



**Roads and Traffic Authority  
Oral History Programme**

**Development of the  
Pacific Highway and  
Sydney-Newcastle Freeway**

**Summary Report**

Researched and compiled by  
Frank Heimans  
Cinetel Productions Pty Ltd

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*Prepared by:*

Frank Heimans

Cinetel Productions Pty Ltd

*for:*

RTA Environment and Community Policy Branch

Level 10

260 Elizabeth St

SURRY HILLS 2010

Telephone (02) 9218 6083

Fax: (02) 9218 6970

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## *Some comments about Oral History...*

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Written history tells the official story, but often the human interest and real motivating factors are not included.

On the other hand, oral history reveals what you won't find in the files and the history books - the facts and the real reasons things happened. It is told by the people who were there, who were involved, who made it happen, who were affected - in the colour, passion and inflection of their own voices.

Oral history accounts also tell about relationships, perceptions, social and political climates, all of which are part of life and influence our actions and those of others. It often reveals the unsung heroes, the names of those actually responsible for innovations and important changes.

So, oral history provides a counterbalance to the formal written record by giving in addition the personal, intimate, human and social account of events and why they happened.

The RTA Environment and Community Policy Branch established an Oral History Programme in 1997 and the Pacific Highway & Sydney-Newcastle Freeway project is the third undertaken. The project did not seek to present a definitive history of the development of the Pacific Highway and the Sydney-Newcastle Freeway, rather a recounting of stories about life "on the road", told by those who were actually there.

The major output of the study was no less than 36 hours of taped interviews with people involved in all aspects of the development of the Pacific Highway & Sydney-Newcastle Freeway such as planning, location, survey, design, construction and maintenance activities. There are also interviews with those who earned their living on the routes - a truck driver, a bus operator and a Highway Patrol officer. The RTA strongly encourages members of the public to make use of the original audio interview tapes and accompanying logs, which may be accessed at the State Records Authority.

This document is simply a summary of the key themes uncovered during the course of this work.

The opinions expressed in the oral history interview tapes and summarised in this report are those of the individuals concerned and do not necessarily represent the views of the NSW Roads and Traffic Authority.

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## A history of the Pacific Highway

A steep and winding road, designed mainly for horses, drays and the odd three-ton truck: this was the Pacific Highway in 1958 when the last, tortuous section of gravel was sealed with bitumen.

For the 150 or so years prior to that momentous point in its history, the Pacific Highway had emerged from the relics of old bullock team tracks and was used by timber cutters and dairy farmers as a way to get their goods to the river ports.

Described as a 'goat track', narrow and winding, with no centre lines, edge markings, few signposts and numerous ferry crossings, the Pacific Highway was named in 1931 because of pressure put by the Queensland Government, who had decided to rename the section of road from Tweed Heads to Brisbane the Pacific Highway. Before 1931, it was simply known as The North Coast Highway, a road used only as a last resort, with a subservient role to that of the New England Highway, then a faster route.

According to Vince O'Grady, the Pacific Highway defines the history of the evolution of people and goods movement in NSW. He points out that in the first 140 years of settlement, to reach places from Sydney such as Newcastle or Batemans Bay, one went by ship. Until the 1920s, it was still easier to take goods by ship out of the Heads, enter the Hawkesbury River and sail to Windsor than to travel there by road.<sup>1</sup>

On the North Coast, the many relatively isolated communities' economies were based on the great river systems, joined by river or ocean communication and their produce, mainly timber, was sent to Sydney by ship. Until the

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<sup>1</sup> O'Grady      Tape RTA:FH10, Side A, 00:23

coming of the railway, and even beyond, they were almost totally dependent on receiving the necessities of life by water. John Brunt remembers that as late as 1948, on holiday in Yamba, he looked out at sea from his hotel room and saw a ship unsuccessfully trying to unload beer across a sandbar in heavy seas. Being unable to do so, the populations of Yamba and Grafton were contemplating running out of beer.<sup>2</sup>

Peter Cooper speculates that the first roads between North Coast towns were probably ox-cart tracks, used for pulling logs. He also suggests that small roads, necessary to gain access to Crown divisions joined one town to another and could have become the basis for what now is the Pacific Highway.<sup>3</sup>

The highway traversed some rugged and interesting terrain: mountain ranges, bush and alluvial flats, but the highway did not receive the attention that other roads received. The initial development of the road system was radiating south and west and because of the difficulty of the terrain and the anticipated expense involved in upgrading the road, it languished.<sup>4</sup>

Colin Nunn describes motorists travelling along the highway during the 1930s on long-distance journeys as having a 'screw loose', experiencing a hot, dusty or wet, boggy trip, with getting to their destinations at a predictable time just guesswork. He considers it to have been a great adventure for them, as they would have had to take supplies of food, fuel and water and make tyre changes and mechanical repairs on the way. They would have had to break their journey at numerous punts and ferry crossings, where they would have met fellow travellers and shared common experiences. He estimates that the maximum that a motorist of that era could expect to cover would be 150 miles a day, with a trip from Sydney to Brisbane taking at least 3 to 4 days.<sup>5</sup> Tom Hope recounts that when he bought his first car in 1946, it took up to 15

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<sup>2</sup> Brunt           Tape RTA:FH6, Side A, 21:28

<sup>3</sup> Cooper        Tape RTA:FH15, Side B, 05:25

<sup>4</sup> Nunn           Tape RTA:FH1, Side A, 01:47

<sup>5</sup> Nunn           Tape RTA:FH1, Side A, 05:55

continuous hours to drive from Dorrigo to Sydney over gravel and stone.<sup>6</sup> Tom Lindsay remembers travelling from Coffs Harbour to Sydney for the first time in 1945 in the back of his father's truck, wrapped in a blanket and a tarpaulin and that the trip took all of 14 hours, crossing the Hawkesbury River over the bridge that had then recently been opened.<sup>7</sup> Peter Stevens documents that as late as the early 1960s, the drive from Grafton to Sydney was still a 12-hour ordeal.<sup>8</sup>

Colin Nunn reports that during the Depression of the 1930s, those who travelled the highway more frequently would be commercial travellers in their canvas-hooded touring cars - they would travel three or four tortuous hours per day over rough, undulating, unsealed, corrugated and badly potholed roads with tree roots growing through it, hawk their wares and then stay at the local pub in town. Motor travel volumes then were low, with motor car ownership limited to the domain of the rich, the adventurous or the aficionados. The terrain could be relentless: motorists, ponies, sulkies and bullocks had, at times, to wade waist-deep through the Hexham Swamp where the Pacific Highway now goes through.<sup>9</sup>

Colin Nunn confirms that the Depression did have an influence on the highway, as the Commonwealth was funding expenditure on unemployment works for road construction projects. He reports, however, that during the latter years of the Depression, the Commonwealth reduced its contributions to 50%, with the State having to make up the rest from its Main Roads and Treasury Funds, reducing the amount of work on the highway. It was not until the late 1930s, when the NSW railway system was extended to Murwillumbah and the Queensland system to Tweed Heads that money was spent on the northern part of the road to join the two bridges and rail heads together.<sup>10</sup> A

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<sup>6</sup> Hope                      Tape RTA:FH11, Side A, 26:47

<sup>7</sup> Lindsay                  Tape RTA:FH31 Side A, 03:48

<sup>8</sup> Stevens                  Tape RTA:FH31, Side A, 13:05

<sup>9</sup> Nunn                        Tape RTA:FH 1, Side A, 08:33

<sup>10</sup>Nunn                        Tape RTA:FH 1, Side A, 15:20

significant amount of work was also carried out during the Depression on eliminating ferry crossings and new bridges were built at Macksville, Boyds Bay, Barneys Point, Raleigh, Mororo and Sharp Creek, in addition to the construction of a new route between Newcastle and Sydney via Peats Ferry.

During the post-war years, with increasing car ownership and population mobility, the realisation grew that the highway would not be able to cater for the expected future needs. With cars now able to reach speeds of 70mph on a road designed at 1939 standards for a maximum speed of 45mph on hilly and mountainous country, with an influx of tourism to coastal communities and increasing traffic volumes, the DMR realised that something had to be done.



## The evolution of the Highway

### *Urban Construction*

In 1947, Vince O'Grady had just graduated with a brand new Engineering degree in his pocket. He recalls that jobs were plentiful then and says: 'You did not have to apply for jobs, the jobs came looking for us'. He and a mate were deciding who would get the job at the Department of Water Resources and who would get the job at Main Roads. They threw a penny in the air and Vince got Main Roads.<sup>11</sup>

O'Grady arrived on his first day, all dressed up, ostensibly to work in the Structural Design Section. But he soon found that his job designation had been changed to becoming a Field Assistant to the Metropolitan Construction Engineer and on that first day he finished up wearing his best suit in the rain, putting in pegs on the Pacific Highway between Crows Nest and St Leonards. O'Grady describes this section as a four-lane road, with the two centre lanes carrying trams, and as one was not allowed to pass a tram on the right-hand side, nor a stationary tram on the left, in morning peak-hour traffic the head of the queue was always a tram. He suggests that this became the main reason for widening the road to six lanes. Land was acquired, shop fronts were demolished, the kerb lane was moved back 18 feet and two new reinforced 8-inch thick concrete lanes were added.<sup>12</sup>

O'Grady tells an anecdote involving a DMR engineer, 'Uncle' Bob Milner, a colourful character who had been a captain on Lawrence of Arabia's team in the Indian Army. He recalls that 'Uncle Bob' asked the PMG's Department to move a bunch of 300 telephone cables before concreting on the lane widening could begin, but that after a three day wait for the PMG linesmen, there had

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<sup>11</sup> O'Grady      Tape RTA:FH8    Side A, 07:40

<sup>12</sup> O'Grady      Tape RTA:FH8    Side A, 09:10

been no result. 'Uncle Bob' lost his patience and instructed O'Grady to go to a telephone booth in Chandos Street, ring the PMG Department and announce that he was a local resident who had lost his telephone connection. At the same time, 'Uncle Bob', using a heavy excavator, cut the 300 cables.<sup>13</sup>

O'Grady worked a 44-hour week, starting each day at 7:00am and working till 4:30pm. Cement still came in bags and concrete aggregate came in two sizes: an inch and a quarter and half inch crushed blue metal. After pouring, traffic was normally not allowed on pavements for 28 days.

O'Grady also recalls an episode where, one day they had concreted an entire lane from Falcon St to Chandos St and, as they were admiring their work, a car, driven by a woman broke through a barrier and made its way through wet concrete until it bogged. He recounts that when the terrified housewife refused to leave her car, eight men bodily picked it up and, with the woman still behind the steering wheel, deposited it on the tram tracks nearby. 'Uncle Bob' then told the woman: 'Have a good evening, Madam.'<sup>14</sup>

Ron Smythe, another young Assistant Engineer, was sent to the Metropolitan Construction Office in 1962 where the road widening program for the northern suburbs from four lanes to six was still in progress. He recounts that as trams had been abolished, a median strip was added and this was the start of divided carriageways in the metropolitan area. Work on the highway involved the removal of utilities such as water mains, electric cables and telephone lines, the construction of new footpaths and the addition of two new lanes. He mentions that traffic on the highway often had to be stopped when a drain had to traverse the road from one side to the other and that some of the flagmen were spat on and even hit by irate motorists.<sup>15</sup> Smythe points out that one of the benefits which resulted from widening of the highway was a better traffic flow through the widened section, but that it would then jam up again at the

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<sup>13</sup> O'Grady      Tape RTA:FH8    Side A, 12:16

<sup>14</sup> O'Grady      Tape RTA:FH8    Side A, 15:20

<sup>15</sup> Smythe        Tape RTA:FH27, Side A, 15:33

unimproved end as cars merged to two lanes. The road widening program on the urban sections of the highway went on for years.

### ***Rural Construction: Investigation and Location***

Long before the urban reconstruction program had begun, investigation and location work for the route of the Pacific Highway had been carried out in rural areas. John Brunt recalls that in 1945, the DMR had produced a Development Plan for Newcastle and a bypass route had been proposed from south of Charlestown to Sandgate. The DMR also had plans for a deviation from Karuah to Bulahdelah, then a tortuous route through Bucketts Way and diverted from Booral to Bulahdelah.<sup>16</sup> Brian Pearson affirms that the plan called for a safe travelling speed of 40mph, so one can visualise the state of the highway before reconstruction commenced.

Peter Cooper joined the DMR as a junior draftsman in 1950 and spent his first year in the Investigation Section with A.G. Close and Frank Gosdon, whom he describes as monumental figures in the history of road location. In 1951 he was sent to the DMR's Grafton office where the major project involved the widening of the highway from Grafton to Maclean, and as far north as Tweed Heads. His job was as a traditional surveyor, as nobody had yet heard of photogrammetry. He carried out topographic surveys by stadia, taking readings from a vertical staff, plotted bearings, distances and marked contours.<sup>17</sup> He describes a typical day in a surveyor's life during the 1950s as going out into the field for up to two weeks at a time and gathering information about the terrain, which he would then enter in the Surveyors' Fortnightly Journals. These Journals also became a check on a surveyor's movements and how he spent his time.<sup>18</sup> He asserts that the ability to recognise different terrain is an important prerequisite to becoming a surveyor and mentions that, when looking for a new person to work in his section, Vince

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<sup>16</sup> Brunt           Tape RTA:FH6, Side A, 02:19

<sup>17</sup> Cooper        Tape RTA:FH15, Side A, 13:05

<sup>18</sup> Cooper        Tape RTA:FH15, Side B, 07:25

O'Grady had once said that 'he wanted a fellow with the smell of gum leaves up his nose'.<sup>19</sup>

Jack Giddy, who started in 1939, aged 15 at the DMR at a wage of thirteen shillings a week also worked in the Grafton office during the 1940s as a Draftsman and later as a Designer. He remembers tracing designs onto linen sheets, from which they would then be printed. Tools used in the design department were T-squares, pencils, ink, planimeters and blueprint machinery.<sup>20</sup> Jack Giddy recalls the printing of road design plans in sheets 30 to 40ft long.<sup>21</sup> John Henley remembers that even as late as the 1960s, some of the tools still used in the design department were 7-figure logarithms and old mechanical hand-wind calculators which were also used by surveyors in the field.<sup>22</sup> Measurements were in feet and decimals of a foot. Despite these crude tools, Jack Giddy maintains that the accuracy of work at the Grafton Drafting Office was down to two decimal points.<sup>23</sup>

John Brunt maintains that the greatest technological advance in road location and design was the development in the late 1950s of air photo interpretation - photogrammetry - as a tool for investigating land use topography.<sup>24</sup> Peter Cooper explains photogrammetry as the science of using aerial photographs to generate a graphic three-dimensional representation of the terrain, identified by certain coordinated positions on the ground.<sup>25</sup> He remarks that until the advent of photogrammetry, the DMR had relied on small-scale aerial photographs, borrowed from the Army. Cooper traces the history of aerial photography in the DMR back to the late 1930s and claims that they were then ahead of anyone else in Australia in using this medium, and similarly, in the introduction of aerial colour photography, using the DMR's own helicopter,

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<sup>19</sup> Cooper           Tape RTA:FH15, Side A, 06:55  
<sup>20</sup> King             Tape RTA:FH13, Side A, 06:45  
<sup>21</sup> Giddy            Tape RTA:FH19, Side B, 13:15  
<sup>22</sup> Henley          Tape RTA:FH25, Side A, 27:53  
<sup>23</sup> Giddy            Tape RTA:FH19, Side A, 19:50  
<sup>24</sup> Brunt            Tape RTA:FH7, Side A, 00:44  
<sup>25</sup> Cooper          Tape RTA:FH16, Side A, 00:34

in the 1960s. He points out that colour photography was able to show up details that were not previously possible with black and white photography.<sup>26</sup>

Jack Giddy adds that photogrammetry also resulted in a better understanding by engineers and the hierarchy of the DMR of the mind and the limitations of the driver. He reports that information obtained through photogrammetry was usefully incorporated in future designs and brought about a completely different attitude to road design.<sup>27</sup> However, Peter Stevens claims that, in the 1960s, although photogrammetry was used, early results with it proved disastrous, being several feet out in height. He mentions that one project in the Grafton Office cost DMR a large sum of money because the quantities and shapes were wrong and that photogrammetry, regarded then as an unreliable tool, was slow to be adopted. He adds, however, that now it is being used extensively with excellent results.<sup>28</sup> Peter Cooper explains that photogrammetry can draw contours very accurately and when the DMR bought two cameras for horizontal photogrammetry and close up work, the contours of potholes and pavements were drawn to an accuracy of half a millimetre.<sup>29</sup> He also points out that photogrammetry was seen by some surveyors as a threat to their work. Cooper reports that photogrammetry has been used extensively on the Pacific Highway, particularly on the section from Brunswick Heads to Tweed Heads. He adds that LANDSAT satellite imagery is now also used and is a whole new revolution, enabling road designers to interpret soil types underneath water. He remarks that the DMR at one stage thought they were getting clever with this new technology until they nearly lost a man who was swallowed up to his armpits in a swamp.<sup>30</sup>

Cooper believes that the DMR was in the forefront of mapping out the country in ground surveys by using permanent markers, such as concrete pillars on the

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<sup>26</sup> Cooper           Tape RTA:FH15, Side B, 13:45  
<sup>27</sup> Giddy            Tape RTA:FH19., Side B, 04:34  
<sup>28</sup> Stevens         Tape RTA:FH31, Side A, 04:39  
<sup>29</sup> Cooper         Tape RTA:FH16, Side A, 05:10  
<sup>30</sup> Cooper         Tape RTA:FH16 Side A, 15:33

top of hills, and that these were tied in with the National Estate mapping grids. He documents that any new survey marked for road construction now has a coordinate value tied to the whole system in Australia in which utilities such as the Water Board all use the same system and values. He confirms that the use of this system has saved many millions of dollars.<sup>31</sup>

Jack Giddy refers to the introduction of computers for road design, which he says were coming in as he left the DMR in 1984. He warns that early computers were producing some of the most dangerous roads imaginable, because designers using computers were not road designers but computer experts who did not understand road design safety.<sup>32</sup> He adds that only in the last few years have computers with enough memory become available to handle all the data at once in a system known as GIS which uses National Grid Coordinates and holds layers of information, such as property records, names and addresses, soil types, environmental values, Aboriginal records, topography and forestry information. The system can also analyse points of conflict in respect to potential environmental issues.<sup>33</sup>

### *The Changing Route of the Highway*

During the 1950s and 1960s traffic volumes on the Pacific Highway increased dramatically, more than quadrupling pre-war figures. John Brunt quotes in his 1948 study that only about 400 to 500 cars per day travelled the highway north of Newcastle.<sup>34</sup> By 1982, Leo D'Adam found that average daily volumes had risen to 4,000 per day, and in festive seasons, reached up to 11,000 vehicles per day. The DMR's emphasis during the 1950s was on putting bitumen over gravel roads, and once this had been done on the Pacific Highway, it received relatively little funding. Exacerbating this situation, the Country Party member and Minister for Roads, Mr Bruxner was successful in

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<sup>31</sup> Cooper           Tape RTA:FH16 Side A, 16:48

<sup>32</sup> Giddy            Tape RTA:FH19 Side A, 16:06

<sup>33</sup> Cooper           Tape RTA:FH16 Side A, 00:34

<sup>34</sup> Brunt            Tape RTA:FH6 Side A, 21:28

applying political pressure to divert funds to improving secondary roads west of the Great Dividing Range<sup>35</sup>

During the 1960s, the DMR's focus had been concentrated on building the Sydney-Newcastle Freeway and development of the rest of the Pacific Highway languished. A 1971 Feasibility Study on the location of the Pacific Highway north of Newcastle was shelved because of the Federal Government's decision to make the New England Highway the national route, thus diverting available funding for road construction away from the Pacific Highway.<sup>36</sup> Kevin Kirkland maintains that the New England Highway was favoured because it was easier to upgrade, had no river crossings and was a more expedient political option for the government of the time.<sup>37</sup> He believes it to have been the worst decision the government ever made, as funding went to roads that did not serve the masses.

