had done a trip to Japan, telling me about a conversation they'd had with a Japanese engineer. The engineer asked them where this railway station was north of Townsville – they'd never heard of it, and when they came back they looked up their Railway Timetable, and it was a whistle stop just north of the copper works – Yabulu. And this appeared on Japanese war plans for the invasion of Australia, and was to be the target for a couple of thousand Japanese marines to be landed on the beach, march about 10 miles [16 kilometres] overland, capture this place, and cut the whole of North Queensland off from the rest of Australia because they'd cut both the railway and road off.

In October 1938 Forgan-Smith, the Queensland Premier, approached the Prime Minister, Joe Lyons, with a plan for such a road to be constructed from South to North Queensland for defence and other purposes. The following month a tentative proposal was made for a military road, beginning with the stage between Goondiwindi and Rockhampton. In March 1939, Lyons sent the Queensland Government a list of projects which could contribute to the defence of the country, including an alternative north-south military road from Cairns, via Atherton, Charters Towers, Clermont, Emerald, Duaringa, Baralaba, Rannes, Banana,

Eidsvold, Gayndah, Blackbutt, Esk and Fernvale, to Ipswich. Surveys began, and the Main Roads Report for 1938-39 noted that subject to the availability of funds, the work will be greatly extended in 1940-41. As it turned out, events overtook them.

Other pre-war projects also emphasised the defence needs of Australia. In the late 1930s the Commonwealth Government began to recognise that air defence could be a necessary, and relatively cheap, form of defence. Prime Minister Lyons offered to subsidise the building or improvement of airfields in sixteen provincial areas, including Townsville, Mackay, Rockhampton, Maryborough, Bundaberg and Bowen. The airfields were to be for defence as well as civilian purposes, and would be built using the combined resources of the Commonwealth Civil Aviation Department and the Queensland Main Roads Commission. This move by the Main Roads Commission into aerodrome construction foreshadowed the shape of things to come. On 1 January 1939, Kemp was appointed to the new post of Co-ordinator-General, making co-operation of this kind much easier to arrange. It also placed the Main Roads Commission in a key position. It was the government instrumentality which was best able to provide civil engineering expertise and it became central in a wide variety of projects.

Thus, there was some continuity between the last, uneasy months of peace and the onset of the war, for some future projects had already been identified. But Prime Minister Menzies' declaration, on 4 September 1939, that Australia was at war meant a whole new level of activity, as well as the anxiety of dealing with a completely new situation. By 14 September, for instance, a booklet was distributed to Queensland's public service and businesses, which contained details of the special precautions to be taken "in large Commercial Houses, and in the event of attacks by enemy aircraft. These booklets were left with this Department by a Boy Scout acting under instructions from the ARP [Air Raid Protection] Committee and it was requested that the instructions contained therein be brought under the notice of all Officers concerned and that suitable arrangements as set out in the booklet be made."[3] In September

3. Memorandum, 14 September 1939, MRD232/2/11.

1939, however, such attacks still seemed remote, and the instructions were thus rudimentary and amateurish.

The war brought death to some, and disruption to many more, but one of the most immediate and startling effects of the war in Queensland was its impact on unemployment. The State had recovered from the depression very slowly indeed. In the first half of 1939, unemployment remained a serious problem, and road building was still used as a means to provide relief. In March 1939, 2729 ex-relief workers were still working on the roads, on work provided by the Main Roads Commission.[4] Six months later, Australia was at war, and unemployment, over-capacity, and the general malaise of the depression years, were rapidly replaced by quite different problems of staff shortages, lack of equipment, and pressure to meet contracting deadlines.

Many members of the staff of the Main Roads Commission joined the armed forces. In 1939, the Main Roads Commission had a permanent staff of 318 men and 85 women. More than half of these men enlisted at some stage: 16 served with the navy, 89 with the army and 80 with the air force, while 2 women joined the AWAS and 8 the WAAAF.[5] The disproportionate number who joined the air force probably reflects the high educational levels of staff from the Commission. The numbers of wage employees who served in uniform is not known, but must have been comparable. Nine members of the permanent staff, and an unknown number of others connected with Main Roads, were killed in action.

Many other men were seconded to Federal departments or to specialist positions within the services. J. E. England, for instance, who had been the Secretary of the Commission since 1921, was seconded to Melbourne in July 1940 to become Controller and Chairman of the Commonwealth Liquid Fuels Control Board. Ted England did not return to Queensland until mid-1943, when he was called back to become Chief Administrative Officer in the Allied Works Council. In his absence, Leo Feenaghty took over as Acting-Secretary of the Commission.

4. *Main Roads Commission Annual Report*, 30 June 1939, p. 4.
5. *The History of the Queensland Main Roads Commission during World War II 1939-1945* (Brisbane: Government Printer, 1949), p. viii.

This movement of senior and skilled staff, while necessary to the war effort, put great strains on the resources of the Main Roads Commission. In November 1941, for instance, the Army decided to raise a Mechanical Equipment Unit for service overseas, and called on the Commissioner to suggest suitable recruits.[6] The Commission did its best to comply, but such demands meant a constant bleeding away of skilled men, and consequent staff shortages. Due to the fact that the staff comprised such a large number of highly-qualified and trained engineers, surveyors, and draftsmen, the various services relied to a greater extent upon the Main Roads' staff than upon the staffs of some other Government offices.[7] By 1942, some engineers had to be transferred from the Department of Main Roads in New South Wales to the Queensland Commission, to make up for these shortages.

As well as losing key senior men to the war effort, the Commission also faced a more general drain as a result of the recruitment of men into the armed services. The pool of unemployment which had blighted Queensland throughout the 1930s, and from which so many road workers were drawn, dried up rapidly after the outbreak of war, not least because men who were without work were amongst the first to enlist. By 1940, then, the Main Roads Commission was faced with a problem it had never before experienced: a shortage of labour.

One solution to the shortage of unskilled labour was to use 'enemy aliens'. In north Queensland, in particular, there were large numbers of Italian immigrants, many of whom had never bothered to take out Australian citizenship. Even if they had lived in Australia for many years, even if they had migrated to Australia in the first place to escape Italian fascism, they were now technically 'enemy aliens'. The attitude of the authorities was ambivalent. At first, the policy was that such people could no longer work on defence projects. When the Main Roads Commission employed Italians as tractor-drivers on the Cairns Aerodrome, the fact was reported to Military Intelligence, and the Director-General of Works complained:[8]

6. Memorandum, W. A. R. [Rogers, Private Secretary to Commissioner and Branch Secretary, Allied Works Council, Queensland], 14 November 1941, MRD232/2/17.
7. Main Roads Commission Annual Report, 30 June 1940, p. 9.
8. H. R. Barker, Department of the Interior, Commonwealth Offices, Brisbane, to Acting Secretary, Main Roads Commission, 3 December 1940, MRD232/5/0.

1. It has been reported that on a recent contract for the RAAF, several enemy aliens were employed on a portion of the work.
2. It is therefore requested that the attention of the various Works Directors be drawn to the necessity of observing the special conditions which apply to secret defence works.
   (a) In no circumstances will the employment of an alien be approved.
   (b) Only **natural born British subjects** of good character are to be employed. Naturalised British subjects cannot be employed without the approval of the Minister for Defence, or any officer authorised by him. Such approval will be given only in the most exceptional cases.

On other projects, however, 'non-refugee enemy aliens' – most of them Italians – were used extensively in unskilled jobs, such as clearing and grubbing, and to a more limited extent in skilled work as well. From March 1943 they were formed into the Civil Alien Corps.[9]

Other work was done by the Civil Constructional Corps [CCC], which was formed to work under the direction of the Allied Works Council. The Civil Constructional Corps eventually included more than 66,000 men. These men were paid civilian award rates for their work, but they were under unusual discipline: they could not refuse work, they were subject to regulations governing their conduct on the job, and were subject to the orders of the Director-General of Allied Works, both at work and in camp.[10]

In September 1940, petrol rationing began. By 1943, petrol consumption had been reduced from 30 million gallons to 11½ million gallons per month, most of which was used for transport and machinery directly related to the war effort.[11] Given Australia's dependence on overseas sources of supply at the time, it was a necessary move. It was bound to be unpopular, however, especially when politicians, such as the Victorian Premier, Dunstan, foolishly

9. *The History of the Queensland Main Roads Commission during World War II 1939-1945*, p. 10.
10. Hasluck, Paul, *The Government and the People, 1942-1945* (Canberra: Australian War Memorial, 1970), p. 235.
11. J. E. England papers, in the possession of his daughter, Mrs. D. Cavaye.

did not demonstrate their willingness to share the burden as this poem, in Ted England's papers, illustrates:

Victorian Premier "Dunce-Stan" helps to win the War.[12]

The pressure of the war effort by our democratic nation
Gives the ordinary motorist a deal of agitation
His small reserve of Petrol now waits rapid confiscation
He's puzzled if to run his car or give up registration.

Some comfort takes he from the fact that loyalty now urges
The smallest use of precious gas, his conscience bright emerges
Right through his patriotic soul a wave of hope soon surges
And his desire to help the job his selfishness then purges.

He feels that as he saves the gas, the boys O'erseas assisting
He quietly obeys the law and does it unresisting
He opens up his breakfast press and gently puts his fist in
And finds that guv'ment blokes themselves give gas a blooming twistin'.

There's Dun(ce)stan off to Canberra a big Buick he uses
Twelve miles per gallon it chews up to use less it refuses
On the distance that the car will run the motorist then muses
And using simple 'rithmetic a road map he peruses.

He's done it, yes, he's worked it out, from Melbourne to Canberra
And back a thousand miles the distance is a terror
He checks his figures once again and finds there is no error
He's sure that Premier Dun(ce)stan is a most extrav'gant feller.

This means that petrol to be used from stocks that are a treasure
Over eighty lovely gallons go to save the Premier's leisure
Monthly for a private car 4 gallons is the measure
So one and twenty motorists will sacrifice their pleasure.

12. Poem by Out-a-Gas, in J. E. England papers, in the possession of his daughter, Mrs. D. Cavaye, dated 8 August 1941.

It shouldn't be a Premier war urgencies ignoring
And any gas economy habitually flooring
Despite the saving that the Government's continually imploring
And public patriotic feelings that are consequently soaring.

The Motorist gasps what the Hell? when this news he is reading
What's the use of saving gas it's only special pleading
Couldn't Dun(ce)stan go by train a rest he's surely needing
And show a right example to the people that he's leading.

As petrol became scarce, and private motorists were restricted to a maximum 1000 miles [1600 kilometres] annually, many people went back to using public transport, and car registrations dropped. The registration figures for Queensland over a period of several decades show the anomaly of the war years:

Date	No. of Motor Vehicles
30 June 1922	13,807
30 June 1927	68,818
30 June 1932	88,960
30 June 1935	100,020
30 June 1937	111,765
31 Aug 1939[a]	129,061
30 Sep 1940[b]	128,843
30 June 1942[c]	109,535
30 June 1945	129,126
30 June 1947	157,293

[a] Start of World War II

[b] Start of liquid fuel rationing

[c] This was the lowest number to which registrations dropped during rationing and was approximately the same figure as that reached at 30 September 1936.[13]

13. From *Queensland Roads*, December 1964.

The war situation changed the basis of Main Roads' funding. Money raised internally, from car registrations, fell considerably. The 1941 Annual Report noted that, in the month of August 1941 alone, 1000 car registrations were cancelled, and it was estimated that revenue from registrations would fall from £900,000 in 1940-41 to £632,000 in 1941-42. At the same time, the ordinary Commonwealth grants to the States for road building were based on an agreed percentage of the revenue raised from the excise on petrol, but the fall in petrol sales meant a fall in revenue from Commonwealth excise.

Yet money *was* available for defence projects from other sources. By 1944, more than £22 million had been spent on urgent defence projects, including more than a million pounds on the Brisbane Cairncross Drydock, then the largest such facility in the southern hemisphere, more than fifty airfields, as well as roads both in Queensland and outside the State.

The Cairncross Drydock – one of the key defence projects undertaken during the war years.

The most important immediate need was to provide an all-weather road system in Northern Australia, where railways were scarce and sea-links were vulnerable. The result was the Northern

Australia Defence Road, built during 1940 between Tennant Creek and Birdum, north of Daly Waters, to fill in the missing link between the railway from Adelaide to Alice Springs in the south, and the railway from Birdum to Darwin in the north.

This road represented an unprecedented cooperative effort of the Commonwealth, Queensland, New South Wales and South Australian governments. The original initiative came from the Commonwealth when, on 25 July 1940, the Army approached the Main Roads Commission asking for cooperation to build the road. The Army asked for the work to be completed within 120 days – a tall order, but to allow for unforeseen factors and also the inevitable problems of the Wet – the Commission planned the road building on the basis of 90 days. The New South Wales Department of Main Roads was given the most northerly section from Larrimah, just north of Birdum, to Dunmarra, a length of 86.5 miles [138 kilometres]. South Australia was given the southern section from Ferguson's Springs to Tennant Creek, while Queensland was given the middle section, from Tennant Creek to Dunmarra, a distance of 90 miles [144 kilometres].

This central section was by far the most difficult. New South Wales planned to move all its equipment and labour to Darwin by sea, and then use the rail link to Tennant Creek; South Australia could similarly use the railway from Adelaide to bring its men and equipment north as far as Alice Springs. For Queensland, however, the nearest railhead was at Mount Isa, 566 miles [906 kilometres] to the east on what was then no more than a bush track.

The first convoy of foremen, plant operators, clerical staff, most of the supplies, and special road plant and trucks, left Brisbane on 1 September and reached the job on 10 September. The journey from Mount Isa to Newcastle Waters, where the road work began, took five days, and each truck driver was armed with a speedo chart setting out details of water supplies, and wood and fuel depots en route. A second convoy, with most of the labour, arrived on 20 September. Plant that was too heavy to go overland was sent to Darwin by ship, and driven from the railhead south to the job. It also arrived on 20 September.

