Works Department - B.C.C.

Maintenance and minor construction operated from depots in the five Districts and were controlled by resident District Engineers. They were responsible to Divisional Engineers who, with all other Engineering staff, the Design Office and administration were located in the western side of the Brisbane City Hall on the second floor. It was a labyrinth of small rooms. The Design Office was at the southern, or river, end and the Chief Engineer, Charlie Mott, had his office at the other end overlooking City Square. In the Design Office I commenced checking structural building plans! One very interesting one was the proposed Greek Orthodox Church in South Brisbane, it had a large ring girder supporting a dome and analysis of the stresses took me back to basics. Other designs were memorable for their lack of competency. The best of these was the self supporting awning for a Butcher's shop, the design showed beams with their ends built into the 9" brick front wall of an otherwise timber structure and projecting over the footpath. There was nothing to prevent the beams falling down, dislodging the few bricks above them in the process. I spoke to the butcher and found that he had already paid the designer. I quietly amended the design for him, showing the beams going through the wall and being tied down to the flat roof of the shop several feet back!

Charlie Mott was a man of few words, respected by all and feared by many. He came to my desk, dropped a file about 4"(100mm) thick on it and said 'Give me a report on that'. Going through the file carefully I found that a block of land in South Brisbane had been leased from the Council at peppercorn rent with the proviso that the lessee build improvements within a couple of years. He was using the block as a parking lot and the Council had taken him to court on three occasions to cancel the lease. These actions had failed due to his 'convincing' arguments; on one occasion he was about to build a club house for the Royal Life Guards Association (Queensland Branch), it did not eventuate, and more recently that he had commenced building by erecting a wall! I consulted with the local Building Inspector who told me if you enter the property he will serve a writ on you - but Wednesdays he goes to the Beaudesert races so we can go in then. We did and I looked at this wall about 12'(4m) high, 20'(6m) long and built of 4"(100mm) light weight brieze blocks. A bit of probing indicated that it had no foundations. My report said, after detailing non compliance with codes, 'I can see no reason why it is standing up'. I believe Charlie Mott considered that I had passed his test! I got on well with him thereafter.

The Engineer supervising all bridge construction left the Council and I took over supervision of several jobs. One of these was the last stages of the new Breakfast Creek Bridge. On the site the Clerk of Works, John Gedge, showed me deficiencies in the gunite covering the girders. I wrote a note to Hornibrooks, the contractor, and a few minutes later their engineer, approached me saying 'What is this, I dont know who you are'. Knowing that the Council had not yet notified the contractor of my taking over I said 'Fair enough' and started to walk off the job. He stopped me with 'Well I suppose I have to talk to someone'. I had won the point and from then on got on well with Hornibrooks!

Another was the Langlands Park Swimming pool, the first Olympic sized pool in Brisbane, which was being built under contract by Thiess with Steve De Horne as their site manager. Steve had an English Civil Engineering diploma, not recognised by the Australian Institution, but was a very able construction supervisor and later joined the Council as a Works Supervisor on my recommendation. He was a Battle of Britain Spitfire pilot and we became great friends. The reinforced concrete pressure filter tank was being built by Kratzman and one morning when I was talking to Steve he mentioned that Kratzmans were pouring concrete. There was no Council Inspector on the job so I drove there as quickly as possible. A second transit mixer was discharging into the formwork so I took a slump test of the concrete, it showed a slump of over 10"(200mm) indicating far too much water in the mix. I told the contractor that I would not accept the filter tank with this concrete in it. He knew I was correct and that the concrete could not possibly attain the required high strength, so started to dig out the concrete already in place. By the late afternoon pneumatic breakers were necessary to remove the setting concrete from the first transit mixer (which had apparently been of the required standard) and the reinforcing had to be taken out, straightened and refixed before the filter could be repoured! I believe Kratzman successfully sued the concrete supplier for his costs! It was a fully tiled pool and later large areas of tiles lifted off the bottom. We learned that this was due to clay tiles expanding in water while the concrete continues to shrink as its strength increases over time! But the tiling contractor put them all back as part of his contract maintenance.

The concept of Centenary Swimming Pools was drafted by Jimmy Birrell, Council Architect, and passed to Works Department for the engineering design. 'Aggie' Brown, the Engineer for Design, gave me the job of coordinating the design work and supervising construction. The Architect's requirements, such as a thin floor to the elevated restaurant, the surface finish to the concourse, the spiral free standing steel staircase to the platforms of the diving tower which was tapered and tilted in both directions and the elevated concourse posed problems which were overcome but I particularly recall two arguments over the dressing rooms. He had specified a half inch (12mm) fall across the floor while I wanted 3"(75mm), he won that one and the staff still have to squeegee the water off the floor daily! The other was his design showing galvanised expanded metal tops for the seats. When I challenged this he insisted that expanded metal be used so I said 'All right, I'll put them in if you will promise to sit naked on them'. He thought for a moment and then said 'You win, make them concrete slab tops'. On the day of the opening of the Centenary Pools I was busy checking over everything when the vice regal car appeared on the road above. The governor, Sir Henry Abel-Smith, walked down to the concourse where I greeted him and, when he asked where he had met me before I told him 'On Stradbroke Island during the Quest of the Golden Hind Venture' (Scouting). After he had looked around the concourse area I offered to take him inside and down below where the filtration plant was operating, he said 'Lady May will be getting impatient, I had better go' adding that he liked to see what he was opening before the event.

Works Construction North

I had been working under both the Engineer for Design, 'Aggie' Brown, and the Construction Engineer, Les Walker, who had two principal assistants, 'Stormy' Fairweather who mainly controlled drainage work and Ron Nisbet-Smith who looked after road works. This dual control gave me some latitude of action!

About the end of 1959 construction work was divided between North and South of the river with offices at the Stafford and Cooparoo Depots respectively, 'Stormy' becoming Construction Engineer, North, and Ron C.E.South. I left the City Hall to work from Construction North.

Blackall Bridge, an old timber bridge across Kedron Brook, joining Grange and Webster Roads, was to be replaced by a new high level concrete structure, the first post-tensioned prestressed girder bridge in Queensland. The Surveyor pegged out a line theoretically well clear of the underground services and immediately the Post Office complained that they had lost their main cable to the north! It turned out that our surveyor had driven a peg through the furthest part of a big loop in the creek bed meant to allow for future erosion!

The contractors, Utting & Baldwin, proposed mixing their own concrete on site to obtain both the high strength required by the specification and early stripping of the side forms for reuse. After some initial confrontations about the standard of the formwork and the properties of the proposed granite aggregate and the curing oil for the sides of the beams after stripping, the contractors did an excellent job. The on site concrete mixing, avoiding the vagaries of transit mixers, and the contractors excellent vibration techniques ensured that the high early strength was attained. However it was relieving to see the girders rise from the base form to become self supporting when the stressing rods were tensioned as we had been worried that a flood would come down and remove the temporary supports! It was the satisfactory completion of this job that persuaded Allan Carter, the Supervisor of the Bridge, Wharf and Pier section, to concede that I did know a little about bridges!

The new Cabbage Tree Creek bridge on the Gympie Road at Aspley had different problems. The Council water main was to be extended across the new bridge and the existing timber bridge carried several private water lines. One of these was for the Holy Spirit Home for Old People, half a mile north. The Sister in Charge of the Canadian Order which ran the Home was very definite about who should keep the water running so I took the dismantling of the old bridge, which was about 50' downstream of the new, out of the contract and arranged for it to be done after the new main was laid. We switched the traffic from the old bridge to the new in two stages, first the traffic to and from the city leaving only the Zillmere Road traffic over the old bridge. I was standing with my clerk of works, Jimmy, when an impressive police car, with a Commissioner in the front seat, went over the old bridge, did a U turn and came back to go over the new one. Jimmy said he will go crook at us for inadequate signing I replied no he will realise he didn't look at them properly, smile and wave to us to indicate he meant to go that way. Which is what happened! Moral - nobody reads the signs anyway!

Works Construction South

Under Stormy Fairweather at Construction North were Alan Robertson, who was there first, and I, both P5 engineers. So when the job of Assistant to the Construction Engineer South, grade P5, came up I put in for it on the basis that I would rather be number two South than number three North.

Allocation of engineers and plant to jobs was interesting as we had a very mixed group! Karol Klika, a Hungarian engineer, became much more friendly after I blew up and told him he was too arrogant, perhaps I helped him to become more Australian! Paul Bujtar, of Rumanian parents, born in Persia and raised in Egypt, was very reliable, having learned to survive in his earlier years. He later left the Council to establish his own consultancy. Tay Keng Yeow was one of the overseas students to whom we gave hospitality. He used to come to tea once a week, sometimes bringing very tasty Asian dishes he had cooked himself, and Janelle used to climb onto his knee and say she would marry him! He had graduated in Civil Engineering and now worked from Construction South. He was educated in a Chinese school in Singapore and he just smiled when he didn't understand what was said in English. The position improved after I convinced him that I was prepared to keep on repeating instructions until I knew that I had been understood!

As at Works Construction North the bulk of my work was supervision of the construction of roads and drainage lines by contract or by day labour. I collected a lot of information on costs, as we were required to put in estimates for every tender called, and,if our estimate was more than 10% below the lowest tender (the 10% allowed for our lower plant costs under government accounting systems) we had to build them for that figure.

The Pedestrian Underpass under the south approach to the Story Bridge was a different and interesting little job. The area was solid Phorphyry rock (true name Brisbane Tuff) and the contractor had to keep the inbound lanes open between 7am & 9am and the outbound lanes between 4pm & 6pm. So he had 22 hours to excavate about 10ft of rock, place precast slabs across the excavation and have the carriageway resurfaced. The mortar which was placed on the rock to seat the slabs had to be hard enough to take the Councils asphalting plant, and the subsequent traffic, so we did experiments into rapid hardening mortars and later carried out compression testing at some very unusual hours! This small job had a little of everything including rock bolting to stabilise sections of the rock sides of the excavation, mining out the bottom after the surface slabs were placed to obtain a true base for the precast portal units which had to be walked in, ensuring watertight joints between units using compriband which was compressed for placing between units and then self expanded and all the more normal, but very prolific problems of not only underground services but also dense traffic with trolley busses on the roadway above. My most vivid memory of this job is however the occasion when, from the inbound kerb I performed a U turn to get back to the depot quickly and, half way round, decided that I was not really capable of mentally sorting out the time of arrival of six lanes of traffic simultaneously. Although successful that time I did not repeat the experiment!