Nevertheless, some limited progress was made on the Pacific Highway north of Newcastle during the 1950s and 1960s with the addition of climbing lanes on some hilly sections. The Bulahdelah section was then relatively new and was considered to be one of the best parts of the highway because it had climbing lanes on every hill.<sup>38</sup> However, it was not until the 1970s that serious attention was given to road widening, bypasses and deviations. Ron Smythe reports that the Dirty Creek Deviation eliminated twenty minutes from the Grafton-Coffs Harbour section of the highway alone.<sup>39</sup> Jack Giddy recalls the intense local opposition by townspeople when the first attempts were made in the 1950s to bypass towns on the Pacific Highway. Terry O'Brien remembers that, when in 1962 the Port Macquarie deviation was opened just before the Christmas rush, motorists found themselves suddenly on a brand new road, passed Port Macquarie without being aware of it and would, on reaching

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<sup>35</sup> D'Adam           Tape RTA:FH17 Side A, 10:45

<sup>36</sup> O'Grady          Tape RTA:FH10 Side A, 06:40

<sup>37</sup> Kirkland         Tape RTA:FH24 Side A, 18:00

<sup>38</sup> Henley           Tape RTA:FH25 Side A, 16:56

<sup>39</sup> Smythe          Tape RTA:FH28 Side A, 12:48

Kempsey, cancel their motel bookings at Port Macquarie. He recalls that businesses at Port Macquarie were rather irate about the bypass and motel owners, service stations and food outlets suffered a substantial loss of business.<sup>40</sup> However, all interviewees confirm that the long term effects on Port Macquarie and every other town that has been bypassed have been beneficial. Peter Cooper thinks that the bypass has made Port Macquarie what it is today. <sup>41</sup>John Henley gives the example of Bangalow, where, with roaring traffic through the town, local residents had problems crossing from one side to the other. He says that since Bangalow has been bypassed, it has become a better place to live. He concedes that after being bypassed, towns stagnate for a few years, but then recover and blossom as they realise that there is another life away from the highway and start to use their assets.<sup>42</sup>

A problem that occurred on bypasses is illustrated by Ron Smythe who recalls that one of the mistakes made in the 1960s at Raymond Terrace was that the Council, keen on generating income from commercial activity would allow development to happen on the bypass. All benefits gained by building the bypass were thus negated as the bypass became choked with service stations, restaurants and houses. He adds that the latest Raymond Terrace bypass, opened in 1998, is the second such bypass. He also draws attention to the Ballina bypass of the late 1980s, where RTA adopted Kerr St as the new route of the highway and Council promised not to allow development on it. He observes that Kerr St is now a commercial strip from end to end with, among other businesses, a K-Mart on it. Smythe notices that RTA is now planning yet another bypass to the west of Ballina.<sup>43</sup>

Ron Smythe comments on yet another case at Bulahdelah where a bypass, built in the mid-1960s has now also been developed. He confirms that the DMR had only an advisory role in influencing councils and that councils pretty

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<sup>40</sup> O'Brien           Tape RTA:FH4 Side A, 17:32

<sup>41</sup> Cooper            Tape RTA:FH15 Side B, 10:59

<sup>42</sup> Henley            Tape RTA:FH25 Side B, 22:00

<sup>43</sup> Smythe            Tape RTA:FH27 Side B, 00:23



well did whatever they felt like doing, as they owned the land. He points out that RTA now builds new roads on proclaimed motorways rather than on road reserves and has absolute power under planning controls because it owns the land on which the road is built.<sup>44</sup>

Tom Lindsay is very critical of the RTA in that there is still no plan to bypass Coffs Harbour, which he describes as a 'nightmare' over the Easter and Christmas holidays and he wonders what it will be like in ten years time. He thinks that the RTA haven't got their priorities right, as they plan to bypass Ballina, but not Coffs Harbour.<sup>45</sup> Kevin Kirkland proclaims that Coffs Harbour now has the worst traffic congestion south of the Queensland border and Peter Cooper believes that the only way to solve the traffic problem at Coffs Harbour would be to build a tunnel.

### ***The Work Depots: on the road with the DMR***

The Pacific Highway was, until 1958, largely gravel, and progress to fix it was slow, the objective being to get through in all weathers and conditions. During the 1960s, the highway north from Newcastle was basically two lanes all the way to Brisbane and the main construction activity was some road widening from 18ft to 24ft, so that edge and centre lines could be added.<sup>46</sup> Much of the DMR's activities to improve the highway centred around the Works Depots, often in remote areas. Men slept in tents, braving the weather as best they could and paying five shillings a week for the privilege.<sup>47</sup> Brian Pearson, who spent his second year with the DMR at the Port Macquarie Works Office remembers that there was always an extra tent, which he discovered to be for empty bottles, a traditional practice he felt would be unwise to disturb.<sup>48</sup> These were truly frontier days: Leo D'Adam remembers driving from Bulahdelah to Karuah once a week with the men's pay, carrying a shotgun.

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<sup>44</sup> Smythe           Tape RTA:FH27 Side B, 04:03

<sup>45</sup> Lindsay         Tape RTA:FH33 Side B, 12:35

<sup>46</sup> Smythe           Tape RTA:FH27 Side B, 08:48

<sup>47</sup> D'Adam         Tape RTA:FH17 Side A, 03:37

<sup>48</sup> Pearson         Tape RTA:FH34 Side A, 03:58

<sup>49</sup>Tom Hope recalls that the general atmosphere among the men at Alum Mountain, near Bulahdelah was congenial and comments on the quality of the men.<sup>50</sup> He describes the furniture inside each man's tent as a bed, a chair and a cupboard and doubts whether RTA employees today would put up with the primitive living conditions. He also adds that Edgar the cook, when sober, produced reasonable meals.<sup>51</sup> Don McDean, who was based at Karuah cooked his own meals. Bush showers were by way of pipes which ran through the barbecue. He recollects that the atmosphere was what you made it and that it was no good complaining to anyone.<sup>52</sup> McDean spent his days splitting rocks up to two feet across with a knapper while a ganger overlooked the work. He explains that there was a knack to splitting rocks: "You had to look for the grain and if you found it, the rock would split fairly easily: if you couldn't, you'd bash there all day."

### *Construction equipment*

Equipment was often basic and Vince O'Grady recalls once having had a horse-drawn grader on the Gwydir Highway, just off the Pacific Highway.<sup>53</sup> Tom Hope mentions mostly hand labour and, on the Pacific Highway in 1939, the use of horses and drays to cart rock from the cuts to the field. He adds that in some remote areas in the western part of the State even camels and drays were used.<sup>54</sup> Hope also spent part of his time on the Pacific Highway working and experimenting with some new types of equipment: force-feed loaders and portable breakers, imported from the USA, which proved unsuitable for the rugged Australian conditions.<sup>55</sup>

Brian Pearson mentions the post-war shortage of construction equipment, with ex-Army bulldozers, having exhausted their first life, continually under

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<sup>49</sup> D'Adam      Tape RTA:FH17 Side B, 20:02  
<sup>50</sup> Hope        Tape RTA:FH11 Side A, 21:35  
<sup>51</sup> Hope        Tape RTA:FH11 Side A, 08:43  
<sup>52</sup> McDean     Tape RTA:FH23 Side A, 06:55  
<sup>53</sup> O'Grady    Tape RTA:FH8 Side B, 03:16  
<sup>54</sup> Hope        Tape RTA:FH12 Side A, 06:40  
<sup>55</sup> Hope        Tape RTA:FH11 Side B, 01:00

repair. He recollects that it wasn't uncommon to find several local Forestry Dept. bulldozers in amongst the DMR equipment on Monday mornings, the men having commandeered them on Sunday and having worked them until they were forced to return them.<sup>56</sup>

Don McDean graduated from labourer to bulldozer driver and worked on the O'Sullivan's Gap section, driving an International TD-18 and an Allis Chalmers HD-20, both of which had no rippers fitted. The work stretched over 12 months and it was one of the most difficult jobs he ever had, due to the hardness of the quartz and blue metal rock. He used graders and front end loaders, but some of the rocks were so heavy that they lifted the back wheels off the ground. He recalls that it took two HD-20 dozers one whole day to get a large rock out of a hole at Karuah and estimates that the rock was about 8 ft high by 10 ft wide. He adds: "He's still sitting out there for anybody to see".<sup>57</sup> He also remembers a near-accident in a quarry when the top of the quarry collapsed onto his machine and nearly pushed him over the edge. Others were not so lucky: Leo D'Adam recounts a fatal accident in which a roller driver was crushed by his own roller. He maintains that work practices were fairly good, but that at times, workers tended to become a bit careless.<sup>58</sup>

McDean remembers an accident that happened just out of Bulahdelah where a bulldozer driver called 'Digger' Mackaway went under a rock shelf which collapsed on top of him, smashing the tractor into three pieces and crippling Mackaway for the rest of his life. After recovering somewhat, Mackaway was sent to Waratah to work in the DMR laboratory, supposedly for life. McDean recalls that when the DMR closed the laboratory and moved it to the Divisional Office, Mackaway was sacked, apparently because he was too crippled to make his own way from his house to the job and the DMR would

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<sup>56</sup> Pearson           Tape RTA:FH34 Side A, 06:20

<sup>57</sup> McDean           Tape RTA:FH23 Side A, 14:50

<sup>58</sup> D'Adam           Tape RTA:FH17 Side A, 23:58

not agree to pick him up any longer. He says that the DMR "done the dirty on him" but admits that the DMR generally was a good employer.<sup>59</sup>

Leo D'Adam mentions that an evolution occurred in construction equipment and methods at the DMR. When he worked on the construction of a climbing lane at Belmont during the 1950s, the DMR was using new bulldozers with hydraulic rippers and blades. They then entered the era of vibrating rollers which minimised the use of water on the road, followed by concrete paving machines that could finish up to 2kms of 8 metres-wide concrete pavement per day. After that, sophisticated laser leveling gear, touch-type profiling on graders and bitumen sprayers came into use.<sup>60</sup>

### *Materials and Pavements*

Tom Hope's job was mostly setting and checking out the construction work and exploring for naturally occurring pavement materials, as in the 1940s, one did not have crushed rock or concrete and pavements were made from whatever one could find within a reasonable distance from the job.<sup>61</sup> Brian Pearson and Tom Hope both mention the use of local crushed shale, broken down to pavement size by the use of 'Sheep's foot rollers' drawn behind a tractor with cleated rollers, wind-rowing the material and then passing it through a crusher to spread it back on the road. Hope believes that this method was the beginning of what is now used throughout the State, where existing pavements are re-used.<sup>62</sup>

Don McDean worked on the section of the highway from Nahiack to Taree where 10 inches of gravel was put on the surface. He also confirms that the gravel was not stabilised and that most of the road from Karuah to Bulahdelah has broken up for that reason.<sup>63</sup> Colin Nunn confirms that this

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<sup>59</sup> McDean      Tape RTA:FH23 Side A, 16:23

<sup>60</sup> D'Adam      Tape RTA:FH17 Side B, 21:45

<sup>61</sup> Hope        Tape RTA:FH11 Side A, 09:25

<sup>62</sup> Hope        Tape RTA:FH11 Side B, 02:45

<sup>63</sup> McDean      Tape RTA:FH23 Side A, 25:31

was the case in the 1950s, but, as traffic volumes were low then, suggests that strength would not have been an issue.<sup>64</sup>

Leo D'Adam recalls that very small royalties were paid for local gravel, usually threepence or sixpence per cubic yard, but as funding for roads became more plentiful and larger quantities of gravel were being used, quarries became exhausted and the price increased. This resulted in quarry companies buying up sites and charging up to \$10 per cubic metre, but materials now had to be graded and stabilised, and cement and lime had to be mixed in to bring them up to required standard.<sup>65</sup>

D'Adam compares the quality of soft and hard aggregate used on road surfaces and reveals that the softer aggregate's sharp edges wore and became cornered, resulting in a loss of friction to tyres and increasing braking distance. He mentions that quarry companies were well aware of this and bought up sites where good-quality aggregate remained.<sup>66</sup>

According to Vince O'Grady bitumen pavement on country roads was called 'flush seal'. Gravel was stone: packed, graded and compacted and then a tar spray, followed by a bitumen spray of 25 gallons per square yard was applied. Chippings would be tipped out by a truck with a fantail spreader and this would be followed by pneumatic-tyred diesel-powered rollers. O'Grady jokes that while driving in country areas on newly-laid bitumen, he would average 'about seven broken windscreens to the mile'.<sup>67</sup>

John Henley tells of how, in 1966 the DMR had a go at what proved to be a failed attempt at Clybucca Flats because of stability problems in the ground. The theory then of how to fix this problem was to mix tar with road-based gravel, in what he terms the 'tar stabilisation method'. He reveals that it was

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<sup>64</sup> Nunn            Tape RTA:FH1    Side B, 05:20

<sup>65</sup> D'Adam        Tape RTA:FH17   Side B, 23:41

<sup>66</sup> D'Adam        Tape RTA:FH8    Side A, 25:37

<sup>67</sup> O'Grady        Tape RTA:FH8    Side A, 25:37

an absolutely horrible job to work on because the tar fumes burnt the skin of workers and that today, one would not be allowed to work under those conditions. The job was completed, but within 12 months, the road had become deformed again, with the tar stabilisation theory having proven to be unsuitable for that location. He says that it was not until recently, when a concrete pavement was constructed at Clybucca Flats that the ground stabilisation problem was solved after many previous failed attempts.<sup>68</sup> He adds that the amount of money spent at Clybucca on experimentation and reconstruction over many years would have paid for a concrete pavement in the first place.<sup>69</sup> Henley admits that mistakes have been made in the construction of the Pacific Highway in the Northern Rivers area, and that as a result, there is presently a degree of subsidence, with dips in the road. He thinks that if one were building a new road now, one would have to go for major excavation or some form of stabilisation. He adds that 20 or 30 years ago, minimum geo-technical investigation was done and if the road sank "you topped it up".<sup>70</sup>

Terry O'Brien talks about the use of limestone aggregate used on the highway south of Kempsey which, over time became polished and in wet weather, highly dangerous, becoming as slippery as an ice skating rink. He recalls one collision that involved six vehicles on that stretch of road.<sup>71</sup>

Vince O'Grady recalls that, while cement-concrete pavements were first used in the 1930s, they were not used much, as they were more expensive to apply. John Henley talks about the present-day use of hot mix or asphaltic concrete and does not believe that there is one accepted standard, but that concrete is probably the best surface, with hot mix being the next best if the cost of concrete is not affordable.<sup>72</sup> Tom Lindsay reckons that the best surface for the

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<sup>68</sup> Henley           Tape RTA:FH25 Side A, 05:25

<sup>69</sup> Henley           Tape RTA:FH25 Side A, 07:55

<sup>70</sup> Henley           Tape RTA:FH26 Side A, 07:50

<sup>71</sup> O'Brien         Tape RTA:FH3 Side A, 16:56

<sup>72</sup> Henley           Tape RTA:FH25 Side B, 19:54

highway is a concrete base topped with hot mix, as tyre wear for his trucks would then be minimised.<sup>73</sup>

### *Maintenance*

Colin Nunn, in giving a history of maintenance on the highway reads from a 'Main Roads' Journal of 1936: "At Port Macquarie, two lengthsmen attended to all maintenance work, each possessing a bicycle". The journal also reports that in 1936, a bridge gang maintained bridges and culverts and constructed 57 new concrete culverts.<sup>74</sup> Nunn mentions that one of the major difficulties with maintenance of the highway was the problem of obtaining high-quality materials, giving rise to various innovations from stabilising with cement in the late 1930s and early 1950s to bitumen macadam and concrete in sections north of Grafton and Nambucca Heads. He admits that compromises were always made in that poorer quality pavements were laid, due to a lack of good materials.<sup>75</sup>

In 1947, Brian Pearson's maintenance activities included the filling of potholes, cleaning out the drainage systems, improving the radius of bends and cutting down trees obstructing sight distance<sup>76</sup>. Leo D'Adam mentions that the Pacific Highway at Charlestown had only a 20ft pavement with 6ft wide shoulders which deteriorated with heavy traffic and needed constant maintenance.<sup>77</sup>

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<sup>73</sup> Lindsay           Tape RTA:FH33 Side B, 17:37

<sup>74</sup> Nunn               Tape RTA:FH1 Side B, 00:17

<sup>75</sup> Nunn               Tape RTA:FH1 Side B, 02:56

<sup>76</sup> Pearson           Tape RTA:FH34 Side A, 11:30

<sup>77</sup> D'Adam            Tape RTA:FH17 Side A, 08:33

## Sydney-Newcastle Freeway

The Pacific Highway from Cowan to the Hawkesbury River became totally inadequate in the post-war years in the face of increasing motor vehicle ownership and population growth. Attempts had been made to widen the section from Asquith to Mt Colah from two to four lanes and the section towards Tuggerah was deviated to improve alignment, but it soon became obvious that these measures were unable to cope with the increasing traffic congestion.<sup>78</sup> The Central Coast was becoming a popular tourist area and traffic volumes of up to 18,000 cars a day were reported in holiday peaks. Colin Nunn witnessed huge traffic jams near Brisbane Waters in 1956 and recalls that it could, at times, take up to 3 hours from Sydney to reach Gosford and up to 5 hours to arrive at Newcastle.<sup>79</sup> Kevin Kirkland remembers, when driving a bus in 1960 that on a Sunday afternoon it could take up to five hours to drive from Gosford to Sydney, the traffic was so bad.<sup>80</sup>

The DMR, realising that a better road system was required, had already sent senior personnel to Germany and the USA in the 1930s to study autobahns and freeways and had, as early as 1946, formulated a vision for a freeway system stretching from Sydney to Newcastle, Sydney to Wollongong and as far west as Lithgow.

Assistant Chief Engineer S. L. Luker, had in 1947 prepared the Cumberland Planning Scheme which took into account population growth predictions and defined the southern sections of the limits of the Sydney- Newcastle Freeway.<sup>81</sup>

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<sup>78</sup> Hope                      Tape RTA:FH11 Side B, 11:36  
<sup>79</sup> Nunn                        Tape RTA:FH1 Side A, 26:34  
<sup>80</sup> Kirkland                Tape RTA:FH24 Side A, 10:36  
<sup>81</sup> O'Grady                 Tape RTA:FH9 Side B, 00:28



Under an early DMR plan, the freeway was to start from Sydney on a bridge across Sugarloaf Bay and it was then to go over the western side of Pittwater out to West Head and then to Patonga via a large suspension bridge. He remembers that there were four alternatives proposed to Gosford, but that neither the Windsor-Putty-Singleton Road nor the Old North Road provided a viable route to build the new freeway.<sup>82</sup> Vince O'Grady recalls that the decision as to what the actual course of the Pacific Highway should be was taken in 1960.

