HISTORY OF BRISBANE'S MAJOR ARTERIAL ROADS
– A MAIN ROADS PERSPECTIVE

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Abstract
In 1964 Main Roads and Brisbane City Council jointly commissioned an American consulting engineering firm, Wilbur Smith and Associates, to undertake a transport planning study for Brisbane. The Wilbur Smith "Brisbane Transportation Study" was published in 1965 and made recommendations covering sixteen years to 1981.

The South East Freeway and Riverside Expressway were two of the early projects to be completed. This series of articles describes the history of Brisbane's freeway system and how it fits within the current road network.

Introduction
We are now living through the biggest motorway building boom that Brisbane has ever seen. However this article does not look at the current building program but explores some of the history of Brisbane's first freeway² building era. It will look at what was originally planned; what has been built; what hasn't been built; and how some of the contemporary concepts fit in with the original freeway plan for Brisbane.

It will also reflect on how well Main Roads planned and why it did not see this current freeway boom coming at an earlier point in time. With the wisdom of hindsight, could this have been done better? The article will be printed in parts over a number of editions of Queensland Roads.

¹ This article documents the personal recollections of Mr Allan Krosch who worked as a Main Roads planning and design engineer during Brisbane's first freeway era.
² Freeway was a term adopted from the American road system. Main Roads currently use the term 'motorway' which is based on European practice.
The Wilbur Smith Freeway Plan for Brisbane — how it came about

In the late 1950's there was a change of state government in Queensland – ending a period of 40 years in office by the Labor Government.

The newly appointed Commissioner of Main Roads was Mr Charles Barton who took up office in January 1960. The new government made a major push to improve Queensland's system of main roads connecting cities and towns. In October 1960, Charles Barton made a trip to the USA where he found that the state road authorities were getting involved in the road issues within cities. In 1956 a "milestone" transportation study had been carried out in Chicago. Prior to that time Main Roads had implicitly seen itself as a "rural roads authority".

The Main Roads Act 1920, effective 1 January 1920, established the Main Roads Board as the central road authority within the state responsible for developing a cohesive network of main roads. This act was patterned legislatively on the Victorian Country Roads Board.

When Charles Barton returned from his USA trip, he focused on what Main Roads needed to be doing with regard to the road system in Brisbane. The following year Mr Clem Jones became Lord Mayor of Brisbane. Mr Clem Jones also sought to initiate a traffic study for Brisbane. Both men subsequently pooled their efforts and in 1964 an American consulting engineering firm, Wilbur Smith and Associates, was commissioned. Their brief was to undertake a transport planning study and recommend a "Road Plan for Brisbane".

The Wilbur Smith "Brisbane Transportation Study" was published in 1965 and made recommendations covering sixteen years to 1981.

The Wilbur Smith freeway plan for Brisbane — what it proposed

Wilbur Smith recommended a ring-radial freeway system for Brisbane (Figure 1).
It had only one "ring", an inner loop called the Central Freeway. It had five radial freeways – a South-East Freeway; an Eastern Freeway; a Northern Freeway; a North-West Freeway; and a Western Freeway. There was also a radial called South-West Expressway (Ipswich Road). There was an outer circumferential route on the eastern side of the City termed "North-South Freeway."

There were several options explored for the Central Freeway. Figure 2 shows an unsuccessful option. This option had an extra link in the north-west termed Paddington Freeway.

For each of these freeways, preliminary design layouts were prepared and presented (Figures 3, 4, 5). Figure 3 shows the city end of the proposed North-West Freeway. It would have cut across from Spring Hill to Kelvin Grove, passing under Gregory Terrace, over Gilchrist Avenue and through the Victoria Park Golf Links.

Figure 4 shows the Petrie Bight Expressway, which would have connected the central city to the eastern side of the Central Freeway. It would have run along the river’s edge, past the Customs House; past where the Riverside Centre now stands; and round to Alice Street near the Stamford Plaza hotel.
Figure 5 is a section of the Eastern Freeway passing close by some of the playing fields of "Churchie".