I was checking levels on approach roadworks for a bridge job on the Wynnum Road. There was not much traffic and I had a half open role of plans in my hand as additional warning. I was crouching down, looking at the stringline, when I glanced up and saw that although three cars were passing safely behind me a fourth was passing them on their left and heading straight for me! My knees being bent I instinctively made a standing jump of about four yards (4m) out of the path of the car.

The adrenalin being high, I chased after the car, which slowly pulled up, and the driver said 'Sorry, I dont have any brakes!' My anger subsided but later, realising the driver had preferred running into me rather than the car in front, I rang Martin Ziebarth, a six foot 20 stone traffic police sergeant, who often worked with me on road closures and deviations, who visited the driver and then told me that they had had a little talk and he wouldn't be driving again until long after his brakes were fixed. All on the job thought I had been knocked by the car, they said 'Your luck's in, buy a Casket ticket'. I did and won a small prize! The muscles in my calves ached for a week after my record jump!

The upstream half of Centenary Bridge, designed and supervised by consultants as part of the Western Freeway, was built in 1963 by Centenary Estates and I was told to look after the Councils interests as it would be handed over to the Council on completion. For each of the four river piers eight 33"(838mm) diameter Franki piles were driven into rock, the deepest nearly 100'(30m) below water level, and I personally inspected the rock for adequacy in all but one of them. This involved going down the inclined steel tube, which was very greasy, on a winch cable. On my first inspection the winch man gave me a free drop for part of the distance, but as I showed no sign of being worried (I was!), this was not repeated. At the bottom, with a screamer (air driven) pump going to keep the water down and a man with a pneumatic drill to test bore for mud seams below the exposed rock surface, there was little room to move! I wore old clothes for these inspections and, after one weekend inspection, arrived home still wearing them, daughter Janelle said 'Dirty dirty Daddy.' After the piers were erected a light lattice girder was placed to support the precast concrete girder segments until they were jointed together and stressed, thus becoming self supporting. I used to walk on the bottom member of the lattice girder, grasping each diagonal bar joining it to the top as it came within reach. The contractor's young site engineer used to walk along the top member like a tight rope! One day a small welding plant, clamped to the light girder, started up as he walked out, he suddenly lost confidence and collapsed down to hug the girder. It took him a long time to recover!

Once, when driving Mum and Dad around, Mum said we could get back to Indooroopilly Bridge via King Arthur Terrace in Tennyson. We couldn't because it ended at Oxley Creek! Now, in 1964, Thiess Contractors were building the bridge across the creek. One day 'Nugget' Hutley, our Inspector, advised me of a small problem with the work. I approached Thiess Foreman and asked him a question. I can't remember the problem but his answer was very obviously incorrect and deliberately misleading if not insulting to my intelligence. I returned to my car and drove to Thiess head office at the other end of King Arthur Terrace, walked into the office of their chief engineer, Ken Aird, and asked him to accompany me back to the job. He did so without question. When we arrived on the job I repeated my question to his Foreman, in Ken's presence, and got the same reply as before, I said nothing, turned around got into my car and drove off. I was told later that the Foreman had been replaced and sent back to Melbourne! This was a prime example of the ethical standards of those days when contractors and supervisers respected each other.

In July,1962, I commenced measuring expansion on a prestressed concrete slab bridge in Wynnum Road. I was surprised to find that the bottom of the slab got shorter as the temperature rose and by taking measurements at the centre was able to show that the slab, some 9" thick with a thick layer of asphalt surfacing on top, being an insulator arched up as the top got hotter and expanded, actually compressing the cool bottom surface. This completely altered my, and to some extent the Design Office, approach to expansion joint design and maintenance. Unfortunately I never found time to write a Master's thesis!

The technique of constructing major roads using rolled concrete consisted of trucking in batches of concrete with very low moisture content, spreading it with a grader and compacting it with a heavy roller. We used this technique to widen the eastern end of Grey Street, South Brisbane in 1965. The crossfall increased from about 1/30 to 1/10, west to east, and as we placed concrete in narrow strips, leaving room for the heavy traffic, I carefully kept a little low to allow for error. When we came to place asphalt the depth seemed excessive in places and the foreman, Charlie May, mentioned that he also had lowered the concrete levels! Charlie was quite a character, he always came close and listened whenever I was confronted by one of the affected property owners. Fortunately I never needed corroboration, which Charlie would have given irrespective of the truth!

The approach jetties and berthing structures of the south terminal for the Queensport Vehicular Ferry, constructed by contract in 1965, was an interesting job. It was a timber structure and my site inspector was a retired Railway Engineer, an old friend of Norm Ward the Engineer in charge of all work on the south side of the river. Norm visited the site frequently and sometimes gave instructions to my Inspector. So one day I told him that if he wanted me to continue supervising the job he had better let me do it! Norm was almost apologetic and our relationship improved.

Immense drawbridge style landing ramps were lowered onto the front and rear ends of the ferry's vehicle deck after berthing so that the cars and trucks could drive off one end as the next load drove on the other end, all four abreast.
In the trials, before opening to the public, we loaded the ferry with loaded trucks from the quarry, two lanes on one side first to check stability under the worst possible conditions, and then four lanes. Everybody, particularly the truck drivers, enjoyed the cruise as an alternative to normal work! As we returned to the berth I told the truck drivers that we wanted to see how fast we could empty the ferry and to be ready to drive off when I waved my hat. We berthed, the ramps were lowered to the deck and the safety chains dropped. Standing on the deck adjacent to the exit ramp I waved my hat and then got a great fright as the ferry moved rapidly backwards away from under the ramp! After the ferry stopped moving, as it hit the fender pile at the other end (designed for that purpose) and the ramp hadn't run out of deck, my momentary terror subsided and I recalled the fundamental rule that action and reaction are equal and opposite. As the 40 loaded trucks started moving forward off the deck the ferry had naturally gone in the opposite direction!

Water Supply & Sewerage Department
The Construction Branch of the W.S.& S.Department, under the Construction Engineer Graham Hewitt, had three independent sections, Sewerage Construction North, Sewerage Construction South and Water Supply Construction Projects to which I was appointed Engineer in Charge in December, 1965.

This section was commonly known as Trunk Mains as the construction of water mains, from 24”(600mm) to 72”(1800mm) diameter by day labour was its main occupation. Also in progress were the amplification of the treatment works at Mt. Crosby, by day labour, and the construction by contract of high level concrete reservoirs to supply water to the distribution system. Trunk Mains operated from a very small depot at Grange. I had an Assistant Engineer, Ian Macfarlane, and a Depot Clerk, Don Burchill, all accounting functions being carried out at Sewerage Construction North which was about a mile away. Ian was efficient, but young and lacking in years of experience, he took over the section three years later when I moved on. I now suspect that I was put there to keep the seat warm for him! Don was also very efficient in the office, knew what was going on and used a lot of his time running Life Savers fund raising. There was a small but efficient workshop run by our Mechanic, Gus Crawczyk, and his assistant. Gus, ex U.S.Army, had returned to Brisbane, with his Queensland bride, after he found too much union and racial strife in Detroit. Gus spent most of his time in the field with his mobile workshop truck, fitting valves and maintaining plant. He was always in the field if there were any industrial disputes on and never heard that he was supposed to be on strike! In road works every Alderman thought he knew how to build a road but they were a lot less interested in water supply headworks and major distribution systems so it was a pleasure to now be out of the front line of local politics!

Mt. Crosby, being 14 miles (22km) as the crow flies from the centre of Brisbane, and a lot further along the windy unsealed road through the hills west of Kenmore, was isolated, very much self contained and somewhat resentful of outsiders. A couple of experienced foreman maintained good discipline and I established a reputation by arriving there one morning just before work started at 7.30am. One day I pulled up beside a tracked Drott just as it started up. The operator, not having seen me arrive, and not looking, reversed one track to turn round, I desperately pressed the horn button but it didn’t work and the Drott’s rippers went through the drivers door as I moved rapidly to the opposite side!

It was a time of high labour turnover and on one occasion I had to confirm the sacking of three or four labourers who had persistently been absent on Mondays. Neville Bonner, Dogman on the high crane, protested that we were racially prejudiced as two of those sacked were his sons. I showed him a list men recently sacked for similar reasons, his two sons were the only aboriginals on it. Neville said ‘Its racial prejudice and I am resigning’. I told him that it wasn’t and that he could have his job back any time he wished, but he left and went into politics, eventually becoming a Senator. In later years when we met at Scout functions we would reminisce without rancour.

We were constructing the last sections of the 66”(1680mm) diameter water main from west of Kenmore to join the existing mains in the grounds of Taringa Scout Den. There were about 20 men in each pipe laying gang and Tommy McShannon’s gang laid two 30’(9m) lengths of 66” pipe a day while others only laid one, but the three man gang following the pipe laying and tidying up spent most of their time following Tommy! I tried making Tommy clean up and gave him a vibrating plate compactor to improve backfilling, when I asked he said it worked well, but when I looked at it the paint was not worn off the compaction plate. I eventually let him revert to the old system, it was more economical in my time and the Council’s money! Tommy’s secret was to keep the excavator going, he operated it, possibly illegally, while ‘Belcher’ O’Gorman, the excavator operator, had smoko or lunch. Belcher was the Union rep and never heard about strikes until they were over. I recall one occasion when Tommy was laying pipes along Goldsborough Road, Taringa, he told me that the 4”(100mm) gas main, across the trench line ahead, had not been dead ended. I rang the gas company and was told they would get around to it in the next few days. I said it’s Tommy McShannon and there will be an accident to the main about noon today if it is not dead ended. The gas main was cut and dead ended before noon!

I always felt a little claustrophobic, particularly when going through the smaller pipes on a trolley to inspect them. Once when about 600’(200m) along a 30”(760mm) pipe at Rocklea, with no opening at the far end to improve ventilation, I told the foreman who was with me that I felt very uneasy. He was very worried that I might panic, always a danger in pipelines, but I told him ‘No, I’m not panicking, I’m turning round now before I get to that point!’ One foremen, who was trapped in a 24”(600mm) line at Sandgate by his offsider outside turning a valve the wrong way, turned around on his trolley, he was short enough to do this, and pushed himself on it for over 400’(120m) under water to reach an open manhole which he had to feel for with his head in the pitch dark! He said ‘No problem, I’m a good swimmer’ and went back to work. His offsider had a nervous breakdown and never worked again!