An average of 170 men worked on the road, and while work was usually confined to a single shift, in some cases, such as clearing and grading, three shifts were operated over the 24 hours to get as much use as possible from the small amount of heavy equipment available. Two 32-volt generators were sent to the job to provide floodlighting so that work could continue throughout the night. As well as the problems of distance, the road builders had to contend with other difficulties caused by isolation. There was very little surface water in the whole area, and workers were forced to rely on bore water provided for stock. Timber was in such short supply that metal piping had to be sent from Queensland to be used for tent poles. Spare parts had to be sent on the weekly air service, but space on the planes was in short supply, so many repairs to the machinery were a matter of 'making do'. Bill Carson explained some of the engineering problems they encountered:

> The conditions that they were working under up in the Northern Territory were extremely bad, very dusty environment, they didn't have filtration equipment in those days to keep the dust out of it. It only takes about a pepper pot full of dust to every cylinder to completely wreck it. Working in the Territory where conditions were extremely poor, most of the machinery was wrecked at the end of the war anyway, other than the stuff that was coming back from the islands.

Oscar Masters was working in the Brisbane Valley during the war, but his friends told him about it:

> We had it fairly easy around these parts, but the men who worked out in the west, it's a wonder how they got through. Like, I was to be sent up too, during the war. I was picked out to work on that Darwin to Alice Springs work, then they took into consideration that I was a married man and the other chap, he was more anxious to go, a chap from Warwick, so they sent him instead. They used to do about a mile a day. It was just a matter of forming up the road, whilst the gravel was at the side of the road, just making a surface, and putting the

bitumen on. It was 600 miles [960 kilometres] from Darwin to Alice Springs.

The road, including an extra section of about 10 miles [16 kilometres] originally allocated to South Australia, was completed just as the wet season was starting, on 6 December, only 88 days after the first convoy had arrived at Newcastle Waters. The total cost, including wages, materials, fuel, plant hire, freight and transport to and from the job, but not including Army assistance with transport and supplies, was £64,000, or £593 a mile [£370 a kilometre].[14]

The road from Tennant Creek to Birdum is noteworthy, both as the first major defence project undertaken by the Main Roads Commission, and because of the cooperation between Commonwealth and State governments that it entailed. It led the way for many such projects. Other important road works of the period include 402.5 miles [644 kilometres] of road from Mount Isa to Tennant Creek, built during 1942, and an Inland Defence road from Ipswich to Charters Towers via Duaringa and Clermont, a distance of 882 miles [1411 kilometres]. By 1942, the Queensland Main Roads Commission was so stretched that the New South Wales Department of Main Roads was brought in to help, and this road, built 1942 and 1943, was a cooperative effort between the Queensland Commission, which built the section from Ipswich to Duaringa (476 miles, i.e. 762 kilometres) and the New South Wales Department, which built the 406 miles [650 kilometres] from Duaringa to Charters Towers.

Many other roads also received attention during these years. A number of roads and bridges which already existed had to be strengthened or rebuilt to meet military requirements. The road from Stanthorpe to Wallangarra, for instance, was in part only a narrow track winding among huge granite boulders, and had to be widened and straightened to cope with army traffic. The job involved building, through granite, a road with a reasonable grade and drainage. Because of the lie of the land, it also had to be built unusually close to the main southern railway line which was in heavy

14. *The History of the Queensland Main Roads Commission during World War II 1939-1945*, pp. 3-8.

use bringing troops and supplies north. This made the road building particularly difficult: at one point a rock wall 350 feet [107 metres] long was built to support the fill from the sidelong cutting, and during operations a fettler was constantly employed supervising the removal of fallen rock from the railway line, which was then carrying heavy wartime traffic. For strategic reasons, too, a linesman from the Postmaster General's Department had to be constantly on duty to repair any telegraph wires that might be broken by flying stone during the blasting.

Roads were also built to serve army camps and other installations. The Atherton Tableland became a centre for a number of Australian Army hospitals, stores and camps. At one point, there were 80,000 troops in the area. To supply them, a road was built from Cairns through Kuranda to provide an alternative route to the coast, while other roads were strengthened or resurfaced, often under conditions of high rainfall and heavy army traffic. Other roads were built for American Army camps, such as the 44 miles [70 kilometres] of roadway built for an American camp at Strathpine, and access roads which were built to American camps at Coolangatta, Caloundra, Samson Vale and Gatton. Oscar Masters recalled how isolated it could be for ordinary men:

> During the War I was on maintenance, and I got exemption, Marburg to Gatton, patrolman. At the time, the Americans had taken over Gatton College as a hospital and I done some work patching up the roads for the Americans while they were there too, but I was down there for nearly ten years, that was over the old Minden Range, Marburg there, and during that time we couldn't get a drum of bitumen or emulsion – it was all used for aerodromes and one thing or another, so I just had to stir it up and put new gravel and that in it. Some of it was really bad road. During the war time, I was working direct from the Brisbane office at the time, and I rang up one of the engineers there I knew pretty well one day, and said: When are you coming up to see me?
>
> He said: Why, anything wrong?

And I said: No, not really.

He said: Are you still getting your pay?

And I said: Yes.

And he said: Well, we still know you're there.

And I hadn't seen an engineer or anyone for over six months at one time during the war.

The action was going on elsewhere, to the north and west, where aerodromes and roads had to be completed as fast as possible. Clem Wilson was first based in the west, where his organisation was set to work on war-related projects:

> Main Roads' organisations were just taken holus bolus. In 42-43 I had quite a big organisation working on the Blackall-Charleville Road – it wasn't much of a road actually, even when we finished, it was only paved, and not paved with very good materials. One or two of the big Yankee trucks came along and got bogged on the highway. My outfit that was on the Blackall-Charleville Road was shifted holus bolus to Cape York peninsula. Most of my team was taken from me and put up right on the tip, on Horn Island aerodrome, and I had to start with another lot. I took over another lot at Iron Range. I managed to get one or two of my key people, a foreman and cost clerk back again and carried on.
>
> We had no security. When we were moving up there, I asked Feenaghty, I think it was, how about if you happened to be killed or injured while up there? The Japs were flying around. And it turned out there was no provision for that at all. Actually, employees were very poorly treated in those early days. You went where you were sent and you didn't argue.

Bill Cock and Doug Morton had similar examples of people who were suddenly moved from job to job:

> Bill Cock: Jack O'Brien, he was the draftsman in Main Roads' Road Design Branch, next day he was on site at Horn Island. People were selected, and they said: We've got this job at Portland Roads or Charleville or whatever, and you go.

Doug Morton: Noel Kemp was just sent out to build a road from Mt Isa to Camooweal.

Cock: And of course Main Roads was involved in so many operations, from building forts on Bribie Island, to airports all over the place.

Morton: It wasn't kept to roads, all sorts of civil engineering facilities. Look at A. J. Bond – he built the Mareeba strip and that's where the Coral Sea battle was fought from. In weeks, or something, he had it built.

Of all the Main Roads' construction activities during the war, the most widespread work was in airport construction. In all, more than fifty airfields were either designed and built, or extended, by the Commission. They included Archerfield, Eagle Farm and Strathpine in Brisbane; Amberley, Goolman, Lowood and Coominya in the Ipswich-Brisbane Valley area; Oakey, Toowoomba, Leyburn, Jondaryan, Condamine and Cecil Plains; Maryborough, Bundaberg, Kingaroy, Charleville, Cunnamulla, Rockhampton, Longreach, Winton, Blackall, Mackay, Bowen, Townsville, Charters Towers, Cairns, Mareeba, Mount Isa, Barcaldine, Cloncurry, Normanton, Coen, Cooktown, Iron Range and Horn Island.

Many airfields had already been built in provincial cities, such as Bowen, Mackay and Bundaberg, during the last few years of the peace, under the joint arrangement established by the Commonwealth Civil Aviation Authority and the Main Roads Commission. But with the onset of the war with Japan, these aerodromes needed to be rapidly upgraded to cope with the requirements of Australian, American and Dutch aircraft. Garbutt aerodrome, near Townsville, for instance, became the site of a RAAF base, and in November 1941 the Commonwealth Works Department asked for three runways to be extended to 5000 feet [1524 metres], with pavement thicknesses modified to allow 6 tons per square foot pressure, so that it could be used by the heavy Lockheed Hudson bombers and Flying Fortresses. Floodlighting was installed, and the work was completed by Main Roads within six weeks, working three shifts per day. Roger Devey explained:

Basically the road design branch and the bridge branch were set up as design organisations to coordinate designing for the whole department throughout the state. That operated from fairly early in the war period here because when the Japanese came into the war and Australia became a lot more heavily involved in it, the Americans came out here and the airforce in particular expanded tremendously, and we were the only organisation that was equipped with the necessary, I hesitate to say it, but expertise to know the requirements of aerodrome *design*, more than construction.

Hangar and tarmac newly completed for RAAF Transport Squadron, Garbutt Aerodrome.

The pressure to build aerodromes and other military projects rebounded on general road building, for there were many shortages, both of labour and supplies, as Oscar Masters noted:

> They were mostly working on aerodromes, all the Main Roads equipment they could find anywhere was all used on aerodromes then. They built a big one down there, I had a few stray drums of bitumen and that, and they built an aerodrome

> down at Lowood, and they come and collected it all. The men that I had, two reasonably good men, they got called up, and I was left with a couple of old men. Anything that was available was all used on aerodromes. In 1941 we had that severe drought, and they said that's one thing that saved Australia they were able to get on and build aerodromes. It was a dry year.

Although it may sometimes have seemed like it, the Main Roads Commission was not only building aerodromes at this time. It was also involved in building fortifications, such as the gun emplacements on Moreton and Bribie Islands, machine gun emplacements at Rockhampton aerodrome, and at Fort Kissing Point and Signal Hill at Townsville. Other work included a naval base at Cairns, and a series of fortifications in the Torres Strait from Thursday Island to Groote Eylandt.

Amongst the largest projects was the Brisbane Graving Dock at Cairncross on the Brisbane River, at that time the largest such dock in the southern hemisphere, which began in August 1942. The Main Roads Commission and the Department of Harbours and Marine shared responsibility for its construction, and with work carried out by three shifts of workers over the twenty-four hours, the dock was ready for operation and taking its first ships by June 1944. Unlike many other wartime projects, the Cairncross dock was a facility whose usefulness outlasted the war years.

The same could not be said for another huge project, the construction of an airbase at Iron Range on Cape York Peninsula. American engineers began work on an airfield there to take heavy bombers in June 1942, but the following November, the Main Roads Commission took over responsibility for the work. It was immensely isolated and difficult terrain, with thick rainforest, torrential rain from December to April, and very remote. Cairns, the nearest major town, was 300 miles [480 kilometres] to the south and normally would only be reached by sea or air. Men, plant and material had to be brought in by truck from Townsville, via Chillagoe, Mitchell River, Coen, and Batavia, and the trip took ten days. Heavy supplies were

shipped in from Cairns. Even by air, the trip to Cairns was about three hours. Clem Wilson used to fly down to Cairns or Townsville from Iron Range fairly regularly:

> Right through the war commercial flights used it. The ships weren't frequent enough to be any use. They were biplanes. They were perfectly safe, but you could see the wings flapping when you hit a bit of an updraft or something like that. You'd leave Cooktown – just a bit north of Cooktown there's a range that you've got to climb over. Well this biplane would be clawing its way up to get high enough to get over, and as you went over the top the wings'd be flapping.
>
> Flying down from Cooktown to Cairns, we used to fly just off the coast at about 3000 feet [914 metres]; we had a perfect view of the coastline, of the ranges there, and I always was intrigued by this coastline, that's Cape Tribulation. Just near there, is Mt Pieter Botte, which is a huge 4000 feet [1219 metres] rock, sticking up out of the jungle, heavy jungle right down to the water's edge.
>
> At Iron Range, I think I had 400 men. We had huts. It was not normally accessible by road, the only access was by sea, about once a month. While the Yanks were there, they had to have their ice cream, so the ships came more frequently to get the ice cream and other things. The Australian Army ran an outfit there and they looked after the supply of beef. I got a bush trap built to give us some change from this terrible meat, but as soon as the Yanks realised we were getting fish, and getting quite a bit of fish, they had more money than we did, and they just did a bit of a handout, and we never saw any more fish. We did catch a couple of crocodiles though – we caught one, about 11 feet [3.4 metres].
>
> We had a garden there. Some of the stuff we had, there'd been big army stores there, and I don't know how long they'd been there, a long time. They must have looked a long time ahead, we had butter in tins that had been out in this tropical

sun about two or three years, terrible. Dried eggs, and things like that, those things were pretty poor, so anything you could get to alleviate that.

