

## Chapter 11: Reactions

### Renewal or Maintenance?

When I found that my new director had forwarded my Perth accounting paper as the department's contribution to the forthcoming Construction Ministers' Conference I was concerned that it had the wrong focus for this audience so I prepared a supplement that specifically addressed the construction issues. I am glad I did. It was the hit of the conference and both the Minister and the CEO returned well pleased.

This did not mean, however, that the work was necessarily understood! "I'm the envy of all", said the CEO, "because at last we have someone who can tell us how much we should be spending on maintenance". Intrigued, I asked who this was. "Why, you!" he replied happily. I tried to explain that my expertise was in component renewal, not in maintenance, but my protestations were considered modesty and did not diminish his happiness - or belief!

It was generally assumed by maintenance personnel at the time (although not by anyone else, particularly their accountants) that annual maintenance should be 2%. (Of what was never well specified). Now it so happened that the PAC calculations of component renewal had averaged out, across all portfolios, to be approximately 2% per year of the replacement capital value. This was taken as validation of the maintenance figure (although at the time replacement values were not available to any outside South Australia and they were relying on historic cost figures which would have provided them a much lower maintenance estimate). It also only considered part of maintenance - what at the time was often referred to as 'major maintenance'. It was a misinterpretation, but I could see how it arose. (Later, I wrote an article examining this, entitled "If the answer is 2%, what's the question?" and this article can be found on the Talking Infrastructure website.)

With the large portfolios that we were dealing with, it was possible to predict renewal costs, using the life cycle renewal model, for we had the economic or useful lives of individual components and we also knew the replacement value and age distribution of those components. The reliability of these projections depended on having a large enough portfolio to apply the 'law of large numbers' as discussed in earlier chapters. Renewal projections were estimates of the overall costs to be incurred and not with the specific actions to be taken.

Maintenance, however, was different. Maintenance was, and always will be, a judgement call and it depends on the maintenance policy in place at any given time. Here we have a broad choice between 'run to failure', where failure is not critical nor even expensive, 'maintain at all costs', for truly critical assets, and, for want of a better term, 'cost effectiveness', where we weigh up the costs, risks and performance. Most assets fall into the latter category. But no maintenance category is subject to simple cost prediction along the lines of the life cycle renewal model. So ordinary maintenance was not included in the cost projections. It was assumed that the maintenance currently being carried out yielded the useful lives that were currently being experienced. Later, this assumption was to be re-examined in the light of appropriate depreciation models and yielded a 15 year research project on 'condition-based depreciation' which we will consider in Part 5.

### Renewal Awareness

The Minister was keen for me to share the PAC information with his Construction Advisory Panel consisting of the leading architects, surveyors and construction personnel in the State. I used the opportunity to stress the need for developing skills in re-construction. I claimed, brazenly, that 'any graduate fresh out of university can easily design and construct on a greenfield site, but it takes real skill and experience to reconstruct on a brownfield site' and I spoke of the difficulties in reconstructing an existing hospital while it continued to operate - minimising noise, dust, infection, and interference with the daily work of the hospital. This skill was much rarer, I said, and deserved to be paid more than simply building a new hospital. Moreover the need for such skill in reconstruction was growing, which I justified with the PAC projections.

This was intended to get a rise out of the audience and it did. Unexpected, however, was the reaction of the Minister himself, who, full of excitement and literally bouncing on the soles of his feet, told me: "You must tell everyone what you have just told us". After that, for the next several years in which I was with SACON, whenever I entered a room where the Minister was engaged in conversation, as soon as he saw me, he would quickly find a way to change his topic to asset management. He was interested.

Regretfully, while asset management knowledge has spread widely, we have yet to reach the general public and until that is achieved, political action will be severely limited. The other problem that we have yet to solve is educating the media which can easily distort very sensible asset management decisions, as I was to quickly realise in Darwin.

## **Darwin**

I had spoken with the Heads of Public Works in both Sydney and Melbourne before the Construction Ministers' Conference, so they had foreknowledge of the PAC work and had been able to brief their Ministers. It was, however, new to the Northern Territory where, some 13 years previously, its capital, Darwin, had been badly damaged by Cyclone Tracey and had required mass evacuations and extensive rebuilding. As a result a large proportion of its infrastructure was relatively new and while renewal was not imminent, it faced possible future construction peak 'chaos' when its assets did age.

The Territory Minister for Construction, previously a builder himself, was particularly impressed with the PAC work and, I was told later, declared: "We are not going to make the same mistakes as those down south - and we are going to get her to come up and tell us what to do". And he did. I was invited to visit Darwin for a week, to meet with all infrastructure departments and make a formal presentation at the end. I am glad my Director was on a long leave of absence otherwise I am sure he would have insisted the Northern Territory pay my salary, as a previous invitation to spend just a day with the Victorian Department of Housing had had that response. On that occasion I had said that in such exchanges we gained as much as we gave so we should not charge.

On my way to Darwin, I had stopped at Alice Springs to meet with the regional maintenance supervisor. When I arrived, he was frantically endeavouring to prevent a contractor, engaged by the education department, from happily demolishing a load-bearing wall. It seemed there was a more laissez-faire approach to contracting in the territory. It later transpired that they had a more laissez-faire approach to everything!