Tom Hope remembers that tenders were designed and called for in the DMR's Parramatta office for the first section of the Freeway from the Hawkesbury River to Mt White.<sup>83</sup> Vince O'Grady names Thiess Bros., Abignano and Dusseldorp as contractors eager to tender for the construction of the Sydney-Newcastle Freeway, but the DMR Commissioner, Harold Sherrard, wouldn't have a bar of having a private contractor building his roads. He recalls that Pat Hills, the Minister for Roads nevertheless instructed Sherrard to call for tenders and Sherrard was forced to put out tender specifications. Vince O'Grady and other senior DMR personnel were of the opinion that tenderers would never be able to deliver an acceptable tender for such a huge undertaking but were surprised, that when tenders closed, they found two tenders in the box. One was from Thiess Bros, which was totally non-compliant and went straight into the bin, and another from an Englishman by the name of Solomon, whose tender included the construction of the proposed bridge from West Head to Patonga.<sup>84</sup>

O'Grady continues that under the terms of the tender, the successful contractor would have to lodge £50 million as security in a bank deposit and expressed some doubt as to whether Mr Solomon would be able to meet that condition, but when it was confirmed that Mr Solomon had actually lodged this amount with the Bank of England, Pat Hills, the then Minister was

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<sup>82</sup> O'Grady      Tape RTA:FH9    Side A, 00:23

<sup>83</sup> Hope        Tape RTA:FH11   Side B, 06:35

<sup>84</sup> O'Grady      Tape RTA:FH9    Side A, 04:08

informed. O'Grady reveals that Pat Hills was eager to accept Solomon's tender, but that Harold Sherrard threatened to resign over the issue and that then was the end of that.<sup>85</sup>

Eric King gives a detailed description of the tasks involved in designing, planning and constructing the first section of the Freeway. He mentions that the DMR's helicopter was used to carry out aerial surveys, discussions were held with property owners to acquire private land, lines were marked, land was cleared and cut timber burnt.<sup>86</sup> He describes it as the biggest rural road construction project of its day, with drilling and blasting on a magnitude never encountered before. He recalls that the men working on it were determined to make it a first class job.<sup>87</sup>

John Henley also enjoyed working on this project, which he says was the showpiece of the DMR and seemed to have almost unlimited funding. He suggests that it was virtually a case of building a first class road and then seeing what the costs were. He is of the opinion that the standard of road building achieved on that project had no equal in Australia and was of a similar standard to the best American freeways through rural areas.<sup>88</sup>

Eric King states that the DMR was pioneering that kind of construction and was developing its own methods. He adds that this tradition and knowledge has been carried on by contractors in more recent years in constructing other sections of the highway.<sup>89</sup> Tom Hope comments that those were exciting days because of the challenge of moving thousands of cubic yards of sandstone to make embankments up to 80 ft in depth and cuttings almost as high. He reports that fortunately, improved methods of drilling and blasting had been developed with wagon drills instead of jackhammers being available, new

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<sup>85</sup> O'Grady      Tape RTA:FH9 Side A, 09:20

<sup>86</sup> King          Tape RTA:FH13 Side B, 08:06

<sup>87</sup> Brunt        Tape RTA:FH13 Side B, 06:40

<sup>88</sup> Henley      Tape RTA:FH25 Side A, 20:29

<sup>89</sup> King        Tape RTA:FH14 Side A, 05:40

forms of explosives and improved tractors with rippers that could rip through sandstone.<sup>90</sup> Hope maintains that one of the challenges as an engineer was to encourage the contractor to develop new techniques that would result in the best possible job and that the contractor was a willing participant in this task. He mentions the way in which stone blocks were stacked on the embankment slopes, giving a pleasing and very stable effect and the way in which concrete culverts were constructed to withstand tremendous loads of the fill above.<sup>91</sup>

Eric King remembers the single largest challenge for him as the big cut and fill south of the Hawkesbury River and thinks that it is still the largest of its type in Australia.<sup>92</sup> He also mentions that a problem cropped up concerning the effects of blasting, particularly around Mooney, where residents complained about cracks in the walls of their properties. The problem necessitated the inspection and photographing of buildings before further blasting began so that residents' claims could later be checked. King remembers one claim for damages that he thought could not possibly be substantiated, but as it was a convent and they could not morally dispute that the Mother Superior was not telling the truth, the DMR paid up.<sup>93</sup>

King also mentions an unfortunate accident that happened during the construction of the Sydney-Newcastle Freeway when a huge rock, pushed over by a contractor's bulldozer fell onto the highway below, crushing a car and killing the two occupants inside. He reveals that, after the accident, the insurance company's representative came to see him and said: "There is nothing to worry about as it was only an old chap and his son, there's only the mother left, and she's pretty old and won't last too long. The son was a bachelor, so the payout is going to be minimal". King says that he nearly

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<sup>90</sup> Hope           Tape RTA:FH11 Side B, 07:55

<sup>91</sup> Hope           Tape RTA:FH11 Side B, 10:12

<sup>92</sup> King           Tape RTA:FH13 Side B, 23:44

<sup>93</sup> King           Tape RTA:FH13 Side B, 14:11

threw the man out of his office because he showed no feelings about the suffering that the woman would be going through.<sup>94</sup>

Colin Nunn proclaims that the first section of the Freeway north of the Hawkesbury River was constructed in record time. He admits that the design standards of this section are lower than if they were to be constructed today, but that there was a cost factor that had to apply. For its day, it was thought to be a super highway which won numerous engineering awards.<sup>95</sup>

Eric King, however, mentions a problem that occurred with this first section in the late 1960s. The initial asphalt laid was a dense, graded asphalt and during times of heavy rain, water would always leave a thin film on the surface. He explains that if a car came round a curve at too great a speed for the radius of that curve, and particularly if its tyres were worn, it could spin out of control due to aquaplaning. He admits that there were a number of accidents that resulted from this problem and confirms that he actually witnessed one such accident where the car in front of him smashed into the side of the cutting. He stresses that the Materials and Research staff at DMR started to investigate this problem and developed an open-graded mix which became the final layer of road surface. However, eventually, with oil falling on the road from passing cars, the surface became ineffectual again and another layer needed to be applied. <sup>96</sup>King admits that this aquaplaning problem, on the climb north of the Hawkesbury River Bridge was partially a design fault, but that the designers were restricted in what they could do, because the road climbs up a ridge and that, for the times, a 1200-ft radius curve was considered to be a reasonable-sized curve. He adds that the problem was exacerbated for drivers coming downhill at speed.<sup>97</sup>

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<sup>94</sup> King           Tape RTA:FH13 Side B, 25:53  
<sup>95</sup> Nunn           Tape RTA:FH1 Side B, 12:48  
<sup>96</sup> King           Tape RTA:FH14 Side B, 00:23  
<sup>97</sup> King           Tape RTA:FH14 Side B, 04:08

Vince O'Grady remarks that the National Parks Act, passed in 1964 brought all National Parks under one authority and when this occurred, the National Parks and Wildlife Service (NSW) objected to the Sydney-Newcastle Freeway passing through their National Park on the section from Calga to Kariong<sup>98</sup>. Eric King takes up the story by saying that after much argument, with ministers pitted against each other and the Premier not game to make a decision, it was decided to abandon that route and the freeway was re-routed to skirt the National Park boundary. After that decision had been made and redesigning of that section had begun, the Minister representing NPWS went on leave and, as it so happened, the Minister for Roads took on his portfolio in an acting capacity. Ironically, he then signed a document extending another National Park, which now included the new route for the Freeway. King recounts that the NPWS then asked for the road to be diverted yet again, putting the Minister in an invidious position. However, after further long argument between Departments, sanity prevailed and the new route was kept.<sup>99</sup> He concludes that an abandoned cutting on the Freeway, leading to nowhere, with over one million cubic yards of rock taken out and costing over a million dollars, is a monument to that folly.<sup>100</sup>

Jack Giddy proclaims that the section of the Sydney-Newcastle Freeway south of the Hawkesbury River is the one he is most satisfied with, and that one of the best features of that road was that it was being built as it was being designed.<sup>101</sup> Eric King tells an interesting story about the official opening of the Berowra - Hawkesbury section. The opening date was set for January 1969, but the Minister for Roads insisted on having it opened on his birthday, the 27th October, 1968. King and Commissioner John Shaw told the Minister that this was not possible. King claims that the Minister then asked him what was needed to make it happen and he replied that they would need to work two shifts a day plus about a million dollars extra in wages. The Minister then

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<sup>98</sup> O'Grady      Tape RTA:FH9 Side B, 04:03

<sup>99</sup> King         Tape RTA:FH14 Side A, 11:44

<sup>100</sup> King         Tape RTA:FH14 Side A, 15:12

<sup>101</sup> Giddy         Tape RTA:FH20 Side A, 04:13

replied: "Well, you got it" and King says "and we did it". (King could not, during the interview recall the Minister's name, but referred to him as "The Ice Cream Man" because he used to wear light-coloured suits. He later remembered that the Minister was the Hon. Pat Morton, MLA).<sup>102</sup>

Colin Nunn reports that the toll on the Sydney-Newcastle Freeway at first discouraged many motorists and that traffic volumes were fairly static. He mentions that the Freeway was developed under a State Labor Government and, according to anecdotal advice he has received, when Robert Askin, the Liberal Premier came to power, he preferred not to extend it and diverted his attention to the Wollongong-Sydney freeway. He maintains that the Sydney-Newcastle Freeway did not get much further development until the Pacific Highway had become the national route and federal funding was made available again in the late 1970s.<sup>103</sup>

The next section of the Freeway planned was the Wahroonga - Berowra section and Peter Cooper recounts an altercation with environmentalists over the route of the Freeway, which was planned to go through wetlands near Tuggerah Lakes. Tom Hope says that it became known as the 'Blackbutt Reserve Controversy' and he remembers the outcry by conservationists.<sup>104</sup> Peter Cooper mentions that because of these environmental concerns, the route was moved west of Wyong, but in order to avoid a swamp to the north-west of Wyong, it was proposed to cling as close as possible to Wyong township and follow the railway line until the freeway passed the swamp. This meant taking part of Wyong High School's grounds and here the DMR ran into strong opposition once again from both the Trades and Labour Council and the Teachers Federation who objected to the highway because of vehicle noise. Despite a noise expert being brought in, who concluded that vehicle noise was too low to impact on teaching in the classroom, the route of the highway was moved still further west, away from the high school. Peter Cooper adds that

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<sup>102</sup> King                      Tape RTA:FH13 Side B, 20:51

<sup>103</sup> Nunn                      Tape RTA:FH1 Side B, 16:43

<sup>104</sup> Hope                      Tape RTA:FH11 Side B, 18:47

this case was a valuable lesson for the DMR, who learned a lot in the process about the need for more and better public consultation.<sup>105</sup> Ron Smythe believes that the new route is far better, as it now bypasses Newcastle instead of cutting through it.<sup>106</sup>

There were some other environmental concerns and Eric King recalls that the DMR was advised to shift the location of the Freeway because a particular species of Boronia, which only grew in the Muogamarra Sanctuary, was in its path. He confirms that the freeway was moved for the Boronia.<sup>107</sup>

Yet another environmental issue concerned six wombats who had been observed to the right of the Freeway route. Vince O'Grady recounts that, knowing how persistent wombats can be to get to water, a special corrugated sheet culvert was constructed under the Freeway to provide a wombat crossing.<sup>108</sup> While this appears to have been the first purpose-built fauna underpass in NSW, the RTA now considers the need for, and includes where required, underpasses in all new and upgraded road designs.

Vince O'Grady recalls that the location of the Wahroonga-Berowra section of the Sydney-Newcastle Freeway was finally agreed to by The National Parks and Wildlife Service and went to the Minister for approval. He says that even at this late stage, with so much of the Freeway already built, the Minister still had his doubts, questioning why a freeway had to be built to the north at all, saying: 'Why don't you build a road out Bankstown way, where the real people are?' O'Grady thought about that for a while and explained to the Minister: "The people living up north in Woy Woy are retired good Labor voters and the traffic is their sons and daughters coming to see them on the weekends". He thinks that won the day.<sup>109</sup>

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<sup>105</sup> Cooper           Tape RTA:FH15 Side B, 22:00

<sup>106</sup> Smythe           Tape RTA:FH27 Side B, 21:25

<sup>107</sup> King             Tape RTA:FH13 Side B, 13:10

<sup>108</sup> O'Grady         Tape RTA:FH9 Side B, 06:20

<sup>109</sup> O'Grady         Tape RTA:FH9 Side B, 09:30

## Significant events on the highway

### *Floods*

The Pacific Highway is not a flood-free road and most interviewees recall that floods were the major significant event that have affected the highway over its history. The highway crosses an area of high rainfall and Tom Hope recalls a heavy downpour at Dorrigo in July 1947 of 23 inches in 24 hours and, at the same time, 15 inches of rain fell at Coffs Harbour, blocking numerous sections of the highway for days and making the movement of goods, mainly bananas, impossible. He says that as there was no alternative route to the Pacific Highway, goods could not get to the railway station and perished.<sup>110</sup> Hope also recalls an incredible hail storm at Dorrigo to a depth of three feet.

Brian Pearson was stationed at Port Macquarie Works Office during the late 1940s and he experienced two major floods during a two-year period, each equivalent to a hundred-year flood in intensity. He recalls that the Hastings River rose by about eight metres and broke through the spit at the northern side of Port Macquarie. The ferry at Blackmans Point was put out of service and road pavements turned to mud. As they could not get traffic through, Pearson instructed his crew cut down hundreds of saplings, lash them together and add shale material on top. He believes that those saplings may still be carrying that section of the highway today.<sup>111</sup>

Vince O'Grady remembers that when the flood of October 1949 came down the Macleay River, reaching levels of 40 feet, it took a span out of the railway bridge at Kempsey, moving it to Smithtown. He describes flood damage at Kempsey and Clybucca Flats, with water 20 to 25 feet above the highway. He recollects that Kempsey was isolated from the north and west and that the

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<sup>110</sup> Hope                      Tape RTA:FH11 Side A, 22:53

<sup>111</sup> Pearson                    Tape RTA:FH34 Side A, 07:00



Police, Army and Air Force helped to evacuate the local population from rooftops. He also describes the devastation shortly after the flood, with 5000 cattle drowned, the highway closed and extensive damage done to culverts and pavements.<sup>112</sup>

Leo D'Adam confirms that the Pacific Highway was never a flood-free road, but that the DMR adopted a policy of making it so. They were consequently unable to meet that goal, as the highway would have had to be constructed to a far higher design standard than it was.<sup>113</sup> Peter Cooper believes that the original communities along the highway learned to live with floods and that this thinking continues with road planners, as it seems impossible to beat flooding on the highway. He hopes that the new work being done at Raleigh does not get washed away when the Bellinger River floods, as it did in the 1950s and is of the opinion that we should not allow floods to wash away our roads in the 21st century. He predicts that the northern part of the new Taree bypass will, in a future flood, be submerged.<sup>114</sup>

John Henley recalls the devastating floods of 1974 in Tweed Shire, with the Pacific Highway at Murwillumbah closed and half of it, including earthworks and road foundations washed away. He states that flooding is a regular event in the Northern Rivers.<sup>115</sup> Ron Smythe warns that a road should not be built across a floodway higher than at water level, because flood patterns will be altered. He adds that this can be environmentally disastrous, as country that has never been flooded before may now be inundated. He believes that the right way to build a road across a flood plain is to build it just high enough so that the road will still be negotiable under flood.

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<sup>112</sup> O'Grady      Tape RTA:FH8 Side B, 13:05  
<sup>113</sup> D'Adam      Tape RTA:FH17 Side A, 26:56  
<sup>114</sup> Cooper      Tape RTA:FH16 Side B, 17:00  
<sup>115</sup> Henley      Tape RTA:FH25 Side A, 12:03

*The Queen's visit*

Queen Elizabeth visited parts of the North Coast on her historic 1954 Royal Tour. Peter Stevens remembers, as an 11-year old, travelling to Casino from Grafton on the Grafton-Casino Road, which was then nothing more than a gravel track through the trees built by Americans during the Second World War. He recalls that it started to rain just as the Queen visited and that the south-bound queue at Harwood - although three ferries were in use- was seven miles long.<sup>116</sup>

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<sup>116</sup> Stevens      Tape RTA:FH 31 Side A, 10:40 & 17:04

## Ferries

In the 1950 floods at Kempsey, Brian Pearson recalls, two or three ferries were washed out to sea, never to be seen again. In times like that, a ferry driver could only tie his vessel to an anchor pole on the bank and hope for the best.<sup>117</sup> There are 18 rivers from Sydney to the Queensland border crossed by the Pacific Highway and many of these were served by ferries. Thus the elimination of ferry crossings and their replacement by bridges became the DMR's greatest priority. In the 1930s, plans were set in motion to replace them, but the lack of available funds plus the intervention of the war delayed this until 1945 when a major bridge was built across the Hawkesbury River, eliminating Peats Ferry Service and depriving the Department of a ferry toll of one shilling and nine pence per car.<sup>118</sup>

Brian Pearson points out that the ferry services were most inefficient because they were always breaking down and because arguments between ferry drivers and the travelling public continually arose, particularly when ferry drivers fell asleep while on duty at night. He adds that quite often, the drowsiness of a ferry driver was aided by the contents of a bottle.<sup>119</sup> He also mentions that accidents did happen involving ferries, and says that if cattle were placed on a ferry and their position was not controlled, the cattle could sink the ferry if they panicked and moved into a corner. He remembers the Rocks Ferry over the Maria River having been lost in this way.<sup>120</sup>

Pearson also recalls a ferry incident at Stockton where a man in a new Mercedes came through a raised boom gate onto the ramp at night and went

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<sup>117</sup> Pearson      Tape RTA:FH34 Side A, 22:43

<sup>118</sup> Nunn         Tape RTA:FH1 Side A, 14:20

<sup>119</sup> Pearson      Tape RTA:FH34 Side A, 15:20

<sup>120</sup> Pearson      Tape RTA:FH34 Side A, 18:32

straight into the water, just as the ferry was approaching. The ferry went straight over the car, crushing the roof. Fortunately, the driver survived.<sup>121</sup>

A more tragic incident involved a mother and daughter driving towards a ferry wharf north of Port Macquarie. The mother, approaching the ramp, accidentally hit the accelerator and the car shot forward through the gate into the water, drowning the mother.<sup>122</sup>

On a lighter note, Pearson tells an anecdote about an Irish constable and an intoxicated ferryman at Blackmans Point, where the ferry driver was inviting a queue of people waiting in cars on the bank of the river to jump across in their cars. Pearson claims that the constable was unable to arrest the ferry driver because, technically, he was in charge of a vessel at sea. Several hours later, upon reaching the shore, the ferry driver was taken in and relieved by another.<sup>123</sup>

Pearson recalls that one of the more memorable things he has ever witnessed was during a major flood in the early 1980s on the Hawkesbury River when four ferries at Wisemans Creek were washed from their crossings and the ferryman rode the ferries down river. As the two larger ferries approached the twin bridges over the Hawkesbury, Pearson became concerned for safety of the bridges and instructed the ferry driver to sink the ferries. The ferry driver, then only 200 metres away said that he should have started that process the previous week, because the bung he was instructed to pull to sink the vessel was only two inches in diameter. Fortunately, the ferry driver was able to ground the ferries just short of the bridges.<sup>124</sup>

Tom Lindsay recalls an incident at Port Macquarie, where one night, he drove a truck onto a ferry that wasn't chained to the wharf. While his front wheels

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<sup>121</sup> Pearson      Tape RTA:FH34 Side A, 20:17

<sup>122</sup> Pearson      Tape RTA:FH34 Side A, 19:35

<sup>123</sup> Pearson      Tape RTA:FH34 Side A, 23:38

<sup>124</sup> Pearson      Tape RTA:FH34 Side A, 27:20

were already on the ferry, his back wheels pushed the ferry out and part of his truck went under water. He recalls that he lost half of his load to salt water damage and consoles himself that, in the end, he came out of it rather well, because he could have ended up with the whole truck under water. Not being insured, he had to carry the loss. He remarks that he could have taken legal action, and that it would probably have cost the ferry driver his job, but thinks that he would have missed a lot of ferries after that.<sup>125</sup>

In 1966 the last ferry crossing at Harwood on the Pacific Highway was replaced by the last steel truss bridge built by the DMR.