Iron Range was a difficult location for many reasons. Many of the workers from the Civil Construction Corps who were sent there seem to have been sent as a punishment, and it was difficult to maintain discipline amongst these disorderly and isolated men. In February 1944, Harry Napier, the assistant engineer, wrote to J. R. Kemp, complaining about a convoy of forty men who had just arrived in Iron Range:

> Judging by their subsequent performance, they were, almost to a man, either irresponsible youths, or trouble makers, some even criminals or near criminals. Some of the very worst class of men have been sent in here ranging over a long period of time. It appears to me that in many cases rather than discipline a man or take an action which, however correct, may not be popular, the corrective applied has been their transfer to just such an isolated spot as Iron Range. Matters have been more or less brought to a head by the events of the last few days. During the unloading of the 'Bidelia', enormous quantities of illicit liquor were brought ashore and drunkenness and general lawlessness were rife. Amongst the chief offenders were CCC personnel. Several days work on the project was lost through drunkenness. AWC trucks were seized for illegal usage. The local DID lost in the order of £100 worth of stores through theft, and civilian personnel and CCC members may be involved.
>
> In the past, there have been at least two full-blooded outbreaks of moonshine brewing and selling, and one aborted one, also robbery of the army canteen, acts of sabotage or opposition to the project such as a fire in the tar dump, a tool dropped down a bore, there have been several instances of men stealing money in the camps, there have been occasions when the Engineer has been subjected to a tirade of drunken abuse, there has been set up a large organisation of gamblers

and drink traders, there have been many other acts, all of which have been done in the absence of an officer of the law. And nobody has ever been caught. Whilst the majority of men here are all right, many undesirables have been transferred here.[15]

As well as all these problems with the labour force, the engineers were also faced with all the difficulties of dealing with a hostile natural environment. In January 1944, Harry Napier drafted a memorandum outlining some of these difficulties:

> From now till the middle of April is normally regarded as the wet season for this area, and from the middle of April to early in June is drizzling showery weather. The principal class of work to be attempted in the immediate wet season would consist of the primary essential drainage, reconstruction of those bridges most likely to collapse, gravelling and consolidation if possible of work at present in a stage of construction, maintaining those sections already constructed, and a small amount of new construction in cases where the work is wanted urgently, or where the ground is sufficiently sound and well drained.
>
> It is imperative that this job be supplied with labour as present strength cannot keep abreast with the work. No men have been sent to this area since early November. The numbers then were 240. Today they are less than 130. Of that 130 about 15 are aborigines from the local missions, and of the remainder, a large proportion are the comb-outs from other jobs. These are very little use to the job.
>
> Even if it is the policy of the Allied Works Council to let this area go for the wet season, labourers, bridge carpenters, truck drivers, and a few tractor drivers should be sent. Two small dozers, and one or two other tractors and scoops are also wanted, also a power shovel would obviate the need to build chinamen, which are always difficult in wet weather.
>
> Failure to send any men and plant, especially labourers, will mean that a lot of work made good in the dry cannot be

15. Napier to Kemp, 9 February 1944, MRD232/6/150.

maintained, and the job will last months longer as a consequence. Also traffic on the roads and dispersals will be held up unnecessarily.[16]

By January 1944, however, the war was moving northwards into the Pacific, and the need for airforce bases on Australian territory was nearly over. The urgency of the previous years was less acute. As Clem Wilson acknowledged, "the big project that we were on there, we never finished," but the airbase is still there, a bitumen surfaced base which provides air access to the Lockhart River Aboriginal community.

Because of the shortage of labour, and the need to get projects completed in the fastest possible time, it was necessary to increase the use of labour-saving equipment. The Main Roads Commission only acquired its first 44 horsepower diesel tractor in 1936, and its first bulldozer in 1938. Now, between 1939 and 1945, the Commission's stock of plant rose steeply. For instance, tractor numbers for the period were as follows:[17]

1939 – 1945	
Tractors without dozers	47 158
Tractors with dozers	1 362
Tractors with end loaders	3
Graders	157 196
Scoops	69 226

However, these increased numbers of tractors and other equipment still could not keep up with the pressure of work to be done, especially as the plant was often needed in isolated and inaccessible areas which were hard to reach. As a result of these difficulties, some plant worked two or three shifts daily, with servicing of the equipment done in snatches during meal breaks. There were also few skilled operators, and men had to be hastily trained to work the new machines. The men working on defence projects for the Allied Works Council through the Civil Constructional Corps were conscripted into the work. Some were disaffected as a result, and took out their hostility on the equipment. Napier, at Iron Range,

16. Iron Range 24 January 1944. Memorandum. Works at Iron Range. Labour and Plant Requirements (signed B. Napier, Assistant Engineer), MRD232/6/150.
17. *The History of the Queensland Main Roads Commission during World War II 1939-1945*,p.43.

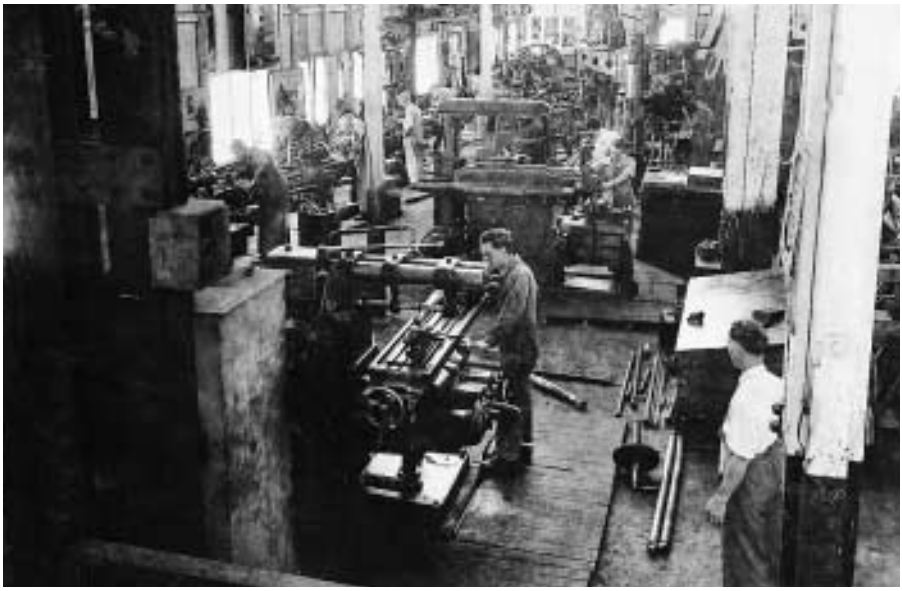
asked permission to discharge one worker who had been treating machinery badly: "His reply was that the machine did not belong to him or me, so what was the use of worrying as he would not have to repair them. He gave me the impression his idea of a tractor was that they were made to be wrecked."[18]

As a result of such harsh treatment, whether accidental or deliberate, there were many casualties amongst Main Roads equipment, but because of its scarcity, wherever it was possible it was reconditioned rather than written off, although there was also a shortage of mechanics who knew how to maintain this new plant. The Main Roads Commission in South Queensland was responsible for the repair, in addition to its own plant, of nearly all Allied Works Council plant, and much of the equipment of the Australian and American forces as well. The Commission's workshops at Nundah therefore became of great importance, and were gradually expanded. In 1940, extensions were made to the woodworking shop, and a paint shop, a kitchen, and extra stores were built. Between 1941 and 1943, further extensions were made. One workshop was extended by 200 feet [61 metres], to include a 10 ton [10.16 tonnes] overhead crane and extra accommodation for tradesmen – welders, electricians, mechanics, carpenters and painters. Four houses were bought to make way for further stores, and a railway loop and loading bank were built so that plant could be transferred to the workshops more conveniently.[19]

Bill Carson started work as an apprentice fitter and turner at the Nundah workshops in early 1943:

> The Main Roads Department was involved with the Allied Works Council which was the construction authority of all the Australian road authorities during the war. The big road was Alice Springs to Darwin and into Mt Isa. In 1943, they were in the process of rebuilding a big new workshop down at Nundah. Prior to this it was only a fairly small organisation, the workshop side of the business.

18. Report on EJW, MRD232/6/150.
19. *Nundah Stores and Workshops – a History, by JAS*, 9 February 1945, MRD209/4/1.



The Nundah workshops where equipment was reconditioned were integral to Main Roads' war effort.

There was an awful lot of equipment that was obtained by some of our Main Roads mechanical engineers going around and impressing equipment from anybody who happened to have it. You see, if you happened to have a bulldozer or a grader they'd just come along and sort of impress the equipment and take that and use it as the Allied Works Council equipment which was repaired by the Civil Construction people.

Prior to the war, the Main Roads did a lot of their construction by horses, so there wasn't too much equipment, but what engines there were around were steam engines. Most of the people of the day, prior to my joining the workshop side of the business, were all steam people – marine engineers and railway engineers, and all these sort of people, who'd actually had experience of steam business. The latter part of the war there were more diesel engines coming into vogue.

> There were very few apprentices employed by the department prior to the war except three or four, but during the war they put on a lot more apprentices, and I happened to be one of the apprentices put on about 1943. I was only fourteen when I got the post in the first place. Even when the war finished I wasn't old enough to be called up, but it was a reserved occupation. You were exempt from call up to the army. A lot of blokes chose to go into the army anyway. If they didn't get approval they'd play up a bit, and they'd soon let them go. See, some of the young blokes, as soon as they were eighteen, they wanted to get into the army, or get into the navy, or something. They didn't want to sit out the war at Nundah.

While work on defence projects went on in the north and west, the work of administration continued under considerable difficulties in Brisbane. Australians felt a much greater sense of menace and direct threat as a result of the outbreak of war against Japan in December 1941. In the following months, Townsville was bombed, north Queensland became a battle zone with women and children evacuated to the south, and civil conscription was introduced bringing new groups, such as married women, into the workforce. At the Main Roads Commission in Brisbane, plans were made to protect the records department and to disperse staff from head office to different locations around the city.[20] On 22 December 1941, two weeks after Pearl Harbour, a memorandum was drafted at Head Office:

> It is agreed that we must be prepared to meet bombs or fire on four levels, roof, ceiling, and the two working floors.
>
> The roof will also be used for spotting, and it is recommended that action be taken to provide slats up the roof at different positions to allow of a person climbing either up to the gable or down to the guttering – about six of these places would be required. Access from roof to roof is recommended, this being supplied by planks placed across the gaps.

20. Memorandum on meeting on safety arrangements, 26 June 1942, MRD232/2/20.

Quick action when dealing with falling bombs is necessary and it is suggested that a buzzer system be installed to allow each spotter to have a buzzer connected straight to his control officer.

The windows need protection, the Public Works are doing the other offices, the system being to paste cheese cloth on the inside of every window. The Public Works Department have purchased practically the whole of the Brisbane supply of cheese cloth, and some other substitute might be necessary if we are to do the work.

Motor Vehicle Accounts: It will be necessary here to protect the pavement lights and build a brick wall between Stationery and Motor Vehicle Accounts, also brick blast walls along the Eastern and Northern Sides. False ceiling with sandbag protection is also necessary.

We suggest approval be given for the following action.

Place slats in roof,

Provide planks across gaps,

Provide walkways in ceiling,

Erect four small platforms on roof,

Install four buzzers from roof to control points,

Attend to electric wiring in ceilings,

Make additional man holes,

Purchase and apply cheese cloth to windows,

Alter telephone to new position.[21]

The administration section was faced with a larger workload and a diminished staff. J. E. England was seconded to the Liquid Fuels Control Board, and many other staff, from J. R. Kemp downwards, had to balance their work in the Main Roads Commission with work for the Allied Works Council or other wartime authorities. There was a slightly decreased number of car registrations to deal with, but in every other respect the work of the administration section increased

21. Memorandum to Secretary, ARP, Main Roads Commission Building, 22 December 1941, MRD232/2/11.

as a result of the war. The accounts branch of Main Roads, for instance, was responsible for paying all the wages of men employed in the Civil Construction Corps, including those who were working on projects outside Queensland. Ordering and purchasing staff were responsible for supplying the Allied Works Council with messing, canteen, medical and accommodation supplies, a task made all the more difficult by shortages, particularly of imported goods.

Bitumen seems to have been a particular problem. Before the war, it came from Central America, mostly Trinidad, in drums holding about 33 gallons. When the sea-lanes became dangerous for commercial shipping, this supply dried up. Oscar Masters was responsible for maintenance on the road between Toowoomba and Brisbane, and bitumen was a major problem:

> We used to get it from Trinidad, the home of bitumen, in drums, and we had to cut it up then; we hadn't long started using the emulsion, a broke down bitumen that you could use cold. In the early days we used to get the bitumen in wooden casks like beer barrels, with wooden staves, and you used to have to cut it up and put it in tanks, and boil it. There was often cases when a shipment come in, and sent off to, say, the Clifton Shire, and when it might be there 12 months or 18 months and you'd find the white ants had eaten the bottom.

When the Americans arrived, they imported large quantities of bitumen, which the Main Roads Commission had to deal with. The steel drums of bitumen were stored in dumps around Brisbane, and forwarded to strategic bases in Northern Australia and New Guinea.

For Queenslanders generally, the impact of the Pacific war was perhaps most clearly illustrated by the arrival of American troops in early 1942, and the establishment of General Macarthur's headquarters in Brisbane. Bill Carson was doing engineering studies part-time:

> The diploma studies were at night time. Most of us used to end up going to College about five nights a week. And this

was all happening during the war with blackouts and that. You'd go past the Bellevue Pub which was the headquarters of all the Yankee soldiers and sailors who used to get on the grog there. You had to fight your way past these fellows to get to college. Halfway through there'd be the air raid sirens going, and you'd have to slip out.

There was an American impact on the Main Roads Commission, too, for at times the Commission worked in close association with American engineers on some of its defence projects. This was true, for instance, in the early stages of the Iron Range project, where Clem Wilson was in charge:

> In Iron Range, the big project was building a 2-mile [3.2 kilometre] long runway for Super Fortresses which was a new secret weapon, and we didn't move with the speed that the American Seabees did; they'd come in, and in about a week they'd have an airport. Their eyes used to goggle at the little tractors and equipment that we had. They just couldn't understand how it was possible to build things using such tiny machinery. They did a quick job which wouldn't last. One of the things of course was our means of coping with that too. I had steel mesh that they'd lay down for the full length of the airport runway, and they could take off on that. Iron Range was a very busy place before we got there.

In the last months of the war, the American advance across the Pacific was so rapid that much of their heavy equipment was left behind. When the war ended, much of it was abandoned and recycled by Australians, as Bill Carson explained:

> Most of the development during the war did come from America. It was after the war, where we started to get some of their cast-off American equipment. They left a lot in the islands and people like Thiess went up there and dragged a lot of this stuff out of the islands, brought it back to Australia, and we finished up getting some of that. It was mainly, I suppose, we got trucks more than anything. There used to be convoys of trucks that arrived to transport the gear up to wherever they

were building the roads, but the Americans didn't do much of it, as far as road building and that was concerned.

So, we didn't get a great deal of gear from the Americans, other than the stuff that was brought back after they'd finished with it, and left it in the islands. Thiess Brothers, for example, they made a lot of money, because the stuff was there for the taking. The Yanks just left it behind so they just went up there and brought back shiploads of the stuff, and got all the rust out of it and sold it to various people.