Figure 4. Petrie Bight Expressway

Figure 5. Eastern Freeway
What could be said about the ring-radial plan today?
Firstly, it reflected a view of a CBD-dominant city. In 1981 a check was made on how well Wilbur Smith had predicted population growth in greater Brisbane. Wilbur Smith was very accurate in regard to the total population but failed to predict the width of its geographic spread. The urban subdivision had expanded over the boundaries of Brisbane out into the surrounding local authorities.

Was it sensible to plan for only one ring - a central ring? Beijing have five great ring roads (and more to come). In London, they failed to implement a central loop that was planned over 40 years ago - but they did implement, much more recently, one great outer ring road called the M25.

An area of debate in urban transport planning in the USA during the early 70’s was whether the freeway system should be ring-radial or a rectangular grid. The resolution was that it didn’t much matter what idea you started out with as the limitations of topography and untouchable sites and so on would lead to a pattern of major roads that was much the same - providing an interconnected network covering the urbanised area. In the original Wilbur Smith Road Plan, Brisbane had only one ring freeway, an inner ring, however this ring road system was never built. The plan had the North-South Freeway on the eastern side; but an outer connector on the western side of the city seemed to be missing.

Implementing the Wilbur Smith Plan
The state government and Brisbane City Council were both fully committed to implementing the plan they jointly commissioned. To overview implementation, two committees were implemented - a policy committee and a technical planning committee.

The policy committee comprised the Minister for Main Roads, the Minister for Transport, the Lord Mayor and the Coordinator-General. Reporting to it was the technical planning committee (TPC). This committee comprised senior officers from Main Roads and Brisbane City Council.
One of the first initiatives was improving the approaches to the Story Bridge and hence improving its traffic capacity. Completed in 1970, the Story Bridge Expressway was built on the southern approaches. On the northern side, the Kemp Place tunnel was built and approach roadways improved.

Early attention focussed on the Captain Cook Bridge, the Riverside Expressway connecting to its northern side and the South-East Freeway extending from its southern side. The Captain Cook Bridge was opened in early 1973, as was the first section of Riverside Expressway. The South-East Freeway was opened to Cornwall Street/Juliette Street soon afterwards.

Thereafter, on-going investment occurred on the South-East Freeway/Riverside Expressway. The Riverside Expressway was completed in 1976. The South-East Freeway reached Marshall Road in 1977; Klumpp Rd/ Mains Road in 1980; Logan Road in 1982 and through to the Pacific Highway at Springwood by the end of 1985.

The Wilbur Smith Plan had a proposed implementation period of sixteen years. However all of that time had been taken up building the South-East Freeway and Riverside Expressway.

While construction had not started on other roads, significant time was spent designing other freeways and acquiring land for the corridors.

There was a major focus on the eastern half of the Central Freeway, where a bridge was designed and documented to cross the river at New Farm. This connected at Bowen Hills to the Northern Freeway, which extended north along Breakfast Creek to Junction Road, where it bi-furcated: with one link connecting through to Gympie Road at Kedron and the other link to connect to Sandgate Road near Toombul Shoppingtown.

In early 1973, I became project manager for design of the Central/Northern Freeway from Doggett Street, Fortitude Valley to Kedron. The geometric design was performed by Main Roads Highway Design Branch. Major lengths of viaduct design were contracted out to Cameron McNamara (crossing of Breakfast Creek) and Bornhorst and Ward (overpass of city to Ferny Grove railway line).

Approximately 600 homes and businesses were acquired for the Northern Freeway Corridor.
Figure 9. Kessels Road foreground and Klumpp Road/Mains Road intersection background

Figure 10. Central and Northern Freeways
Figure 11. Proposed plan for completion by 1979
The interchange of the Central and Northern Freeways was a very complex interchange (There was local road access allowed within this freeway-freeway interchange). There were 14 lanes of roadway through Bowen Hills in the vicinity of Markwell Street and Hamilton Place as shown in figure 10. Main Roads Bridge Branch designed a 4-span box girder bridge to carry Markwell Street over the freeway.