I was required to give estimates of cost, for the construction of pipelines, based on the Design Office plans. I graphed all the completed jobs for which we had records and came up with a formula of $1 per 1”(25mm) diameter per foot (300mm) run, modified by a factor of from - 25% to +100%. This critical factor was based on my assessment of the nature of the ground, in perfect excavation conditions - 25% and in the worst case + 100%. A worst case was the Sandgate line which went through a deep soft mud swamp with floating ironstone boulders. These were probably the result of molten iron raining into the swampland from the volcanoes at Glasshouse Mountains, they looked like a lot of rusty ball bearings stuck together! Stopping them from falling into the excavation was virtually impossible and we finished up with a very wide excavation in these areas where sheet piling could not be driven. In most case I was remarkably successful in getting close to actual cost without going into the details of valves, bends, concrete works etc. Graham Hewitt was puzzled about how I could give an estimate so quickly!

Greenhill Reservoir, on the foothills of Mount Coot-tha, was the largest reservoir built in Brisbane and was intended to take the constant flow from Mt. Crosby and deliver the very variable flows required in Brisbane. It was connected to the 66”(1680mm) line by 72”(1800mm) diameter lines and valves and if the loader driver had not put his bucket on the side of the crane at the critical moment we would have lost a crane trying to lay them. We had to clear and level the site by day labour, before a contract was let for construction. I put in the scrapers to take off and stockpile the very thin layer of topsoil. Graham and others criticised this as waste of time but we used it to top dress all our pipeline trenches after refilling, at little cost, for a long time afterwards. The 80,000 cubic yards of subsequent excavation was used on various Council jobs.

It was in mid 1968, while standing on the roof of the completed Greenhill Reservoir, admiring the view, that Bernie O'Connell, Manager of W.S.&.S., said to me 'You havent put in for that Works Department job!' The job was that of Field Construction and Maintenance Supervising Engineer, North, and, apart from the length of the title, I was not sure that I wished to leave the comparative tranquillity of Trunk Mains to return to the political turmoil of Works. I also knew that the previous incumbent had pulled out after a nervous breakdown, although I thought that self inflicted, as he tried to give personal attention to every detail. However I knew that Bernie's statement was really 'put up or hibernate' so I applied for the job. I heard nothing more until, some weeks later, Sam Earle rang me up and said 'Congratulations', he had a letter telling him he was unsuccessful and that I had the job! I got Don to locate and obtain from City Hall, a letter addressed to me - it said I had been appointed F.C.& M.S.E.N. and was to take up duty in two weeks time. I cleared my desk, handed over to Ian and regretfully said goodbye to Don, Gus, and the rest of the team, with whom I had spent a happy three years!

Works Department, F.C.& M.S.E.North.

Monday 4th November, 1968, as instructed by my letter of appointment, I reported to the Department of Works. I entered the office of Jack Allan, the Deputy Chief Engineer and Manager, and said 'Good morning, I'm here'. Jack looked a bit puzzled at first but then recollected my appointment and showed me to my office. Not an inspiring welcome! A few days later Ross Fardon, the Chief Engineer and Manager, called me in and asked a few questions about jobs in the field. Having answered these I said 'I thought you might be going to tell me just what my job entailed'. He replied 'Thats for you to determine".

North meant all works north of the Brisbane River, although, no matter which side I was on, somehow I continued also to be responsible for all the bridges across the river! Jack Sands, Divisional Engineer, North, was responsible to me for all maintenance work and Alan Robertson, Senior Engineer Works Construction North, for all construction work. Jack was quiet, very experienced and efficient. No direction was necessary on the day to day running of his Division. Alan, who I knew and respected from our earlier days together as junior construction engineers, was equally experienced and efficient, but not quiet. I had already surmised that his reaction to the detailed supervision practised by Ray Polglase, the previous F.C.& M.S.E.N., would have contributed to Ray's retreat back to his former position of Divisional Engineer South. I decided that it was my job to deal with the politicians while Jack and Alan got on with the work and I also made myself a firm rule that I did nothing that I could get my staff to do! I was still very busy with reports, planning, unions and of course the politicians.

It was nearly two weeks after I commenced that I first rang Alan, asking for some statistics. He quickly gave them to me and then said 'I hope you are not going to tell me where to put every gully" (gully being the short term for drainage pits in kerb and channel).
I replied 'You can put them on the roofs of houses if you like, that's your problem.'

The old Victoria Bridge carried trams but there were no tracks on the new Victoria Bridge, built by the Main Roads Department, which was nearing completion. Trams throughout Brisbane were to be replaced by buses when the traffic was switched to the new bridge. Also North Quay had to be raised a few feet, to meet to meet the new bridge, after traffic was stopped on the old bridge, so much careful planning was needed! A bit later than intended, approaching midnight on Saturday 12th April, 1969, I watched the last tram, loaded with citizens intent on making the most of the event, pass the Treasury Building and gave the signal to close off the roads and start work.

A bus loading island was to be built in the middle of Queen Street in front of the Treasury and I had been concerned that vehicles coming over the crest at George Street might not see this island in time to stop before hitting waiting bus passengers, so I had a 3ft(1m) length of 6"(150mm) diameter steel pipe welded to the old tram tracks, and filled with concrete, at that end of this island! Fortunately I dont think it has ever been put to use as a vehicle stopper! Sunday morning, 13th April, I was on site, checking progress on the raising of North Quay, when a small car drove up to the barriers in William Street. I explained to the elderly lady driving the car that the road was closed but she gently, but firmly, insisted that she always went to church this way on Sunday mornings. I wasn't going to win the argument so I studied the job, decided that it could be done and told her to follow me. I raised the barrier and walked ahead of her car guiding her across the earthworks, between the working plant, and out the other end! Despite our little problems the job was virtually complete by 5am on Monday 14th and the new bridge, and the bus loading island, were in full use by the 7am deadline.

The lowering and widening of Milton Road through the cutting (Dixon to Ridley St.) was complicated by an 0rdinance survey error which resulted in the cutting slopes being steeper than designed. We had to stone pitch these slopes to keep them stable! There were red lights along the edge of the high level footpath in front of the houses while the work proceeded, but Gabby Horan, who lived in one of them, complained that they didnt do her any good! We also had slips in the big cutting on the northward extension of the Western Freeway from Moggill Road. I mentioned both to George Birkbeck, an expert in soil mechanics, he responded 'That would be the north or western side', explaining that slips in Brisbane Schist were always thus! I thought of all the slips I knew and could only agree with him.

In July, 1969, Sutling Street, Kenmore, was being raised a few feet, to reduce the frequency of flooding by Cubberlla Creek, simultaneously the Main Roads Department were widening and raising Moggill Road and I was asked to look at a problem. The very new Main Roads engineer insisted that, as his plan showed the turnout from Moggill Road going down to the old level to join our work, we couldn't raise that end of Sutling Street. I tried pointing out the ludicrousness of leaving a short floodable dip at the junction but was told that the signed Main Roads plans must be adhered to. I didn't argue further but politely took my leave, back in the office I rang the Main Roads District Engineer and explained the situation. The dip was eliminated!

The Indooroopilly suspension bridge had been built as a private toll bridge using the erection cables from the Sydney Harbour bridge as suspension cables. It was later taken over by the State and the toll removed. In 1965 we were given two hours to inspect the bridge before it was passed over to the Brisbane City Council in a political deal. In my report I stated that only a superficial inspection had been possible in the time allowed but that this brief inspection indicated that the bridge had been maintained for appearances only. One typical example was that the handrails were only painted on the pedestrian side! In early 1971 it was found that some of the outer strands of the support cables were broken. We eventually sorted out the metallurgical/corrosion problem and stopped the deterioration but in the meantime I told Joyce that it was perfectly safe, but not to go over it when there was a heavy truck on it.

In 1973 a contract was let to the John Holland Company to construct the Turbot Street overpass over Roma Street. In the early stages it was found that some of the very old drain lines were not where they were supposed to be. The beautifully drawn plans of one old brick drain showed every brick but was thirty feet out of position. When it was exposed and opened one of our Central District Foreman was delighted at the discovery and immediately crawled into it to explore. He returned an hour later saying that he had got to the vent at Albert Park (I think), we had been wondering if we were ever going to see him again!

The piles were put down, the columns erected and work started on the very complicated deck which was curved both horizontally and vertically. I considered that the contractor was taking a very long time to get the formwork, reinforcing and the cardboard tubes in position for the first concrete pour. The cardboard tubes, about 18”(450mm) in diameter, which were to form holes longitudinally in the thick slab to lighten the structure and, more importantly, to reduce the cross section of the slab so that the post tensioning could do its job, had been in position and exposed to the weather for far too long. My opinion was that they had been weakened by exposure to such an extent that they could collapse under the weight of the wet concrete. At a conference John Holland’s site engineer told my Chief Engineer, and me, that they wouldn’t collapse but that, if one did, it would immediately be internally strutted so as to retain its shape and make sure the hole was properly formed in the concrete. My office in the City Hall was only a short distance from the job and, some days later when the pour had started, my site inspector came in to tell me that a cardboard tube had collapsed and the contractor was continuing to pour concrete without doing anything about it. I hurried to the job and verified his report. I considered that the contractor had gone back on his word and felt very angry. I stood in the middle of the job facing the contractor and said “Are you going to stop this pour?” He made several unsatisfactory replies and each time I repeated the same question. After more than a dozen such exchanges he said ‘Can I slow it down while we strengthen the tube?’ To which I said “Of course you can” and left the job. I believe that he was trying to get me to give a direction, for which he could have claimed an extra payment. After the formwork was stripped it took several days for men, working in the tube with small pneumatic tools for very short shifts, to open up the tube to its full size!

I had several more problems with John Holland before the job was finished and it became obvious that they would go to arbitration on several highly technical points, such as what gauges should be used when post-tensioning the deck and how well they should be calibrated! I was therefore very frugal in my contract payments so that when they went to arbitration claiming a fairly large sum, and got awarded about half, I calculated that they had received almost exactly what they were entitled to!