While the Americans brought in some new machinery, it is easy to overstate their influence on road building techniques in Queensland. The Main Roads Commission, after all, had begun to use tractors and dozers in the late 1930s. But they were expensive to buy and to maintain, and as long as unemployment continued to be a problem, there was no real incentive to change to more labour-saving ways of doing things. In the war, however, time was the important thing, labour was scarce, and the Commission was prepared to use new equipment whenever possible. It was a change in circumstances, rather than the American example, that led to the introduction of new techniques. In the words of Clem Wilson, who was in charge of one of Queensland's largest projects at Iron Range:

> One of the things, the myths that ought to be exploded, one of the myths is that the Americans built all these wartime defence projects. They didn't, they were *all* done by Australians. All around you've probably heard the marvellous things the Yanks did, during the war. They didn't do them, we did them.

CHAPTER 5

THE 1950s
The Main Roads Commission Becomes the Department of Main Roads

The Second World War was a turning point for the Main Roads Commission. As a result of its wartime efforts, the Commission finished the war with new skills, new equipment, and new goals. It also involved the passing of old ways and old skills. So, for instance, the horses, those huge and gentle Clydesdales which had been an important feature of road building until the end of the 1930s, disappeared forever.

Early road building depended on horses. They pulled drays, rollers and scoops, and working the horses was a skilled job. The Main Roads Commission bought horses as needed, second-hand, from farms in the area: on 30 June 1923, they owned 135.[1] When Oscar Masters began work in the 1920s, horses were indispensable:

> Early equipment was all pretty crude. We didn't have a tractor on the road until 1930, did it all with horses – the Warwick-Stanthorpe road on one part, with 60 horses. They even had a vet on the road to look after the horses. They were all Main Roads horses then. They used to have a brand on the hoof, 'MRC'. Up to sixty horses, Clydesdales. I wouldn't say they'd be all working at the time. Perhaps there'd be half of them spelling.
>
> The first road that I was on, I was only about 12 years old then. They did a road in the Allora Shire, and there wasn't a motor vehicle used on that road. It was all done with horses and drays and the rolling part of it was done with the steam engine that used to go around threshing; about 1922, that was the first piece of road done in Allora Shire.
>
> Mostly they'd rent a paddock along the road, but most of the horses, they were hand fed too. They used to have a couple that used to have to get up early in the morning and feed the horses before they went to work, and then take over in the evening when they come back from work. They didn't groom them or anything but they used to have to feed them and water them. They had some good horses, the Main Roads, the pick of the horses. They just bought them around sales,

1. A.H.B., 'Mechanical Development – Man to Machine', in Queensland Roads, December 1972, vol. 11, no. 22, p. 48.

because there was plenty of draught horses. Nearly all the land was worked by draught horses. There were plenty of draught horses about in those days.

The horses began to be superseded by machinery by the later 1930s. The first diesel tractor was bought by the department in 1936, the first bulldozer in 1938, but it was during the war, when money for mechanical equipment became available, that horses all but disappeared from Queensland road building. Ironically there was a temporary revival of the use of horses in road building in New South Wales during the same war years, because so much mechanical equipment was sent north to Queensland and the Territory that the Department of Main Roads in New South Wales brought back horses into use one more time. In Queensland, however, the war put an end to the use of horses in the Commission. In February 1946, the district engineers were asked to comment on the use of horse graders. In reply, they gave a number of reasons why they were no longer used. According to H. H. Hull:

(1) They are practically useless in producing the desired results on all except very lightly gravelled or earth formed roads carrying light traffic.

(2) In latter years it has been well nigh impossible to obtain men with the necessary experience and/or inclination to drive and look after horses.

(3) Horse feed is not always readily obtainable.

(4) Water is not always readily obtainable.

(5) Suitably trained horses are not always obtainable.

(6) Camps are required for man and beast as opposed to the completely mobile unit of power grader and caravan.

(7) Most Councils are aware of the above facts and are therefore especially unwilling to see maintenance money wastefully spent where they are required to bear a proportion of the cost.

> Regarding the matter of horse graders or drags being used in southern States, I might mention that, in the early stages of World War II, I personally observed a maintenance man in New South Wales on the Main South Coast Road, carefully placing silt in the individual corrugations and 'patting' it into position with the back of a shovel. I have been informed that Councils in New South Wales are not required to bear any portion of the cost of maintenance on State Highways, which may possibly account for the above extraordinary sight witnessed by me.[2]

Within a decade of the purchase of the first diesel tractor in 1936, horses had all but disappeared from road building in the state. The last occasion on which the Main Roads Commission used horses in road building was in October 1948, and the last horses were sold in March 1949. Bill Carson noted these changes:

> The major changes in the organisation have been in the development of the equipment. It has become very sophisticated equipment. We started off with the horses, and the drawn equipment like scoops and little wee graders and all that sort of thing. We then had a lot of crushing and screening plants which we used to get the road making materials. They used to drag it out of the ground and put it through these screening plants to get the road making material. All the equipment there was driven by steam engines, so that was the horse era and then the steam era, and then there was a sort of intermediate section, with petrol and kerosene machines, but then the diesel engines started to come in and almost exclusively these days the modern equipment is driven by diesel engines.

Clearly, everything was different after the war. For the first time ever in peacetime, money was no longer a major problem. On the contrary, while money was generally available, the Commission was dogged by shortages of men and of materials.

Supplies were short, both of imported products like bitumen and of locally made materials such as steel. There was a backlog of demand

2. Memorandum. District Engineer H. H. Hull, 21 February 1946, Use of Horses for Road Maintenance, MRD209/8/16.

for industrial products, and there were also exchange restrictions which made it difficult to import supplies, particularly from a dollar area. Most of the machinery purchased by Main Roads during this period was therefore army surplus from both the Australian and the American armies. Much of this was in poor condition, but neither factories nor importers could keep pace with demand for new plant.

By 30 June 1950, the Main Roads Commission owned 56 large graders (some twenty years old), 71 small graders (also including some items over 20 years old) and 289 tractors, some with dozers, of various sizes, many of which had been purchased second-hand from Army disposals, and all but ten of which were of pre-war vintage. Considering the disorganisation caused to jobs by the sudden frequent breakdown of plant, it can be understood why every road building authority in Australia was clamouring to be allowed to purchase additional new plant. But it was difficult to buy new plant: Australian factories could not keep up with demand, and American machinery was hard to purchase because of exchange controls on imports from dollar areas. That year, the Commission was allowed to buy only eleven more tractors from International Harvester.

Labour was the most difficult of all commodities to supply. Except for the exceptional period of the war years, Main Roads had always been able to rely on a pool of unskilled labour from which to draw its road builders. In fact, there were often quarrels about who should be employed from the pool of workers available, with RSL, AWU and local farmers competing for the right to supply labour from their own community. For the first time since the Main Roads Commission began, indeed, for the first time since the beginnings of road building in Australia, there was no need to use road building as a means to mop up unemployment. Instead, unskilled men were no longer there for the taking. The war years had brought industrial development to Queensland, and workers could get better pay and better conditions in the new factories. To add to these problems, the old pattern of rural labour was changing. Farmers were turning to mechanisation, and no longer needed so many seasonal

agricultural labourers; this meant that these men were no longer available for Main Roads work in the off-season.

One means of dealing with this labour shortage was to employ 'displaced persons', the popular term given to immigrants who arrived in large numbers during the late 1940s and 1950s, displaced from their homelands by war and social upheaval. Many of these immigrants, particularly in the early years, were single men, unskilled, or with skills that were not recognised in Australia. This meant that they formed a mobile work force that could be used in areas and occupations where older Australians were increasingly unwilling to work. Their employment in road building, however, was only a short-term expedient for the department; in the longer term, Main Roads concentrated its energies on replacing men with machinery.

The shortage of skilled staff was more difficult to resolve. During the war, employment in Main Roads was treated as a reserved occupation, so that it was difficult for men to leave their jobs, either to join the armed services, or to go into another, non-reserved, occupation. Once the war ended, people on the staff of Main Roads began to leave. There were many reasons. Some, who had managed to serve in the forces, took up the offer of repatriation scholarships to get further training at the University. Others went into private industry, tempted by the much better salaries and conditions in the private sector. Demand for skilled people – engineers, surveyors and tradesmen – was high, and Main Roads could not hold its staff against this competition from outside. In the year to 30 June 1952, for instance, two senior engineering officers died, twelve retired, six resigned to take up other jobs, and another six technical officers resigned at the end of that year. These were experienced men, and even when replacements could be found, that experience was lost to the Commission.

In 1954 the problem of staff wastage was still there. Difficulty continued to be experienced in obtaining suitable trained workshop personnel for the Department's workshops, the Annual Report noted. It was very difficult to obtain and hold personnel who were

prepared to undertake repair work in the field, particularly in outback areas. In general, apprentices trained in the Department's workshops become good tradesmen, but losses to the Department of trained employees was largely due to the fact that attractive inducements were offered by private industry, where in many cases they were not required to leave the cities.

There were also problems acquiring and retaining clerical staff. In 1951, the Main Roads Commission became the Department of Main Roads, and came under the Queensland Public Service system. Clerical staff, many of whom had worked for the Commission for many years, now came under a new set of rules and were required to face examinations. Kath Mahoney began as a junior typist in the Department of Main Roads at Barcaldine:

> Up to 1951, I think, you could come out with a Junior pass, and after four years of work, if you were good enough they'd put you on the permanent staff, but it didn't matter if you were temporary or permanent, you all got the same wage, and you all went up the ladder. It wasn't until they pushed us into the Public Service that things changed. We weren't in the Public Service, we were Main Roads Commission. After we came into the Public Service, you had to have Junior to get into the permanent staff. But a few unfortunates missed out who were still classed as temporary. A few turned round and did their Junior with their kids. They had been there twenty years, but they didn't take that twenty years into consideration. They had to start off as if they'd just come in.

The most significant departure of all occurred in 1949. The Commissioner of Main Roads, J. R. Kemp, had dominated the organisation since it began as a Board in 1920; in 1939, he became Co-ordinator-General; during the war he also became Deputy-Director of Allied Works in Queensland. In short, Kemp was the state's most powerful public servant, and within Main Roads everybody else lived beneath the shadow of his dominant personality.

When, on 30 June 1949, Kemp resigned from Main Roads to concentrate on his other job of Co-ordinator-General, he left something of a vacuum in his wake. D. A. Crawford, another of the original triumvirate from the days of the Main Roads Board, replaced him as Commissioner, but Crawford was no substitute for Kemp. He was, by 1949, close to retirement and, in stepping into Kemp's shoes, he stepped into a position which had been created and built up over nearly thirty years to suit a much more powerful man. Until the work load became too great for him, Kemp had dominated Main Roads; Crawford was not the man to do so. Crawford retired after four years, and was replaced by A. R. Williams, who was also close to retirement, and the result was a period of less effective leadership from head office. Doug Morton and Bill Cock discussed the problems of this period:

> Bill Cock: The problem was that after Kemp's great burst of activity, and being so forceful, we had D. A. Crawford, and he was an old man taking over and slowing down. A. R. Williams was even more so. Williams generally liked to be in head office; wandering the country on inspections wasn't his bag.
>
> Doug Morton: I was fairly low down in the scale at that time, but he was regarded as a weak commissioner.
>
> Cock: The department sort of ran down, and we were losing senior engineers, they were resigning to go elsewhere. The employment conditions for engineers were pretty substandard at that stage. For instance, Ken Paterson resigned. He was a very senior Main Roads district engineer.
>
> Morton: He went into the coal mining industry.
>
> Cock: Because he had an interest that attracted him there, but he was fed up with the operations in the department. And there were several others.

Another important resignation was that of J. E. England, who had been secretary of the Commission since its creation. He was succeeded by Leo Feenaghty, who had, in fact, moved into the job

during the war when England was seconded to Victoria to run the Liquid Fuel Board. Feenaghty was relatively young, highly efficient and widely respected. But the new Commissioner, D. A. Crawford, whatever his personal qualities, had been with the Commission since 1922, and by the 1950s he was an old man. At a time when the post-war boom meant that new ideas were important, Crawford no longer had the vision or the energy to deal with the problems that the Commission now faced.

Moreover, Main Roads was now a much larger organisation than ever before. The war years had seen an enormous increase in its activities, and after the war it retained an increased staff and increased budget. The increased expectations of the public for better roads ensured that much of that expanded role would continue. But it was to continue only with difficulty. The failure of strong direction from the top, together with the rival attractions of private industry which drew away the department's most experienced staff, led to a decline in morale during the decade that followed Kemp's departure.

The economic boom that brought problems to Main Roads directly in the form of shortages and the high cost of labour, also affected it more indirectly. With the end of the war, Queenslanders went on a spending spree, and car numbers rose as fast as the factories could supply them. Many people had learned to drive as a result of their wartime experiences, and with full employment and high wages, more people than ever before could afford to own a car. This brought a windfall to Main Roads in the form of increased revenue from registrations: in a single year, 1951-52, car registrations rose by 14,269 to 253,361 – one vehicle for every 4.8 people in the state.

However, this rapid rise in car ownership also caused problems. As well as private motor cars, the number and size of trucks on the roads increased greatly, and the road system was inadequate to cope with the increased traffic of heavier and faster vehicles. Kemp had already recognised this changing emphasis by February 1947, when he outlined some of these problems in a letter to the Treasurer, and Minister for Main Roads, J. Larcombe:

Hazards may be divided into several heads:–

1. Those due to bad visibility.
2. Those due to bad alignment of roads.
3. Those due to the state of surface of road.

Narrow roads are not in themselves hazardous, but, if in a generally well aligned road a section having bad curvature, or embracing a narrow bridge, is restricted in visibility so that a driver is suddenly confronted with bad driving conditions without sufficient warning, this constitutes one of the worse hazards. For this reason, on modern roads in this State an endeavour is made to provide that a driver has a clear sight of not less than 500 ft. to an object 4 ft. above the road surface. This often entails heavy earthworks at the summit of grades.