In Alice Springs I had my first ride on a camel and, while I can't be sure the camel was to blame, I contracted an odd virus that left me so weak I was scarcely able to walk. Still, I did what I had been asked to do and visited all of the major departments.

I was surprised to find that hospitals and prisons came within the same portfolio. "Why not?" was the response, "they both deal with captive audiences". The main hospital had been built to the same design as the hospital in Canberra, our coldest mainland capital, so it was not surprising that the airconditioning was under-sized for the heat of Darwin, our hottest.

This was a serious and continual problem, made worse by the fact that half of the patients were aboriginals who did not like airconditioning at all, and who open a window and then drag their mattresses to get fresh air. The answer seemed obvious: a choice of natural ventilation or air-conditioning. But such was the fear of the political damage that could - and almost certainly would - be wrought by the media interpreting this as discrimination, even if adopted on an entirely voluntary choice basis, it was not employed.

Incidentally, it was the head of the hospitals and prisons who came up with the solution to my virus problem - Scotch! It worked and I wished I had thought of it earlier. It meant I recovered enough to stand for the three hour public performance at the end of the week. Question time, always my favourite, was lively. I was then invited back to Darwin numerous times.

### **Interest spreads**

Not only Darwin, there were invitations all over the country. Each time I was invited to speak, I would prepare an executive summary for our Directors. It was my way of getting the message across to them. Initially I would also prepare both a speaking address and a more formal paper for publication, but then I found that people liked to read the speaking address and were also happy to publish it so I was able to reduce my workload. On the other hand, I started to be regularly approached by the ABC which meant adding sound bites and, although (or because!) these were short they were exceedingly time-consuming to prepare. I would also write up summaries of the discussions that I held with the Treasuries, Auditors-General, Public Works and other departments interstate.

With so much interstate travel, it is not surprising that my fellow branch managers felt a little envious, and not only them, the Directors also. Then word came that the Directors were concerned that 'Penny was not doing high priority work'. That could not be left to rest so I visited each of the Directors, saying "I want to be sure that the Policy Branch is doing top priority work, so could you please tell me what your top priorities are?" I had started with the senior Director, the one in charge of architectural services. He looked at me blankly so, to reassure him, I said "I wouldn't expect you to tell me off the top of your head" (although I thought if it really were a top priority he certainly should be able to). "What say I come back next week and we can talk about it?"

The other directors were no more forthcoming, even with a week's warning. So what was this all about? I now think that it was that I was not being successful in raising the department's, and therefore their own, reputation, but they didn't want to admit that they were relying on me to do this. My own director later ruefully declared that he had increased his own profile in the public service, but not that of the department, which continued in distress.

It might have been this envy that led to my director working with my fellow branch managers to ensure that it was I who was invited to give an after dinner address to the Plumbers' Association. Any of the others, all male, would surely have been a more suitable choice to address drunken male plumbers. But I agreed to do it. I agitated for

several weeks to find jokes that would be acceptable yet also tell the story I wanted to get across. I tried them out on my daughter and whenever she laughed but said “Oh, Mum, you can’t say that!” I would add it to the list.

The major message, of course, was the ageing of our infrastructure and that failure to attend to renewal would result in the breakdown of many of our assets, including sewers and lead to regular back up of sewage in our bathrooms. This they could appreciate. I told them my jokes and they were a good audience. However, what I did not expect was the appreciation of the wives, several of whom afterwards came up and thanked me!

They told me they had not thought that a woman would be able to hold the attention of their drunken husbands and had worried on my behalf. (Probably what my colleagues had also envisioned but I doubt it caused them much worry.) When they saw that I was alright, not only could they relax but they were proud! In the process, I learned a little about how to talk with practical tradesmen. I also couldn’t help thinking that asset management is a natural skill for women who have to manage their own households and the later growth of women in senior asset management positions has not surprised me.

### **The asset management word spreads**

Of course I wasn’t the only one willing, and actively taking, the asset management message out into the world. I have already mentioned Roger Byrne. Also amongst the key players at that time was David Ness, the first architect I met in the department and my constant ‘go-to’ source. He used his position as Editor of ‘Building and Architecture’ to get the word abroad and later became one of my earliest PhD students. Professor David Ness, University of South Australia, is now the author of over 100 publications, including ‘The Impact of Overbuilding on People and the Planet’ (2019) and ‘Transforming Rural Communities in China and Beyond’ (2015). His area of speciality is recycling and the circular economy.

Then there was Haydn Reynolds from the water authority. Haydn had a quick wit and when he saw that forward asset renewal projections rose and fell in a series of irregular humps ‘like the Loch Ness Monster’, he quickly named his renewal work ‘the Nessie Models’, and took the idea over to the United States water industry where he was very active. Haydn and I created the ‘Asset Managers Forum’ in which we gathered all the corporate planning liaison officers from Public Accounts Committee’s work. Later we invited the Adelaide University and the Adelaide City Council to join our monthly meetings.