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<sup>125</sup> Lindsay      Tape RTA:FH33 Side A, 27:50 and RTA:FH33 Side B, 00:17

## Bridges

The Pacific Highway has a rich history of bridge building and innovation in bridge design. Most bridges along the highway were timber or steel truss bridges built during the last decade of the 19th century. Brian Pearson recalls that in the 1950s, Port Macquarie had nine such steel truss bridges. With the DMR's program of increased road widening, bridges became too narrow for the traffic using it, and most being steel truss bridges, were unable to be widened. Despite this fact, Pearson was surprised that during the 1960s four more truss steel bridges were built on the Pacific Highway.<sup>126</sup>

Some of these bridges were badly aligned, such as the curved bridge at Telegraph Point, while across the Bellinger River at Raleigh, the road joined the bridge at right angles.<sup>127</sup> Other bridges were quaint and anachronistic, such as the Boyds Bay Bridge, built early in the century at the entrance to Tweed Heads. John Henley describes it as a 20ft wide lift span bridge, lifted through hand winching by three men, using a crank handle. Often, when it came down, it would not sit on its bed properly.<sup>128</sup>

John Henley also refers to another lift span bridge at Barneys Point, south of Tweed Heads which held up traffic on the Pacific Highway at least twice a day to let a particular cruise boat pass. As the boat had right of way over vehicular traffic and the captain could demand that the bridge be opened at any time, it was causing spectacular traffic jams. Henley adds that the problems of the bridge opening was compounded each time, as water mains that ran underneath the bridge had to be drained, turned off, disconnected and disassembled.<sup>129</sup>

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<sup>126</sup> Pearson      Tape RTA:FH34 Side B, 08:18

<sup>127</sup> Hope        Tape RTA:FH11 Side A, 15:20

<sup>128</sup> Henley      Tape RTA:FH26 Side A, 02:40

<sup>129</sup> Henley      Tape RTA:FH26 Side A, 03:58

In the 1960s, designs were being drawn up for pre-stressed concrete bridges and the DMR became very interested in post-tensioned box sections as a replacement for steel truss bridges. The first post-tensioned concrete box section bridge to be built on the Pacific Highway was over Warrell Creek, south of Macksville, a twin-box design. A similar design was also used to build a bridge over the Kalang River at Urunga in 1972. Brian Pearson tells us that the DMR then developed a single box spine beam design which was used to replace a lift span single truss bridge at Telegraph Point over the Wilson River. He considers this 800-metre long bridge to be his favourite because of its perfect proportions.<sup>130</sup> He also developed a design that became known as a 'banana bridge' and used it to span the Camden Haven River, south of Kew, in 1978. At that time, the DMR was building at least one major bridge a year on the Pacific Highway north of Newcastle.<sup>131</sup>

Ron Smythe talks about his involvement with bridges on the highway. He mentions the duplication of the Tabbimoble bridge, the Pine Brush Creek bridge, the Halfway Creek bridge widening, the duplication of the Mororo Bridge and the Tyagarah Railway overbridge, constructed to eliminate a level crossing.<sup>132</sup>

A major bridge project was the addition of a new bridge at Hexham across the Hunter River, a concrete box-girder post-tensioned bridge which needed piles up to 50 metres deep and had seven major spans, each of 30 metres, plus minor spans.<sup>133</sup> However, after almost completing the bridges, construction problems arose with cracking of the anchorage blocks at each end of the bridge when cables were tensioned. Pearson recounts that, because pre-stressed concrete technology was then in its infancy, there was insufficient knowledge regarding the stresses that might be built up as cables were anchored on. He

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<sup>130</sup> Pearson      Tape RTA:FH34 Side B, 18:04

<sup>131</sup> Pearson      Tape RTA:FH34 Side B, 20:43

<sup>132</sup> Smythe      Tape RTA:FH28 Side A, 00:23

<sup>133</sup> Hope        Tape RTA:FH11 Side B, 27:38

had no option but to repair the anchorage blocks and adds that this problem does not occur today, as knowledge of this technology is now much greater.<sup>134</sup>

Pearson explains that a different problem arose with the balanced cantilever bridge at Mooney-Mooney which was being built out from the two main piers simultaneously, block by block. The bridge was nearing completion and construction crews had reached the abutment on the northern side, had temporarily set the abutment of the deck on bearings and were finishing off the centre of the bridge when the bridge started to sway. Pearson remarks that he was frightened out of his wits because they could have lost the entire bridge, but that quick thinking by people on site, who attached steel cables to the abutment end, saved the bridge.<sup>135</sup> He adds that up to that stage, the DMR had never lost a bridge during construction, nor had they ever had a fatality on a bridge during construction, except on the Sydney Harbour Bridge. He compares the DMR's record to the Victorian Dept. of Roads which has suffered two major bridge collapses, with the West Gate Bridge (35 lives lost) and the King St Bridge in Melbourne.<sup>136</sup>

Pearson declares that the Mooney Mooney Bridge, while not the longest on the Pacific Highway, is certainly the highest, with the deck, at 75 metres above water level, higher than that of the Sydney Harbour Bridge. He reveals that he personally wanted that bridge to be even 15 or 30 metres higher, which would have involved building a longer, cable-stayed style bridge. He feels that it would have eased the grade on both sides, which he considers to be too severe, even for modern traffic. He regrets that his efforts to have the design changed were not favourably received. If Pearson had got his way, the Mooney Mooney Bridge would have been the largest of its type in the world.

Terry O'Brien mentions a bridge mishap which occurred in 1960 when the old timber bridge at Kempsey over the Macleay River was being demolished. The

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<sup>134</sup> Pearson      Tape RTA:FH35 Side A, 04:23

<sup>135</sup> Pearson      Tape RTA:FH35 Side A, 05:10

<sup>136</sup> Pearson      Tape RTA:FH35 Side A, 07:25



bridge, because of inherent weakness, had a bailey-bridge support and was undertrussed. O'Brien happened to ask the crew where their lifebuoys were kept, as they were working in 30ft of water. When one of the men explained that the lifebuoys were kept in the shed, O'Brien suggested that they be put close to where the men were working. The following week the bridge collapsed and six lifebuoys were thrown to the men in the water, but one man was drowned.<sup>137</sup> O'Brien declares that although the official verdict classed it as an accident, he believes that it was an accident that need not have happened if more care had been exercised. He indicates that the winch man should not have let the truss load rest on the bailey bridging, triggering the accident.<sup>138</sup>

Pearson states that one of the biggest problems in bridge design and construction during the 1960s, 70s and 80s were with foundation components. He mentions that they did not then possess modern piling equipment to enable putting down caissons of a metre or so diameter without the need for compressed air, whereas that equipment now exists. He discloses that on several bridges, he miscalculated the depth to which piling foundations would go because a full investigation to provide the necessary information was not undertaken. As a result of the uncertainty of the strength of foundations, the DMR became very conservative in their piling design, allowing only a fraction of the load on a pile that that pile would have been able to carry.<sup>139</sup>

Terry O'Brien tells an anecdote about an American explosives expert, an ex-Vietnam green beret type who used a new blasting technique for explosives on the approaches to the Blackmans Point Bridge. He remembers, however, that when the men came back on the day following the detonations, they found many unfired explosives which could have killed them. He confirms that the American explosives 'expert' was fired.<sup>140</sup>

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<sup>137</sup> O'Brien           Tape RTA:FH4   Side A, 22:22

<sup>138</sup> O'Brien           Tape RTA:FH4   Side B, 04:49

<sup>139</sup> Pearson           Tape RTA:FH35   Side A, 23:41

<sup>140</sup> O'Brien           Tape RTA:FH5   Side B, 10:17

Terry O'Brien was Engineer on the construction of the 300-metre long Dennis Bridge at Port Macquarie. He believes that the design, by Albert Fried, had shortcomings. For him, the bridge was not constructed long enough, the southern abutment was in the wrong position and should have been on natural ground, not made ground, and the span lengths of the bridge should have been longer.<sup>141</sup> He recalls that the ground materials on the southern side of the bridge approach was fairly soft, but that EPT, who were constructing the bridge, were anxious to receive payment for work undertaken and did not wait for test piles to be driven before starting construction of the 14-metres long piles. O'Brien observed that the first pile, when lowered went down about ten metres before hitting solid ground. The contractor was then instructed to build on extra sections, making the piles eventually 27 metres long. Even then, the piles were not satisfactory and the design was rapidly amended, with the number of piles increasing, the gap between piles shortened considerably and the piles arranged in a cluster about 2 feet apart from one another.<sup>142</sup>

O'Brien recalls a terrifying incident where he and others were working at the bottom of a caisson in the pressure chamber at about 30 metres under water when the air pressure suddenly changed, letting water in up to their waists. He mentions that everyone was too scared to enter the pressure chamber. After an argument that O'Brien had with EPT, it was decided that EPT's construction foreman was to accompany O'Brien in future inspections but O'Brien recalls that the EPT foreman only went in once, terrified and praying to 'our father.'<sup>143</sup> Eventually Peter Gregg was ordered down, but O'Brien advised him against doing so because he was suffering from a cold. Ignoring his recommendation, Gregg went down and blew an eardrum.<sup>144</sup>

O'Brien also mentions that in the case of the bridge over the Hastings River, they had made a connection to the abutment. He remembers the foreman,

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<sup>141</sup> O'Brien Tape RTA:FH3 Side A, 25:05

<sup>142</sup> O'Brien Tape RTA:FH3 Side B, 02:14

<sup>143</sup> O'Brien Tape RTA:FH3 Side B, 07:20

<sup>144</sup> O'Brien Tape RTA:FH3 Side B, 12:25

George Armstrong coming to see him one Saturday afternoon, saying that they had pushed his bridge over because downwards pressure on the soil had moved the top of the bridge forward. O'Brien explains how this problem was overcome by unusual engineering methods using timber piles within the caissons. He took photographs which he later showed to one of the bridge engineers at Head Office who would not believe that this was how the problem had been solved.<sup>145</sup>

Brian Pearson mentions that a new bridge adjacent to the Pacific Highway was built at Woodburn in 1981 over the Richmond River and that a boat builder upstream sued the DMR for damage suffered by his business because the bridge did not have a high enough clearance for his fishing boats. Pearson recalls that the boat builder won the case. The judge stated that every bridge over a navigable river crossing was to be considered a hazard to river traffic and this finding was written into the Main Roads Act of 1993, so that people would be aware that in the design of bridges, a person using the river for his living had legal priority over bridge builders.<sup>146</sup>

Pearson is reasonably happy with the appearance of his bridges, especially of the later ones because models were always built and tested. He confesses that in some of the bridges on the Pacific Highway, he did not put enough time into the appearance of the structures and feels that the finished work is almost a mistake.<sup>147</sup> He believes that the bridges that the RTA is building today are structurally very good.

Pearson admits that he does worry about the long term corrosive effects on concrete piers constructed in salt water, particularly on bridges built some decades ago. He singles out the concrete bridge at Ballina as a typical example of a concrete bridge built in a hostile environment.<sup>148</sup>

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<sup>145</sup> O'Brien           Tape RTA:FH3 Side B, 15:41

<sup>146</sup> Pearson           Tape RTA:FH35 Side A, 00:23

<sup>147</sup> Pearson           Tape RTA:FH36 Side A, 00:28

<sup>148</sup> Pearson           Tape RTA:FH35 Side B, 11:53

There are now only two timber bridges left on the Pacific Highway near  
Crabbes Creek and Yelgun.<sup>149</sup>

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<sup>149</sup> Smythe      Tape RTA:FH28 Side A, 00:23

## Transport

### *Road vs Rail Freight*

For the first five decades of this century almost all freight to the mid and north coast regions of NSW went by ship or rail. Today, almost all freight movements are by road. What has brought this radical change about?

Colin Nunn compares the attributes of the road freight and rail networks and mentions that the flexibility of a good road system has made agriculture possible in some places. He puts forward the example of a tomato, grown in Bundaberg and eaten in Sydney, which can be delivered to market within a short space of time by road. He contrasts this with the rail network which he claims is unable to meet the time frames set by an efficient road system and still suffers to some degree by the tyranny of different rail gauges.

Nunn alleges that accessibility in the rail system has remained static for 70 or 80 years and notes the vast improvement in road travel times from Sydney to Newcastle. He points out other inefficiencies of the rail system and gives the example of a container from Port Augusta which goes by rail to Brisbane and then has to be trucked from the rail depot at Acacia Ridge to the Port of Brisbane to continue on its journey.<sup>150</sup>

Such problems aided the development of the road transport industry which received its first boost on the Pacific Highway when the ferry crossing over the Hawkesbury River was eliminated. The toll on the new bridge, however, stayed for another eight years until 1953, when it too was abolished. That, according to Colin Nunn, plus the end of petrol rationing and the elimination of other ferry crossings stimulated a massive growth of truck volumes on the highway. The Government subsequently imposed rules to control the growth of

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<sup>150</sup> Nunn

Tape RTA:FH2 Side A, 10:03

the road freight industry and competition from rail again increased, resulting in a decrease of heavy vehicles using the highway.<sup>151</sup>

Tom Lindsay is one of the early users of road transport on the highway. He and his brother started in the trucking industry in 1953, carting bananas to the rail head at Coffs Harbour. For a ten-year period, they drove from Coffs Harbour to Sydney with truckloads of tomatoes, peas and beans for delivery in Sydney within 12-13 hours, a tremendous improvement over rail transport for the times. Lindsay built his reputation on reliability and on the advantage to deliver directly to markets, not to a rail head.<sup>152</sup>

Lindsay describes the Pacific Highway of the 1950s as it wound its way through the Pine Creek State Forest and Repton, a route that today's large trucks could not negotiate.<sup>153</sup> He recalls that trucks then had five-speed gearboxes and on steep grades, he would have to change back three gears down to 4 or 5 miles per hour, grinding his way up hills. On a flat he would have to slow down to go through the potholes on a road that he describes as 'atrocious.' He mentions that it was quite common to have a puncture on every trip.<sup>154</sup>

Lindsay recalls that during the 10 years he drove along the highway very little development occurred. Near the end of that period, the Bulahdelah section of the highway was opened.<sup>155</sup>

John Henley says that during the 1960s the highway was relatively easy to drive on with the relatively small amount of traffic, but that single lane bridges still existed along it. The section from Port Macquarie to Kempsey had speed advisory signs of only 15mph on some tight bends, slowing down semi

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<sup>151</sup> Nunn           Tape RTA:FH1 Side A, 26:53

<sup>152</sup> Lindsay       Tape RTA:FH33 Side A, 14:16

<sup>153</sup> Lindsay       Tape RTA:FH33 Side A, 07:00

<sup>154</sup> Lindsay       Tape RTA:FH33 Side A, 26:31

<sup>155</sup> Lindsay       Tape RTA:FH33 Side A, 05:45

trailers to about half of that speed. To him, the art of driving on the highway was in not trying to get caught behind a truck on a hill.<sup>156</sup>

Ron Smythe says that in the 1970s, there was a general acceptance that road transport is and always would be the principal form of transport in Australia. State and Federal governments finally recognised this by allocating more funding, outnumbering those who had advocated a switch to rail transport.<sup>157</sup> The recognition that came with the Pacific Highway becoming the National Route in the 1980s also gave road transport a boost.