In areas where the local traffic is not likely to be heavy for many years, single track bridges are still built, even on Highways, provided that they are built at bank height so that they can be clearly seen at a considerable distance away.

In all the above cases, suitable marking is adopted to warn drivers where it is considered that a hazard exists.

Bitumen surfaces tend to become slippery in wet weather if bitumen accumulates on the surface; such surfaces are referred to as being 'slick', and engineers aim at providing a surface which will always be safe in this respect.

As aids to night driving, a system of marking with discs, indicating right or left hand turns ahead, was adopted some years ago. During the war, the inability to keep these discs properly painted, or renewed in case of damage, has prevented full benefit being obtained from them.

On roads wide enough, a marked centre line, adequately varied to indicate prohibition of overtaking on points with restricted visibility, has proved a great help to night driving.

> Generally, it is considered to be more important, at the present time, to extend the mileage of construction than to relocate roads built in the past to a lower standard than that in use now. However, relocation and improvement of previously constructed roads is being carried out as opportunity offers.[3]

It was in this period that many of the characteristics of today's roads were first introduced: road line marking, reflector discs, warning sign posts, and the introduction of a national system of numbering roads.

There were new methods of construction, too, not only as a result of new equipment, but with major breakthroughs in design. In 1953, for instance, a prestressed concrete bridge was built over Tenthill Creek on the Gatton to Mt Sylvia road, only the second such prestressed concrete bridge to be opened to traffic in Australia. Within a few years, such bridges were becoming much more common. In 1955, the Annual Report noted:

> The increasing age of the large number of timber bridges built by this Department in the past means that the amount of timber required for repairs will increase, and this fact coupled with the scarcity of suitable bridge timber is one good reason why the number of timber bridges built each year is being gradually decreased and the number of steel girder and reinforced concrete bridges built increased.

By 1955 the emphasis on extending the road network as cheaply as possible was changing. That year, the Report of the Commission noted:

> Queensland is passing out of the earlier phase of road construction, that is, where construction took the form of clearing, grubbing, earthworks, formation and light gravelling just sufficient to keep traffic moving. The State has entered a second phase where construction must provide for the traffic of to-day and the traffic of to-morrow in such a way that roads and bridges will carry much heavier loads than those of the

3. Kemp to Larcombe, 6 February 1947, MRD231/7/1.

first phase. This second phase requires much more attention to the building of safety into roads. Queensland's operations are extending also to a third phase, that is, where reconstruction of obsolete road works is necessary and many old bridges require replacing.

As the size and age of the road network throughout the state increased, an increasing proportion of time and money had to be spent on maintenance and improvement, rather than building new roads. With the increased density and speed of traffic, too, there was a greater need for roads to be bitumened as soon as possible. In 1955, a refinery was opened at Bulwer Island, at the mouth of the Brisbane River, and the perennial shortage of supply was at last alleviated. Harold Wade was an industrial chemist who went through these changes:

> When the refineries came in Australia, we immediately slipped into buying local refinery bitumens, which was manufactured down at the mouth of the river at Bulwer, and then, when Shell Company went on flow in Townsville, we did all the testing of bitumens in Shell Laboratory, down at Pinkenba. We used to pick up samples off the aircraft at 11 o'clock or 12 o'clock at night and go down and test the thing till 1, 2 or 3 o'clock in the morning, and then if the bitumen was okay, we'd declare that shipment free, and they'd start pumping the next day.

Clem Wilson was now back in Barcaldine, working on the new road works in the west, and determined to produce the best roads for the conditions:

> A lot of the work wasn't bitumen, of course, it was just gravel. That's one of the things that I did a bit of battling about, out in those parts. Construction material was pretty scarce. My argument was that we couldn't afford to waste, if you put down a gravel road it wears out in a few years; we couldn't afford to do this. Put the bitumen on it and it's still there. When the beef roads scheme came in, that'd be in the late 50s and 60s, they were all going to be gravel roads. The chap

> responsible for that was Rex Patterson. He became Federal Minister for Northern Development. He was from the Bureau of Agricultural Economics and he was all set to do these gravel roads. And I went down to Canberra to talk to him about this, and argue chapter and verse about a very bad policy, and actually they were all bitumen surfaced, right from the start. The other way were dreadful roads to drive on. I don't know if you've ever driven on a bad corrugated road; a short-sighted policy.

Road safety also became a matter of increasing concern. The result was a need for improved road design, with better curves and camber than had been required at the lower speeds of the inter-war years.

One effect of road widening was an increase in the number of resumptions. Between 1924 and 1929, there were an average of 150 resumption cases each year, but by 1950-1954, there were 390 cases each year, and the number continued to rise. Moreover, while most land owners were relatively content to see land resumed when its purpose was to build a road that had not existed before, they were much less happy when their land was resumed to allow roads to be widened for the benefit of long-distance road users, with no direct benefit to themselves. By-passes were also a potential source of conflict. In 1954, for instance, a new by-pass cut out Helidon from the Toowoomba-Brisbane road, and land was already being bought up for a future by-pass of Beenleigh on the Pacific Highway. This was advantageous for the long-distance road user, but many local towns were hurt by these diversions, and fought a rearguard action against them.

Balancing these often contradictory demands, from the shires, from the Commonwealth, and from long-distance road users, involved some fancy political footwork, as Bill Cock explained:

> The Commissioner's job was basically a PR job where he sat with control of certain funds to do certain things. The requests came in from all around the place, and from Parliament and the Members of Parliament supporting their

local authorities. And in a situation where the funds to meet these demands were so small, it didn't matter *what* you did, it was a hell of an improvement. So whether the thing had come from a Member of Parliament, the Minister, or the Councillor, or all three together about the same thing or whatever, didn't really make any difference, 'cause whatever you did was going to be a significant improvement. So it wasn't one project competing against another, mainly it was one project, full stop. Do *something*!

After the war, the traditional time for this exodus of Local Authority Councillors to Brisbane was the Royal National Show in August. They all swarmed down for that. And we used to live in fear and trembling when they came back, 'cause they all came back with the latest vogue of flu from Brisbane and infected the whole bloody neighbourhood. We used to say: Don't come near me for a fortnight till you get over the flu, 'cause it was extraordinary the number of times they brought these new viruses back to the bush. But the thing was, we're talking about 130 local authorities, and there was a week or two set aside for the Commissioner to see them all, so they got a fairly limited time. And by the time they've said: The crop was crook or the cattle died or something, and a few of those sort of things, the real purpose was totally lost. And organising it was one hell of a problem, you've only got to talk to Flo Bjelke-Petersen who was one of the organisers.

As a result of these conflicts of interest, the Commission eventually decided that no further additional roads should be declared until funds were available for their construction and maintenance since, it was estimated, it would take more than fifty years to complete the construction of all the roads that had then been declared. The only exceptions were to be roads declared to serve new townships or land opened for closer settlement. This policy increased the pressure for a complete review of declared roads, and in 1957 the Local Government Association resolved that the Government be "requested to review all Main Roads gazetted as such with a view to

degazetting those that now cannot be justified, and gazetting those new roads that can be justified."[4]

Before this however, in the early 1950s, Main Roads set out with Commonwealth support to extend the strategic road system that had been started during the war. In 1950, for instance, the direct route from Cloncurry to Mount Isa was declared, completing the connection into the Territory of the Highway system via the North-Western and Barkly Highways. With the growth of Mount Isa during the 50s, this road grew in importance, and by 1953, the Barkly Highway was bitumen sealed as far as Camooweal, as part of the Commonwealth Government's program of works on roads of strategic importance.

Other roads were planned to open up new country, particularly in the Gulf and in the Channel country, where the so-called beef roads were designed to transport fat cattle to the railheads. The Channel Country Scheme was established in 1950 and by 1953 it had already provided more than £500,000 in Commonwealth funding under the *Encouragement of Meat Production Act*. One of the first beef roads to be built under this scheme was the Croydon to Forsayth Highway which was extended to Normanton and renamed the 'Gulf Highway' to provide access from the Tablelands to the pastoral country centred on Normanton, and to bring cattle down to the terminus of the Etheridge Railway system at Forsayth.

Other roads through the Channel country declared included Yaraka-Windorah-Currawilla, Windorah-Birdsville, Thargomindah-Cunnamulla-Barringun, and Quilpie-Eromanga-Coonaberry Creek. Des Simmonds was one of the surveyors working on these roads:

> I worked with Ted Hamill. Ted was a bit of a goer. We had to carry bags of pegs, cornbags full of pegs, which were green and were pretty heavy, and on that job we earned the title of Hamill's camels. In early 1950, we went to Eromanga, and we surveyed a main road from Eromanga to Coonaberry Creek Flats, which is about 48 miles [77 kilometres] SSW of Eromanga. That road covers what is now the Jackson oil field,

4. "The Road Plan of Queensland", MRD 207/6/4.

we didn't know that we were walking on an oil field at the time. It also goes through the opal fields, we knew about the opals because we used to collect them. The key point about that road was that at that time, it was built specifically for road transport of cattle and to my knowledge, even though it wasn't called that at the time, that would be the first big road project of that type that we carried out in the state of Queensland.

An example of a beef road used to transport cattle at Collinsville.

One consequence of this concentration on new projects in outlying areas was a certain degree of decentralisation within Main Roads. Although head office maintained its centrality, a number of new district offices were opened. To deal with the Normanton-Forsayth road, for instance, a new district office was established at Georgetown in 1953, but most of the major decisions were still made in Brisbane, as Bill Cock recalled:

> Up till about the mid-50s it was almost what your life was worth for a junior engineer to talk to a councillor or any

member of a local authority because this was all handled by the upper echelons from Head Office. But gradually during the 50s it became more normal for engineers in districts to talk with engineers in the local authorities and the consulting engineers, and that way get known to councillors and the administrative staff of local authority.

Gordon Neilsen was based at Roma when this decentralisation began to take effect:

> I was out there I suppose for about four years [from 1955], and I think that helped us get a lot closer to what was going on around the place. It certainly benefited the local people because they got a real district office there, and they could come in and talk about things. We were very centralised in the area, and it wasn't as far to go. If a person wanted to go from here to Quilpie it'd take two or three days to get there. Even though places like Barcaldine, Rockhampton, Townsville, Mackay and those places were all out there, and had been built up over many years, there were still a lot of district offices in Brisbane, and they eventually shifted them to Bundaberg, Warwick, Toowoomba, Roma and Gympie. Nerang was a more recent one.

In small country towns Main Roads played an important economic and social role, for it was one of the largest employers, particularly of women. Kath Mahoney was in Barcaldine:

> The Barcaldine District Office was a reconditioned garage with cement floor, whitewashed walls, and the outside was black paint. It was hot, and you had the old billy, building the fire, with a tripod, to make the tea for morning tea.
>
> It was also on the track of Powder Puff. He was the council goat. They only had one male goat, and he used to have the tribe, and would take his harem with him, as it were, and when the wind was right – My God! in the office it was really something!

The Barcaldine District Office. Main Roads played a critical role in country towns.

Engineers? If they came out and they weren't married, they used to drink. You had to have a pretty hard head to be in the social life out west. It was a bit of a shock to the system if you were from the city, and you went out to a small country town. It was before television, so they used to drink, and bet on the horses and the SP bookies at the back. The engineers weren't there much. They'd be out doing their rounds. One engineer, when he came out, being a townie, he decided to camp by the Barcoo on his way down, and heard these sounds and took off, and all it was, was the pelicans. They beat the water with their wings to herd the fish, and he heard these sounds and got frightened and got in his car and shot through.

Main Roads was the main employer there, because in those days the banks didn't take on women as cashiers, so it was the main employer of typists – the only job, the only government office out there. It built up the town a bit. It meant people came out and knew the town, made more employment for people, most of the clerical staff.

> We were our own office, and they (Head Office) were God Almighty. Maybe every two years the Commissioner used to come out, and the whole office had to be cleaned up and everything hidden out of the road, which was stupid because all the time you'd be hammering them that you needed more cupboards or more space or more something, and instead of leaving it where they could see the junk, when they came out everything would be all right, wouldn't it?

Back in head office, conditions could be fairly tough as well for ordinary workers. Until the move to Spring Hill in the 1960s, the Main Roads Department was based in a collection of old buildings on the corner of Albert and Turbot Streets, just across from the Roma Street markets. And everybody remembered the rats:

> The one at the corner of Albert and Turbot Streets, it was a real old building, 1897, with terrible rats. You'd work back at night and the partition only went a certain way to the ceiling.
>
> Funny part was, when everybody went out of the building at five o'clock and it was quiet, the markets were just across the road, and these great things like young cats used to gallop across somewhere underneath there, and we were below the Turbot Street level in Turbot Street, and they must have had an inlet somewhere there, and you'd be working back late, and these things would tear along. We had a stage at the end of our room, and they used to tear up this stage and you'd fly up on a chair and go Yeeeeeeeeeeeeeeee!
>
> Course, the markets encouraged the rats. But they knew the minute it was five o'clock and everybody left the building. The next day, you rarely saw them in the daytime, but they sure were there at night time.

Gordon Neilsen also remembered these old city buildings:

> I could talk for ages on the dump we were in. You just had to see the conditions we worked under down town to believe it. The building was on the corner of Albert and Turbot Streets,

and there was another building up in Turbot Street, and they were really old buildings. They were rat infested and cockroach infested. We didn't have water coolers like we had here – the ice man used to bring blocks of ice and plonk it in the top of this thing, that was your cold water.

Saying it was a dump wouldn't even describe it. They tried doing it up, tried renovating it, painting it, but it never really looked any good. The plaster used to fall off the walls and the place used to leak in wet weather.