The extension of Turbot Street from Edward Street to Wickham Street, part as an elevated structure over Central Station, was a challenge! The Railway Department lived up to it’s reputation, we had to purchase land over the existing tunnel from them, and then give it back to the State, free of charge, as dedicated road and Clem Jones at first refused to sign the extremely binding undertaking to compensate them if a train was delayed anywhere in Queensland. So it took two years to get started! As this was a time of rapid inflation the tendered prices for the structure were inflated by about 100% when we did get going!

As with the Overpass, the foundation and piers were constructed in reasonable time but it took a while to get the first section of the deck ready for concreting. I was doing a final check before the first deck pour and I thought that there was some reinforcing missing! The deck is continuous over the several piers and is bonded to simple prestressed concrete girders which span from pier to pier. On each pier, the ends of the girders are about 9”(225mm) apart and the projecting steel at the bottom of each girder was welded to that in the next girder across this gap, which was to be filled with concrete when the deck was poured. But there was no similar arrangement at the tops of the girders! Design Office, when asked, said that the necessary reinforcing steel was in the top of the slab, i.e. about 9”(225mm) above the girder. I had another look at the job and considered that there should be reinforcement close to the top of the girder to carry the stress from the top flange of one girder to the next. I worked out an equivalent area of steel bars and, despite Design Office protests, told the Contractor to put four short bars on top of each pair of girders, spanning the gap. It was nearly a year later, when reading an Engineering Journal one night, that I found a report on cracking of deck slabs from the bottom upwards on similar bridges in America. Their solution was to do in future what I had already done!

Another frustrating problem was a design requirement that the fill behind the abutments be compacted to 100% to prevent any subsidence in the approach roadway. The Contractor got the compaction to 98% but additional rolling of the fill reduced it to 97%. So after several attempts I accepted 97% or 98% when they reached it. I dont think there have been any subsequent problems with the approaches, or with the deck slab!

The Flood (See Qld Division Technical Paper Vol. 16, No. 15) It had been raining for some time but on Friday afternoon 25th January, 1974, the intensity had increased. I drove out westward looking at the rising creeks and started to go along Upper Kedron Road. The intensity of the rainfall now completely obscured my vision through the windscreen and, with the side windows down, I could hardly see the sides of the road. Even on hill tops there was a measurable depth of water swirling around the wheels of the car. I slowly returned and confirmed the gravity of the situation. Personnel were instructed to be available during the Australia Day weekend.

Saturday morning I took the Lord Mayor, Clem Jones, on a tour of the western suburbs. At the bridge over Kedron Brook in Dawson Parade the water was up to road level and we got out and walked to the upstream side. Clem touched the handrail on the southern approach and it, together with its concrete base, immediately disappeared into the swirling water. I grabbed Clem and pulled him back expecting more to collapse! In the office, reports started to come in of damage to many other bridgs and of houses swept away. All available staff were out dealing with the problems, which at this stage consisted mainly of putting up barricades to keep people and vehicles from danger points.

Early on Sunday morning, 27th January, we received a report from a stream gauger of a barge stuck under Centenary Bridge #1. This did not sound very serious so I told Alan Robertson, whose men were heavily engaged with the damage caused by the raging flood in the western creeks, that I would look at this problem and drove out to the bridge.

The barge turned out to be the Koala, a steel hulled boom defence vessel about 160 ft (50m) long which had been converted into a gravel barge #2. It had struck and destroyed the upstream cantilever girder supporting the northern end of the central span #3, bounced back and hit the middle section of the same girder side on #4. Its bow rested against the pier, the stern was wedged under the girder and, with the river rising rapidly, was starting to lift and crack the bridge. I radioed in advising that, as the river continued to rise, it could destroy the bridge and received approval to sink the barge if I considered this necessary. I asked Koala crew members, who had followed it down when it broke its moorings upstream, to assist me to sink it. They agreed to help, provided that I started the process, and showed me the bilge cocks. I opened one and the water came in at about one drop per minute, they were rusted up! I called for a powder monkey and explosives, they arrived and charges were set in the hull. The first resulted in a loud noise but no visible damage as we had nothing with which to stem the charges to make the force go towards the hull. Larger explosive charges resulted in small openings high up in the side but no inflow of water. I considered it essential that the Koala be made to roll over as, if it sank vertically, the winches and bollards on deck would have seriously damaged more girders as it was forced under the bridge by the flood water. One of the crew showed me the plates covering openings into the cavities between the double skins of the hull and we managed to unbolt a couple on the upstream side. I called for a fire engine and it eventually arrived. I asked the Fireman to pump water from the river into these upstream openings, assuming (correctly as it turned out!) that the keel isolated the two sides from each other to make the vessel harder to sink. I watched the Koala start to tilt and, as the upstream gunwale approached the water level, asked the Fireman how long it would take to uncouple the hoses and drive off. When he replied a few minutes I said when the water flows into the open hold I don't know what will happen and it could take the bridge with it. How about chopping the hoses and driving off? He replied will you pay for them? Actually when I saw the water start to flow into the hold and gave the signal they uncoupled in about 30 seconds and then drove off! The Koala slowly rolled right over and, forced by the raging flood, started to move under the bridge smooth side up. I felt it grind its way under the other four girders and then it popped up on the downstream side like the cork out of a bottle. The waiting tug #6 chasing it into the dark to try, unsuccessfully, to push it ashore. The Fireman walked back onto the bridge and said 'I thought you said the bridge might collapse, why did you stay there?' I replied that I was so interested in what was happening that I had forgotten about that possibility. I had been on the bridge for over nine hours and went home tired but relieved.

I had a 35mm camera with 5 slide shots remaining and I used them as indicated by #2 , #3, #4. #1 is of the stream gauger's log, obtained much later, #5 is a view from downstream and #6 from upstream showing a tug, or tugs? waiting to collect the barge.

The river continued rising to a peak on Monday night when it covered the bottom half of the damaged girders and was across the deck at the lower southern end. The water fell rapidly during Tuesday night and Wednesday morning, when I got to the bridge, I had to stop the vehicles which were making their way over the heaps of gravel we had placed at the northern end to keep them off the damaged bridge. At this moment a dinghy with outboard motor came upstream. I hailed the occupant and, as the water was now about 10'(3m) below the damaged girder, asked if he would help me inspect the damage. He advised that he was a Telegraph photographer, and said he would put a new roll of film in his camera, take a picture of anything I wanted and give me the film for processing by the Council. Payment was to be a picture of me inspecting the damage! I commented that Clem might not like that, but agreed.

(it was quite a good picture in that evenings paper!)

My close up visual inspection had convinced me that at least the downstream half of the bridge was safe for traffic and I reasoned that it would not be good public relations to keep it closed until it was later proved safe by a detailed analysis of the damage which could (and did) take weeks. Without asking permission (which must have been refused on technical grounds) I called for two loaded Council trucks, of about 20 tonnes weight each, and on their arrival told them to drive, one at a time, across the bridge on the downstream (undamaged) side while I stood in the middle of the damaged section. I observed no movement in, or extension of, the deck cracks and heard no sounds of distress during repeated crossings so I then told them to come over close together. Again no signs of distress! At this point the drivers asked why they were doing this, I replied 'To see if the bridge will fall down'. They were a bit terse about this so I said surely you can swim at which they were a bit more positive in their comments. I checked with Bruce Thomas and was told that our lightest bus weighed 10 tonnes. At our lunch time conference I told the Chief Engineer that we should open the downstream lane to traffic with a 10 tonne weight limit and a speed limit of 24 kph to reduce impact stresses. Alan Robertson, now Engineer for Design, said we can't take the risk. I said we can and, in answer to the Chief's queries, told him that I had put 40 tonnes over the bridge and observed no indications of trouble. The Chief looked, thought and then agreed to the proposal.

During the succeeding days I kept an eye on the bridge. One day I saw a low loader with a dozer aboard queuing up to cross the bridge, where traffic lights now controled the one lane traffic in alternate directions, I pulled alongside and asked his weight. 9 tonnes the driver replied, I queried this weight pointing to the tare and much higher gross weights painted on the chassis, the driver decided it would be quicker to go the long way round! The cleanup of the areas that had been flooded was a massive job. I recall an electricity engineer being very upset because crowds of sightseers had prevented him from replacing as many of the damaged transformers as he had planned for the day. Subsequently police escorts having to be provided for this vital work.

Coronation Drive had reopened to traffic on Wednesday morning, 30th January. I was driving in to our daily lunchtime conference on Saturday 2nd February when I saw a crack in the road surface just inbound from the Regatta Hotel. I drove on to the footpath and parked. The crack formed a 75m arc, from near the river at both ends, to touch the kerb and channel mid way, on the opposite side of the road. I sketched it, marked a point near the middle where I could insert my little finger and the road surface had dropped about 2”(50mm) below the channel, and drove on to City Hall. We discussed the problem over lunch and then Errol Jones, our soil mechanics expert, returned with me to Coronation Drive. I could now insert my thumb into the crack and the road surface had moved down another inch (25mm) or more. Errol and I put our cars across the road at each end, stopped all traffic and called for barricades. I particularly remember one electricity truck driver who needed a lot of convincing that he couldnt get through. It took a long time for the barricades to arrive as our action had created major traffic problems! It was a hot day, so with the barricades in place I said we have earned one and Errol and I walked in to the Regatta. The first beer hardly touched the sides so we were quietly sipping the second when the barmaid said what’s the problem. We explained that the ground had become saturated while underwater and, being wet and soft, was now slipping towards the river. She replied well you’ll have to wait till it dries out. We could only agree with that solution!

Two weeks later, Saturday 16th February, I had all the necessary plant working on the cleanup in Brookfield as Clem Jones negotiated with St.Columbans Mission to extend Land Street through their grounds and thus provide a bypass around the failed section of Coronation Drive. At noon he emerged, gave the go ahead and I called in the gangs. We excavated the swampy ground and found the old box culvert carrying the Auchenflower Creek to be in poor condition. Speed being important replacement was out of the question so I ordered 100 cubic yards (80 cubic m) of concrete for early Sunday morning, specifying additives to enable us to drive over it quickly, and we placed a thick slab of lightly reinforced concrete over the culvert. A pick bounced off the slab an hour later, construction continued, with heavy rock fill across the swamp before paving, and we opened to traffic on Tuesday evening!

