

Official Opening....

DECEMBER 14, 1986.

Mooney Mooney Bridge

Somersby, Gosford.



DEPARTMENT OF MAIN ROADS, N.S.W.

EXPLORER
Souvenir Supplement

Mooney Mooney - A bridge to the future....

On Sunday, December 14, 1986, a 15 km. section of the Sydney - Newcastle Freeway between Calga and Somersby will be opened to traffic.

A spectacular feature of the new length of Freeway is the twin bridges over Mooney Mooney Creek, which stand higher than the deck of the Sydney Harbour Bridge.

Officiating at the joint opening ceremony on the deck of the imposing new structure will be the Prime Minister of Australia, the Hon. R.J.L. Hawke, A.C., M.P., and the Premier of New South Wales, The Hon. Barrie Unsworth, M.P. Also in attendance will be the Federal Minister for Transport, the Hon. Peter Morris, M.H.R., and the Minister for Public Works and Ports and Minister for Roads, The Hon. L.J. Brereton, M.P.

This Federally funded section completes the Freeway from Berowra through to Warnervale with a motorway link to Doyalson. At 14 km. shorter than the existing route via Peats Ridge, the new section represents significant savings in time and fuel for motorists and improvements in safety and comfort. The value of the savings is estimated to be \$43 million per year.

A little history....

The 160 km. distance between Sydney and Newcastle contains some of the most rugged terrain to be found on the Australian coast. Additionally, the way is divided by the wide waters and numerous inlets of the Hawkesbury River.

The first road link was built in 1930 and it quickly became the most heavily trafficked rural road in New South Wales and probably Australia.

The limitations of the road to meet future needs were recognised in the 1950's and planning commenced on a Freeway to link the two cities.



The first completed sections of the Freeway were from the Hawkesbury River to Mt. White, opened in 1965 and extended to Calga in 1966, and from Berowra to the Hawkesbury River in 1968. A new six lane bridge over the Hawkesbury River linked these two sections in 1973. To improve conditions north of Calga pending further freeway construction, a temporary highway link was constructed from Calga via Central Mangrove to Ourimbah, allowing through traffic to avoid the low standard length of highway from Calga to Gosford.

The Wyong Bypass and motorway-standard connection from Wallarah Creek to Doyalson to connect with the Pacific Highway east of Lake Macquarie were opened to traffic in November 1983.

When the Freeway is completed, the route will avoid heavily populated areas east of Lake Macquarie and will allow through traffic to bypass Newcastle.

Left: The Somersby interchange under construction at the Gosford end of the new section.

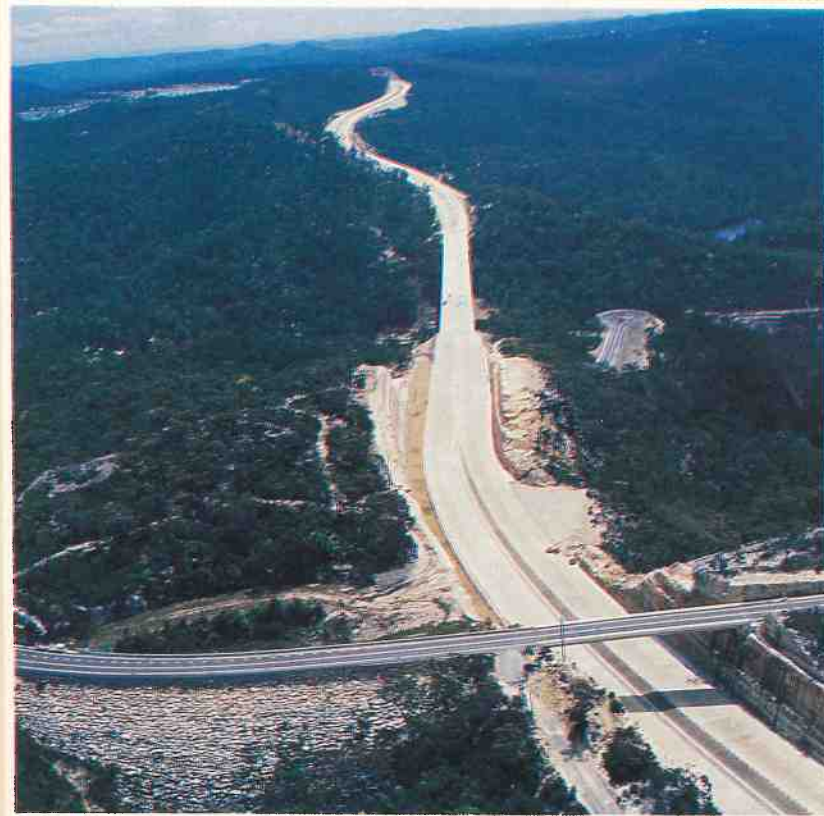
Calga to Somersby....

The design of this 15 km. section is generally for four lanes (two in each direction). However, the section from Calga to Kariong has been built to a full six lane width, due to the expected high traffic volume in the area.

Geographical constraints have made it necessary to exceed the desirable maximum gradient of 5 per cent at some locations. The approaches on both sides of Mooney Mooney Creek Bridge have a grade of 7 per cent, the grade north from Kariong Interchange is 6.5 per cent while on the existing section between Somersby and Ourimbah it is 6.3 per cent.

As this new section of the Freeway passes through large areas of natural bushland, including a section of Brisbane Water National Park, special measures were developed to keep disturbance to a minimum.

Clearing was limited only to the area to be occupied by completed works. During clearing, shrubs and undergrowth vegetation were collected and bagged for replanting after construction. Topsoil was stored for reuse in the area from which it was taken and foliage from felled trees has been used for mulching



Above: Looking south along the deck of the new bridge towards Calga. The minimum disturbance to the environment is apparent.

regeneration areas. These measures should ensure rapid revegetation of completed works areas. Inspection of regeneration areas will prevent unwanted species establishing themselves and encourage native flora similar to that existing in each area before construction.