But such discomforts, of course, were nothing compared with life in the survey camps. By the 1950s, the old isolated road gangs were less significant, but for the surveyors, and to a lesser extent the engineers, the same lifestyle still continued, almost unchanged from the pre-war years. As the road network expanded into that area, it was the surveying teams that pioneered these areas, sometimes spending months at a time isolated from the outside world. Des Simmonds had his first experience with surveying camps when he started in 1948:

The first camp I went to was Moonmerra. The tents that we lived in were a cottage type tent: the front of it with a flat base and two vertical sides, and then you've got the two sloping sides and the roof. It was supported by a fork at the front and the rear with ridge poles running through the fork and sloping poles that came down the side.

The mess/eating facilities, we were fortunate in the survey organisation – from the time that I started, and I don't know how long prior to that, we were always allowed to employ a cook which meant you could work like hell all day, and come home and you didn't have to cook your own meals. And it paid off actually in performance; people soon get sick and tired of having to get up early in the morning and cook their own meals. We'd go off to work, work hard all day, and it was hard work, then come home and have to cook your meals of a night time. The mess in those days was normally an open fly, without any sides on it at all. The cooking was done over an open fire.

In 1948 there were no stoves issued to any of the survey camps at all, in fact to any camps. We used fire bars on rocks, and that's how the cooking was done. Cooks in those days were able – in remote areas, that combined with camp ovens, they were able to cook us roasts, bake us fruit cakes, and bake bread under those sort of working conditions.

Our toilets were backyard thunder boxes. In fact, when I first started, it was before we had thunder boxes, it was just a pole set over a hole in the ground with a hessian tarp around it. When I was at Moonmerra one night – you always carried a light around at night because of the snakes around on the ground, so if you went to the toilet you took the light with you – one night I was sitting in the toilet and suddenly the walls went up in flames. The lights we used were carbide lights and the wind had just blown the hessian into the flame, and up she went.

Also, we didn't have refrigerators then. What we had were Coolgardie safes, a safe with zinc fly screens on each side and a water tank on top. You hung hessian bags over the side and the water by capillary action crept up over the top of the tank and over the sides and that cooled all your food.

For a shower we had bucket showers. You stuck about 2 to 4 gallons [9-18 litres] of water and you pulled the handle and rub like hell with the other hand. Sometimes these were surrounded with hessian for privacy, but very often they were just out in the open and it could get pretty cold on a winter's night when the wind was blowing.

By the end of the 1950s many of the inconveniences which Main Roads staff had endured were finally coming to an end. The 1960s brought more comfortable accommodation, whether in the field, in district offices, or in Brisbane Head Office. At the same time, however, some of the camaraderie which went with these primitive conditions was lost. The tales of rats, of burning hessian toilets, of

Typical survey camp, Caboolture, 1952. Surveying teams withstood trying conditions in order to expand Queensland's road network.

billy goats and making tea on a tripod, were fondly remembered as the old days disappeared for ever.

In many ways, Main Roads in the 1950s was bedevilled with inefficiency and low morale, a consequence of the constant bleeding away of good staff to better jobs in the private sector. But there were compensations in a sense of community and companionship in a small, tight-knit organisation with its own culture and its own loyalties. With more effective leadership, Main Roads offered much to build on for the future.

CHAPTER 6

THE 1960s

The Introduction of a Road Plan for Queensland

In January 1960, Charles Barton became the new Commissioner of Main Roads. After nearly three decades of the domination of Main Roads by Sir John Kemp, subsequent Commissioners during the 1950s had been internal appointments, chosen on the basis of seniority within the Department. Barton, on the contrary, was an outsider. A graduate of the University of Queensland, he had worked as an engineer in Main Roads before leaving in the 1930s to set up as a consulting engineer in Mackay. He joined the army when war broke out, and had reached the rank of Colonel in the Army Engineers when he was captured at Tobruk in 1941. He spent the rest of the war as a prisoner-of-war in Italy and Germany where, according to *Queensland Roads*, he tutored his fellow officers in engineering subjects, and several owe at least part of their success in obtaining professional engineering qualifications to his assistance. During this period he also gained some practical experience in the engineering of tunnels and other escape mechanisms. He returned to his engineering business in 1945, and worked in Mackay until he was appointed Commissioner.

Barton's appointment was something of a surprise, for the position had been advertised world-wide. Bill Cock explained:

> Charlie Barton came in with firm ideas. He was an ex-Main Roads engineer, junior engineer, back in 1928-1930. He came back to the department after world-wide tenders were called for the position, but it just so happened that Charlie Barton, who was operating as a consultant in Mackay, and Ernie Evans, who happened to be member for Mirani, was also Minister for Main Roads, Development and Electricity. This close group were suddenly elevated to the top management of the Department.

Perhaps it was the controversy of the appointment that made the transfer from old to new Commissioner somewhat difficult:

> So when Charlie eventually turned up, he had a month there in which the retiring Commissioner was to 'break him in' to the operations of the Department. A. R. Williams handed him a

copy of the Main Roads Acts and Regulations, gave him an office down the passageway, and that was basically it. He saw little of the Commissioner during that period, and he said to me, years later; "It was the loneliest period of my life, even including being in a prisoner of war camp!"

Barton was a new broom within the department who was remembered by Stan Rawlings as a strong leader:

> Charles Barton presided over his empire based in the large, well-constructed headquarters building at Spring Hill. It wasn't lavishly appointed, it was quite tame by present standards, but he saw everything in terms of his army organisation. Things had to be done. He didn't necessarily use lines of control, but he was a very tall man, a very strong man, he wanted things done and things had to happen. So there were people within the organisation prepared to get things done, and people he'd know, they would approach him direct and he'd say: "Yes, go ahead and do that." And something'd happen sort of behind your back, in your own area, being done by others and it became a bit of a source of worry.
>
> But still he was brought into the department from outside to stir up the department and get it back to being a really strong performer. He really turned the department around, and whilst it's now the most progressive department in the service, the start of it becoming one of the most progressive in the service goes back to the changes that Sir Charles Barton brought in. He was a brilliant administrator and a driving force, and he wanted things done and things really happened. The department's officers throughout the state knew that he was around and he expected things to be done and he got things done.

From 1960, Barton undertook a complete reorganisation of the department, based on the development of a Road Plan, the encouragement of higher qualifications and in-service training for Main Roads' employees, and the decentralisation of administration within the department.

Until the 1950s, Main Roads was a highly centralised organisation. Kemp had created it, and it bore the stamp of his personality long after he left to become Co-ordinator-General. By the 1950s, however, the organisation had become too big to be managed efficiently from Brisbane, and power began to devolve to local district engineers. This process was at first resisted by the Main Roads authorities, but after the change of government in 1957, attitudes began to change. The process of greater decentralisation, like many other aspects of administration, was reinforced by Barton's appointment as Commissioner. Bill Cock recalled this as the time when significant changes took place:

> The Department then, and all officers, became very closely tied to local operations, local authorities and what have you, because of the major decentralisation, as against the previous centralisation. It was only in the late '50s, more by accident than for any other reason, that we were talking more to local authorities. From 1960 it became the stated policy of the department to do this.

Under Barton, assistant commissioners were appointed to be resident in Townsville, Rockhampton and Brisbane, and divisional engineers to these three centres, together with Toowoomba. The policy of decentralisation meant that the local Main Roads staff were given more autonomy than ever before, and the local officers became more important, both in negotiating with the local authorities, and as significant employers of labour in smaller centres such as Roma, where Gordon Neilsen was sent:

> Back when I started in about 1955, a lot of district offices were decentralised, but there were a lot in the Brisbane area still, and when they had a change of government, when the Country Party came back in 1957, they started a policy of decentralising further district offices back to the areas in which they operated. For example I was in No. 4 district and that, even though it covered an area from west of Toowoomba right through to the border, was based in Brisbane. If an engineer wanted to go on inspection he was away sometimes for a week or a fortnight, just going out to have a look at road works.

> You spent a lot of time getting there, because the roads weren't all that good in those days. So they brought in a policy of decentralisation. We had a small district office out in Roma, and I think ours was the first one of that new batch, No. 4 district, the south-west district to be decentralised to Roma. They decided to set up in Roma and expand the office to a full scale district office. I was sent out there. I'd been in the department about six years, I suppose, at that stage. We had a very small staff there of three engineers, a draftsman and a couple of clerks.

From one point of view, the policy of granting greater autonomy to the District Engineer improved efficiency within the local area. However, together with the greater emphasis on formal qualifications, it could disadvantage older employees, particularly on the clerical side, as Kath Mahoney remembered:

> When Charlie Barton came in, he made it that everything had to be addressed to the District Engineer. It cut down the District Clerk. He was a man of experience in his own right, and knowing everything, and he was cut down.

By the end of the 1960s, the divisions and districts were as follows:

South-Eastern Division:

No.1 - Brisbane

No.2 - Brisbane

No.12 - Bundaberg

No.13 - Brisbane

South-Western Division:

No.3 - Toowoomba

No.4 - Roma

No.5 - Warwick

Central Division:

No.6 - Rockhampton

No.7 - Barcaldine

No.8 - Mackay

Northern Division:

No.9 - Townsville

No.10 - Cloncurry

No.11 - Cairns

Amongst the most significant of Barton's initiatives as Commissioner was the introduction of a Road Plan for Queensland. Surprisingly, this was the first overall plan to be developed in the department's forty-odd years of existence. In June 1962, Barton explained his new policy in the Main Roads publication, *Queensland Roads*, itself an initiative of the 1960s: "It would be fair to say, I think, without being critical, that we in this country went into the business of road making without much planning." Since the war, other countries had begun to assess their transport needs more carefully, recognising "the need to study not only the science of road design and construction, but also the factors which should be weighed in deciding where roads should be built and to what standards."

At the time the Commissioner wrote, the research and planning section of Main Roads had been in existence in Queensland for just over a year. However, Barton argued, this relatively late start of more detailed planning allowed Queensland to benefit from the examples of other countries.

The starting point in planning a road system was a well-based classification of the roads already in existence. Only when this had been done could the department proceed:

> to the job of making an inventory of the existing roads so that we know all about them and where and why they are in good, bad or indifferent condition or if they are adequate or inadequate for their job. From this we can estimate the cost of producing an adequate system and we can also establish a system of priorities for improvements which is based on a common standard of evaluation.
>
> Having done this we now have to take other things into consideration and the main one is consideration of people and what they want. This is the field in which too much planning falls down.

Barton set out to negotiate a logical system of roads to replace the present 'system', which had grown like Topsy during forty years to meet local demands. During 1962-63 an inventory of all highways and developmental roads was completed, a total of approximately 12,000 miles [19,200 kilometres], and on 1 July 1963, the reclassification of declared roads was announced as the Road Plan for Queensland.

Type of road	Declared as at 30 June 63	Declared as from 1 July 1963
State Highways	8,251	6,262
Development Roads	230	4,263
Main Roads	10,109	5,130
Secondary Roads	2,057	8,465

Bill Cock explained the importance of the Road Plan:

> Over the previous forty years there had been all sorts of deals to get roads declared, and some of the reasons for these roads, like servicing a mining field which was relevant in 1923 – by 1963, the mine, even the town, had disappeared long since. They were still sitting there, and they were sort of cluttering the whole situation up. So it was a major effort which required discussions with the local authority, because first of all, they had to be asked what they thought in their area should be declared roads, and they had to put up cases for them on a prescribed formula and so on.
>
> And then they had to be told that not only were we seeking extra declarations to modernise the system, but the good news was, we were going to get rid of a lot of them. Naturally in a group of a dozen councillors round a table, there'd be some who, for many years, had had the benefit of having what was basically almost a personal road kept up by the department, who were suddenly going to miss those roads.

Many of the decisions made were politically sensitive, for roads that lost their current status as 'main roads' would revert to the financial responsibility of local authorities. As maintenance rather than construction costs took an increasing proportion of Main Roads' funds, the process was therefore, in part, a cost-saving exercise.

> Bill Cock: I remember going to this Council meeting, and the District Engineer was with me and one of the things on the agenda was to discuss the road plan review, and they were all clued up. Naturally we had a fairly solid input from them about all the things that ought to be increased, and our responsibilities doubled while theirs were halved, a philosophy which is not unreasonable, and I said to them: "Well, having heard your stories, how about somebody tell me where *this* road is? Is there a person on the premises who ever heard of this road? It has been declared for many years."
>
> And one bloke got up and he said: "Yes, that's in my division, and it used to lead to the old mine."
>
> I said: "Say no more, it *used* to be a main road." Then somebody else put up a story, and I said: "Good one, that's another five miles we've saved."
>
> At that stage, the shire chairman intervened and he said: "Ladies and gentlemen, I'm going to close this segment down. We go on like this, we'll have *no* roads. This is a subject that should be taken up in a less public matter with the Main Roads Department with our engineer and clerk and myself and a small committee to handle it, otherwise we're going to lose heavily, and I'm not going to cop that."

The process was bound to be contentious for many vested interests were involved. However, the Road Plan was not just a cost-cutting exercise, but a rationalisation and re-evaluation of the entire road system of Queensland. It was, firstly, a major adjustment to changing circumstances; old mining roads and other such roads which had acquired a higher status for reasons which were now a

matter of historical accident, were reclassified according to their present significance. It was also an attempt to establish a logical road system which finally abandoned once and for all the old dominance of railways which had governed so much governmental thinking in the inter-war years.

Central to the Road Plan were the promises that every town or closely settled area with a population greater than 500 people should be served by either a main road or a state highway, that every urban area with a population greater than 5000 people would be served by a state highway, and that a state highway or developmental road would serve each of the major ports. As far as possible, each main road was to be interconnected either with another main road or with the highway system, so that it would provide a continuous route of travel. Finally, and most importantly, the Road Plan was to be an ongoing process, recognising that shifts of population and economic development would continue to occur, and that road priorities had to respond to such shifting circumstances.

The first Road Plan was completed by mid-1963. Further plans were to be carried out on a regular basis, usually at three to five year intervals. Because of the political sensitivity of many of the decisions that needed to be made, the reviews were carried out, for preference, in non-election years. The first such review was carried out during 1965-66. Doug Morton explained the timing:

> This review of the Road Plan was something that we as engineers organised, and quite obviously, we always organised it in the off years from elections. It was never put on during election times, there would be too much political pressure. It would override the basic facts of the needs for the roads.