An engineer who was very early in the picture was Alex Pettlevany from the New South Wales Water Resources Department. Even before the final PAC reports had been presented, he had approached me with the idea of running an asset management seminar. He wisely involved about half a dozen other departments and organisations to maximise the reach he could achieve and it is Alex to whom credit must go for the very first Asset Management Seminar, held in Sydney, April 1988. Others claiming such credit were actually concerned with maintenance and risk and reliability - important, but not asset management.

Of course, we can’t forget Professor Frank Bromilow, University of Melbourne and Lex Blaikie of the CSIRO who had been some of the earliest starters in the game. Later Frank would arrange for me to meet with his PhD students who would be asked to explain the nature and intent of their research for me to respond how I saw fit. In this way we were

able to make early inroads into their thinking about incorporating asset management principles in their architectural designs and thinking.

### **The Infrastructure Forum**

It had been the CSIRO who had secured an invitation for me to present to the National Infrastructure Forum in Canberra. Originally to be held that November, it had been deferred to the following year, initially by delay in a government report and then, again, to enable the Forum to invite one of the authors of the recently released American infrastructure study "Fragile Foundations"

"There, I told you she'd make it!" Dr Selwyn Tucker turned triumphantly to his CSIRO organising team for the forum. Actually, I had only just made it. There had been an air strike and I had taken an overnight bus from Sydney. My reputation for reliability was the upside, the downside was that I was asked to change my presentation time from the afternoon to the morning as their guest speaker from the United States had not yet arrived (and nor had half the audience).

I agreed and then discovered that I had to follow Barry Jones on the platform. Now no-one willingly follows Barry Jones, a polymath, multiple times quiz champion, member of Parliament and author of the much vaunted 'Sleepers Awake' on technology and the future of work. He was a powerhouse!

The greater problem for me, however, was that he was also over six foot. To accommodate him the technicians had to extend the microphone to its full length. Then they needed to reduce it to about its lowest level to suit me. I had only got half way through my first sentence when the microphone collapsed. Back came the technicians and fiddled around for a bit, then I had another go. Same thing, half way through the first sentence it collapsed! Third time lucky, but by this time my carefully crafted opening was completely shattered.

So when, a few weeks later, I had a phone call from the Local Government Association in Tasmania asking me if I would speak at their AGM and what's more, 'present that paper you presented in Canberra because few of us would have had a chance to hear it', I saw the opportunity of a reprieve and agreed. Then I got on with things and forgot all about it until the night before I was due to fly to Hobart.

With the paper already written, I was about to relax with a cup of tea and watch the evening movie, when it suddenly struck me that I could not present that paper to the councils. I had written "Infrastructure Priority Setting: the rules of the game" to tackle what I saw as the practice of the Australian Federation of Construction Contractors (AFCC) of promoting new capital works to decision makers regardless of the benefit, or lack of it, to the wider community.

Local councils in Tasmania would need a different paper. So I heaved myself out of the armchair and retired to my study and rewrote the paper - same title, but a totally different paper. Six hours later I managed to get a few hours sleep before leaving for the airport. Naturally when I arrived all I wanted to do was sleep so I missed the morning sessions at the conference.

### **Presentation in Tasmania**

There was no opportunity to catch up over lunch either, because at the time I was in a competition with John Klunder, the former Chair of the Public Accounts Committee and

now the Minister for Energy, to see who could be the first to eat in the Members Dining Room in every state capital parliament house. How this challenge started I cannot say. Since John had the advantage of his parliamentary position, it was idiotic of me to engage. But there you are! On this day the Auditor-General had offered to take me to lunch in the Tasmanian Parliamentary Members Dining Room and so even at the lunch break I did not hear how the morning sessions had gone.

Which is how I happened to come on stage as the first speaker after lunch and say what I did. Completely unaware that all of the morning's presentations had been passionate claims of more money for roads, I opened with a press cutting from the Courier Mail in Brisbane, where I had been a week previously. It was presented as a sad story of how councils in Queensland were seriously thinking about turning their sealed roads back to gravel because they did not have the money to reseal them.

Reading this out I said that I was interested because roads are a major asset for all councils and here was an asset management solution to a problem. But, I continued, let's read on. And, of course, the rest of the article was all about how the Federal government needed to give them more money.

"Look", I said, "we can throw money at some problems, but we don't have enough to solve all our problems this way. Indeed, I want to tell you there is no more money coming! So you can stop putting your hands out. What is available, those with longer arms are going to get to it first." Tasmania, as our top mendicant state, knew this only too well. I then continued "I want to tell you why this is so - and then what you can do about it."

At the end of that presentation, John Howard, later to become a leading light in asset management for the Institute of Public Works Engineering (IPWEA) for many years, approached me and asked whether I would give that paper the following day to his Local Engineers AGM, and it became the only paper I have ever given twice.

That night at the conference dinner I watched as the ABC reporter moved from table to table, diligently performing his task. When at last he came to ours, he said, with a broad grin on his face "Guess what they are talking about at every single table!" For the next several years whenever I visited a Tasmanian council, I would be greeted as "Oh! You are the one who gave that paper!"

But an even more interesting result was yet to come.