To stabilise Coronation Drive a minimum of 13,000 cubic yards (10,000 Cubic metres) of rock fill had to be placed in the river on the underwater toe of the slip, but it was not safe to drive over the unstable slip area to do this. So we tipped rock fill from the stable bank just upstream of the slip, forming a ridge of rocks out into the river and then downstream along the toe of the slip. This was then reshaped by a dragline working back upstream and throwing the rock towards the bank. We had to tip about 47,000 cubic yards (36,000 cubic metres) of rock to achieve stability. To reduce waste we kept the rock about 6”(150mm) below high tide level and many people remarked on seeing the dragline and dozer walking on water some 50’(15m) from shore! They were both equipped with a drum buoy, tied to their machine by a long rope, in case they slid off into deep water and the operators wore life jackets! After stabilisation was complete we dug down to the 24”(600mm) cast iron water main, Brisbane’s first and laid about 1890. It crossed the ends of the slip in the middle of the road and I firmly believe that it had anchored the slip. If it had broken the effect of a broken 24” water main discharging full bore into the slip area can only be guessed. It would have been far more disastrous than the simple slip that occurred! I can only thank those unknown engineers of long ago who made it strong enough to resist the great force on it!

Many other slips around Brisbane, the result of soft ground being waterlogged as at Coronation Drive, though less spectacular, were similarly stabilised by weighting the toe of the slip. One, in Radnor street Indooroopilly, was a slip along one of the joints in the sedimentary rock and we used long steel bolts to tie the slipping rock to the stable rock. Another more spectacular slide was at Strathburn Street Oxley where a large area of a comparatively recent subdivision slid as a result of water under pressure lubricating soft seams deep underground. With one half on the moving ground and the other fixed, the houses on the uphill edge were torn apart, those on the bottom edge squashed and those on the sides sheared! The notable exception was one house, built on a flat slab on ground in the middle of the area, which, although finishing up a couple of feet from where it was built, was undamaged and was reoccupied after the services were reconnected!

Restoration of Centenary Bridge was in two stages; firstly to make the damaged part safe and secondly to repair it. The northern end of the upstream girder, under the central suspended span, was supported only by the diaphragm connecting it to the second girder and by the deck. The designer advised that this heavily loaded the second girder was just safe, while the diaphragm between the girders was overloaded to breaking point even if it was uncracked (we later found it was cracked and theoretically should have failed, dropping the upstream girder, but this confirmed my experience that concrete has the ability to creep and redistribute high stresses in such circumstances). We fabricated and placed a long steel girder above the damaged girder, strapped them together, like a splint on a broken leg, and hung the unsupported central span from the end of the steel girder. The load limit on the downstream lane was raised to 25 tonnes and the speed limit to 60 kph.

In August tenders were called for the repair or replacement of the damaged girder. I was surprised, but very happy, to be successful in recommending to Council that they accept the highest of 15 tenders, that of Hornibrook to replace the damaged girder with a similar post tensioned girder. I had given detailed reasons for rejecting all lower tenders, either the tenderer had no experience of bridge work, would not accept responsibility for their work or offered a steel replacement beam which could have posed serious differential expansion and maintenance problems. But I surmise that the major reason the Council agreed with my recommendation was that the money was coming from a Federal Flood Grant!

In this respect I had been asked to supply a list of works to repair flood damage and reduce the possibility of future flood .damage. I came up with a list totalling about $6M and was told to jack it up as we would probably only receive a portion of our estimate. I then included such improbabilities as raising Milton Road above flood level bringing the total to about $10M. To my astonishment the Federal Government gave us the lot and I was hard pressed to spend it all, but managed to do so by upgrading many repaired roads and culverts to a higher standard! Federal rules were spend it on the jobs you have listed, but it didnt matter how much or little went on each job!

It took a few months to repair Centenary Bridge and one day I received a call from someone who lived in Jindalee, complaining about the time being taken to repair the bridge and the consequent continuing delays to traffic. He said 'I'm a Civil Engineer and I consider that it should be repaired a lot quicker'. I replied 'If you can give me a reference to a similar problem anywhere in the world it may help speed things up'. I never heard from him again!

We had frequent site conferences with Hornibrook as we felt our way into the unknown! The unanswered questions being, how had the damaged beam reacted to the 500 tons of post tensioning in the steel cables encased in the concrete girder at the time of impact, and, how it would react as we removed more concrete from around the cables. Steel cables stretched like bow strings can be highly dangerous! Hornibrooks would make a suggestion and I would say 'But what if' and finally we would agree on the next step. As we prepared to de-stress and cut the exposed cables in the damaged beam someone said how do you feel about it? I replied 'Like the man who learnt lion taming by correspondence and was about to enter a lion cage for the first time - I hope the lion has read the book'! When we finally did de-stress the cables, by heating them to about 450˚C, bridge movement was well within the arbitrary limits (or guided guesses) that I had set and the cables were then cut without any further effect on the bridge. Demolition and reconstruction of the girder and associated deck then proceeded with sections of the damaged girder being cut free and lowered onto barges and then new girder sections lifted into place. It was a relief when the new sections had been joined together and the cables threaded and stressed, so that the new girder was self supporting and no longer hung from our splint, the thin steel girder which also had been carrying the working platform and the ends of the adjacent spans! The strip of new concrete deck was poured above the new girder and, finally, traffic stopped for the last time, to avoid vibration, as this strip of deck was joined to the rest of the bridge using rapid hardening concrete. The steel girder was cut up and removed, ancillary equipment cleared away, asphalt laid on the new deck surface, and I think it was about Christmas, 1974, when normal two lane traffic was restored to my bridge!

Upper Brookfield Road runs up the Moggill Creek valley. The first of many crossings over the creek was by a substantial, high level, two span timber bridge. This was swept away by the raging torrents of water running off the western hills sometime on Friday or Saturday, 25th or 26th January. The water, as was usual in this steep hill country had soon fallen to a more normal level and the locals immediate solution was to pool transport; the cars marooned on the western side bringing travellers to that side of the Creek from where they walked and waded to the eastern side to be picked up and taken towards town by cars marooned on that side. They also constructed a Flying Fox cable way to transport goods across the gap. When I visited the scene there was not a single piece of the timber bridge to be seen and I surmise that it all finished up in Moreton Bay! As soon as plant could be spared we graded approach tracks down the creek banks and a rough ford across the creek. At the many road crossings further upstream, where smaller culvert culverts had been destroyed and where the approaches were not so precipitous, we also graded rough crossings. The next step was to temporally replace the missing bridge by constructing a low level crossing, with a few small pipes to take the normal small stream flow and a good surface for the traffic. Like the crossings upstream, this went under water after every rainfall but was rarely submerged for more than an hour or two. As soon as a design had been prepared our bridge team started work on the foundations of a new high level prestressed concrete bridge which was opened to traffic in early 1975. The bridge workers told me that they collected a bucketful of sapphires whilst digging the foundations! Possibly an exaggeration as to both quantity and quality!

Flood Epilogue

In the middle of the Australia Day long weekend, and after the damaging flood in the short western creeks had subsided, Council Engineers had warned of the impending rise in the Brisbane River, as similar rainfalls had been recorded in the upper catchment areas. Their predictions of river levels were not taken seriously enough, resulting in many residents in low areas receiving little warning of their necessary evacuation when the River peaked on the Monday night, 28th January. For example, on Tuesday morning I found Eric Brown, a First Class Bridge Carpenter in our Bridge Team, and his wife Beryl, sitting in their car on the higher section of Durham Street, where he had parked it at Beryls insistence the previous evening. They had been evacuated by boat from their submerged home in Sir Fred Schonell Drive around midnight. I sent them to our place for breakfast!

During and for a period after the flood, we, the representatives of the various Council and State Departments, met daily at Police Headquarters, under the chairmanship of the Police Commissioner, to discus problems in the clean up and restoration of services and assist each other wherever possible. But it was all very ad hoc and forward planning, particularly for the control of sightseers and similar problems, was practically nonexistent! So one beneficial aftermath of the 1974 Flood was the establishment of a State Disaster Relief Organisation, to which I was appointed, in October, 1975, as the Council Representative. We met monthly at Police Headquarters and plans for future disasters were prepared. Fortunately (at the time of writing in 2000) they have not yet been put to the test, but I believe that the relationships built up then resulted in better co-operation between the various authorities and were particularly valuable in such events as the running of the 1982 Commonwealth Games.

B.C.C. Works - Bridges, a Roundabout and a Reshuffle

We were in the Chiefs office discussing possible ways of improving the flow of traffic from the northern suburbs towards the city and the duplication of Blackall Bridge across Kedron Brook was raised. I strongly opposed this pointing out the difficulty and cost of improving the route south from Grange and suggested that what was really needed was an intermediate crossing of Kedron Brook between the existing Blackall Bridge and McDowalls Bridge at Everton Park. The map showed that the most obvious solution was the connection of Appleby Road to Enoggera Road through Grinstead Park. I started to regret my suggestion as Grinstead Park was leased to Sir Leslie Wilson Scout District as a training ground, the Post Office building from the Jamboree had been re-erected in the park as their headquarters and the proposed road would cut the park in two! I quietly sounded out the District Commissioner about the proposal. He was delighted! He told me that maintaining the whole park was beyond the Districts resources and that they had been considering ways of divesting the District of part of the Park! In the final design the new road, extending Shand Street to South Pine Road at Pickering Street, left the building in the half of the park that the District wished to retain so everyone was happy!

Early in 1975 we commenced pegging out the new roundabout at the intersection of Webster and Hamilton Roads at Chermside. It would be the largest in Brisbane and adequate for 60 kph traffic. We made the surprising discovery that the existing road going north from the small bridge over Downfall Creek was in private property until it rejoined the through line of Webster Road and that consequently the Council did not possess the land on which the north west part of the new roundabout was to be built! An approach to the owners of this as yet undeveloped property revealed that they also were unaware that the traffic had been crossing their land for a long period of time. So, no doubt to facilitate future subdivision applications, agreement was reached and the roundabout completed!