Keeping the destruction of native vegetation to a minimum will also minimise the effect on fauna in the area. A steel arch underpass has been provided to the south of Mooney Mooney Creek to allow wildlife free movement across the freeway route. A 1.5m. wallaby-proof fence will deter them from crossing the actual road.

The numerous Aboriginal rock carvings in the area were located and the Freeway was designed so as not to interfere with any significant sites.

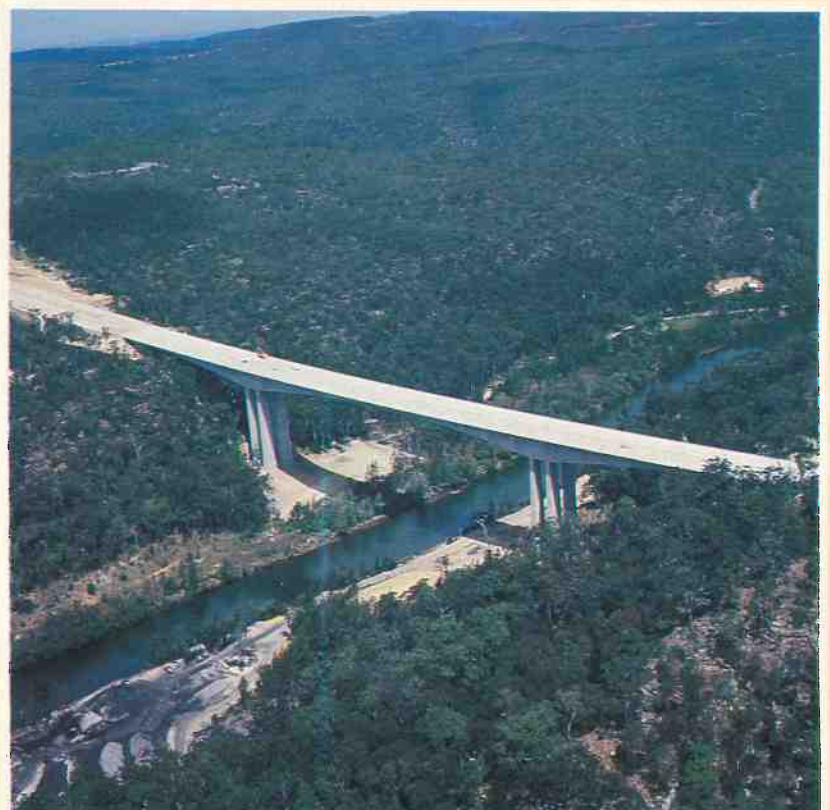
Mooney Mooney Creek Bridge....

Twin bridges with an overall length of 485m. have been constructed over Mooney Mooney Creek between Calga and Kariong.

The height of the bridge decks is approximately 75m. above normal water level. This is 16m. higher than the deck of the Sydney Harbour Bridge.

Each of the twin bridges consists of a single concrete box girder with three spans of 130m., 220m. and 130m. The girder varies in depth from 12.5m. at the piers to 4.25m. at the ends

Right: The 485m. long bridge contains 22,000 cu.m. of concrete and 4,000 tonnes of steel reinforcement.



of the deck and at the centre of the bridge.

The piers vary in height between 57m. and 63m. and each comprises a pair of tapered reinforced concrete hollow box columns. The structures contain 22,000 cubic metres of concrete and 4,000 tonnes of reinforced steel.

The bridges were designed by the Department of Main Roads and built by Enpro Constructions Pty. Ltd. at a cost of approximately \$19.5 million. The total cost of the section from Calga to Somersby, including the bridge, amounts to approximately \$80 million.

The Calga to Somersby Section is expected to save 84.3 million kms. and 1.7 million hours of motor vehicle travel in its first year of operation. These savings, together with reduced operating costs and accidents, are estimated to be worth \$43 million per annum.

Sections Under Construction

Wahroonga to Berowra....

This work involves the construction of 15.5 kms. of Freeway, linking the existing Freeway into the Sydney road network at the Pacific Highway and Pennant Hills Road at Wahroonga. The Freeway will comprise dual carriageways with three lanes in each direction between Wahroonga and Mt Colah and two lanes in each direction north of Mt Colah. Grade separated interchanges will provide vehicular access at various locations. The Freeway will run adjacent to the Ku-ring-gai Chase National Park for 12 kms. and it will be fully landscaped to blend in and will include special measures to reduce impact on the environment. In residential areas, noise barriers will be provided to reduce disturbance. These barriers will be in the form of earth mounds and timber acoustic screens.

The objective is to complete the work by 1988, at a cost of \$90 million, with the new section reducing the number of accidents by two-thirds and reducing congestion, particularly during holiday peak periods. Travelling cost and time factor savings are estimated at \$18.2 million per annum in present costs.

Wyee to Wallsend....

Work has been proceeding on sections of the route around the west of Lake Macquarie, from Wallarah Creek (near Wyee) to Freemans Waterhole. The final links toward Newcastle will commence shortly, following final assessment of environmental impacts and the effects of coalmining along the route.

The section from Wallarah Creek to Freemans Waterhole involves over 3 million cubic metres of earth works and 263,000 cubic metres of concrete pavement, providing two lanes of traffic in both directions.. This section includes major bridges at Dora Creek and the final cost is estimated at \$70 million.

Motorists will begin using the Freeway from Wallarah Creek to Morisset before mid 1987 and to Freemans Waterhole by the end of 1988.

Below: Artists Impression of the Mooney Mooney Creek Bridge in Relation to the Sydney Harbour Bridge.