Another freeway under design in the early 1970’s was the North-West Freeway. Land acquisitions for the corridor were being planned and a corridor adjacent to Trouts Road, north of Stafford Road, was reserved for road purposes.

Writing on the wall for urban freeways
Since the Second World War, the Federal Government had collected revenue by an excise on fuel tax, some of which was returned to the states for expenditure on roads. Between 1969 and 1974 there was a five year Commonwealth road funding act that included provision for expenditure on urban freeways. This had enabled works like the Captain Cook Bridge and the South East Freeway to be funded.

The Whitlam Labor Government was elected in December 1972. It had a policy that was anti-urban freeways. Regardless of this opposition, the funding was committed until June 1974.

When the federal treasurer, the Hon Mr Frank Crean, made his budget speech in 1973, it was clear that Brisbane’s first freeway boom was over. The writing was clearly on the wall. Main Roads senior management at the time did not recapitulate easily. They were determined to keep the design teams in place steadily progressing designs. It eventually became quite soul-destroying to be kept working diligently away at complex designs that had little hope of being funded.

Figure 12. An over-bridge without a road under — Markwell Street Bridge
Figure 13. Frederick Street/Mt Coot-tha Road roundabout foreground and Western Freeway/Mt Coot-tha Road background
Main Roads response to federal funding cuts

When the realisation sank in that the aspirations for Brisbane’s freeway system would have to be curtailed, a scaled-down freeway system was proposed (Figure 11).

With the revised plan, the western half of the Central Freeway was erased, and also the North-West Freeway beyond Kelvin Grove Road. In fact all design work on the North-West Freeway ceased. Work on the Central/Northern Freeway kept going, albeit the design concept was scaled down.

The Markwell Street Bridge was scaled down to a two-span I-beam bridge and opened to traffic in 1978. It raised Markwell Street up so a motorway could pass underneath, but that motorway has never been built. Train commuters may see this bridge which is located between Bowen Hills and Fortitude Valley railway stations.

In preparation for the construction of the southern approaches to the Markwell Street bridge, about five houses were demolished. Protesters endeavoured to block the demolition and because of some degree of violent behaviour the police were called. This sort of behaviour had been occurring in the United States, but was new to Brisbane. It foreshadowed, however, much greater community opposition to urban freeway projects that was to come later.

The Northern Freeway corridor was not relinquished. In later years, Main Roads reviewed the corridor width and retained a narrower corridor along Breakfast Creek through Windsor and out to Albion along the railway line towards Kedron. The balance of the land was sold off but the narrower corridor had been retained until recently. Some $60M worth of land held by the department was made available to construct a section of the Inner City Bypass - a project undertaken by Brisbane City Council.

The Western Freeway/Centenary Freeway

The big push through the 1970’s was in the South-East of the City. The other area that received attention was the South-West of the City. The Centenary Bridge and Centenary Highway, linking Moggill Road at Indooroopilly to Ipswich Road at Darra, had been built in the mid-1960’s with financial contributions from the developers of the new suburbs from Jindalee south.

Brisbane City Council constructed a link from Mt Coot-tha Road to Taringa Parade at Indooroopilly. In 1979 Main Roads completed the controlled access roadway to connect from the section council had built through to the Centenary Bridge, a project involving six grade-separated interchanges.

Progress to the end of the 1970’s

So at the end of the 1970’s, with the Wilbur Smith Plan’s sixteen year time horizon approaching, the freeway building effort had been focussed in the South-East and the South-West.

Whereas works on other elements of Wilbur Smith’s ring-radial road plan had ceased, some other important road projects had been undertaken in the latter half of the 1970’s. The Houghton Highway was built and opened to traffic in late 1979. There had also been major improvements to the Bruce Highway leading out of Brisbane to the north - the Bald Hills to Burpengary Deviation being completed in 1978.

This article will be continued in the next edition of Queensland Roads.