During the repair of Centenary Bridge there had been considerable pressure to improve the traffic flow by erecting a temporary bridge on the existing downstream half of the pier foundations, which projected above normal water level and were to be the base for the future duplication of the bridge. I had discussions with the Commanding Officer of the Royal Australian Engineer Regiment and we managed to find enough reasons to knock this idea on the head. There were not enough Bailey Bridging units in Australia and, with the necessary construction of the intermediate supports required, it could not be finished before we had repaired the bridge, even if the Army brass approved the idea! Late in 1974, having finalised some minor items with the R.A.E. C.O., I was about to leave when he said 'You havent got any bridges you want blown up have you?' I thought for a moment and then had a brain wave, 'Yes' I said 'The bridge over Ugly Gully'. The Main Roads Department had constructed a new road and bridge over Kholo Creek downstream of the junction of Kholo and Ugly Creeks which were crossed by two old timber bridges, now no longer used except by trespassers and vandals entering the Tyamolum Campsite. The destruction of Ugly Gully Bridge would close this back entrance. He was delighted with this answer and I started to finalise the arrangement, but when I looked at the Local Government Act I found that a border bridge with a shire road on one side and an M.R.D. road on the other belonged to the M.R.D. I rang the Main Roads District Engineer and told him that I had asked the army to blow up one of his bridges. He was a little startled but when I told him which bridge he said go ahead! So in August 1975 the Sappers prepared to blow the bridge. They wanted to place explosives on the main beams so excavated trenches across the bridge deck through about 3 feet (1 metre) of compacted dirt and road metal which had accumulated over the years. The bridge became very shaky as that compacted dirt was the only stiffener in the old structure. However it stood up long enough for all the charges to be placed and we watched from a distance as the cloud of dust, smoke and timber shot skywards. The Sappers cleaned up the site, removing all the timbers for reuse in other exercises.

A different sort of explosion occurred on 18th August, 1975, when I was advised that the position of Field Construction and Maintenance Supervising Engineer had been abolished and that I had been appointed to the newly created position of Field Engineer. Meaning that I was to be in charge of all Works Maintenance, throughout the City, including cross river bridges, the Asphalt and Testing Section, Works programming and training. Graham Hewitt from W.S.&S. Dept. would be in charge of all major construction and quarries. I was pleased with the shorter title but unhappy with the loss of construction as I considered close cooperation between construction and maintenance led to greater efficiency. As the new positions had not been advertised, as required by the Acts and Ordinances, I wrote a memo suggesting that the new position was therefore possibly in the Administrative Division (exempting the Council from some requirments and giving me better conditions). It took 18 months for the Council to advise me that it was!

Storey Bridge

Apart from my time in Water Supply, the major cross river bridges had been my responsibility since soon after I joined the Council. Now as Field Engineer I could not give the time that these bridges needed. The position of Bridge Engineer was advertised, the 6 possible appointees reported to the Storey Bridge, were shown the way up and I interviewed them on the top girder! (This was before public accass was provided.) When someone remarked that this seemed a bit silly I pointed out that I would look sillier if I appointed someone who could not stand heights or was overconfident. I had previously had the experience of a young, fit and athletic Safety Officer freezing at height and having to be helped down from the Storey Bridge! The Storey Bridge had an unusual work force and environment! The painter riggers on the bridge generally worked in pairs and at height. It is a fairly demanding job, dirty and exposed to the elements, and not to the liking of most men sent out by the employment office! Most of the permanent work force were of European origin with many from the Balkans. Great care had to be taken by the staff to keep members of politically opposed factions on widely spaced parts of the bridge and on one occasion when this didn't work properly we had a knife fight between two groups!

One day the Lord Mayor, Clem Jones, was inspecting the Storey Bridge and remarked thsat the grey paint looked dull, 'Paint it green he said'. I answered 'Certainly my Lord Mayor, it should be finished in about 14 years', that being the time it took the work force of 28 men to chip down, clean and repaint the bridge steelwork from end to end. There was a long pause so I suggested that we could paint the main girder and handrail green in a much shorter time. My suggestion was accepted!

Pavement Maintenance Management

Although the change from looking after maintenance and construction work in the north half of the City to managing maintenance work throughout the City was not of my choosing, and in my mind had some unsatisfactory aspects, there were some advantages. Since returning to the Works Department in 1968 I had been responsible for scheduling works in the northern half of the city for inclusion in the annual budget. I had become increasingly aware that the lists of work submitted by the District Engineers came as much from knowledge stored in their heads as from any defined system and occasionally streets, which should have been included in the schedules, were omitted. I decided that it was time to change and seized on a minor proposal in the Lord Mayors budget speech to properly list the roads of Brisbane and the work required on them. The Council had acquired a computer which seemed to be permanently reserved for recording and processing financial matters but the Lord Mayor's proposal enabled me to design a system for recording the physical details of the citys 4,500 km of roads and, despite Finance Department opposition, have the data stored on the Council computer.

In the initial collection of data, the Technicians were asked to describe the pavement surface as Good, Moderate, Poor or Bad and, in relevant cases, Seal meaning that resealing was the major need.

The first comprehensive print out in 1972 gave, for the first time, the accurate physical dimensions of all of Brisbane's roads. But, although the pavement descriptions gave a crude indication of their overall condition, they only represented the opinions of the individual technicians and detailed testing of a sample area, by Errol Jones' crews in the Asphalt and Testing Section, indicated their unreliability. Errol and I looked in technical papers for a suitable system of pavement classification and found that they either did not cover the identification of problems in pavements or left it to the judgment of the 'experienced highway engineer'.

The change to Field Engineer in 1975 give me direct control of the technicians in the southern Maintenance Districts as well as the Asphalt and Testing Section. Also that same year a paper was published by Livneh and Chaustere entitled Visual Classification of Typical Damages in Flexible Pavements. Errol and I decided to try their recommended system of using standard photographs to identify different types of pavement damage. With an instruction manual, containing photographs of fifteen locally identified distinctive and technically different pavement problems, the results of our technicians visual inspections became much more uniform. Three years later, when all roads had been reclassified using the new system, detailed testing of a representative area showed that 15% of the pavements were actually better than classified by the technicians, only 4% very slightly worse and no seriously defective pavements had been missed. We had won the battle, from now on technicians could be used to eliminate roads that did not need inspection by an experienced highway engineer who could now concentrate on the quarter (approximately 1,100 km) that did need his attention!

Local Government Engineers Conference

Brisbane City Council was to be the host for the 29th Annual Local Government Engineers Conference in October 1978. The Chief Engineer and Manager of the Works Department, Ian Fairweather, was the Chairman of the Organising Committee and I was the Organiser! I don't remember there being any Committee on the organisational side! As was normal practice the whole event was subsidised by the various bodies engaged in supplying engineering goods and services to Local Government and I well remember, after arranging sponsors for the five lunches and four dinners, receiving a call from the Tractor and Machinery Association of Australia asking to sponsor a function. After much thought, as there were formal dinners on Monday, Wednesday and Thursday evenings but only a Tropical, Informal, Hawaiian Lu-au at the Boulevard Tropical Gardens on Tuesday evening, we came up with a Bar-B-Que Breakfast on the Wednesday morning with buses leaving hotels at 7.10 am, an hour and a half earlier than usual.

The venue for all technical sessions was the new auditorium at the Mt. Coot-tha Botanic Gardens and a marquee for all lunches, and the Bar-B-Que Breakfast, was erected alongside the new lagoon still being landscaped below the Tropical Display Dome. Thoughtfully the Parks Department had fertilised the whole area with stable manure a few days before the Conference and the flies were there in clouds. We assured our guests from the far north and west of Queensland that this was part of our effort to make them feel at home! The formal dinners were a success with a reasonably quantity of fluids flowing but the boys really let their hair down at the Tropical, Informal, Hawaiian Lu-au. After the band ceased, the piano, played by a talented engineer, accompanied the sing song, so I organised extra supplies of grog and, after a brief talk with my friend, Bruce Thomas of Transport Department, held their bus until the early hours of the morning. The following morning I arrived for the Bar-B-Que Breakfast a bit tired. But steaks, eggs and onions with champagne and orange juice to drink was the choice of most our hardened guests from the far Shires of Queensland.

Course at Canberra

In 1979 the Council directed me to attend a Senior Management Course in Local Government, running from 2nd September to 9th November, at the Canberra College of Advanced Education. In addition to the costs of the Course and a small expense allowance I was provided with accommodation, a Council car and one return airfare from Canberra to Brisbane during the 10 week course. The Course members filled the old fashioned but comfortable Hotel Kingston, Canberra Avenue, Griffith, and the College was at Belconnen. Meals were adequate and the Hotel bar well stocked. There were sufficient cars to transport all the 22 course members over the 15 km from one to the other and I soon had a fairly regular group of passengers and we settled down to a busy round of lectures, note taking and homework.

When I went for a run each morning the frosted grass would crackle under my shoes and it didnt get a lot warmer during the day. Jamir Khan, Assistant Town Clerk of Lautoka in Fiji, appeared to have no warm clothes but refused our offers of spare woollens etc. He was always cheerful and seemed immune to the cold. During the week the high pressure course kept us too busy to miss our homes but our weekends were boring and emphasised our enforced absence! Some were close enough to go home at weekends but most of us wandered round Canberra visiting the Canberra Club, of which we were honorary members, Galleries and museums or other points of interest like Cotter Dam. My one weekend at home, 27th September to 2nd October courtesy of the Councils air fares, was a welcome break. I recall nothing of it, other than that I was very happy to be home for those few days.

The course was well structured to keep us active and interested, the two resident lecturers, Bob Armstrong and Charles Foley, were very good at their job. I think it was Charles, who had been a union official in England before changing sides to join management, who was most interesting. He detailed methods of talking, or scaring, people into supporting decisions they didnt really like and told stories of collusion between unions and management to the detriment of the staff and workers. A lot of what he said definitely struck a chord in my memory.

University of N.S.W. Workshops

In February, 1981, I was invited by the University of N.S.W. to join the eminent body of lecturers at two Continuing Education Workshops on Pavement Maintenance Management and to present a lecture/tutorial on the system of maintenance management and development for Brisbane. The Council agreed to my attending and Errol and I worked hard to produce a 103 page technical paper covering the operation of our system.

The Clyde Cameron College at Wodonga was an example of modern architecture and looked like a lot of large pipes joined together, but is was comfortable and a very adequate venue. The bar prices were low and, being a Union oriented venue, attracted the local Union Representatives in the evenings. These were mainly imports from the U.K. and their standard of behaviour prompted one of the New Zealanders to state that they wouldn't allow people like them run Unions in New Zealand!