Colin Nunn states that freight traffic on the Pacific Highway is higher in winter than in summer, as companies deliberately avoid the Pacific Highway during holiday periods and use the alternative route more frequently. He is also concerned that with larger numbers of freight trucks using the roads at night and with an accelerating older population on the North Coast, elderly motorists are afraid to venture out at night to compete with larger numbers of trucks.<sup>158</sup> Kevin Kirkland thinks that the increase of night transport has to do with market requirements, the fact that it's quieter on the roads and driving conditions are optimal, with better centering and less use of brakes.<sup>159</sup>

Colin Nunn observes that at present, some regulations prevent the larger 'B-Doubles' using long sections of the Pacific Highway but thinks that, as the road improves, greater pressure will be applied by trucking companies to make more use of the road. He anticipates that the RTA will not be able to regulate against this and predicts that freight traffic on the Pacific Highway will increase for reasons of greater fuel efficiency and accessibility to markets along the route. He thinks that freight traffic will become a bigger issue to address in future.<sup>160</sup>

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<sup>156</sup> Henley           Tape RTA:FH25 Side A, 08:57

<sup>157</sup> Smythe           Tape RTA:FH28 Side B, 02:29

<sup>158</sup> Kirkland        Tape RTA:FH24 Side B, 18:32

<sup>159</sup> Nunn             Tape RTA:FH2 Side A, 16:43

<sup>160</sup> Kirkland        Tape RTA:FH24 Side B, 03:48

Kevin Kirkland states that today, with more powerful and heavy trucks, tremendous damage has been done to road pavements and bridges. He thinks that this damage will continue with the non-use of tachographs by the trucking industry, something he believes to be essential.<sup>161</sup> He also forecasts that a four-lane divided highway between Brisbane and Sydney would reduce travelling time for trucks between Brisbane and Sydney from 16 to 12 hours with less likelihood of fatigue.<sup>162</sup> Tom Lindsay mentions that the feedback from his drivers about the state of the Pacific Highway is mostly positive, but that the road works are frustrating because they lose 10 or 15 minutes on each trip. He remarks that the Taree bypass, which opened in December 1997, is now saving his trucks 20 minutes each way.<sup>163</sup>

Bruce Parks forecasts an increase of truck traffic on the Pacific Highway, with a bleed-off from the New England Highway as soon as the Bulahdelah section is opened because steep grades on the existing Bulahdelah section will be eliminated. He estimates the savings per truck to be \$60 per trip, and that when the Burringbar deviation is opened, they could be as high as \$100 per trip.<sup>164</sup>

Kevin Kirkland concludes by remarking that one of the most unusual things he has seen along the highway was at the Burringbar Range one fine Sunday morning as he was coming up Fern Vale Hill, (the steepest hill on the Pacific Highway) behind two semi trailers, loaded with sawn timber. He recounts that both semis, very close to each other came over the crest of the hill, gathered speed on the downhill run and as they went around the next corner, the timber load shifted to the left on both trucks, which went over the side of the embankment, one on top of the other.<sup>165</sup>

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<sup>161</sup> Kirkland Tape RTA:FH24 Side B, 03:48

<sup>162</sup> Kirkland Tape RTA:FH24 Side B, 05:35

<sup>163</sup> Lindsay Tape RTA:FH33 Side A, 13:00

<sup>164</sup> Parks Tape RTA:FH29 Side B, 23:11

<sup>165</sup> Kirkland Tape RTA:FH24 Side B, 24:48



### *The bus industry*

Kevin Kirkland's father started a local bus company in Nimbin because, Kirkland explains, it was a lot easier to load passengers than bananas. Kevin, continuing in this tradition, took delivery of his first bus in 1945. It proved impossible to bring up from Sydney via the Pacific Highway, so delivery was by way of the New England Highway which had no ferry crossings on it.<sup>166</sup> Kirkland's family company now runs 127 buses and claims to be the largest bus operator outside of Sydney. He recalls that in 1959, it took three days for bus passengers to travel from Brisbane to Sydney. He remembers the highway then as a narrow, winding and dangerous road that an experienced driver could read like a novel. He recalls one lady passenger saying to him: "You seem to know every pothole on the road", to which Kirkland replied: "We ought to, we make them all".<sup>167</sup>

Kirkland reveals that there was a feeling of hopelessness about the highway and that one of his friends, before he drove, always crossed himself, because one never knew when one's turn would come. He recalls that he was missing heavy vehicles by only one or two feet coming towards him at 100km/h and adds that one was totally dependent on other drivers for their skills and alertness.<sup>168</sup> He compares survival on the Pacific Highway with going into combat: "If you survived the first six months, then you would survive the next six years". He also compares the fatalities suffered by 46,000 troops sent to Vietnam over 11 years (560 deaths) with the greater number of fatalities on the Pacific Highway (600 deaths) during the same period.<sup>169</sup>

Kirkland is disappointed that funding priority was given to the Hume and the New England highways before the Pacific Highway and proclaims this as a disaster that cost many hundreds of lives. He says that the government forgot that the Pacific Highway was the coastal route where the majority of people in

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<sup>166</sup> Kirkland Tape RTA:FH24 Side A, 02:40

<sup>167</sup> Kirkland Tape RTA:FH24 Side A, 14:11

<sup>168</sup> Kirkland Tape RTA:FH24 Side A, 12:56

<sup>169</sup> Kirkland Tape RTA:FH24 Side A, 15:16

Australia lived. Quoting figures from the *Pacific Highway Task Force Analysis* document of 1996, he reports that traffic volumes on the Pacific Highway now exceed the Hume Highway's by 600,000 a year.<sup>170</sup>

Kirkland maintains that the two tragic 1989 accidents involving buses on the highway finally jolted both levels of government into action. The immediate result of these accidents was the imposition of a 90km/h speed limit on coaches in NSW, which he describes as a knee-jerk reaction by politicians who had to be seen doing something. Kirkland says that a coach, travelling at 90km/h on an inadequate highway, with 15 or 20 cars queued up behind it, will create a dangerous situation and suggests that it would be far better to be able to go with the flow of traffic. He points out that his drivers have been abused and tailgated by truck drivers, whose vehicles, unlike coaches, are not fitted with tachographs and can blatantly abuse the speed limits.<sup>171</sup>

Kirkland is delighted at what is happening to the Pacific Highway. He suggests that if he happened to drop dead tomorrow and someone asked him in heaven what his greatest achievement had been on earth, he would say: "Being a part of the National Pacific Highway Task Force that was successful in getting that funding in place". He is delighted that it is now happening before his very eyes, as he never thought it would occur in his lifetime.<sup>172</sup>

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<sup>170</sup> Kirkland      Tape RTA:FH24 Side A, 18:00

<sup>171</sup> Kirkland      Tape RTA:FH24 Side B, 16:39

<sup>172</sup> Kirkland      Tape RTA:FH24 Side A, 23:48

## Road Safety

Car accidents have occurred ever since the first motor car ventured out onto the road in 1894. However, in NSW it was not until 1937 that car accidents were first reported by the police to the DMR, and then only when the police thought that the road had been a contributing factor.<sup>173</sup>

During the 1930s, the DMR's approach to road safety was that they would undertake to improve road design standards, but that the onus was on the motorist to drive carefully. Colin Nunn claims that, given the low volumes of traffic then, the chance of a head-on collision between two vehicles on the Pacific Highway was fairly remote. He speculates that, given the high cost of motor vehicles at that time, motorists would have driven more carefully and that, due to road conditions, high speeds were unsustainable.<sup>174</sup> However, accounts by Tom Hope suggest that road accidents were not a rare event: he remembers that in 1948, the highway south of Coffs Harbour, north of Woolgoolga and near Frederickton was prone to many accidents, as drivers overestimated safe driving speeds.<sup>175</sup> Jack Giddy gives poor alignment, grading and sight distance as reasons for accidents on the highway during the post-war years.<sup>176</sup> Peter Stevens considers that the road did not have any particular dangers for him in the 1950s, but recognises, in hindsight, that the road was less than ideal and claimed a high number of victims. He says, however, that it was not then seen as the road's problem.<sup>177</sup>

Don McDean, a Foreman, working on the O'Sullivan's Gap section of the highway during the 1950s recalls a tragic accident between a car and a semi-

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<sup>173</sup> Nunn           Tape RTA:FH1   Side A, 20:17

<sup>174</sup> Nunn           Tape RTA:FH1   Side A, 18:13

<sup>175</sup> Hope           Tape RTA:FH11  Side A, 25:47

<sup>176</sup> Giddy          Tape RTA:FH19  Side B, 00:17

<sup>177</sup> Stevens        Tape RTA:FH31  Side A, 19:46

trailer carrying a load of meat, which overbalanced and crushed the car. McDean had to help the ambulance man to extract the bodies of the two victims from the car and recollects that for a week afterwards, he could not rid himself of the smell of the dead woman's blood.<sup>178</sup> McDean thinks that a lot of accidents occurred because truck drivers were either inexperienced, given impossible deadlines by trucking companies, drove too fast or lost control on bends in the road. He saw an average of one truck crash truck per week along the highway.<sup>179</sup>

Leo D'Adam reports an accident involving an elderly couple who left Sydney with a caravan up the Pacific Highway and came over a blind crest, colliding head-on with a car driven by four nuns. The six people in the two vehicles were killed instantly, and the reason given for the accident was that the caravan driver had evidently fallen asleep. D'Adam recounts that the only positive outcome from that tragedy was that the DMR responded swiftly with a grant of several hundred thousand dollars to improve that section of the highway.<sup>180</sup> D'Adam also mentions another tragic accident that occurred on a deviation during construction of the extension of the bypass at Nambucca. An ambulance driver and his family were involved in a fatal collision with a truck and D'Adam was horrified to discover that the girl in the back of the car happened to be his nephew's fiancée. He reveals that his nephew blamed him for the accident, although it was apparent that the accident would probably not have happened if the car had not been driven for seven or eight hours without a break.<sup>181</sup>

Terry O'Brien remarks on an accident that occurred when a bus veered off the road south of Bulahdelah and hit a fallen tree log, killing five soldiers. He became concerned that the speed limit of 60 miles per hour for that stretch of road was set too high because the road had not been designed for that speed.

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<sup>178</sup> McDean      Tape RTA:FH23 Side B, 10:45

<sup>179</sup> McDean      Tape RTA:FH23 Side B, 13:41

<sup>180</sup> D'Adam      Tape RTA:FH17 Side B, 13:00

<sup>181</sup> D'Adam      Tape RTA:FH17 Side B, 15:20

He found that a pattern of accidents seemed to be emerging near Bulahdelah, where crashes that occurred in the morning were invariably passengers travelling south and falling asleep and accidents in the afternoon were due to drivers from Sydney who then got drowsy. He became convinced that city drivers weren't used to the subtleties of horizontal and vertical curves which, unfortunately, abounded through the highway. This led to a lot of concern in the 1970s of why fatal accidents were moving from north of Bulahdelah to north of Taree. O'Brien concluded that this was largely due to improved dual carriageways and freeways that had been built south of Newcastle. He deduced that the four-hour fatigue factor was moving further north from Sydney, and unless one could persuade drivers to have a break at Taree, they would enter a danger zone north of Taree.<sup>182</sup>

Kevin Kirkland remembers taking a group of kids from Woodlawn College to Kempsey and recalls that one of the children met relatives in Kempsey that night, as there had been a fatal accident on the highway of someone coming back from a funeral of another person killed at that same spot. He says that there were few people who did not know of someone maimed, injured or killed on the Pacific Highway and that people were becoming afraid to travel on it, it having gained a reputation as a "killer highway".<sup>183</sup>

John Andrews quotes statistics that the accident rate increases during the daytime and reduces at night. In comparing the 285kms of Pacific Highway from Grafton to the border with the 7,000 kilometres of sealed roads in his district he found that 80% of all fatal crashes occurred on the Pacific Highway. He put into action a plan to patrol that section of the highway, which, he confirms, had the effect of reducing road accidents by 37%.<sup>184</sup> Andrews also remembers quite a few bad crashes on the highway in the Wyong area during the mid 1960s due to the fact that there were then virtually no speed restrictions on the highway outside of the town, those sections of the highway

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<sup>182</sup> O'Brien           Tape RTA:FH4 Side A, 00:12

<sup>183</sup> Kirkland        Tape RTA:FH24 Side A, 11:35

<sup>184</sup> Andrews        Tape RTA:FH21 Side B, 08:28

being classed as 'derestricted areas'.<sup>185</sup> He mentions that a motorist could drive on the Pacific Highway at 90mph with no fear of being stopped by police. Magistrates then also held the view that speed was not dangerous and the onus was on the police to prove that the motorist was driving at excessive speed. Andrews thinks that the introduction of a state-wide 100km/h speed limit in the early 1970s, followed by stationary and mobile radar had a tremendous influence on the way police went about enforcing road rules and also changed driver behaviour.<sup>186</sup> He claims that the use of radar has been one of the most effective and innovative policing tools on rural roads. He confirms that the margin of error in radar's ability to measure speed is now less than one km per hour.<sup>187</sup> Andrews also relates some of the more humorous excuses by motorists stopped on the highway for speeding, such as "The dog just farted and I wound down the window - I went faster to get rid of the smell" and "I'm running late for my husband's funeral".<sup>188</sup>

Bruce Parks believes that the causes of accidents on the highway are due to a combination of things, such as people wanting to travel too far in one day, the road not being good enough to travel at high speeds and motorists taking risks by overtaking, as roads get more crowded. He says that most fatal accidents on the highway are head-on collisions, not run-off-the-road-type accidents.<sup>189</sup> He adds that as roads such as the Hume Highway have improved, people's expectations now are to drive on a road of that standard wherever they go, and in that respect, he feels that the condition of the present Pacific Highway has contributed in some way to the road accident rate. He believes that because cars are now better and faster and road surfaces are better, he believes that this creates the illusion that one is now safer than one might have been 20 years ago.<sup>190</sup>

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<sup>185</sup> Andrews      Tape RTA:FH21 Side B, 03:42

<sup>186</sup> Andrews      Tape RTA:FH21 Side A, 08:14

<sup>187</sup> Andrews      Tape RTA:FH21 Side A, 11:26

<sup>188</sup> Andrews      Tape RTA:FH21 Side B, 00:34

<sup>189</sup> Parks        Tape RTA:FH29 Side B, 12:16

<sup>190</sup> Parks        Tape RTA:FH29 Side B, 13:15

John Andrews discloses that alcohol was a factor in 30% of car accidents and maintains that the introduction of random breath testing in 1982 has helped to reduce this significantly. In his experience, drink-driving is mostly a problem of local drivers, not of through or tourist traffic.<sup>191</sup>

Kevin Kirkland talks about the October 1989 accident at Cowper between a Sunliner coach and a semi-trailer loaded with steel, killing the truck driver and 20 passengers. In his opinion, the accident was caused by three bad sections of waves in the pavement, which a loaded semi-trailer would have trouble with at speed, but which a bus with air suspension would ride out. He recalls that a few months after that accident he was driving a spring-suspended bus on that very spot and was almost thrown through the roof. He speculates that this bad road surface could have easily projected the semi-trailer into the bus. He concedes, however, that the autopsy on the truck driver showed the presence of stimulatory drugs in his body and this could have been a contributing factor. He also observes that the Coroner's Report stated that the accident would not have happened if the road had been a four-lane divided carriageway.<sup>192</sup>

Kevin Kirkland describes the second accident at Clybucca two months later, when two fully-laden identical coaches met head-on with the loss of 30 lives and 50 injured. He mentions that the absence of seat belts - not mandatory then - in both buses increased fatalities. He speculates that the cause of the accident was either fatigue or driver error and says that the coroner's conclusions were the same as in the first accident.<sup>193</sup>

Tom Lindsay and Kevin Kirkland both agree that these two accidents were the catalyst for change and that community pressure eventually forced both levels of government to put up funding for the Pacific Highway reconstruction.<sup>194</sup>

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<sup>191</sup> Andrews           Tape RTA:FH21 Side B, 12:20

<sup>192</sup> Kirkland         Tape RTA:FH24 Side B, 09:01

<sup>193</sup> Kirkland         Tape RTA:FH24 Side B, 12:11

<sup>194</sup> Lindsay          Tape RTA:FH33 Side A, 19:35

Ron Smythe contends that trucks travelling on the highway frequently exceed the 100km/h speed limit and has observed them reaching speeds of up to 120km/h. He maintains that lowering the truck speed limit to 90km/h and imposing a speed limit of 80km/h for P-plate drivers has created three layers of speed on the highway, contributing to reckless overtaking by impatient motorists queuing behind.

John Andrews mentions a part of the Pacific Highway north of Ballina at Tintenbar, where over a 10-months period fourteen road fatalities occurred, all involving heavy vehicles. Further police investigation revealed that these vehicles had been travelling at excessive speeds for the conditions. He singles out a bend at the bottom of the southern side of a hill at Sandy Creek, where he was forever pulling trucks off the side of the road. He concludes that the set speed limit of 100km/h was clearly inappropriate and after consultations with the RTA's Grafton Office, a 70km/h speed limit for trucks was imposed, a move, he says that was not very well received by the road transport industry.<sup>195</sup> However, following the strict enforcement of the 70km/h speed limit for heavy vehicles, not a single accident occurred in the following twelve months at Tintenbar, clearly demonstrating the effectiveness of policing for road safety.<sup>196</sup>

Peter Cooper lists other factors that can cause accidents, such as road geometry and pavement width. He advises that as much of the Pacific Highway was designed in the 1950's, its sharp curves were not designed for 100km/h speeds. He pinpoints a notorious section on the highway from Taree to Nahiab and recalls that at one time, the logging of accidents was limited to one police constable called out to an accident scene who wrote in his report "Twenty miles south of Taree". This was very imprecise information and things have improved much since, because RTA now has accurate positioning

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<sup>195</sup> Andrews      Tape RTA:FH21 Side A, 21:02

<sup>196</sup> Andrews      Tape RTA:FH21 Side A, 23:25



systems. Cooper studied the section from Taree to Nahiab and concluded that accidents were occurring on straight sections of the highway, not on curves.<sup>197</sup>

### *Road markings, signage and guard rails*

Ron Smythe discloses that in the 1960s, on some winding parts of the highway with steep drops, side guard rails were built, but that sometimes there would not be room to build guard rails.<sup>198</sup> Terry O'Brien talks about having used old ferry ropes as part of protection fencing to stop people going off the road. They were eventually replaced by steel guard rails, but O'Brien finds it strangely rewarding that the new median separations in urban motorways use the same principle, with a wire rope stretching gradually to take the impact of a vehicle. He asserts that it was entirely accidental that ferry ropes were utilised, as some use needed to be found for them, adding: "It seemed like a good idea at the time".<sup>199</sup> Peter Cooper has noticed a deterioration in standards on the Princes Highway between Wollongong and Kiama where, until two years ago, there were no steel guard rails and where bridge pylons in the middle of the road are still uncovered by barriers, an omission, he believes, that can have fatal consequences. He is critical of the RTA for lack of coordination and in not having thought this out properly.<sup>200</sup>

Terry O'Brien believes that the colour of lines marking the separation of lanes on two-way roads should have remained yellow, as in the American system. He considers it confusing for motorists who come from dual carriageways to single lanes in each direction, whereas a yellow line would alert them to the fact that there would be traffic coming from the opposite direction.<sup>201</sup> He states that the Australian Road Research Board in Melbourne had a bias against yellow centre line markings. He also remembers that while Brian Sexton, the Commissioner for Main Roads was arguing for the American system, the

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<sup>197</sup> Cooper           Tape RTA:FH16 Side A, 26:22

<sup>198</sup> Smythe           Tape RTA:FH27 Side B, 11:12

<sup>199</sup> O'Brien         Tape RTA:FH4 Side B, 09:25

<sup>200</sup> Cooper           Tape RTA:FH16 Side B, 23:11

<sup>201</sup> O'Brien         Tape RTA:FH4 Side A, 04:55

South Australian Commissioner had just finished surfacing a 350km stretch of highway towards the Western Australian border with new thermo-plastic white paint and indicated that he could not support the NSW Commissioner. O'Brien said that the DMR held out for another 10 years, but finally declared that NSW would change over to all-white to conform with other states.<sup>202</sup>

O'Brien speculates that, in a fatal accident involving two Americans and a semi-trailer near Clybucca, the Americans may not have been aware that they were no longer travelling on a dual carriageway, as the road looked the same.<sup>203</sup>

John Andrews thinks that road marking and signage on the Pacific Highway is now vastly superior to what it was 10 years ago, with coloured markers in the centre and on sides giving drivers an exact position of road alignment. He point out that this, in addition to chevron markers on sharp corners, markings on guide posts, concrete New Jersey Curve road dividers and new reflective signs have given drivers a vastly superior picture of where the road is leading them and has contributed to reducing road toll statistics.<sup>204</sup> Andrews concurs with O'Brien and believes that yellow line markings, used in the past, were vastly superior to the white road markings now being used. He also believes that the Fatigue Rattle Strips used on edge lines, although expensive, can save lives plus about three quarters of a million dollars each accident, as an indirect cost to taxpayers.<sup>205</sup>

Ron Smythe thinks that guide signs developed by RTA are very good and that Queensland has a lot to learn from the NSW system. He is less enthusiastic about advisory speed signs, believing that they have fostered a generation of drivers who can't read a curve by eye and have become dependent on advisory speed signs. He suggests that it would be quite easy for a driver dependent on

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<sup>202</sup> O'Brien      Tape RTA:FH4 Side A, 13:00

<sup>203</sup> O'Brien      Tape RTA:FH4 Side A, 14:36

<sup>204</sup> Andrews      Tape RTA:FH21 Side B, 15:46

<sup>205</sup> Andrews      Tape RTA:FH21 Side B, 21:12

advisory speed signs to go off a highway onto a country road without advisory signs and spin off the edge on the first bend.<sup>206</sup>

Vince O'Grady believes that the safety record of the Pacific Highway has improved considerably since the 1960s, with the road now up to ten times as safe as it used to be, taking into account the increased traffic volumes. He attributes this to safer cars, better designed roads, fewer blind crests and corners, fewer pedestrians using the roads, more over and underpasses and fewer narrow bridges.<sup>207</sup> John Andrews notes that around Bulahdelah Mountain, in the twelve months since the new road opened, the cost of fatal crashes to the community has been greatly reduced and would probably pay for the road construction costs alone.<sup>208</sup>

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<sup>206</sup> Smythe           Tape RTA:FH27 Side B, 17:57

<sup>207</sup> O'Grady         Tape RTA:FH10 Side A, 24:52

<sup>208</sup> Andrews         Tape RTA:FH21 Side A, 23:25

## The Environmental Record

The DMR appears to have had a very mixed environmental record, compared with its successor. Bruce Parks proclaims that until well into the 1970s, the DMR did not know what the word 'environment' meant and that any solution then was an engineering solution. Environment was never taken into consideration and the public was not consulted as to what they wanted. The DMR might, out of courtesy talk to the local Council and that would be it.<sup>209</sup> Peter Stevens recalls that in the 1960s Environmental Impact Statements were not required and if the DMR found something it did not want anyone to know about, it was 'buried'.<sup>210</sup>

Ron Smythe admits that the DMR used to pass drainage water from one side of the road to the other at Bangalow and at other locations along the highway without caring very much where the water came out, resulting in the silting up of rivers and creeks. In later years, local people protested that this should not have been done and Smythe concedes that these protests are justified. He confesses that the DMR did not worry about doing these things, but just did them.<sup>211</sup> He also mentions that in the 1940s, along the Clarence River, from the Pacific Highway to Yamba a swamp was drained, filled in and the road built across. He regrets that the river on the far side of the embankment is now completely dead and silted up with mud, something, he believes should never have been allowed to happen.<sup>212</sup>

Don McDean talks about some problems in working on boggy ground between Karuah and Bulahdelah and near swamps at Raymond Terrace where they could not find a suitable foundation. He confirms that the only solution then

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<sup>209</sup> Parks           Tape RTA:FH29 Side A, 18:09

<sup>210</sup> Stevens       Tape RTA:FH32 Side A, 26:34

<sup>211</sup> Smythe        Tape RTA:FH27 Side B, 27:47

<sup>212</sup> Smythe        Tape RTA:FH27 Side B, 26:06

was to drain the swamp and that this was done. He says: "In those days there weren't too many 'greenies' around and you could knock over trees whenever you wanted to. Now you can't."