In announcing the Road Plan in 1963, the Main Roads Report noted:

> The system of roads shown in the Plan for provincial urban areas is tentative only. No proposals were made for the City of Brisbane. In the time available for the preparation of the Plan

it was not possible to undertake the detailed transportation surveys that are necessary before the routes of major roads can be determined. These will be carried out during the next few years.

The result was the introduction of a series of transportation studies, firstly in Brisbane, then in provincial towns and regions, which complemented the long-range thinking of the Road Plan, for it was recognised that road classifications within the main urban centres could only be provisional until detailed studies were undertaken.

Until the 1960s, Main Roads' operations were directed at the building and maintenance of roads *between* population centres, while the roads and streets of individual towns were a responsibility of the individual local authority. With the exception of a few major projects, such as the Story Bridge in the 1930s, Brisbane remained the responsibility of the Brisbane City Council, and to a lesser extent, the same separation of authority existed in provincial cities. By the 1960s however, it was realised that the flow of traffic *through* cities could best be dealt with by the combined expertise of the local authority *and* the Main Roads Department. As the 1963 Report explained, the objective of these surveys was to determine the existing pattern of motor vehicle travel in the urban area, to ascertain the development reasonably to be expected and lastly, to determine the pattern of travel movements that would follow from such development. On the basis of these studies, the location and standard of design of future roads would be determined.

The first such 'origin and destination' survey was conducted on the Gold Coast between August and October 1962. The survey involved 37,000 interviews, and was a major achievement for a department which was yet to enter the computer age. In 1963, a study of Toowoomba City was conducted in cooperation with the Toowoomba City Council, and over the next few years surveys were carried out in many parts of the state, including one on the North Coast between Bribie and Tewantin during 1965, Townsville during 1966, in Ipswich and Redcliffe in 1968, the Mackay-Sarina region in 1969, and in the cities of Mackay and Rockhampton in 1971.

As well as these more specialist studies, in 1966 the Australian Road Research Board conducted a state-wide traffic survey. This new emphasis on basic research, evident in both the Road Plan and the transportation and traffic studies, illustrated Barton's personal commitment to change. However it also reflected an Australia-wide trend. In March 1960, for instance, a major initiative came with the formation of the Australian Road Research Board. This was an unincorporated research body, later incorporated as a public company in January 1965, which was established to encourage and co-ordinate research in problems such as aspects of pavement design and construction techniques, traffic flows and safety, and the economics of road transport. It was to be a co-operative development, involving both State and Federal Governments, and the permanent heads of all state road authorities and of the Commonwealth Department of Works. In 1962-63, it had a budget of £130,000.

By far the largest such transportation study was the Brisbane Transportation Study, commonly known as the Wilbur Smith Plan, which was completed in September 1965. Unlike the studies of other towns, the Brisbane study was not done by Main Roads personnel, but was contracted out to American consultants Wilbur Smith and Associates of Connecticut. With hindsight Des Simmonds is critical of the decisions made:

> The traffic was starting to build up in Brisbane, bearing in mind that up until that time, the Main Roads didn't encroach in the Brisbane area – the roads in the Brisbane area were all under the control of the Brisbane City Council. The task must have got too big for the BCC and the government decided to bring its own departments in to upgrade roads. The Wilbur Smith was a magnificent plan, a plan from somebody overseas who didn't really understand this country. Right from the start it was probably 90 per cent impractical, however we did finish up with the South-East Freeway, didn't we?
>
> It was too grandiose for a city the size of Brisbane, and we just couldn't afford to pay for it. The general idea was to build the

South-East Freeway in the first 18 months. Well it took from 1968 to 1978. Planners sometimes get carried away.

But it was gradually modified, for the original expectations of the Transportation Study turned out to be too grand for Brisbane's needs. In 1965, eight freeways, four expressways and five new bridges, including the Gateway Bridge, were proposed. By 1968, the Commissioner reported that, after the completion of the South-East Freeway, five further freeways were planned for Brisbane, for which 'preliminary designs' were already on hand. These were to be a Central Freeway from Melbourne St across the proposed Merivale Bridge to the Northern Freeway, the Western Freeway from the Central Freeway to Toowong, the North West Freeway from the Central Freeway to Everton Park, the Northern Freeway from the Central Freeway to Kedron, and the Riverside Expressway from Turbot St to the Central Freeway. Of these, only the Riverside Expressway, and Western and Central Freeways in modified form, have eventuated, and only two of the proposed new bridges, Gardens Point and Gateway, have been built, together with the replacement of the Victoria Bridge.

Transportation studies in other parts of the state were not as far-reaching as the Wilbur Smith proposals, but of great local significance. In Townsville, for instance, the report of the transportation study in 1966 recommended the expansion of the Charters Towers Road into a multi-lane carriageway, involving the construction of two three-lane concrete bridges to replace the old narrow structure at 'The Causeway'. All construction had to be done while leaving the route open to traffic, and since construction was across a tidal region, it was first necessary to dam a tidal creek.

The Gold Coast origin and destination survey in 1962 indicated how traffic was increasing in this fast-growing area of the state. The solution adopted was to improve traffic flow by a system of one-way traffic, and to replace the old Nerang Bridge. The one-way system considerably altered traffic flows in the area, and was only accepted reluctantly by the local council. According to *Queensland Roads*, Main Roads' own journal, local prejudice had to be met and, as is

usually the case in these circumstances, public relations played an important part.

Des Simmonds was in charge of the survey:

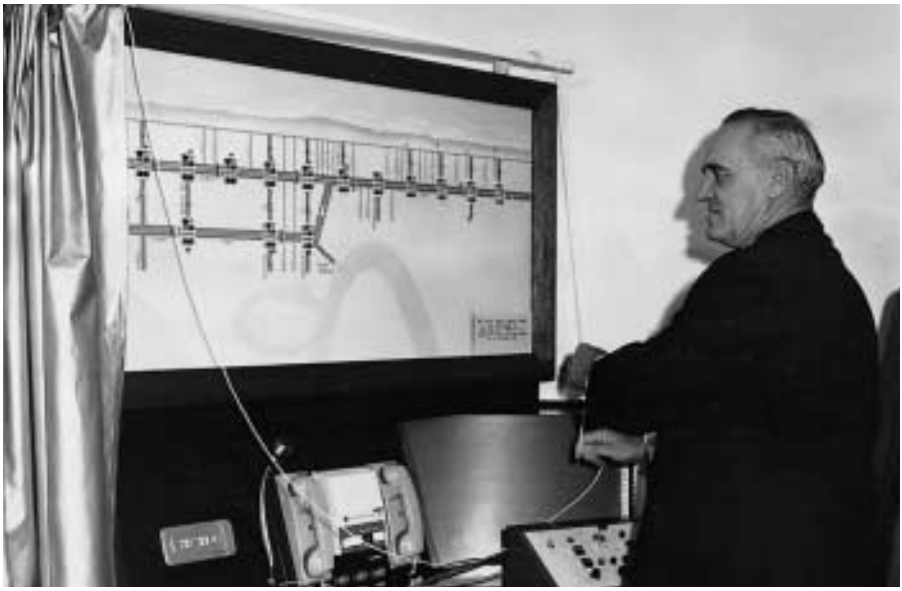
> The approaches between Southport and the bridge actually ran out into the Broadwater itself. We used to get a bit of ribbing from fishermen as we'd walk through in neck-deep water in between their fishing boats, while we were doing our surveys. The next section was the bridge, roughly about 1200 feet [366 metres] long. It was too long to measure with tapes; that's the first project on which we used electronic distance measuring equipment. A surveyor named Keith Waller from the Survey Office at that time, brought down a geodometer, which was a very old model, you needed a packhorse to carry it. It was in about a 3' by 2' [91 by 61 centimetre] box. He brought it down one night, and he measured the lines across the Nerang River at where the bridge is at present, and also the two channels on the southern side towards Surfers Paradise. It's probably worth noting that we had already calculated those distances ourselves and we only differed by a tenth of a foot [3 centimetres] from the final measurement by the geodometer, so I don't know what he brought the geodometer down for.
>
> At that time, those surveys extended right through to the southern end of Surfers Paradise, and as a result of those surveys the two-way roads through Surfers Paradise were built, as well as the bridge complex, and Macintosh Island, because Macintosh Island, while we were working there, was about 90 per cent under at high tide. In fact it was quite good, because every time we worked there, especially at high tide sloshing through the water, we used to get mud crabs.

As would be expected, the expanded Main Roads involvement in Brisbane's road system involved a major expansion of the department's surveying activities and this brought its own problems.

According to Des Simmonds:

> It meant that we had to have some sort of major control surveys through the whole of Brisbane. There weren't any, they didn't exist. It's a fault of Queensland that we don't have a decent coverage of standard mapping, that's topographic mapping, at a scale that we can use for planning projects. So it virtually meant that we had to re-survey the areas of Brisbane that we were interested in, the corridors where the freeways were planned to go eventually. So the first thing we had to do was to set up a second order trig. network over the whole of Queensland. This was done in conjunction with the Department of Surveying and Mapping.
>
> We as a department fixed the position of all the trig. stations – we actually installed the trig. stations in position. Sir Max Serisier, who was later to become Surveyor-General in Queensland, was seconded by the Department of Surveying and Mapping to measure all the distances and read all the angles between the trig. stations. Our own survey crews carried all the levelling, so we did all the levelling between the trig. stations. That's how the network was set up in Brisbane.
>
> The next step in the planning and design of the roads was to carry out feature surveys either on the ground or by other means. Smaller areas such as Kemp Place and the southern end of Kangaroo Point Bridge, Shaftston Avenue to Wellington Road, they were surveyed on the ground by survey teams. The larger areas where there was a lot of detail such as the South-East Freeway, which extended all the way from the southern end of the Captain Cook bridge right out to Mains Rd. at Mt Gravatt. All that information was obtained using photogrammetric methods, and the department actually contracted that work out to private firms.

Aerial surveys were also undertaken. During 1965, both Brisbane and Townsville were covered by block aerial photography, and about 500 miles [800 kilometres] of aerial strip photography was carried out on highways, main roads and beef roads.



The unveiling of Main Roads' digital computer – one of the innovations of the 1960s.

One of the most significant technological changes of the decade came with the installation of the first Main Roads computer. In 1964, the Department helped to pay for an IBM computer in the University of Queensland's Engineering School, in return for access to the machine for some electronic data processing. During 1965, it undertook the massive task of converting approximately 600,000 vehicle registration records to machine-readable punch cards. The job took nine months, and employed thirty punch and verifier machines and operators, ten document coders and three officers on miscellaneous duties. All but one were women. In 1966 the Department bought its own computer, a monster which weighed six tons and cost half a million dollars. Gordon Neilsen was working in Administration when the computer was installed:

> Prior to 1965 we'd started using computer punch cards for various things. It was mainly to do with recording of survey data, I think that was the thing they started off with, then they gradually built it up. Registration then came into it, but it wasn't on-line, it was more just updates here. They punched it on to cards and updated the system once a week.

> Prior to that, almost everything was done manually. When computer systems were coming in, a lot of people thought they wouldn't be able to cope with them. These people had been around for a long time and so used to working with handwritten things, but one thing we found here – and I'm only a two-fingered person on the keyboards – a lot of people are, but we coped very well with it.

Computers were also used in processing surveying material, as Des Simmonds explained:

> We tried using 'mark sense' cards in the field, to enter information. To be absolutely truthful, we took longer doing it that way than it did by the old manual method, and then when they used the equipment to read the cards, there were some errors. The card used to get dirty in the field, so at that time we stayed with our booked entries, and a system was developed of processing the data as it was surveyed. The books would go to Computer Branch. We had data prep girls there who would key the information straight out of the field and level books into the computer programs in set formats and then the computer was able to process the data.
>
> For years this was restricted to level information rather than features and detail - features and detail was still plotted by the draftsmen. When we started to use our electronic distance ME [Measuring Equipment], one of the main advantages of it in these early times was that we were able to use it in heavily trafficked areas; prior to EDME we used to have to measure everything with a chain, which meant we had to hold up the traffic. There were two advantages: we didn't disadvantage the motorist, and our chain-man didn't get run over.

An important factor in the successful introduction of many new technologies during these years was the emphasis that Commissioner Barton placed on training at all levels of the institution.

Doug Morton: Charlie Barton was very strong on training, all forms of training, right across the board.

Group training on a job site, Cunningham's Gap Road, 1964.

Bill Cock: He really started the exercise of sending engineers and others to management courses. He was involved very deeply with AIM, the Australian Institute of Management, and he sent people to that within Queensland and the Construction Management Course down at the University of New South Wales, and ultimately, to the Australian Staff College at Mount Eliza. He also instituted the annual District Engineers' Conference for a week, which ultimately became the Senior Officers' Conference. That was all part of his initiative to do that.

In Central Division we used to run training courses in all the districts. We ran classes, and brought all our foremen and cost clerks, and decentralised these out to Barcaldine and Mackay from Rockhampton. And it was expected, accepted and desired that the Assistant Commissioner, Divisional Engineer, and the District Engineers would go there and be part of the

training, so that the staff started to identify themselves to the blokes on the job. That was the philosophy of the whole exercise and it worked.

And we also took in all local authority staff that worked for us, when they were constructing authority. We insisted on *their* foremen, *their* cost clerks and sometimes Shire Clerks and engineers, coming to our courses, so we up-graded the road construction industry. We even had contractors sending staff.

Morton: Local authorities were pleading with us to take their foremen. We didn't care whether the foremen were working on main roads or not, as far as we were concerned, it was all to the good of the construction industry in the state. See, the thought was that, righto, basically, Main Roads is responsible for the declared road system in the state. But also, the Main Roads Department is the government authority overseeing *all* roads, not only declared roads, but *all* roads. And we felt that we had a part in the local authority system, as well as our own, and we were happy to accept that, too.