At the Workshop there were Engineers from all over Australia and New Zealand, and a few from the U.S.A., and it soon became evident that the system of pavement maintenance management that we had instituted in Brisbane was ahead of anywhere else in the world. Some of the States in the U.S.A. had started to set one up but none were actually in operation. Most systems were being designed for highway networks, where the construction details were usually available, and were based on sampling or high speed transit measurement of surface deformation. Only in the city of Palo Alto, U.S.A., had any attempt been made to collect information on the total road network, which we considered essential in any city where the road network had grown like Topsy over a long period of time as in Brisbane!

On Monday I took the train to Laura in the Blue Mountains for the second, invitation only, Workshop. The Blue Mountains City Council submitted a pavement management system, the only other Australian Authority to do so. At the time, I thought it a bit too simple and later when Errol and I examined it in detail we decided that their system, while working in the Blue Mountains where almost all road foundations were excellent, would be totally ineffective in most other areas, where more variable and much softer foundations normally existed.

Committees

Committees are a way of life in the Public Service about which there are several schools of thought. Two popular ones are 'A camel is a horse designed by a committee' or 'If you dont want to make a decision send it to a committee'. I found that the committees I was on actually did what they were supposed to do, although that may not have been what their official terms of reference stated.

A good example of this was my first memorable committee, the Interdepartmental Transportation Working Group. I joined this committee soon after my return to the Works Department. Lionel Guthrie of Planning and Traffic Department was Chairman and I was Works Department representative, I soon realised that its real purpose was to reduce the diversion of Federal funds by the State from Council buses, which only cost twice as much to run as the fares collected, to the State railways which lost more! Lionel was a very astute engineer but, unfortunately, died a couple of years after I joined the committee and I was made Chairman. My first act was to give it the short title of TWIG, formed from the initials of its proper name. I think most people shared my dislike of long titles as it soon was in general use! Tony Philbrick, a Transport Department engineer became my Committee Secretary and was a very good one too. We understood and trusted each other and, after he was suddenly promoted to Town Clerk about 1981, this made my task of designing the intricate submissions on transport funding, and on other matters, easier.

I dont recall the name of the committee intended to smooth the way for construction of the new airport but it was composed of representatives from all Federal, State and Local Government Departments involved. The most memorable meeting was the morning after a State Government Gazette was issued raising the royalty on rock from a quarry whose tender for supply of material for the main runway had just been accepted by the Federal constructing authority. Annoying some State politicians. The Co-ordinator Generals Department representative had to field many questions from the Federal Officers, which he did without answering them!

I was appointed Works Department representative on the Civil Engineering Productivity Group in November 1969. This group consisted of representatives of Federal, State and Local Government bodies, major consultants and contractors who were involved in civil engineering works. Productivity as such was only rarely discussed, but this group formed a useful forum in which mutual problems could be discussed. Normally meetings of principals, consultants and contractors are handicapped by contractual relationships! We hammered out standard designs for kerb and channel and for drainage structures, which should have saved money by reducing the number of different shapes specified by the various authorities but didn't because because of the resistance to change in most local authorities. We wrote a new, and we thought fairer, standard condition on Rise and Fall for contract prices, which was generally accepted, except by the federal body, although some contractors were a bit slow in using it! We arbitrated on minor problems in civil works and circumvented some political problems.

In due time I became chairman of this group and enjoyed a trip or two to national conferences in places like Melbourne in 1978. My most enlightening moment was when a manufacturer at a conference said I admire the Council for employing men we consider unemployable. My response was 'Show me a trouble maker and I will show you a man working in a job below his mental capacity', I went on to say that we, like others, have jobs which we think are boring and repetitive but some of our best workers in these jobs are those considered to be mentally retarded, they are happy to have a job they can successfully complete.

All road, rail and water traffic authorities were represented on the Technical Planning Committee which met monthly at the Main Roads Department offices to co-ordinate planning for traffic in south east Queensland. I was the Council Works Department representative and found this committee fairly productive in minimising clashes between authorities. We produced a master plan for the next ten years with some longer projections. The State Minister responsible refused to present it to cabinet until a proposed new river bridge and the associated road through his electorate in New Farm were eliminated. As this was about eight years away on our plan we reduced it from a ten year plan to a five year plan which he agreed to present! Despite the later falling from grace of that minister this road and bridge has not proceeded although now, in 2000, it is being mooted as a possible tunnel!

One of the smaller committees that I served on was under the Chief Inspector of Explosives to write a standard by-law on explosives for Local Authorities. It was amusing to read some of the existing by-laws with clauses such as all explosives must be kept in earthenware jars securely stoppered.

Call outs
Although I was officially on call at all times we had Works Department Overseers, one on the northside and another on the southside of the river, rostered on call out duties for all out of normal working hours emergencies. They were very good at dealing with the various incidents that came their way and only called me if it was really serious or could become political by getting media attention.

I had a call late one night from one of my call out Overseers telling me that he thought I should look at a hole in Bradshaw Street, Lutwyche. I arrived and was shown a small hole in the bitumen adjacent to the tramlines and close to the eastern abutment of the bridge over Kedron Brook.The bottom was a long way down!I squeezed through the hole and lowered myself down. Swinging my torch around revealed that the upper six feet of the concrete abutment of the bridge was exposed and all that was holding up the road above for about ten feet back were the tramlines, encased in concrete, spanning the gap! I surmise that, at the height of the 1974 flood, the sandy bed of the Kedron Brook had been eroded below the base of the abutment wall, which was supported by piles, and the sand sucked out from behind the abutment. As the flood subsided sand must have been redeposited in the bed adjacent to the abutment sealing the hole on the outside and leaving no visible trace of the problem. Over the next year or so the fill behind the abutment and above the original sandy surface had progressively collapsed downward until the hole had now reached the surface! Barricades were obtained, the road closed and bus and other traffic rerouting arranged. I also detailed the situation to police headquarters asking for regular checks as it was most likely that the very small hole in the road surface would not deter someone from removing the barricades to drive through. Repairs took a few days as several truck loads of rock fill had to be placed and compacted before the road could be resurfaced and the bridge reopened.

Incidents
Damage to houses was reported during the construction of the Lutwyche Shopping Centre. The developer was notorious for contravening Council ordinances when building houses or units and selling them before the Council caught up with him, thus leaving the new owner with the problem. My investigations indicated that the developer himself had set the errant charges. I couldn't prove this so called in the licensed powder monkey and put him before the Chief Engineer who has the power under the ordinances to revoke blasting licences. To my dismay he pleaded guilty and pleaded for a caution, promising that it would not occur again, to which the Chief acquiesced. Outside the office I asked the reason, telling him that I had been certain that he, the powder monkey, had not been on site when the blast occurred and that my intention was to charge the real culprit, our troublesome developer. He replied 'Well he owes me money so I couldnt put him in'. Much later I saw this powder monkey and asked if he had got his money, 'No' he replied!

The Federal Department of Administrative Services (D.A.S.) handled property matters for the new airport. George Aufferber was a scrap metal dealer with a yard on Brands Road, Lower Nudgee, and we often had to chase him about bits of car bodies littering the dirt roads in the vicinity of his yard, where they were crushed down into blocks of scrap metal for export. Well before construction of the new airport had really started, the D.A.S. closed the northern part of Sugarmill Road, Georges only real means of access as the old timber culvert in Brands Road beyond Georges yard had a one ton load limit on it! George came to me with a letter from D.A.S. telling him that he would have to get the Council to upgrade the culvert. As Brands Road and all that area was to be resumed for the new airport I told George that I could not recommend spending Council funds on it and that he should talk to the D.A.S. who had prematurely closed Sugarmill Road.

George then told me his story, starting with his survival as slave labour of the German army at Stalingrad where they were used to clear land mines ahead of German troops, through to recent attempts made at night to destroy his metal compacting press with gelignite and of his continuing struggle with D.A.S. He had a contract with a Japanese company to supply scrap metal but his several applications for an export licence had been unsuccessful. He had flown to Canberra and complained personally to the Minister. His complaint was investigated and all his applications were found, unprocessed, in a clerks drawer. This clerk left the D.A.S. for a job with another scrap metal dealer, and George's export licence was issued. Almost immediately the D.A.S. closed his only real access, via Sugarmill Road, and told him he still had access via Brands Road which was a Council responsibility, so he should ask the Council to upgrade the culvert.

George might not have been our tidiest rate payer but I did not like the attempt to shift the blame for, and costs of, his problems to the Council and I was sympathetic to someone being unfairly harassed by a government body, possibly at the instigation of a competitor. So I sifted through all my paperwork on the new airport and drafted a five page letter to George detailing the appropriate agreements and decisions and concluding with a statement to the effect that it was clearly the responsibility of whoever closed Sugarmill Road to either reopen it or provide the $20,000 necessary to upgrade the culvert in Brands Road. The Town Clerk called me in. We discussed the letter with a Council solicitor who was of the opinion that my statements were correct and clearly set out the Council's position, that we had nothing to hide and nothing to gain by not telling the truth! Tony signed the letter, George took it down to the Minister in Canberra and a few days later an engineer I knew in the Federal Construction agency rang to say he had the funds and could the Council please build the new culvert at Federal expense. We did!

Spring Hill Fair, organised by Cecilia McNally to raise funds for charity, was run every year. City Cleansing cleaned up afterwards and each year Cecilia would complain that she didnt have the money to pay for it! The District Engineer was not renowned for his tact and discretion and prolonged arguments resulted. In August 1982, as the next Fair approached, I invited Cecilia to come in and discus the problem with me. Cecilia was good at organising the Fair but her bookwork was almost non existent and she sent donations off to charities as soon as the Fair was over, consequently, when the District Engineer sent in the account, there was no money to pay for the clean up. I suggested to Cecilia that as she received booking fees prior to the Fair she prepay money to cover the clean up. She agreed and I set the figure a bit above estimated costs. As a result Cecilia got a small refund instead of a bill and thought this was wonderful!