Leo D'Adam, however, points out that although in his day the word 'environment' was never used, the DMR was foremost in environmental matters. He mentions that on the Sydney-Newcastle Freeway, stiling ponds and straw bales were used, embankments were re-vegetated and seed grasses regenerated.<sup>213</sup> He also points out that during construction of the Belmont bypass in 1958/59, the DMR planted saplings to stabilise banks on both sides of the road and that at Cooperook, about a hundred Jacaranda trees were planted by the DMR, but that a dairy farmer took them out. He recalls that the DMR took the farmer to court and that he was fined for causing environmental damage.<sup>214</sup>

John Henley verifies that a long line of she-oaks, known as "Oak Avenue" perhaps 2-3 miles long, grew on either side of the concrete road south of Chinderah and that it could be unsettling as one drove along the road with the sun shining through the trees. The land was low-lying and flood-prone and the accident rate there was high, prompting the DMR in 1972 to decide to remove the oaks. He reveals that the DMR had indications that the small but growing environmental movement might object to the removal of the trees, and the DMR was also aware that questions would be raised in Parliament, so an operation by stealth was planned. Henley recounts that one morning at 5am, armed with two bulldozers and a lot of men with chain saws, the DMR removed every tree. He adds that by the time the Minister received complaints from the environmentalists, it was too late.<sup>215</sup>

Ron Smythe refers to the introduction of Environmental Impact Statements open to public comment which became a necessity for all new construction

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<sup>213</sup> D'Adam      Tape RTA:FH18 Side A, 00:39

<sup>214</sup> D'Adam      Tape RTA:FH18 Side A, 04:34

<sup>215</sup> Henley        Tape RTA:FH25 Side B, 00:28

projects. He points out that this scuttled the Wyong High School proposal, plus early plans for the freeway to cross swamplands, which would have endangered wildlife.<sup>216</sup>

Peter Stevens confirms that today, thorough environmental assessments are carried out on the natural and built environment, the consequences of the work to be undertaken and the impact of adjoining projects. He believes the RTA's EIS statements to be of the highest standard and points out the change in mentality from the DMR's 'slash and burn' mentality of the 1960s and 1970s. He advises that RTA employs three full time environmentalists in the northern region who take steps to ensure compliance with environmental procedures. He comments that RTA found remnants of an endangered native grass south of Coffs Harbour and took steps to preserve and re-establish the grass.<sup>217</sup> Colin Nunn points out that RTA is now much more responsive to environmental concerns as community values have changed. He adds that RTA can sometimes improve the environment after construction is completed by planting more native species and providing compensatory habitat for wildlife. He mentions that environmental damage caused by farming and agriculture over the years has been more damaging than building the road network and that sometimes the only remnants of native vegetation left are along the roads.<sup>218</sup>

Bruce Parks mentions that an endangered frog was discovered on the Bulahdelah section and a bridge was built over its breeding habitat. At Chinderah, the road crossed wetlands with mangroves and RTA bought some adjacent farming land, replanted the mangroves and created another wetland area to compensate for what had been lost.<sup>219</sup>

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<sup>216</sup> Smythe           Tape RTA:FH27 Side B, 24:05

<sup>217</sup> Stevens         Tape RTA:FH32 Side A, 26:34

<sup>218</sup> Nunn             Tape RTA:FH2 Side A, 24:35

<sup>219</sup> Parks            Tape RTA:FH29 Side B, 08:28

## Heritage items

Terry O'Brien, Vince O'Grady and Eric King all report that Aboriginal carvings were found along the Berowra to Wahroonga section of the Sydney-Newcastle Freeway and that subsequently, the DMR contacted the Australian Museum who sent out an amateur [archaeologist] who mapped the carvings. The Aboriginal rock art carvings are preserved on top of a rock island in the middle of the Freeway.<sup>220</sup> Bruce Parks says that RTA is always on the lookout for any Aboriginal heritage items and that consultations with The National Parks and Wildlife Service and Aboriginal groups take place before any construction begins. He adds that during construction, an Aboriginal liaison person is brought on site at times to consult on any items of significant value. He reports that RTA employs a full-time Aboriginal Liaison Officer at the Kempsey office.<sup>221</sup>

Tom Hope refers to a cow bale near Wootton as a heritage item that was retained<sup>222</sup>, Ron Smythe knows of a stone wall constructed by early Chinese immigrants on the road from Lismore to Bangalow<sup>223</sup> while Peter Stevens mentions War Memorials, grain silos and older public buildings. He also refers to the old timber truss bridge at Barney's Point that RTA is presently removing.<sup>224</sup> John Henley also mentions the Barneys Point Bridge, a part of which has been retained and turned into a fishing jetty. He thinks that the item with real heritage value was the Boyds Bay Bridge, which was wound up by hand with cables, but has been totally demolished.<sup>225</sup>

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<sup>220</sup> King                      Tape RTA:FH14 Side A, 21:08 and O'Brien Tape RTA:FH4 Side B, 15:12  
<sup>221</sup> Parks                     Tape RTA:FH29 Side B, 21:16  
<sup>222</sup> Hope                     Tape RTA:FH11 Side B, 16:14  
<sup>223</sup> Smythe                  Tape RTA:FH28 Side A, 09:10  
<sup>224</sup> Stevens                 Tape RTA:FH31 Side B, 10:59 & 13:05  
<sup>225</sup> Henley                    Tape RTA:FH26 Side A, 08:53

Brian Pearson mentions that, as an outsider by invitation, he attends meetings of the RTA Heritage Committee and that the Committee is presently looking at timber truss bridges. He confirms that several old timber truss bridges have been preserved and that RTA will usually pay for the demolition of old timber bridges, but that the difficulty lies in new owners having enough funds to reconstruct and maintain old bridges.<sup>226</sup>

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<sup>226</sup> Pearson      Tape RTA:FH35 Side B, 16:12



## DMR/RTA's Relations with the Public and Unions

Generally speaking, the DMR had amicable relations with those it dealt with, but there are some notable exceptions. Tom Hope recalls that when the new bridge foundation had been started on the bridge at Stockton, industrial unrest inspired by the Fireman's & Deckhands Union commenced and began to affect ferry services, with the result that the service deteriorated. Hope says that this problem ended with the opening of the new bridge in 1970.<sup>227</sup>

Bruce Parks recalls that the typical approach of the DMR to others in the 1960s was that they knew how to do a job and 'don't ask us any questions'.<sup>228</sup> He remembers that the DMR, in its relations with landowners to purchase land for road resumption was rather secretive. He says that the first thing that the public would have known about it was when an DMR representative would knock on someone's door and say: "We want to buy your land".<sup>229</sup> Ron Smythe confirms that the DMR would enter a property with a blue "Permit to Enter" order which an owner would sign prior to acquisitions being paid for, and which would allow the DMR to commence road widening or the building of retaining walls. Sometimes, he adds, acquisitions were not paid for until years afterwards.<sup>230</sup>

Ron Smythe confirms that in the case of some obstinate landholders who did not agree to the price that the DMR offered, construction of the road was delayed while negotiations continued. If negotiations broke down irrevocably, the DMR could and did resort to resumption and take landowners to court. He

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<sup>227</sup> Hope           Tape RTA:FH11 Side B, 24:29

<sup>228</sup> Parks           Tape RTA:FH29 Side A, 12:20

<sup>229</sup> Parks           Tape RTA:FH30 Side A, 09:30

<sup>230</sup> Smythe         Tape RTA:FH27 Side A, 21:38

thinks that the DMR had quite a bit of clout then and was looked upon with a fair amount of trepidation.<sup>231</sup>

Peter Stevens discloses that in some cases DMR did not compensate owners for changes in boundaries. He admits that the DMR developed a very bad reputation as people that you could not deal with. He confesses that this reputation haunts the RTA even today because people remember that the DMR did not pay their father for a piece of land 20, 30 or 40 years ago. He says that this was how government departments dealt with people then, a practice that has now changed to a softly-softly approach involving consultation, understanding the needs and, as far as possible, meeting those needs.<sup>232</sup>

Vince O'Grady remembers an angry pig farmer near Wyong who threatened to come down with a gun to 'sort him out'.<sup>233</sup>

Bruce Parks is of the opinion that not too many mistakes were made by DMR in the past and that the public ended up with good roads, but that the process would have upset some landowners and environmentalists. He concludes that it might have been a good road, but not perhaps what the community might have wanted, or what might have fitted environmentally.<sup>234</sup>

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<sup>231</sup> Smythe           Tape RTA:FH27 Side A, 19:50 & 21:02

<sup>232</sup> Stevens         Tape RTA:FH32 Side A, 16:06

<sup>233</sup> O'Grady         Tape RTA:FH9 Side A, 23:55

<sup>234</sup> Parks            Tape RTA:FH30 Side A, 10:26

## Road Funding and Politics

The process of building and upgrading the Pacific Highway is fraught by the politics of votes, geography and funding. John Brunt remembers a Minister for Transport who came from Broken Hill and remarks how extraordinary it was that so much money was spent on roads to and from Broken Hill during his tenure. He also recalls that the Rip Bridge at Woy Woy was built ahead of its time because of election promises.<sup>235</sup>

John Brunt recalls that during the late 1970s he was on the Grants Commission and that a study was done, comparing the state of NSW roads to major roads in other States. One of the findings of the study confirmed that NSW and Victorian taxpayers were subsidising the road building activities of other states. He points out that the conclusions of the study were not acted upon by government, being put in the 'too hard' basket.<sup>236</sup>

According to Kevin Kirkland, The Pacific Highway Task Force, on which he represented the coach industry battled for years to achieve recognition of the priority due to the Pacific Highway, but it fell on deaf ears, with various ministers offering paltry amounts to fix the highway. Brian Langton at one stage offered \$100 million, but Kirkland told him that this would not even be pothole money to maintain the highway, let alone improve it.<sup>237</sup> Kirkland is convinced that politicians did not consider that there were votes in the highway until the March 1996 Federal election, when three seats in the north-east of the State became very marginal. He adds that only then, bi-partisan support for the \$2.2 billion upgrade of the Pacific Highway became a reality.<sup>238</sup>

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<sup>235</sup> Brunt           Tape RTA:FH7 Side A, 05:45

<sup>236</sup> Brunt           Tape RTA:FH7 Side A, 18:51

<sup>237</sup> Kirkland       Tape RTA:FH24 Side A, 20:09

<sup>238</sup> Kirkland       Tape RTA:FH24 Side A, 22:04

## Comparing the DMR and the RTA

Ron Smythe thinks that the major shift from the DMR days to the RTA is that contract work has increased and has become the majority. He mentions that contractors do not necessarily do things better, but they do them quicker. He suspects that the quality of work has decreased and that roads built by contractors often fail after construction.<sup>239</sup>

Tom Lindsay disagrees and says that the best thing that has happened to the road system is the letting of road construction contracts to private enterprise. He believes that the DMR or the RTA itself never built a road strong enough to stand up to the traffic. He estimates that it must be costing an enormous amount of money for repairs made to roads that have been realigned over the past 5-8 years, as they seem to break up within 12 months.<sup>240</sup>

Bruce Parks compares the approach of the DMR with the RTA and believes that there is more direction now in the RTA. He concludes by saying that the RTA is a 'big picture' organisation and much more professional than the DMR ever was.<sup>241</sup>

Eric King reflects that 'in the good old days' the DMR had a certain autonomy, enabling the Commissioner to plan and do things and advise the Minister what the DMR had decided. He believes that there was a change of attitude when Wal Fife became Minister and started to exert greater control over the DMR and imposing restrictions on what the Commissioner could do and say. He thinks it was better in the days when the DMR could consult directly with

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<sup>239</sup> Smythe           Tape RTA:FH28 Side A, 27:59

<sup>240</sup> Lindsay        Tape RTA:FH33 Side B, 07:10

<sup>241</sup> Parks            Tape RTA:FH30 Side A, 19:15

municipal councils, and regrets that Ministers now make all announcements and take all credit for road construction.<sup>242</sup>

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<sup>242</sup> King . . . Tape RTA:FH14 Side B, 11:12

## Benefits of the Highway

Communities along the route of the Pacific Highway have derived great benefits from improvements to the highway. Initially, they benefited with the change from ship and rail to road transport. They benefited further as travel times for local people were reduced and roads were sealed, ending the tyranny of a road that, after heavy rain would become unpassable. Primary producers have benefited by gaining the opportunity to get their goods - bananas, sugar cane, cotton, dairy products and timber - to market in shorter times than were previously possible. Increased accessibility also opened up formerly remote areas, such as the Bellinger River Valley, to agriculture. It also fuelled a tourism industry that might otherwise not have emerged and made the growth of towns such as Port Macquarie, Coffs Harbour and Byron Bay possible.

Peter Stevens remarks that some commercial developments along the highway have done very well, capitalising on the exposure of their sites and attracting custom. Now, with a desire by Australians to be close to the water's edge, a range of resorts have materialised and new National Parks have been established. He suggests that the real beneficiaries of having a highway are those people who now use the highway for transport and commercial reasons, rather than private use.<sup>243</sup>

Increased mobility has also had an effect on the movement patterns of town residents: Ron Smythe makes the point that Coffs Harbour has benefited by the better road between it and Grafton and mentions that local Grafton people prefer to shop at Coffs Harbour, now only a 45-minute drive away, whereas 10 years ago one would not think about doing that.<sup>244</sup>

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<sup>243</sup> Stevens      Tape RTA:FH31 Side B, 24:02

<sup>244</sup> Smythe      Tape RTA:FH28 Side A, 03:53

Pitted against these benefits are the environmental costs of land that has been lost or spoiled, the division of a community that occurs when a highway goes through a town and the deterioration of amenities of those living along the highway through noise or safety factors.<sup>245</sup>

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<sup>245</sup> Henley      Tape RTA:FH25 Side B 20:51

## Remaining problems and unresolved issues

The highway has greatly improved in recent years and will continue to do so under the RTA's \$2.2 billion upgrade to 2008, but many legacies remain.

'Black spots' are still numerous and Colin Nunn points to high accident rates south of Bulahdelah, north of Karuah and near Coffs Harbour.<sup>246</sup> He also refers to some poorly-aligned sections of the highway north of Bulahdelah and north of Bangalow and Brunswick Heads.<sup>247</sup>

Eric King points to accident blackspots on the northern route at the Burringbar Range, Corindi Creek, Tyagarah railway crossing and near Ewingsdale, north of Ballina.<sup>248</sup>

Ron Smythe mentions the Burringbar Range as a major problem area and believes that a major bypass planned for this section will eliminate one of the last accident-prone areas on the highway.<sup>249</sup>

Tom Lindsay singles out Bulahdelah and the Burringbar Range where, he claims, drivers are not observing the 70km/h speed limit.<sup>250</sup> He also informs that some of the bridges on the Pacific Highway are still very narrow and points out a bridge just south of his depot at Boambee where, when a bus and a semi-trailer pass, there is not a foot to spare. He points to another bridge at Coolongolook where trucks drivers call each other on their CB radios to warn each other to allow the truck closest to the bridge to enter first.<sup>251</sup>

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<sup>246</sup> Nunn           Tape RTA:FH2 Side B, 01:26  
<sup>247</sup> Nunn           Tape RTA:FH1 Side B, 10:22  
<sup>248</sup> King           Tape RTA:FH13 Side A, 21:21  
<sup>249</sup> Smythe       Tape RTA:FH27 Side B, 13:45  
<sup>250</sup> Lindsay      Tape RTA:FH33 Side B, 09:40  
<sup>251</sup> Lindsay      Tape RTA:FH33 Side A, 10:59



Terry O'Brien worries about the Dennis Bridge approaches at Port Macquarie which he says are showing signs of distress with ultimate settlement and the weight of heavy traffic.<sup>252</sup> He is also concerned about the polishing characteristics of road aggregates and worries that, as experienced RTA staff are replaced with less experienced staff, knowledge of what constitutes an acceptable aggregate may be lost.<sup>253</sup>

John Henley confirms that there are still parts of the highway that haven't changed since he was with the DMR 25 years ago and singles out the section from Burringbar to Mooball which has very narrow shoulders.<sup>254</sup>

Peter Stevens ponders on any mistakes that the RTA in Grafton might have made, and refers to the building of one section of road in which a vertical crest was not regraded. He admits that although the design fully complies with the guidelines, a group of road users has been running a campaign for 5 years to have the design changed. He concedes that in hindsight, it would have been better to have paid more and removed the crest.<sup>255</sup>

John Andrews mentions the section of the highway from Boambee to Coffs Harbour as having no overtaking opportunities and leading to driver frustration and accidents.<sup>256</sup>

Peter Cooper points out that what in the past were regarded as road design standards are now regarded only as guidelines to comply with if one feels like it. He holds that this is resulting in danger for the travelling public as they meet different design standards when crossing over a local government boundary. He gives an example in the Bourke Division: when travelling north

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<sup>252</sup> O'Brien      Tape RTA:FH3    Side B, 20:17