Cock: And we deliberately decentralised this, so that people were able to go to them without having to travel thousands of miles. The courses were held in district centres or wherever there was a suitable sort of centre for the number of people who were coming. And it worked marvellously. Plus the fact that everybody got to know each other, because they'd been welded together for a week. In Rockhampton, we used to run a course every 6 or 12 months for our graduate engineers who'd been sent to us the previous year, and had been sent to Mackay and Rockhampton and out west and so on. We used to bring them together for a week in which we could tell them some home truths about the Main Roads Department and the sort of bastards that ran it!

It is worth noting that the beef and brigalow road schemes were amongst the most important rural projects of the 1960s. The term "Beef Road" was coined to distinguish those roads for which the Commonwealth Government supplied special funds, by grant or

loan, as distinct from roads constructed entirely from Main Roads Department funds. From 1947, the State government had provided funds to improve roads in the Channel Country, aimed at promoting the operation of road trains for carrying livestock. In 1949, the Commonwealth began to provide funds. During the 1950s, droving began to disappear before the competition of the new road trains, and the State government developed a plan to provide roads for transporting cattle between the breeding and fattening areas of the state, and for the quicker transport of fat cattle from the fattening areas to railhead and to the export meat-works along the eastern seaboard. In 1961, Commissioner Barton presented a report to the government envisaging a network of roads to a gravel surface standard, to cost $44m, and to be completed by 1970.

The roads chosen for the first stage (1961-66) were Julia Creek-Normanton, Georgetown-Mt Surprise and Mt Isa-Dajarra, in the Gulf Country, and in the Channel Country, Dajarra-Boulia, Winton-Boulia and Quilpie-Windorah, a total road length of 944 miles [1510 kilometres]. The roads were originally planned to be gravel only but eventually more money was provided by the Commonwealth to allow bitumen surfacing.

In the Channel Country, in particular, many of the original roads had been designed as stock routes. They therefore followed the water courses and were easily flooded. The task of the surveyor was to find a new all-weather route, if such was possible. Between Winton and Boulia, major floodways had to be constructed across the Diamantina River (¾ mile [1.2 kilometres]) and Hamilton River (2¼ mile [3.6 kilometres]). Some roads, such as the one from Georgetown to Mt. Surprise, were completely new; others involved major diversions from the original track. The Brigalow Roads scheme was also based on shared funding from the Commonwealth and State governments. They were roads designed to give access to the brigalow areas of Central Queensland in the Fitzroy Basin.

All these schemes involved the work of surveyors, and Des Simmonds remembered how conditions in the field were changing for surveyors by the 1960s:

In the 60s things changed. People's attitudes changed too. They wanted better conditions, they wanted more. We probably didn't want more because we didn't have more at home. There was no TV until 1959, so we didn't want TV in the bush. We had radios, which was exactly the same as everybody had at home. The camp conditions, although they seem to be poor by modern standards, weren't that bad by existing standards in the city.

Those were basically the conditions. We had refrigerators before we got stoves. We got refrigerators in 1949, and I never got a stove until 1953. Then in 1962 the surveyors approached the department about the use of caravans, and it would have been 1962 to 63 when we first started to get mess caravans. They were the first for cooking and eating in, and the department agreed to pay the surveyors a caravan allowance if they provided their own caravans for living.

As well as changes in living conditions, the whole pattern of work in the survey camps was changing. Winter surveys, designed for six months at a time, brought surveyors into rural areas on temporary assignment, with a greater emphasis on speed:

Whilst I was in the office we had one area of Queensland, No. 7 district based on Barcaldine, that didn't have a full-time surveyor. Each year I would take a survey crew out into Barcaldine in the winter and I would start those surveyors out doing six months work in No. 7 district.

Surveyors from the coast would go out during the winter into Western Queensland, work for six months, and as soon as it got hot they'd go back to the coast and for ten years that's how the surveys were done in western Queensland, rather than have surveyors full-time in the district. That changed in the mid-70s, and now we have surveyors permanently allocated to the western districts based on Roma, Barcaldine and Cloncurry.

Other projects involved not the extension of the road system, but its *expansion* and constant *updating* to deal with new cars, new traffic

patterns, and new expectations. Car ownership was much higher by the 1960s, families had higher incomes and more leisure, and families in cars and caravans were increasingly setting out to explore the country. Trucks, including heavier vehicles up to the great road trains of the cattle country, were more and more taking over from trains in the transportation of goods of all kinds. With more motorists on the roads, driving longer distances both for leisure and commercial reasons, the increasing amounts of traffic posed problems for small towns. On the other hand, drivers wanted to reach their ultimate destination without delay. The result was the widespread construction of bypasses around towns. Just one example of many is the Beenleigh Bypass on the Pacific Highway, where work began in 1963, and included building a new bridge at Yatala to replace the existing timber bridge over the Albert River, which could no longer cope with the volume of traffic.

Main Roads' Secretary, Leo Feenaghty.

At the end of 1965, the retirement of the Secretary to the Main Roads Department, Leo Feenaghty, marked the end of an era. Feenaghty joined the Queensland Public Service in 1916, and was appointed as a clerk to the Main Roads Board when it first began in 1922. By 1926 he was Assistant Secretary, under the Secretary, J. E. England. When England was seconded to Melbourne in 1940, Feenaghty became Acting Secretary, responsible for the complexities of co-operation with other departments during the war period. He became Secretary of the Department on England's retirement at the end of 1952, and was himself replaced as Chief Administration Officer and Secretary by Alexander Morris. One of Feenaghty's last

administrative tasks was organising the construction of new headquarters for Main Roads at Spring Hill, though he retired just before the department moved into its new quarters in September 1967.

The new headquarters were known, colloquially, as 'Feenaghty's Folly'. The initial transfer of 1250 staff, with all their furnishings and records, was an enormous task. Transfer of the Registration Branch was particularly complicated, involving the shifting of about 750,000 files while normal activities were being continued. The complete move of all branches from Dickens St., Perry House, Esanda House, the Institution of Engineers Building, Howard Smith Building and the Department's building in Mary St. was completed by the end of September. The new building in Boundary St. brought together the whole of the department's administrative branches in a single building for the first time since the start of World War II. However, while this undoubtedly increased efficiency, the building was also a long way from the centre of the city, a cause of some inconvenience to workers, as Gordon Neilsen recollected:

> To a lot of people it was a bit of a shock, the inconvenience of moving up here, because our building used to be where Suncorp is now, and you know how close that is to town. It was a bit traumatic for people because they only had three quarters of an hour for lunch in those days; we didn't have flexible working hours, and to be able to get down town and back in three quarters of an hour was a bit of a hassle. And on pay days, I can still see cabs lined up from this corner, way down past the International Hotel. People had booked them, five to a cab, to get down town the quickest way.

Amongst those 1250 staff at Spring Hill was a high proportion of women, about whom little has as yet been said. Main Roads was always a predominantly masculine organisation. The emphasis was on engineering, surveying and technical skills. Very few women trained in these areas, and there were structural disadvantages for women attempting to break into such male-dominated fields. Many of the Department's technical staff began work as cadets, direct

from school, with the expectation that they would complete their education through evening classes; this was not usually possible for women. After the war, men, but not women, who had served in the armed forces were able to go to university on Commonwealth repatriation scholarships. Other young men took Main Roads scholarships, and were bonded to the Department for a number of years after completing their degrees. This path, too, was closed to women. Only very gradually, with the development of new areas of expertise, such as photography and computer science, did women begin to move into technical work. Even then, there were sometimes difficulties. Stan Rawlings, for instance, recalls problems:

> It was difficult trying to persuade males of the species that women could be very usefully and gainfully employed in various areas. I introduced women into the photographic section which used to be a totally male preserve; the chief photographer always used to say: "No, you can't put women into darkrooms with men," and I suggested you can. His successor accepted the situation and we've probably got fifty per cent women working in the darkrooms and doing a lot of good processing and taking microfilm and things like that.

Another structural difficulty for women was that promotion was often dependent on mobility. Employees were expected to do some country service, and for many women, this was hard to arrange. Girls were not expected to leave home before marriage, and even finding accommodation in country towns could be difficult. Gordon Neilsen described the problems they faced in Roma:

> One of the difficulties for females was that they had difficulty getting places to board. Because people – and I know the place where I stayed – there wasn't a female boarding there, even though the lady was a widow and she was running the place, she wouldn't have lady boarders because she felt that there was a lot more concern, their parents were a lot more concerned with what they were doing, whereas the fellows were able to handle themselves. And as a consequence, lady school-teachers, and most of the females there couldn't board

at some place where they had their meals cooked for them and that sort of stuff, they couldn't get a place. They had to build some units for them where they could live and prepare their own meals.

Most women in Main Roads worked in the clerical area and here, too, they were at a disadvantage. As Gordon Neilsen admitted, it was always a 'male domain' in Main Roads. Throughout the Public Service, women were expected to leave when they married. Until the end of the 1960s women received less pay than men in the same job classification, but to compound the problem, women could not become clerks, but were obliged to stay at the lower classification of clerk-typist, like Kath Mahoney:

> In the beginning the Public Service didn't say male or female, everybody was equal to be a clerk, but then this infamous section 17 was put in. We had to have the same pass in Junior to get into the Public Service as the blokes but we couldn't become clerks. Because of section 17, we were only able to become clerk-typists, and this was because in 1932 I think that damn J. D. Story, he told the Premier of the day that as there was a depression on it wasn't fair. Up until then, women went into the Public Service as clerks.
>
> It took us forty years to get back to 1932, and that was after bloody battles down the union office, so the girls don't realise it, but it was a long battle.

Women were subject to more regulation than their male colleagues, with dress restrictions, no trousers, and no smoking allowed:

> Smoking! I know it's a no-no these days, but we girls weren't allowed to smoke in the office. All the men were puffing away like mad, but we weren't able to smoke, because they said we were typists, and it would splatter and might put a scorch mark on the paper. It didn't matter that one of the blokes, you'd type this beautiful letter, and he'd say: "Would you mind typing this again?" and you'd look, and he used to smoke roll-your-owns. With the paper it sends out a little catherine wheel

of sparks, and if it hit the paper, just the tiny little burn marks through the paper, he'd come back and you'd have to type it all again. But we weren't allowed to smoke!

According to Gordon Neilsen, women workers were supervised even at the most fundamental level:

> They decided to bring this lady in to keep an eye on the girls in the ladies toilets. Funnily enough there wasn't one in the men's toilets, but in the ladies' toilets, there always used to be a couch. Now that was for the girls to go and lay down on if they weren't well. The trouble is, the ladies used to have to book three weeks ahead to get to lie on the couch. And they used to waste a lot of time in the toilets, I don't know whether the men did or not, but they brought this monitress in and her job was to go and check out the toilets every so often to make sure the girls were on the move, or if they were unwell she'd take them home. That was back in the early 60s.

While most women in Main Roads worked in the clerical area, new choices were becoming available by the end of the decade.

These restrictions were aimed at administrative staff. Only very gradually did women start to work in the technical areas. The Main Roads Department report for 1963 lists a first, lone woman, Miss E. Martens, amongst the 121 engineers employed that year. The next year she had gone, but three computer scientists and a technical officer were women, and in this area there was a gradual increase in the proportion of women throughout the 1960s.

Charles Barton retired as Commissioner at the end of 1968 to become Co-ordinator-General of Queensland, as Kemp had done before him, but the changes he had instituted in Main Roads - the Road Plan, decentralisation, and training - were carried on under his replacement, Harry Lowe. The third review of the Road Plan was conducted during 1969. The policy of decentralisation continued, and was formalised in 1969 by the division of the state into three areas of control for administrative purposes: Townsville, for the Northern Division, Rockhampton, for Central Division, and Brisbane, for Southern Division. The emphasis on training continued, with staff officers studying overseas and interstate, as well as in the new educational facilities attached to the Spring Hill headquarters.

By the end of the 1960s, technology was changing the experience of road building. Concrete, to a large extent, replaced timber and steel in bridge building. The first computer-controlled traffic lights were introduced on the Gold Coast Highway at seventeen intersections. The computer program to control them was designed by Main Roads' programmers, two of them women. For employees within Main Roads, too, technological changes brought greater comfort in working conditions. By 1969, field accommodation for survey teams, for instance, included mobile kitchens with LP gas stoves, refrigerators and hot water, and living quarters with 240 volt electricity. Many regional offices were air-conditioned.

On the other hand, while material conditions improved, some interviewees expressed a sense of malaise within the Department by the early 1970s, perhaps brought about by the sheer increase in the size of the organisation, and the loss of communal spirit that this could bring.

For ordinary Queenslanders, however, there was no doubt about the achievements of the Main Roads Department in transforming their state. Especially at elections, they might grumble about particular decisions regarding road building, or the quality of the roads in their neighbourhood, but a longer perspective shows the profound change that roads have brought about in Queensland.

Traffic lights – another addition improving road conditions in the 1960s.

EPILOGUE
THE 1970s –
The Story Continues

From the 1970s onwards, the Main Roads Department has continued to build, maintain and improve road networks for the people of Queensland. It has been a task that the Department has pursued with commitment and vigour.

From the Cooktown Developmental Road in the far north, to the Pacific Motorway in the south east, road developments have steadily been improving the standard of living and quality of life of all Queenslanders. From the challenges of the early days, Main Roads' focus has become increasingly clear: delivering an effective road system to provide linkages for rural communities, safety for the motoring public, and improved economic and social growth for the whole state.

To do this, the Department has embraced a more scientific and sophisticated approach to building roads and traffic management. With the advent of intelligent transport systems and the use of the latest technology, Main Roads' business today is no longer simply 'just building roads'.

As the Department continues to evolve, its mission is simple – to become the premier roads agency in South-East Asia in the new millennium. This goal is set to take Main Roads into the future. The progress from bulldust to beef roads has been quite a journey and now the beyond awaits ...