Commonwealth Games1982

The Games Transport Planning group commenced meeting early in 1978 and a little later I found myself in charge of preparing the external venues on roads. The Walk was not a problem, the venue on the Bayside required little additional work. The chosen Road Cycling circuit was on existing roads around the Sleeman Sports Complex, where most of the track and field events were to be held, and comprised sections of the inbound pavement of Old Cleveland Road, Mount Petrie Road, Mt. Gravatt Capalaba Road and Tilley Road. Old Cleveland Road, being a new Main Roads project, would be to a good standard but the others were the Council's and varied from very old narrow pavements, such as Mount Petrie Road and the western section of Mt. Gravatt Capalaba Road, which I had built through virgin scrub some years before, to Tilley Road which did not exist! These all had to be scheduled for construction or at least resurfacing within our normal budget to obtain the high standard of road surface that we wished to provide. I wondered about the steep climb up Mount Petrie Road from Old Cleveland Road, I would not have liked to cycle up it even once, but it was given top marks by the road cycling fraternity who said it was just what they liked! By a stroke of good fortune the whole circuit measured a fraction over 14km so that seven circuits made almost exactly 100km and the start and finish lines could be at almost the same location, halfway along the Old Cleveland Road section. I managed to watch the end of the 100km race and saw a lad from Leicester (where I was born) come in first. Speaking to him I asked if he felt like a rest. He said "No. I'm going to find myself a lass for the night!" They breed those bike riders tough!

The Marathon was that in every sense for us! The chosen route started near Tribune Street, South Brisbane (this was before the South Bank Development) running along Stanley Street to Melbourne Street and over the Victoria Bridge. Via North Quay to Ann, Boundary and Ivory Streets, going through the tunnel under the north approach to the Storey Bridge. Then McLachlan, James and Ann Streets to Breakfast Creek Road and Kingsford Smith Drive, with a turning loop at Curtin Avenue to send the runners back along the same route to North Quay. From here it traversed Coronation Drive, Benson and Brisbane Streets, Gailey Road, Sir Fred Schonell Drive and Mill Road to and along Sir William McGregor Drive to near the far end where it looped back, via College Road, for the return trip to town on the same roads, crossing the river by the William Jolly Bridge, then via Peel Street to Stanley Street, finishing where it had started.

My first problem was to measure the 22 mile (35.406Km) course to the satisfaction of the Games officials. Electronic equipment was fitted to a car and calibrated along a straight kilometre, accurately marked in Montague Road, South Brisbane. As the route went the wrong way in one way streets, and in the one way tunnel, measuring was done in the very early hours of the morning with police escort. I think we ran it on three separate nights, once to make sure we were close and then, after we had opened out the loop at Curtin Avenue to get the right length, twice more before we were satisfied with the accuracy of the measurement. As far as I know, neither the Games Officials, nor anybody else, queried our measurement or even tried to check it!

The second obvious problem was to clear the route of vehicular traffic from half an hour before the runners arrived until after the last runner had passed. As the Marathon was to start at 6.00 a.m. on Friday 8th October this meant loosing several main access routes to the city, for about two hours each, between 5.30 a.m. 9.00 a.m. The use of the tunnel under the north approach to the Storey Bridge at least kept that bridge open! I decided that normal systems of communication (telephone in those days) could involve critical time delays, so organised for my police and electricity coordinators to each bring a radio car to near the start/finish. We parked them close together with the map on the bonnet. Thus each of us could then contact our field forces quickly and independantly in any emergency. Other problems, unplanned, occurred just before the actual event! On Thursday afternoon, only about 16 hours before the Marathon was to start, a high pressure fuel transfer line, from the refinery to the aerodrome, burst in Kingsford Smith Drive right under the inbound blue line along which the competitors were to run. Then in the very early hours of Friday 8th October a truck carrying a load of steers overturned in the Valley right on the Marathon route. These were quickly resolved and then we watched, on T.V., as Costello took over from the Nigerians at the Regatta Hotel and a little while later we saw the actual finish.

Lord Mayors

Reg Groom was Lord mayor when I joined the Council staff in 1958 but, as a junior engineer I saw little of him and three years later Clem Jones became Mayor and remained in that office until 1975. We used to say that Clem, though a Labour mayor, was a bit to the right of Ghenghis Khan and many officers were a bit worried by his autocratic style. I think that my first, though indirect, contact with Clem was in 1965 when I refused, on the grounds that it would endanger lives, to construct a connection of the new Centenary Highway to the Ipswich Highway by joining it to the existing narrow roads of the army married quarters which accessed the Highway about half a mile further along. It was his personal design, intended to try and force the State Government to contribute to a proper connection with the Highway. I don't know if there was any connection but I was promoted to head Major Water Projects a couple of weeks later and that dangerous connection was never built! Among other episodes involving Clem were his proposal to close down Mt.Coot-tha quarry, to which I replied fine so long as you can find the extra million for cartage of rock from more distant quarries (it wasn't closed), during the 1974 flood and its aftermath (page 7) and the Storey Bridge painting episode (page 10).

I found Clem good to work for, as far as real construction and maintenance were concerned, he made a decision and stuck to it! Some of his decisions were controversial, such as his decision to construct light sealed shoulder pavements in residential streets, joining the existing central bitumen strip to the existing kerb and channel, which resulted in a cheap effective improvement with a much smaller percentage of failures than predicted by some engineers. Others such as the Carina Sports complex required that we find the finance for the free of cost project from savings on scheduled work. Clem handed over as mayor to Bryan Walsh nine months before the Council elections in 1976. Most believe that Clem knew what was going to happen. None of the staff that I knew were unhappy when Walsh, along with several of his running mates, was defeated at the polls! In the aftermath, Clem's faction being reduced to the same level as Roy Harvey's, Frank Sleeman was probably the middle of the road choice for mayor.

As I write, I read in Frank Sleeman's obituary, in Thursdays Courier Mail, 3rd August, 2000, that he reluctantly became Lord Mayor of Brisbane in 1976 and continued to 1982. Frank Sleeman was quiet and unassuming, in absolute contrast to Clem. I found Frank to be very straight, direct and understanding. He had been a lifesaver, an amateur boxer, a commando and a prisoner of war in Japan.

I recall him saying to me this job is like being a lifesaver in a rough sea, every time you come out of one wave another one hits you in the face. At a reception for some Japanese business men one of them said ‘You should visit Japan’. Frank replied quietly ‘I have’. The man said ‘When was that’. Frank replied ‘1944’. The subject was quickly changed!

On another occasion Frank told me that the Governor of Zamboanga Province in the Philippines had been foisted on him, by Canberra's Liberal Federal Government, to be shown something about road maintenance, as they were about to take over and maintain roads constructed with Australian help in the Philippines. Assuming that these would be in rural areas I took the Governor out to Kenmore Depot and asked Allan McGinn, the Overseer there, to show him our methods and equipment. Later I collected him and brought him back to a small beer and bickies in the Lord Mayors rooms. The mood was restrained and politically correct until the Governor commented that the smell on the road into Brisbane had really taken him back to the war years. We found that he was referring to passing Arnotts factory on Coronation Drive and the smell of biscuits cooking! He then recounted that, as one of the Phillipino guerrillas fighting the Japanese, they had received Australian biscuits delivered, with other more lethal supplies, by Australian submarines. Frank responded by saying that he had been delivering these supplies (possibly the reason he finished the war as a POW in Japan) and the mood of the gathering became much more friendly as they exchanged reminiscences and refreshments continued to flow. Frank and the Governor were both small of stature but the Governor was broader across the shoulders and looked as if he would have been a dangerous person to meet on a dark night in the jungle!

Roy Harvey followed Frank Sleeman as Lord Mayor. When they were both quite young Roy Harvey's family used to camp next to Joyce's family at the beach during the summer holidays and I now met him at the quarterly Grand Lodge meetings. Our relationship was occasionally rather informal and sometimes he would ask me for information rather than go through official channels. This was never of a nature that would compromise my good relationship with my Chief, Ian Fairweather. I would give Roy the information he asked, believing that there was a degree of mutual trust, and I never had cause to regret it! This was quite the reverse of my dealings with Clem, to whom my answer to such requests was I will give a report on that to my chief.

Unions, the work force and retirement.

As a former committee member of the A.P.E.A. I appreciated the purpose of the unions, generally had reasonable relationships with most of them and was able to settle minor claims without creating precedents. However getting rid of a trouble maker was difficult, no matter to which union he belonged, as at least two warnings were required before taking him before the Chief on a charge and making it stick.

Traditionally the T.W.U. had dictated which drivers the Council could employ and used the Council as a rest home for its older members. This we could cope with, but some, particularly one or two of their job representatives, were very non co-operative, difficult to control and almost impossible to remove. But all drivers had one Achilles Heel, their driving licence! Normally, if a driver lost his licence, we would find him a labourers job until his licence was restored, then he would be given the next vacancy for a driver, working as a relief driver from the garage until a permanent position became available. One day a rumour reached me that a problem driver, who had applied for a months sick leave to have minor surgery, had actually lost his licence for a month. So when he returned to work he was offered a labourers job. When he protested that he had a licence we suggested that we ask the T.W.U. if he should be given preference over the other drivers waiting for return to a driving job, he went labouring for a period!

In the 1980s the fight for control of the T.W.U. by its two main factions created severe industrial problems on Council jobs. Delivery of a continuous supply of hot asphalt from our plant to the job was a critical operation. Asphalt is expensive, must reach the paving machine at high temperature and if allowed to go cold may have to be removed from the truck using pneumatic paving breakers! An organiser entered the asphalt plant and demanded to see a drivers union ticket. The driver refused to show it saying you are not my organiser. The organiser said if you load him the plant is black. Another organiser came in and said If you don't load him the plant is black. All work stopped, although the already loaded drivers, being more co-operative, sneaked out and delivered their asphalt. The Chief read my report and said ‘Does this make sense to you’. I replied ‘No’.

There were many more disputes during this period when the Council was literally the meat in the sandwich and powerless to prevent work disruption. In addition it looked as though the Liberal Party might at last gain control of the Council. To which, being somewhat Liberal minded, I had no objection except that we would have to educate a lot of new Aldermen to the workings of the Council.

I said to Joyce ‘Can I afford to retire’, Joyce said ‘Yes’. So on 4th July, 1984, I put in my resignation, effective 4th October.

Explanatory Note

Joyce, before we first met in 1952, was a Certified Practicing Accountant and a Tax agent. Consequently I was happy to leave all financial matters in her hands and concentrate my efforts on the design, erection and development of our home in affordable stages.