<sup>253</sup> O'Brien      Tape RTA:FH5    Side A, 12:30

<sup>254</sup> Henley        Tape RTA:FH26   Side A, 15:24

<sup>255</sup> Stevens      Tape RTA:FH32   Side A, 19:35

<sup>256</sup> Andrews      Tape RTA:FH21   Side A, 17:57

from Dubbo through Gilgandra and coming to Coonamble, one suddenly found that the road had no edge lining, because the Divisional Engineer of the Bourke Division did not believe in it. He hopes that on safety grounds there will be uniformity in the treatment of curves and super-elevations, but predicts that when you have only guidelines instead of strict instructions, standards will deteriorate.<sup>257</sup>

Jack Giddy mentions that in some sections of the highway, more trucks than cars use the road and are driving faster than before. He worries that as the trucks get wider, pavements are getting proportionately narrower.<sup>258</sup>

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<sup>257</sup> Cooper      Tape RTA:FH16 Side B, 20:09  
<sup>258</sup> Giddy        Tape RTA:FH20 Side A, 12:40

## A Highway for the new Millennium

During the last decade, the Pacific Highway has been subject to much planning and assessment. In the late 1980s, a study was done by the Northern Regional Office and this was followed by the North Coast Road Strategy Study, released in 1993. This study looked at the Pacific Highway and the North Coast at a more strategic basis: the impact of low growth/high growth scenarios of population and how the highway supports the economic development of local communities, a role it traditionally had and still has.<sup>259</sup>

Colin Nunn believes that the \$2.2 billion funding for the upgrade of the Pacific Highway will provide significant lengths of dual carriageway until 80% of the highway will become a dual carriageway by 2008, bypassing all major towns. He is confident that this will result in a safer, more accessible highway, but with more freight and passenger car use.<sup>260</sup> He also speculates that by 2008, improvements to the Pacific Highway will have cut travel times between Newcastle and the Queensland border by 50 minutes. He contrasts this with the situation where, if no money was spent on the highway between 1998 and 2008, travel times on that stretch of the highway would have increased by 20 minutes.<sup>261</sup>

Nunn also discusses the possibility of building additional lanes on the Sydney-Newcastle Freeway south of Calga to manage a massive growth in traffic volumes from Sydney to Gosford, now 65,000 vehicles a day.<sup>262</sup>

Bruce Parks quotes figures which verify that until 1996, only 9% of the Pacific Highway from Hexham to the Queensland border was a dual carriageway and

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<sup>259</sup> Nunn           Tape RTA:FH1   Side B, 23:28  
<sup>260</sup> Nunn           Tape RTA:FH2   Side A, 18:32  
<sup>261</sup> Nunn           Tape RTA:FH2   Side B, 00:28  
<sup>262</sup> Nunn           Tape RTA:FH2   Side B, 11:44

hopes that by the end of 1999, that figure will have risen to 21%, as a number of major programs should then be completed. He estimates a saving of 30kms from the total route, from 696 kms down to 666 kms, plus a saving of one and a half hours in travelling time.<sup>263</sup> He also forecasts that with the expected increased car and truck traffic the highway, when a dual carriageway, will be able to cope with volumes of up to 40,000 vehicles per day, compared to present average volumes of about 20,000 vehicles. He anticipates that traffic volumes could double before a problem would arise, and asserts that if those volumes were to be exceeded, a third lane could always be added to the highway.<sup>264</sup> He admits however, that the remaining parts of the highway that will still be a single lane each way after 2008 will not be able to cope with expected traffic volumes and that therefore the push to upgrade the rest of the highway will be on.<sup>265</sup>

Kevin Kirkland anticipates that more designated rest stops along the highway every 100kms, complete with service facilities such as food, fuel and toilets would need to be incorporated in the new Pacific Highway to make it a more pleasant trip for motorists.<sup>266</sup> He considers that the new Pacific Highway will be as beautiful as the Mona Lisa and is delighted at the way it is being built, and the care and understanding that the RTA is putting into the construction.<sup>267</sup>

Leo D'Adam is amazed at the number of improvements that have been carried out on the Pacific Highway in recent times, but regrets that these improvements are as yet nowhere near good enough. He thinks that the Pacific Highway is just as important as the Hume Highway, particularly as demographic projections for 2020 to 2050 forecast the largest population increases for the area between Nambucca and Brisbane. He suggests that it is

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<sup>263</sup> Parks Tape RTA:FH29 Side B, 01:11

<sup>264</sup> Parks Tape RTA:FH29 Side B, 24:45

<sup>265</sup> Parks Tape RTA:FH29 Side B, 25:50

<sup>266</sup> Kirkland Tape RTA:FH24 Side B, 06:25

<sup>267</sup> Kirkland Tape RTA:FH24 Side A, 26:53

better for the road to be in place before population increases catch up with it, rather than the reverse.<sup>268</sup>

Peter Cooper thinks that the Pacific Highway will not be of a high enough standard for the 21st century. He points out that what's simultaneously happening is vehicles designed for higher speeds, increased through traffic and larger and more frequent freight transports, all travelling at high speeds on a road with turning traffic, school buses and pedestrians. He forecasts that we'll be duplicating the problems and not the benefits.<sup>269</sup>

Peter Stevens remarks on the future role of the Pacific Highway, which he says will become an important north-south link for Australia, with ever-increasing tourism and commercial traffic. He sees a reassignment of traffic from other highways to the Pacific Highway as being inevitable. This revolution is happening quickly, with many bypasses opening, or in progress.<sup>270</sup>

Tom Lindsay, asked whether he has any message to pass on to the RTA replies: "Keep letting to private enterprise to build roads and we'll end up with a better Pacific Highway". He concludes that it is very gratifying for him to see the improvements that are now occurring.<sup>271</sup> He forecasts that after the entire Pacific Highway has become dual lane divided carriageway, the RTA should be looking at widening it to six lanes, but thinks that won't come in his lifetime.<sup>272</sup>

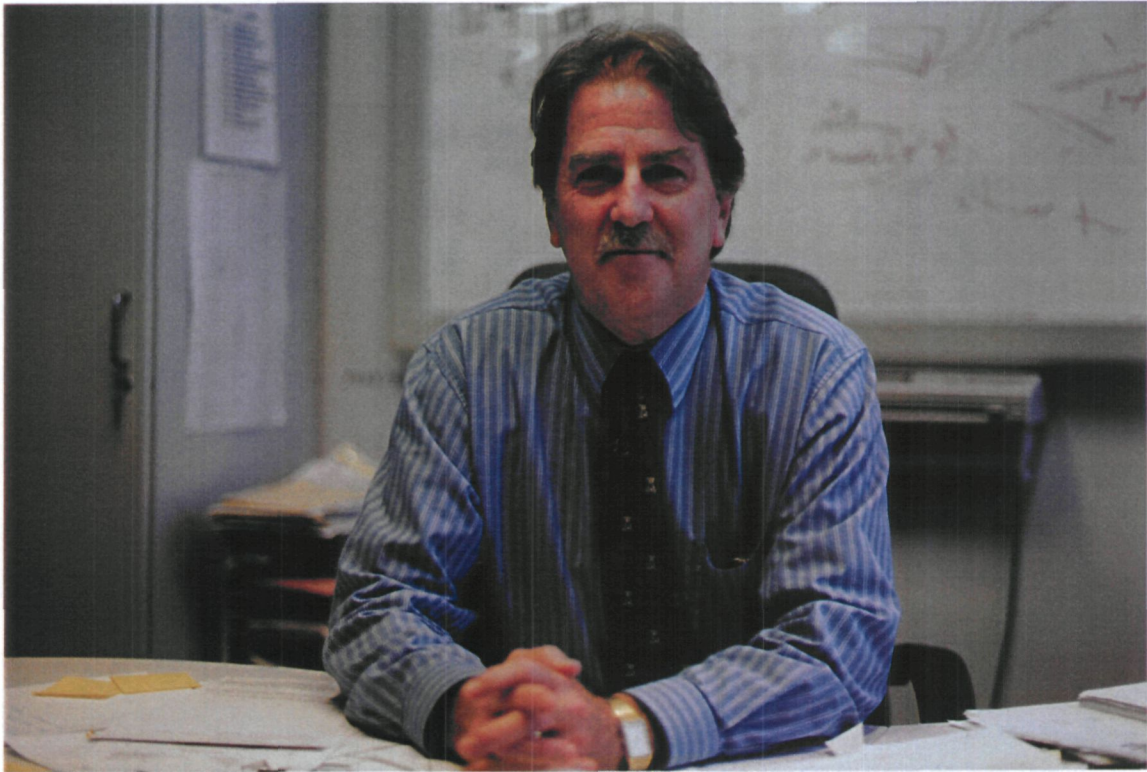
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<sup>268</sup> D'Adam           Tape RTA:FH18 Side A, 07:40  
<sup>269</sup> Cooper           Tape RTA:FH16 Side B, 08:57  
<sup>270</sup> Stevens          Tape RTA:FH32 Side B, 04:29  
<sup>271</sup> Lindsay          Tape RTA:FH33 Side B, 29:27  
<sup>272</sup> Lindsay          Tape RTA:FH33 Side B, 06:05



# **Appendix A:**

## **The Interviewees**



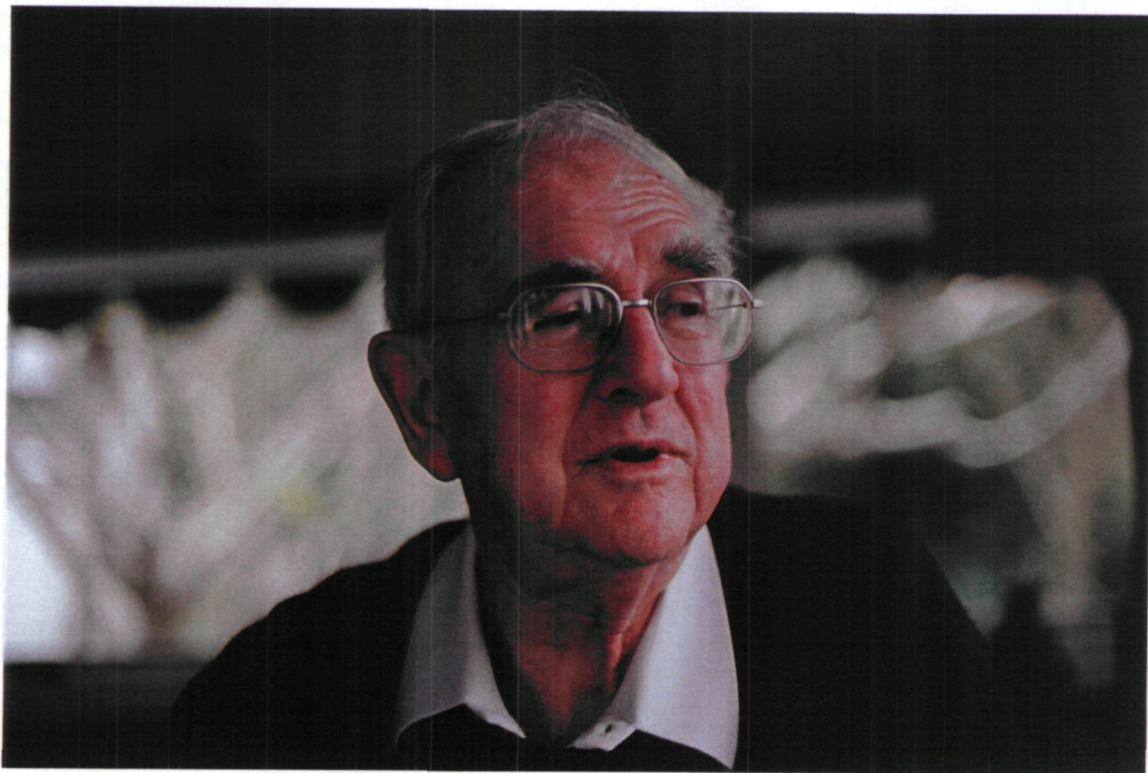
**Colin Nunn, Tapes RTA:FH1 & RTA:FH2**



**Terry O'Brien, Tapes RTA:FH 3, RTA:FH4 & RTA:FH5**

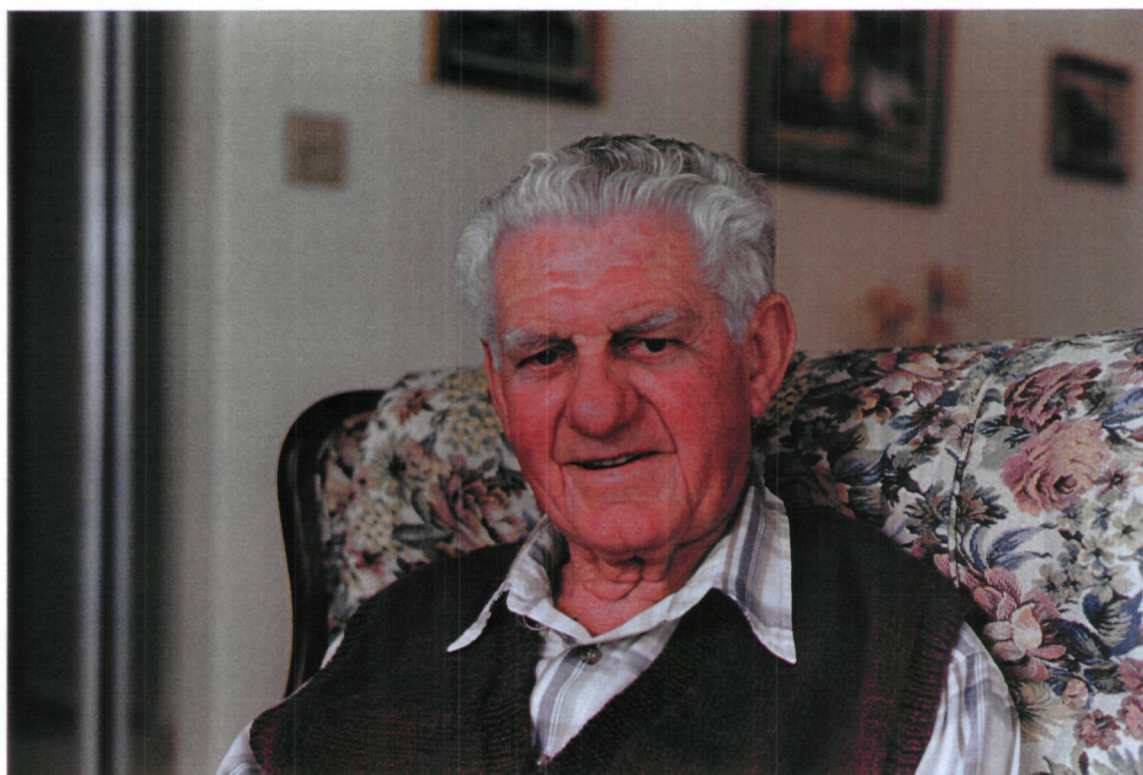


**John Brunt, Tapes RTA:FH6 & RTA:FH7**

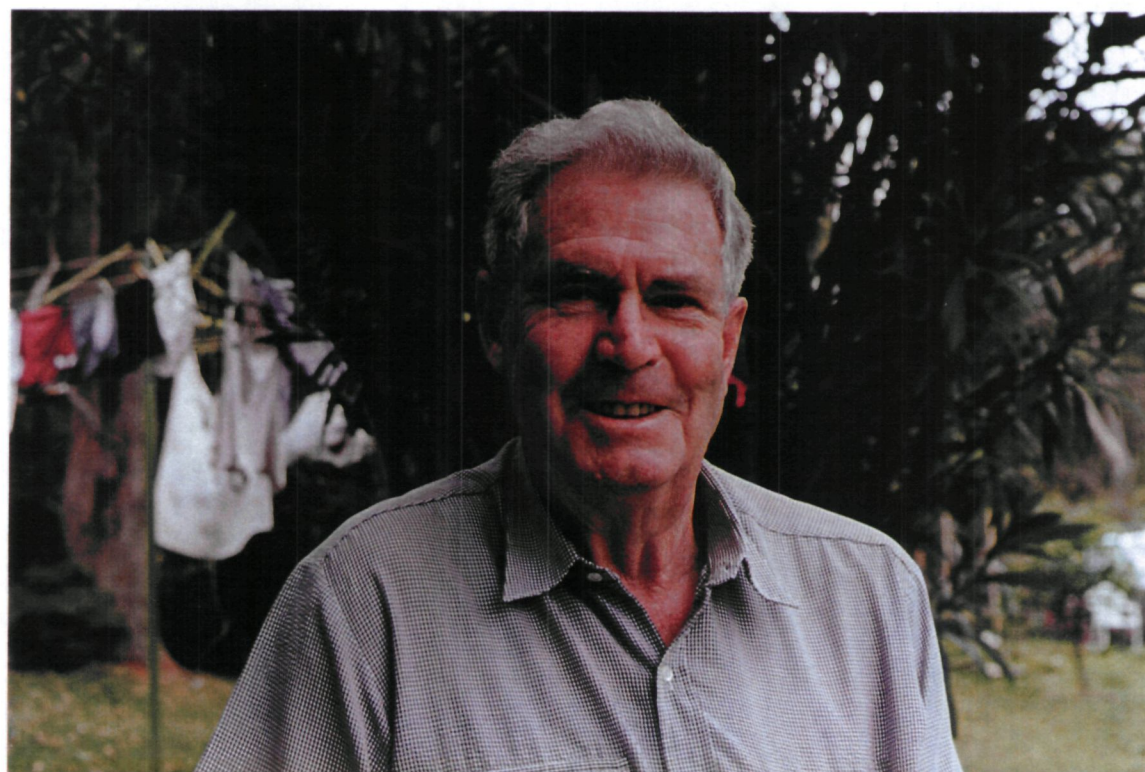


**Vince O'Grady, Tapes RTA:FH 8, RTA:FH9 & RTA:FH10**





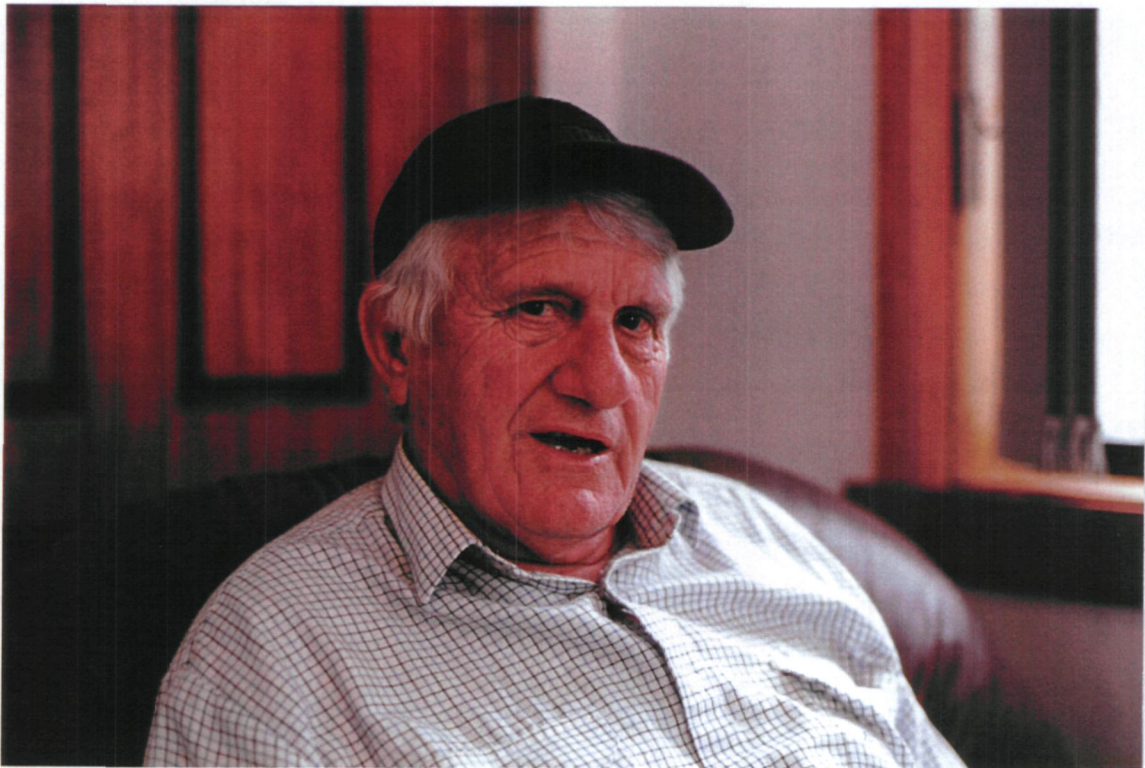
**Tom Hope, Tapes RTA:FH11 & RTA:FH12**



**Eric King, Tapes RTA:FH 13 & RTA:FH14**



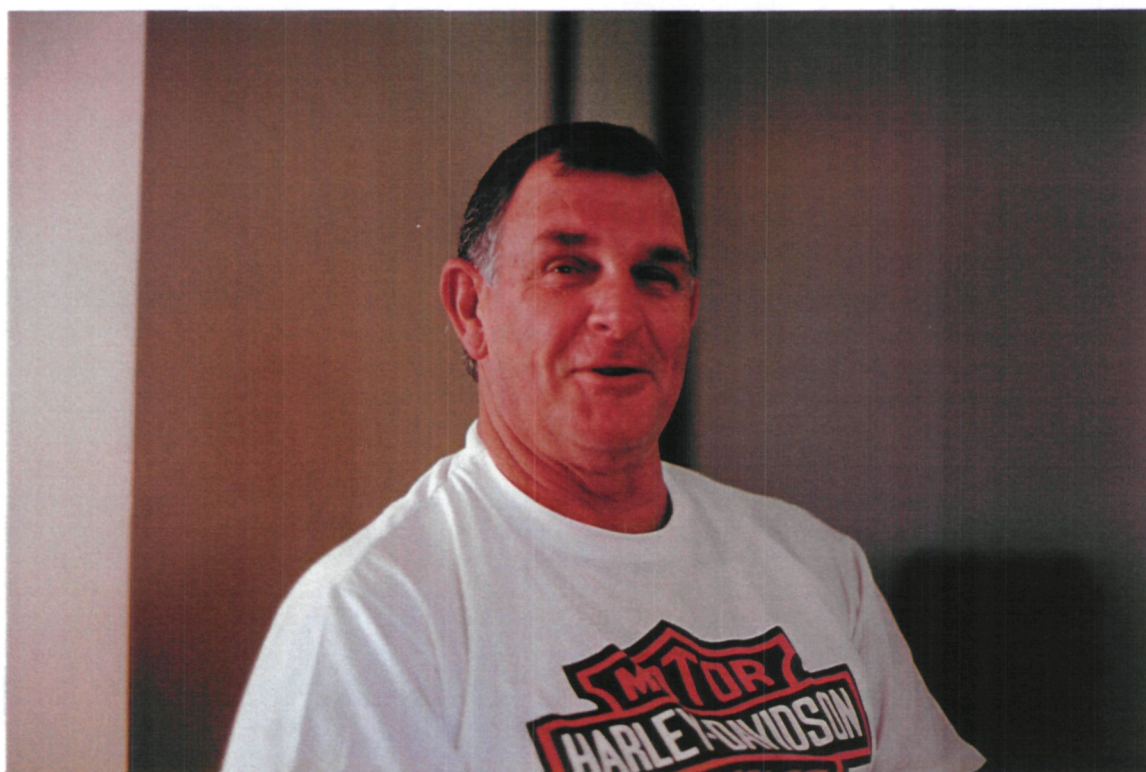
**Peter Cooper, Tapes RTA:FH15 & RTA:FH16**



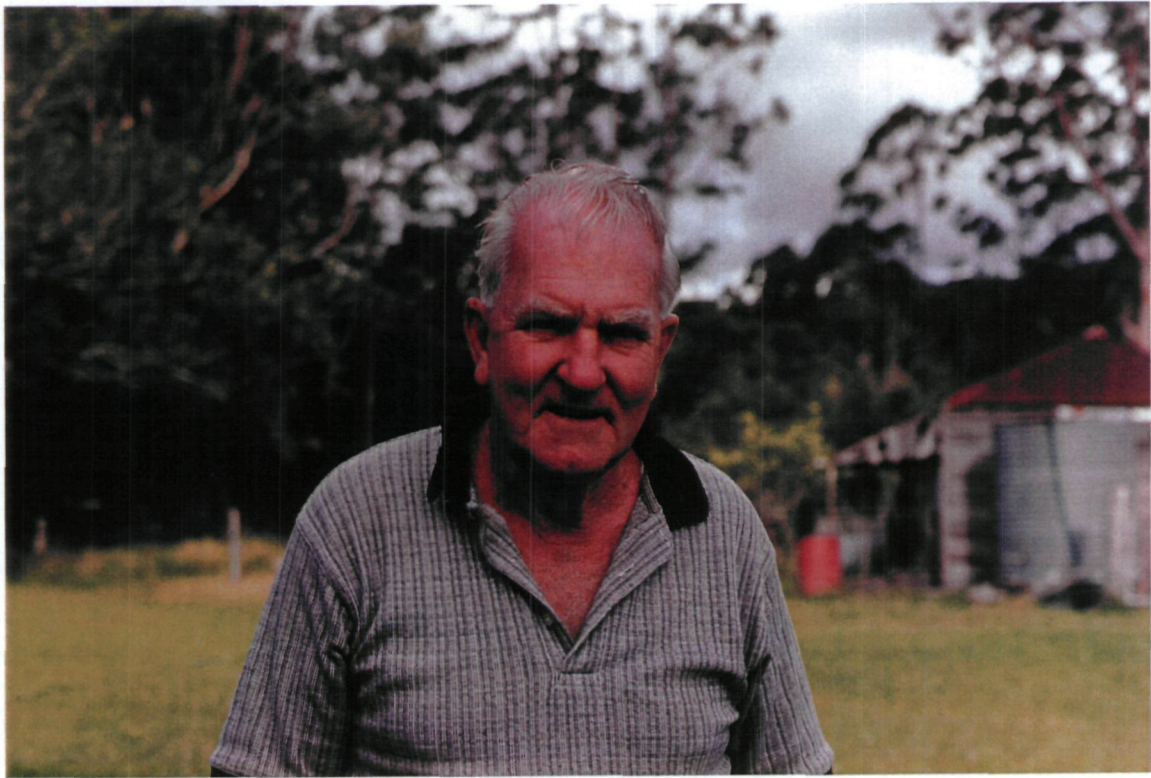
**Leo D'Adam, Tapes RTA:FH17& RTA:FH18**



**Jack Giddy, Tapes RTA:FH19 & RTA:FH20**



**John Andrews, Tapes RTA:FH21& RTA:FH22**



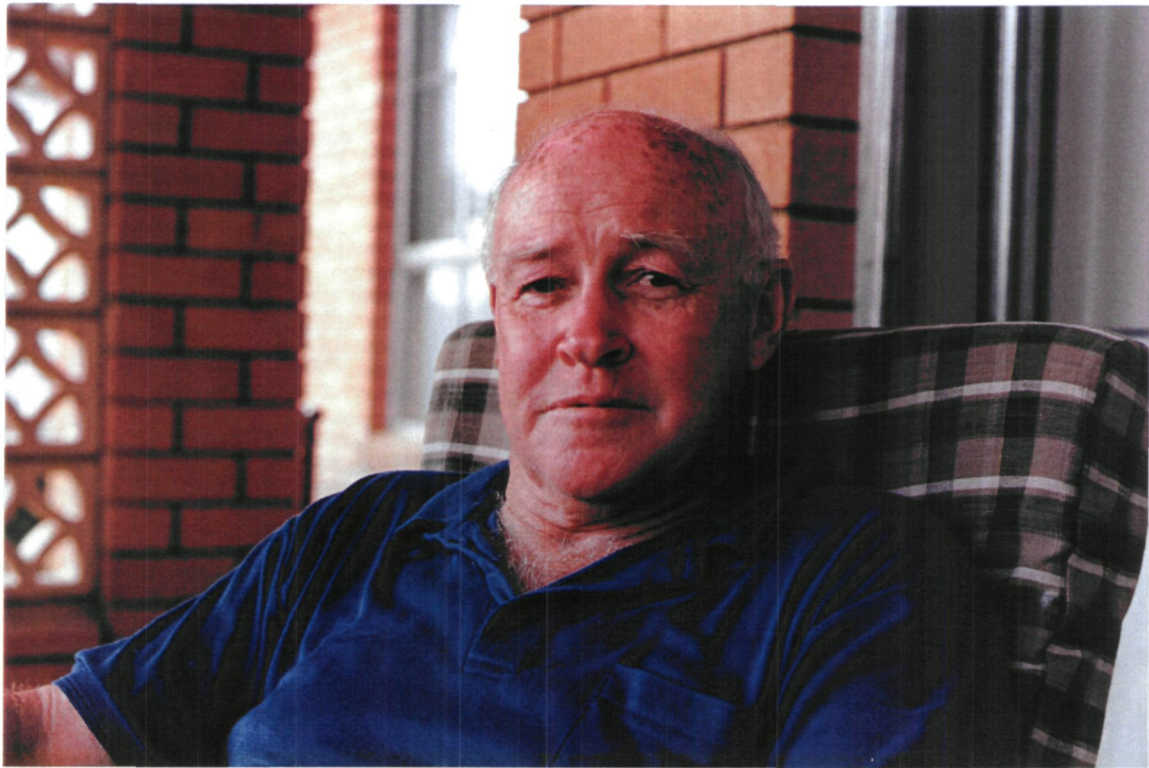
**Don McDean, Tape RTA:FH23**



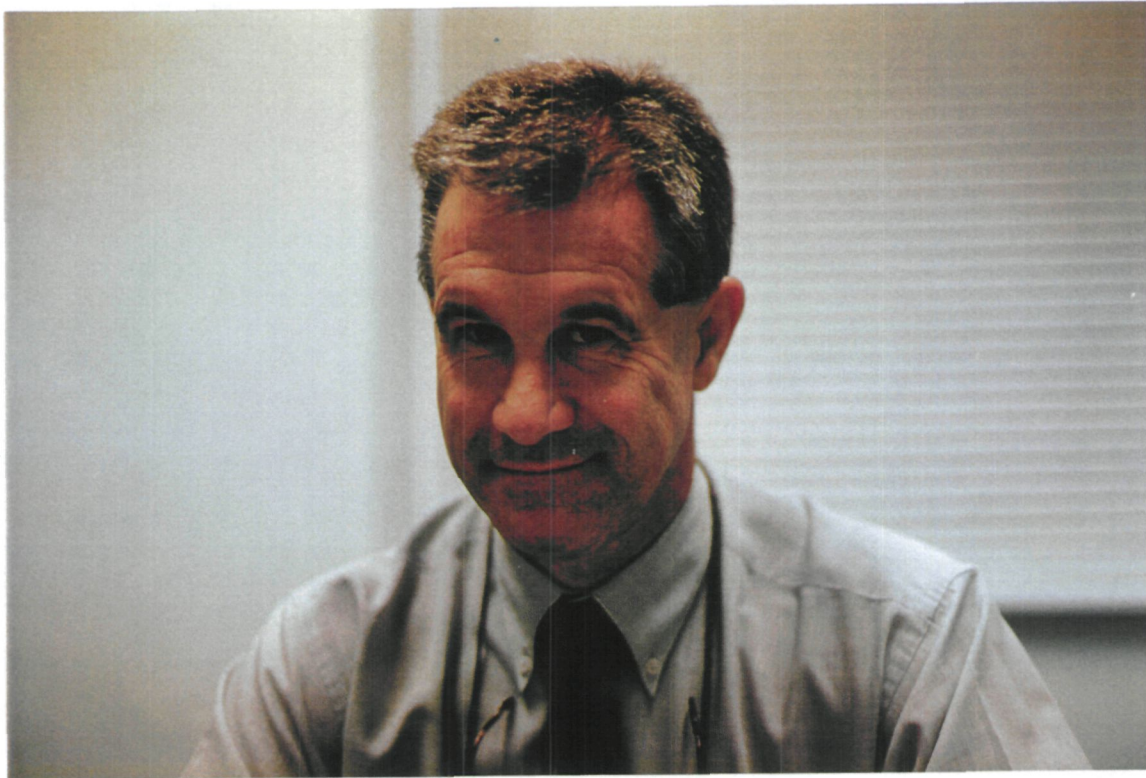
**Kevin Kirkland, Tape RTA:FH24**



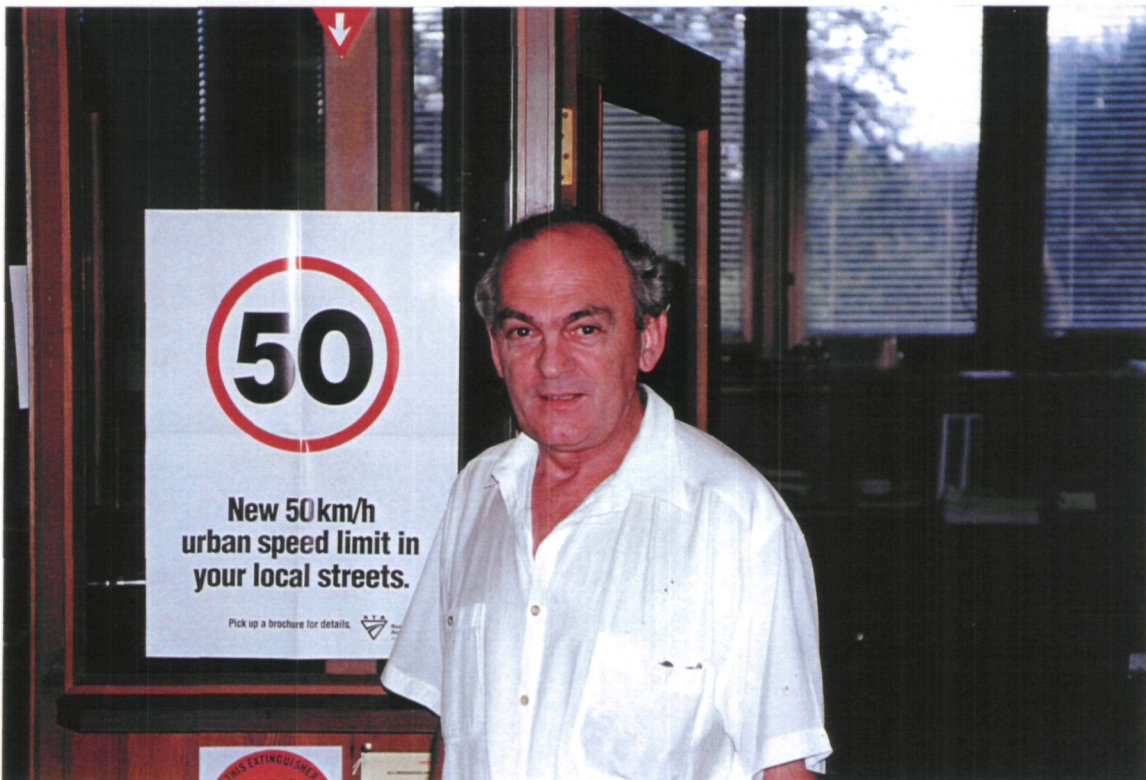
**John Henley, Tapes RTA:FH25 & RTA:FH26**



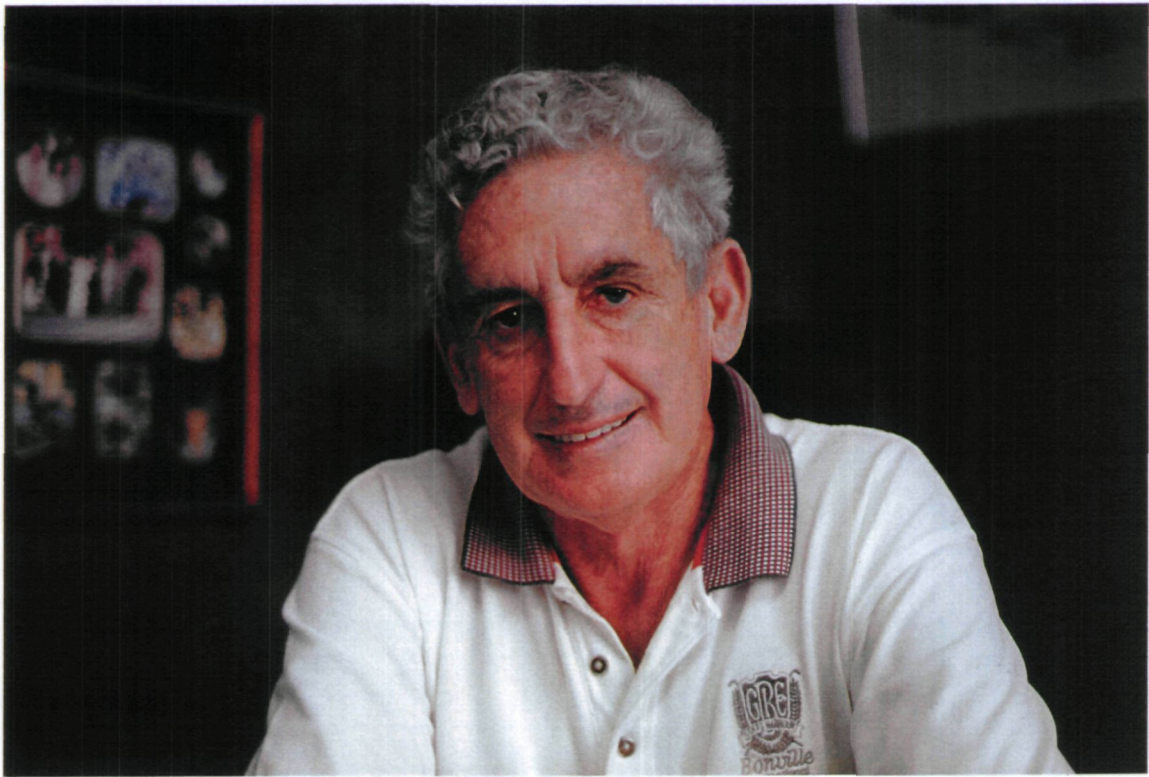
**Ron Smythe, Tapes RTA:FH 27 & RTA:FH28**



**Bruce Parks, Tapes RTA:FH29 & RTA:FH30**



**Peter Stevens, Tapes RTA:FH31 & RTA:FH32**



**Tom Lindsay, Tape RTA:FH33**



**Brian Pearson, Tapes RTA:FH 34, RTA:FH35 & RTA:FH36**